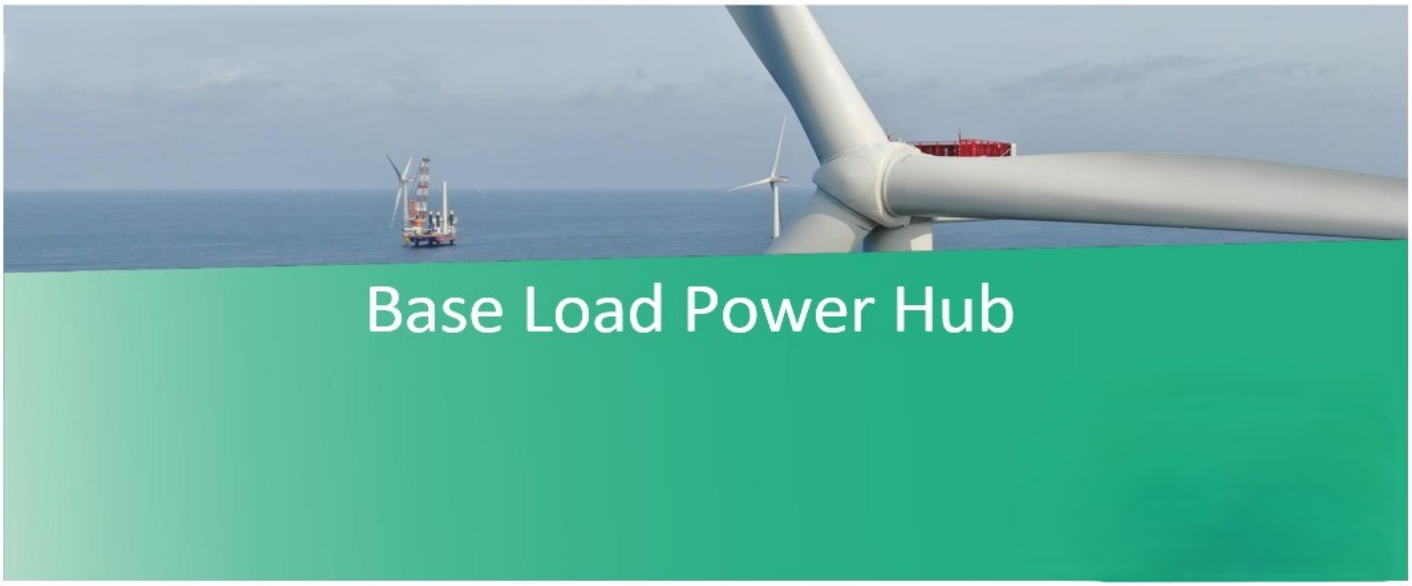
CROSSWIND

ROSETTI MARINO

PROVERLIS

PROJECT **123A90 - HOLLANDSE KUST NOORD WIND PARK**
BLPH Project



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	90 Structural, Architectural
SUBSYSTEM	90-05 Areas

CROSSWIND	123A90 - HOLLANDSE KUST NOORD WIND PARK BLPH Project MECHANICAL COMPLETION DOSSIER INDEX	ROSETTI MARINO

Sub System N°:	90-05	Tick as appropriate	ONSHORE	O
Description:	Areas		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	NA
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	O
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	O
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	NA
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	NA
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	NA
13.	***MECHANICAL COMPLETION CHANGES / MARK-UPS*** *A copy of the changes initiated during the Mechanical Completion process pertaining to the relevant Sub-System will be incorporated in this section*	NA

Note: Under the generic terminology “Building” are also covered the following disciplines: **Structural, Painting**

Under the generic terminology “Instrumental” is also covered the following discipline: **Fire & Gas**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	1		Issued on:	2025-05-09	
System:	90	/	Structural, Architectural		
SubSystem:	90-05	/	Areas		

1	COMPANY has, at its option and if required, reviewed the mechanical completion associated with the above-named system/sub-system of the SCOPE and observed that such functional sub-system has been brought into readiness for commencement of the associated pre-commissioning and commissioning activities, but for the outstanding punch list items, if any, attached and referred in this Certificate.
2	Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.
3	Mechanical Completion Status Index attached (per Discipline) Punch List report attached (Outstanding and Cleared)

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A 0'	B 15

REMARKS: ONSHORE SOW completed, n. 6 outstanding tasks to be cleared in OFFSHORE phase.

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-05-09	2025-05-12	2025-05-12	2025-05-12
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-05-09T10:46:17.700Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-12T08:49:37.721Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-12T09:22:42.478Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-12T09:22:48.566Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC

Building	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
LOWER_DECK	Lower Deck Structures	ONSHORE	C10002379	CQX01	100	2025-03-20	RFC 1
		ONSHORE	C10002382	CXX03	100	2025-03-25	RFC 1
TRANSITION_PIECE	Transition Piece Structures	ONSHORE	C10002378	CQX01	100	2025-05-09	RFC 1
		ONSHORE	C10002381	CXX03	100	2025-05-06	RFC 1
UPPER_DECK	Upper Deck Structures	ONSHORE	C10002380	CQX01	100	2025-03-20	RFC 1
		ONSHORE	C10002383	CXX03	100	2025-03-25	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC

Electrical	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_LD_ELE_HV	Cable Tray Lower Deck - Electrical (High Voltage)	ONSHORE	C10002264	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002265	CPX30B	100	2025-03-01	RFC 1
CABLE_TRAY_LD_ELE_LV	Cable Tray Lower Deck - Electrical (Low Voltage)	ONSHORE	C10002262	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002263	CPX30B	100	2025-02-24	RFC 1
CABLE_TRAY_LD_ELE_MV	Cable Tray Lower Deck - Electrical (Medium Voltage)	ONSHORE	C10002266	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002267	CPX30B	100	2025-02-20	RFC 1
CABLE_TRAY_TP_ELE_HV	Cable Tray Transition piece - Electrical (High Voltage)	OFFSHORE	C10002258	CPX30A	0	-	-
		OFFSHORE	C10002259	CPX30B	0	-	-
CABLE_TRAY_TP_ELE_LV	Cable Tray Transition piece - Electrical (Low Voltage)	ONSHORE	C10002256	CPX30A	100	2025-05-06	RFC 1
		ONSHORE	C10002257	CPX30B	100	2025-05-09	RFC 1
CABLE_TRAY_UD_ELE_LV	Cable Tray Upper Deck - Electrical (Low Voltage)	ONSHORE	C10002270	CPX30A	100	2025-02-24	RFC 1
		ONSHORE	C10002271	CPX30B	100	2025-03-07	RFC 1
CABLE_TRAY_UD_ELE_MV	Cable Tray Upper Deck - Electrical (Medium Voltage)	ONSHORE	C10002272	CPX30A	100	2025-03-05	RFC 1
		ONSHORE	C10002273	CPX30B	100	2025-03-07	RFC 1
E-MCT-T01	Multi Cable Transit	ONSHORE	C10001876	CPX29	100	2025-05-07	-
		OFFSHORE	C10004923	CPX29	0	-	-
E-MCT-T02	Multi Cable Transit	ONSHORE	C10001877	CPX29	100	2025-05-08	-
		OFFSHORE	C10004924	CPX29	0	-	-
E-MCT-T03	Multi Cable Transit	ONSHORE	C10001878	CPX29	100	2025-05-07	-
		OFFSHORE	C10004925	CPX29	0	-	-
E-MCT-U02	Multi Cable Transit	ONSHORE	C10001880	CPX29	100	2025-02-10	RFC 1
E-MCT-U03	Multi Cable Transit	ONSHORE	C10001881	CPX29	100	2025-01-30	RFC 1
E-MCT-U04	Multi Cable Transit	ONSHORE	C10001882	CPX29	100	2024-12-13	RFC 1
E-MCT-U05	Multi Cable Transit	ONSHORE	C10001883	CPX29	100	2025-01-29	RFC 1
E-MCT-U06	Multi Cable Transit	ONSHORE	C10001884	CPX29	100	2025-01-29	RFC 1
E-MCT-U07	Multi Cable Transit	ONSHORE	C10001885	CPX29	100	2025-02-06	RFC 1
E-MCT-U08	Multi Cable Transit	ONSHORE	C10001886	CPX29	100	2025-01-30	RFC 1
E-MCT-U09	Multi Cable Transit	ONSHORE	C10001887	CPX29	100	2025-02-06	RFC 1
E-MCT-U10	Multi Cable Transit	ONSHORE	C10001888	CPX29	100	2025-01-29	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC

Electrical	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
E-MCT-U11	Multi Cable Transit	ONSHORE	C10001889	CPX29	100	2025-01-22	RFC 1
E-MCT-U12	Multi Cable Transit	ONSHORE	C10001890	CPX29	100	2025-01-22	RFC 1
E-MCT-U13	Multi Cable Transit	ONSHORE	C10001891	CPX29	100	2025-01-22	RFC 1
E-MCT-U14	Multi Cable Transit	ONSHORE	C10001892	CPX29	100	2025-01-22	RFC 1
E-MCT-U15	Multi Cable Transit	ONSHORE	C10001893	CPX29	100	2025-03-24	RFC 1
E-MCT-U16	Multi Cable Transit	ONSHORE	C10004490	CPX29	100	2025-01-30	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC

Instrumental	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_LD_INS	Cable Tray Lower Deck - Instrumental	ONSHORE	C10002268	CJX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002269	CJX30B	100	2025-02-24	RFC 1
CABLE_TRAY_TP_INS	Cable Tray Transition piece - Instrumental	ONSHORE	C10002260	CJX30A	100	2025-05-06	RFC 1
		ONSHORE	C10002261	CJX30B	100	2025-05-06	RFC 1
CABLE_TRAY_UD_INS	Cable Tray Upper Deck - Instrumental	ONSHORE	C10002274	CJX30A	100	2025-02-24	RFC 1
		ONSHORE	C10002275	CJX30B	100	2025-03-07	RFC 1
I-MCT-T01	Multi Cable Transit	ONSHORE	C10001906	CJX29	100	2025-05-07	-
		OFFSHORE	C10004928	CJX29	0	-	-
I-MCT-U01	Multi Cable Transit	ONSHORE	C10001907	CJX29	100	2025-02-06	RFC 1
I-MCT-U02	Multi Cable Transit	ONSHORE	C10001908	CJX29	100	2025-01-30	RFC 1
I-MCT-U03	Multi Cable Transit	ONSHORE	C10001909	CJX29	100	2025-01-30	RFC 1
I-MCT-U04	Multi Cable Transit	ONSHORE	C10001910	CJX29	100	2025-02-19	RFC 1
I-MCT-U05	Multi Cable Transit	ONSHORE	C10001911	CJX29	100	2025-01-29	RFC 1
I-MCT-U06	Multi Cable Transit	ONSHORE	C10001912	CJX29	100	2025-02-10	RFC 1
I-MCT-U07	Multi Cable Transit	ONSHORE	C10002012	CJX29	100	2025-01-22	RFC 1
I-MCT-U08	Multi Cable Transit	ONSHORE	C10002013	CJX29	100	2025-01-24	RFC 1
I-MCT-U09	Multi Cable Transit	ONSHORE	C10002014	CJX29	100	2025-02-26	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004017	A	I-MCT-U04 C10001910	MCT composition is not in compliance with the required standards for Hazardous Areas Classification. See attached photo	.		Pschintu 2025-02-19	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000680	B	CABLE_TRAY_LD_INS C10002269	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000682	B	CABLE_TRAY_UD_INS C10002275	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30003154	B	I-MCT-U07 C10002012	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003196	B	I-MCT-U08 C10002013	Missing traffolyte tag both sides of MCT	.		Pschintu 2025-01-24	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30004370	B	I-MCT-T01 C10001906	The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.	.		Gtangianu 2025-05-07			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural
SUBSYSTEM 90-05 Areas

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000679	B	CABLE_TRAY_LD_ELE_LV C10002263	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000681	B	CABLE_TRAY_UD_ELE_LV C10002271	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30001825	B	E-MCT-U04 C10001882	Missing Traffolyte tag both sides	.		Pschintu 2024-12-13	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30002356	B	CABLE_TRAY_LD_ELE_LV C10002262	Missing L150-101-LVT-105	.		Pschintu 2025-01-04	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30003155	B	E-MCT-U11 C10001889	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003157	B	E-MCT-U13 C10001891	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003158	B	E-MCT-U14 C10001892	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003159	B	E-MCT-U12 C10001890	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30004093	B	CABLE_TRAY_LD_ELE_LV C10002263	Missing cable tray cover on L-150-101-LVT-139	.		Pschintu 2025-02-24	2025-02-26	Pschintu 2025-02-26	2025-02-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural
SUBSYSTEM 90-05 Areas

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004193	B	CABLE_TRAY_LD_ELE_HV C10002265	Lid installation to be completed	.		Pschintu 2025-03-05	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30004358	B	E-MCT-U13 C10001891	The layout (123A90-DDL-EL-DL-20114) shows the wrong tag E-MCT-J13. instead of E-MCT-U13 .	.		Gtangianu 2025-05-05			
C30004369	B	E-MCT-T01 C10001876	The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.	.		Gtangianu 2025-05-07			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural
SUBSYSTEM 90-05 Areas

Building

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004250	B	UPPER_DECK C10002380	the part highlighted in the attachment due to the rubber protection mats will be inspected before the sail away after installing the safety grip strips.	.		LNovaga 2025-03-20			
C30004251	B	UPPER_DECK C10002380	Access platform to vessels are missing (north side).	.		LNovaga 2025-03-20	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30004252	B	UPPER_DECK C10002380	The vertical stairs highlighted in the layout attached are not installed as per drawings.	.		LNovaga 2025-03-20			
C30004253	B	UPPER_DECK C10002380	Foot plate of the handrails in Access platform missing the third rivet. North side of the Access platform missing corner joints. The access gates	.		LNovaga 2025-03-20			
C30004254	B	LOWER_DECK C10002379	the part highlighted in YELLOW in the attachment due to the rubber protection mats will be inspected before the sail away after installing the	.		LNovaga 2025-03-20			
C30004255	B	LOWER_DECK C10002379	Some handrails are not installed. (see document attached)	.		LNovaga 2025-03-20			
C30004266	B	LOWER_DECK C10002382	The finish of the lower deck paint will be done before the sail away.	.		LNovaga 2025-03-25			
C30004267	B	UPPER_DECK C10002383	The finish of the upper deck paint will be done before the sail away.	.		LNovaga 2025-03-25			
C30004368	B	TRANSITION_PIECE C10002381	The finish of the lower deck paint will be done before the sail away.	.		LNovaga 2025-05-06			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Building

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004377	B	TRANSITION_PIECE C10002378	Missing internal vertical ladder.	.		LNovaga 2025-05-09			
C30004378	B	TRANSITION_PIECE C10002378	Missing entrance door.	.		LNovaga 2025-05-09			
C30004379	B	TRANSITION_PIECE C10002378	The part of the gratings highlighted in red in the annex is not installed. Some gratings in the lower part are missing fixing system (min 4 per m^2).	.		LNovaga 2025-05-09			
C30004380	B	TRANSITION_PIECE C10002378	The fixing clips (BROOCH PIN) of the handrails are missing both in the upper part and in the inner part.	.		LNovaga 2025-05-09			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004017	A	I-MCT-U04 C10001910	MCT composition is not in compliance with the required standards for Hazardous Areas Classification. See attached photo	.		Pschintu 2025-02-19	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000680	B	CABLE_TRAY_LD_INS C10002269	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000682	B	CABLE_TRAY_UD_INS C10002275	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30003154	B	I-MCT-U07 C10002012	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003196	B	I-MCT-U08 C10002013	Missing traffolyte tag both sides of MCT	.		Pschintu 2025-01-24	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30004370	B	I-MCT-T01 C10001906	The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.	.	Clarified with ROXTEC	Gtangianu 2025-05-07	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural
SUBSYSTEM 90-05 Areas

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000679	B	CABLE_TRAY_LD_ELE_LV C10002263	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30000681	B	CABLE_TRAY_UD_ELE_LV C10002271	General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.	.		Ecarotenuto 2024-11-21	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30001825	B	E-MCT-U04 C10001882	Missing Traffolyte tag both sides	.		Pschintu 2024-12-13	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30002356	B	CABLE_TRAY_LD_ELE_LV C10002262	Missing L150-101-LVT-105	.		Pschintu 2025-01-04	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30003155	B	E-MCT-U11 C10001889	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003157	B	E-MCT-U13 C10001891	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003158	B	E-MCT-U14 C10001892	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30003159	B	E-MCT-U12 C10001890	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-22	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30004093	B	CABLE_TRAY_LD_ELE_LV C10002263	Missing cable tray cover on L-150-101-LVT-139	.		Pschintu 2025-02-24	2025-02-26	Pschintu 2025-02-26	2025-02-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004193	B	CABLE_TRAY_LD_ELE_HV C10002265	Lid installation to be completed	.		Pschintu 2025-03-05	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30004358	B	E-MCT-U13 C10001891	The layout (123A90-DDL-EL-DL-20114) shows the wrong tag E-MCT-J13. instead of E-MCT-U13 .	.	AS-BUILT ISSUED	Gtangianu 2025-05-05	RDegliEsposti 2025-10-17	RDegliEsposti 2025-10-17	2025-10-17
C30004369	B	E-MCT-T01 C10001876	The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.	.	Installation clarified with ROXTEC	Gtangianu 2025-05-07	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Building

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004250	B	UPPER_DECK C10002380	the part highlighted in the attachment due to the rubber protection mats will be inspected before the sail away after installing the safety grip strips.	.	Completed	LNovaga 2025-03-20	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004251	B	UPPER_DECK C10002380	Access platform to vessels are missing (north side).	.		LNovaga 2025-03-20	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30004252	B	UPPER_DECK C10002380	The vertical stairs highlighted in the layout attached are not installed as per drawings.	.	Stairs installed.	LNovaga 2025-03-20	RDegliEsposti 2025-07-22	RDegliEsposti 2025-07-22	2025-07-22
C30004253	B	UPPER_DECK C10002380	Foot plate of the handrails in Access platform missing the third rivet. North side of the Access platform missing corner joints. The access gates	.	Done	LNovaga 2025-03-20	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004254	B	LOWER_DECK C10002379	the part highlighted in YELLOW in the attachment due to the rubber protection mats will be inspected before the sail away after installing the	.	Completed	LNovaga 2025-03-20	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004255	B	LOWER_DECK C10002379	Some handrails are not installed. (see document attached)	.	Installed	LNovaga 2025-03-20	RDegliEsposti 2025-07-24	RDegliEsposti 2025-07-24	2025-07-24
C30004266	B	LOWER_DECK C10002382	The finish of the lower deck paint will be done before the sail away.	.	Done	LNovaga 2025-03-25	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004267	B	UPPER_DECK C10002383	The finish of the upper deck paint will be done before the sail away.	.	Completed	LNovaga 2025-03-25	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004368	B	TRANSITION_PIECE C10002381	The finish of the lower deck paint will be done before the sail away.	.	Activity completed	LNovaga 2025-05-06	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-05	Areas

Building									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004377	B	TRANSITION_PIECE C10002378	Missing internal vertical ladders.	.	Installed	LNovaga 2025-05-09	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10
C30004378	B	TRANSITION_PIECE C10002378	Missing entrance door.	.		LNovaga 2025-05-09	2025-05-15	Gtangianu 2025-05-15	2025-05-15
C30004379	B	TRANSITION_PIECE C10002378	The part of the gratings highlighted in red in the annex is not installed. Some gratings in the lower part are missing fixing system (min 4 per m^2).	.	Installed	LNovaga 2025-05-09	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10
C30004380	B	TRANSITION_PIECE C10002378	The fixing clips (BROOCH PIN) of the handrails are missing both in the upper part and in the inner part.	.		LNovaga 2025-05-09	2025-05-16	Gtangianu 2025-05-16	2025-05-16

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004368

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002381	1.4 Discipline	Building
1.2 Item	TRANSITION_PIECE		Transition Piece Structures
1.3 Subsystem	90-05		Areas

2 - OBSERVATION

The finish of the lower deck paint will be done before the sail away.

Name: Lorenzo Novaga
Date: 2025-05-06
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-05-06
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Activity completed

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004369

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001876	1.4 Discipline	Electrical
1.2 Item	E-MCT-T01	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.

Name: Giovanni Tangianu
Date: 2025-05-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-05-07
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Installation clarified with ROXTEC

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-10
Signature:


E-MCT-T01
VIEW INSIDE
Roxtec


VIEW OUTSIDE



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004370

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001906	1.4 Discipline	Instrumental
1.2 Item	I-MCT-T01	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The installation direction of the frame is reverse mounted. Need to be clarify by ROXTEC. See attached photo.

Name: Giovanni Tangianu
Date: 2025-05-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-05-07
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Clarified with ROXTEC

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

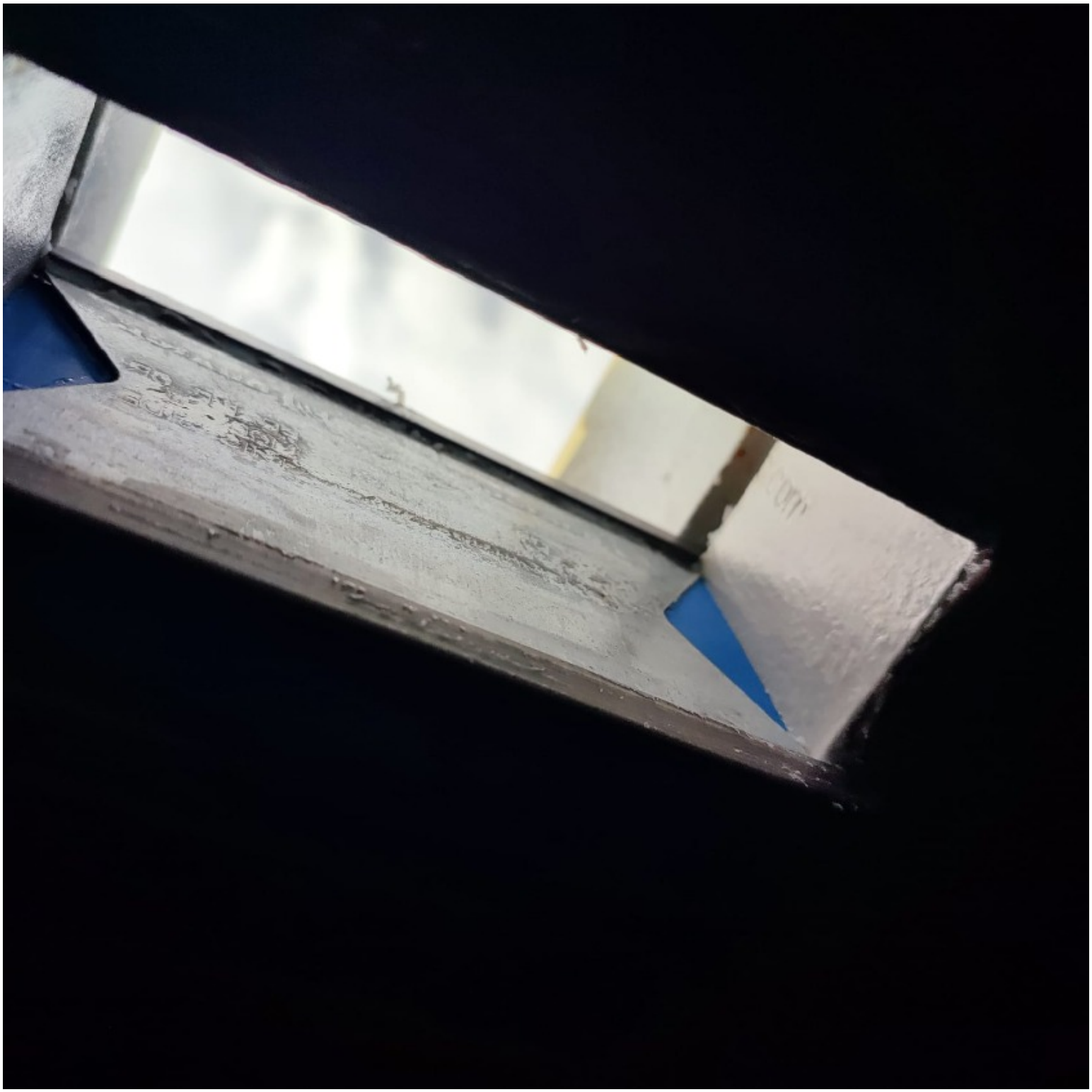
Done

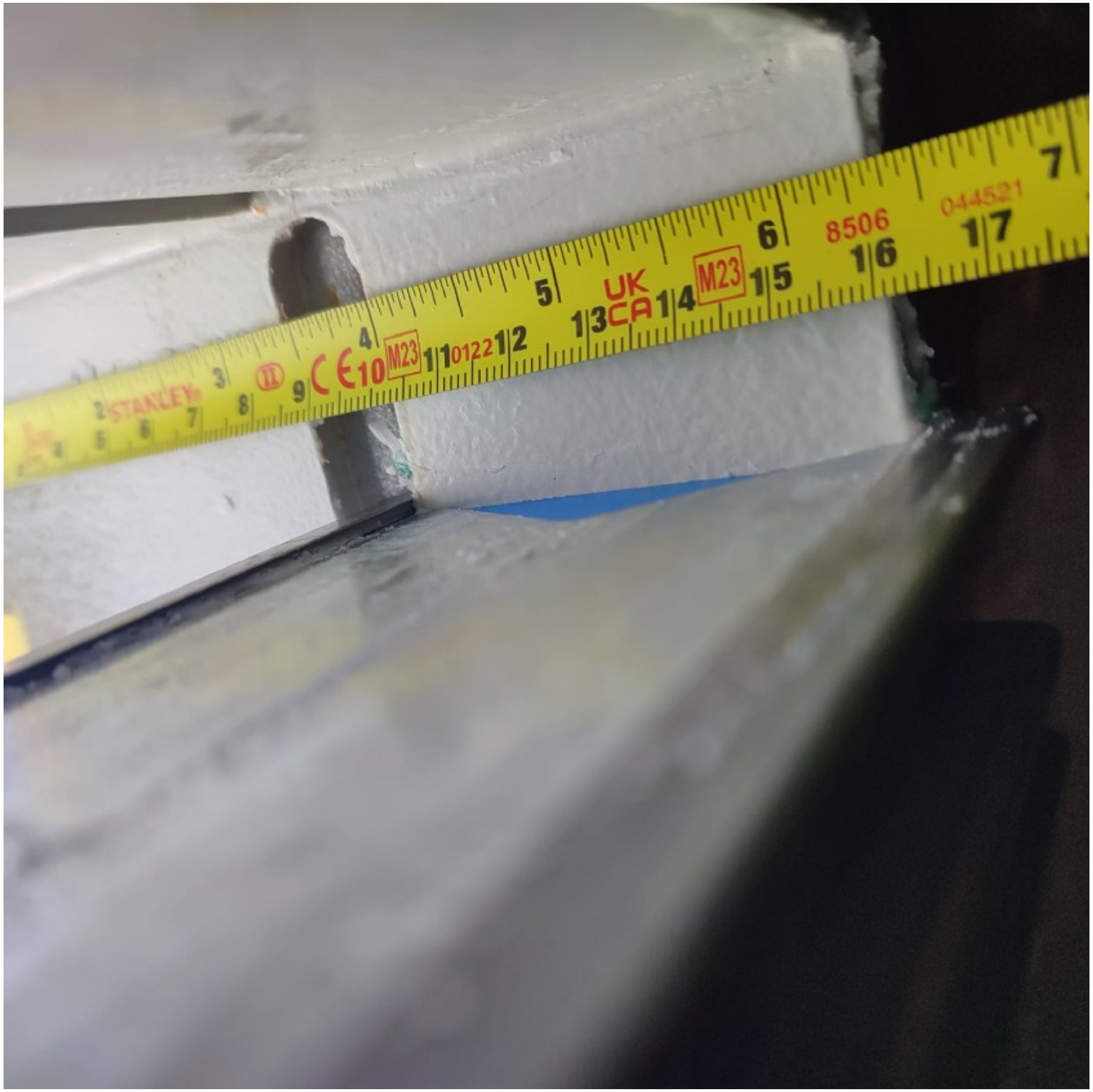
Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

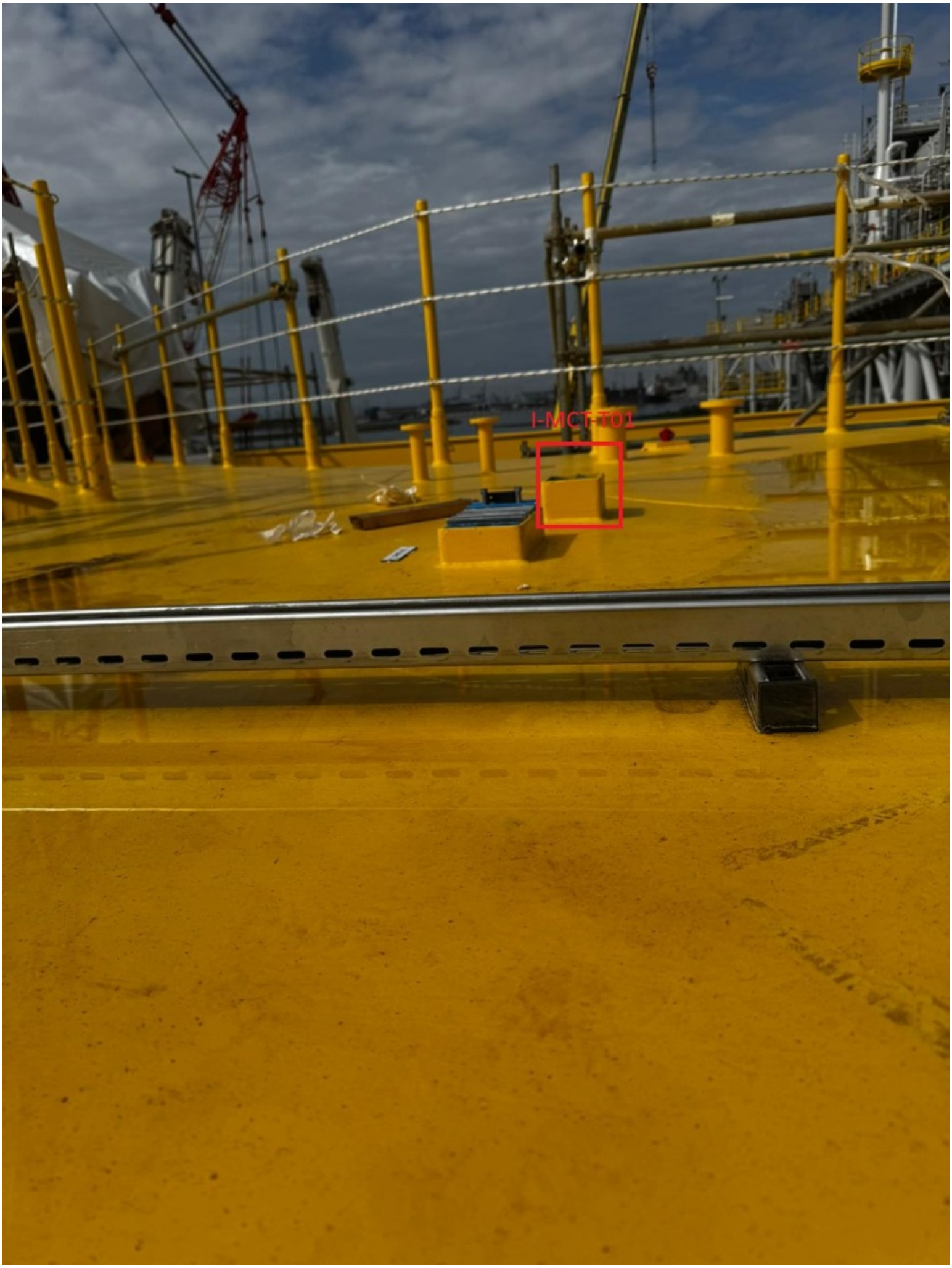
6- CLEARANCE APPROVAL

Name:
Date: 2025-07-10
Signature:


I-MCT-T01
Roxtec




STANLEY
M23
UK
CA
M23
8506
044521


I-MCT-T01


STANLEY®
CE 10 M23


Wedge Galv.
To be used in conjunction with Roxtec Bs frames
Tighten alterna
echanical step
Frame or modules this side
Startplate this side
Tighten alternately to
step
Roxtec
roxtec.com

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004377

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002378	1.4 Discipline	Building
1.2 Item	TRANSITION_PIECE	Transition Piece Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing internal vertical ladders.

Name: Lorenzo Novaga
Date: 2025-05-09
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-05-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Installed

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004378

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002378	1.4 Discipline	Building
1.2 Item	TRANSITION_PIECE	Transition Piece Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing entrance door.

Name: Lorenzo Novaga

Date: 2025-05-09

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-05-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

The door has been installed.See attached photo.

Name: Giovanni Tangianu

Date: 2025-05-15

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:







ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004379

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002378	1.4 Discipline	Building
1.2 Item	TRANSITION_PIECE	Transition Piece Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The part of the gratings highlighted in red in the annex is not installed.
Some gratings in the lower part are missing fixing system (min 4 per m^2).

Name: Lorenzo Novaga
Date: 2025-05-09
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-05-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Installed

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

Done

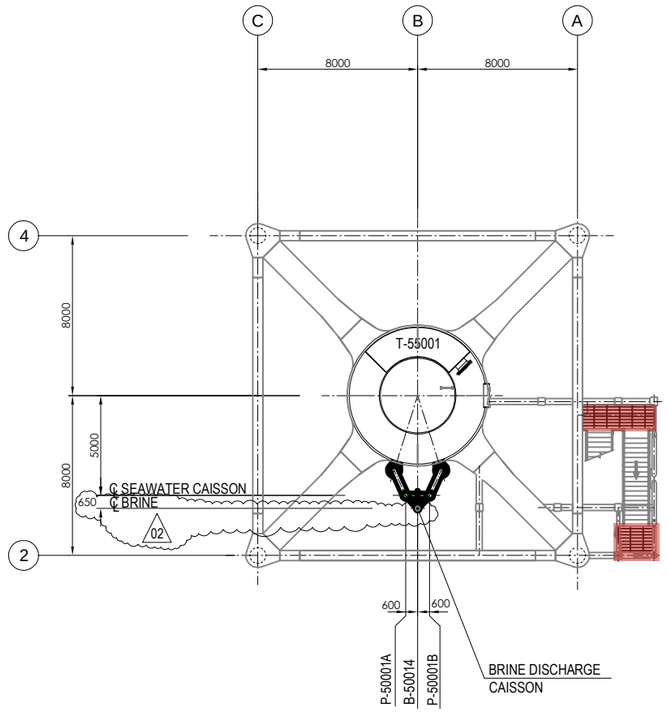
Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

6- CLEARANCE APPROVAL

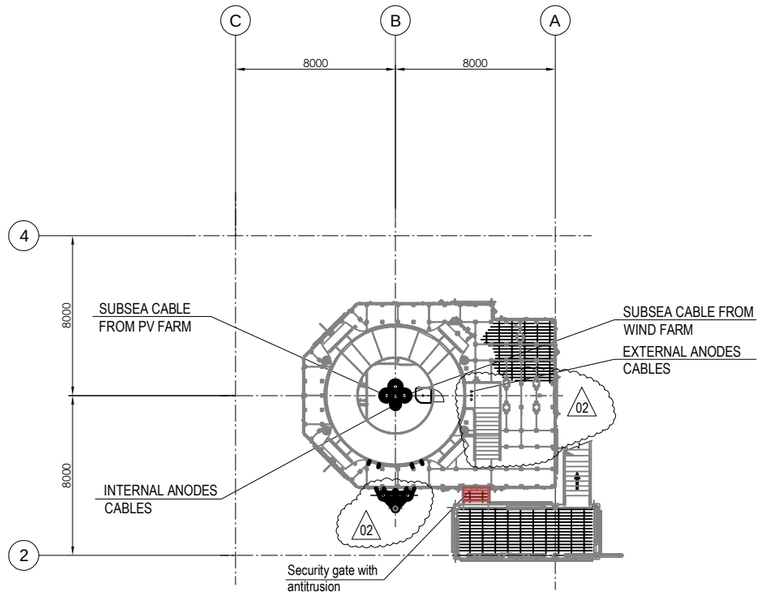
Name:
Date: 2025-07-10
Signature:

DRAWING NO. 123A90-DDL-PP-DL-70071

REV. 02

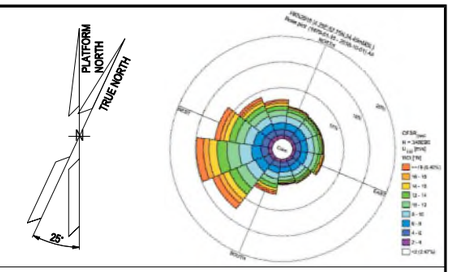


PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST	
TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK
B-50014	BRINE CAISSON



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. EQUIPMENT SIZES ARE BASED ON MASTER EQUIPMENT LIST 123A90-DDL-MAC-LIS-50000 AND VENDOR DWG. RECEIVED.
4. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.
5. PLAN SHOWS PRIMARY ESCAPE/MATERIAL HANDLING ROUTES ONLY.
6. DELETED
7. MISCELLANEOUS SAFETY EQUIPMENT ARE SHOWN IN DOC. 123A90-DDL-SAF-DL-3002516_Escape Routes, Fire Fighting, Life Saving Equipment and Safety Equipment Layouts Drawings.
8. PREVAILING WIND DIRECTION INFLUENCING EQUIPMENT/VENT LAYOUT FROM THE SOUTH WEST.
9. PLATFORM NORTH DIRECTION IS N 25°W.

LEGEND

DENOTES PLATED DECK

ESCAPE/MATERIAL HANDLING ROUTE

DENOTES OPEN GRATING

HOLDS

1. DELETED
2. DELETED
3. DELETED
4. DELETED
5. DELETED
6. DELETED
7. DELETED
8. DELETED
9. DELETED

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	24/05/24	MMA	CBO	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	07/02/24	MMA	CBO	DLO	ISSUE FOR REVIEW (IFR)
00	31/10/23	MMA	CBO	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
PLOT PLAN
BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. BORTOLIN	APPROVED D. LO STERZO	DATE 24/05/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PP-DL-70071	001	02

File Name : 123A90-DDL-PP-DL-70071 Rev.02

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004380

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002378	1.4 Discipline	Building
1.2 Item	TRANSITION_PIECE	Transition Piece Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The fixing clips (BROOCH PIN) of the handrails are missing both in the upper part and in the inner part.

Name: Lorenzo Novaga
Date: 2025-05-09
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-05-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

The fixing clips as been installed.See attached photo.

Name: Giovanni Tangianu
Date: 2025-05-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004093

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002263	1.4 Discipline	Electrical
1.2 Item	CABLE_TRAY_LD_ELE_LV	Cable Tray Lower Deck - Electrical (Low Voltage)	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing cable tray cover on L-150-101-LVT-139.See attached layout

Name: Paolo Schintu

Date: 2025-02-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

INSTALLED

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01

L-300-101-LVT-112 | W300 X H100mm | +28.810/30.170m | +5.500/6.860m T.O.S

L-300-101-LVT-077 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-300-101-LVT-078 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-300-101-LVT-078 | W300 X H100mm | +29.060/30.170m | +5.750/6.860m T.O.S

L-150-101-LVT-086 | W150 X H100mm | +23.300m | −0.010m T.O.S

L-300-101-LVT-077 | W300 X H100mm | +28.810/30.170m | +5.500/6.860m T.O.S

L-300-101-LVT-078 | W300 X H100mm | +29.060m | +5.750m T.O.S

L-300-101-LVT-073 | W300 X H100mm | +28.810/+30.210m | +5.500/6.900m T.O.S

L-300-101-LVT-073 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-150-101-LVT-086 | W150 X H100mm | +22.700m | −0.610m T.O.S

L-150-101-LVT-086 | W150 X H100mm | +23.300m | −0.010m T.O.S

L-150-101-LVT-083 | W150 X H100mm | +23.300m | −0.010m T.O.S

L-150-101-LVT-106 | W150 X H100mm | +28.988/30.188m | +5.678/6.878m T.O.S

L-300-101-LVT-084 | W300 X H100mm | +29.010m | +5.700m T.O.S

L-300-101-LVT-096 | W300 X H100mm | +28.960/24.400m | +5.650/1.090m T.O.S

L-300-101-LVT-084 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-150-101-LVT-102 | W150 X H100mm | +28.938/30.188m | +5.628/6.878m T.O.S

L-300-101-LVT-084 | W300 X H100mm | +29.010/+23.298m | +5.700/0.012m T.O.S

L-150-101-LVT-103 | W150 X H100mm | +28.908/30.208m | +5.598/6.898m T.O.S

L-150-101-LVT-092 | W150 X H100mm | +27.178m | +3.868m T.O.S

L-150-101-LVT-088 | W150 X H100mm | +29.010m | +5.700m T.O.S

L-150-101-LVT-088 | W150 X H100mm | +28.810m | +5.500m T.O.S

L-150-101-LVT-144 | W150 X H100mm | +28.930/24.180m | +5.620/0.870m T.O.S

L-150-101-LVT-092 | W150 X H100mm | +27.278m | +3.968m T.O.S

L-300-101-LVT-068 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-300-101-LVT-068 | W300 X H100mm | +29.060m | +5.750m T.O.S

L-150-101-LVT-092 | W150 X H100mm | +27.278/23.728m | +3.968/0.418m T.O.S

L-300-101-LVT-095 | W300 X H100mm | +28.888/30.188m | +5.578/6.878m T.O.S

L-150-101-LVT-093 | W150 X H100mm | +28.810/26.400m | +5.500/3.090m T.O.S

L-150-101-LVT-139 | W150 X H100mm | +26.280 | +2.970m T.O.S

L-300-101-LVT-068 | W300 X H100mm | +29.060m/+23.500 | +5.750/0.190m T.O.S

L-150-101-LVT-099 | W150 X H100mm | +28.810/24.000m | +5.500/0.690m T.O.S

L-150-101-LVT-087 | W150 X H100mm | +28.810/23.390m | +5.500/0.080m T.O.S

L-150-101-LVT-138 | W150 X H100mm | +26.280 | +2.970m T.O.S

L-300-101-LVT-070 | W300 X H100mm | +23.410m | +0.100m T.O.S

L-150-101-LVT-146 | W150 X H100mm | +26.280/24.520m | +2.970/1.210m T.O.S

L-150-101-LVT-105 | W150 X H100mm | +28.810/30.188m | +5.500/6.878m T.O.S

L-150-101-LVT-083 | W150 X H100mm | +23.300/22.860m | −0.010/0.450m T.O.S

L-150-101-LVT-081 | W150 X H100mm | +22.680m | −0.630m T.O.S

L-300-101-LVT-069 | 300X100mm | +29.060m | +5.750m T.O.S

L-150-101-LVT-101 | W150 X H100mm | +28.810/30.188m | +5.500/6.878m T.O.S

L-300-101-LVT-071 | W300 X H100mm | +23.410m | +0.100m T.O.S

L-150-101-LVT-101 | W150 X H100mm | +28.810m | +5.500m T.O.S

L-300-101-LVT-069 | 300X100mm | +29.060/23.610m | +5.750/0.300m T.O.S

L-300-101-LVT-080 | W300 X H100mm | +22.680m | −0.630m T.O.S

L-300-101-LVT-069 | 300X100mm | +29.060/23.610m | +5.750/0.300m T.O.S

L-300-101-LVT-109 | W300 X H100mm | +23.410m | +0.100m T.O.S

L-300-101-LVT-079 | W300 X H100mm | +28.810/22.940m | +5.500/−0.370m T.O.S

L-150-101-LVT-097 | W150 X H100mm | +29.080m | +5.770m T.O.S

L-150-101-LVT-143 | W150 X H100mm | +29.080/24.185m | +5.770/0.875m T.O.S

L-150-101-LVT-082 | W150 X H100mm | +22.680m | −0.630m T.O.S

L-150-101-LVT-089 | W150 X H100mm | +28.410/23.860m | +5.100/0.550m T.O.S

L-150-101-LVT-089 | W150 X H100mm | +28.410m | +5.100m T.O.S

L-150-101-LVT-082 | W150 X H100mm | +23.300m | −0.010m T.O.S

L-300-101-LVT-098 | W300 X H100mm | +28.660/24.000m | +5.350/0.690m T.O.S

L-150-101-LVT-104 | W150 X H100mm | +28.938/30.188m | +5.628/6.878m T.O.S

L-300-101-LVT-076 | W300 X H100mm | +28.810m | +5.500m T.O.S

L-150-101-LVT-100 | W150 X H100mm | +28.710/24.260m | +5.400/0.950m T.O.S

L-600-101-LVT-094 | W600 X H100mm | +28.970m | +5.660m T.O.S

L-600-101-LVT-094 | W600 X H100mm | +28.810m | +5.500m T.O.S

L-150-101-LVT-091 | W150 X H100mm | +23.600m | +0.290m T.O.S

L-600-101-LVT-094 | W600 X H100mm | +28.410m | +5.100m T.O.S

L-600-101-LVT-094 | W600 X H100mm | +28.810m | +5.500m T.O.S

L-300-101-LVT-074 | W300 X H100mm | +28.810/26.810m | +5.500/3.500m T.O.S

L-150-101-LVT-085 | W150 X H100mm | +22.598m | −0.712m T.O.S

L-450-101-LVT-072 | W450 X H100mm | +28.410/30.219m | +5.100/6.909m T.O.S

L-450-101-LVT-075 | W300 X H100mm | +27.810/26.810m | +4.500/3.500m T.O.S

L-150-101-MVT-017 | W150 X H100mm | +28.410/23.860m | +5.100/0.550m T.O.S

L-150-101-LVT-108 | W150 X H100mm | +23.300m | −0.010m T.O.S

L-150-101-LVT-108 | W150 X H100mm | +22.598m | −0.712m T.O.S

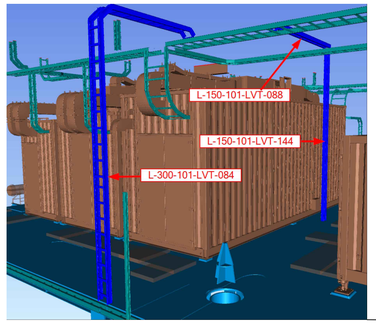
L-150-101-LVT-107 | W150 X H100mm | +22.598m | −0.712m T.O.S

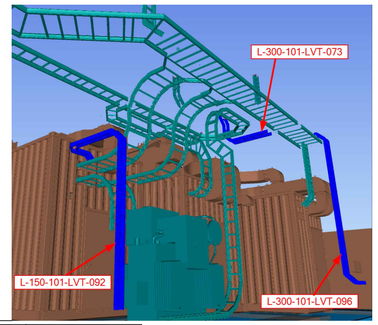
L-150-101-MVT-017 | W150 X H100mm | +28.410m | +5.100m T.O.S

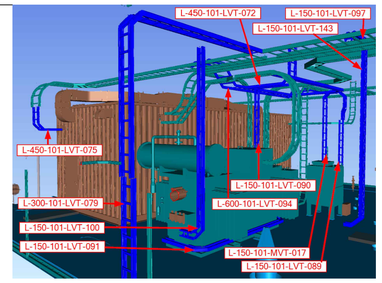
L-150-101-LVT-085 | W150 X H100mm | +23.300m | −0.010m T.O.S

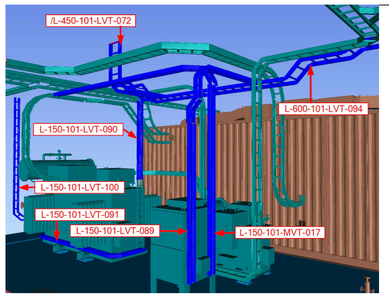
L-150-101-LVT-090 | W150 X H100mm | +28.510/23.860m | +5.200/0.550m T.O.S

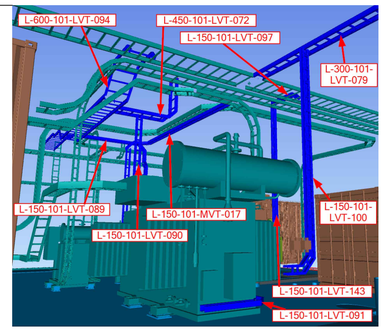
L-600-101-LVT-094 | W600 X H100mm | +29.110m | +5.100m T.O.S

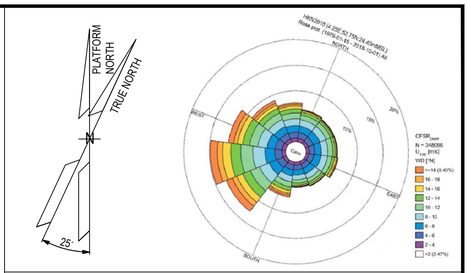












NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004193

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002265	1.4 Discipline	Electrical
1.2 Item	CABLE_TRAY_LD_ELE_HV	Cable Tray Lower Deck - Electrical (High Voltage)	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Lid installation to be completed

Name: Paolo Schintu

Date: 2025-03-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Completed.

Name: Giovanni Tangianu

Date: 2025-03-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004250

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002380	1.4 Discipline	Building
1.2 Item	UPPER_DECK	Upper Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

the part highlighted in the attachment due to the rubber protection mats will be inspected before the sail away after installing the safety grip strips.
Most of the gratings in the Access platform (north and sud area) are missing fixing system (min 4 per m^2)
All penetrations in Access platform the foot plate (high 200mm) are missing.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Completed

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Done

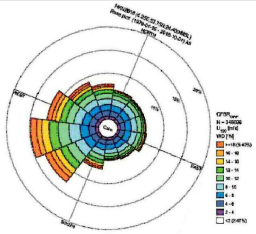
Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

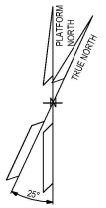
6- CLEARANCE APPROVAL

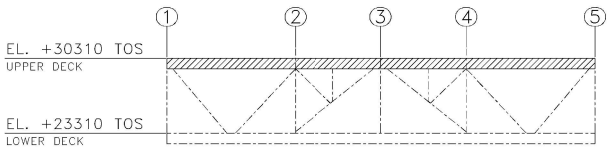
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Date: 2025-07-30
Signature:

DRAWING NO. 123A90-DDL-ST-DD-90060

REV. 02





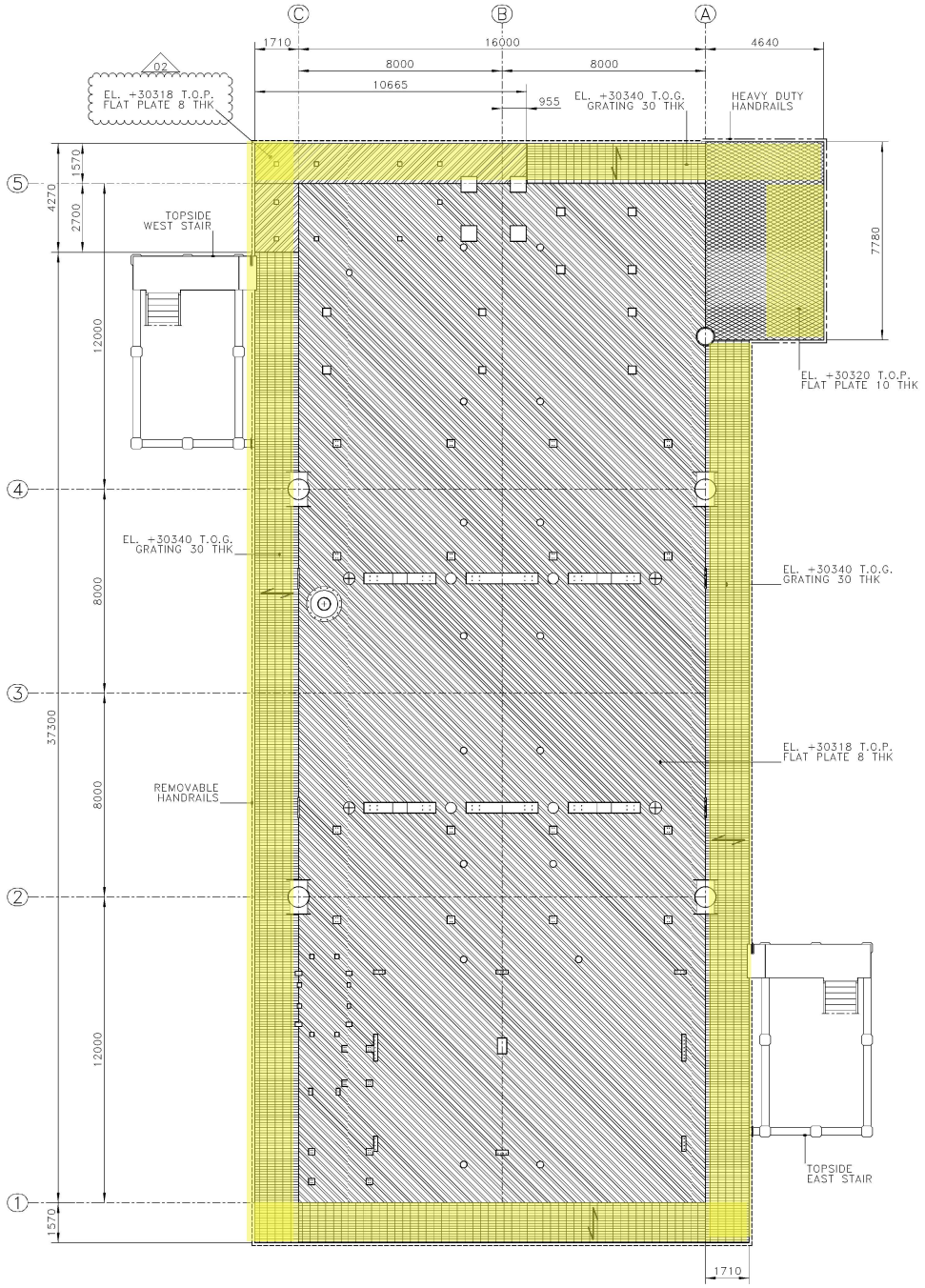


KEY ELEVATION

SCALE 1:250

LEGEND

- FLAT PLATE – 8 THK
- FLAT PLATE – 10 THK
- GRATING – MESH 30 x 50 BEARING PLATE 30 x 5
- GRATING – BEARING BAR DIRECTION
- FIXED HANDRAILS
- REMOVABLE HANDRAILS
- HEAVY DUTY HANDRAILS



PLAN AT EL.+30310 TOS

SCALE 1:100

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

MATERIALS

ITEM IDENTIFICATION	MATERIAL DESIGNATION
PL 30 THK	DCS-IV-235-10_GRATING
PL 8 THK	DCS-IV-355-10
PL 10 THK	DCS-IV-355-10

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90025	DRAWING LIST
123A90-DDL-ST-DD-90026	GENERAL NOTES
123A90-DDL-ST-DD-90027	WELDING GENERAL NOTES
123A90-DDL-ST-DD-90037	STANDARD DRAWINGS – HANDRAILS
123A90-DDL-ST-DD-90038	HEAVY DUTY HANDRAILS
123A90-DDL-ST-DD-90039	PLATING AND GRATING TYPICAL DETAILS
123A90-DDL-ST-DD-90050	PRIMARY STEEL – PLAN AT EL. +30310 TOS
123A90-DDL-ST-DD-90058	SEC. STEEL – PLAN AT EL +30310 TOS – SH. 1
123A90-DDL-ST-DA-90070	TOPSIDE – UPPER DECK – EQUIPMENT SUPPORTS
123A90-DDL-ST-DD-90075	DRAIN SYSTEM – PLAN AT EL +30310 TOS
123A90-DDL-ST-DD-90105	SEC. STEEL – PLAN AT EL +30310 TOS – SH. 2

tecon

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	22/08/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
01	02/07/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/12/23	SGR	AB	DLS	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
TOPSIDE – FLOORING
PLAN AT EL. +30310 T.O.S.

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN S.GRIFFINI	CHECKED A.BALZAROTTI	APPROVED D.LO STERZO	DATE 22/08/24
A1	DRAWING NO. 123A90-DDL-ST-DD-90060	SHEET 001	REV. 02

File Name : 123A90-DDL-ST-DD-90060_02.dwg

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004251

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002380	1.4 Discipline	Building
1.2 Item	UPPER_DECK	Upper Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Access platform to vessels are missing (north side).

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-09
Signature:

5 - CLEARANCE CHECK

Refer to punch: C30003397 ÷ C30003402.

Name: Lorenzo Novaga
Date: 2025-04-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-09
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004252

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002380	1.4 Discipline	Building
1.2 Item	UPPER_DECK	Upper Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The vertical stairs highlighted in the layout attached are not installed as per drawings.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Stairs installed.

Name: Raffaele Degli Esposti
Date: 2025-07-22
Signature:

5 - CLEARANCE CHECK

Done

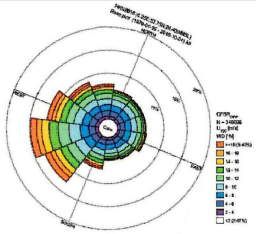
Name: Raffaele Degli Esposti
Date: 2025-07-22
Signature:

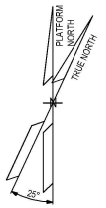
6- CLEARANCE APPROVAL

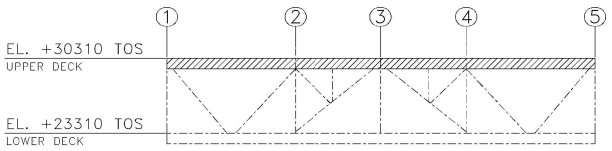
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Date: 2025-07-22
Signature:

DRAWING NO. 123A90-DDL-ST-DD-90060

REV. 02





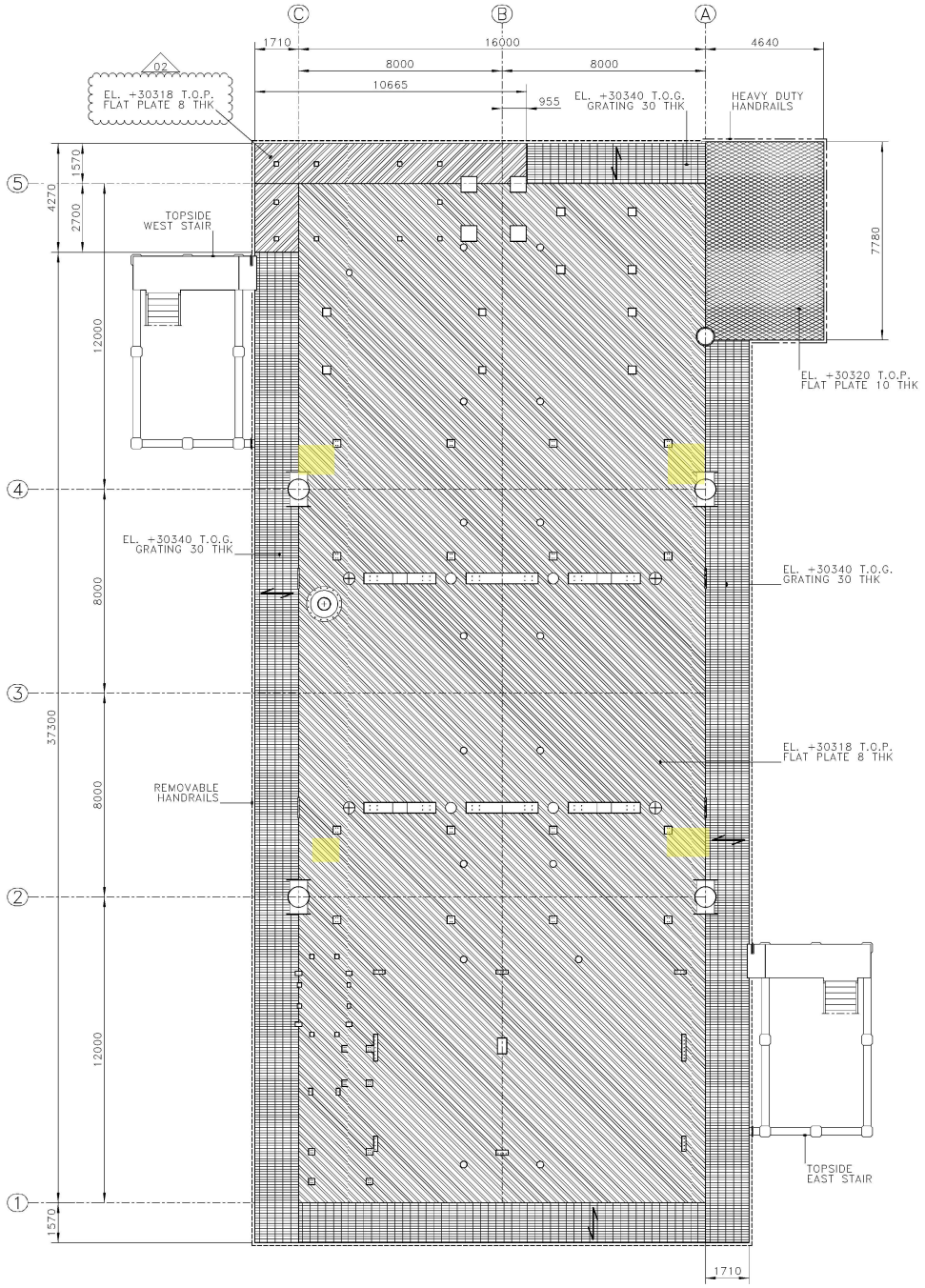


KEY ELEVATION

SCALE 1:250

LEGEND

- FLAT PLATE – 8 THK
- FLAT PLATE – 10 THK
- GRATING – MESH 30 x 50 BEARING PLATE 30 x 5
- GRATING – BEARING BAR DIRECTION
- FIXED HANDRAILS
- REMOVABLE HANDRAILS
- HEAVY DUTY HANDRAILS



PLAN AT EL.+30310 TOS

SCALE 1:100

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

MATERIALS

ITEM IDENTIFICATION	MATERIAL DESIGNATION
PL 30 THK	DCS-IV-235-10_GRATING
PL 8 THK	DCS-IV-355-10
PL 10 THK	DCS-IV-355-10

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90025	DRAWING LIST
123A90-DDL-ST-DD-90026	GENERAL NOTES
123A90-DDL-ST-DD-90027	WELDING GENERAL NOTES
123A90-DDL-ST-DD-90037	STANDARD DRAWINGS – HANDRAILS
123A90-DDL-ST-DD-90038	HEAVY DUTY HANDRAILS
123A90-DDL-ST-DD-90039	PLATING AND GRATING TYPICAL DETAILS
123A90-DDL-ST-DD-90050	PRIMARY STEEL – PLAN AT EL. +30310 TOS
123A90-DDL-ST-DD-90058	SEC. STEEL – PLAN AT EL +30310 TOS – SH. 1
123A90-DDL-ST-DA-90070	TOPSIDE – UPPER DECK – EQUIPMENT SUPPORTS
123A90-DDL-ST-DD-90075	DRAIN SYSTEM – PLAN AT EL +30310 TOS
123A90-DDL-ST-DD-90105	SEC. STEEL – PLAN AT EL +30310 TOS – SH. 2

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	22/08/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
01	02/07/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/12/23	SGR	AB	DLS	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
TOPSIDE – FLOORING
PLAN AT EL. +30310 T.O.S.

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:100

DRAWN S.GRIFFINI | CHECKED A.BALZAROTTI | APPROVED D.LO STERZO | DATE 22/08/24

A1 | DRAWING NO. 123A90-DDL-ST-DD-90060 | SHEET 001 | REV. 02

File Name : 123A90-DDL-ST-DD-90060_02.dwg

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004253

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002380	1.4 Discipline	Building
1.2 Item	UPPER_DECK	Upper Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Foot plate of the handrails in Access platform missing the third rivet.
North side of the Access platform missing corner joints.
The access gates are missing, only one S/E side is installed.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Done

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-30
Signature:








NAZZA

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004254

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002379	1.4 Discipline	Building
1.2 Item	LOWER_DECK	Lower Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

the part highlighted in YELLOW in the attachment due to the rubber protection mats will be inspected before the sail away after installing the safety grip strips.
The part highlighteted in BLUE are removable grating panel, the mesh of the grating must be perpendicular to that of all other gratings (doc 123A90-DDL-DD-90059).
Fixing system (min 4 per m^2) are missing in the gratings of pumps area.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Completed

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Done

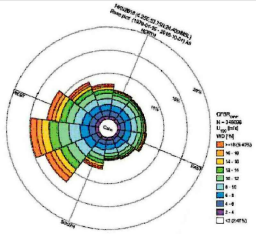
Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

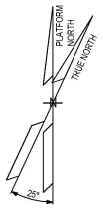
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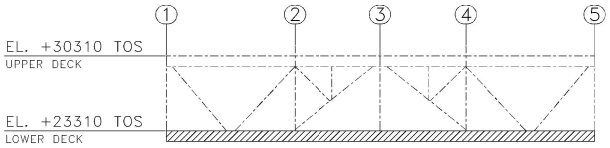
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REV. 01



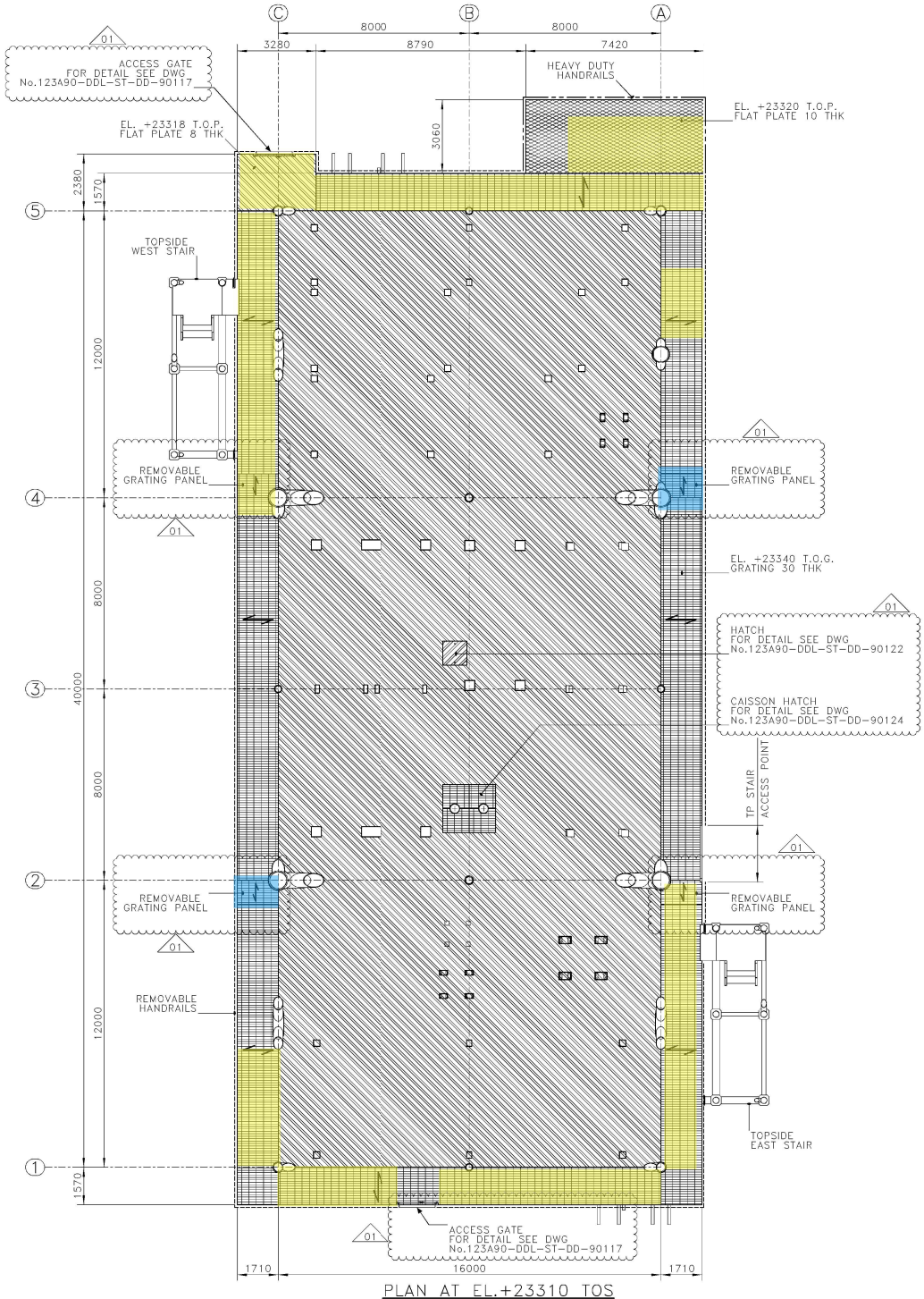




KEY ELEVATION

SCALE 1:250

LEGEND	
	FLAT PLATE – 8 THK
	FLAT PLATE – 10 THK
	GRATING – MESH 30 x 50 BEARING PLATE 30 x 5
	GRATING – BEARING BAR DIRECTION
	FIXED HANDRAILS
	REMOVABLE HANDRAILS
	HEAVY DUTY HANDRAILS



PLAN AT EL.+23310 TOS

SCALE 1:100

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

MATERIALS

ITEM IDENTIFICATION	MATERIAL DESIGNATION
PL 30 THK	DCS-IV-235-10_GRATING
PL 8 THK	DCS-IV-355-10
PL 10 THK	DCS-IV-355-10

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90025	DRAWING LIST
123A90-DDL-ST-DD-90026	GENERAL NOTES
123A90-DDL-ST-DD-90027	WELDING GENERAL NOTES
123A90-DDL-ST-DD-90037	STANDARD DRAWINGS – HANDRAILS
123A90-DDL-ST-DD-90038	HEAVY DUTY HANDRAILS
123A90-DDL-ST-DD-90039	PLATING AND GRATING TYPICAL DETAILS
123A90-DDL-ST-DD-90049	PRIMARY STEEL – PLAN AT EL. +23310 TOS
123A90-DDL-ST-DD-90057	SEC. STEEL – PLAN AT EL +23310 TOS – SH. 1
123A90-DDL-ST-DA-90069	TOPSIDE – LOWER DECK – EQUIPMENT SUPPORTS
123A90-DDL-ST-DD-90104	SEC. STEEL – PLAN AT EL +23310 TOS – SH. 2

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/07/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/12/23	SGR	AB	DLS	ISSUE FOR REVIEW (IFR)

TECON

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
TOPSIDE – FLOORING
PLAN AT EL. +23310 T.O.S.

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:100
DRAWN S.GRIFFINI	CHECKED A.BALZAROTTI	APPROVED D.LO STERZO		DATE 02/07/24
A1	DRAWING NO. 123A90-DDL-ST-DD-90059		SHEET 001	REV. 01

File Name : 123A90-DDL-ST-DD-90059_01.dwg

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004255

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002379	1.4 Discipline	Building
1.2 Item	LOWER_DECK	Lower Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Some handrails are not installed. (see document attached)

Name: Lorenzo Novaga

Date: 2025-03-20

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-20
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Installed

Name: Raffaele Degli Esposti

Date: 2025-07-24

Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti

Date: 2025-07-24

Signature:

6- CLEARANCE APPROVAL

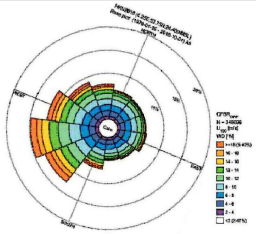
Name:

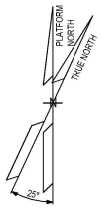
Date: 2025-07-24

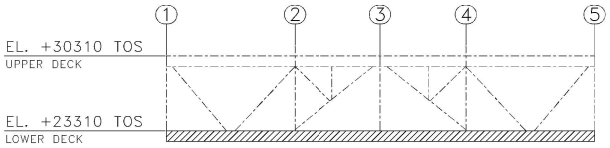
Signature:

DRAWING NO. 123A90-DDL-ST-DD-90059

REV. 01



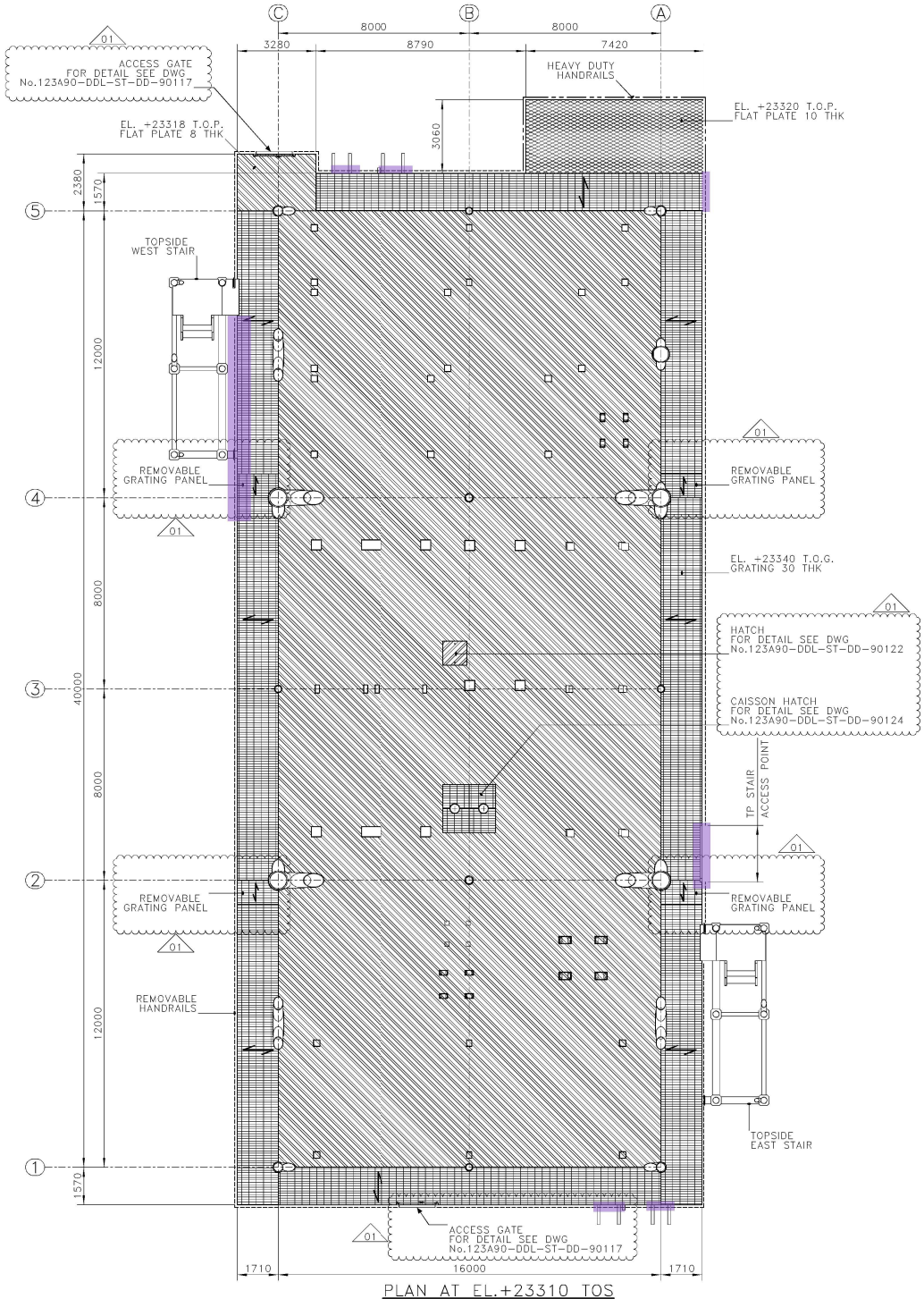




KEY ELEVATION

SCALE 1:250

LEGEND	
	FLAT PLATE – 8 THK
	FLAT PLATE – 10 THK
	GRATING – MESH 30 x 50 BEARING PLATE 30 x 5
	GRATING – BEARING BAR DIRECTION
	FIXED HANDRAILS
	REMOVABLE HANDRAILS
	HEAVY DUTY HANDRAILS



PLAN AT EL.+23310 TOS

SCALE 1:100

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

MATERIALS

ITEM IDENTIFICATION	MATERIAL DESIGNATION
PL 30 THK	DCS-IV-235-10_GRATING
PL 8 THK	DCS-IV-355-10
PL 10 THK	DCS-IV-355-10

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90025	DRAWING LIST
123A90-DDL-ST-DD-90026	GENERAL NOTES
123A90-DDL-ST-DD-90027	WELDING GENERAL NOTES
123A90-DDL-ST-DD-90037	STANDARD DRAWINGS – HANDRAILS
123A90-DDL-ST-DD-90038	HEAVY DUTY HANDRAILS
123A90-DDL-ST-DD-90039	PLATING AND GRATING TYPICAL DETAILS
123A90-DDL-ST-DD-90049	PRIMARY STEEL – PLAN AT EL. +23310 TOS
123A90-DDL-ST-DD-90057	SEC. STEEL – PLAN AT EL +23310 TOS – SH. 1
123A90-DDL-ST-DA-90069	TOPSIDE – LOWER DECK – EQUIPMENT SUPPORTS
123A90-DDL-ST-DD-90104	SEC. STEEL – PLAN AT EL +23310 TOS – SH. 2

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/07/24	SGR	AB	DLS	ACCEPTED FOR CONSTRUCTION (AFC)
00	01/12/23	SGR	AB	DLS	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
TOPSIDE – FLOORING
PLAN AT EL. +23310 T.O.S.

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN S.GRIFFINI	CHECKED A.BALZAROTTI	APPROVED D.LO STERZO	DATE 02/07/24

A1	DRAWING NO. 123A90-DDL-ST-DD-90059	SHEET 001	REV. 01

File Name : 123A90-DDL-ST-DD-90059_01.dwg

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004266

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002382	1.4 Discipline	Building
1.2 Item	LOWER_DECK	Lower Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The finish of the lower deck paint will be done before the sail away.

Name: Lorenzo Novaga
Date: 2025-03-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Done

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-30
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004267

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002383	1.4 Discipline	Building
1.2 Item	UPPER_DECK	Upper Deck Structures	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The finish of the upper deck paint will be done before the sail away.

Name: Lorenzo Novaga
Date: 2025-03-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Completed

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-30
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004358

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001891	1.4 Discipline	Electrical
1.2 Item	E-MCT-U13	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

The layout (123A90-DDL-EL-DL-20114) shows the wrong tag E-MCT-J13. instead of E-MCT-U13 .

Name: Giovanni Tangianu
Date: 2025-05-05
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-05-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

AS-BUILT ISSUED

Name: Raffaele Degli Esposti
Date: 2025-10-17
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-10-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-10-17
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000679

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002263	1.4 Discipline	Electrical
1.2 Item	CABLE_TRAY_LD_ELE_LV	Cable Tray Lower Deck - Electrical (Low Voltage)	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.

Name: Eleonora Carotenuto

Date: 2024-11-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000680

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002269	1.4 Discipline	Instrumental
1.2 Item	CABLE_TRAY_LD_INS	Cable Tray Lower Deck - Instrumental	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.

Name: Eleonora Carotenuto

Date: 2024-11-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000681

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002271	1.4 Discipline	Electrical
1.2 Item	CABLE_TRAY_UD_ELE_LV	Cable Tray Upper Deck - Electrical (Low Voltage)	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.

Name: Eleonora Carotenuto

Date: 2024-11-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000682

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002275	1.4 Discipline	Instrumental
1.2 Item	CABLE_TRAY_UD_INS	Cable Tray Upper Deck - Instrumental	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

General point valid for all cables inside Cable tray. Plastic cable ties to be relaced.

Name: Eleonora Carotenuto

Date: 2024-11-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Eleonora Carotenuto
3.4 Activity code	MC Mechanical Completion	Date	2024-11-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001825

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001882	1.4 Discipline	Electrical
1.2 Item	E-MCT-U04	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing Traffolyte tag both sides

Name: Paolo Schintu

Date: 2024-12-13

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002356

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002262	1.4 Discipline	Electrical
1.2 Item	CABLE_TRAY_LD_ELE_LV	Cable Tray Lower Deck - Electrical (Low Voltage)	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing L150-101-LVT-105

Name: Paolo Schintu

Date: 2025-01-04

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-04
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003154

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002012	1.4 Discipline	Instrumental
1.2 Item	I-MCT-U07	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003155

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001889	1.4 Discipline	Electrical
1.2 Item	E-MCT-U11	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003157

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001891	1.4 Discipline	Electrical
1.2 Item	E-MCT-U13	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003158

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001892	1.4 Discipline	Electrical
1.2 Item	E-MCT-U14	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003159

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001890	1.4 Discipline	Electrical
1.2 Item	E-MCT-U12	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003196

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002013	1.4 Discipline	Instrumental
1.2 Item	I-MCT-U08	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

Missing traffolyte tag both sides of MCT

Name: Paolo Schintu

Date: 2025-01-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004017

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001910	1.4 Discipline	Instrumental
1.2 Item	I-MCT-U04	Multi Cable Transit	
1.3 Subsystem	90-05	Areas	

2 - OBSERVATION

MCT composition is not in compliance with the required standards for Hazardous Areas Classification. See attached photo

Name: Paolo Schintu

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Paolo Schintu
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


I-MCT-U04

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

NOT APPLICABLE

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC & discipline : E

Electrical	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_LD_ELE_HV	Cable Tray Lower Deck - Electrical (High Voltage)	ONSHORE	C10002264	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002265	CPX30B	100	2025-03-01	RFC 1
CABLE_TRAY_LD_ELE_LV	Cable Tray Lower Deck - Electrical (Low Voltage)	ONSHORE	C10002262	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002263	CPX30B	100	2025-02-24	RFC 1
CABLE_TRAY_LD_ELE_MV	Cable Tray Lower Deck - Electrical (Medium Voltage)	ONSHORE	C10002266	CPX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002267	CPX30B	100	2025-02-20	RFC 1
CABLE_TRAY_TP_ELE_HV	Cable Tray Transition piece - Electrical (High Voltage)	OFFSHORE	C10002258	CPX30A	0	-	-
		OFFSHORE	C10002259	CPX30B	0	-	-
CABLE_TRAY_TP_ELE_LV	Cable Tray Transition piece - Electrical (Low Voltage)	ONSHORE	C10002256	CPX30A	100	2025-05-06	RFC 1
		ONSHORE	C10002257	CPX30B	100	2025-05-09	RFC 1
CABLE_TRAY_UD_ELE_LV	Cable Tray Upper Deck - Electrical (Low Voltage)	ONSHORE	C10002270	CPX30A	100	2025-02-24	RFC 1
		ONSHORE	C10002271	CPX30B	100	2025-03-07	RFC 1
CABLE_TRAY_UD_ELE_MV	Cable Tray Upper Deck - Electrical (Medium Voltage)	ONSHORE	C10002272	CPX30A	100	2025-03-05	RFC 1
		ONSHORE	C10002273	CPX30B	100	2025-03-07	RFC 1
E-MCT-T01	Multi Cable Transit	ONSHORE	C10001876	CPX29	100	2025-05-07	-
		OFFSHORE	C10004923	CPX29	0	-	-
E-MCT-T02	Multi Cable Transit	ONSHORE	C10001877	CPX29	100	2025-05-08	-
		OFFSHORE	C10004924	CPX29	0	-	-
E-MCT-T03	Multi Cable Transit	ONSHORE	C10001878	CPX29	100	2025-05-07	-
		OFFSHORE	C10004925	CPX29	0	-	-
E-MCT-U02	Multi Cable Transit	ONSHORE	C10001880	CPX29	100	2025-02-10	RFC 1
E-MCT-U03	Multi Cable Transit	ONSHORE	C10001881	CPX29	100	2025-01-30	RFC 1
E-MCT-U04	Multi Cable Transit	ONSHORE	C10001882	CPX29	100	2024-12-13	RFC 1
E-MCT-U05	Multi Cable Transit	ONSHORE	C10001883	CPX29	100	2025-01-29	RFC 1
E-MCT-U06	Multi Cable Transit	ONSHORE	C10001884	CPX29	100	2025-01-29	RFC 1
E-MCT-U07	Multi Cable Transit	ONSHORE	C10001885	CPX29	100	2025-02-06	RFC 1
E-MCT-U08	Multi Cable Transit	ONSHORE	C10001886	CPX29	100	2025-01-30	RFC 1
E-MCT-U09	Multi Cable Transit	ONSHORE	C10001887	CPX29	100	2025-02-06	RFC 1
E-MCT-U10	Multi Cable Transit	ONSHORE	C10001888	CPX29	100	2025-01-29	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC & discipline : E

Electrical	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
E-MCT-U11	Multi Cable Transit	ONSHORE	C10001889	CPX29	100	2025-01-22	RFC 1
E-MCT-U12	Multi Cable Transit	ONSHORE	C10001890	CPX29	100	2025-01-22	RFC 1
E-MCT-U13	Multi Cable Transit	ONSHORE	C10001891	CPX29	100	2025-01-22	RFC 1
E-MCT-U14	Multi Cable Transit	ONSHORE	C10001892	CPX29	100	2025-01-22	RFC 1
E-MCT-U15	Multi Cable Transit	ONSHORE	C10001893	CPX29	100	2025-03-24	RFC 1
E-MCT-U16	Multi Cable Transit	ONSHORE	C10004490	CPX29	100	2025-01-30	RFC 1

ROSETTI MARINO

CROSSWIND

ITEM	Tag	E-MCT-T01	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10001876		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

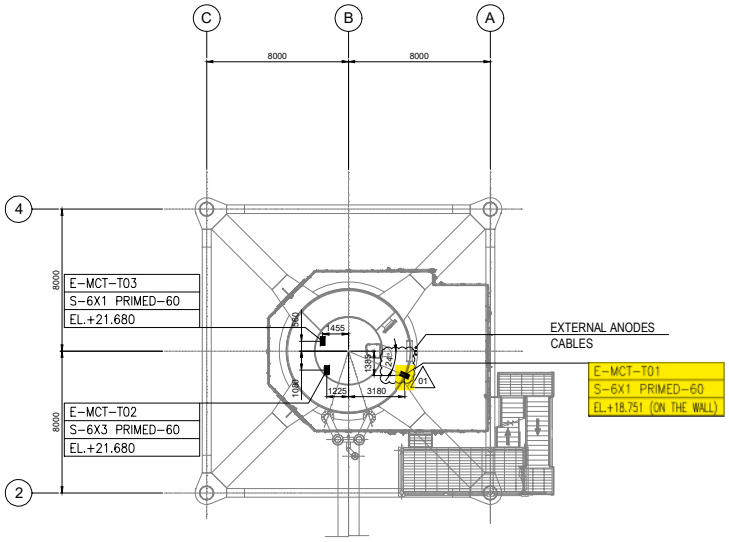
1	Check that MCT's conforms to revision and specification.	PL
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note : The cables will be laid OFFSHORE Activity..

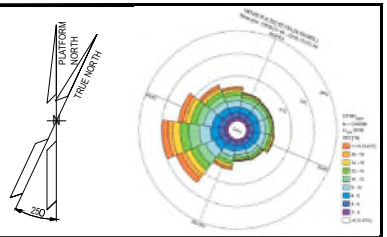
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-07	
Signature	Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:37:25.837Z	Digitaly signed by Giovanni Tangianu 2025-05-07T07:05:22.666Z	

DRAWING NO. 123A90-DDL-EL-DL-20116

REV. 01



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



NOTES

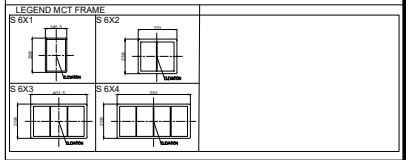
GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

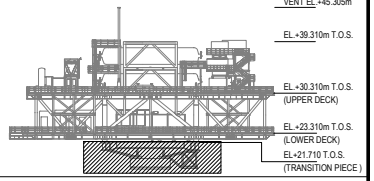
LEGEND



MULTI CABLE TRANSIT
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70071	PLOT PLAN-BELOW LOWER DECK
123A90-DDL-EL-DL-20102	ELECTRICAL EQUIPMENT LAYOUT - STAIR TOWERS
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20116
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
BELOW LOWER DECK

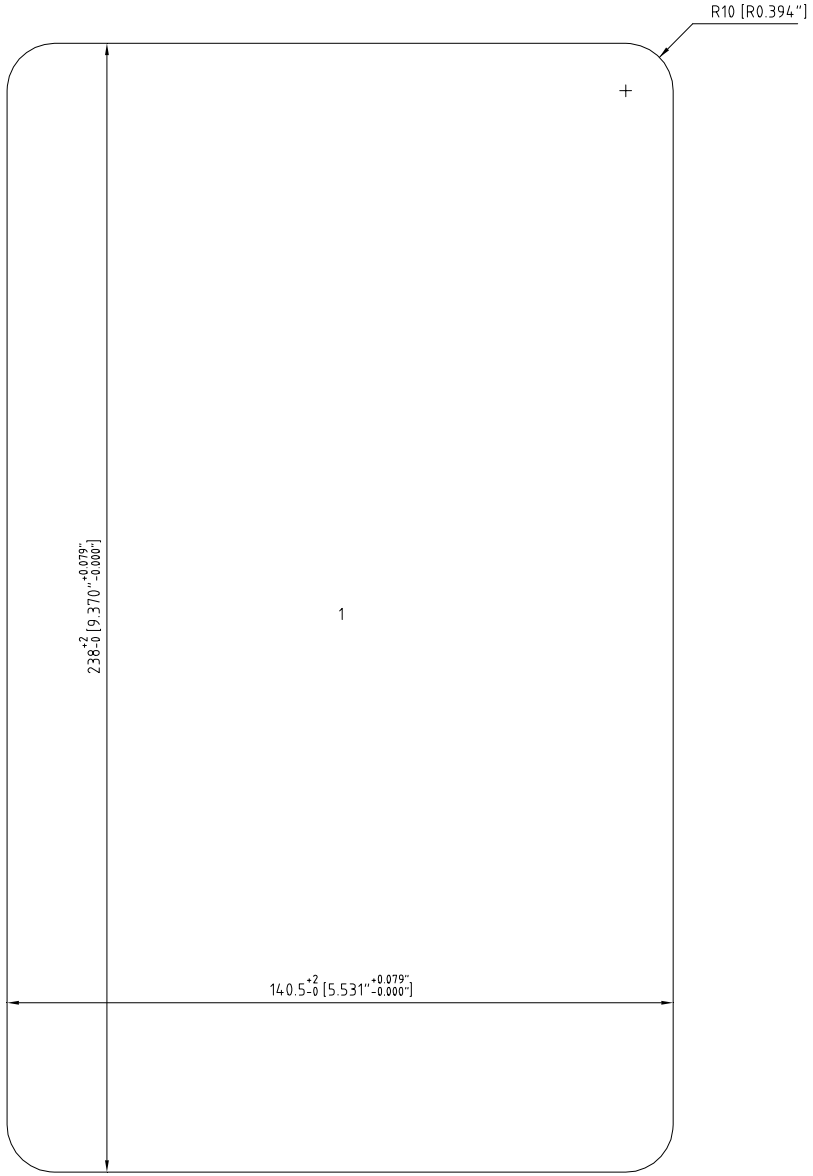
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20116	SHEET 001 REV. 01

File Name : 123A90-DDL-EL-DL-20116

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS	Location/ Sublocation	TotWeight: 7.1 [15.61]
Roxtec	Format: NTS		Transit name: E-MCT-T01		Sheet No: 1/3
Client			Drawing number		Rev

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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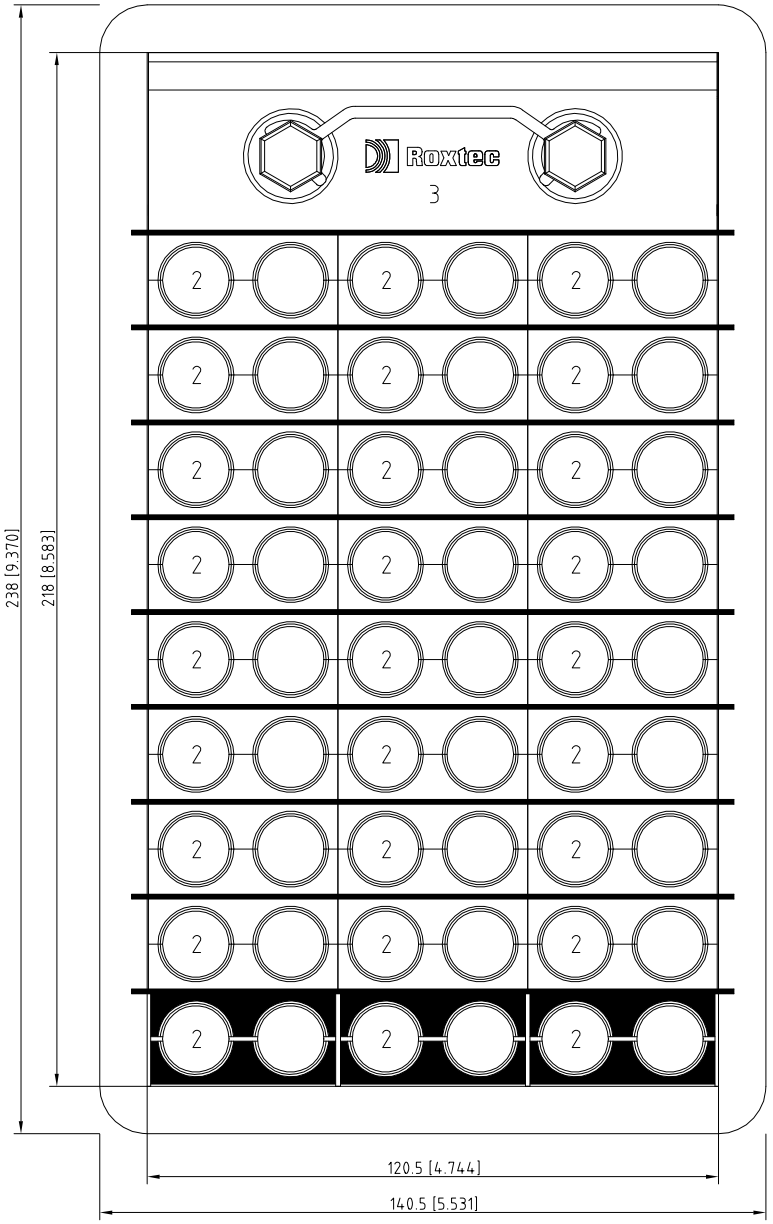
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 140.5x238 [5.531"x9.370"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	9	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
3	1	Wedge 120 galv	ARW0001201018	0.8 [1.76]
2	27	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
1	1	S 6x1 PRIMED	S006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	7.1 [15.61]
Roxtec	Format: NTS		Transit name: E-MCT-T01	Sheet No: 2/3
	Client		Drawing number	Rev

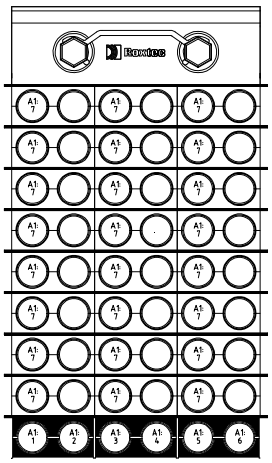
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

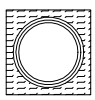
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

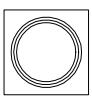
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

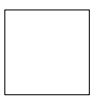
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A1:7						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	7W3.2	ICCP External Reference Cell	1C x 16	Power	12.5 [0.492"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5	7W3.1	ICCP External Anode	1C x 16	Power	12.5 [0.492"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:4	7W3	ICCP External Anode	1C x 16	Power	12.5 [0.492"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3	7W2	ICCP External Reference Cell	1C x 16	Power	12.5 [0.492"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:2	5W3	ICCP External Reference Cell	2C x 2.5	Control	11.8 [0.465"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:1	5W2.2	ICCP External Reference Cell	2C x 2.5	Control	11.8 [0.465"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation	TotWeight: 7.1 [15.61]
Roxtec	Format: NTS		Transit name: E-MCT-T01	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO

CROSSWIND

ITEM	Tag	E-MCT-T02	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10001877		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

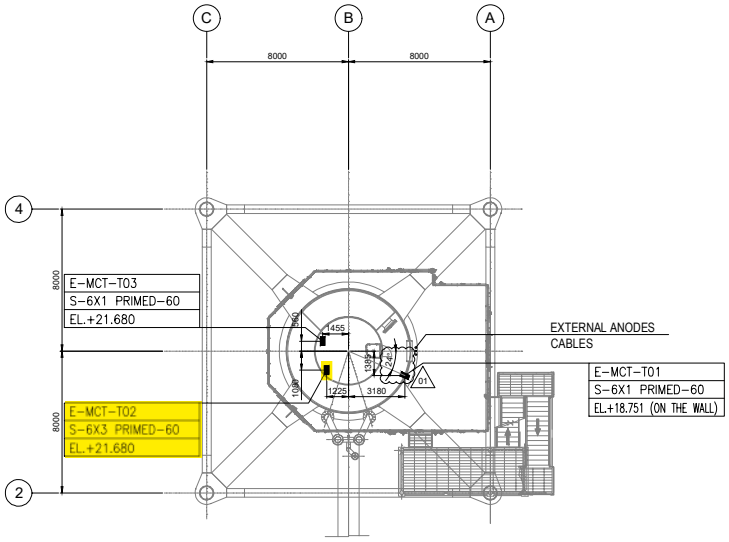
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

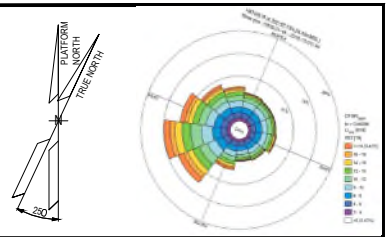
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-08	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:37:56.824Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-05-08T14:20:40.404Z	

DRAWING NO. 123A90-DDL-EL-DL-20116

REV. 01



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



NOTES

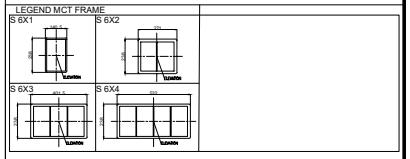
GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

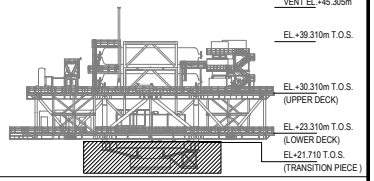
NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND



KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70071	PLOT PLAN-BELOW LOWER DECK
123A90-DDL-EL-DL-20102	ELECTRICAL EQUIPMENT LAYOUT - STAIR TOWERS
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20116
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20116	SHEET 001 REV. 01

File Name : 123A90-DDL-EL-DL-20116

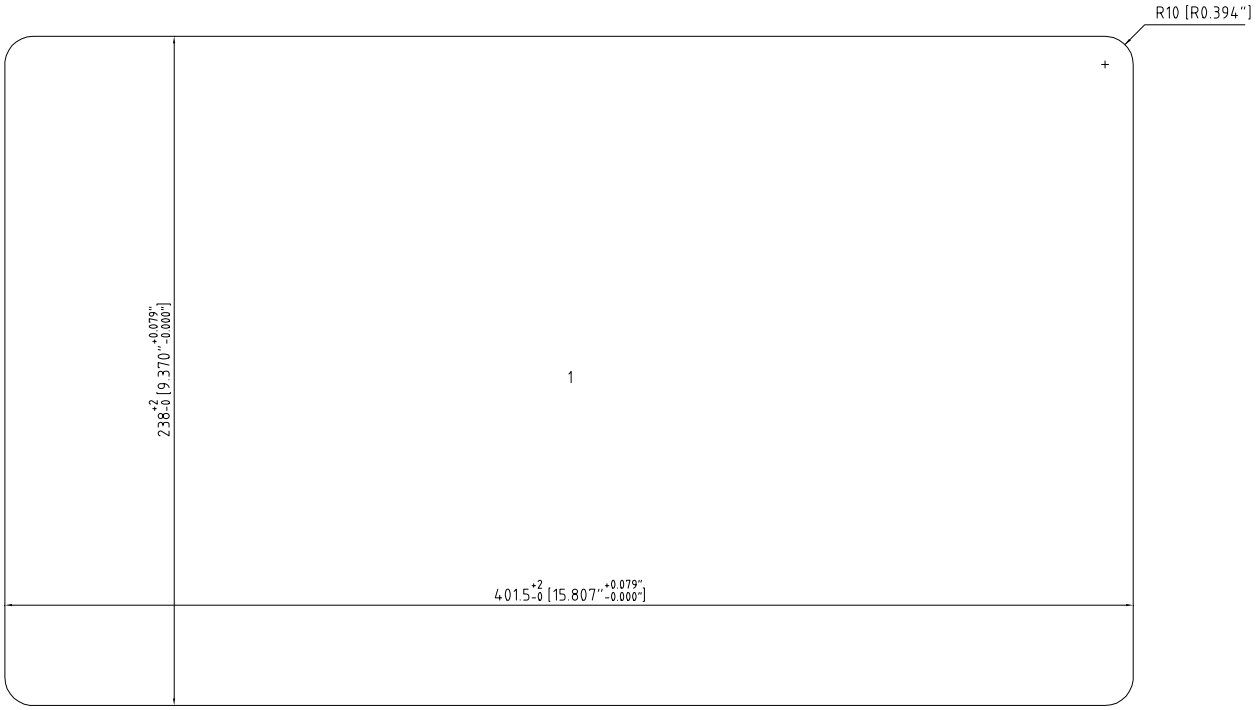
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x3 PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	17.1 [37.79]
Roxtec	Format: NTS		Transit name: E-MCT-T02	Sheet No: 1/3
Client			Drawing number	Rev

CUTOUT TO FIT SOLUTION WELDING, 401.5x238 [15.807"x9.370"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

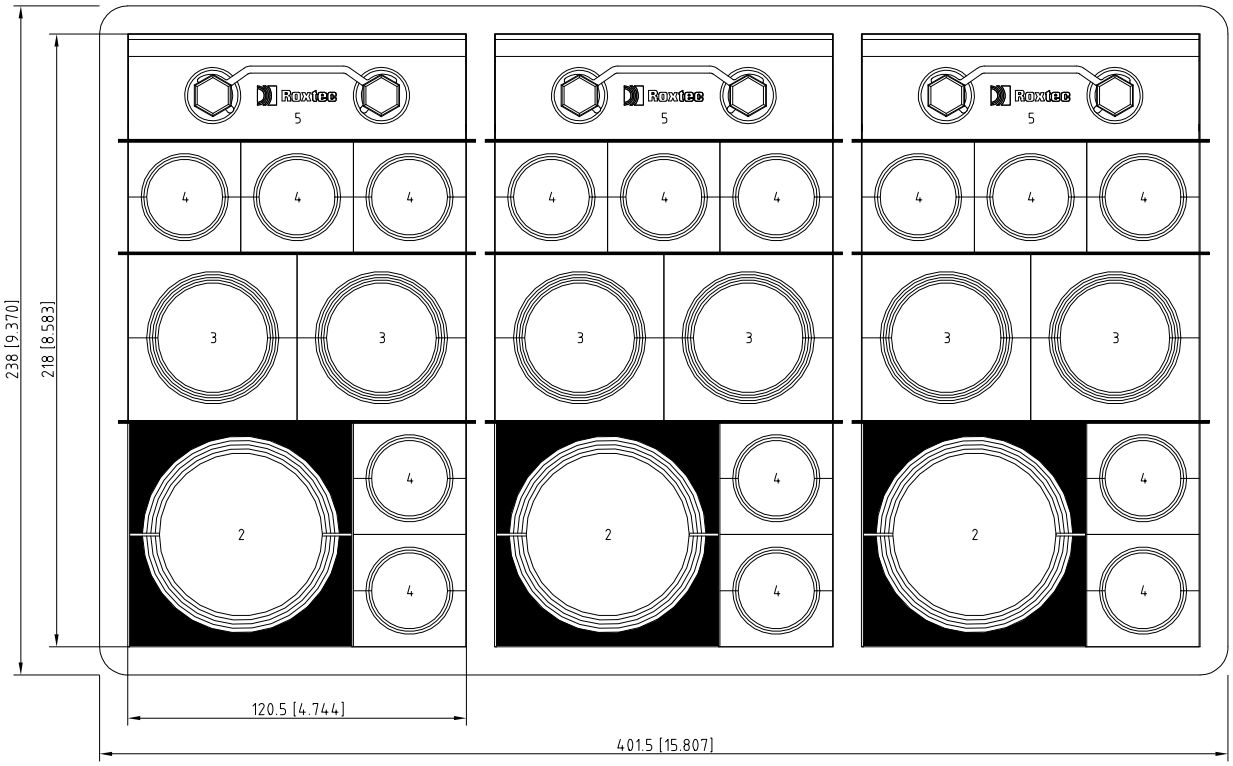
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1



Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
6	9	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	3	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	15	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
3	6	RM 60 28-54 [1.102"-2.126"]	RM00100601000	0.3 [0.73]
2	3	RM 80 48-71 [1.890"-2.795"]	5RM0000003350	0.6 [1.30]
1	1	S 6x3 PRIMED	S006000000312	7.9 [17.42]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	17.1 [37.79]
Roxtec	Format: NTS		Transit name: E-MCT-T02	Sheet No: 2/3
	Client		Drawing number	Rev

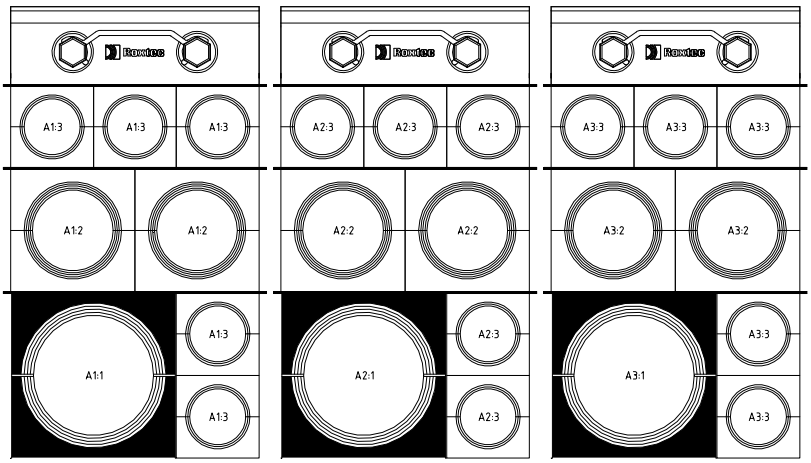
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 A2 A3

A1 A2 A3



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Note 1: The Diameter of 66kV cable (52mm) is from ELAND cable catalogue.

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A3:3						RM 40 21.5-34.5 [0.846"-1.358"]
A3:2						RM 60 28-54 [1.102"-2.126"]
A3:1	81001-CEH-L3	66kV GIS	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
A2:3						RM 40 21.5-34.5 [0.846"-1.358"]
A2:2						RM 60 28-54 [1.102"-2.126"]
A2:1	81001-CEH-L2	66kV GIS	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
A1:3						RM 40 21.5-34.5 [0.846"-1.358"]
A1:2						RM 60 28-54 [1.102"-2.126"]
A1:1	81001-CEH-L1	66kV GIS	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	17.1 [37.79]
Roxtec	Format: NTS		Transit name: E-MCT-T02	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-T03	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10001878		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

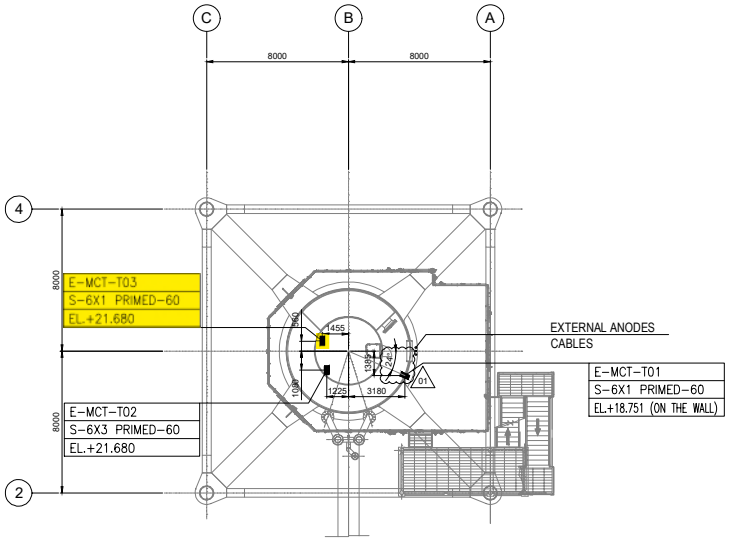
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note : The cables will be laid OFFSHORE Activity..

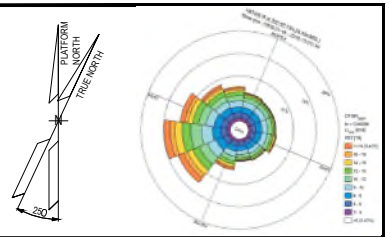
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:38:23.713Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-05-07T09:15:44.162Z	

DRAWING NO. 123A90-DDL-EL-DL-20116

REV. 01



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



NOTES

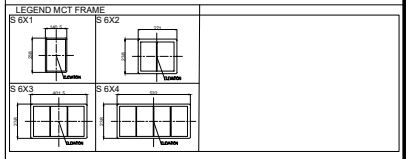
GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

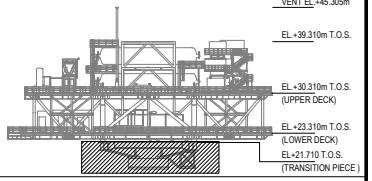
LEGEND



MULTI CABLE TRANSIT
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70071	PLOT PLAN-BELOW LOWER DECK
123A90-DDL-EL-DL-20102	ELECTRICAL EQUIPMENT LAYOUT - STAIR TOWERS
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20116
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20116	SHEET 001 REV. 01

File Name : 123A90-DDL-EL-DL-20116

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

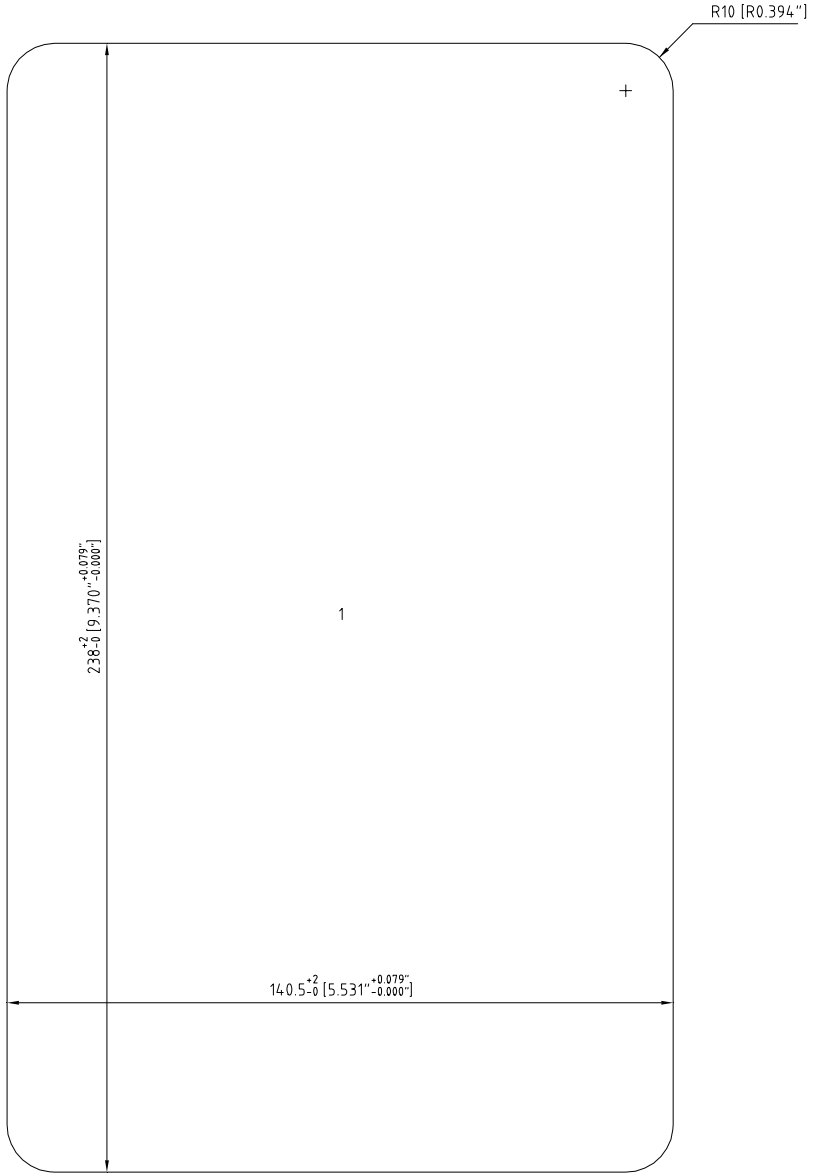
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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 PRIMED Solution: 1

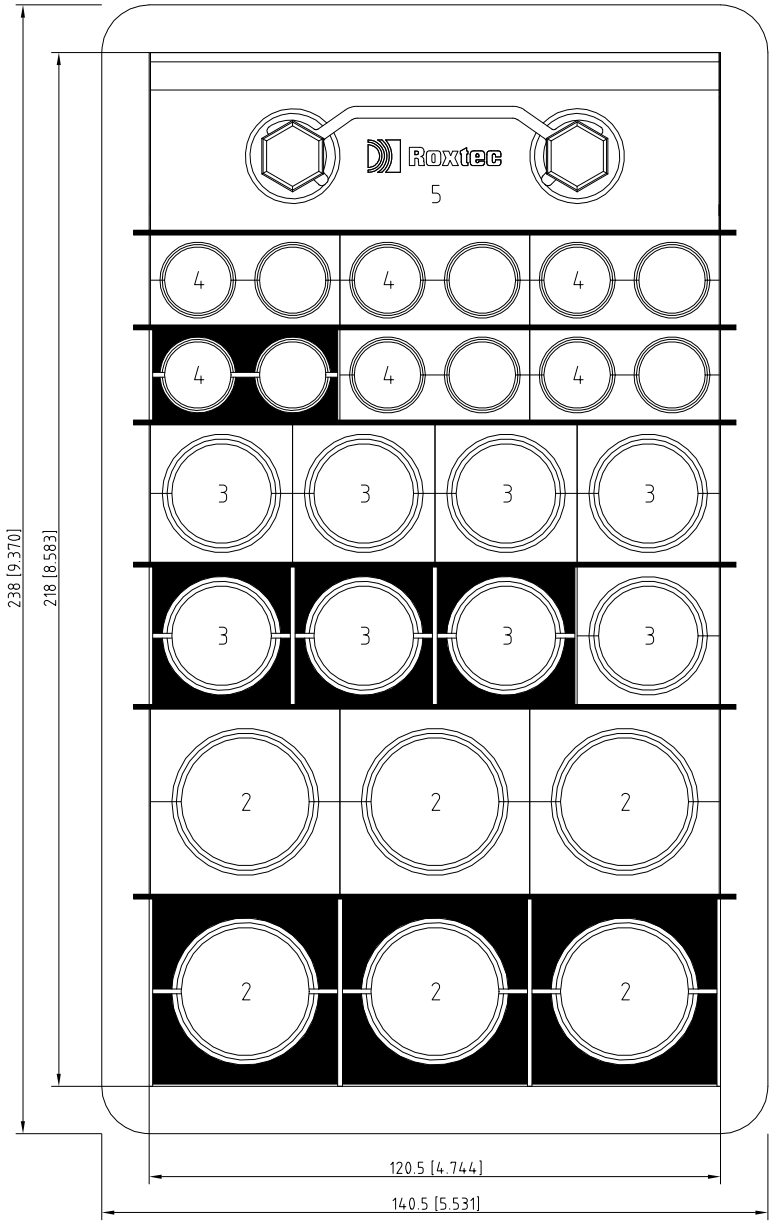
Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS	Location/ Sublocation	TotWeight: 6.8 [14.90]
Roxtec	Format: NTS		Transit name: E-MCT-T03		Sheet No: 1/3
Client			Drawing number		Rev

CUTOUT TO FIT SOLUTION WELDING, 140.5x238 [5.531"x9.370"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
6	6	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	1	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	6	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
3	8	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
2	6	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
1	1	S 6x1 PRIMED	S006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.8 [14.90]
Roxtec	Format: NTS		Transit name: E-MCT-T03	Sheet No: 2/3
	Client		Drawing number	Rev

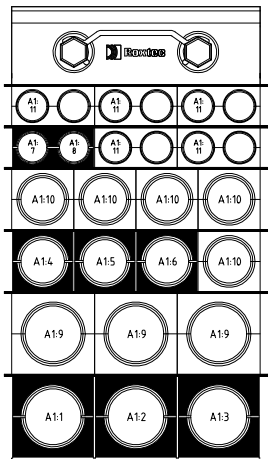
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:11						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:10						RM 30 10-25 [0.394"-0.984"]
A1:9						RM 40 21.5-34.5 [0.846"-1.358"]
A1:8	6W2.1	ICCP System	2C X 2.5	Control	9.5 [0.374"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	5W2.1	ICCP System	2C X 2.5	Control	9.5 [0.374"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	P-ELS-200N1-09-L2-01	Emergency Lighting Switch	4G4_E	Power	15.5 [0.610"]	RM 30 10-25 [0.394"-0.984"]
A1:5	7WD6.1	ICCP System	1C X 70	Power	17 [0.669"]	RM 30 10-25 [0.394"-0.984"]
A1:4	7WD3	ICCP System	1C X 70	Power	17 [0.669"]	RM 30 10-25 [0.394"-0.984"]
A1:3	83002-CEL-L3	LV SWBD 800/460V	1C X 300	Power	29.4 [1.157"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:2	83002-CEL-L2	LV SWBD 800/460V	1C X 300	Power	29.4 [1.157"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:1	83002-CEL-L1	LV SWBD 800/460V	1C X 300	Power	29.4 [1.157"]	RM 40 21.5-34.5 [0.846"-1.358"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.8 [14.90]
Roxtec	Format: NTS		Transit name: E-MCT-T03	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U02	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001880		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

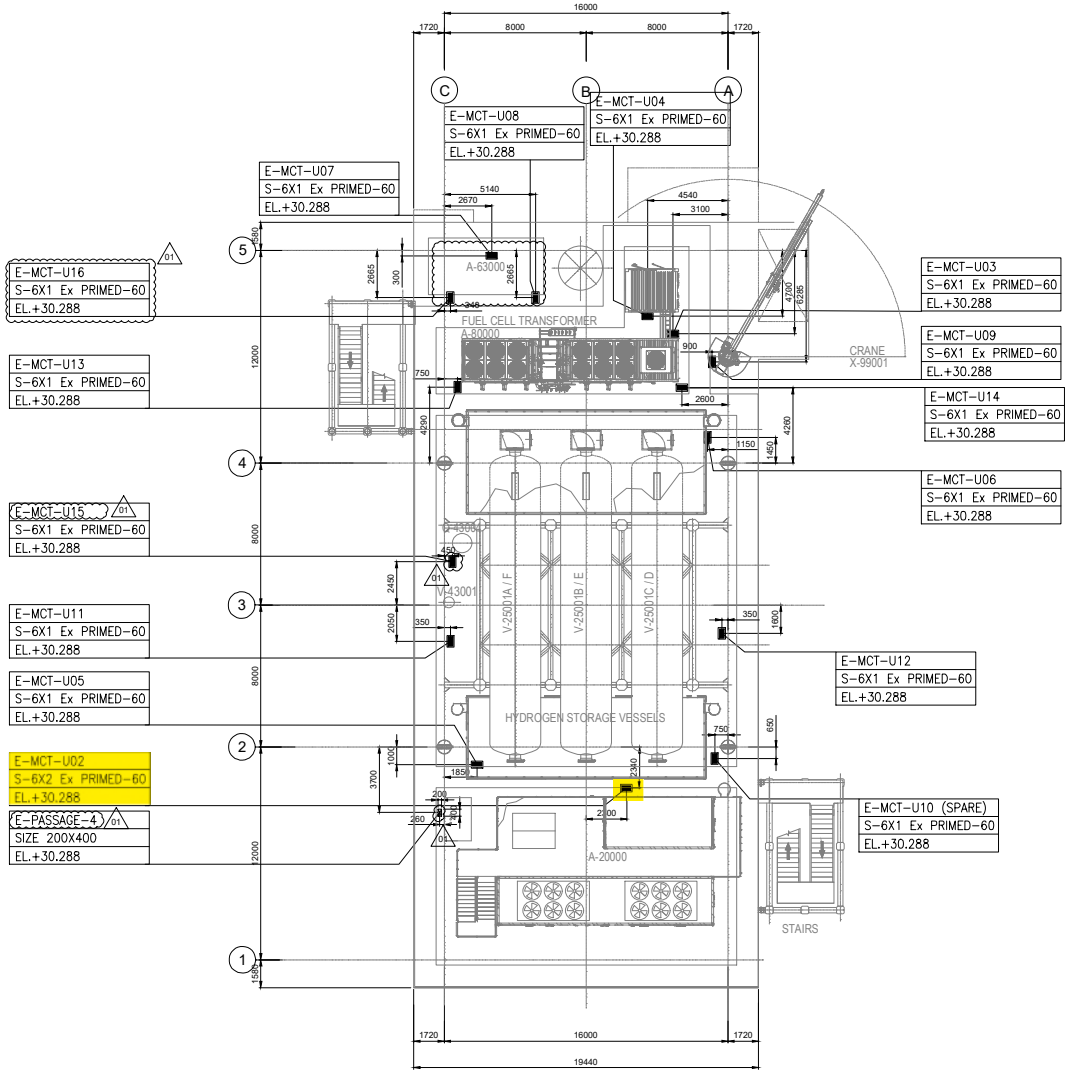
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

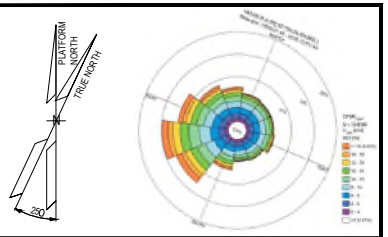
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Page 1/1			
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-02-10	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-30T10:18:36.437Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-10T11:24:11.486Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

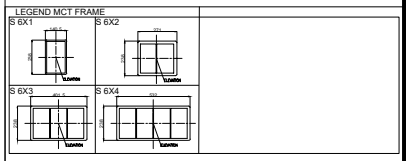
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

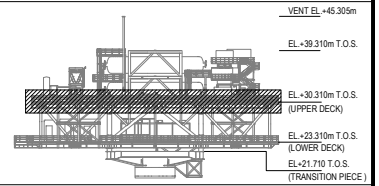
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG — TAGGING
SIZE–MATERIAL–DEPTH — TYPICAL
EL. — ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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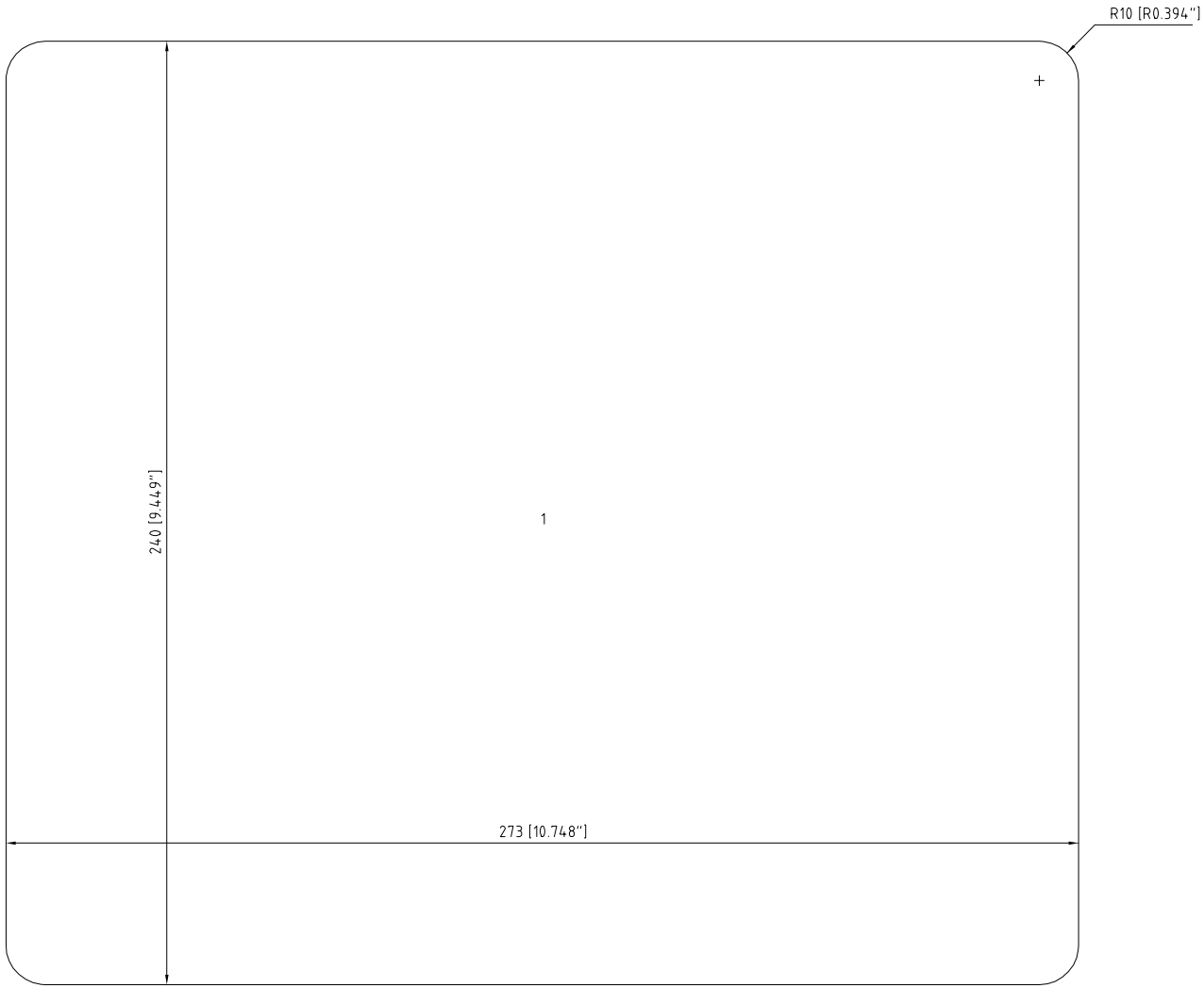
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1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x2 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12.1 [26.65]
Roxtec	Format: NTS		Transit name: E-MCT-U02	Sheet No: 1/3
Client			Drawing number	Rev

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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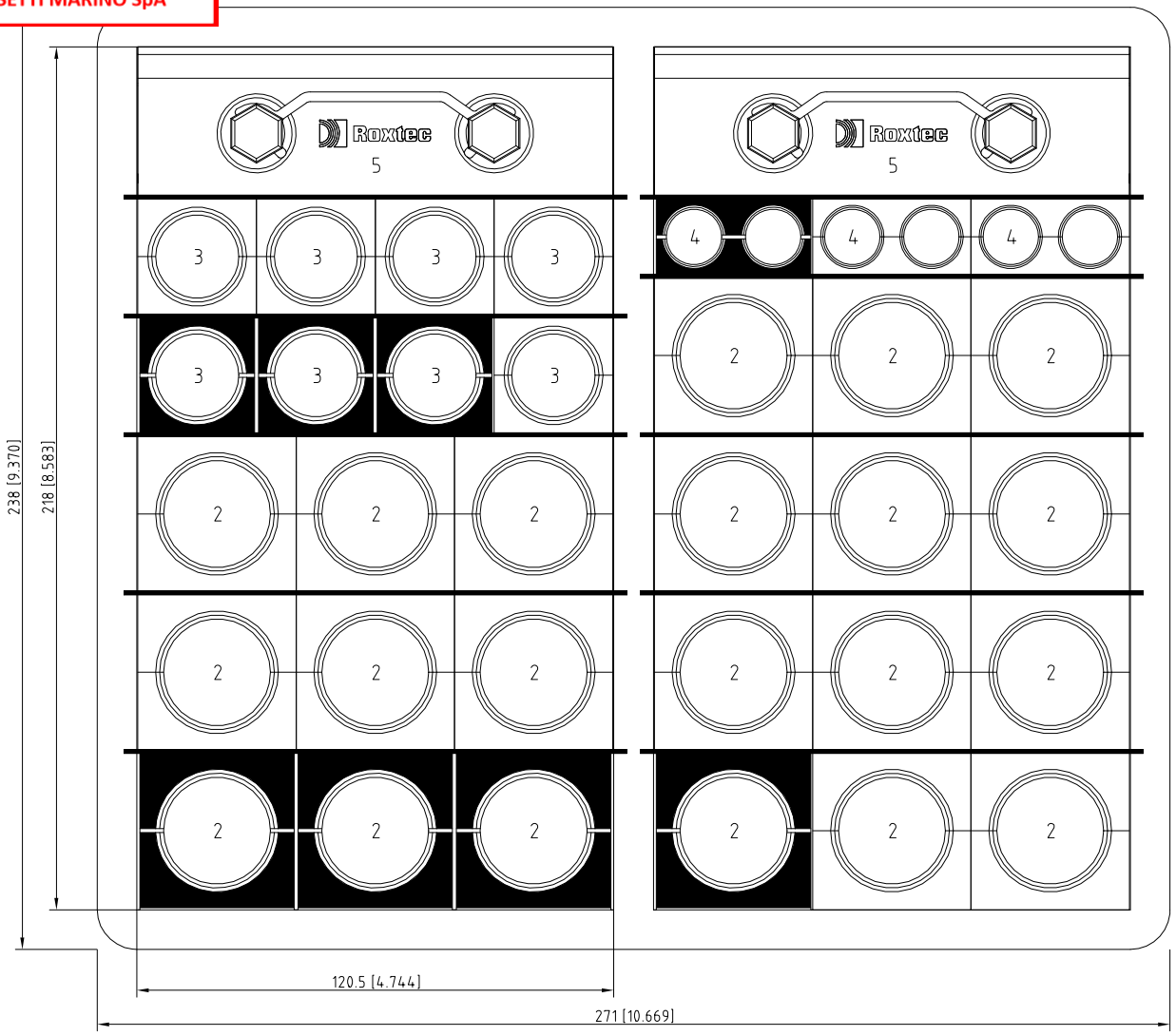
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CUTOUT TO FIT SOLUTION WELDING, 273x240 [10.748"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
6	10	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
5	2	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
4	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
3	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	21	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 6x2 Ex PRIMED	EXS006000000212	5.6 [12.35]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12.1 [26.65]
Roxtec	Format: NTS		Transit name: E-MCT-U02	Sheet No: 2/3
	Client		Drawing number	Rev

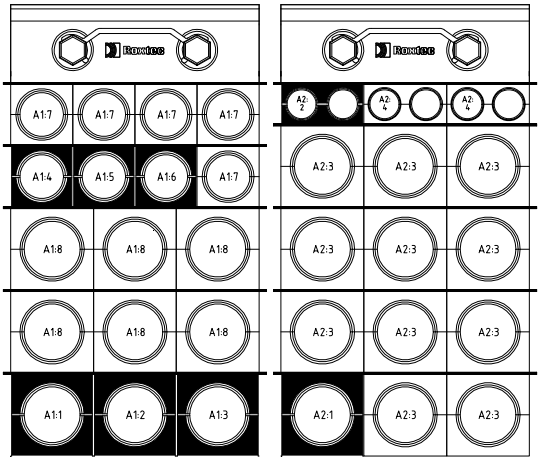
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 A2

A1 A2



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

A2:4						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:3						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:2	20001-CEC	A20000 - 6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:1	83013-CEL-N	Electrolyser Auxiliary load	1C X 300	Power	29.4 [1.157"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:8						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:7						RM 30 EX 10-25 [0.394"-0.984"]
A1:6	P-ELF-200N1-02-L1-14	Normal Lighting	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:5	83013-CEL-E	Electrolyser Auxiliary load	1C X 150	PE	17.7 [0.697"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:4	72213-CEL	Intermediate Obstruction Red Light	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:3	83013-CEL-L3	Electrolyser Auxiliary load	1C X 300	Power	29.4 [1.157"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:2	83013-CEL-L2	Electrolyser Auxiliary load	1C X 300	Power	29.4 [1.157"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:1	83013-CEL-L1	Electrolyser Auxiliary load	1C X 300	Power	29.4 [1.157"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS		TotWeight: 12.1 [26.65]
Roxtec	Format: NTS		Location/ Sublocation	Transit name: E-MCT-U02	Sheet No: 3/3
	Client		Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	E-MCT-U03	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001881		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

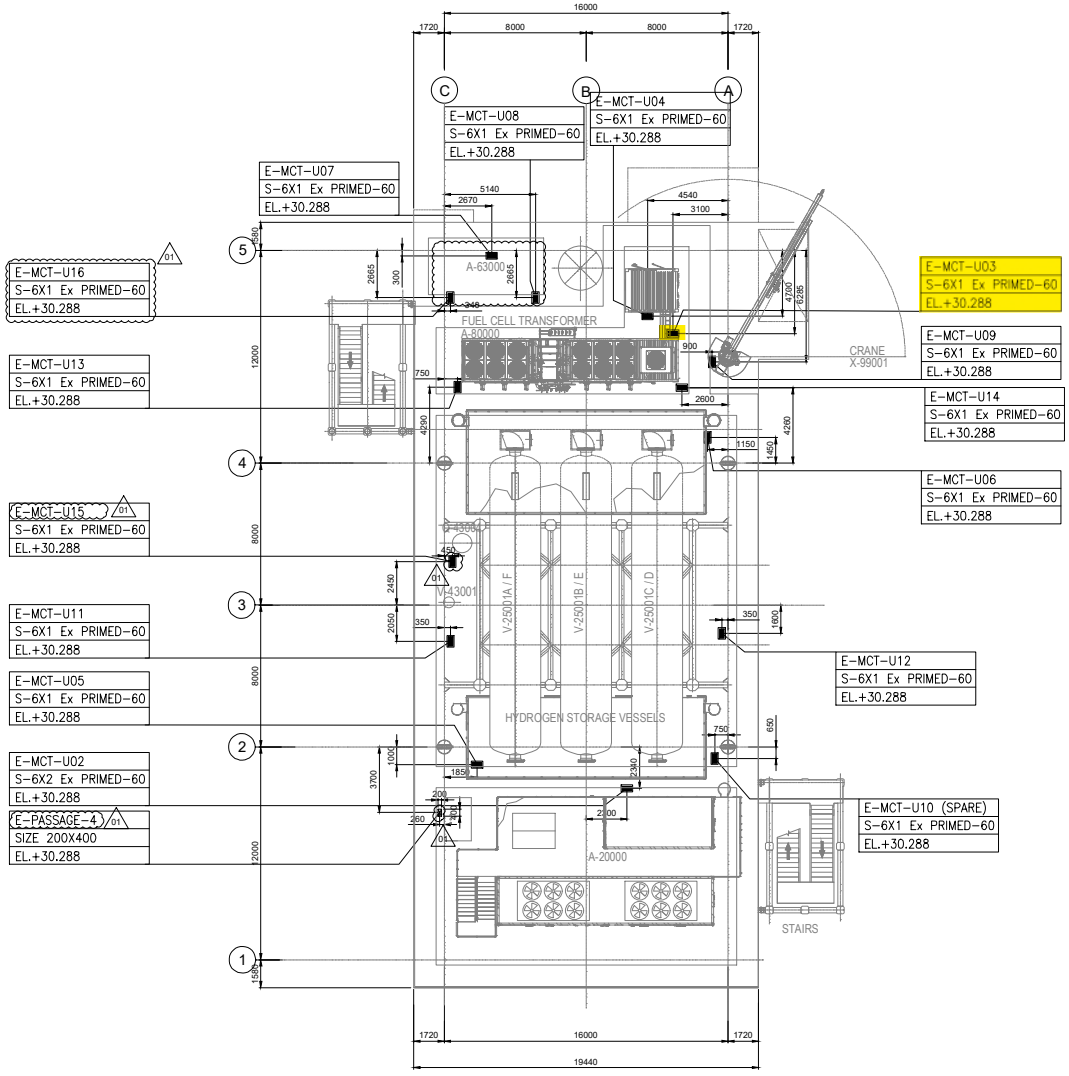
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

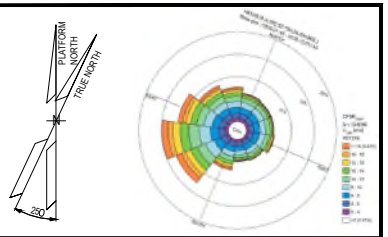
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-30	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:54:48.147Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-30T15:14:30.765Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

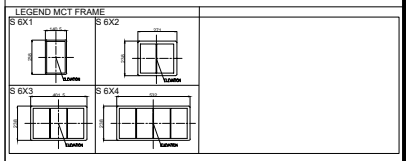
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

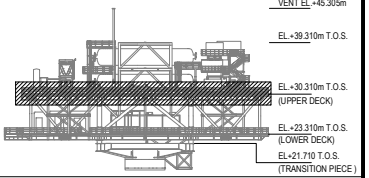
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG — TAGGING
SIZE–MATERIAL–DEPTH — TYPICAL
EL. — ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
8	E-MCT-103	S 6X2 PRIMED	27
9	E-MCT-104	S 6X1 PRIMED	31
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24	E-MCT-U04	S 6X1 **Ex** PRIMED	93
25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
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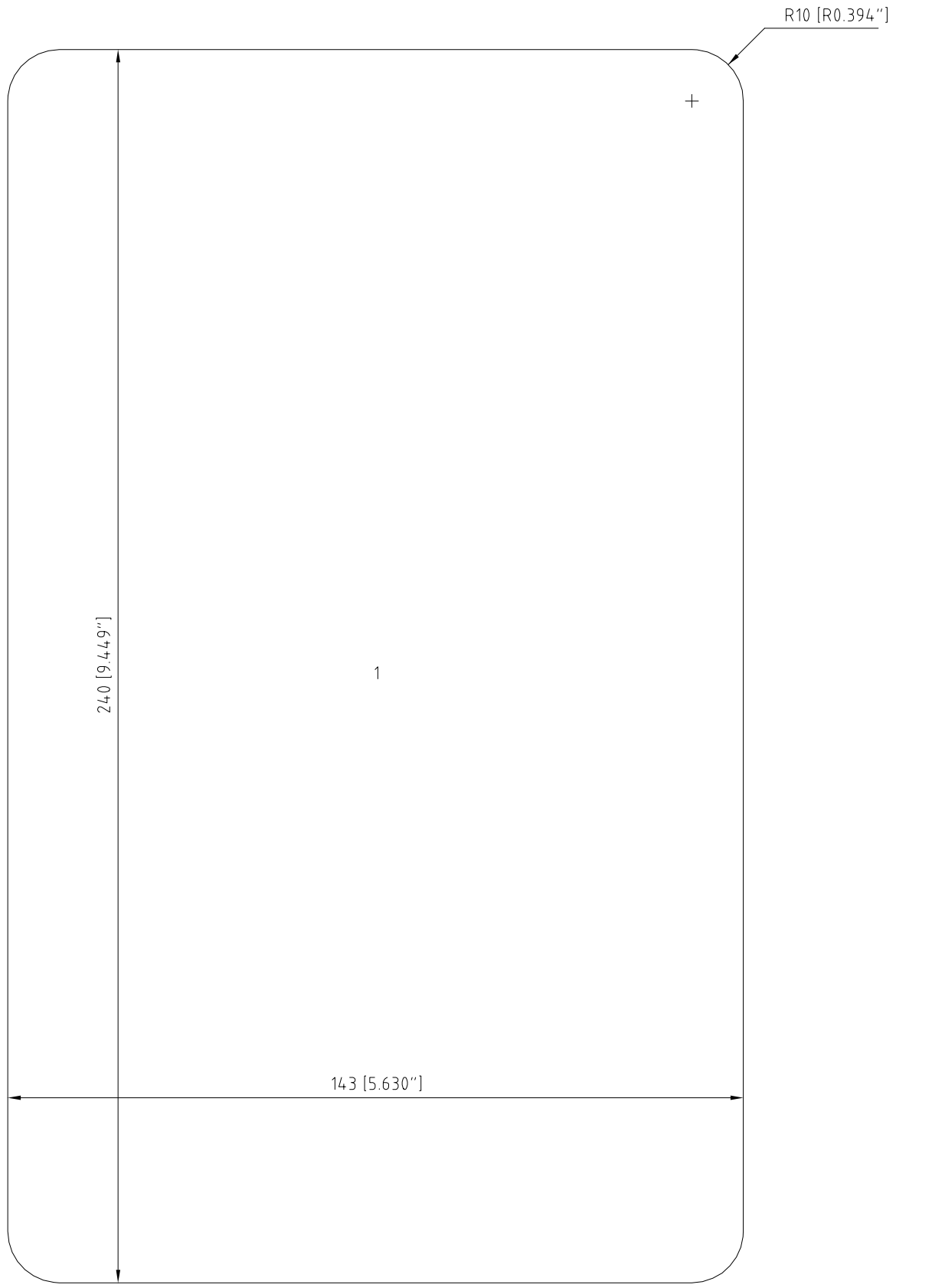
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ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.66]
Roxtec	Format: NTS		Transit name: E-MCT-U03	Sheet No: 1/3
	Client		Drawing number	Rev

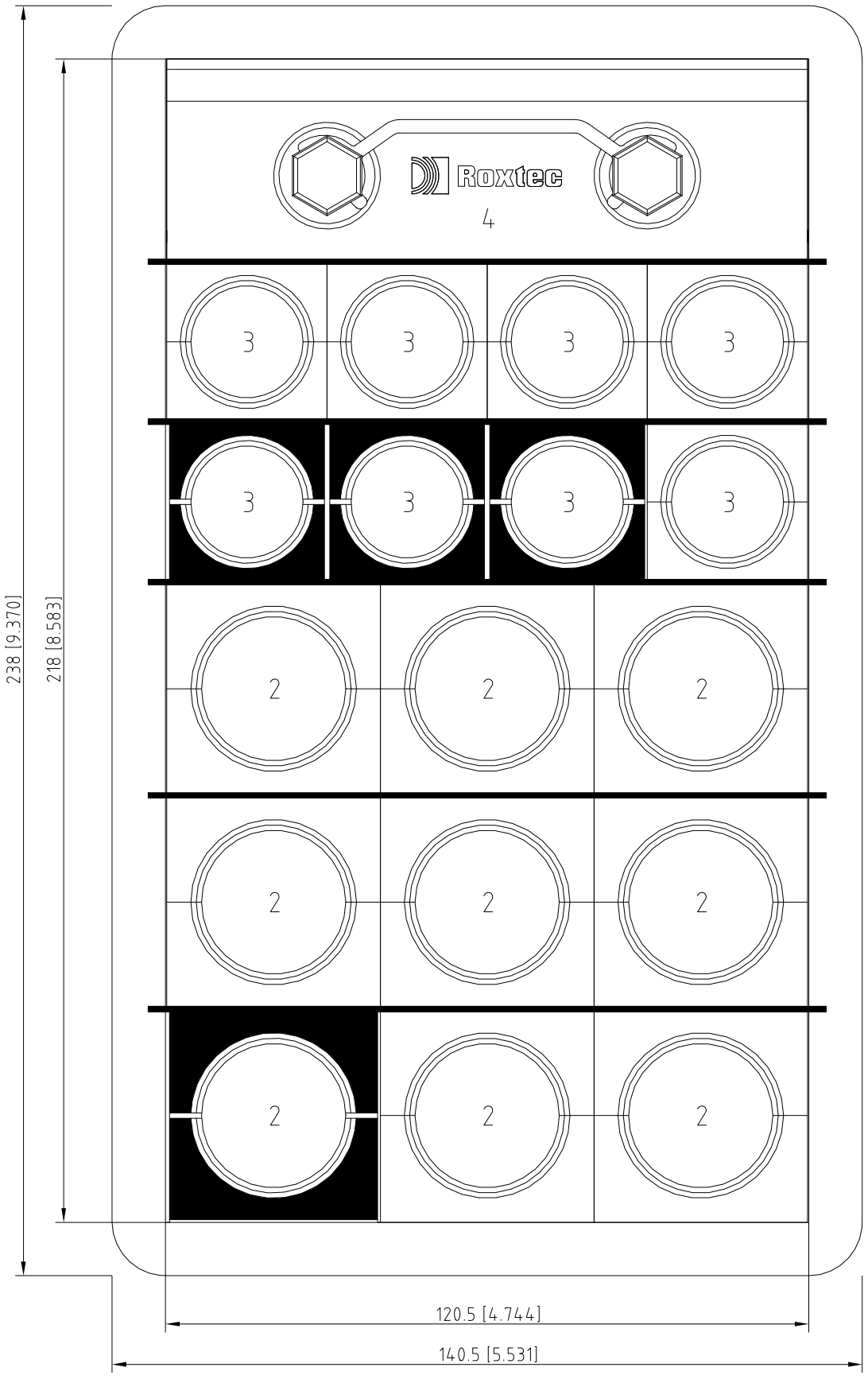
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
5	5	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
4	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
3	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	9	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.66]
Roxtec	Format: NTS		Transit name: E-MCT-U03	Sheet No: 2/3
	Client		Drawing number	Rev

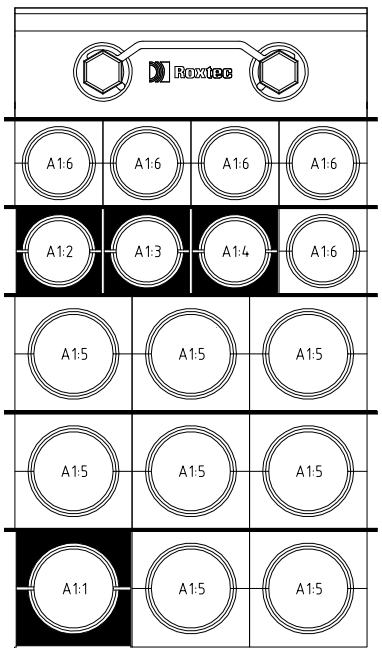
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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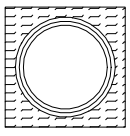
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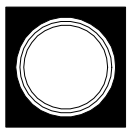
FDL DWG: **123A90-FDL-EL-DD-20095**

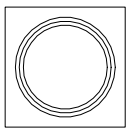
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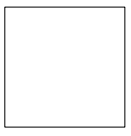
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:6						RM 30 EX 10-25 [0.394"-0.984"]
A1:5						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:4	P-EJB-200N1-02-L1-03	Normal Lighting JB - Upperdeck	3G4	Power	17 [0.669"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:3	P-EJB-200N1-02-L1-02	Normal Lighting JB	3G4	Power	17 [0.669"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:2	P-EJB-200N1-02-L1-01	Normal Lighting JB - Upperdeck	3G4	Power	17 [0.669"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	83012-CEL	Fuel Cell Auxiliary Load	5G16	Power	24 [0.945"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

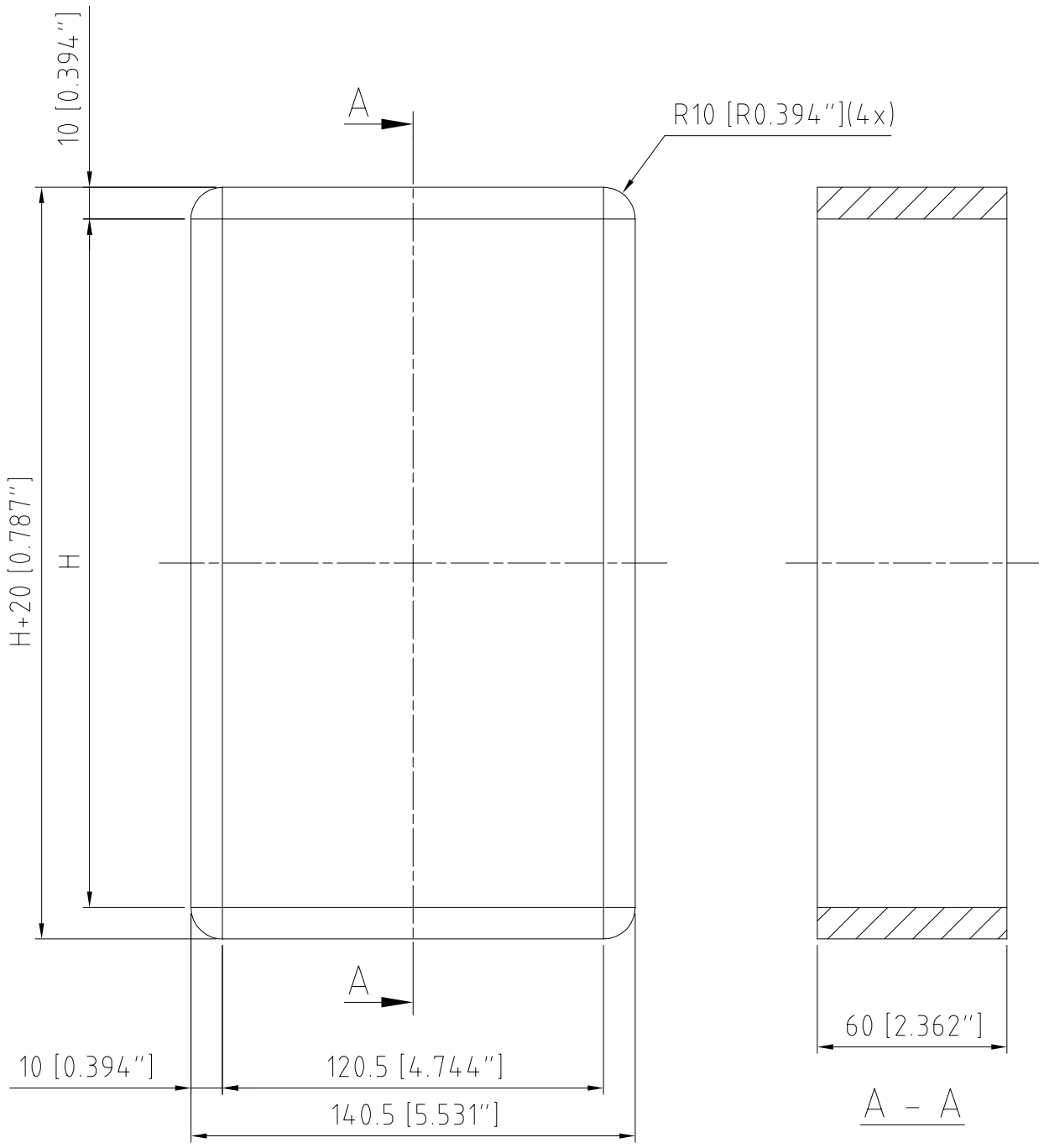
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.66]
Roxtec	Format: NTS		Transit name: E-MCT-U03	Sheet No: 3/3
	Client	Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U04	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001882		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

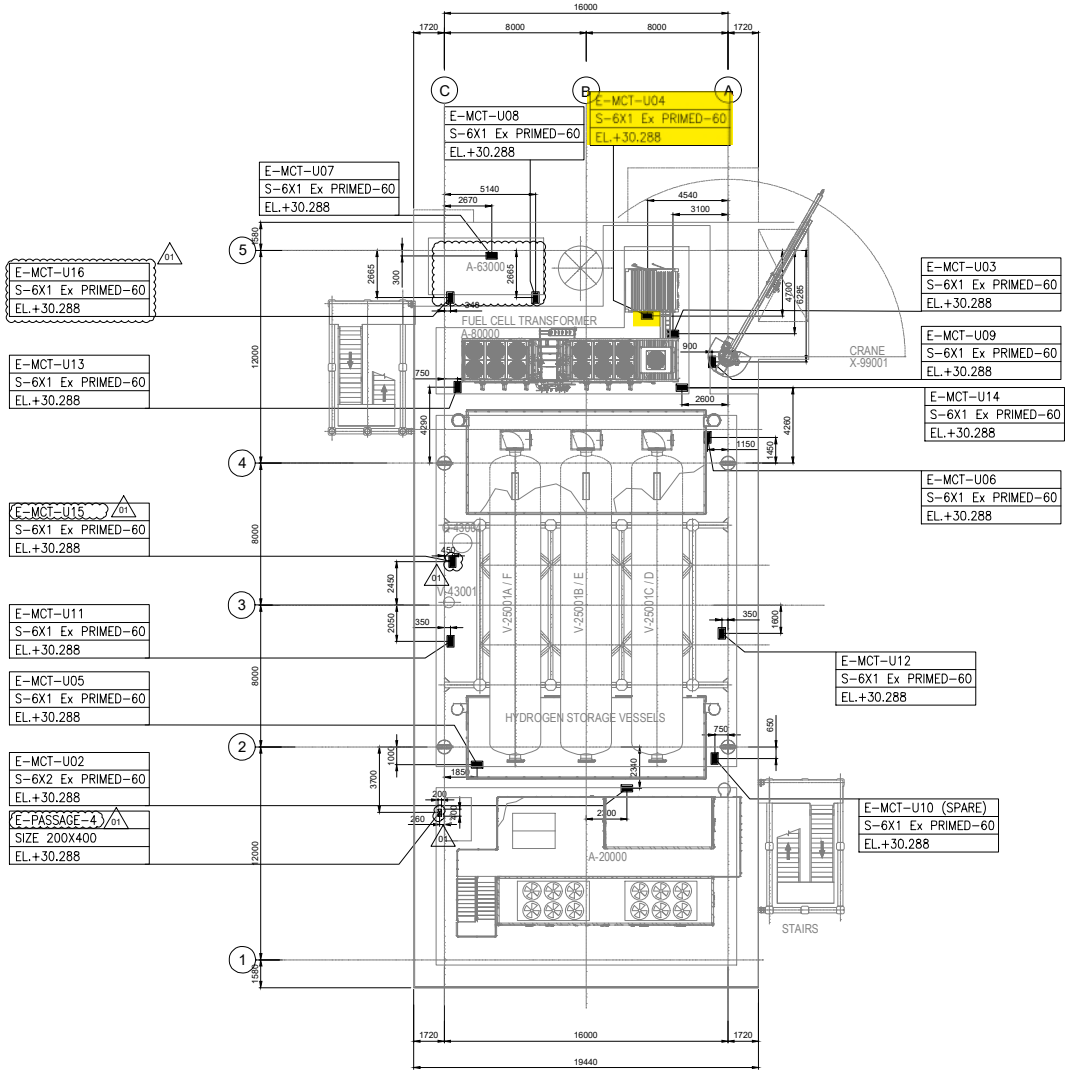
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

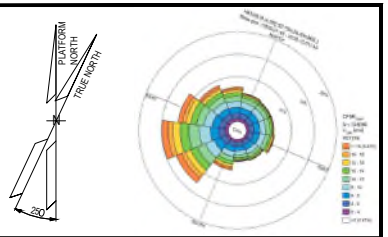
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-11-25	2024-12-13	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T11:03:34.284Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-12-13T12:53:25.190Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

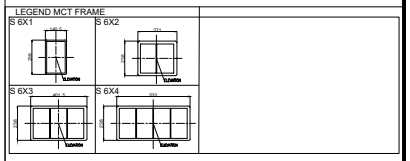
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

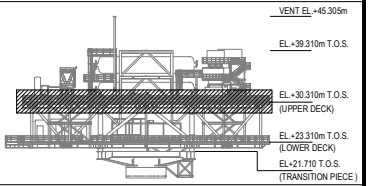
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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2	INDEX		3
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3	E-MCT-T01	S 6X1 PRIMED	6
4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
8	E-MCT-103	S 6X2 PRIMED	27
9	E-MCT-104	S 6X1 PRIMED	31
10	E-MCT-105	S 6X2 PRIMED	35
11	E-MCT-106	S 6X2 PRIMED	39
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16	E-MCT-205	S 6X2 **AISI316**	60
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24	E-MCT-U04	S 6X1 **Ex** PRIMED	93
25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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File: 123A90-DDL-EL-DD-20095-MCT-composition.docx

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20095
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

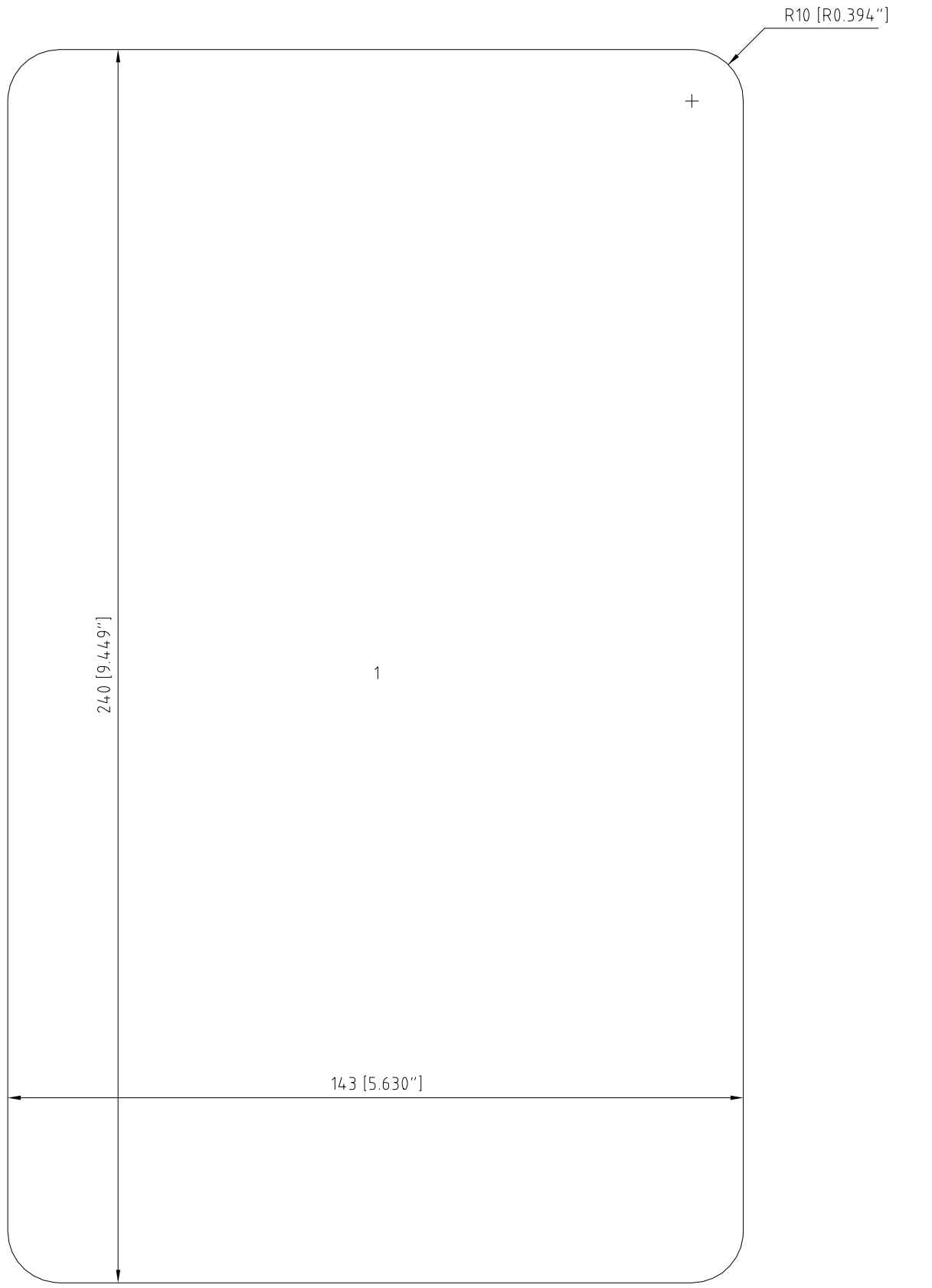
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U04	Sheet No: 1/3
	Client		Drawing number	Rev

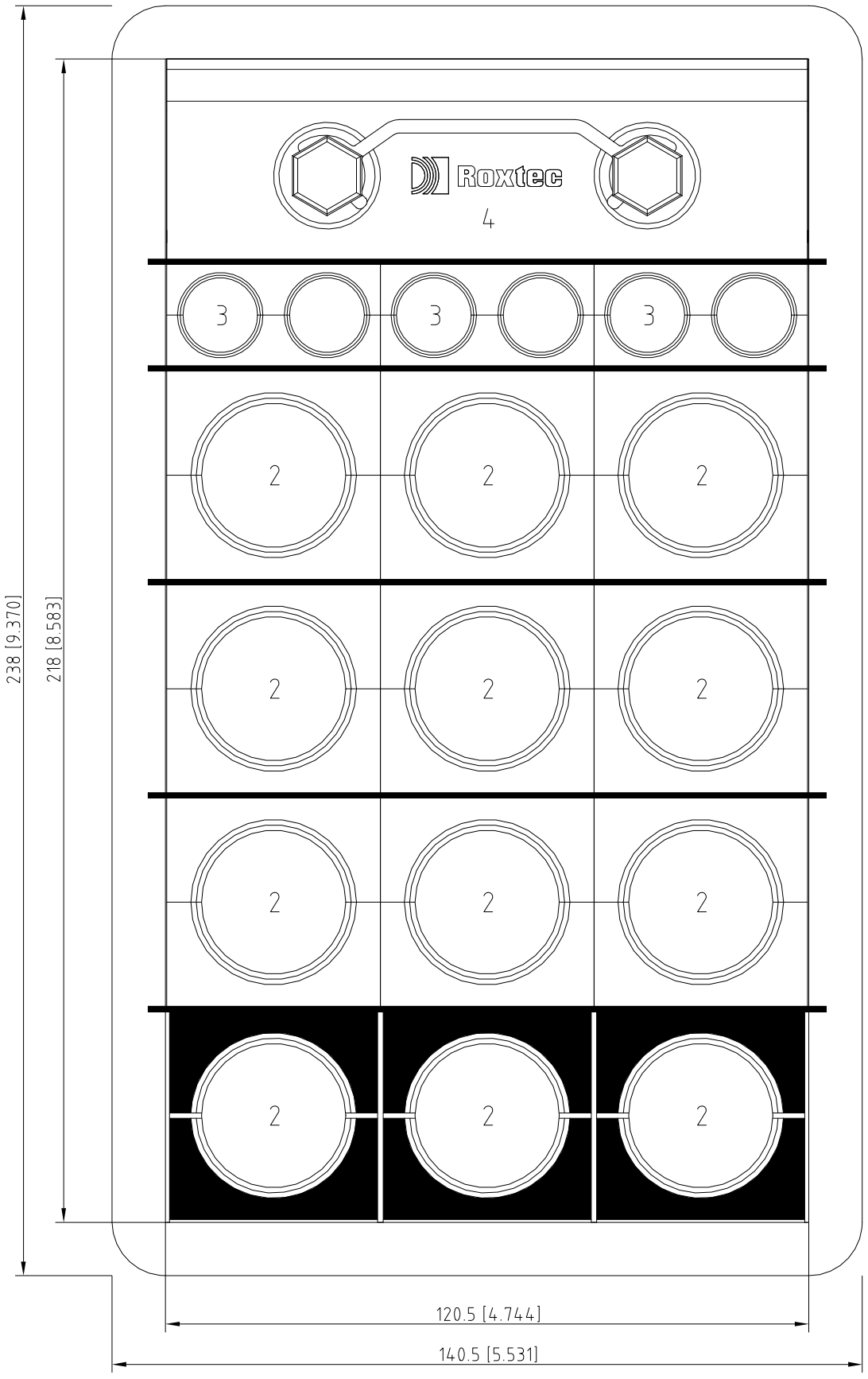
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material (mm [ ])	Roxtec Art No	Weight Kg [lb]
5	5	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
4	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
3	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
2	12	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U04	Sheet No: 2/3
	Client		Drawing number	Rev

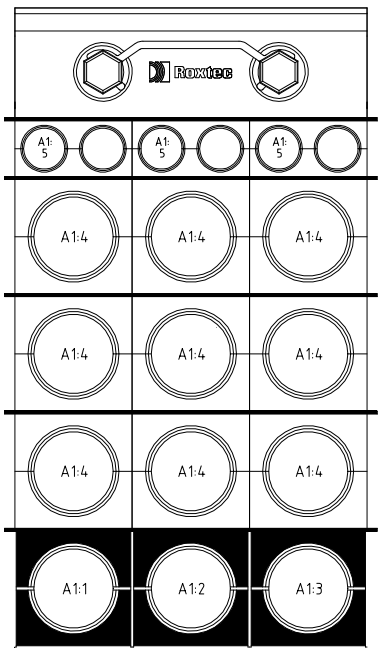
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:5						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:4						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:3	82003-CEM-1-L3	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:2	82003-CEM-1-L2	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:1	82003-CEM-1-L1	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]

MODULE WITH PIPE

MODULE WITH CABLE

SPARE MODULE

SOLID MODULE

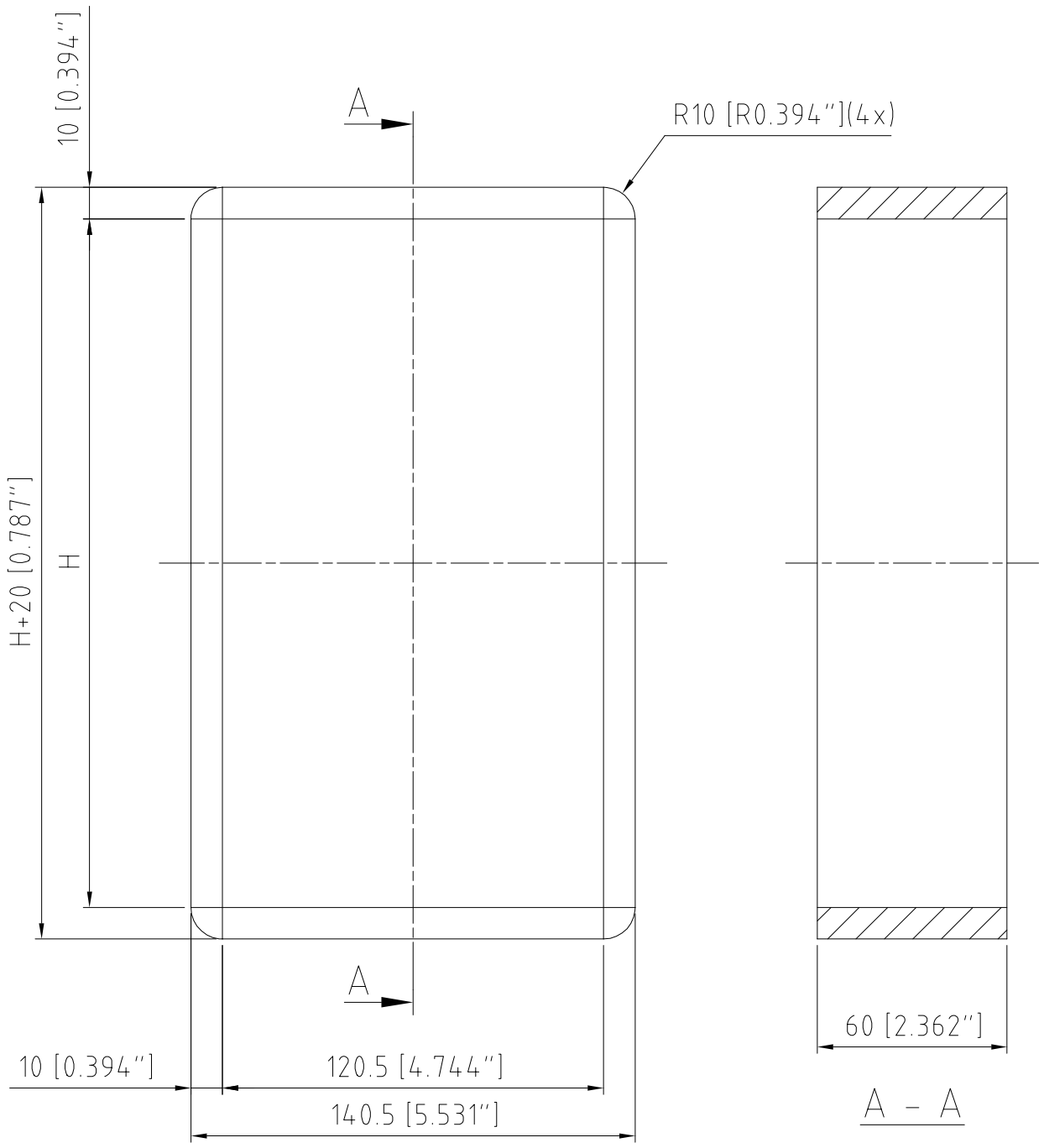
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation		TotWeight: 6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U04		Sheet No: 3/3
	Client		Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U05	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001883		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

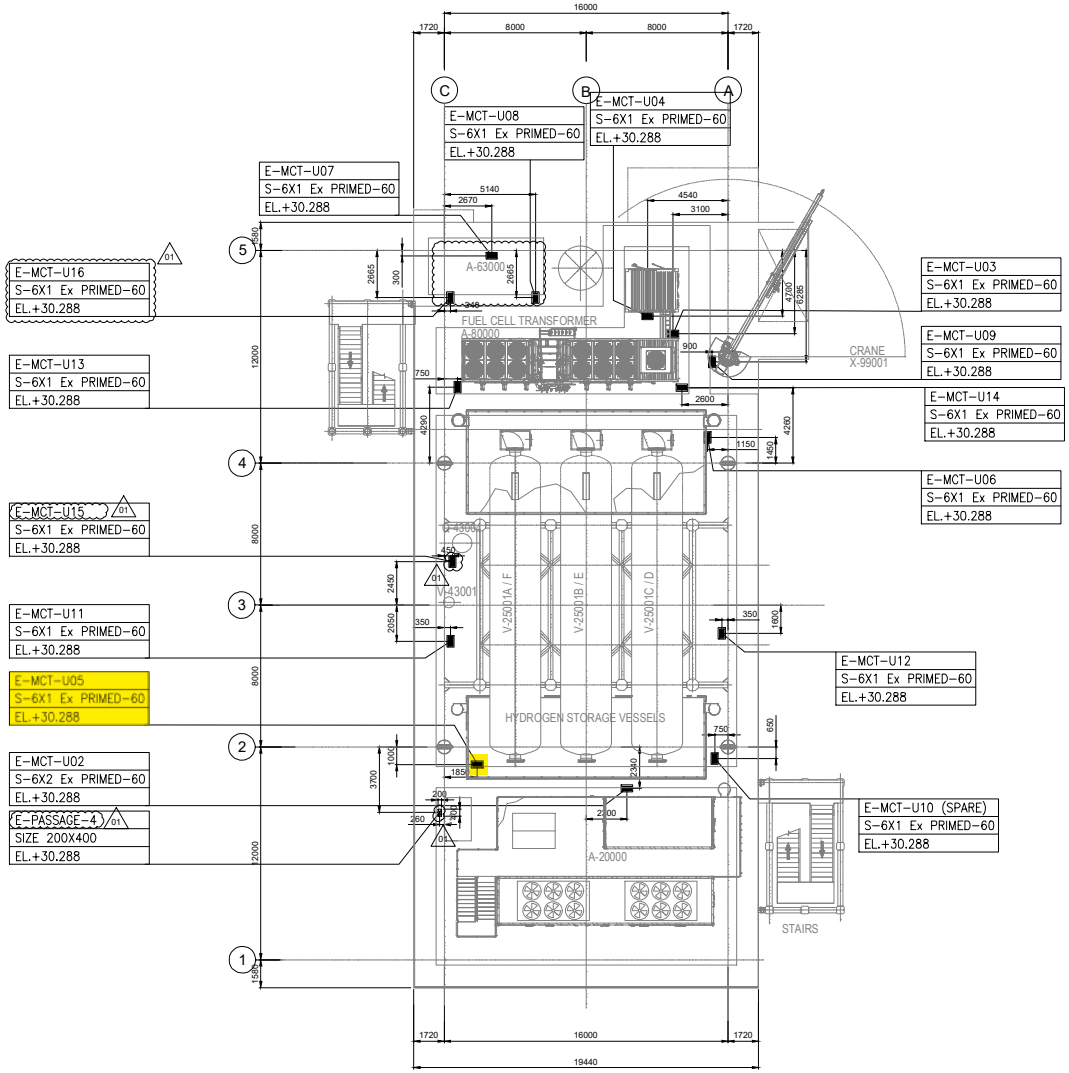
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

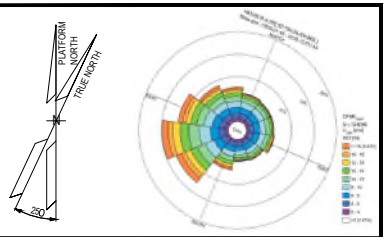
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-29	
Signature	Digitaly signed by Michele Tartaglia 2025-01-25T13:55:00.592Z	Digitaly signed by Paolo Schintu 2025-01-29T07:35:18.267Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

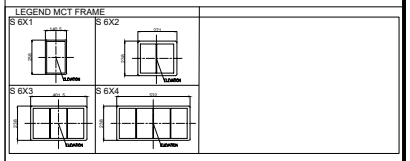
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

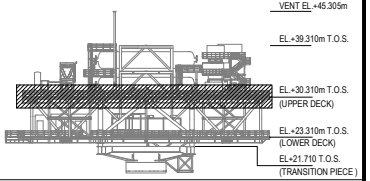
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90–DDL–EL–DL–20114	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

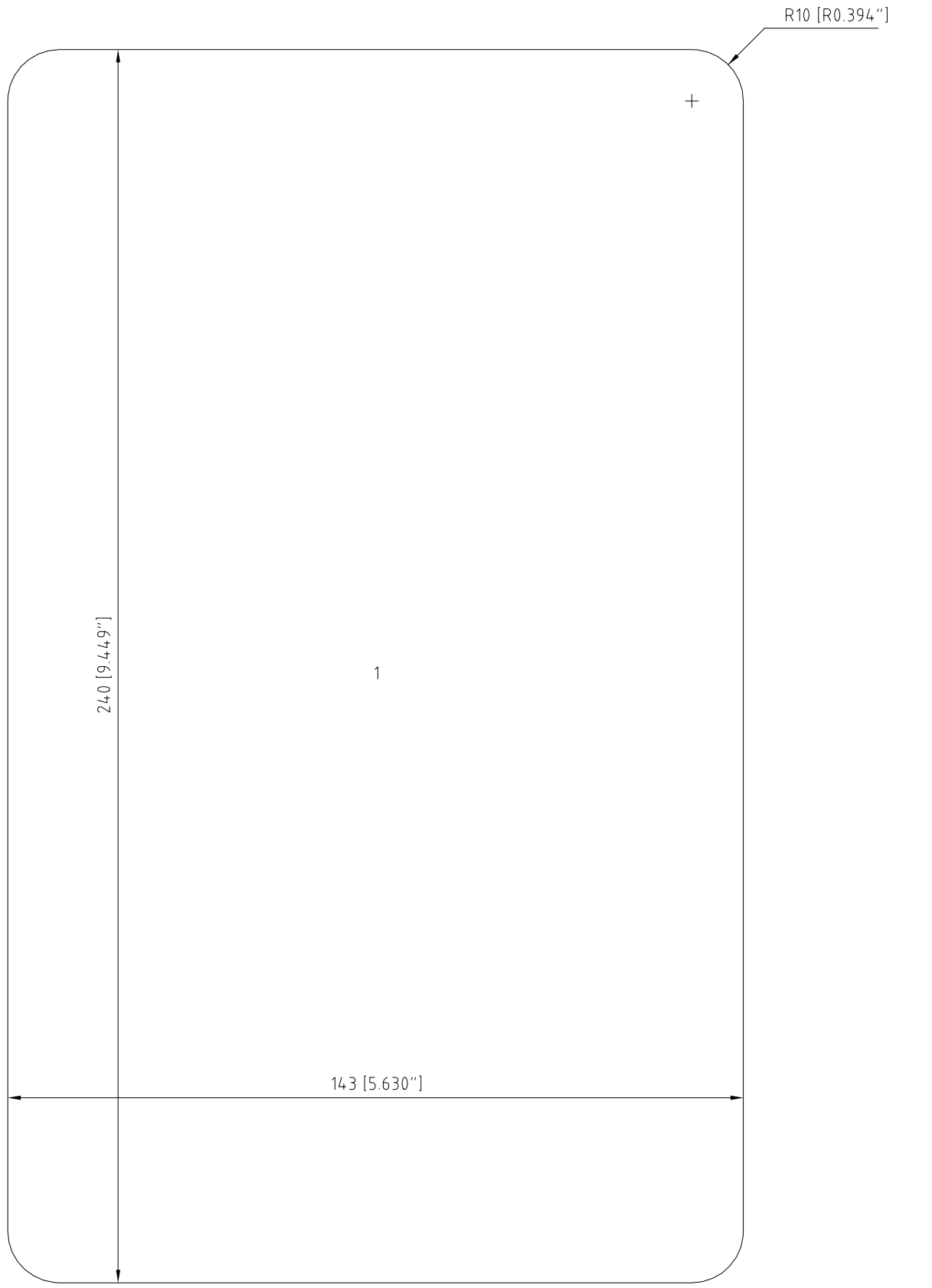
VALID FOR CONSTRUCTION
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1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U05	Sheet No: 1/3
	Client		Drawing number	Rev

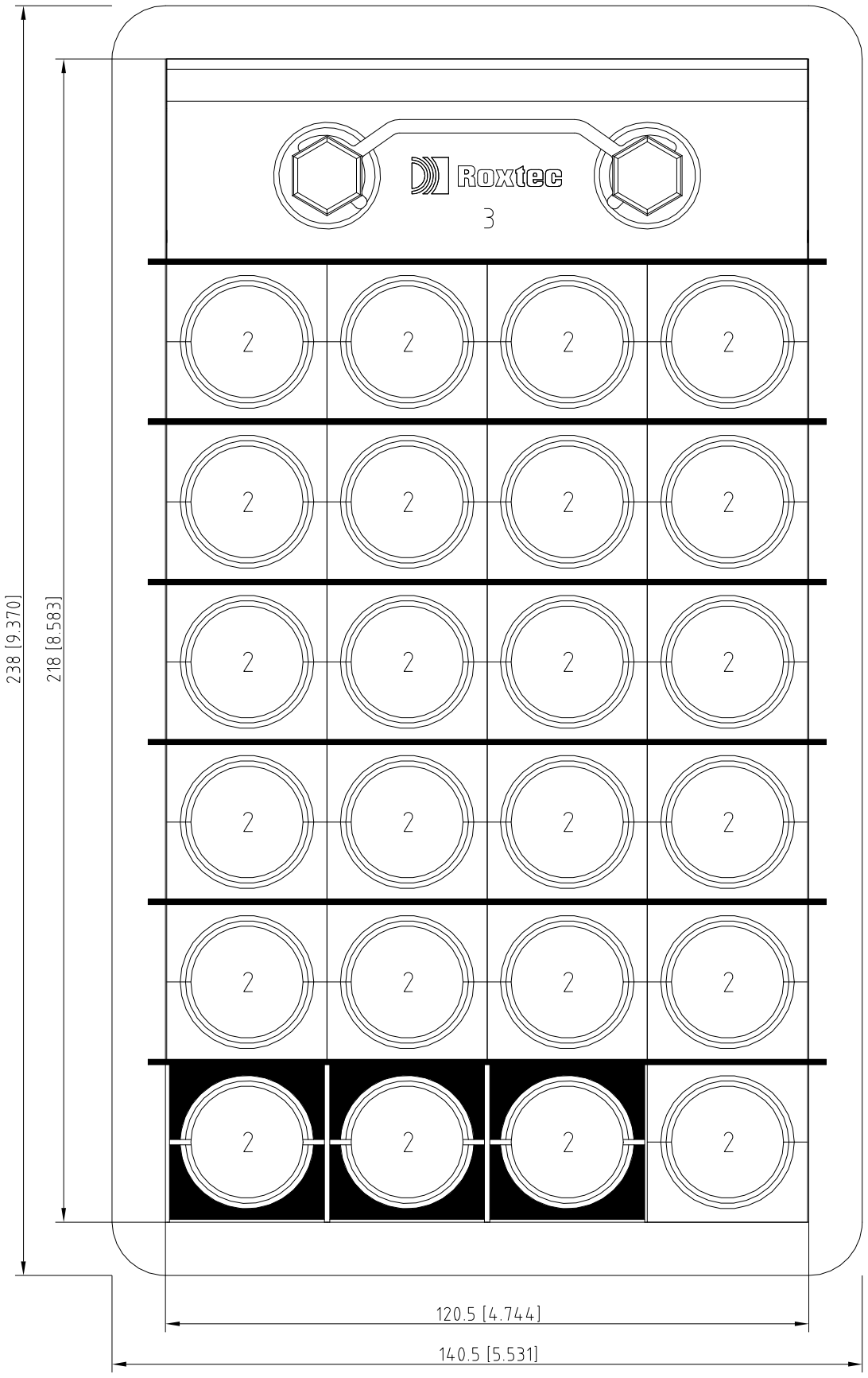
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	6	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	24	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U05	Sheet No: 2/3
	Client		Drawing number	Rev

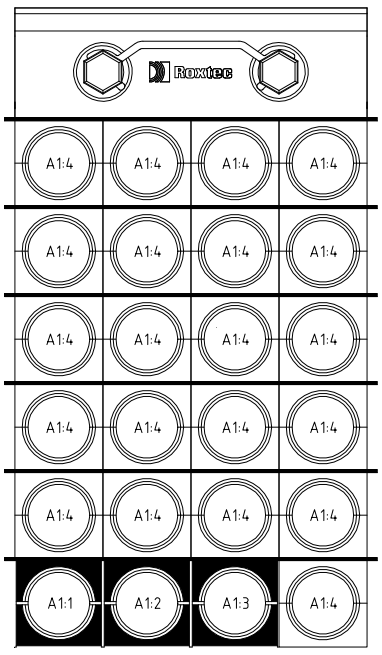
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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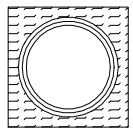
VALID FOR CONSTRUCTION

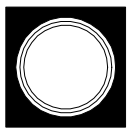
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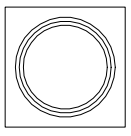
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1_A	08/08/24	G.Randi

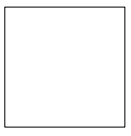
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:4						RM 30 EX 10-25 [0.394"-0.984"]
A1:3	P-ELF-200N1-02-L1-14	Normal Lighting	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:2	P-EJB-200N1-08-L1-12	Emergency Lighting JB	4G4_E	Power	18.3 [0.720"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	P-EJB-200N1-08-L1-03	Emergency Lighting JB	4G4_E	Power	18.3 [0.720"]	RM 30 EX 10-25 [0.394"-0.984"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

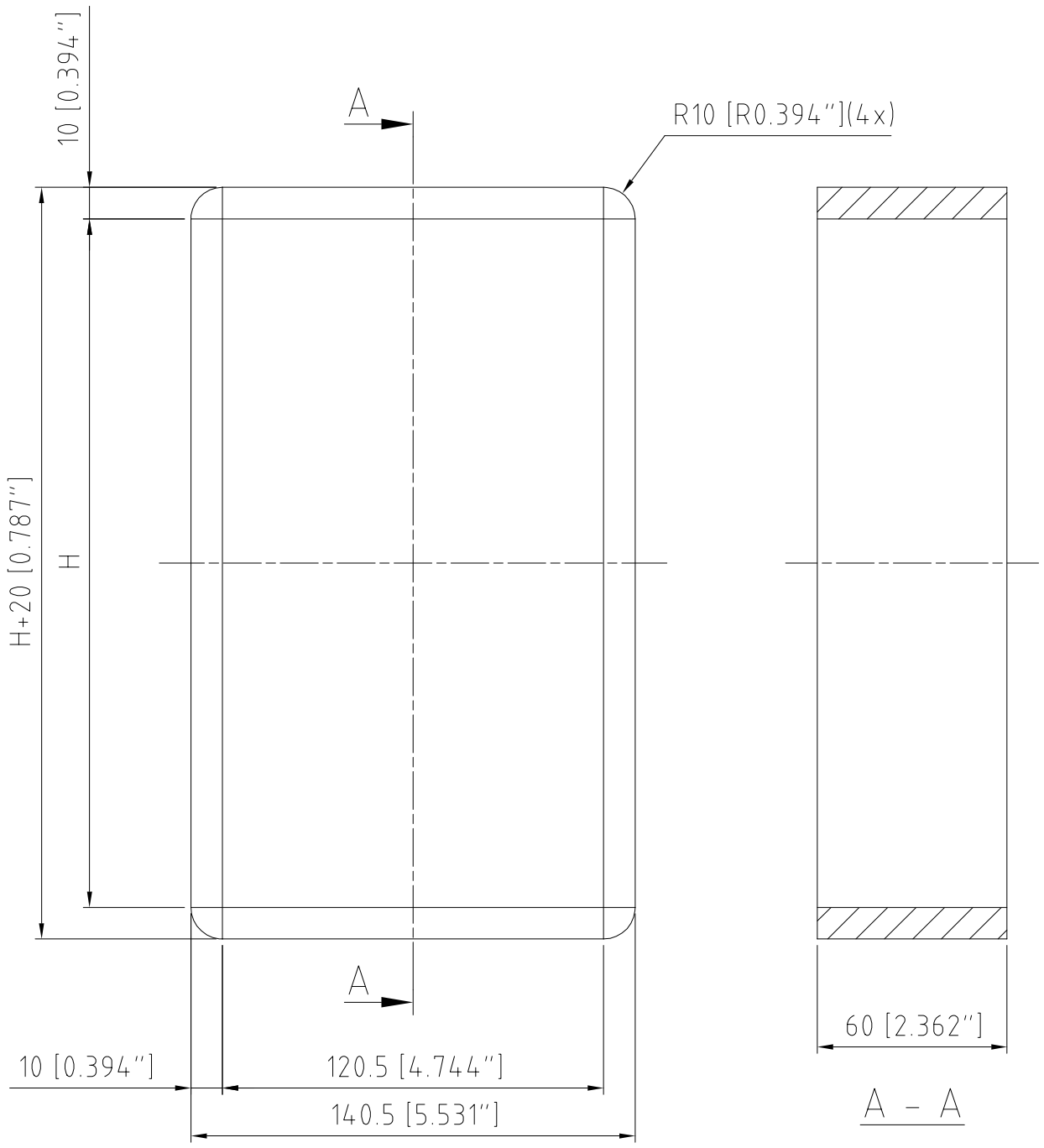
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U05	Sheet No: 3/3
	Client	Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U06	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001884		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

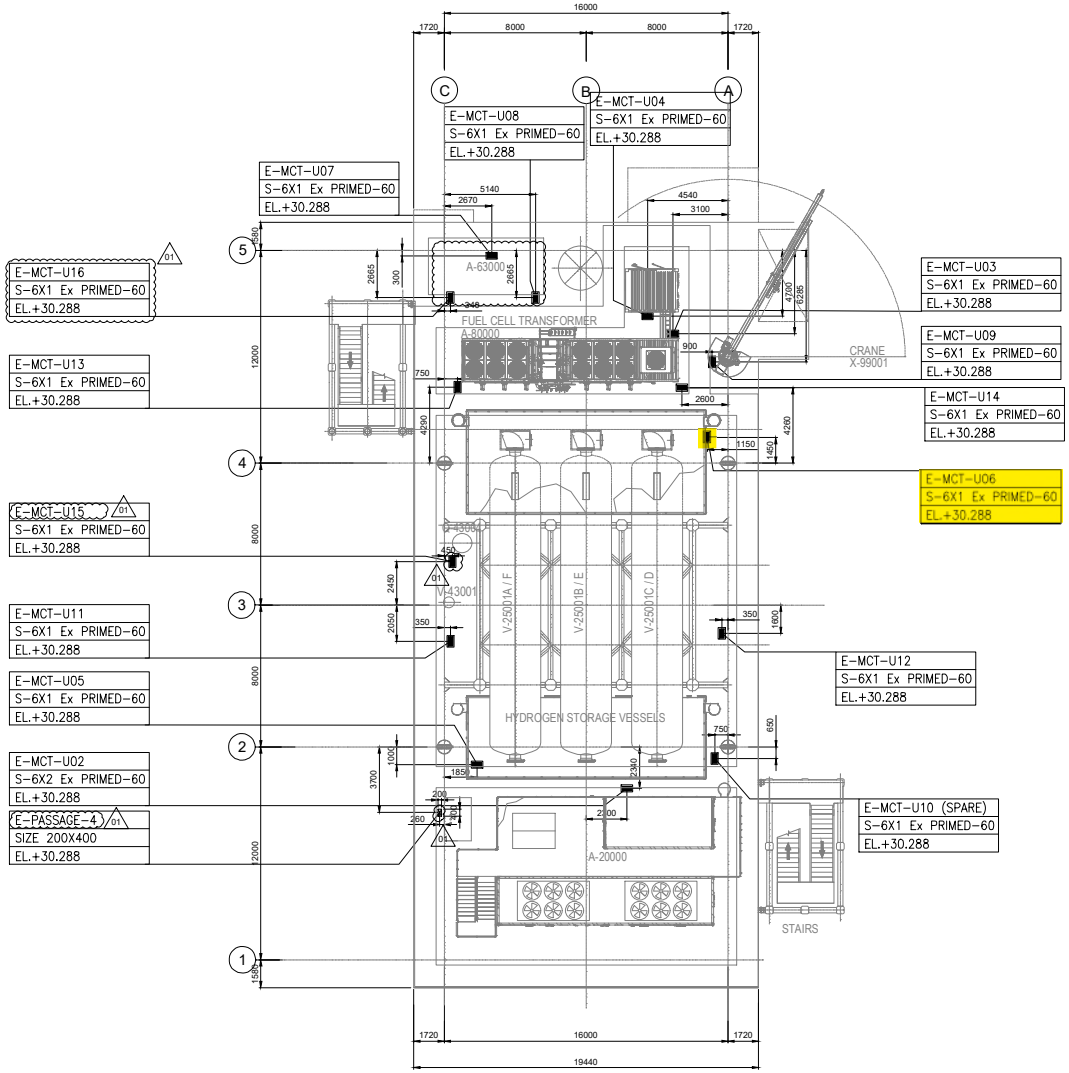
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

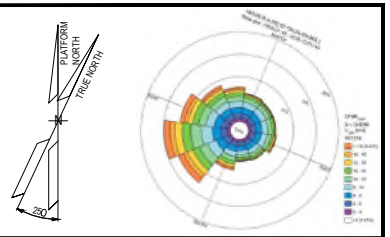
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-29	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:55:17.277Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-29T07:40:26.933Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

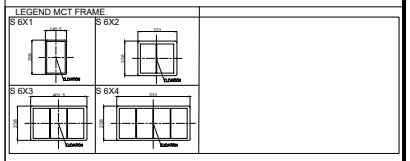
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

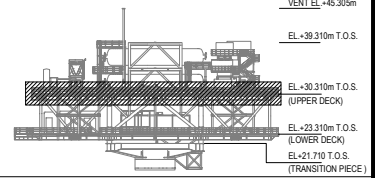
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG — TAGGING
SIZE–MATERIAL–DEPTH — TYPICAL
EL. — ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
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27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
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30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
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33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
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REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
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RTD Version No: 4.37.4.0

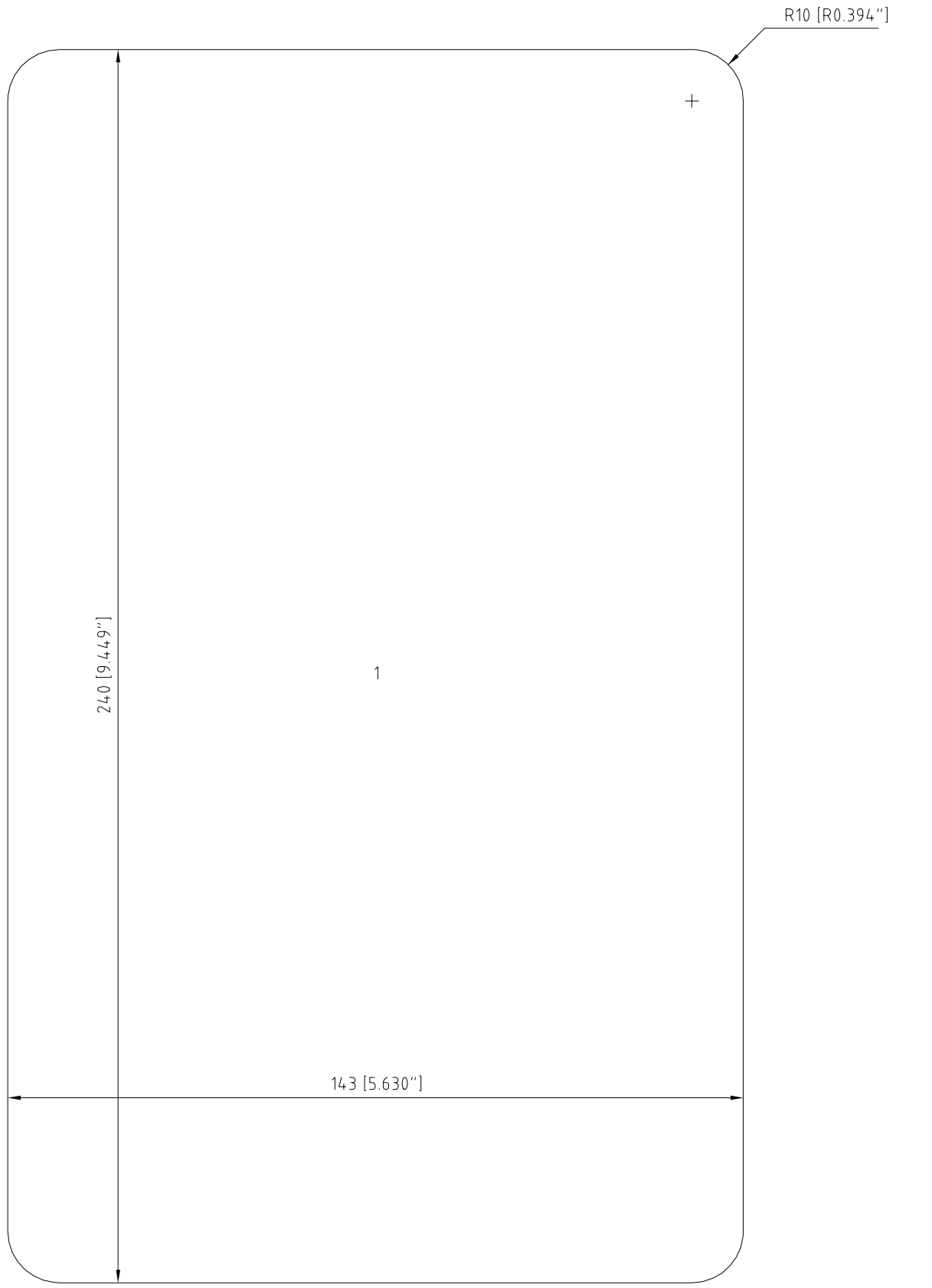
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ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U06	Sheet No: 1/3
	Client		Drawing number	Rev

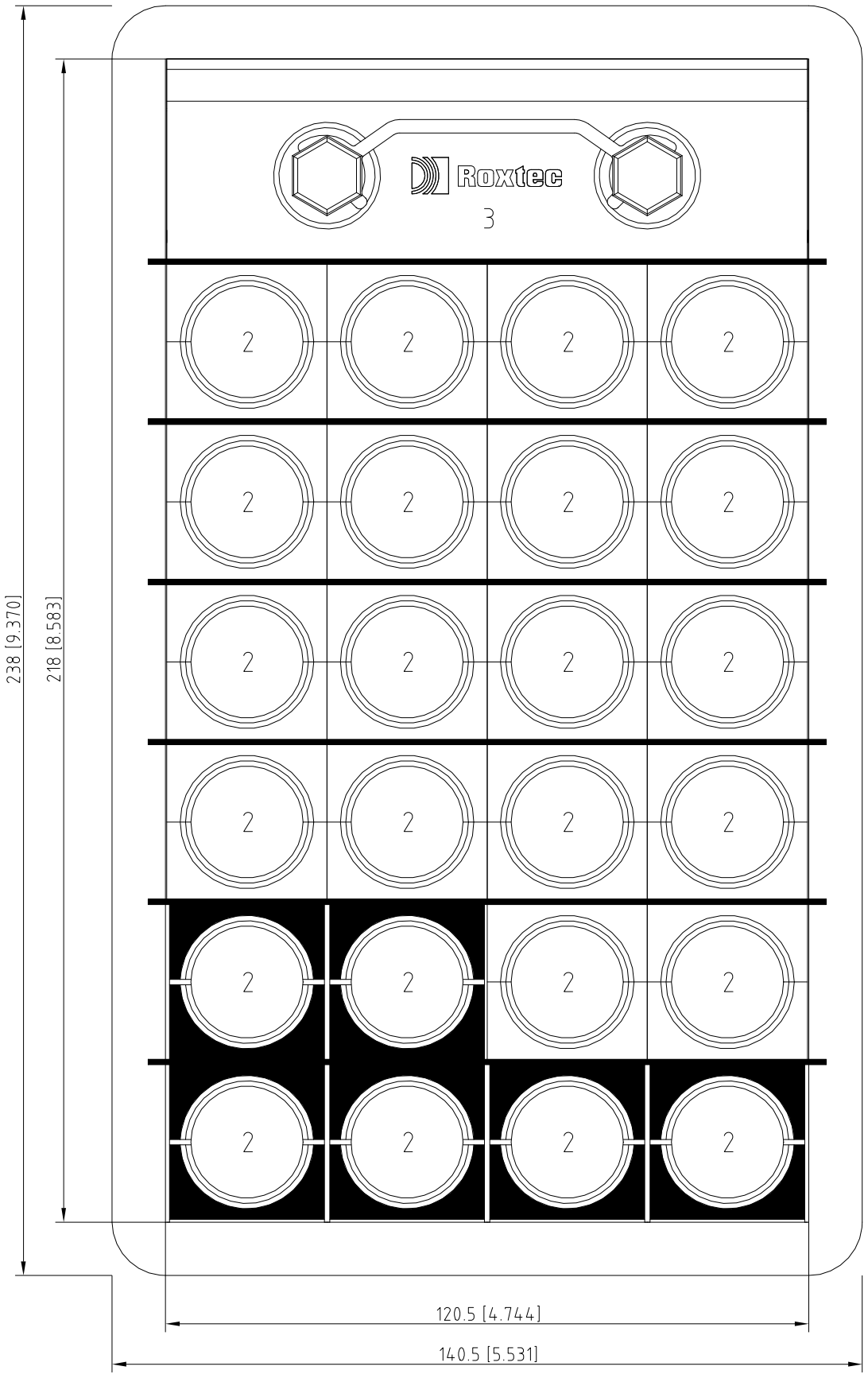
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	6	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	24	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U06	Sheet No: 2/3
	Client		Drawing number	Rev

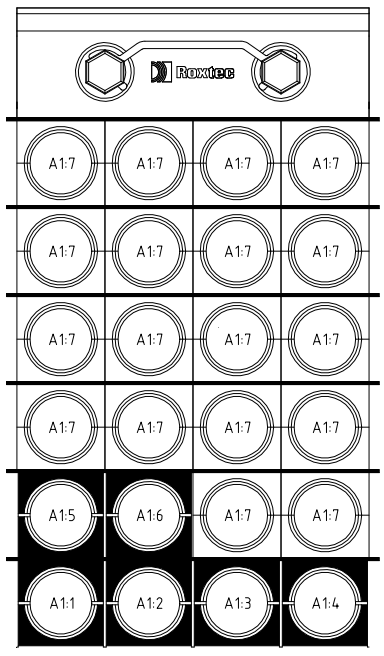
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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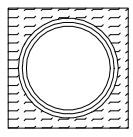
VALID FOR CONSTRUCTION

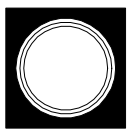
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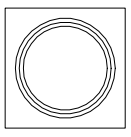
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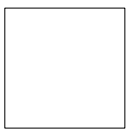
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:7						RM 30 EX 10-25 [0.394"-0.984"]
A1:6	P-EJB-200N1-08-L1-04	Emergency Lighting Upper Deck	4G4_E	Power	18.3 [0.720"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:5	P-EJB-200N1-08-L1-03	Emergency Lighting JB	4G4_E	Power	18.3 [0.720"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:4	P-EJB-200N1-02-L1-03	Normal Lighting JB	3G4	Power	17 [0.669"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:3	P-EJB-200N1-02-L1-02	Normal Lighting JB	3G4	Power	17 [0.669"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:2	72213-CEL	Intermediate Obstruction Red Light	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	72203-CEL	Top Obstruction lights Junction box	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

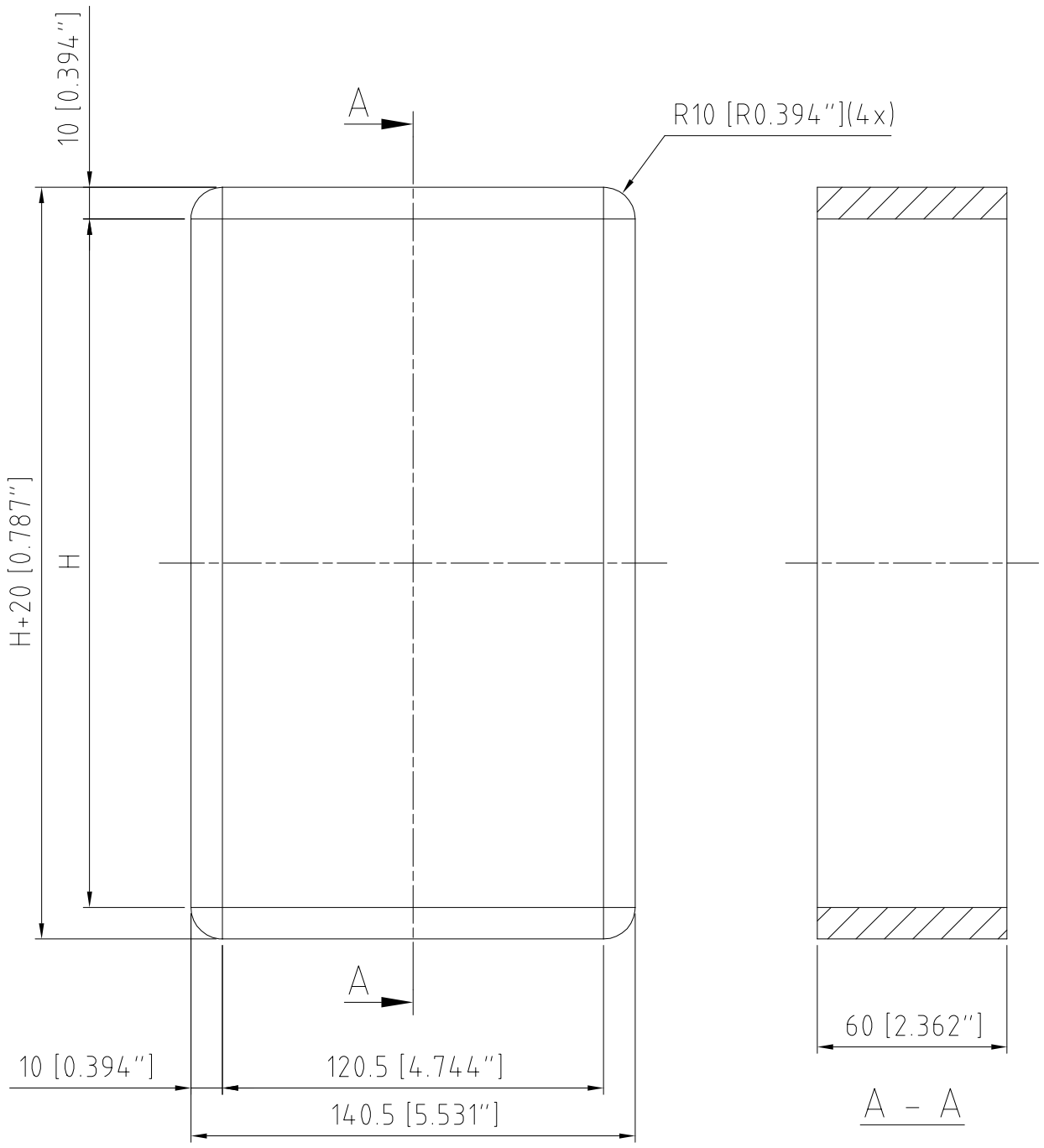
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.8 [14.95]	
Roxtec	Format: NTS		Transit name: E-MCT-U06	Sheet No: 3/3	
	Client		Drawing number	Rev	

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U07	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001885		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

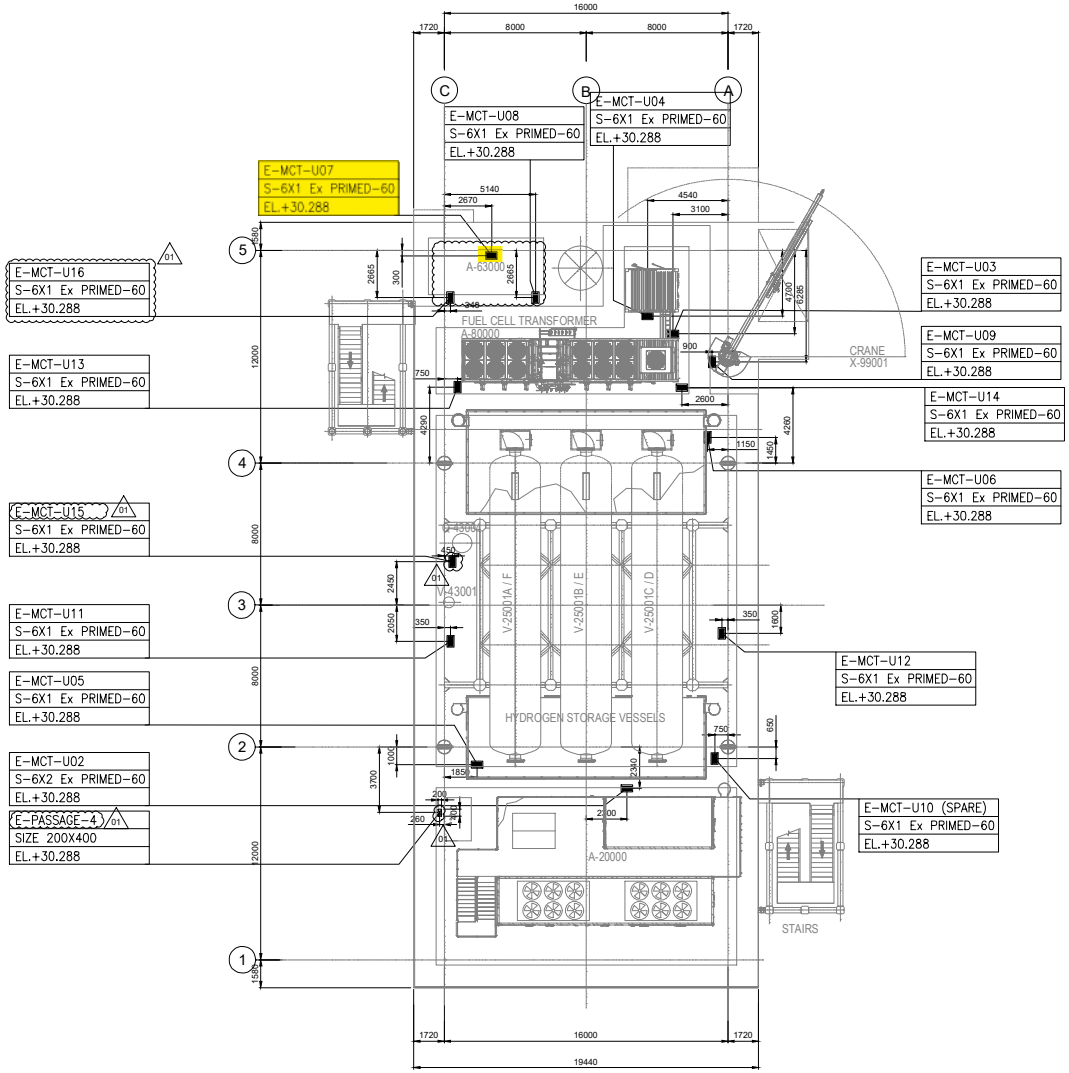
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

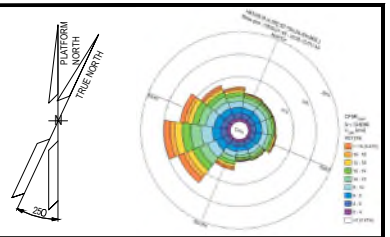
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-02-06	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-30T10:19:49.309Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-06T11:16:30.420Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

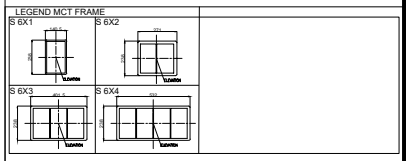
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

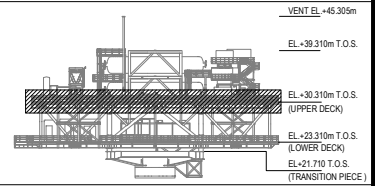
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

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5	E-MCT-T03	S 6X1 PRIMED	14
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34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
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REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

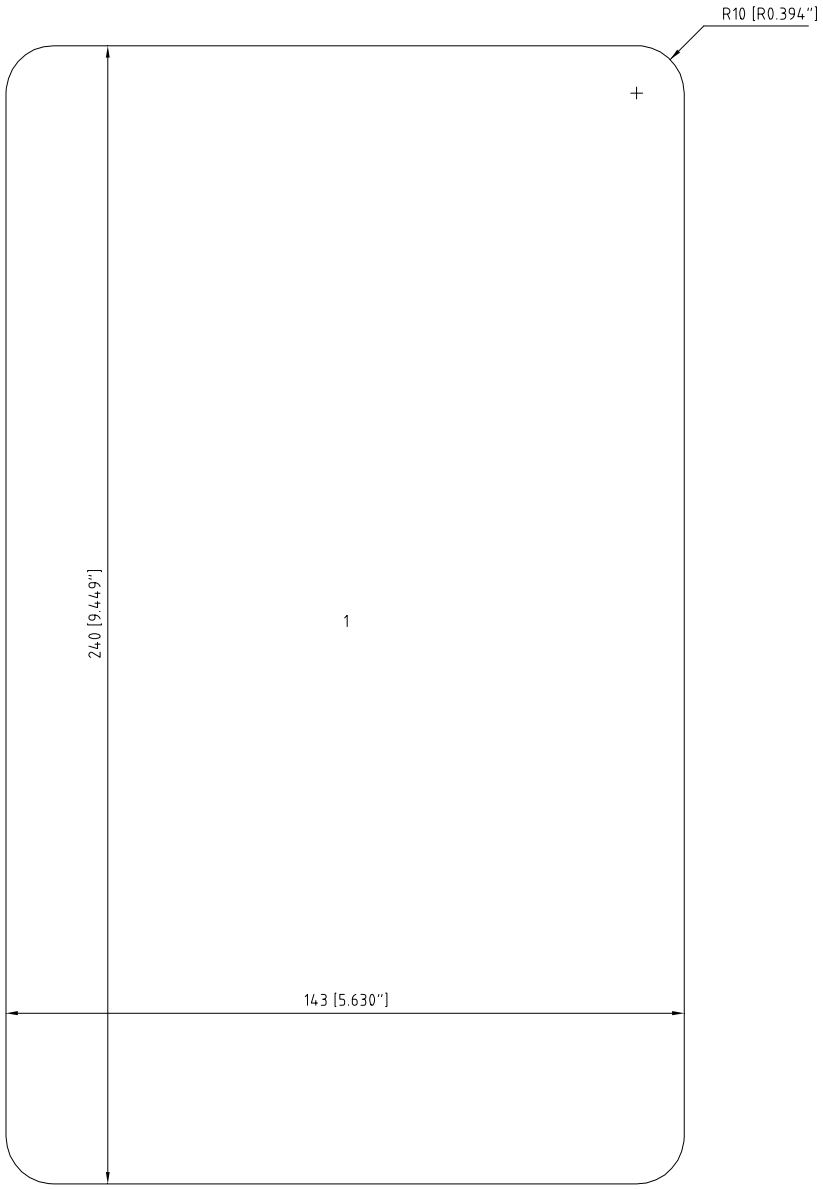
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REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

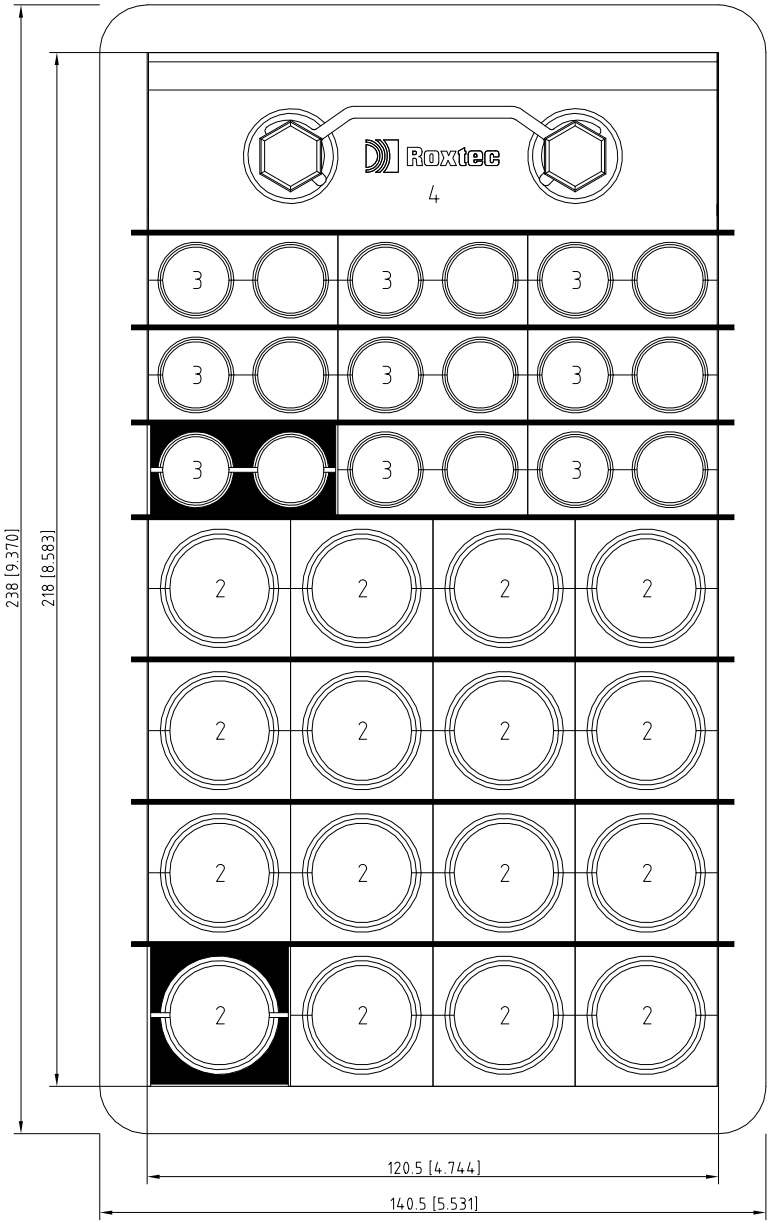
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.9 [15.17]
Roxtec	Format: NTS		Transit name: E-MCT-U07	Sheet No: 1/3
Client			Drawing number	Rev

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
5	7	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
4	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
3	9	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
2	16	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.9 [15.17]
Roxtec	Format: NTS		Transit name: E-MCT-U07	Sheet No: 2/3
	Client		Drawing number	Rev

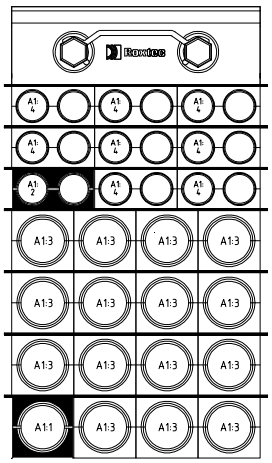
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:4						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:3						RM 30 EX 10-25 [0.394"-0.984"]
A1:2	83110-CEL	UCP - Instrument Air Package -A-63000 - Auxiliary	3G2.5	Power	13 [0.512"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	84311-CEL	UCP - Instrument Air Package A-63000	3G2.5	Power	15.5 [0.610"]	RM 30 EX 10-25 [0.394"-0.984"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.9 [15.17]
Roxtec	Format: NTS		Transit name: E-MCT-U07	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U08	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001886		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

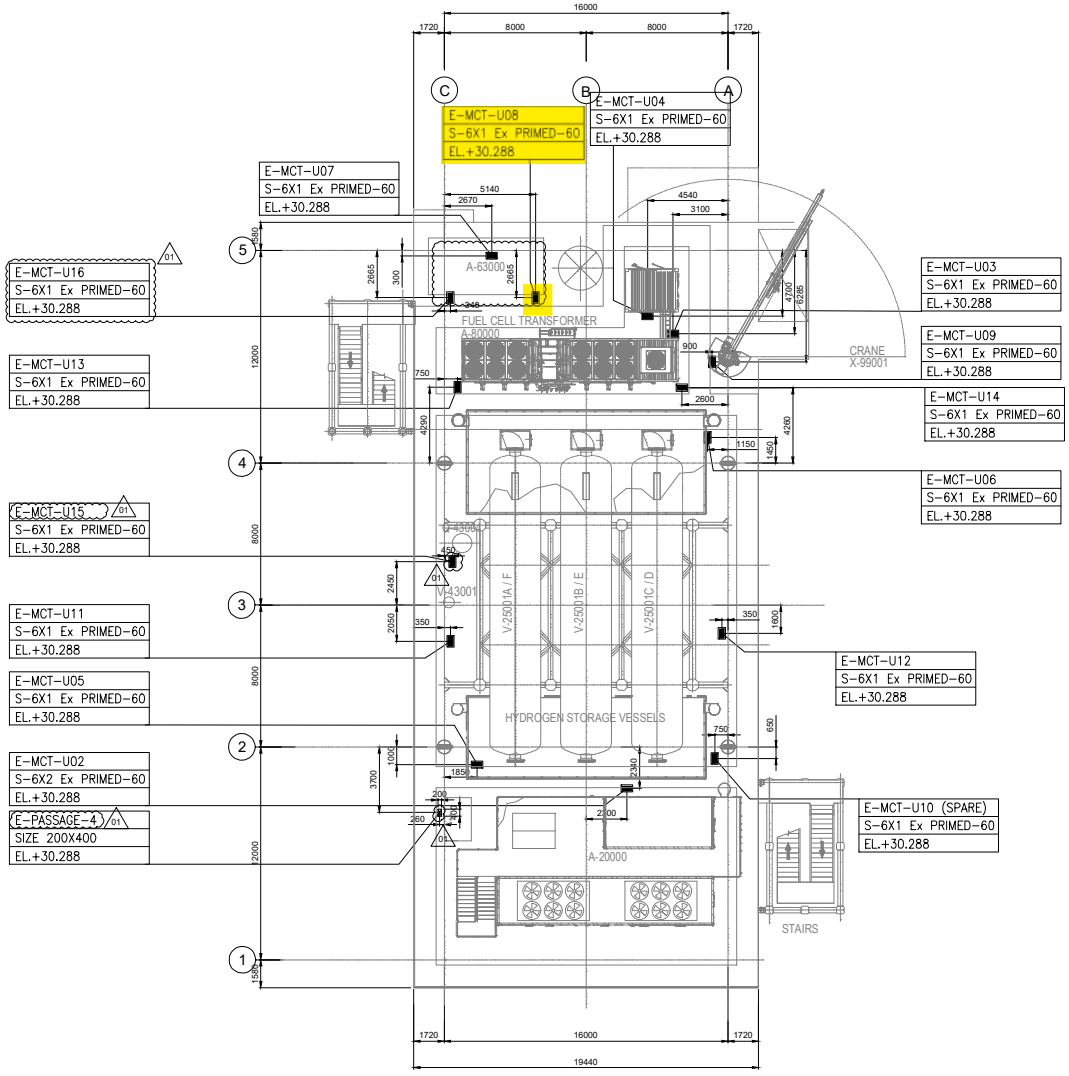
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

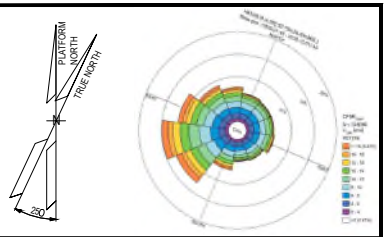
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-01-30	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-30T10:20:05.732Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-30T15:22:37.114Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

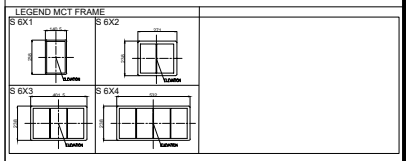
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

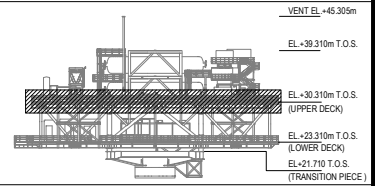
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

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123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

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ROSETTI MARINO SpA

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TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90–DDL–EL–DL–20114	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

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23	E-MCT-U03	S 6X1 **Ex** PRIMED	89
24	E-MCT-U04	S 6X1 **Ex** PRIMED	93
25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
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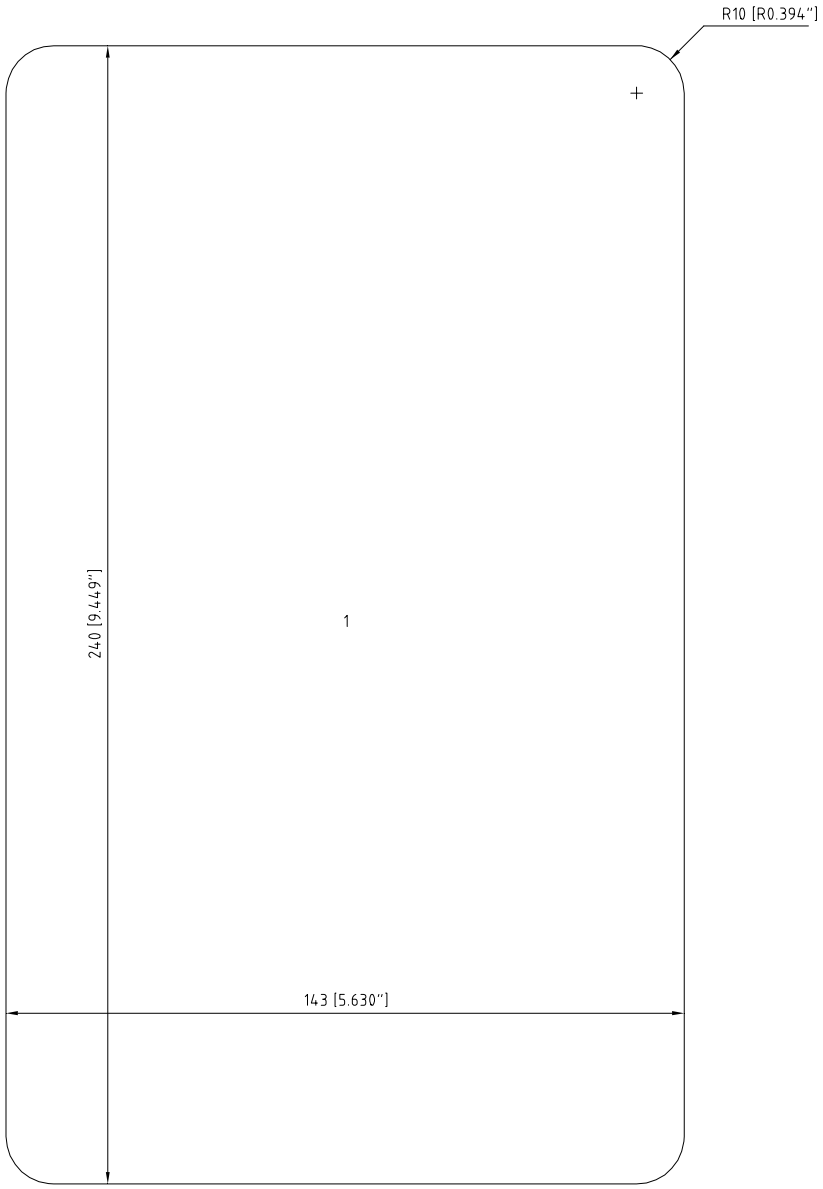
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VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20095
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U08	Sheet No: 1/3
Client			Drawing number	Rev

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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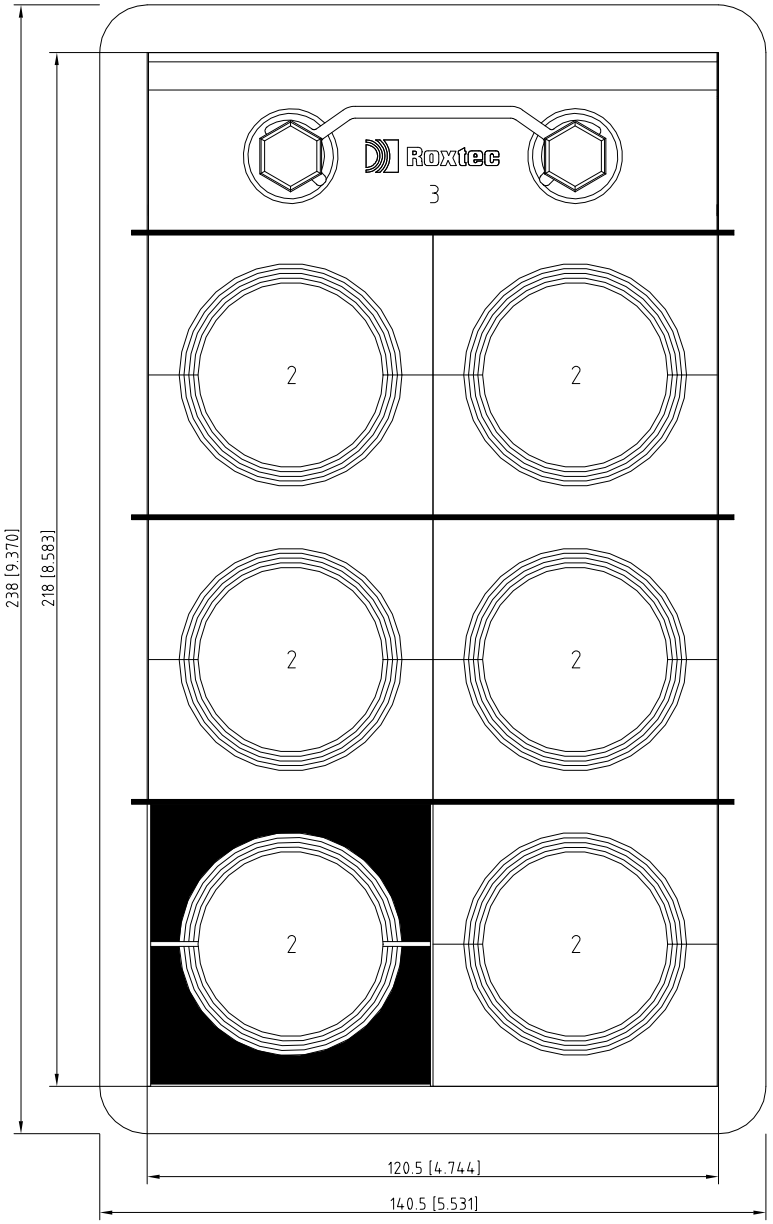
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CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	6	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

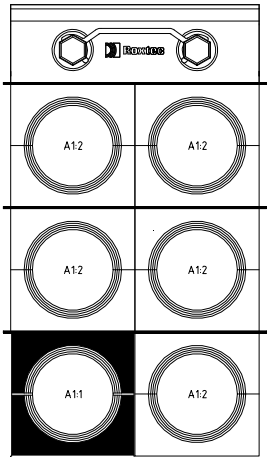
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U08	Sheet No: 2/3
	Client		Drawing number	Rev

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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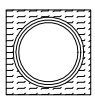
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FDL DWG: **123A90-FDL-EL-DD-20095**

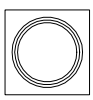
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1_A	08/08/24	G.Randi

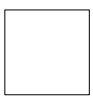
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:2						RM 60 EX 28-54 [1.102"-2.126"]
A1:1	83017-CEL-2	Instrument Air Package	5G70	Power	39.5 [1.555"]	RM 60 EX 28-54 [1.102"-2.126"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U08	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	E-MCT-U09	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001887		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 — MCT Penetration Electrical

1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

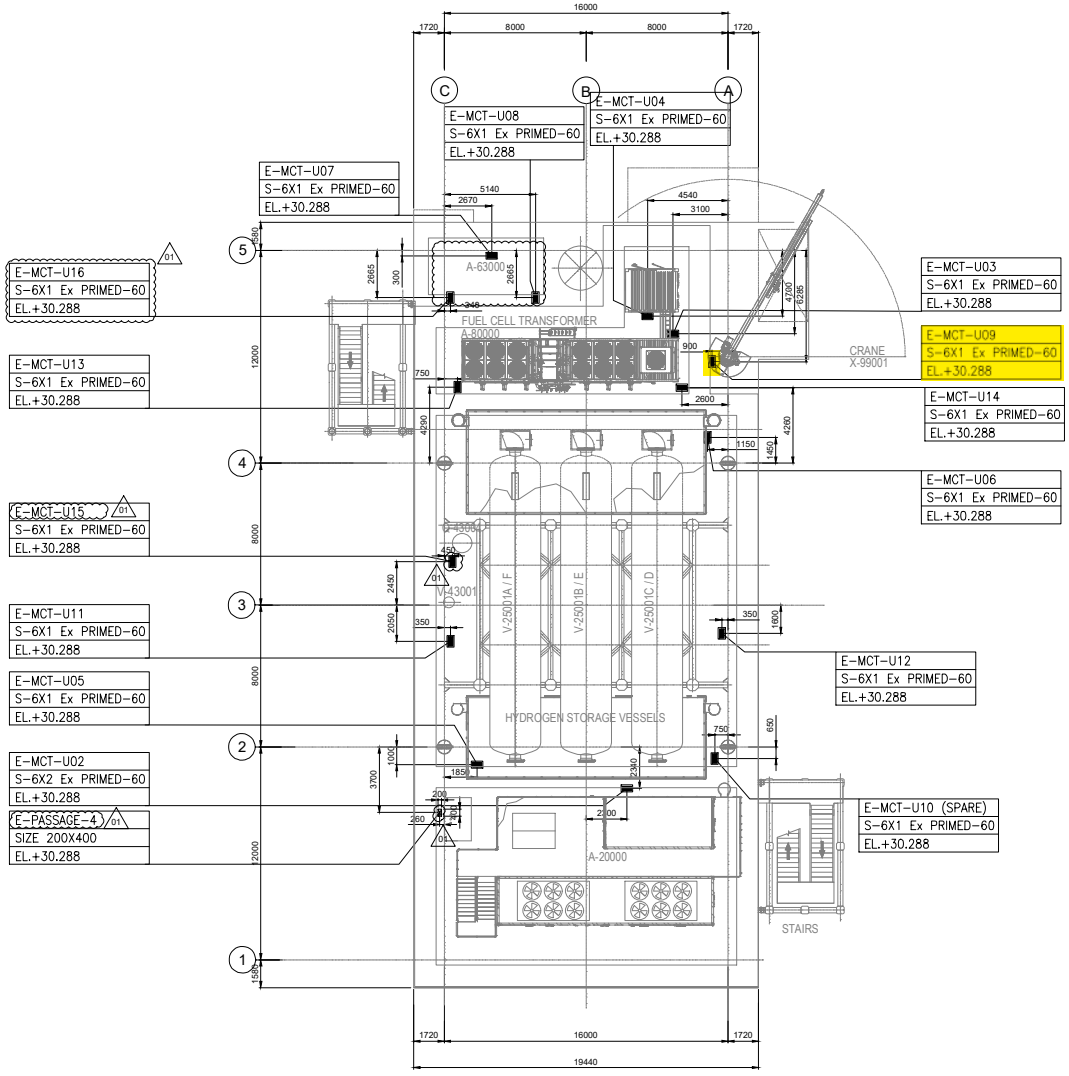
Comments: Note 4: Refer to PL n* C30002351

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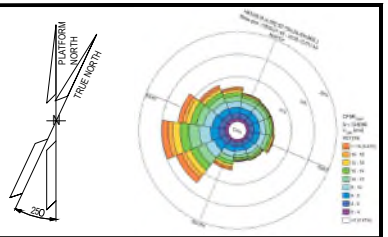
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-02-06	
Signature	Digitaly signed by Michele Tartaglia 2025-01-30T10:20:29.672Z	Digitaly signed by Paolo Schintu 2025-02-06T11:15:58.515Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

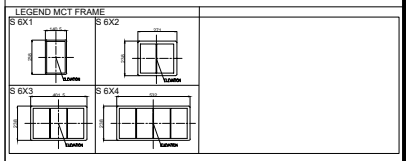
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

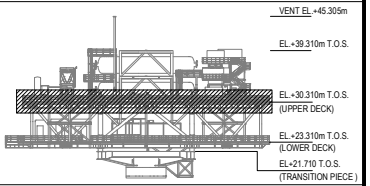
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

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5	E-MCT-T03	S 6X1 PRIMED	14
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7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
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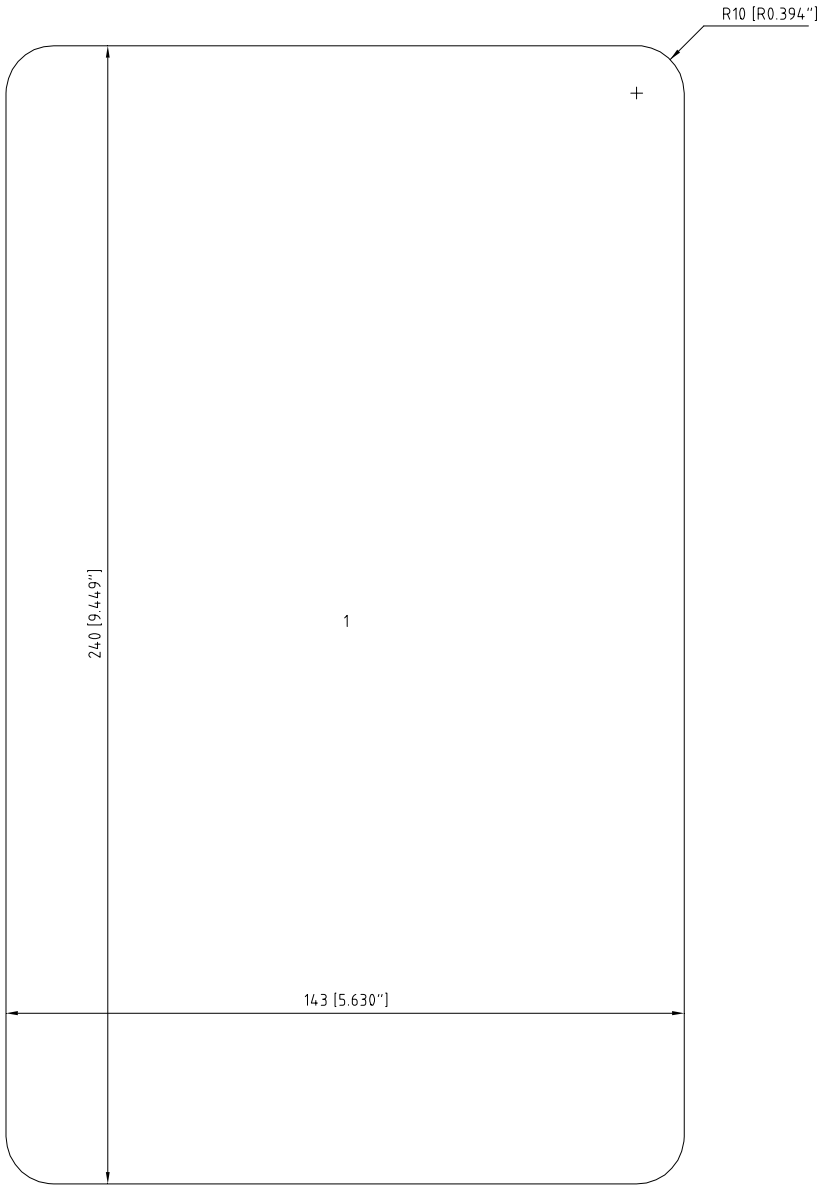
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1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project / Location/ Sublocation	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS	6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U09	Sheet No: 1/3
Client			Drawing number	Rev

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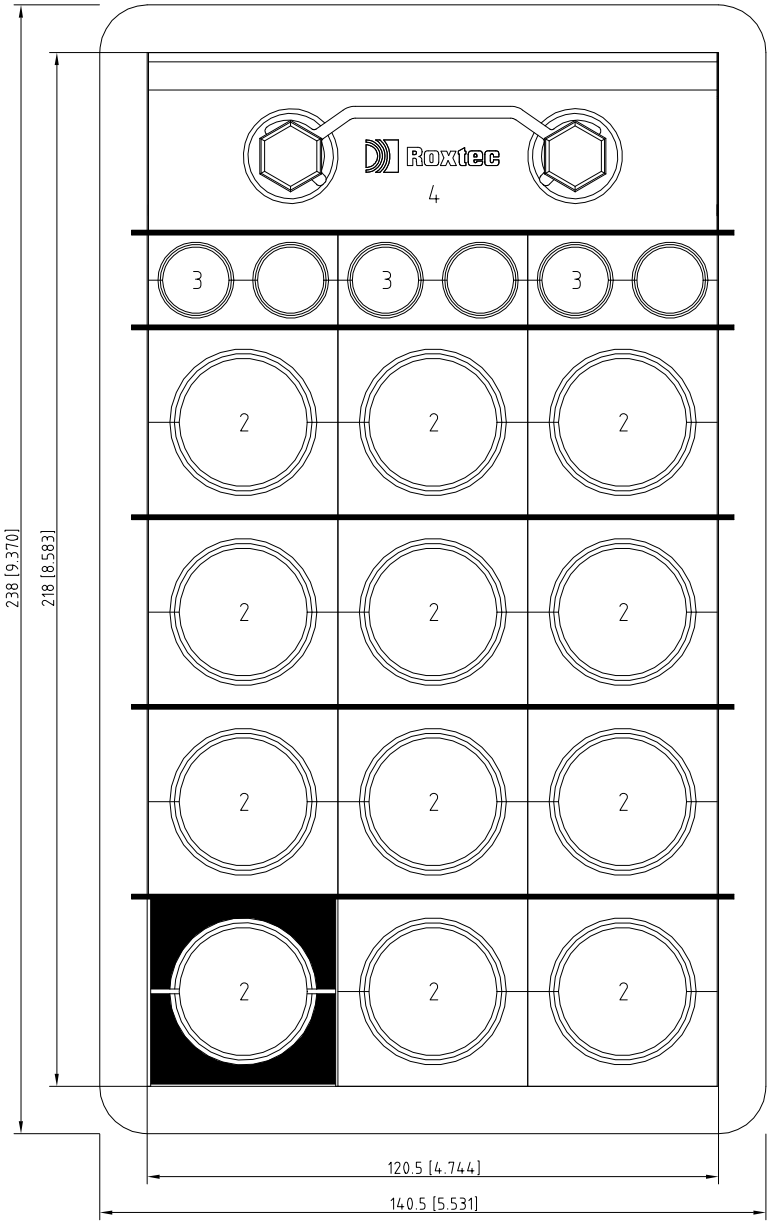
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
5	5	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
4	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
3	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
2	12	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U09	Sheet No: 2/3
	Client		Drawing number	Rev

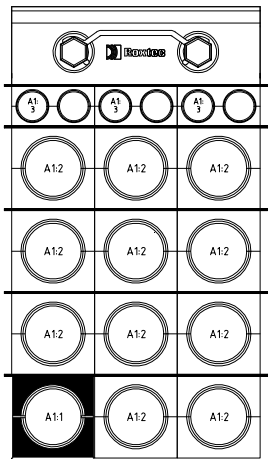
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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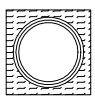
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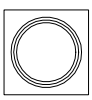
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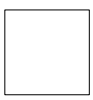
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:3						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:1	83020-CEL	Crane	5G16	Power	24 [0.945"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.6 [14.64]
Roxtec	Format: NTS		Transit name: E-MCT-U09	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	E-MCT-U10	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001888		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

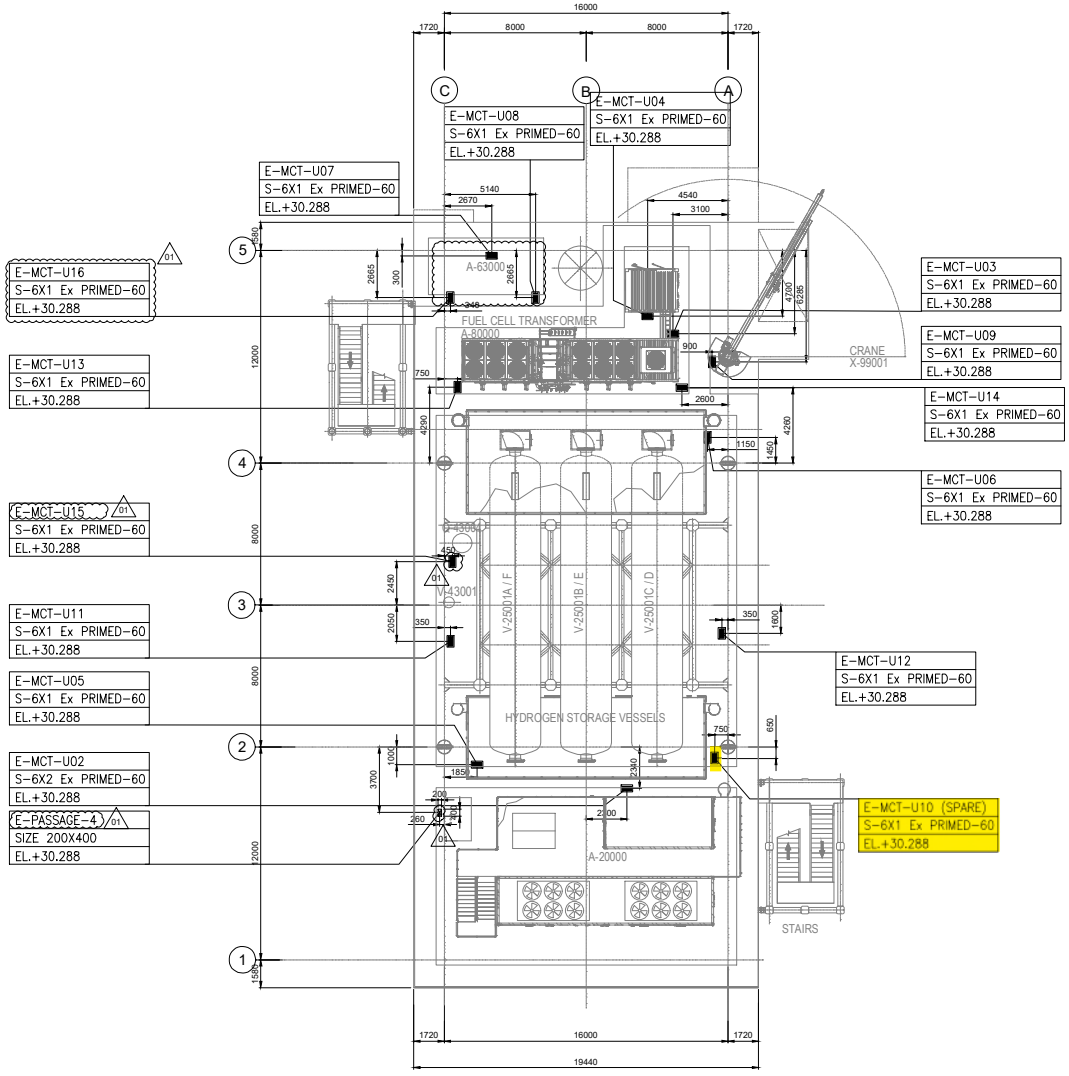
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

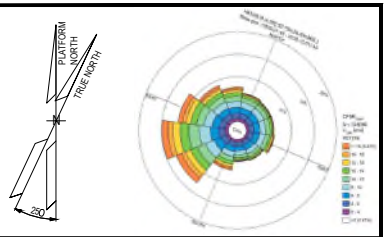
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-29	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:55:31.509Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-29T07:46:21.743Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

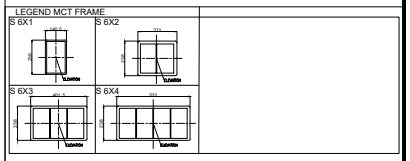
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

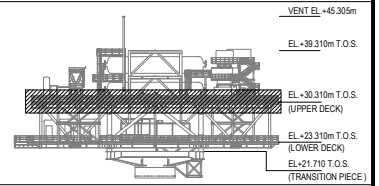
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

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FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
8	E-MCT-103	S 6X2 PRIMED	27
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23	E-MCT-U03	S 6X1 **Ex** PRIMED	89
24	E-MCT-U04	S 6X1 **Ex** PRIMED	93
25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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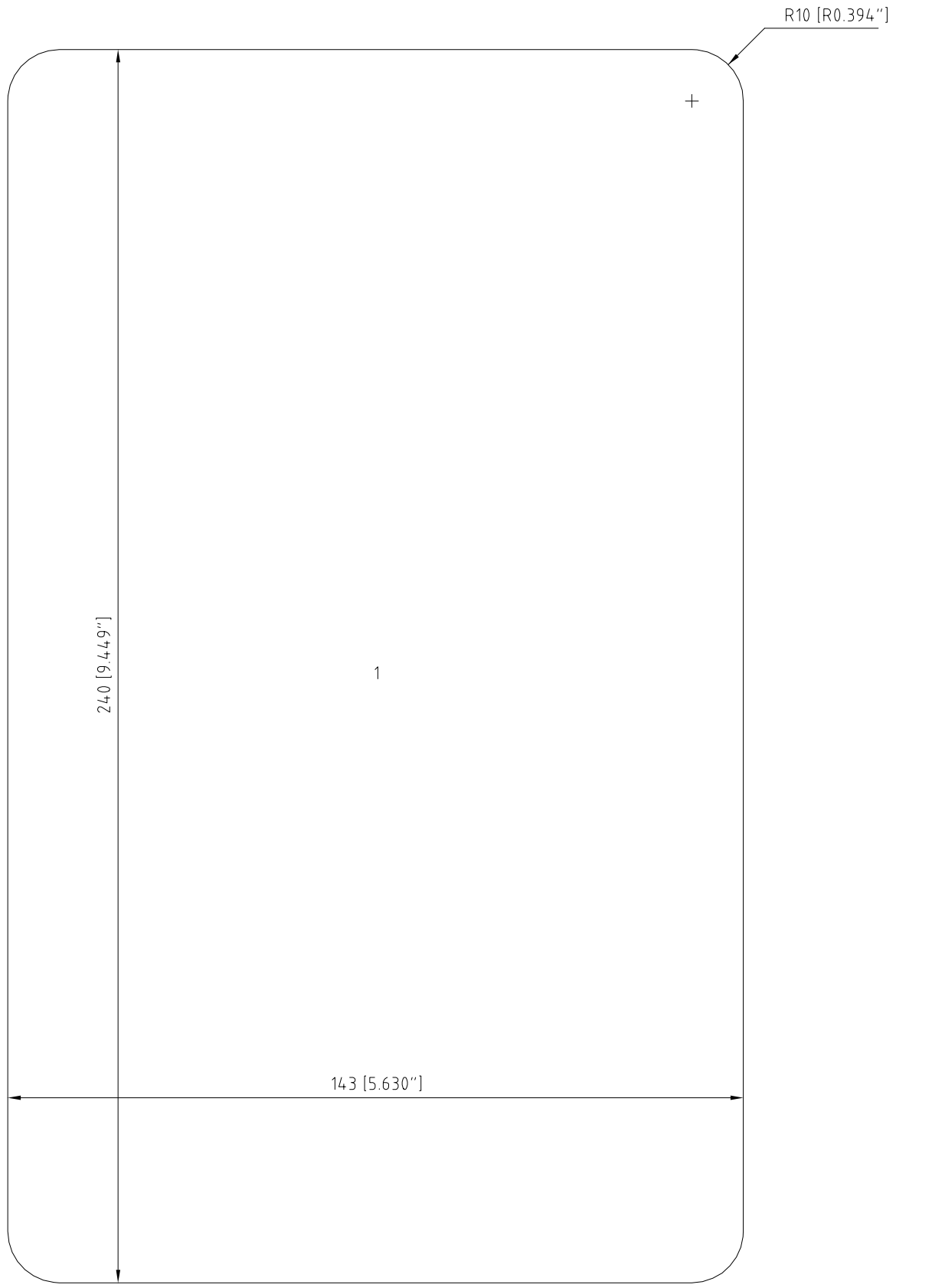
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ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.73]
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	Client		Drawing number	Rev

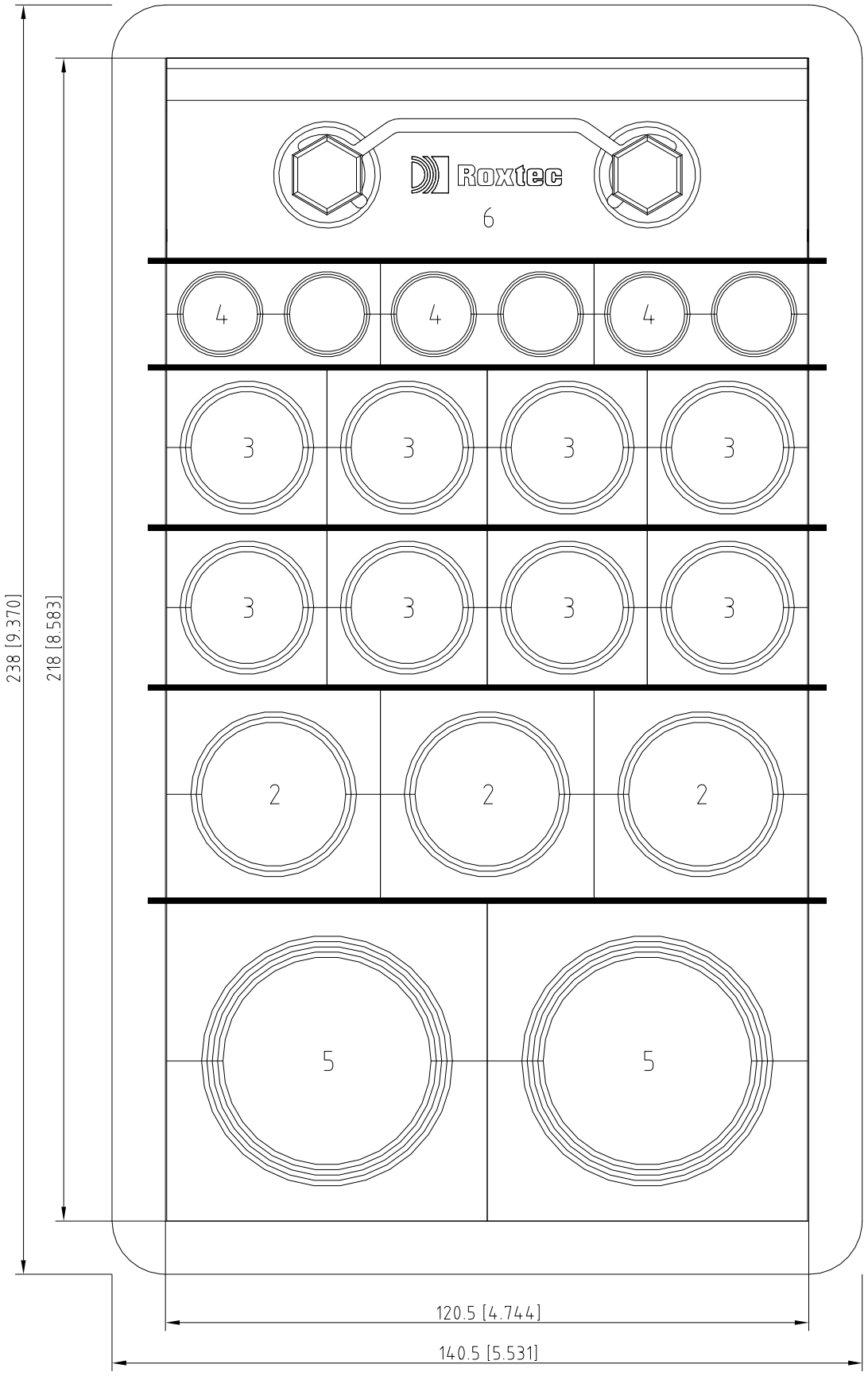
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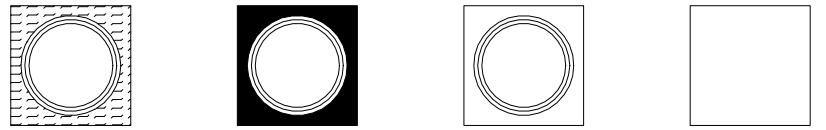
CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
7	5	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
6	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
5	2	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
4	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
3	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	3	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.7 [14.73]
Roxtec	Format: NTS		Transit name: E-MCT-U10-Spare	Sheet No: 2/3
	Client	Drawing number		Rev

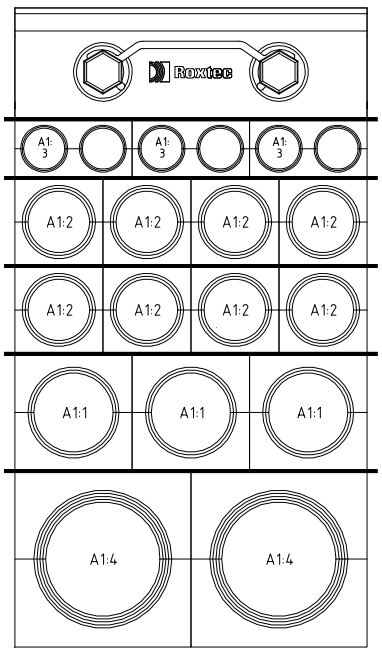
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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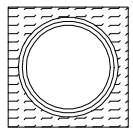
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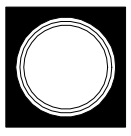
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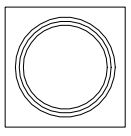
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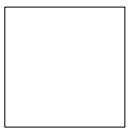
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:4						RM 60 EX 28-54 [1.102"-2.126"]
A1:3						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2						RM 30 EX 10-25 [0.394"-0.984"]
A1:1						RM 40 EX 21.5-34.5 [0.846"-1.358"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

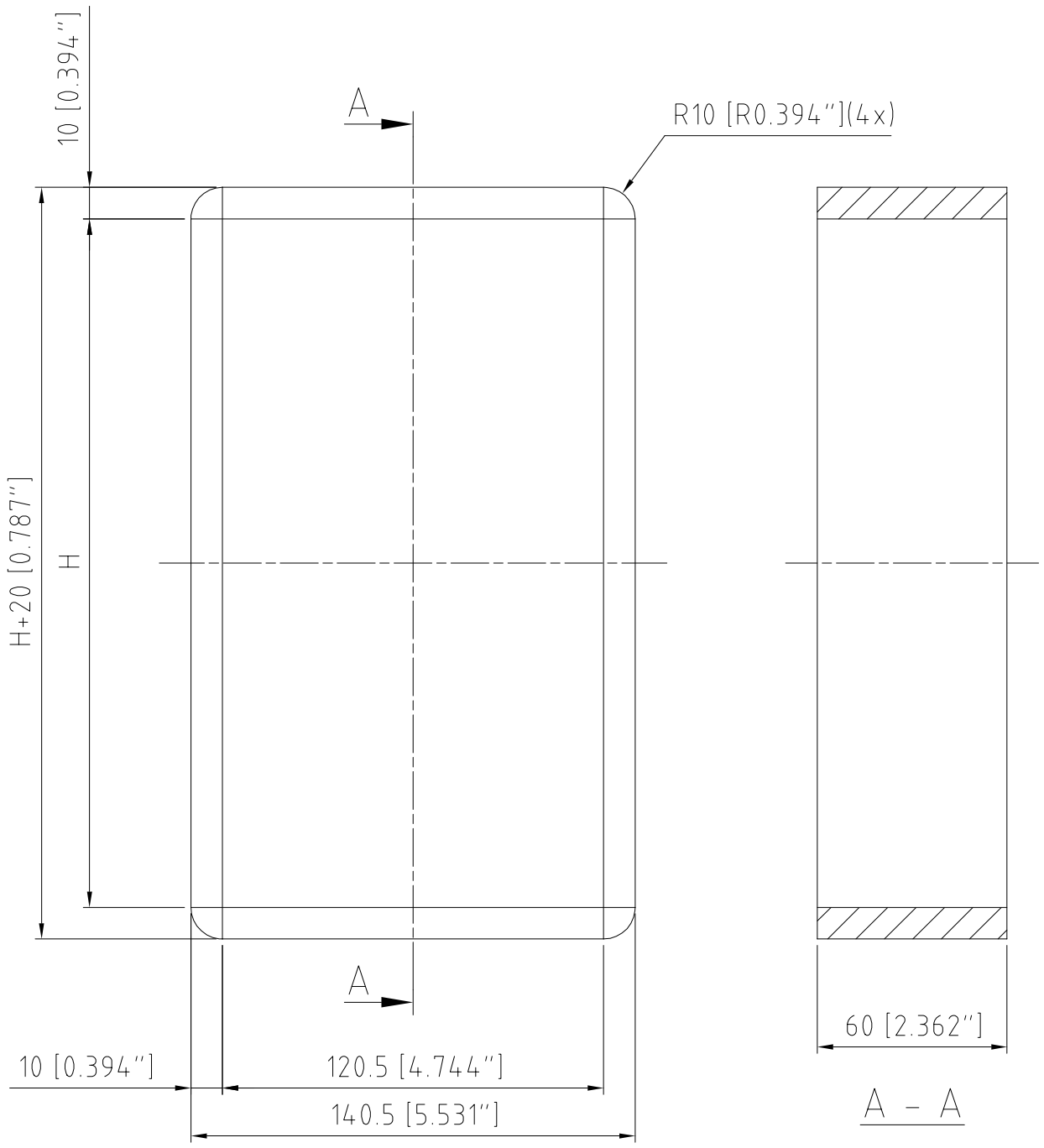
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.73]
Roxtec	Format: NTS		Transit name: E-MCT-U10-Spare	Sheet No: 3/3
	Client	Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U11	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001889		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

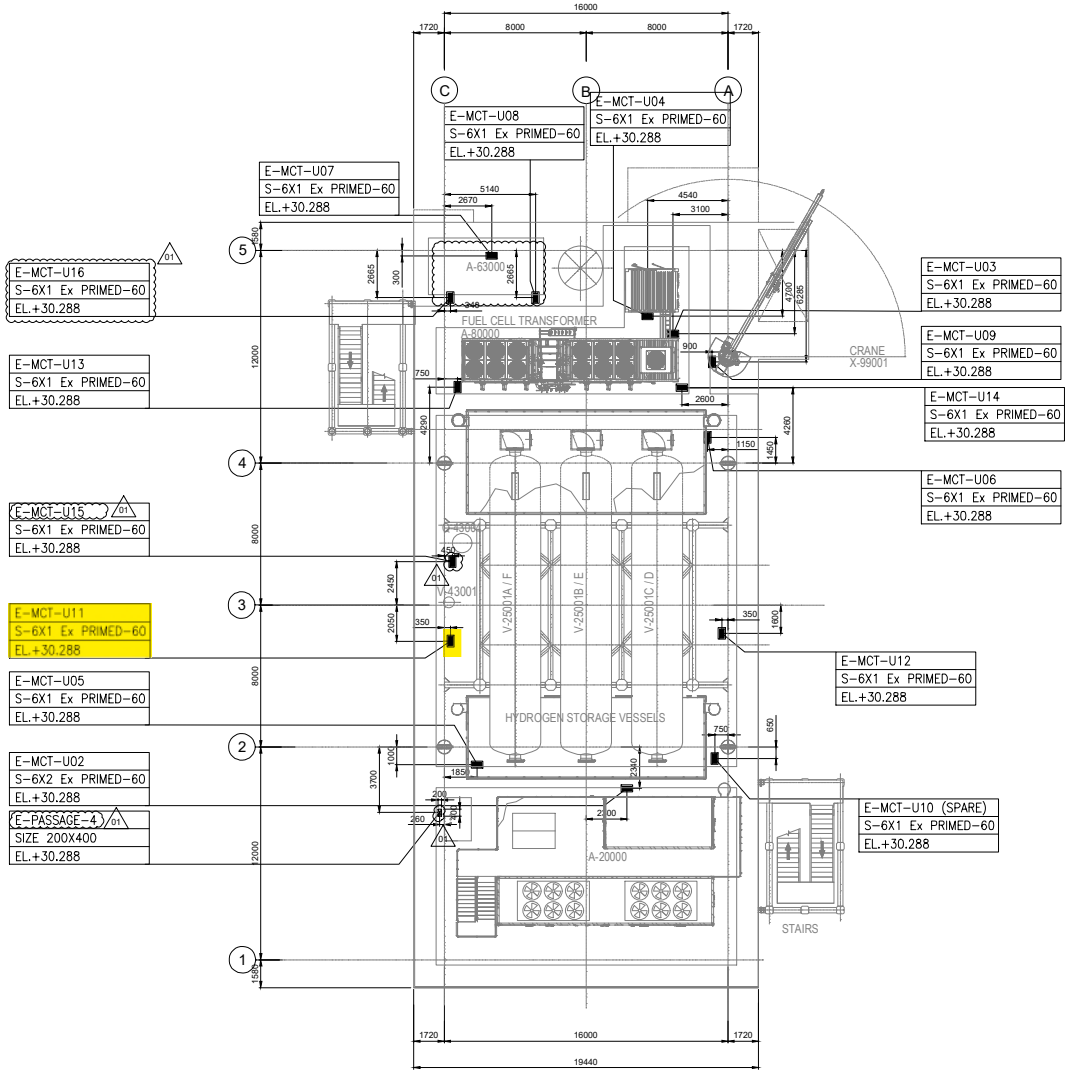
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

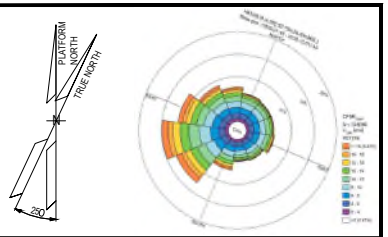
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-22	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-21T16:15:08.556Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:30:32.297Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

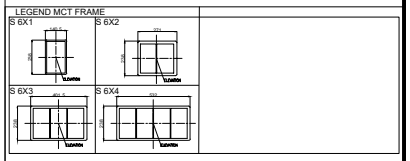
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

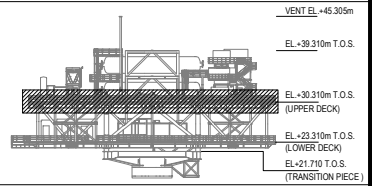
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

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FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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2	INDEX		3
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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
8	E-MCT-103	S 6X2 PRIMED	27
9	E-MCT-104	S 6X1 PRIMED	31
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16	E-MCT-205	S 6X2 **AISI316**	60
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23	E-MCT-U03	S 6X1 **Ex** PRIMED	89
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25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
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32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
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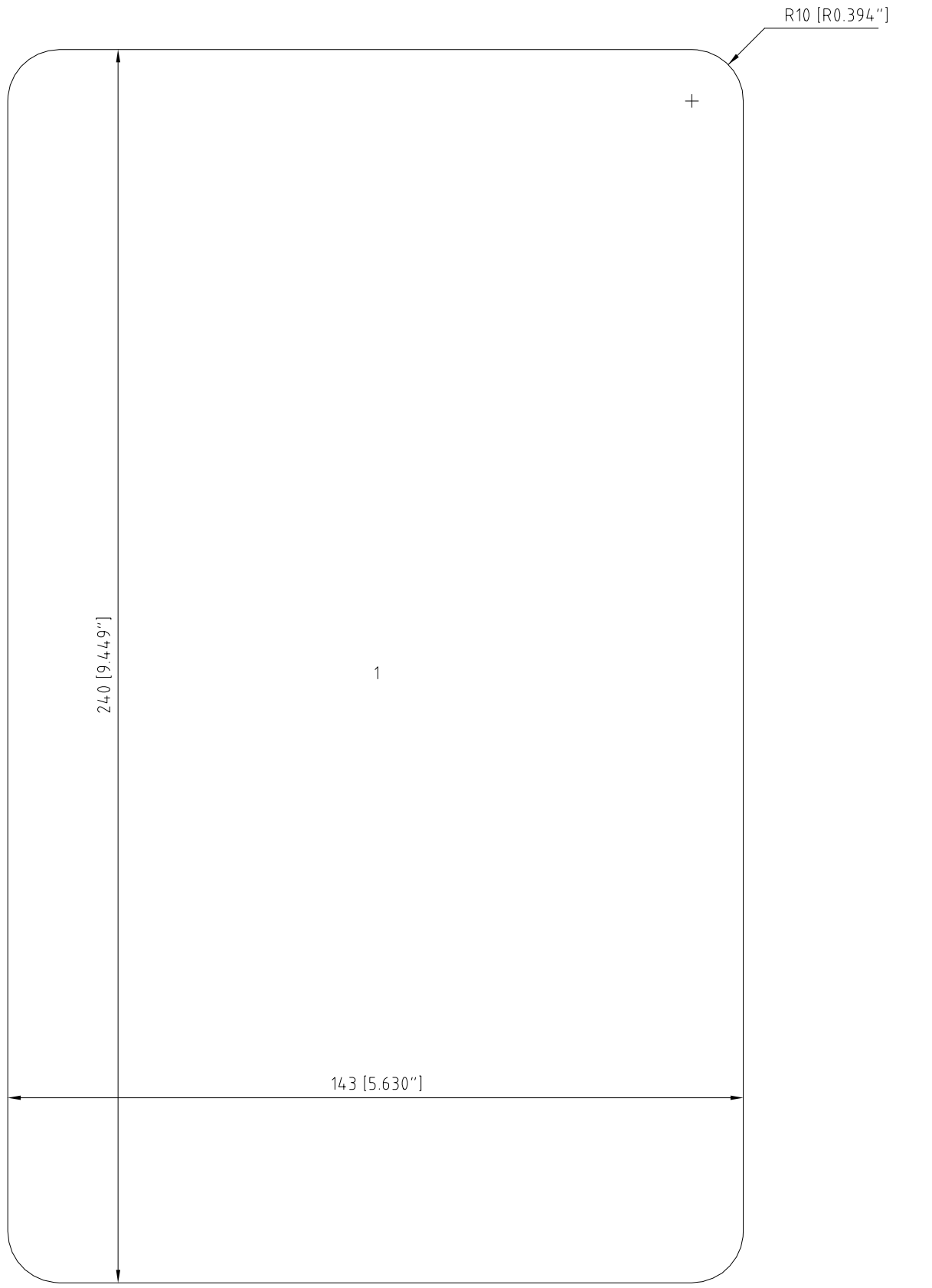
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1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.7 [14.75]
Roxtec	Format: NTS		Transit name: E-MCT-U11	Sheet No: 1/3
	Client		Drawing number	Rev

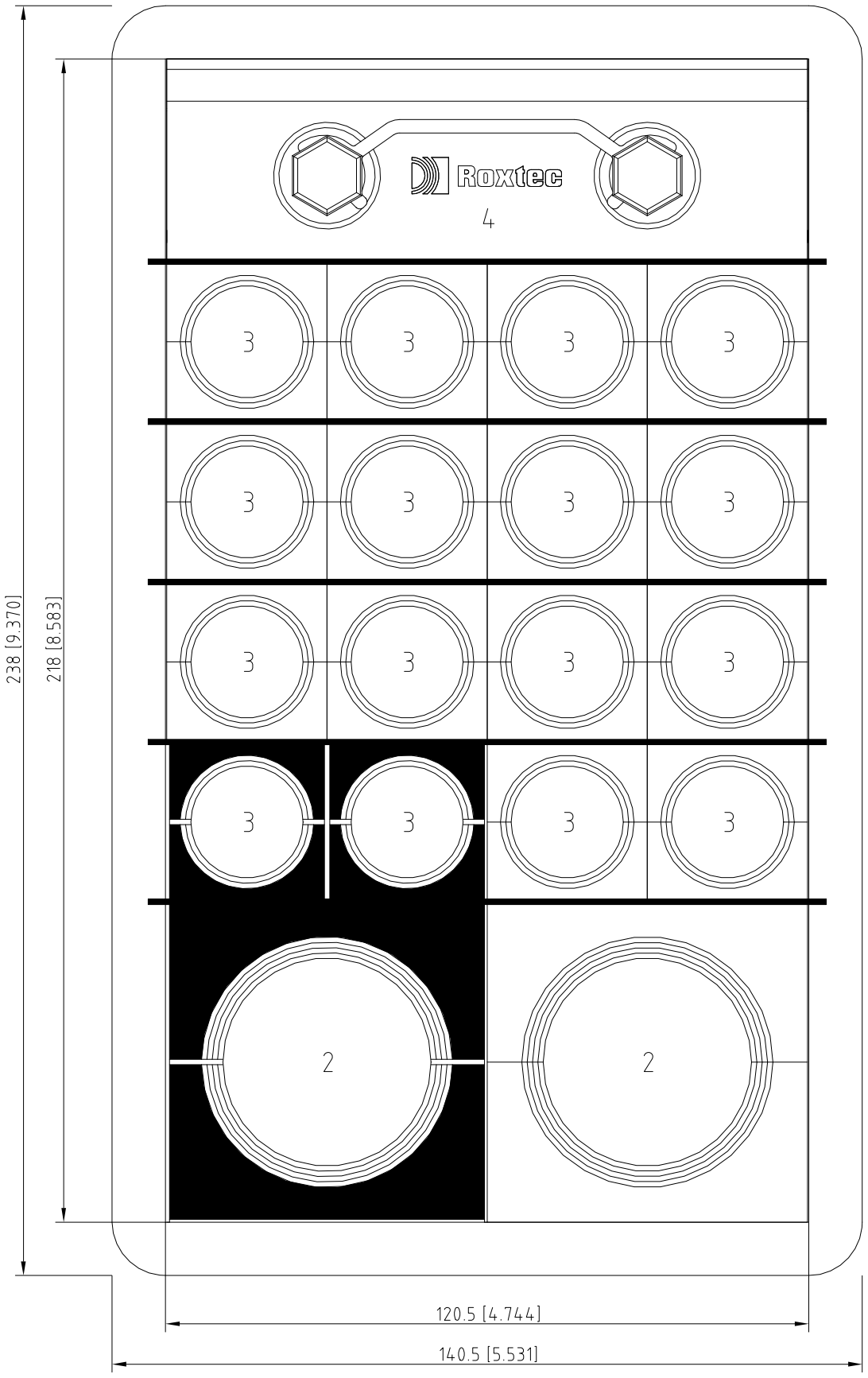
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
5	5	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
4	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
3	16	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	2	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.7 [14.75]
Roxtec	Format: NTS		Transit name: E-MCT-U11	Sheet No: 2/3
	Client		Drawing number	Rev

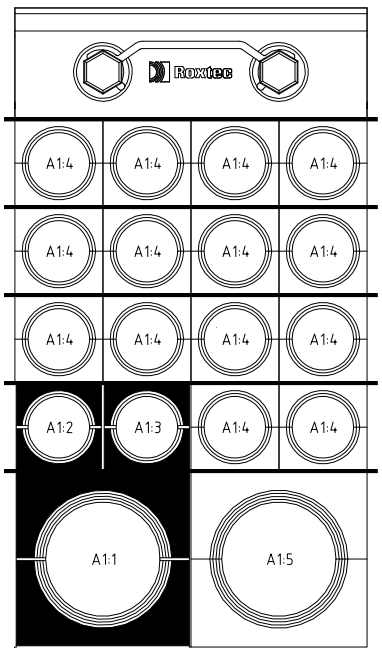
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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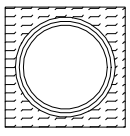
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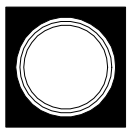
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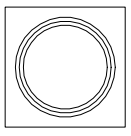
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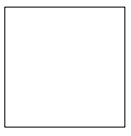
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:5						RM 60 EX 28-54 [1.102"-2.126"]
A1:4						RM 30 EX 10-25 [0.394"-0.984"]
A1:3	P-ETB-200N1-18-L2-01	KO Drum V-43001 Heat tracing	3G6	Power	15.6 [0.614"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:2	P-ETB-200N1-17-L1-01	Pipe line WW-259 Heat tracing	3G6	Power	15.6 [0.614"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	83021-CEL-03	Welding Sockets (Top Deck) JB's	5G50	Power	35 [1.378"]	RM 60 EX 28-54 [1.102"-2.126"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

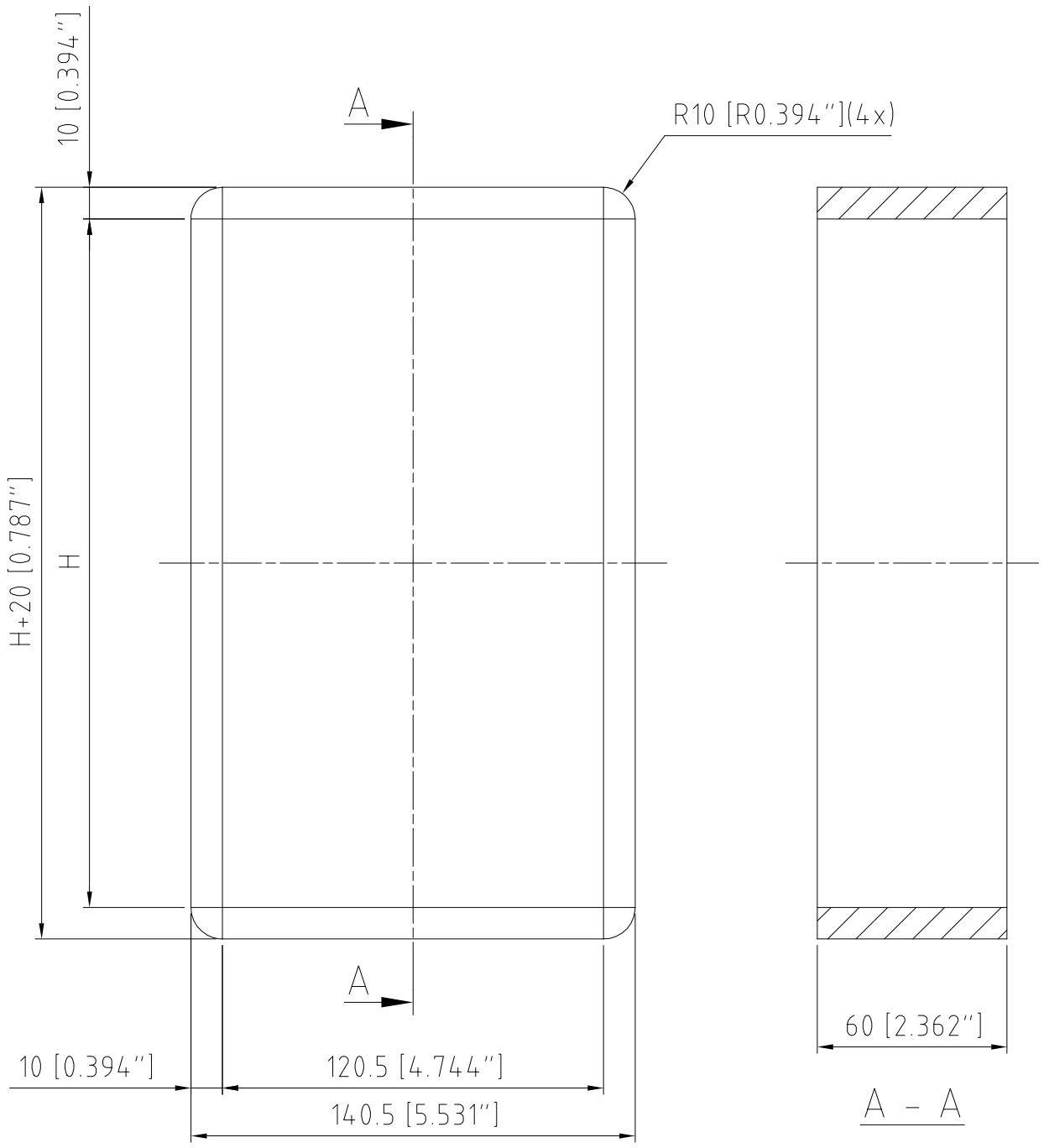
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Roxtec	Format: NTS		Transit name: E-MCT-U11		Sheet No: 3/3
	Client		Drawing number		Rev

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ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
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2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
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S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U12	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001890		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

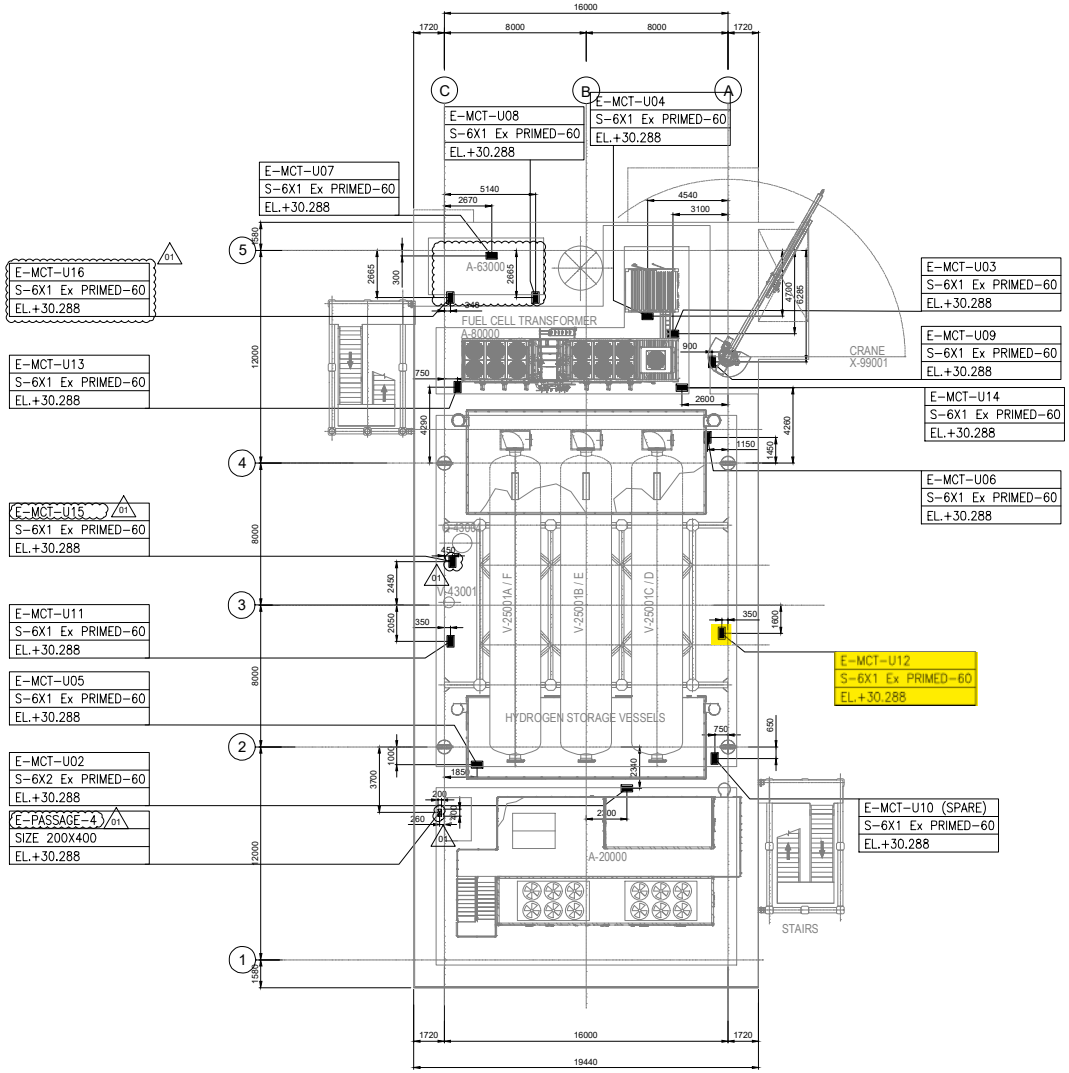
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

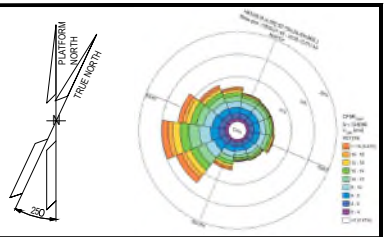
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-22	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-21T16:15:37.237Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:35:46.115Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

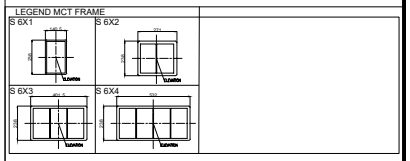
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

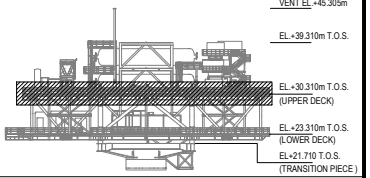
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
8	E-MCT-103	S 6X2 PRIMED	27
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25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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1_A	08/08/24	G.Randi

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RTD Version No: 4.37.4.0

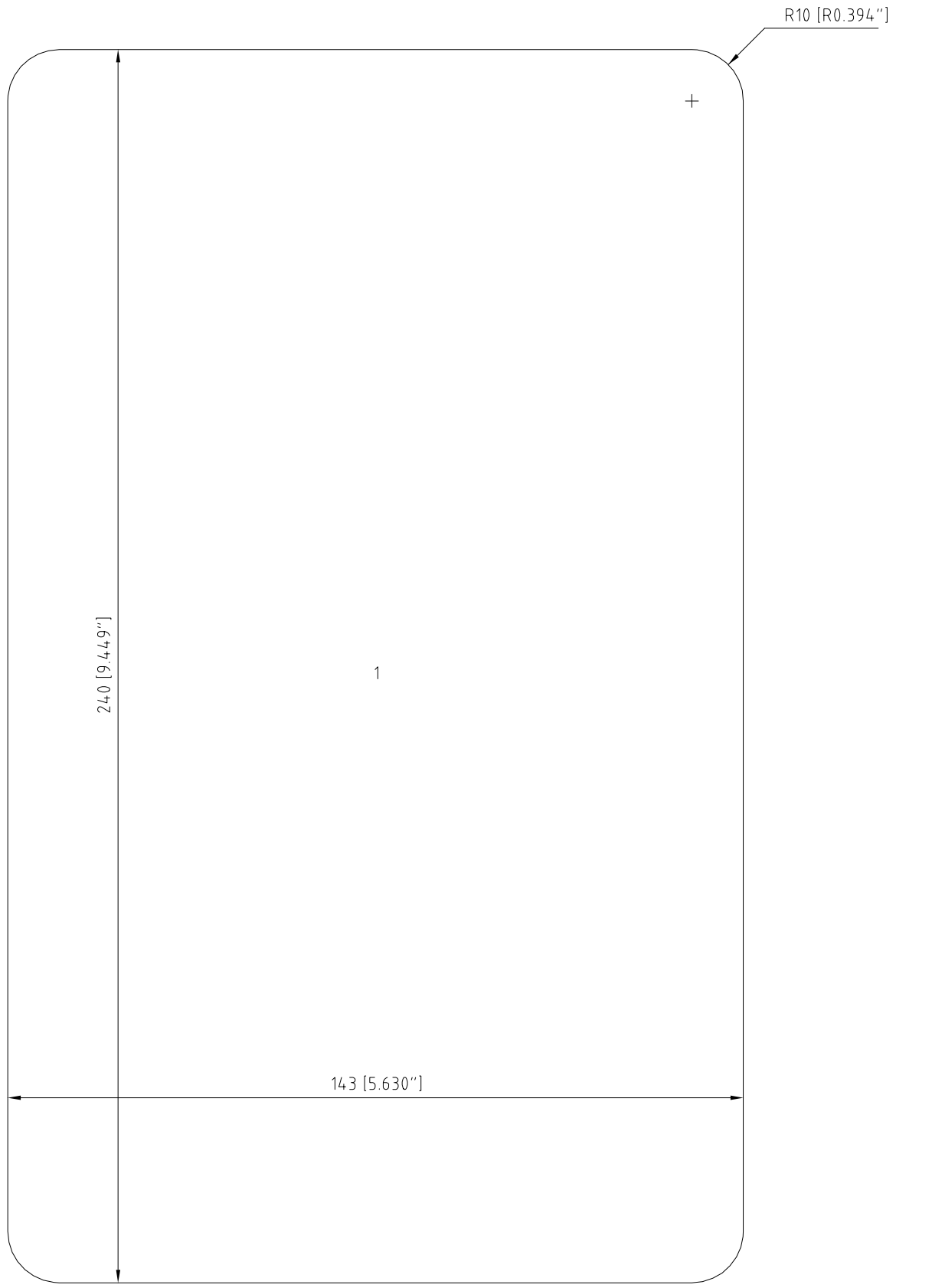
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U12	Sheet No: 1/3
	Client		Drawing number	Rev

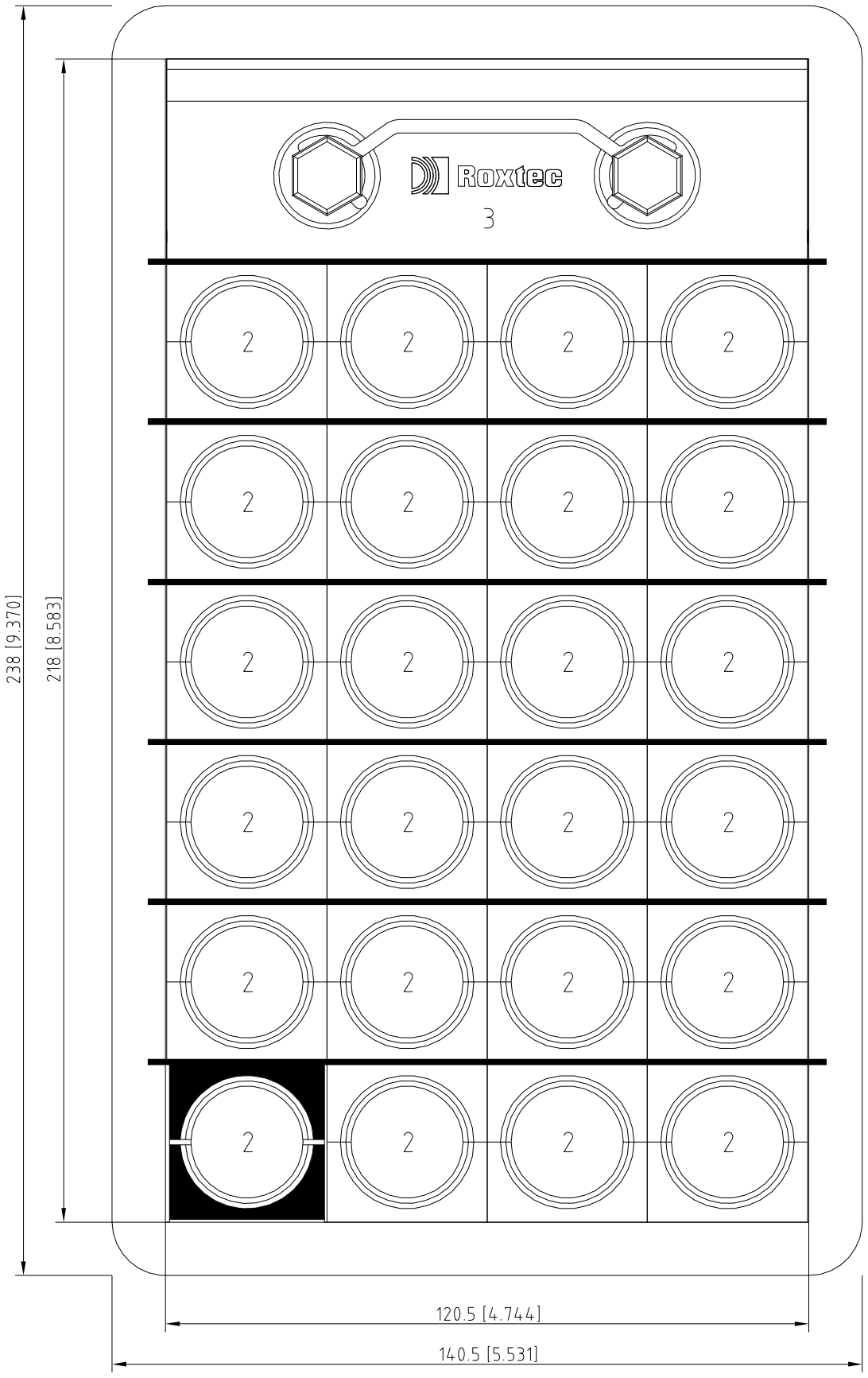
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm [']	Roxtec Art No	Weight Kg [lb]
4	6	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	24	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format NTS		Transit name E-MCT-U12	Sheet No 2/3
	Client	Drawing number		Rev

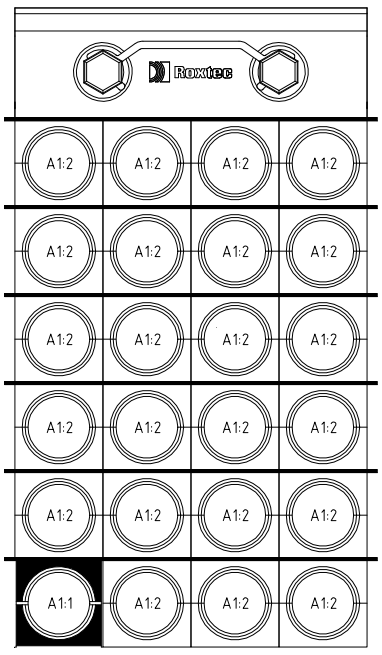
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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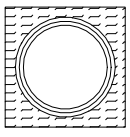
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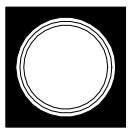
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

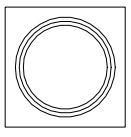
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1_A	08/08/24	G.Randi

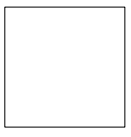
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:2						RM 30 EX 10-25 [0.394"-0.984"]
A1:1	P-EJB-200N1-05-L1-02	Small Power Socket JB(Upper Deck)	3G10	Power	17.7 [0.697"]	RM 30 EX 10-25 [0.394"-0.984"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

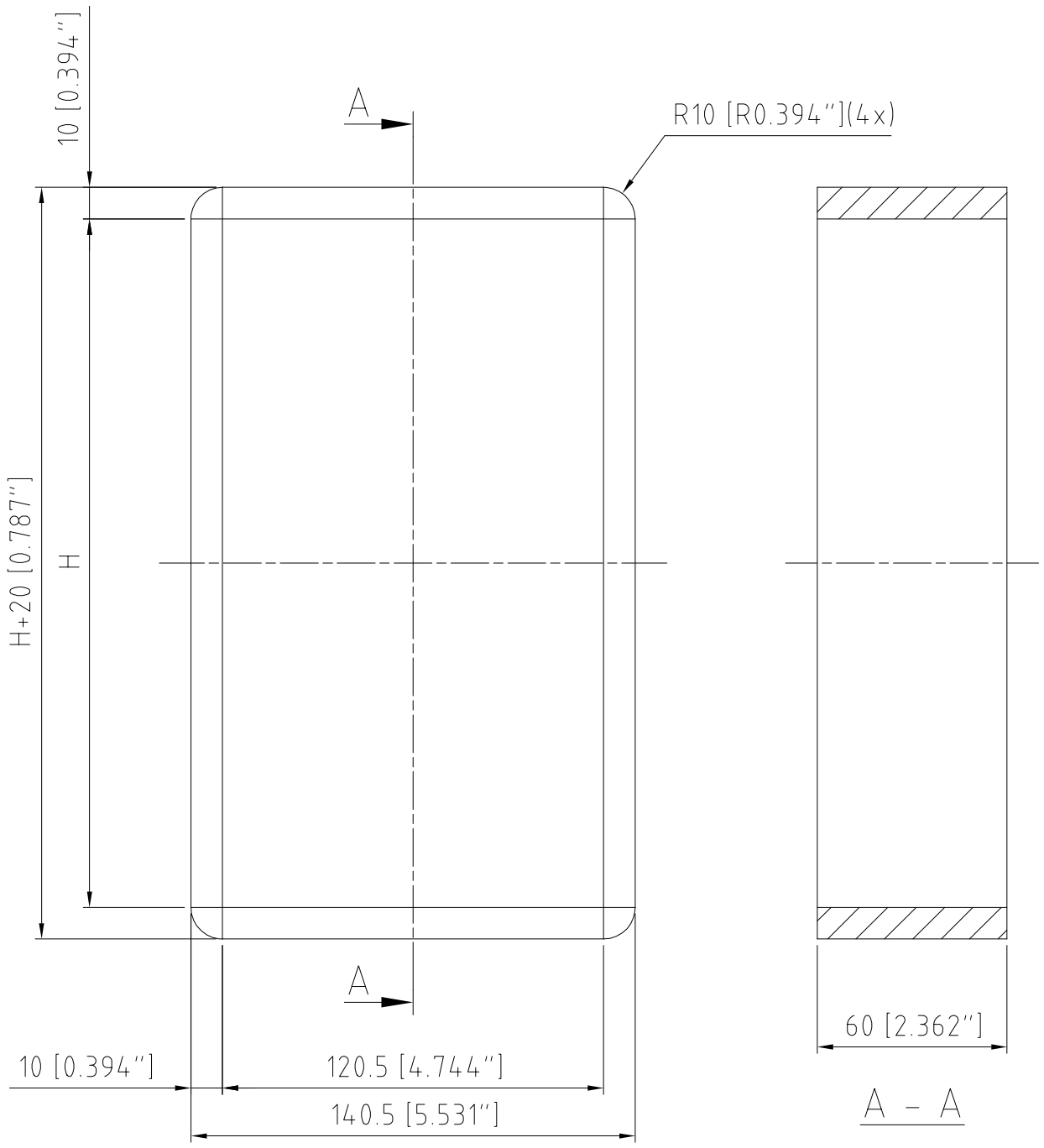
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U12	Sheet No: 3/3
	Client	Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-U13	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001891		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

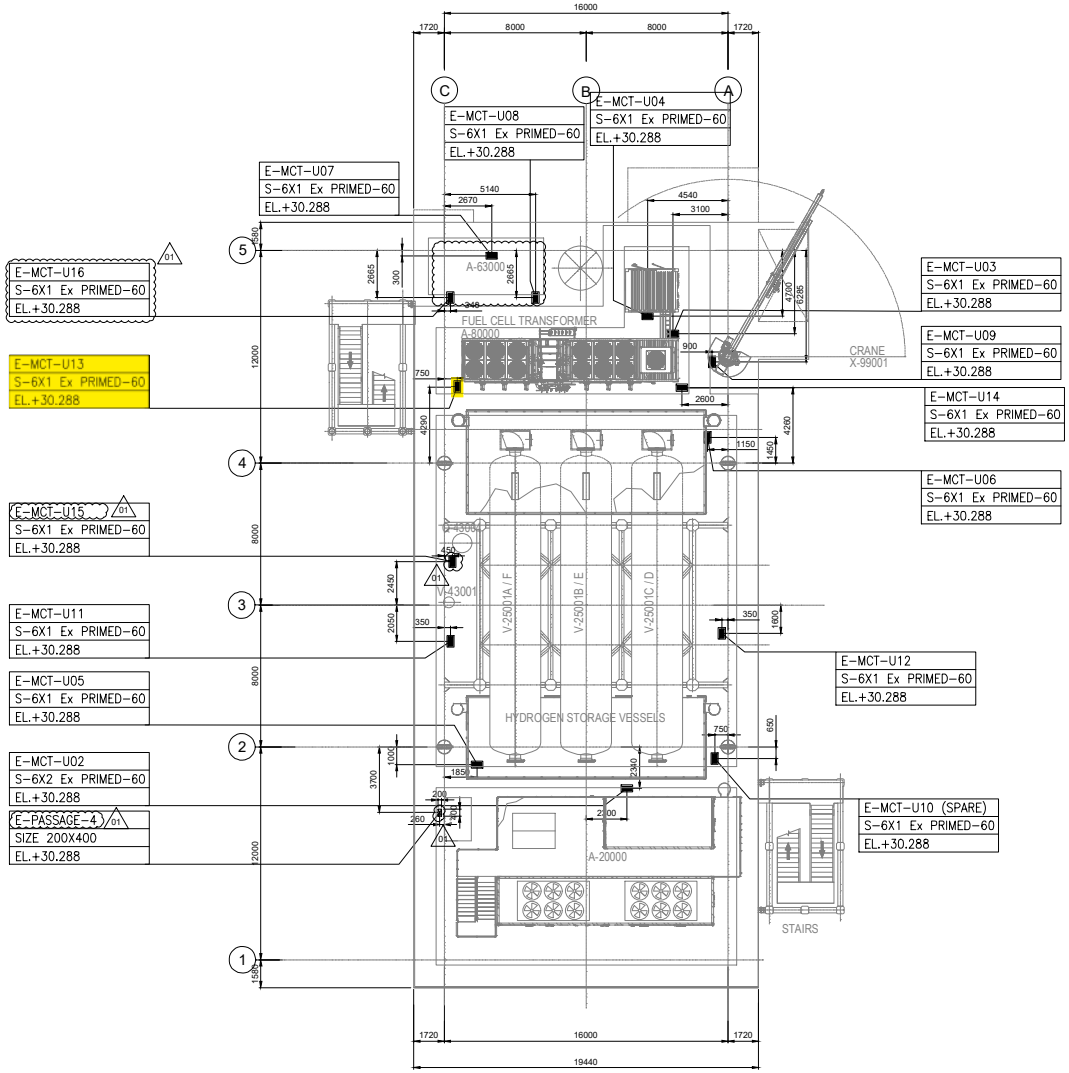
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 2: Refer to PL n* C30002351

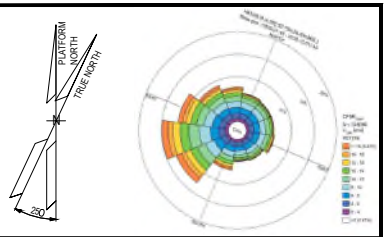
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-22	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-21T16:16:07.375Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:33:08.457Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

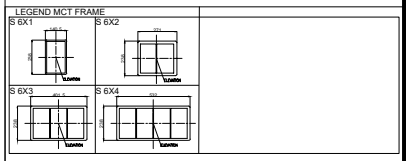
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

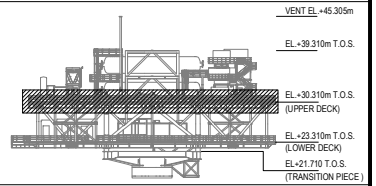
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG — TAGGING
SIZE–MATERIAL–DEPTH — TYPICAL
EL. — ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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11	E-MCT-106	S 6X2 PRIMED	39
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13	E-MCT-202	S 6X2 **AISI316**	48
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25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
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35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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1_A	08/08/24	G.Randi

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RTD Version No: 4.37.4.0

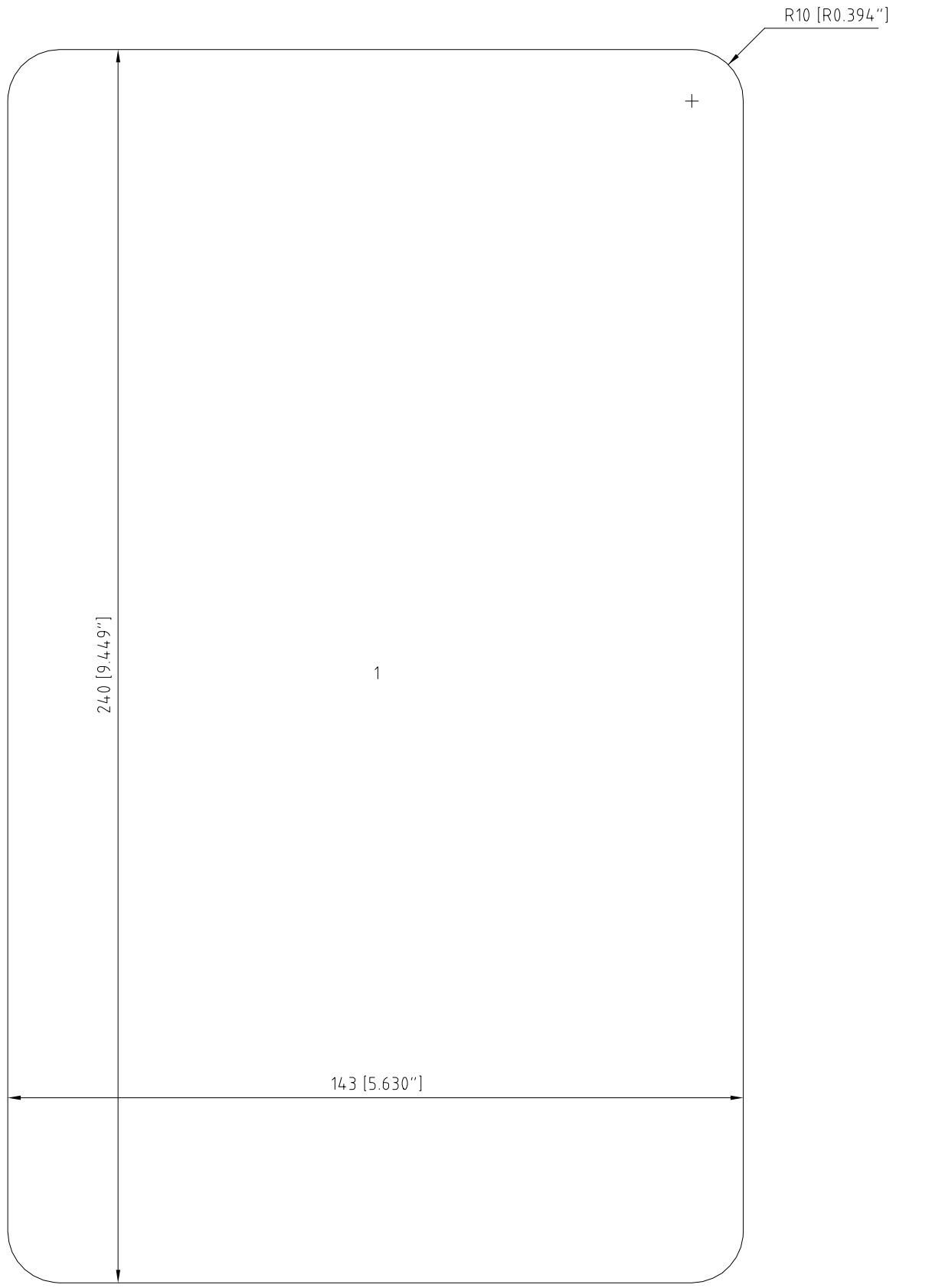
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U13	Sheet No: 1/3
	Client		Drawing number	Rev

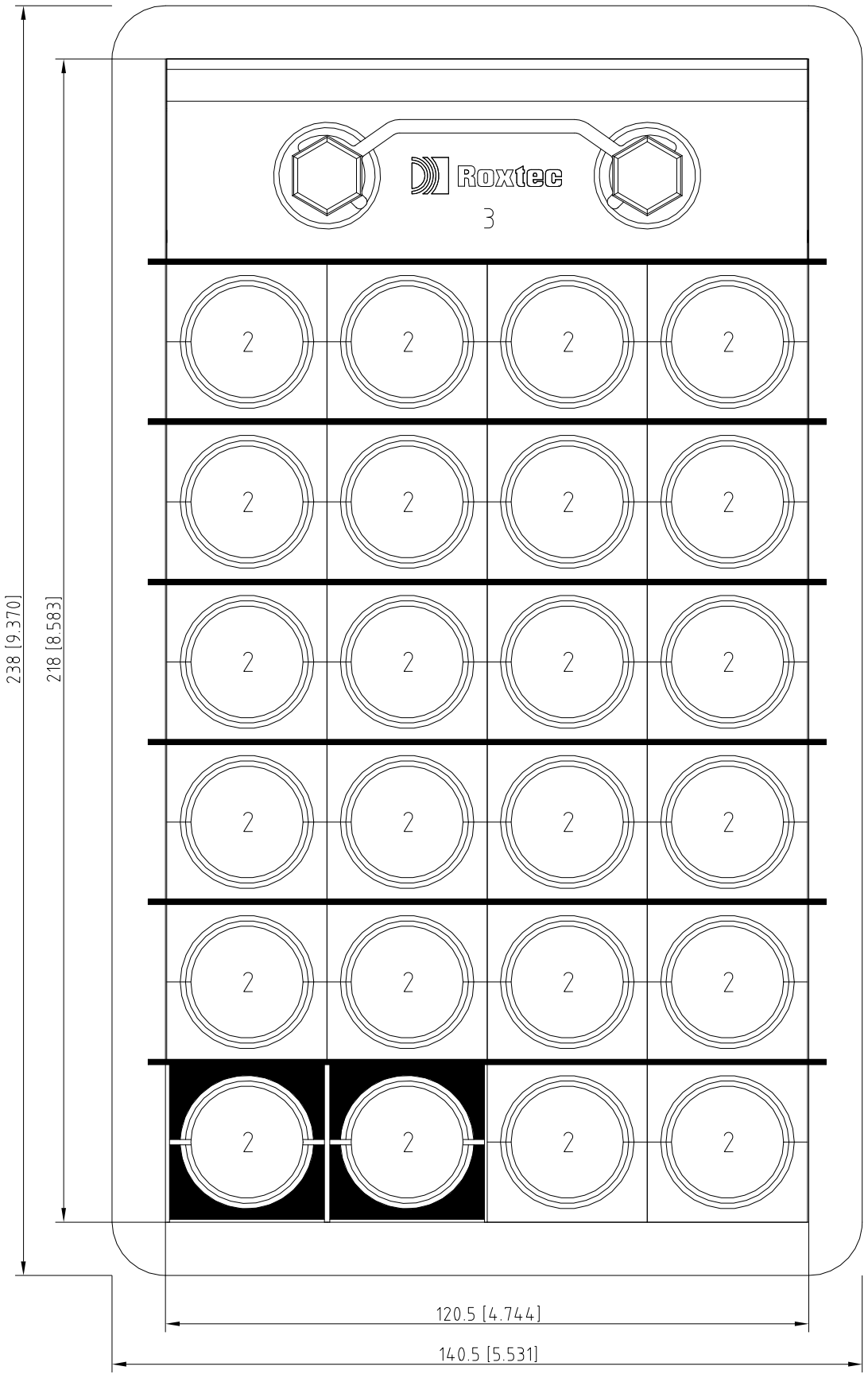
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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ROSETTI MARINO SpA



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm [']	Roxtec Art No	Weight Kg [lb]
4	6	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	24	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U13	Sheet No: 2/3
	Client		Drawing number	Rev

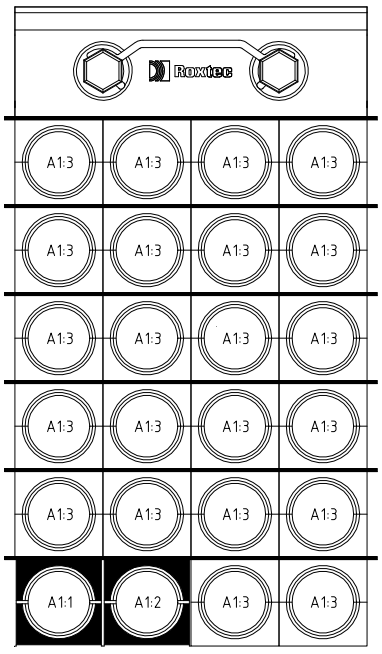
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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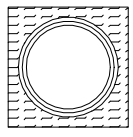
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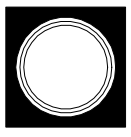
FDL DWG: **123A90-FDL-EL-DD-20095**

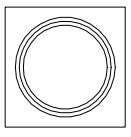
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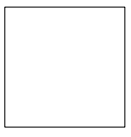
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:3						RM 30 EX 10-25 [0.394"-0.984"]
A1:2	P-EJB-200N1-05-L1-02	Small Power Socket JB(Upper Deck)	3G10	Power	17.7 [0.697"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	P-EJB-200N1-05-L1-01	Small Power Socket JB(Upper Deck)	3G10	Power	17.7 [0.697"]	RM 30 EX 10-25 [0.394"-0.984"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

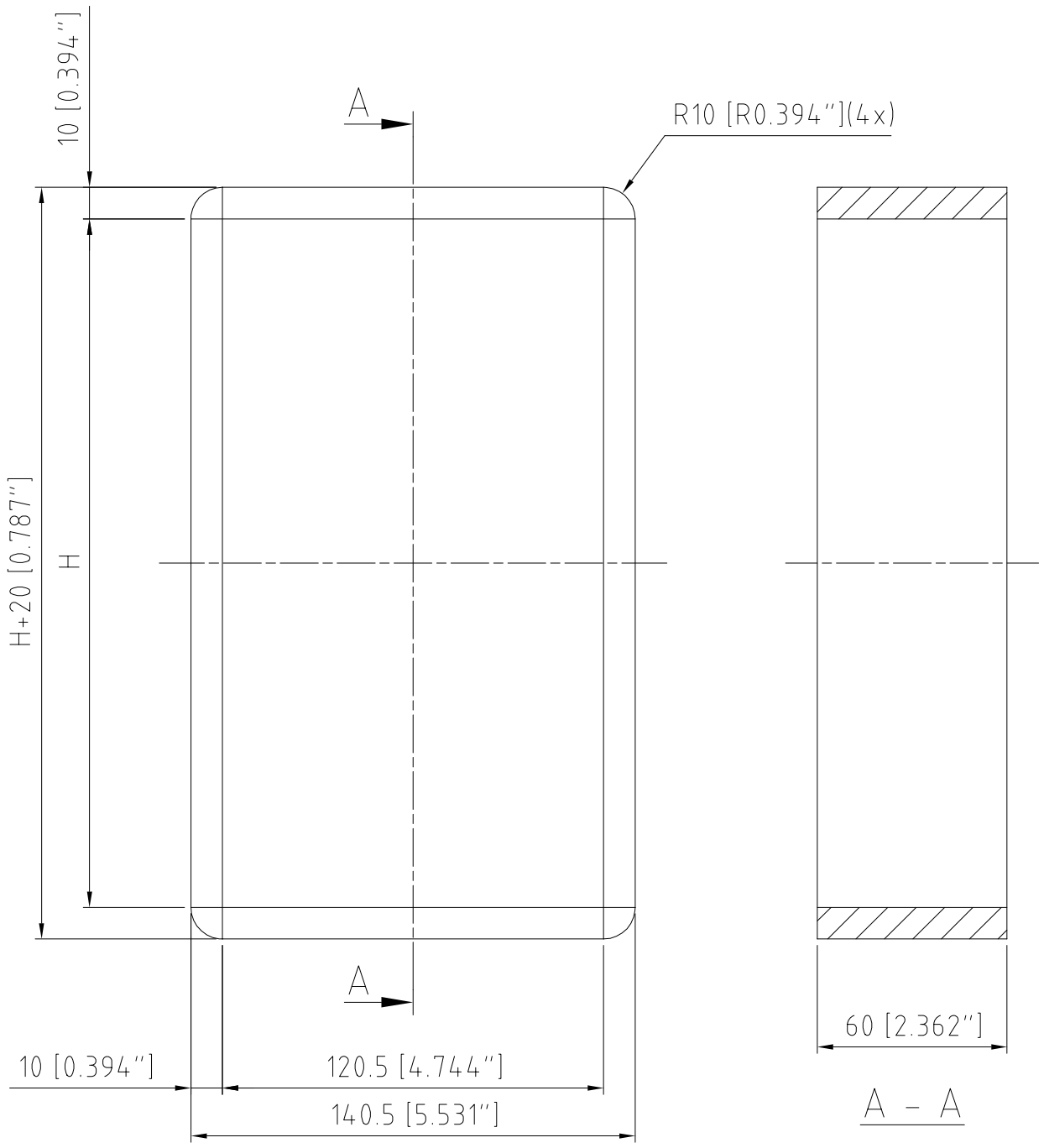
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-10	Project: BLPH - ROS Location/ Sublocation		TotWeight: 6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U13		Sheet No: 3/3
	Client		Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	E-MCT-U14	: Multi Cable Transit		Dwg	123A90-DDL-EL-DL-20114	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10001892	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX29	MCT Penetration Electrical

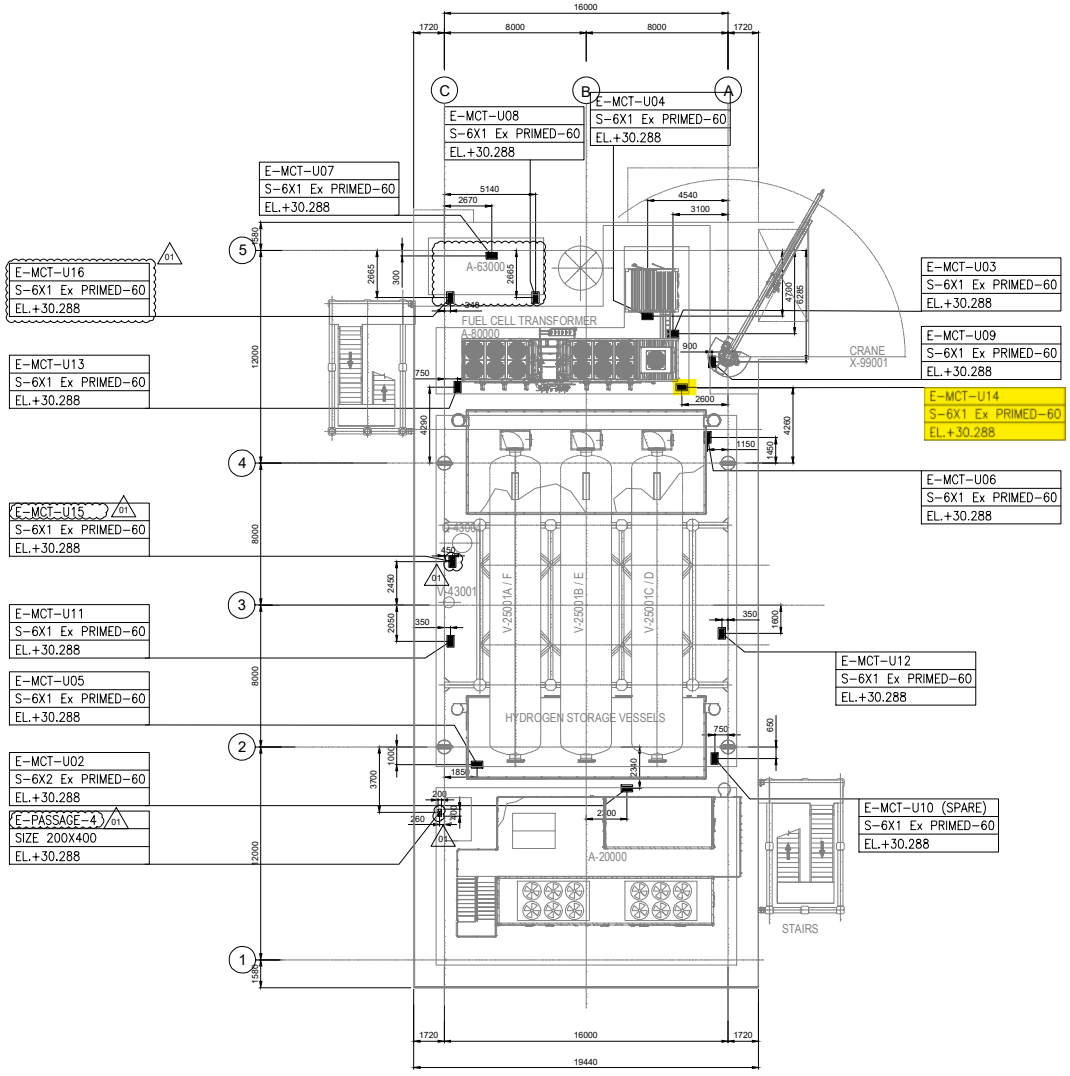
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

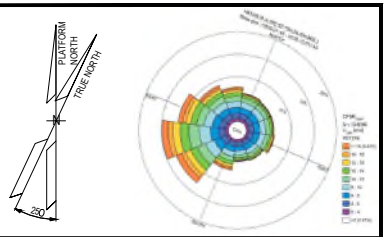
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-22	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-21T16:16:42.637Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:34:22.943Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

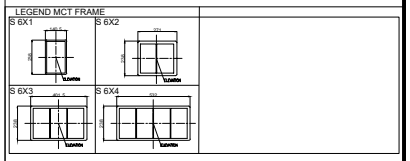
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

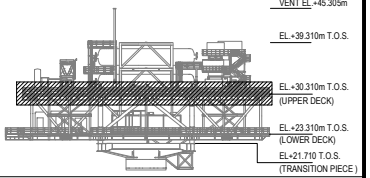
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project **Contract No. CW-I-WP4-2023-05**	ROSETTI MARINO
Document Title:	**MCT Composition**	Sheet 3 of 241 Date: 23/07/2024 Rev: 01

INDEX

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4	E-MCT-T02 **(NOTE-1)**	S 6X3 PRIMED	10
5	E-MCT-T03	S 6X1 PRIMED	14
	LOWER DECK MCT		18
6	E-MCT-101 **(NOTE-1)**	S 6X2 **AISI316**	19
7	E-MCT-102 **(NOTE-1)**	S 6X2 **AISI316**	23
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9	E-MCT-104	S 6X1 PRIMED	31
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24	E-MCT-U04	S 6X1 **Ex** PRIMED	93
25	E-MCT-U05	S 6X1 **Ex** PRIMED	97
26	E-MCT-U06	S 6X1 **Ex** PRIMED	101
27	E-MCT-U07	S 6X1 **Ex** PRIMED	105
28	E-MCT-U08	S 6X1 **Ex** PRIMED	109
29	E-MCT-U09	S 6X1 **Ex** PRIMED	113
30	E-MCT-U10 (Spare)	S 6X1 **Ex** PRIMED	117
31	E-MCT-U11	S 6X1 **Ex** PRIMED	121
32	E-MCT-U12	S 6X1 **Ex** PRIMED	125
33	E-MCT-U13	S 6X1 **Ex** PRIMED	129
34	E-MCT-U14	S 6X1 **Ex** PRIMED	133
35	E-MCT-U15	S 6X1 **Ex** PRIMED	137

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File: 123A90-DDL-EL-DD-20095-MCT-composition.docx

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

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RTD Version No: 4.37.4.0

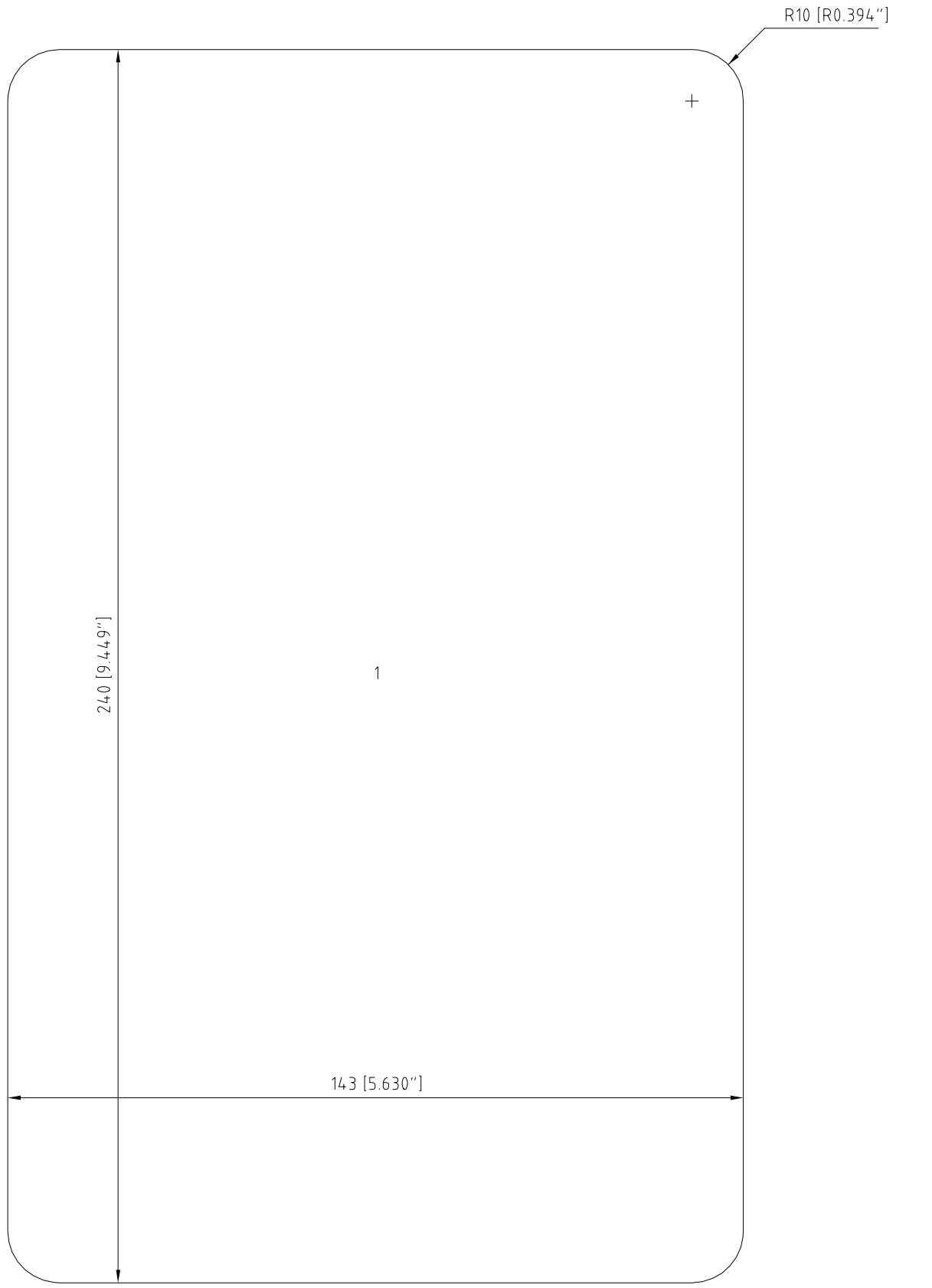
VALID FOR CONSTRUCTION
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U14	Sheet No: 1/3
	Client		Drawing number	Rev

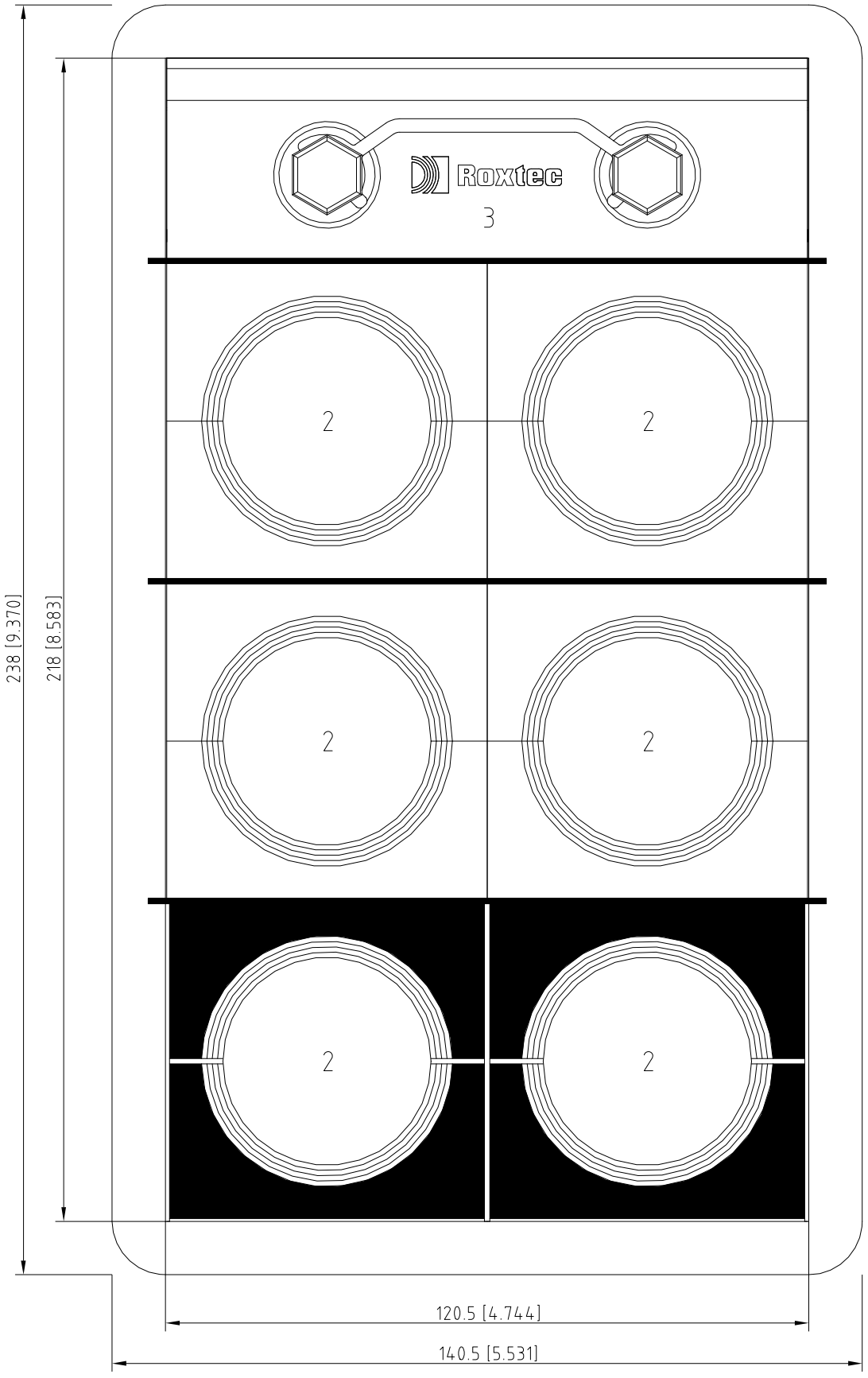
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	6	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U14	Sheet No: 2/3
	Client	Drawing number		Rev

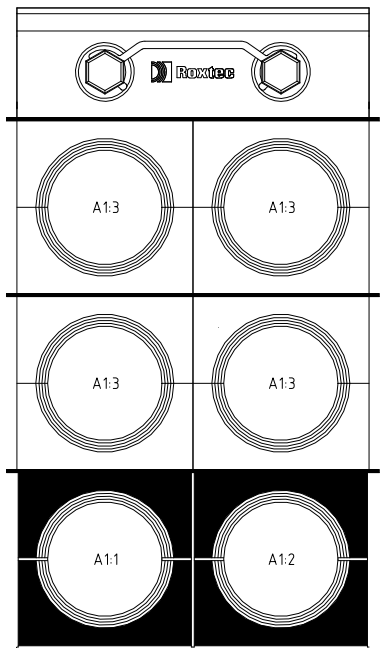
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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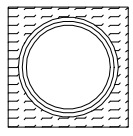
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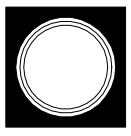
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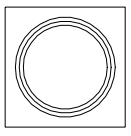
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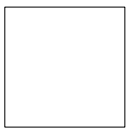
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:3						RM 60 EX 28-54 [1.102"-2.126"]
A1:2	83021-CEL-03	Welding Sockets (Top Deck) JB's	5G50	Power	35 [1.378"]	RM 60 EX 28-54 [1.102"-2.126"]
A1:1	83021-CEL	Welding Sockets (Top Deck) JB's	5G50	Power	35 [1.378"]	RM 60 EX 28-54 [1.102"-2.126"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

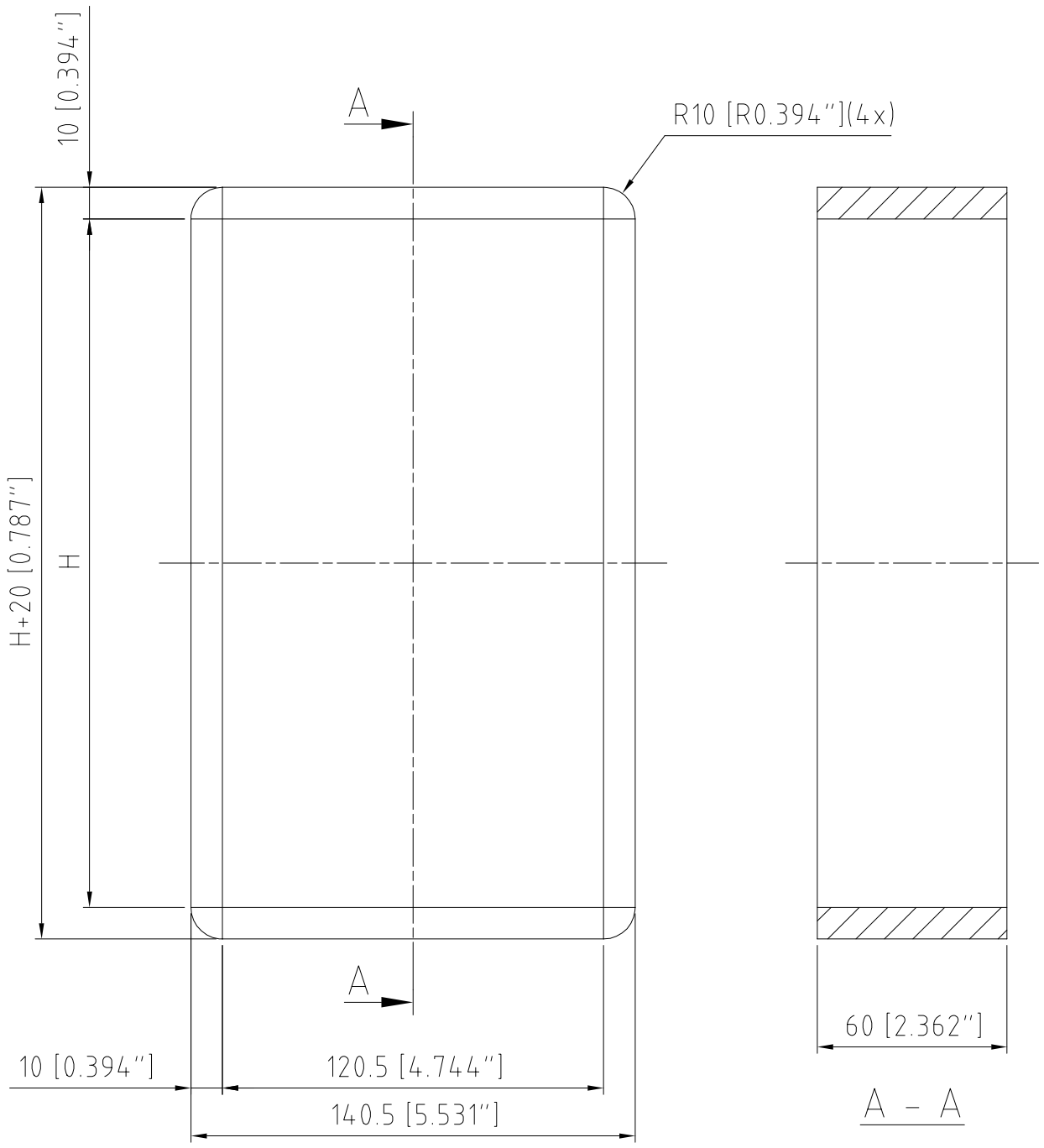
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation		TotWeight: 6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U14		Sheet No: 3/3
	Client		Drawing number		Rev

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

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MATERIAL AND SURFACE TREATMENT				
M	SS2132	S355J0	1.0553	-
2	PRIMED, BLACK ACC. TO S1005244			
L	SS 2348	X5CrNiMo17-12-2	1.4404	AISI 316L



TYPE	H (MM/")
S 2x1	101/3.976
S 4x1	159.5/6.280
S 6x1	218/8.583
S 8x1	278/10.945

Rev	Type of revision	Date	Sign
–	–		

Item	Qty	Designation	Specification	NetWeight

ROXTEC INTERNATIONAL AB
BOX 540 S-371 23 Karlskrona
TEL: +46 455 366700 FAX: +46 455 82012

Designed by	Date	General tolerance ISO 2768-1	Welded details SS-EN 25 817 SS-EN 30 042	General surface roughness, Ra	TotWeight
AN KARLSSON	2006-01-18	m	C	–	–
Checked by: JE BOHLIN	Format: A3	Title: S FRAME EX SINGLE FRAME			Projection method
Approved by: JE BOHLIN	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1008811				Rev: –

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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ROSETTI MARINO

CROSSWIND

ITEM	Tag	E-MCT-U15	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001893		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

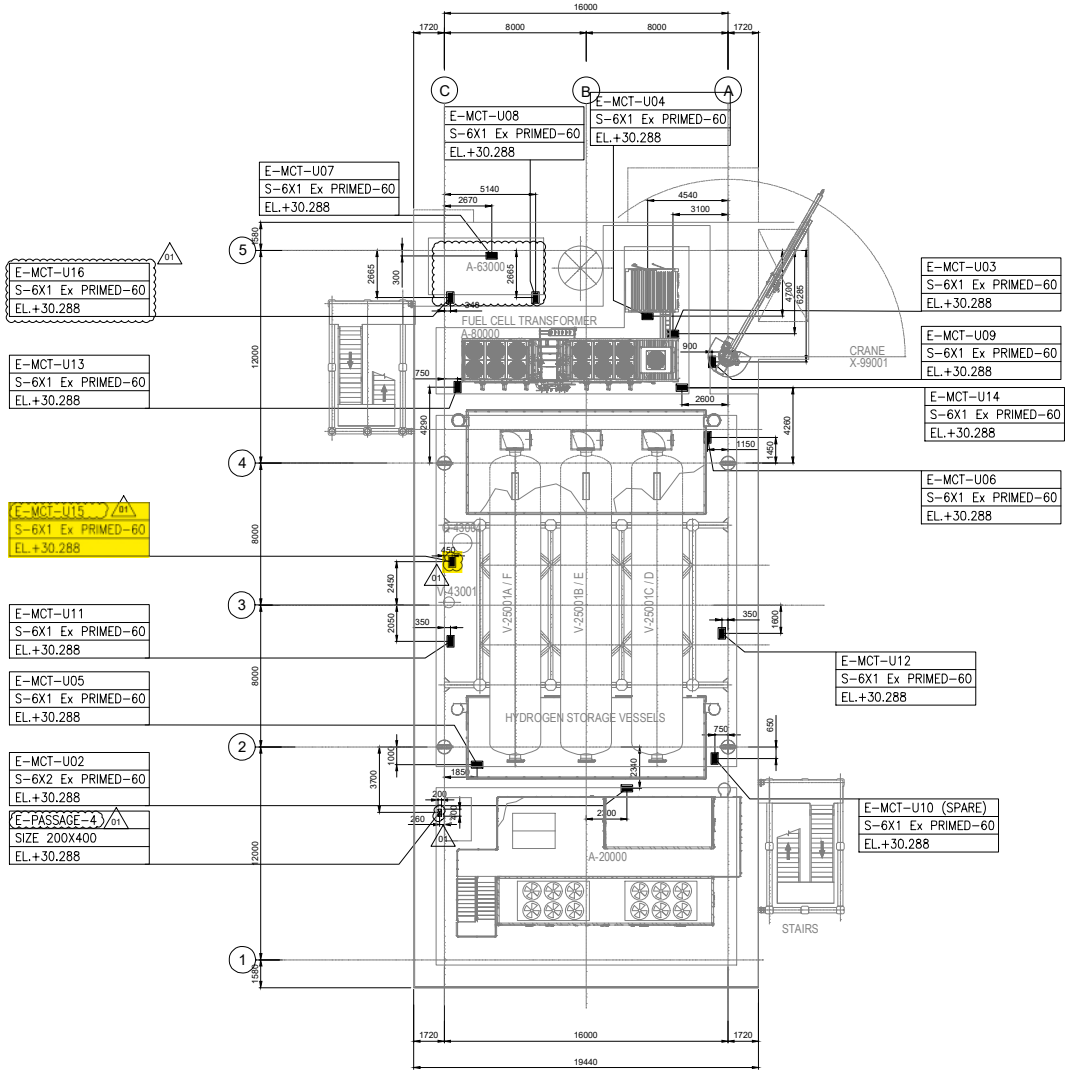
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

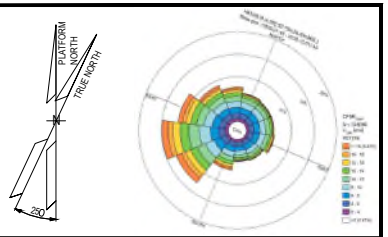
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-02-10	2025-03-24	
Signature	Digitaly signed by Michele Tartaglia 2025-02-10T08:56:06.916Z	Digitaly signed by Giovanni Tangianu 2025-03-24T12:33:08.577Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

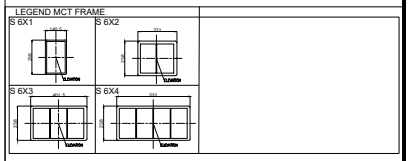
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

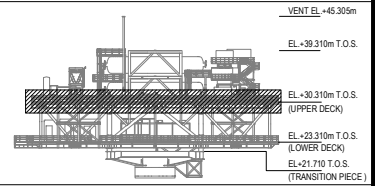
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG	TAGGING
SIZE–MATERIAL–DEPTH	TYPICAL
EL.	ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 15/07/24
A1	DRAWING NO. 123A90–DDL–EL–DL–20114	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20114

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

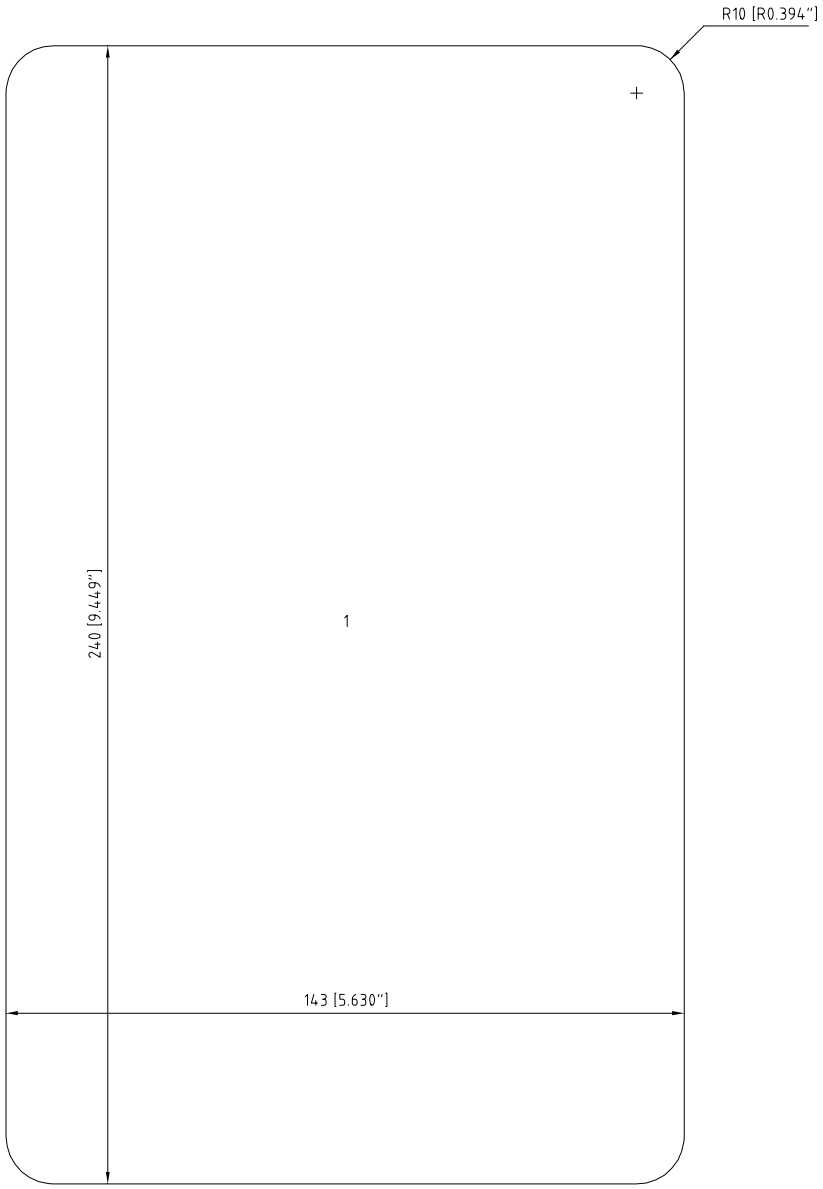
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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

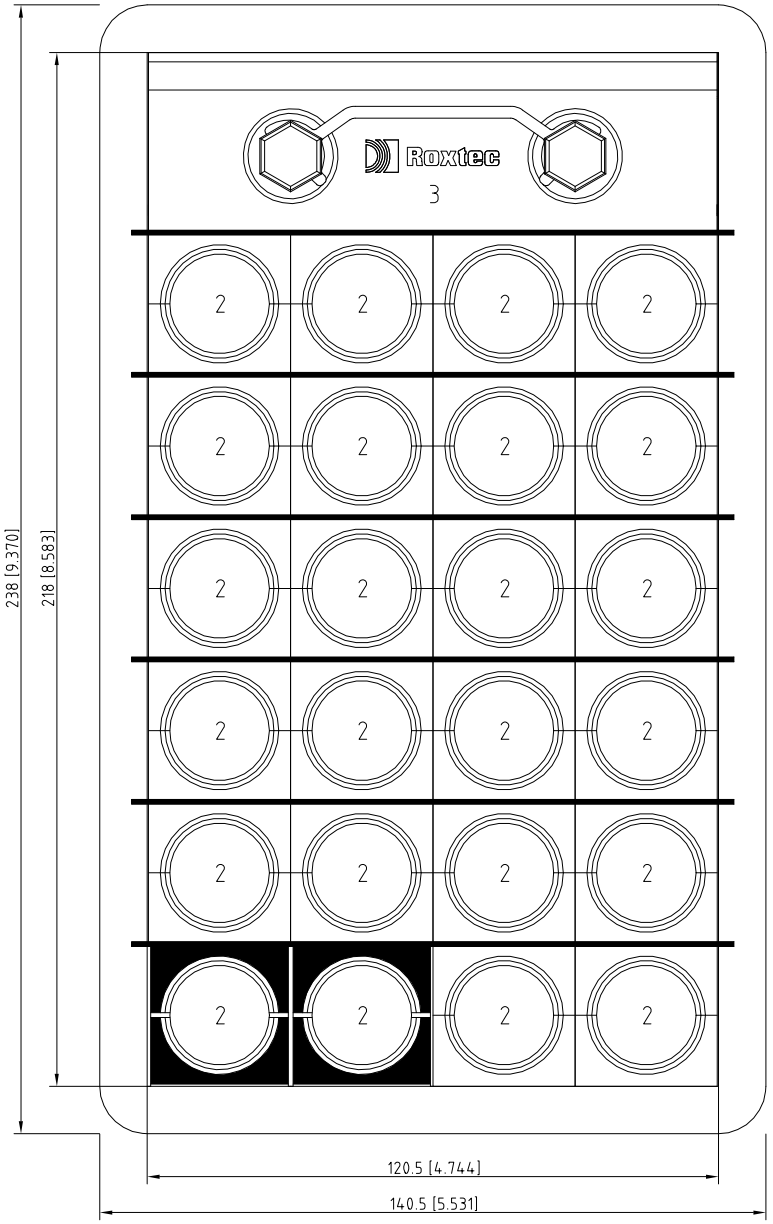
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U15	Sheet No: 1/3
Client			Drawing number	Rev

CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	6	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	24	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U15	Sheet No: 2/3
	Client		Drawing number	Rev

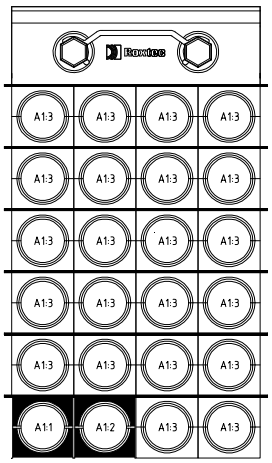
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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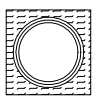
VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DD-20095**

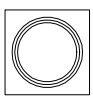
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

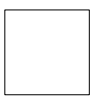
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:3						RM 30 EX 10-25 [0.394"-0.984"]
A1:2	P-ETB-200N1-19-L3-01	Vent Q-43004 Heat tracing	3G6	Power	15.6 [0.614"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:1	P-ETB-200N1-17-L1-02	Pipe line WW-260 Heat tracing	3G6	Power	15.6 [0.614"]	RM 30 EX 10-25 [0.394"-0.984"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	6.8 [14.95]
Roxtec	Format: NTS		Transit name: E-MCT-U15	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	CABLE_TRAY_TP_ELE_LV	: Cable Tray Transition piece - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20109
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10002256		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

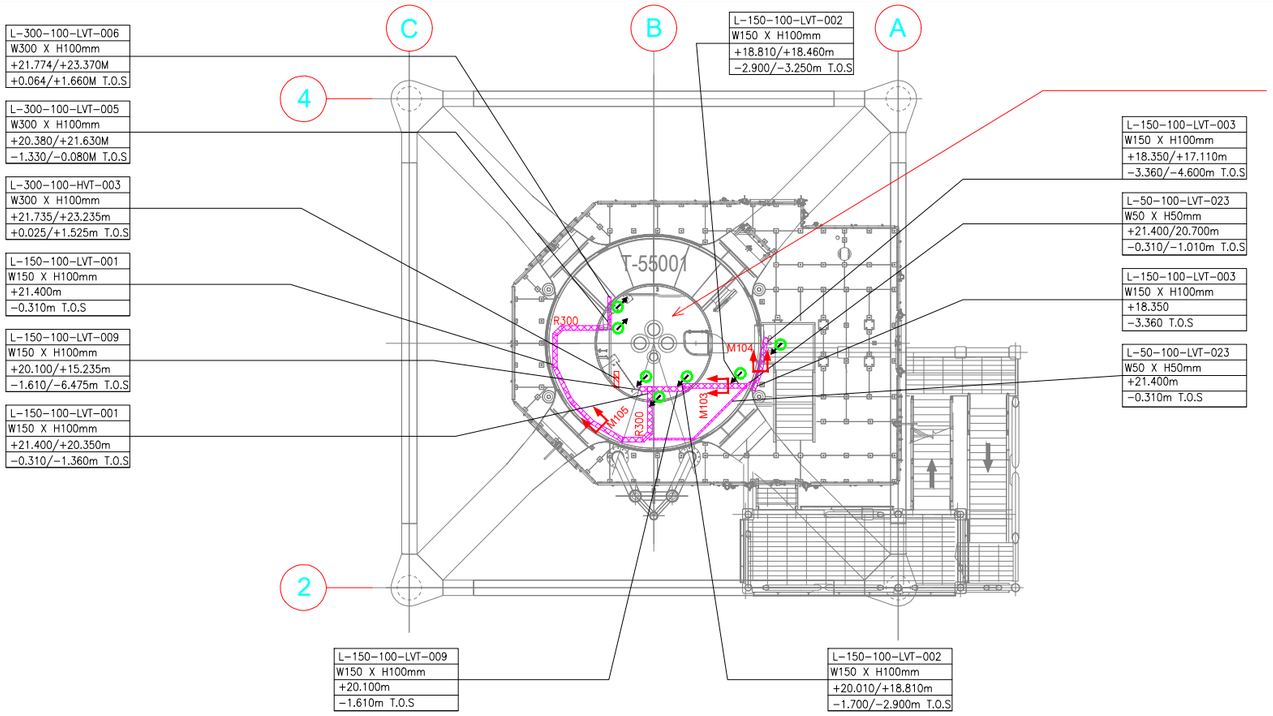
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

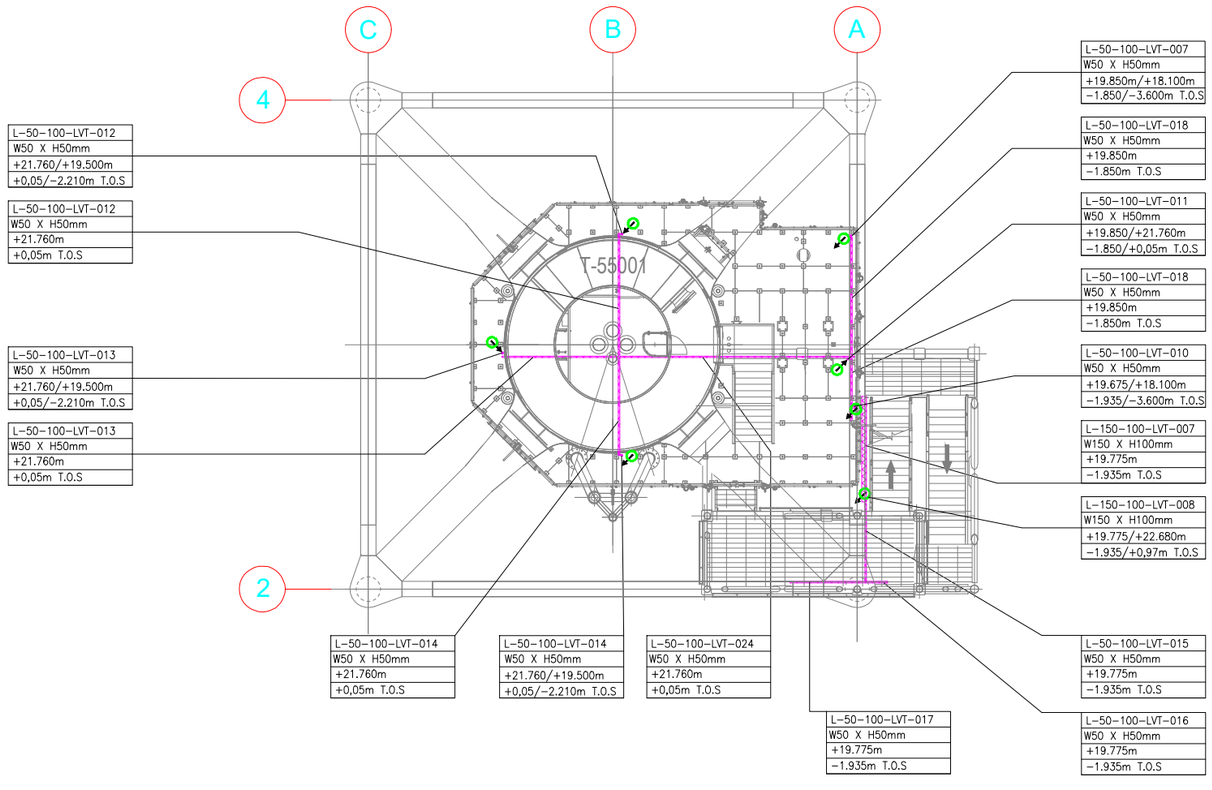
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-06	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:40:55.952Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-05-06T09:29:49.984Z	

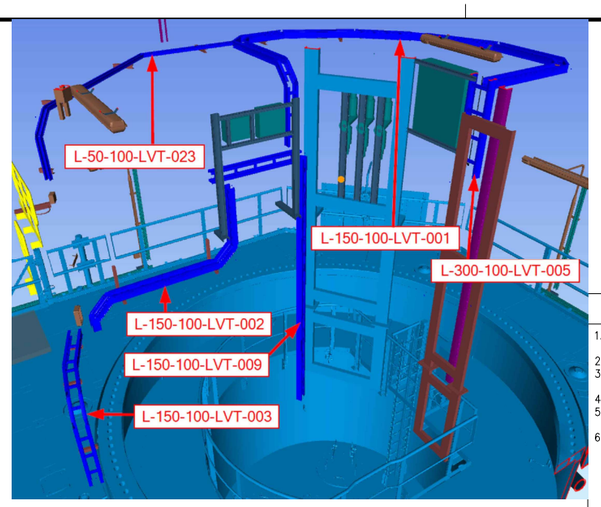
DRAWING NO. 123A90-DDL-EL-DL-20109

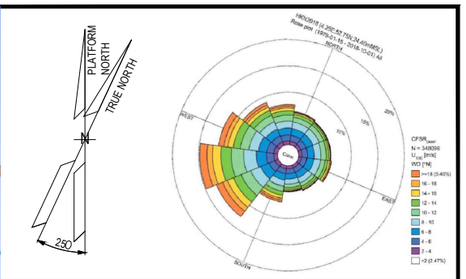
REV. 02



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.







NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE TRAY ELEVATION CHANGE
- M101 — CABLE TRAY SECTION BELOW LOWER DECK

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20109**

REV.:	DATE:	SIGNATURE:
2_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-EL-DL-20102	ELECTRICAL EQUIPMENT LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	10/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	09/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
BELOW LOWER DECK

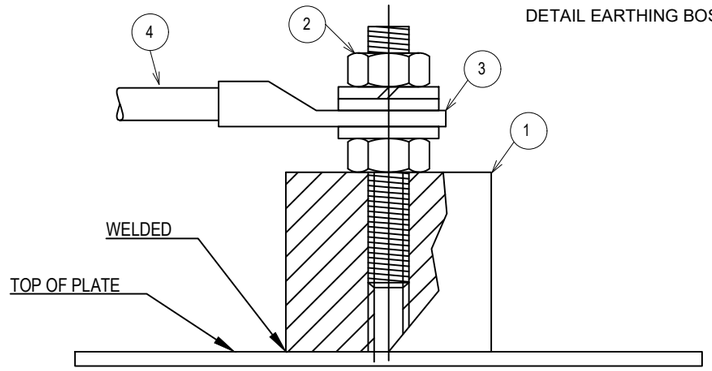
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN AMA	CHECKED CGI	APPROVED DLO	DATE 10/10/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20109	SHEET 1of4	REV. 02

File Name : 123A90-DDL-EL-DL-20109

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

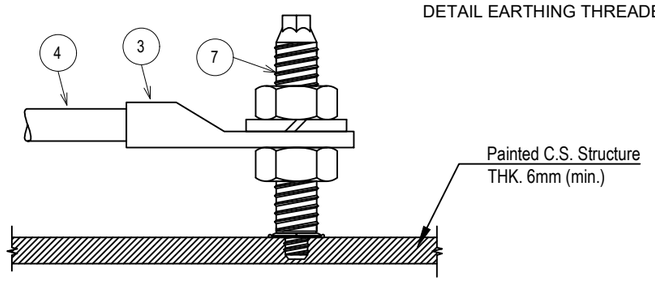


E11D

SEE NOTE 6

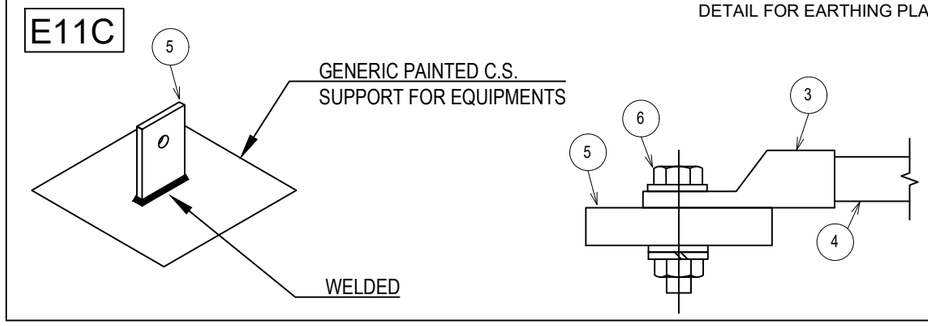
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

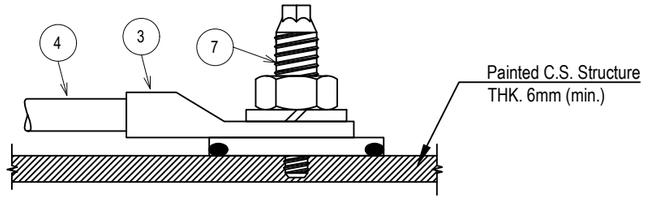


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

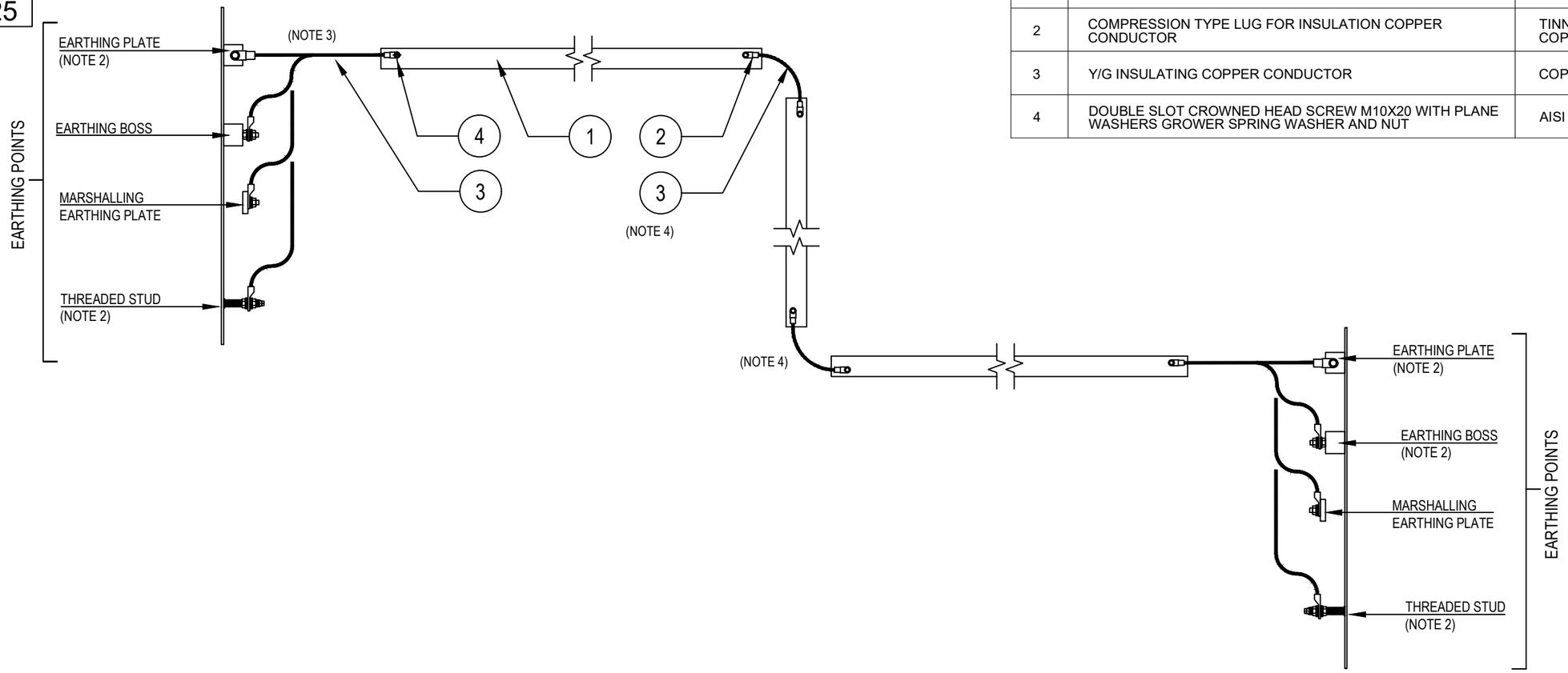
SHEET 003

REV. 02

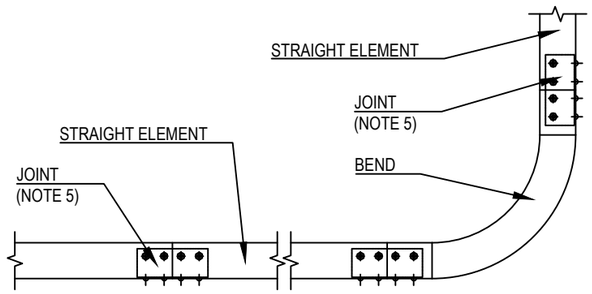
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

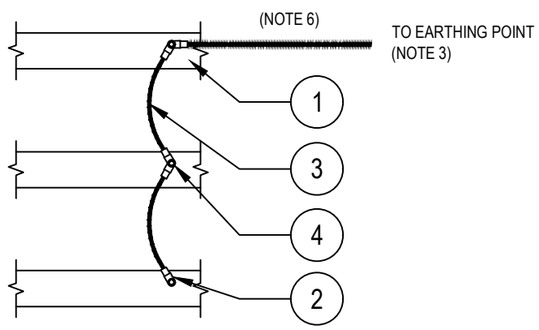
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

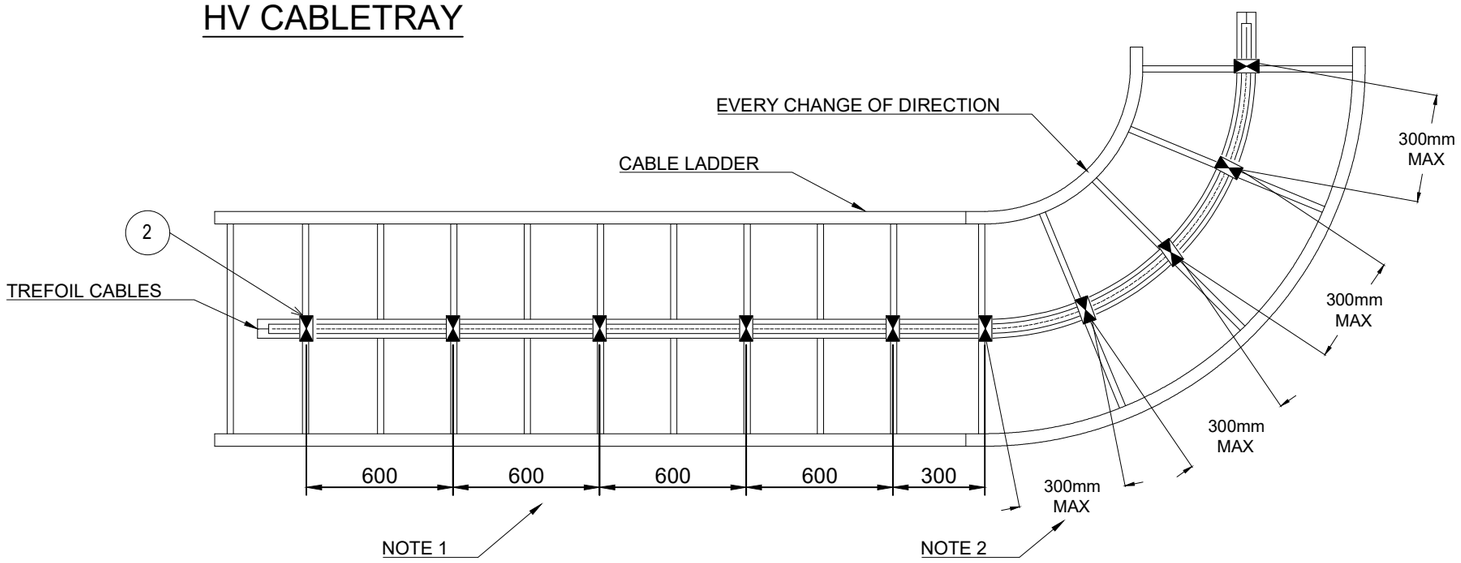
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

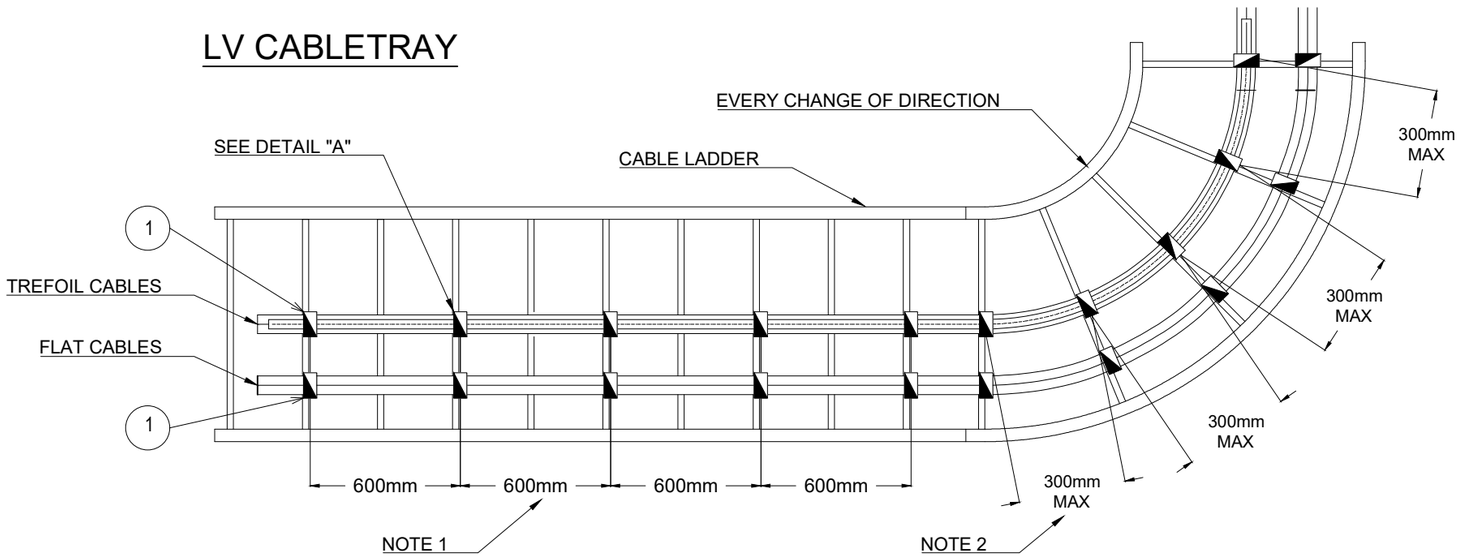
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

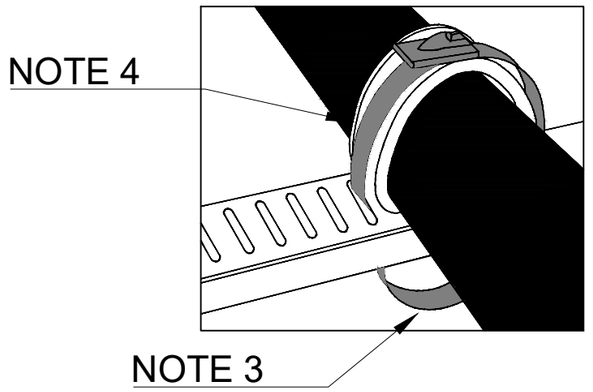
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

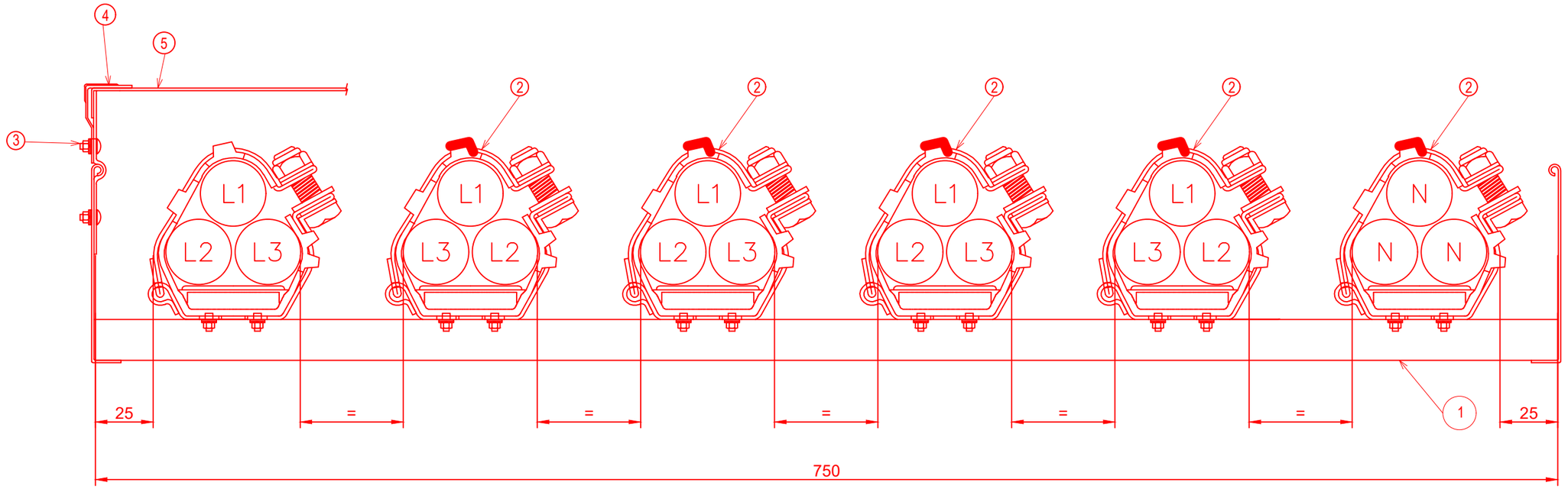
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

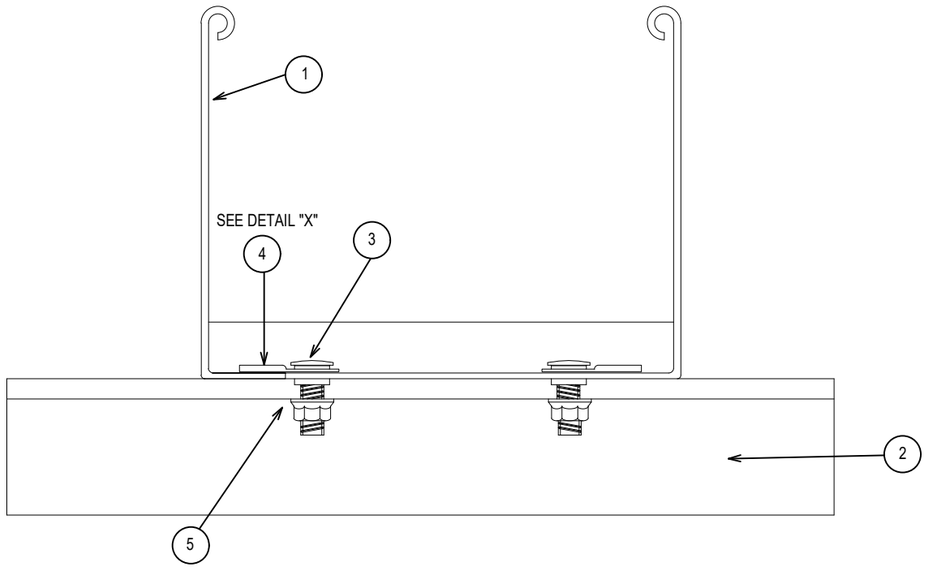
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

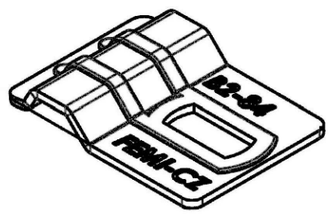
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

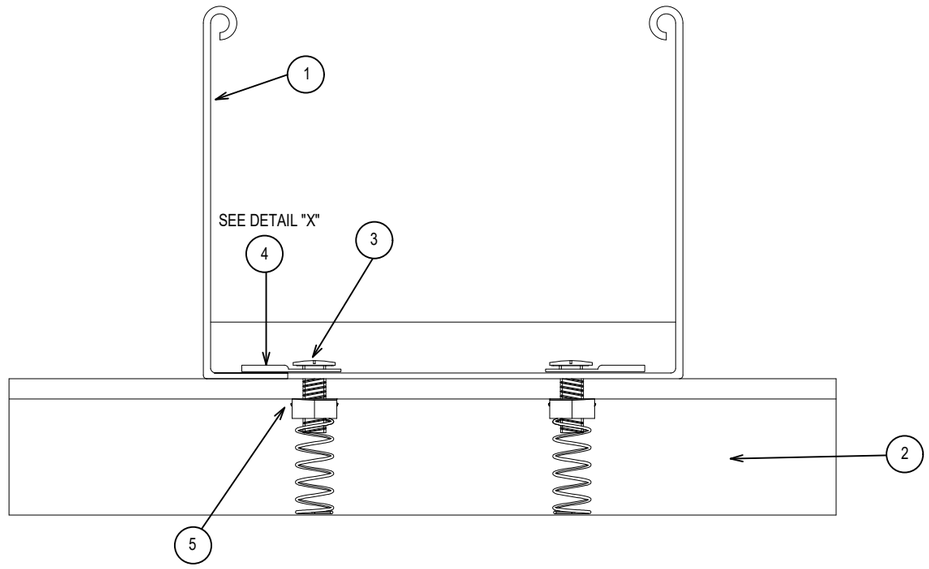
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

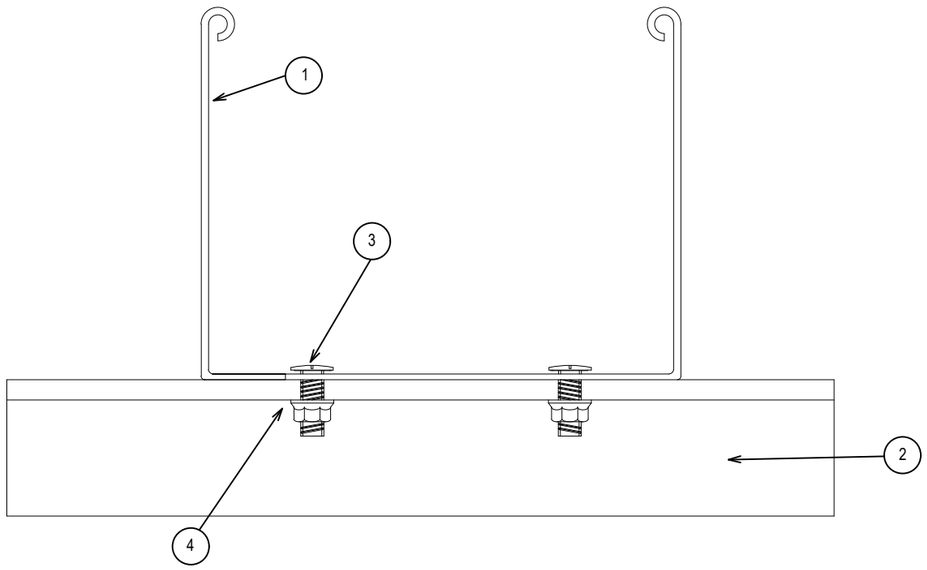
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

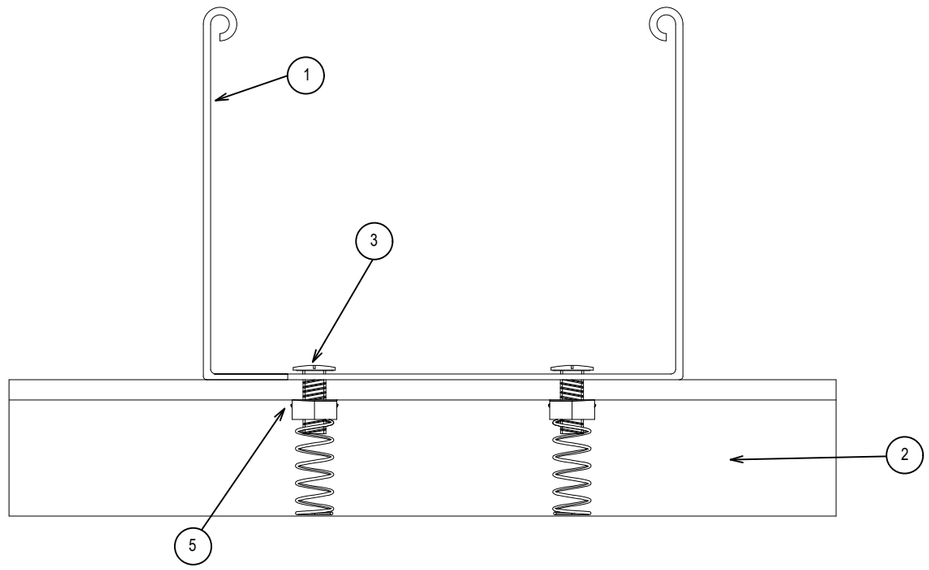


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

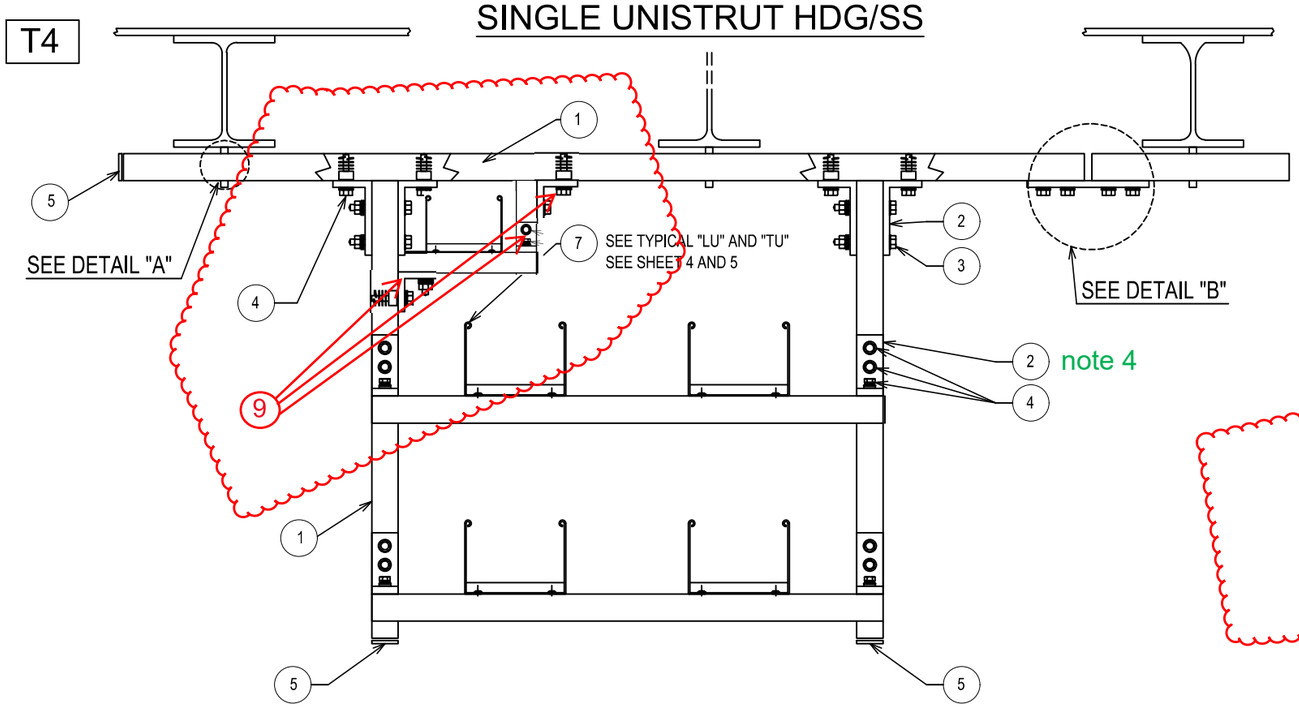
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

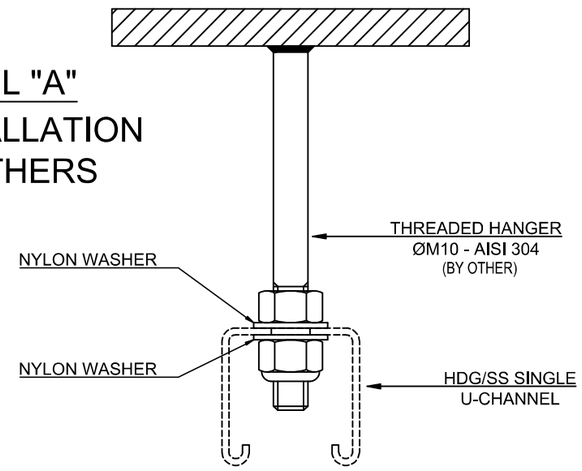
T4

SINGLE UNISTRUT HDG/SS

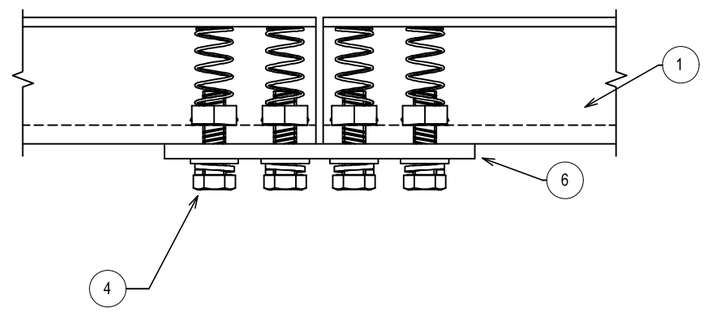


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

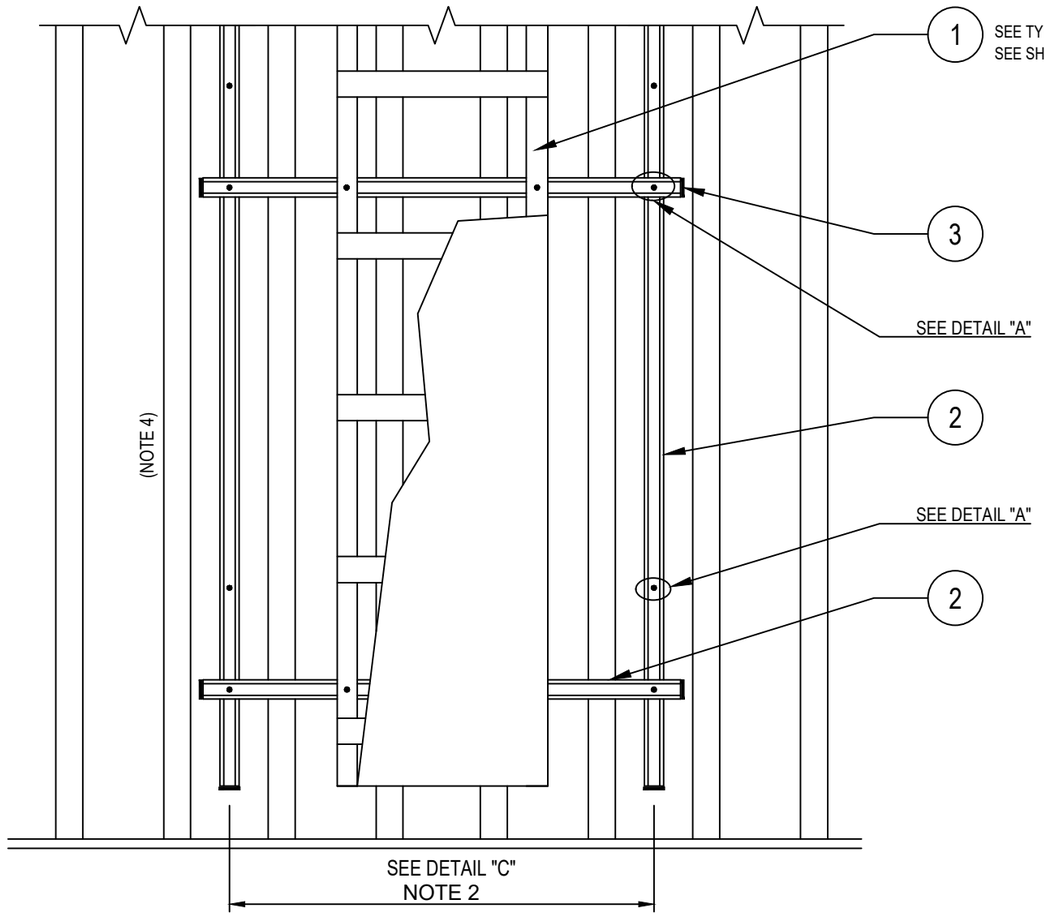
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

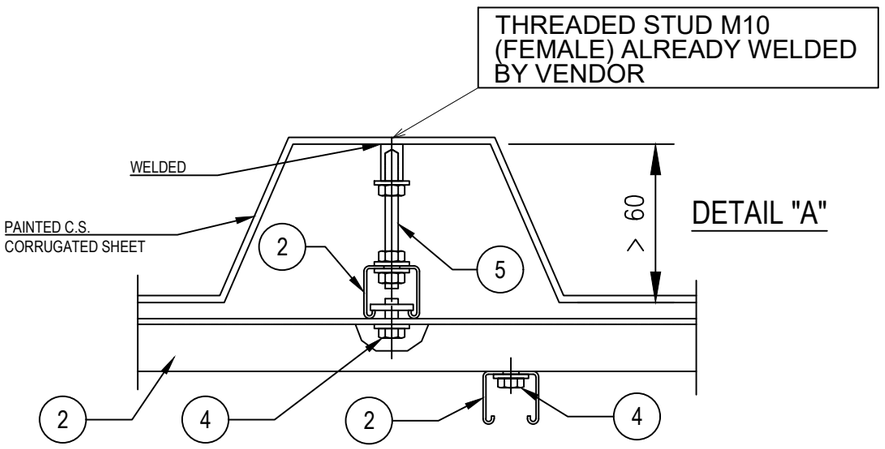
F.to UNI A3: 420mmx297mm

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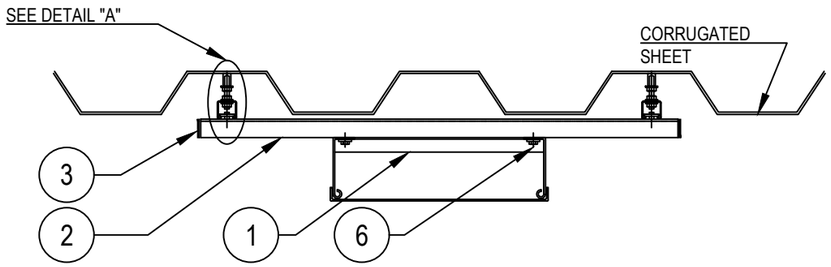
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

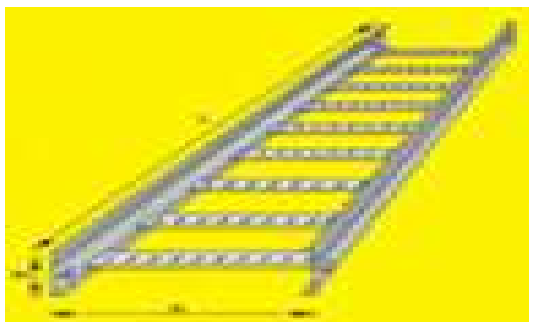
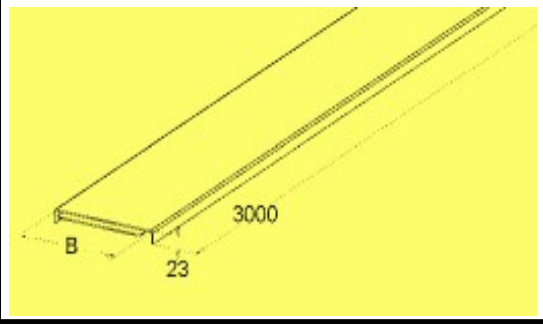
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
38		
39		
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42		
43		
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47 **NOTES:**

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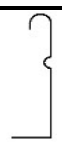
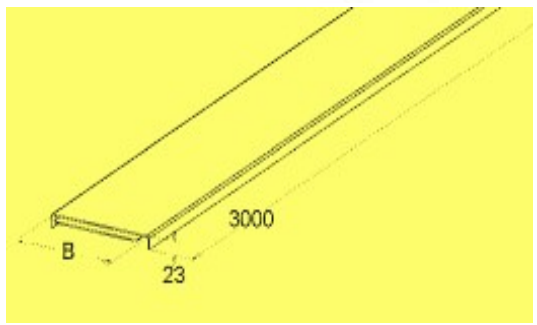
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

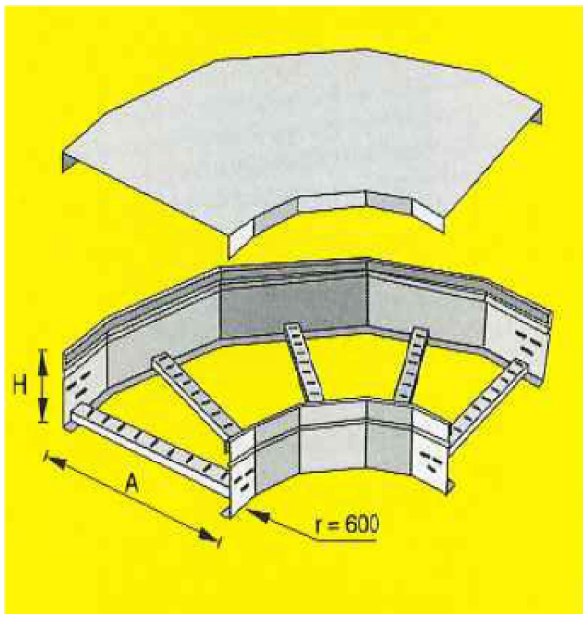
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



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16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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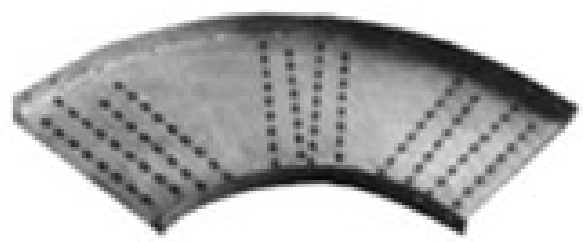
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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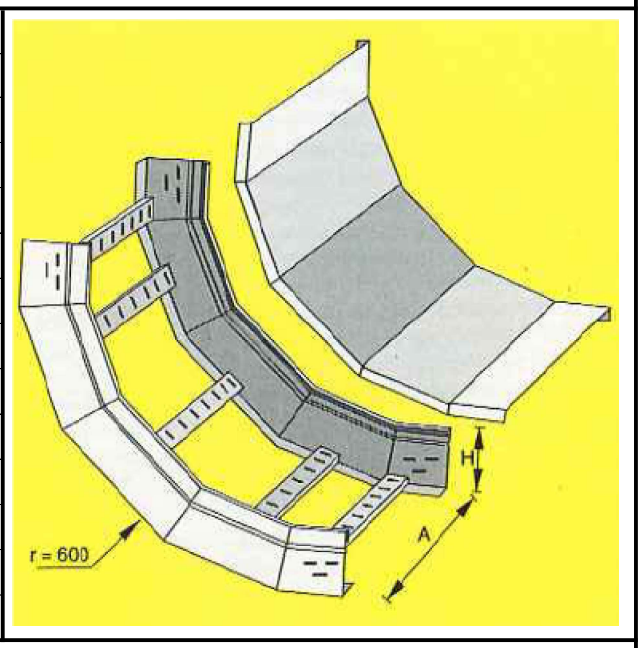
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



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16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
44		
45		
46		
47		
48		
49		

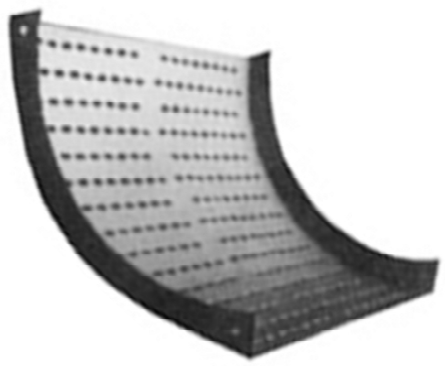
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
44		
45		
46		
47		
48		
49		

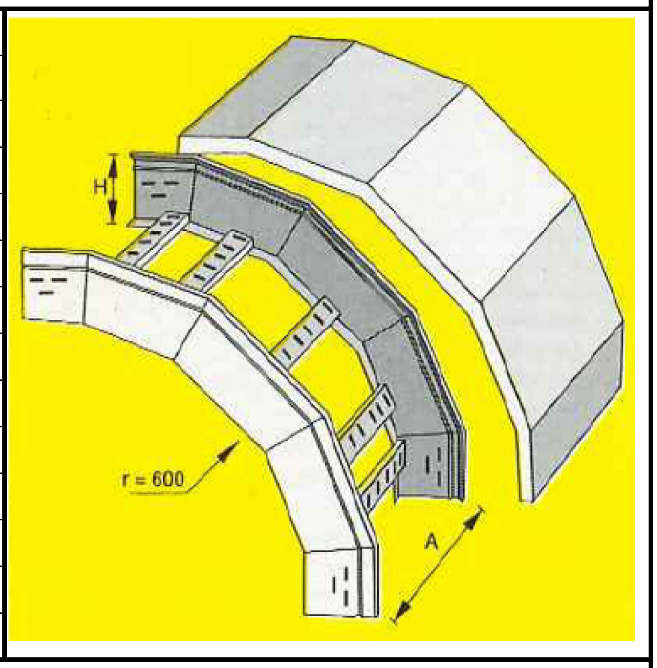
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		
51	**NOTES:**	
52		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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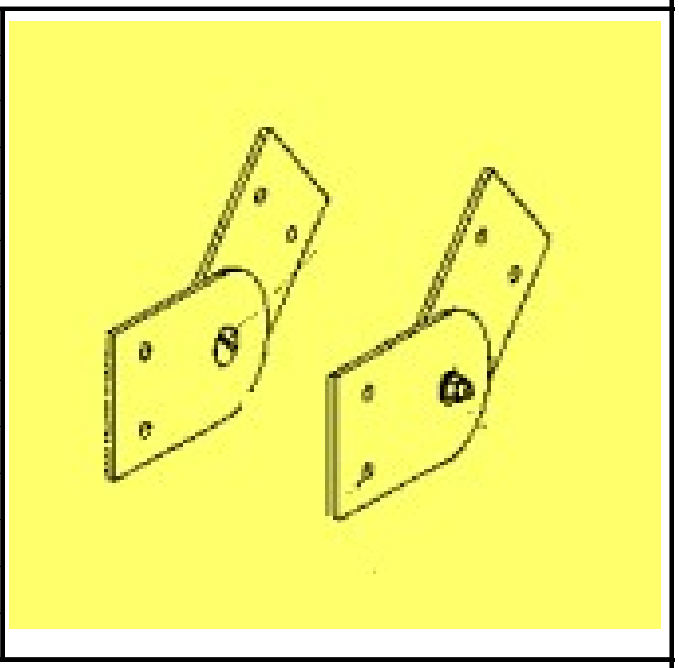
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

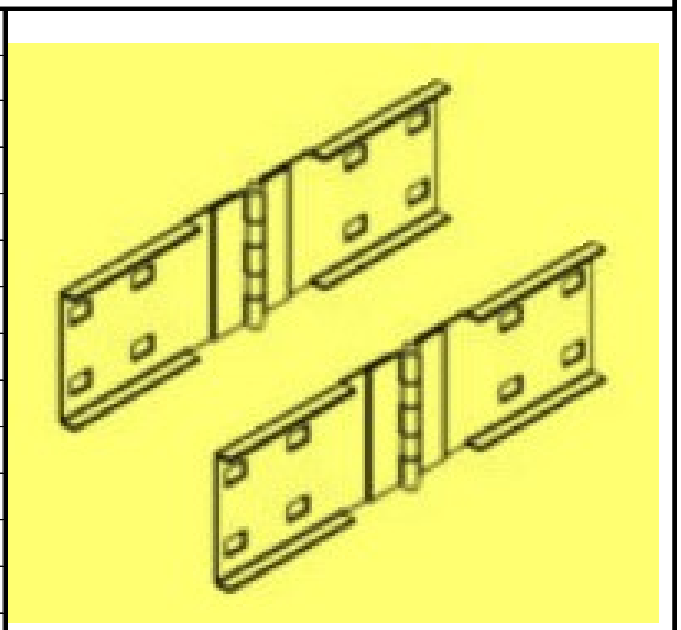
	CODE	REMARKS
28		
29		
30		
31		
32		
33		
34		
35		
36		
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41		

NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

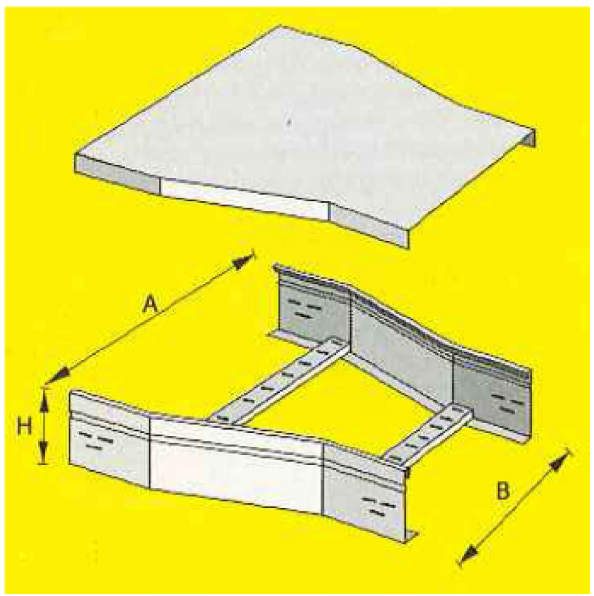
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
34		
35		
36		
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43		
44		
45	**NOTES:**	
46		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
38		
39		
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41		
42		
43		
44		

45 **NOTES:**

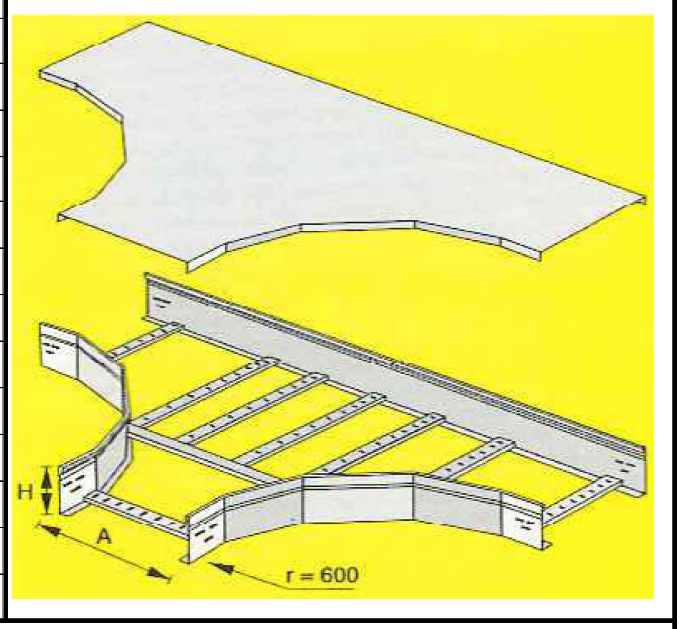
46
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
38		
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42		
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49		

50 **NOTES:**

51
52
53
54
55

ROSETTI MARINO

CROSSWIND

ITEM	Tag	CABLE_TRAY_TP_ELE_LV	: Cable Tray Transition piece - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20109
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10002257		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B Cable Tray/Ladder After pulling

AFTER PULLING

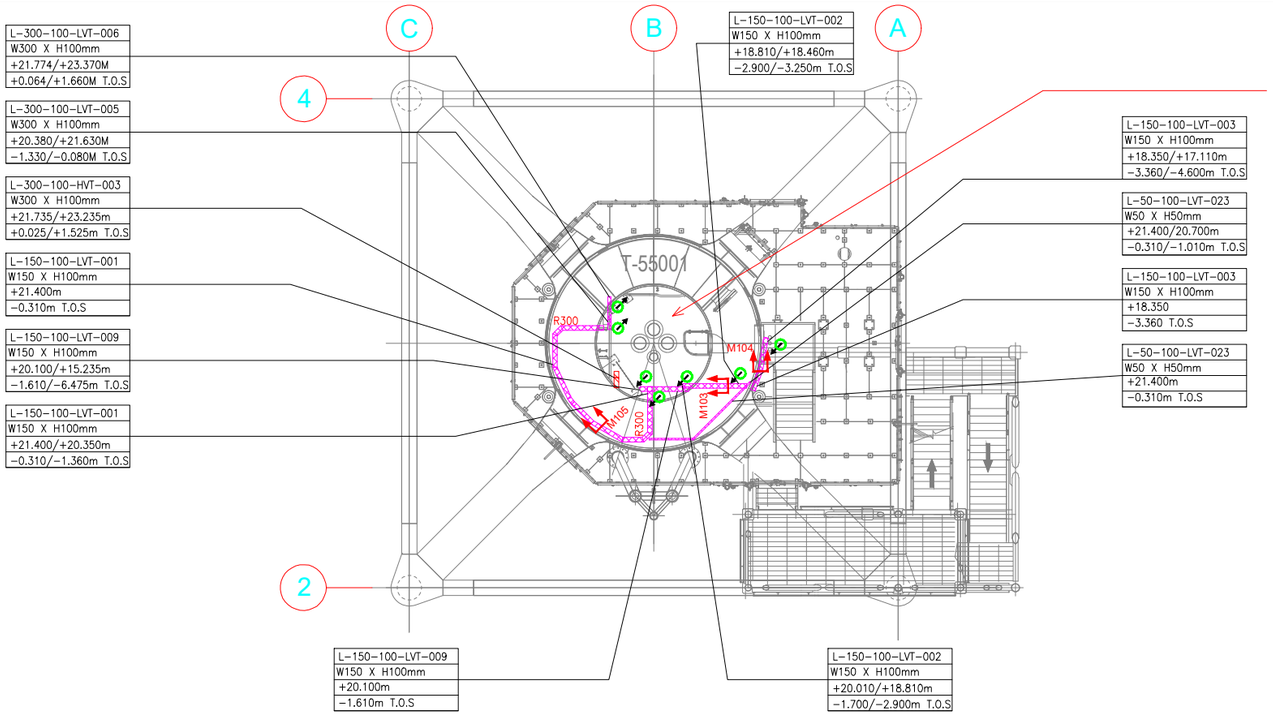
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

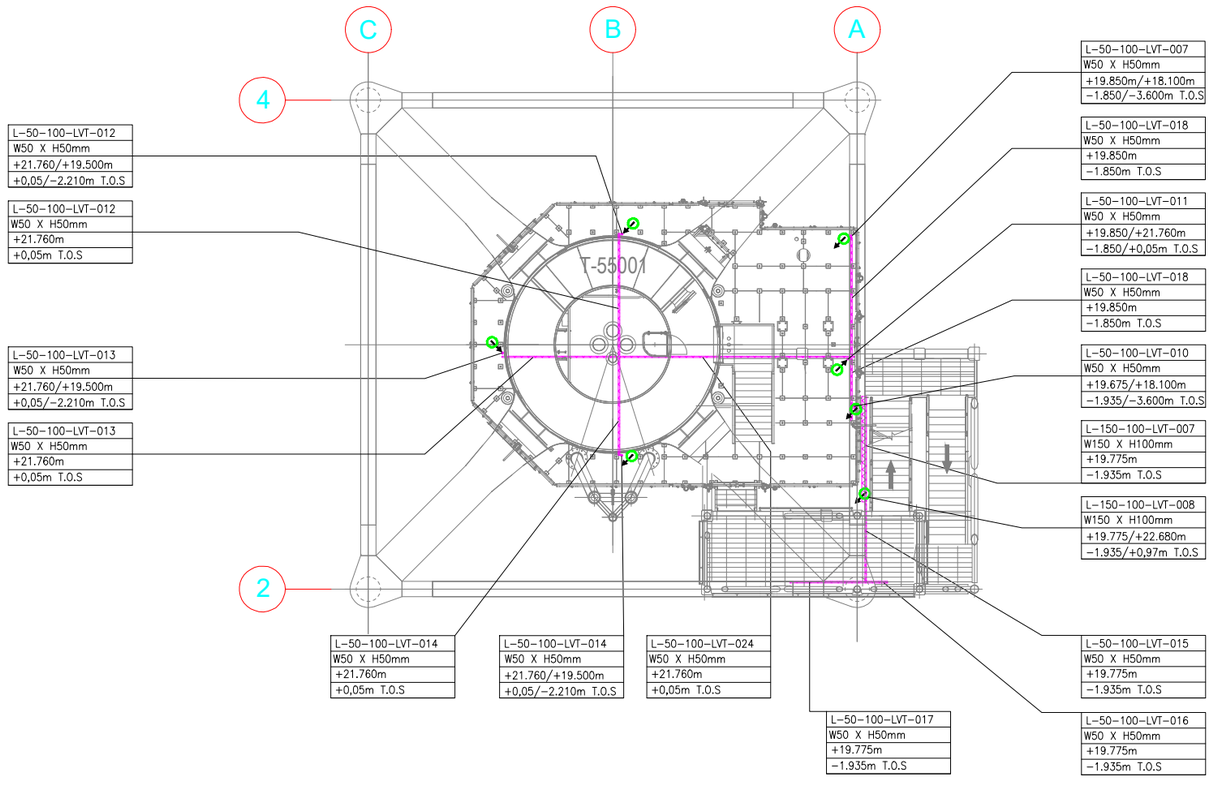
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-09	
Signature	Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:41:21.902Z	Digitaly signed by Giovanni Tangianu 2025-05-09T07:49:14.531Z	

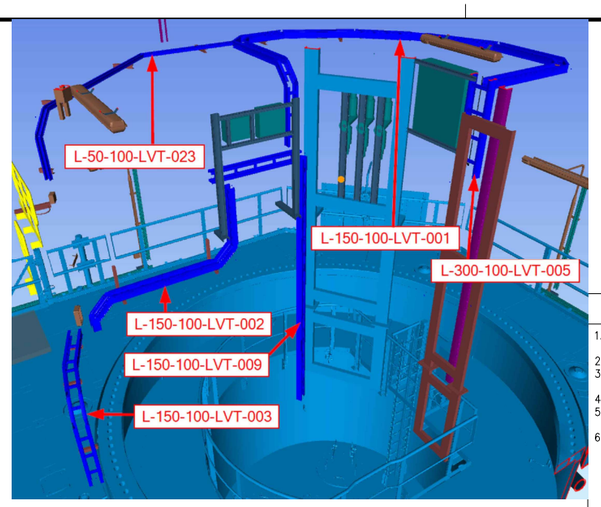
DRAWING NO. 123A90-DDL-EL-DL-20109

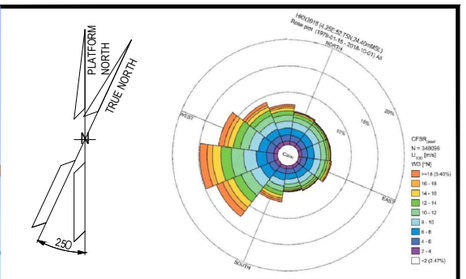
REV. 02



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.







NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE TRAY ELEVATION CHANGE
- M101 — CABLE TRAY SECTION BELOW LOWER DECK

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20109**

REV.:	DATE:	SIGNATURE:
2_A	17/10/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-EL-DL-20102	ELECTRICAL EQUIPMENT LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	10/10/24	AMA	CGI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	09/07/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
BELOW LOWER DECK

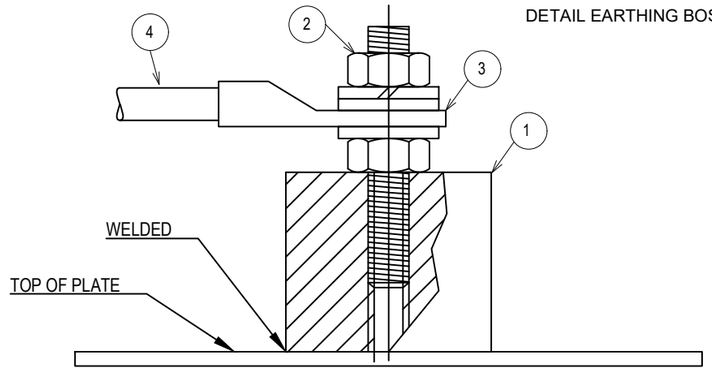
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN AMA	CHECKED CGI	APPROVED DLO	DATE 10/10/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20109	SHEET 1of4	REV. 02

File Name : 123A90-DDL-EL-DL-20109

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

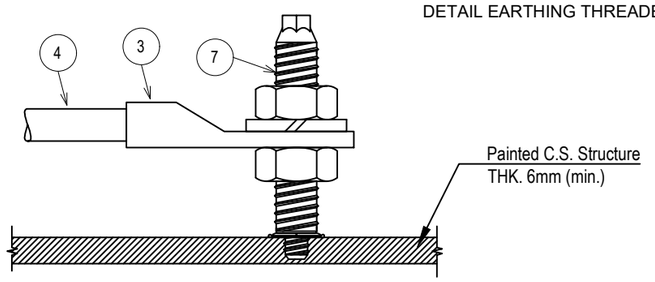


E11D

SEE NOTE 6

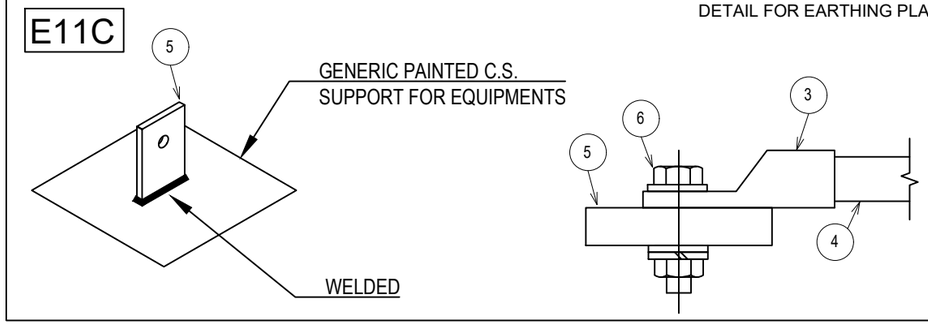
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

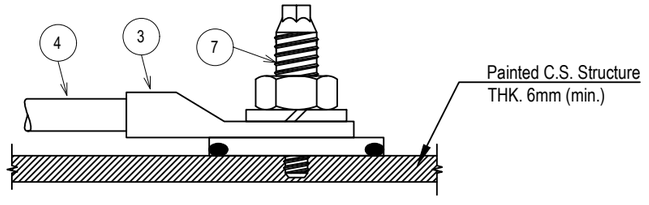


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

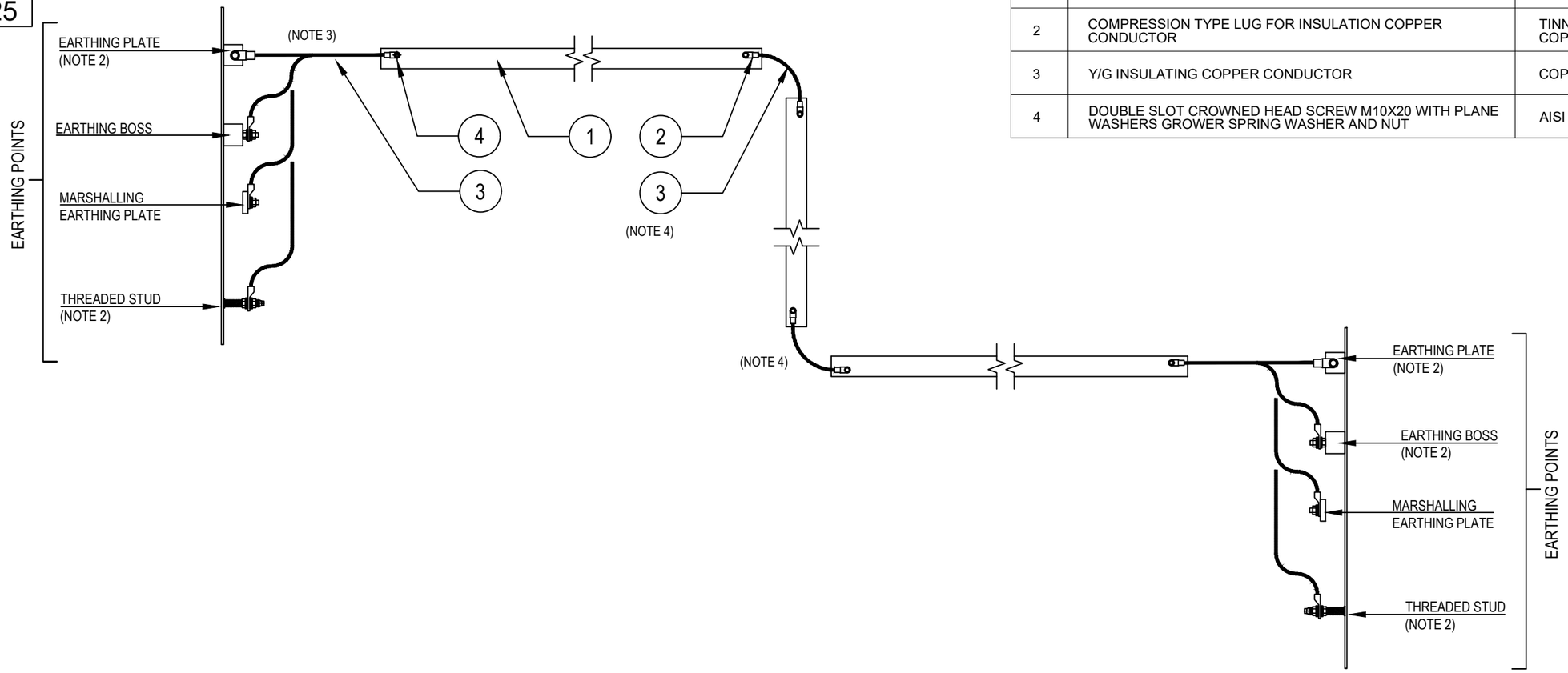
SHEET 003

REV. 02

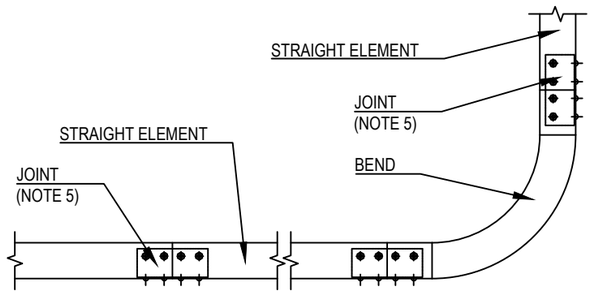
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

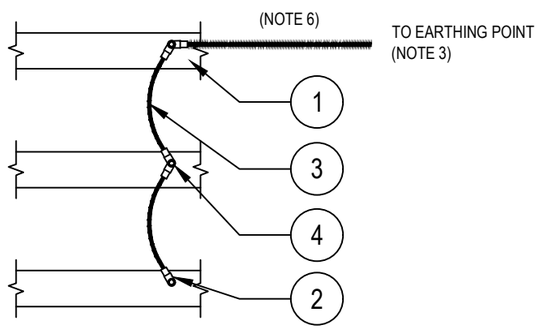
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

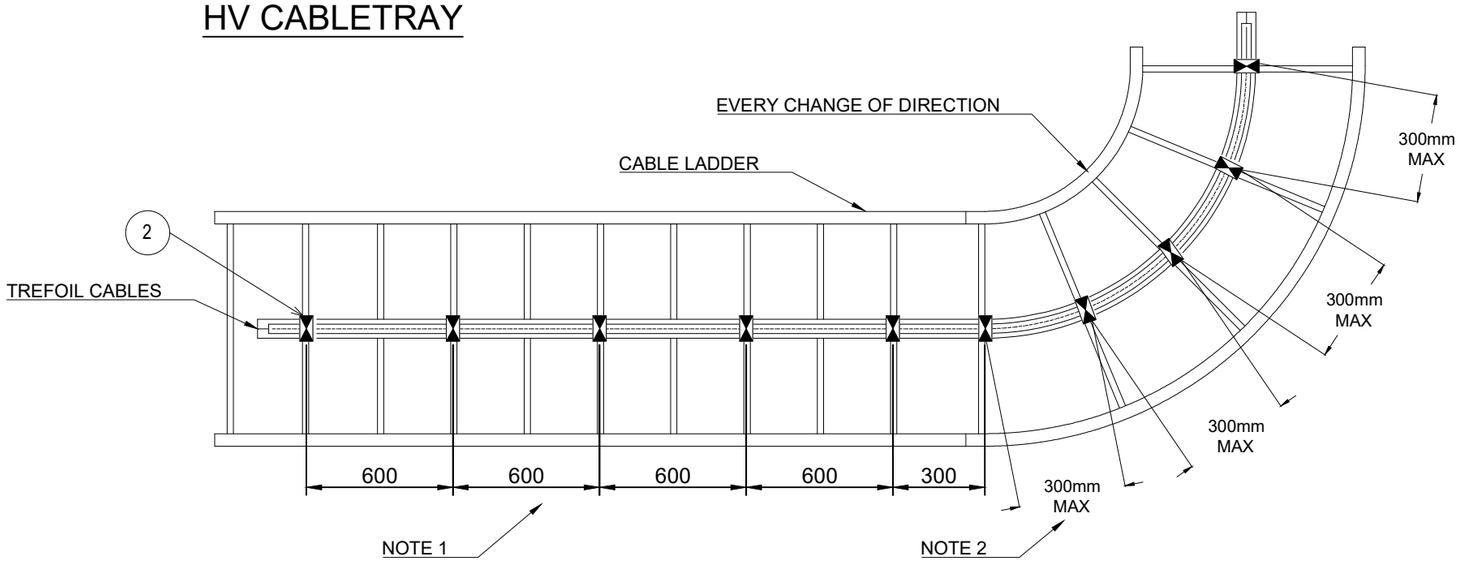
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C06

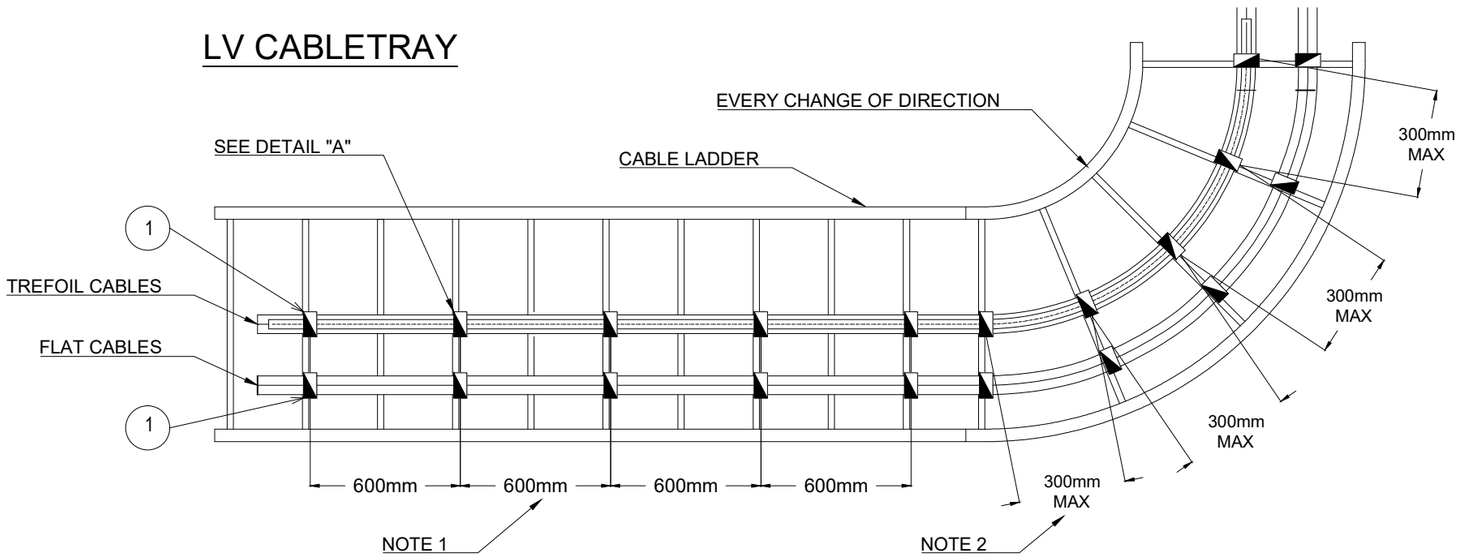
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

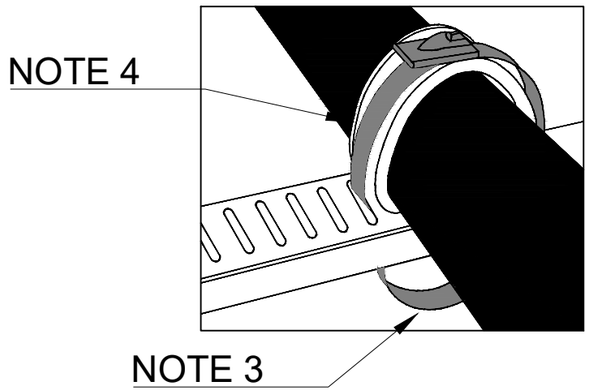
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

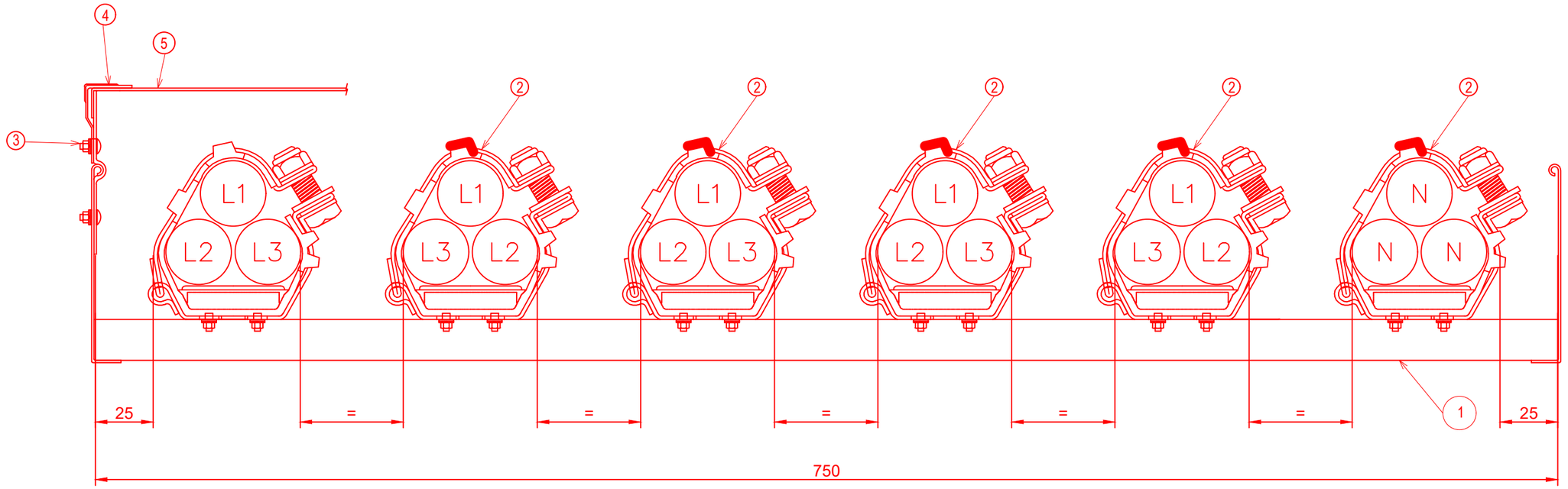
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

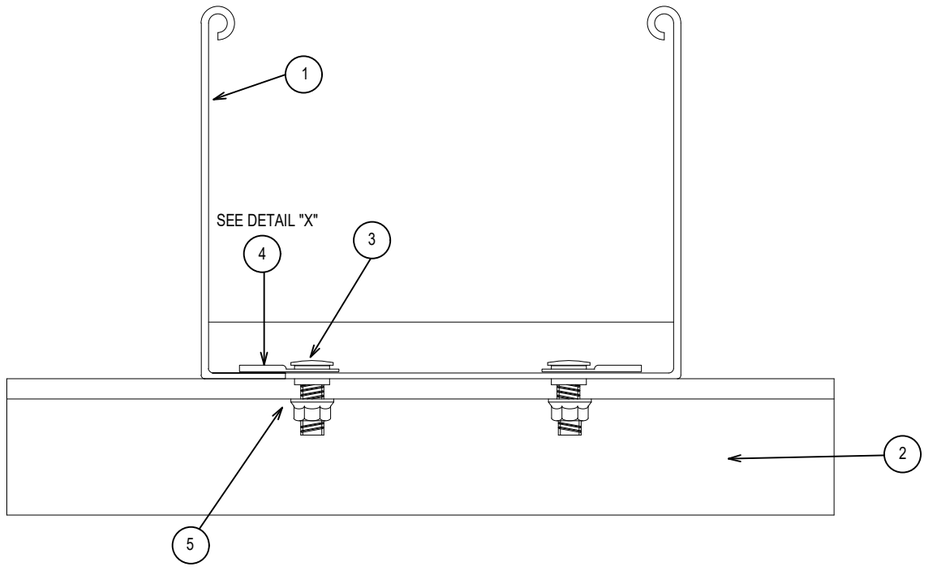
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

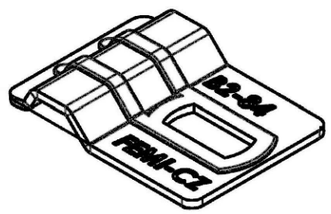
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

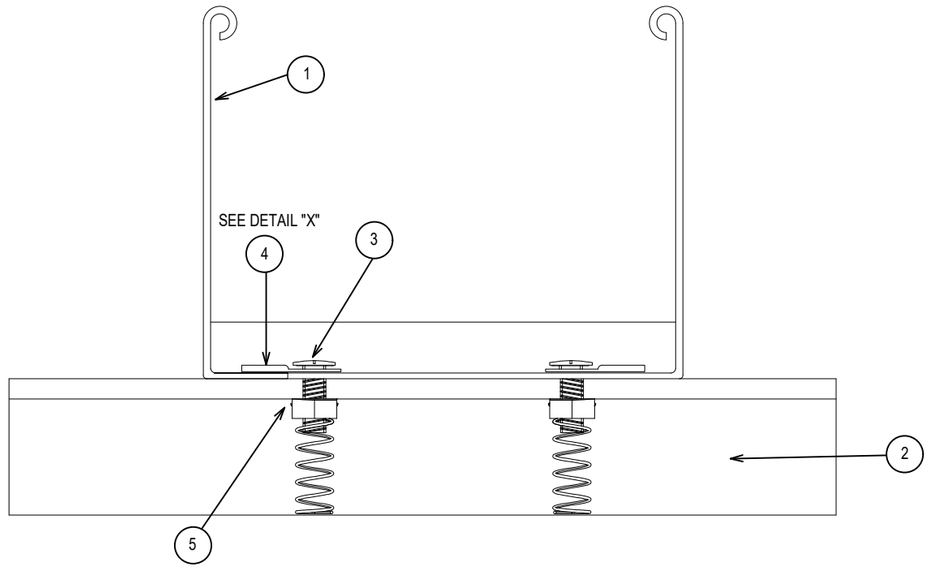
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

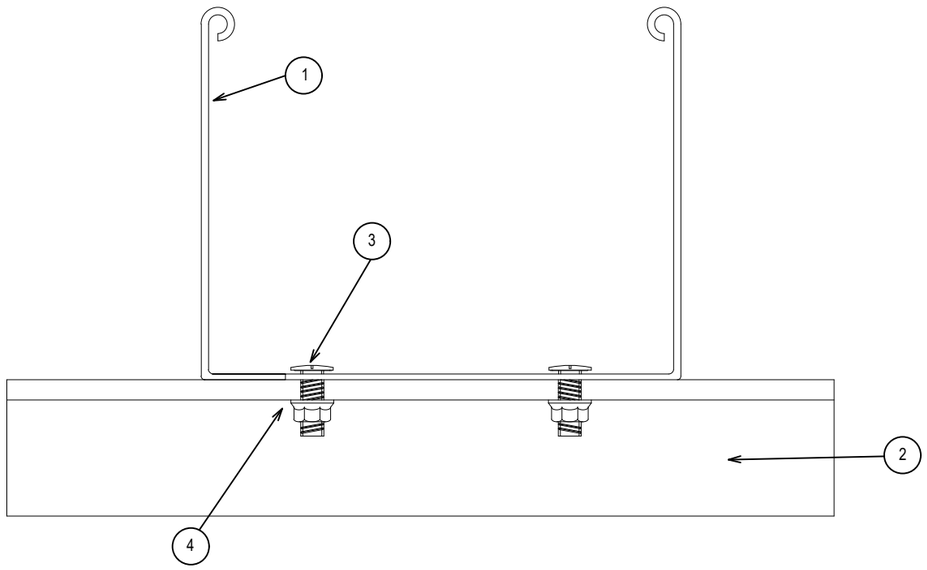
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

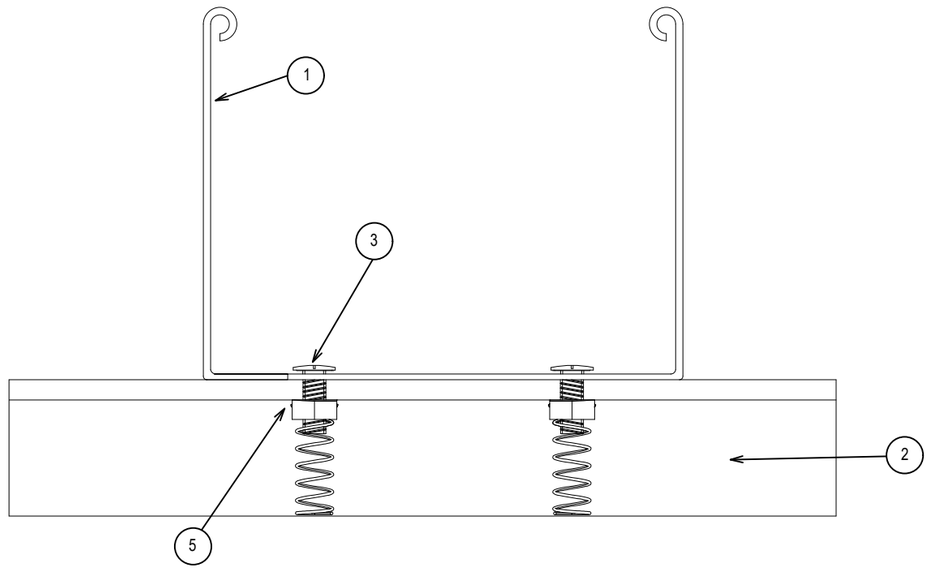


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

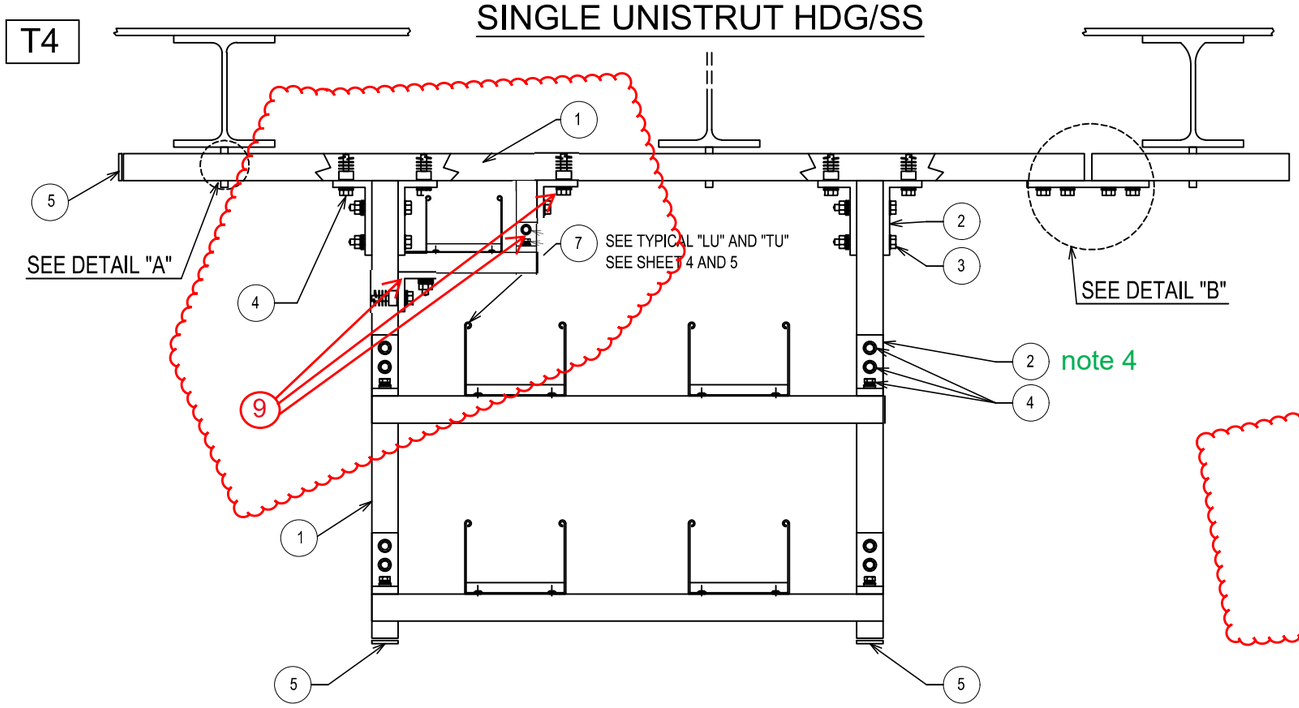
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

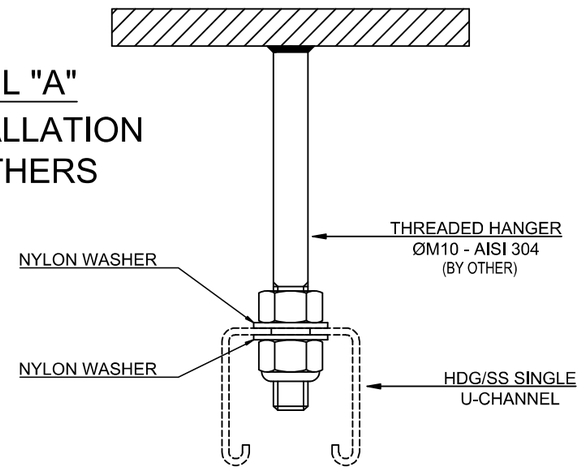
T4

SINGLE UNISTRUT HDG/SS

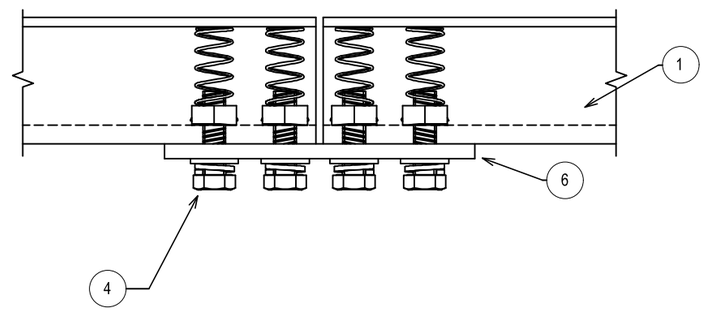


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

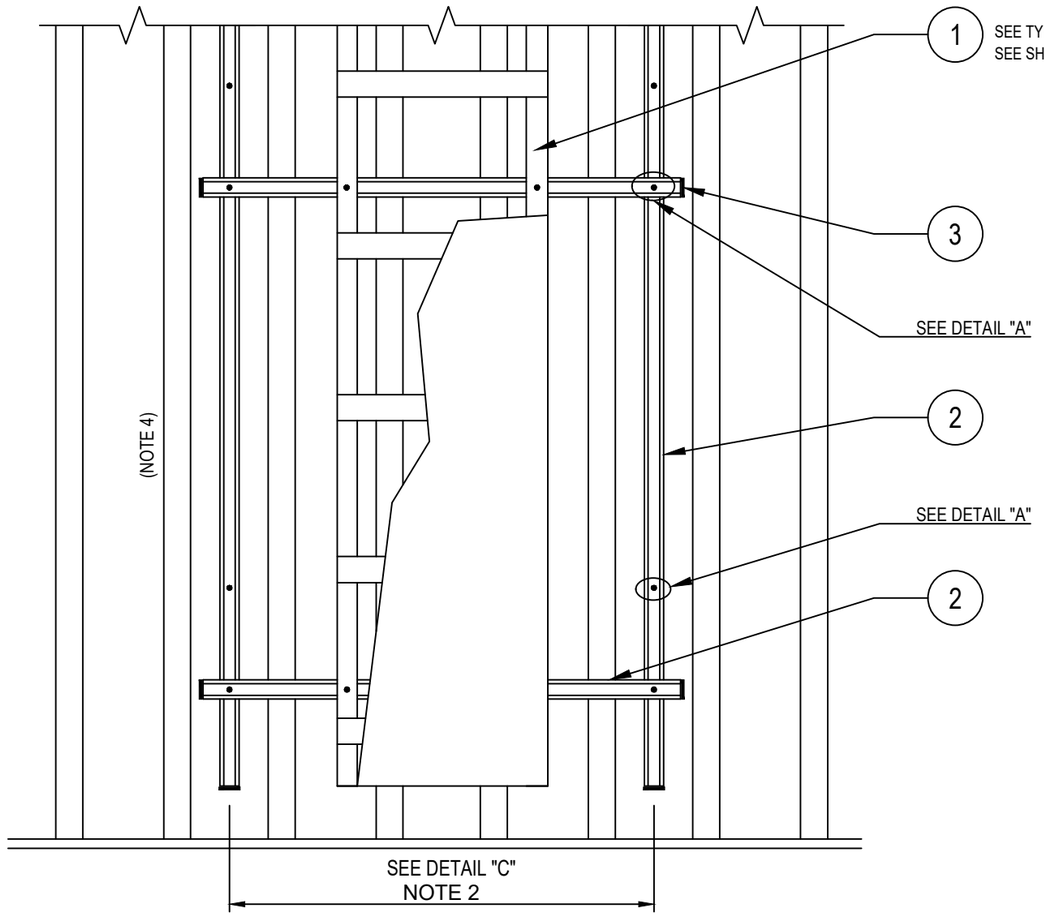
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

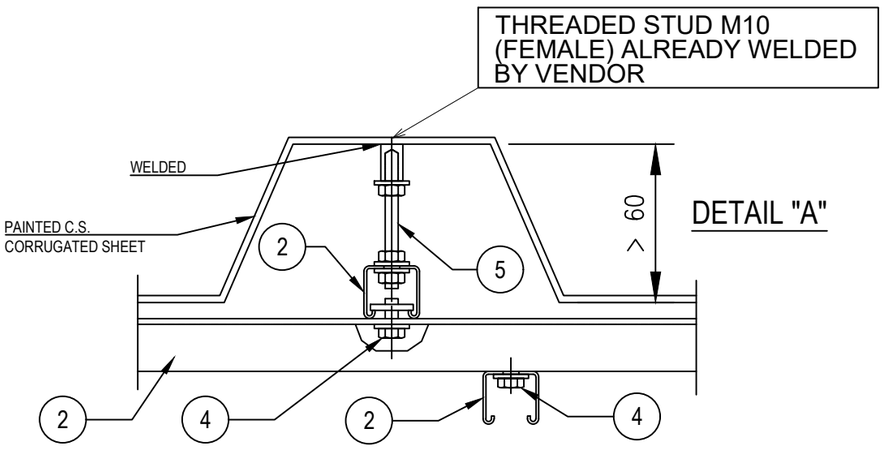
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

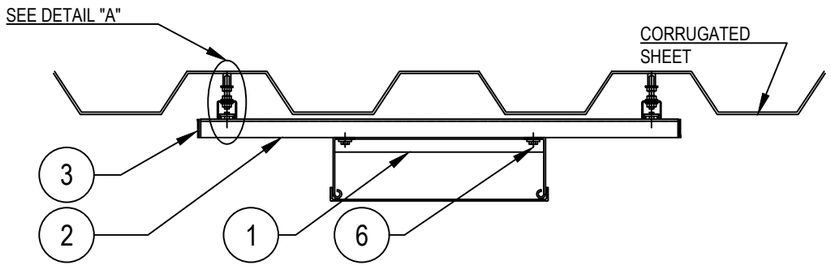
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_TP_ELE_HV	: Cable Tray Transition piece - Electrical (High Voltage)			Dwg	123A90-DDL-EL-DL-20109
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10002258		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).
3	Check cable tray / ladder segregation between racks
4	Check Material for Bolt and splices
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.
6	Check cable tray / ladder cleanness.
7	Check cable tray / ladder earthed and bonded against drawings.
8	Check Continuity and Resistance test on tray (spot check)
9	Check proper mitigations against sharp edges that could damage the cables
10	Check Transitions to ensure proper cables bending radius
11	Check Proper protection of racks and trays until cable pulling
12	Check Labelling with system and segment number
13	If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	CABLE_TRAY_TP_ELE_HV	: Cable Tray Transition piece - Electrical (High Voltage)			Dwg	123A90-DDL-EL-DL-20109
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10002259		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B
							Cable Tray/Ladder After pulling

AFTER PULLING

1 Check cable segregation on rack and tray

2 Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)

3 Check cable tray / ladder for Damages and cleanness

4 Check of proper cable bending radius

5 Check proper fastening of cables (distance and material)

6 Check lids intallation (if any) against drawings

7 If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	CABLE_TRAY_LD_ELE_LV	: Cable Tray Lower Deck - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002262		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	PL
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-01-04	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T10:59:14.384Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T12:26:09.983Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01

L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

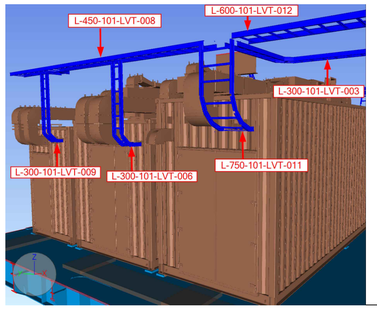
L-300-101-MVT-001
W300 X H100mm
+28.410m
+5.100m T.O.S

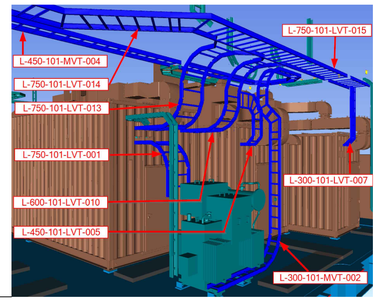
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W450 X H100mm
+28.810m
+5.500m T.O.S

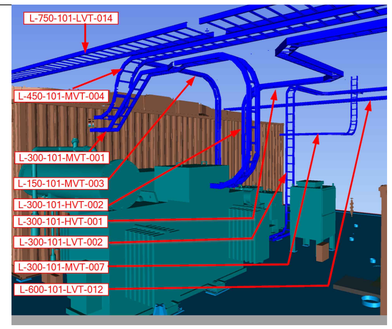
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

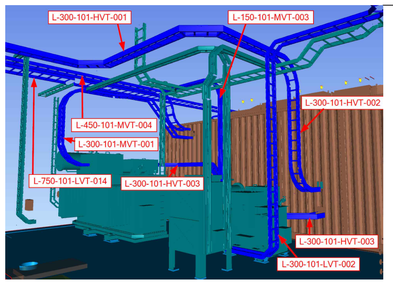
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

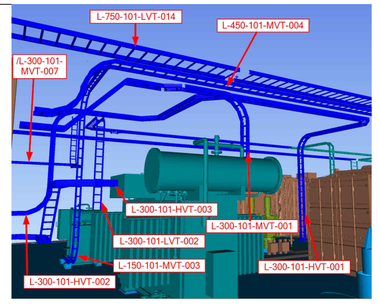
L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S

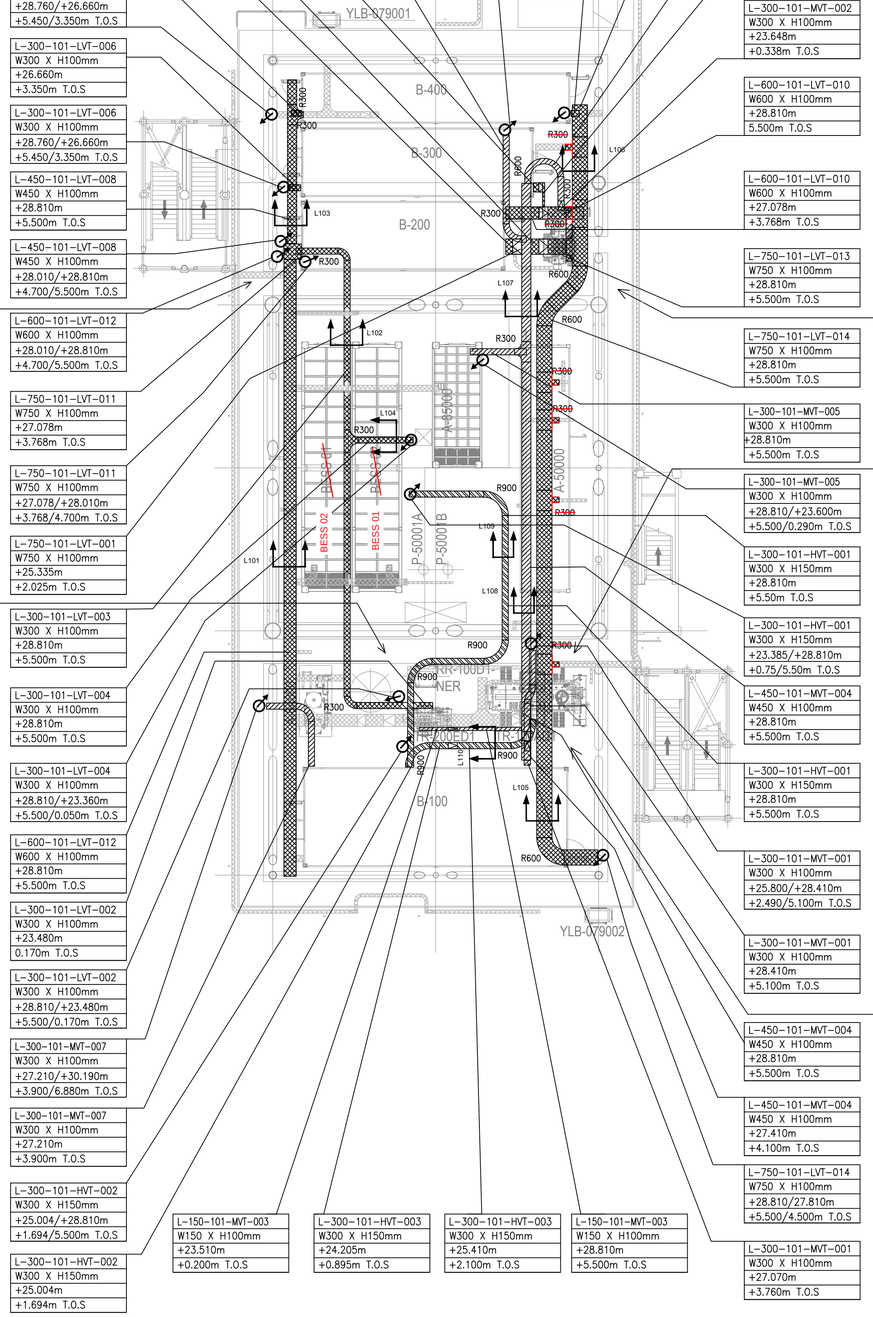








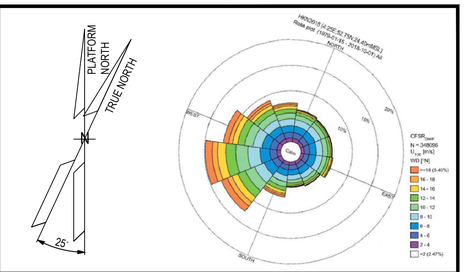




PRIMARY CABLE ROUTING

PLAN ON LOWER DECK

EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

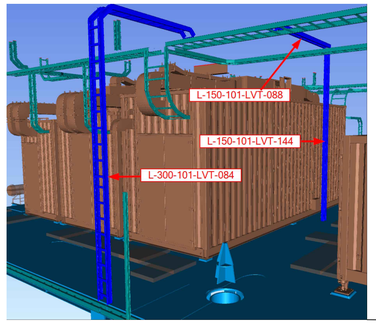
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

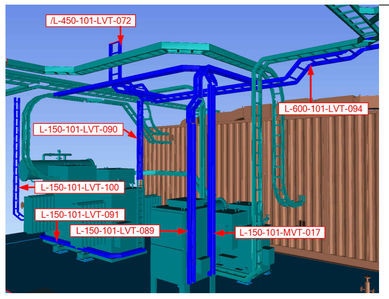
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
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L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

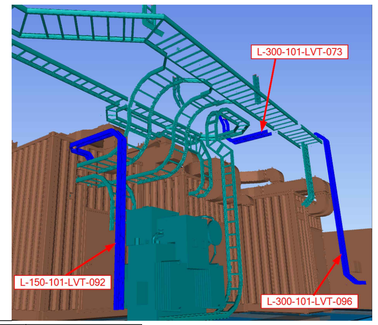
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W150 X H100mm
+22.598m
−0.712m T.O.S

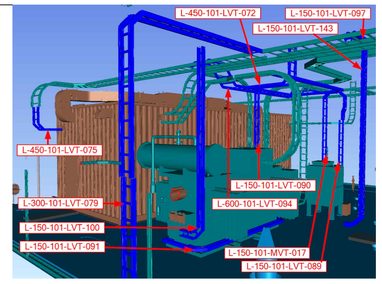
L-150-101-MVT-017
W150 X H100mm
+28.410m
+5.100m T.O.S

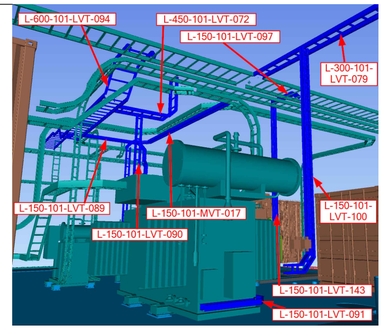
L-150-101-LVT-085
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

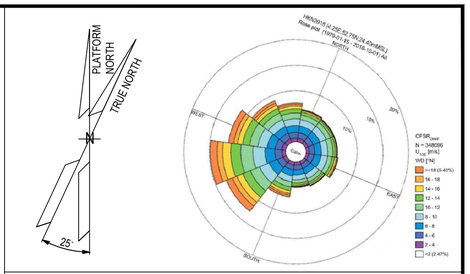
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S







SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

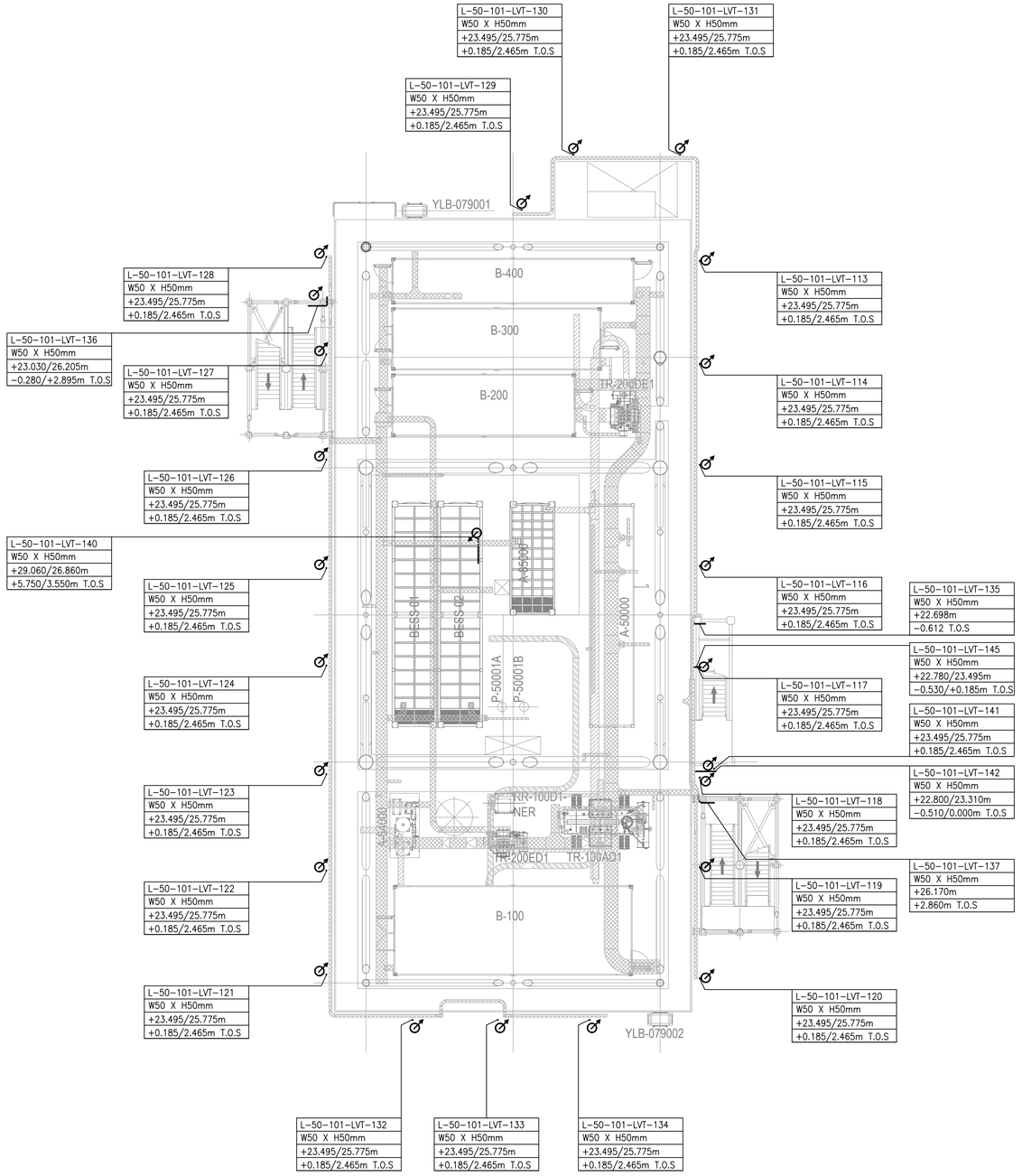
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

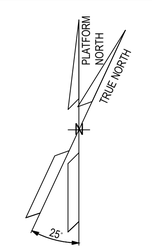
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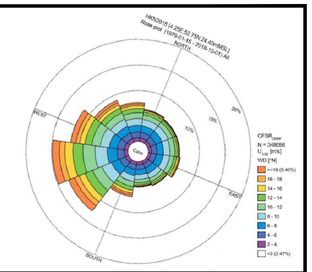
DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

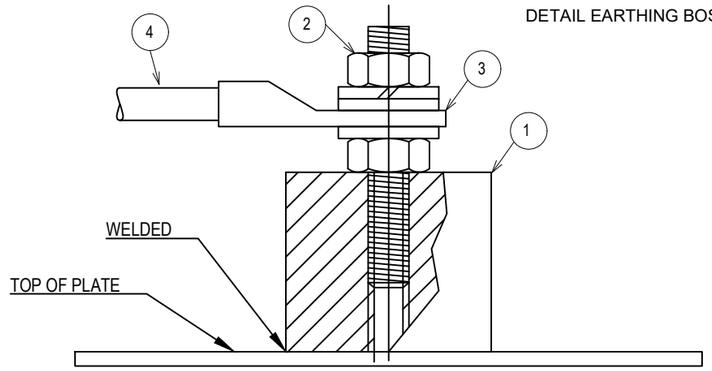
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

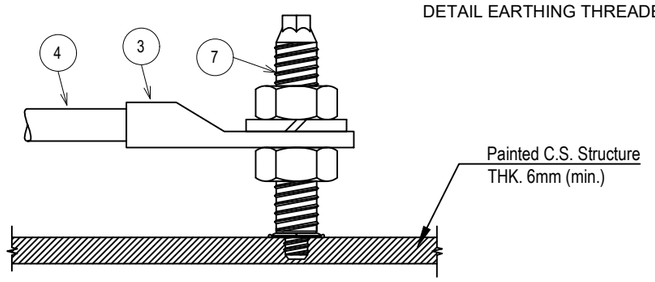


E11D

SEE NOTE 6

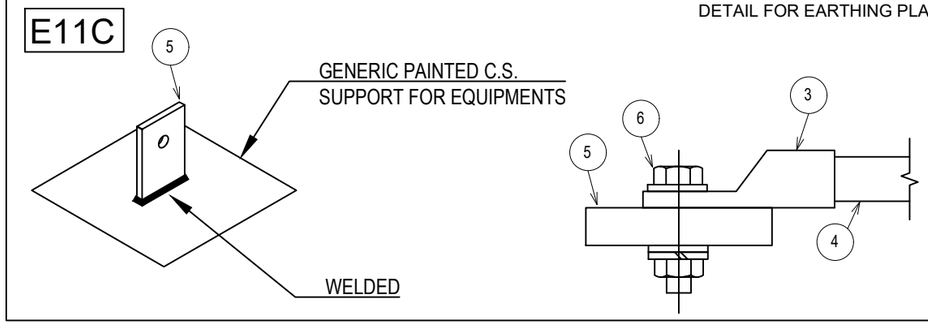
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

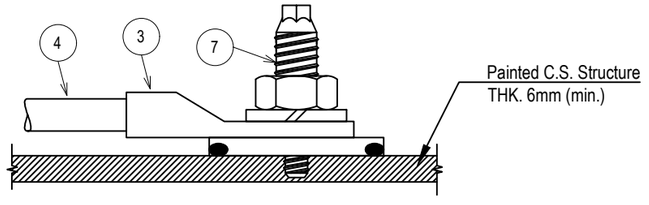


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

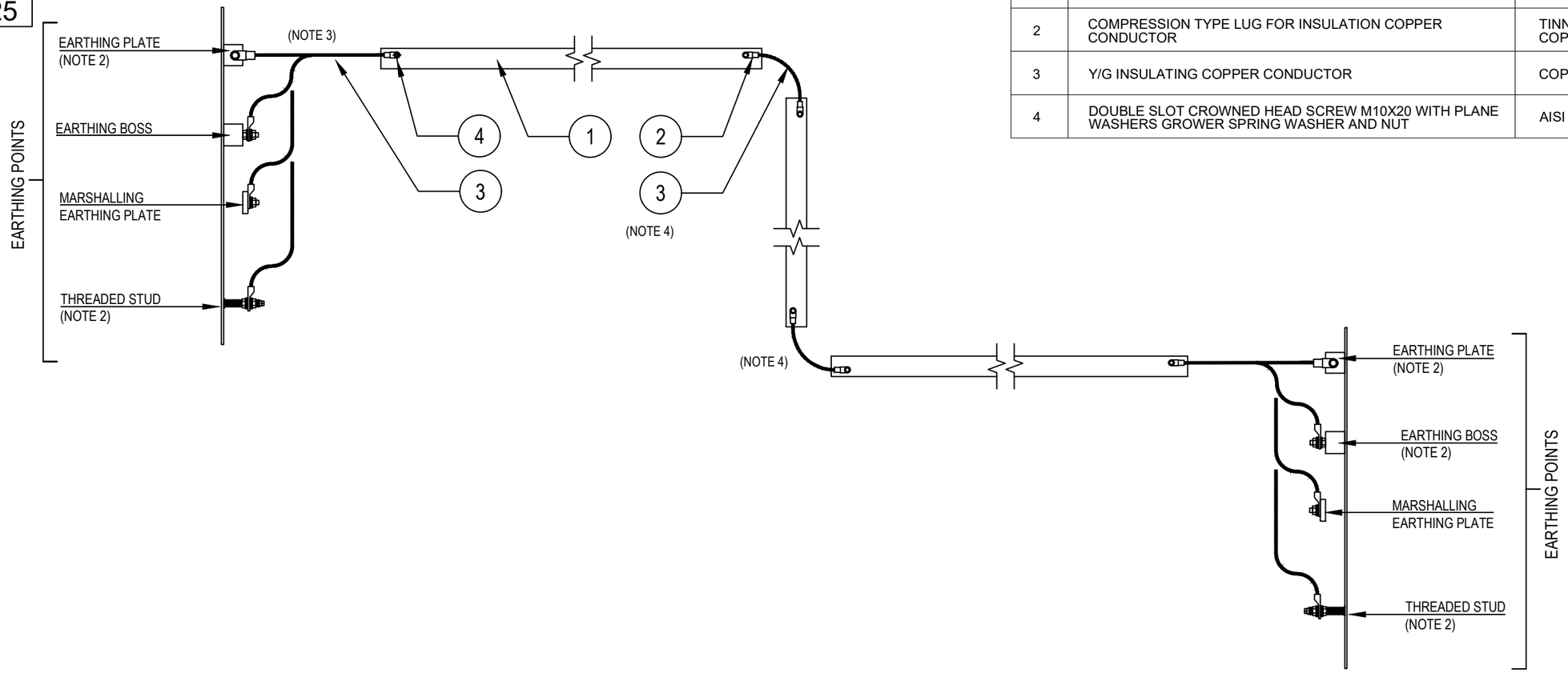
SHEET 003

REV. 02

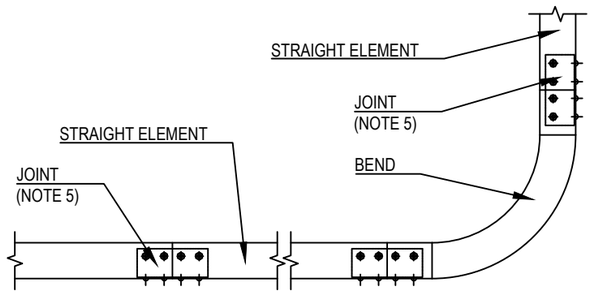
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

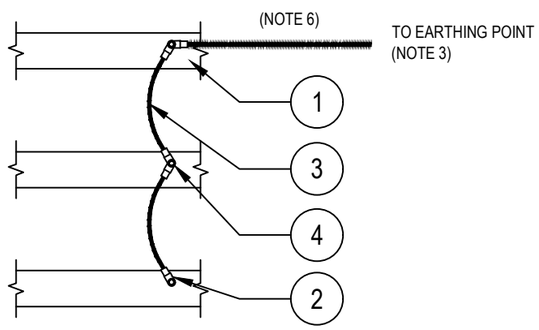
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

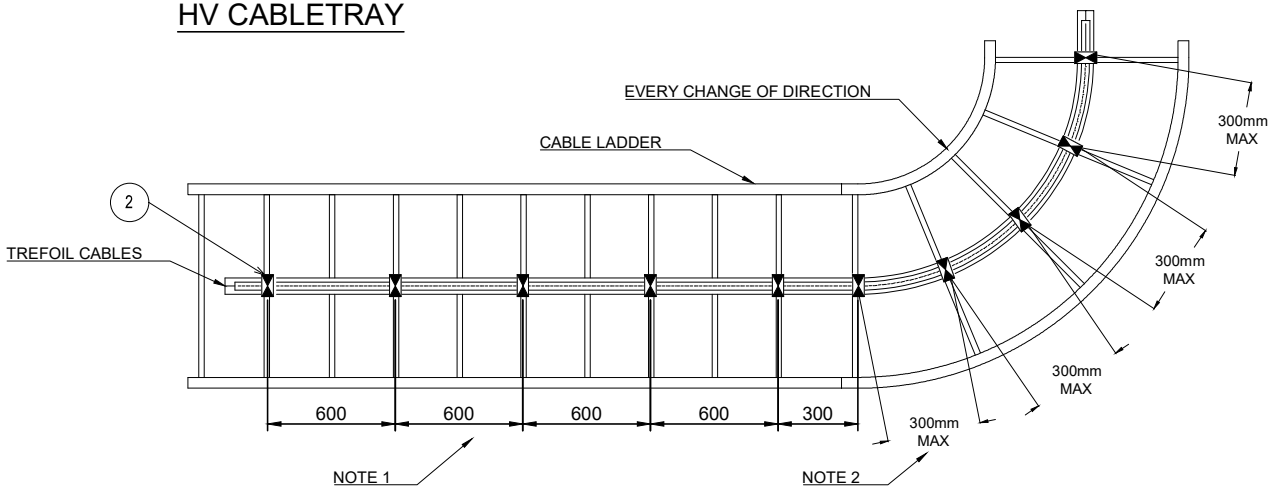
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

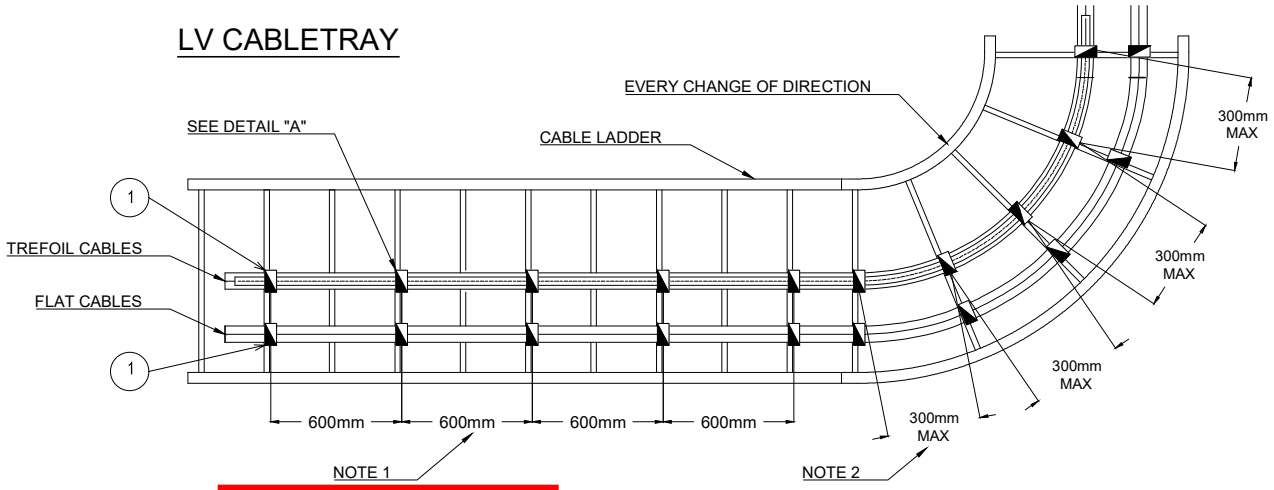
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

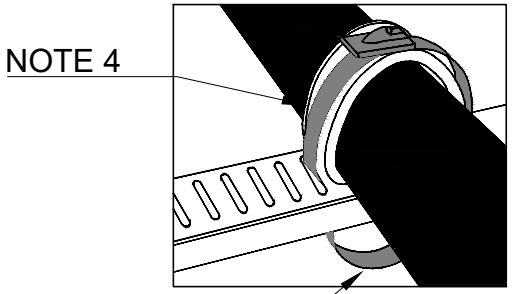
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_B	28/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20092	010	02

CROSSWIND

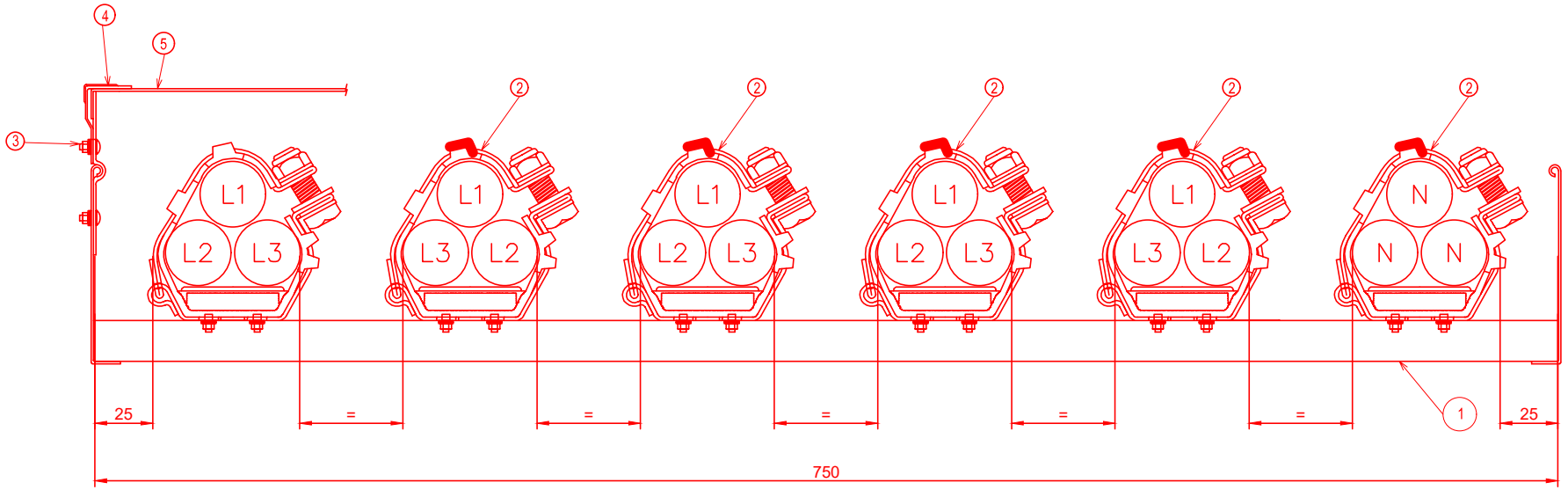
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_B	28/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

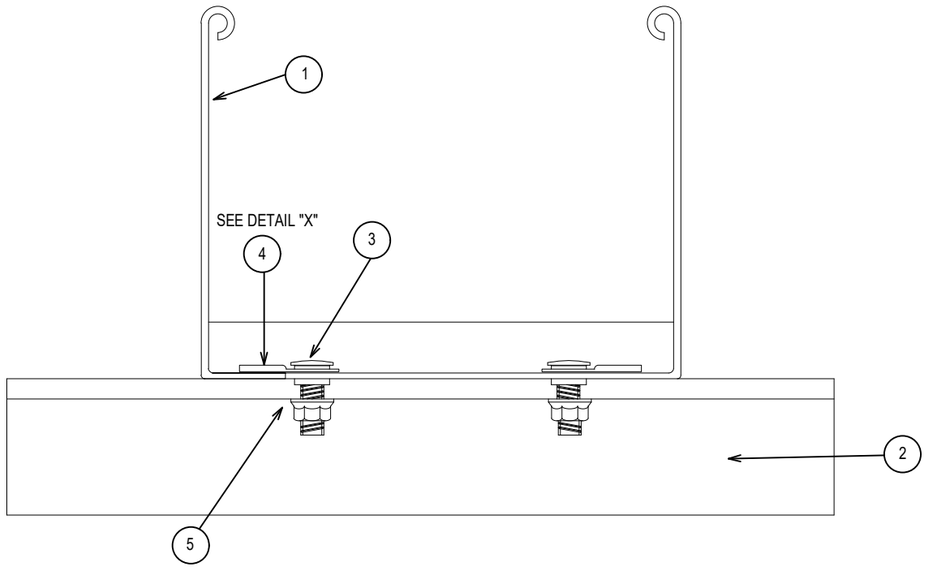
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

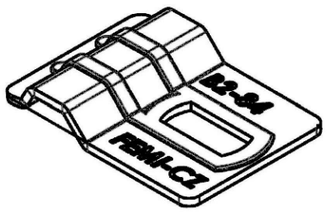
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

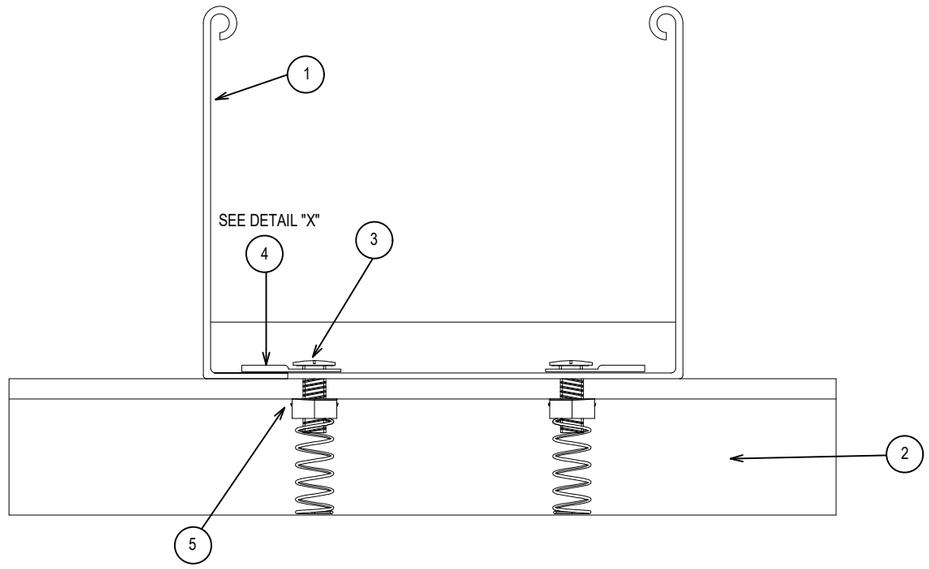
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

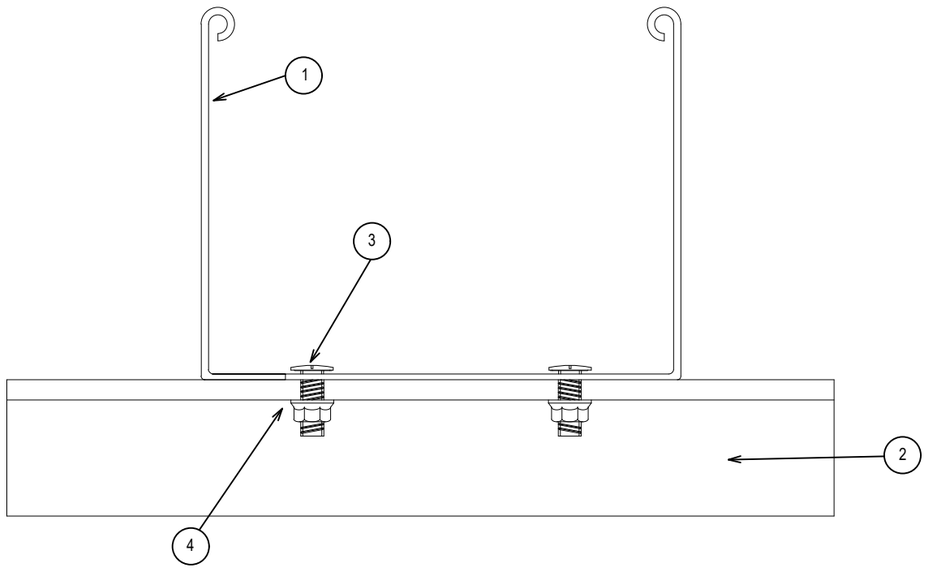
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

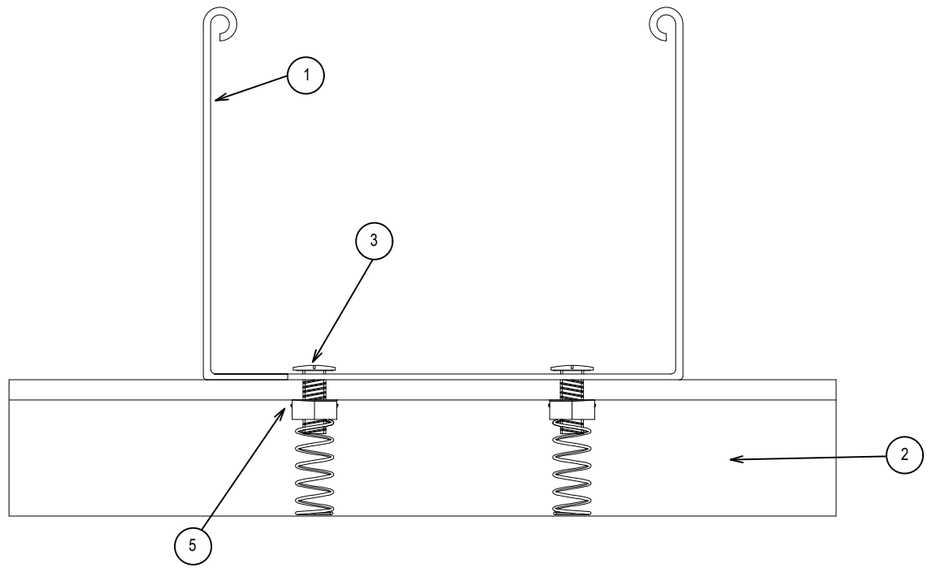


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

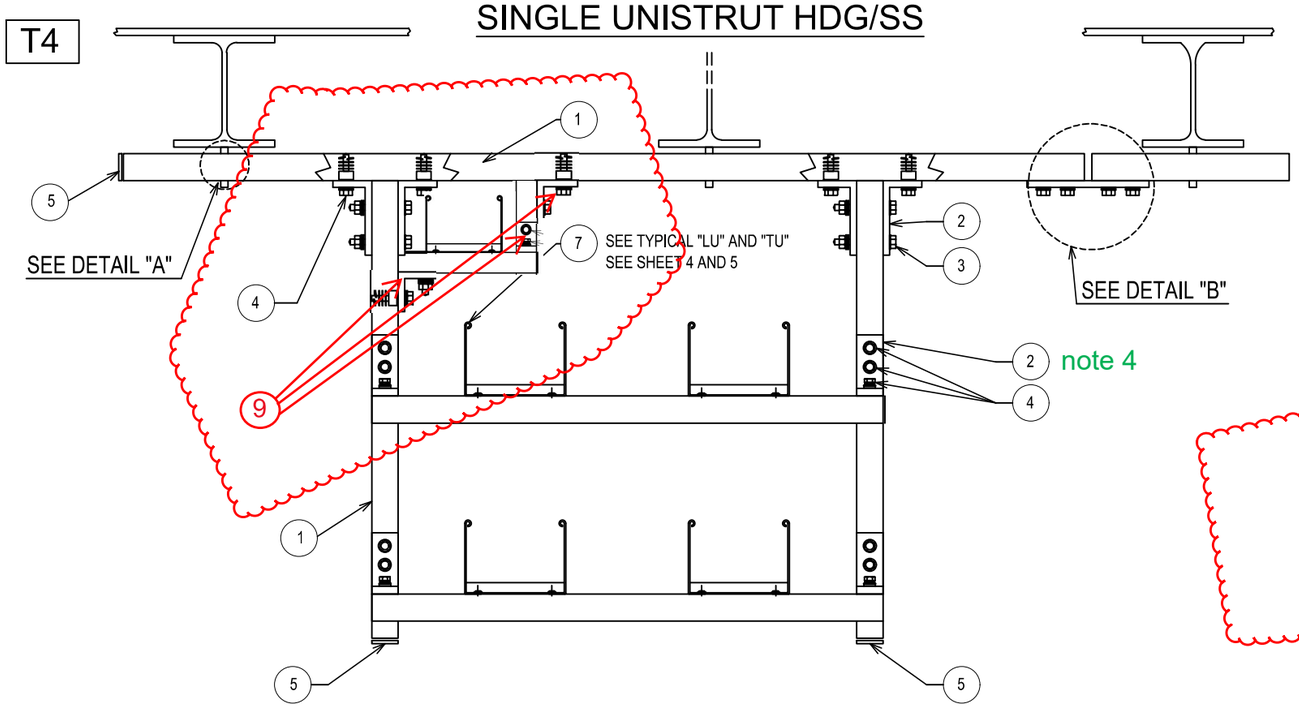
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

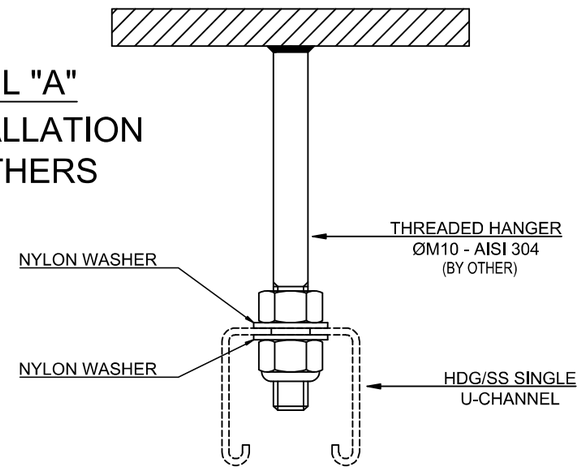
T4

SINGLE UNISTRUT HDG/SS

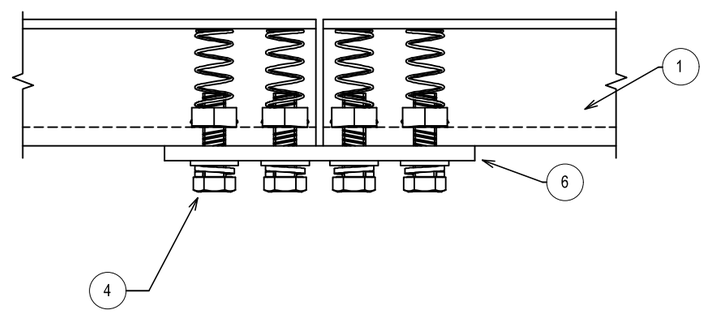


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

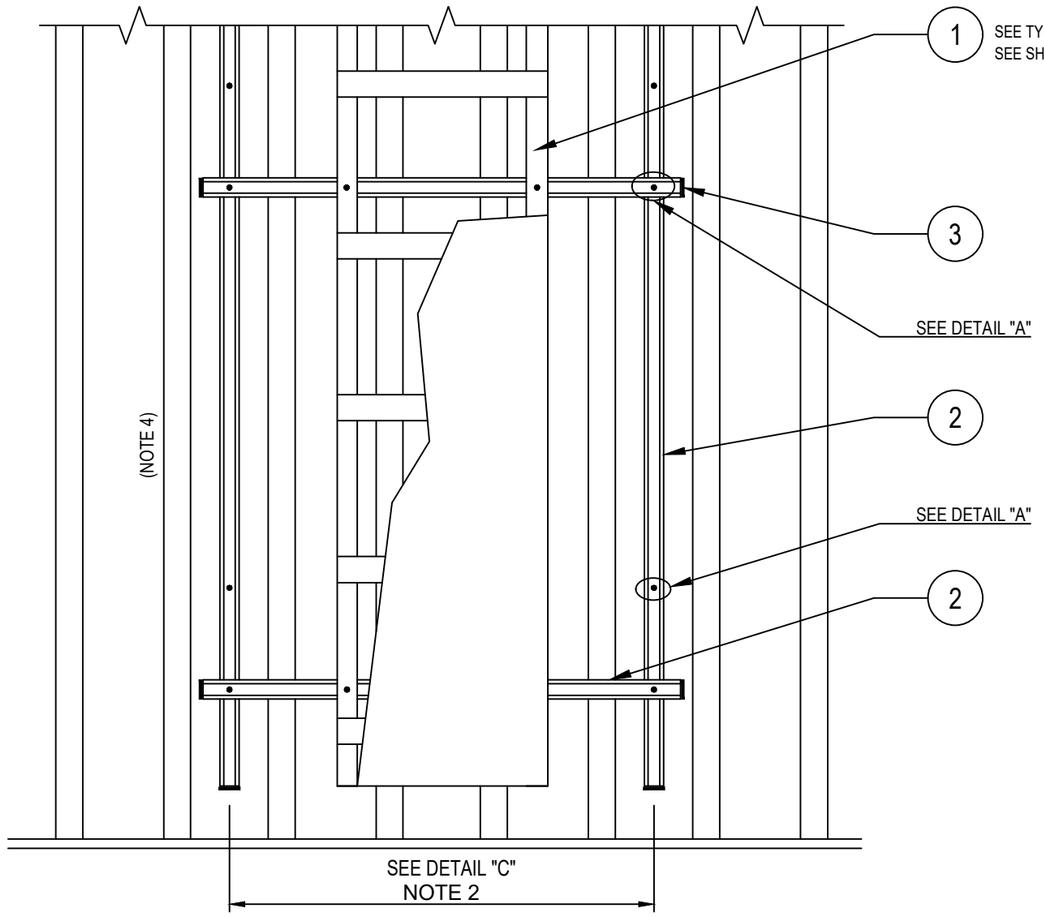
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

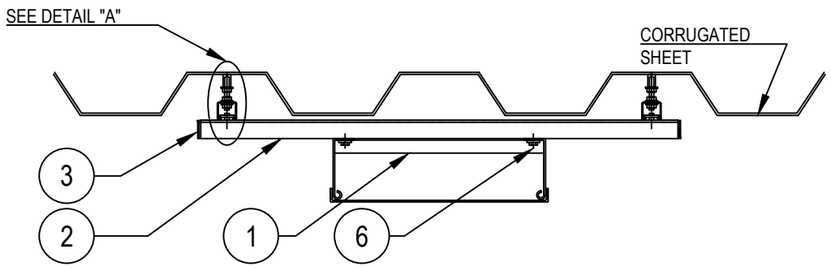
F.to UNI A3: 420mmx297mm

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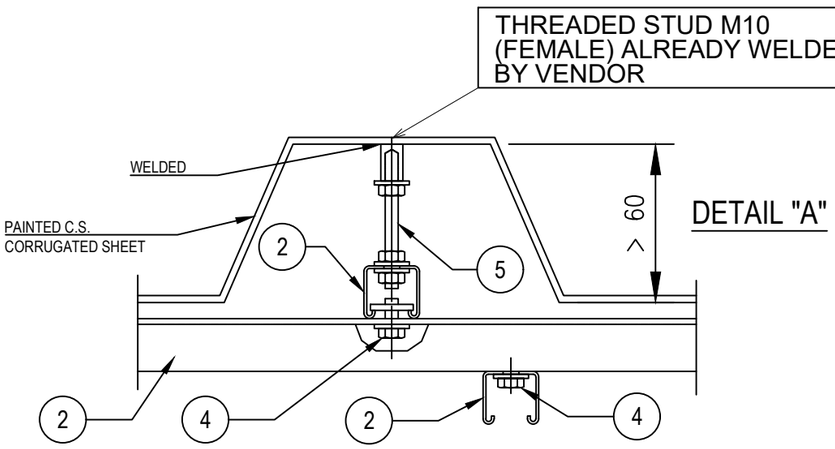
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	014	02

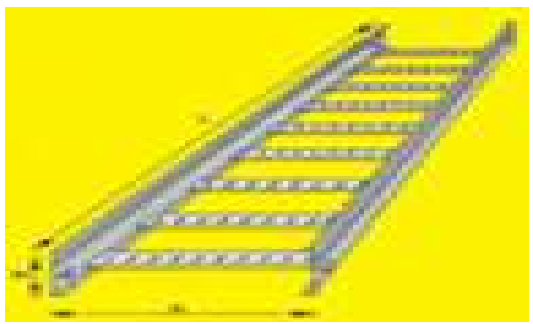
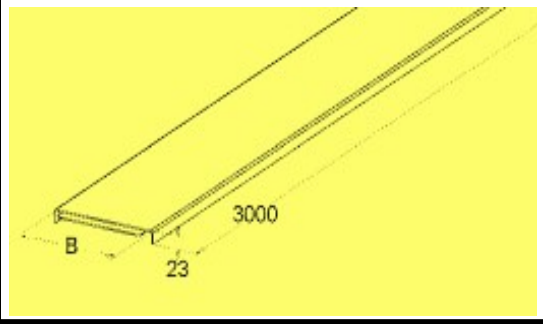
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
38		
39		
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47 **NOTES:**

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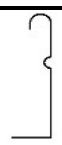
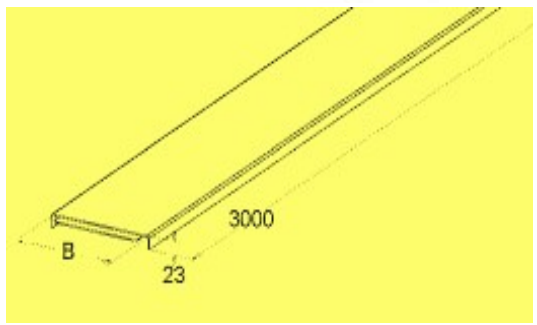
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

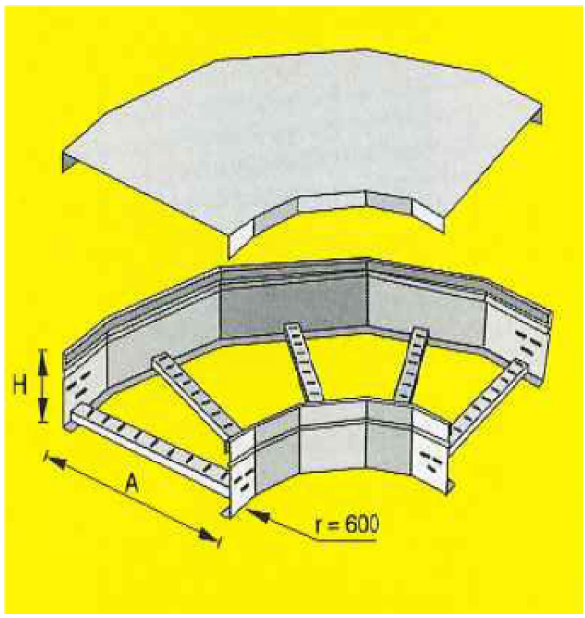
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



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16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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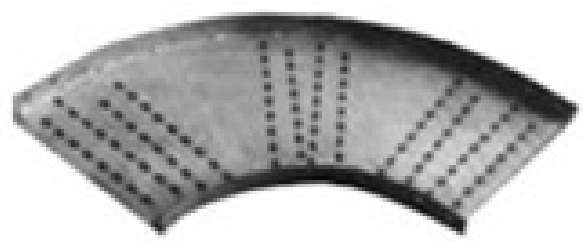
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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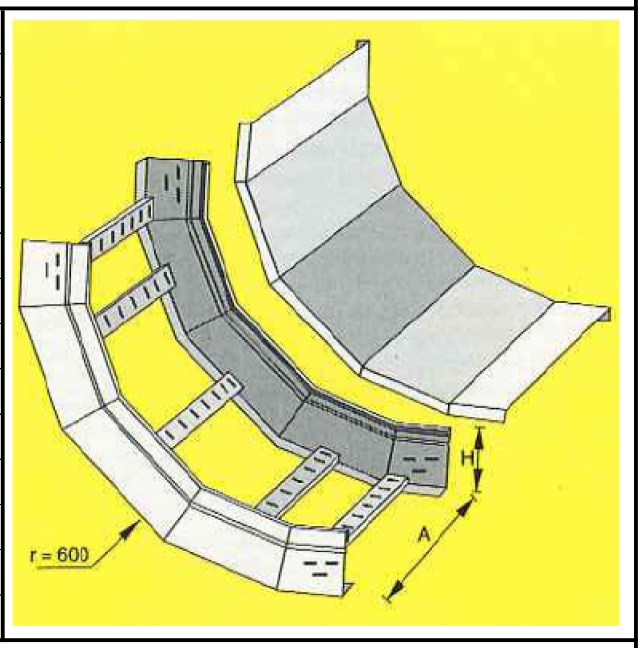
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



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16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
44		
45		
46		
47		
48		
49		

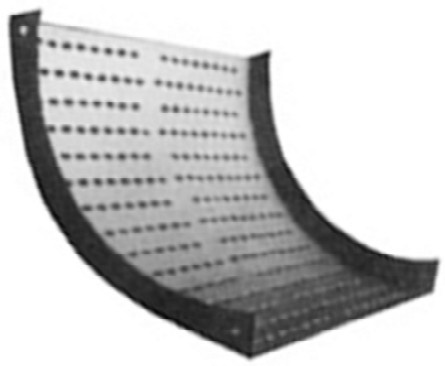
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
44		
45		
46		
47		
48		
49		

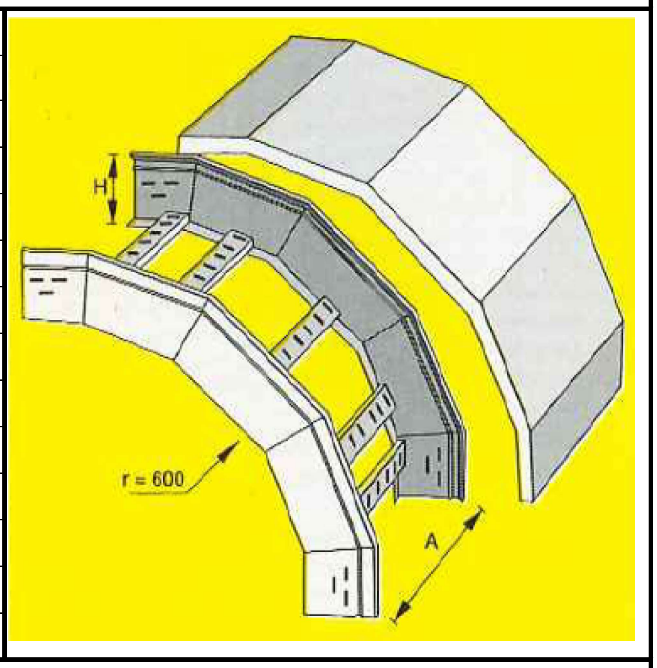
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		
51	**NOTES:**	
52		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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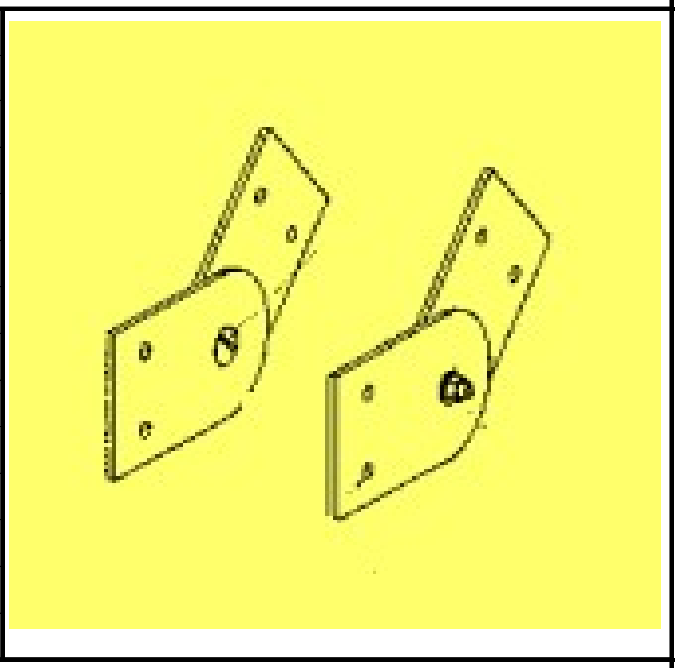
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

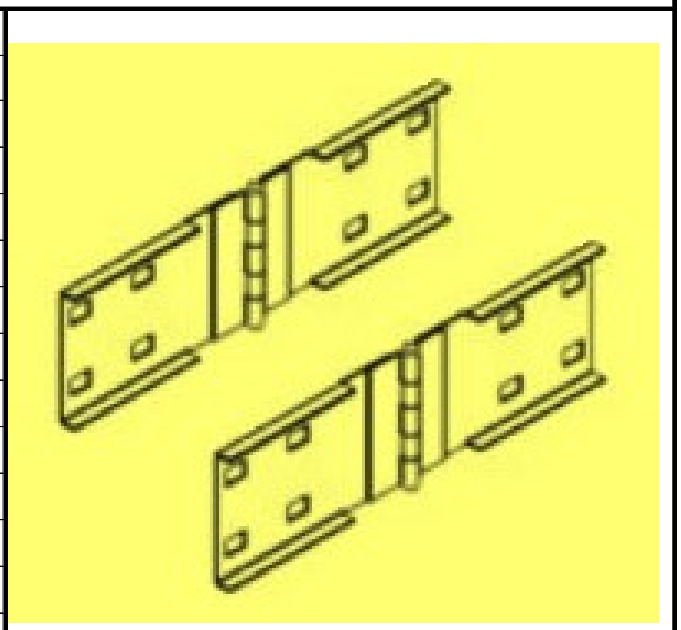
	CODE	REMARKS
28		
29		
30		
31		
32		
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34		
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41		

NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

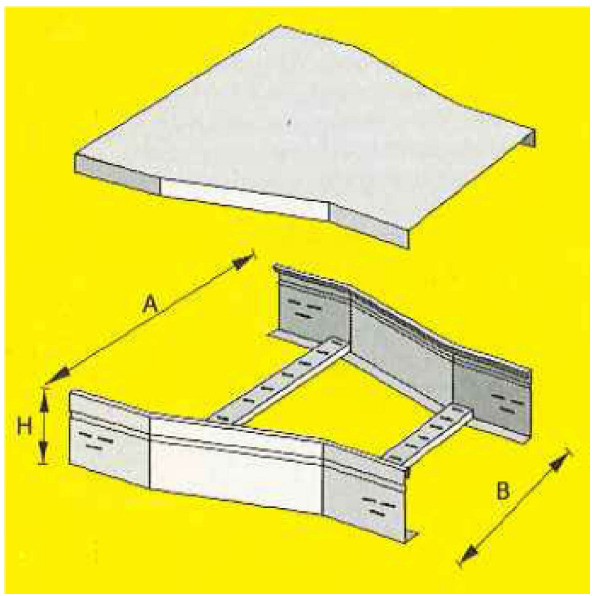
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
34		
35		
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44		
45	**NOTES:**	
46		
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55		

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
38		
39		
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41		
42		
43		
44		

45 **NOTES:**

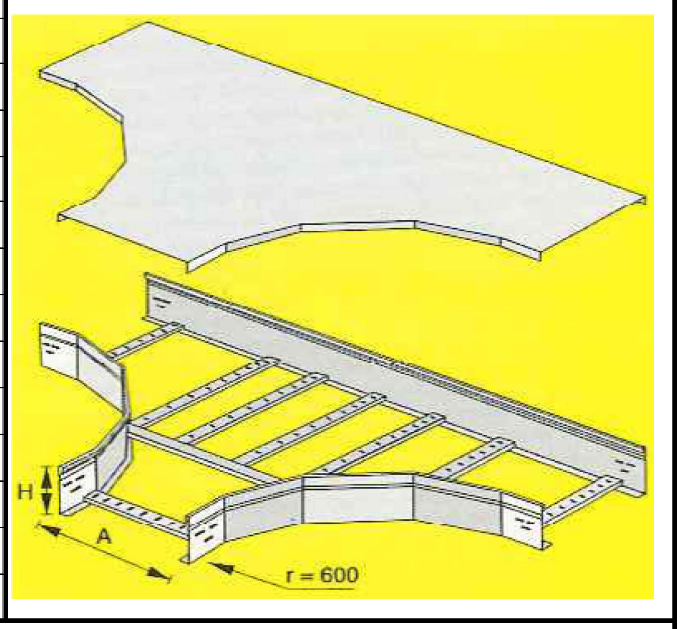
46
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
38		
39		
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50 **NOTES:**

51
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ITEM	Tag	CABLE_TRAY_LD_ELE_LV	: Cable Tray Lower Deck - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002263		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B Cable Tray/Ladder After pulling

AFTER PULLING

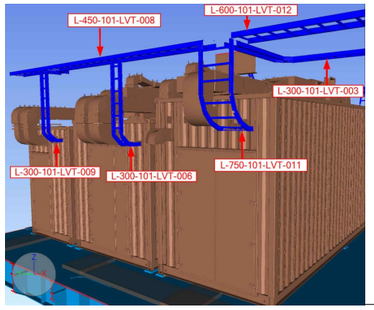
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	PL
6	Check lids intallation (if any) against drawings	PL
7	If required produce Red Line Mark Up for "AS BUILT"	

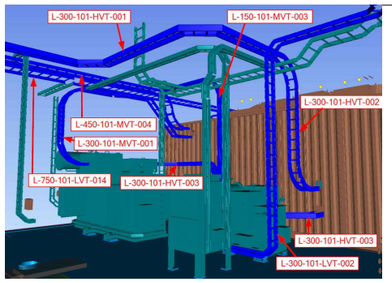
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-02-24	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:42:32.814Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-24T14:56:03.164Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

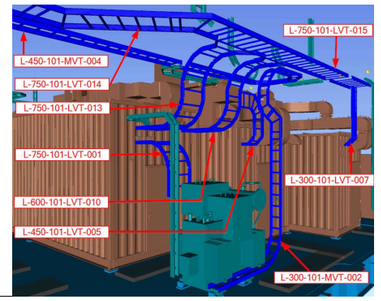
L-300-101-MVT-001
W300 X H100mm
+28.410m
+5.100m T.O.S

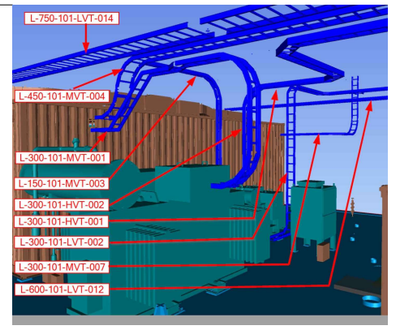
L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

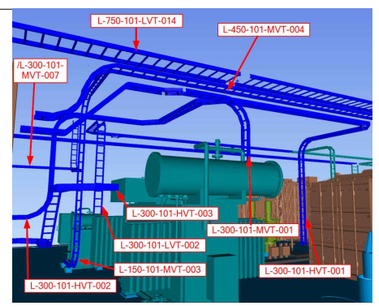
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

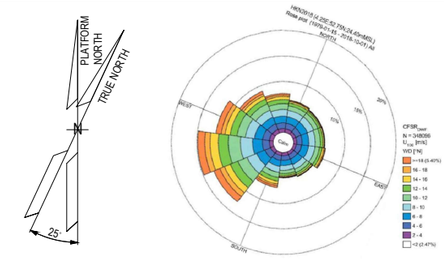
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S









NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS NOTED OTHERWISE.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

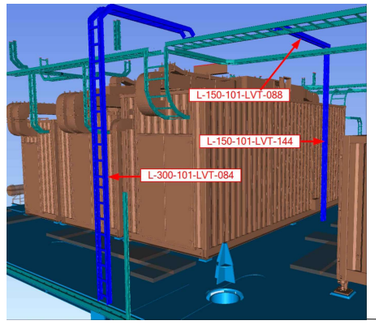
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

PRIMARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

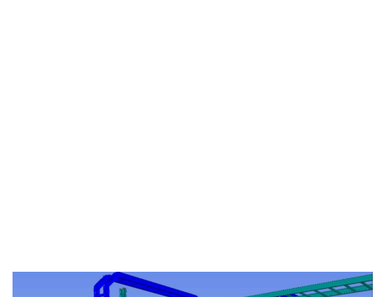
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W150 X H100mm
+22.598m
−0.712m T.O.S

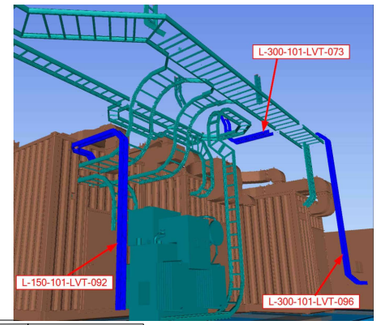
L-150-101-MVT-017
W150 X H100mm
+28.410m
+5.100m T.O.S

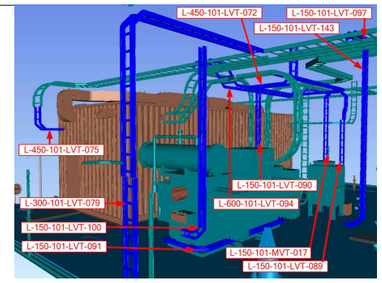
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W150 X H100mm
+23.300m
−0.010m T.O.S

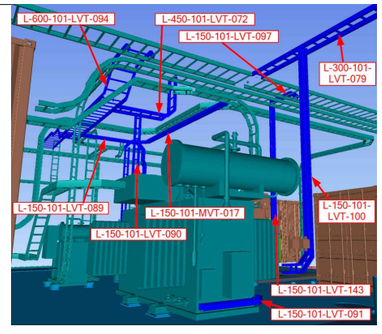
L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

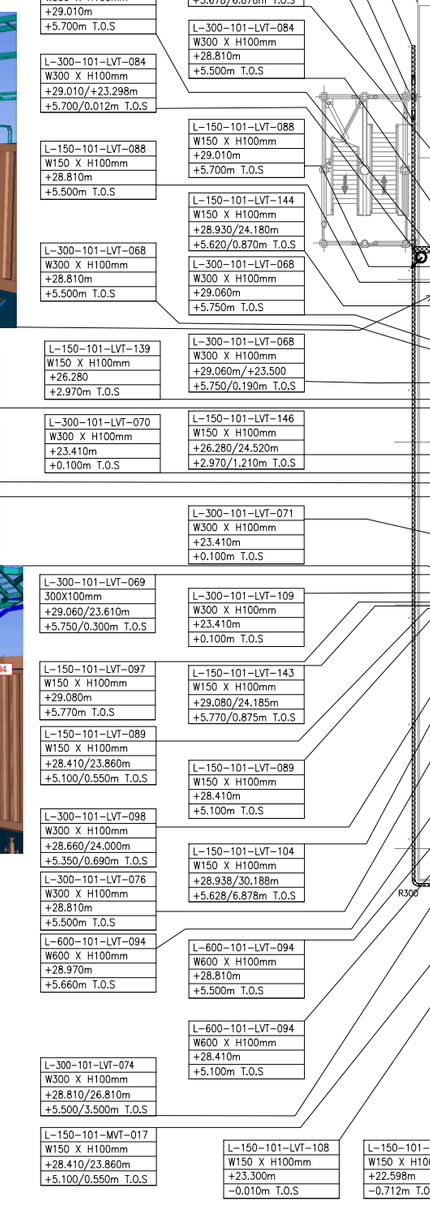
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S



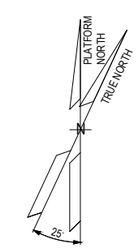


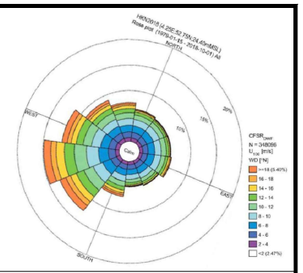






SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

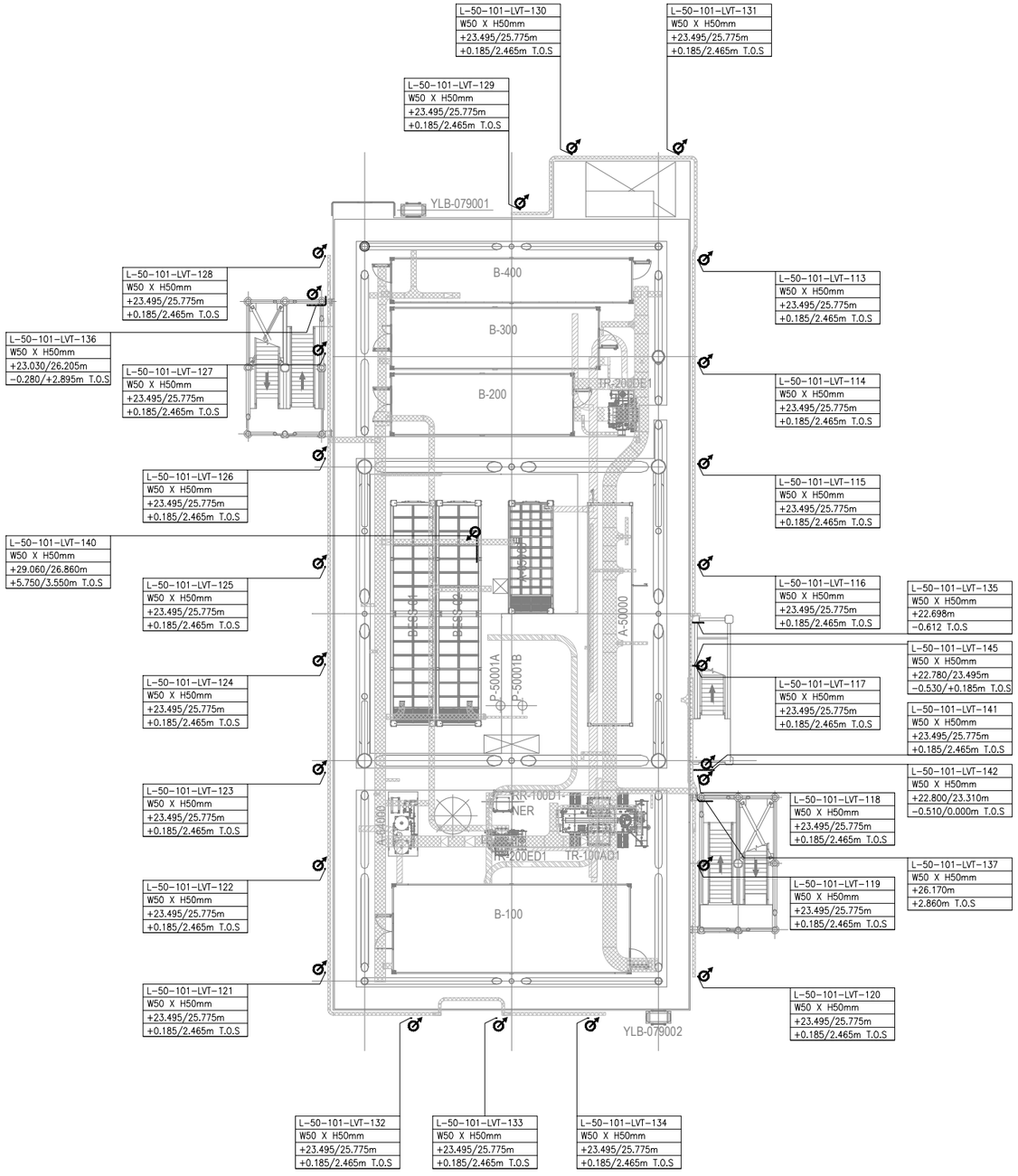
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

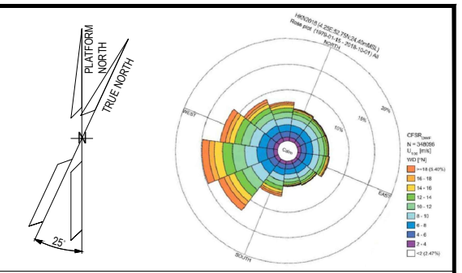
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DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

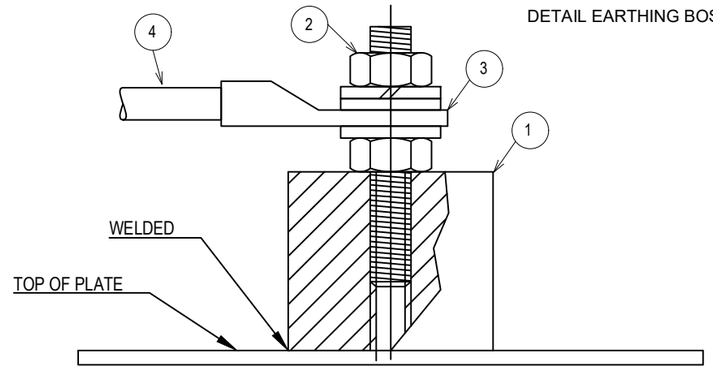
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

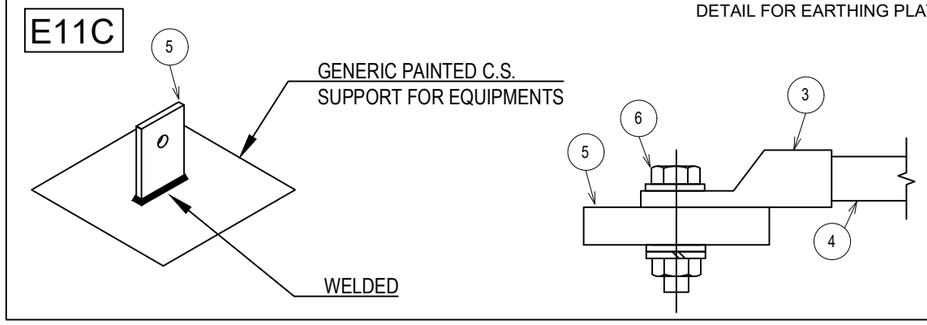
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

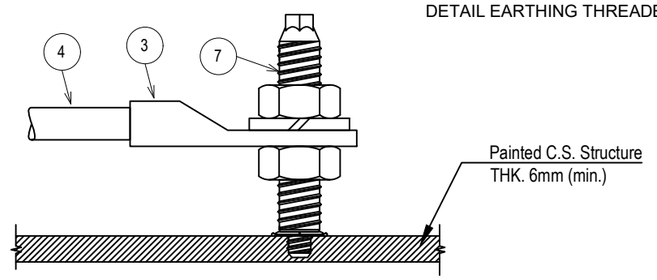


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

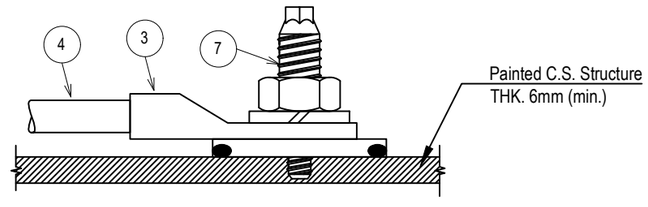


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

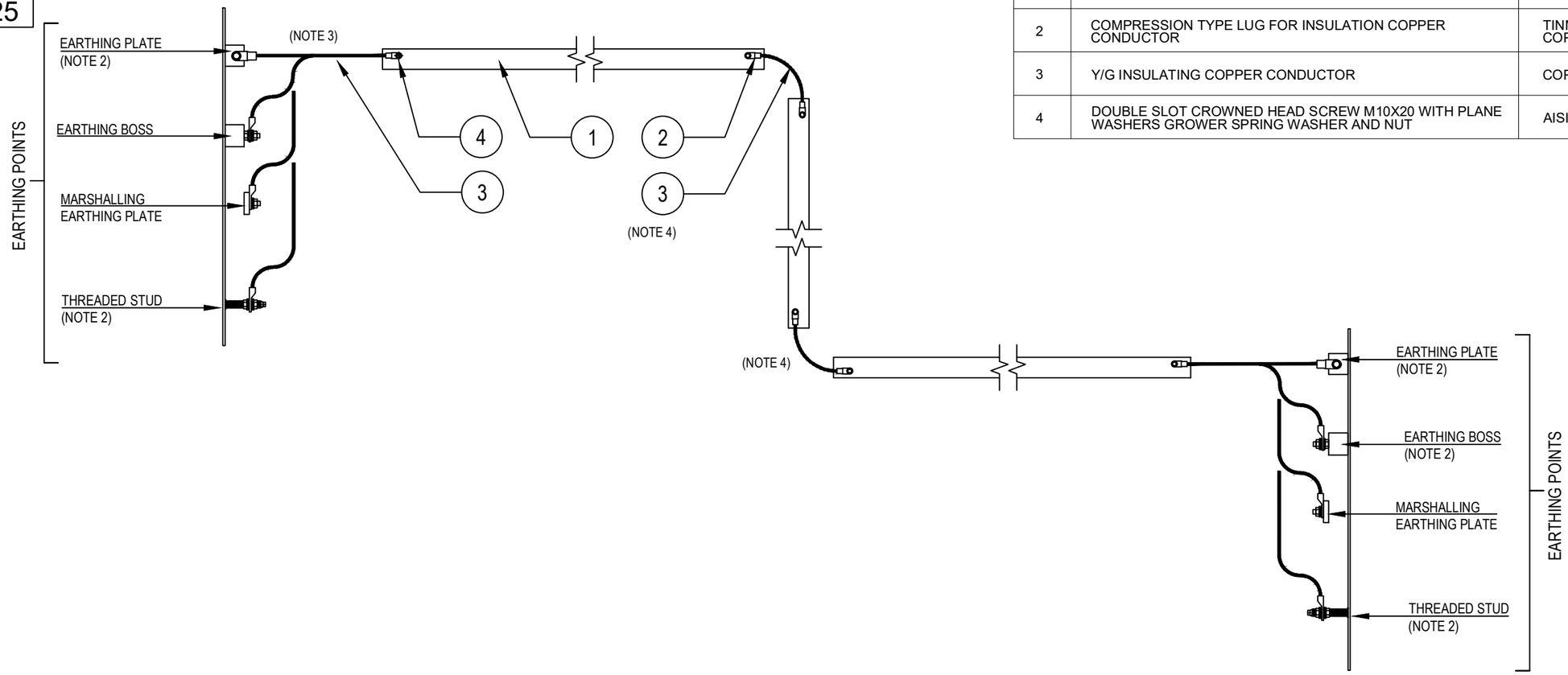
SHEET 003

REV. 02

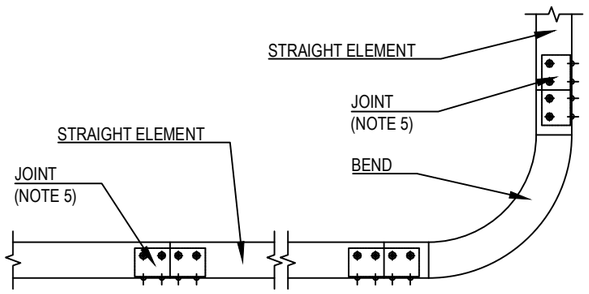
F.to UNI A3: 420mmx297mm

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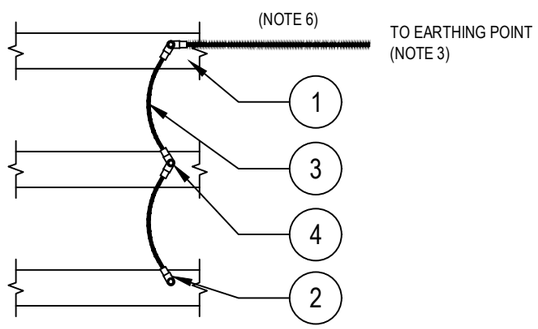
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
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F.to UNI A3: 420mmx297mm

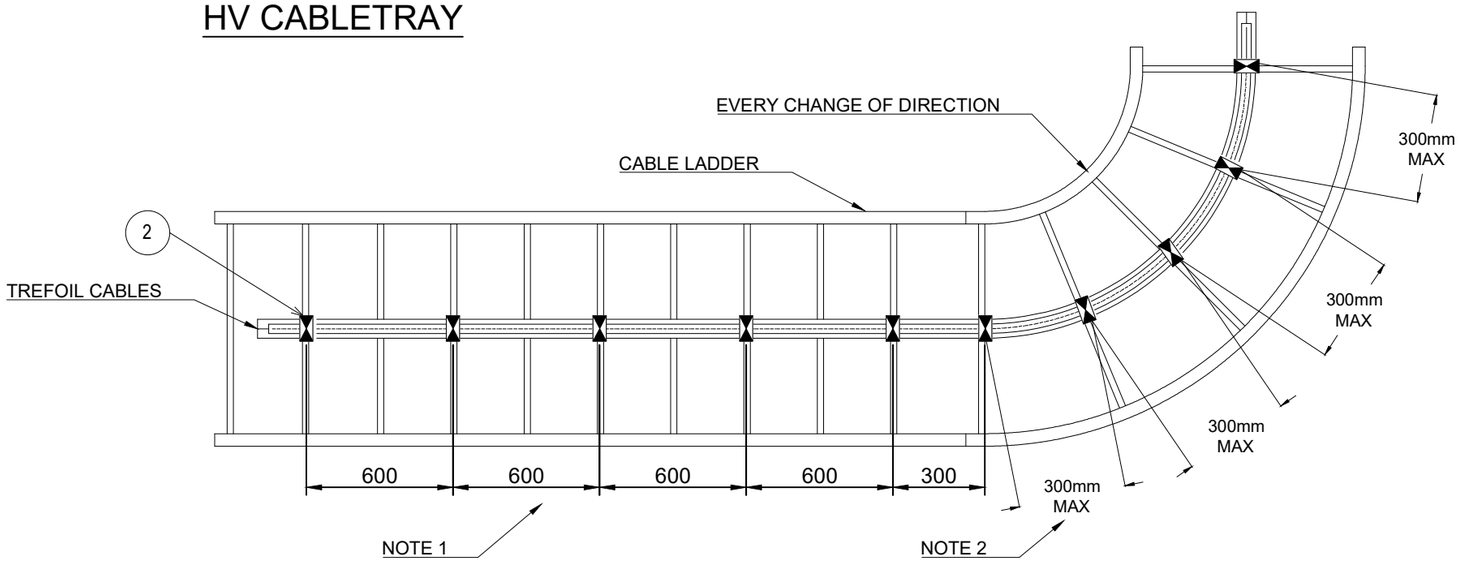
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

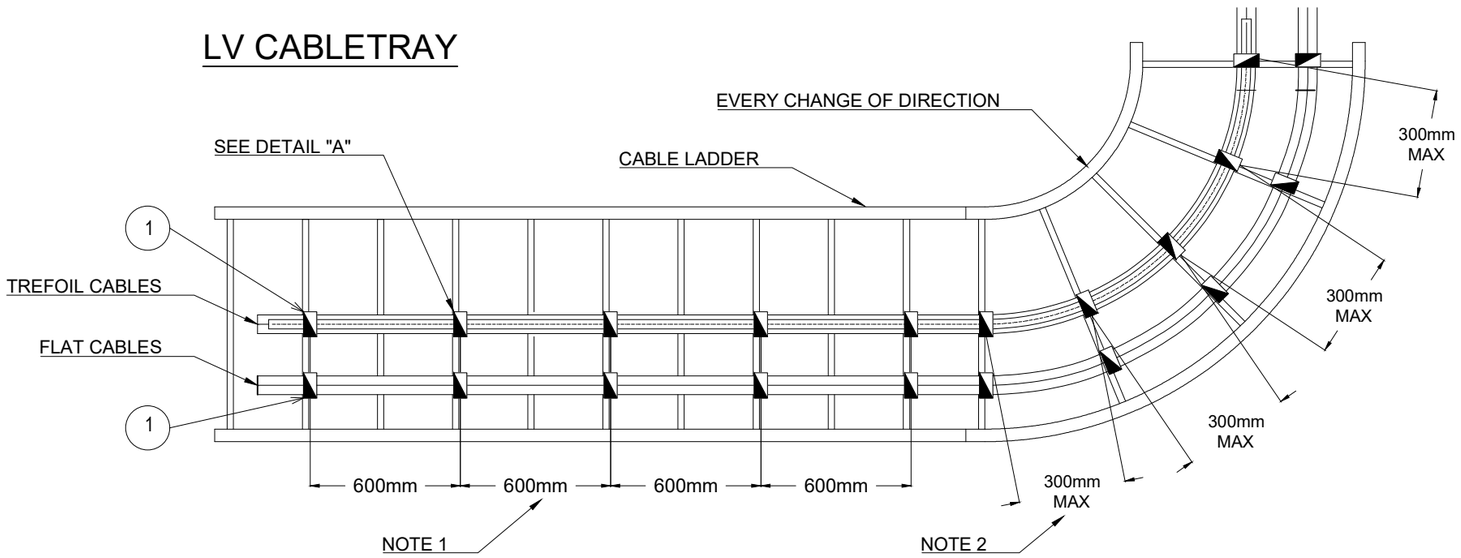
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

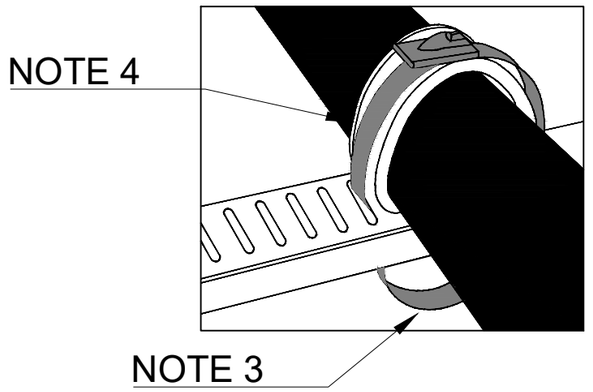
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

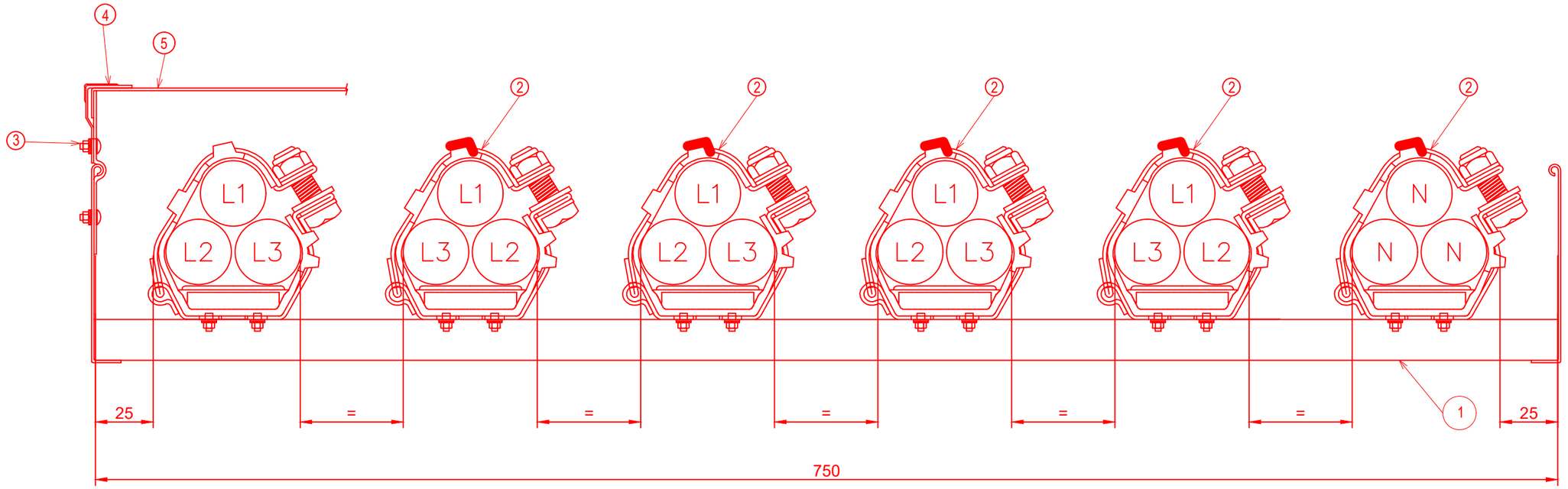
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

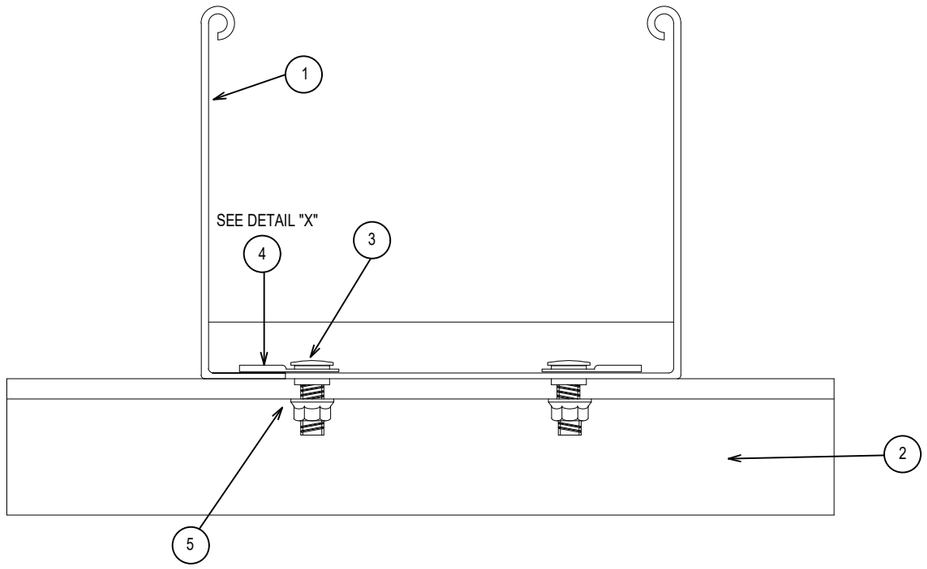
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

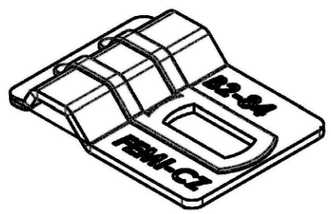
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

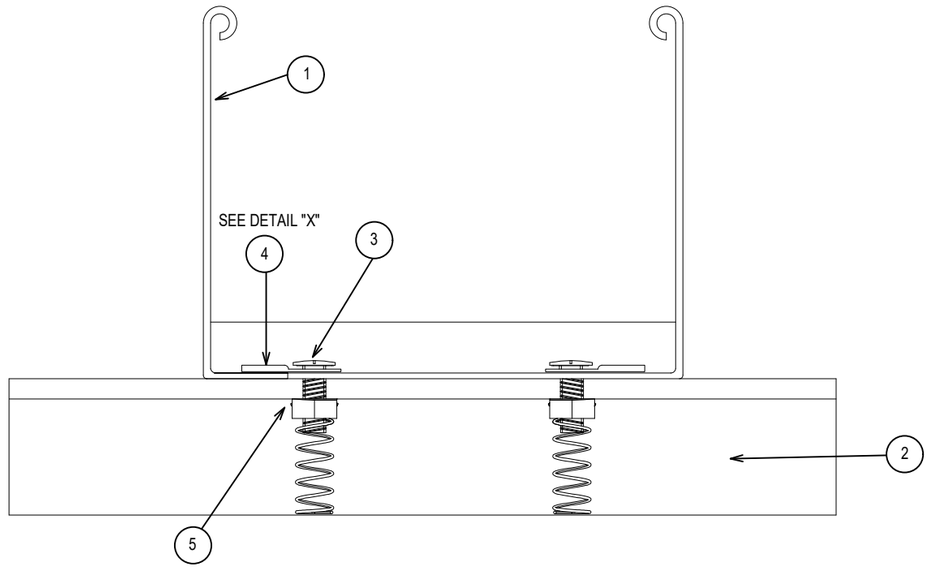
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

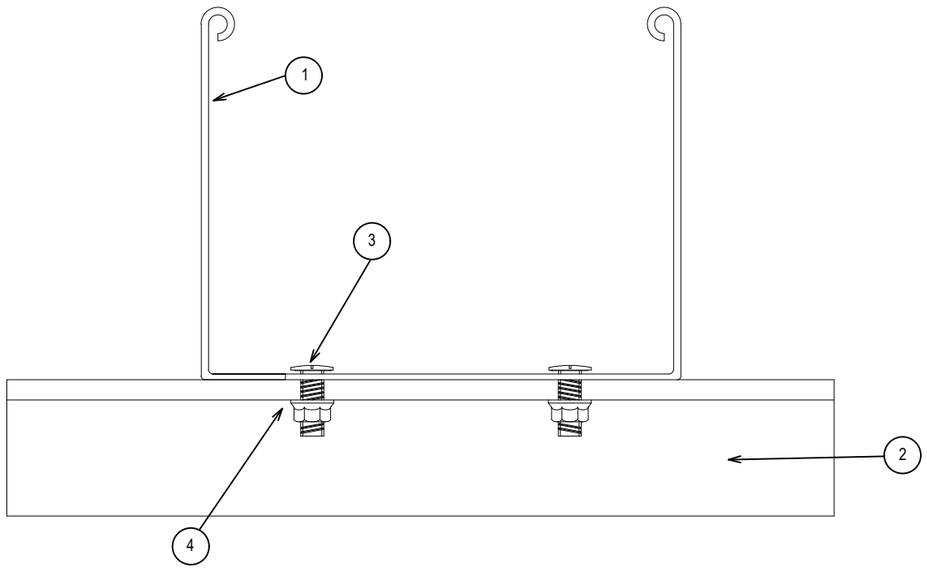
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

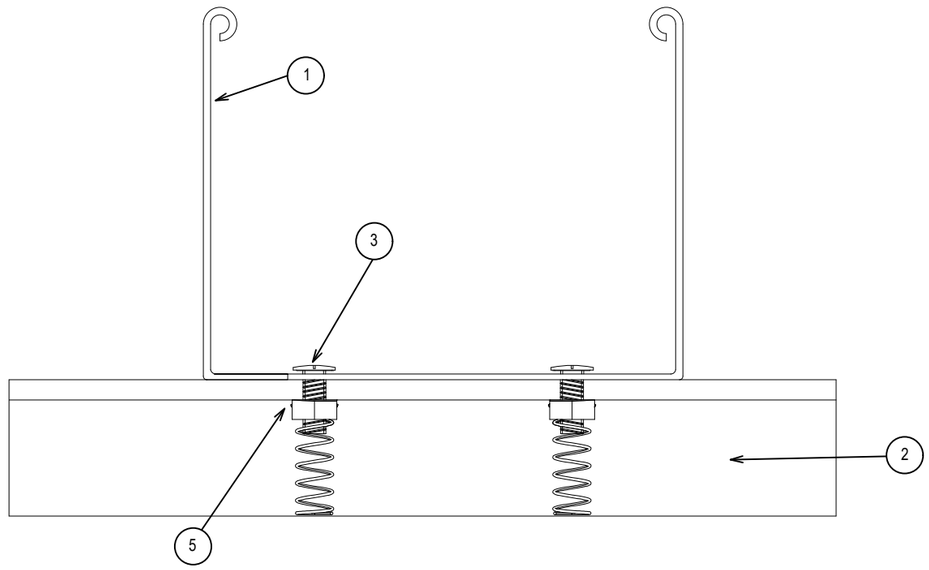


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

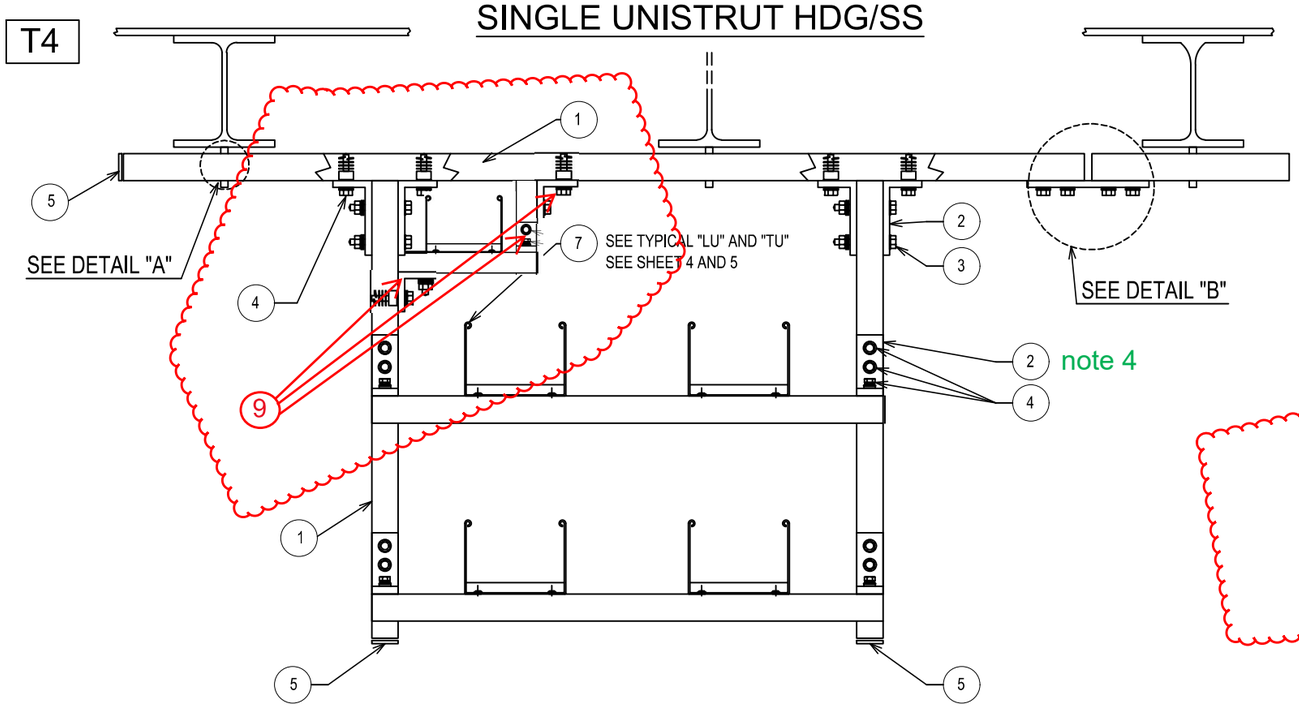
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

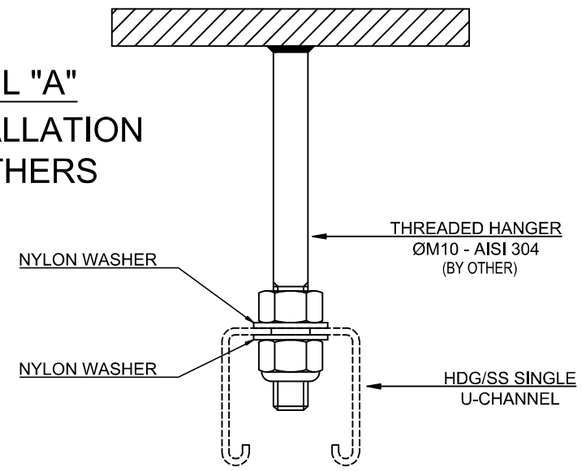
T4

SINGLE UNISTRUT HDG/SS

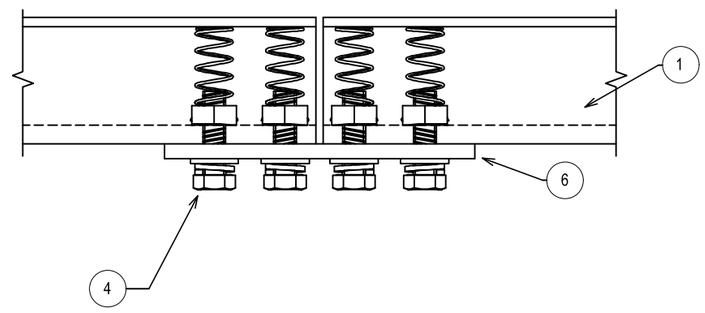


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

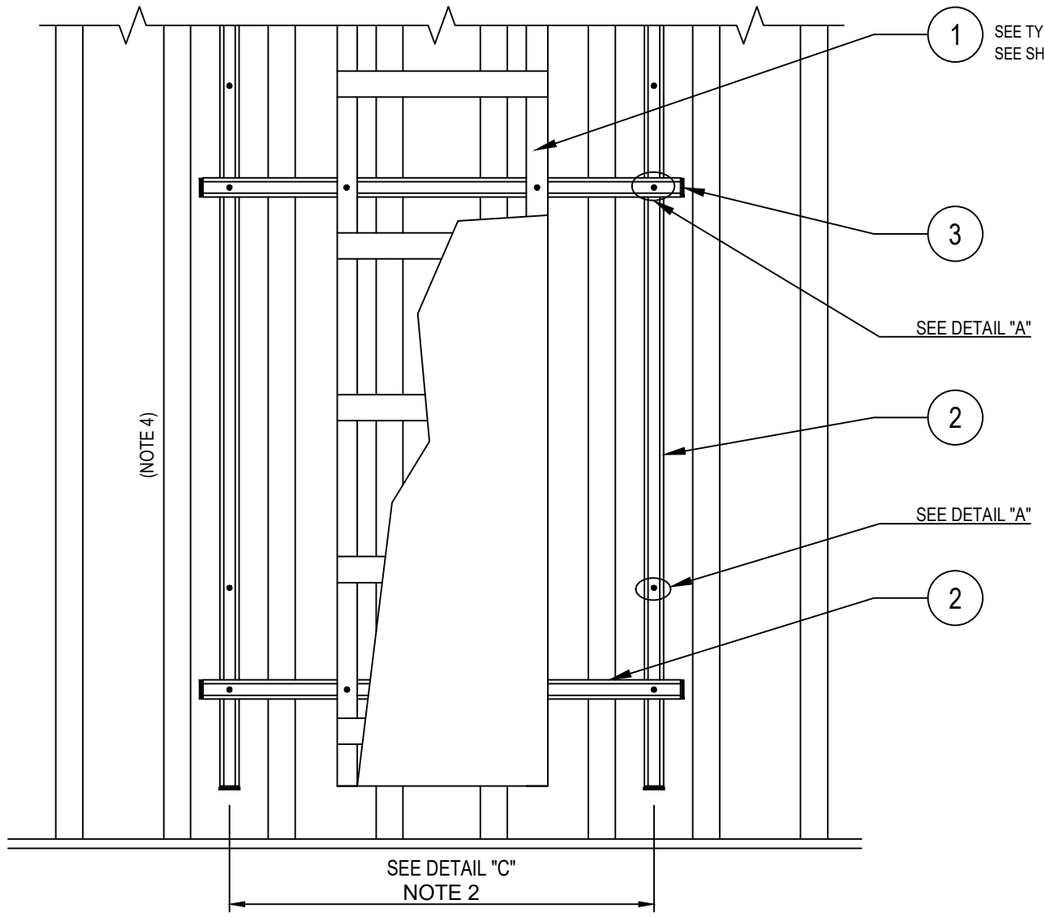
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

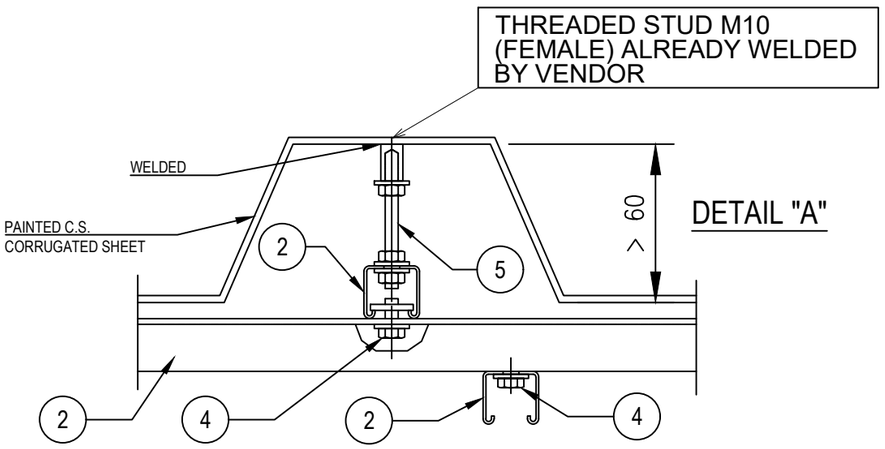
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

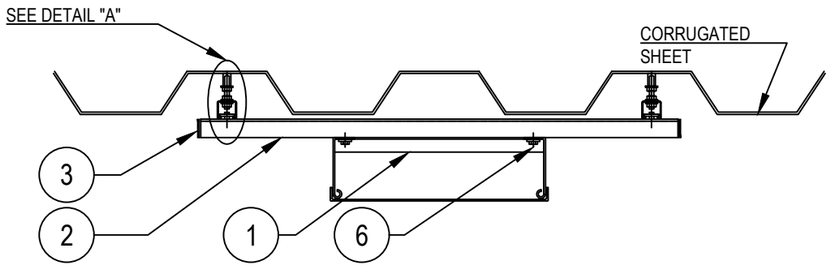
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_LD_ELE_HV	: Cable Tray Lower Deck - Electrical (High Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002264		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-01-04	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T10:59:26.805Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T12:28:48.933Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01

L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

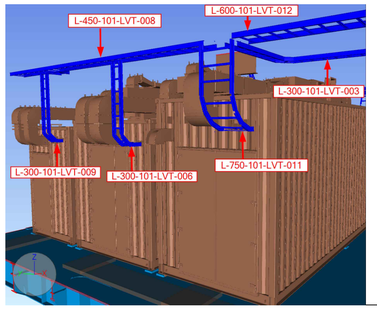
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W300 X H100mm
+28.410m
+5.100m T.O.S

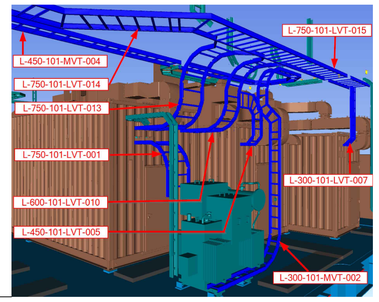
L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

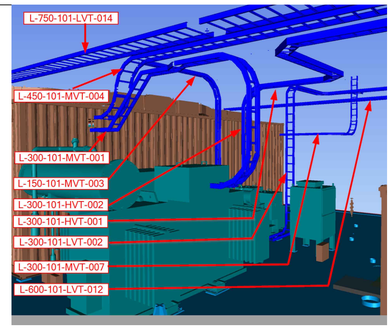
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

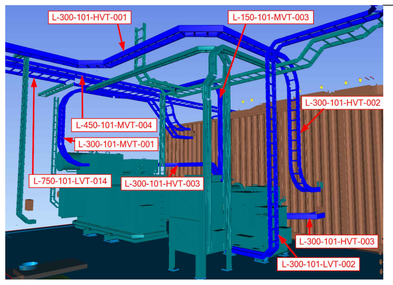
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

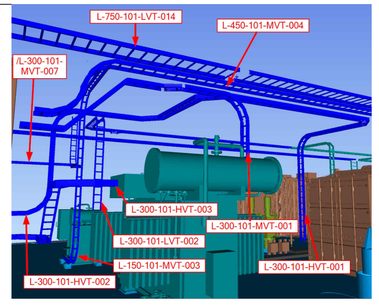
L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S

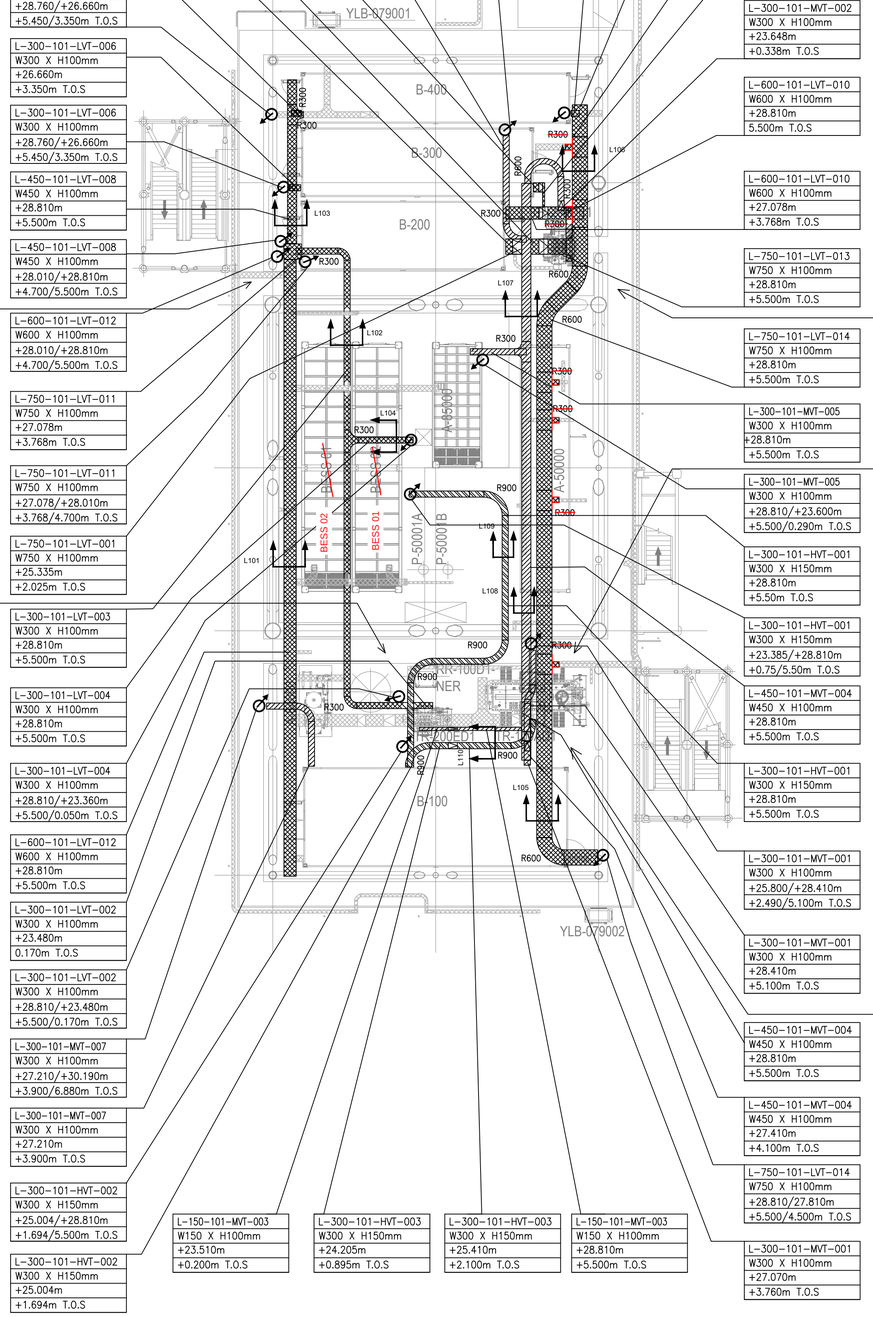








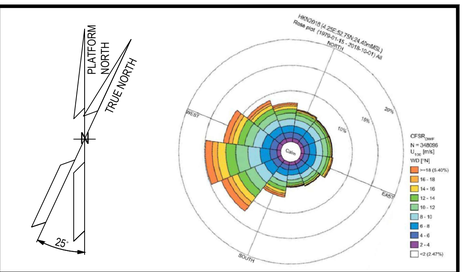




PRIMARY CABLE ROUTING

PLAN ON LOWER DECK

EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

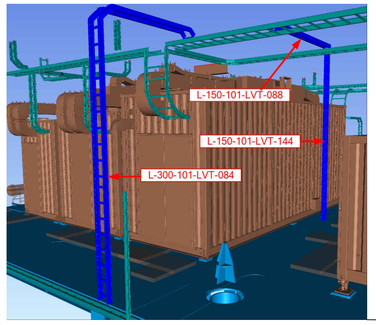
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

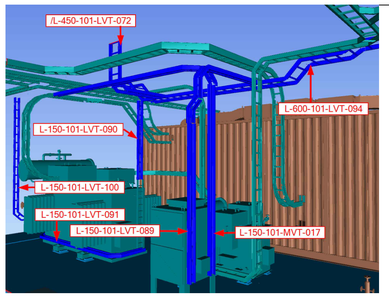
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

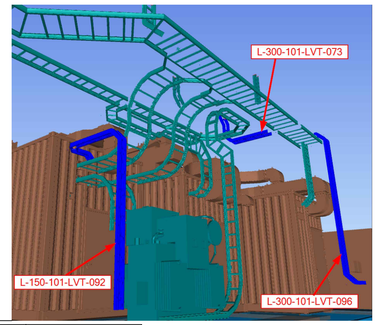
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W150 X H100mm
+22.598m
−0.712m T.O.S

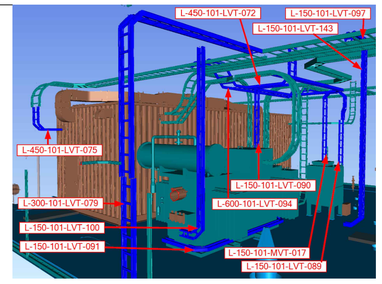
L-150-101-MVT-017
W150 X H100mm
+28.410m
+5.100m T.O.S

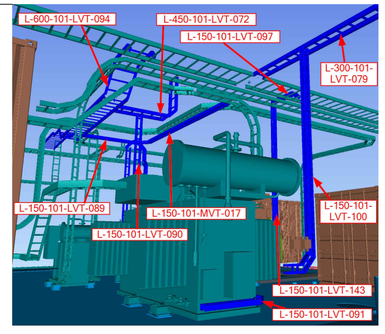
L-150-101-LVT-085
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

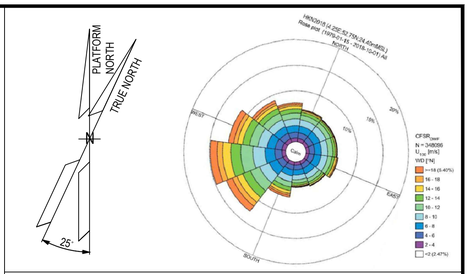
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S







SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

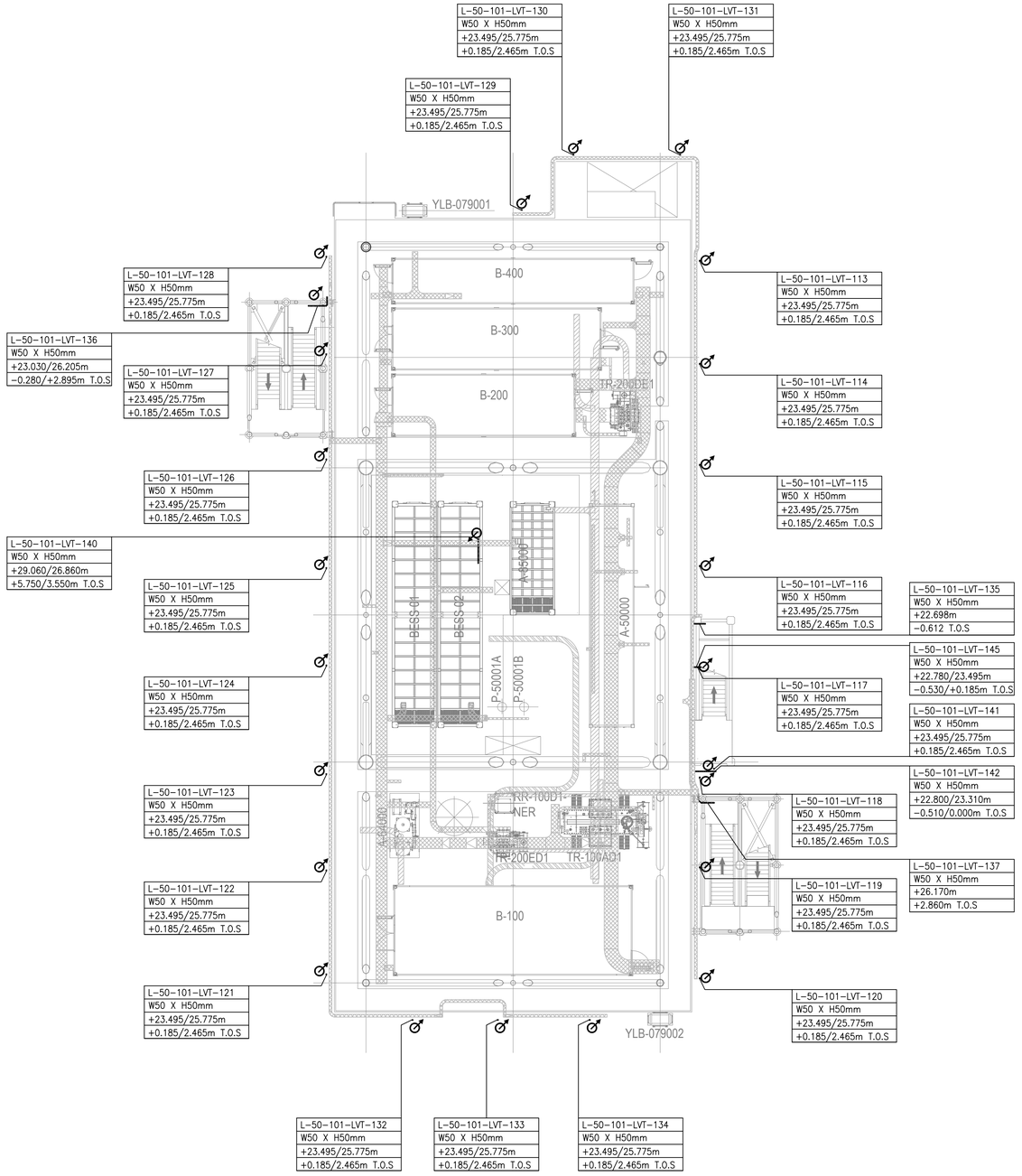
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

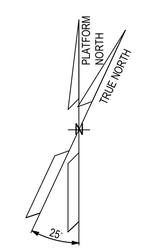
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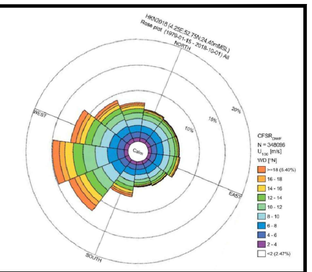
DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

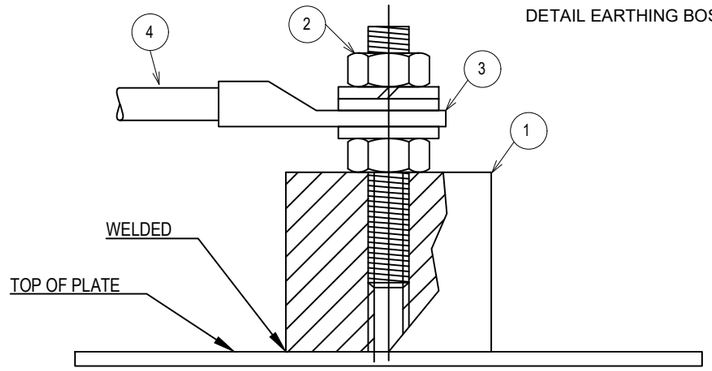
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

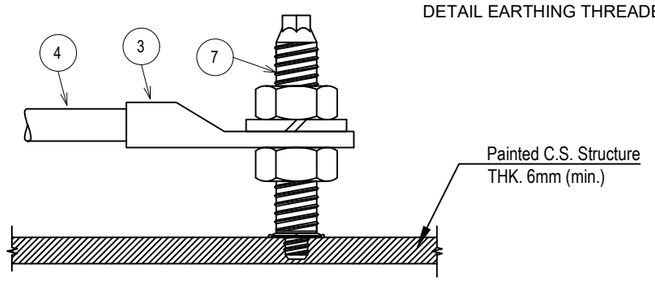


E11D

SEE NOTE 6

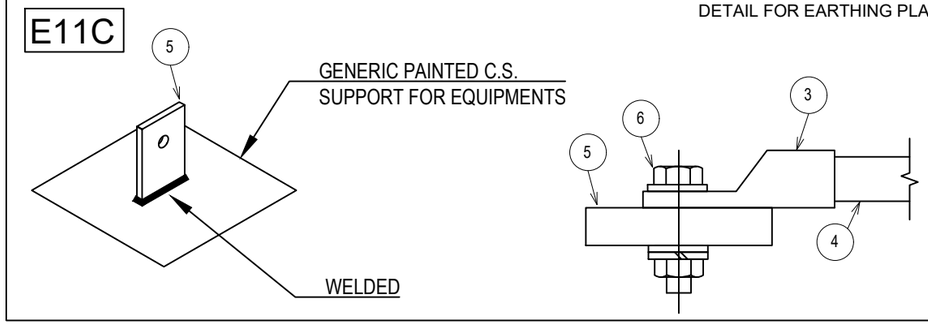
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

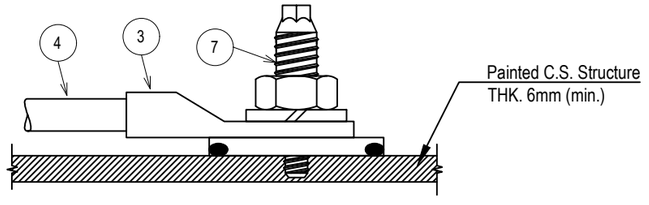


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

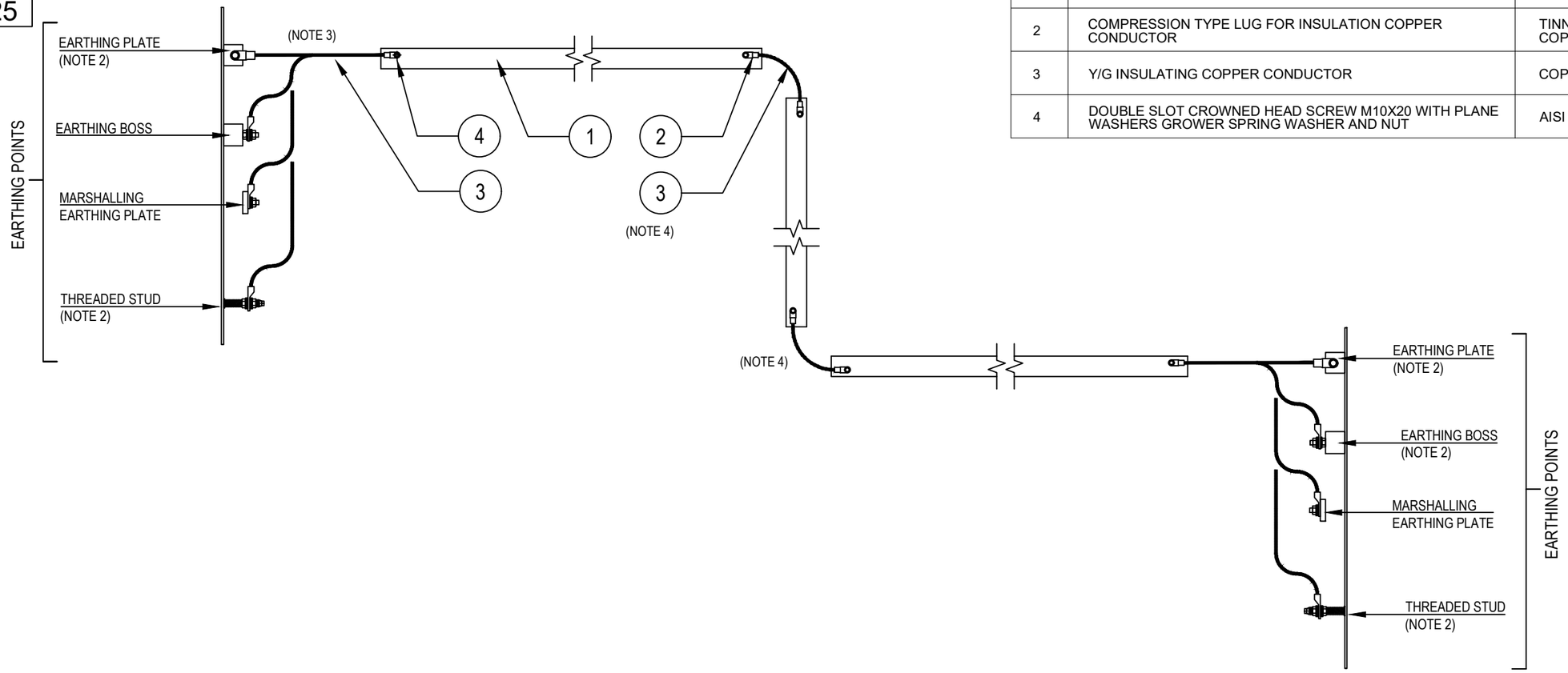
SHEET 003

REV. 02

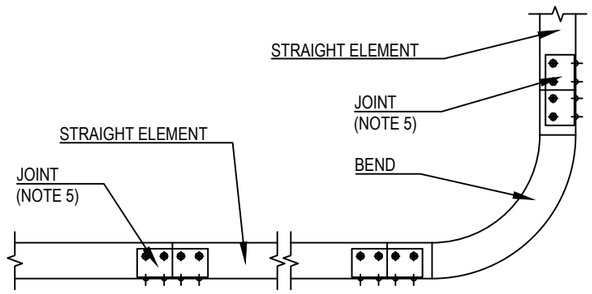
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

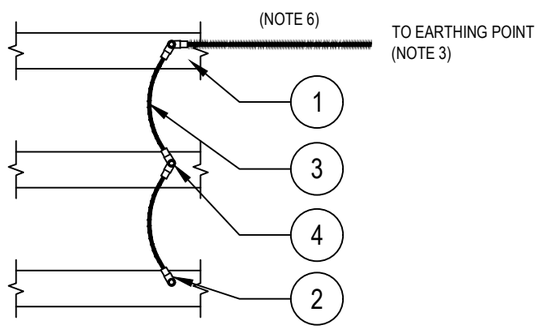
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

ROSETTI MARINO

F.to UNI A3: 420mmx297mm

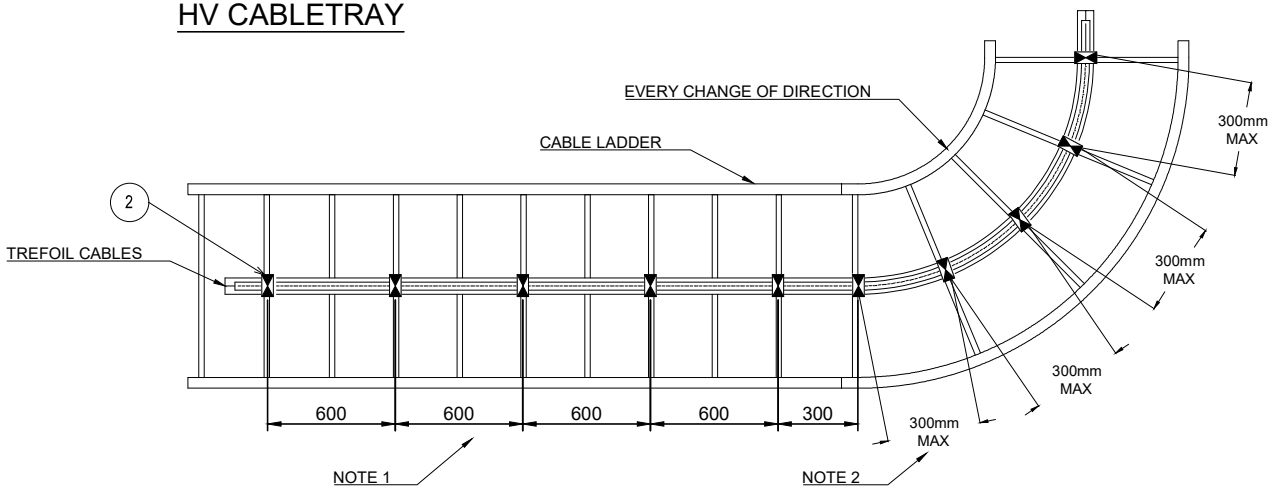
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

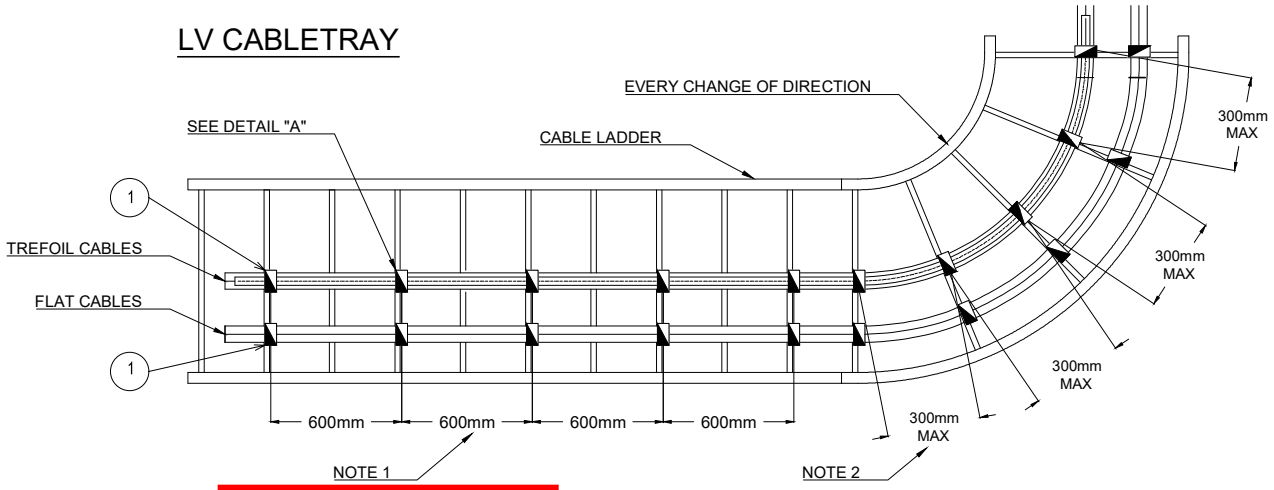
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

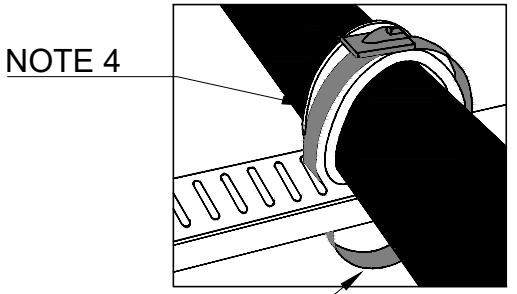
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_B	28/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20092	010	02

CROSSWIND

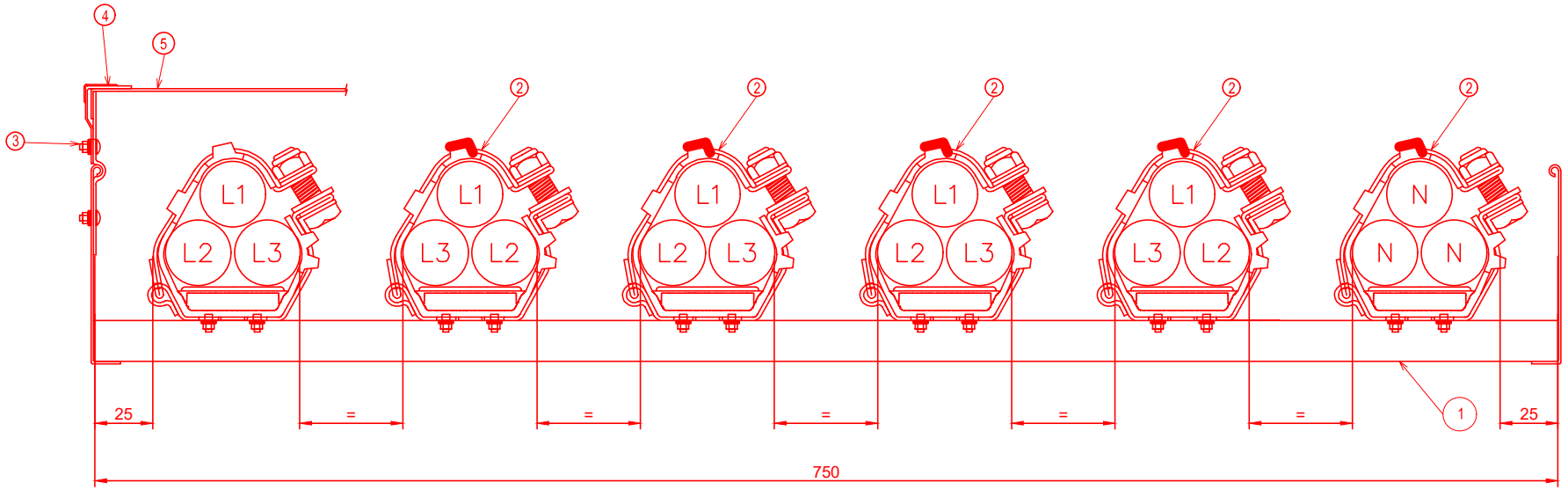
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_B	28/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

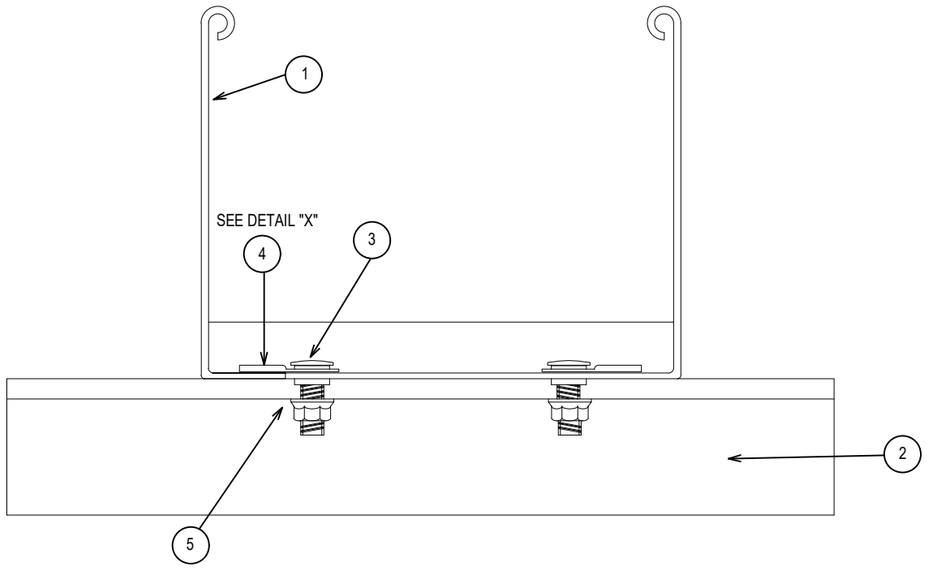
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

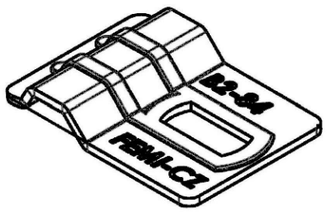
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

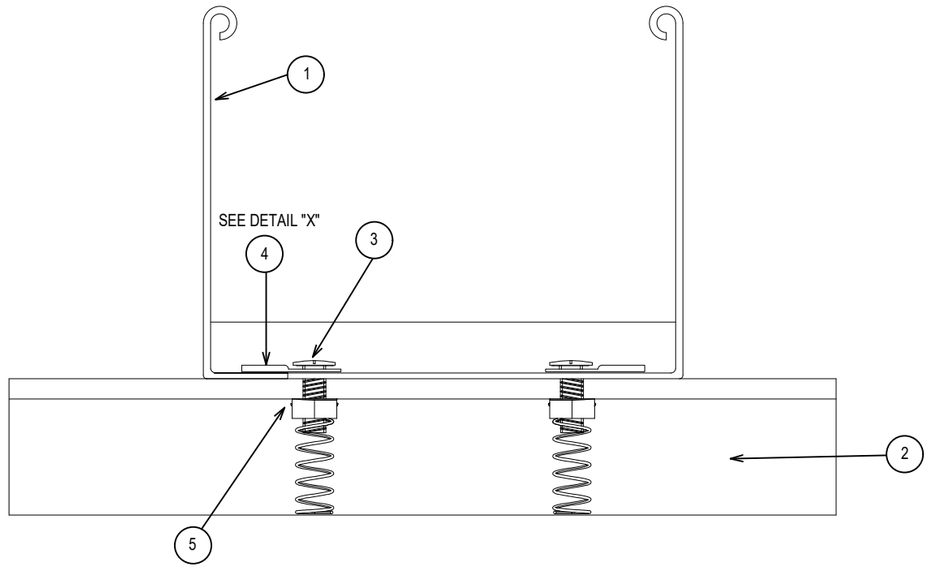
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

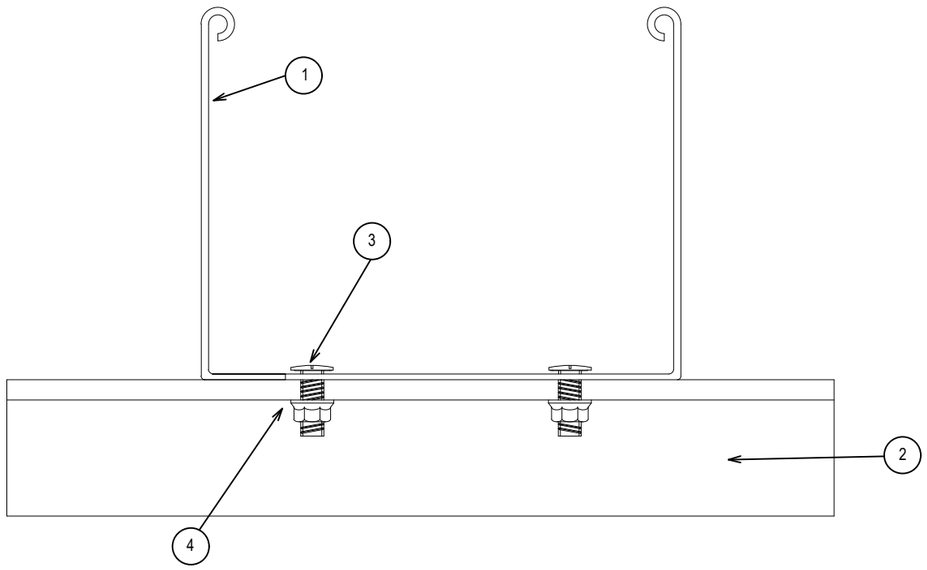
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

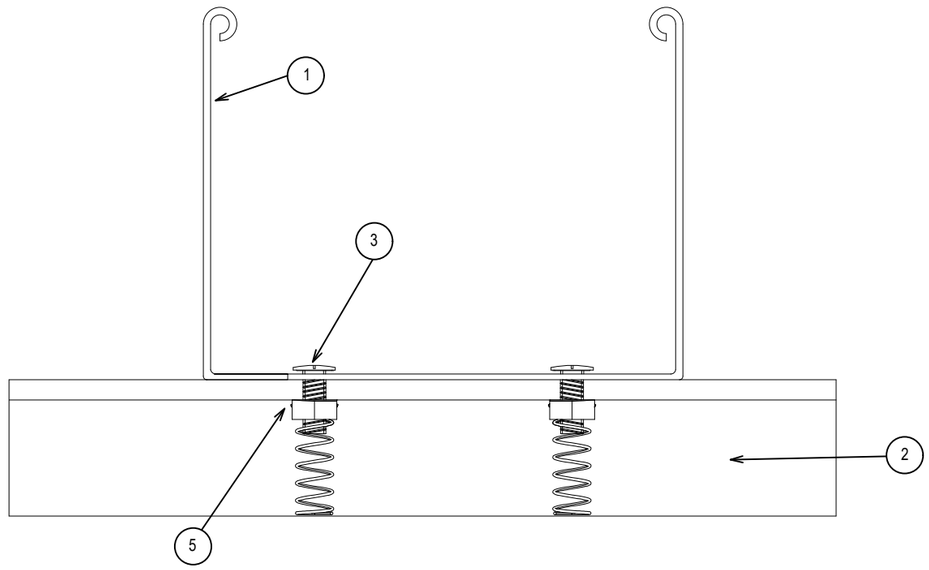


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

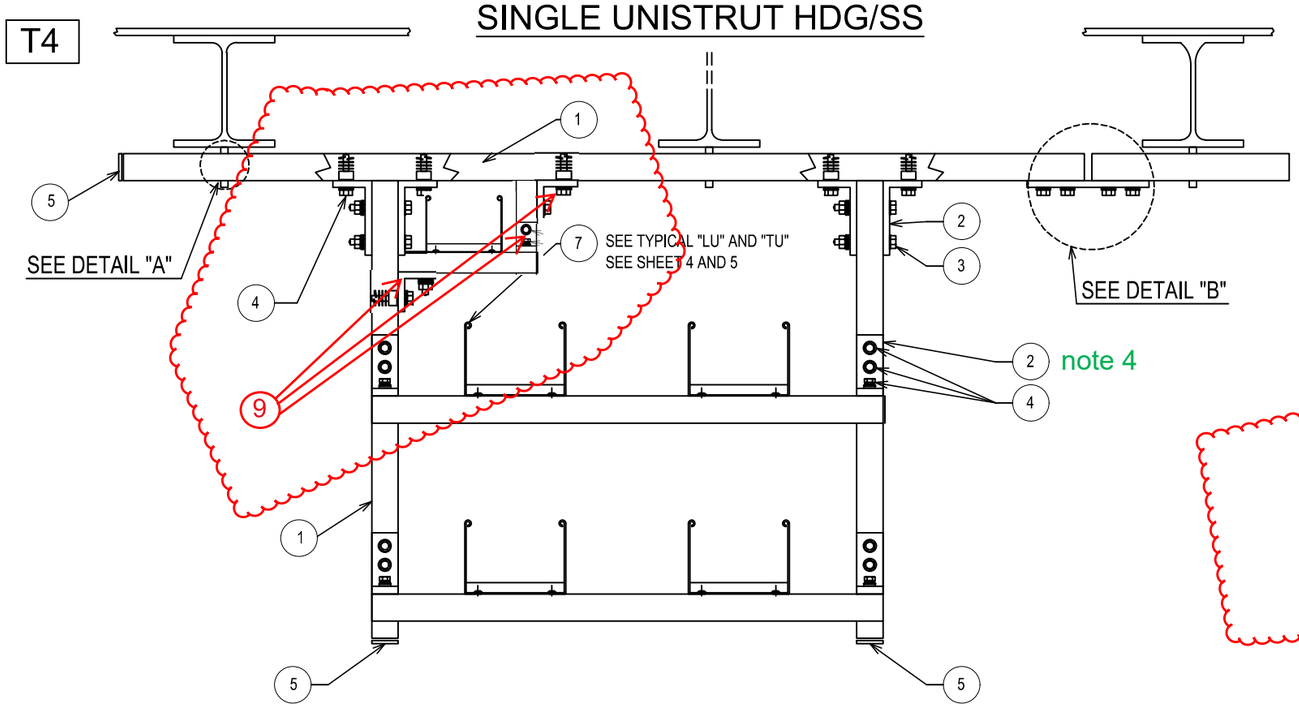
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

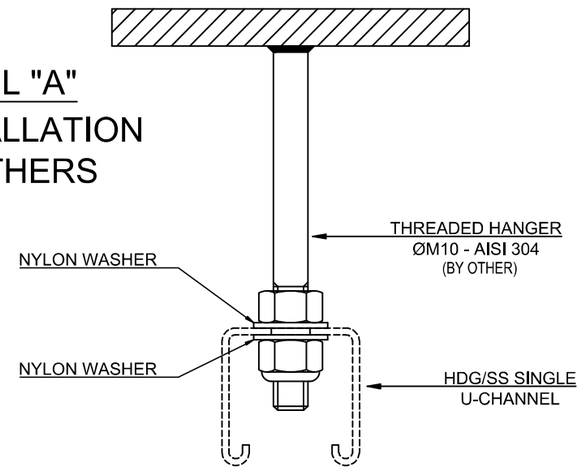
T4

SINGLE UNISTRUT HDG/SS

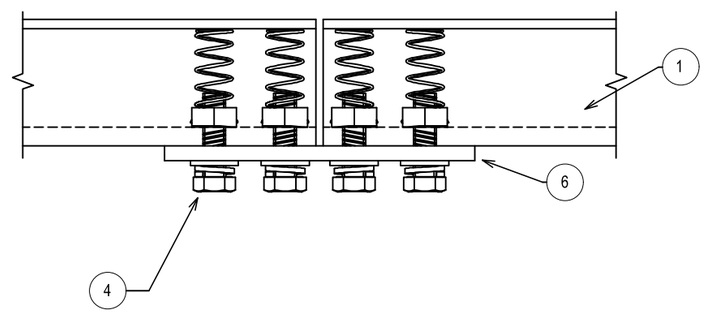


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

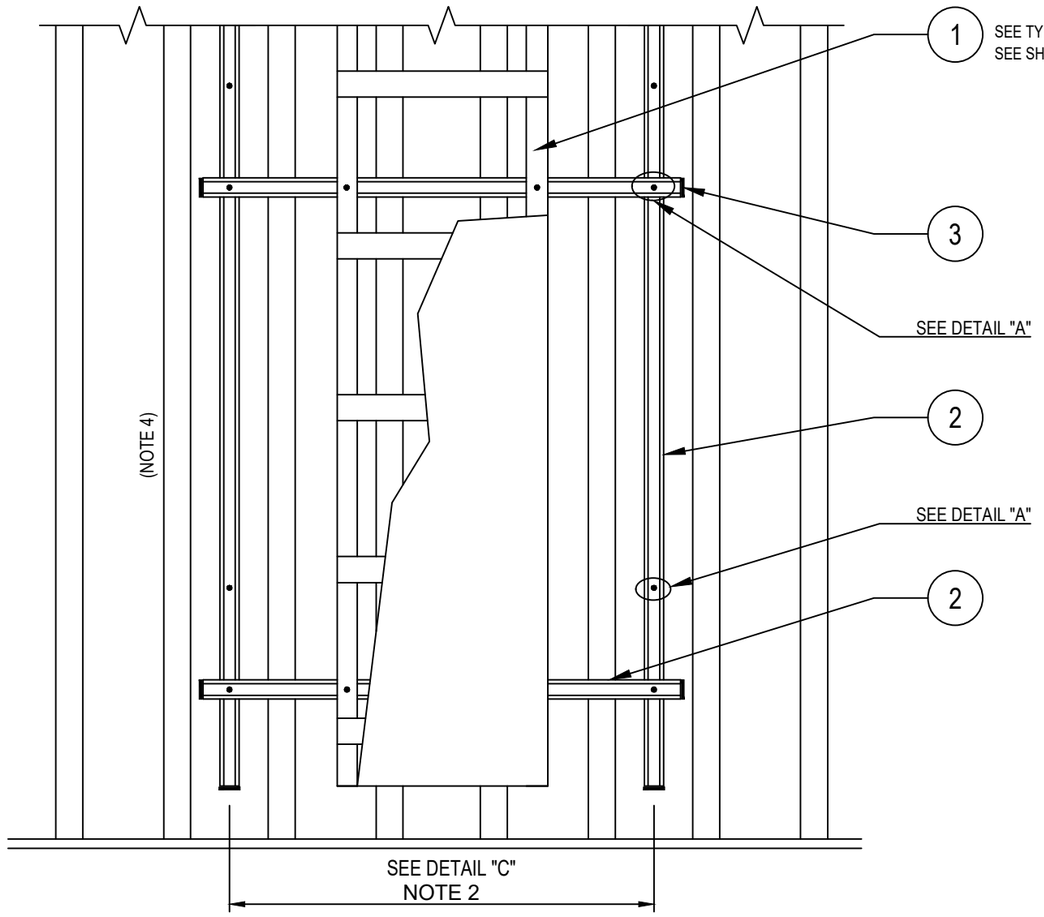
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

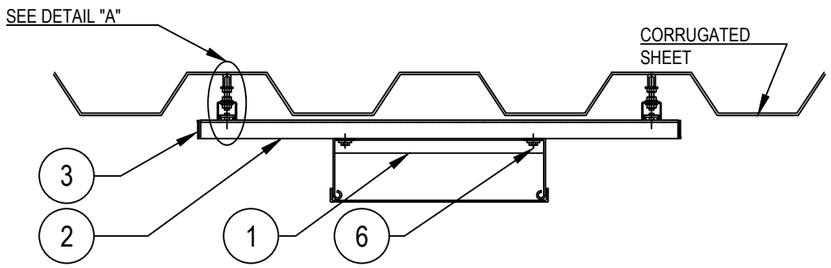
F.to UNI A3: 420mmx297mm

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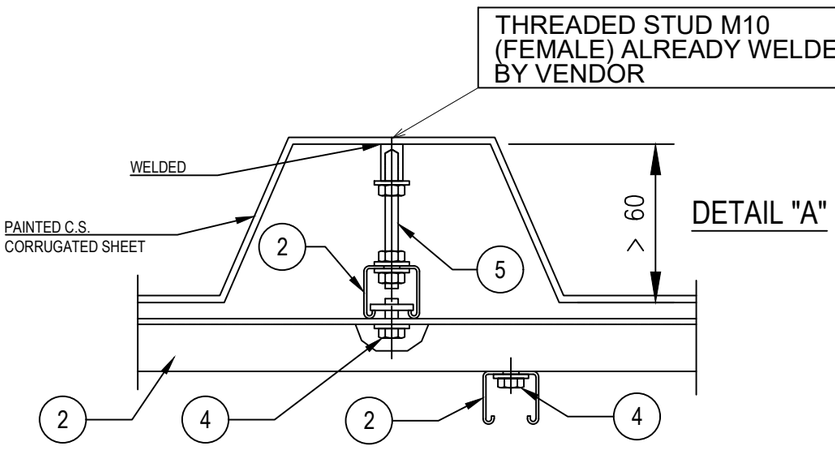
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	014	02

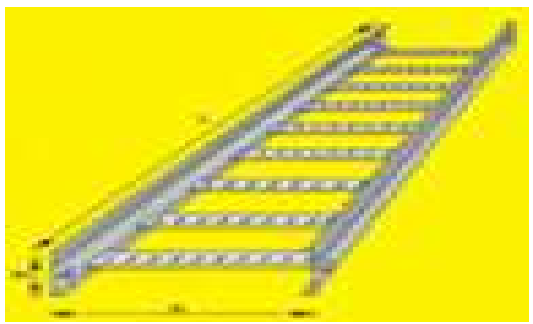
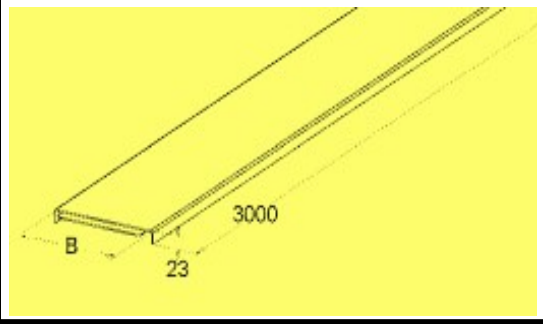
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
38		
39		
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42		
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47 **NOTES:**

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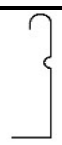
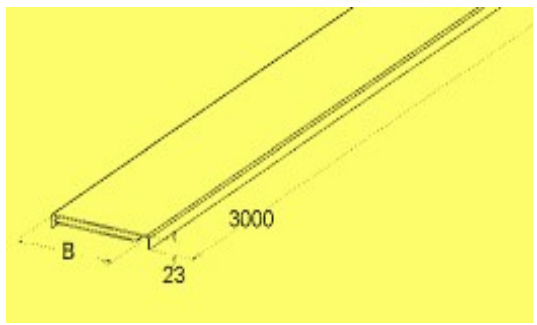
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

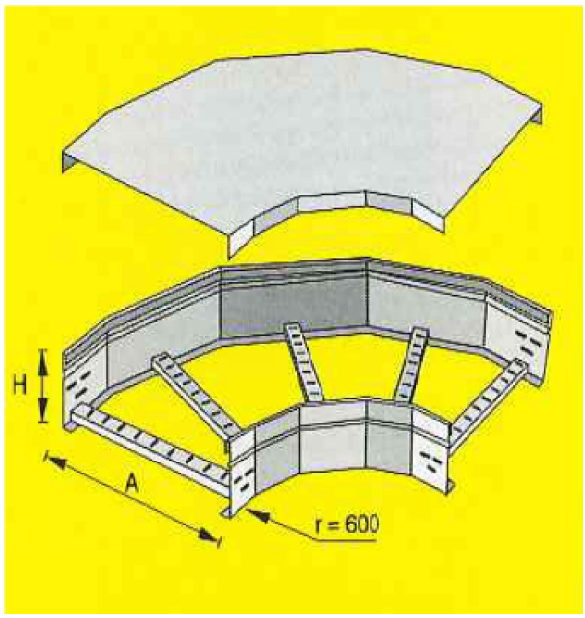
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



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16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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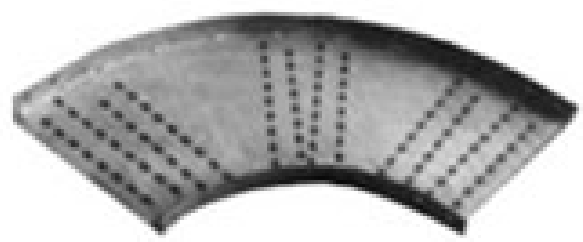
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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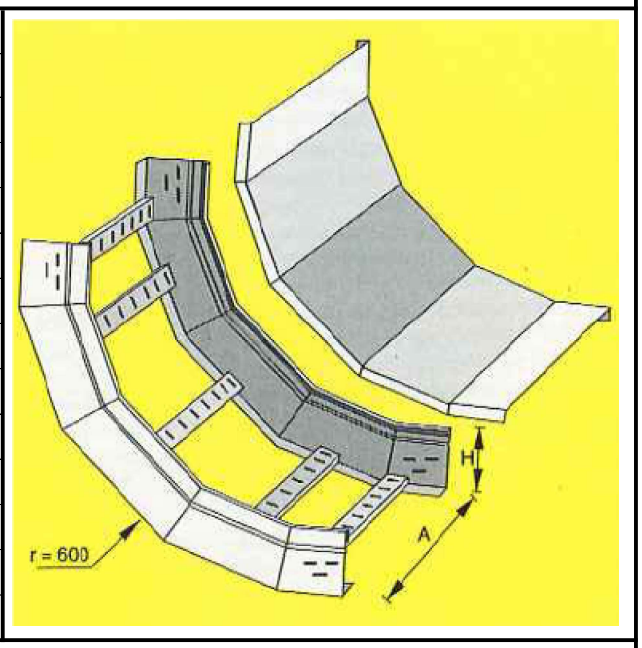
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



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16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
44		
45		
46		
47		
48		
49		

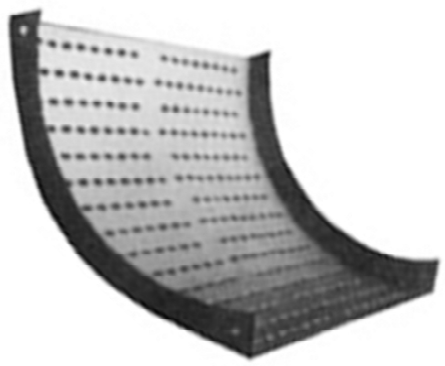
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
44		
45		
46		
47		
48		
49		

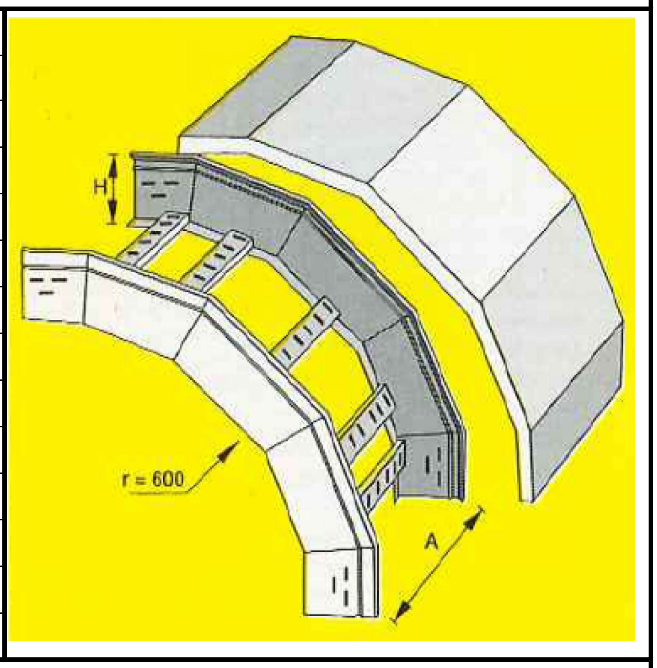
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		
51	**NOTES:**	
52		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
46		
47		
48		
49		
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51 **NOTES:**

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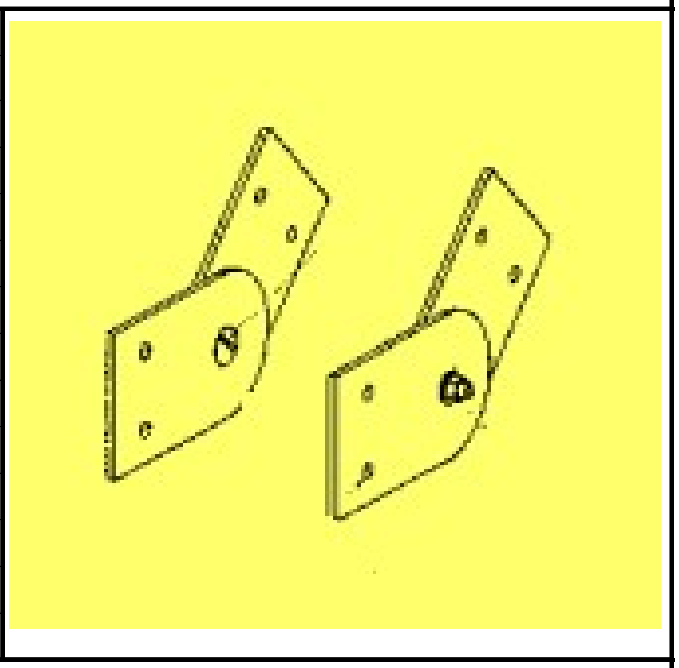
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

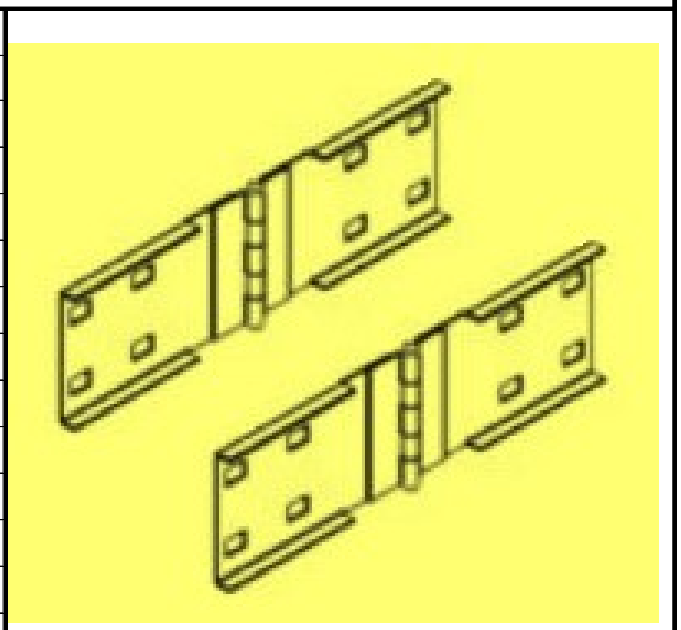
	CODE	REMARKS
28		
29		
30		
31		
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41		

NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

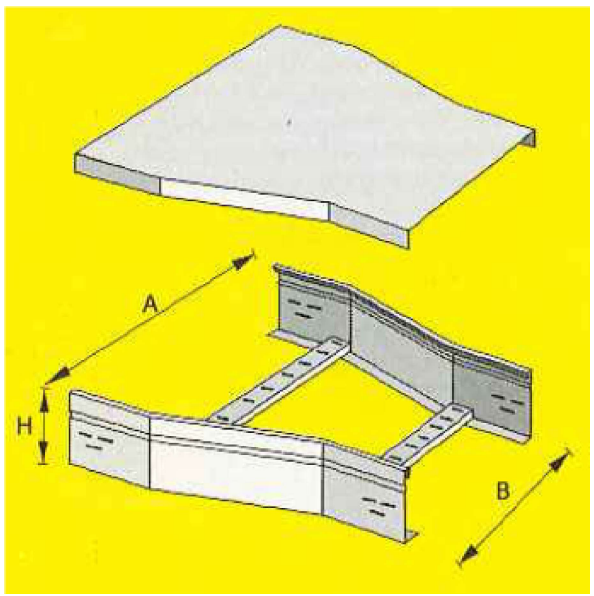
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
34		
35		
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45	**NOTES:**	
46		
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55		

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
38		
39		
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41		
42		
43		
44		

45 **NOTES:**

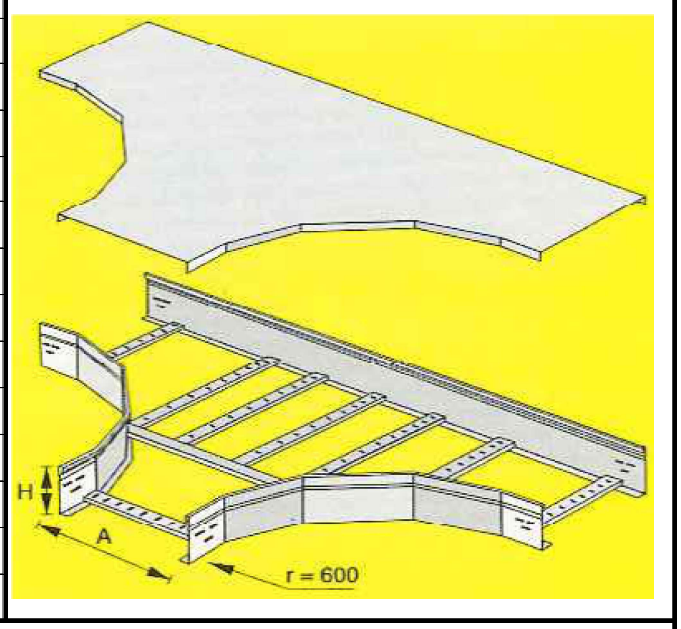
46
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
38		
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50 **NOTES:**

51
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ITEM	Tag	CABLE_TRAY_LD_ELE_HV	: Cable Tray Lower Deck - Electrical (High Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002265		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B Cable Tray/Ladder After pulling

AFTER PULLING

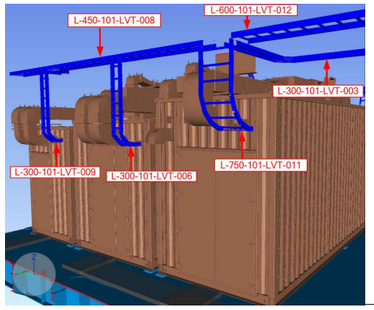
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	Note
6	Check lids intallation (if any) against drawings	PL
7	If required produce Red Line Mark Up for "AS BUILT"	

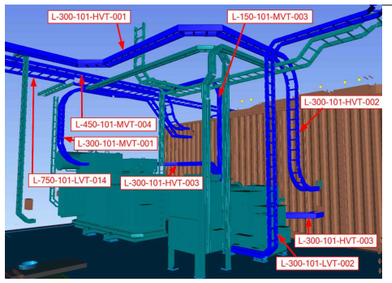
Comments: Note 5: Refer to PL n°C30004139

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-03-01	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:42:42.116Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-03-01T08:09:36.077Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

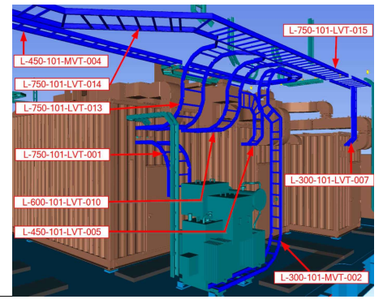
L-300-101-MVT-001
W300 X H100mm
+28.410m
+5.100m T.O.S

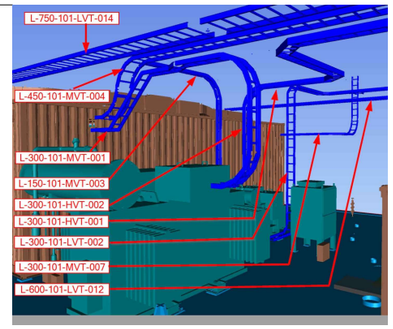
L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

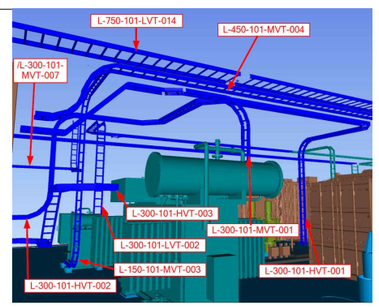
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

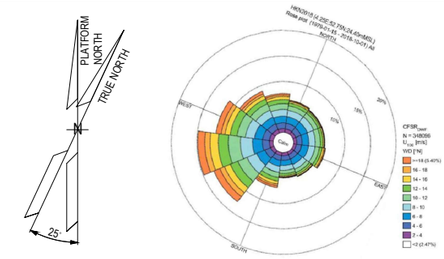
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S









NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS NOTED OTHERWISE.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

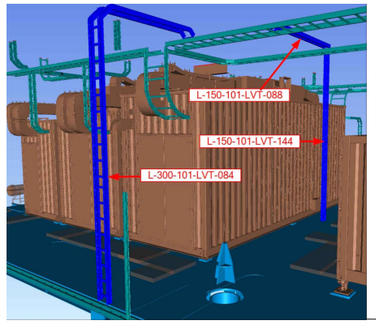
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

PRIMARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

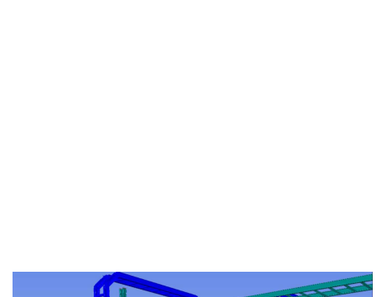
L-150-101-LVT-107
W150 X H100mm
+22.598m
−0.712m T.O.S

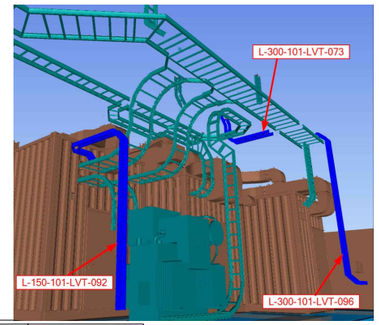
L-150-101-MVT-017
W150 X H100mm
+28.410m
+5.100m T.O.S

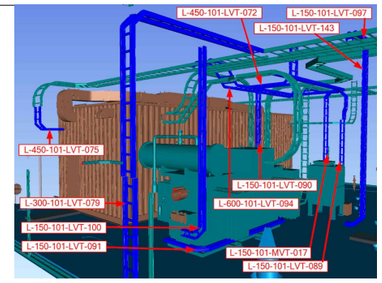
L-150-101-LVT-085
W150 X H100mm
+23.300m
−0.010m T.O.S

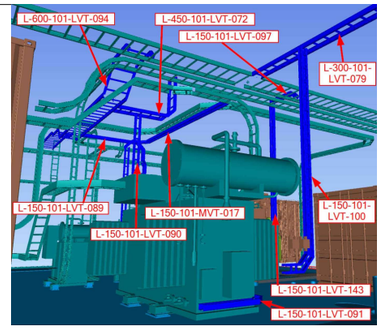
L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

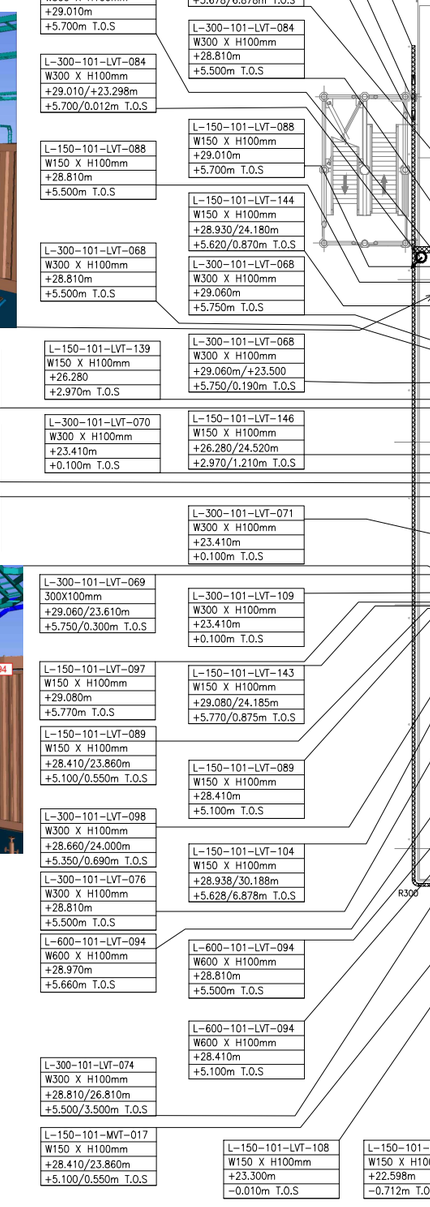
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S



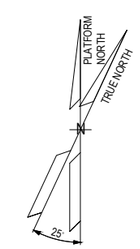


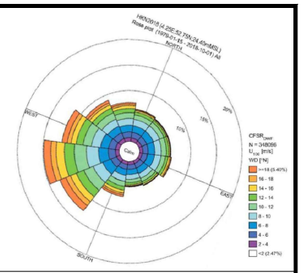






SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

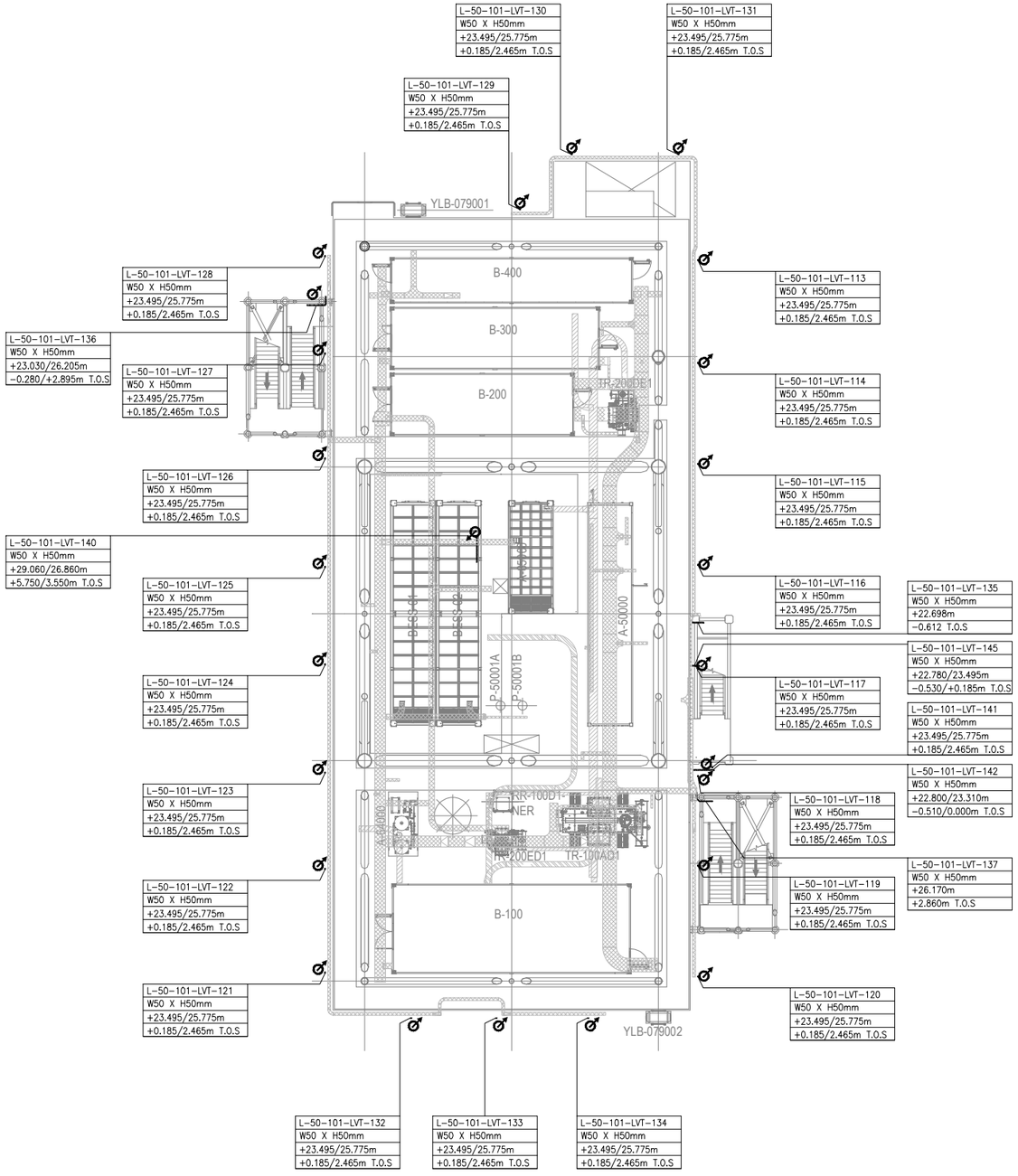
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

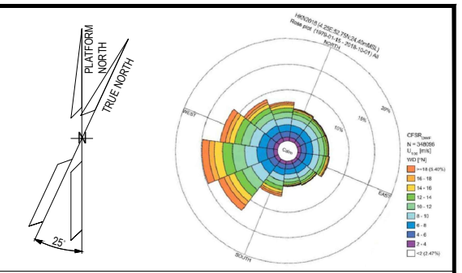
File Name : 123A90-DDL-EL-DL-20108

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

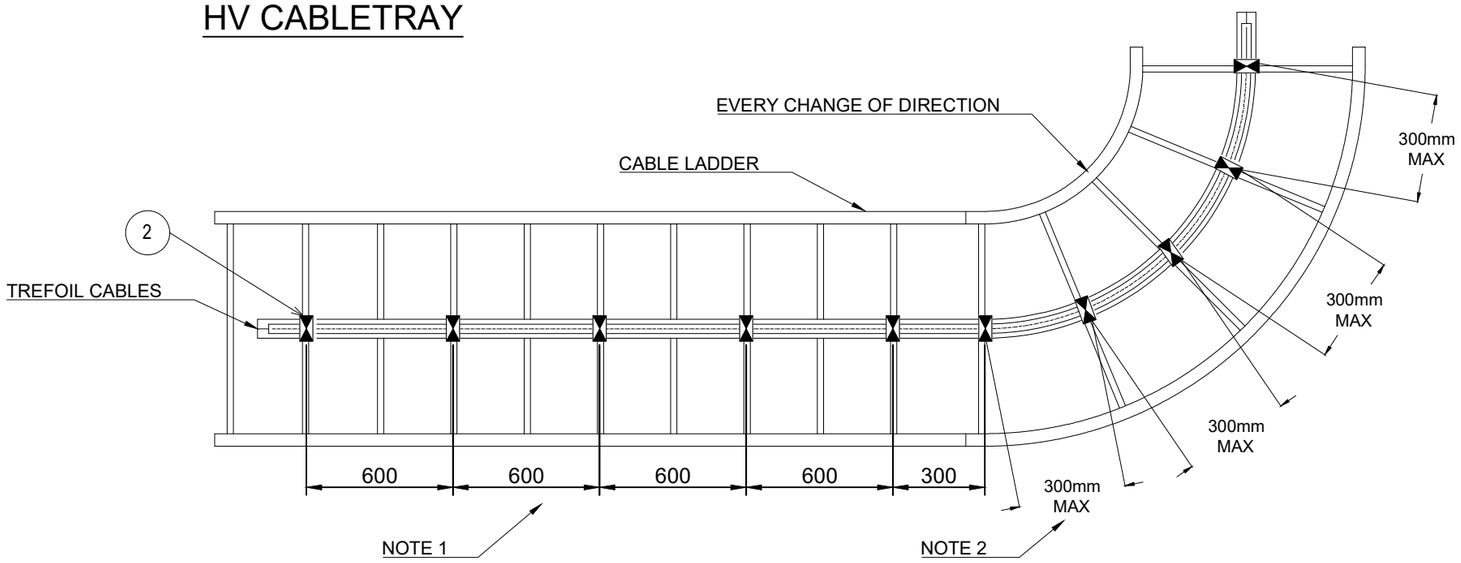
File Name : 123A90-DDL-EL-DL-20108

C06

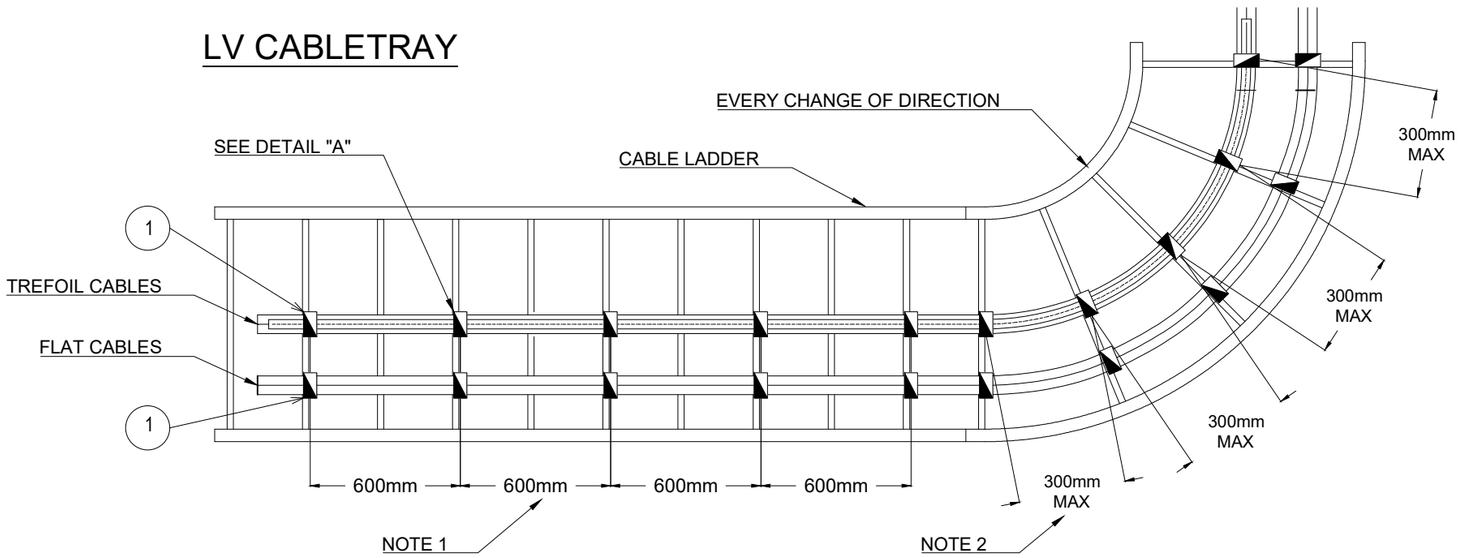
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

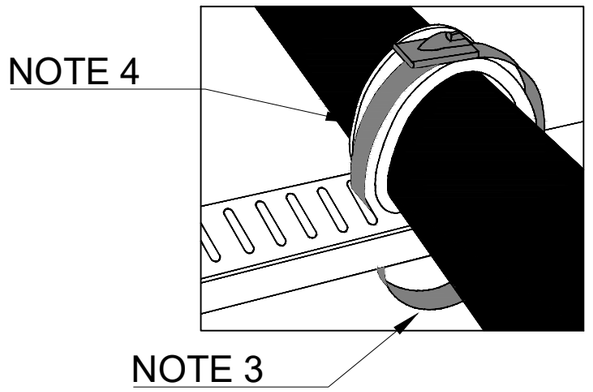
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

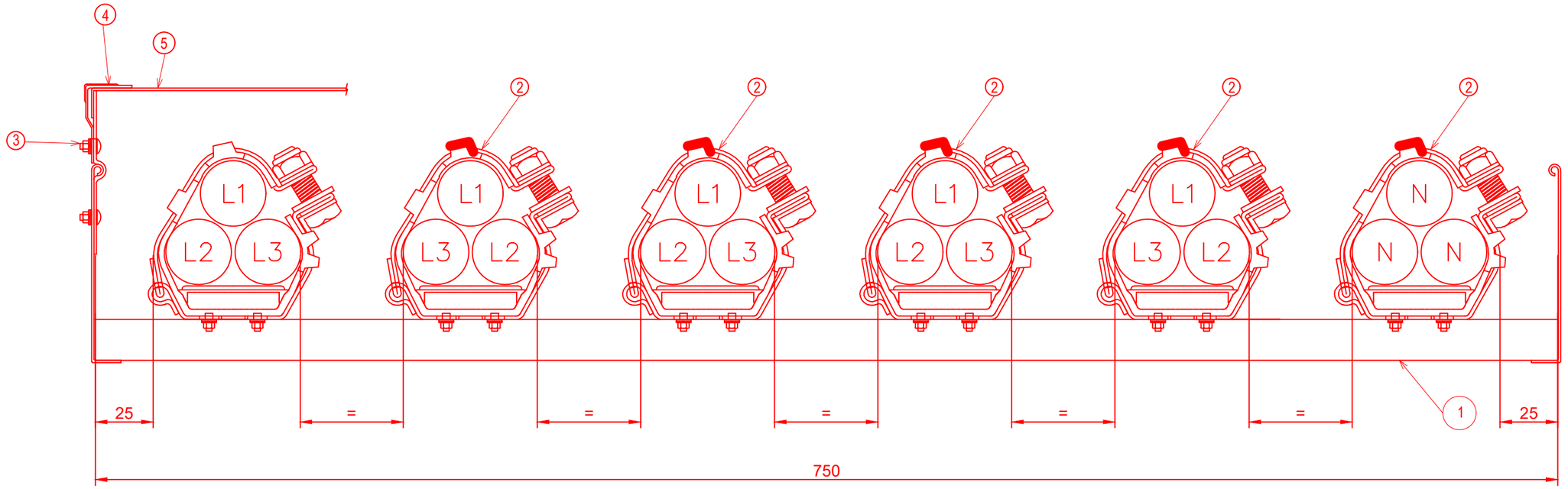
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

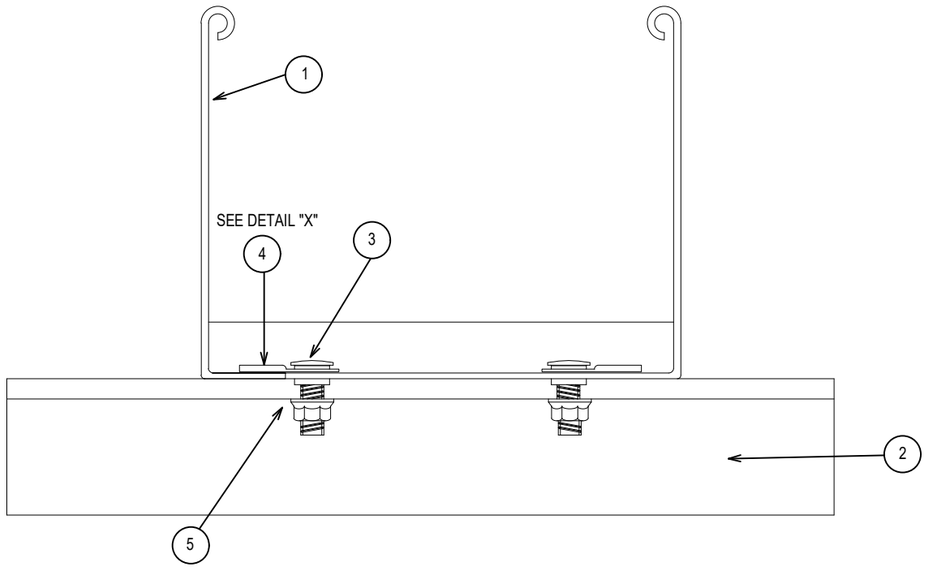
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

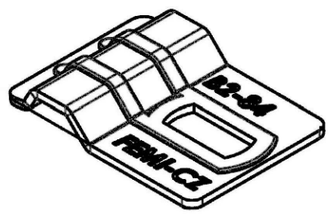
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

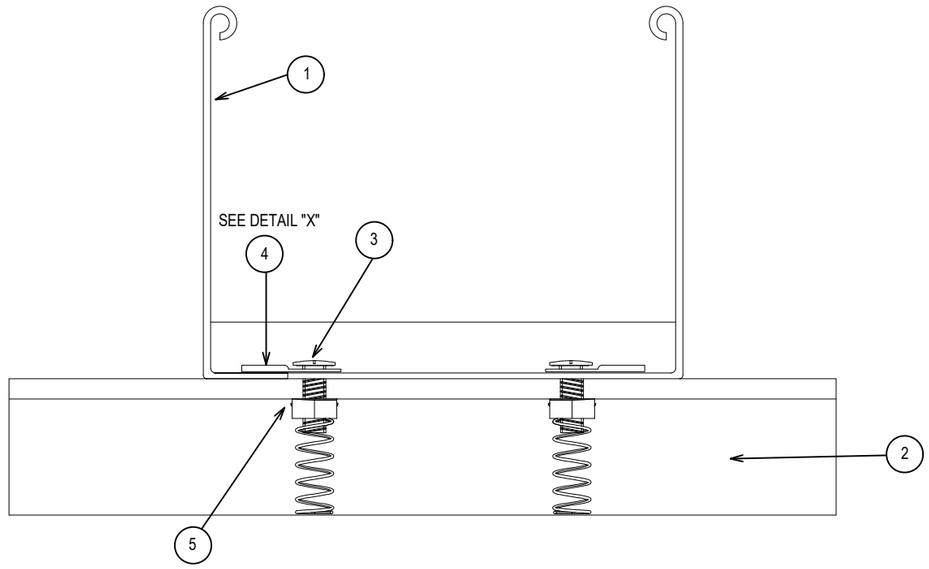
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

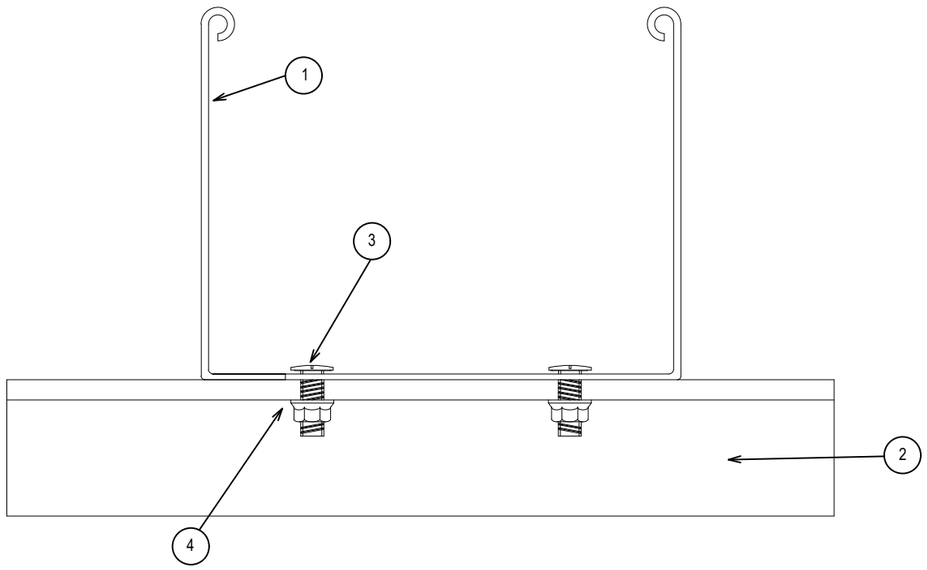
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

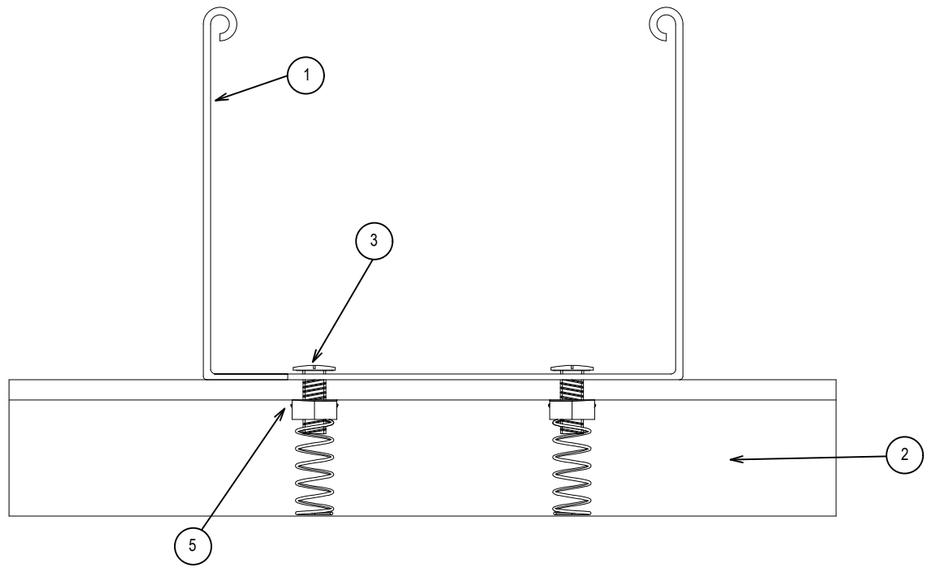


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

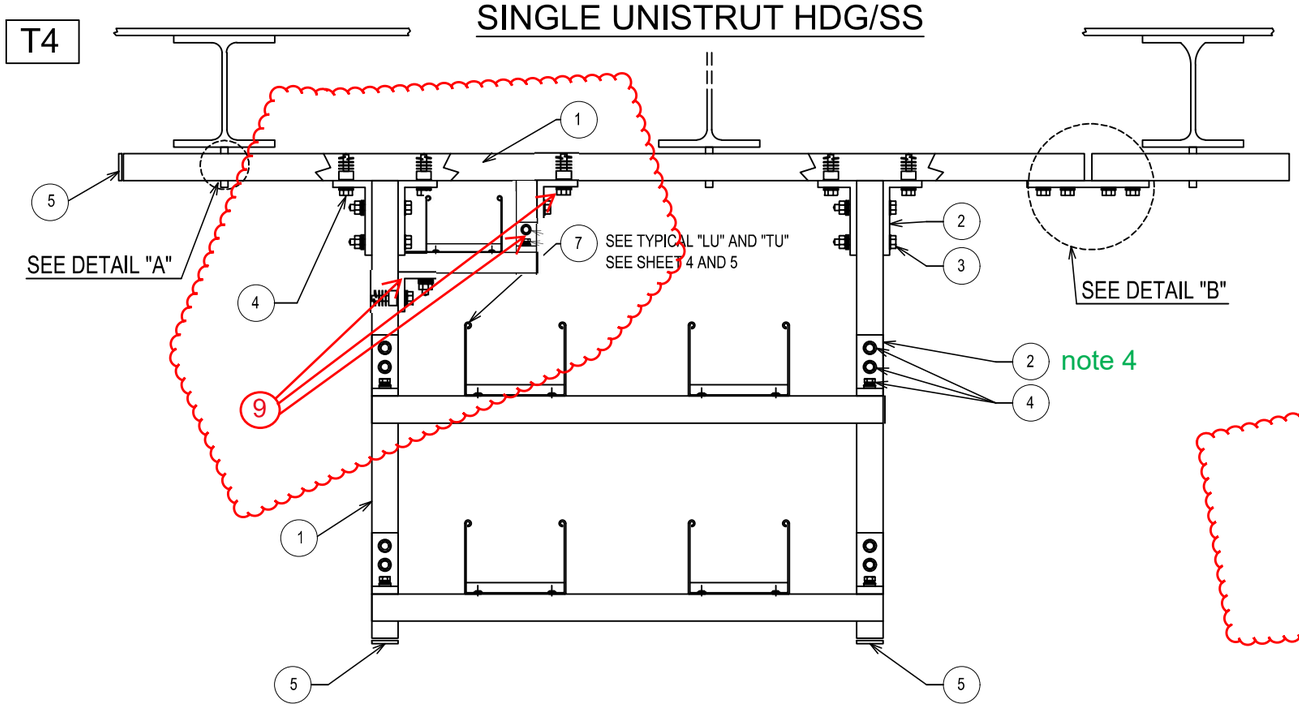
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

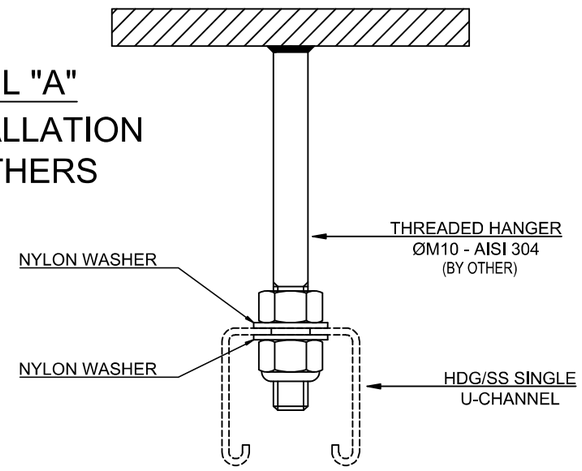
T4

SINGLE UNISTRUT HDG/SS

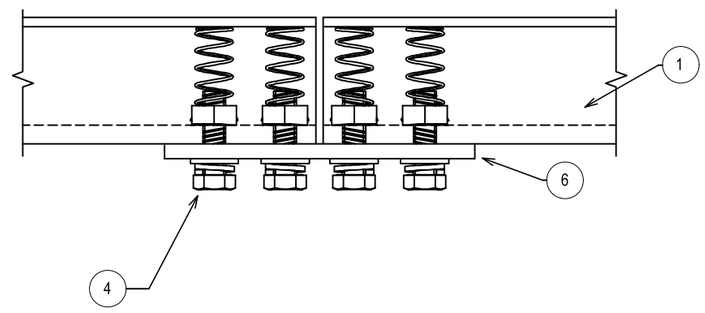


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

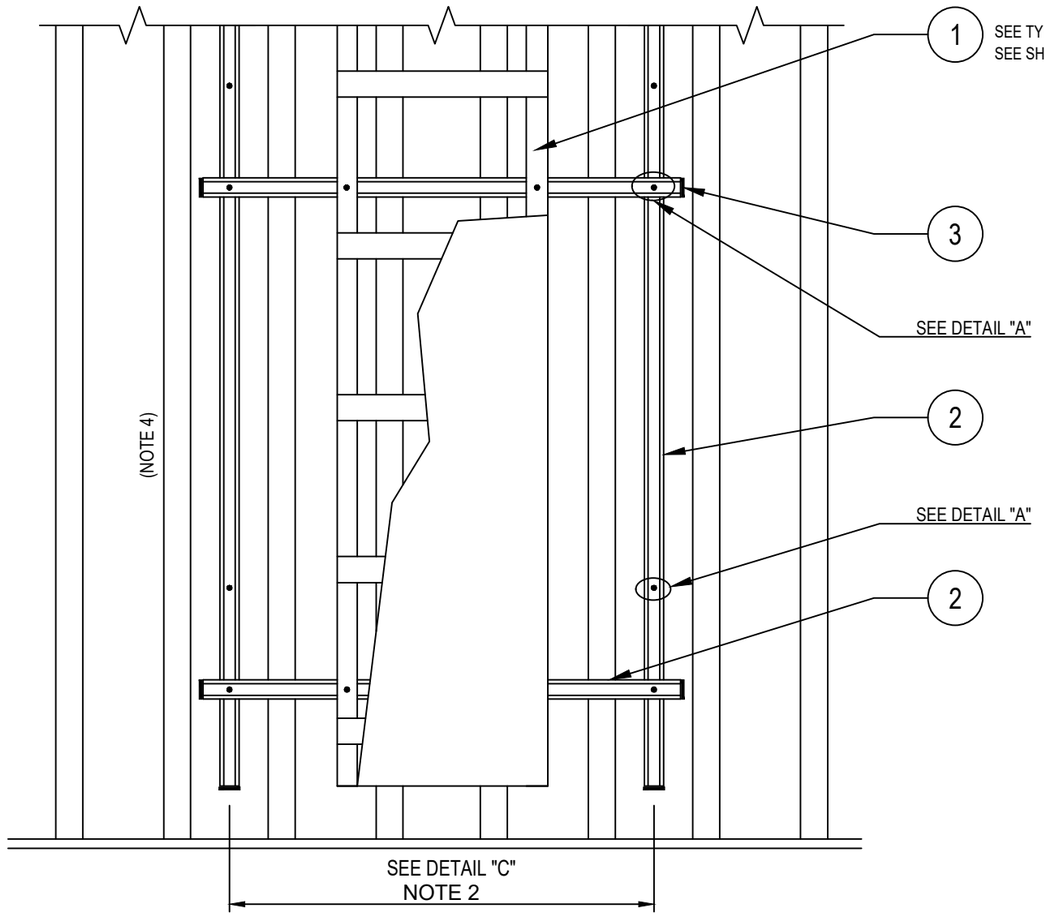
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

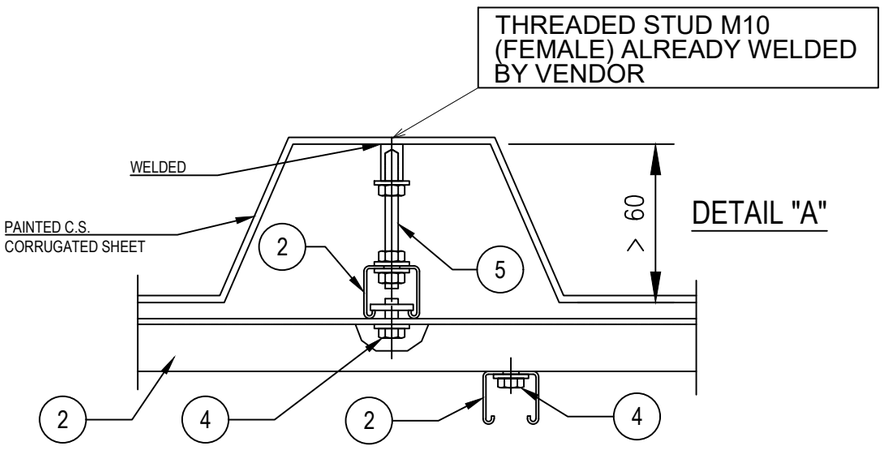
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

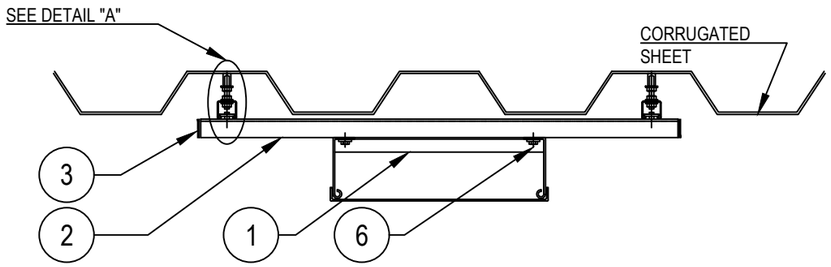
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

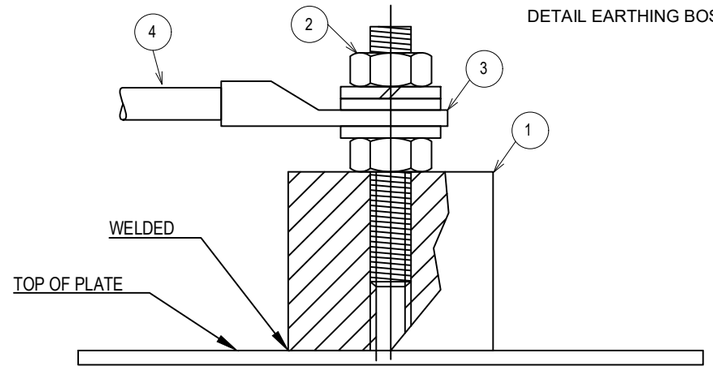
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

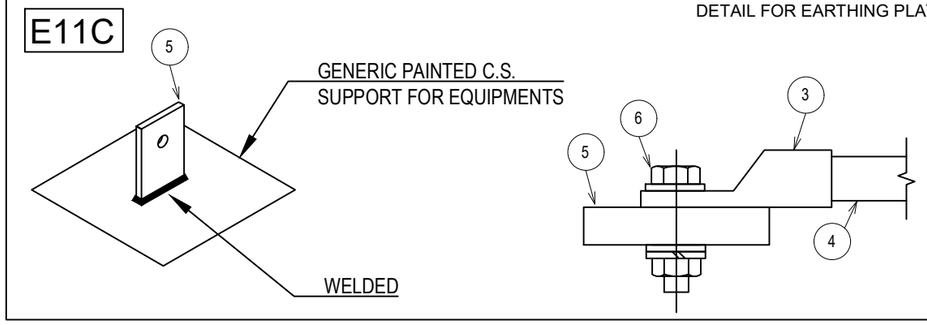
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

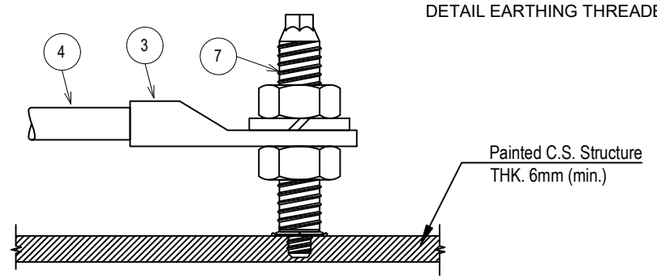


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

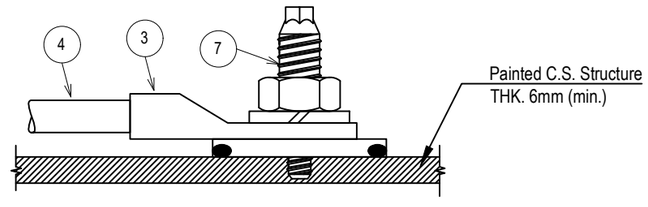


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

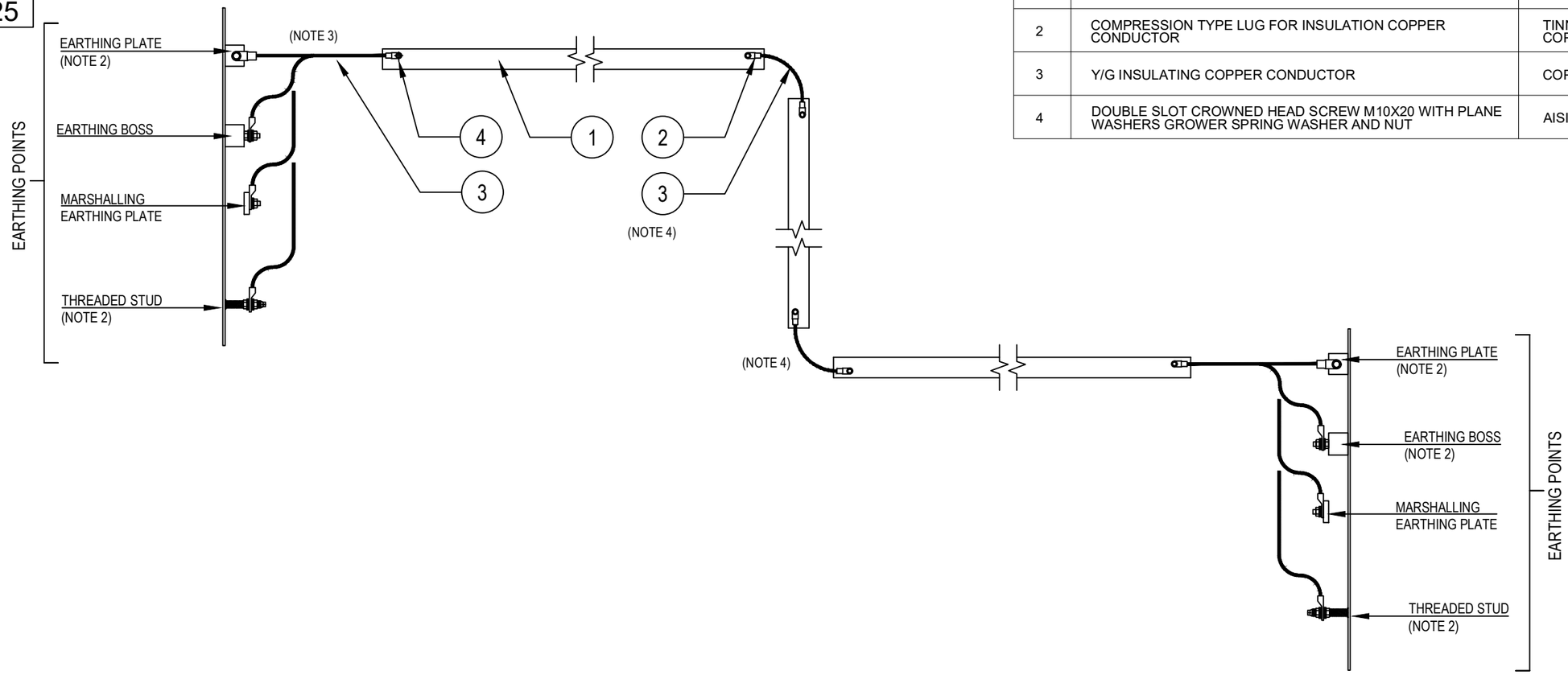
SHEET 003

REV. 02

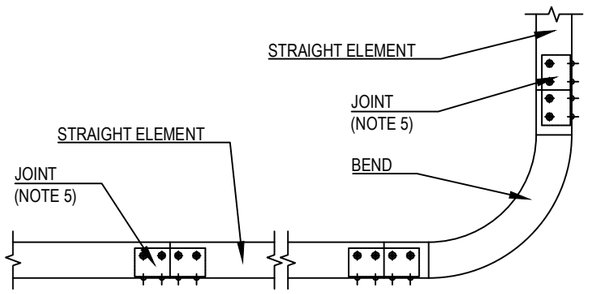
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

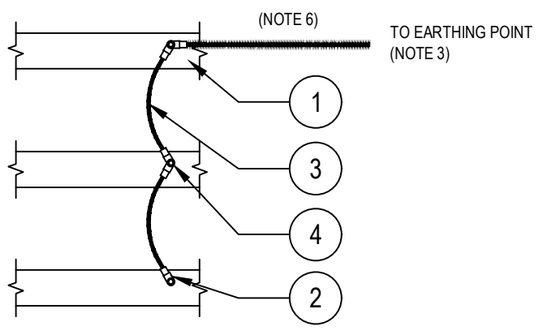
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

ITEM	Tag	CABLE_TRAY_LD_ELE_MV	: Cable Tray Lower Deck - Electrical (Medium Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002266		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A Cable Tray/Ladder Before pulling

BEFORE PULLING

1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-01-04	
Signature	Digitaly signed by Michele Tartaglia 2025-01-04T10:59:48.738Z	Digitaly signed by Paolo Schintu 2025-01-04T12:30:18.708Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01

L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

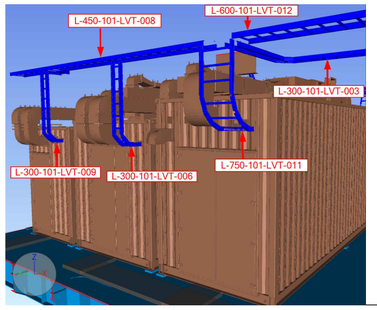
L-300-101-MVT-001
W300 X H100mm
+28.410m
+5.100m T.O.S

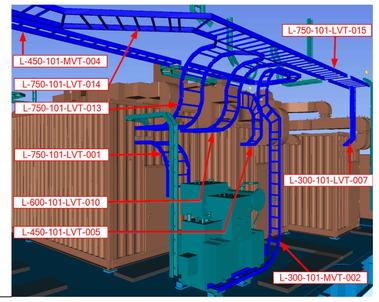
L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

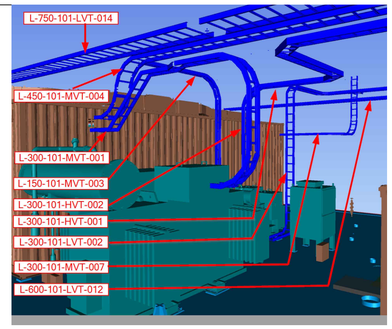
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

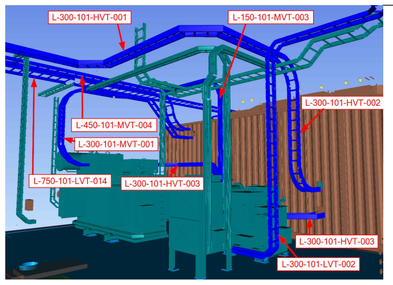
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

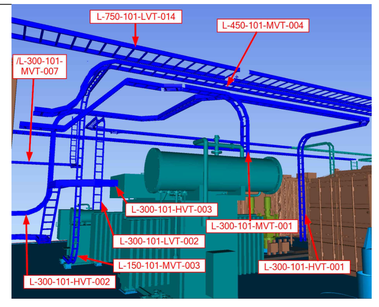
L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S

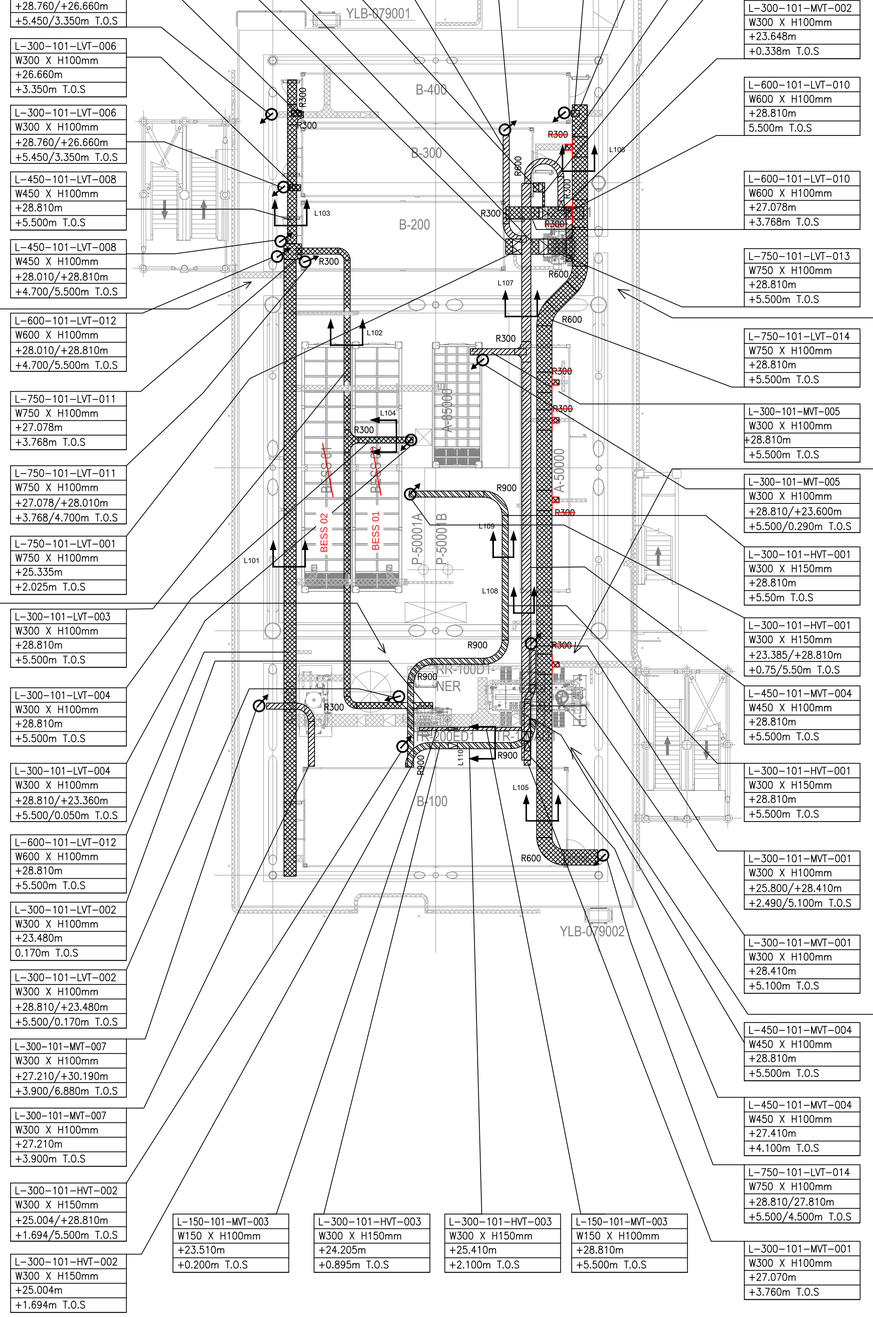








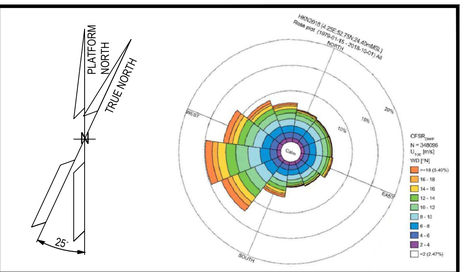




PRIMARY CABLE ROUTING

PLAN ON LOWER DECK

EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

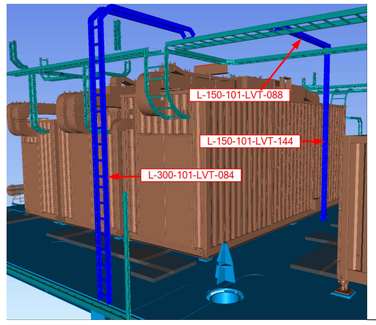
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

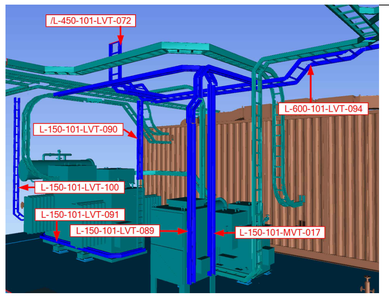
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

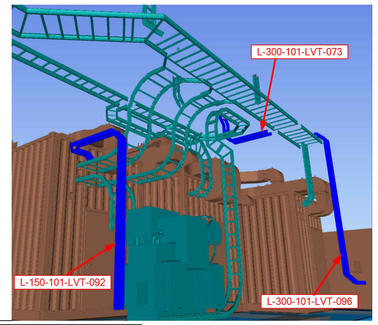
L-150-101-LVT-107
W150 X H100mm
+22.598m
−0.712m T.O.S

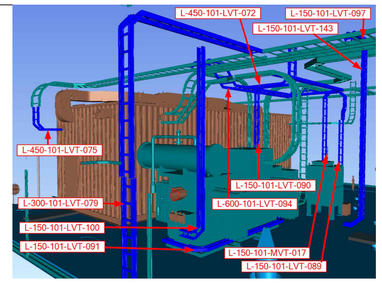
L-150-101-MVT-017
W150 X H100mm
+28.410m
+5.100m T.O.S

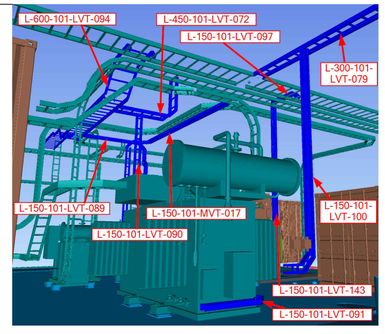
L-150-101-LVT-085
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

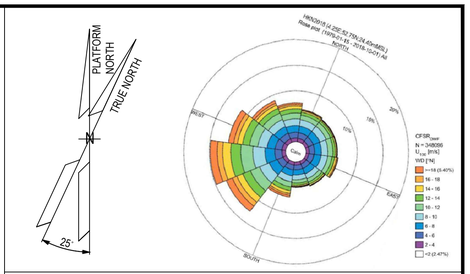
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S







SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

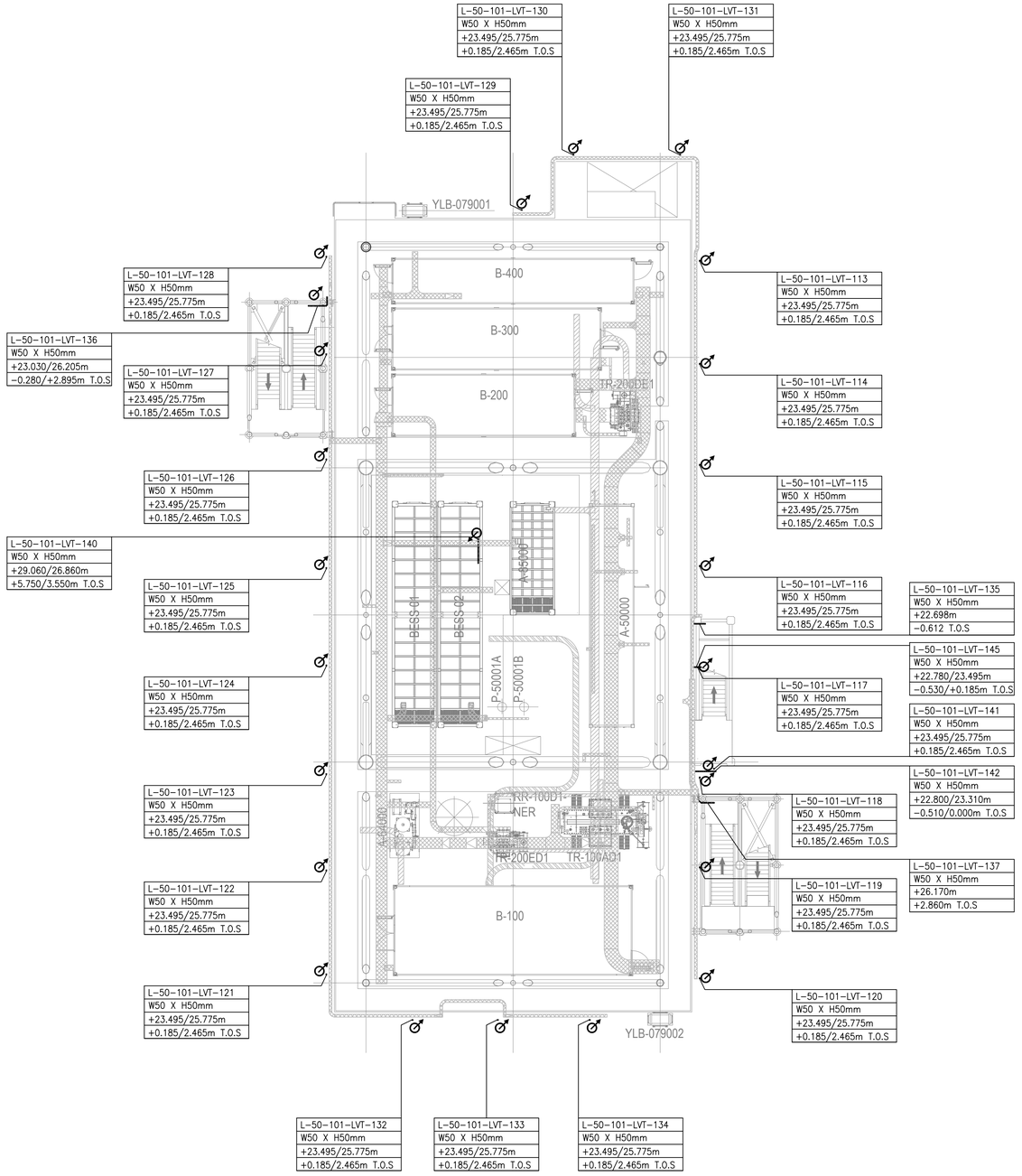
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

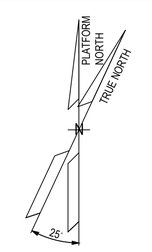
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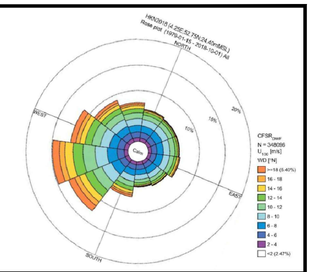
DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

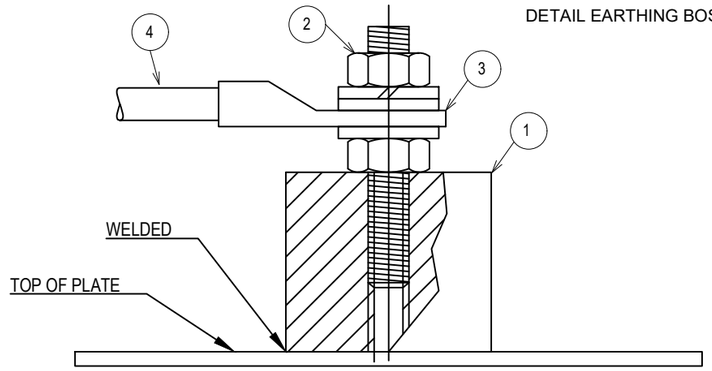
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

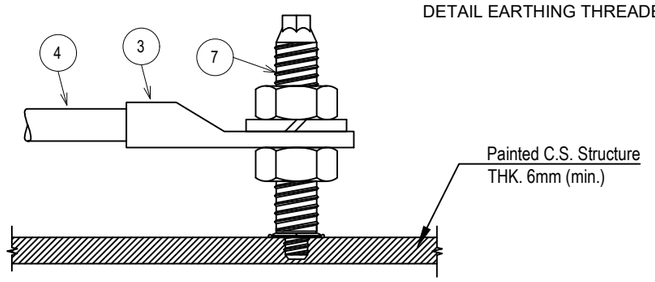


E11D

SEE NOTE 6

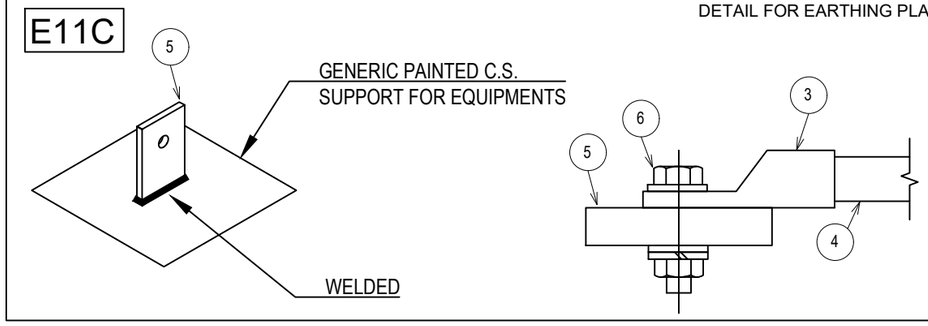
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

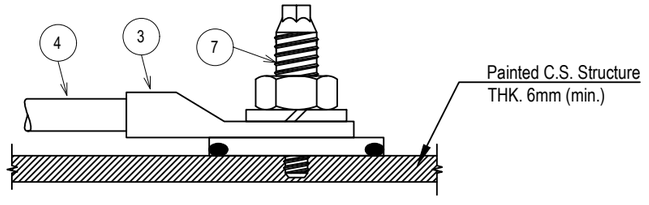


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

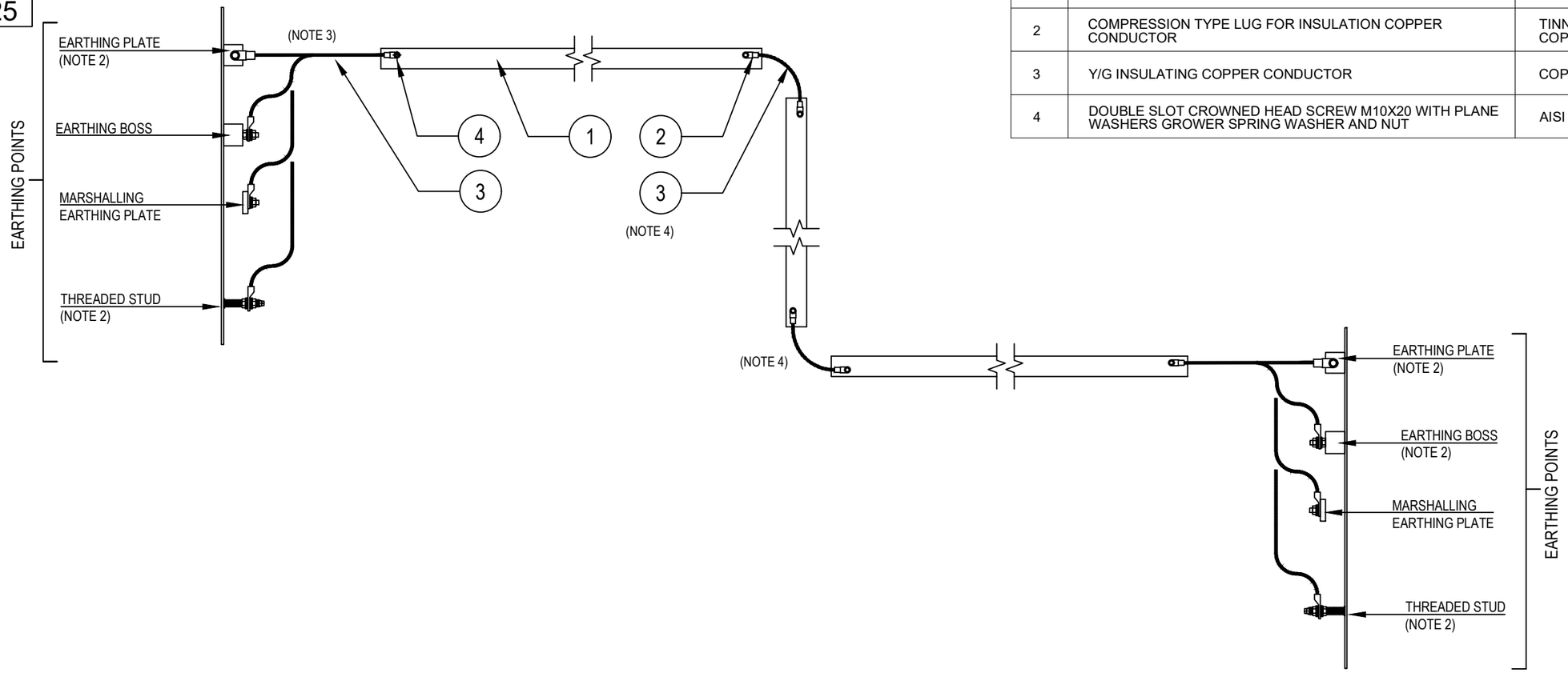
SHEET 003

REV. 02

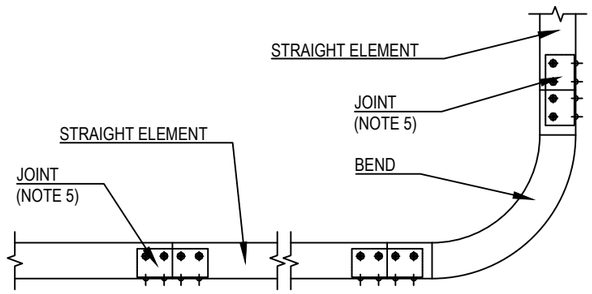
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

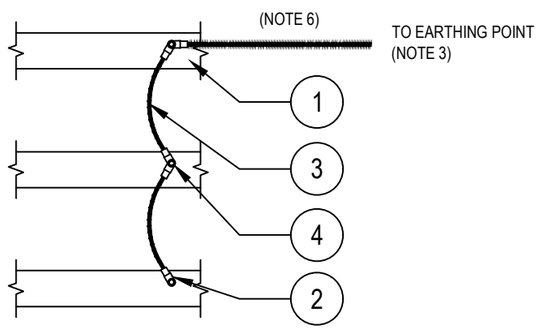
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

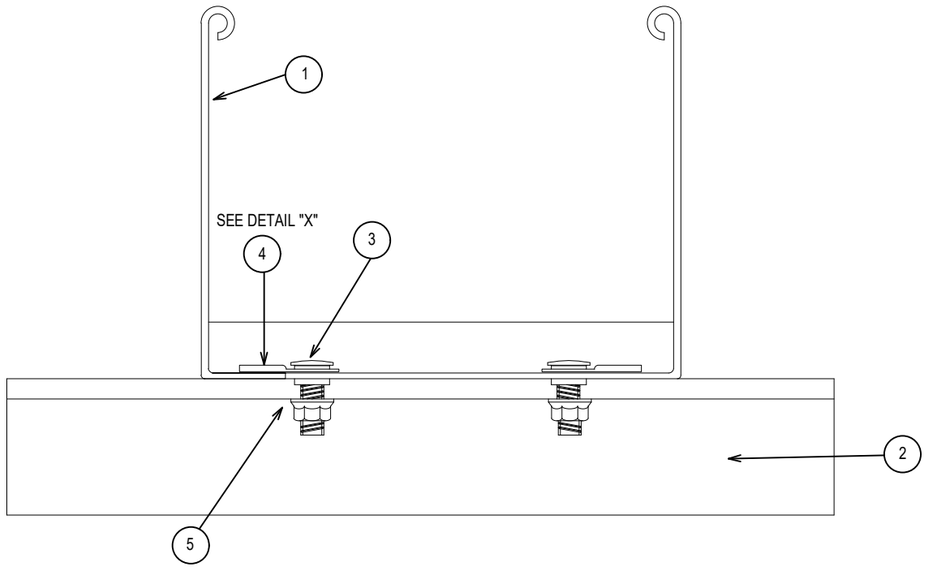
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

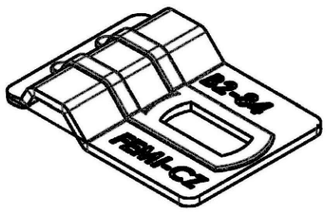
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

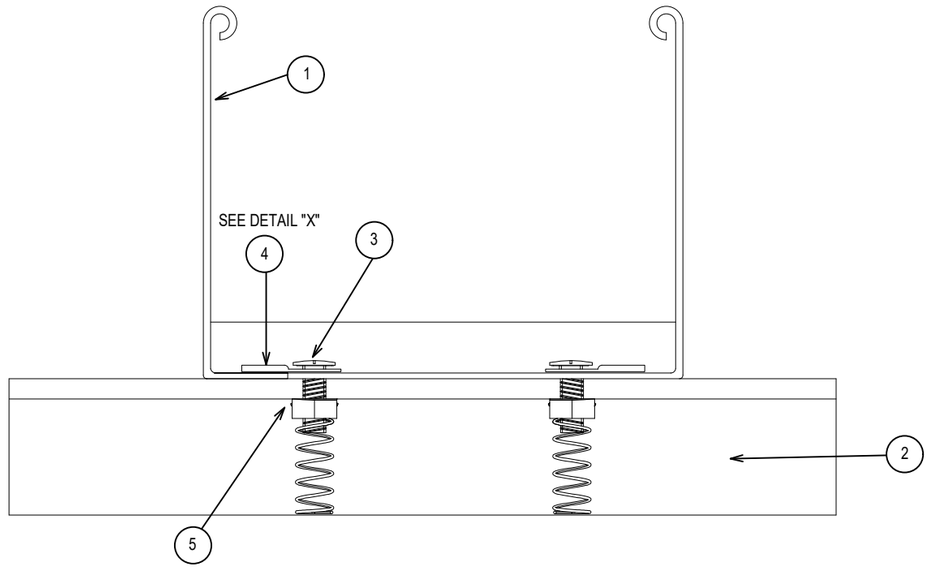
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

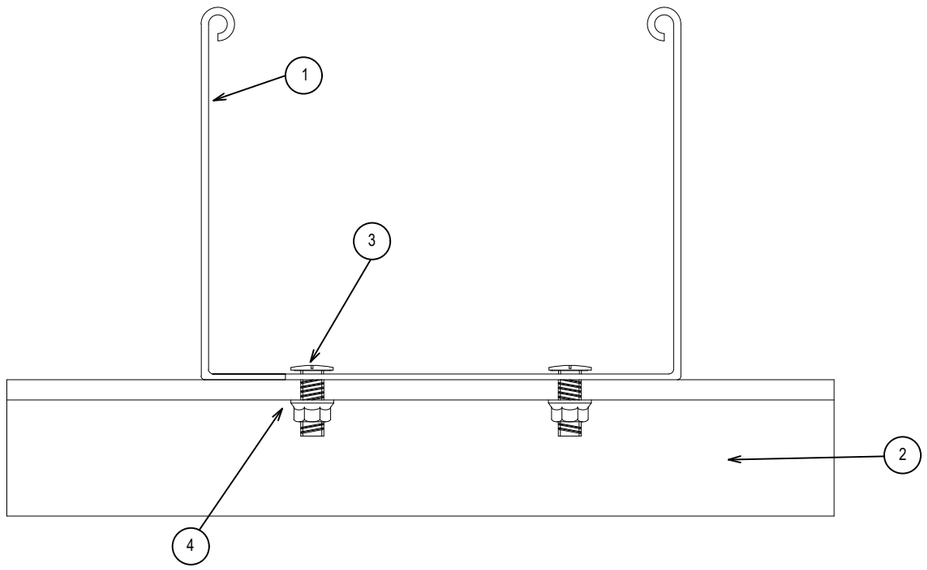
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

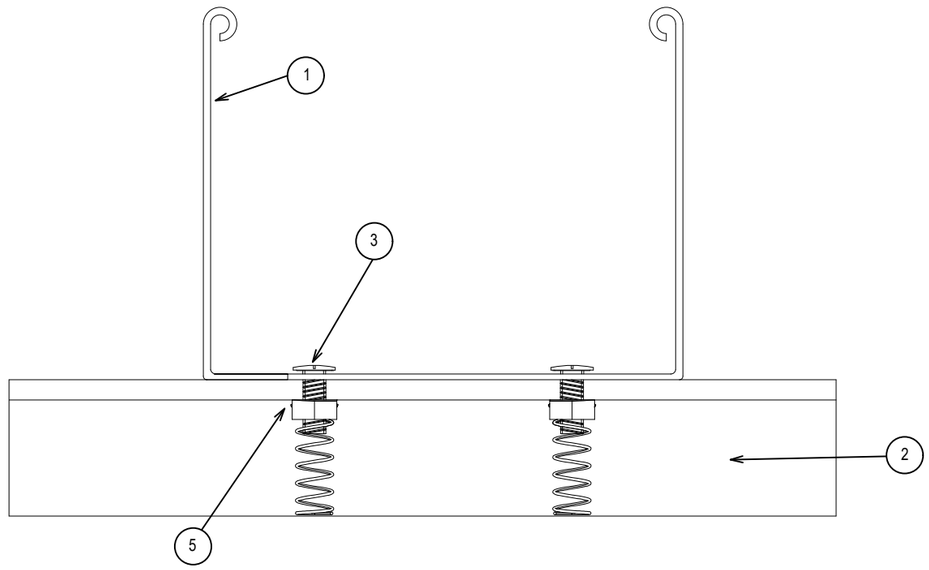


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

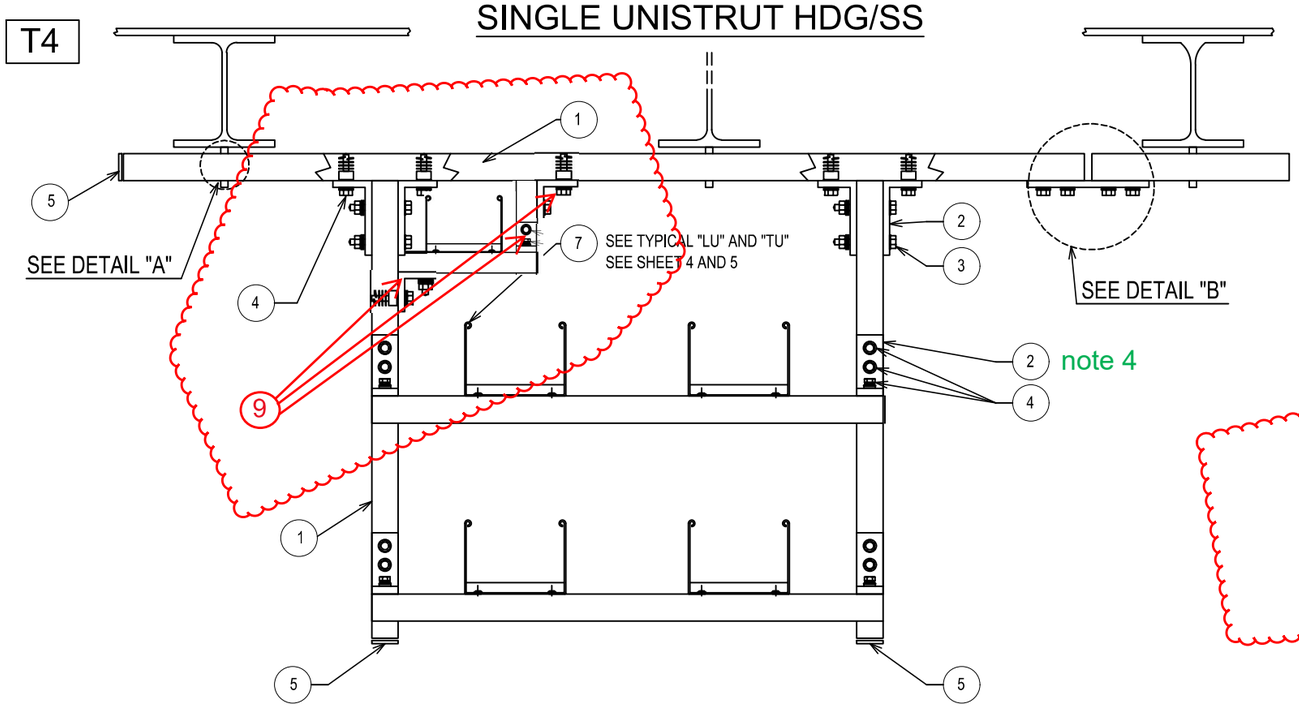
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

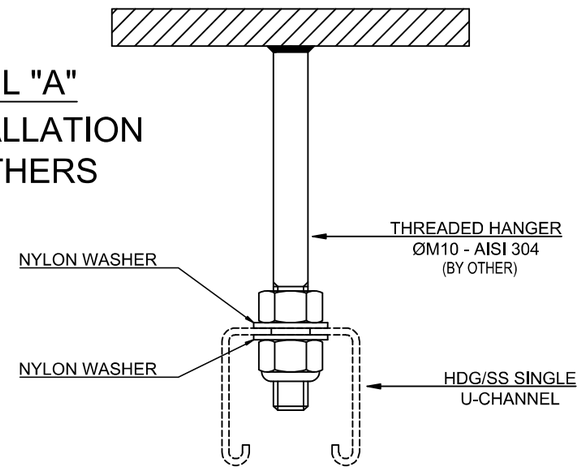
T4

SINGLE UNISTRUT HDG/SS

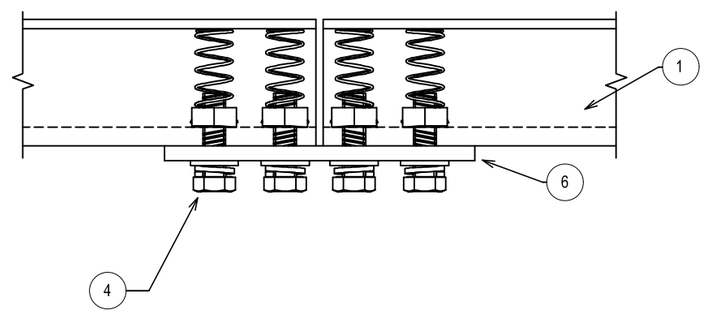


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

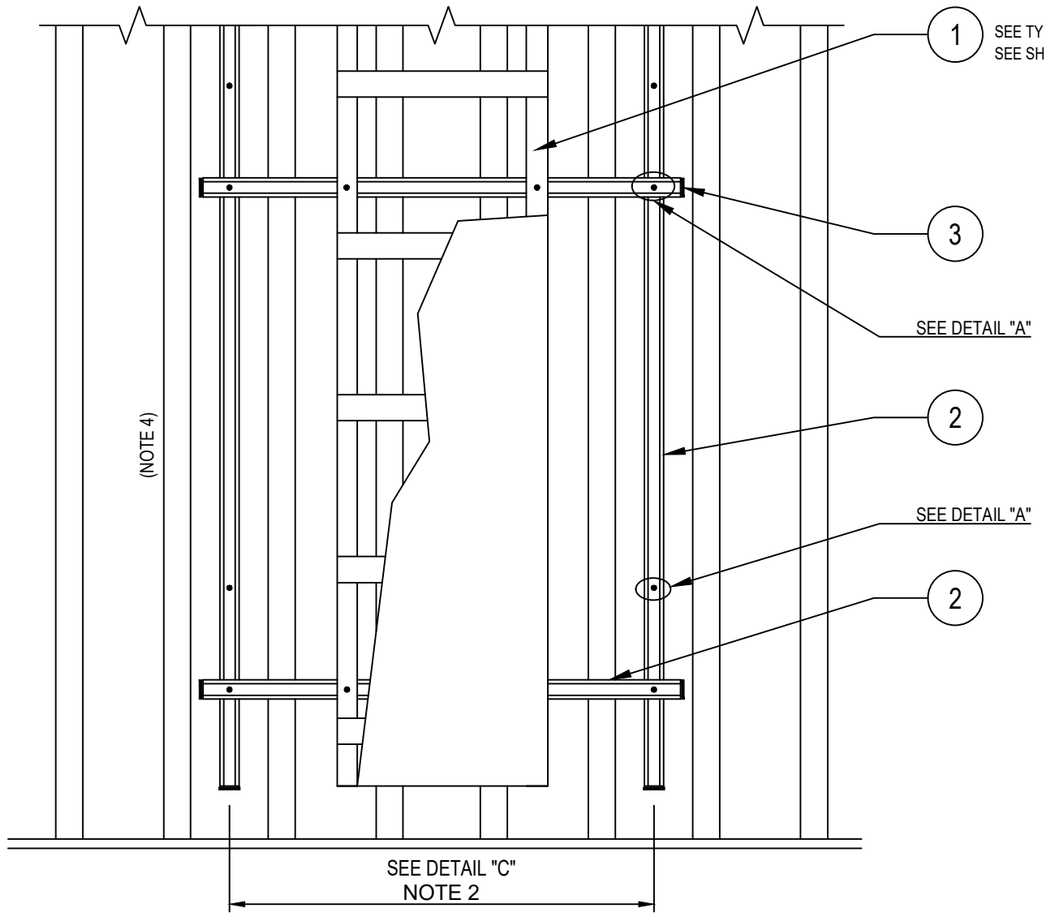
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
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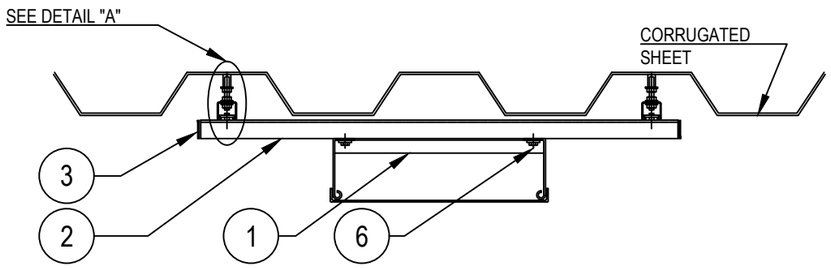
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

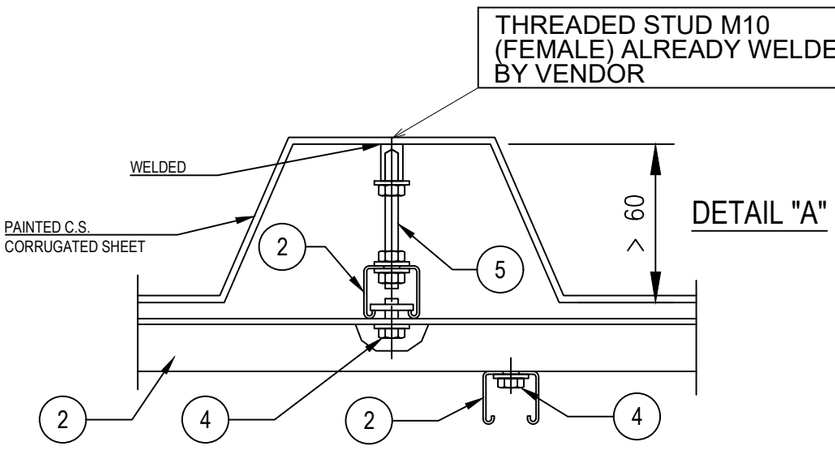
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	014	02

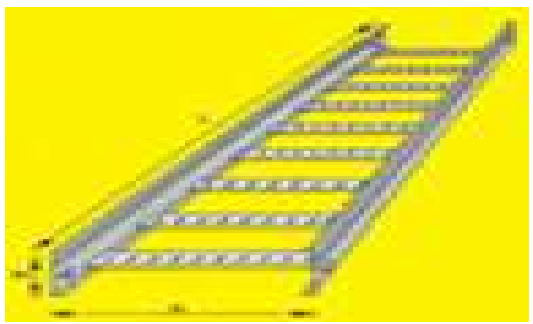
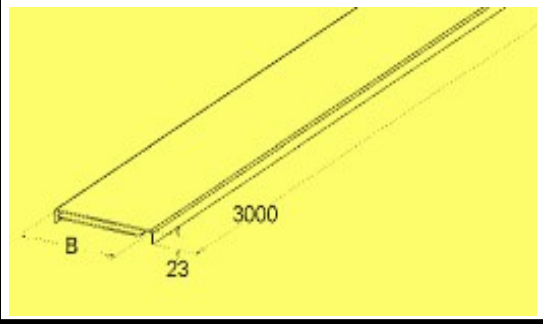
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
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47 **NOTES:**

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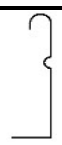
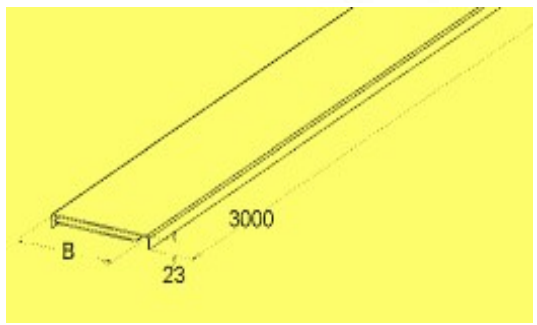
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

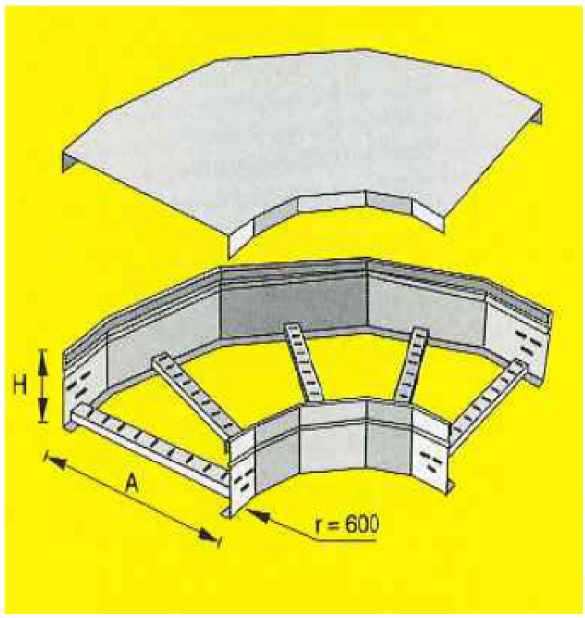
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



15

16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
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48		
49		
50		

51 **NOTES:**

52

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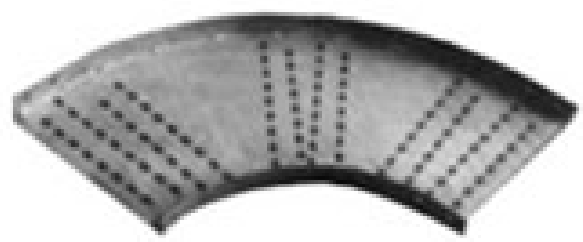
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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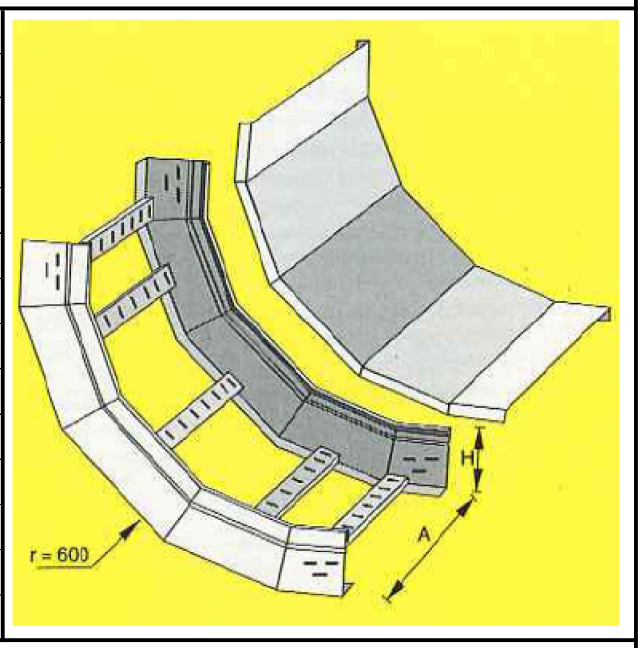
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
44		
45		
46		
47		
48		
49		

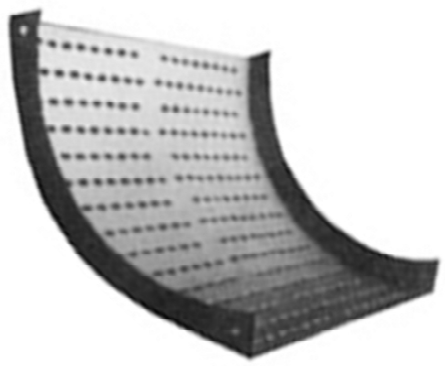
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
44		
45		
46		
47		
48		
49		

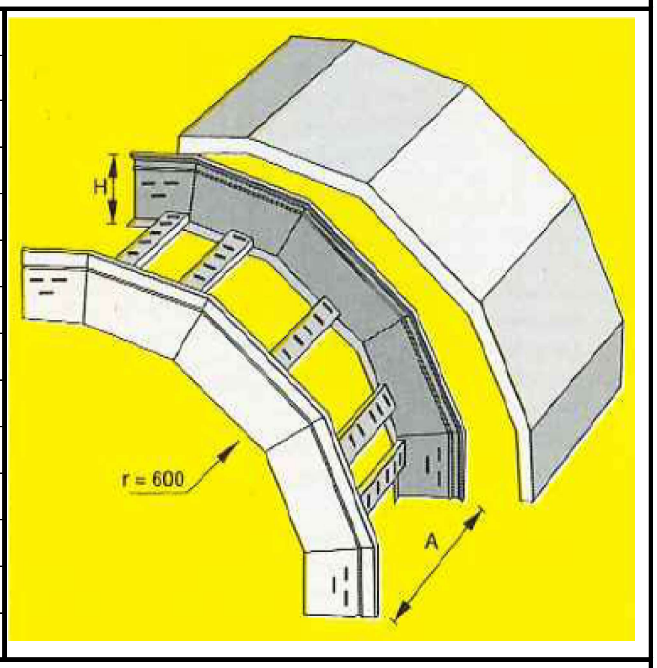
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
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51	**NOTES:**	
52		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
46		
47		
48		
49		
50		

51 **NOTES:**

52

53

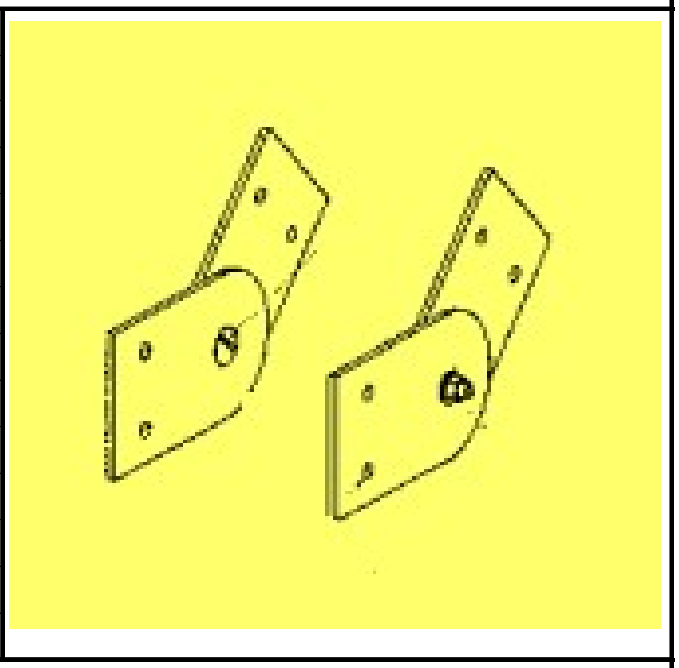
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

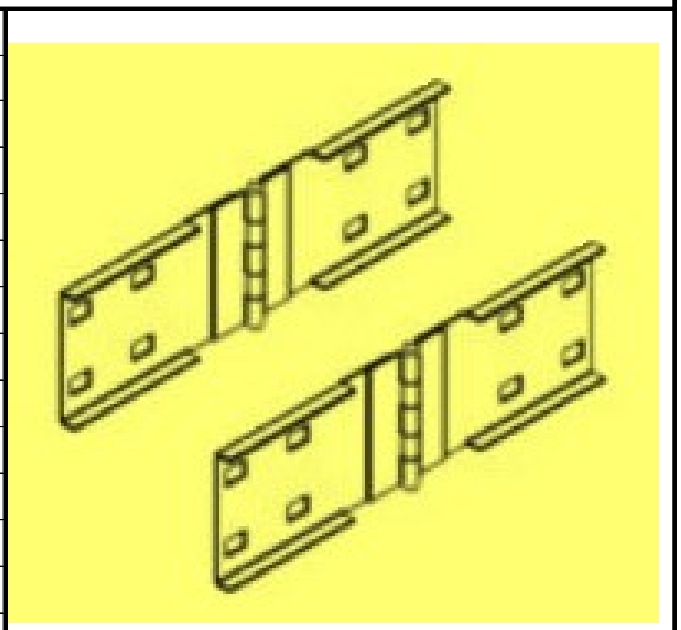
	CODE	REMARKS
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		

NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

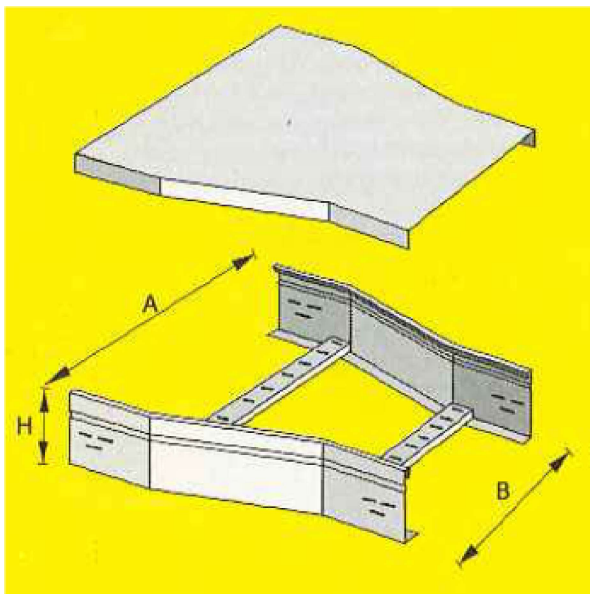
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
34		
35		
36		
37		
38		
39		
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41		
42		
43		
44		
45	**NOTES:**	
46		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
38		
39		
40		
41		
42		
43		
44		

45 **NOTES:**

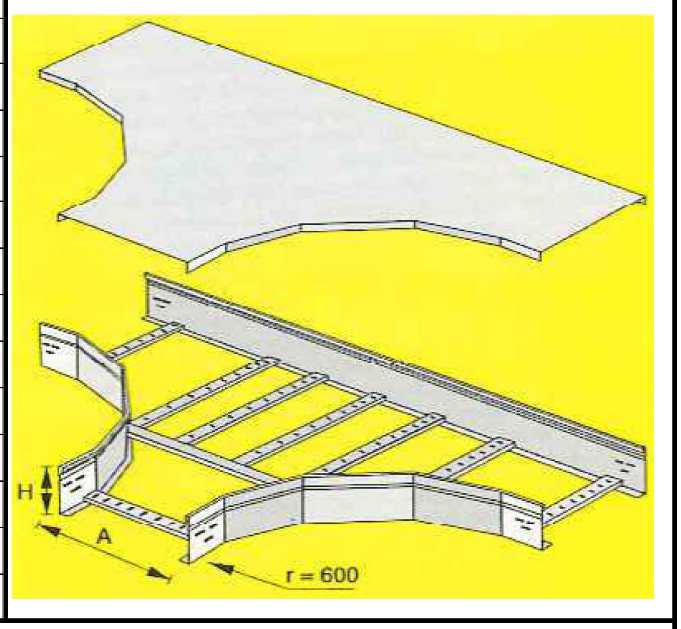
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
38		
39		
40		
41		
42		
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50 **NOTES:**

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ROSETTI MARINO | CROSSWIND

ITEM	Tag	CABLE_TRAY_LD_ELE_MV	: Cable Tray Lower Deck - Electrical (Medium Voltage)			Dwg	123A90-DDL-EL-DL-20108
	S/Sys	90-05	: Areas			Module	LD
TASK	code	C10002267		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B — Cable Tray/Ladder After pulling

AFTER PULLING

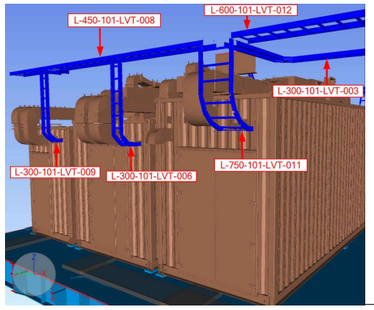
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

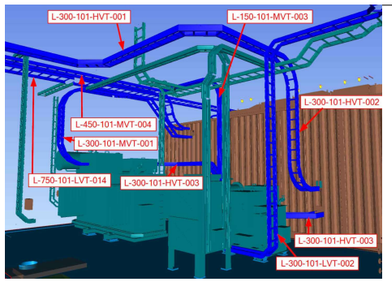
Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-02-20	
Signature	Digitaly signed by Michele Tartaglia 2025-02-19T13:42:51.955Z	Digitaly signed by Paolo Schintu 2025-02-20T12:51:33.384Z	

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01





L-750-101-LVT-013
W750 X H100mm
+27.078m
+3.768m T.O.S

L-450-101-LVT-005
W450 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-006
W300 X H100mm
+28.810/+30.190m
+5.500/6.880m T.O.S

L-300-101-LVT-007
W300 X H100mm
+28.810/+26.660m
+5.500/3.350m T.O.S

L-750-101-LVT-001
W750 X H100mm
+26.678m
+3.368m T.O.S

L-300-101-LVT-009
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-009
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+26.660m
+3.350m T.O.S

L-300-101-LVT-006
W300 X H100mm
+28.760/+26.660m
+5.450/3.350m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-008
W450 X H100mm
+28.810/+28.810m
+4.700/5.500m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.010/+28.810m
+4.700/5.500m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-011
W750 X H100mm
+27.078/+28.010m
+3.768/4.700m T.O.S

L-750-101-LVT-001
W750 X H100mm
+25.335m
+2.025m T.O.S

L-300-101-LVT-003
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-004
W300 X H100mm
+28.810/+23.360m
+5.500/0.050m T.O.S

L-600-101-LVT-012
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-002
W300 X H100mm
+23.480m
0.170m T.O.S

L-300-101-LVT-002
W300 X H100mm
+28.810/+23.480m
+5.500/0.170m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210/+30.190m
+3.900/6.880m T.O.S

L-300-101-MVT-007
W300 X H100mm
+27.210m
+3.900m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004/+28.810m
+1.694/5.500m T.O.S

L-300-101-HVT-002
W300 X H150mm
+25.004m
+1.694m T.O.S

L-150-101-MVT-003
W150 X H100mm
+23.510m
+0.200m T.O.S

L-300-101-HVT-003
W300 X H150mm
+24.205m
+0.895m T.O.S

L-300-101-HVT-003
W300 X H150mm
+25.410m
+2.100m T.O.S

L-150-101-MVT-003
W150 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-015
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+28.810m
+5.500m T.O.S

L-450-101-LVT-005
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-002
W300 X H100mm
+23.648m
+0.338m T.O.S

L-600-101-LVT-010
W600 X H100mm
+28.810m
5.500m T.O.S

L-600-101-LVT-010
W600 X H100mm
+27.078m
+3.768m T.O.S

L-750-101-LVT-013
W750 X H100mm
+28.810m
+5.500m T.O.S

L-750-101-LVT-014
W750 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-005
W300 X H100mm
+28.810/+23.600m
+5.500/0.290m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.50m T.O.S

L-300-101-HVT-001
W300 X H150mm
+23.385/+28.810m
+0.75/5.50m T.O.S

L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-HVT-001
W300 X H150mm
+28.810m
+5.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+25.800/+28.410m
+2.490/5.100m T.O.S

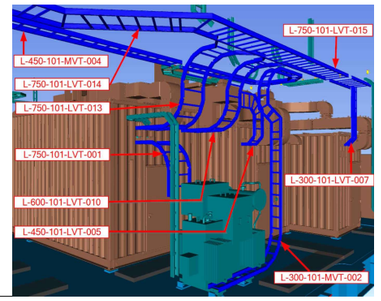
L-300-101-MVT-001
W300 X H100mm
+28.410m
+5.100m T.O.S

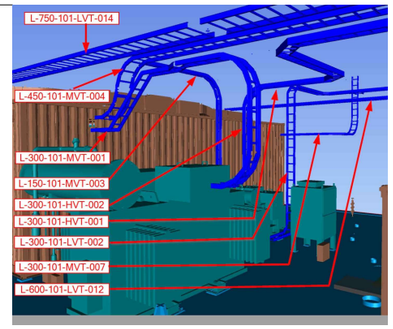
L-450-101-MVT-004
W450 X H100mm
+28.810m
+5.500m T.O.S

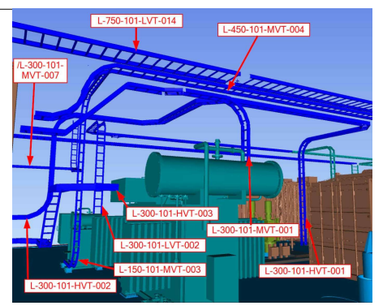
L-450-101-MVT-004
W450 X H100mm
+27.410m
+4.100m T.O.S

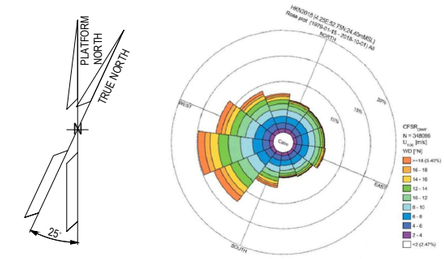
L-750-101-LVT-014
W750 X H100mm
+28.810/27.810m
+5.500/4.500m T.O.S

L-300-101-MVT-001
W300 X H100mm
+27.070m
+3.760m T.O.S









NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS NOTED OTHERWISE.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

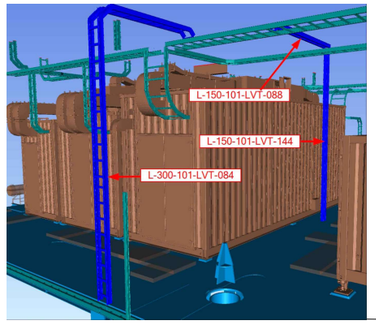
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 01of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

PRIMARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S

DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



L-300-101-LVT-112
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060/30.170m
+5.750/6.860m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-077
W300 X H100mm
+28.810/30.170m
+5.500/6.860m T.O.S

L-300-101-LVT-078
W300 X H100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-086
W150 X H100mm
+22.700m
−0.610m T.O.S

L-300-101-LVT-073
W300 X H100mm
+28.810/+30.210m
+5.500/6.900m T.O.S

L-150-101-LVT-086
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-106
W150 X H100mm
+28.988/30.188m
+5.678/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010m
+5.700m T.O.S

L-300-101-LVT-096
W300 X H100mm
+28.960/24.400m
+5.650/1.090m T.O.S

L-300-101-LVT-084
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-102
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-084
W300 X H100mm
+29.010/+23.298m
+5.700/0.012m T.O.S

L-150-101-LVT-103
W150 X H100mm
+28.908/30.208m
+5.598/6.898m T.O.S

L-150-101-LVT-088
W150 X H100mm
+29.010m
+5.700m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.178m
+3.868m T.O.S

L-150-101-LVT-088
W150 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278m
+3.968m T.O.S

L-150-101-LVT-144
W150 X H100mm
+28.930/24.180m
+5.620/0.870m T.O.S

L-150-101-LVT-092
W150 X H100mm
+27.278/23.728m
+3.968/0.418m T.O.S

L-300-101-LVT-095
W300 X H100mm
+28.888/30.188m
+5.578/6.878m T.O.S

L-300-101-LVT-068
W300 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m
+5.750m T.O.S

L-150-101-LVT-093
W150 X H100mm
+28.810/26.400m
+5.500/3.090m T.O.S

L-150-101-LVT-099
W150 X H100mm
+28.810/24.000m
+5.500/0.690m T.O.S

L-150-101-LVT-139
W150 X H100mm
+26.280
+2.970m T.O.S

L-300-101-LVT-068
W300 X H100mm
+29.060m/+23.500
+5.750/0.190m T.O.S

L-150-101-LVT-087
W150 X H100mm
+28.810/23.390m
+5.500/0.080m T.O.S

L-150-101-LVT-138
W150 X H100mm
+26.280
+2.970m T.O.S

L-150-101-LVT-105
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-070
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-146
W150 X H100mm
+26.280/24.520m
+2.970/1.210m T.O.S

L-150-101-LVT-083
W150 X H100mm
+23.300/22.860m
−0.010/0.450m T.O.S

L-150-101-LVT-081
W150 X H100mm
+22.680m
−0.630m T.O.S

L-300-101-LVT-069
300X100mm
+29.060m
+5.750m T.O.S

L-300-101-LVT-071
W300 X H100mm
+23.410m
+0.100m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810/30.188m
+5.500/6.878m T.O.S

L-300-101-LVT-069
300X100mm
+29.060/23.610m
+5.750/0.300m T.O.S

L-150-101-LVT-101
W150 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-109
W300 X H100mm
+23.410m
+0.100m T.O.S

L-300-101-LVT-080
W300 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-097
W150 X H100mm
+29.080m
+5.770m T.O.S

L-150-101-LVT-143
W150 X H100mm
+29.080/24.185m
+5.770/0.875m T.O.S

L-300-101-LVT-079
W300 X H100mm
+28.810/22.940m
+5.500/−0.370m T.O.S

L-150-101-LVT-082
W150 X H100mm
+22.680m
−0.630m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-089
W150 X H100mm
+28.410m
+5.100m T.O.S

L-150-101-LVT-082
W150 X H100mm
+23.300m
−0.010m T.O.S

L-300-101-LVT-098
W300 X H100mm
+28.660/24.000m
+5.350/0.690m T.O.S

L-150-101-LVT-104
W150 X H100mm
+28.938/30.188m
+5.628/6.878m T.O.S

L-300-101-LVT-076
W300 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-100
W150 X H100mm
+28.710/24.260m
+5.400/0.950m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.970m
+5.660m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-150-101-LVT-091
W150 X H100mm
+23.600m
+0.290m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.410m
+5.100m T.O.S

L-600-101-LVT-094
W600 X H100mm
+28.810m
+5.500m T.O.S

L-300-101-LVT-074
W300 X H100mm
+28.810/26.810m
+5.500/3.500m T.O.S

L-150-101-LVT-085
W150 X H100mm
+22.598m
−0.712m T.O.S

L-450-101-LVT-072
W450 X H100mm
+28.410/30.219m
+5.100/6.909m T.O.S

L-450-101-LVT-075
W300 X H100mm
+27.810/26.810m
+4.500/3.500m T.O.S

L-150-101-MVT-017
W150 X H100mm
+28.410/23.860m
+5.100/0.550m T.O.S

L-150-101-LVT-108
W150 X H100mm
+23.300m
−0.010m T.O.S

L-150-101-LVT-108
W150 X H100mm
+22.598m
−0.712m T.O.S

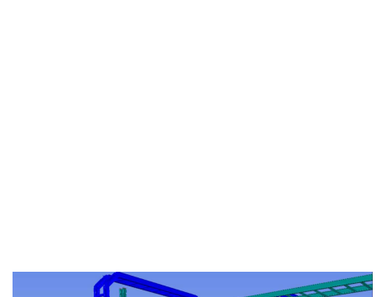
L-150-101-LVT-107
W150 X H100mm
+22.598m
−0.712m T.O.S

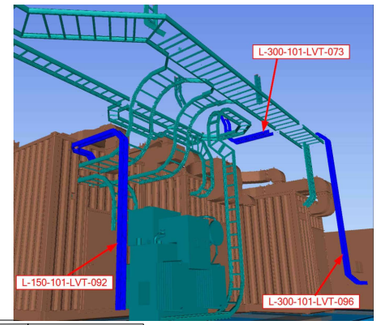
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W150 X H100mm
+28.410m
+5.100m T.O.S

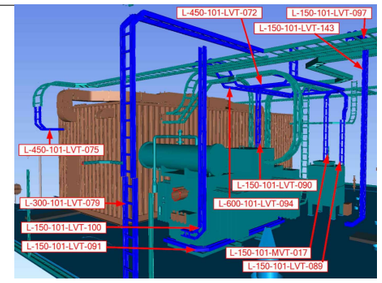
L-150-101-LVT-085
W150 X H100mm
+23.300m
−0.010m T.O.S

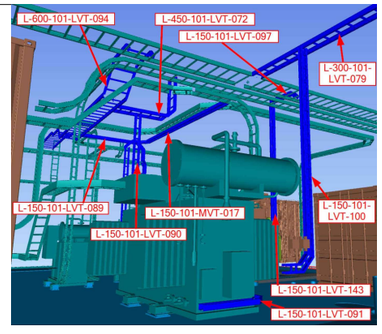
L-150-101-LVT-090
W150 X H100mm
+28.510/23.860m
+5.200/0.550m T.O.S

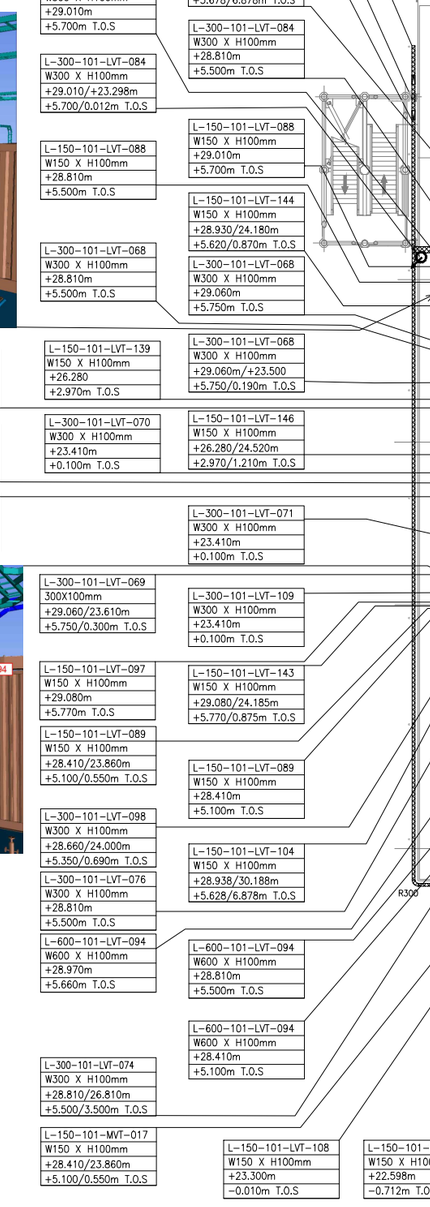
L-600-101-LVT-094
W600 X H100mm
+29.110m
+5.100m T.O.S



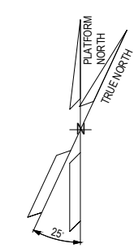


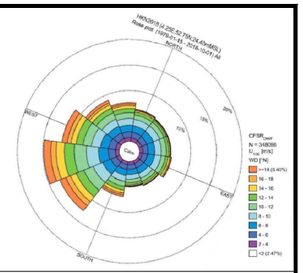






SECONDARY CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

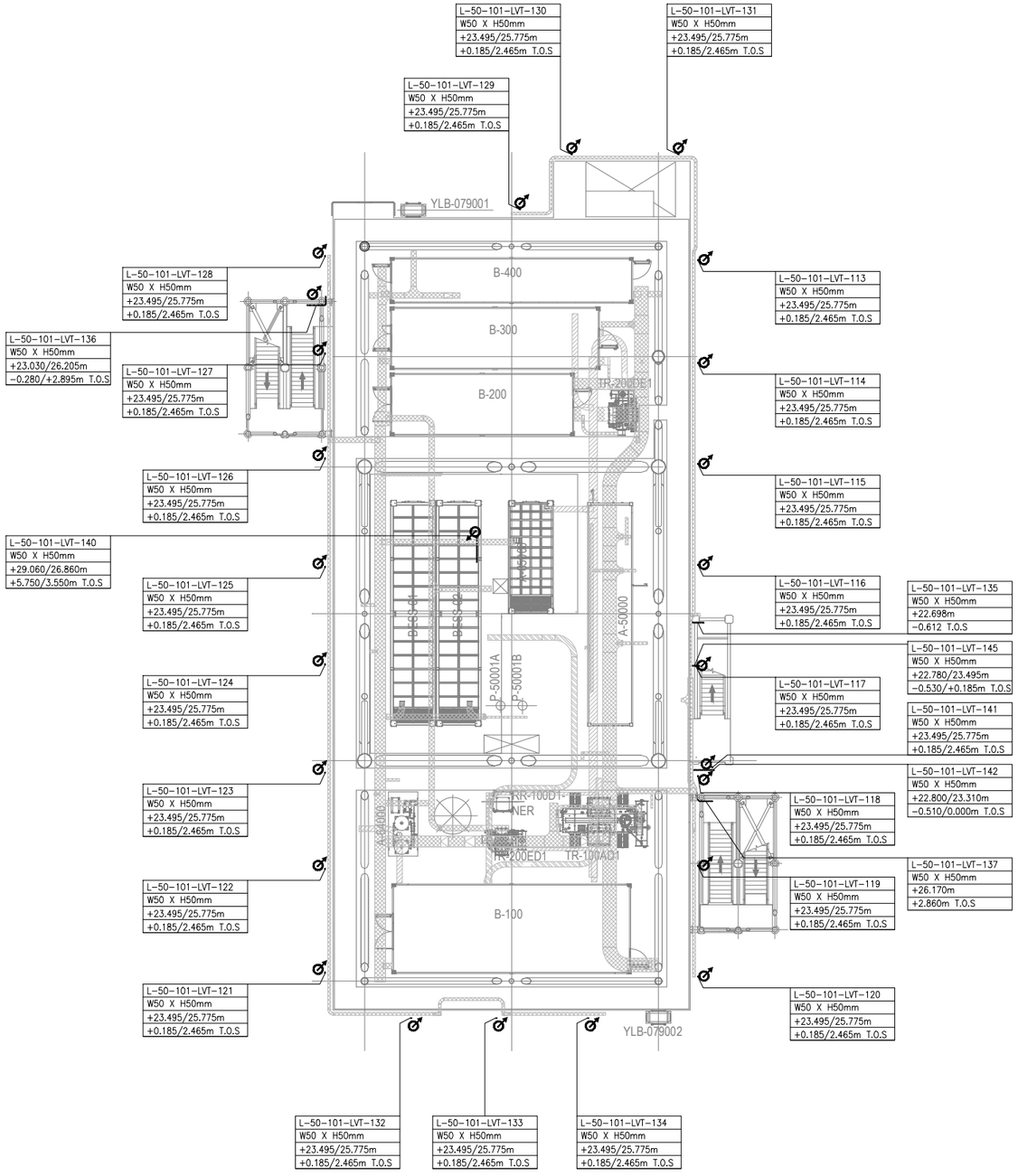
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 02of18	REV. 01

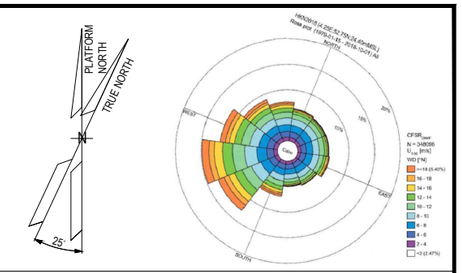
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DRAWING NO. 123A90-DDL-EL-DL-20108

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON LOWER DECK
EL+23.310 T.O.S



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
4. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
5. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
6. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
7. UNARMOURED CABLES PASSING OR ARRIVING IN A CLASSIFIED AREA WILL BE MECHANICALLY PROTECTED IN COMPLIANCE WITH THE REQUIREMENTS OF THE IEC 60079-14.
8. 50MM CABLE TRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL.

LEGEND

- ELECTRICAL 66 KV CABLE TRAY
- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- L101 — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_C	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20107	ELECTRICAL CABLES ROUTING LAYOUT - TOP DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/06/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
LOWER DECK

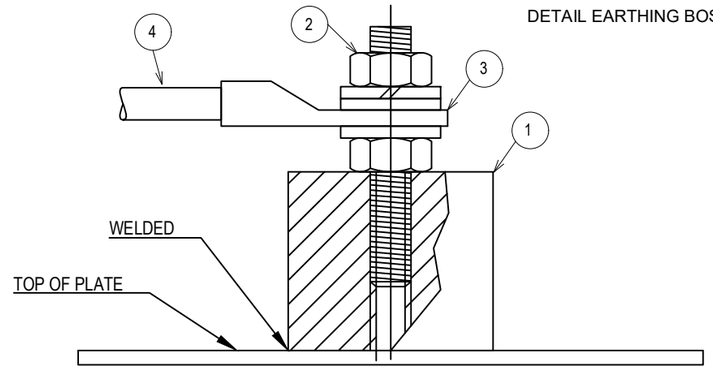
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20108	SHEET 03of18	REV. 01

File Name : 123A90-DDL-EL-DL-20108

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

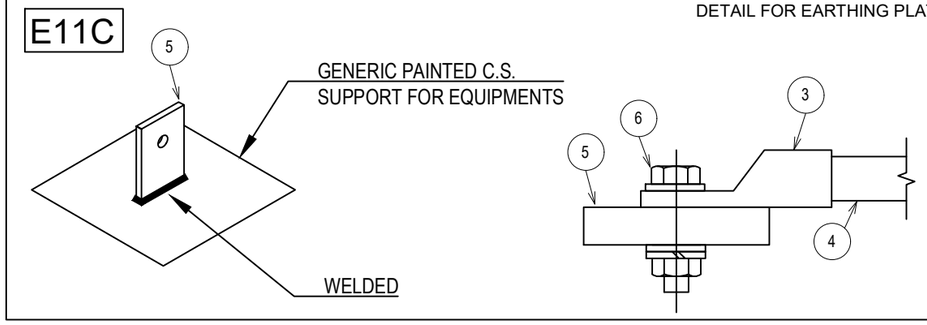
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

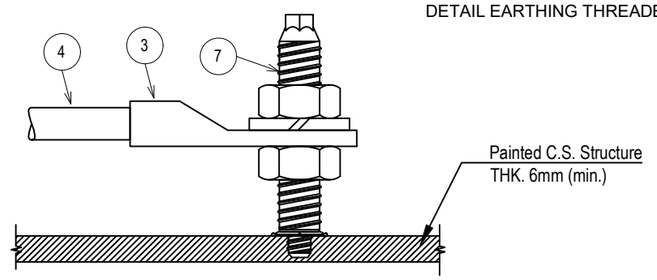


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

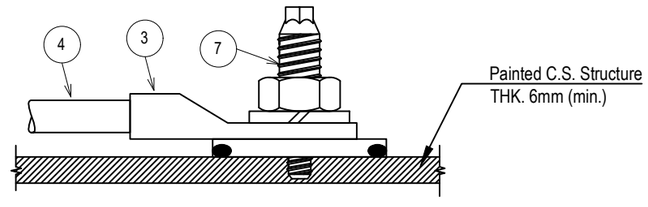


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

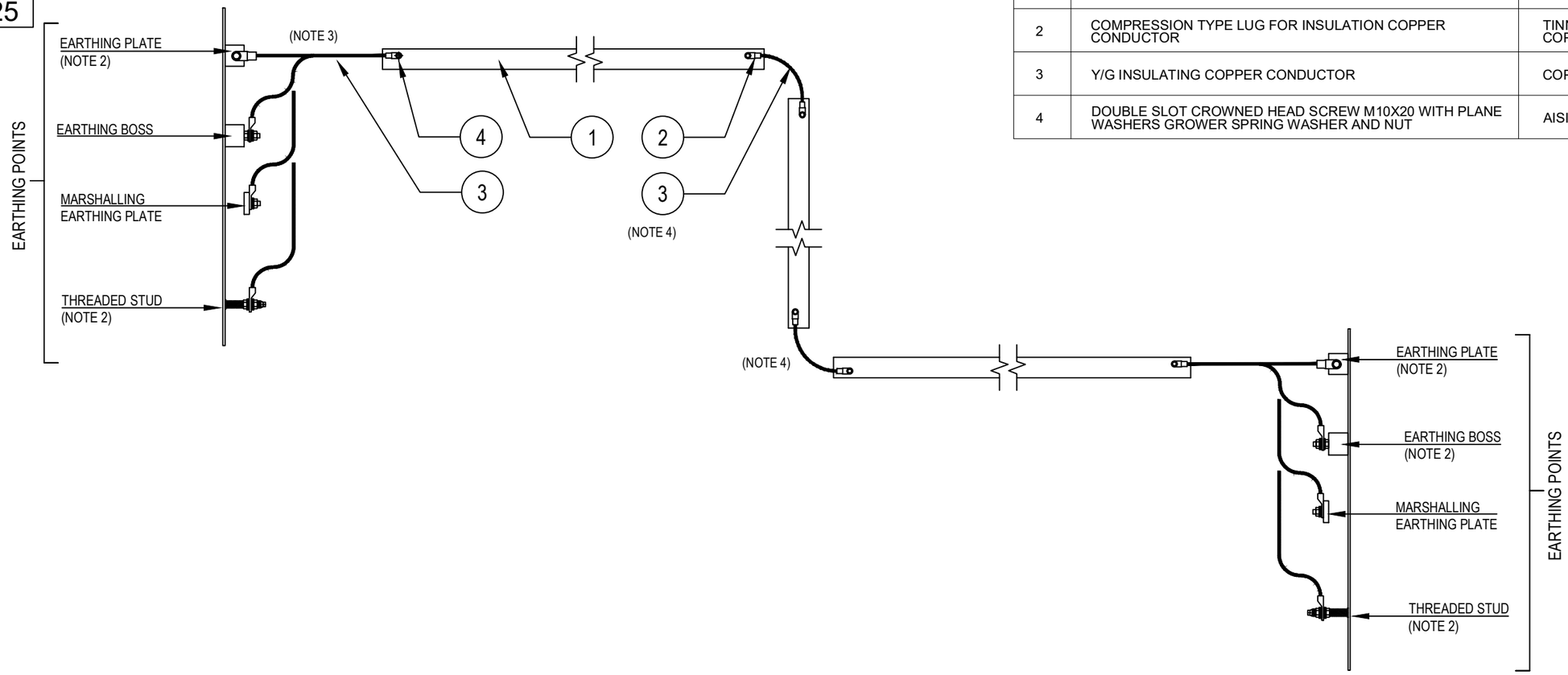
SHEET 003

REV. 02

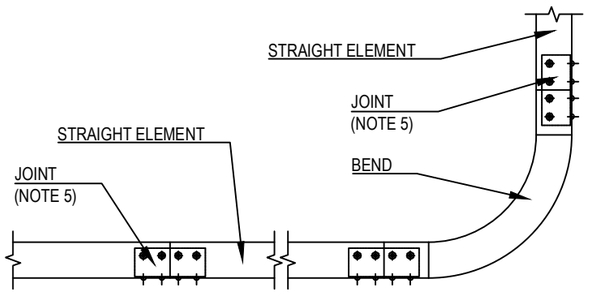
F.to UNI A3: 420mmx297mm

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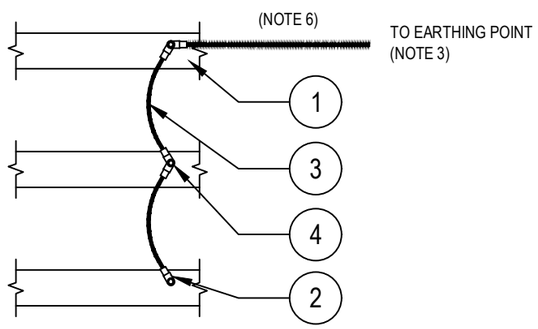
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

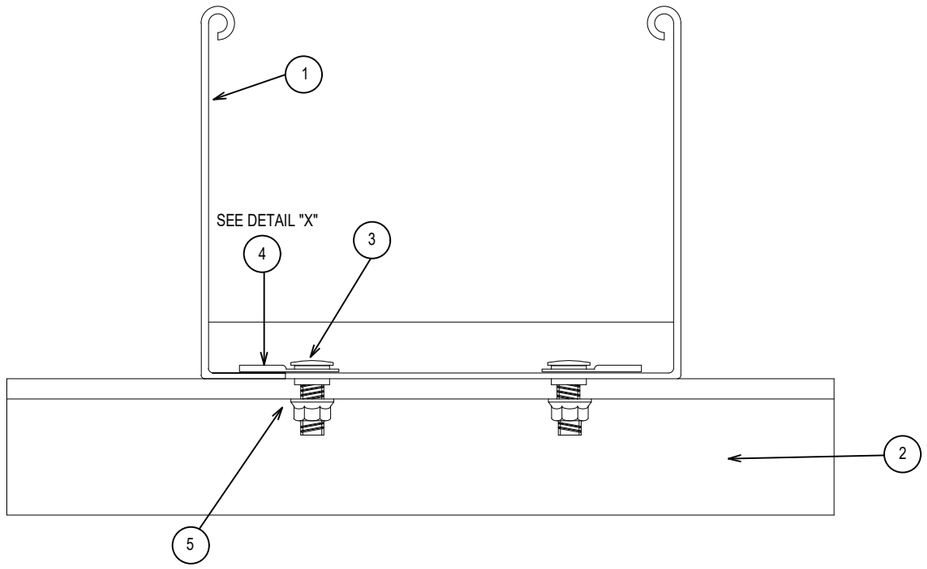
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

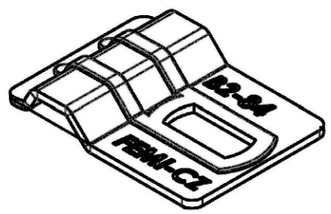
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

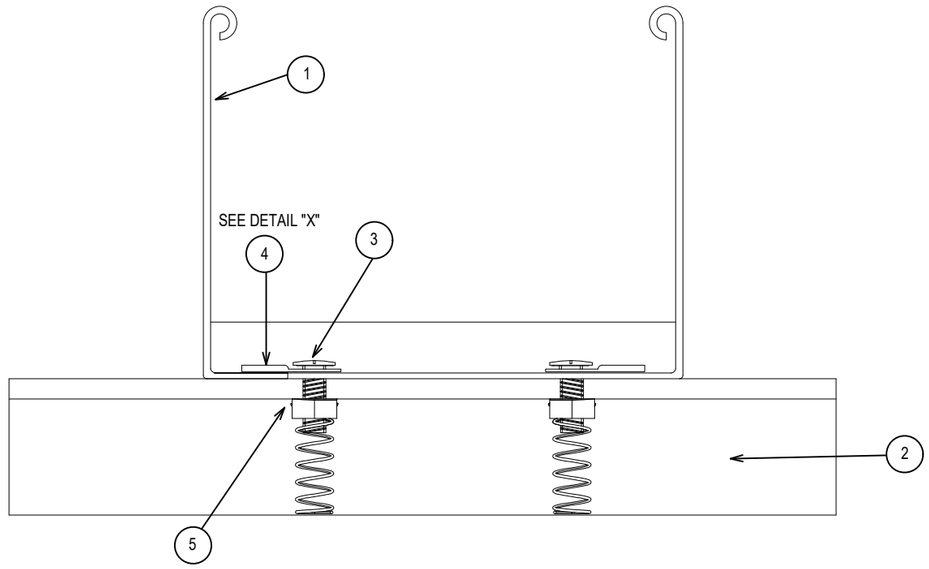
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

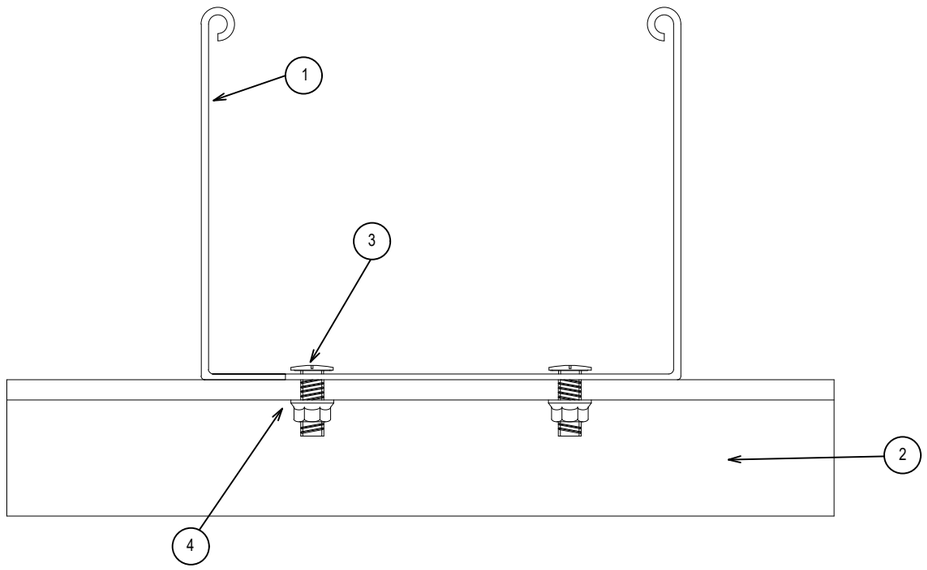
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

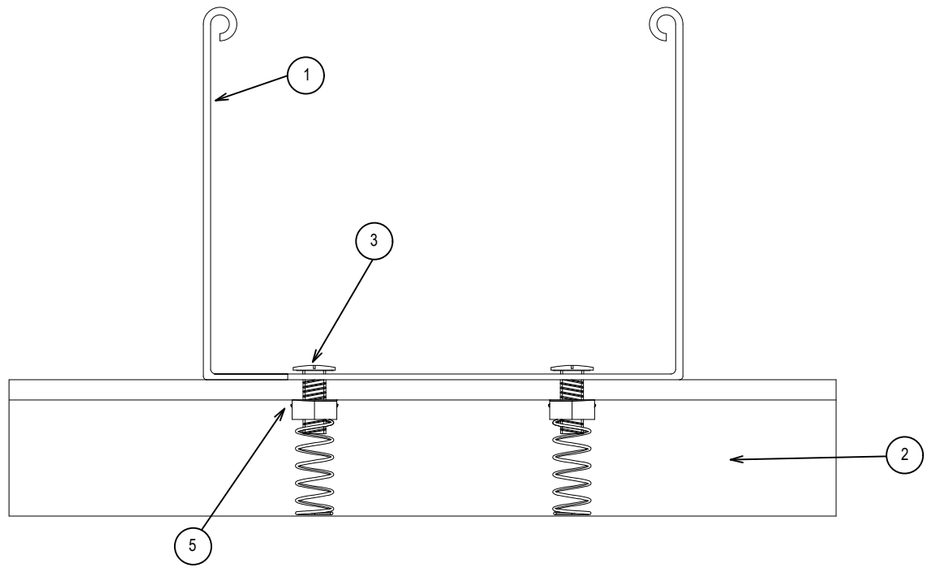


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

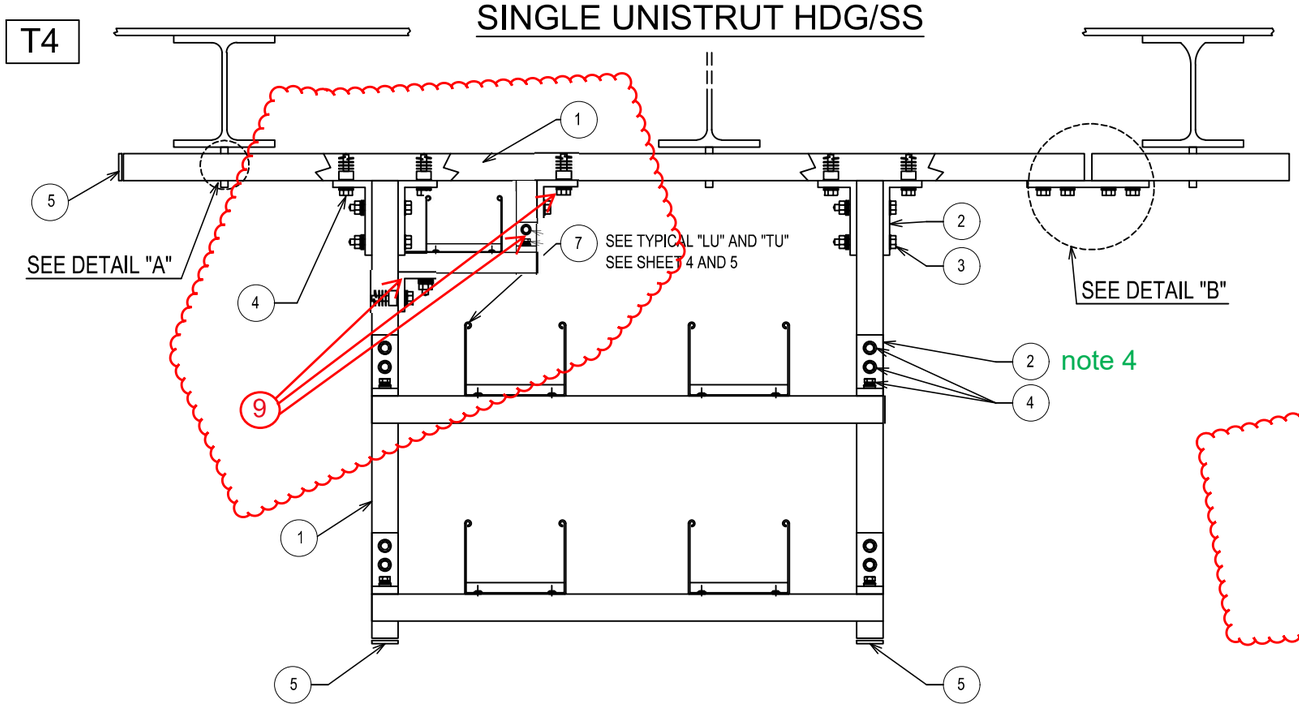
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

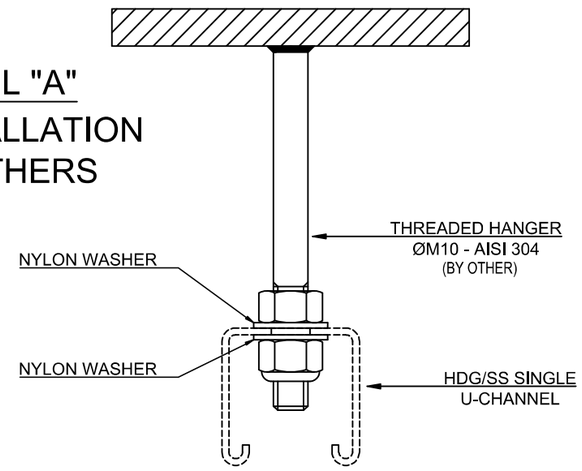
T4

SINGLE UNISTRUT HDG/SS

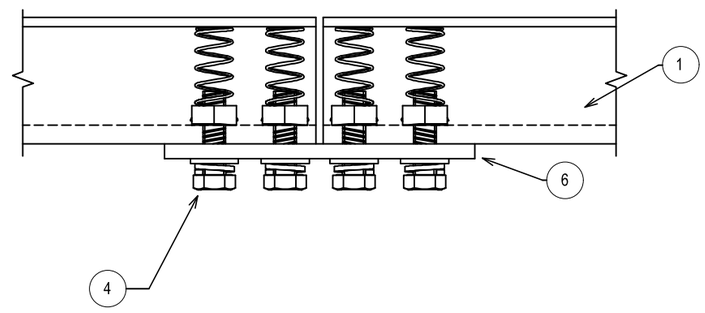


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

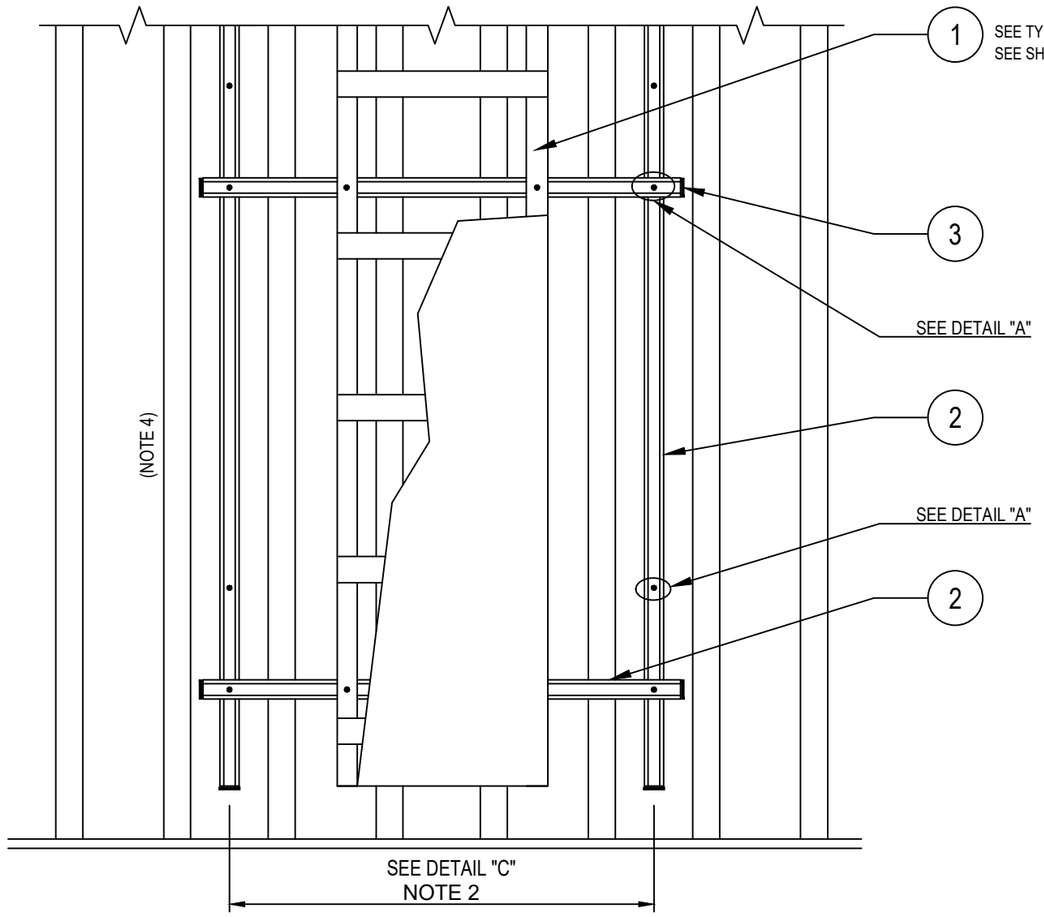
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

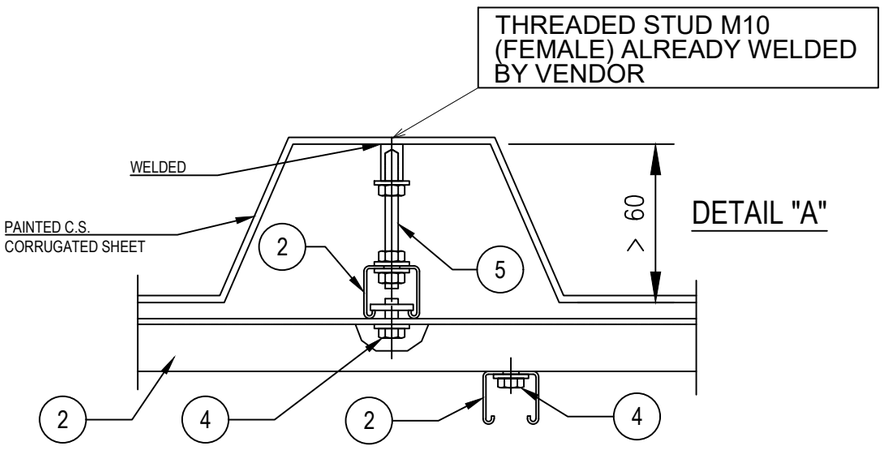
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

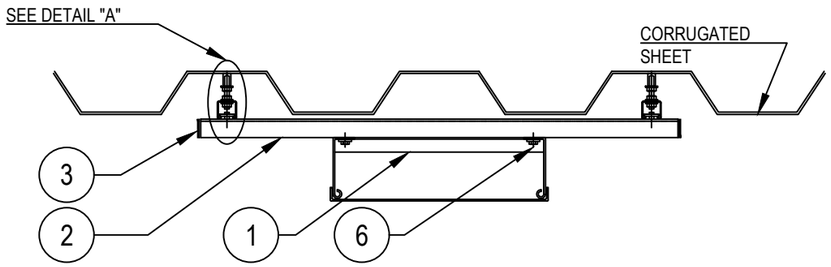
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_UD_ELE_LV	: Cable Tray Upper Deck - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20107
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002270		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A — Cable Tray/Ladder Before pulling

BEFORE PULLING

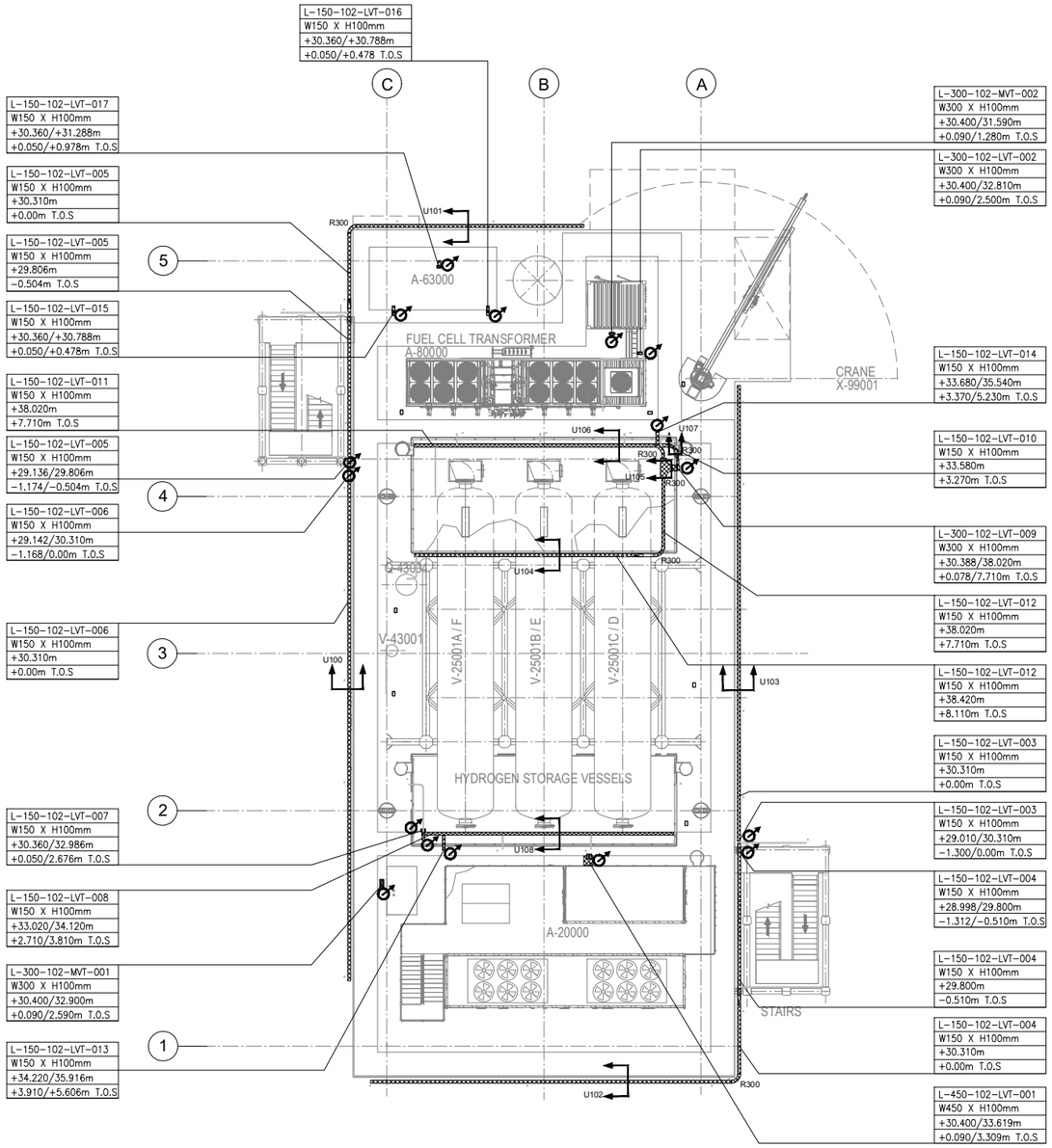
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

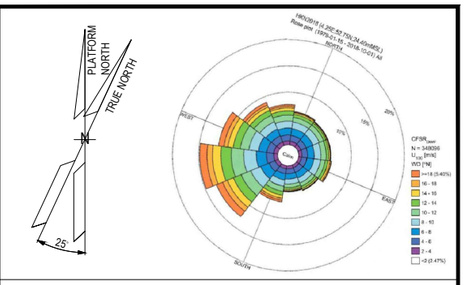
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-02-24	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T11:00:21.184Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-24T15:15:56.387Z	

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



MAIN CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- UXXX — CABLE SECTION

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20107

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

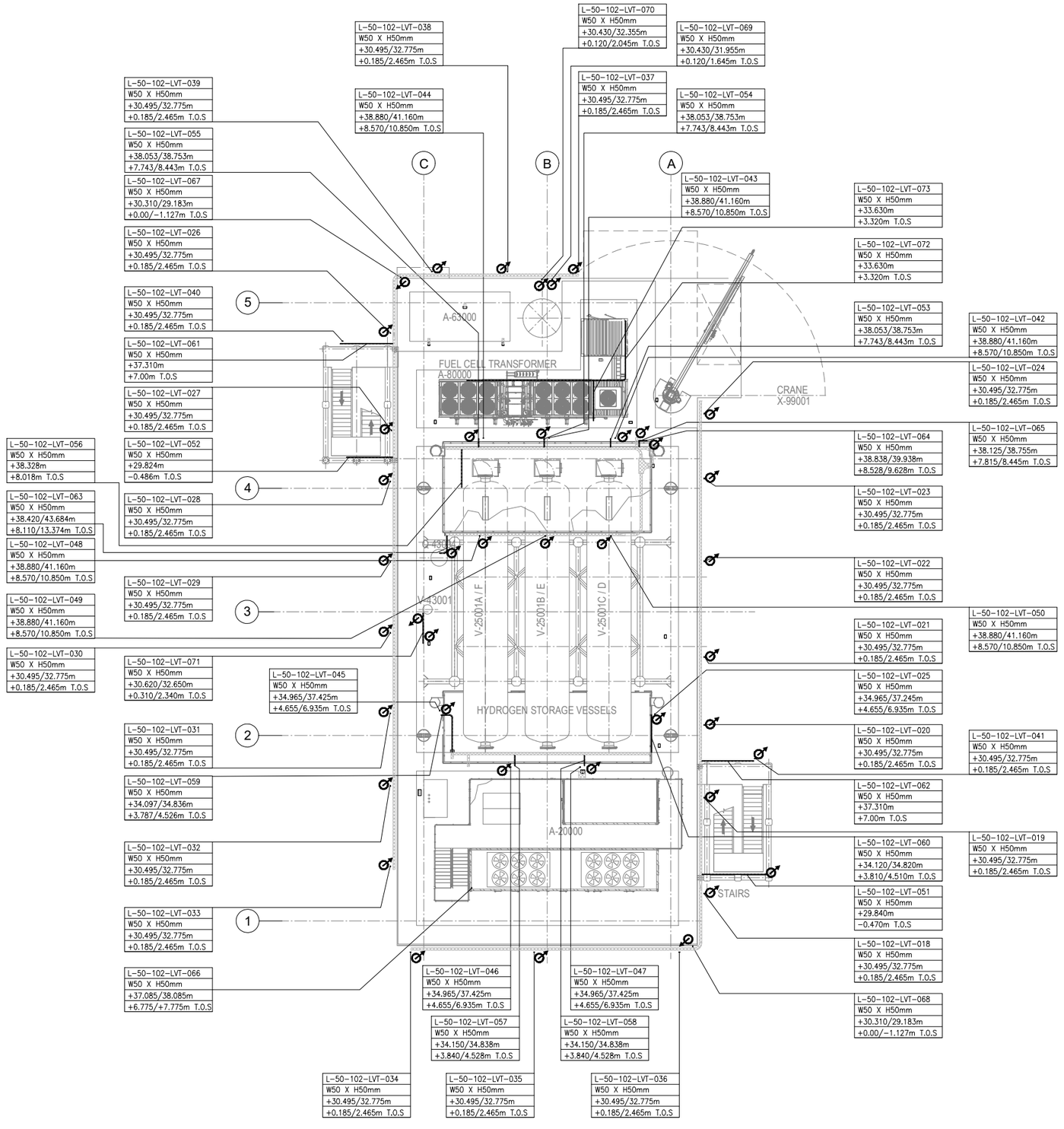
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20107	1of7	01

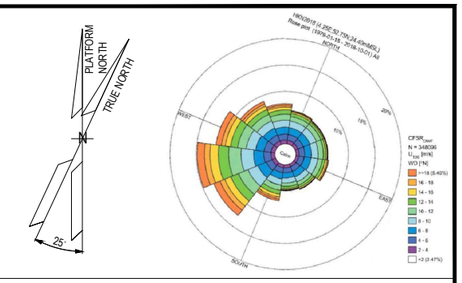
File Name : 123A90-DDL-EL-DL-20107

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE SECTION (uxxx)
- WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20107**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

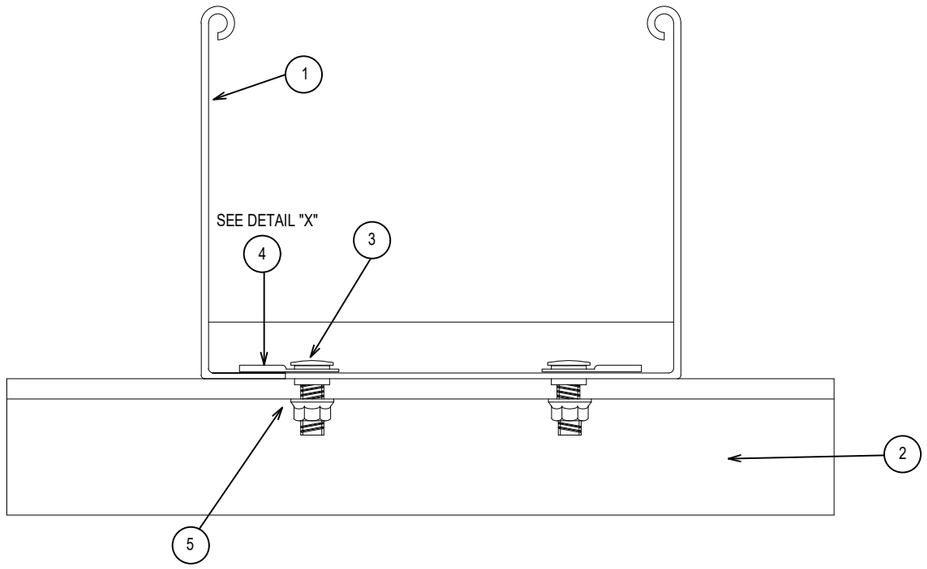
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20107	SHEET 2of7	REV. 01

File Name : 123A90-DDL-EL-DL-20107

CABLE LADDER FIXING ON FRP RACK

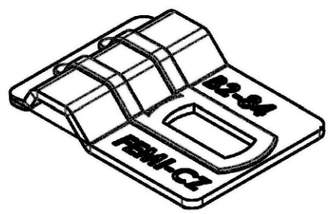
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

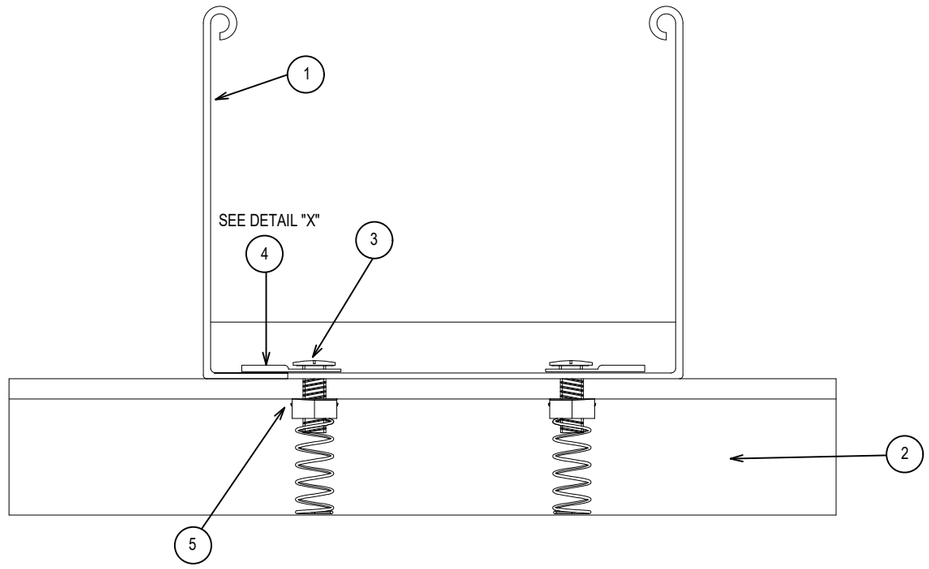
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

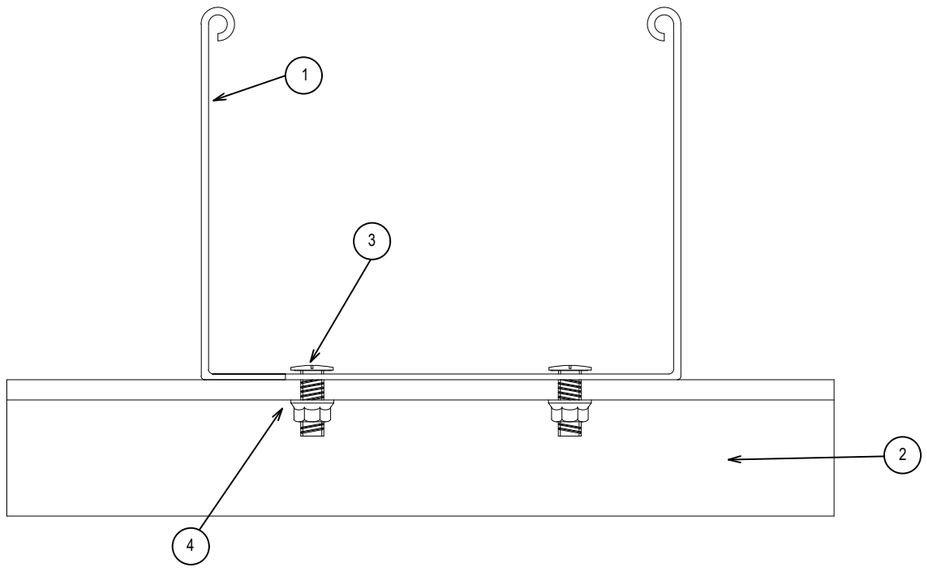
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

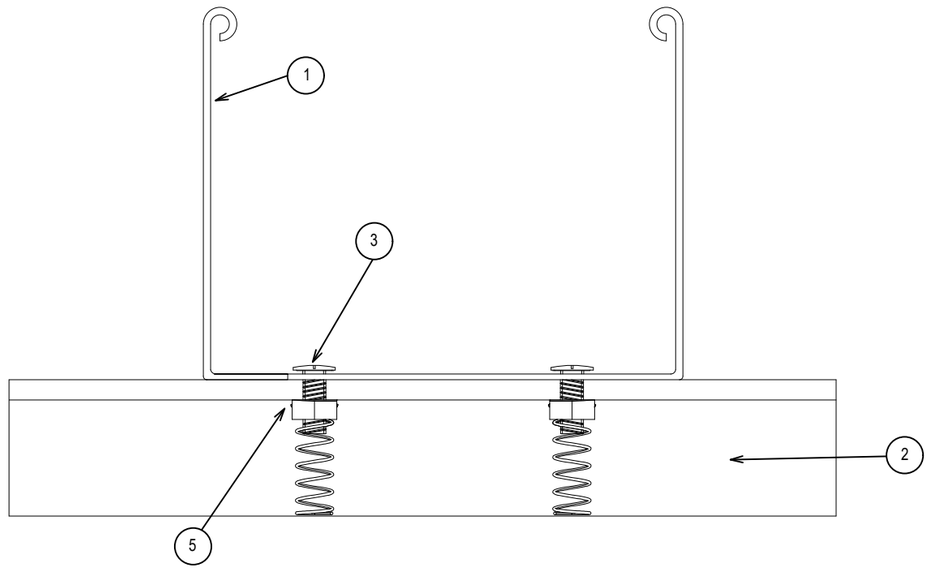


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

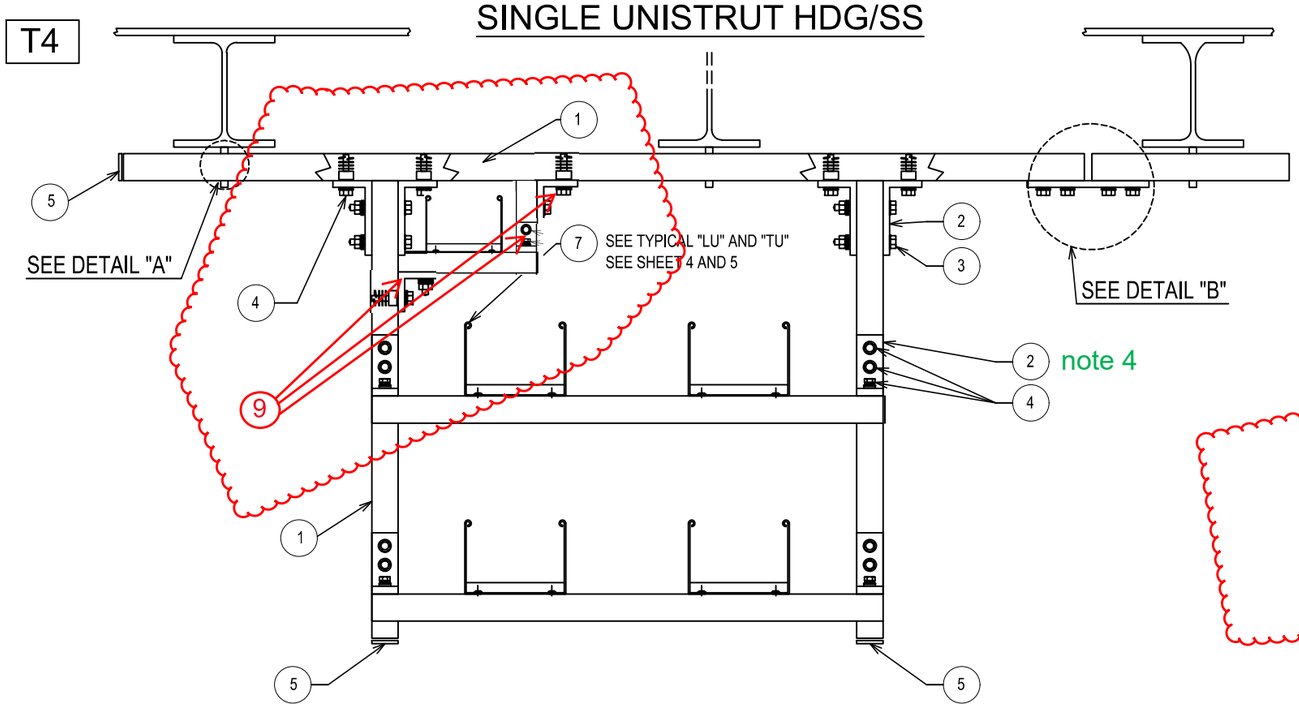
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

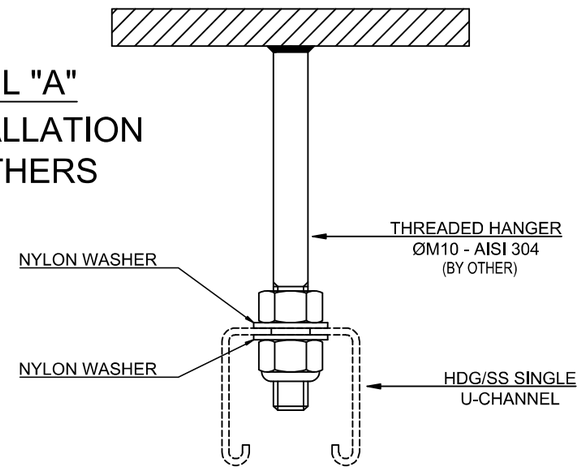
T4

SINGLE UNISTRUT HDG/SS

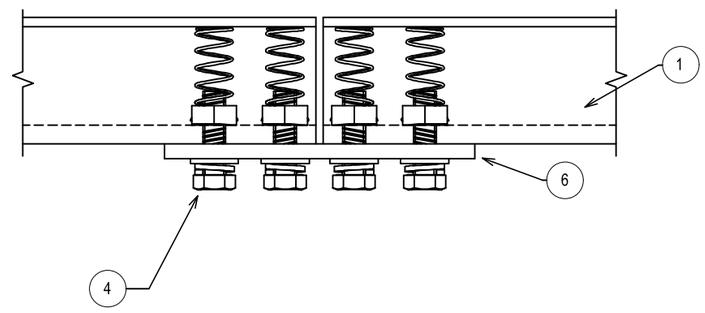


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

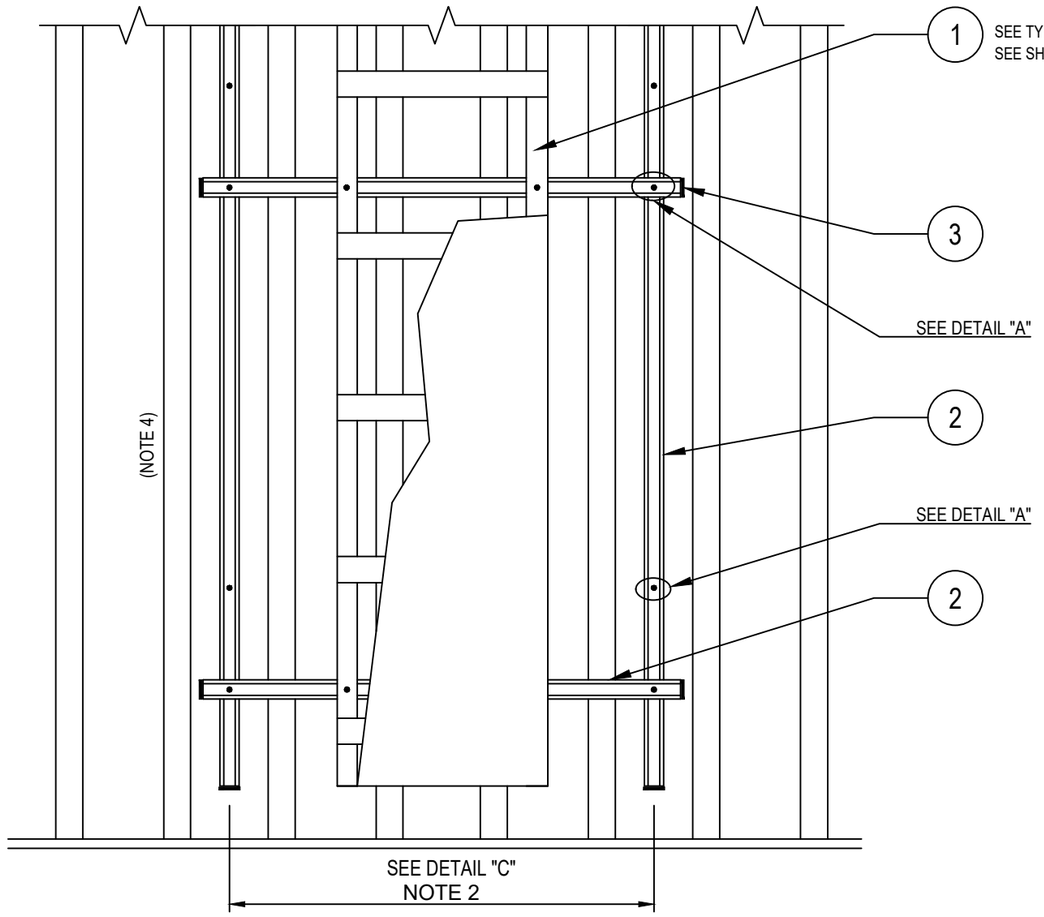
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

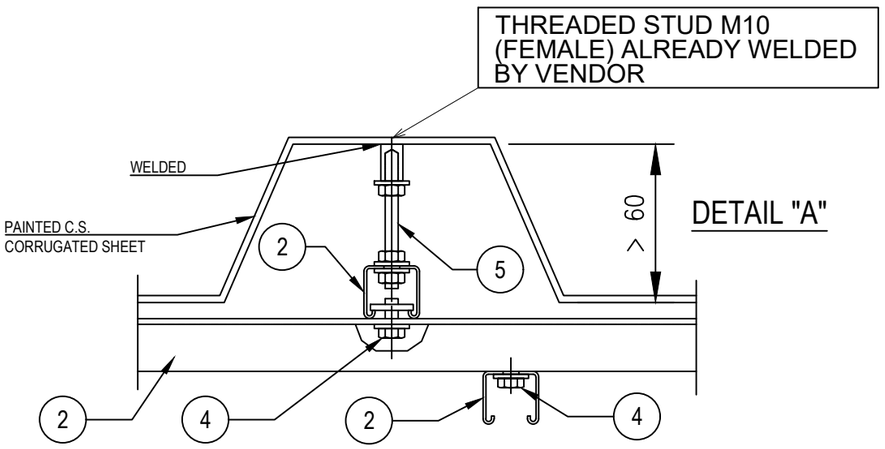
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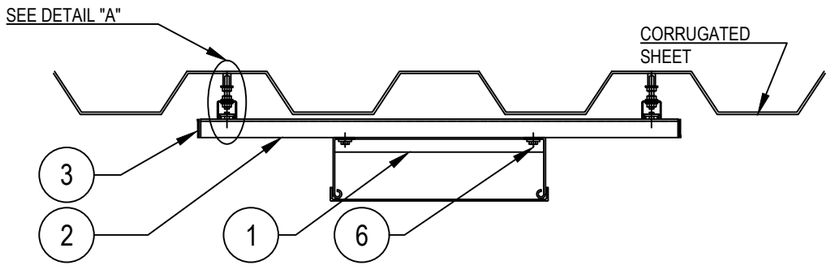
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

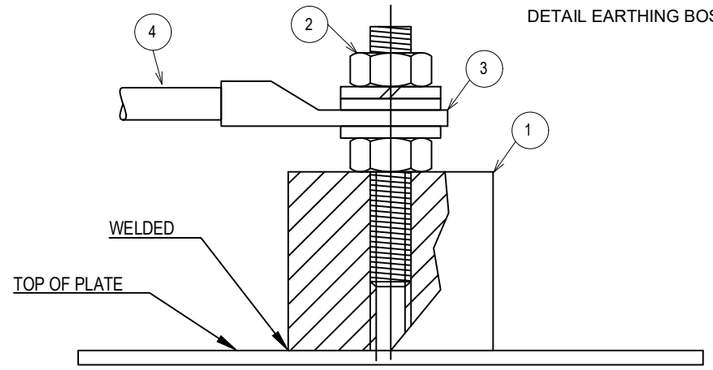
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

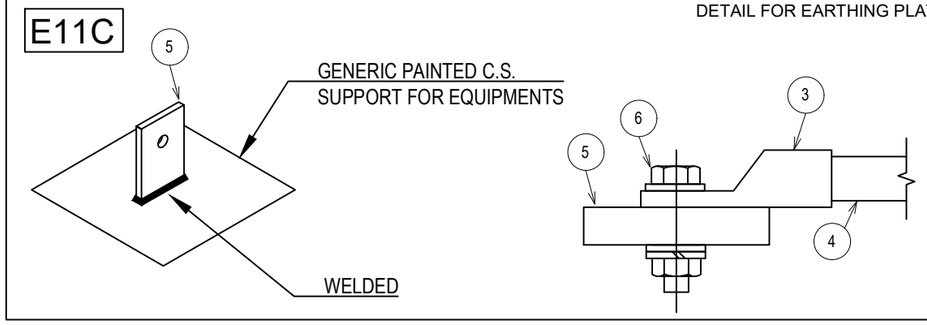
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

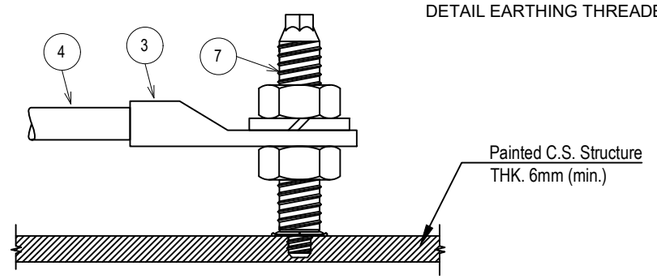


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

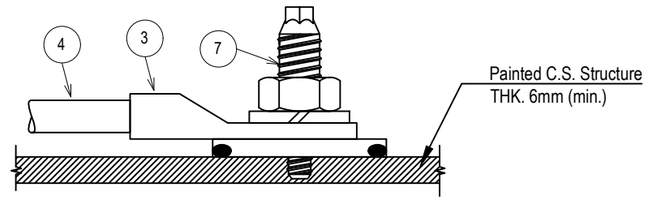


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

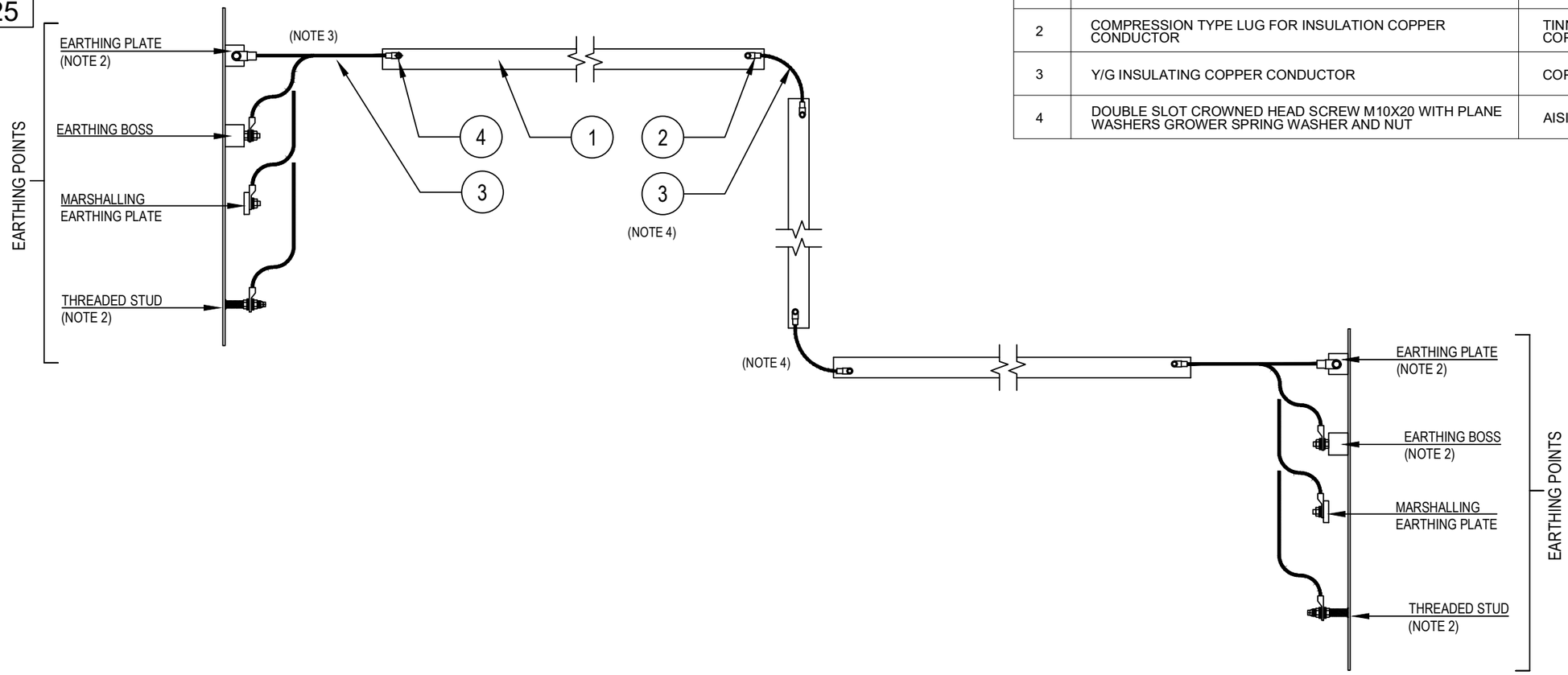
SHEET 003

REV. 02

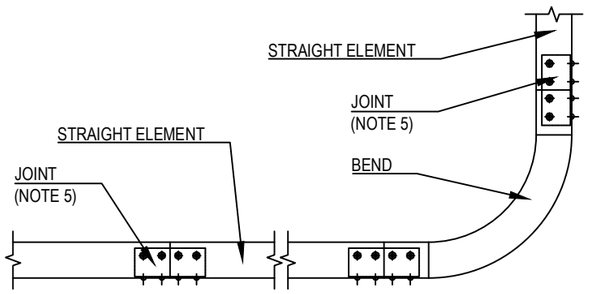
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

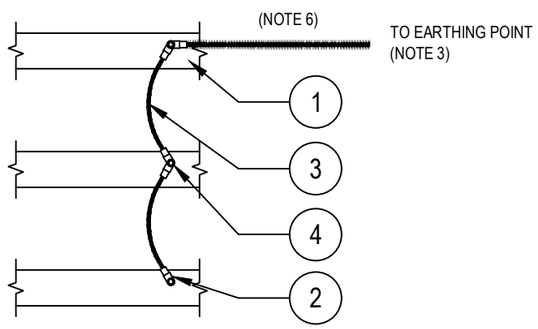
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

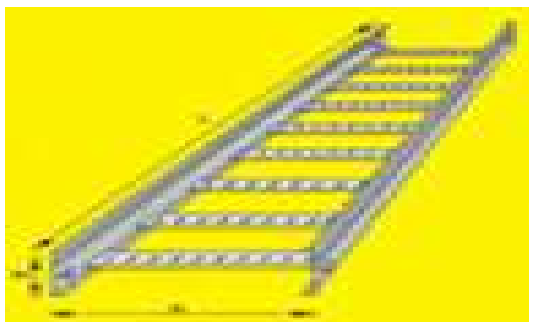
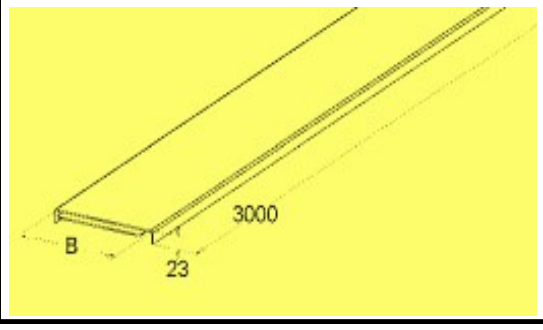
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
38		
39		
40		
41		
42		
43		
44		
45		
46		

47 **NOTES:**

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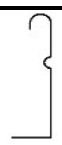
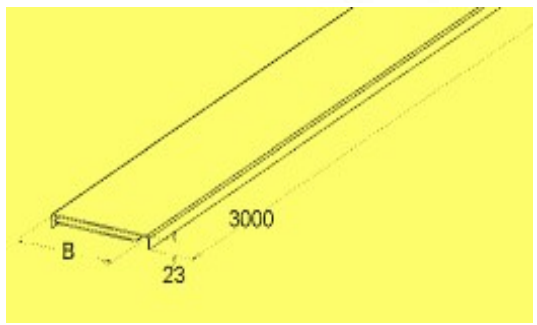
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

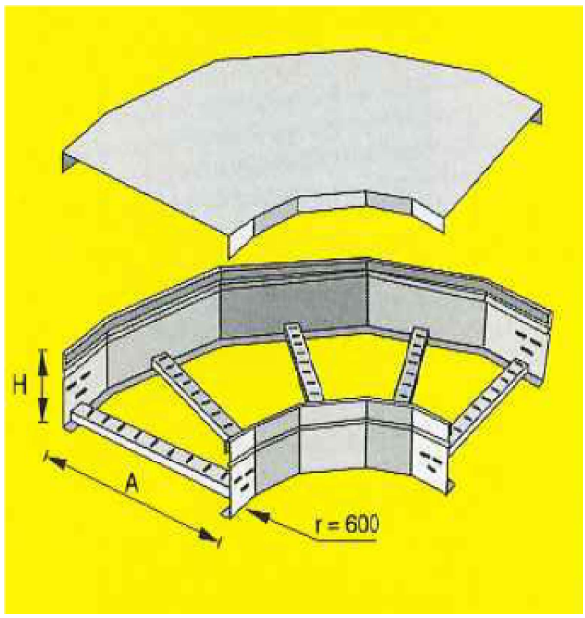
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



15

16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
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44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

52

53

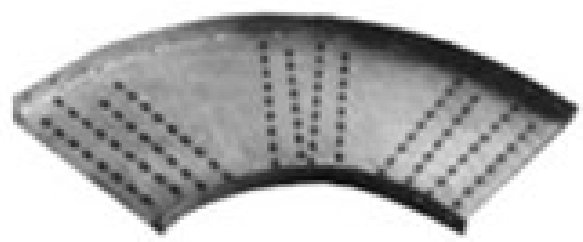
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
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51 **NOTES:**

52

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54

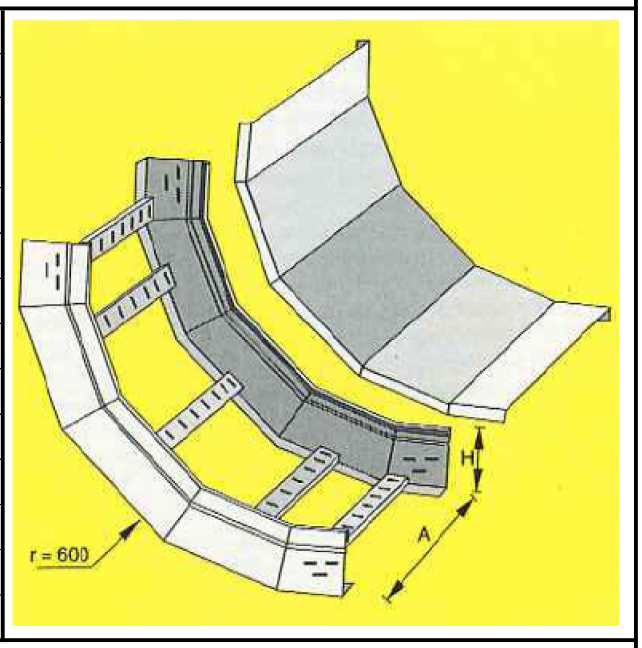
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
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49		

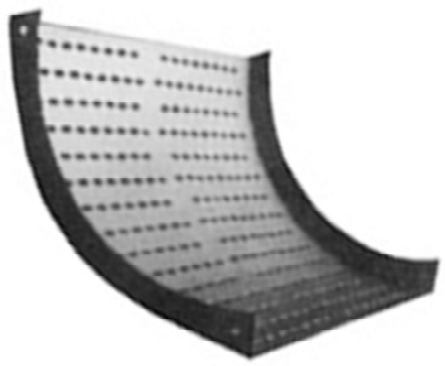
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
44		
45		
46		
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48		
49		

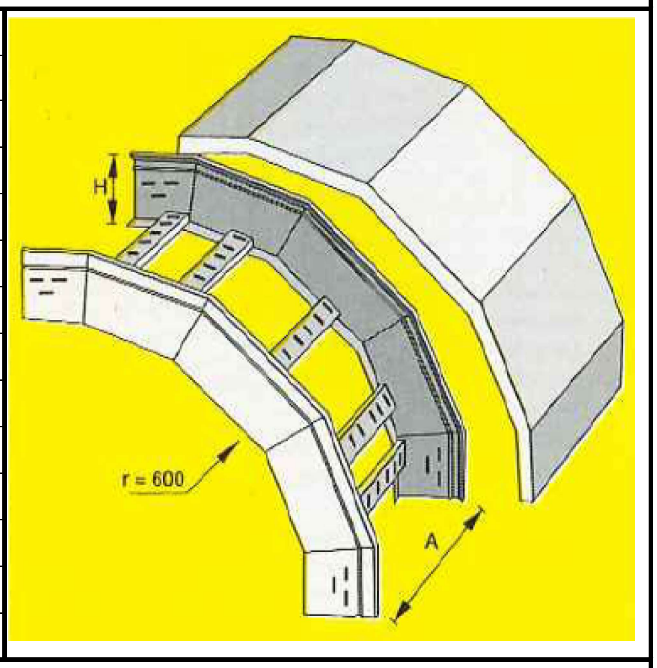
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
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51	**NOTES:**	
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
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51 **NOTES:**

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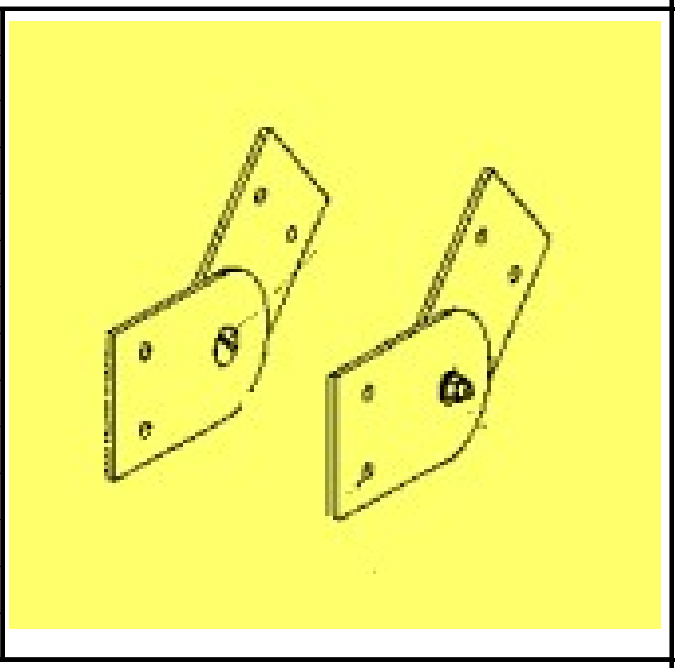
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

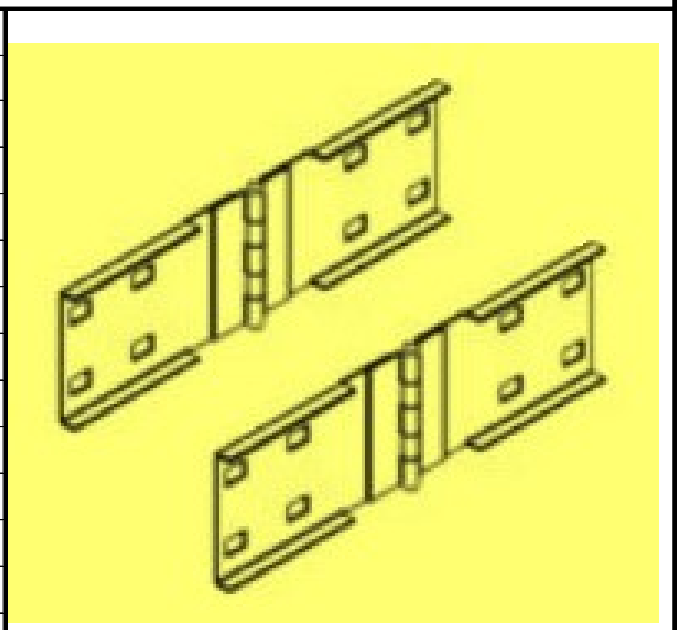
	CODE	REMARKS
28		
29		
30		
31		
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NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

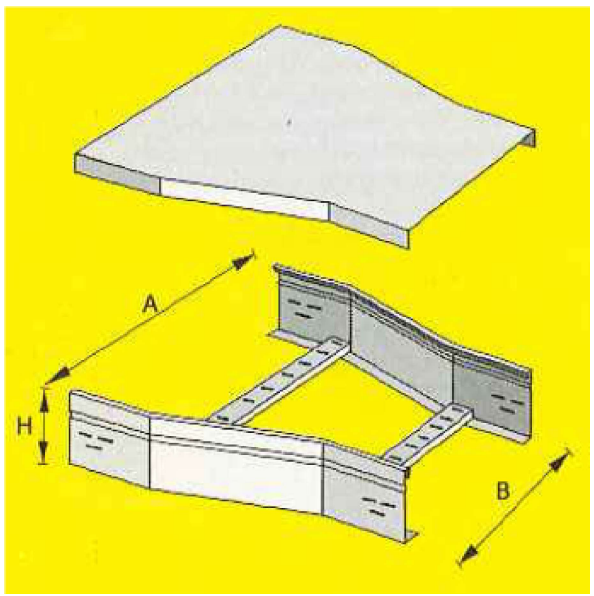
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
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45	**NOTES:**	
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
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42		
43		
44		

45 **NOTES:**

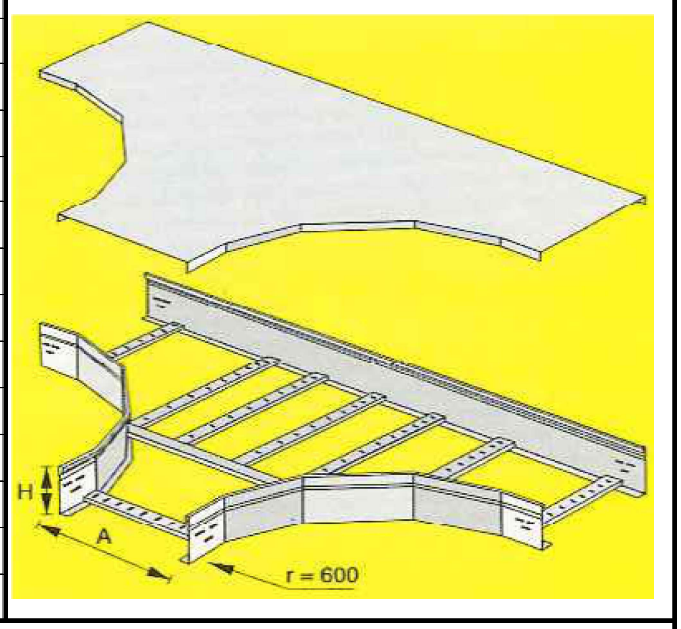
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
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50 **NOTES:**

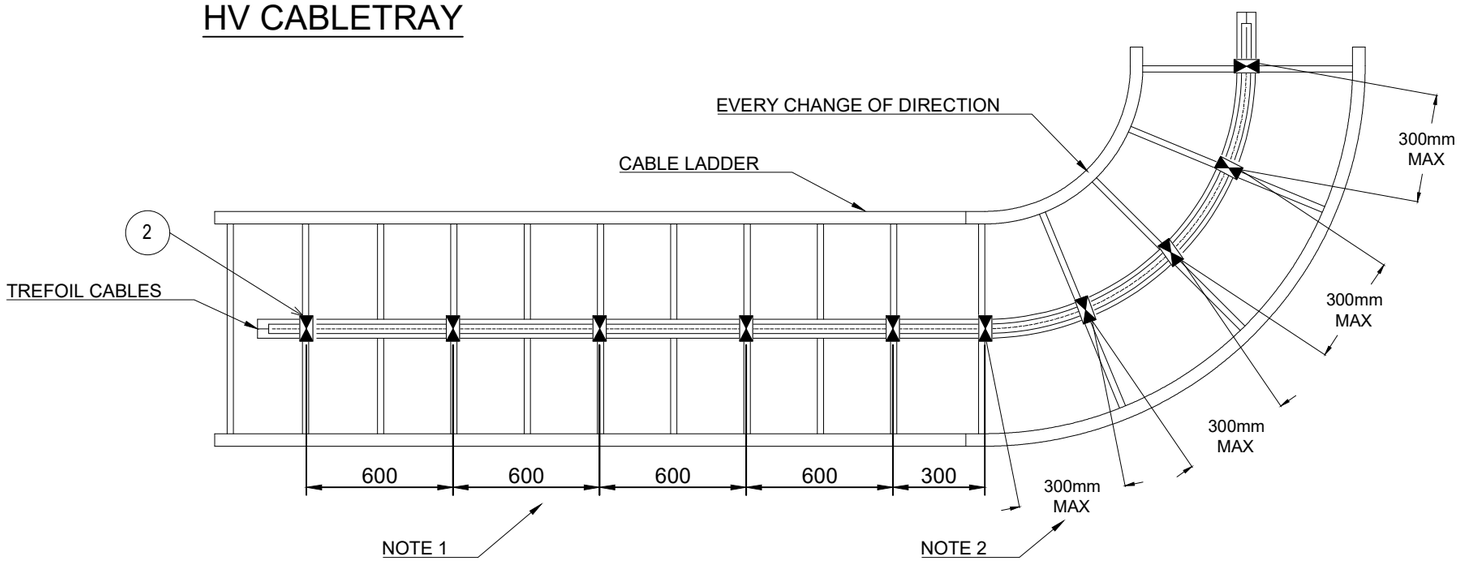
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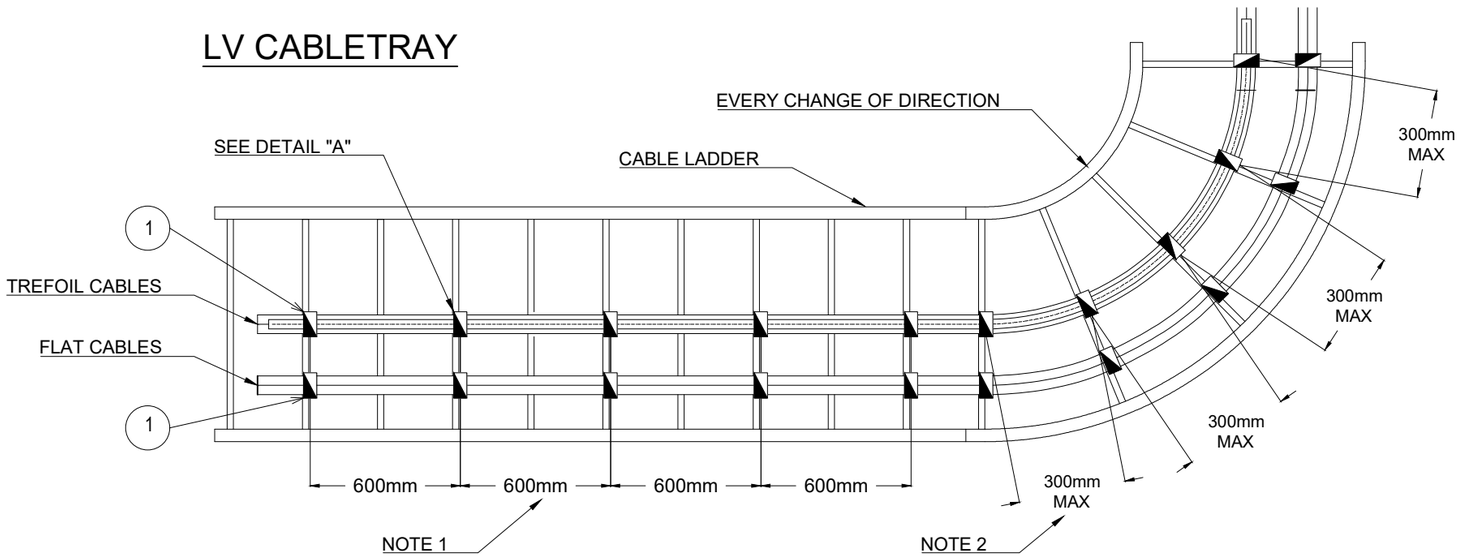
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

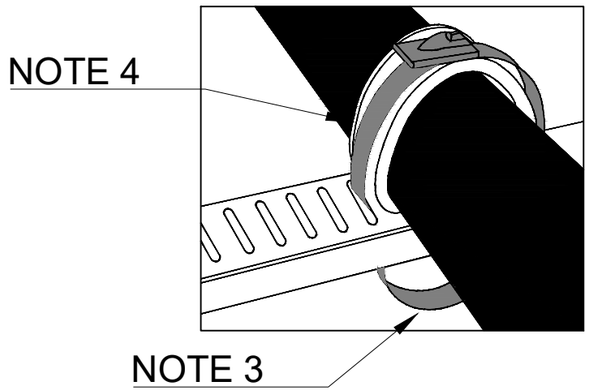
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

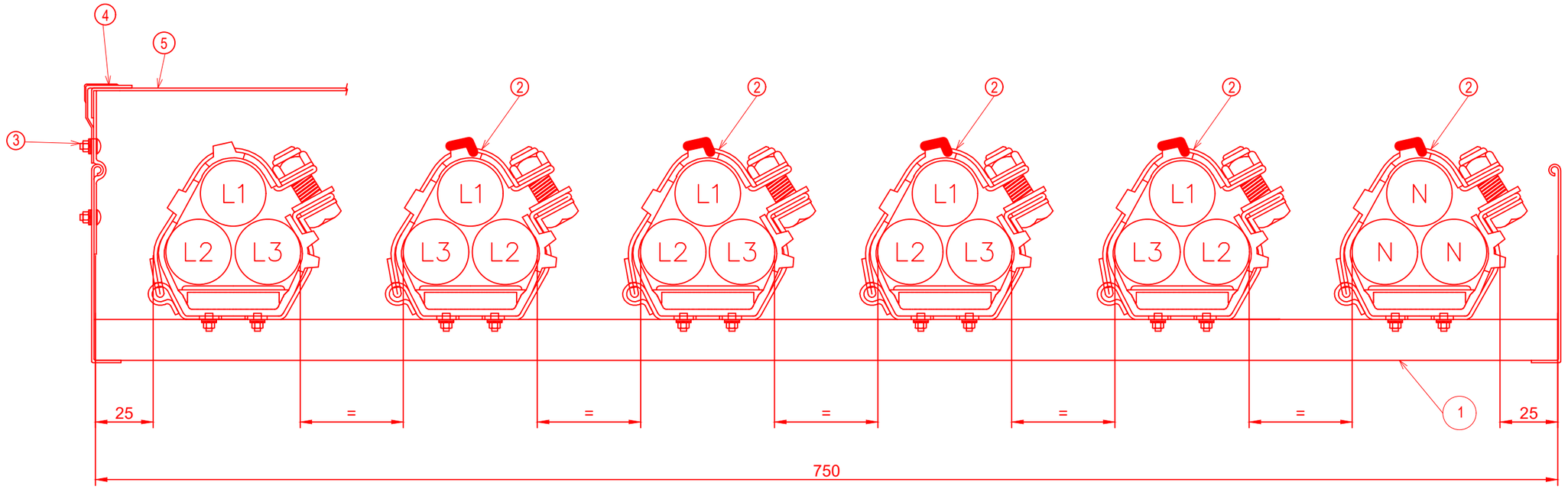
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

ITEM	Tag	CABLE_TRAY_UD_ELE_LV	: Cable Tray Upper Deck - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20107
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B
							Cable Tray/Ladder After pulling

AFTER PULLING

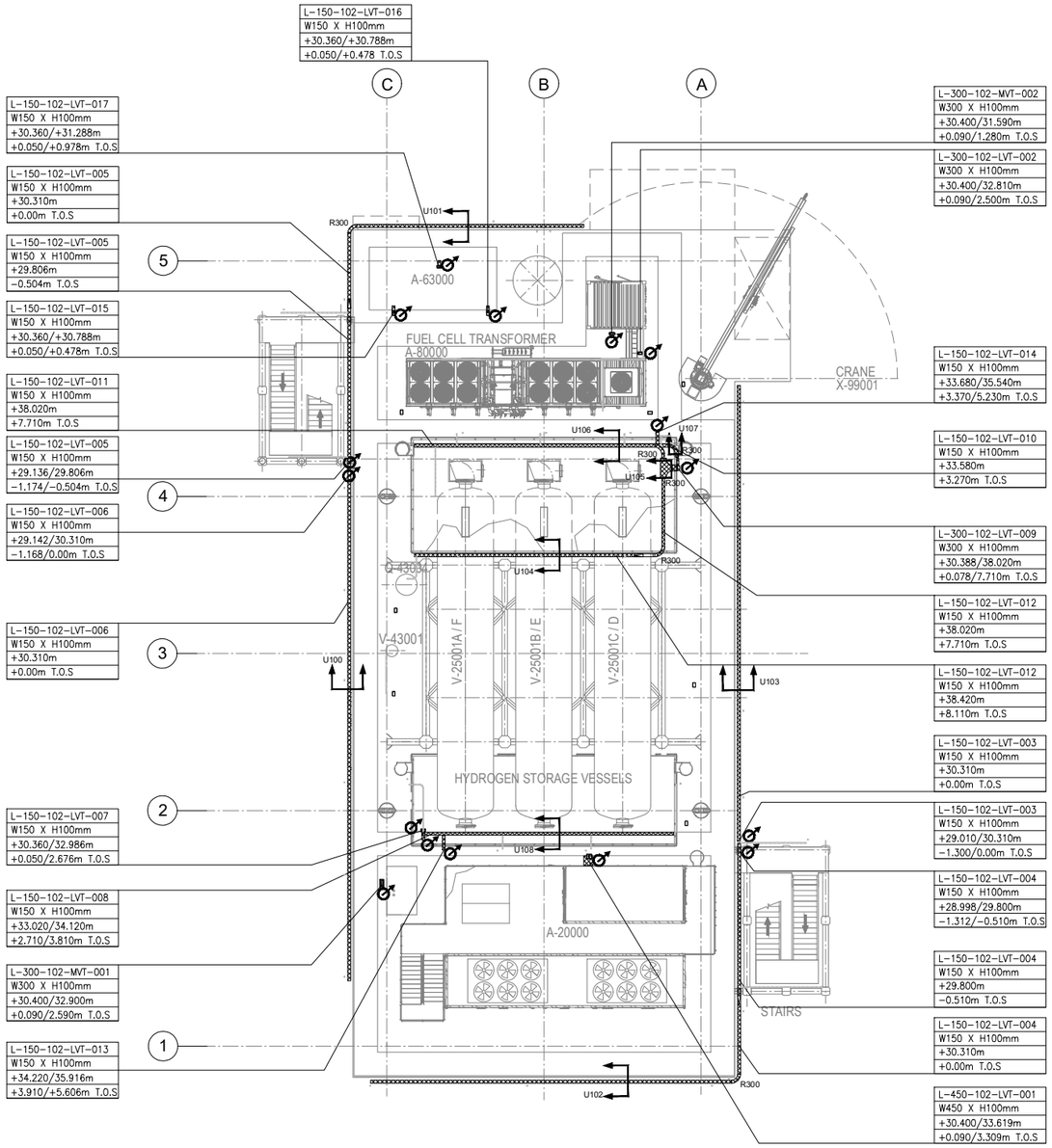
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

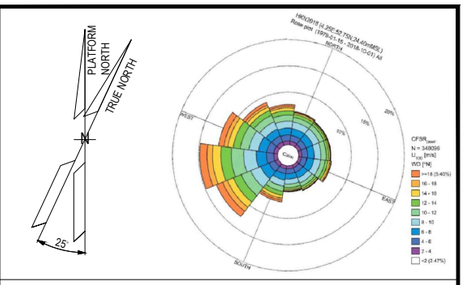
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-03-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:43:11.397Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-03-07T15:48:03.494Z	

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



MAIN CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- UXXX — CABLE SECTION

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20107

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

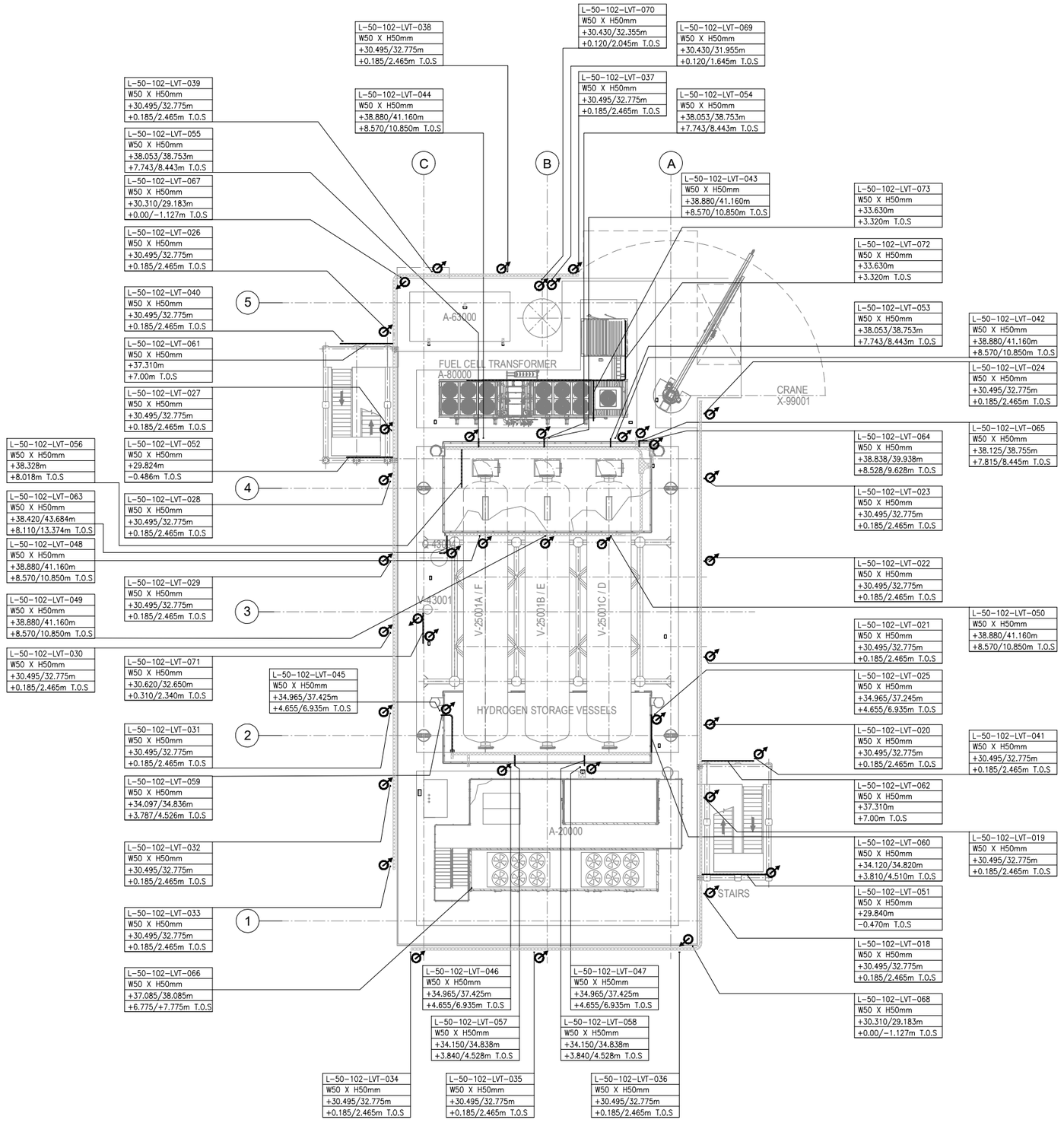
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20107	1of7	01

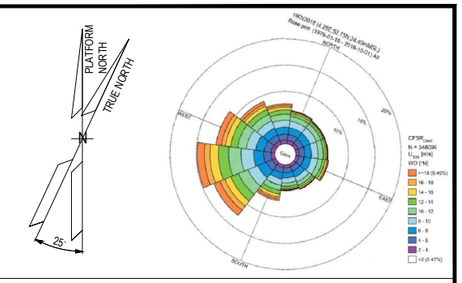
File Name : 123A90-DDL-EL-DL-20107

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE SECTION (uxxx)
- WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20107**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

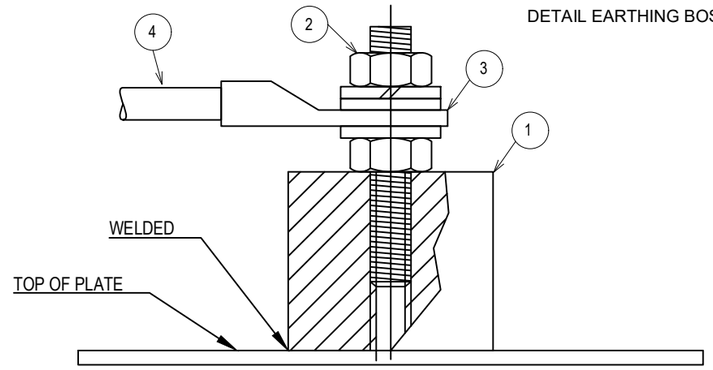
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20107	SHEET 2of7	REV. 01

File Name : 123A90-DDL-EL-DL-20107

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

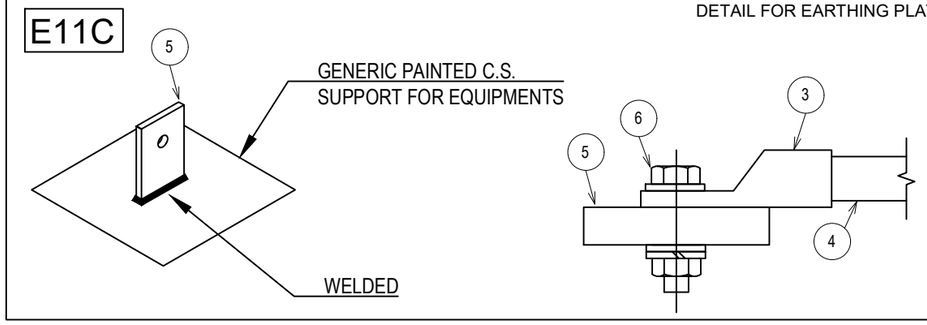
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

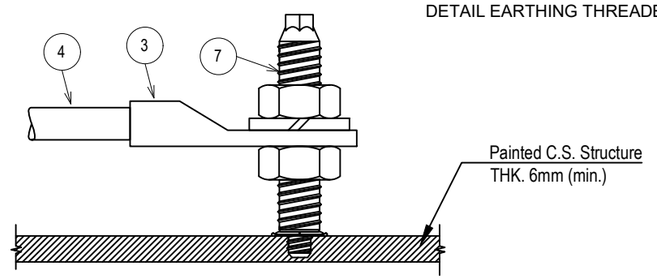


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

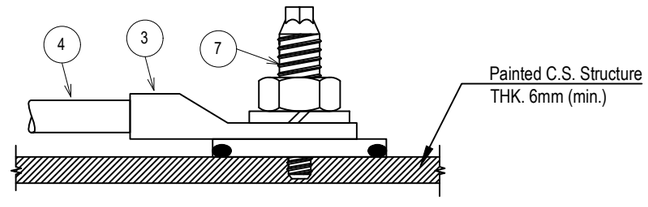


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

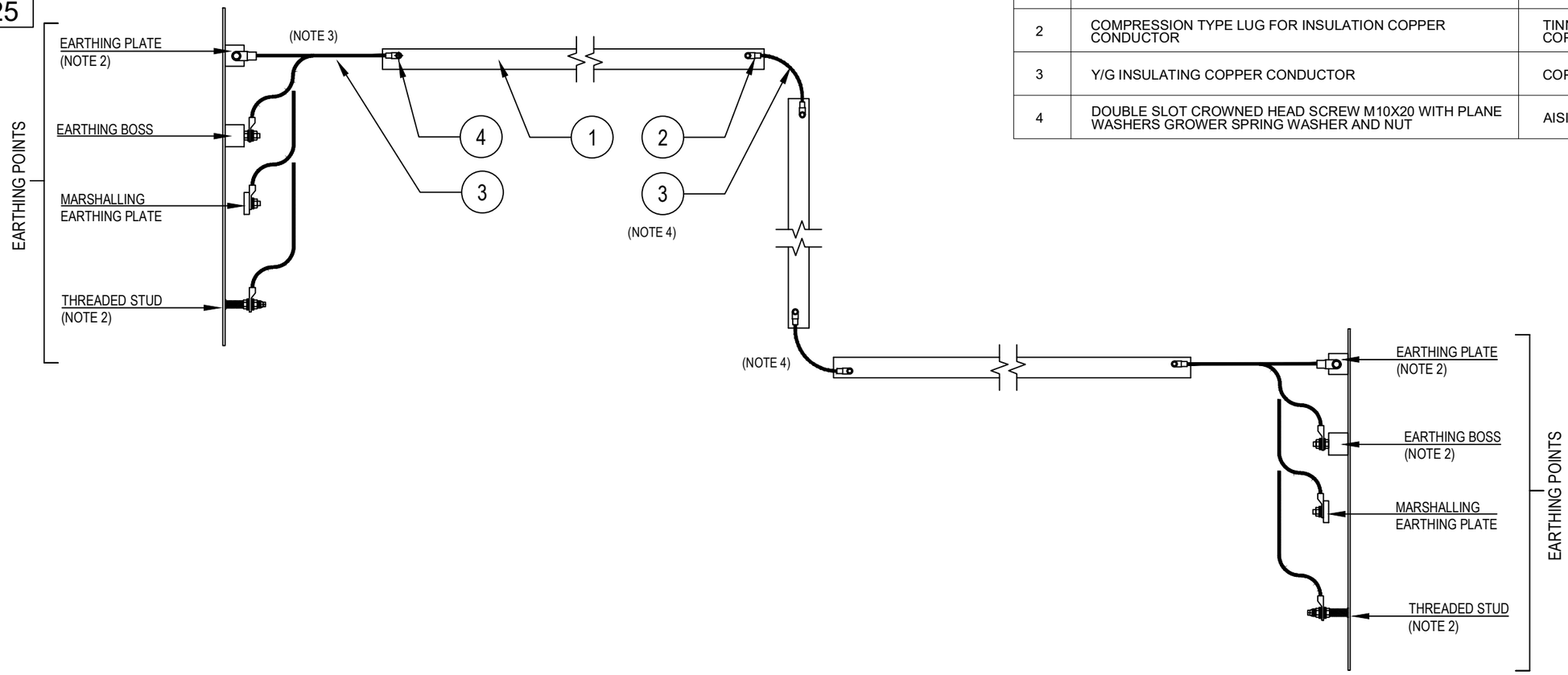
SHEET 003

REV. 02

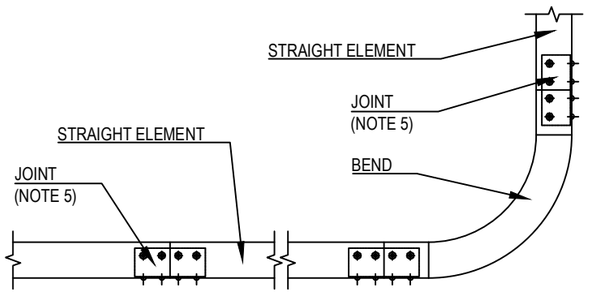
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

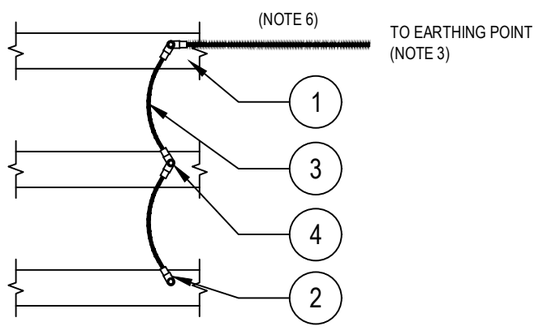
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

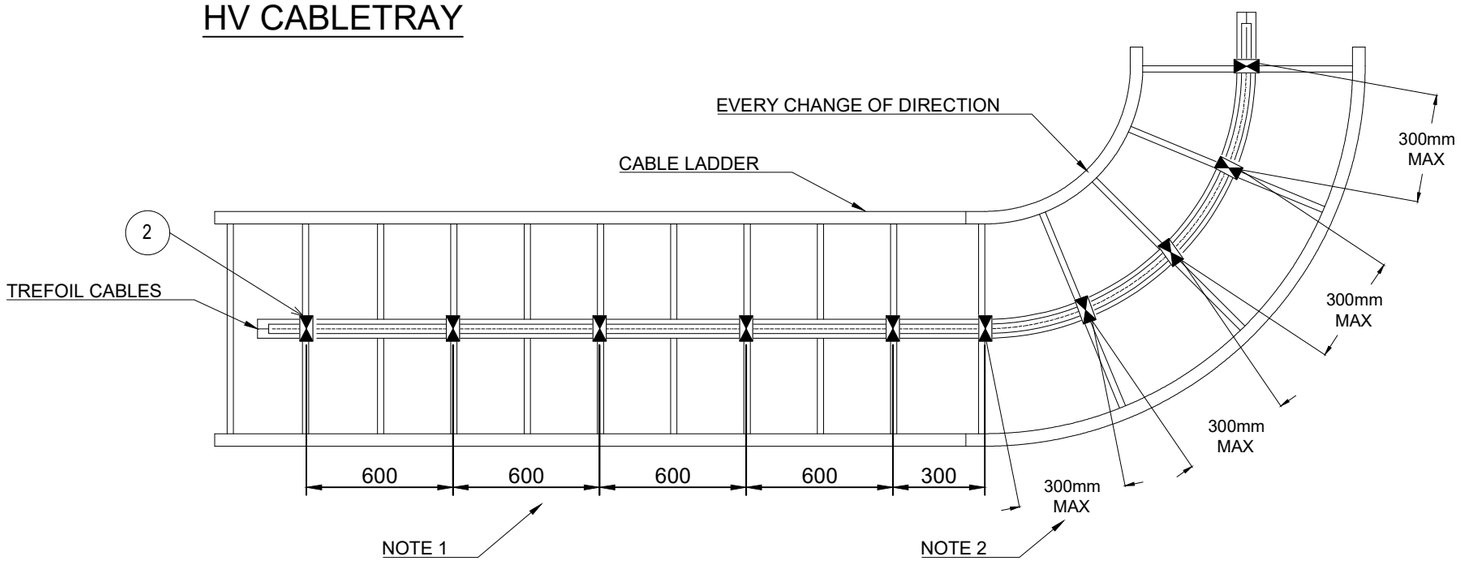
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

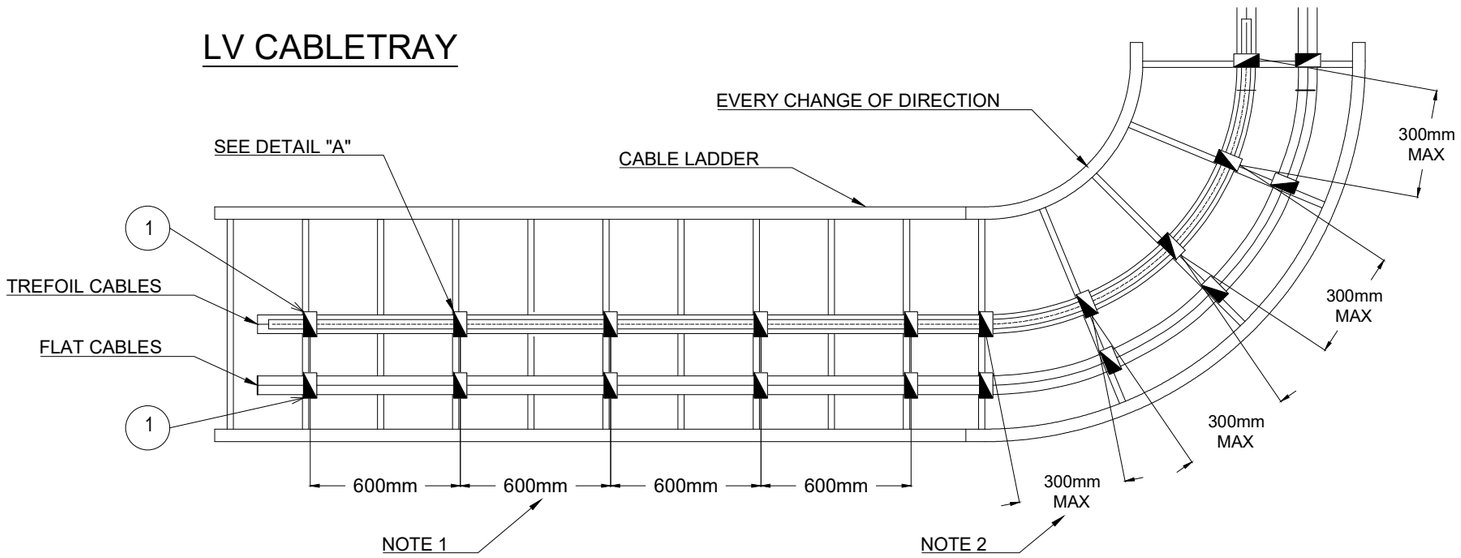
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

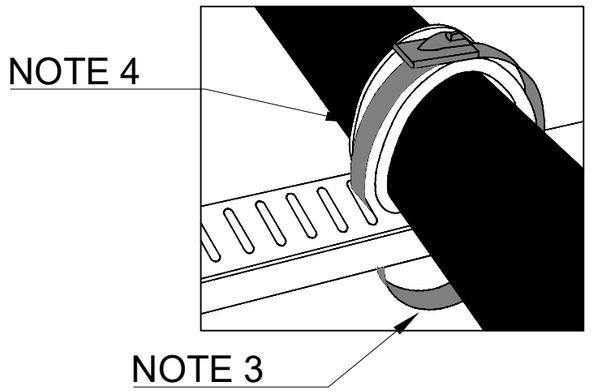
HV CABLETRAY



LV CABLETRAY



DETAIL "A" CABLE CLEATS



NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

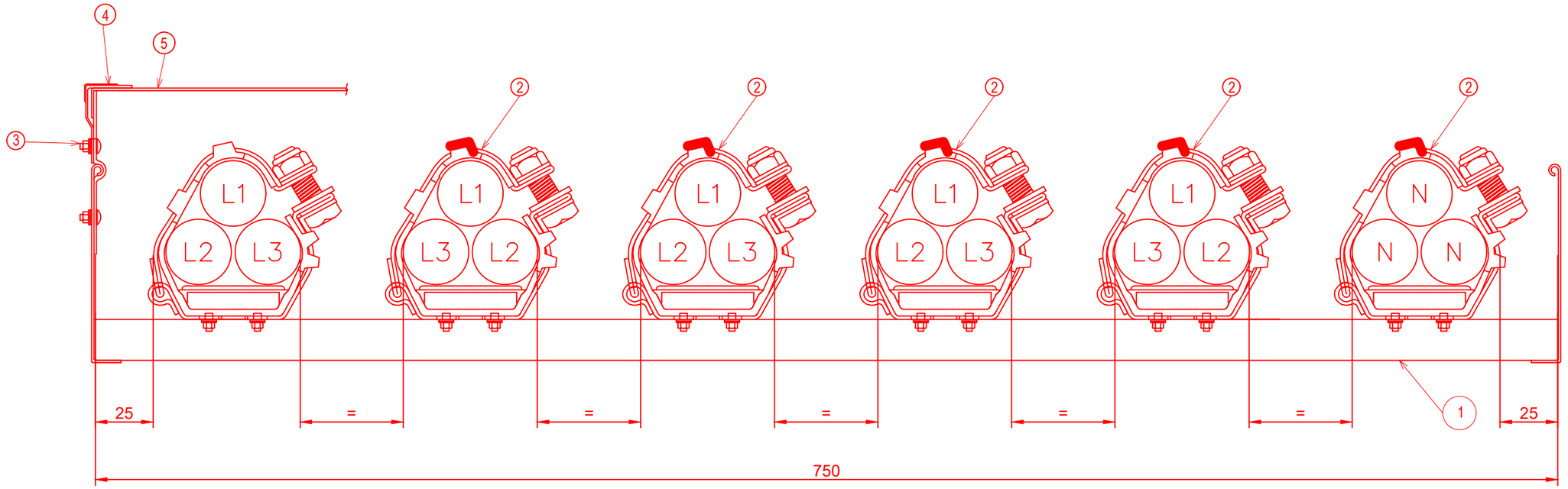
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	CABLE CLEATS	AISI 316L			
3	BOLT, WASHER AND LOCK NUT	AISI 316L	M8x20		
4	COVER SPACER	AISI 316L			
5	COVER	AISI 316L			



NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20092**

REV.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

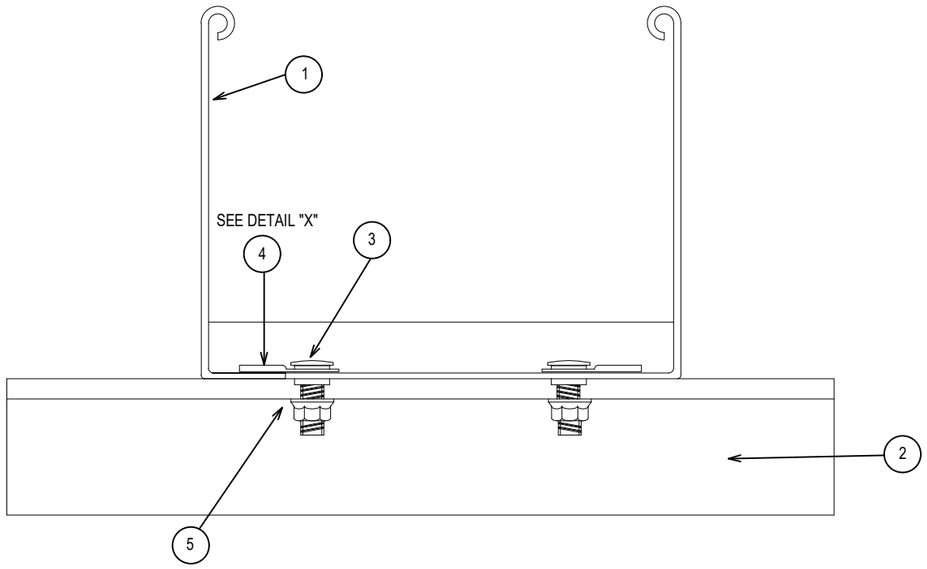
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

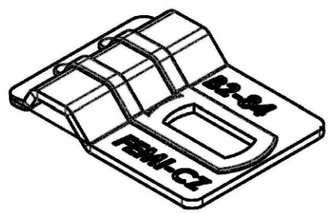
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

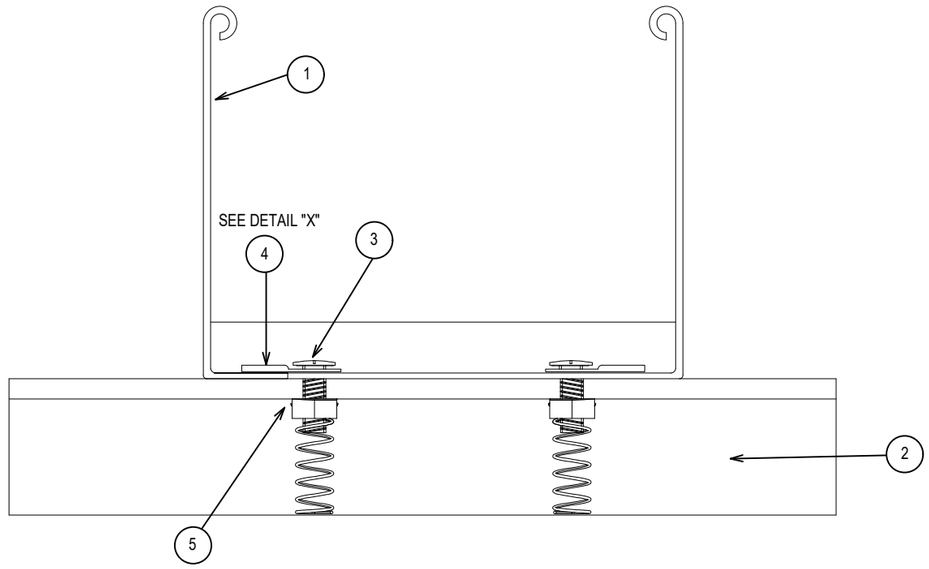
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

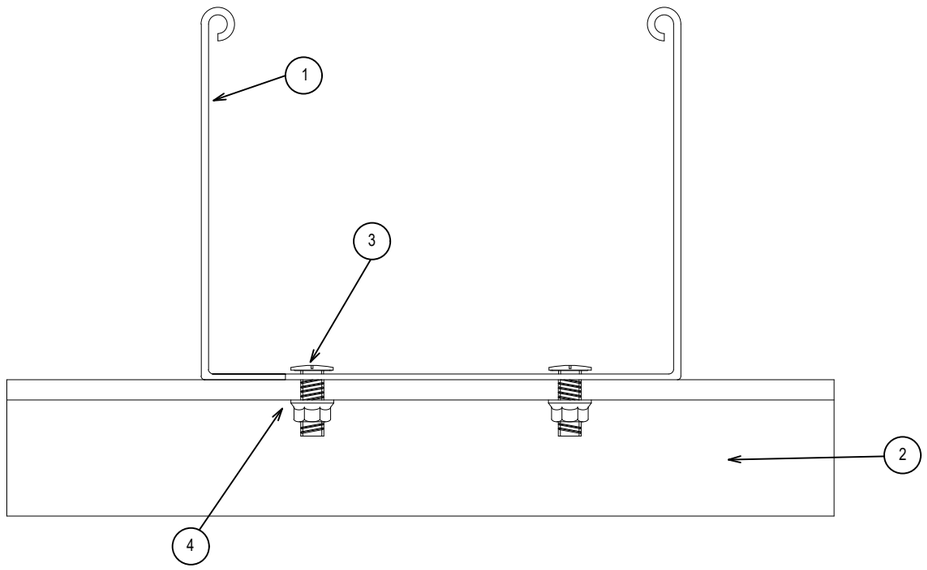
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

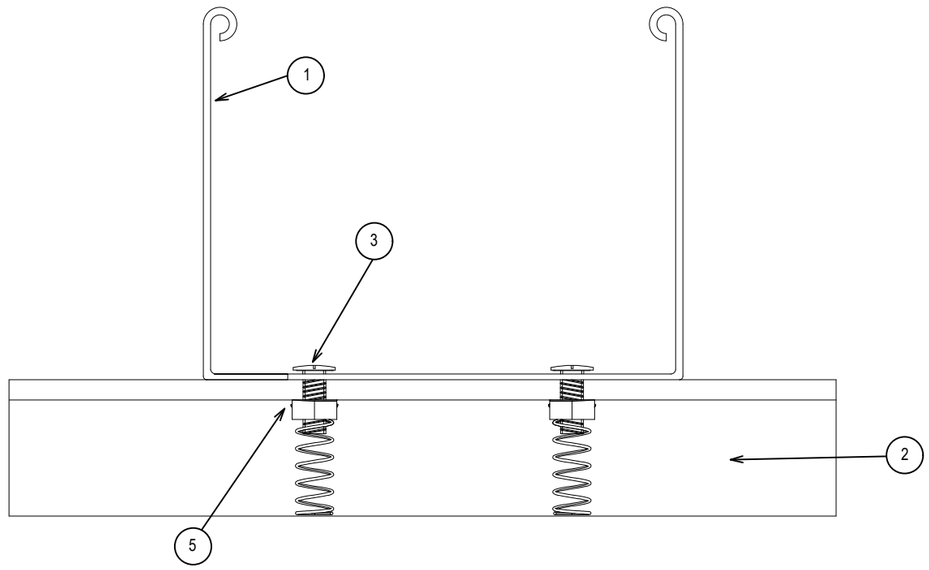


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

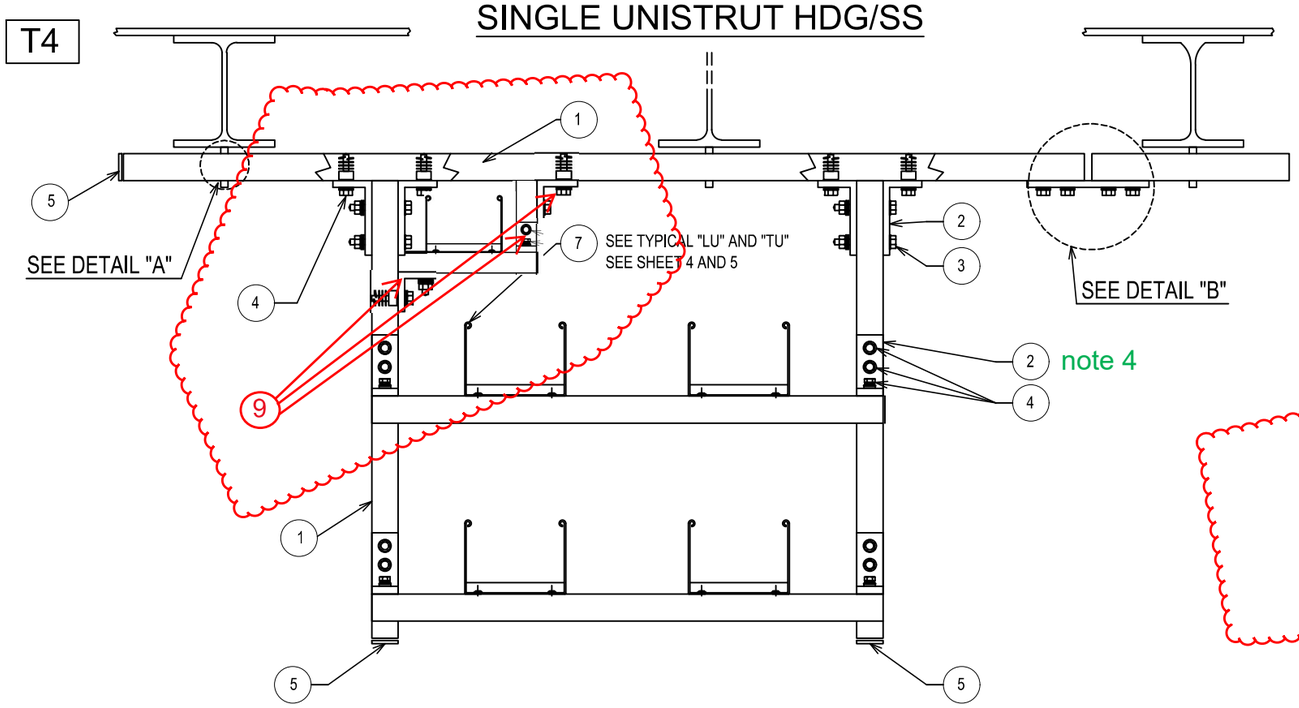
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

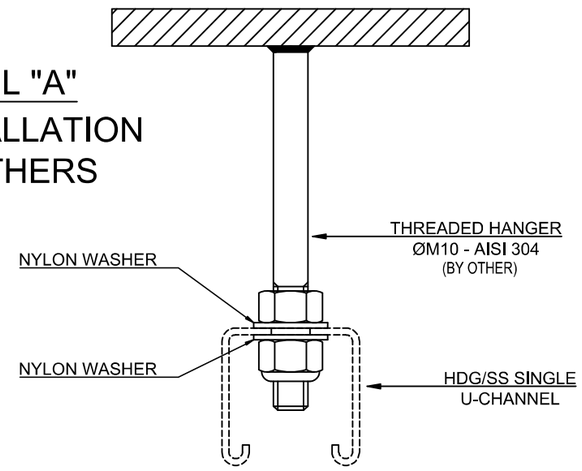
T4

SINGLE UNISTRUT HDG/SS

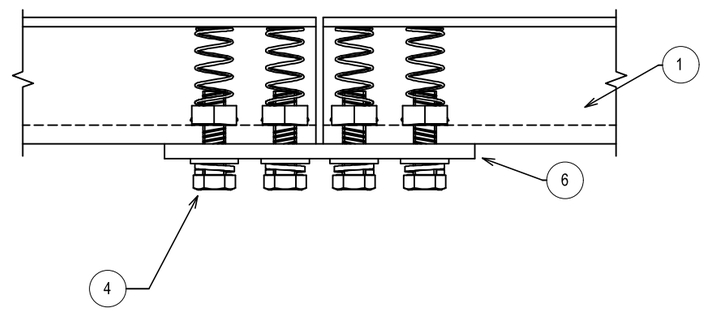


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

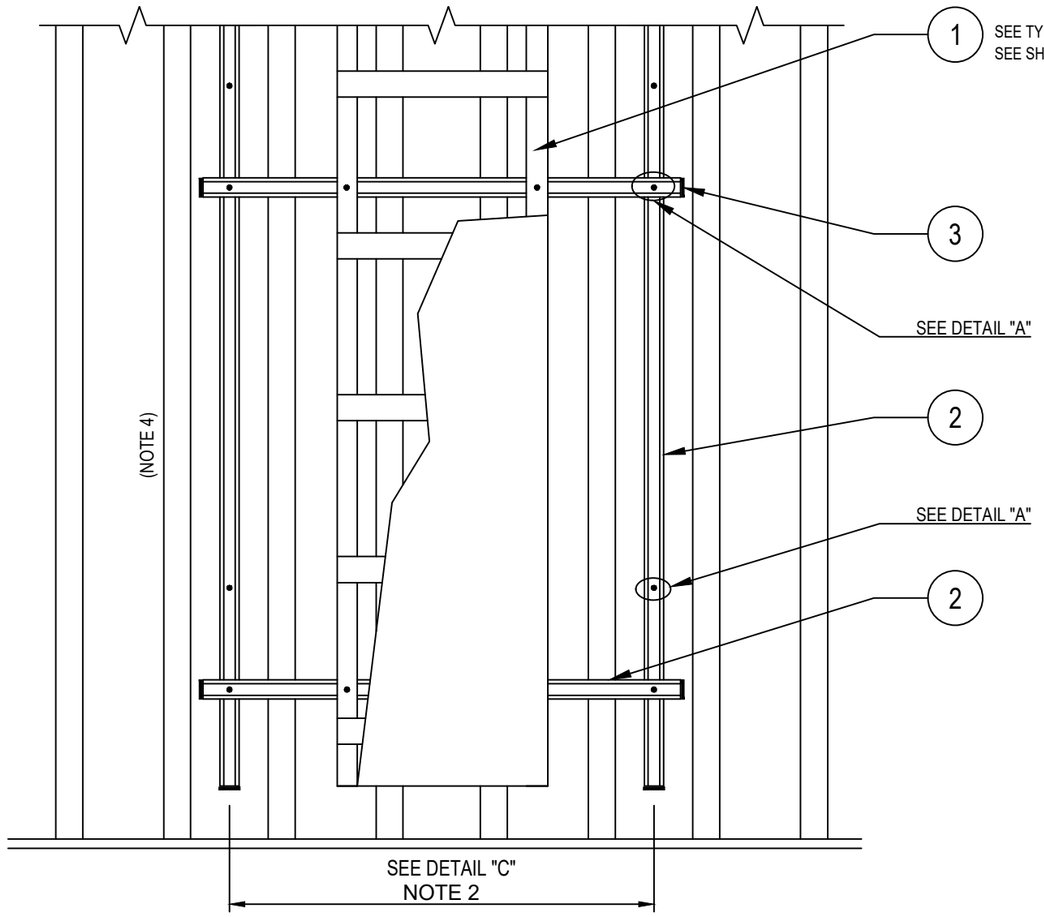
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
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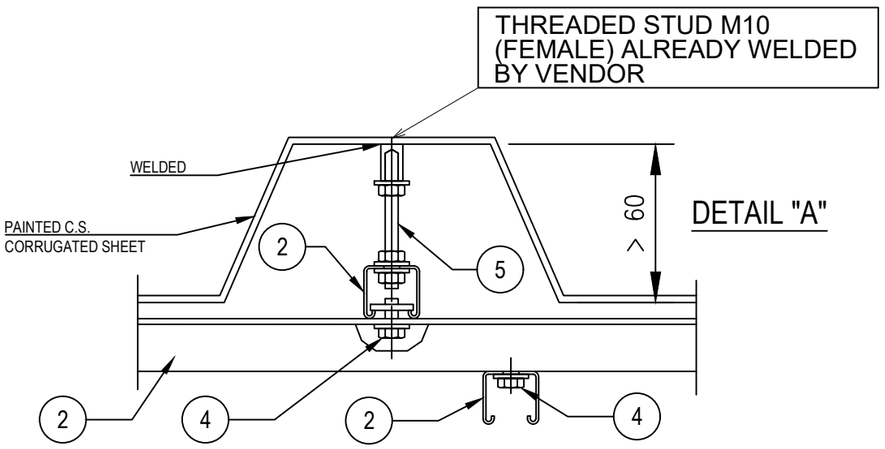
F.to UNI A3: 420mmx297mm

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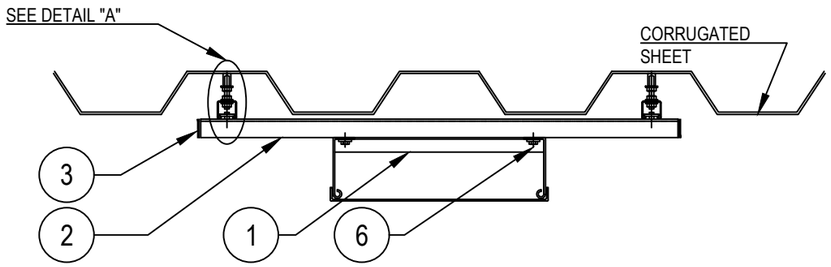
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_UD_ELE_MV	: Cable Tray Upper Deck - Electrical (Medium Voltage)			Dwg	123A90-DDL-EL-DL-20107
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002272		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A Cable Tray/Ladder Before pulling

BEFORE PULLING

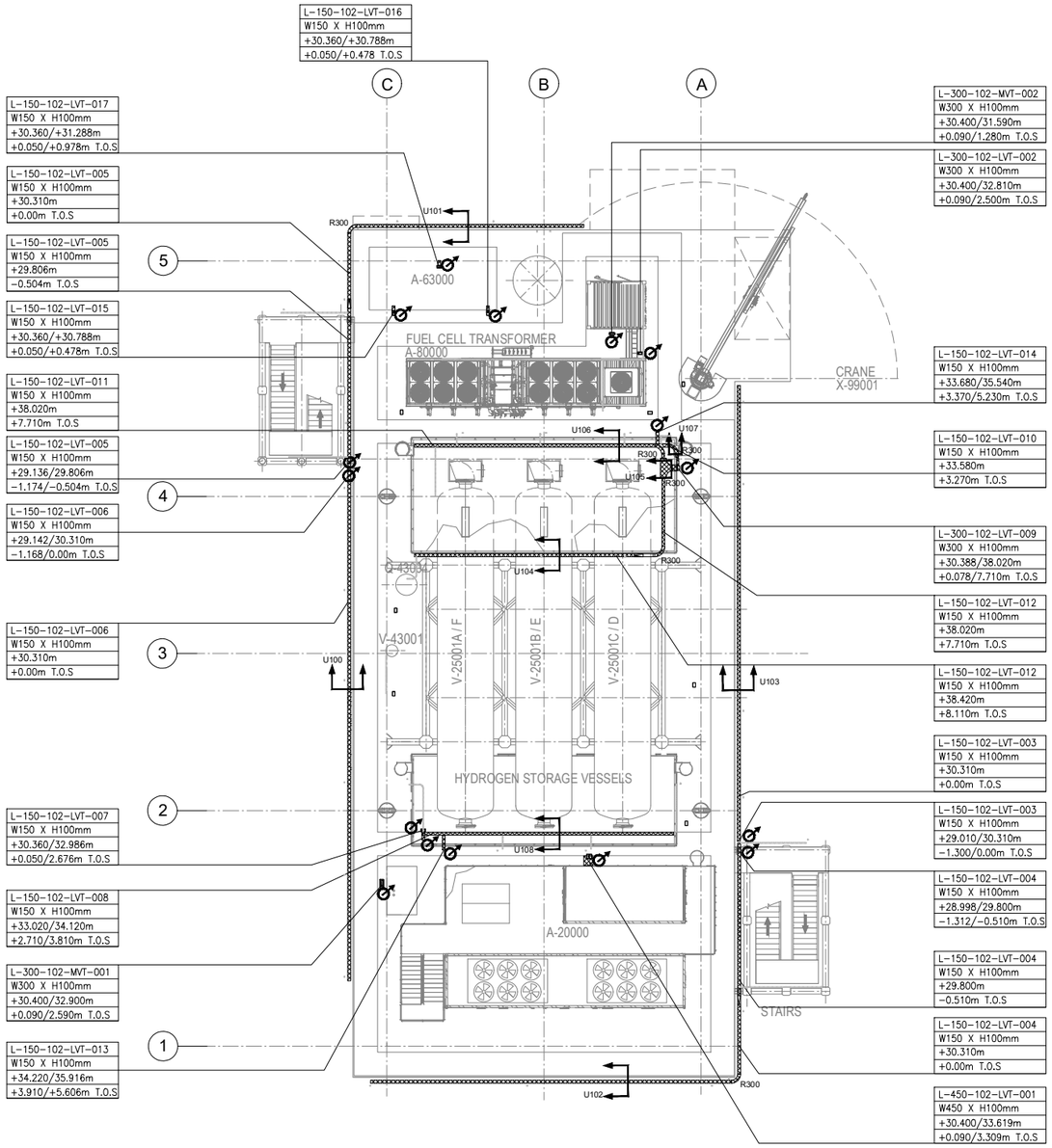
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray (spot check)	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Check Labelling with system and segment number	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

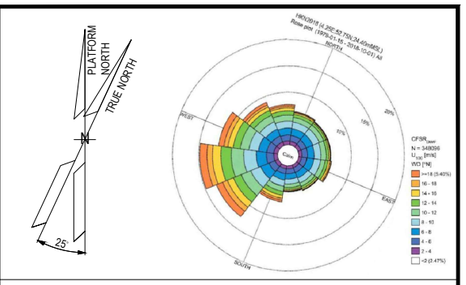
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-03-05	
Signature	Digitaly signed by Michele Tartaglia 2025-01-04T11:00:31.496Z	Digitaly signed by Paolo Schintu 2025-03-05T09:26:51.627Z	

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



MAIN CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- UXXX — CABLE SECTION

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20107

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

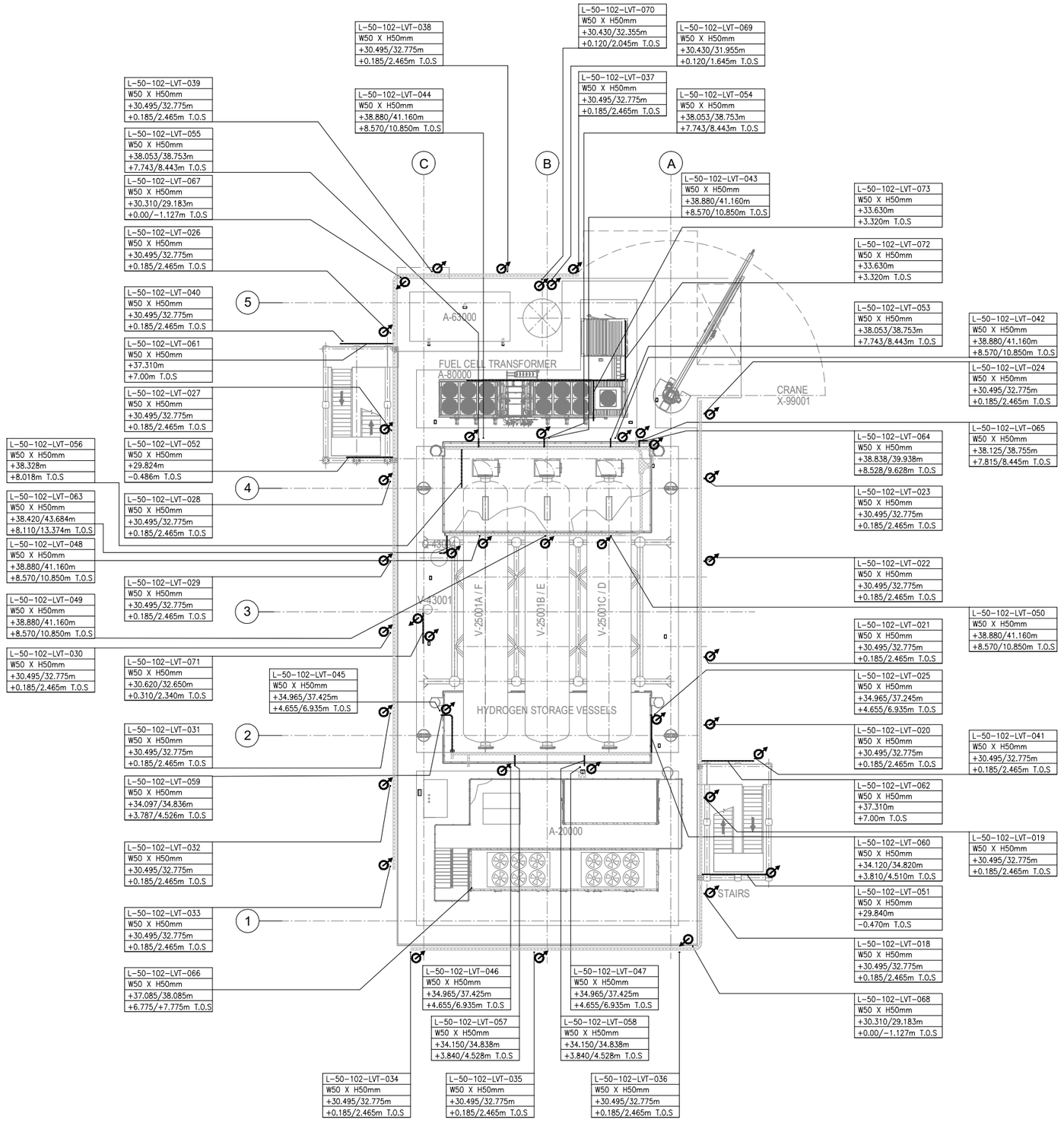
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20107	1of7	01

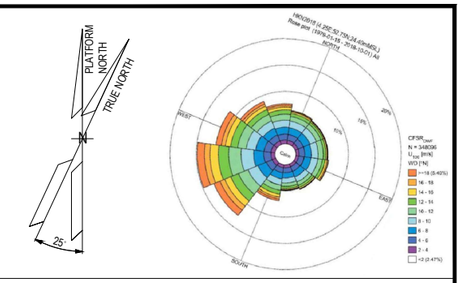
File Name : 123A90-DDL-EL-DL-20107

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE SECTION (uxxx)
- WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20107**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

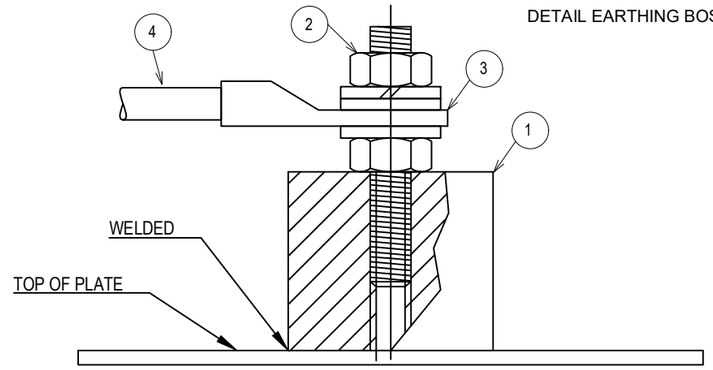
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DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20107	SHEET 2of7	REV. 01

File Name : 123A90-DDL-EL-DL-20107

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

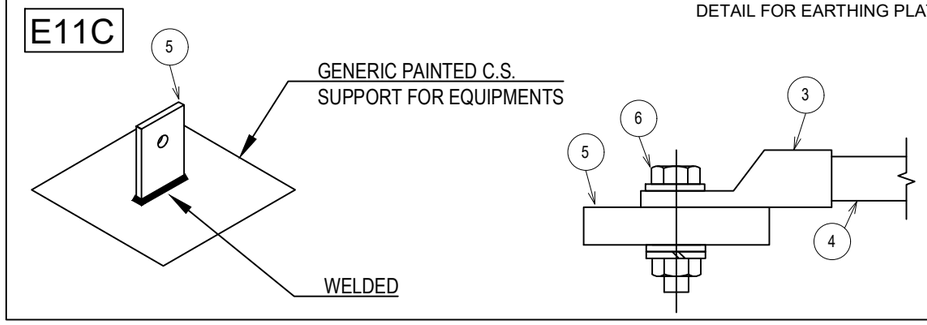
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

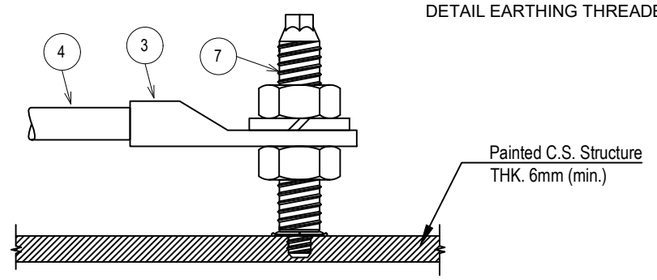


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

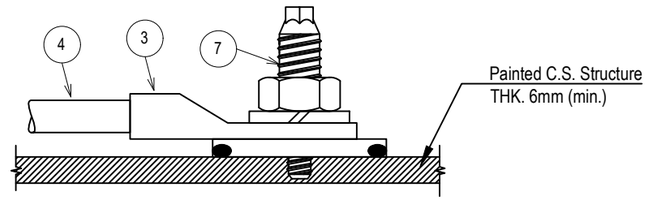


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

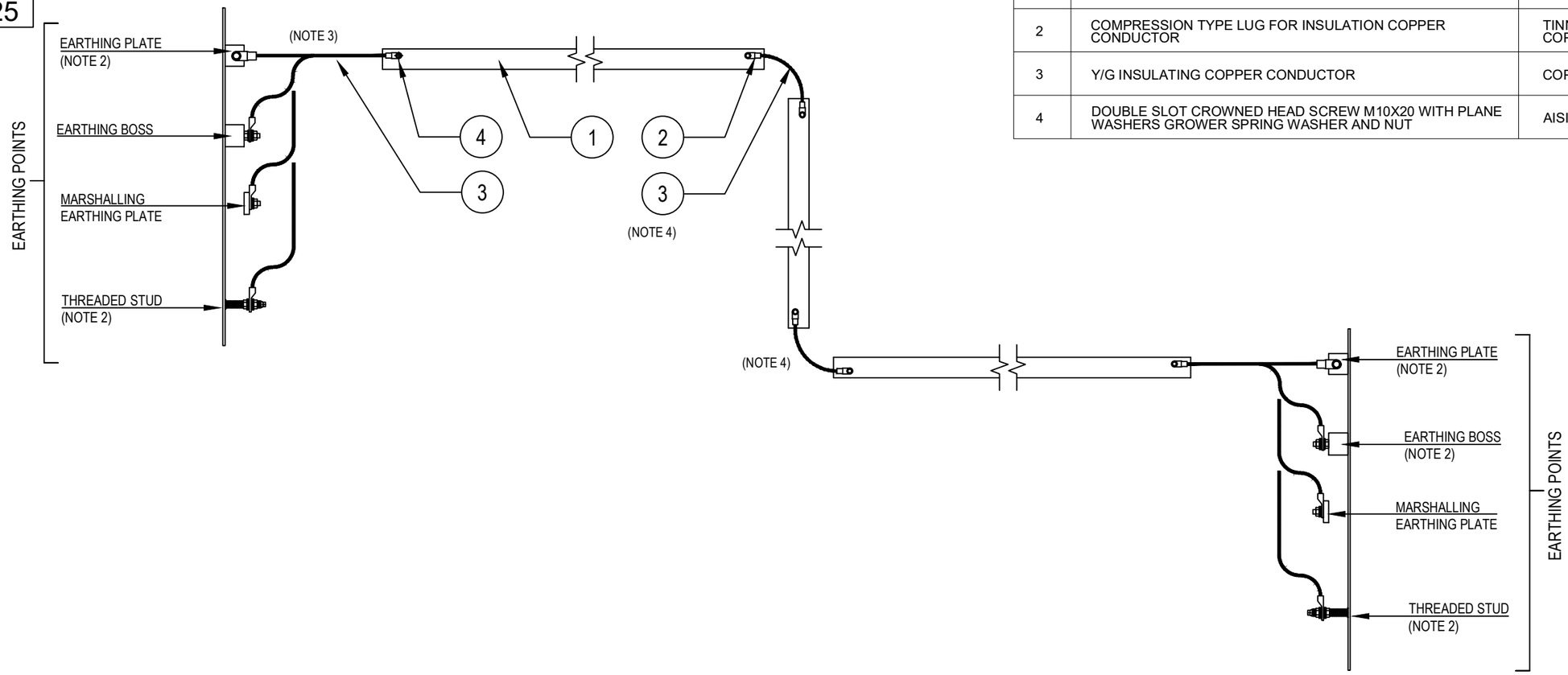
SHEET 003

REV. 02

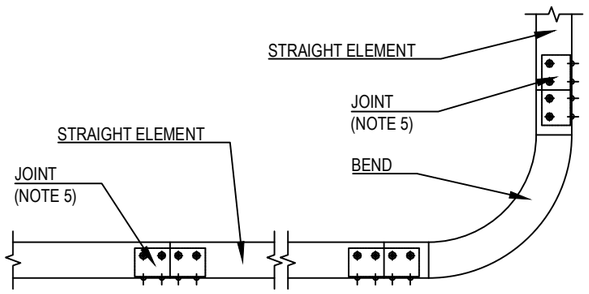
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

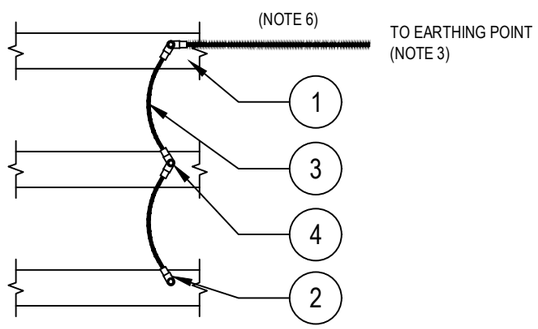
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

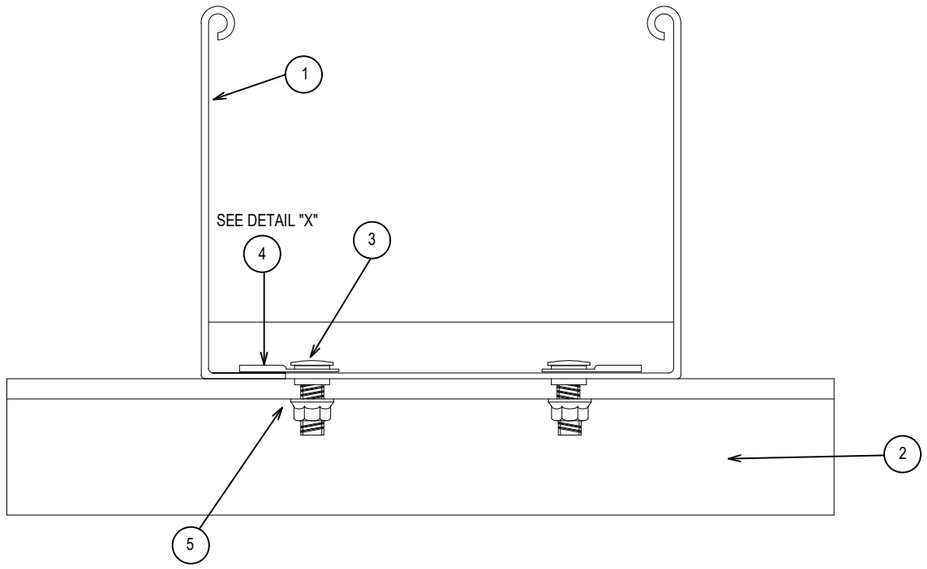
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

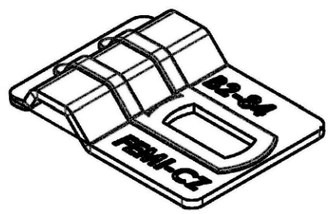
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

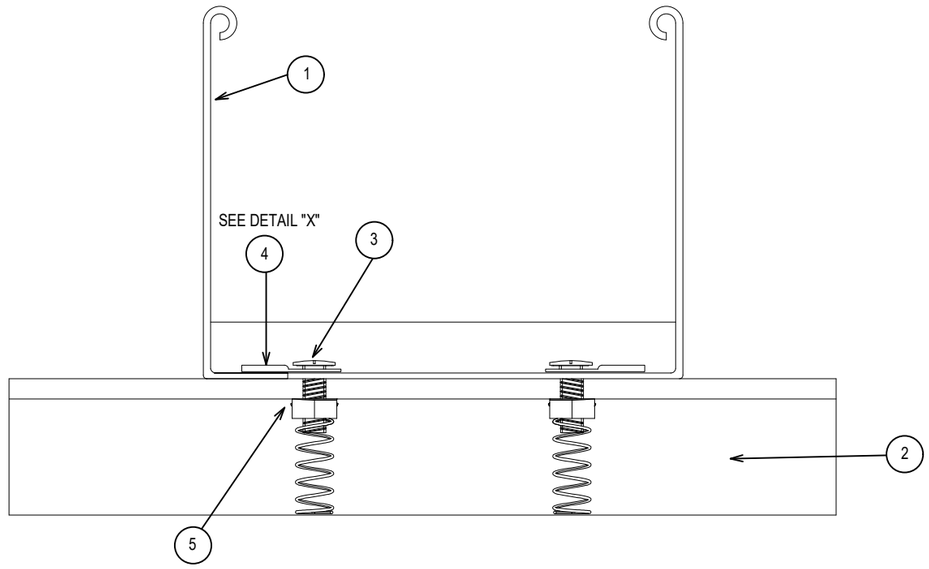
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

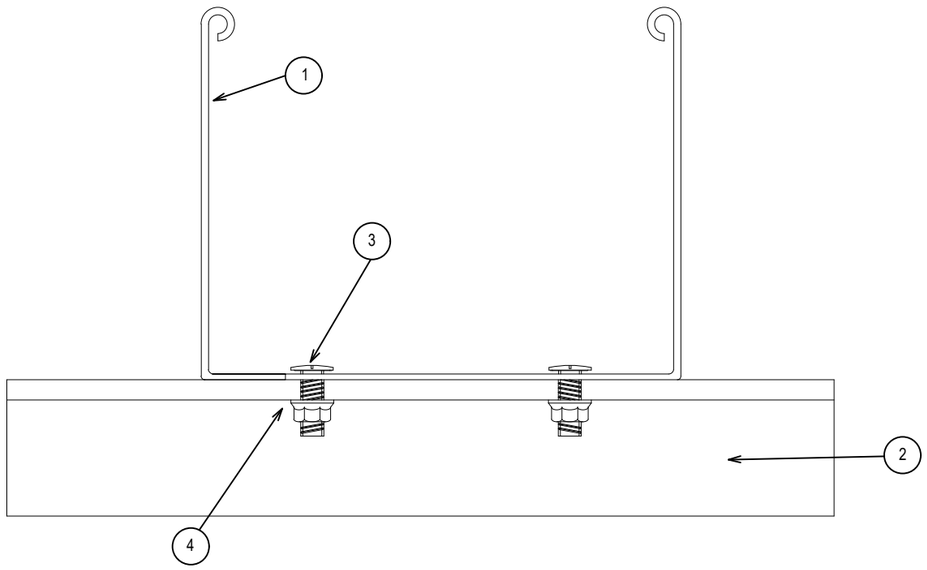
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

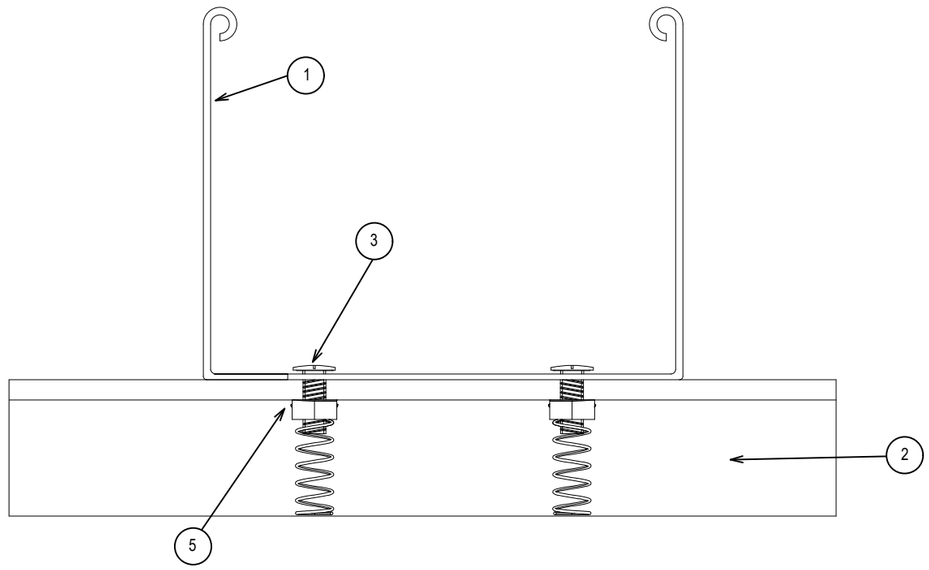


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

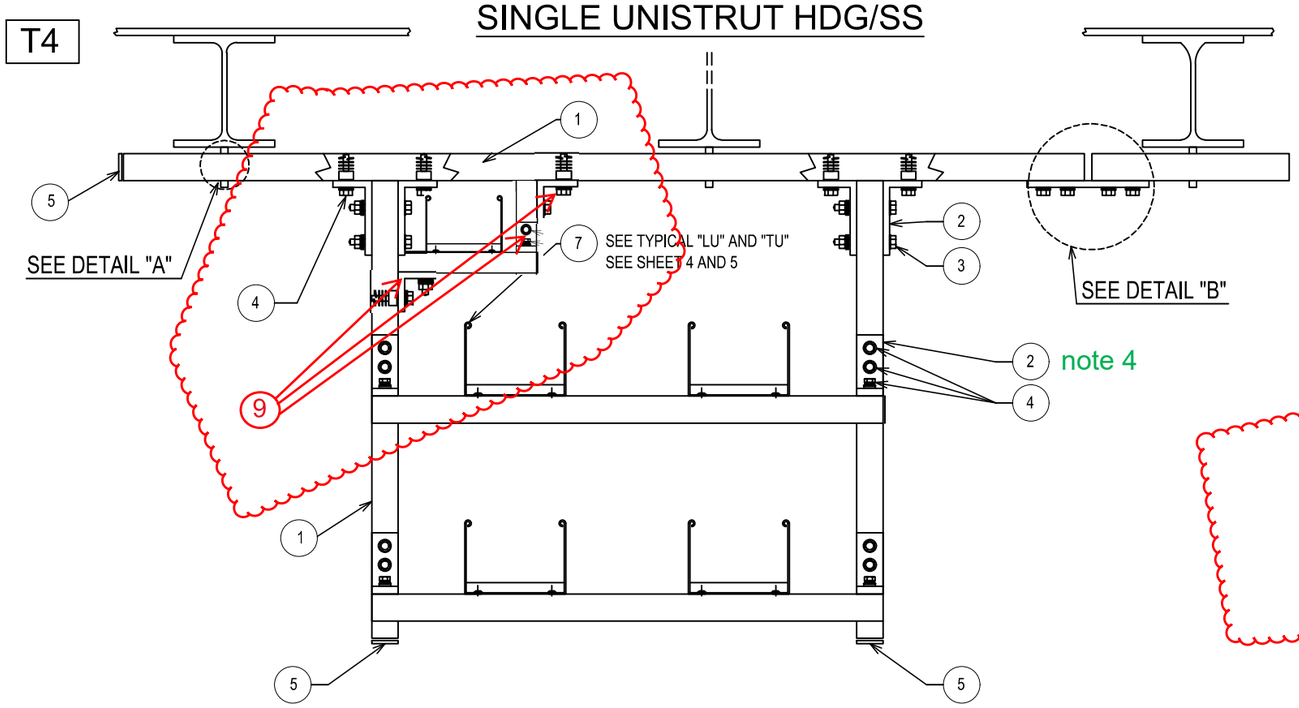
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

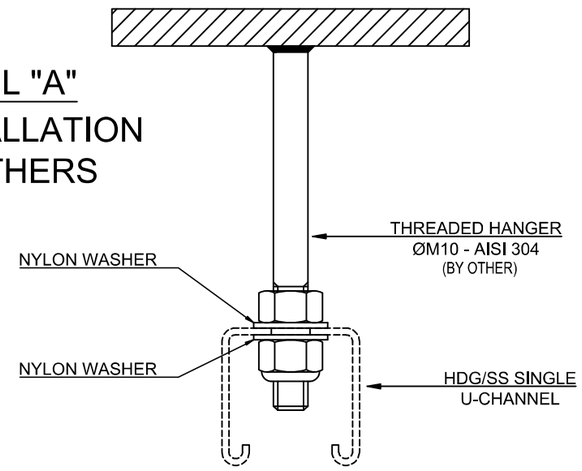
T4

SINGLE UNISTRUT HDG/SS

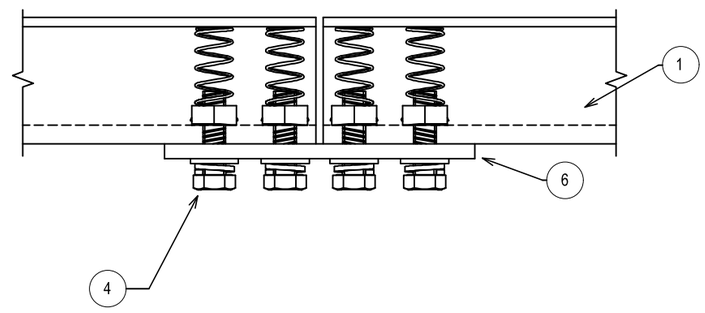


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

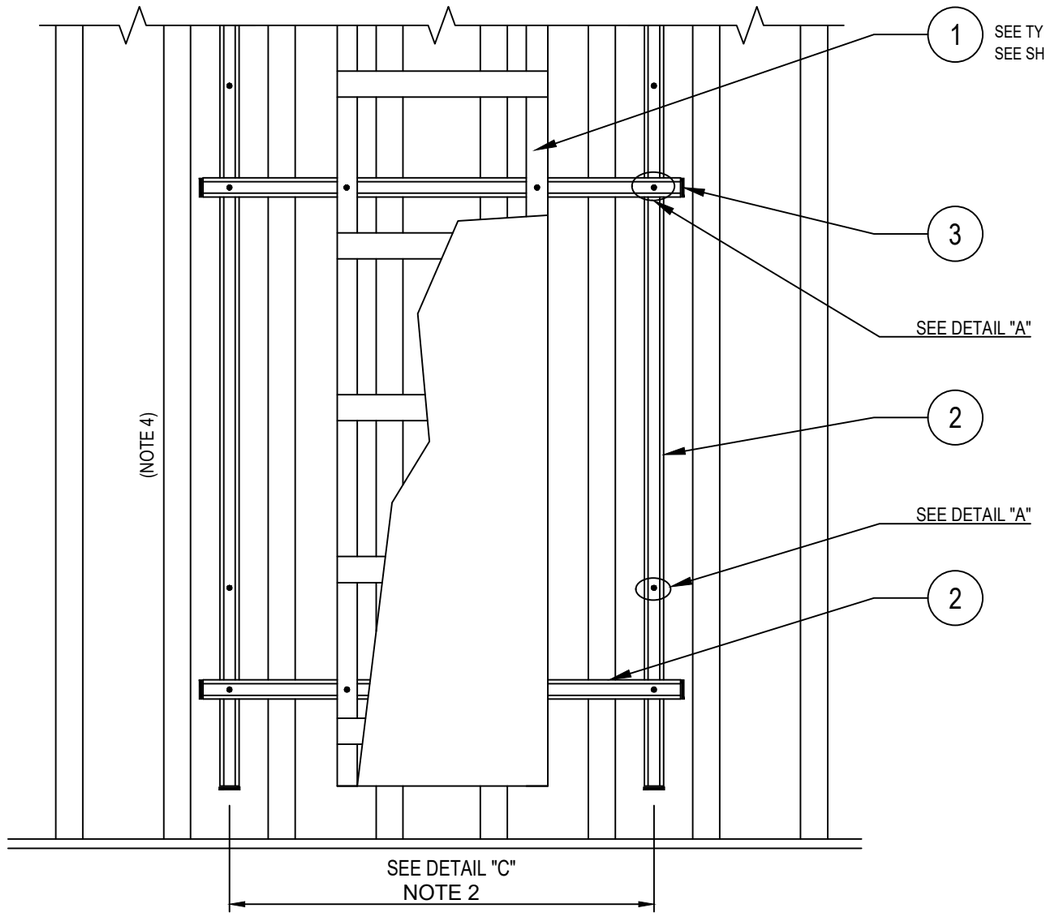
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

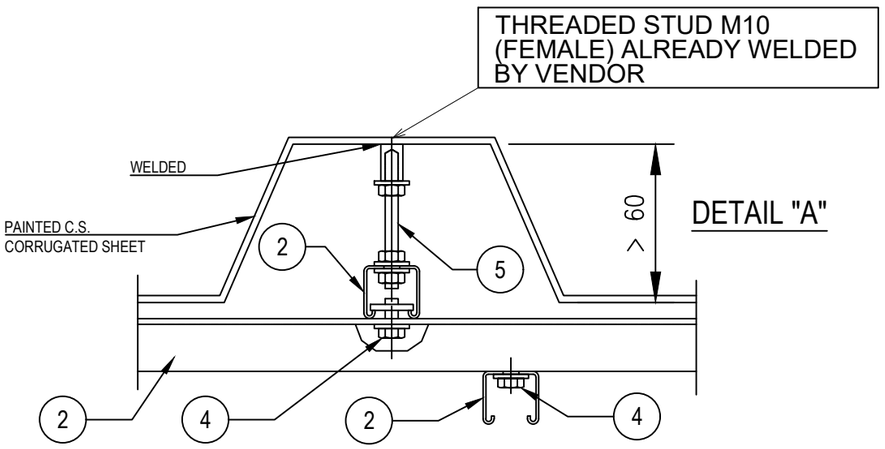
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

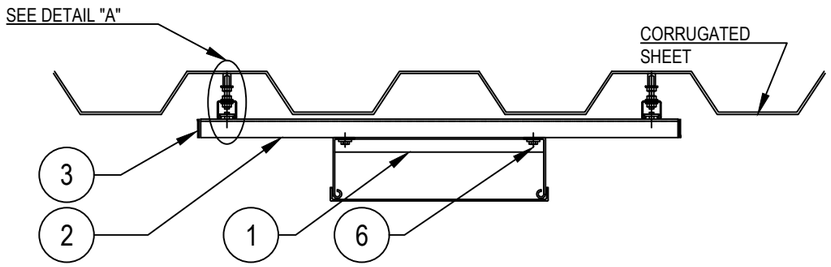
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

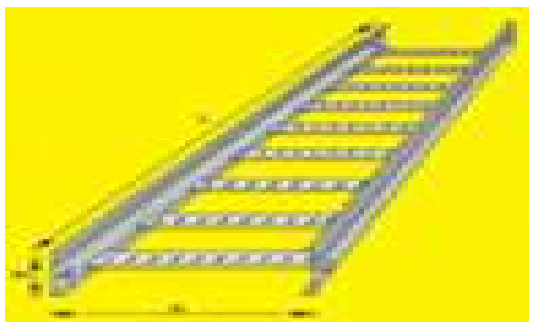
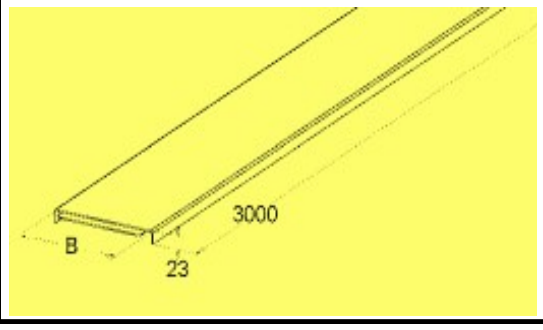
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 5 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALVANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

STRAIGHT ELEMENT with COVER

18	LENGTH [mm]	3000 ☑	5000 ☐	
19		4000 ☐	6000 ☐	
20	HEIGTH [mm]	50 ☐	100 ☑	
21		75 ☐	150 ☑	
22	WIDTH [mm]	50 ☐	300 ☑	600 ☑
23		100 ☐	400 ☐	750 ☑
24		150 ☑	450 ☑	
25		200 ☐	500 ☐	

QUANTITY

	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
29	150x300	34	100x150	523		
30	STRAIGHT JOINT (1)	35	100x300	269		
31			100x450	58		
32			100x600	129		
33			100x750	43		
34			STRAIGHT JOINT (1)	850		
35						

36	CODE	REMARKS
37		(1) Complete of the bolts, nuts and washer
38		
39		
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47 **NOTES:**

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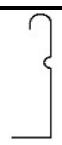
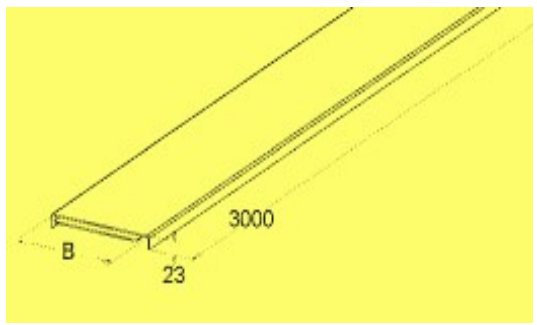
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

TYPE	CABLE LADDER	☐			
	PERFORATED	☑			
	CLOSED	☐			
	FLANGE	SIMPLE ☐	BORDERED ☑		
					
MATERIAL	HOT DIP GALVANIZED STEEL	☐			
	ELECTROLYTICALLY GALVANIZED STEEL	☐			
	SENDZIMIR GALVANIZED STEEL	☐			
	STAINLESS STEEL AISI 304	☐			
	STAINLESS STEEL AISI 316	☑			
	ALLUMINIUM	☐			
	FRP / GRP for Hazardous Area	☐			

STRAIGHT ELEMENT with COVER

LENGTH [mm]	3000 ☑	5000 ☐		
	4000 ☐	6000 ☐		
HEIGTH [mm]	50 ☑	100 ☐		
	80 ☑	150 ☐		
WIDTH [mm]	50 ☑	300 ☐	600 ☐	
	100 ☐	400 ☐	750 ☐	
	150 ☐	450 ☐		
	200 ☑	500 ☐		

QUANTITY

HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]	HEIGHT x WIDTH [mm]	QUANTITY [m]
80x200	100	50x50	283		

CODE	REMARKS
	(1) Complete of the bolts, nuts and washer

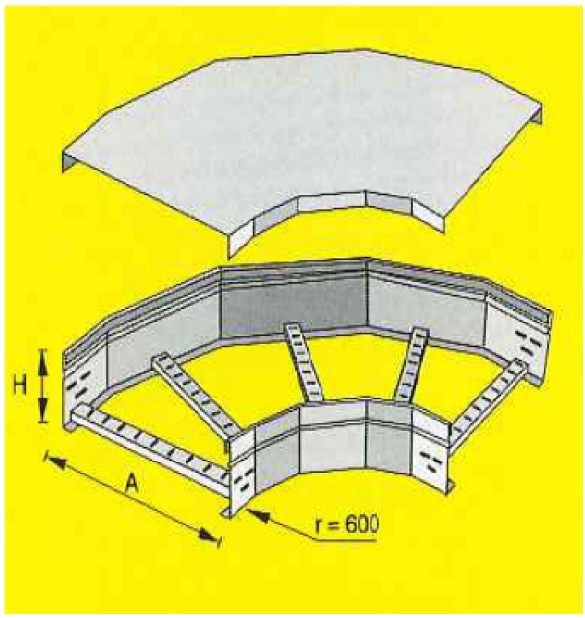
NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 7 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER		☑	
2		PERFORATED		☐	
3		CLOSED		☐	
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL		☐	
9		ELECTROLYTICALLY GALVANIZED STEEL		☐	
10		SENDZIMIR GALCANIZED STEEL		☐	
11		STAINLESS STEEL AISI 304		☐	
12		STAINLESS STEEL AISI 316		☑	
13		ALLUMINIUM		☐	
14		FRP / GRP for Hazardous Area		☐	



15

16 17 **BEND INCLUDING COVER + FIXING CLIP**

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm]		[°]	QUANTITY [pc]
31	H100 x W150	R300	90	29	H150 x W300	R300	90	6
32	H100 x W300	R300	90	11				
33	H100 x W450	R300	90	1				
34	H100 x W300	R600	90	6				
35	H100 x W600	R600	90	1				
36	H100 x W750	R600	90	1				
37	H100 x W600	R900	90	1				
38								
39					FIXING CLIP			224

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

52

53

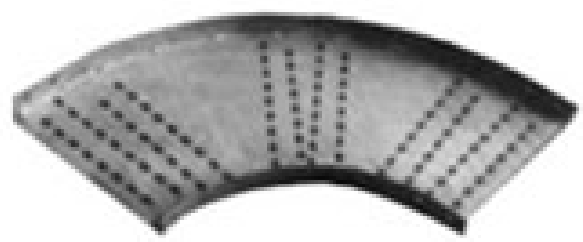
54

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

BEND INCLUDING COVER + FIXING CLIP

18	BEND DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	11		
32				
33				
34				
35				
36				
37				
38				
39	FIXING CLIP	44		

40	CODE	REMARKS
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

51 **NOTES:**

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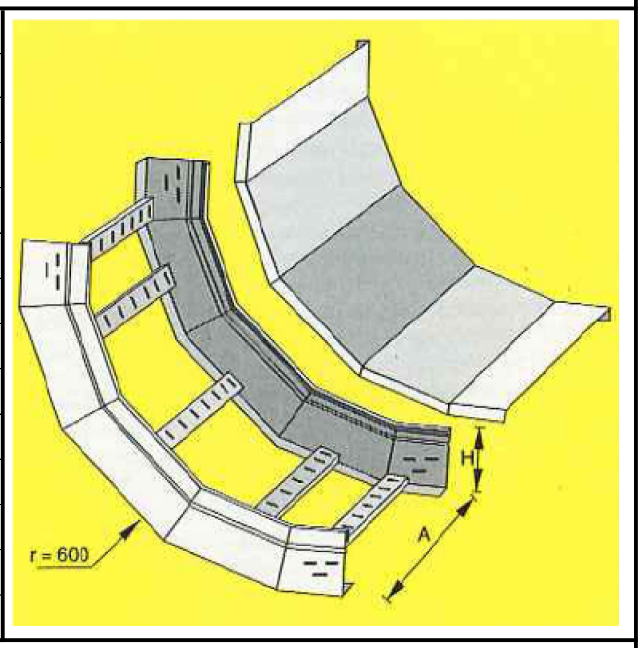
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

16 17 **INSIDE RISER INCLUDING COVER + FIXING CLIP**

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

28 29 **QUANTITY**

	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
30				
31	H100 x W150 R300 90	11	H150 x W300 R900 90	1
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	6		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	6		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	3		
39				
40			FIXING CLIP	176
41				

	CODE	REMARKS
42		
43		
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47		
48		
49		

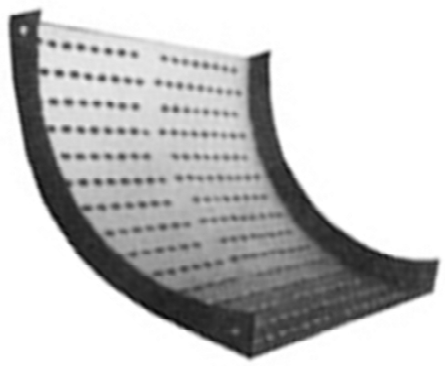
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 10 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

INSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	19		
32				
33				
34				
35				
36				
37				
38				
39				
40	FIXING CLIP	76		
41				

42	CODE	REMARKS
43		
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49		

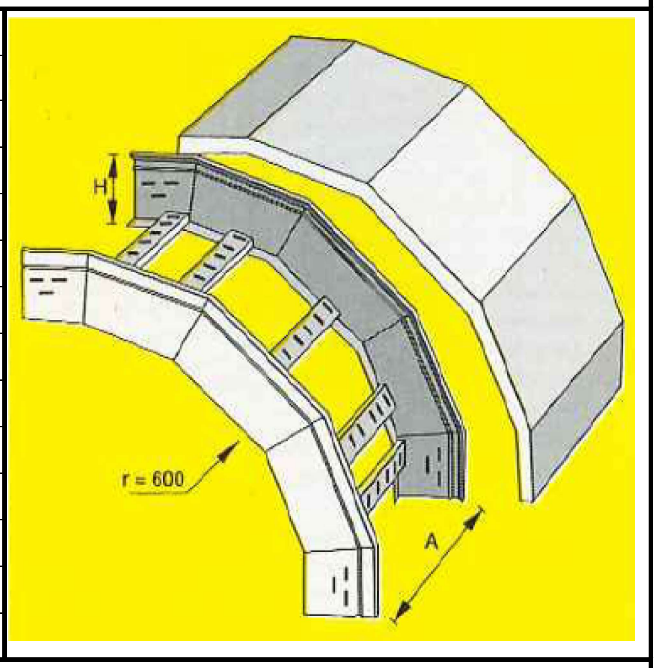
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 11 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☑		
22	WIDTH [mm]	50	☐	300	☑	600	☑
23		100	☐	400	☐	750	☑
24		150	☑	450	☑		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☑
27		300	☑	500	☐	900	☑

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H100 x W150 R300 90	38	H150 x W300 R900 90	3
32	H100 x W300 R300 90	14		
33	H100 x W450 R300 90	11		
34	H100 x W150 R600 90	1		
35	H100 x W300 R600 90	4		
36	H100 x W450 R600 90	1		
37	H100 x W600 R600 90	1		
38	H100 x W750 R600 90	4		
39				
40				
41				
42				
43			FIXING CLIP	308

44	CODE	REMARKS
45		
46		
47		
48		
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51	**NOTES:**	
52		
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55		

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 12 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☐		
2		PERFORATED	☑		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

OUTSIDE RISER INCLUDING COVER + FIXING CLIP

18	RISER DEGREE	30°	☐	60°	☐		
19		45°	☐	90°	☑		
20	HEIGTH [mm]	50	☑	100	☐		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☑	300	☐	600	☐
23		100	☐	400	☐	750	☐
24		150	☐	450	☐		
25		200	☐	500	☐		
26	INTERNAL RADIUS [mm]	150	☐	400	☐	600	☐
27		300	☑	500	☐	900	☐

QUANTITY

30	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]	HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°]	QUANTITY [pc]
31	H50 x W50 R300 90	5		
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43	FIXING CLIP	20		

44	CODE	REMARKS
45		
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51 **NOTES:**

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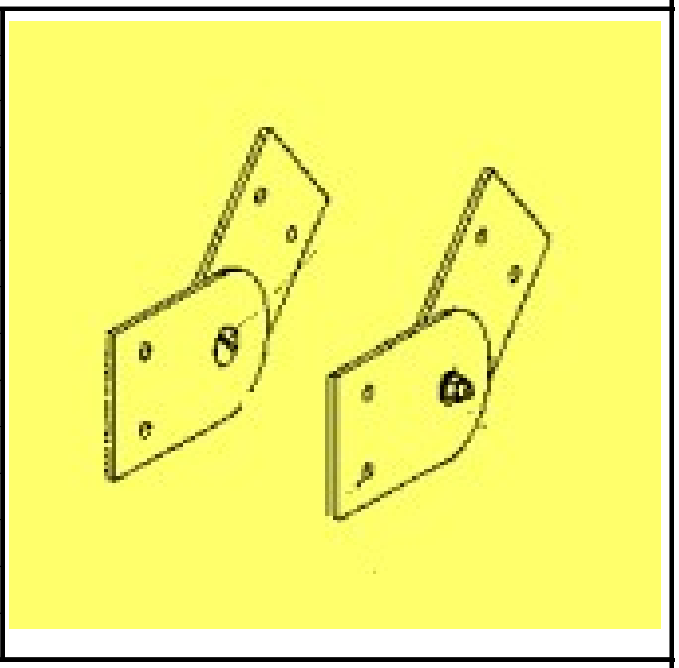
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

VERTICAL HINGED JOINT (complete of bolts,nuts and washer)

18	HEIGTH [mm]	50	☐	100	☑
19		75	☐	150	☑

QUANTITY

	HEIGHT [mm]	QUANTITY [pc]
22		
23	100	125
24	150	25
25		
26		

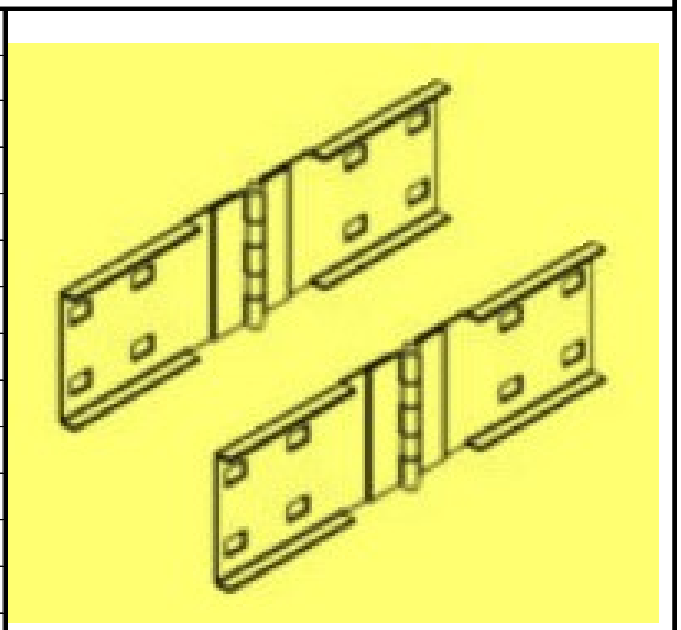
	CODE	REMARKS
28		
29		
30		
31		
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NOTES:

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					
16	**HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)**				
17					
18	HEIGTH [mm]	50	☐	100 ☑	
19		75	☐	150 ☑	
20	**QUANTITY**				
21					

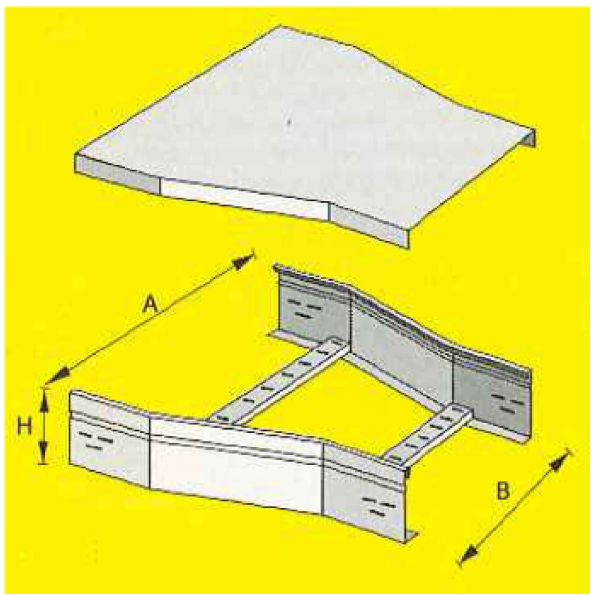
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
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45	**NOTES:**	
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 15 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		
15					

REDUCTION ELEMENT INCLUDING COVER + FIXING CLIP

18	HEIGTH [mm]	50	☐	150	☐	
19		75	☐			
20		100	☑			
21	WIDTH [mm]	200-100	☐	600-300	☑	
22		300-200	☐	600-400	☐	
23		300-150	☑	600-500	☐	
24		450-300	☑			
25		500-300	☐			

QUANTITY

	HEIGHT / WIDTH [mm]	QUANTITY [pc]	HEIGHT / WIDTH [mm]	QUANTITY [pc]	
28					
29	H100 x W300-150	4			
30	H100 x W450-300	3			
31	H100 x W600-300	3			
32					
33					
34					
35	FIXING CLIP	40			

	CODE	REMARKS
36		
37		
38		
39		
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41		
42		
43		
44		

45 **NOTES:**

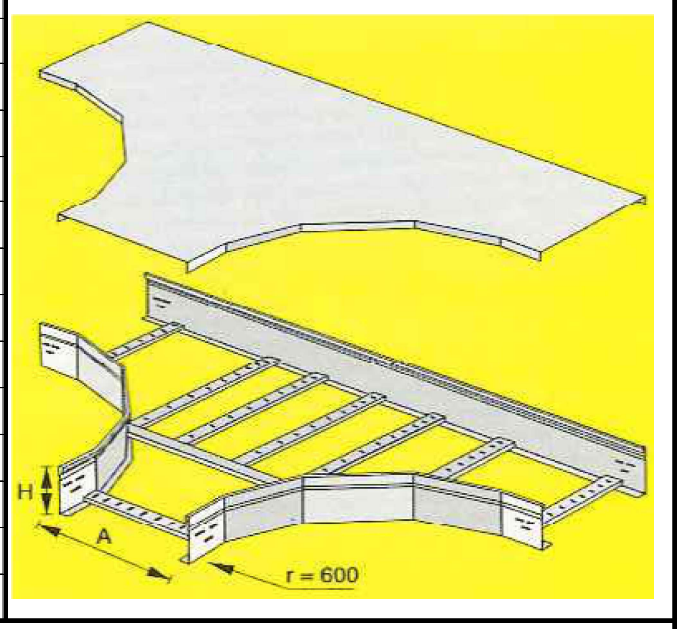
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

1	TYPE	CABLE LADDER	☑		
2		PERFORATED	☐		
3		CLOSED	☐		
4		FLANGE	SIMPLE ☐	BORDERED ☑	
5					
6					
7					
8	MATERIAL	HOT DIP GALVANIZED STEEL	☐		
9		ELECTROLYTICALLY GALVANIZED STEEL	☐		
10		SENDZIMIR GALCANIZED STEEL	☐		
11		STAINLESS STEEL AISI 304	☐		
12		STAINLESS STEEL AISI 316	☑		
13		ALLUMINIUM	☐		
14		FRP / GRP for Hazardous Area	☐		



15

TEE CONNECTION INCLUDING COVER + FIXING CLIP

18	INTERNAL RADIUS [mm]	300	☑	500	☐	900	☑
19		400	☐	600	☑		
20	HEIGTH [mm]	50	☐	100	☑		
21		75	☐	150	☐		
22	WIDTH [mm]	50	☐	300	☑		
23		100	☐	450	☑		
24		150	☑	600	☑		
25		200	☐	750	☑		

26
27

QUANTITY

	HEIGHT x WIDTH , RADIUS [mm]	QUANTITY [pc]
28		
29	H100 x W300 , R300	3
30	H100 x W450 , R600	3
31	H100 x W600 , R600	4
32	H100 x W150 , R900	3
33	H100 x W300 , R900	6
34	H100 x W600 , R900	3
35	H100 x W750 , R900	3
36	FIXING CLIP	150

37

	CODE	REMARKS
38		
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50 **NOTES:**

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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	CABLE_TRAY_UD_ELE_MV	: Cable Tray Upper Deck - Electrical (Medium Voltage)			Dwg	123A90-DDL-EL-DL-20107
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002273		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B — Cable Tray/Ladder After pulling

AFTER PULLING

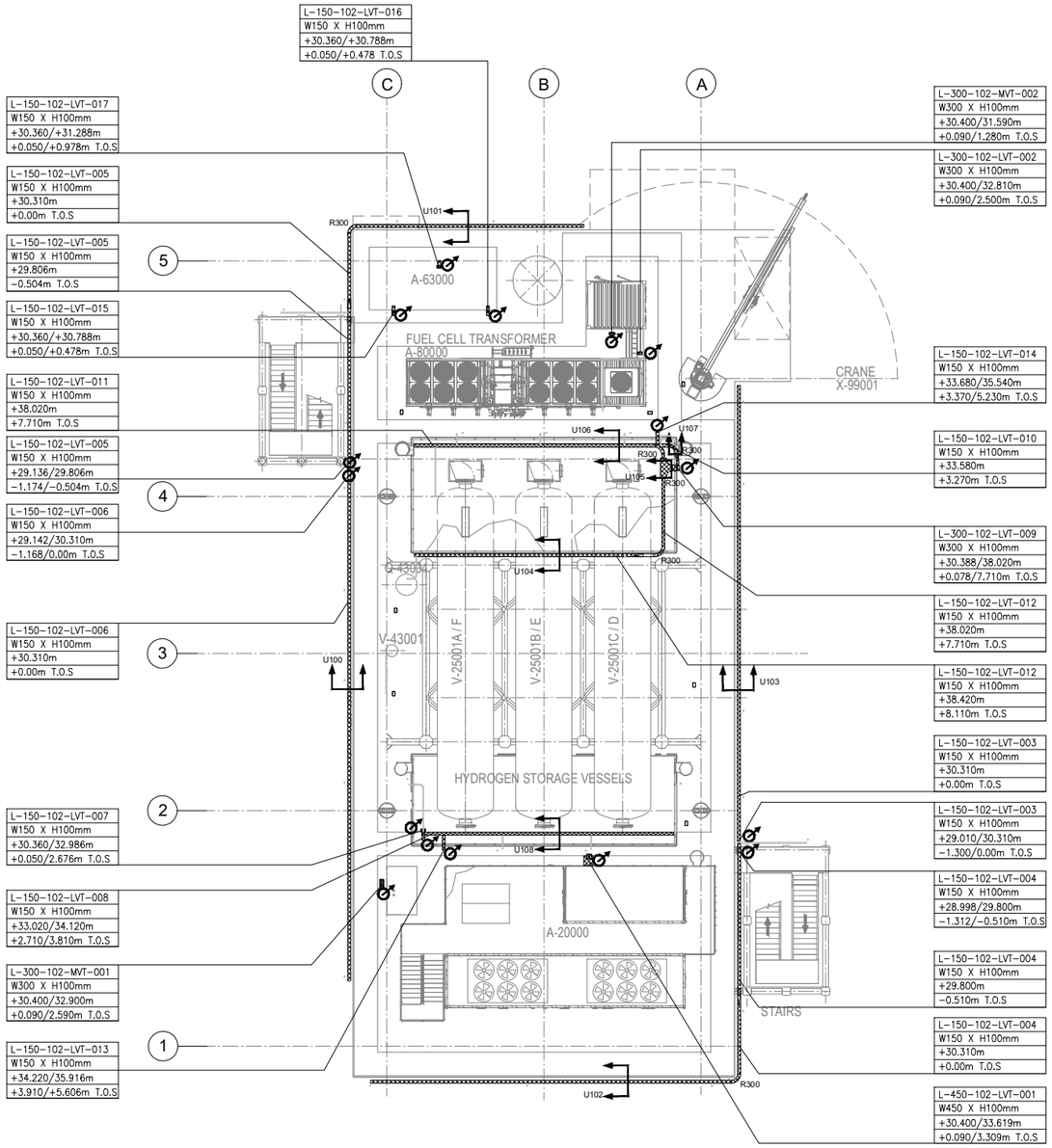
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

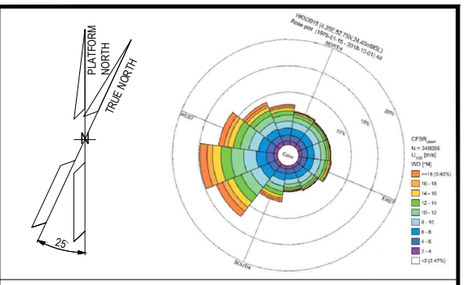
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-03-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:43:21.299Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-03-07T15:48:27.147Z	

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



MAIN CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- UXXX — CABLE SECTION

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20107

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

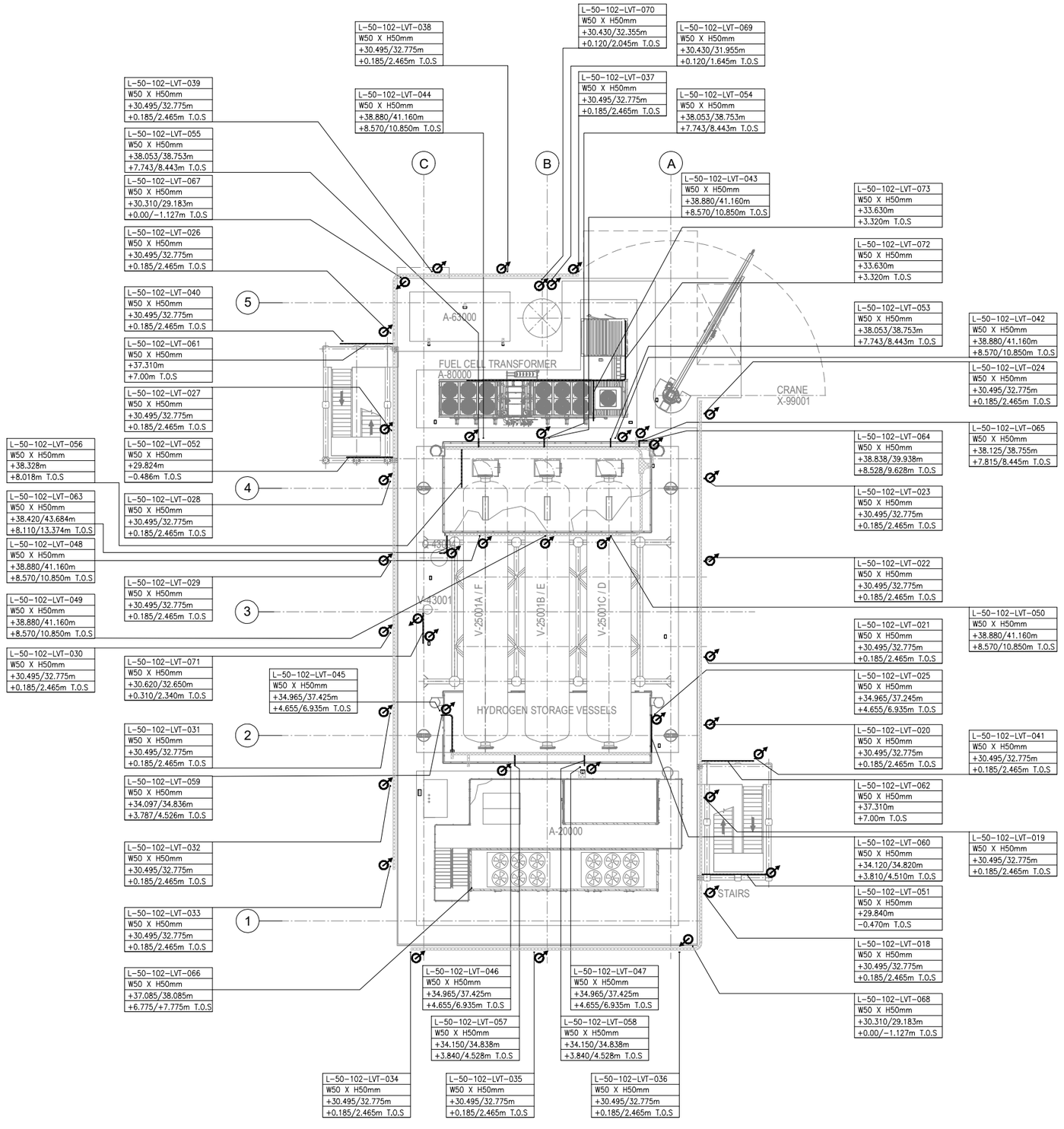
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20107	1of7	01

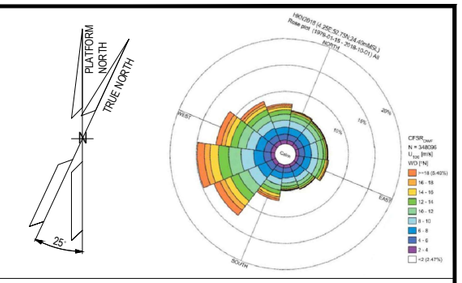
File Name : 123A90-DDL-EL-DL-20107

DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



50mm WIDTH CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- CABLE SECTION (uxxx)
- WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20107**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

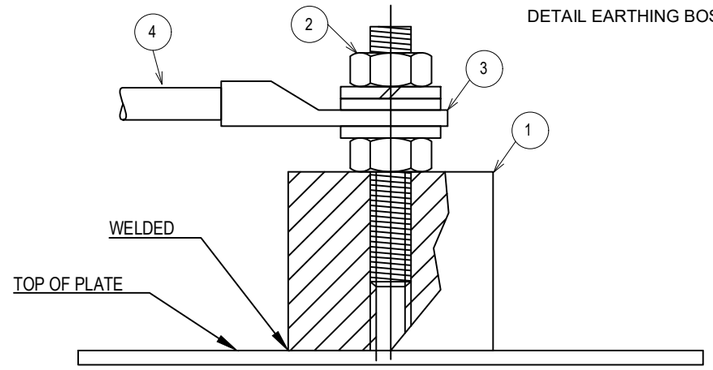
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20107	SHEET 2of7	REV. 01

File Name : 123A90-DDL-EL-DL-20107

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

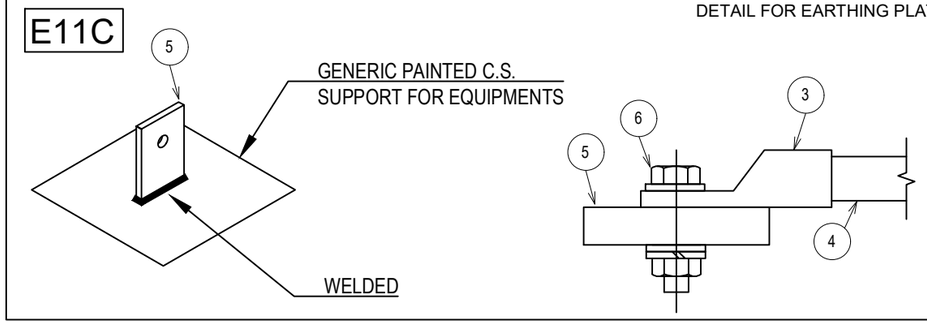
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

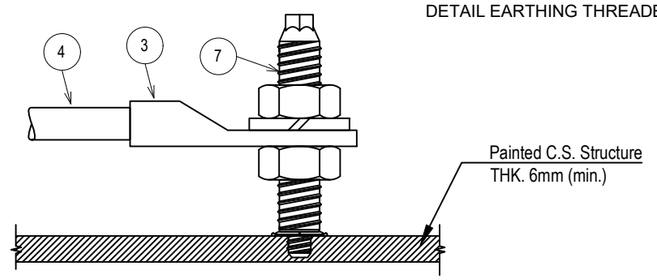


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

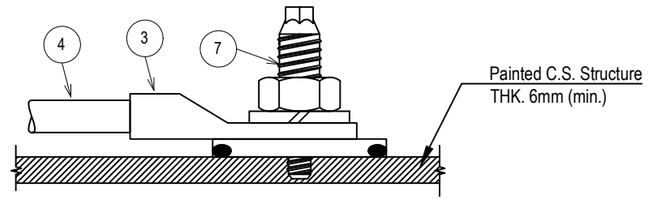


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

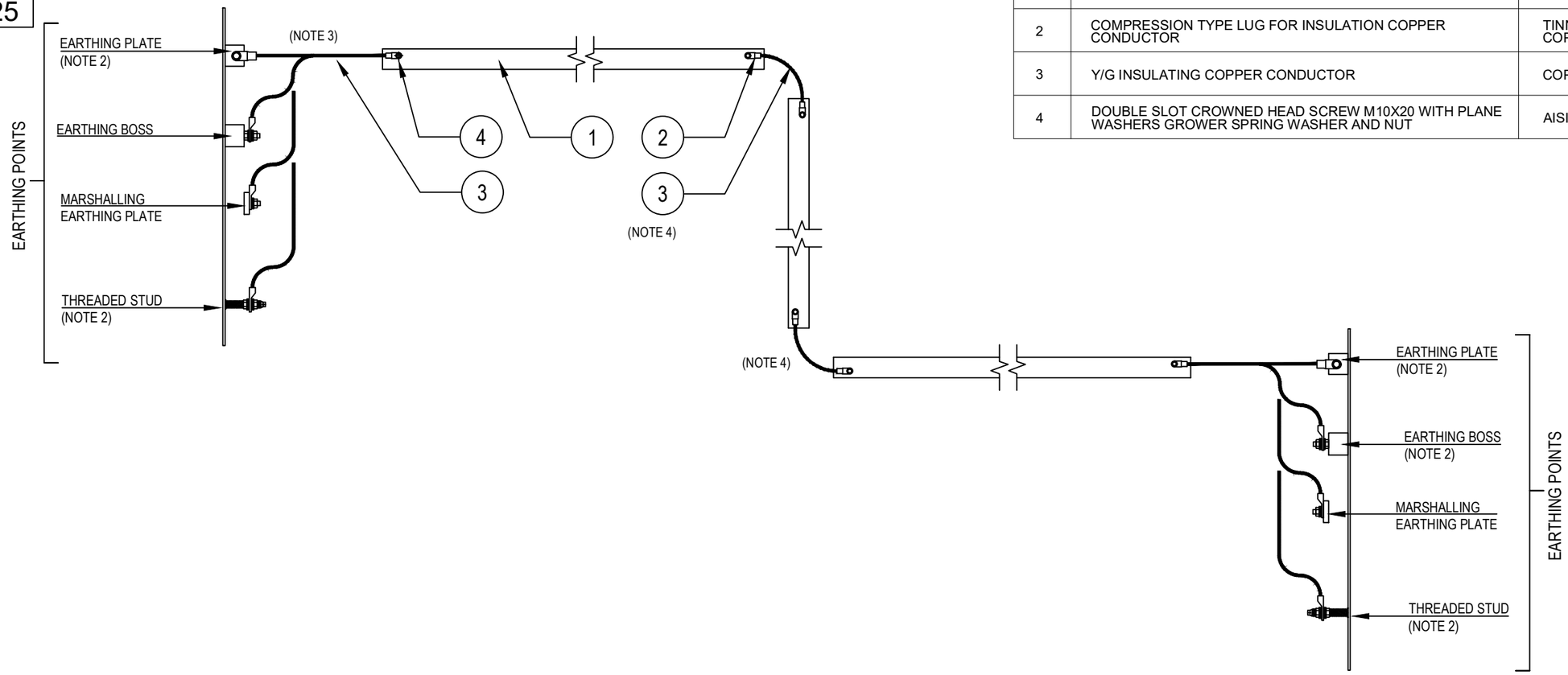
SHEET 003

REV. 02

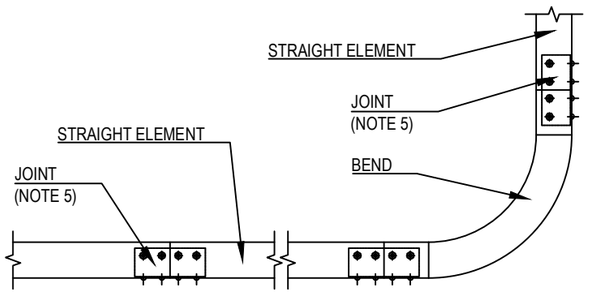
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

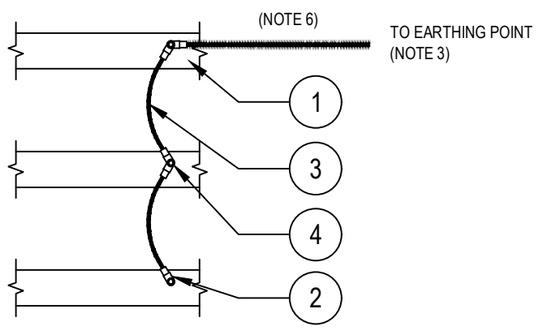
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

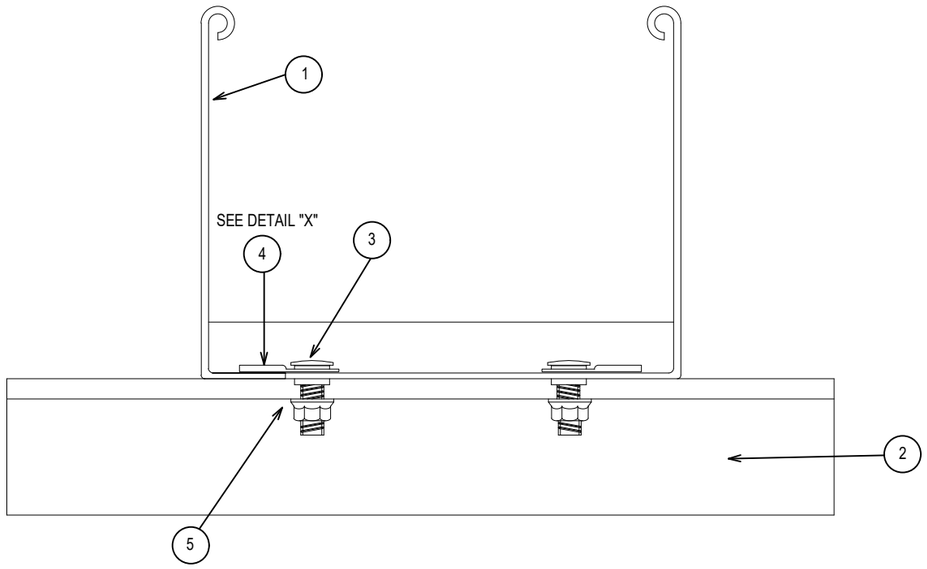
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

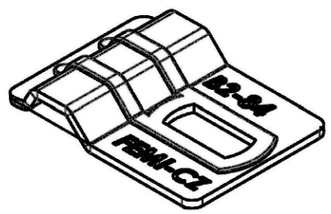
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

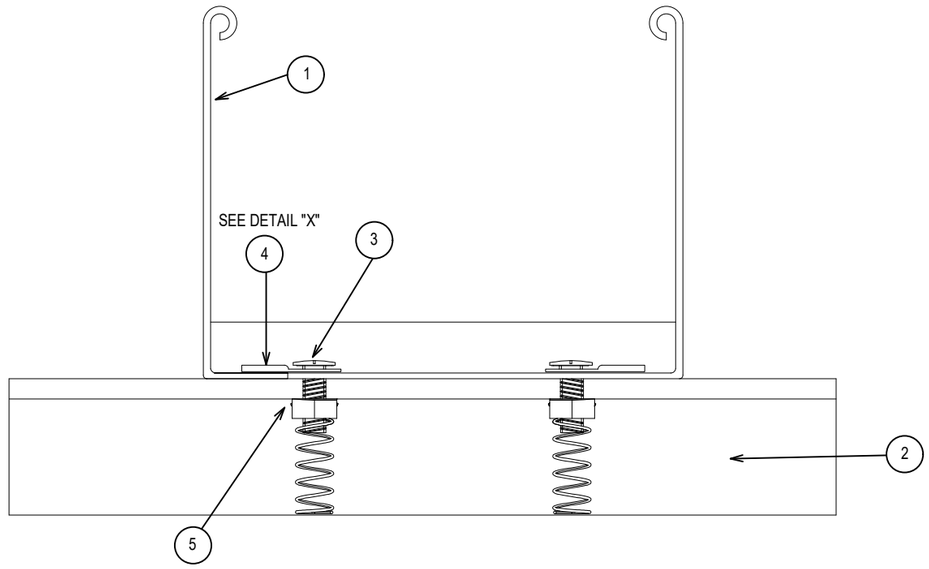
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

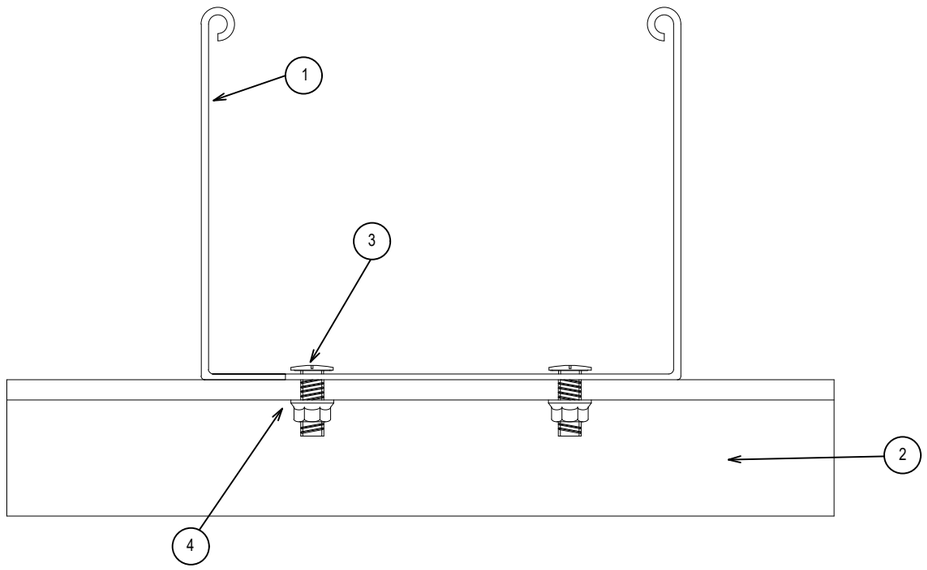
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

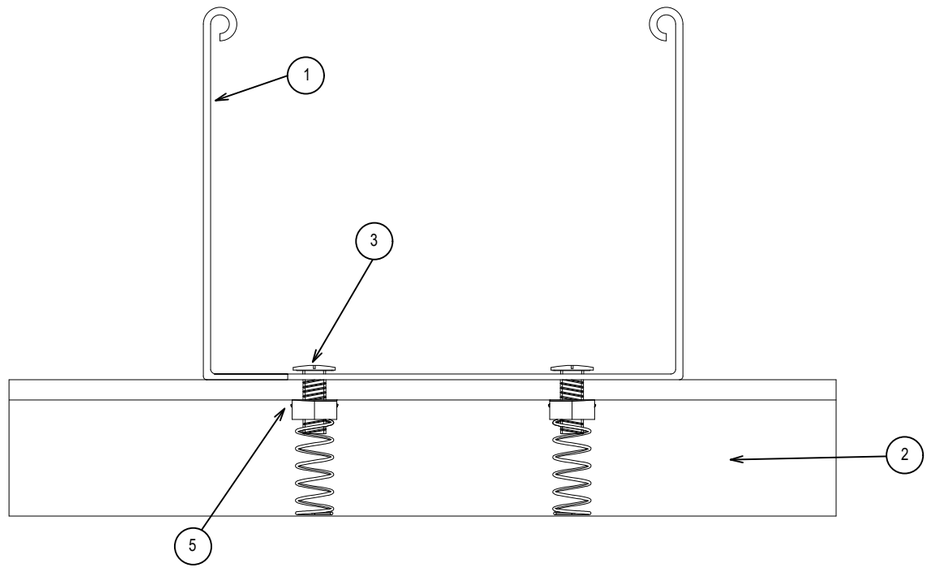


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

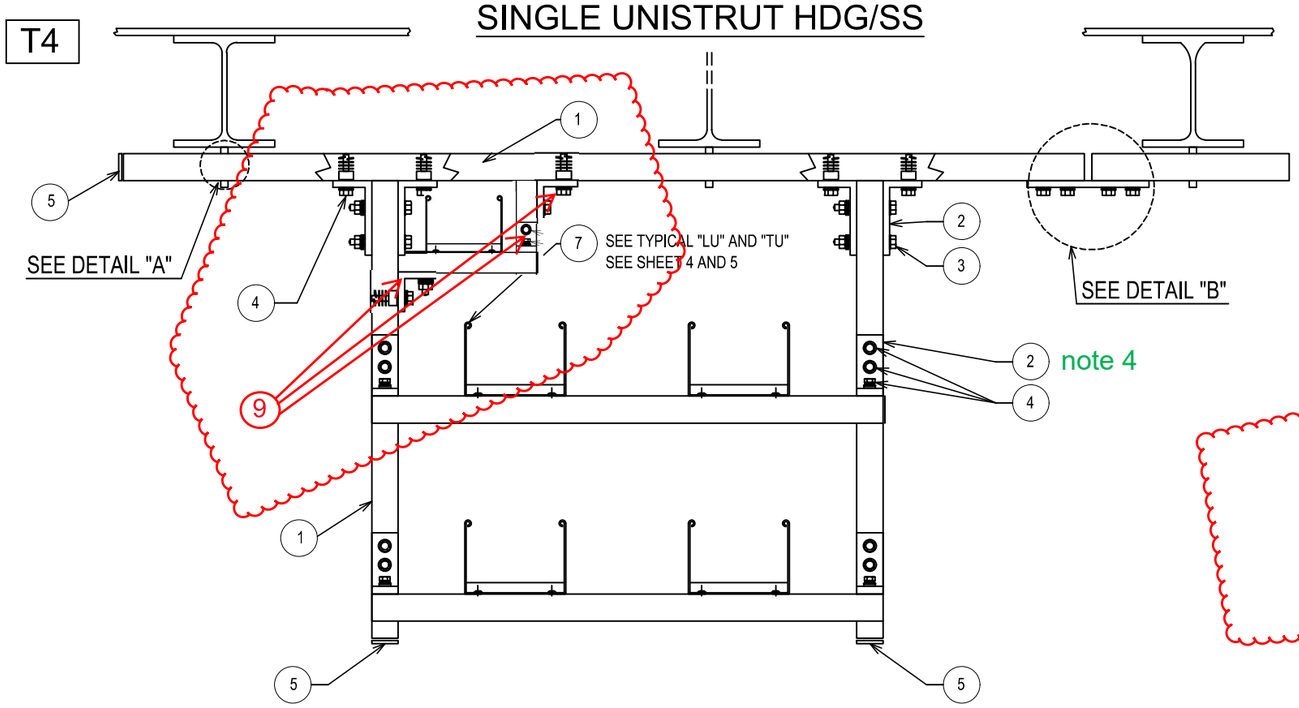
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F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

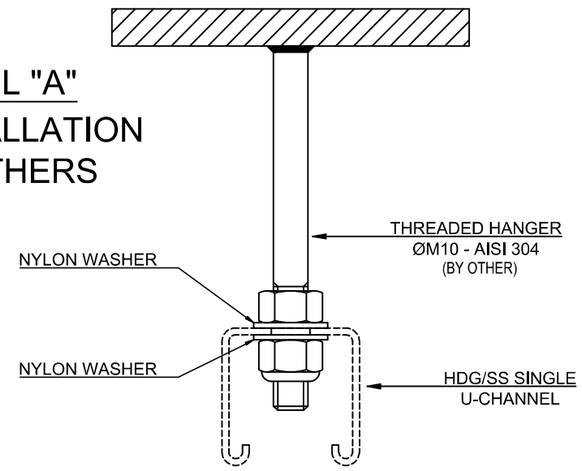
T4

SINGLE UNISTRUT HDG/SS

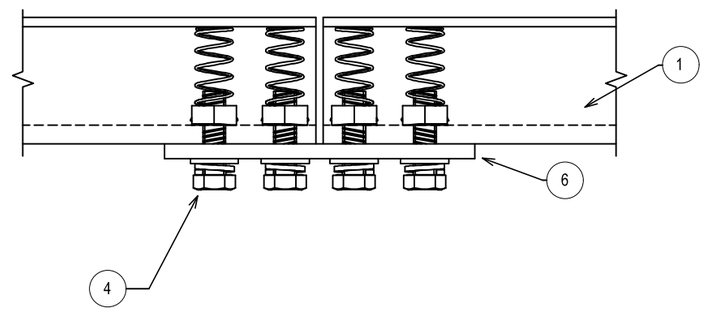


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

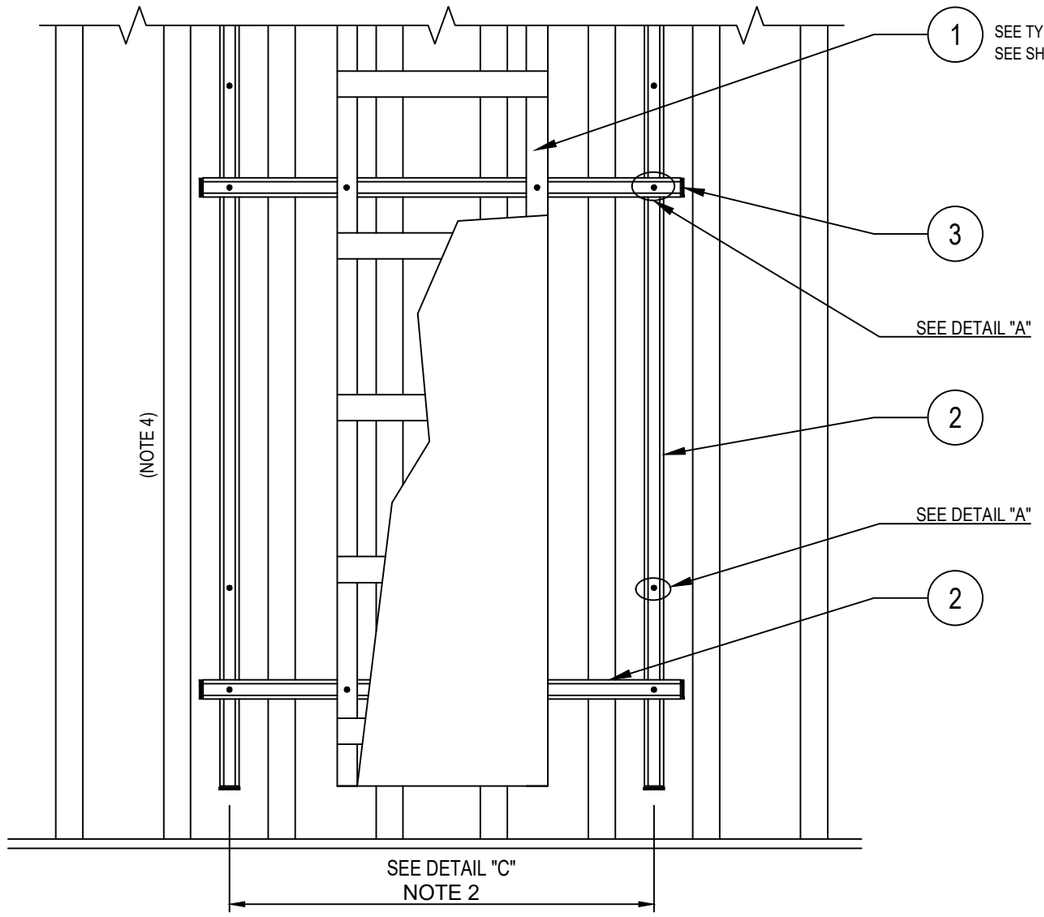
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

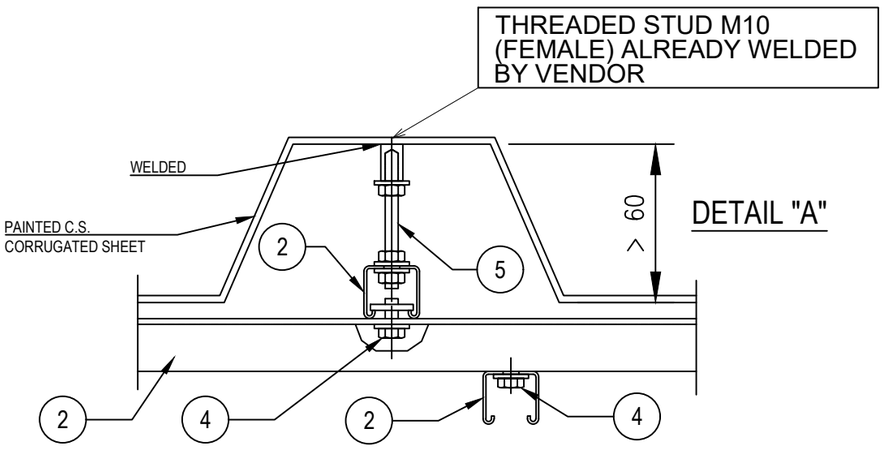
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

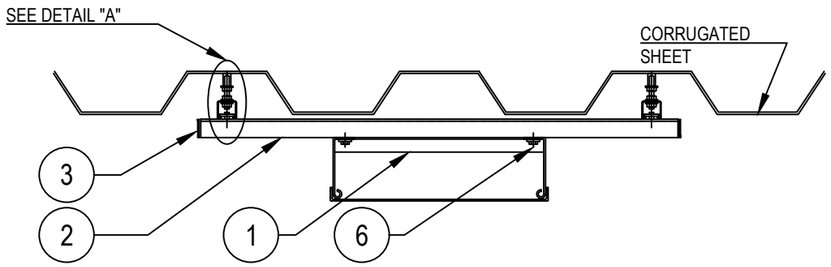
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	E-MCT-U16	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20114
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10004490		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

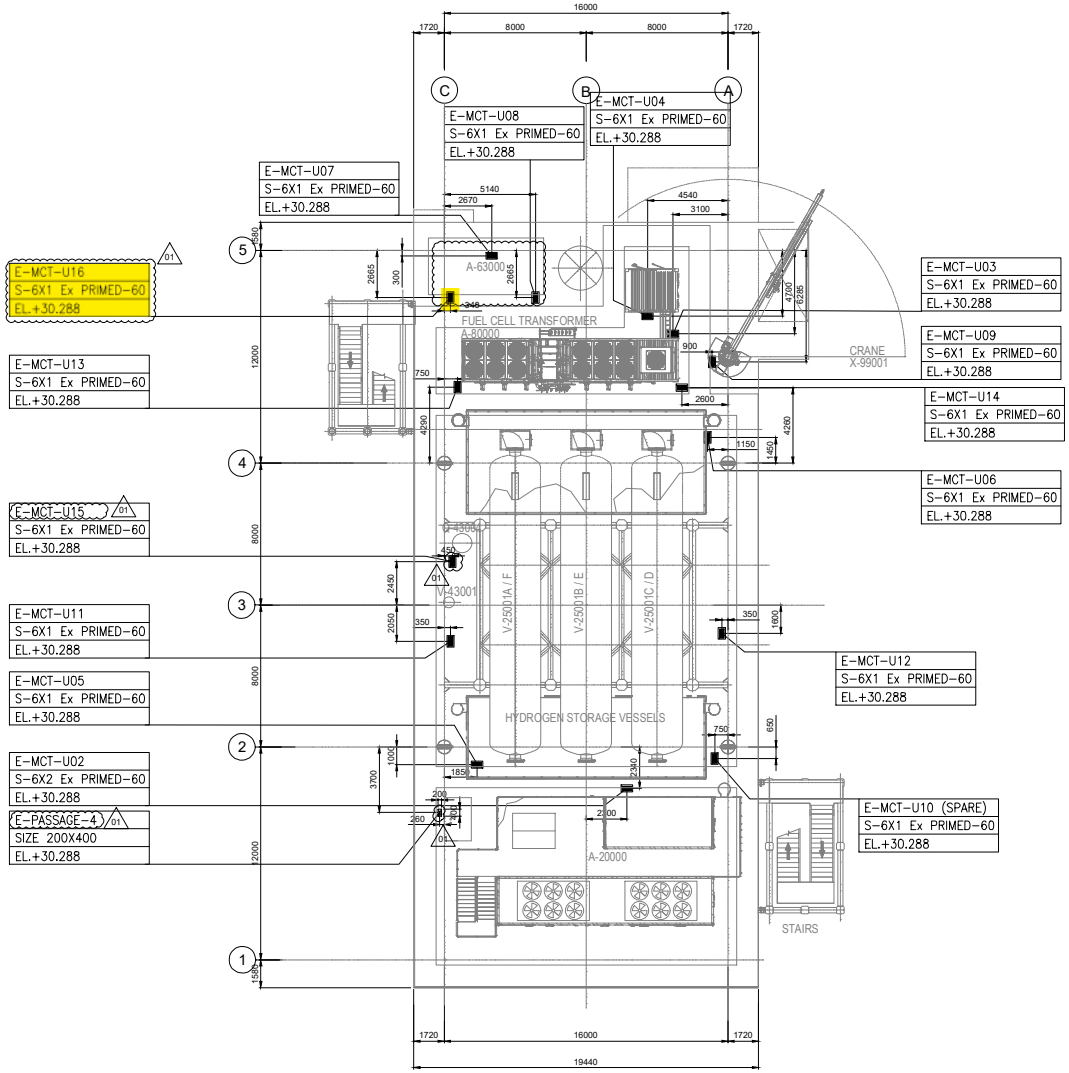
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002351

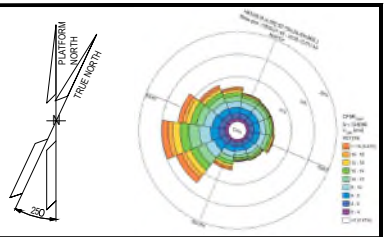
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-29	2025-01-30	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-29T07:42:10.789Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-30T15:12:05.388Z	

DRAWING NO. 123A90-DDL-EL-DL-20114

REV. 01



PLAN ON UPPER DECK
EL+30.310 T.O.S.



NOTES

GENERAL NOTES:

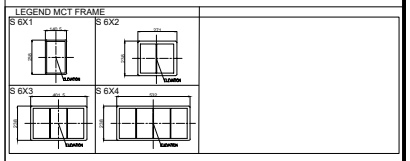
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.
2. ALL MCTs IN UPPER DECK ARE ATEX TYPE.

HOLDS

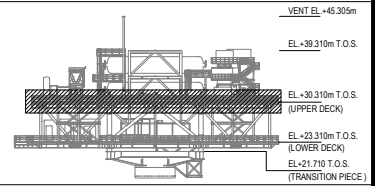
LEGEND



MULTI CABLE TRANSIT FOR ATEX AREA
PASSAGE

TAG — TAGGING
SIZE–MATERIAL–DEPTH — TYPICAL
EL. — ELEVATION

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT-LOWER DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20114
REV: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT LAYOUT
TOP DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SPS | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 15/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20114 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20114

Sl.No.	TITLE	TYPE	Page No.
36	E-MCT-U16	S 6X1 **Ex** PRIMED	141
	SG-100D1 – 6.6KV SWITCHGEAR MCT (NOTE-2)		145
37	SG100D1-MCT-A1	S 6X1 PRIMED	149
38	SG100D1-MCT-A2	S 6X1 PRIMED	150
39	SG100D1-MCT-A3	S 6X1 PRIMED	154
40	SG100D1-MCT-A4	S 6X1 PRIMED	158
41	SG100D1-MCT-A6	S 6X1 PRIMED	162
42	SG100D1-MCT-A7	S 6X1 PRIMED	166
43	SG100D1-MCT-B1	S 6X1 PRIMED	170
44	SG100D1-MCT-B2	S 6X1 PRIMED	174
45	SG100D1-MCT-B3	S 6X1 PRIMED	178
46	SG100D1-MCT-B4	S 6X1 PRIMED	182
47	SG100D1-MCT-B5	S 6X1 PRIMED	186
48	SG100D1-MCT-B6	S 6X1 PRIMED	190
49	SG100D1-MCT-B7	S 6X1 PRIMED	194
	SG-200N1 – LV SWITCHGEAR MCT (NOTE-2)		198
50	SG200N1-MCT-A1a	S 6X4 PRIMED	199
51	SG200N1-MCT-A1b	S 6X2 PRIMED	203
52	SG200N1-MCT-A2	S 6X2 PRIMED	207
53	SG200N1-MCT-A3	S 6X2 PRIMED	211
54	SG200N1-MCT-A4	S 6X2 PRIMED	215
55	SG200N1-MCT-A5	S 6X2 PRIMED	219
56	SG200N1-MCT-A6	S 6X2 PRIMED	223
57	SG200N1-MCT-A7	S 6X2 PRIMED	227
	DP-200N1 – DB BoP MCT (NOTE-2)		231
58	DP200N1-MCT-A1	S 8X2 PRIMED	232
	SG-200D2 – SOLAR ACB MCT (NOTE-2)		237
59	SG200D2-MCT-A1	S 6X2 PRIMED	238

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20095

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

NOTE – 1) The Diameter of 66kV cable (52mm) is from ELAND cable catalogue.

2) THE MCT FRAMES ARE IN VENDOR SCOPE AND FIXED ON THE VENDOR EQUIPMENT ITEMS SG-100D1, SG-200N1, DP-200N1, SG-200D2.

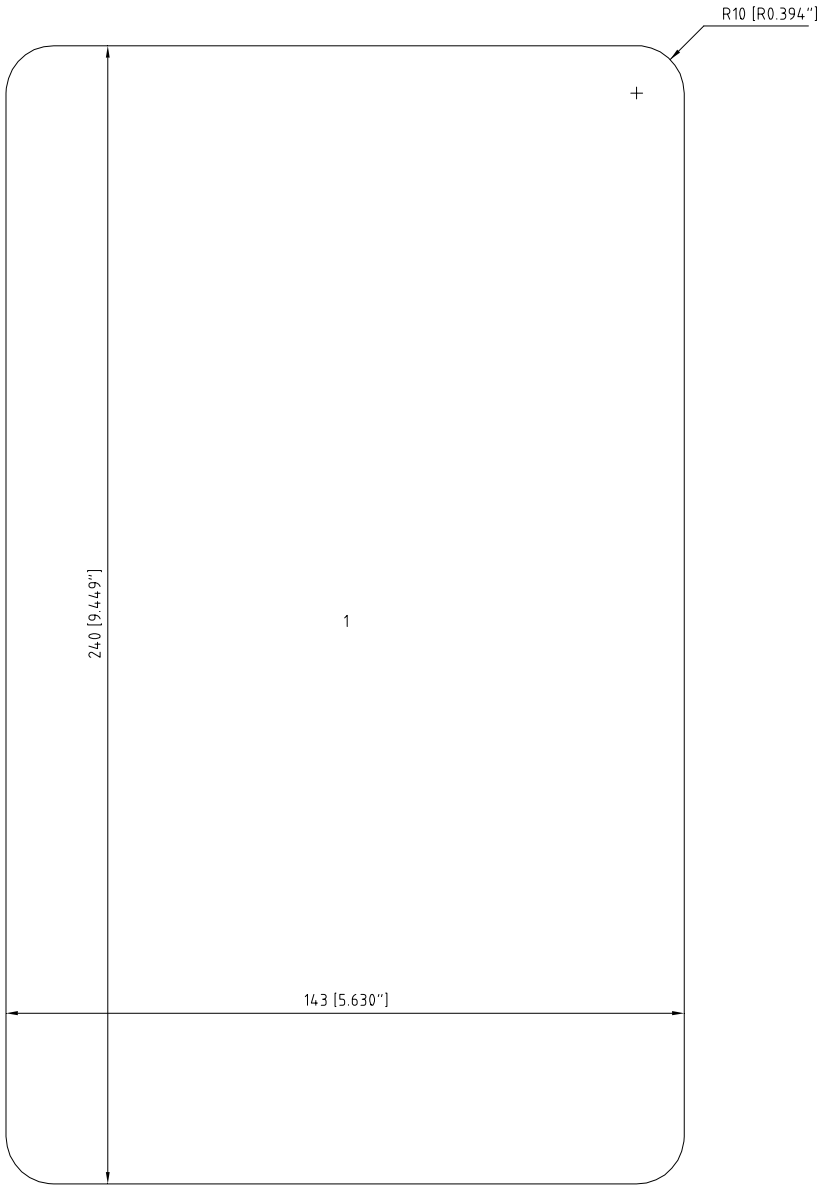
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RTD Version No: 4.37.4.0

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



Cutout Detail

Frame: S 6x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]
Responsible: ARNESH		Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 6.5 [14.35]
Roxtec		Format: NTS		Transit name: E-MCT-U16	Sheet No: 1/3
		Client		Drawing number	Rev

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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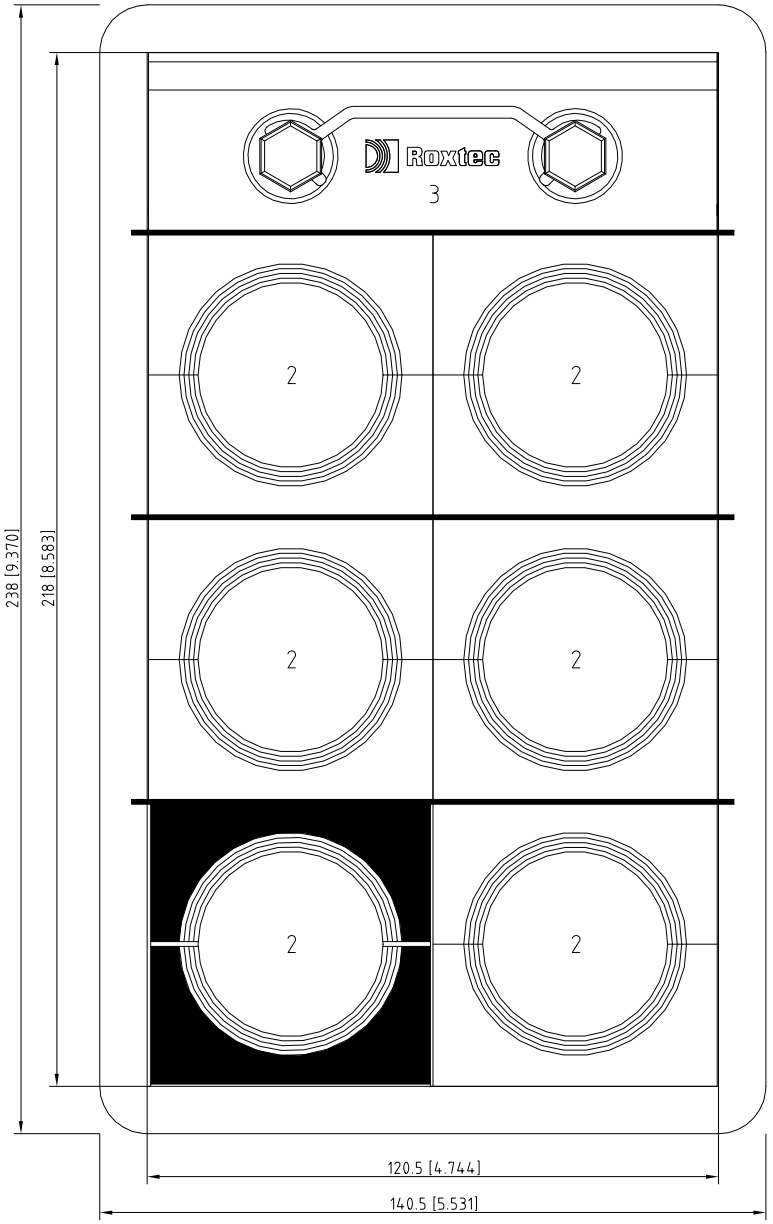
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CUTOUT TO FIT SOLUTION WELDING, 143x240 [5.630"x9.449"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





Detail Drawing

Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
4	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
3	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
2	6	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
1	1	S 6x1 Ex PRIMED	EXS006000000112	3.4 [7.50]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U16	Sheet No: 2/3
	Client	Drawing number		Rev

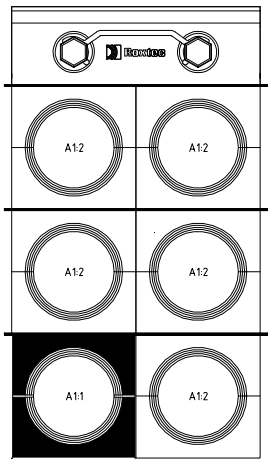
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:2						RM 60 EX 28-54 [1.102"-2.126"]
A1:1	83017-CEL-1	Instrument Air Package	5G70	Power	39.5 [1.555"]	RM 60 EX 28-54 [1.102"-2.126"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-U16	Sheet No: 3/3
	Client	Drawing number		Rev

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	
1	General				00
2	Manufacturer	ROXTEC			01
3	Order Status	for purchase			00
4	Service	Electrical Multi-Cable Transit			00
5	Confirmity Assesment System (CAS) level				00
6	Environmental Conditions				00
7	Hazardous Area Classification	Zone 1 Ex e IIC or IIB+H2, T1			01
8	Ambient Temperature (min/nom/max)	-8.4 °C/ 10.5°C / 25.0°C			00
9	Relative Humidity (%)	Maximum 95 %			00
10	Atmospheric pressure (nominal) - hourly @ +10m	1013.7 bar			00
11	Annual average wind speed (at 100m)	33.1 m/s			00
12	Extreme wind speed for 50-year recurrence period (at 100 m)	41.0 m/s.			00
13	Atmosphere	Marine Offshore-fixed			00
14	Altitude > 1000m	not more than 1000m			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	Yes			00
9	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
10	Description		Quantity	Notes	00
11	S 6x1 Ex PRIMED		14		00
12	Manufacturer: Roxtec				00
13	Art. No.: EXS006000000112				00
14	S 6x2 Ex PRIMED		1		00
15	Manufacturer: Roxtec				00
16	Art. No.: EXS006000000212				00
17	MULTI CABLE TRANSIT SYSTEM - MODULES				00
18	Module: RM 40 EX 21.5-34.5 [0.846"-1.358"]		57	48 Spares out of 57	01
19	Manufacturer: Roxtec				00
20	Art. No. EXRM00100401000				00
21	Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"]		21	19 Spares out of 21	01
22	Manufacturer: Roxtec				01
23	Art. No. EXRM00120401000				01
24	Module: RM 30 EX 10-25 [0.394"-0.984"]		176	153 Spares out of 176	01
25	Manufacturer: Roxtec				00
26	Art. No. EXRM00100301000				00
27	Module: RM 60 EX 28-54 [1.102"-2.126"]		22	17 Spares out of 22	01
28	Manufacturer: Roxtec				00
29	Art. No. EXRM00100601000				00
	NOTES				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
33	MULTI CABLE TRANSIT - WEDGES			00
34	Description	Quantity	Notes	00
35	Wedge 120 Ex Galvanized	16		01
36	Manufacturer: Roxtec			00
37	Art. No. EXARW0001201018			00
38	MULTI CABLE TRANSIT - STAY PLATES			00
39	Stay Plate 120 Ex Galvanized	81		01
40	Manufacturer: Roxtec			00
41	Art. No. EXASP0001200018			00

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT				Rev.
	Feature	Required	Manufacturer Proposal	Comments	00
1	GENERAL DATA				00
2	Location	Outdoor			00
3	Depth	60 mm			00
4	Construction type	Primed Mild Steel - PRIMED			00
5	Type of Installation	by Welding			00
6	Fire Resistant Class	A0			00
7	Position	Shelter, Wall penetration, Floor penetration			00
8	Certification ATEX	No			00
10	MULTI CABLE TRANSIT SYSTEM - FRAMES				00
11	Description		Quantity	Notes	00
12	S 6x1 PRIMED		5		00
13	Manufacturer: Roxtec				00
14	Art. No.: S006000000112				00
15	S 6x2 PRIMED		6		01
16	Manufacturer: Roxtec				00
17	Art. No.: S006000000212				00
18	S 6x2 AISI316		6		01
19	Manufacturer: Roxtec				01
20	Art. No.: S006000000221				01
21	S 6x3 PRIMED		1		01
22	Manufacturer: Roxtec				01
23	Art. No.: S006000000312				01
24	S 6x4 PRIMED		1		01
25	Manufacturer: Roxtec				00
26	Art. No.: S006000000412				01
27	MULTI CABLE TRANSIT SYSTEM - MODULES				00
28	Module: RM 20W40 3.5-16.5 [0.138''-0.650'']		417	323 Spares out of 417	01
29	Manufacturer: Roxtec				01
30	Art. No. RM00120401000				01
31	Module: RM 40 21.5-34.5 [0.846''-1.358'']		326	208 Spares out of 326	01
32	Manufacturer: Roxtec				00
33	Art. No. RM00100401000				00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
37	MULTI CABLE TRANSIT SYSTEM - MODULES			00
38	Description	Quantity	Notes	00
39	Module: RM 40/10-32 9.5-32.5 [0.374''-1.280'']	10	6 Spares out of 10	01
40	Manufacturer: Roxtec			01
41	Art. No. RM00140101000			01
42	Module: RM 60 28-54 [1.102''-2.126'']	60	30 Spares out of 60	01
43	Manufacturer: Roxtec			00
44	Art. No. RM00100601000			00
45	Module: RM 30 10-25 [0.394"-0.984"]	436	307 Spares out of 436	01
46	Manufacturer: Roxtec			00
47	Art. No. RM00100301000			00
48	Module: RM 80 48-71 [1.890"-2.795"]	9	No Spare	01
49	Manufacturer: Roxtec			01
50	Art. No. 5RM0000003350			01
51	Module: RM 10/0x12	9	Solid Module	01
52	Manufacturer: Roxtec			00
53	Art. No. RM00310121000			00

	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT			Rev.
54	MULTI CABLE TRANSIT - WEDGES			00
55	Description	Quantity	Notes	00
56	Wedge 120 Galvanized	59		01
57	Manufacturer: Roxtec			00
58	Art. No. ARW0001201018			00
				00
59	Wedge 120 AISI 316	12		01
60	Manufacturer: Roxtec			01
61	Art. No. ARW0001201021			01
62	MULTI CABLE TRANSIT - STAY PLATES			00
63	Stay Plate 120 Galvanized	346		01
64	Manufacturer: Roxtec			00
65	Art. No. ASP0001200018			00
				00
66	Stayplate 120 AISI 316	56		01
67	Manufacturer: Roxtec			01
68	Art. No. ASP0001200021			01

ITEM	Tag	E-MCT-T01	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10004923		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

1 Check that MCT's conforms to revision and specification.

2 Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.

3 Check MCT's is properly tagged, on both side of penetration

4 Check the cable arrangement in MCT's is conform with the latest drawing.

5 If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	E-MCT-T02	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10004924		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

1 Check that MCT's conforms to revision and specification.

2 Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.

3 Check MCT's is properly tagged, on both side of penetration

4 Check the cable arrangement in MCT's is conform with the latest drawing.

5 If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	E-MCT-T03	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20116
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10004925		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

1 Check that MCT's conforms to revision and specification.

2 Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.

3 Check MCT's is properly tagged, on both side of penetration

4 Check the cable arrangement in MCT's is conform with the latest drawing.

5 If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-05 & process: MC & discipline : I

Instrumental	90-05 Areas						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_LD_INS	Cable Tray Lower Deck - Instrumental	ONSHORE	C10002268	CJX30A	100	2025-01-04	RFC 1
		ONSHORE	C10002269	CJX30B	100	2025-02-24	RFC 1
CABLE_TRAY_TP_INS	Cable Tray Transition piece - Instrumental	ONSHORE	C10002260	CJX30A	100	2025-05-06	RFC 1
		ONSHORE	C10002261	CJX30B	100	2025-05-06	RFC 1
CABLE_TRAY_UD_INS	Cable Tray Upper Deck - Instrumental	ONSHORE	C10002274	CJX30A	100	2025-02-24	RFC 1
		ONSHORE	C10002275	CJX30B	100	2025-03-07	RFC 1
I-MCT-T01	Multi Cable Transit	ONSHORE	C10001906	CJX29	100	2025-05-07	-
		OFFSHORE	C10004928	CJX29	0	-	-
I-MCT-U01	Multi Cable Transit	ONSHORE	C10001907	CJX29	100	2025-02-06	RFC 1
I-MCT-U02	Multi Cable Transit	ONSHORE	C10001908	CJX29	100	2025-01-30	RFC 1
I-MCT-U03	Multi Cable Transit	ONSHORE	C10001909	CJX29	100	2025-01-30	RFC 1
I-MCT-U04	Multi Cable Transit	ONSHORE	C10001910	CJX29	100	2025-02-19	RFC 1
I-MCT-U05	Multi Cable Transit	ONSHORE	C10001911	CJX29	100	2025-01-29	RFC 1
I-MCT-U06	Multi Cable Transit	ONSHORE	C10001912	CJX29	100	2025-02-10	RFC 1
I-MCT-U07	Multi Cable Transit	ONSHORE	C10002012	CJX29	100	2025-01-22	RFC 1
I-MCT-U08	Multi Cable Transit	ONSHORE	C10002013	CJX29	100	2025-01-24	RFC 1
I-MCT-U09	Multi Cable Transit	ONSHORE	C10002014	CJX29	100	2025-02-26	RFC 1

ROSETTI MARINO

CROSSWIND

ITEM	Tag	I-MCT-T01	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40086
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10001906		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	PL
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note : The cables will be laid OFFSHORE Activity..

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-07	
Signature	Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:38:52.776Z	Digitaly signed by Giovanni Tangianu 2025-05-07T09:14:25.846Z	

DRAWING NO. 123A90-DDL-IN-DL-40086

REV. 01

SEE DETAIL "C"
I-MCT-402
S-4x2 PRIMED
EL. +U 26.370

SEE DETAIL "C"
I-MCT-301
S-4x2 PRIMED
EL. +U 27.320

SEE DETAIL "D"
I-MCT-302
S-4x1 PRIMED
EL. +U 26.870

SEE DETAIL "D"
I-MCT-202
S-4x1 PRIMED
EL. +U 27.320

SEE DETAIL "C"
I-MCT-201
S-4x2 PRIMED
EL. +U 27.320

SEE DETAIL "A"
I-PASSAGE-2
SIZE 200x200
EL. +U 23.288

SEE DETAIL "A"
I-PASSAGE-1
SIZE 200x200
EL. +U 23.288

SEE DETAIL "A"
I-PASSAGE-3
SIZE 200x300
EL. +U 23.288

SEE DETAIL "E"
I-MCT-401
S-6x6 PRIMED
EL. +U 26370

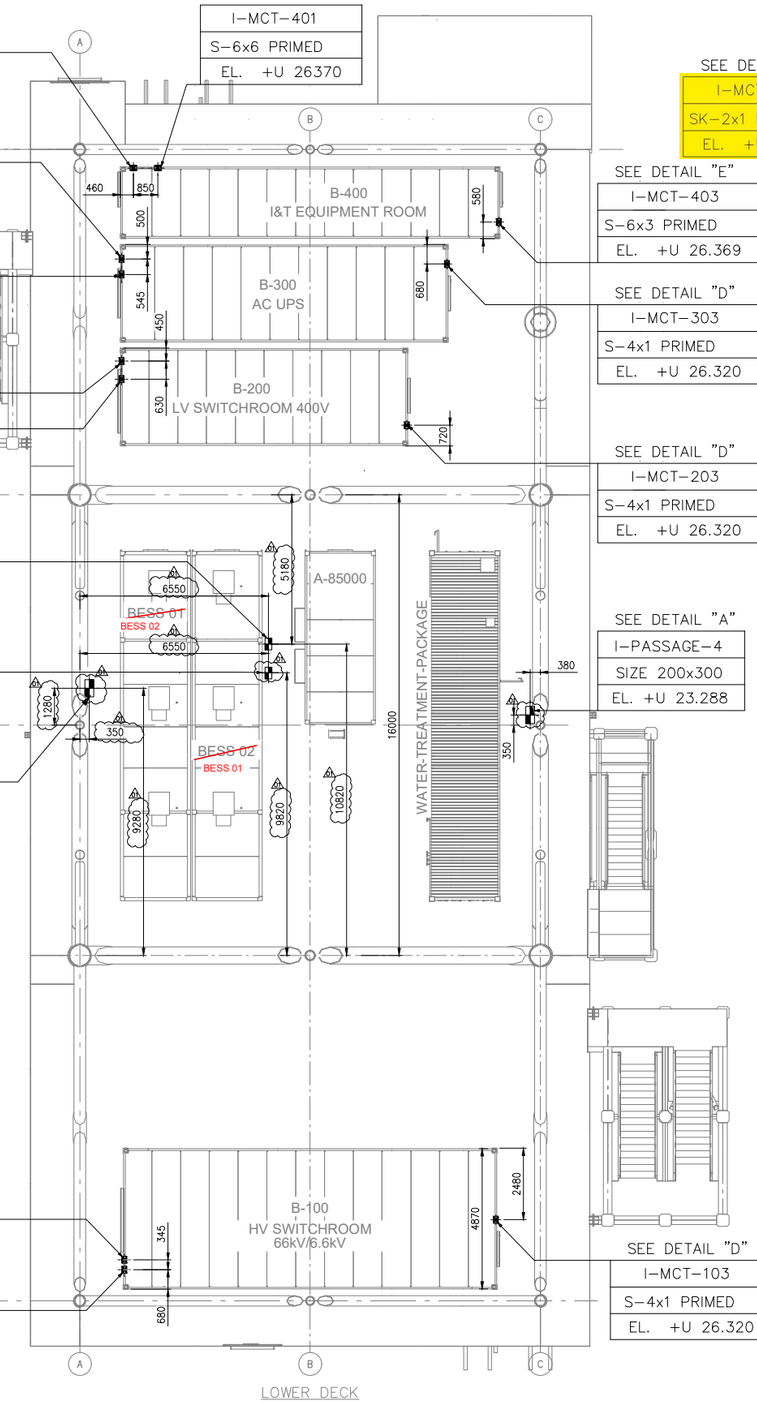
SEE DETAIL "B"
I-MCT-T01
SK-2x1 PRIMED
EL. +U 21.680

SEE DETAIL "E"
I-MCT-403
S-6x3 PRIMED
EL. +U 26.369

SEE DETAIL "D"
I-MCT-303
S-4x1 PRIMED
EL. +U 26.320

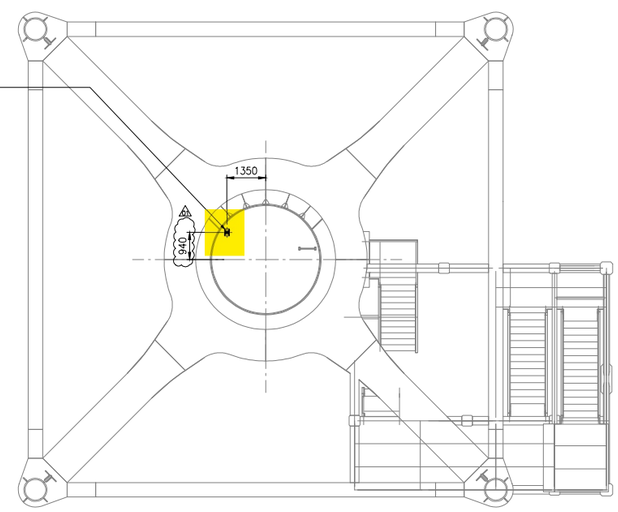
SEE DETAIL "D"
I-MCT-203
S-4x1 PRIMED
EL. +U 26.320

SEE DETAIL "A"
I-PASSAGE-4
SIZE 200x300
EL. +U 23.288



LOWER DECK

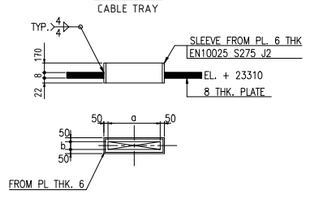
VIEW EL. +23310mm to +30310mm



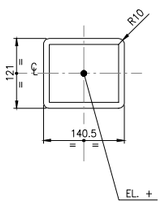
MONO PILE (TRANSITION PIECE)

VIEW EL. +17180mm to +23340mm

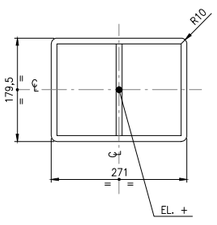
DETAIL "A"
CABLE TRAY



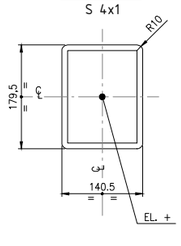
DETAIL "B"
SK 2x1



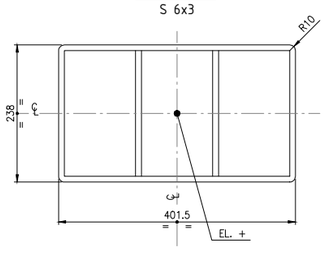
DETAIL "C"
S 4x2



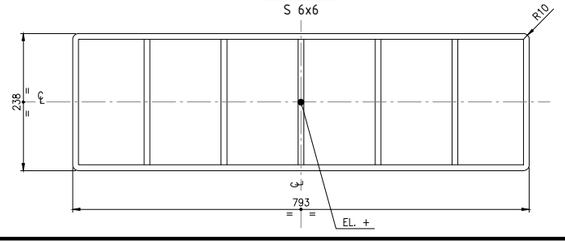
DETAIL "D"
S 4x1

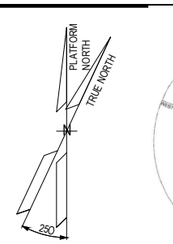


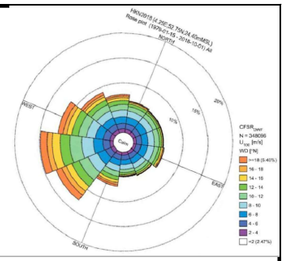
DETAIL "E"
S 6x3



DETAIL "E"
S 6x6







NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

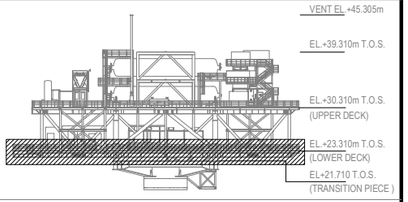
PASSAGE

MCT

TAG	TAGGING
SIZE-MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40087	Instrument and Telecom MCT Layout - Upper Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	28/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	24/04/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT-LOWER DECK
TOS EL. +23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 24/04/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40086	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40086 REV01.dwg

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40086**

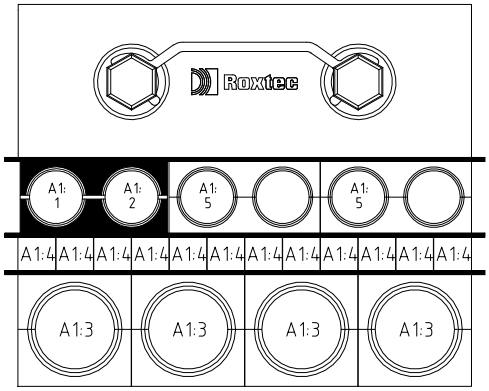
REV.:	DATE:	SIGNATURE:
1_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

RTD Version No: 4.37.11.0

A1

A1



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/['])	Module Type
A1:5						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:4						RM 10/0x12 EX
A1:3						RM 30 EX 10-25 [0.394"-0.984"]
A1:2	2	HNA6 / CN-200N1	FO12 OS2	COMM	8.5 [0.335"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	1	HNA6 / B400-NET-001	FO12 OS2	COMM	8.5 [0.335"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]

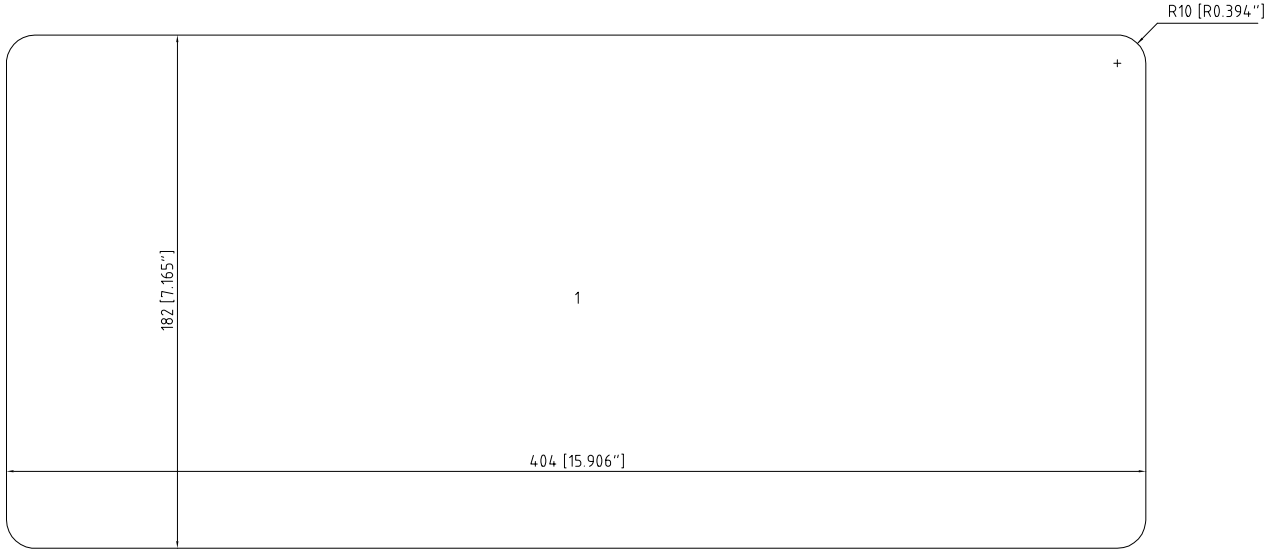
MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible: Rosetti Marino	Created Date: 2024-06-03	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH)	Location/ Sublocation	TotWeight: 5.2 [11.43]
Roxtec	Format: NTS		Transit name: I-MCT-T01		Sheet No: 3/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074		Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 4x3 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.1 [31.06]
	Format		Location/ Sublocation	Sheet No
Roxtec	NTS		Transit name I-MCT-U01	1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

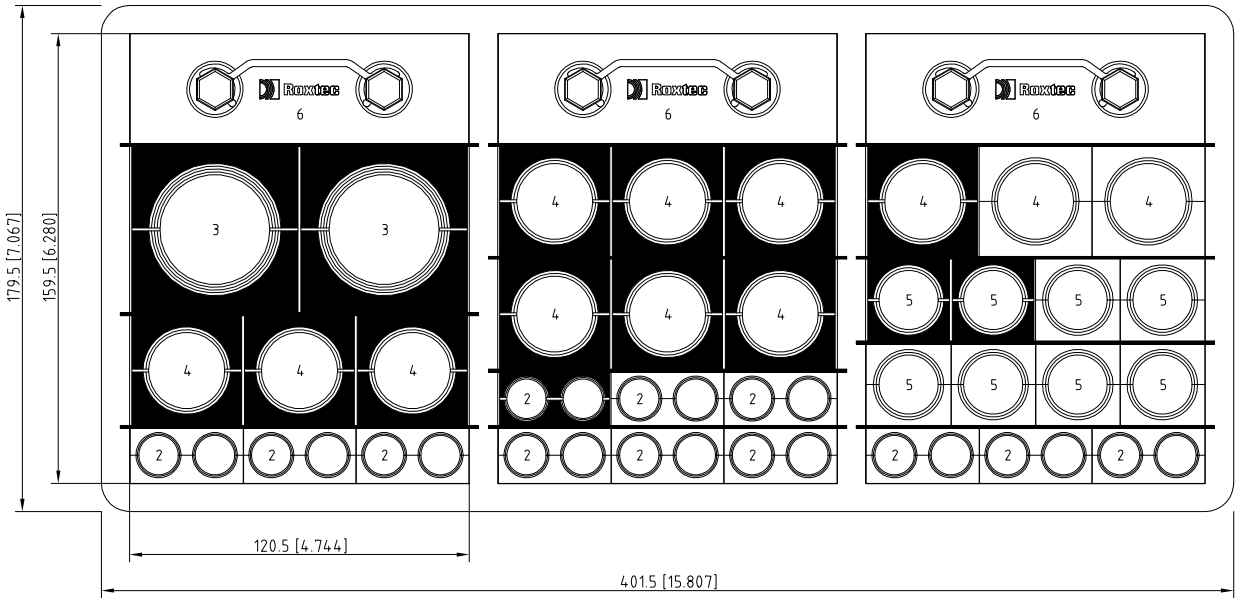
CUTOUT TO FIT SOLUTION WELDING, 404x182 [15.906"x7.165"]



Detail Drawing

Solution: 1

I-MCT-U01 - UPPER DECK



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
7	11	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
6	3	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
5	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
4	12	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
3	2	RM 60 WOC EX 28-54 [1.102"-2.126"]	EXRM00000601000	0.3 [0.57]
2	12	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
1	1	S 4x3 Ex PRIMED	EXS004000000312	6.8 [14.99]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	14.1 [31.06]
Roxtec	Format NTS		Transit name I-MCT-U01	Sheet No 2/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

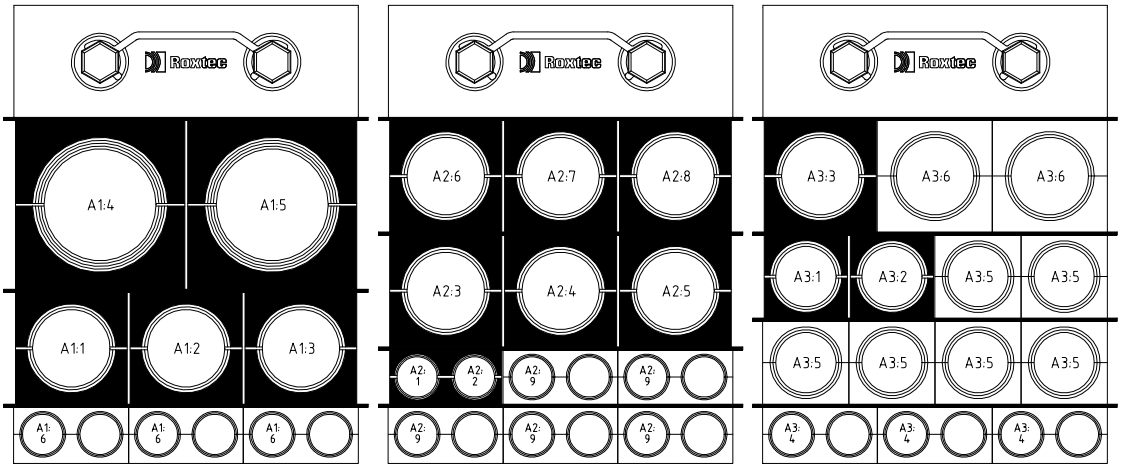
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 A2 A3

A1 A2 A3



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/['])	Module Type
A3:6						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:5						RM 30 EX 10-25 [0.394"-0.984"]
A3:4						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:3	11	00-JE-22001_2/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:2	7	00-JE-12003/B400-PCS-002	6x2x0.75mm2	Ex-d	19.4 [0.764"]	RM 30 EX 10-25 [0.394"-0.984"]
A3:1	6	00-JE-12002/B400-PCS-002	6x2x0.75mm2	Ex-d	19.4 [0.764"]	RM 30 EX 10-25 [0.394"-0.984"]
A2:9						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:8	8	00-JE-13001/B400-PCS-002	24x2.5mm2	Ex-d	27.8 [1.094"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:7	5	00-JE-12001_2/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:6	4	00-JE-12001_1/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:5	10	00-JE-22001_1/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:4	9	00-JE-21001/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:3	12	00-JE-23001/B400-SIS-001	12x2.5mm2	Ex-d	32.8 [1.291"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:2	15	C-950-FDZ-02104/950-JE-0210 1	3x2.5mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:1	14	C-950-FDZ-02103/950-JE-0210 1	3x2.5mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:6						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:5	16	950-JE-02102/B400-FGS-002	12x3x2.5mm2	Ex-d	43.7 [1.720"]	RM 60 WOC EX 28-54 [1.102"-2.126"]
A1:4	13	950-JE-02101/B400-FGS-002	12x3x2.5mm2	Ex-d	43.7 [1.720"]	RM 60 WOC EX 28-54 [1.102"-2.126"]
A1:3	2	00-JE-11001_2/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:2	3	00-JE-11002/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:1	1	00-JE-11001_1/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible: Rosetti Marino	Created Date: 2024-06-03	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH)	Location/ Sublocation	TotWeight: 14.1 [31.06]
Roxtec	Format: NTS		Transit name: I-MCT-U01		Sheet No: 3/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074		Rev: 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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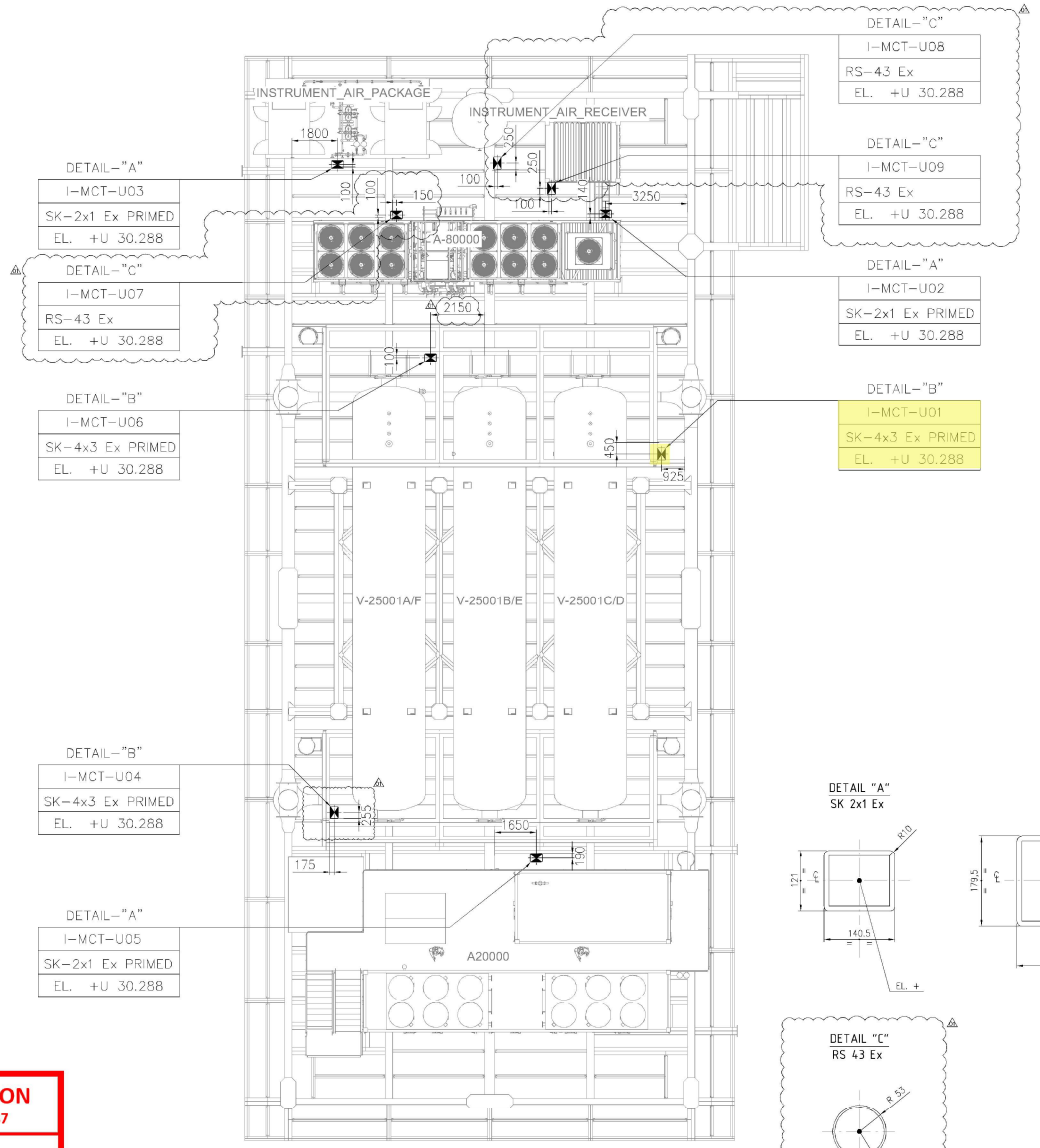
ITEM	Tag	I-MCT-U01	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40087
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001907		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-02-06	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-30T10:20:43.462Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-06T16:20:29.083Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

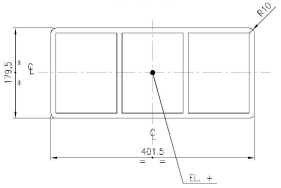


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

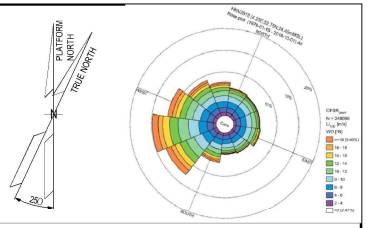


DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

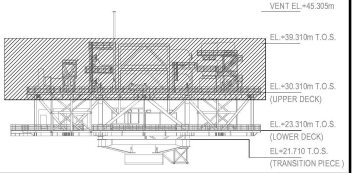
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

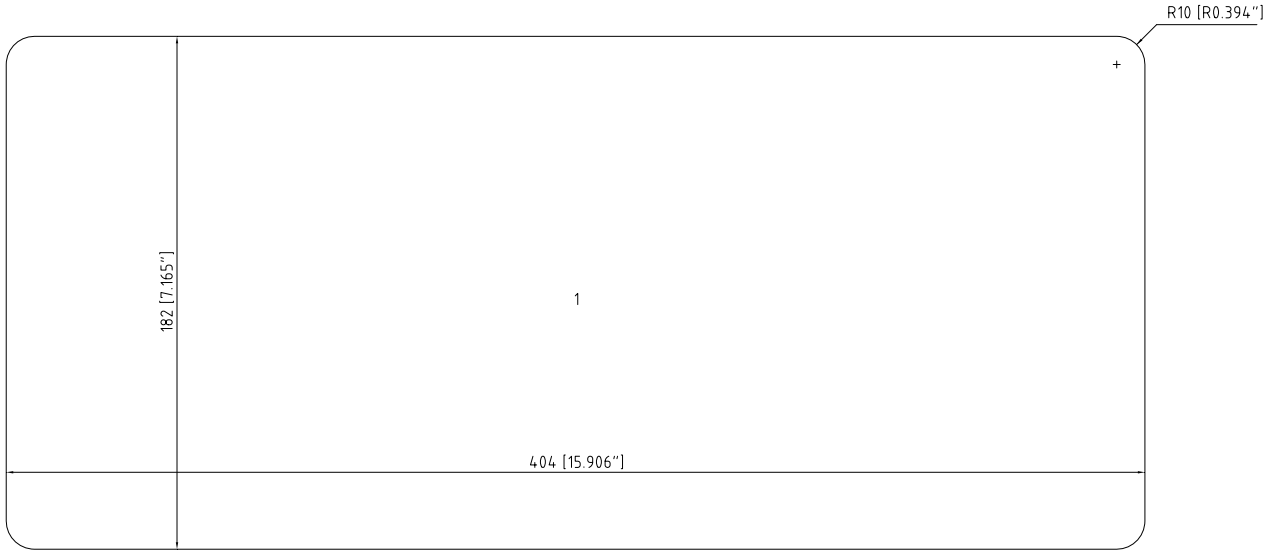
File Name : 123A90-DDL-IN-DL-40087 REV01.dwg

RTD Version No: 4.37.11.0

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 4x3 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]

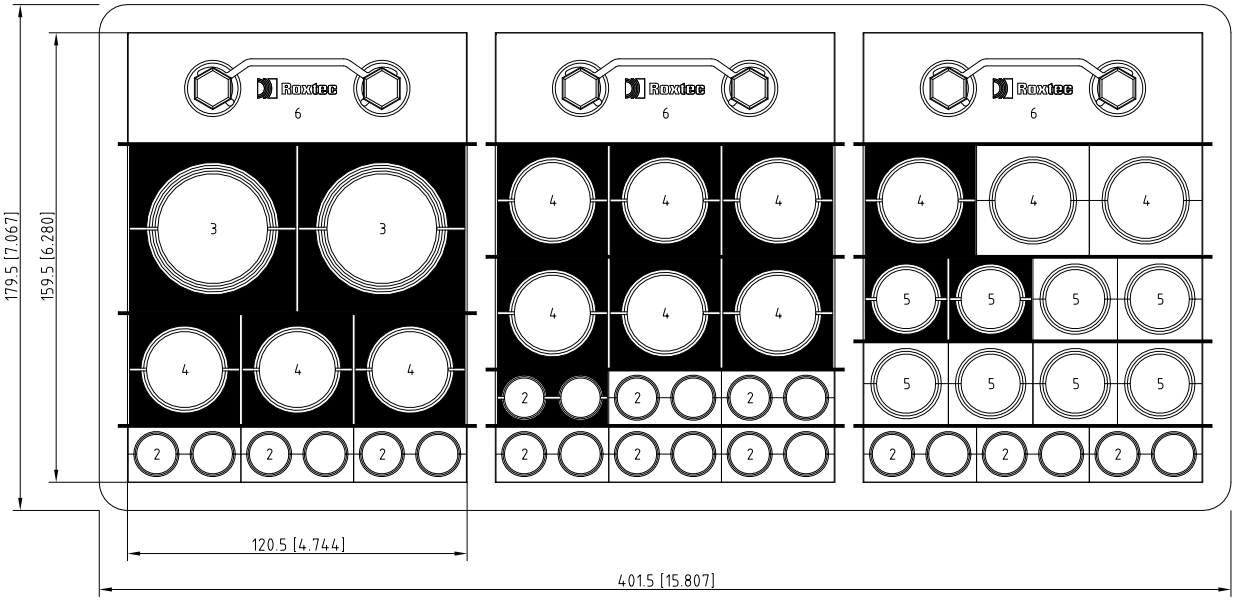
Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.1 [31.06]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U01	1/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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CUTOUT TO FIT SOLUTION WELDING, 404x182 [15.906"x7.165"]



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

I-MCT-U01 - UPPER DECK

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

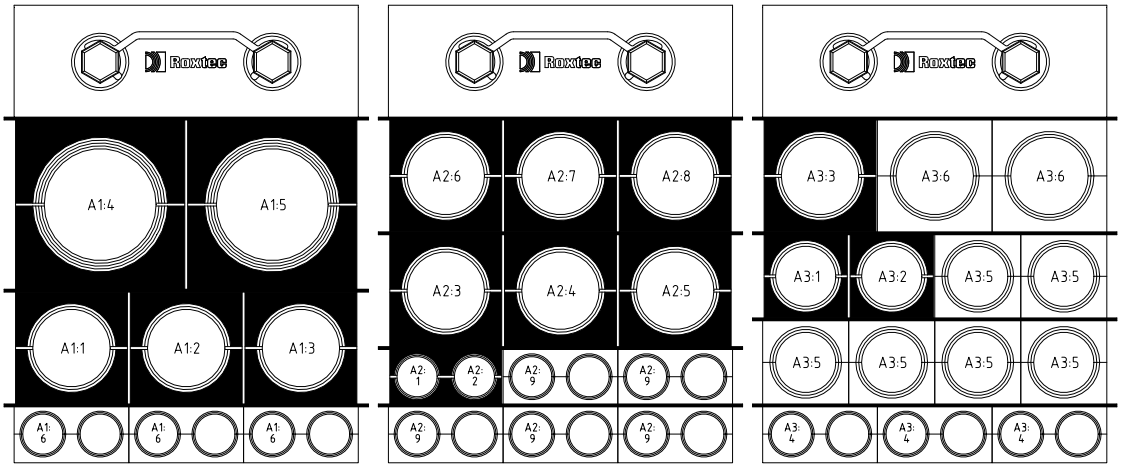
Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
7	11	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
6	3	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
5	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
4	12	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
3	2	RM 60 WOC EX 28-54 [1.102"-2.126"]	EXRM00000601000	0.3 [0.57]
2	12	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
1	1	S 4x3 Ex PRIMED	EXS004000000312	6.8 [14.99]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.1 [31.06]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U01	2/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

A1 A2 A3

A1 A2 A3



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/["))	Module Type
A3:6						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:5						RM 30 EX 10-25 [0.394"-0.984"]
A3:4						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:3	11	00-JE-22001_2/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:2	7	00-JE-12003/B400-PCS-002	6x2x0.75mm2	Ex-d	19.4 [0.764"]	RM 30 EX 10-25 [0.394"-0.984"]
A3:1	6	00-JE-12002/B400-PCS-002	6x2x0.75mm2	Ex-d	19.4 [0.764"]	RM 30 EX 10-25 [0.394"-0.984"]
A2:9						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:8	8	00-JE-13001/B400-PCS-002	24x2.5mm2	Ex-d	27.8 [1.094"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:7	5	00-JE-12001_2/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:6	4	00-JE-12001_1/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:5	10	00-JE-22001_1/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:4	9	00-JE-21001/B400-SIS-001	12x2x0.75mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:3	12	00-JE-23001/B400-SIS-001	12x2.5mm2	Ex-d	32.8 [1.291"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:2	15	C-950-FDZ-02104/950-JE-0210 1	3x2.5mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:1	14	C-950-FDZ-02103/950-JE-0210 1	3x2.5mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:6						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:5	16	950-JE-02102/B400-FGS-002	12x3x2.5mm2	Ex-d	43.7 [1.720"]	RM 60 WOC EX 28-54 [1.102"-2.126"]
A1:4	13	950-JE-02101/B400-FGS-002	12x3x2.5mm2	Ex-d	43.7 [1.720"]	RM 60 WOC EX 28-54 [1.102"-2.126"]
A1:3	2	00-JE-11001_2/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:2	3	00-JE-11002/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:1	1	00-JE-11001_1/B400-PCS-002	12x2x0.75mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]

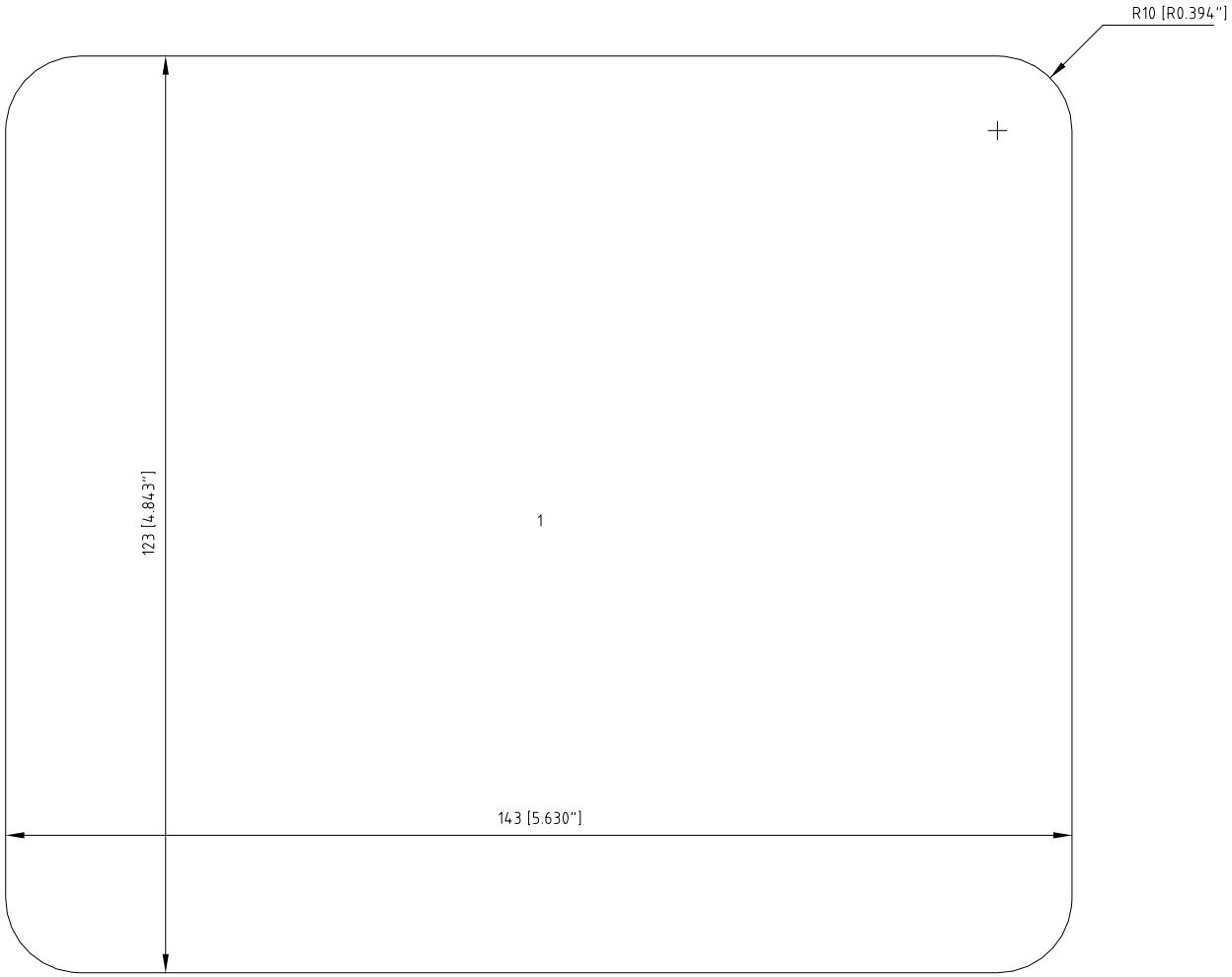
MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible: Rosetti Marino	Created Date: 2024-06-03	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH)		TotWeight: 14.1 [31.06]
Roxtec	Format: NTS		Location/ Sublocation		Sheet No: 3/3
	Client		Transit name: I-MCT-U01		
			Drawing number: 123A90-DDL-IN-DD-40074		Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 2x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U02	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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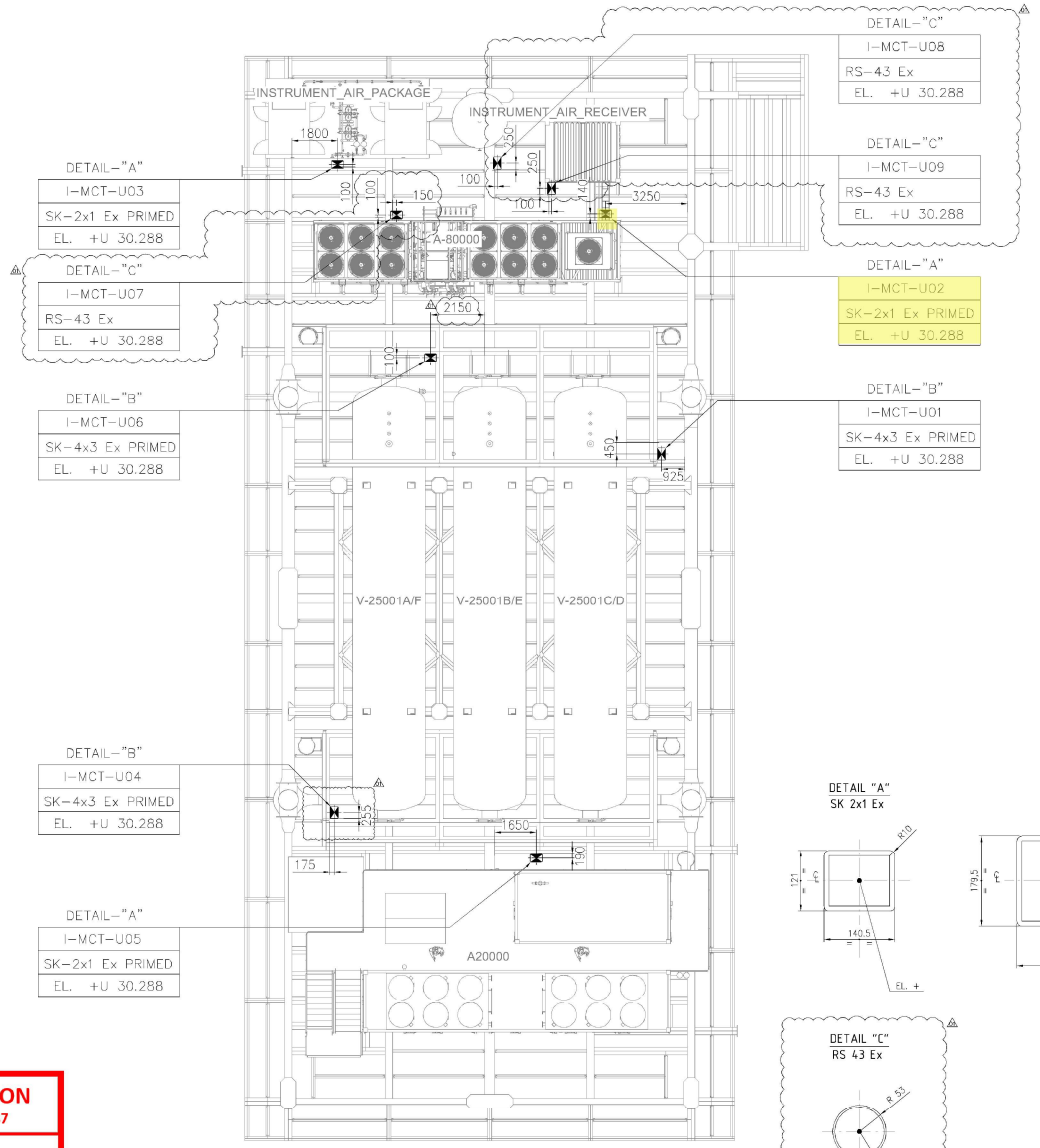
ITEM	Tag	I-MCT-U02	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40087
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10001908		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-30	
Signature	Digitaly signed by Michele Tartaglia 2025-01-25T13:55:48.223Z	Digitaly signed by Paolo Schintu 2025-01-30T15:13:26.285Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

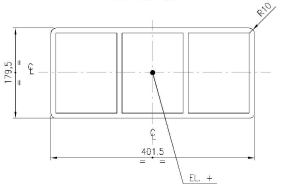


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

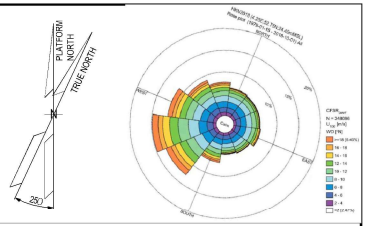


DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

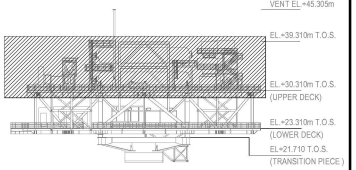
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

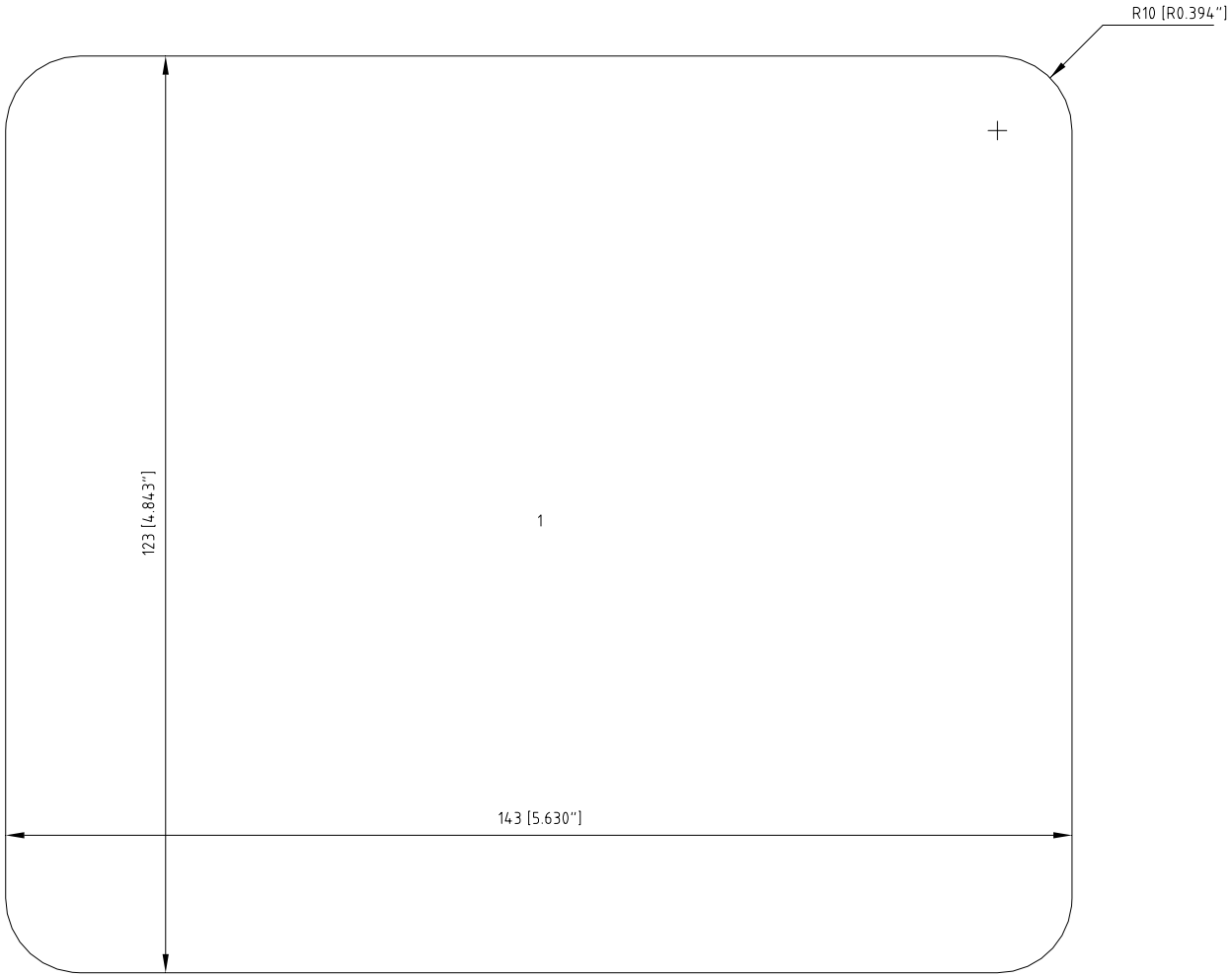
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087_REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

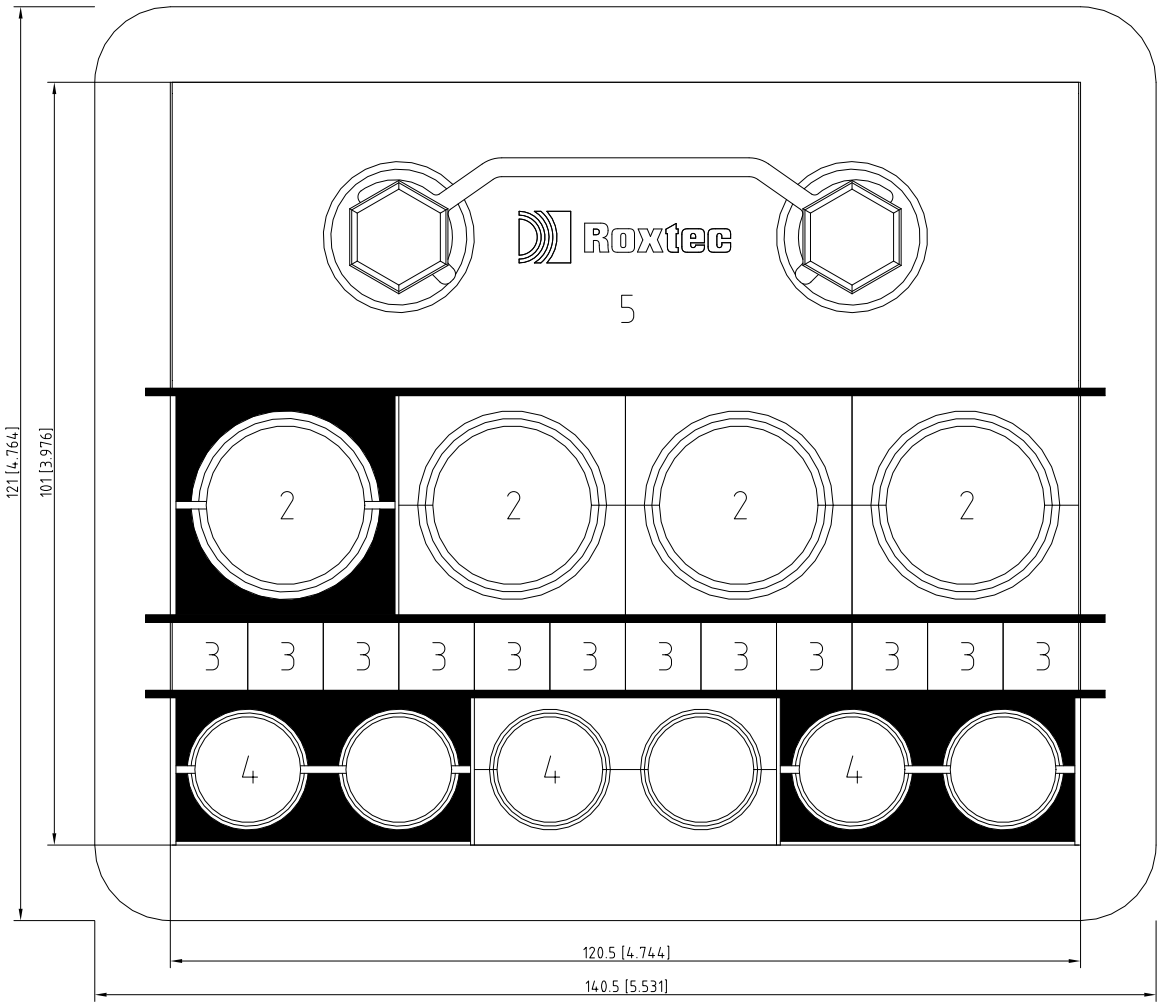
Cutout Detail

Frame: S 2x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U02	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

CUTOUT TO FIT SOLUTION WELDING, 143x123 [5.630"x4.843"]





Detail Drawing

Solution: 1

I-MCT-U02 - UPPER DECK

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
6	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
5	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
4	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
3	1	RM 10/0x12 EX	EXRM00310121000	0.1 [0.22]
2	4	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 2x1 Ex PRIMED	EXS002000000112	2.3 [5.07]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U02	Sheet No 2/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

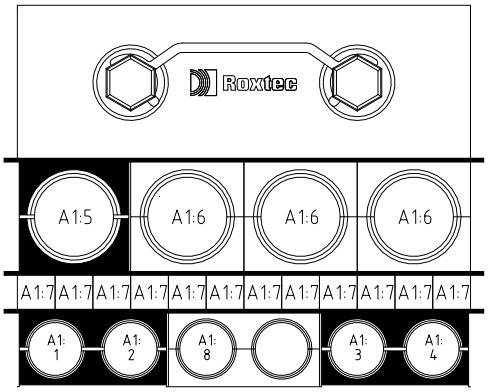
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[“])	Module Type
A1:8						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:7						RM 10/0x12 EX
A1:6						RM 30 EX 10-25 [0.394"-0.984"]
A1:5	8	80-UCP-001/B400-FGS-002	2x2x0.75 mm2	Ex-d	19.3 [0.760"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:4	5	80-UCP-001/B400-NET-001.02	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:3	4	80-UCP-001/B400-NET-001.01	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2	6	C-80-XS-001/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	7	C-80-XA-003/B400-SIS-001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U02	Sheet No 3/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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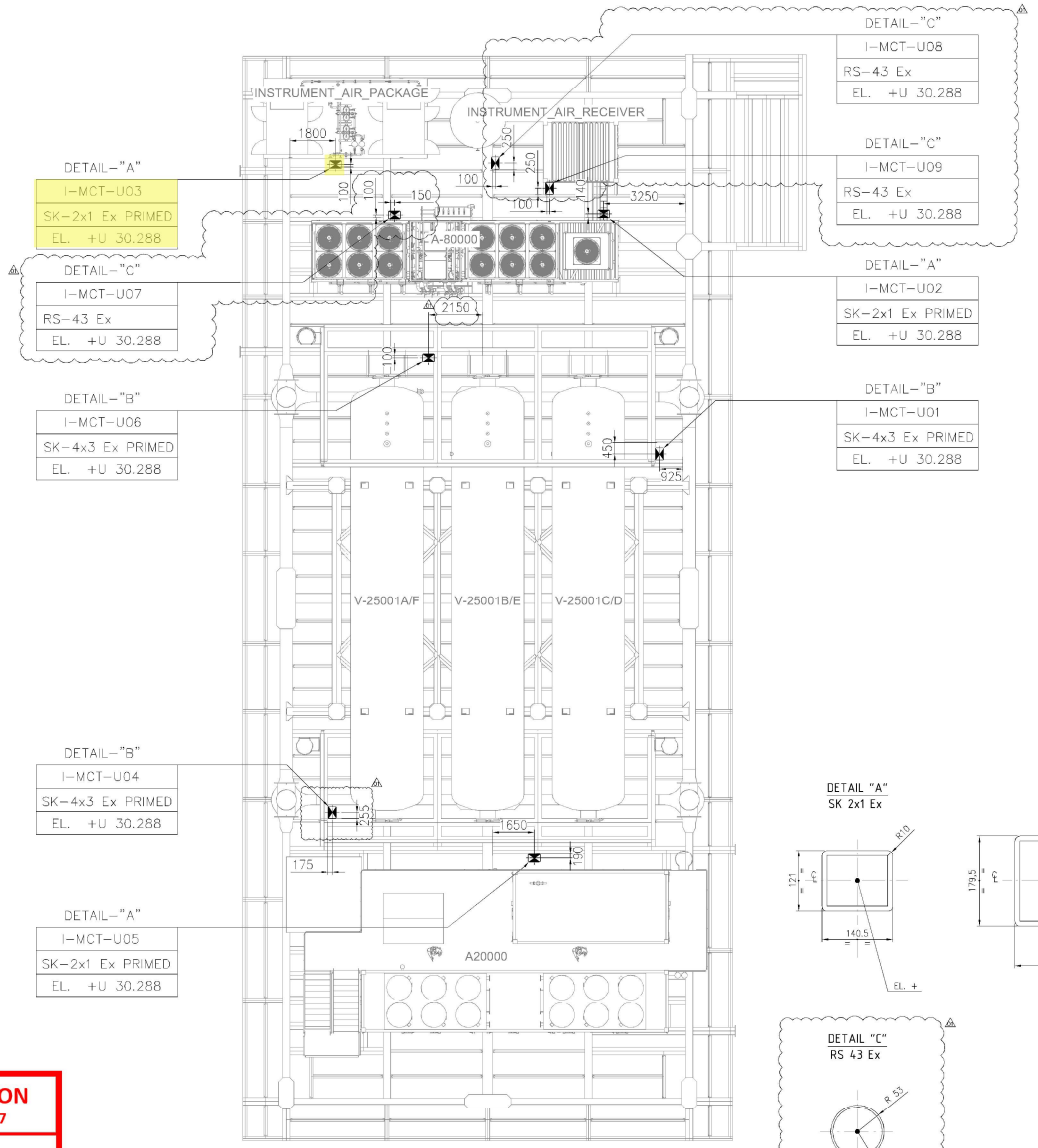
ITEM	Tag	I-MCT-U03	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40087	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10001909		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX29 MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-30	2025-01-30	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-30T10:21:20.138Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-30T15:10:11.310Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

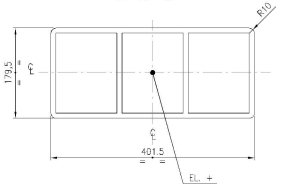


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

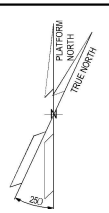


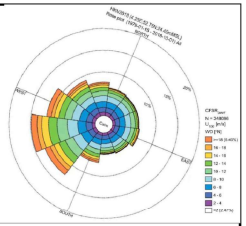
DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA





NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

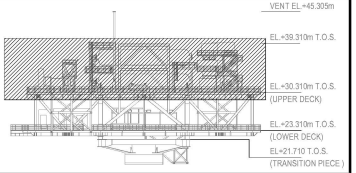
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

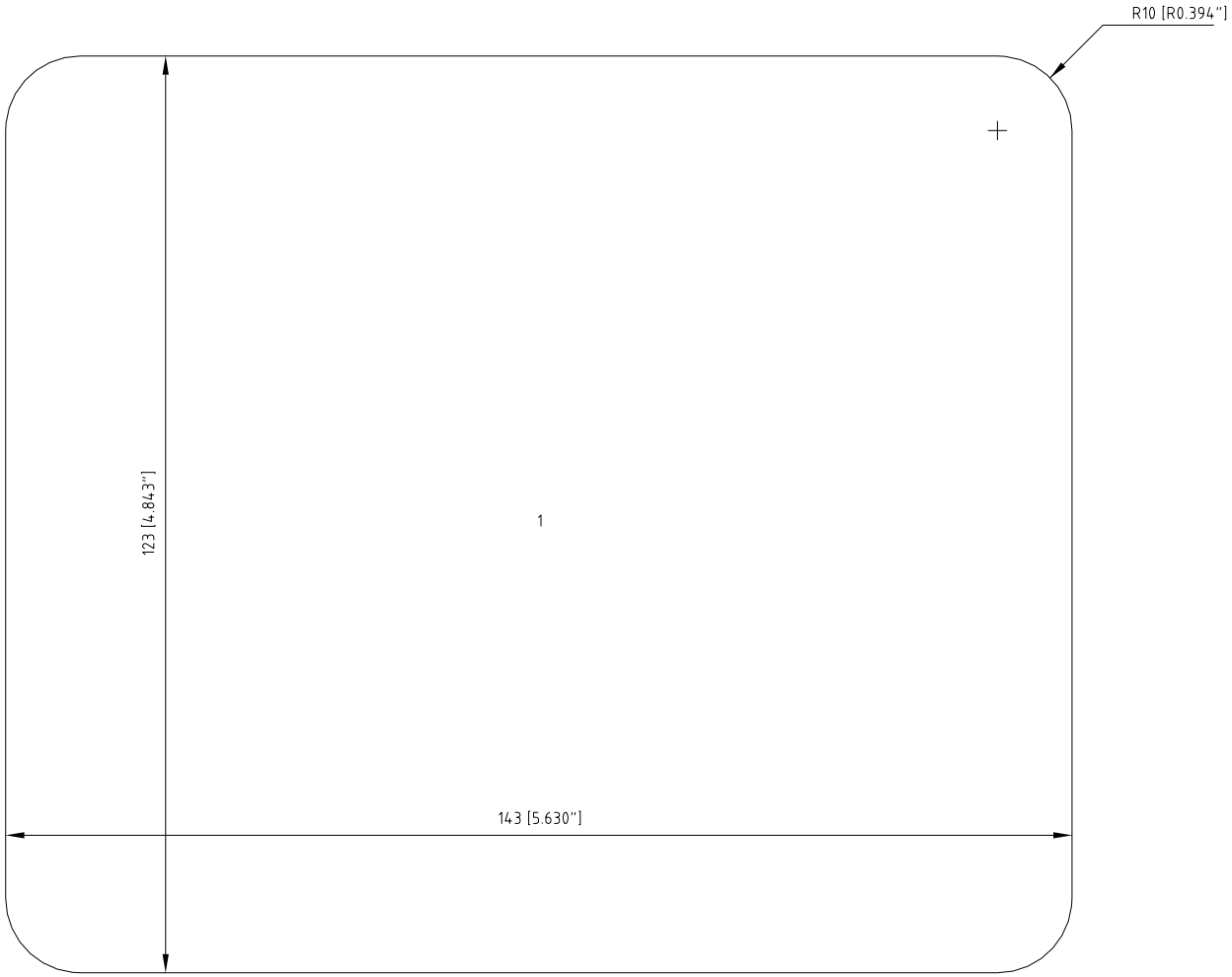
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087_REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 2x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U03	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

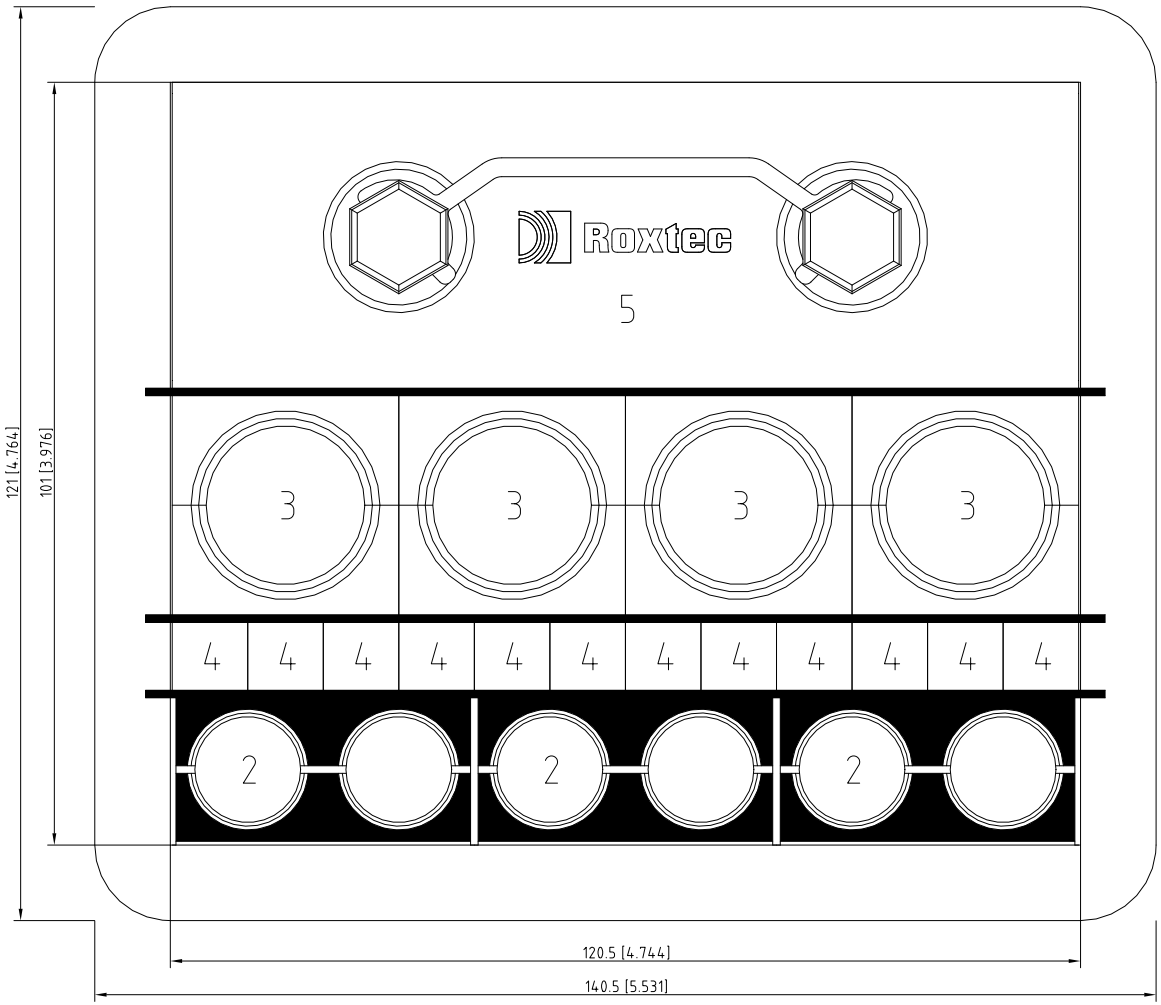
CUTOUT TO FIT SOLUTION WELDING, 143x123 [5.630"x4.843"]



Detail Drawing

Solution: 1

I-MCT-U03 - UPPER DECK



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
6	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
5	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
4	1	RM 10/0x12 EX	EXRM00310121000	0.1 [0.22]
3	4	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
1	1	S 2x1 Ex PRIMED	EXS002000000112	2.3 [5.07]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U03	Sheet No 2/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

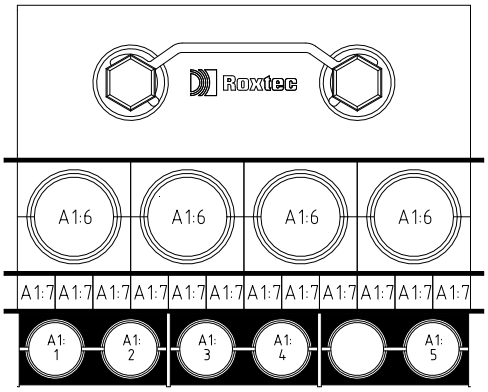
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ [*])	Module Type
A1:7						RM 10/0x12 EX
A1:6						RM 30 EX 10-25 [0.394"-0.984"]
A1:5	11	63-LP-001/B400-NET-001	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:4	12	C-63-XS-001/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:3	15	C-63-PT-004/B400-SIS-001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2	13	C-63-XA-003/B400-SIS-001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	14	C-63-PT-003/B400-PCS-002	1x2x0,75 mm2	Ex-d	9.5 [0.374"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format: NTS		Transit name: I-MCT-U03	Sheet No: 3/3
Client			Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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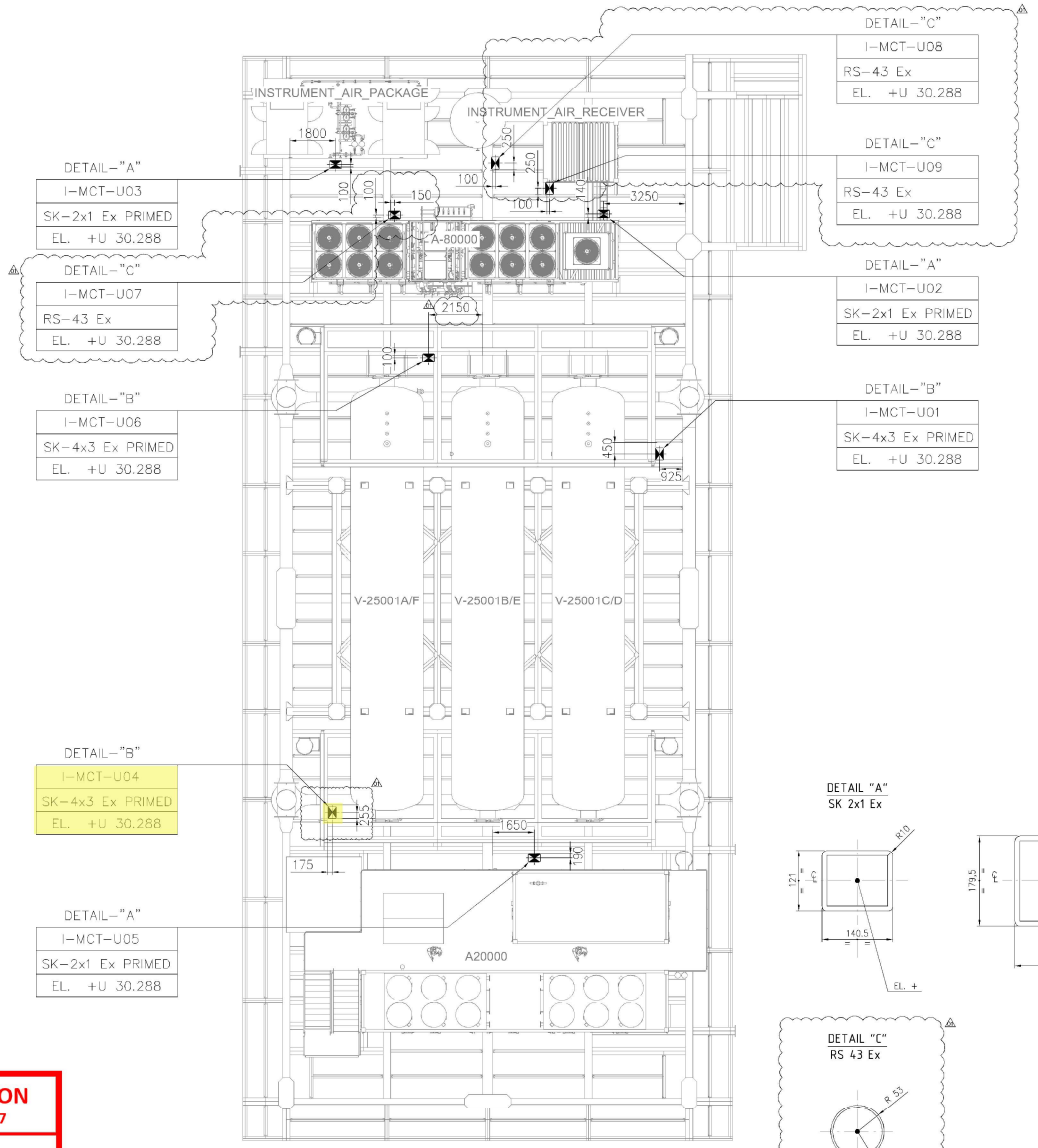
ITEM	Tag	I-MCT-U04	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40087	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10001910	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX29	MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	PL
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-02-19	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:55:58.259Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-19T10:44:19.460Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01



UPPER DECK

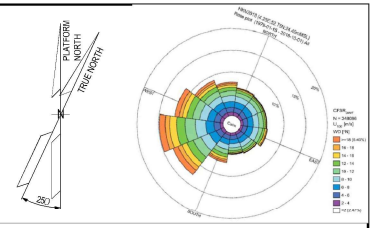
VIEW EL. +30310mm to +40000mm

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

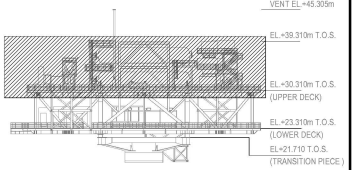
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

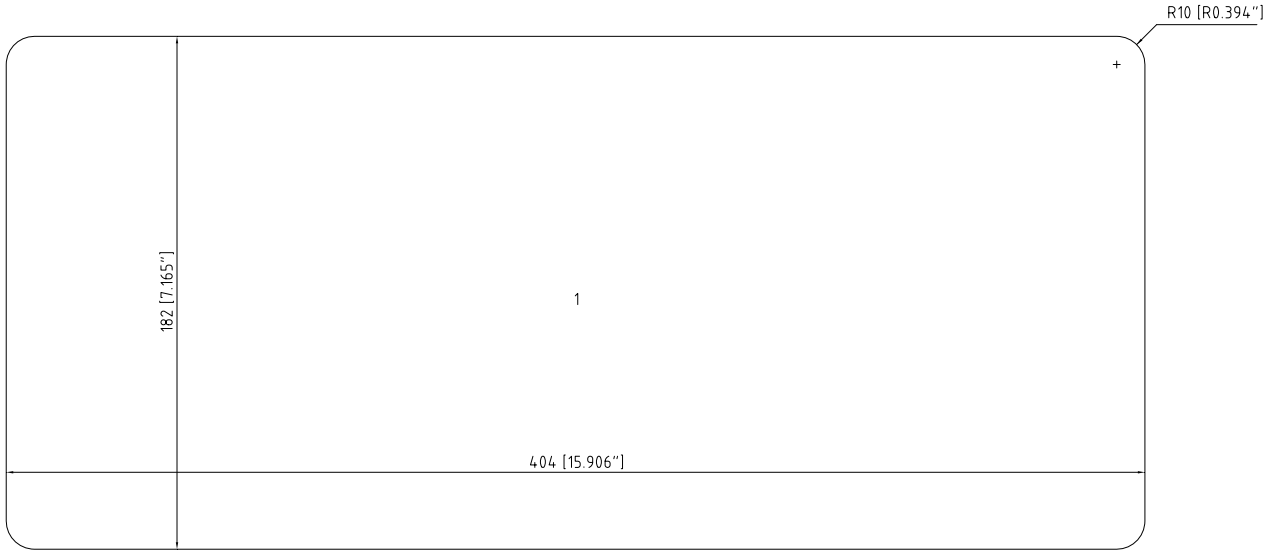
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087 REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 4x3 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

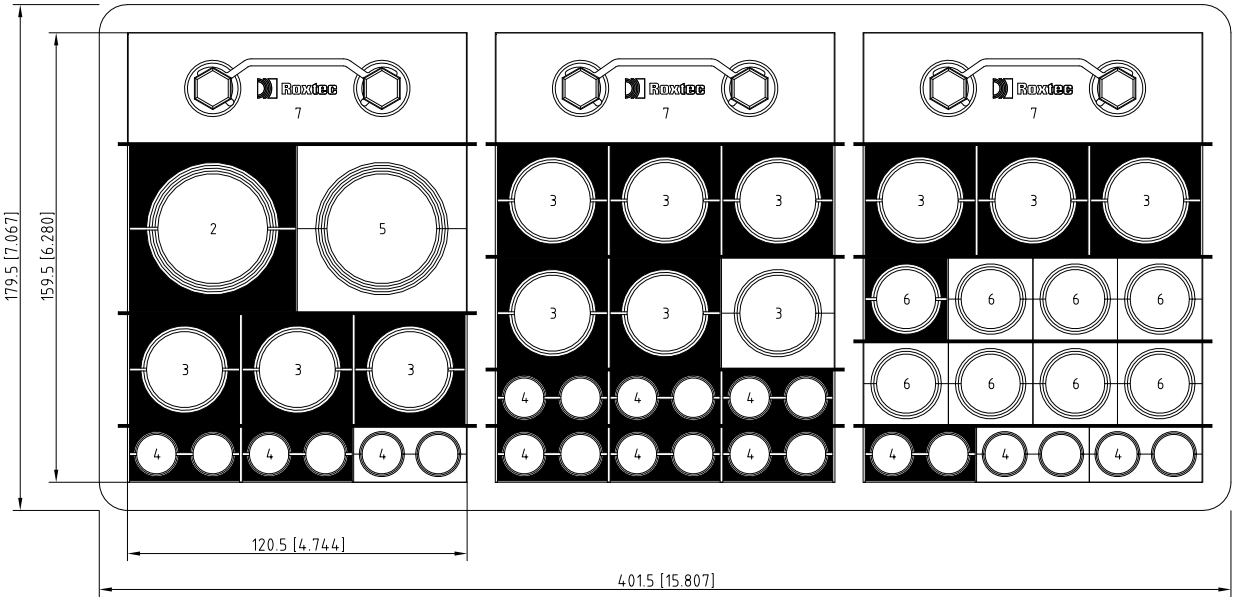
Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.2 [31.22]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U04	1/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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CUTOUT TO FIT SOLUTION WELDING, 404x182 [15.906"x7.165"]



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

I-MCT-U04 - UPPER DECK

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

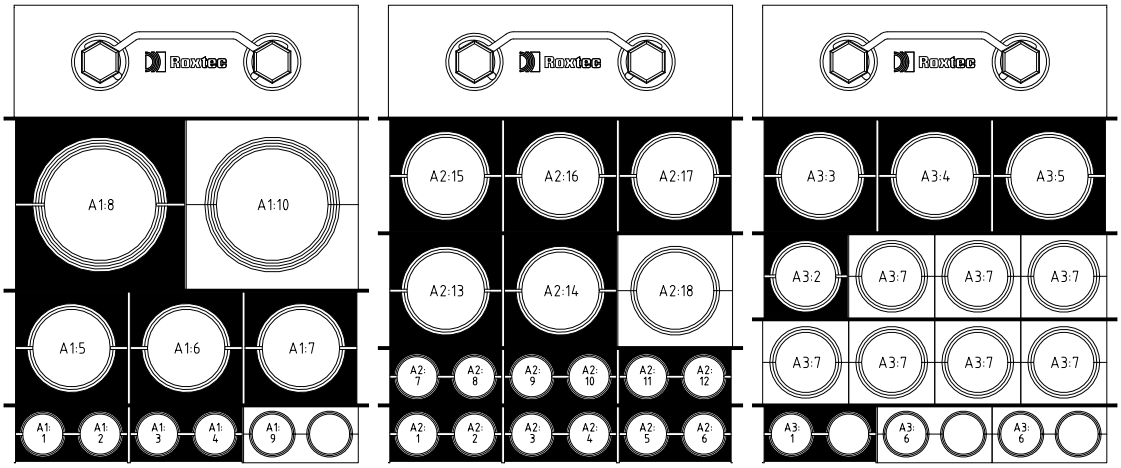
Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
8	11	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
7	3	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
6	8	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
5	1	RM 60 EX 28-54 [1.102"-2.126"]	EXRM00100601000	0.3 [0.73]
4	12	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
3	12	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
2	1	RM 60 WOC EX 28-54 [1.102"-2.126"]	EXRM00000601000	0.3 [0.57]
1	1	S 4x3 Ex PRIMED	EXS004000000312	6.8 [14.99]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.2 [31.22]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U04	2/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

A1 A2 A3

A1 A2 A3



Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[*])	Module Type
A3:7						RM 30 EX 10-25 [0.394"-0.984"]
A3:6						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:5	5	00-JE-13002/B400-PCS-002	24x2,5 mm2	Ex-d	27.8 [1.094"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:4	12	00-JE-12005/B400-PCS-002	12x2x0,75 mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:3	10	00-JE-12004_2/B400-PCS-002	12x2x0,75 mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A3:2	11	00-JE-13003/B400-PCS-002	12x2,5 mm2	Ex-d	20.8 [0.819"]	RM 30 EX 10-25 [0.394"-0.984"]
A3:1	13	64-PT-002/00-JE-21002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:18						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:17	9	00-JE-12004_1/B400-PCS-002	12x2x0,75 mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:16	8	00-JE-11003_2/B400-PCS-002	12x2x0,75 mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:15	7	00-JE-11003_1/B400-PCS-002	12x2x0,75 mm2	Ex-d	24.8 [0.976"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:14	1	00-JE-23002/B400-SIS-001	12x2,5 mm2	Ex-d	24.2 [0.953"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:13	6	950-JE-02103/B400-FGS-002	6x3x2,5 mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A2:12	19	C-950-MOB-06101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:11	18	C-950-ASD-06101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:10	17	C-950-ESDD-03101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:9	16	C-950-ESD-03101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:8	15	C-950-MOB-03101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:7	14	C-950-ASD-03101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:6	25	C-950-ESDD-07101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:5	24	C-950-ESD-07101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:4	23	C-950-MOB-07101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:3	22	C-950-ASD-07101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:2	21	C-950-ESDD-06101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:1	20	C-950-ESD-06101/00-JE-22002	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:10						RM 60 EX 28-54 [1.102"-2.126"]
A1:9						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:8	30	950-JE-03101/B400-FGS-002	12x3x2.5 mm2	Ex-d	43.7 [1.720"]	RM 60 WOC EX 28-54 [1.102"-2.126"]
A1:7	3	00-JE-22002_2/B400-SIS-001	12x2x0,75 mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:6	2	00-JE-22002_1/B400-SIS-001	12x2x0,75 mm2	Ex-d	32.9 [1.295"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:5	4	00-JE-21002/B400-SIS-001	12x2x0,75 mm2	Ex-d	25.2 [0.992"]	RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:4	29	C-50-XY-004/00-JE-13003	2x2.5 mm2	Ex-d	12.1 [0.476"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:3	28	C-50-XY-003/00-JE-13003	2x2.5 mm2	Ex-d	12.1 [0.476"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2	27	C-50-XY-002/00-JE-13003	2x2.5 mm2	Ex-d	12.1 [0.476"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	26	C-50-XY-001/00-JE-13003	2x2.5 mm2	Ex-d	12.1 [0.476"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.2 [31.22]
			Location/ Sublocation	
Roxtec	Format: NTS		Transit name: I-MCT-U04	Sheet No: 3/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

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POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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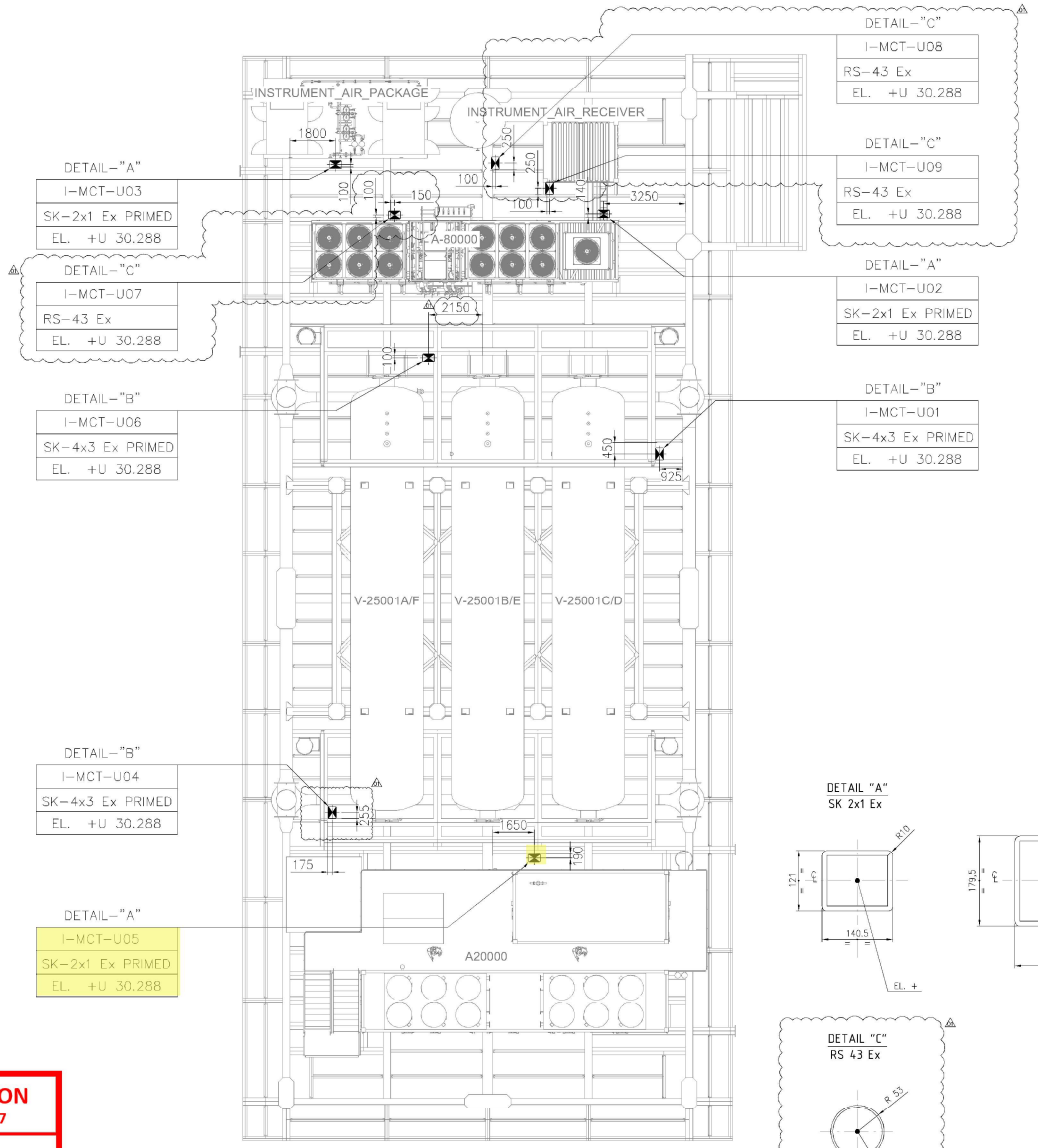
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	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10001911	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX29	MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-29	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:56:13.703Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-29T08:00:30.765Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

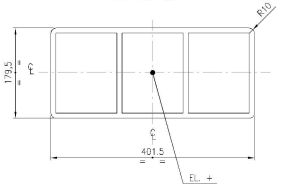


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

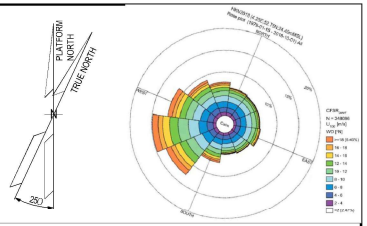


DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

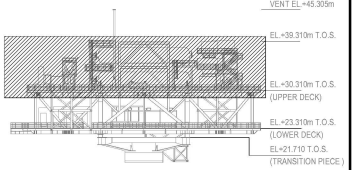
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

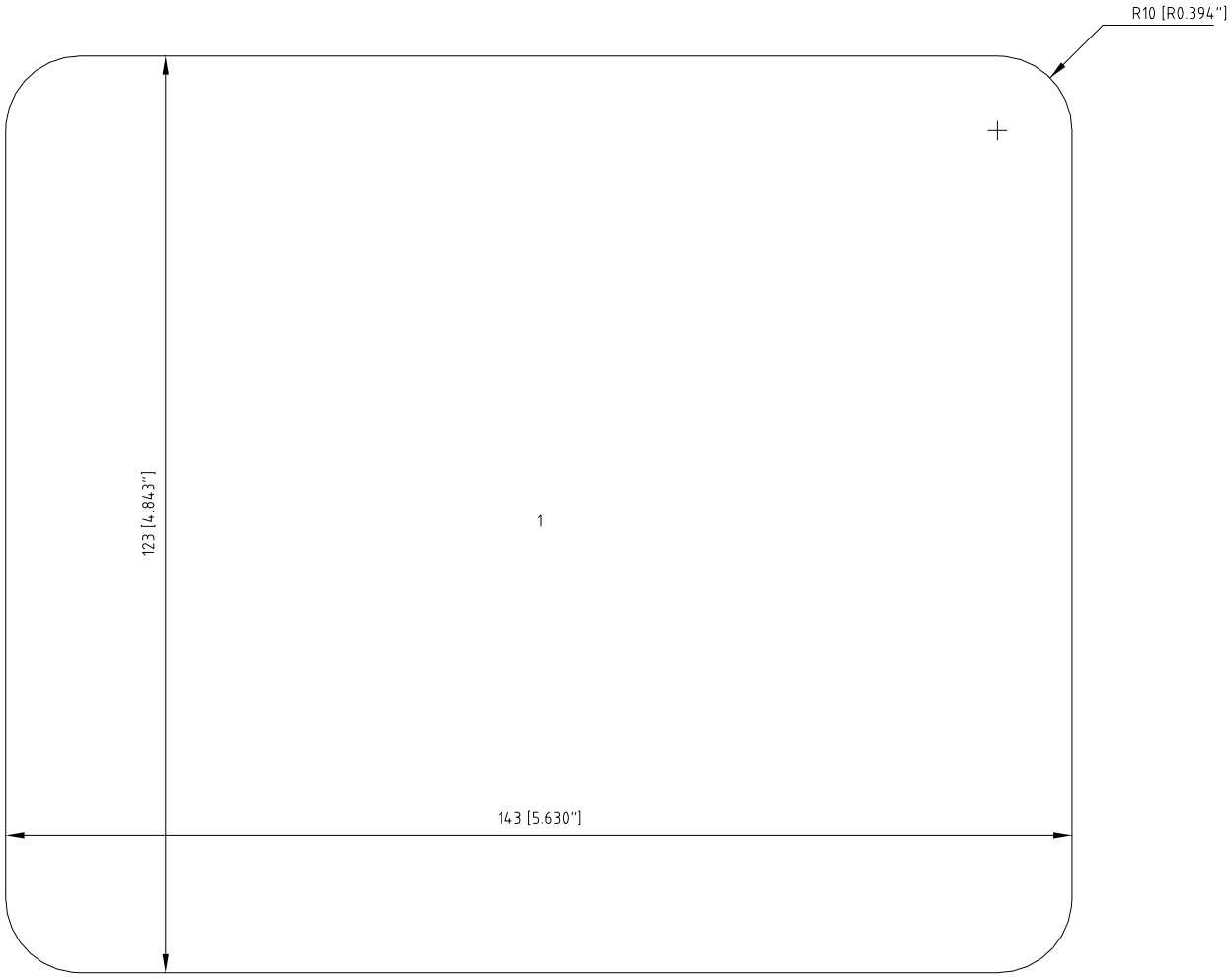
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087_REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

Frame: S 2x1 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U05	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

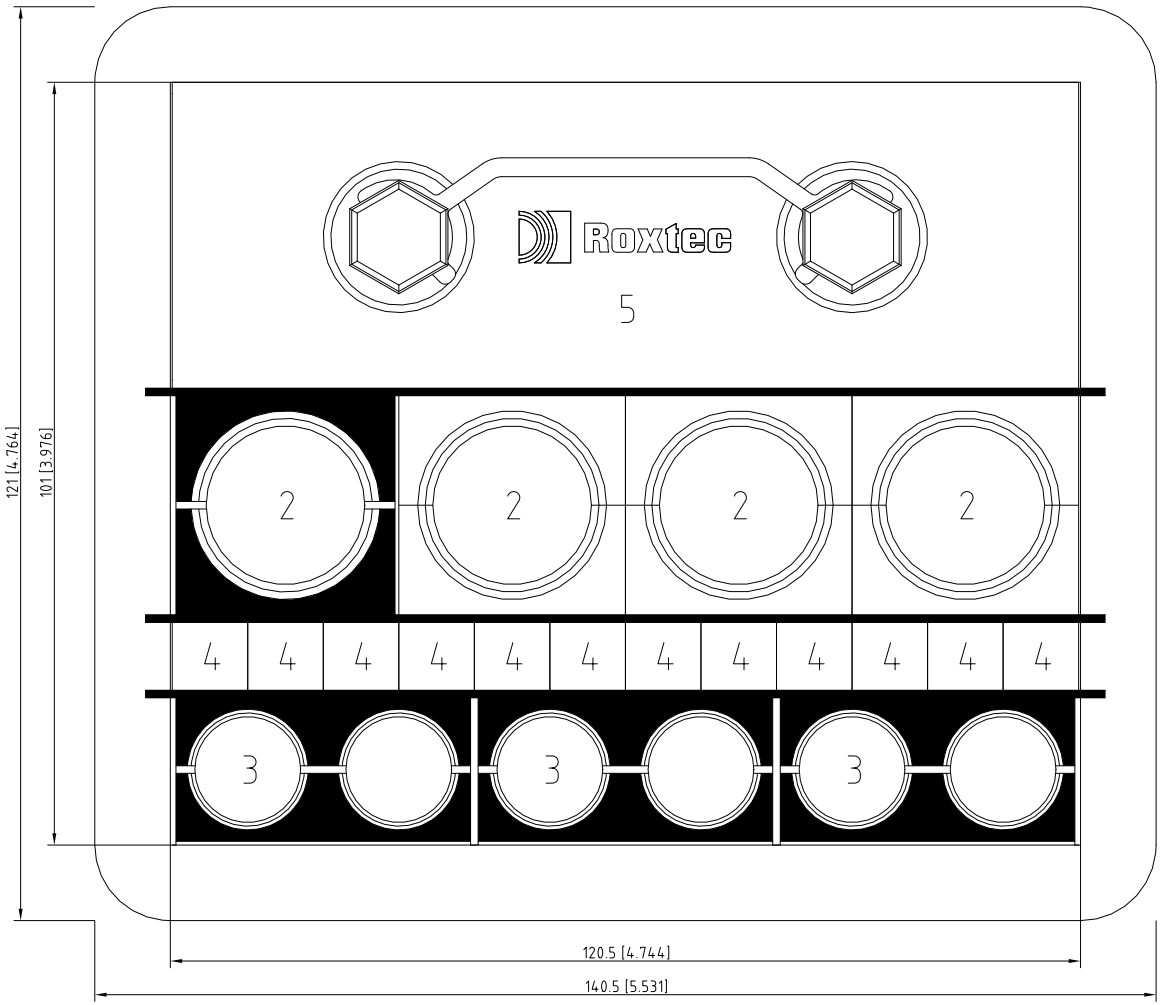
CUTOUT TO FIT SOLUTION WELDING, 143x123 [5.630"x4.843"]



Detail Drawing

Solution: 1

I-MCT-U05 - UPPER DECK



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
6	3	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
5	1	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
4	1	RM 10/0x12 EX	EXRM00310121000	0.1 [0.22]
3	3	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
2	4	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
1	1	S 2x1 Ex PRIMED	EXS002000000112	2.3 [5.07]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.2 [11.43]
Roxtec	Format NTS		Transit name I-MCT-U05	Sheet No 2/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

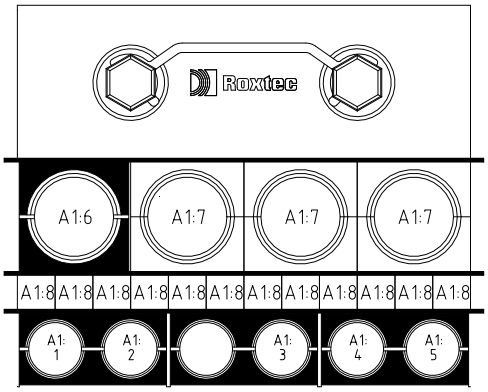
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1

A1



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[“])	Module Type
A1:8						RM 10/0x12 EX
A1:7						RM 30 EX 10-25 [0.394"-0.984"]
A1:6	15	20-UCP-001/B400-FGS-002	2x2x0.75 mm2	Ex-d	19.3 [0.760"]	RM 30 EX 10-25 [0.394"-0.984"]
A1:5	12	20-UCP-001/B400-NET-001.02	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:4	11	20-UCP-001/B400-NET-001.01	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:3	17	TR-100AD1AVR/B400-NET-001	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2	13	C-20-XS-001/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:1	14	C-20-XA-003/B400-SIS-001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

Responsible: Rosetti Marino	Created Date: 2024-06-03	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH)	Location/ Sublocation:	TotWeight: 5.2 [11.43]
Roxtec	Format: NTS		Transit name: I-MCT-U05		Sheet No: 3/3
	Client:		Drawing number: 123A90-DDL-IN-DD-40074		Rev: 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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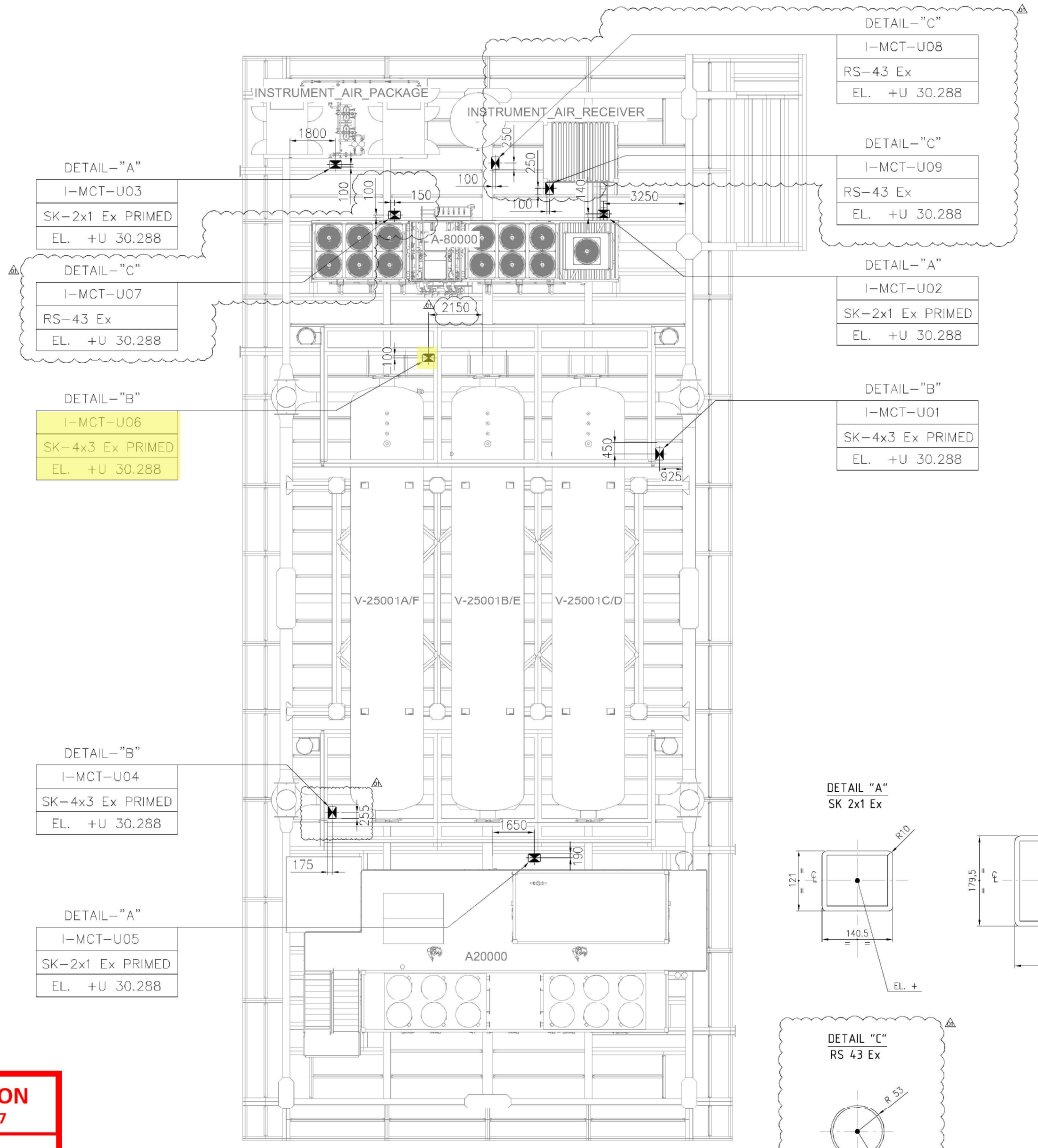
ITEM	Tag	I-MCT-U06	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40087	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10001912		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX29 MCT Penetration Instrument

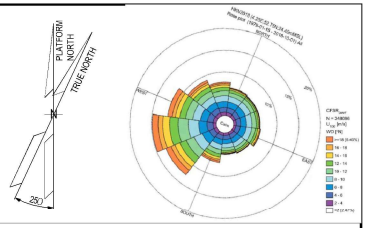
1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	Note
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 4: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-02-10	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:56:36.437Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-10T16:49:47.356Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01





NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

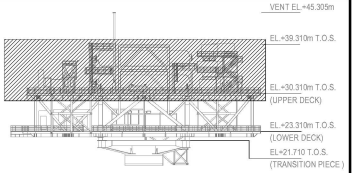
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE: 20/05/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : - 123A90-DDL-IN-DL-40087 REV01.dwg

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

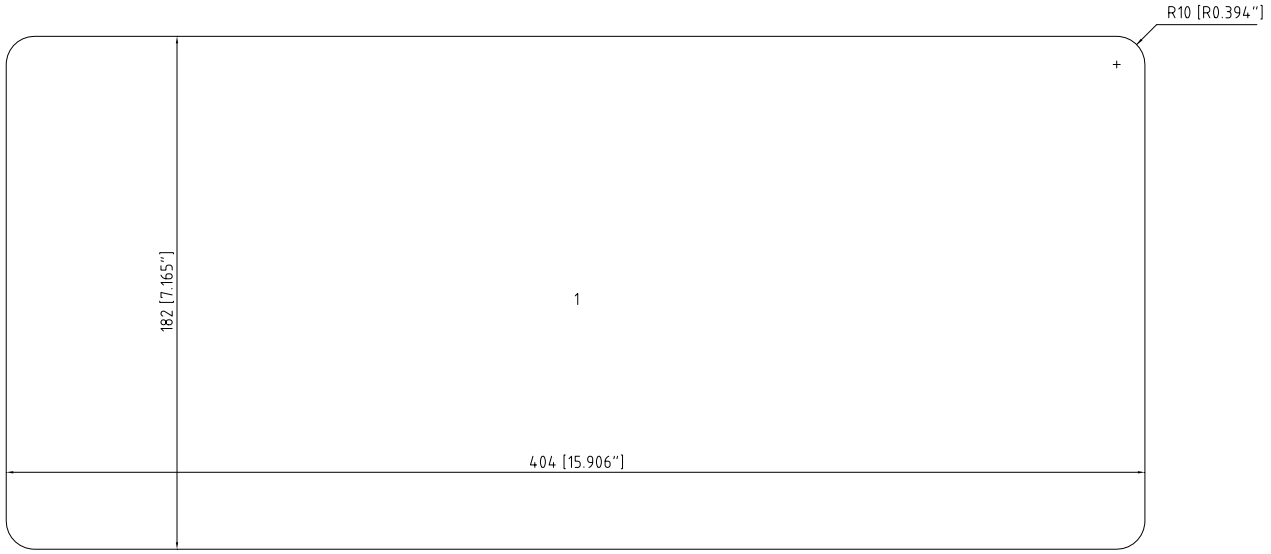
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

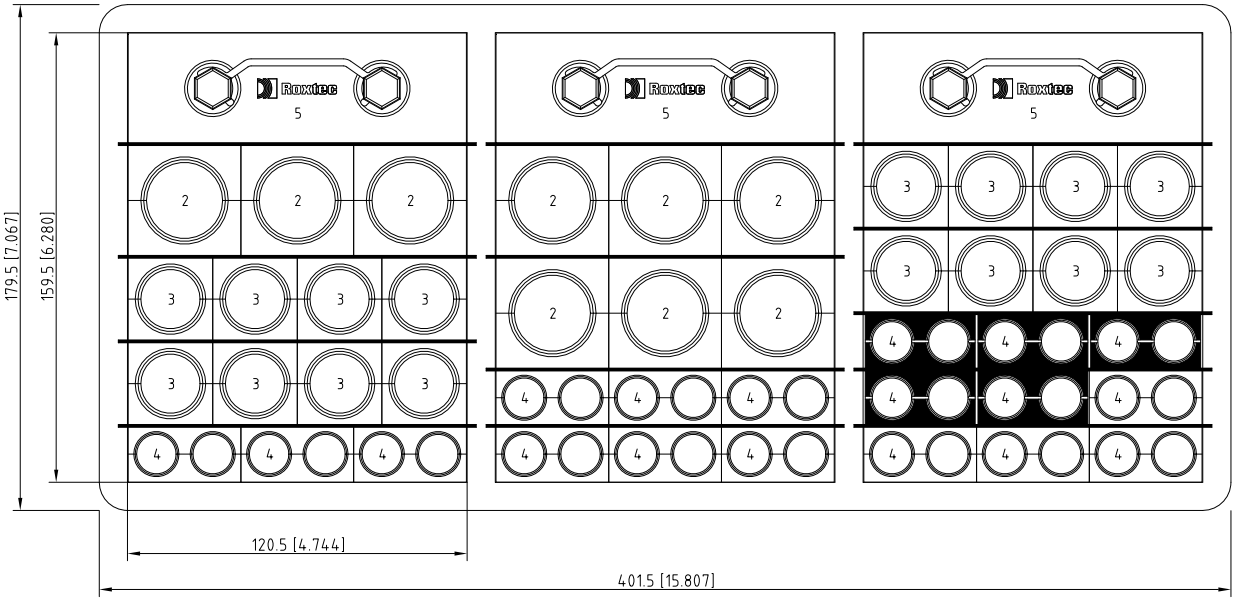
Cutout Detail

Frame: S 4x3 Ex PRIMED Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.4 [31.81]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U06	1/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

CUTOUT TO FIT SOLUTION WELDING, 404x182 [15.906"x7.165"]



MODULE WITH PIPE | MODULE WITH CABLE | SPARE MODULE | SOLID MODULE

Detail Drawing

Solution: 1

I-MCT-U06 - UPPER DECK

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
6	13	Stayplate 120 Ex galv	EXASP0001200018	0.1 [0.24]
5	3	Wedge 120 Ex galv	EXARW0001201018	0.8 [1.76]
4	18	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]	EXRM00120401000	0.1 [0.15]
3	16	RM 30 EX 10-25 [0.394"-0.984"]	EXRM00100301000	0.1 [0.18]
2	9	RM 40 EX 21.5-34.5 [0.846"-1.358"]	EXRM00100401000	0.1 [0.31]
1	1	S 4x3 Ex PRIMED	EXS004000000312	6.8 [14.99]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	14.4 [31.81]
Roxtec	Format NTS		Transit name I-MCT-U06	Sheet No 2/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

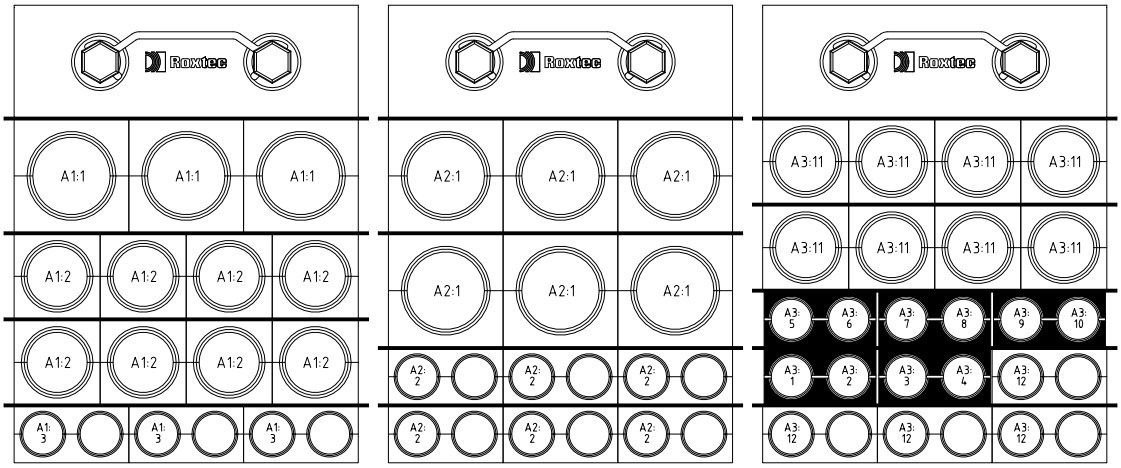
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 A2 A3

A1 A2 A3



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[“])	Module Type
A3:12						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:11						RM 30 EX 10-25 [0.394"-0.984"]
A3:10	25	C-950-ESDD-01101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:9	24	C-950-ESD-01101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:8	23	C-950-MOB-01101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:7	22	C-950-ASD-01101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:6	31	C-950-FDZ-02102/950-JE-02101	3x2.5 mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:5	30	C-950-FDZ-02101/950-JE-02101	3x2.5 mm2	Ex-d	14.7 [0.579"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:4	29	C-950-ESDD-04101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:3	28	C-950-ESD-04101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:2	27	C-950-MOB-04101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A3:1	26	C-950-ASD-04101/00-JE-22001	1x2x0,75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:2						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A2:1						RM 40 EX 21.5-34.5 [0.846"-1.358"]
A1:3						RM 20W40 EX 3.5-16.5 [0.138"-0.650"]
A1:2						RM 30 EX 10-25 [0.394"-0.984"]
A1:1						RM 40 EX 21.5-34.5 [0.846"-1.358"]


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-03	2024-09-30	Base Load Power Hub (BLPH)	14.4 [31.81]
Roxtec	Format: NTS		Location/ Sublocation	Sheet No: 3/3
	Client		Transit name: I-MCT-U06	
			Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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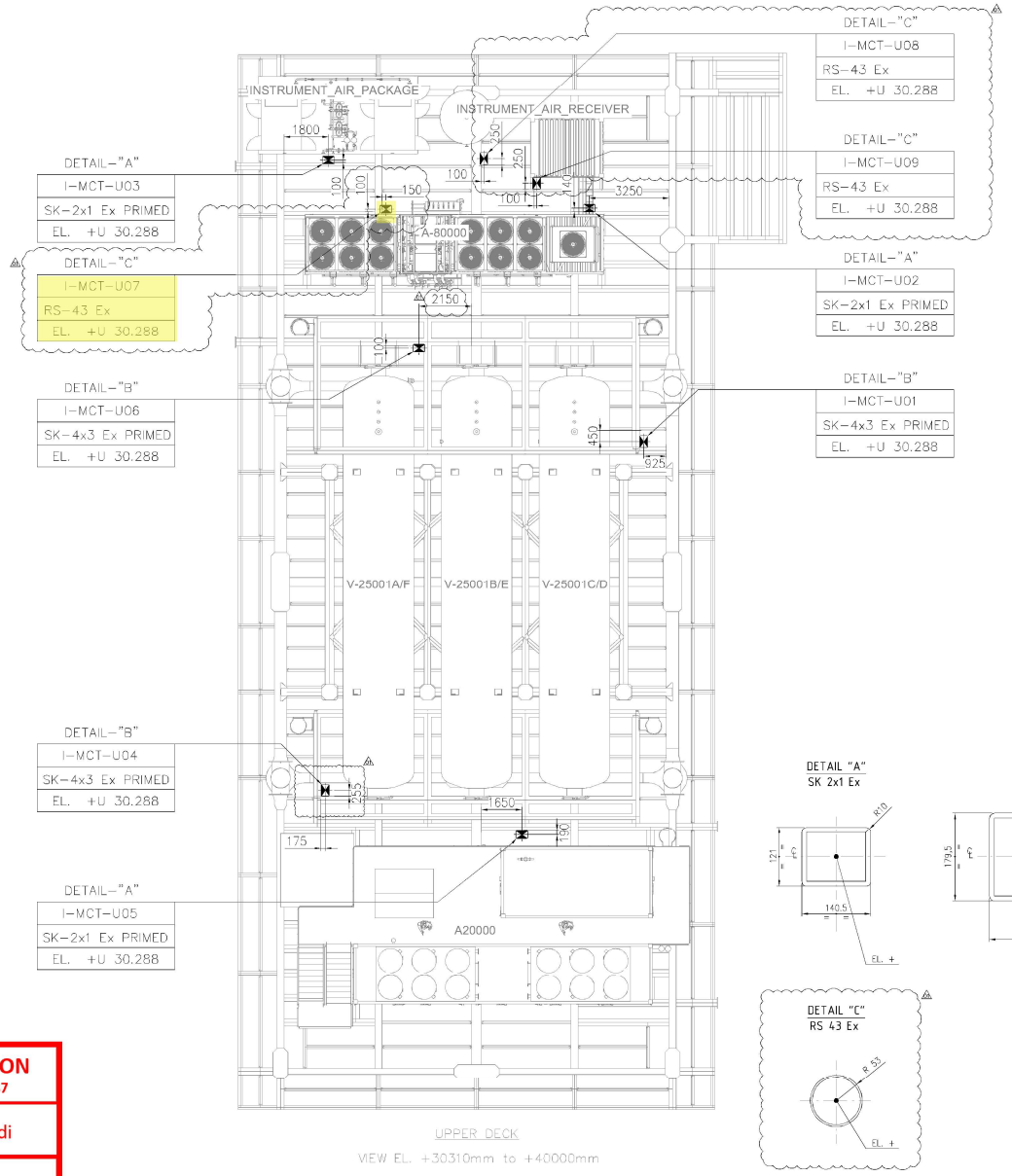
ITEM	Tag	I-MCT-U07	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40087
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002012		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-22	
Signature	Digitaly signed by Michele Tartaglia 2025-01-21T16:17:42.977Z	Digitaly signed by Paolo Schintu 2025-01-22T17:23:16.021Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01



UPPER DECK

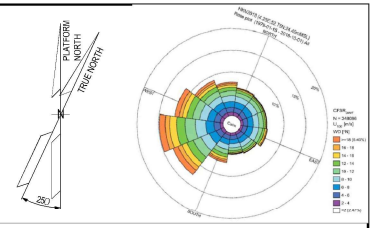
VIEW EL. +30310mm to +40000mm

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

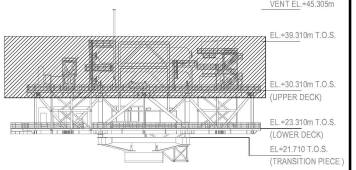
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

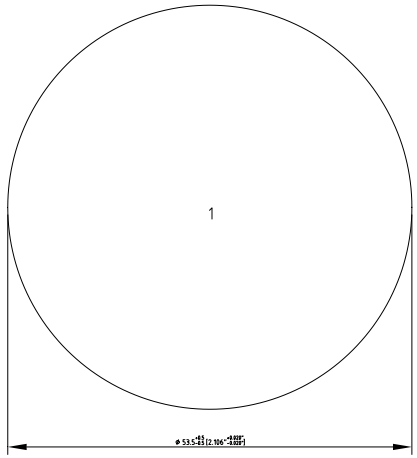
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087 REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

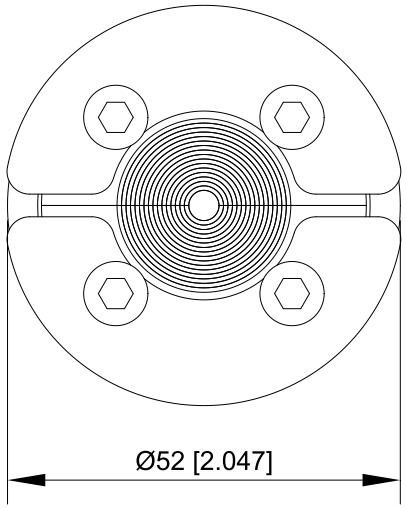
Frame: RS 43 W Ex AISI 316/AISI 316 Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-26	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U07	1/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, min:Ø53 max:Ø54 [min:Ø2.087" max:Ø2.126"]





Detail Drawing

Solution: 1

I-MCT-U07 - UPPER DECK
Cable:
1, Ex-d, 3x2.5 mm2, OD=14.7 [0.579"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]
1	1	RS 43 W Ex AISI 316/AISI 316 4-23 [0.157"-0.906"]		EXRSW0430102121	0.6 [1.21]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-06-26	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U07	2/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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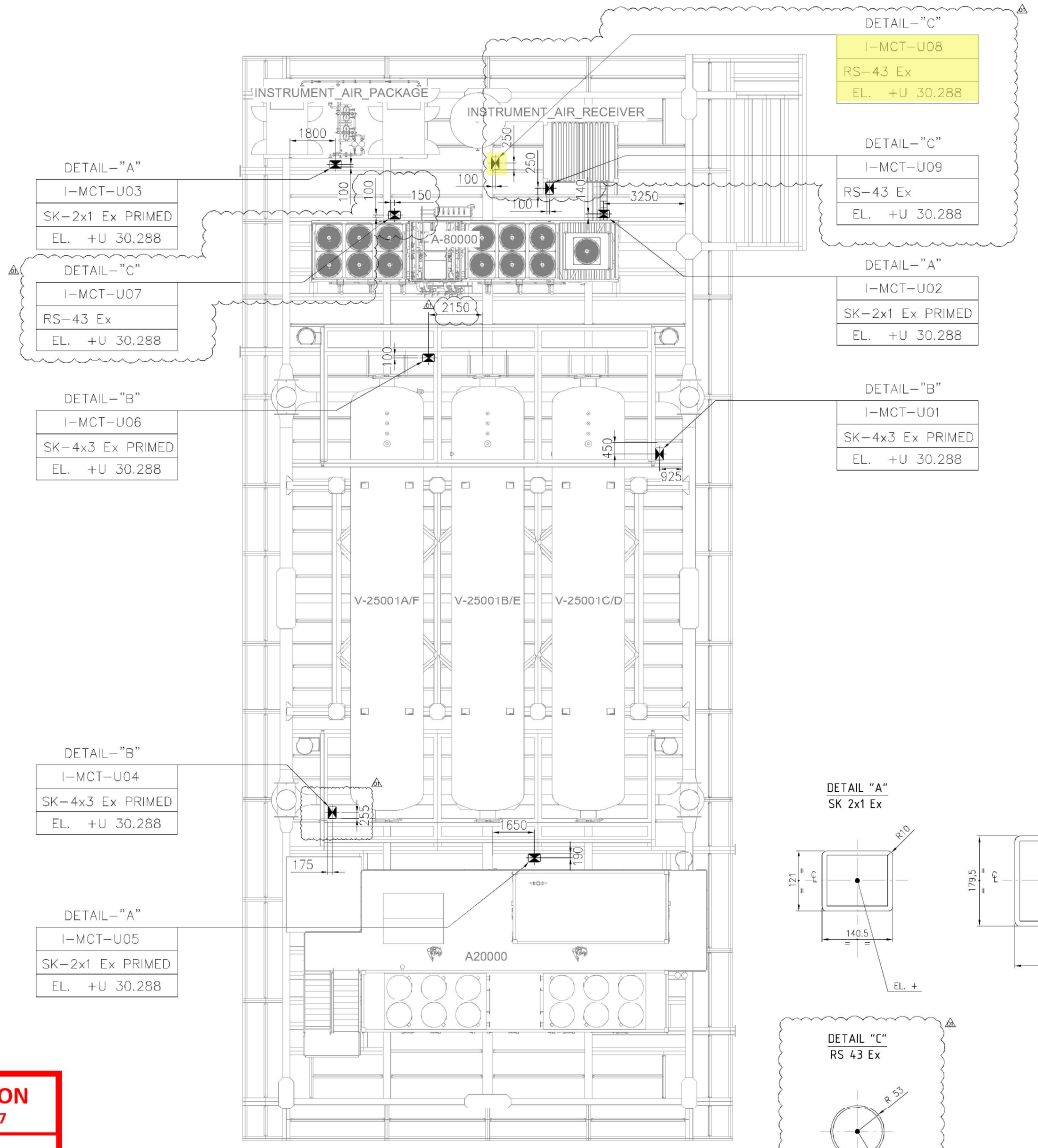
ITEM	Tag	I-MCT-U08	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40087
	S/Sys	90-05	: Areas			Module	UD
TASK	code	C10002013		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-21	2025-01-24	
Signature	Digitaly signed by Michele Tartaglia 2025-01-21T16:18:11.448Z	Digitaly signed by Paolo Schintu 2025-01-24T17:36:00.795Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

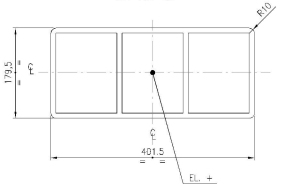


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

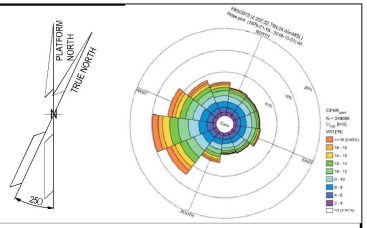


DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

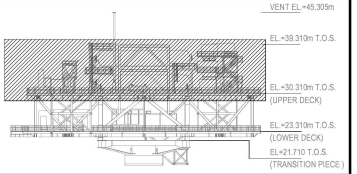
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

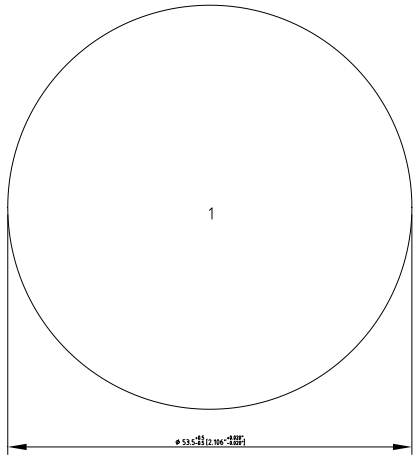
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087_REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

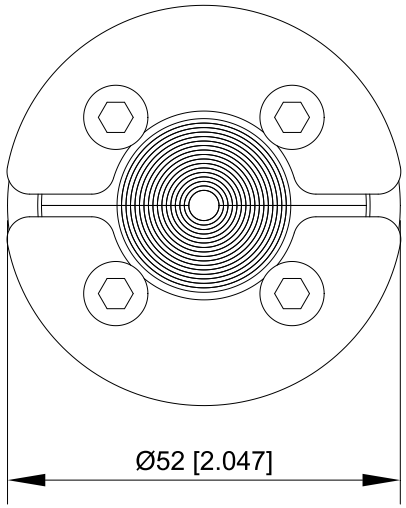
Frame: RS 43 W Ex AISI 316/AISI 316 Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-09-30	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U08	1/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, min:Ø53 max:Ø54 [min:Ø2.087" max:Ø2.126"]





Detail Drawing

Solution: 1

I-MCT-U08 - UPPER DECK
Cable:
1, Ex-d, 3x2.5 mm2, OD=14.7 [0.579"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material mm ["]	Roxtec Art No	Weight Kg [lb]
1	1	RS 43 W Ex AISI 316/AISI 316 4-23 [0.157"-0.906"]	EXRSW0430102121	0.6 [1.21]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-09-30	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U08	2/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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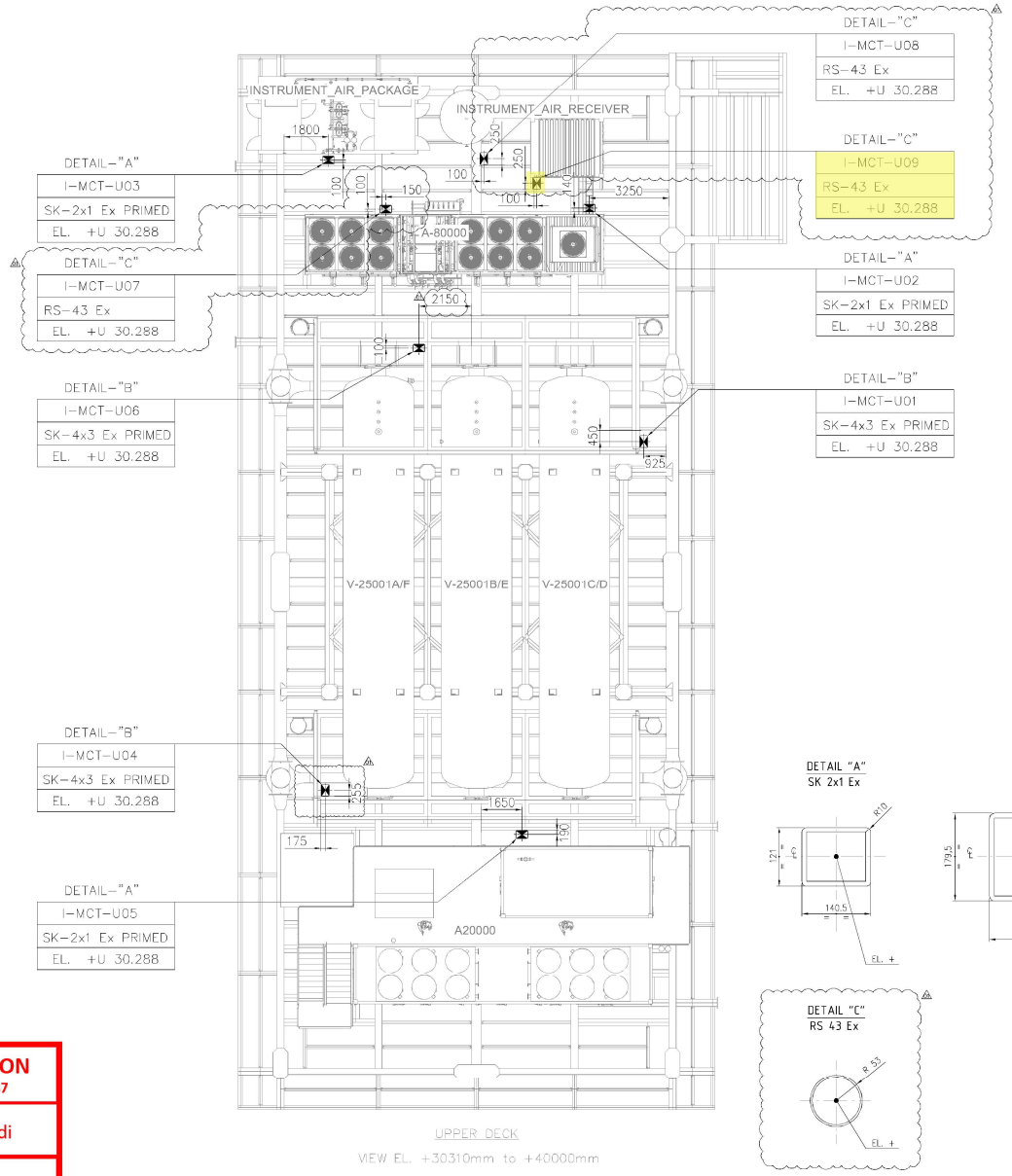
ITEM	Tag	I-MCT-U09	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40087	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10002014	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX29	MCT Penetration Instrument

1	Check that MCT's conforms to latest project standards and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	OK
4	Check the cable arrangement in MCT's is conform with the latest drawing.	OK
5	Check that product marking is matching with hazardous area certification document data	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-18	2025-02-26	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-18T10:01:21.372Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-26T07:57:33.008Z	

DRAWING NO. 123A90-DDL-IN-DL-40087 REV. 01

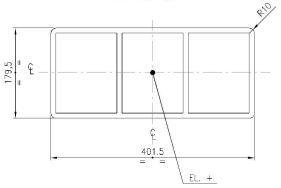


UPPER DECK

VIEW EL. +30310mm to +40000mm

DETAIL "A"
SK 2x1 Ex

DETAIL "B"
SK 4x3 Ex

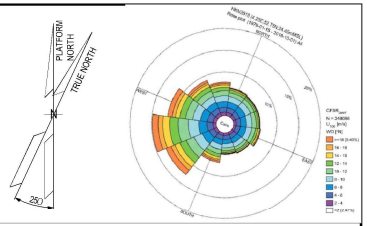


DETAIL "C"
RS 43 Ex

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40087**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA



NOTES

GENERAL NOTES:

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

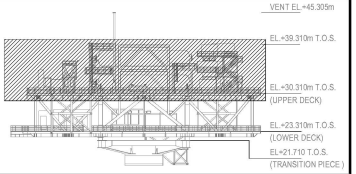
MCT

TAG	TAGGING
SIZE–MATERIAL	TYPICAL
EL.	ELEVATION

HOLDS

1. I–MCT–U03/U05 – MCT LOCATION NOT YET FINALIZED

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-IN-DL-40086	Instrument and Telecom MCT Layout - Lower Deck
123A90-DDL-PP-DL-70070	Plot Plan - Lower & Upper Deck
123A90-DDL-IN-DS-40072	TDS - Instrument and Telecom MCTs
123A90-DDL-IN-DD-40074	MCT Composition

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/06/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	20/05/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT–UPPER DECK
TOS EL. +30.310M

CONTRACT NO./TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND FARM			SCALE 1:100
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 20/05/24

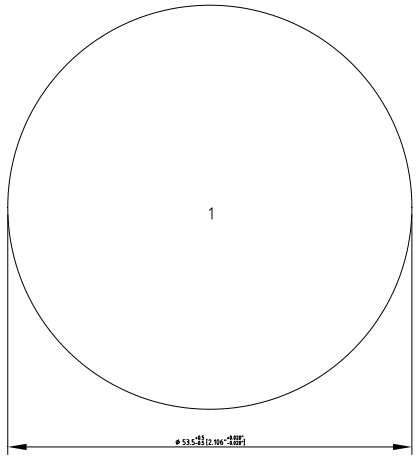
A1	DRAWING NO. 123A90–DDL–IN–DL–40087	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40087 REV01.dwg

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Cutout Detail

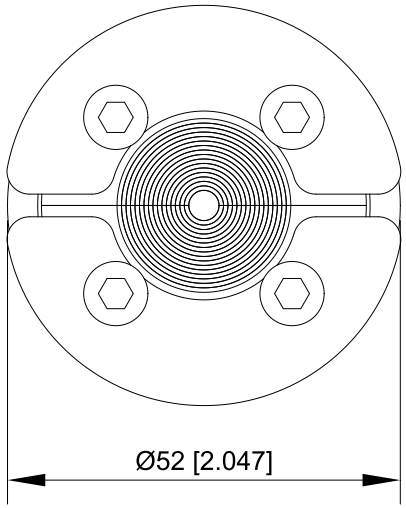
Frame: RS 43 W Ex AISI 316/AISI 316 Solution: 1

Item	Qty	Roxtec Packing Material	mm ["]	Roxtec Art No	Weight Kg [lb]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-09-30	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U09	1/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, min:Ø53 max:Ø54 [min:Ø2.087" max:Ø2.126"]





Detail Drawing

Solution: 1

I-MCT-U09 - UPPER DECK
Cable:
1, Ex-d, 3x2.5 mm2, OD=14.7 [0.579"]

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

Item	Qty	Roxtec Packing Material (mm ["])	Roxtec Art No	Weight Kg [lb]
1	1	RS 43 W Ex AISI 316/AISI 316 4-23 [0.157"-0.906"]	EXRSW0430102121	0.6 [1.21]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-09-30	2024-09-30	Base Load Power Hub (BLPH)	0.6 [1.21]
	Format: NTS		Location/ Sublocation	Sheet No
Roxtec			Transit name: I-MCT-U09	2/2
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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POS.	REV.	FEATURE	REQUIRED	MANUFACTURER PROPOSAL	COMMENTS
GENERAL DATA					
1	00	LOCATION	OUTDOOR		
2	00	DEPTH	163 mm		
3	00	CONSTRUCTION TYPE	PRIMED MILD STEEL = PRIMED STAINLESS STEEL = AISI 316		
4	00	TYPE OF INSTALLATION	BY WELDING		
5	00	CLASS	A0		
6	00	BLAST	N.A.		
7	00	POSITION	CONTAINER WALL, FLOOR PENETRATION		
8	00	CERTIFICATION Ex	REQUIRED WHERE INDICATED (Note 1)		

MULTICABLES TRANSIT SYSYTEM - FRAMES				
POS.	REV.	DESCRIPTION	Q.TY	NOTES
		S 4x1 PRIMED	6	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x1 PRIMED		
		S 4x2 PRIMED	4	Provided by others
		Manufacturer: Roxtec		
		Model: S 4x2 PRIMED		
		S 6x3 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x3 PRIMED		
		S 6x6 PRIMED	1	Provided by others
		Manufacturer: Roxtec		
		Model: S 6x6 PRIMED		
		SK 2x1 Ex PRIMED Depht 100mm	4	Provided by others
		Manufacturer: Roxtec		
		Model: SK 2x1 Ex PRIMED Depht 100mm		
		SK 4x3 Ex PRIMED Depht 100mm	3	Provided by others
		Manufacturer: Roxtec		
		Model: SK 4x3 Ex PRIMED Depht 100mm		

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Its distribution is electronically controlled. Once printed shall be considered as “NOT CONTROLLED” copy

MULTICABLES TRANSIT SYSYTEM - BLOCKS & ACCESSORIES

POS.	REV.	DESCRIPTION	Q.TY	NOTES
		RM 40	72	
		Manufacturer: Roxtec		
		Model: RM 40		
		RM 20W40	219	
		Manufacturer: Roxtec		
		Model: RM 20W40		
		RM 30	92	
		Manufacturer: Roxtec		
		Model: RM 30		
		RM 60 WOC	5	
		Manufacturer: Roxtec		
		Model: RM 60 WOC		
		RM 10/0x12	4	
		Manufacturer: Roxtec		
		Model: RM 10/0x12		
		Wedge 120 Galv	23	
		Manufacturer: Roxtec		
		Model: Wedge 120 Galv		
		Stayplate 120 Galv	123	
		Manufacturer: Roxtec		
		Model: Stayplate 120 Galv		
		RM 20W40 EX	54	Note 1
		Manufacturer: Roxtec		
		Model: RM 20W40 EX		
		RM 30 EX	48	Note 1
		Manufacturer: Roxtec		
		Model: RM 30 EX		
		RM 40 EX	33	Note 1
		Manufacturer: Roxtec		
		Model: RM 40 EX		
		RM 60 WOC EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 60 WOC EX		
		~~RM 60/24-54 EX~~	~~2~~	~~Note 1~~
		~~Manufacturer: Roxtec~~		
		~~Model: (*)~~		
		RM 10/0x12 EX	4	Note 1
		Manufacturer: Roxtec		
		Model: RM 10/0x12 EX		
		Wedge 120 Ex Galv	13	Note 1
		Manufacturer: Roxtec		
		Model: Wedge 120 Ex Galv		
		Stayplate 120 Ex Galv	47	Note 1
		Manufacturer: Roxtec		
		Model: Stayplate 120 Ex Galv		
		RS 43 W Ex AISI 316/AISI 316	3	Note 1
		Manufacturer: Roxtec		
		Model: RS 43 W Ex AISI 316/AISI 316		
		Lubrificant 25 ml	(*)	
		Manufacturer: STD Vendor		
		Model: STD Vendor		

NOTES:

1) Frame, modules and other accessories shall have ATEX Certification

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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	CABLE_TRAY_TP_INS	: Cable Tray Transition piece - Instrumental		Dwg	123A90-DDL-IN-DL-40082	
	S/Sys	90-05	: Areas		Module	TP	
TASK	code	C10002260	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX30A	Cable Tray/Ladder Before pulling

BEFORE PULLING

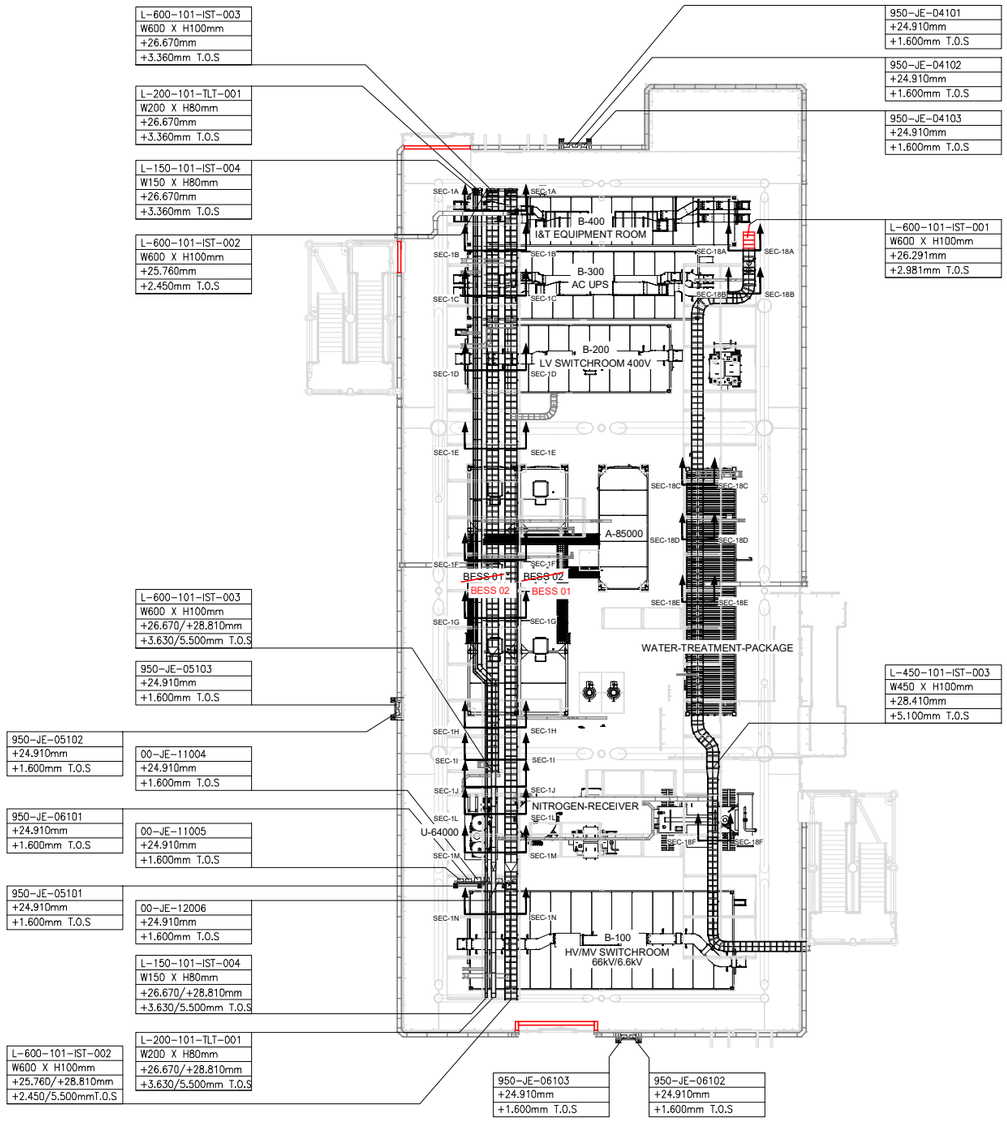
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Painting touch-up as necessary, if applicable	OK
13	Check Labelling with system and segment number	NA
14	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-05-05	2025-05-06	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-05-05T13:40:13.801Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-05-06T09:31:05.166Z	

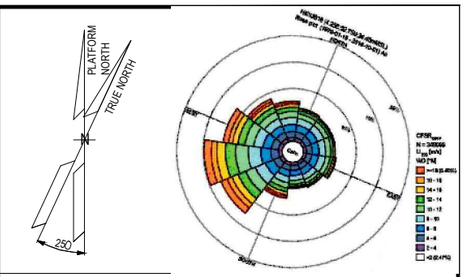
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02



PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

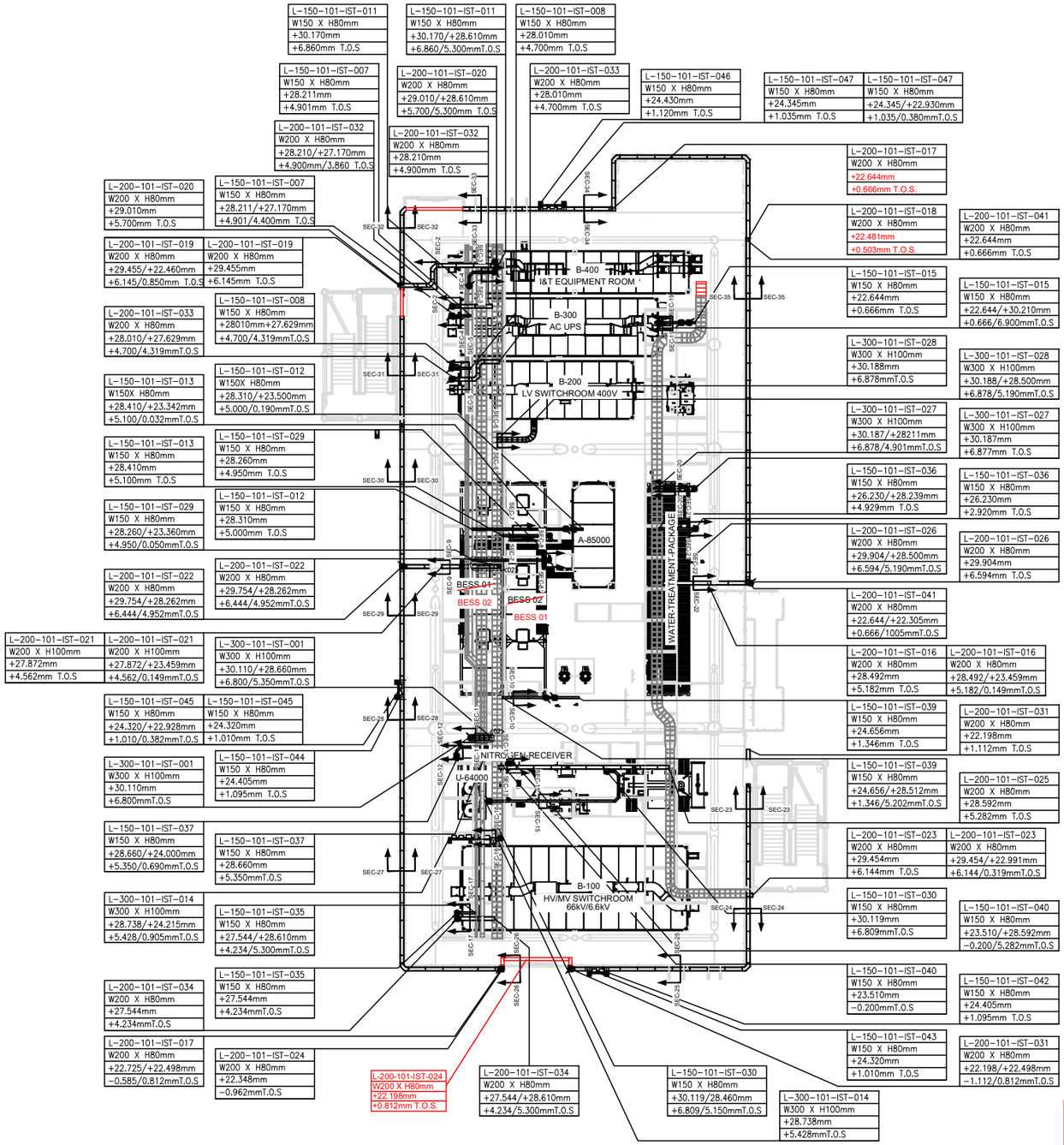
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV:02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02

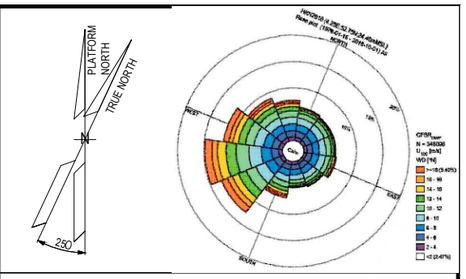


SECONDARY CABLETRAY

LOWER DECK

SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 002	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV.02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02

<02>

L-150-100-IST-005
W150 X H80mm
-23.242/22.910mm
-0.068/0.400mmT.O.S

L-150-100-IST-005
W150 X H80mm
-23.242mm
-0.068mm T.O.S

L-150-100-IST-006
W150 X H80mm
-21.780mm
-1.530mm T.O.S

L-150-100-IST-006
W150 X H80mm
-21.780/23.230mm
-1.530/0.080mmT.O.S

L-200-100-IST-003
W200 X H80mm
-23.110/22.754mm
-0.200/0.556mmT.O.S

L-200-100-IST-003
W200 X H80mm
-23.110mm
-0.200mm T.O.S

L-150-100-IST-007
W150 X H80mm
-17.244/21.600mm
-6.066/1.710mmT.O.S

L-150-100-IST-007
W150 X H80mm
-17.244mm
-6.066mm T.O.S

JB-200E1
-21.110mm
-2.200mm T.O.S

L-150-100-IST-009
W150 X H80mm
-16.790mm
-6.520mm T.O.S

L-150-100-IST-010
W150 X H80mm
-17.330mm
-5.980mm T.O.S

L-150-100-IST-010
W150 X H80mm
-17.330/20.268mm
-5.980/3.042mmT.O.S

L-150-100-IST-008
W150 X H80mm
-17.997mm
-5.313mm T.O.S

950-JE-07101
-18.507mm
-4.803mm T.O.S

L-200-100-IST-004
W200 X H100mm
-22.088mm
-1.222mm T.O.S

L-200-100-IST-002
W200 X H100mm
-23.272mm
-0.038mm T.O.S

L-200-100-IST-002
W200 X H100mm
-23.272/20.418mm
-0.038/2.892mmT.O.S

L-150-100-IST-001
W150 X H80mm
-20.268mm
-3.042mm T.O.S

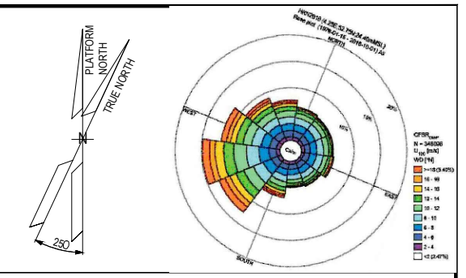
SEC-01 SEC-02 SEC-03 SEC-04 SEC-05 SEC-06 SEC-07 SEC-08

SECONDARY CABLETRAY

TRANSITION PIECE

SCALE: 1:50

VIEW EL. 6000mm to 23310mm



NOTES

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2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
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123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-TRANSITION PIECE

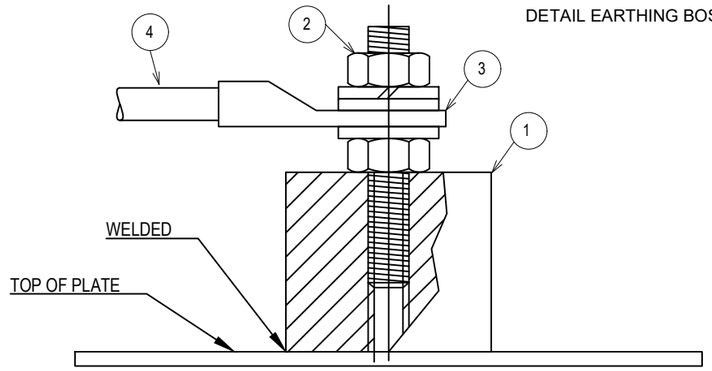
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 003	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV02.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

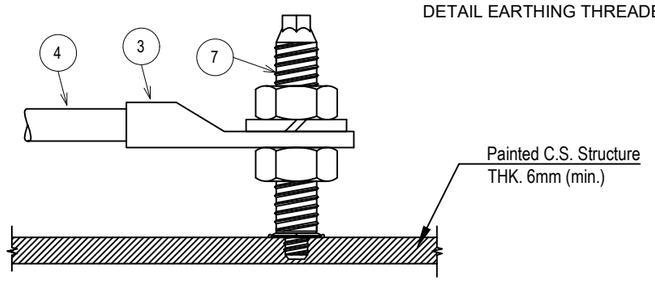


E11D

SEE NOTE 6

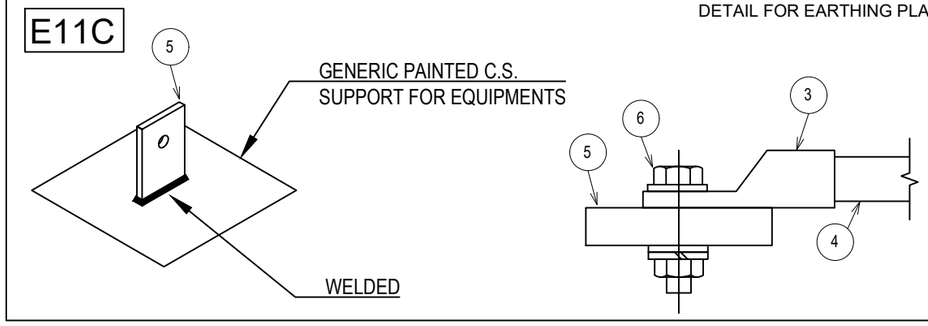
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

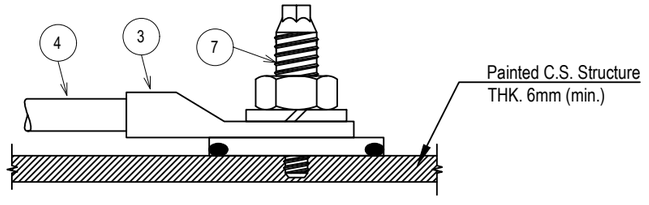


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

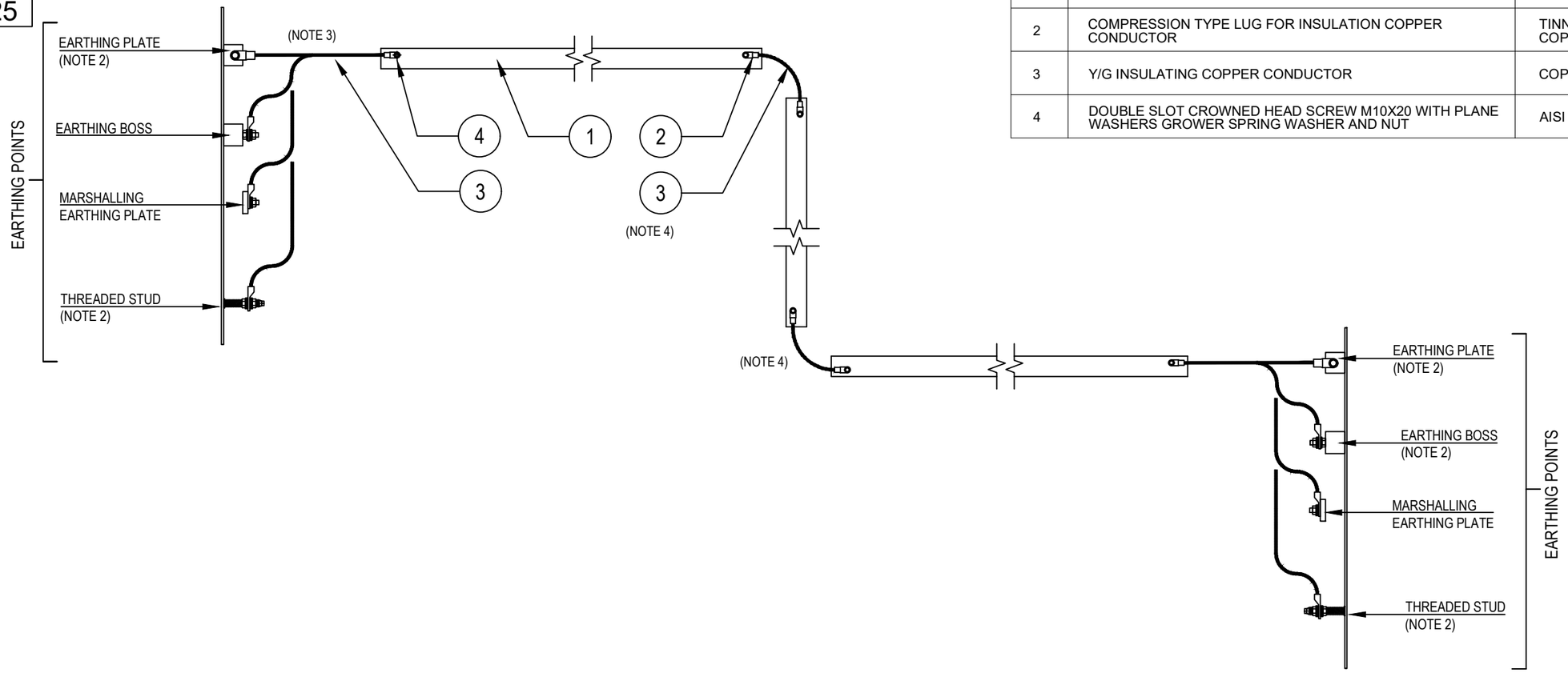
SHEET 003

REV. 02

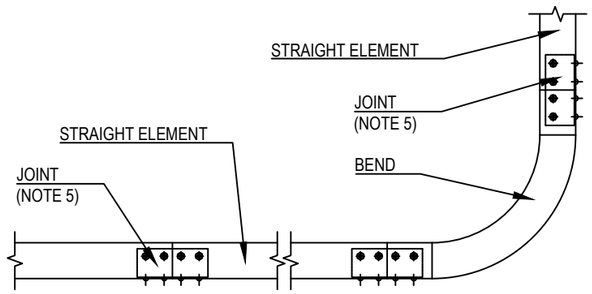
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

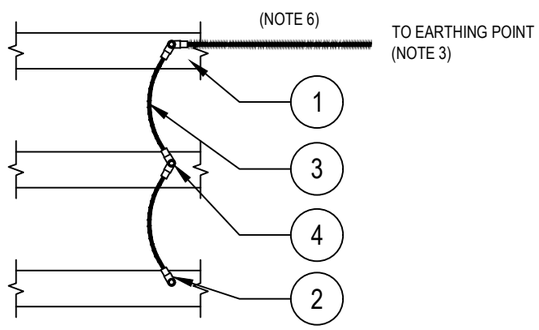
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

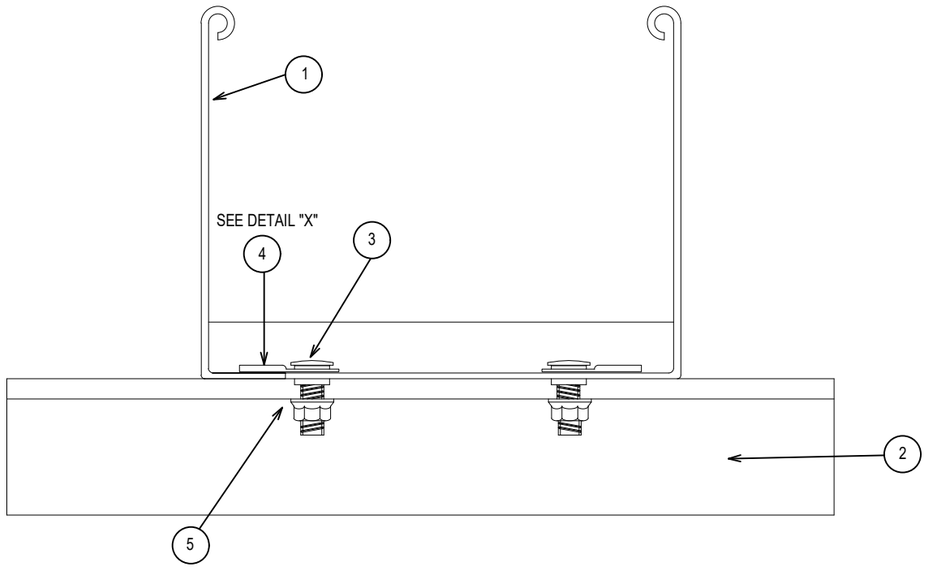
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

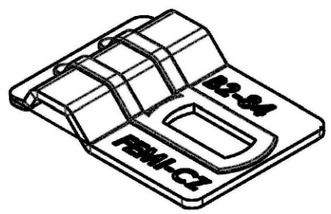
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

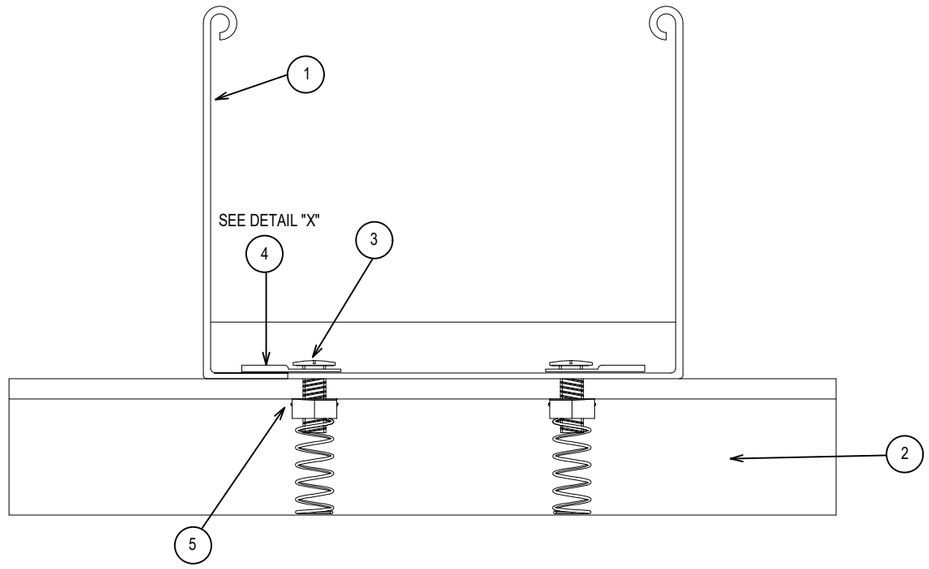
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

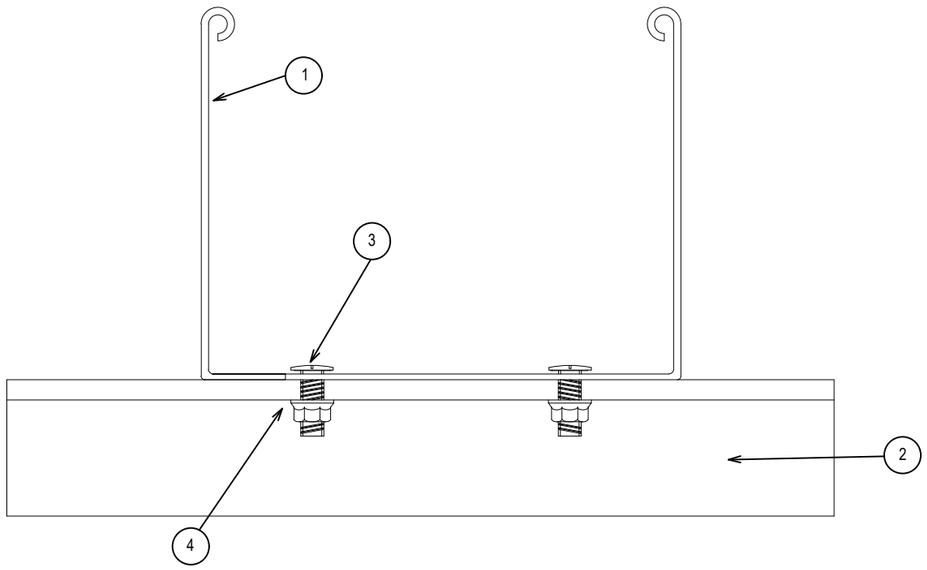
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

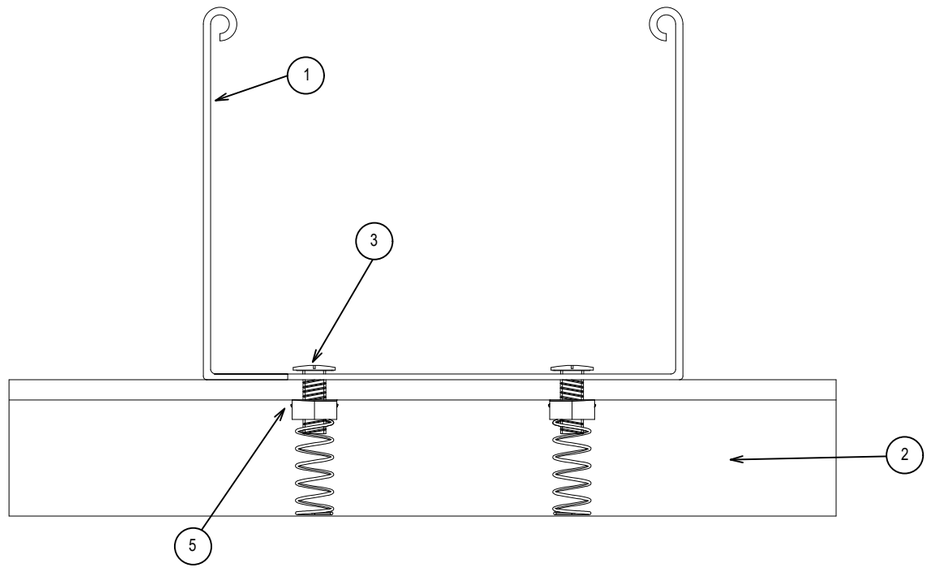


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

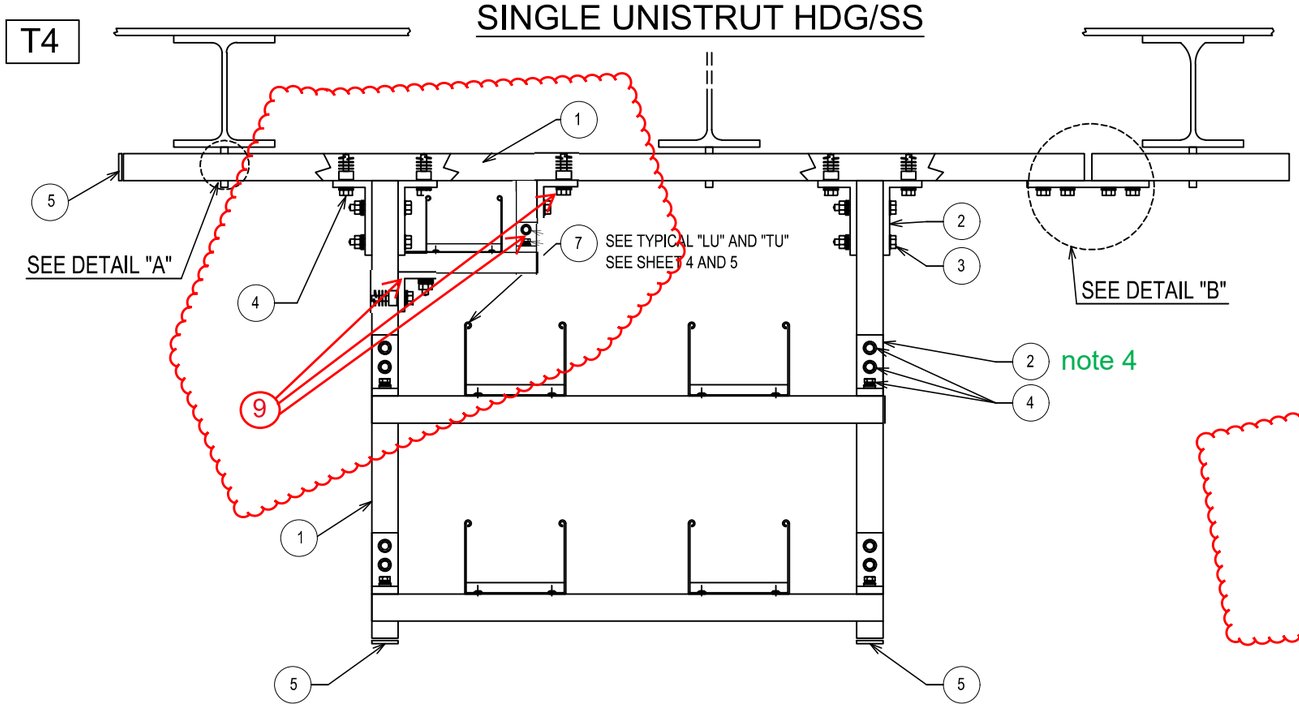
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

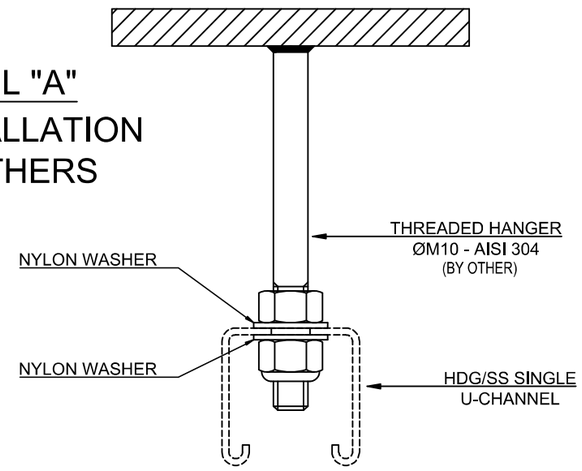
T4

SINGLE UNISTRUT HDG/SS

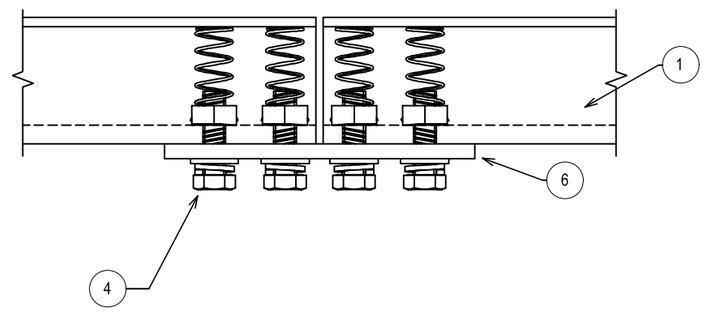


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

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ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

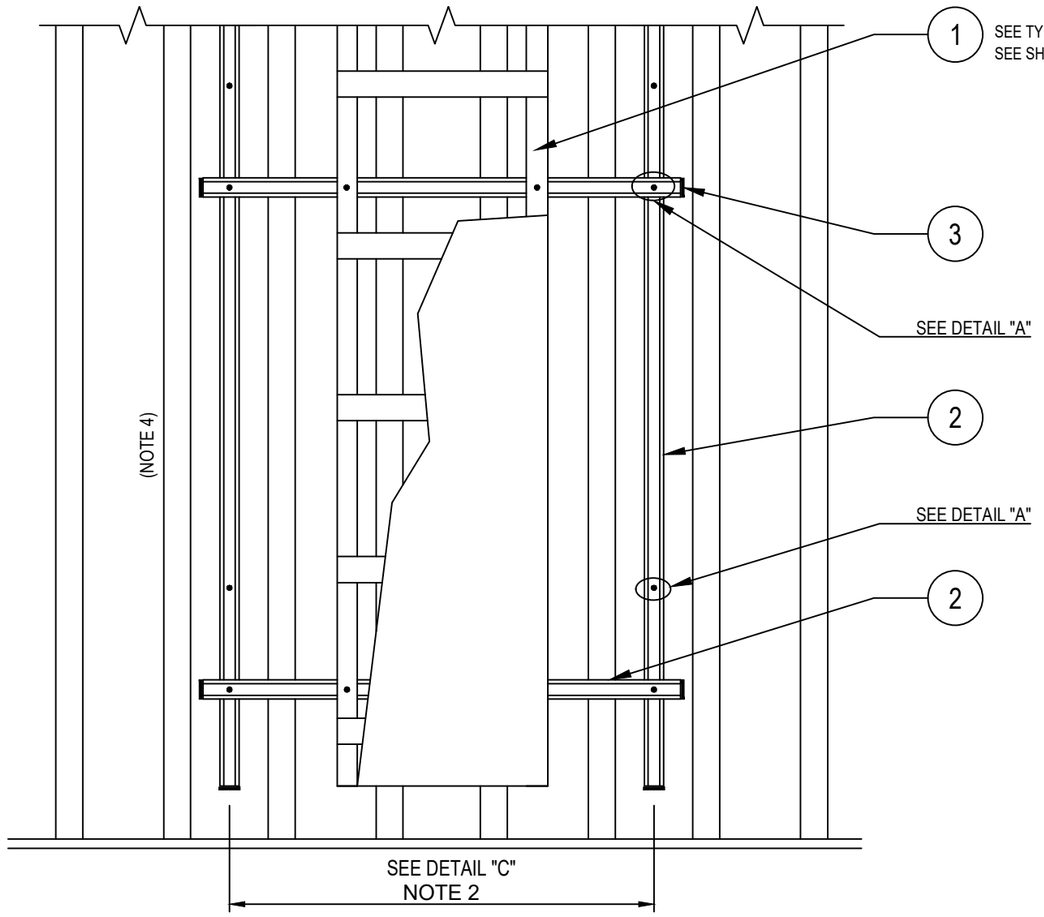
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

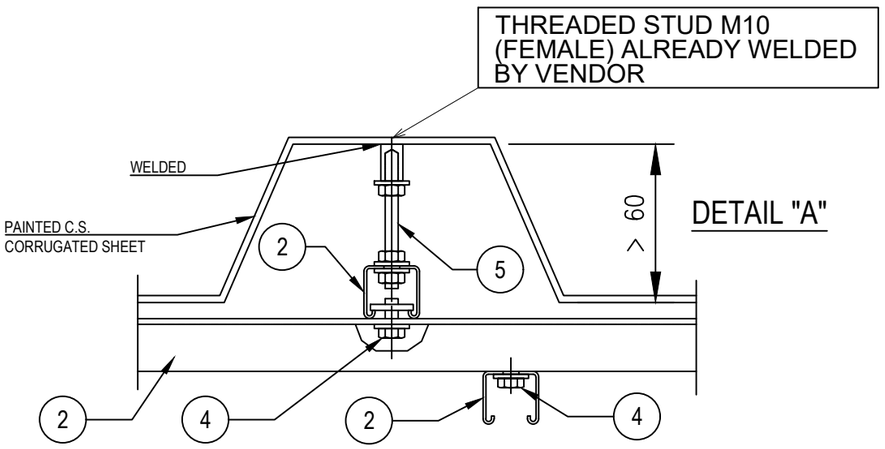
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File Name : 123A90-DDL-EL-DD-20093_02.DWG

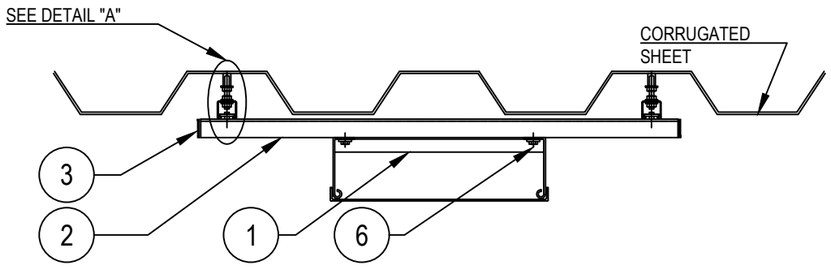
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

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FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

DESIGN DATA - *CABLE TRAYS LADDER TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Ladder	☐ Tray with simple ribs		☐ Tray with rimmed ribs
	Thickness 5mm (*)	BENDING RADIUS:	☑ **300mm**	☐ **500mm**
	☑ Cover	☐ Cover spacer		☐ Whitout Cover
	Thickness 5mm (*)			
MATERIAL	☐ Galvanized steel	☐ Stainless steel	☐ Light alloy	☑ FRP (3) ☐ AISI 316L
SURFACE PROTECTION	Galvanized	☐ before machined (ex. with "Sendzimir" process)		☐ after machined
	☐ Surface clean and polished from any welding and working residual			
	☐ Painting			
	Colour:	☑ Grey RAL 7035	☐ blue RAL 5012	☐
	Cycle:			

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	100	100	100									Manufacturer: Oglaend Supplier: HILTI Series: FOE100 P.O.
	Working internal width	W	300	450	600									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	Plane 30 degree bend													
5	"T" junction	D												
6	Cross junction	E												
7	Single element for vertical bend	F												
8	Plane left-hand reducing section	G												
9	Plane simmetric reducing section	H												
10	Plane right-hand reducing section	I												
11	Elbow Inside 30°													
12	Elbow Outside 30°													
13	Elbow Inside 45°													
14	Elbow Outside 45°													
15	Elbow Inside 90°													
16	Elbow Outside 90°													
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint (note 6)	M												
20														
21	Separators													

NOTES :

6) Dimensions in millimeters
7) Reference to sheet 6
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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CABLE TRAYS LADDER TYPE - FIGURES

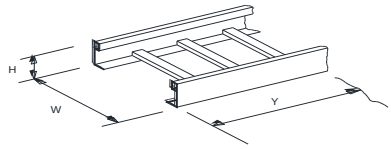


Fig. A
STRAIGHT ELEMENT

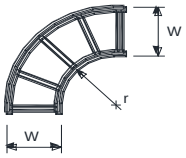


Fig. B
PLANE 90° BEND

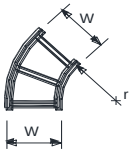


Fig. C
PLANE 45° BEND

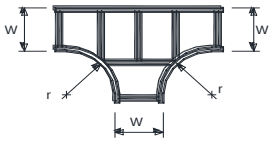


Fig. D
TEE JUNCTION

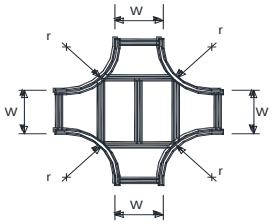


Fig. E
CROSS JUNCTION

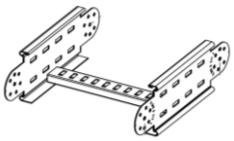


Fig. F
SINGLE ELEMENT FOR VERTICAL BENDS



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

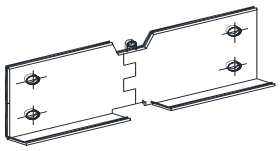


Fig. L
HORIZONTAL HINGED JOINT

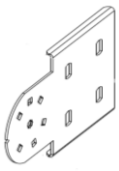


Fig. M
VERTICAL HINGED JOINT

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DESIGN DATA - *CABLE TRAY PERFORATED TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Perforated ☐ Tray with simple ribs ☐ Tray with rimmed ribs **Thickness 5mm (*)** BENDING RADIUS: ☑ **300mm** ☐ Adjustable elbow ☑ Cover ☐ Cover spacer ☐ Whitout Cover **Thickness 5mm (*)**
MATERIAL	☐ Galvanized steel ☐ Stainless steel ☐ Light alloy ☑ FRP ☐ AISI 316L
SURFACE PROTECTION	Galvanized ☐ before machined (ex. with "Sendzimir" process) ☐ Hot dip Galvanized after machined - 50 µm ☐ Surface clean and polished from any welding and working residual ☐ Painting Colour: ☑ Grey RAL 7035 ☐ blue RAL 5012 ☐ Cycle:

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	50	80	80									Manufacturer: Oglaend Supplier: HILTI Series: FTE80 P.O.
	Working internal width	W	50	150	200									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	"T" junction													
5	Vertical convex 90° Bend	D												
6	Vertical concave 90° Bend	E												
7	Plane left-hand reducing section	F												
8	Plane simmetric reducing section	G												
9	Plane right-hand reducing section	H												
10		I												
11														
12														
13														
14														
15														
16														
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint	M												
20														
21	Separators													

NOTES :
6) Dimensions in millimeters
7) Reference to Sheet 9
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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CABLE TRAYS PERFORATED TYPE - FIGURES

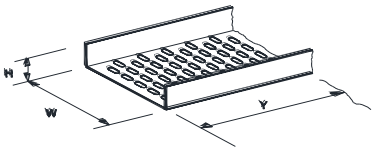


Fig. A
STRAIGHT ELEMENT

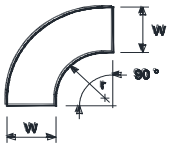


Fig. B
PLANE 90° BEND

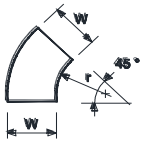


Fig. C
PLANE 45° BEND

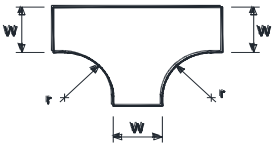


Fig. D
TEE JUNCTION

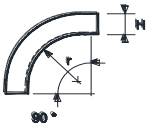


Fig. E
VERTICAL CONVEX 90° BEND

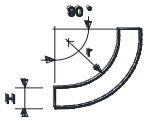


Fig. F
VERTICAL CONCAVE 90° BEND



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

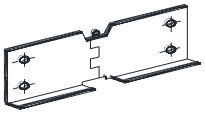


Fig. L
HORIZONTAL HINGED JOINT

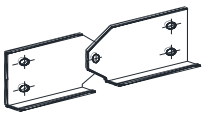


Fig. M
VERTICAL HINGED JOINT

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INSTRUMENT CABLE TRAYS MTO				
S.No	**Description**	**U.M.**	**Rev. 00**	**Rev. 01**
Perforated Cable Tray 50(W)x50(H), R=300, Grey, Complete with Cover				
1	Straight elements	m	1338	1338
2	Bends 45°	N.	-	8
3	Inside Risers 90°	N.	-	3
4	Outside Risers 90°	N.	-	14
Perforated Cable Tray 150(W)x80(H), R=300, Grey, Complete with Cover				
5	Straight elements	m	453	453
6	Bends 45°	N.	7	12
7	Bends 90°	N.	40	40
8	Inside Risers 90°	N.	18	18
9	Inside Risers 45°	N.	6	6
10	Outside Risers 90°	N.	25	25
11	Outside Risers 45°	N.	3	3
12	"T"	N.	-	3
Perforated Cable Tray 200(W)x80(H), R=300, Grey, Complete with Cover				
13	Straight elements	m	480	480
14	Bends 90°	N.	22	22
15	Bends 45°	N.	10	12
16	Inside Risers 90°	N.	6	8
17	Inside Risers 45°	N.	12	12
18	Outside Risers 90°	N.	6	14
19	Outside Risers 45°	N.	12	12
Ladder Cable Tray 300(W)x100(H)), R=300, Grey, Complete with Cover				
20	Straight elements	m	111	111
21	Bends 90°	N.	7	7
22	Inside Risers 90°	N.	8	8
23	Outside Risers 90°	N.	4	4
24	"T"	N.	3	3
Ladder Cable Tray 450(W)x100(H)), R=300, Grey, Complete with Cover				
25	Straight elements	m	18	99
26	Bends 90°	N.	-	5
27	Bends 90°, Radius 500mm	N.	2	2
Ladder Cable Tray 600(W)x100(H)), R=300, Grey, Complete with Cover				
28	Straight elements	m	171	171
29	Bends 45°	N.	3	3
30	Inside Risers 90°	N.	2	2
31	Inside Risers 45°	N.	3	3
32	Outside Risers 90°	N.	4	4
33	Outside Risers 45°	N.	3	3
34	Reducer 600X450	N.	-	1
Accessories				
35	Divider straight elements, 45(H)	m	87	120
36	Divider for bend elements, 45(H)	m	15	15
37	Divider for riser elements, 45(H)	m	15	15
38	Fixing Clamps	N.	(1)	(1)
Notes 1) Vendor shall estimate fixing clamp quantities				

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ITEM	Tag	CABLE_TRAY_TP_INS	: Cable Tray Transition piece - Instrumental		Dwg	123A90-DDL-IN-DL-40082	
	S/Sys	90-05	: Areas		Module	TP	
TASK	code	C10002261		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form CJX30B	Cable Tray/Ladder After pulling

AFTER PULLING

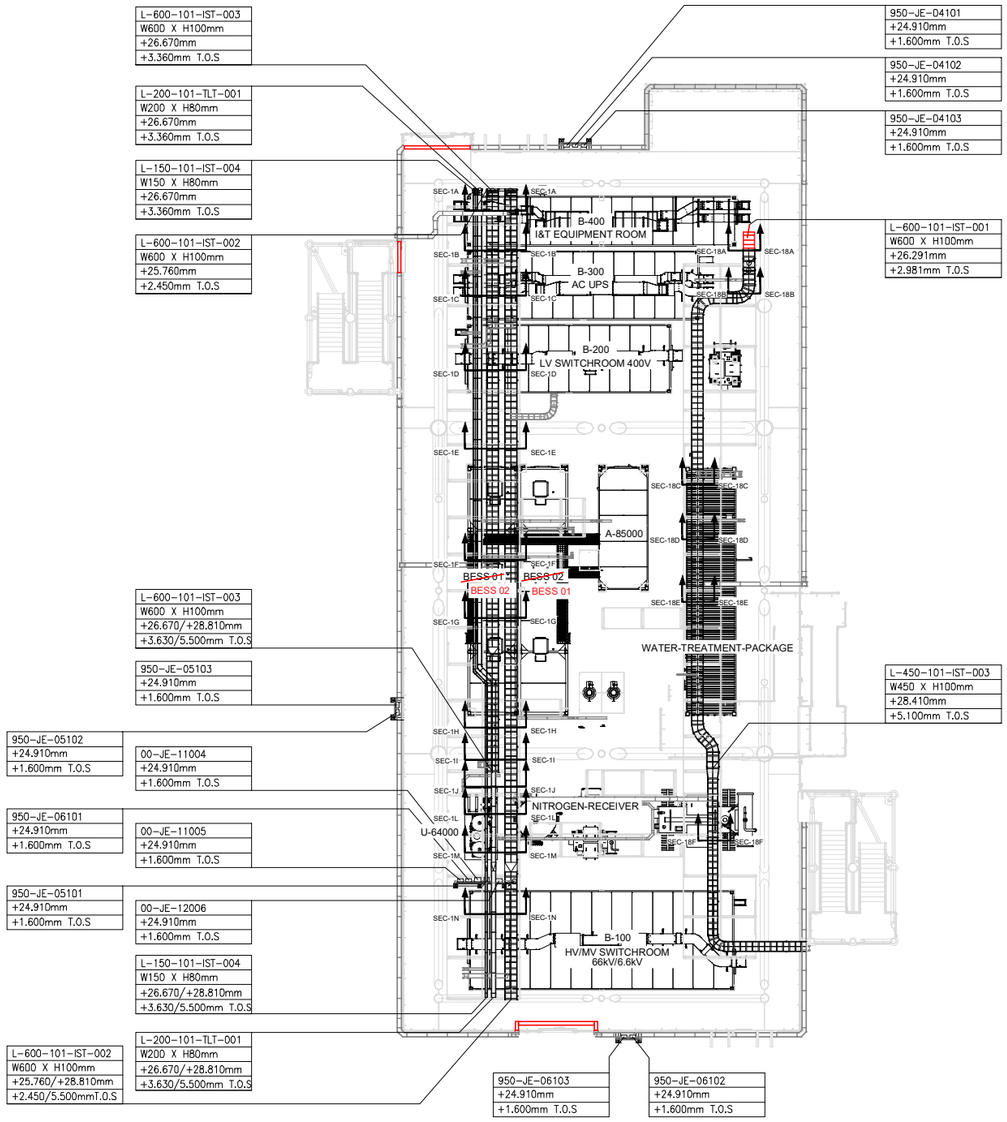
1	Check cable segregation on rack and tray	OK
2	Check capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanliness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings OR Proper protection until additional cable pulling or all work completed in the vicinity	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-05-06	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:43:12.655Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-05-06T13:51:11.494Z	

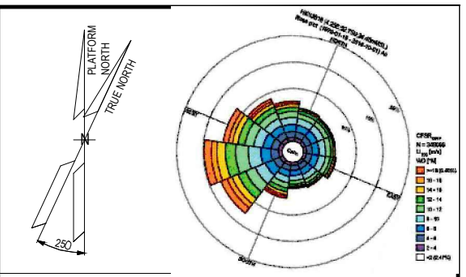
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02



PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

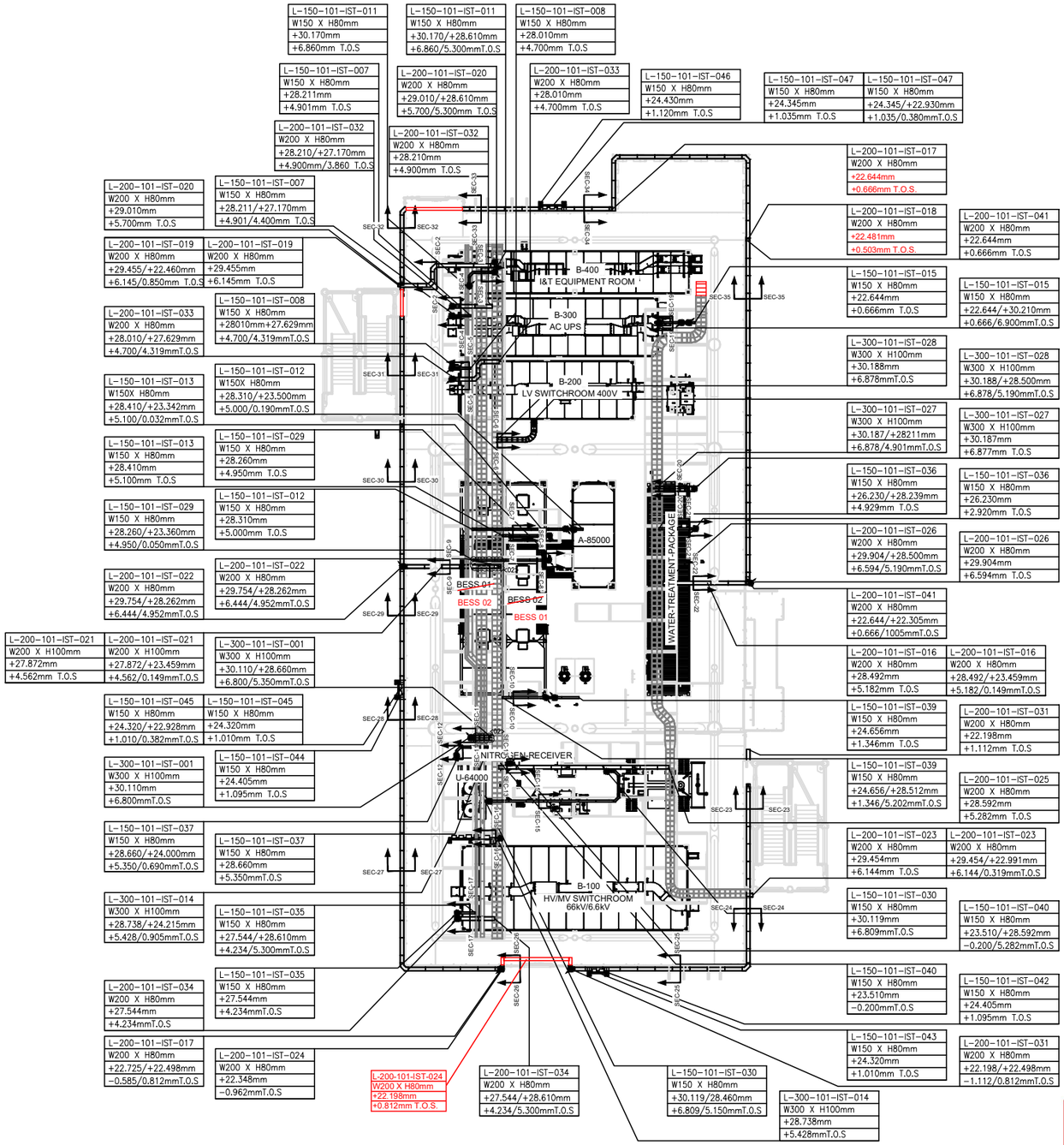
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
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REV. 02

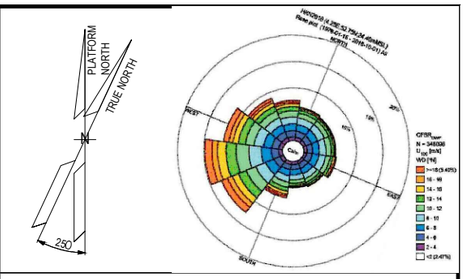


SECONDARY CABLETRAY

LOWER DECK

SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

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LEGEND

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- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

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REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 002	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV.02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02

<02>

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-0.068/0.400mmT.O.S

L-150-100-IST-005
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-23.242mm
-0.068mm T.O.S

L-150-100-IST-006
W150 X H80mm
-21.780mm
-1.530mm T.O.S

L-150-100-IST-006
W150 X H80mm
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L-200-100-IST-003
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-0.200/0.556mmT.O.S

L-200-100-IST-003
W200 X H80mm
-23.110mm
-0.200mm T.O.S

L-150-100-IST-007
W150 X H80mm
-17.244/21.600mm
-6.066/1.710mmT.O.S

L-150-100-IST-007
W150 X H80mm
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-6.066mm T.O.S

JB-200E1
-21.110mm
-2.200mm T.O.S

L-150-100-IST-009
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L-150-100-IST-010
W150 X H80mm
-17.330mm
-5.980mm T.O.S

L-150-100-IST-010
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-5.980/3.042mmT.O.S

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-5.313mm T.O.S

950-JE-07101
-18.507mm
-4.803mm T.O.S

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-1.222mm T.O.S

L-200-100-IST-002
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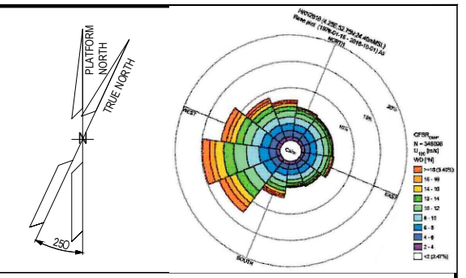
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SECONDARY CABLETRAY

TRANSITION PIECE

SCALE: 1:50

VIEW EL. 6000mm to 23310mm



NOTES

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123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

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01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-TRANSITION PIECE

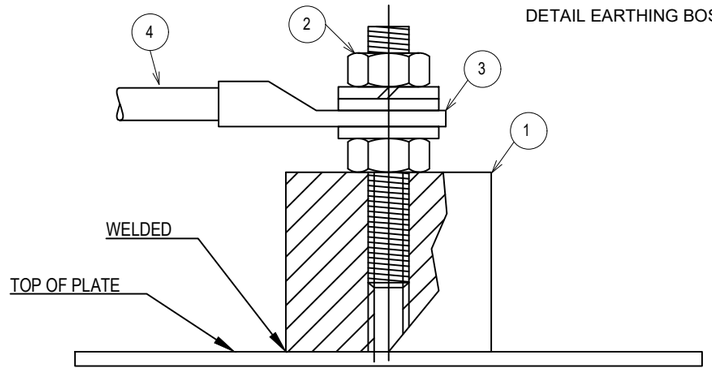
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DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 003	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV02.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

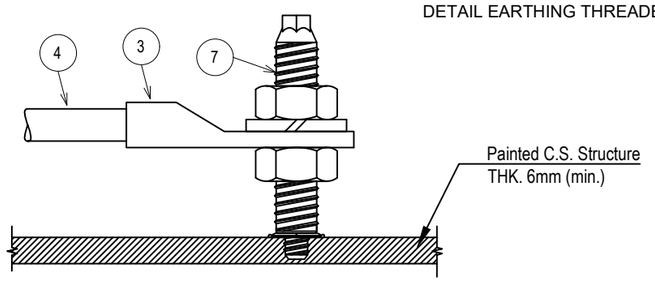


E11D

SEE NOTE 6

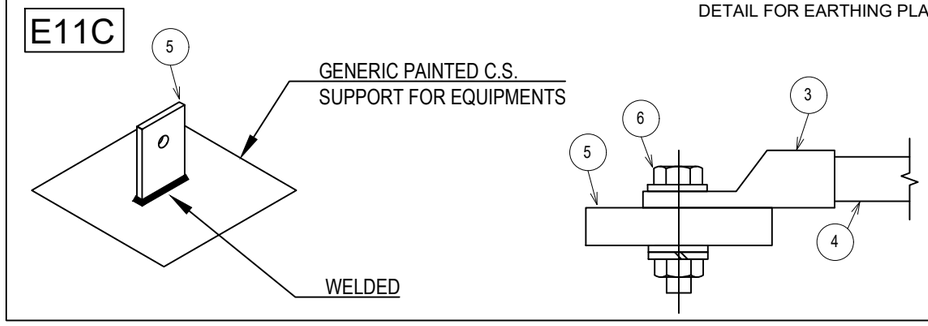
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

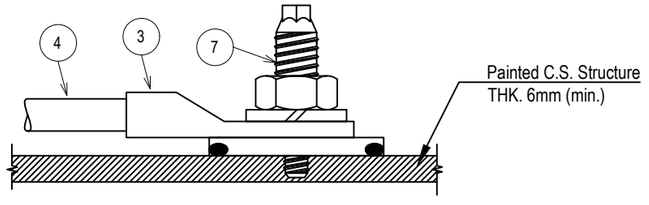


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

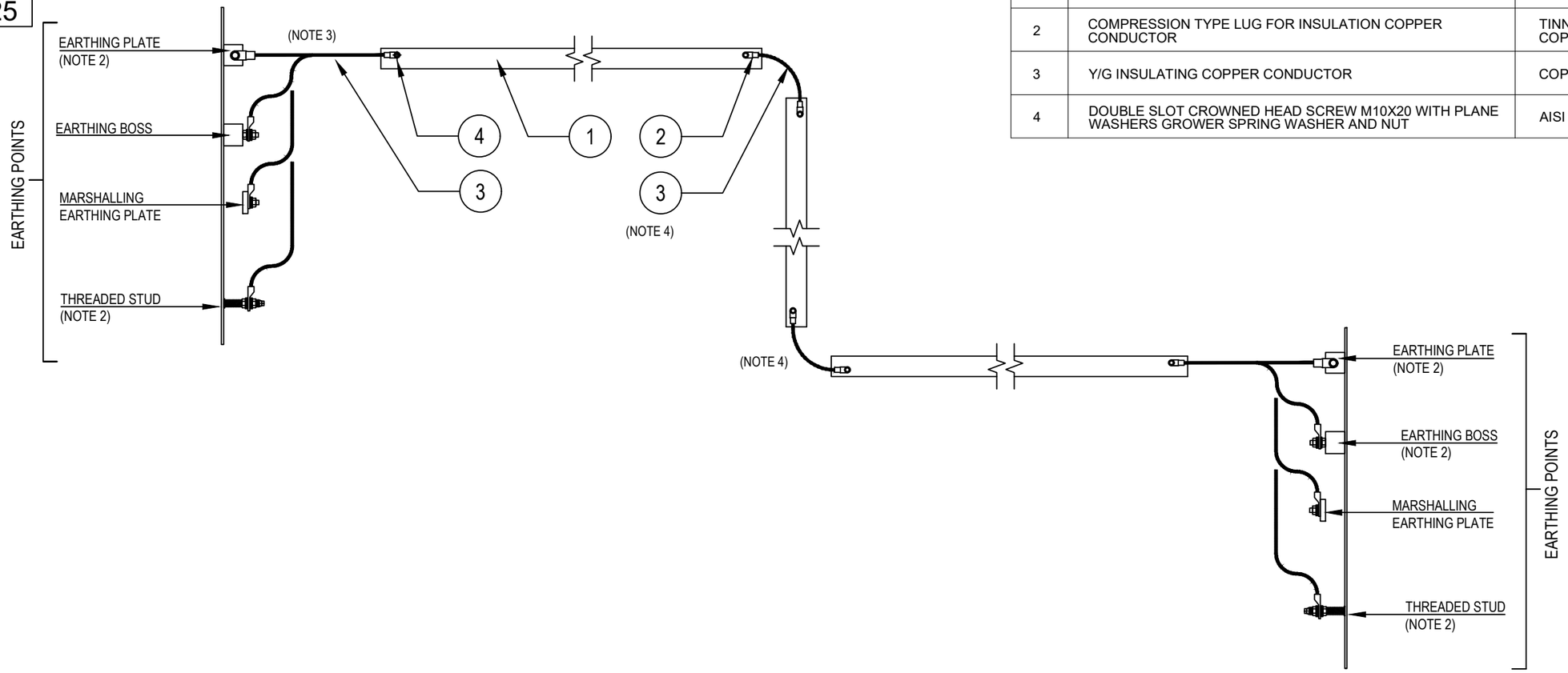
SHEET 003

REV. 02

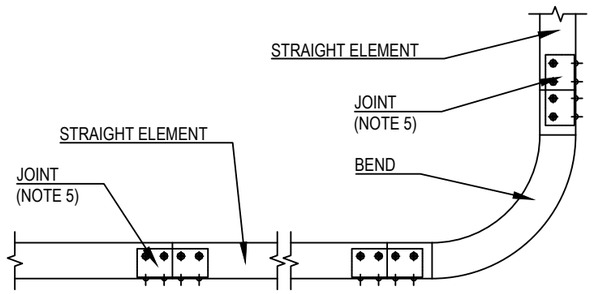
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

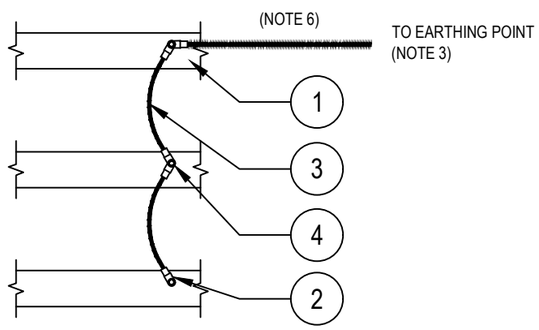
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

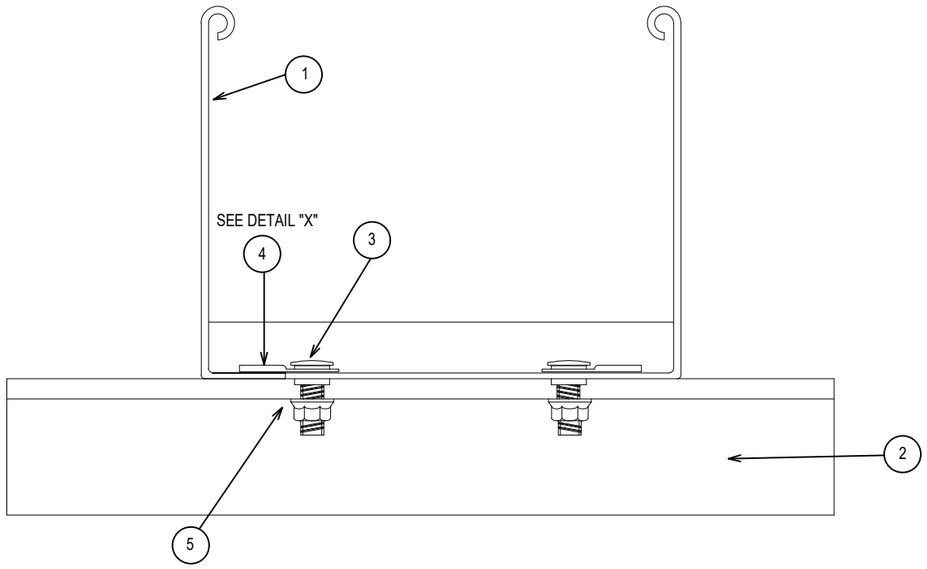
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

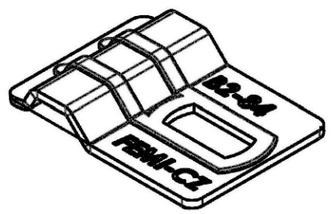
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

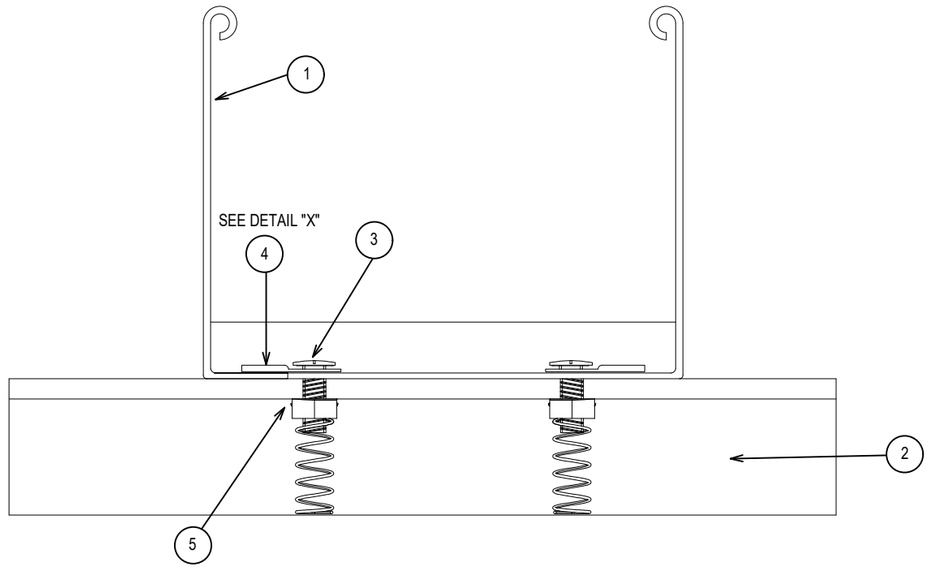
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

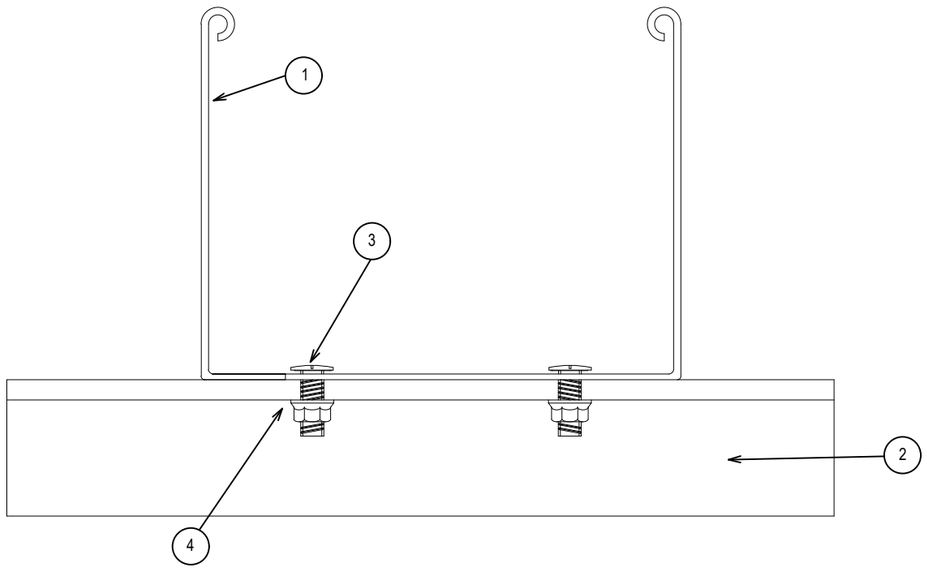
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

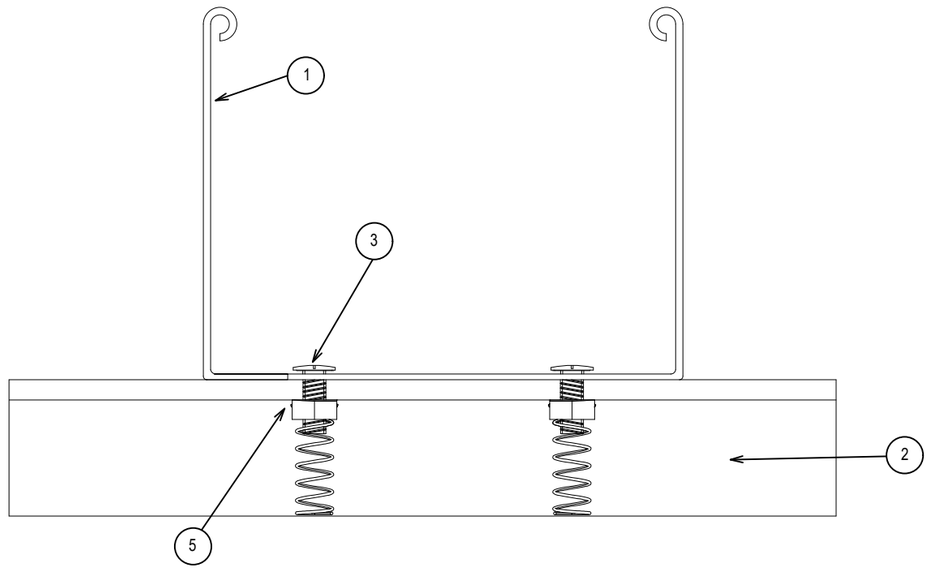


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

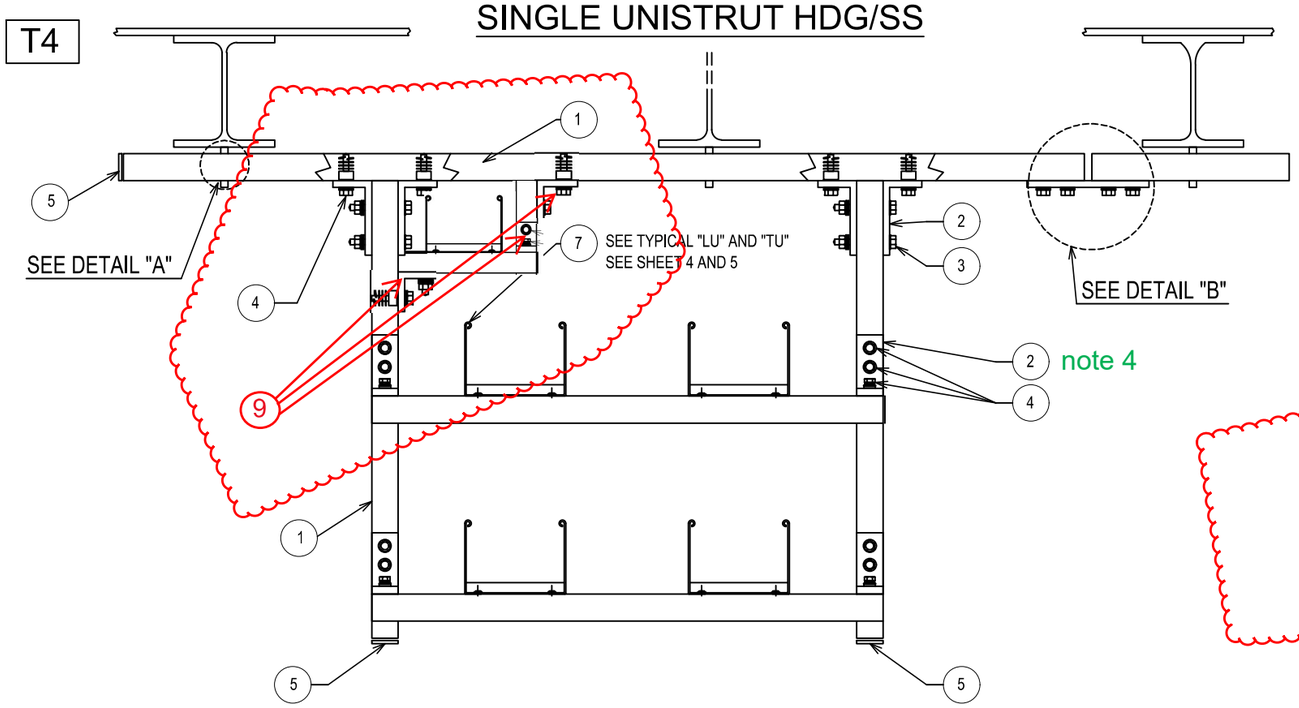
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

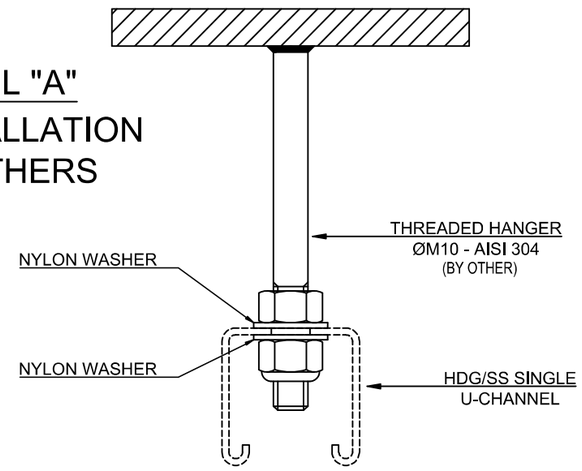
T4

SINGLE UNISTRUT HDG/SS

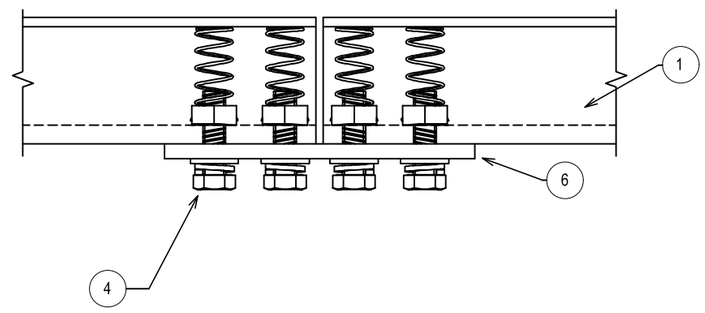


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

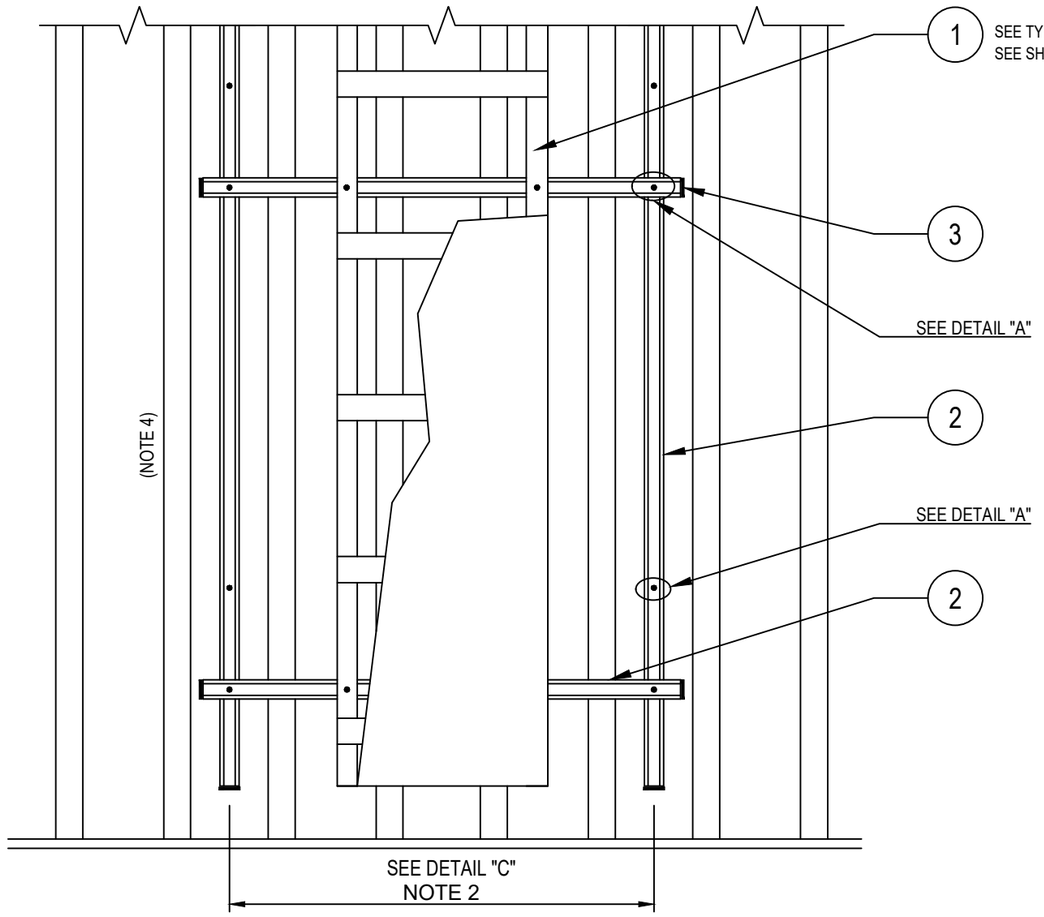
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

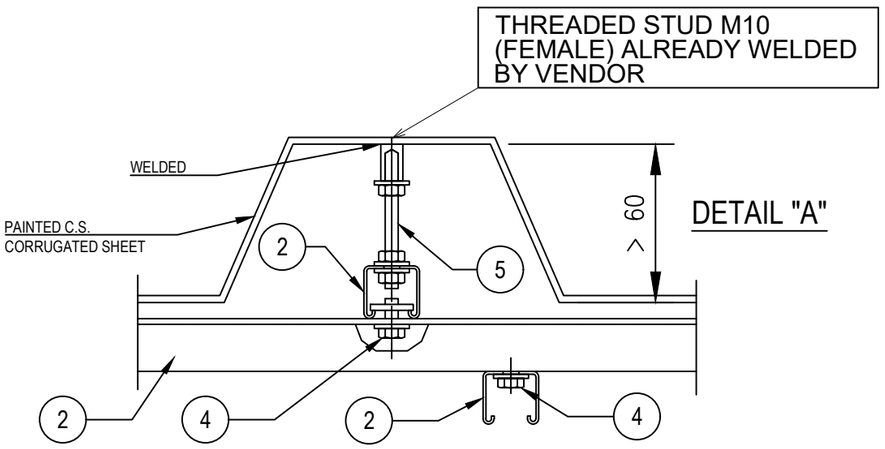
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

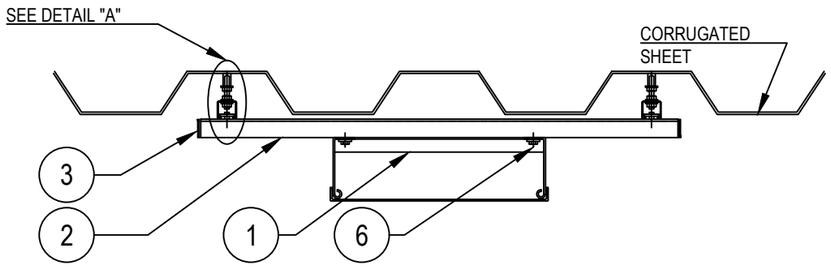
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_LD_INS	: Cable Tray Lower Deck - Instrumental		Dwg	123A90-DDL-IN-DL-40082	
	S/Sys	90-05	: Areas		Module	LD	
TASK	code	C10002268		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX30A		Cable Tray/Ladder Before pulling

BEFORE PULLING

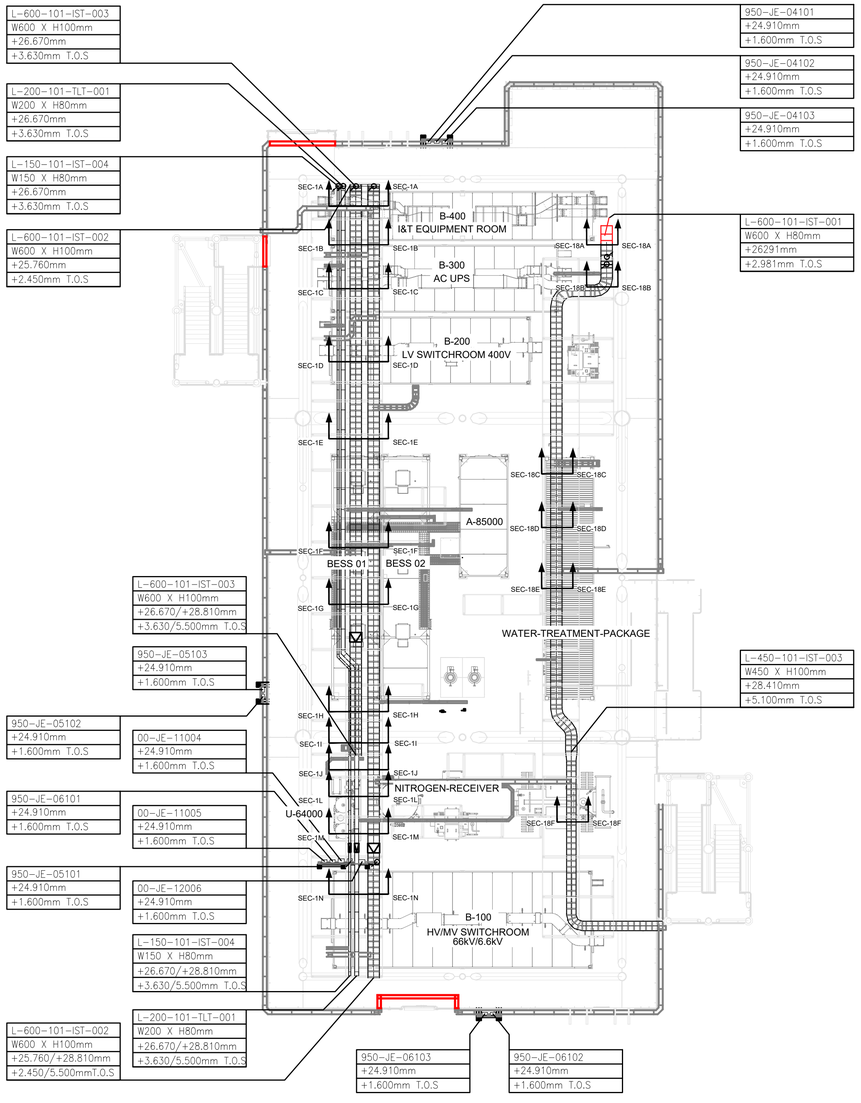
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Painting touch-up as necessary, if applicable	OK
13	Check Labelling with system and segment number	NA
14	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-01-04	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T11:00:05.225Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T12:31:02.258Z	

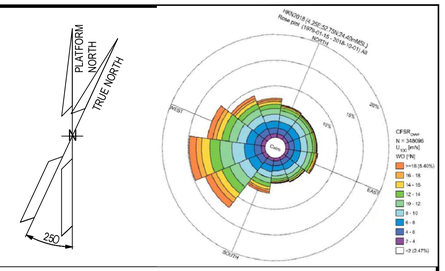
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 00



PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:150

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
CABLETRAY LAYOUT-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 22/12/23
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40082**

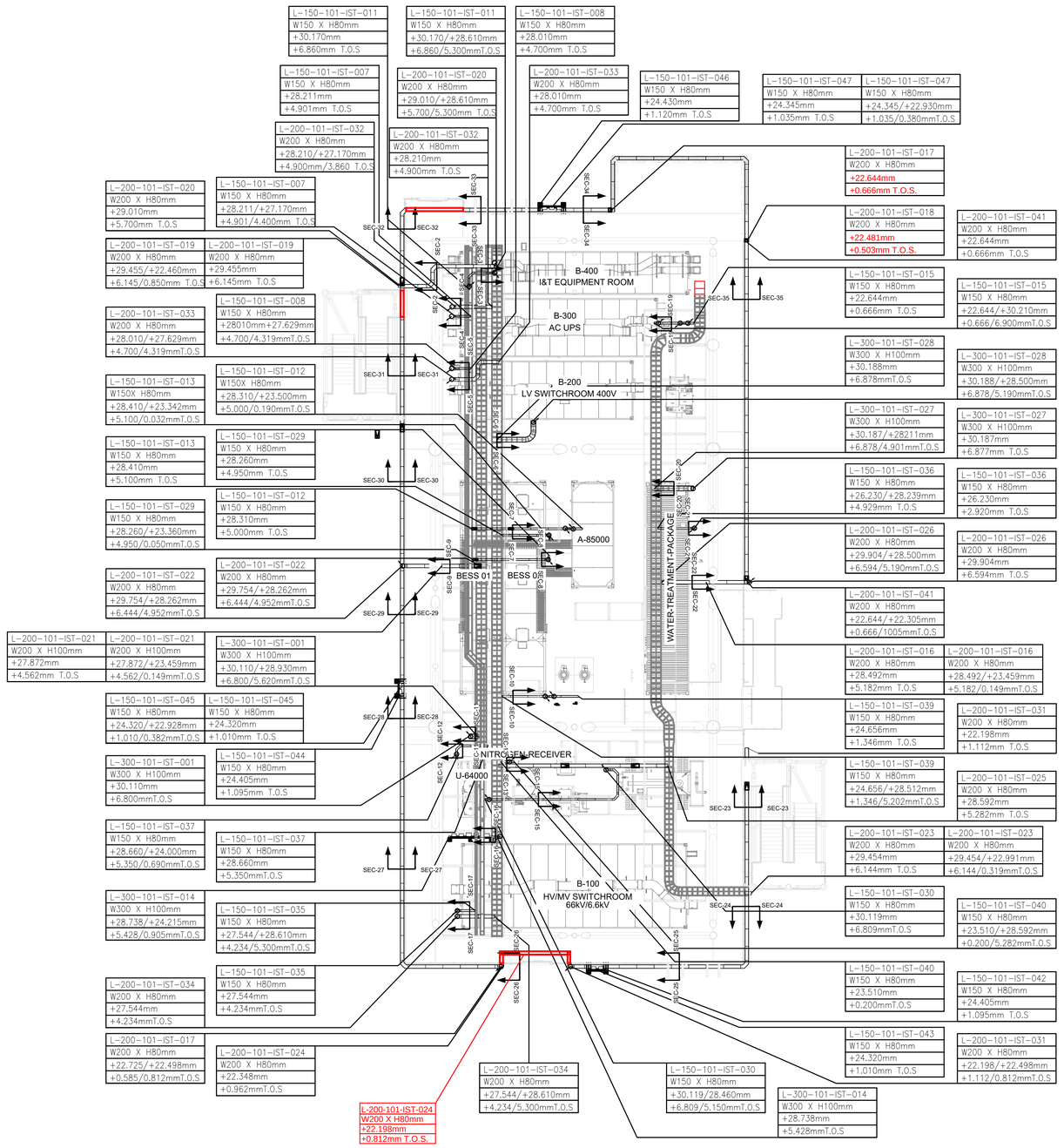
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1_C	27/08/24	G.Randi

ROSETTI MARINO SpA

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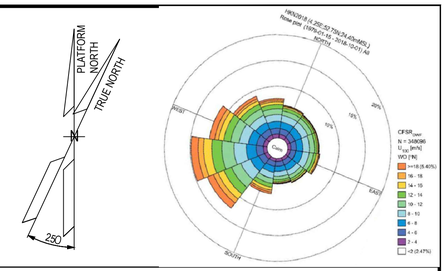
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 00



SECONDARY CABLETRAY
LOWER DECK
SCALE: 1:150

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40082**

REV.:	DATE:	SIGNATURE:
1_C	27/08/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
CABLETRAY LAYOUT-LOWER DECK
TOS EL. 23.310M

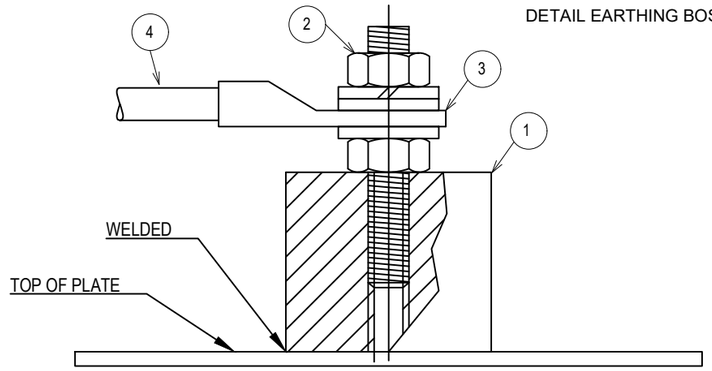
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 22/12/23
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 002	REV. 01

File Name : : 123A90-DDL-IN-DL-40082 REV:00.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

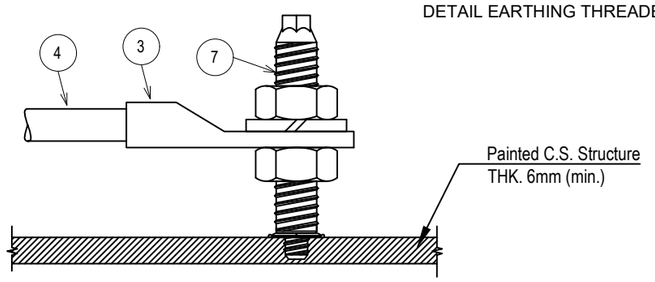


E11D

SEE NOTE 6

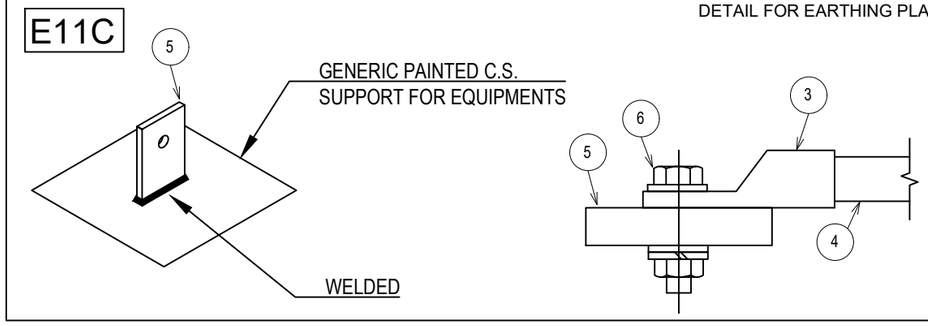
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

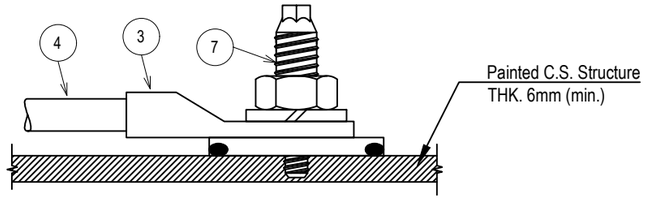


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

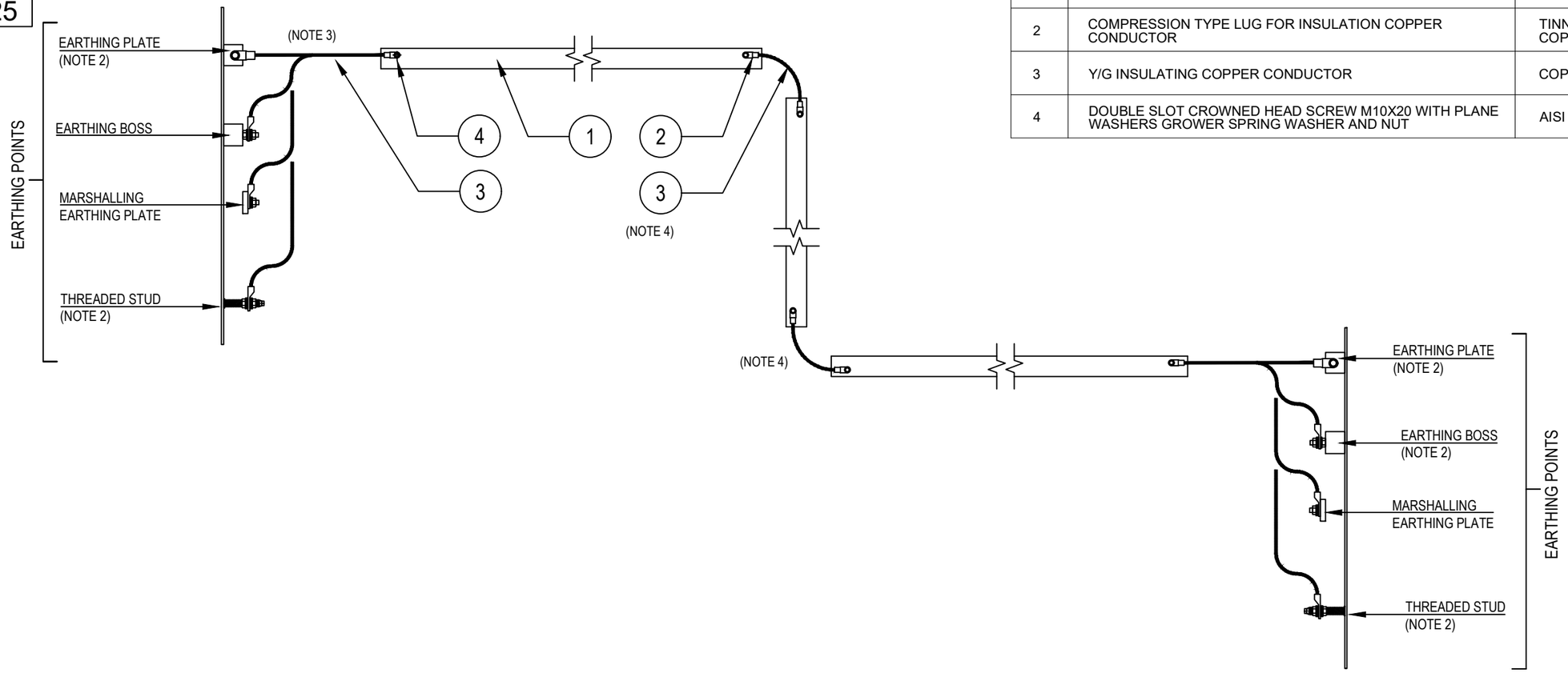
SHEET 003

REV. 02

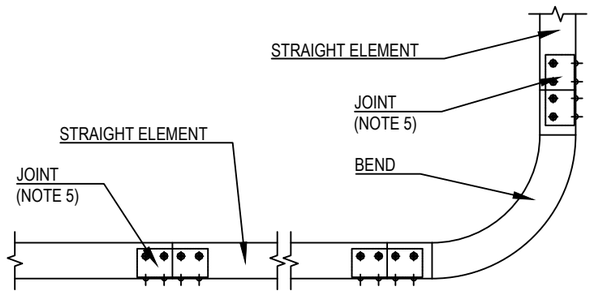
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

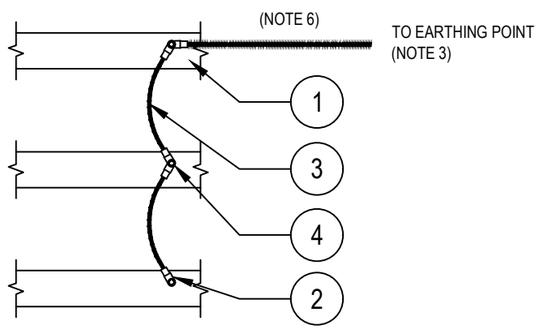
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

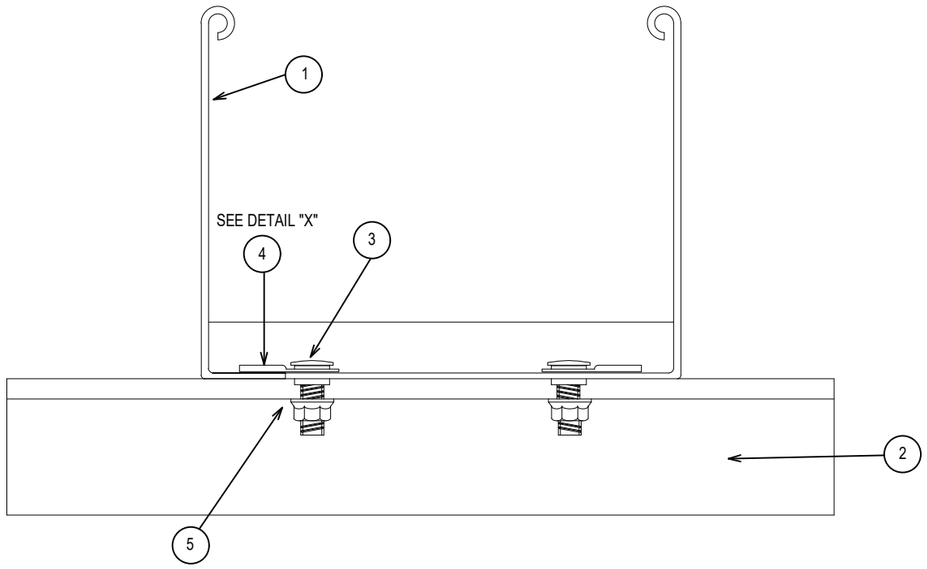
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

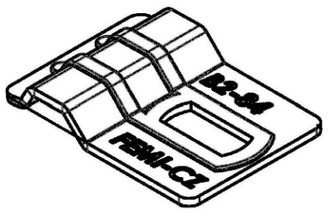
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

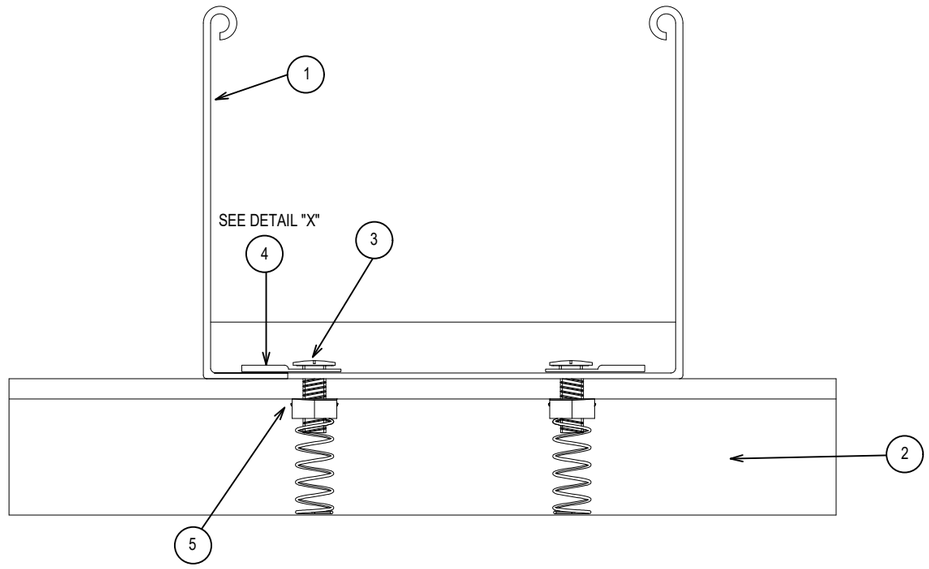
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

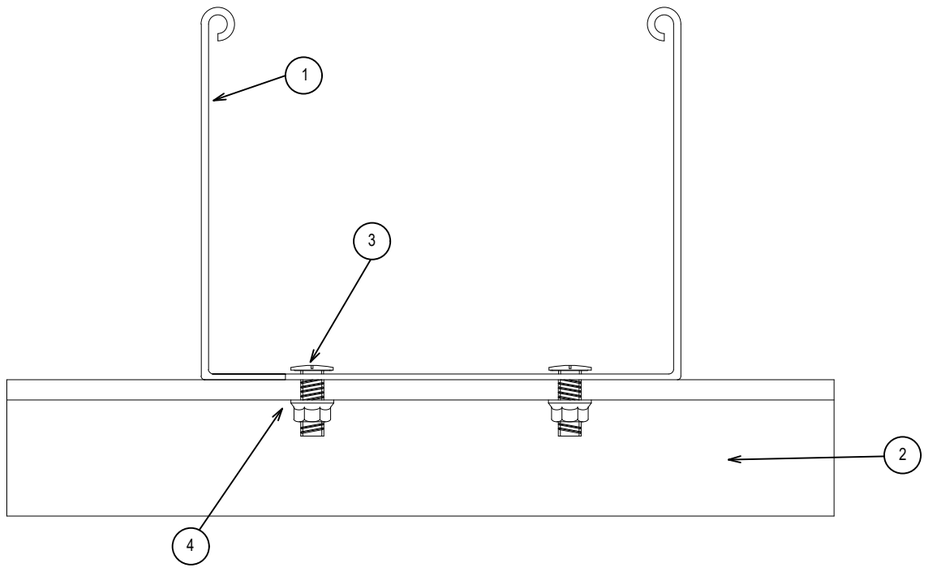
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

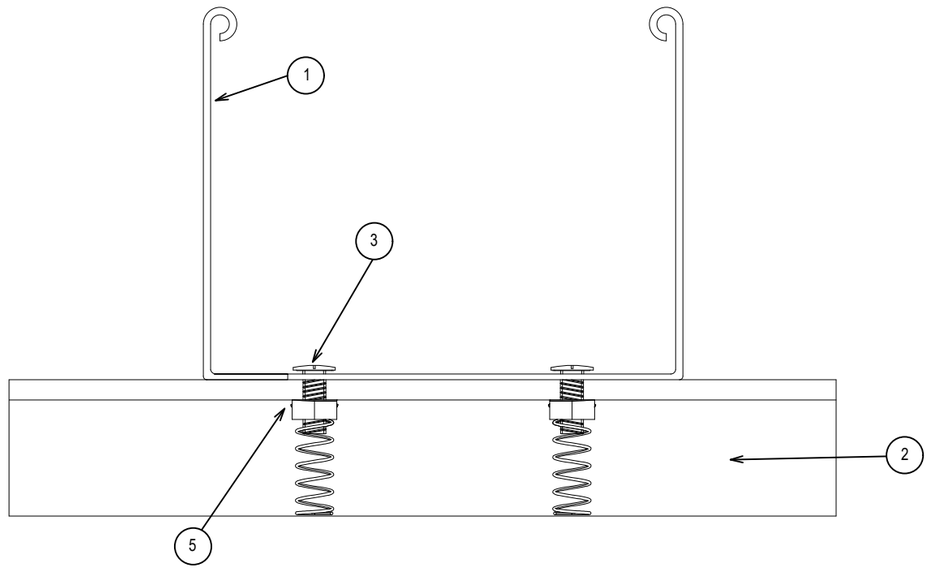


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

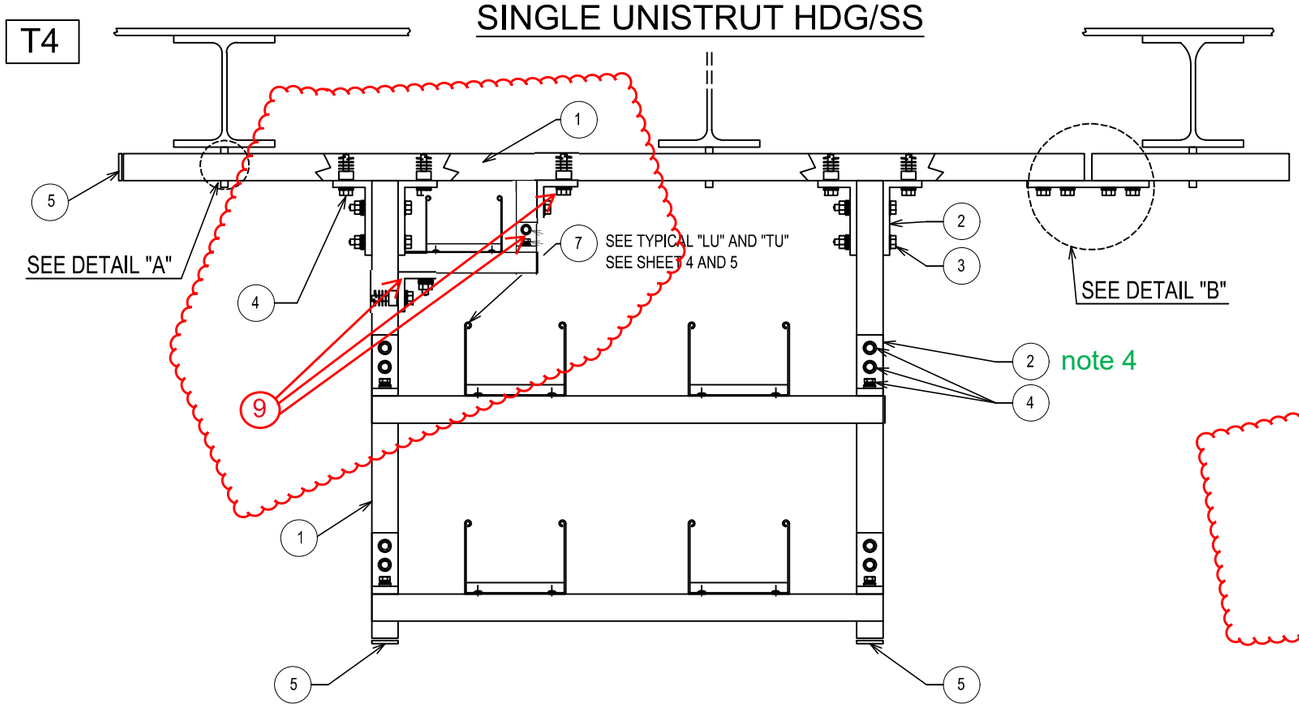
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

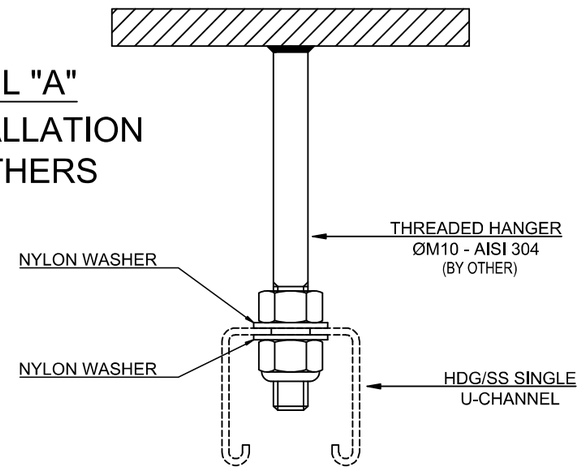
T4

SINGLE UNISTRUT HDG/SS

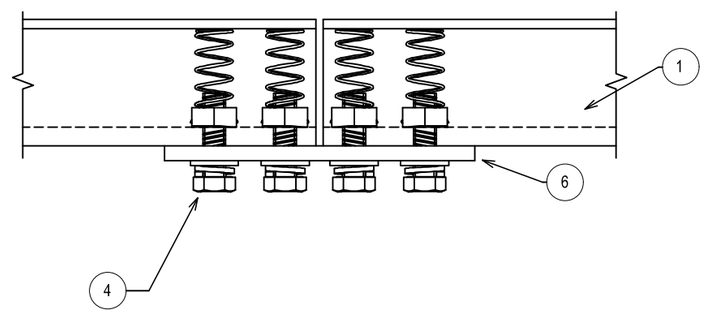


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

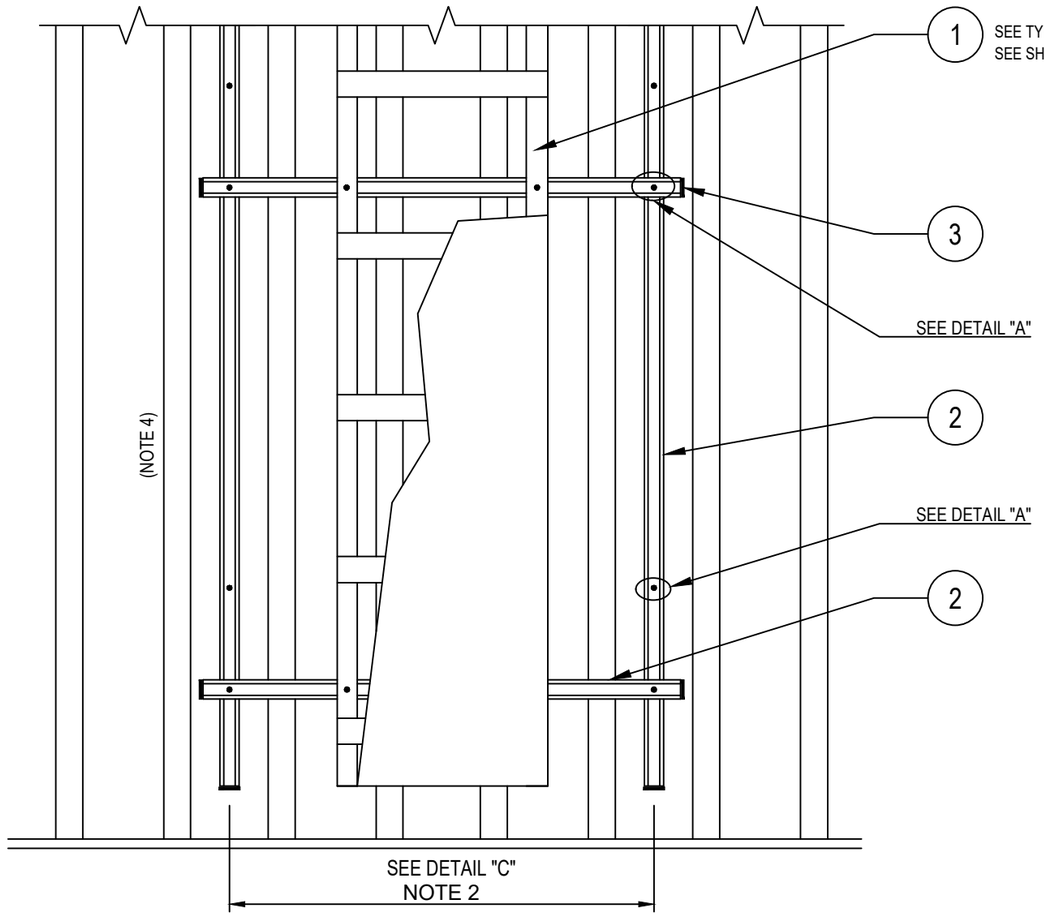
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

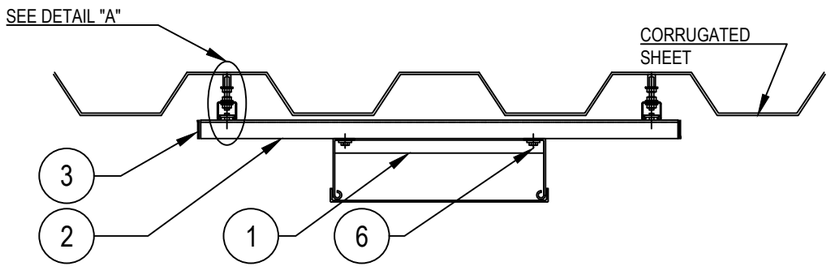
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

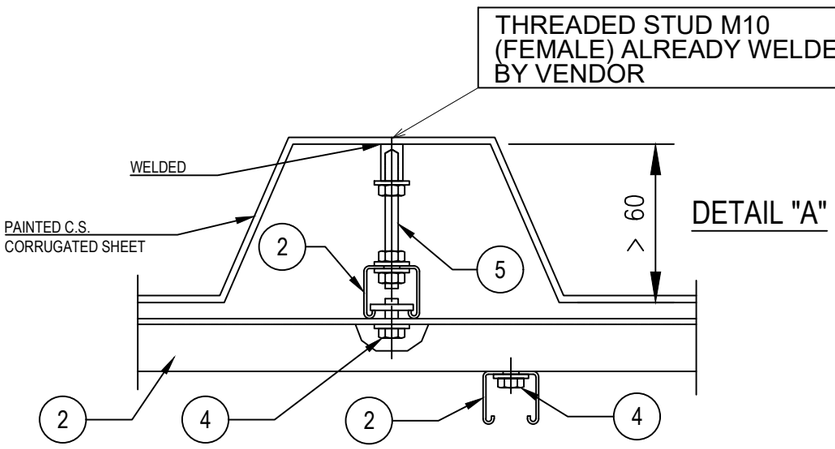
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	014	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

DESIGN DATA - *CABLE TRAYS LADDER TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Ladder	☐ Tray with simple ribs		☐ Tray with rimmed ribs
	Thickness 5mm (*)	BENDING RADIUS:	☑ **300mm**	☐ **500mm**
	☑ Cover	☐ Cover spacer		☐ Whitout Cover
	Thickness 5mm (*)			
MATERIAL	☐ Galvanized steel	☐ Stainless steel	☐ Light alloy	☑ FRP (3) ☐ AISI 316L
SURFACE PROTECTION	Galvanized	☐ before machined (ex. with "Sendzimir" process)		☐ after machined
	☐ Surface clean and polished from any welding and working residual			
	☐ Painting			
	Colour:	☑ Grey RAL 7035	☐ blue RAL 5012	☐
	Cycle:			

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	100	100	100									Manufacturer: Oglaend Supplier: HILTI Series: FOE100 P.O.
	Working internal width	W	300	450	600									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	Plane 30 degree bend													
5	"T" junction	D												
6	Cross junction	E												
7	Single element for vertical bend	F												
8	Plane left-hand reducing section	G												
9	Plane simmetric reducing section	H												
10	Plane right-hand reducing section	I												
11	Elbow Inside 30°													
12	Elbow Outside 30°													
13	Elbow Inside 45°													
14	Elbow Outside 45°													
15	Elbow Inside 90°													
16	Elbow Outside 90°													
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint (note 6)	M												
20														
21	Separators													

NOTES :

6) Dimensions in millimeters
7) Reference to sheet 6
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

CABLE TRAYS LADDER TYPE - FIGURES

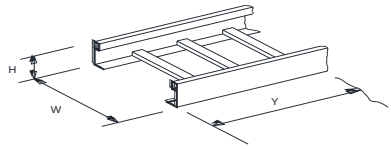


Fig. A
STRAIGHT ELEMENT

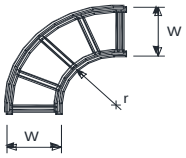


Fig. B
PLANE 90° BEND

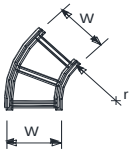


Fig. C
PLANE 45° BEND

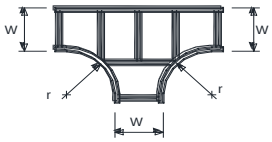


Fig. D
TEE JUNCTION

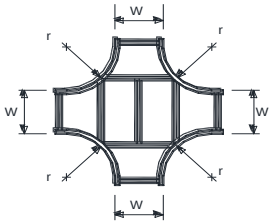


Fig. E
CROSS JUNCTION

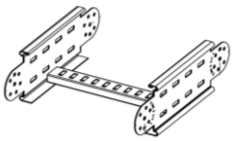


Fig. F
SINGLE ELEMENT FOR VERTICAL BENDS



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

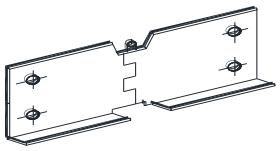


Fig. L
HORIZONTAL HINGED JOINT

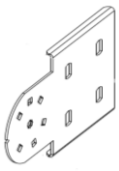


Fig. M
VERTICAL HINGED JOINT

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DESIGN DATA - *CABLE TRAY PERFORATED TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Perforated ☐ Tray with simple ribs ☐ Tray with rimmed ribs **Thickness 5mm (*)** BENDING RADIUS: ☑ **300mm** ☐ Adjustable elbow ☑ Cover ☐ Cover spacer ☐ Whitout Cover **Thickness 5mm (*)**
MATERIAL	☐ Galvanized steel ☐ Stainless steel ☐ Light alloy ☑ FRP ☐ AISI 316L
SURFACE PROTECTION	Galvanized ☐ before machined (ex. with "Sendzimir" process) ☐ Hot dip Galvanized after machined - 50 µm ☐ Surface clean and polished from any welding and working residual ☐ Painting Colour: ☑ Grey RAL 7035 ☐ blue RAL 5012 ☐ Cycle:

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	50	80	80									Manufacturer: Oglaend Supplier: HILTI Series: FTE80 P.O.
	Working internal width	W	50	150	200									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	"T" junction													
5	Vertical convex 90° Bend	D												
6	Vertical concave 90° Bend	E												
7	Plane left-hand reducing section	F												
8	Plane simmetric reducing section	G												
9	Plane right-hand reducing section	H												
10		I												
11														
12														
13														
14														
15														
16														
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint	M												
20														
21	Separators													

NOTES :
6) Dimensions in millimeters
7) Reference to Sheet 9
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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CABLE TRAYS PERFORATED TYPE - FIGURES

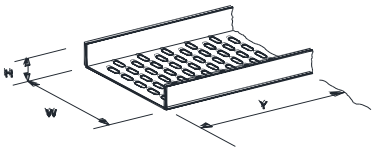


Fig. A
STRAIGHT ELEMENT

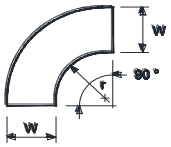


Fig. B
PLANE 90° BEND

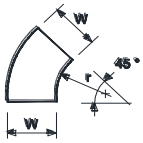


Fig. C
PLANE 45° BEND

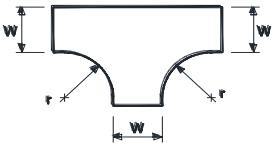


Fig. D
TEE JUNCTION

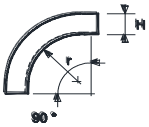


Fig. E
VERTICAL CONVEX 90° BEND

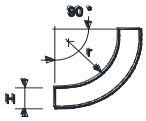


Fig. F
VERTICAL CONCAVE 90° BEND



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

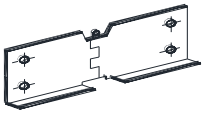


Fig. L
HORIZONTAL HINGED JOINT

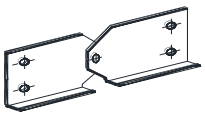


Fig. M
VERTICAL HINGED JOINT

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INSTRUMENT CABLE TRAYS MTO				
S.No	**Description**	**U.M.**	**Rev. 00**	**Rev. 01**
Perforated Cable Tray 50(W)x50(H), R=300, Grey, Complete with Cover				
1	Straight elements	m	1338	1338
2	Bends 45°	N.	-	8
3	Inside Risers 90°	N.	-	3
4	Outside Risers 90°	N.	-	14
Perforated Cable Tray 150(W)x80(H), R=300, Grey, Complete with Cover				
5	Straight elements	m	453	453
6	Bends 45°	N.	7	12
7	Bends 90°	N.	40	40
8	Inside Risers 90°	N.	18	18
9	Inside Risers 45°	N.	6	6
10	Outside Risers 90°	N.	25	25
11	Outside Risers 45°	N.	3	3
12	"T"	N.	-	3
Perforated Cable Tray 200(W)x80(H), R=300, Grey, Complete with Cover				
13	Straight elements	m	480	480
14	Bends 90°	N.	22	22
15	Bends 45°	N.	10	12
16	Inside Risers 90°	N.	6	8
17	Inside Risers 45°	N.	12	12
18	Outside Risers 90°	N.	6	14
19	Outside Risers 45°	N.	12	12
Ladder Cable Tray 300(W)x100(H)), R=300, Grey, Complete with Cover				
20	Straight elements	m	111	111
21	Bends 90°	N.	7	7
22	Inside Risers 90°	N.	8	8
23	Outside Risers 90°	N.	4	4
24	"T"	N.	3	3
Ladder Cable Tray 450(W)x100(H)), R=300, Grey, Complete with Cover				
25	Straight elements	m	18	99
26	Bends 90°	N.	-	5
27	Bends 90°, Radius 500mm	N.	2	2
Ladder Cable Tray 600(W)x100(H)), R=300, Grey, Complete with Cover				
28	Straight elements	m	171	171
29	Bends 45°	N.	3	3
30	Inside Risers 90°	N.	2	2
31	Inside Risers 45°	N.	3	3
32	Outside Risers 90°	N.	4	4
33	Outside Risers 45°	N.	3	3
34	Reducer 600X450	N.	-	1
Accessories				
35	Divider straight elements, 45(H)	m	87	120
36	Divider for bend elements, 45(H)	m	15	15
37	Divider for riser elements, 45(H)	m	15	15
38	Fixing Clamps	N.	(1)	(1)
Notes 1) Vendor shall estimate fixing clamp quantities				

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ITEM	Tag	CABLE_TRAY_LD_INS	: Cable Tray Lower Deck - Instrumental		Dwg	123A90-DDL-IN-DL-40082	
	S/Sys	90-05	: Areas		Module	LD	
TASK	code	C10002269		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX30B		Cable Tray/Ladder After pulling

AFTER PULLING

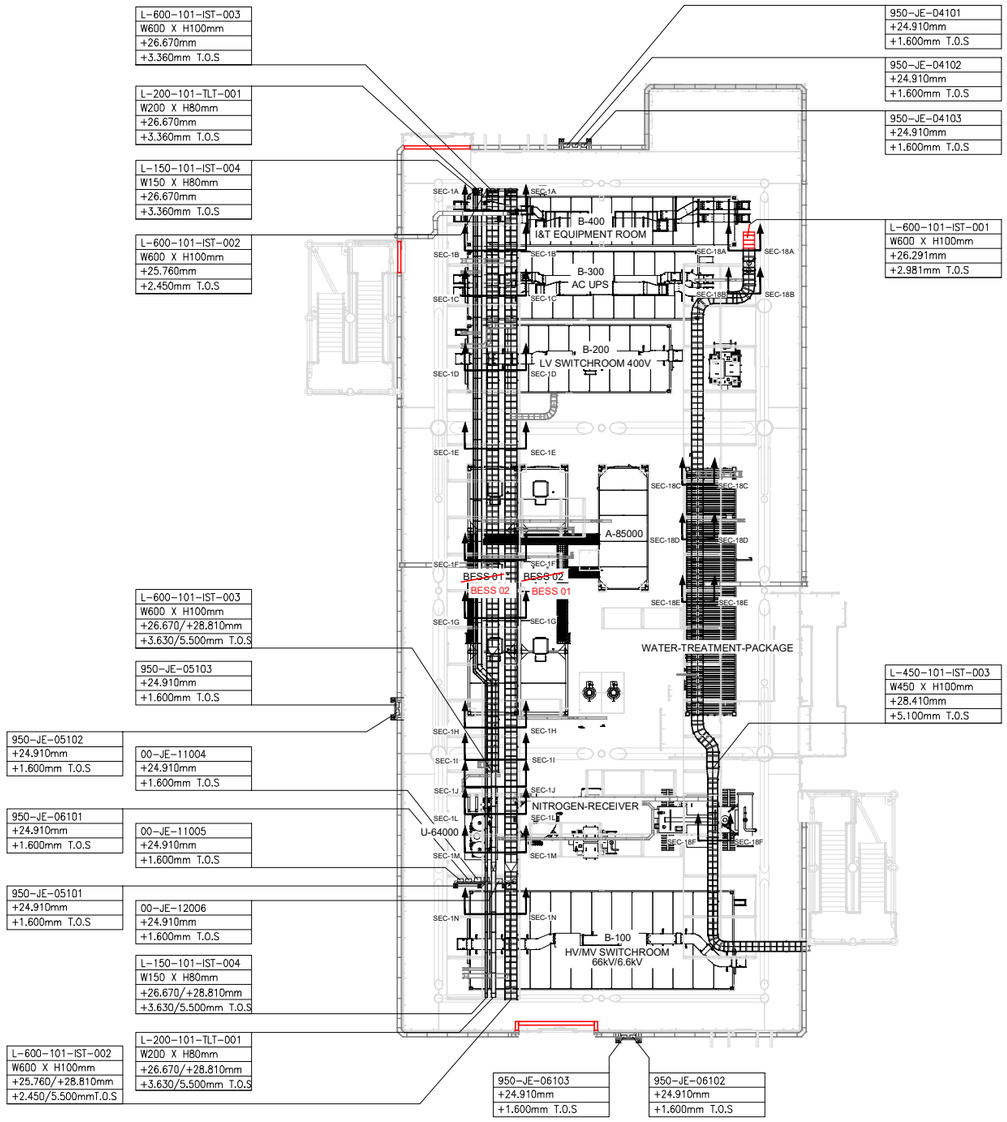
1	Check cable segregation on rack and tray	OK
2	Check capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanliness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	PL
6	Check lids intallation (if any) against drawings OR Proper protection until additional cable pulling or all work completed in the vicinity	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-02-24	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:43:01.700Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-24T15:14:09.860Z	

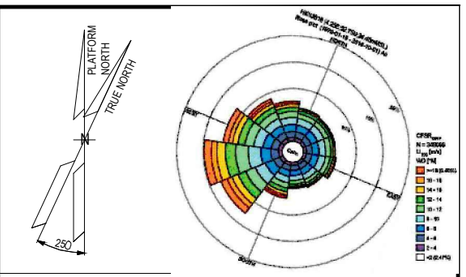
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02



PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

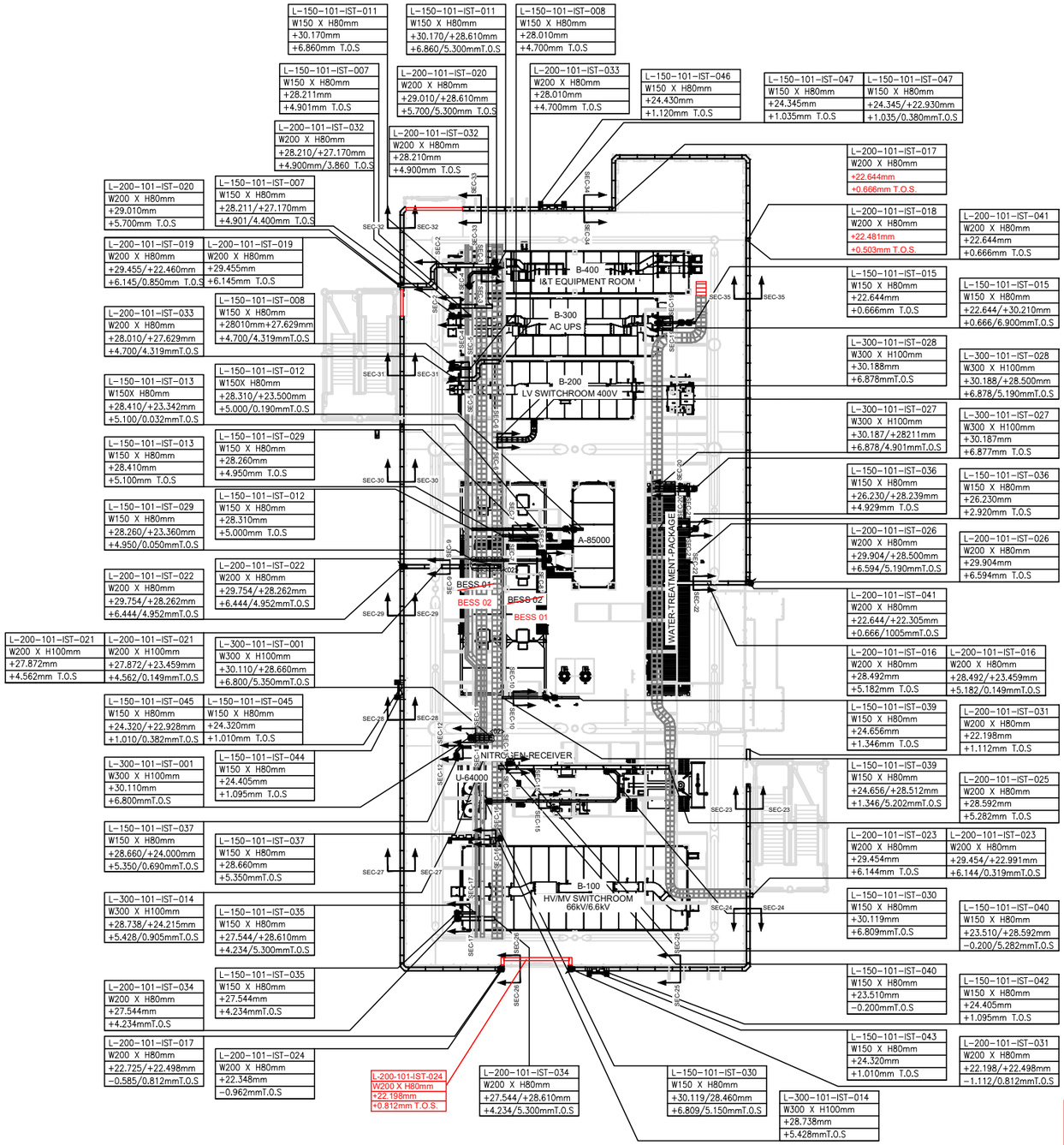
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV:02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02

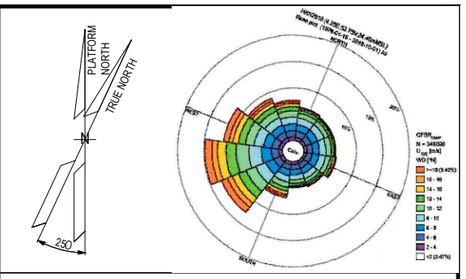


SECONDARY CABLETRAY

LOWER DECK

SCALE: 1:100

VIEW EL. 23310mm to 30310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
2_B	12/12/24	C.Pilato

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

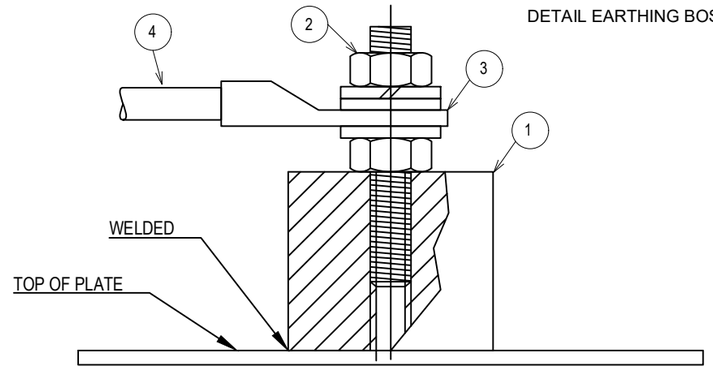
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DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40082	SHEET 002	REV. 02

File Name : 123A90-DDL-IN-DL-40082 REV.02.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

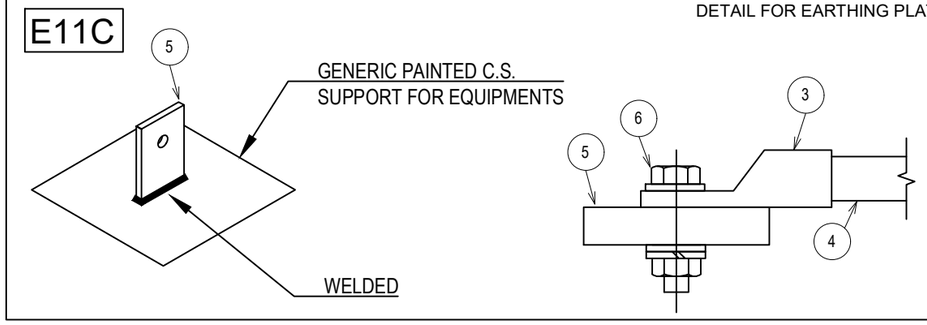
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

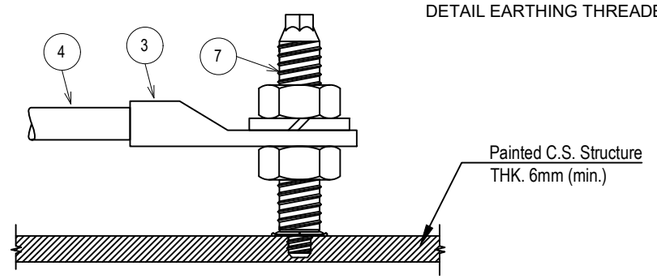


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

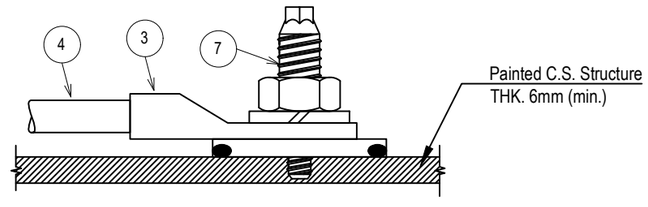


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

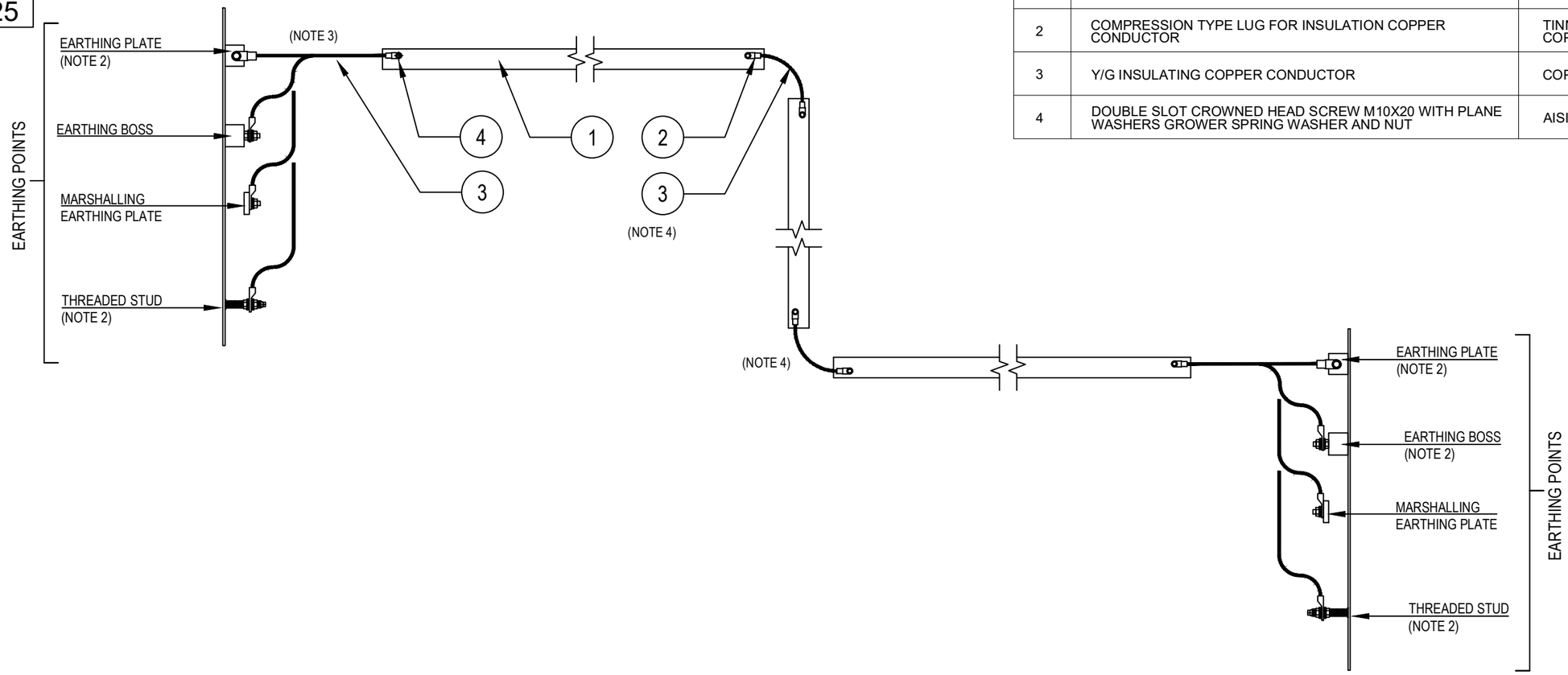
SHEET 003

REV. 02

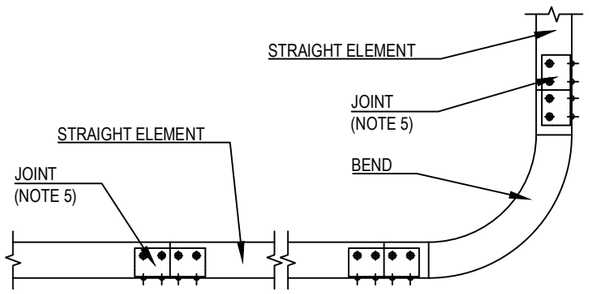
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

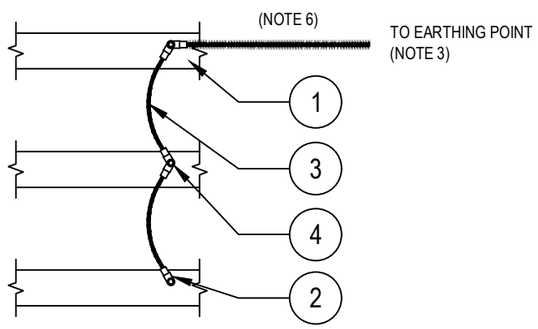
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

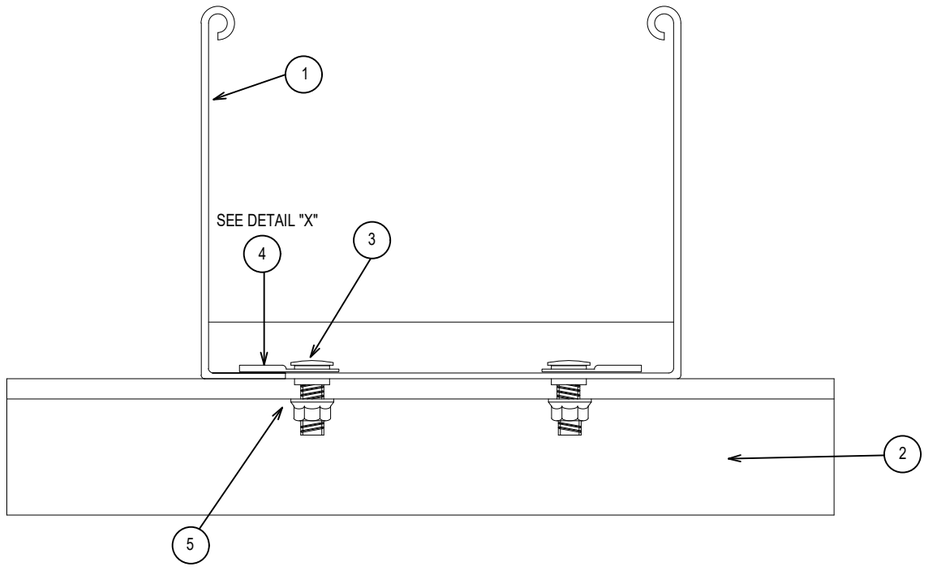
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

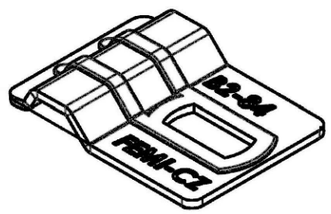
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

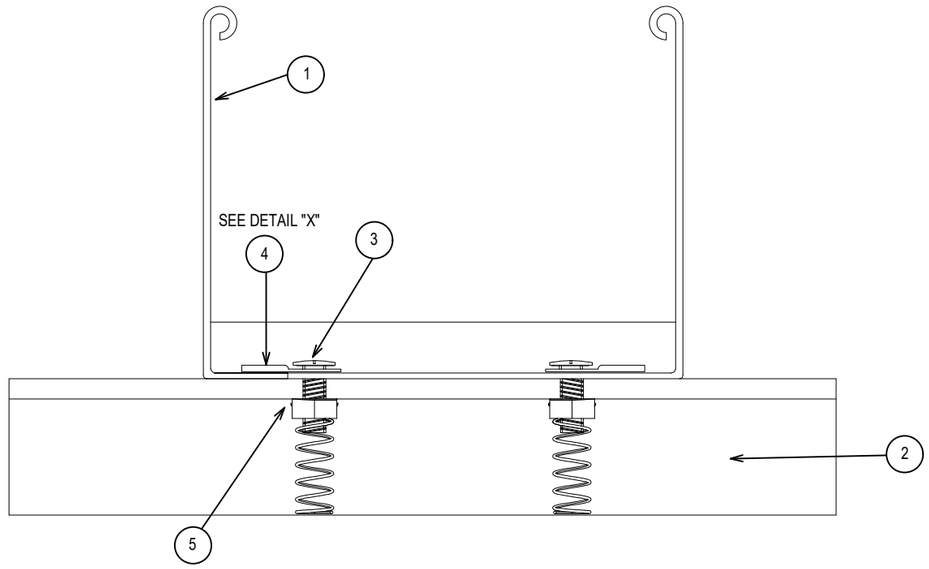
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

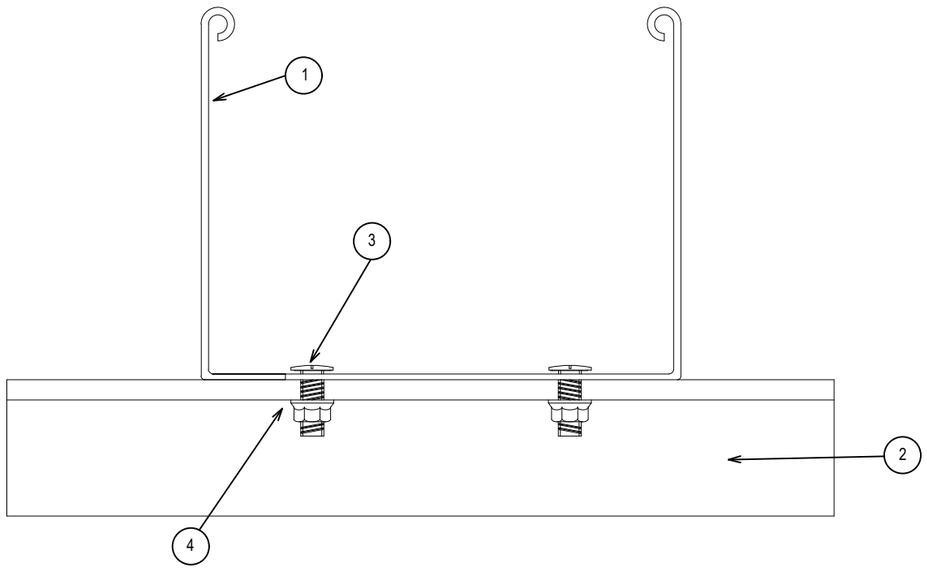
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

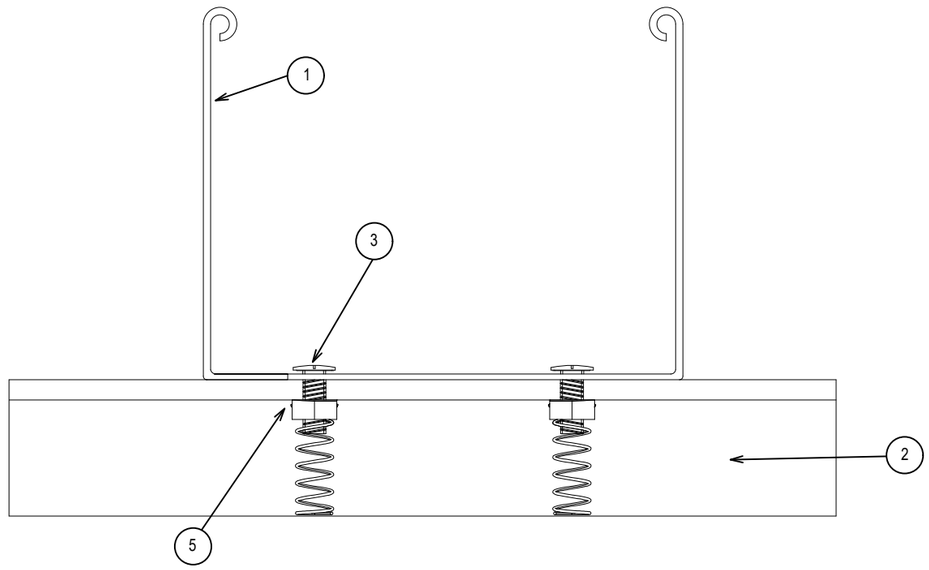


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

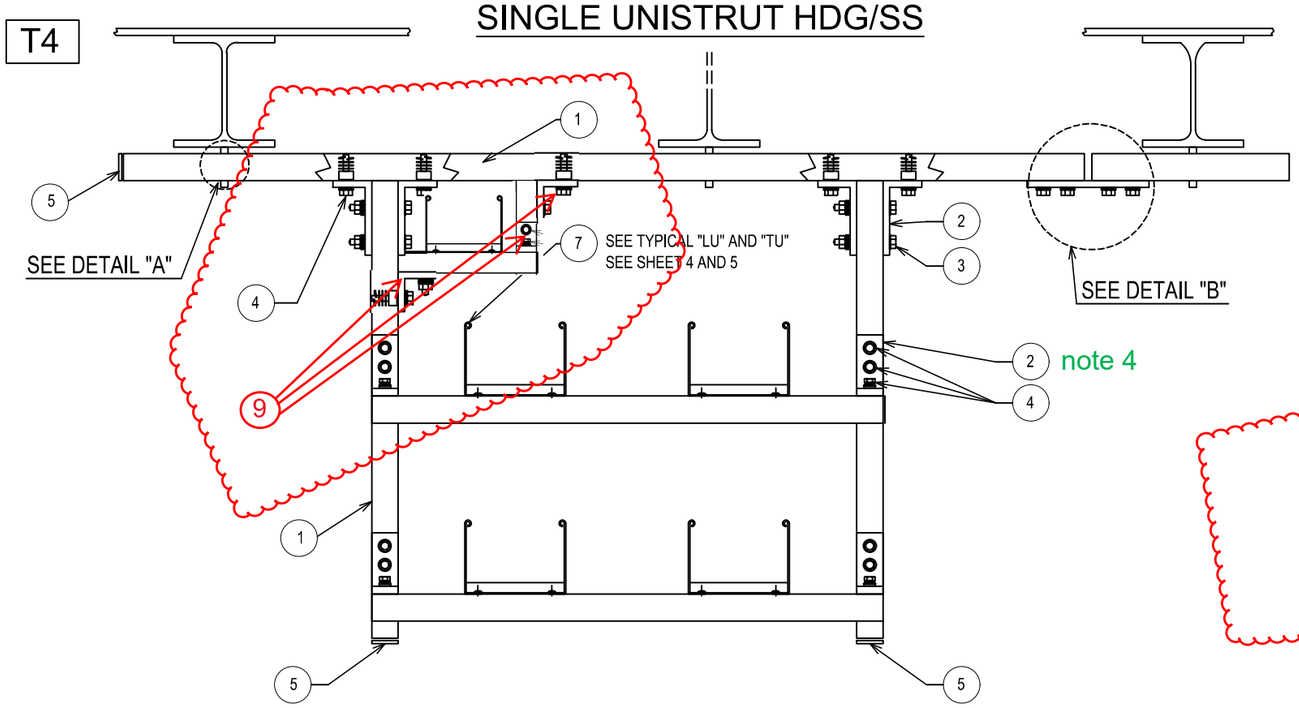
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

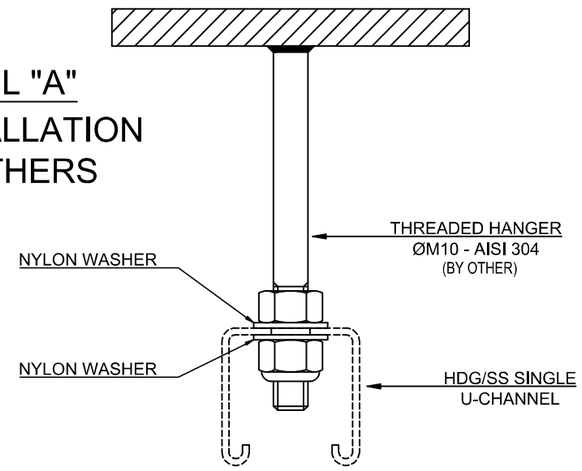
T4

SINGLE UNISTRUT HDG/SS

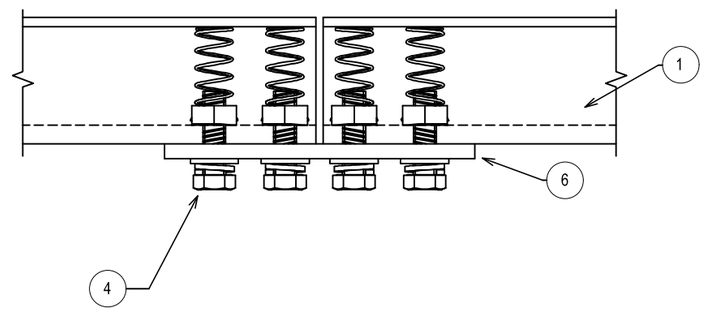


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

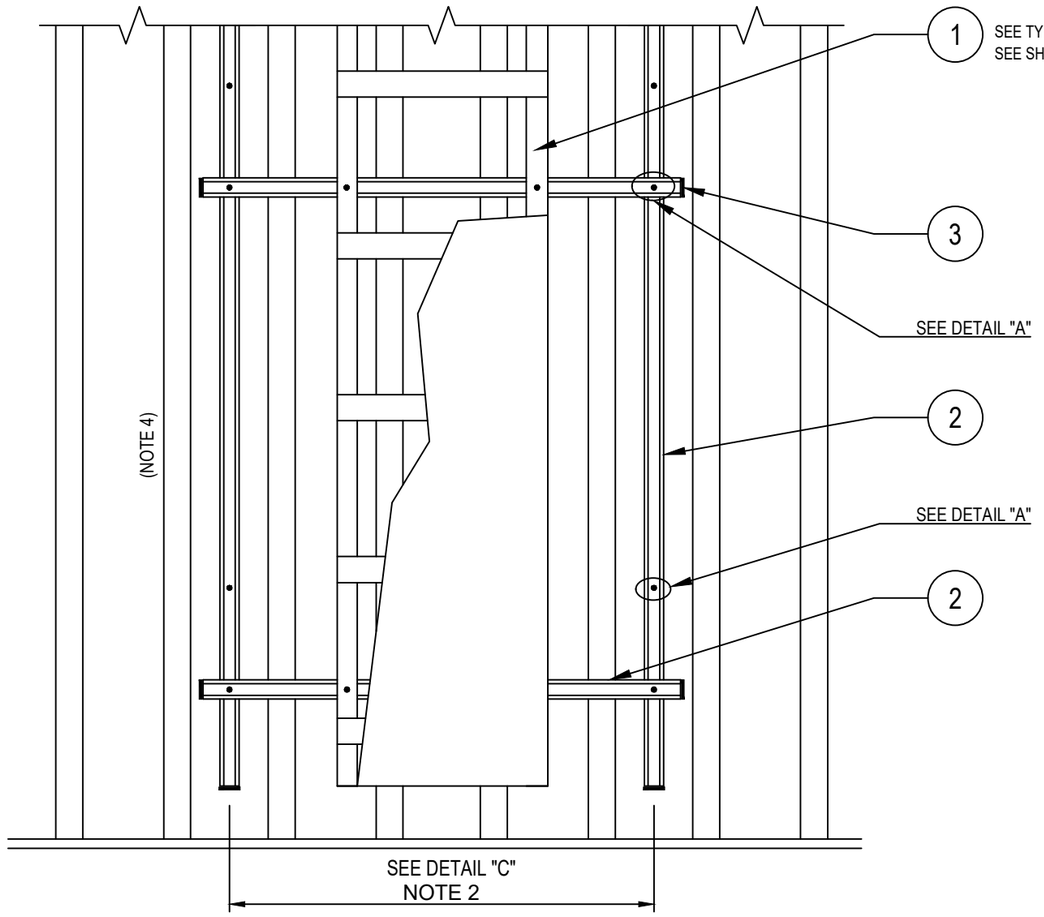
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

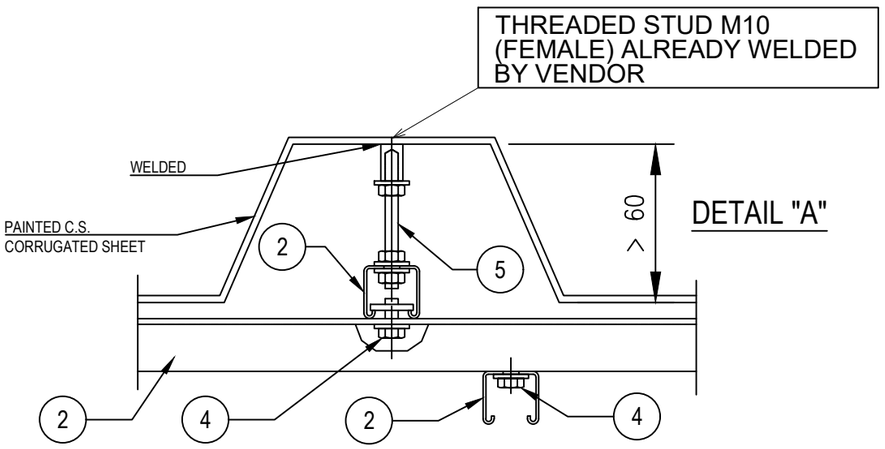
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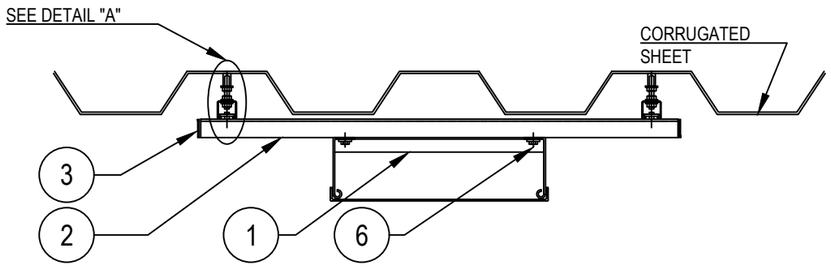
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_F	09/01/25	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	CABLE_TRAY_UD_INS	: Cable Tray Upper Deck - Instrumental		Dwg	123A90-DDL-IN-DL-40083	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10002274		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX30A	Cable Tray/Ladder Before pulling

BEFORE PULLING

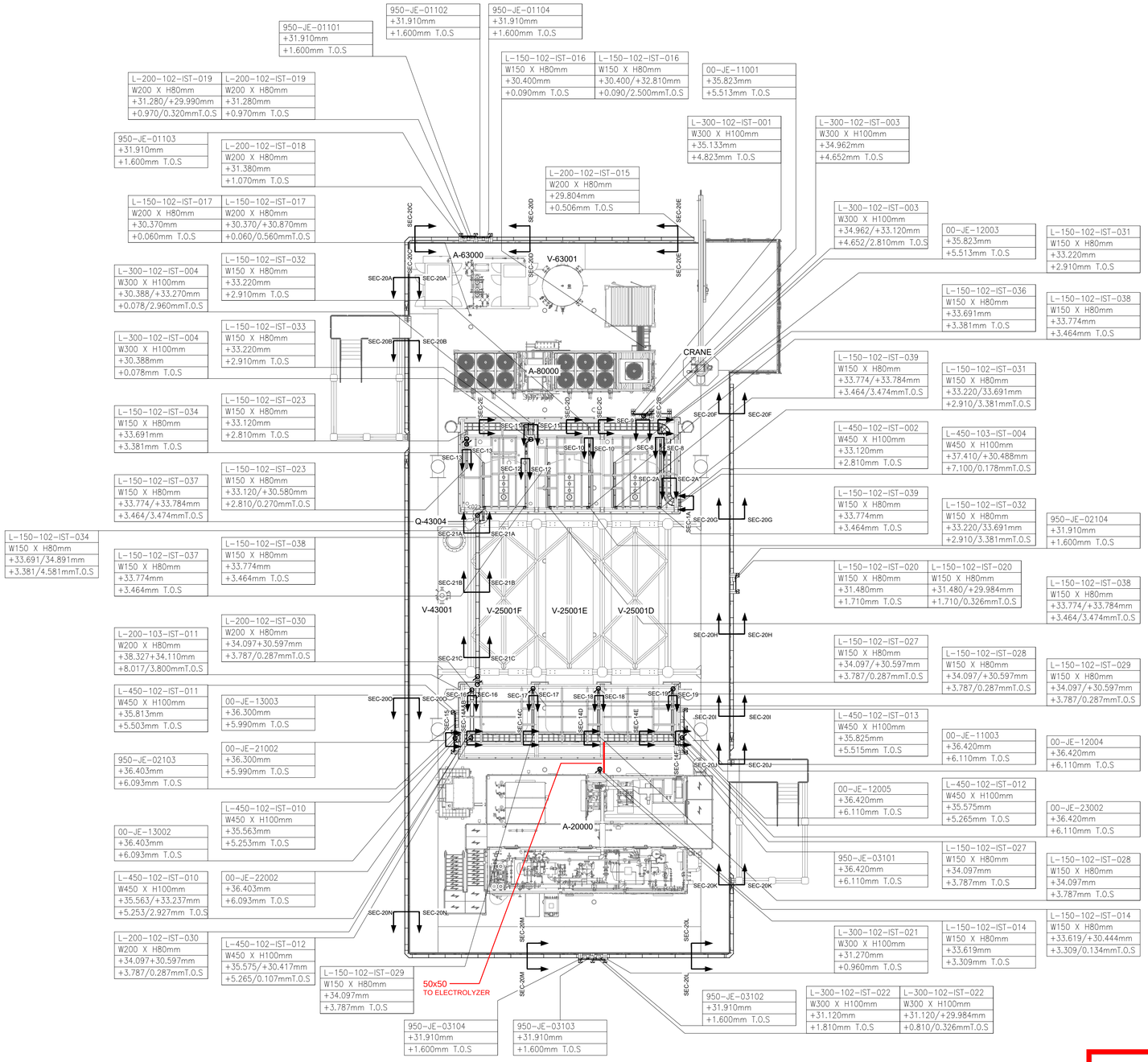
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for Bolt and splices	OK
5	Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder.	OK
6	Check cable tray / ladder cleanness.	OK
7	Check cable tray / ladder earthed and bonded against drawings.	OK
8	Check Continuity and Resistance test on tray	OK
9	Check proper mitigations against sharp edges that could damage the cables	OK
10	Check Transitions to ensure proper cables bending radius	OK
11	Check Proper protection of racks and trays until cable pulling	OK
12	Painting touch-up as necessary, if applicable	NA
13	Check Labelling with system and segment number	NA
14	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-04	2025-02-24	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T11:00:41.922Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-24T15:18:23.464Z	

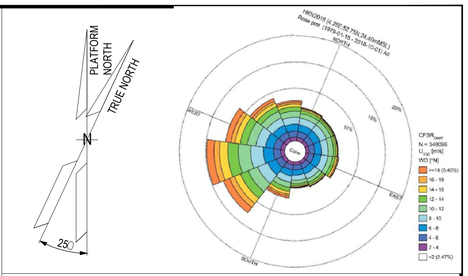
DRAWING NO. 123A90-DDL-IN-DL-40083

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 29310mm to 36500mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40083**

REV.:	DATE:	SIGNATURE:
2_B	06/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

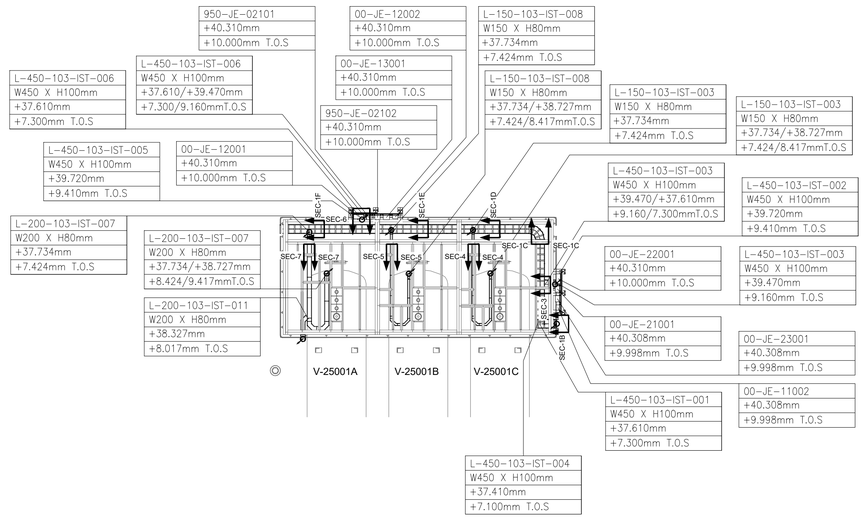
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-UPPER DECK
TOS EL. 30.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40083	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40083 REV.02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40083

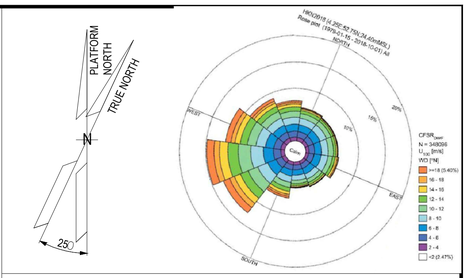
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 36500mm to 47106mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40083**

REV.:	DATE:	SIGNATURE:
2_B	06/12/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-UPPER DECK
TOS EL. 30.310M

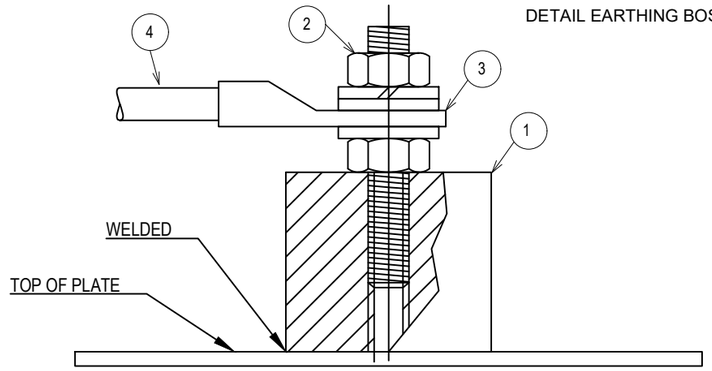
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40083	SHEET 002	REV. 02

File Name : 123A90-DDL-IN-DL-40083 REV:02.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

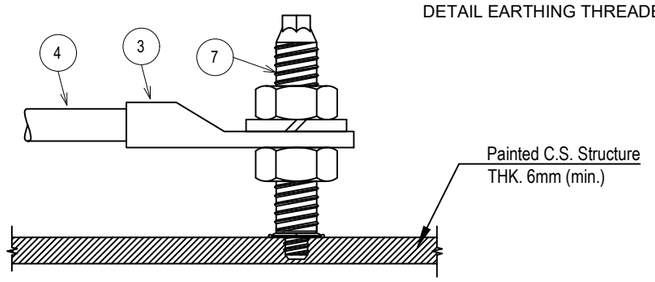


E11D

SEE NOTE 6

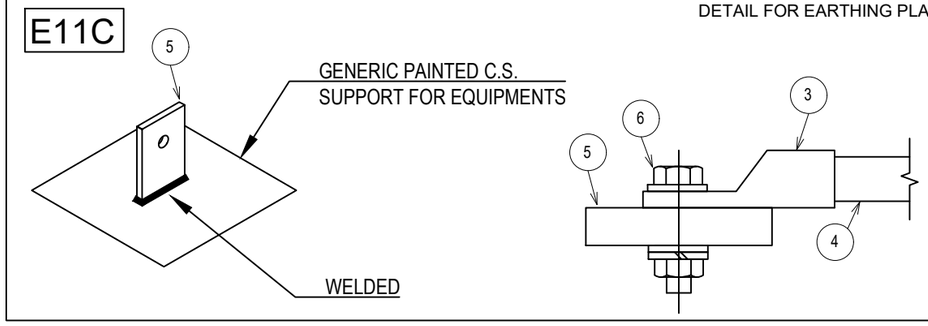
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

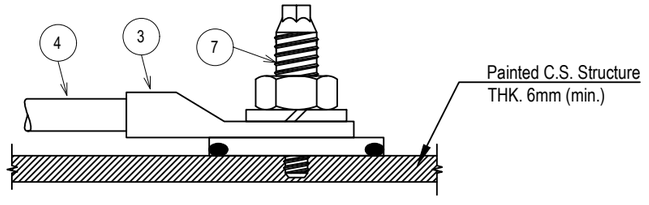


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

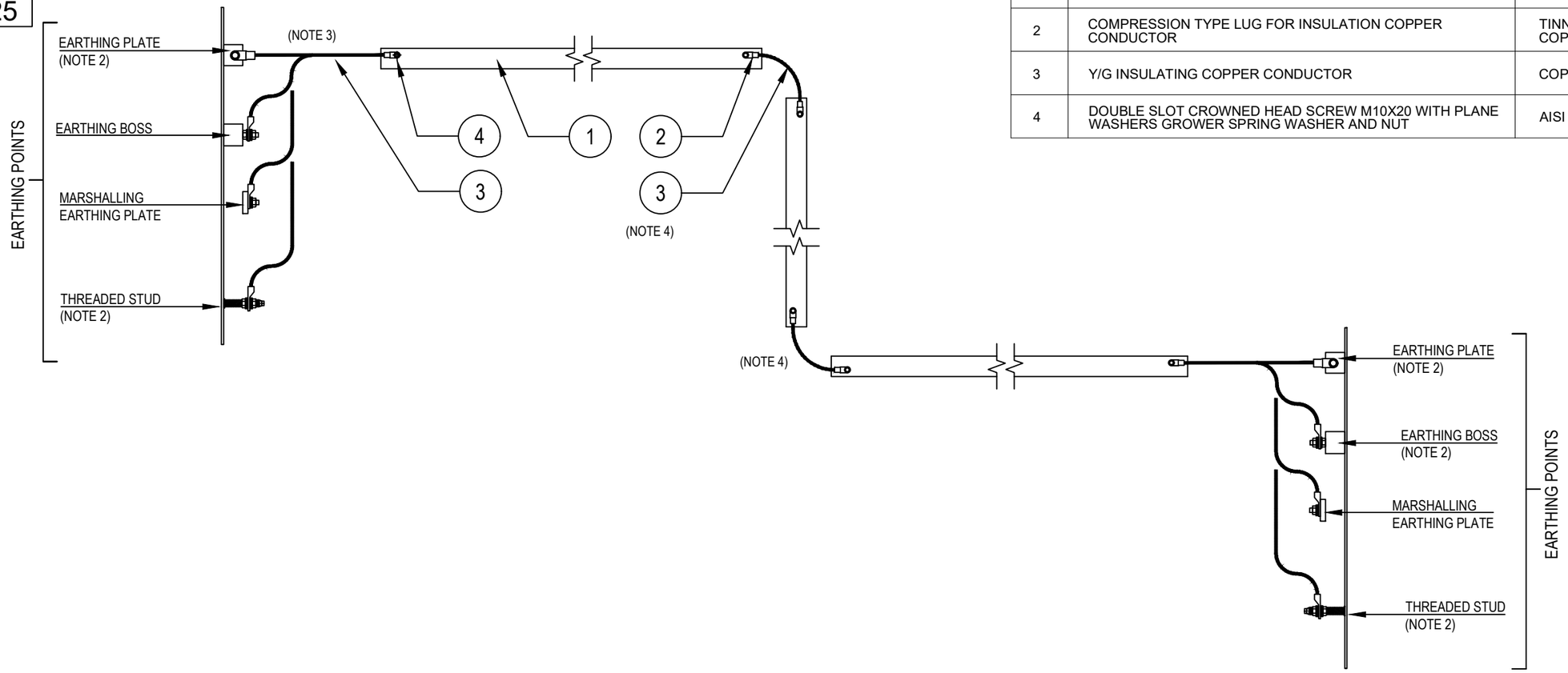
SHEET 003

REV. 02

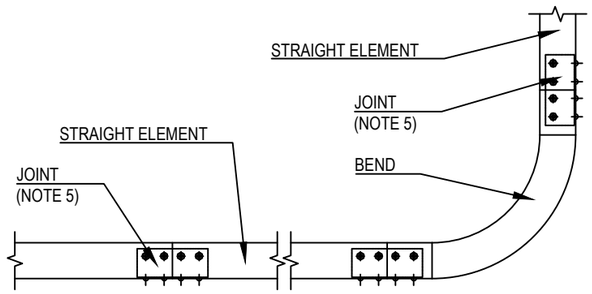
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

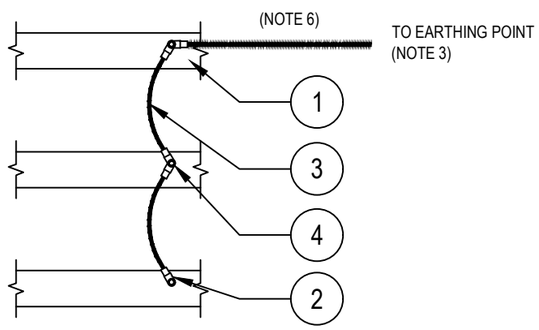
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

CROSSWIND

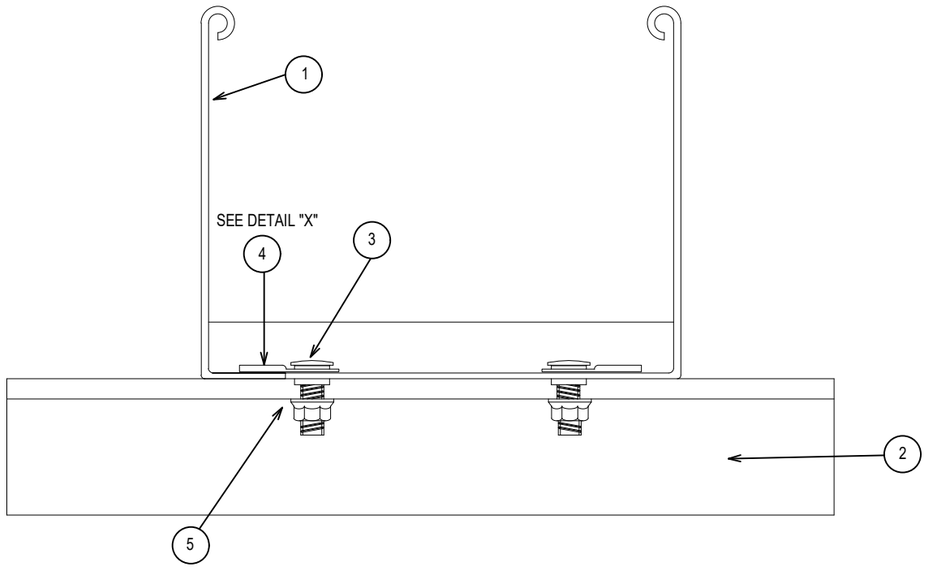
ROSETTI MARINO

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

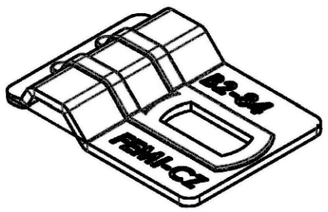
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

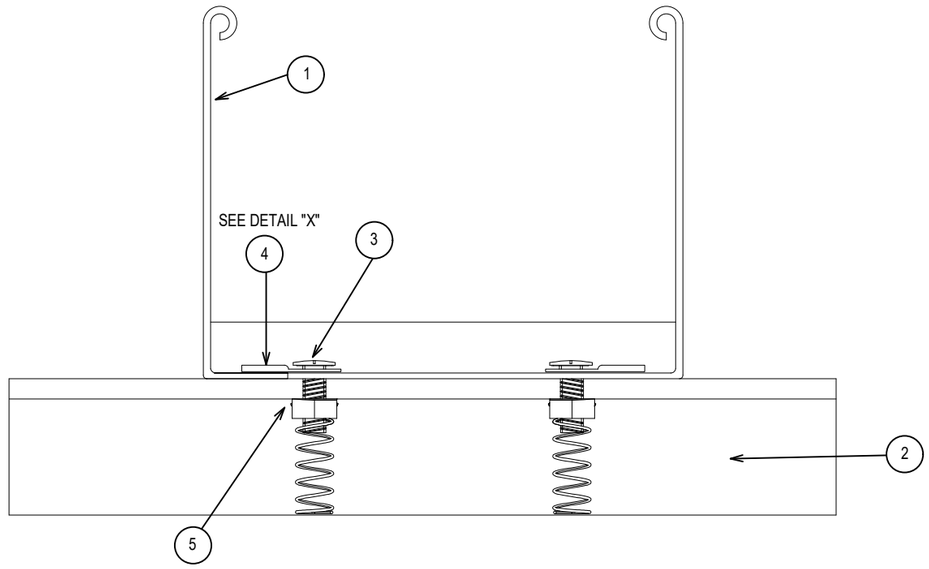
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

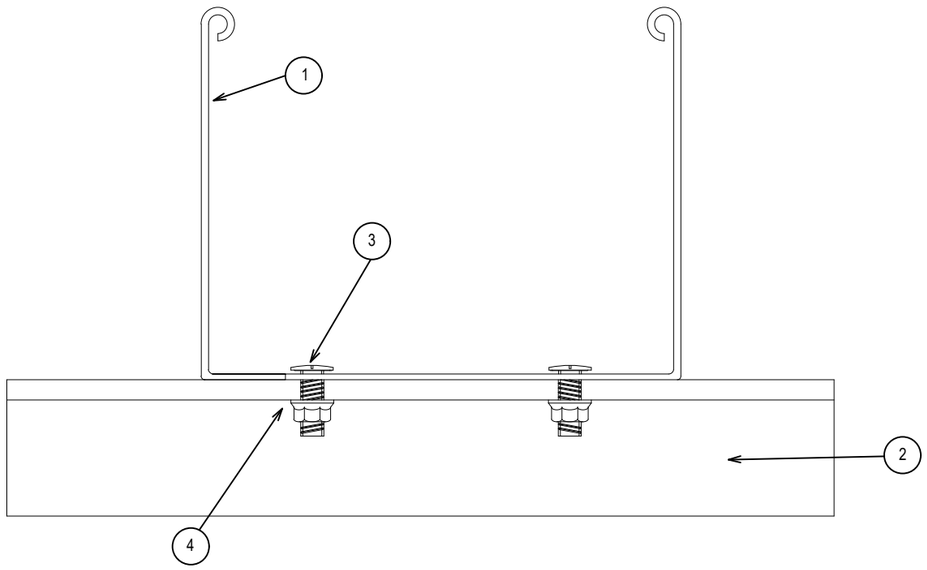
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

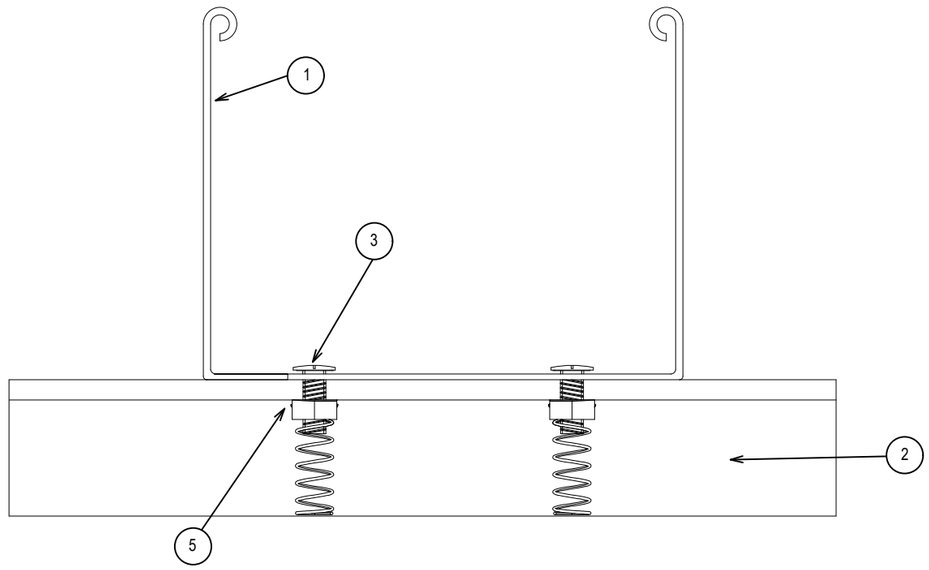


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

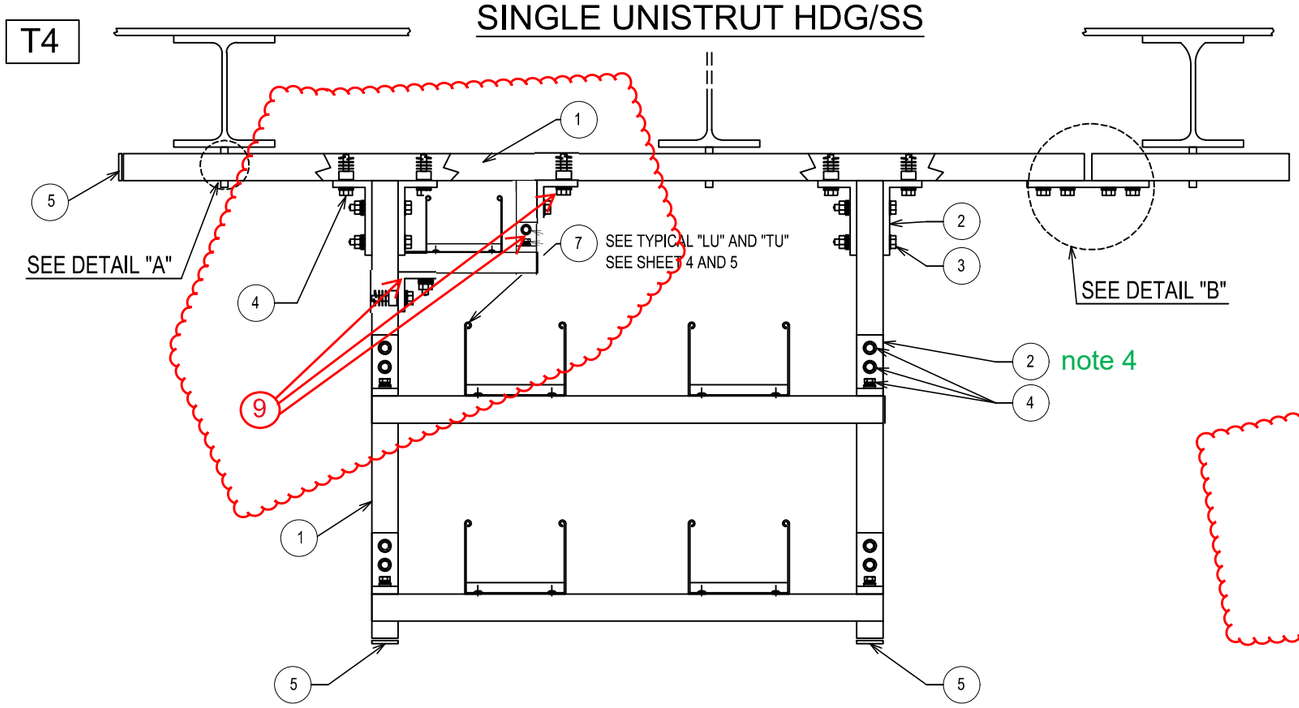
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

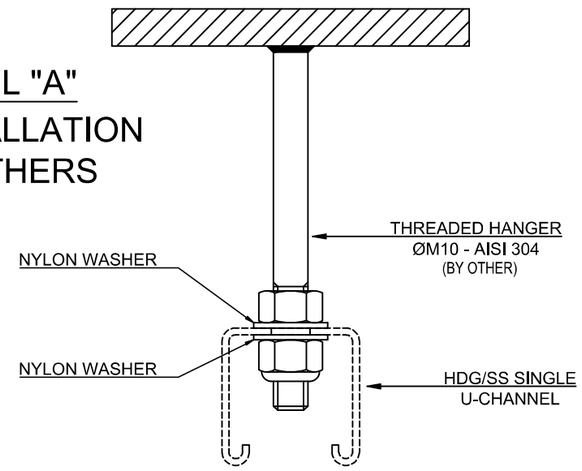
T4

SINGLE UNISTRUT HDG/SS

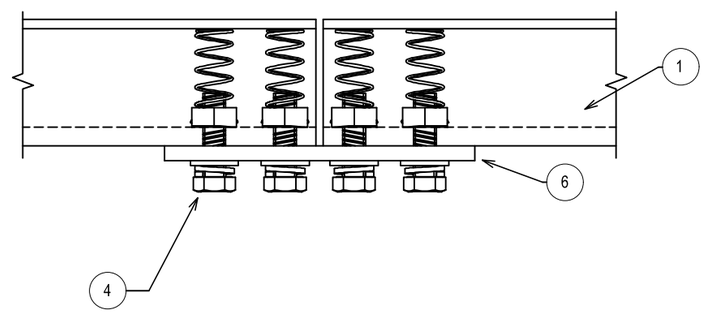


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

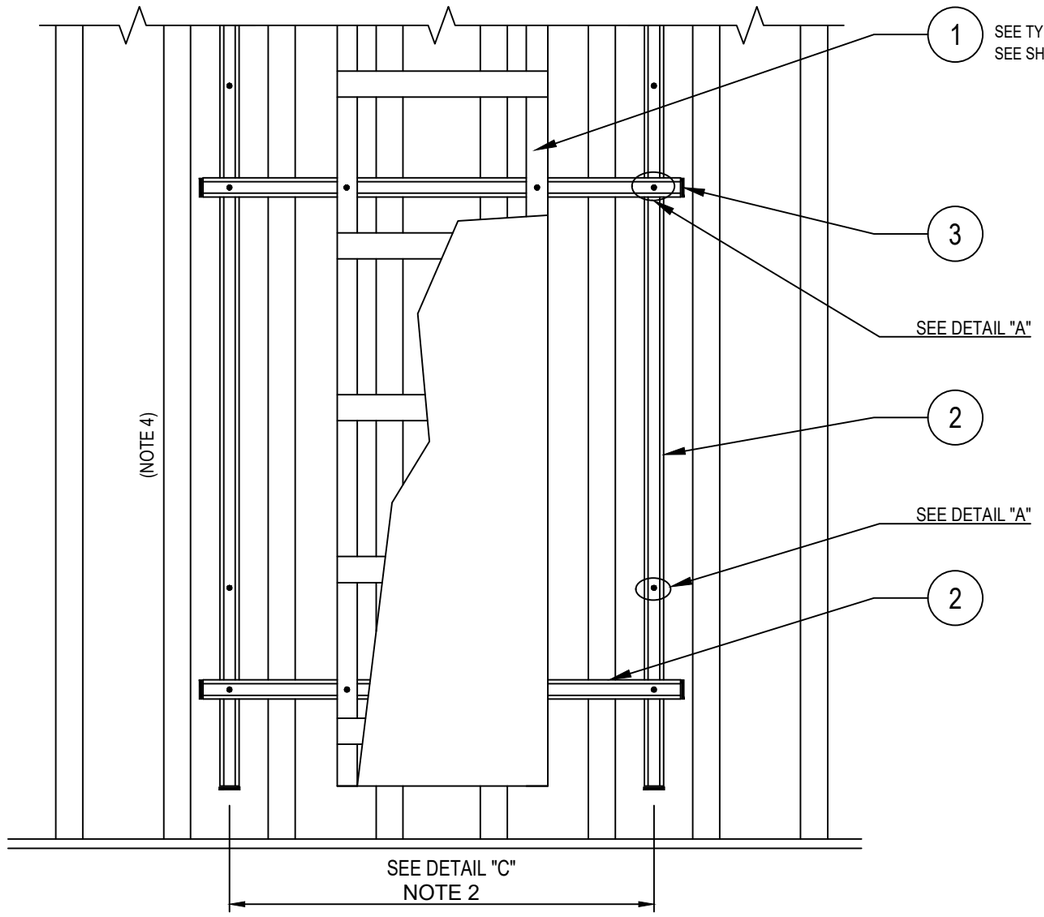
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

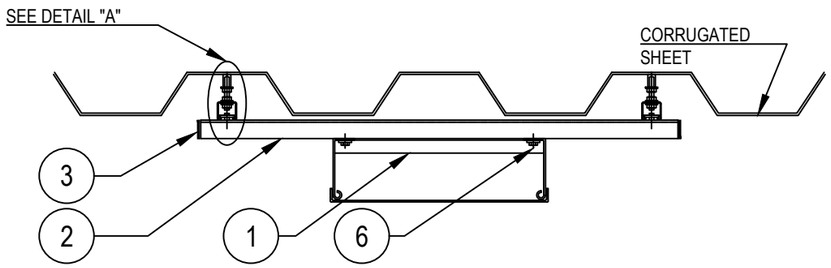
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

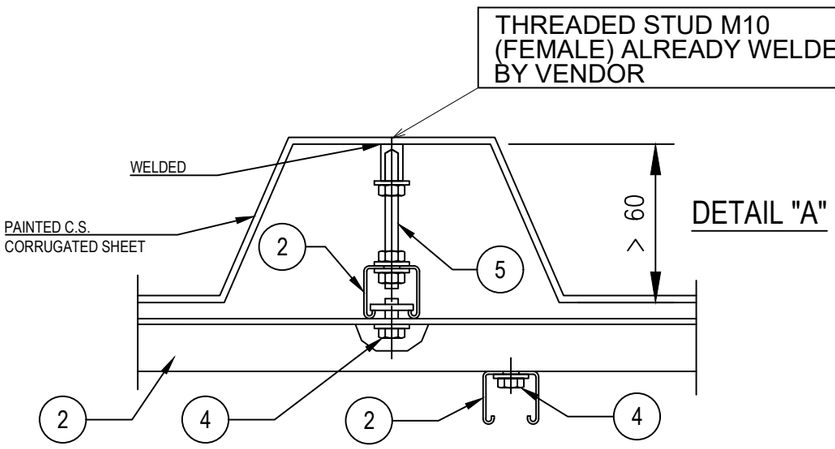
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20093

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	014	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

DESIGN DATA - *CABLE TRAYS LADDER TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Ladder	☐ Tray with simple ribs		☐ Tray with rimmed ribs
	Thickness 5mm (*)	BENDING RADIUS:	☑ **300mm**	☐ **500mm**
	☑ Cover	☐ Cover spacer		☐ Whitout Cover
	Thickness 5mm (*)			
MATERIAL	☐ Galvanized steel	☐ Stainless steel	☐ Light alloy	☑ FRP (3) ☐ AISI 316L
SURFACE PROTECTION	Galvanized	☐ before machined (ex. with "Sendzimir" process)		☐ after machined
	☐ Surface clean and polished from any welding and working residual			
	☐ Painting			
	Colour:	☑ Grey RAL 7035	☐ blue RAL 5012	☐
	Cycle:			

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	100	100	100									Manufacturer: Oglaend Supplier: HILTI Series: FOE100 P.O.
	Working internal width	W	300	450	600									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	Plane 30 degree bend													
5	"T" junction	D												
6	Cross junction	E												
7	Single element for vertical bend	F												
8	Plane left-hand reducing section	G												
9	Plane simmetric reducing section	H												
10	Plane right-hand reducing section	I												
11	Elbow Inside 30°													
12	Elbow Outside 30°													
13	Elbow Inside 45°													
14	Elbow Outside 45°													
15	Elbow Inside 90°													
16	Elbow Outside 90°													
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint (note 6)	M												
20														
21	Separators													

NOTES :

6) Dimensions in millimeters
7) Reference to sheet 6
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

CABLE TRAYS LADDER TYPE - FIGURES

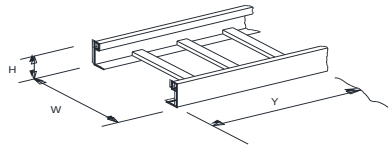


Fig. A
STRAIGHT ELEMENT

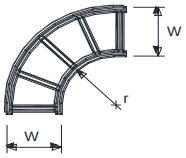


Fig. B
PLANE 90° BEND

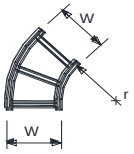


Fig. C
PLANE 45° BEND

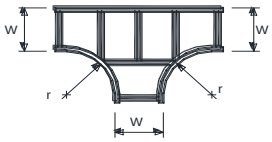


Fig. D
TEE JUNCTION

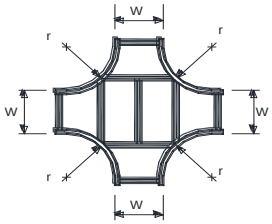


Fig. E
CROSS JUNCTION

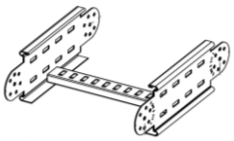


Fig. F
SINGLE ELEMENT FOR VERTICAL BENDS



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

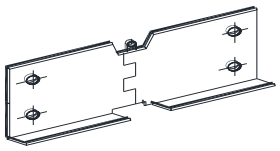


Fig. L
HORIZONTAL HINGED JOINT

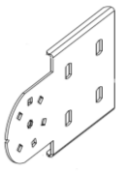


Fig. M
VERTICAL HINGED JOINT

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DESIGN DATA - *CABLE TRAY PERFORATED TYPE FOR EXTERNAL INSTALLATION - GREY COLOUR*

TYPE	☑ Perforated ☐ Tray with simple ribs ☐ Tray with rimmed ribs **Thickness 5mm (*)** BENDING RADIUS: ☑ **300mm** ☐ Adjustable elbow ☑ Cover ☐ Cover spacer ☐ Whitout Cover **Thickness 5mm (*)**
MATERIAL	☐ Galvanized steel ☐ Stainless steel ☐ Light alloy ☑ FRP ☐ AISI 316L
SURFACE PROTECTION	Galvanized ☐ before machined (ex. with "Sendzimir" process) ☐ Hot dip Galvanized after machined - 50 µm ☐ Surface clean and polished from any welding and working residual ☐ Painting Colour: ☑ Grey RAL 7035 ☐ blue RAL 5012 ☐ Cycle:

POS.	DIMENSIONS (6)		a	b	c	d	e	f	g	h	i	l		
	Total External height	H	50	80	80									Manufacturer: Oglaend Supplier: HILTI Series: FTE80 P.O.
	Working internal width	W	50	150	200									
	Working internal width (reducer)	W1												
	DESCRIPTION	**FIG. (7)**	**QUANTITY (8)**											
1	Straight section Y = 3000 mm	A												
2	Y = mm													
3	Plane 90 degree bend	B												
4	Plane 45 degree bend	C												
	"T" junction													
5	Vertical convex 90° Bend	D												
6	Vertical concave 90° Bend	E												
7	Plane left-hand reducing section	F												
8	Plane simmetric reducing section	G												
9	Plane right-hand reducing section	H												
10		I												
11														
12														
13														
14														
15														
16														
17														
18	Horizontally hinged joint	L												
19	Vertically hinged joint	M												
20														
21	Separators													

NOTES :
6) Dimensions in millimeters
7) Reference to Sheet 9
8) For quantities please refer to sheet 9 Cable Trays Material Take-OFF
9) FRP = Fiberglass Reinforced Plastic

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CABLE TRAYS PERFORATED TYPE - FIGURES

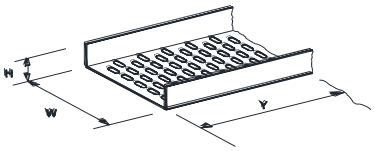


Fig. A
STRAIGHT ELEMENT

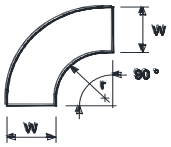


Fig. B
PLANE 90° BEND

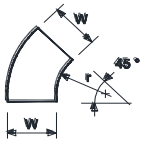


Fig. C
PLANE 45° BEND

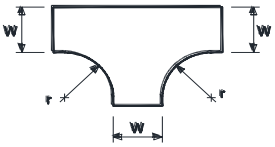


Fig. D
TEE JUNCTION

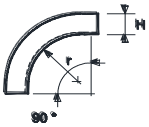


Fig. E
VERTICAL CONVEX 90° BEND

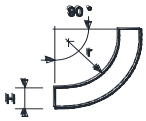


Fig. F
VERTICAL CONCAVE 90° BEND



Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

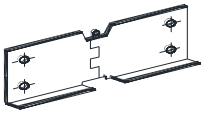


Fig. L
HORIZONTAL HINGED JOINT

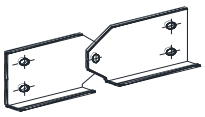


Fig. M
VERTICAL HINGED JOINT

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INSTRUMENT CABLE TRAYS MTO				
S.No	**Description**	**U.M.**	**Rev. 00**	**Rev. 01**
Perforated Cable Tray 50(W)x50(H), R=300, Grey, Complete with Cover				
1	Straight elements	m	1338	1338
2	Bends 45°	N.	-	8
3	Inside Risers 90°	N.	-	3
4	Outside Risers 90°	N.	-	14
Perforated Cable Tray 150(W)x80(H), R=300, Grey, Complete with Cover				
5	Straight elements	m	453	453
6	Bends 45°	N.	7	12
7	Bends 90°	N.	40	40
8	Inside Risers 90°	N.	18	18
9	Inside Risers 45°	N.	6	6
10	Outside Risers 90°	N.	25	25
11	Outside Risers 45°	N.	3	3
12	"T"	N.	-	3
Perforated Cable Tray 200(W)x80(H), R=300, Grey, Complete with Cover				
13	Straight elements	m	480	480
14	Bends 90°	N.	22	22
15	Bends 45°	N.	10	12
16	Inside Risers 90°	N.	6	8
17	Inside Risers 45°	N.	12	12
18	Outside Risers 90°	N.	6	14
19	Outside Risers 45°	N.	12	12
Ladder Cable Tray 300(W)x100(H)), R=300, Grey, Complete with Cover				
20	Straight elements	m	111	111
21	Bends 90°	N.	7	7
22	Inside Risers 90°	N.	8	8
23	Outside Risers 90°	N.	4	4
24	"T"	N.	3	3
Ladder Cable Tray 450(W)x100(H)), R=300, Grey, Complete with Cover				
25	Straight elements	m	18	99
26	Bends 90°	N.	-	5
27	Bends 90°, Radius 500mm	N.	2	2
Ladder Cable Tray 600(W)x100(H)), R=300, Grey, Complete with Cover				
28	Straight elements	m	171	171
29	Bends 45°	N.	3	3
30	Inside Risers 90°	N.	2	2
31	Inside Risers 45°	N.	3	3
32	Outside Risers 90°	N.	4	4
33	Outside Risers 45°	N.	3	3
34	Reducer 600X450	N.	-	1
Accessories				
35	Divider straight elements, 45(H)	m	87	120
36	Divider for bend elements, 45(H)	m	15	15
37	Divider for riser elements, 45(H)	m	15	15
38	Fixing Clamps	N.	(1)	(1)
Notes 1) Vendor shall estimate fixing clamp quantities				

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ITEM	Tag	CABLE_TRAY_UD_INS	: Cable Tray Upper Deck - Instrumental		Dwg	123A90-DDL-IN-DL-40083	
	S/Sys	90-05	: Areas		Module	UD	
TASK	code	C10002275		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX30B		Cable Tray/Ladder After pulling

AFTER PULLING

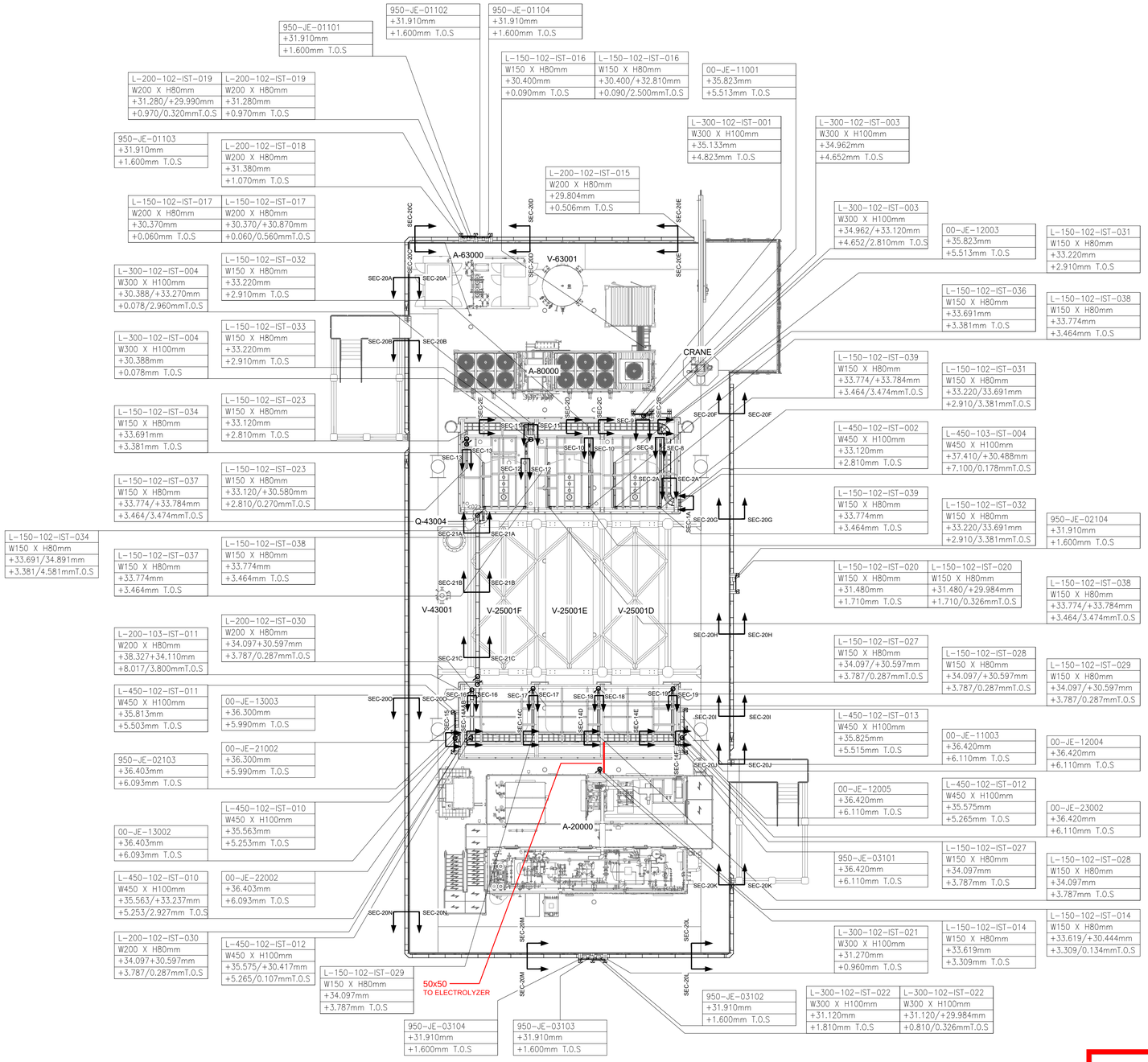
1	Check cable segregation on rack and tray	OK
2	Check capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanliness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings OR Proper protection until additional cable pulling or all work completed in the vicinity	OK
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-02-19	2025-03-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-19T13:43:34.081Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-03-07T15:48:56.787Z	

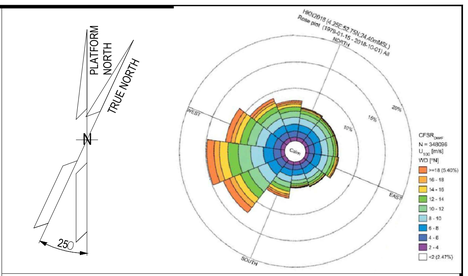
DRAWING NO. 123A90-DDL-IN-DL-40083

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 29310mm to 36500mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40083**

REV.:	DATE:	SIGNATURE:
2_B	06/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

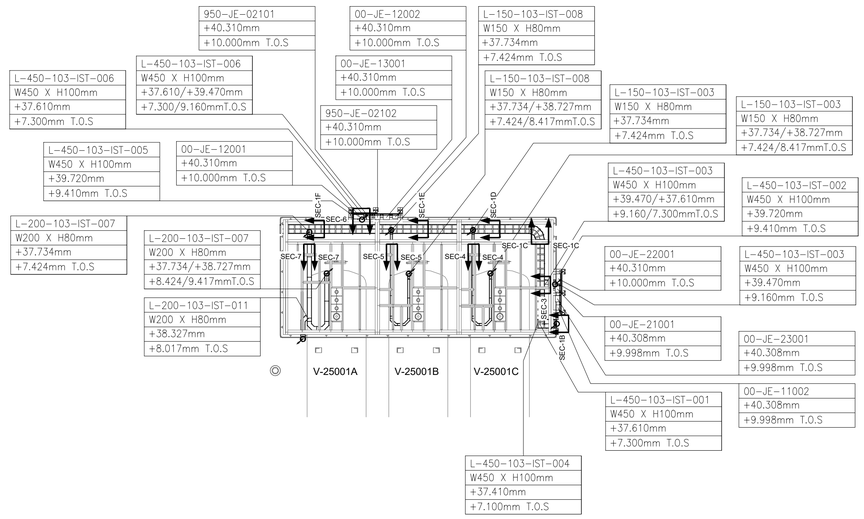
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-UPPER DECK
TOS EL. 30.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40083	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40083 REV.02.dwg

DRAWING NO. 123A90-DDL-IN-DL-40083

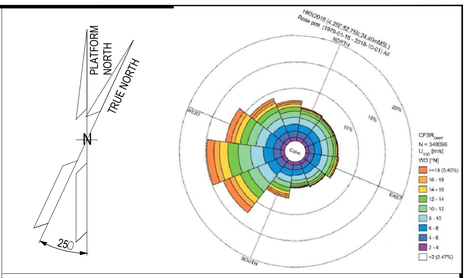
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 36500mm to 47106mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT CABLE ROUTING LAYOUT.

LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40082	INSTRUMENT MAIN CABLE ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	30/07/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40083**

REV.:	DATE:	SIGNATURE:
2_B	06/12/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-UPPER DECK
TOS EL. 30.310M

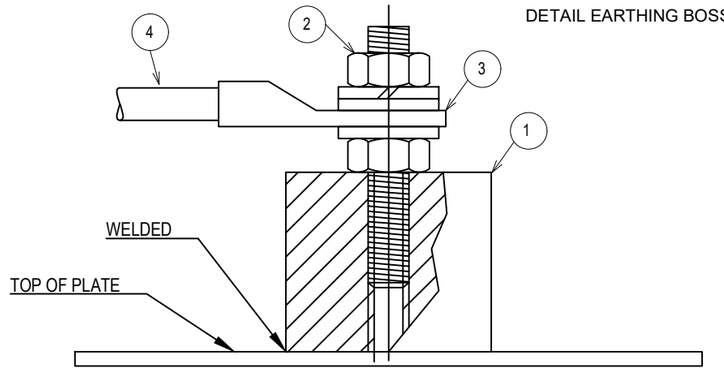
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40083	SHEET 002	REV. 02

File Name : 123A90-DDL-IN-DL-40083 REV:02.dwg

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

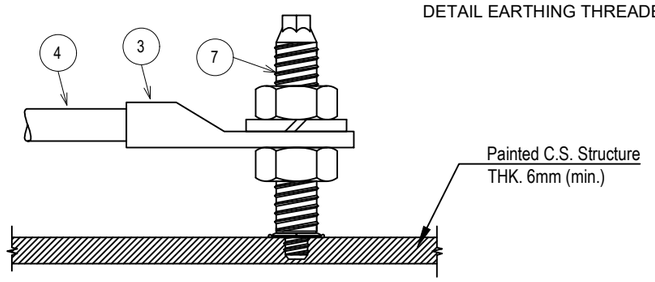


E11D

SEE NOTE 6

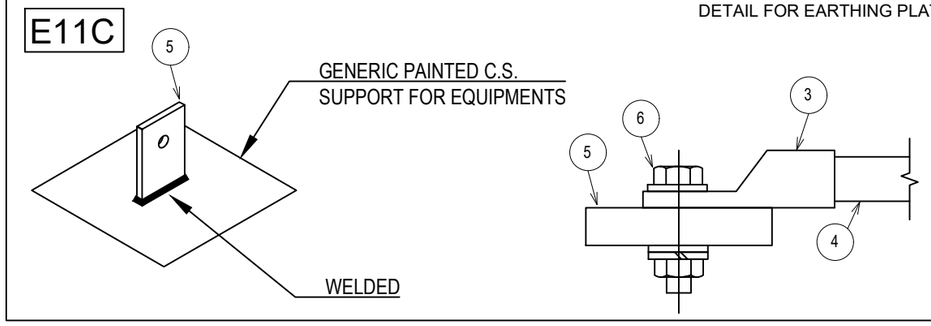
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

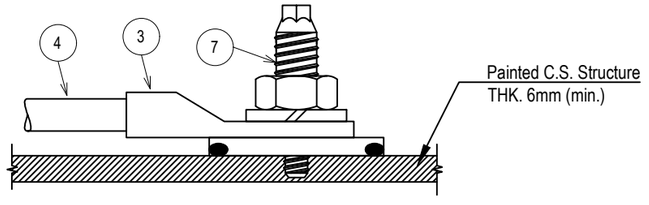


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

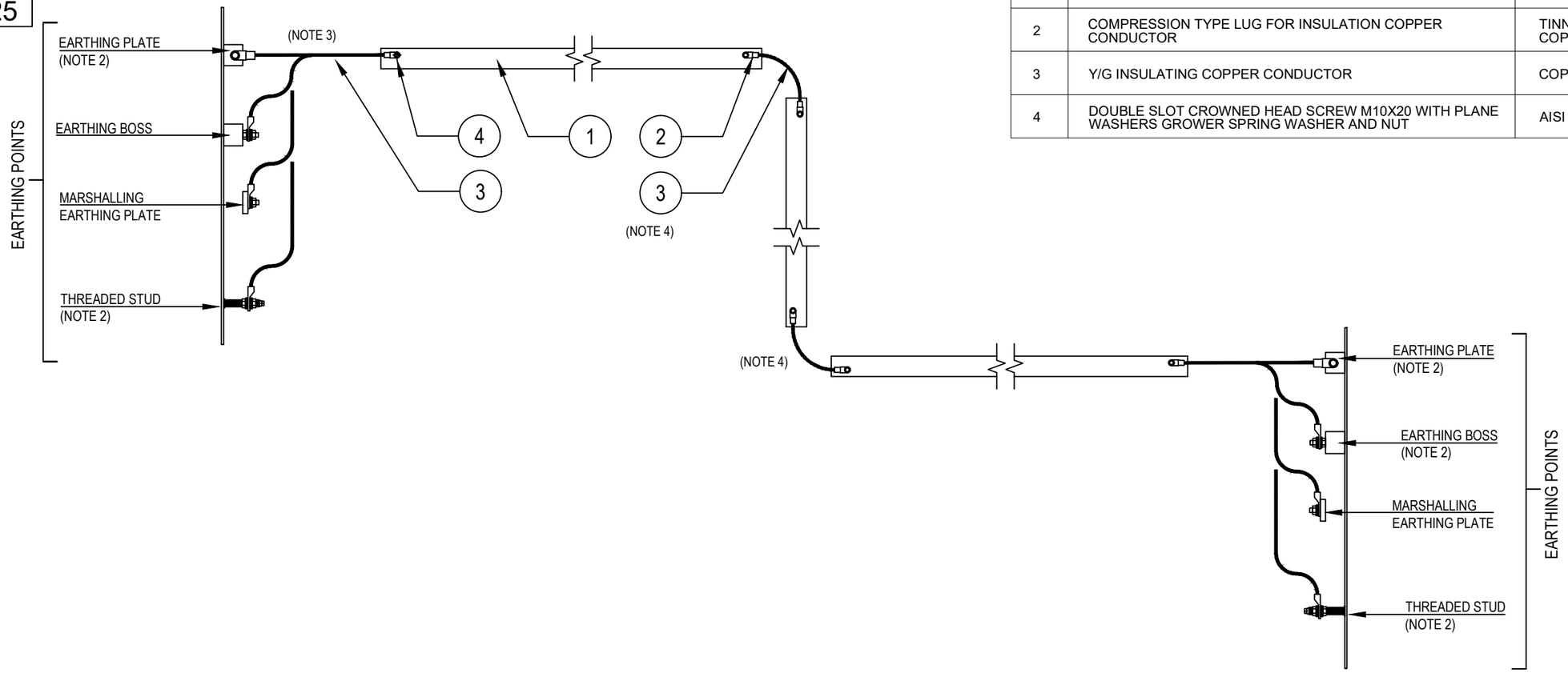
SHEET 003

REV. 02

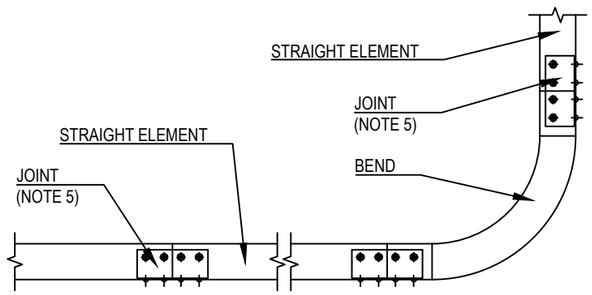
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

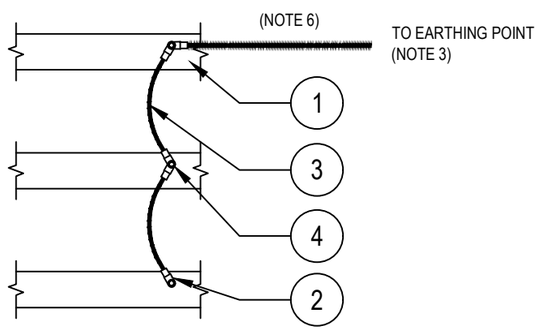
E25



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER/TRAY	FRP/GRP			
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	16mm^2		~~NOTE 1~~
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	16mm^2		
4	DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT	AISI 316L	~~M10X20~~ M6x20		



PARALLEL ROUTING



NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

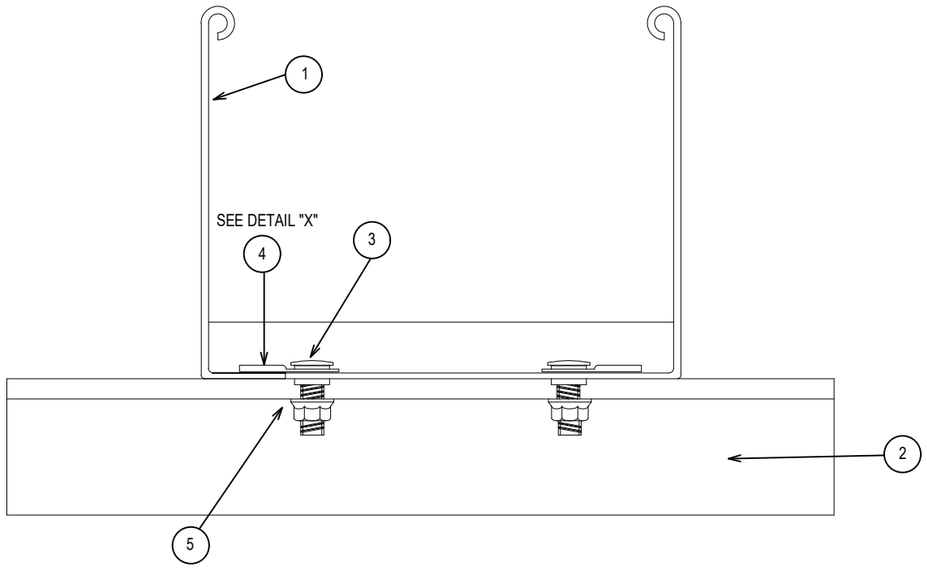
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 013 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

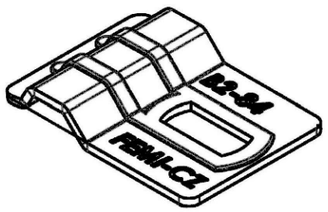
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

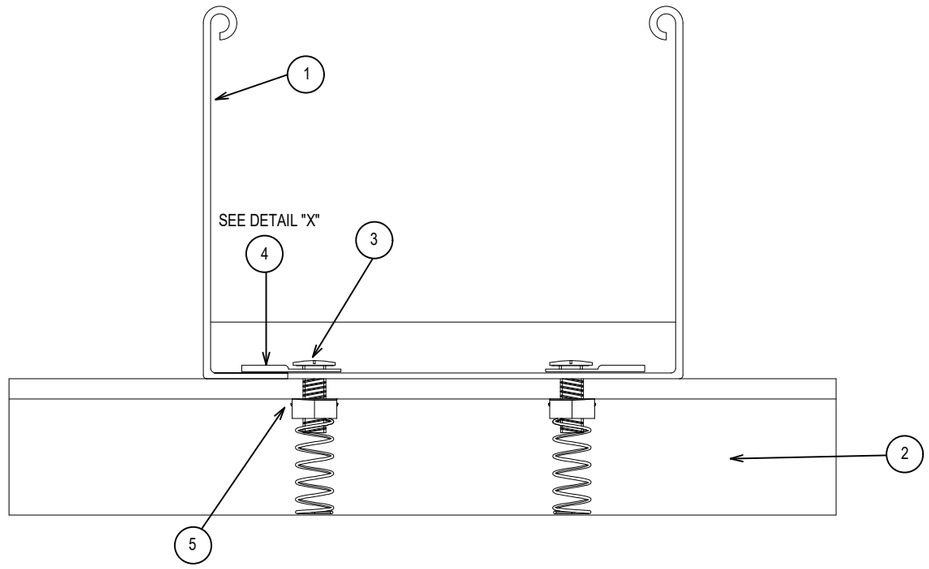
LF

DETAIL "X"



CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

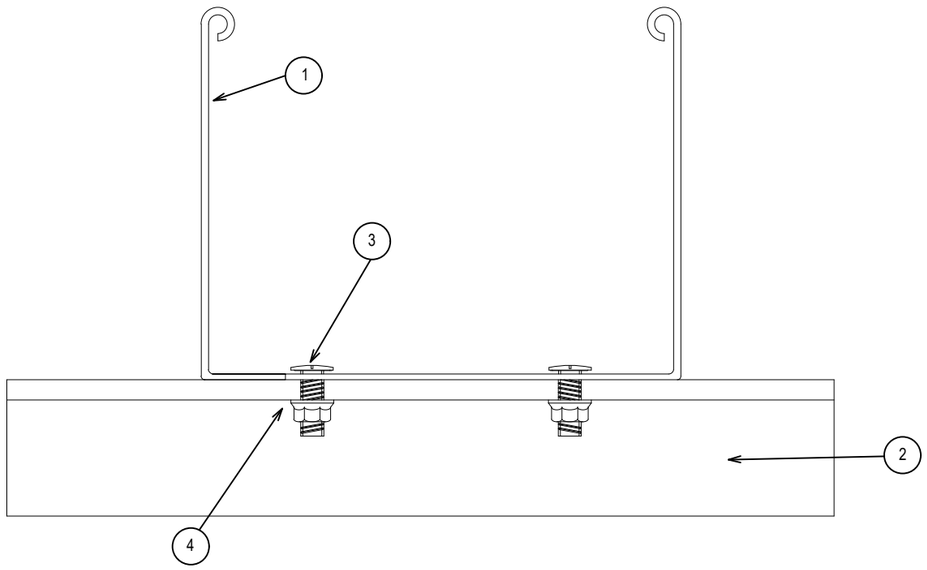
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

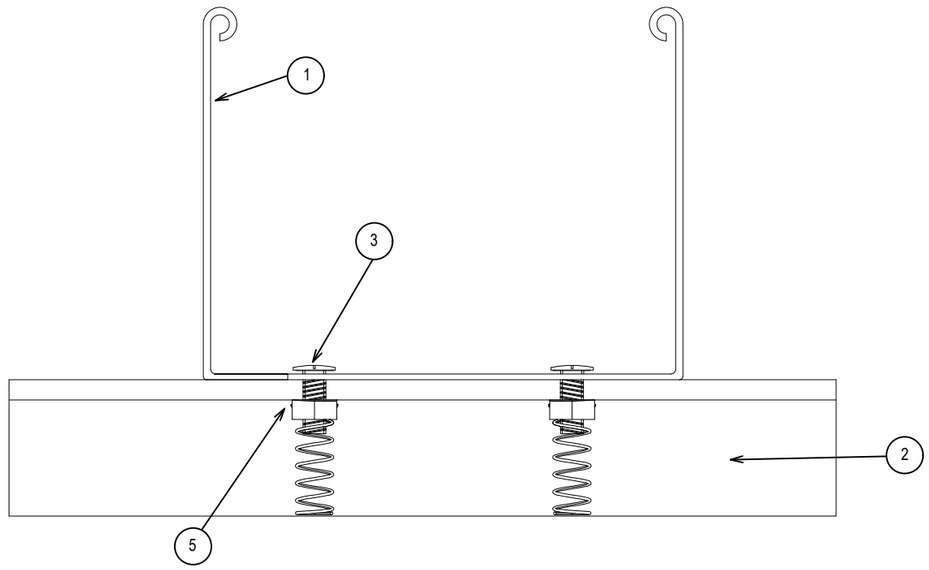


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

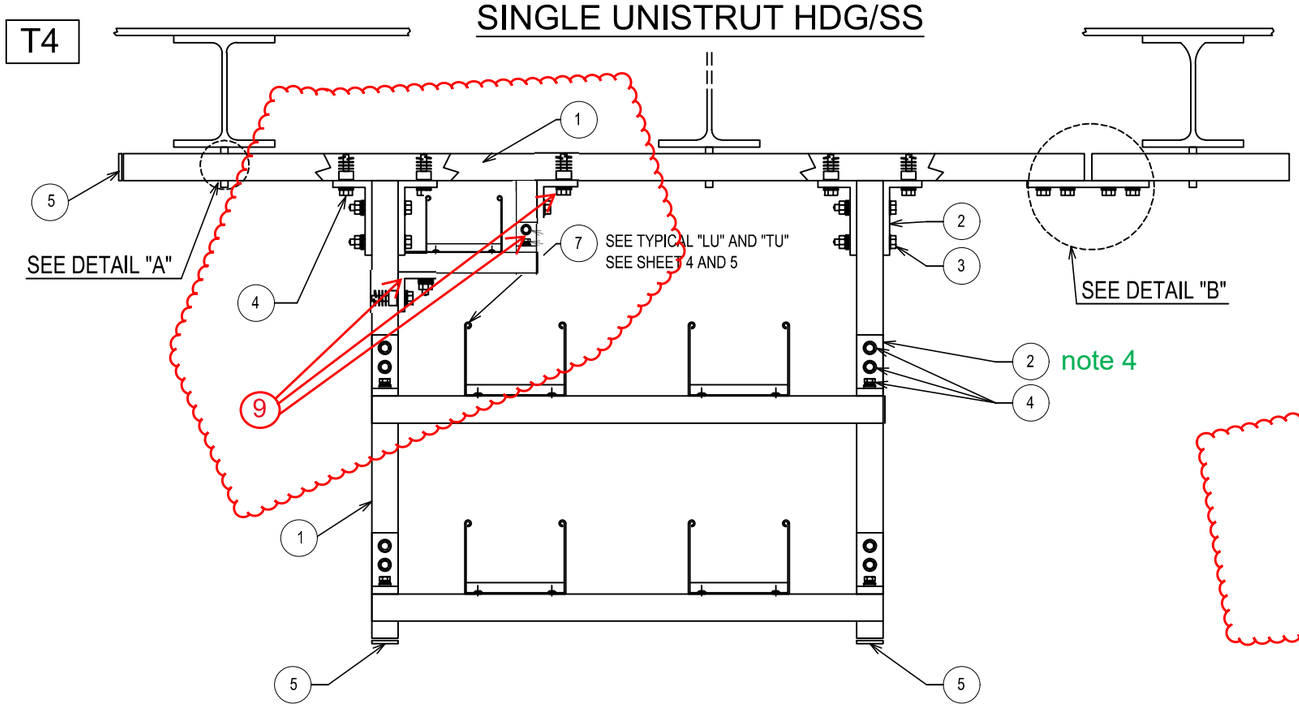
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

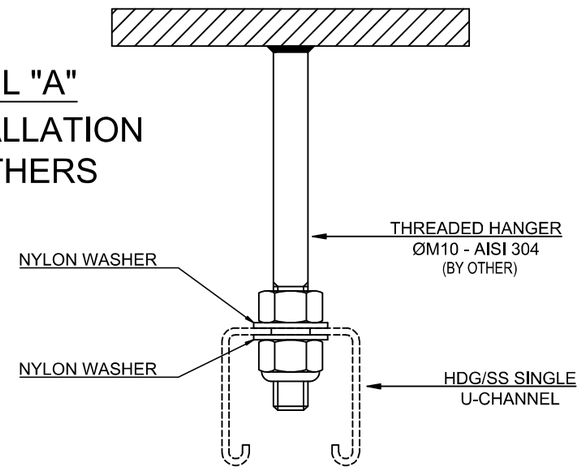
T4

SINGLE UNISTRUT HDG/SS

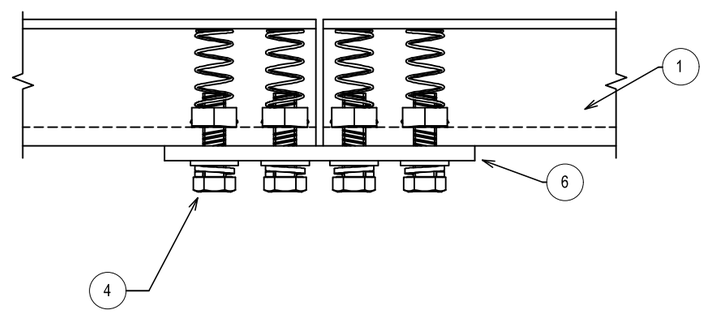


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	~~M10~~ M12	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	
9	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES	AISI 316L		3	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

TYPICAL VALID INSIDE TECHNICAL ROOMS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

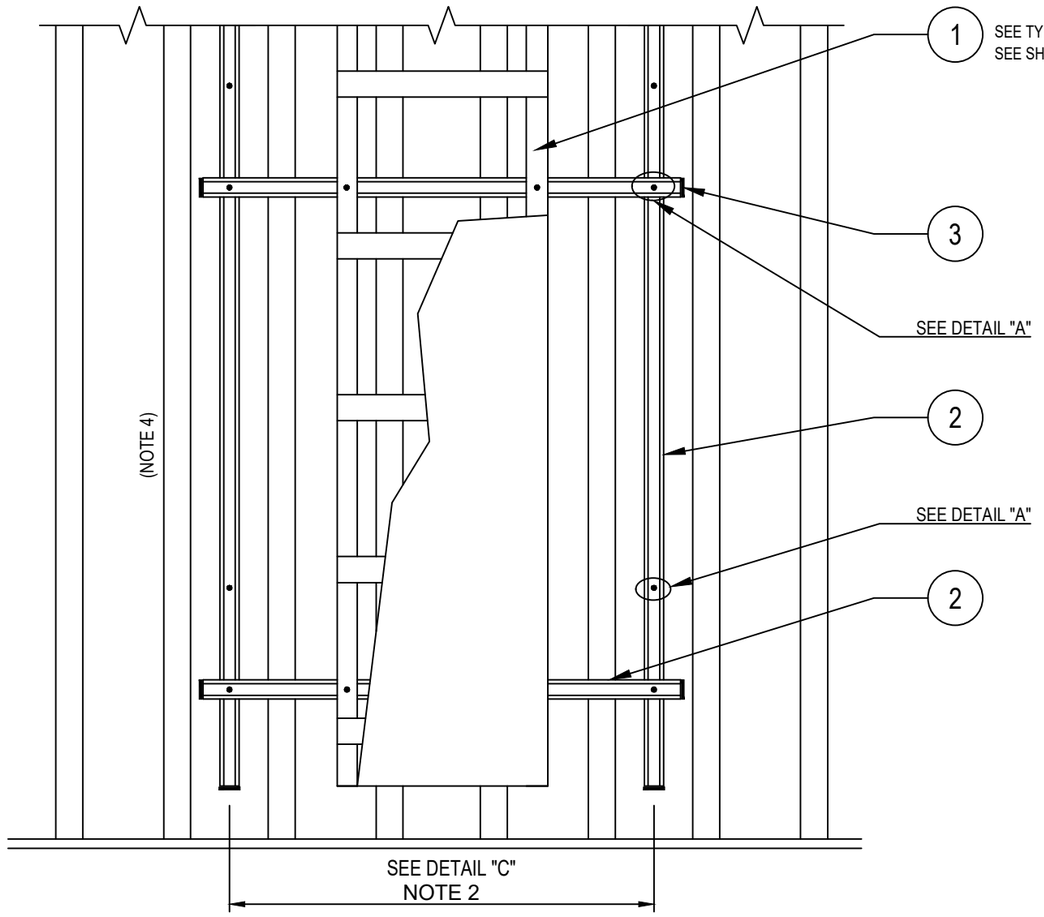
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

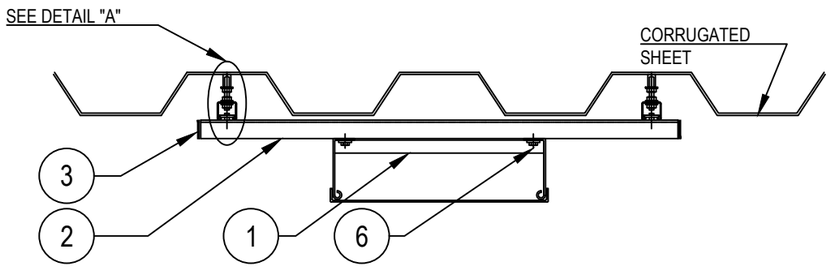
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

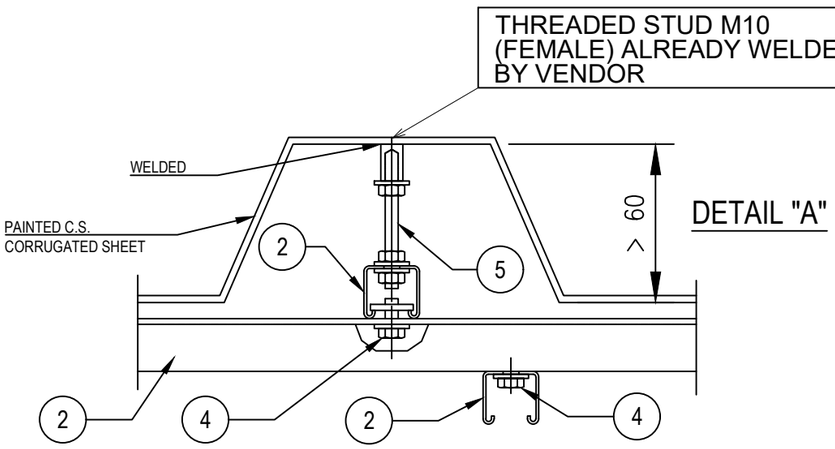
T7



DETAIL "C"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_E	18/10/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

ITEM	Tag	I-MCT-T01	: Multi Cable Transit			Dwg	123A90-DDL-IN-DL-40086
	S/Sys	90-05	: Areas			Module	TP
TASK	code	C10004928		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX29		MCT Penetration Instrument

1 Check that MCT's conforms to latest project standards and specification.

2 Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.

3 Check MCT's is properly tagged, on both side of penetration

4 Check the cable arrangement in MCT's is conform with the latest drawing.

5 Check that product marking is matching with hazardous area certification document data

6 If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

NOT APPLICABLE

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

NOT APPLICABLE

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE