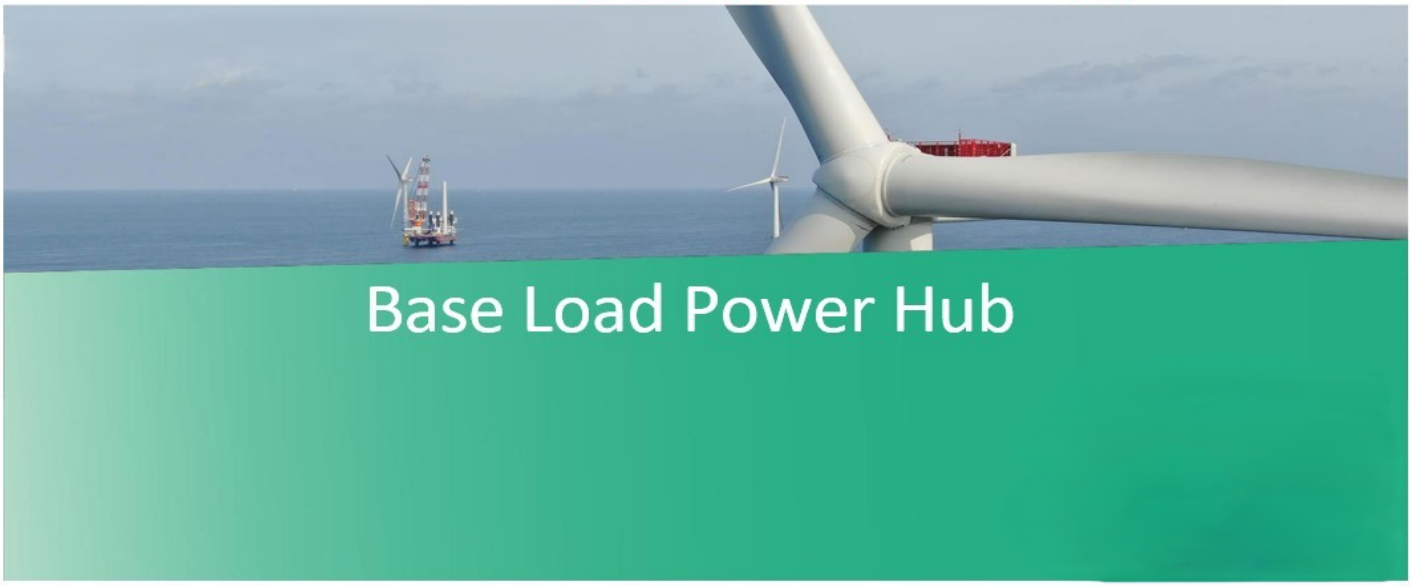
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	90 Structural, Architectural
SUBSYSTEM	90-01 HV-MV Switchgear Room B-100

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

Sub System N°:	90-01	Tick as appropriate	ONSHORE	O
Description:	HV-MV Switchgear Room B-100		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:	2025-01-25	
System:	90	/	Structural, Architectural		
SubSystem:	90-01	/	HV-MV Switchgear Room B-100		

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	B
	'0	12

REMARKS:

	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	2025-01-27	2025-01-27	2025-01-27	2025-01-27
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-01-27T14:57:47.446Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-01-27T15:05:01.110Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:17:02.105Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:17:10.669Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-01 & process: MC

Electrical	90-01 HV-MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_B100_ELE_LV	Cable Tray B100 - Electrical (Low Voltage)	ONSHORE	C10002276	CPX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002277	CPX30B	100	2025-01-25	RFC 1
CABLE_TRAY_B100_ELE_MV	Cable Tray B100 - Electrical (Medium Voltage)	ONSHORE	C10002280	CPX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002281	CPX30B	100	2025-01-25	RFC 1
E-MCT-101	Multi Cable Transit	ONSHORE	C10001862	CPX29	100	2025-01-04	RFC 1
E-MCT-102	Multi Cable Transit	ONSHORE	C10001863	CPX29	100	2025-01-04	RFC 1
E-MCT-103	Multi Cable Transit	ONSHORE	C10001864	CPX29	100	2024-12-10	RFC 1
E-MCT-104	Multi Cable Transit	ONSHORE	C10001865	CPX29	100	2024-12-10	RFC 1
E-MCT-105	Multi Cable Transit	ONSHORE	C10001866	CPX29	100	2025-01-04	RFC 1
E-MCT-106	Multi Cable Transit	ONSHORE	C10001867	CPX29	100	2025-01-04	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-01 & process: MC

Instrumental	90-01 HV-MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_B100_INS	Cable Tray B100 - Instrumental	ONSHORE	C10002282	CJX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002283	CJX30B	100	2025-01-25	RFC 1
I-MCT-101	Multi Cable Transit	ONSHORE	C10001894	CJX29	100	2025-01-04	RFC 1
I-MCT-102	Multi Cable Transit	ONSHORE	C10001895	CJX29	100	2025-01-04	RFC 1
I-MCT-103	Multi Cable Transit	ONSHORE	C10001896	CJX29	100	2025-01-04	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-01	HV-MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001645	B	E-MCT-104 C10001865	Missing traffolyte tag both sides	.		Pschintu 2024-12-10			
C30001646	B	E-MCT-103 C10001864	Missing traffolyte tag both sides	.		Pschintu 2024-12-10			
C30001827	B	E-MCT-102 C10001863	Missing Traffolyte tag both sides	.		Pschintu 2024-12-13			
C30002348	B	E-MCT-101 C10001862	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04			
C30002349	B	E-MCT-105 C10001866	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04			
C30002350	B	E-MCT-106 C10001867	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04			
C30002351	B	E-MCT-106 C10001867	DOC-General point valid for All electrical MCT: MCT Composition drawing 123A90-DDL-EL-DD-20095 to be update as per	.		Pschintu 2025-01-04			
C30002685	B	E-MCT-106 C10001867	MCT composition to be checked after temporary cables are removed	.		Pschintu 2025-01-11			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural

SUBSYSTEM 90-01 HV-MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002352	B	I-MCT-101 C10001894	DOC-General point valid for All instrumental MCT: MCT Composition drawing 123A90-DDL-IN-DG-40074 to be update as per	.		Pschintu 2025-01-04			
C30002353	B	I-MCT-103 C10001896	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04			
C30002354	B	I-MCT-102 C10001895	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04			
C30002355	B	I-MCT-101 C10001894	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	90	Structural, Architectural
SUBSYSTEM	90-01	HV-MV Switchgear Room B-100

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001645	B	E-MCT-104 C10001865	Missing traffolyte tag both sides	.		Pschintu 2024-12-10	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30001646	B	E-MCT-103 C10001864	Missing traffolyte tag both sides	.		Pschintu 2024-12-10	2025-02-07	Pschintu 2025-02-07	2025-02-07
C30001827	B	E-MCT-102 C10001863	Missing Traffolyte tag both sides	.		Pschintu 2024-12-13	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30002348	B	E-MCT-101 C10001862	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30002349	B	E-MCT-105 C10001866	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30002350	B	E-MCT-106 C10001867	Missing traffolyte tag on both side of MCT	.		Pschintu 2025-01-04	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30002351	B	E-MCT-106 C10001867	DOC-General point valid for All electrical MCT: MCT Composition drawing 123A90-DDL-EL-DD-20095 to be update as per	.		Pschintu 2025-01-04			
C30002685	B	E-MCT-106 C10001867	MCT composition to be checked after temporary cables are removed	.		Pschintu 2025-01-11	2025-03-04	JKrizanic 2025-03-04	2025-03-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 90 Structural, Architectural

SUBSYSTEM 90-01 HV-MV Switchgear Room B-100

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002352	B	I-MCT-101 C10001894	DOC-General point valid for All instrumental MCT: MCT Composition drawing 123A90-DDL-IN-DG-40074 to be update as per	.		Pschintu 2025-01-04			
C30002353	B	I-MCT-103 C10001896	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30002354	B	I-MCT-102 C10001895	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04	2025-02-03	Pschintu 2025-02-03	2025-02-03
C30002355	B	I-MCT-101 C10001894	Missing traffolyte tag on both sides of MCT	.		Pschintu 2025-01-04	2025-02-03	Pschintu 2025-02-03	2025-02-03

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001645

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001865	1.4 Discipline	Electrical
1.2 Item	E-MCT-104	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag both sides

Name: Paolo Schintu

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001646

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001864	1.4 Discipline	Electrical
1.2 Item	E-MCT-103	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag both sides

Name: Paolo Schintu

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

INSTALLED

Name: Paolo Schintu

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001827

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001863	1.4 Discipline	Electrical
1.2 Item	E-MCT-102	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

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

Done

Name: Paolo Schintu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002348

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001862	1.4 Discipline	Electrical
1.2 Item	E-MCT-101	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

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: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002349

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001866	1.4 Discipline	Electrical
1.2 Item	E-MCT-105	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

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: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002350

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001867	1.4 Discipline	Electrical
1.2 Item	E-MCT-106	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both side of MCT

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: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002351

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001867	1.4 Discipline	Electrical
1.2 Item	E-MCT-106	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

DOC-General point valid for All electrical MCT: MCT Composition drawing 123A90-DDL-EL-DD-20095 to be update as per installation

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	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name:
Date:
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002352

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001894	1.4 Discipline	Instrumental
1.2 Item	I-MCT-101	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

DOC-General point valid for All instrumental MCT: MCT Composition drawing 123A90-DDL-IN-DG-40074 to be update as per installation

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	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name
Date
Signature

5 - CLEARANCE CHECK

DONE

Name
Date
Signature

6- CLEARANCE APPROVAL

Name
Date
Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002353

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001896	1.4 Discipline	Instrumental
1.2 Item	I-MCT-103	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both sides of MCT

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

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002354

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001895	1.4 Discipline	Instrumental
1.2 Item	I-MCT-102	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both sides of MCT

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: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002355

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001894	1.4 Discipline	Instrumental
1.2 Item	I-MCT-101	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

Missing traffolyte tag on both sides of MCT

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: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002685

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001867	1.4 Discipline	Electrical
1.2 Item	E-MCT-106	Multi Cable Transit	
1.3 Subsystem	90-01	HV-MV Switchgear Room B-100	

2 - OBSERVATION

MCT composition to be checked after temporary cables are removed

Name: Paolo Schintu

Date: 2025-01-11

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	2025-01-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

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: 90-01 & process: MC & discipline : E

Electrical	90-01 HV-MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_B100_ELE_LV	Cable Tray B100 - Electrical (Low Voltage)	ONSHORE	C10002276	CPX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002277	CPX30B	100	2025-01-25	RFC 1
CABLE_TRAY_B100_ELE_MV	Cable Tray B100 - Electrical (Medium Voltage)	ONSHORE	C10002280	CPX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002281	CPX30B	100	2025-01-25	RFC 1
E-MCT-101	Multi Cable Transit	ONSHORE	C10001862	CPX29	100	2025-01-04	RFC 1
E-MCT-102	Multi Cable Transit	ONSHORE	C10001863	CPX29	100	2025-01-04	RFC 1
E-MCT-103	Multi Cable Transit	ONSHORE	C10001864	CPX29	100	2024-12-10	RFC 1
E-MCT-104	Multi Cable Transit	ONSHORE	C10001865	CPX29	100	2024-12-10	RFC 1
E-MCT-105	Multi Cable Transit	ONSHORE	C10001866	CPX29	100	2025-01-04	RFC 1
E-MCT-106	Multi Cable Transit	ONSHORE	C10001867	CPX29	100	2025-01-04	RFC 1

ITEM	Tag	E-MCT-101	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001862		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

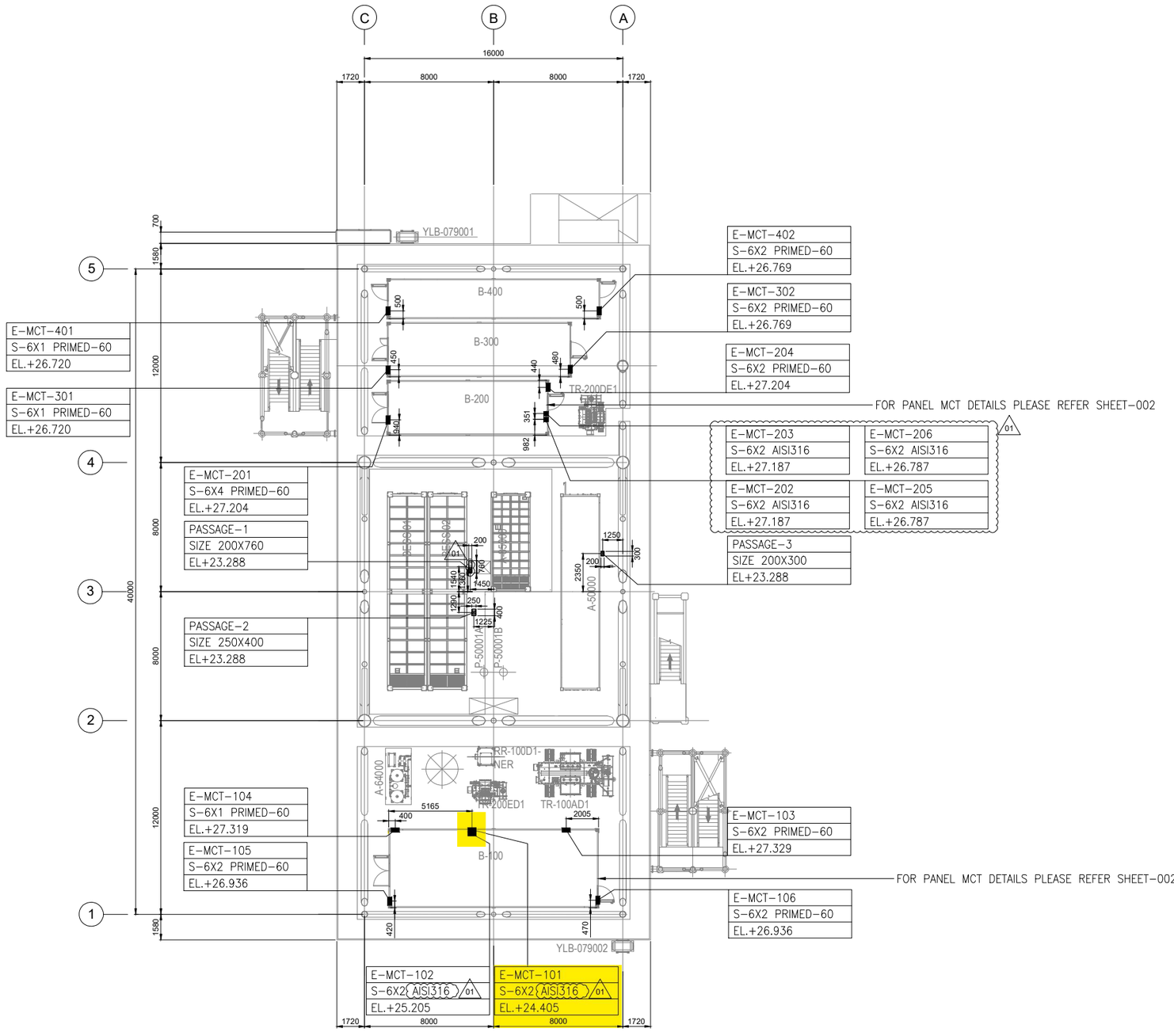
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is 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

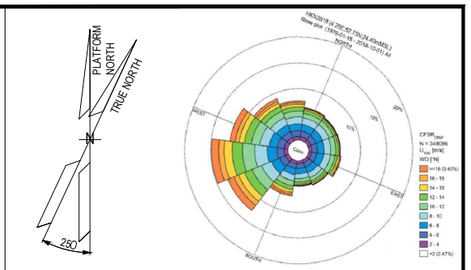
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-03	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:07:01.073Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T08:28:32.562Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

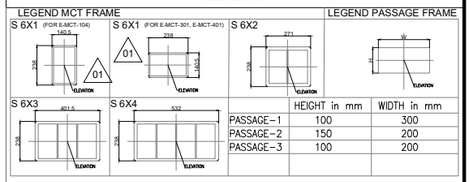
GENERAL NOTES:

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.

LEGEND

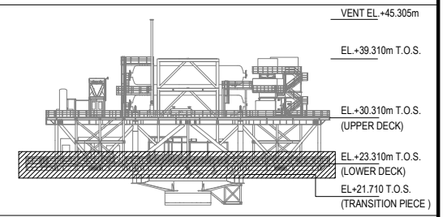


	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT
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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	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-20115
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
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 18/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20115	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20115

INDEX

Sl.No.	TITLE	TYPE	Page No.
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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
10	E-MCT-105	S 6X2 PRIMED	35
11	E-MCT-106	S 6X2 PRIMED	39
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14	E-MCT-203	S 6X2 **AISI316**	52
15	E-MCT-204	S 6X2 PRIMED	56
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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1_A	08/08/24	G.Randi

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RTD Version No: 4.37.4.0

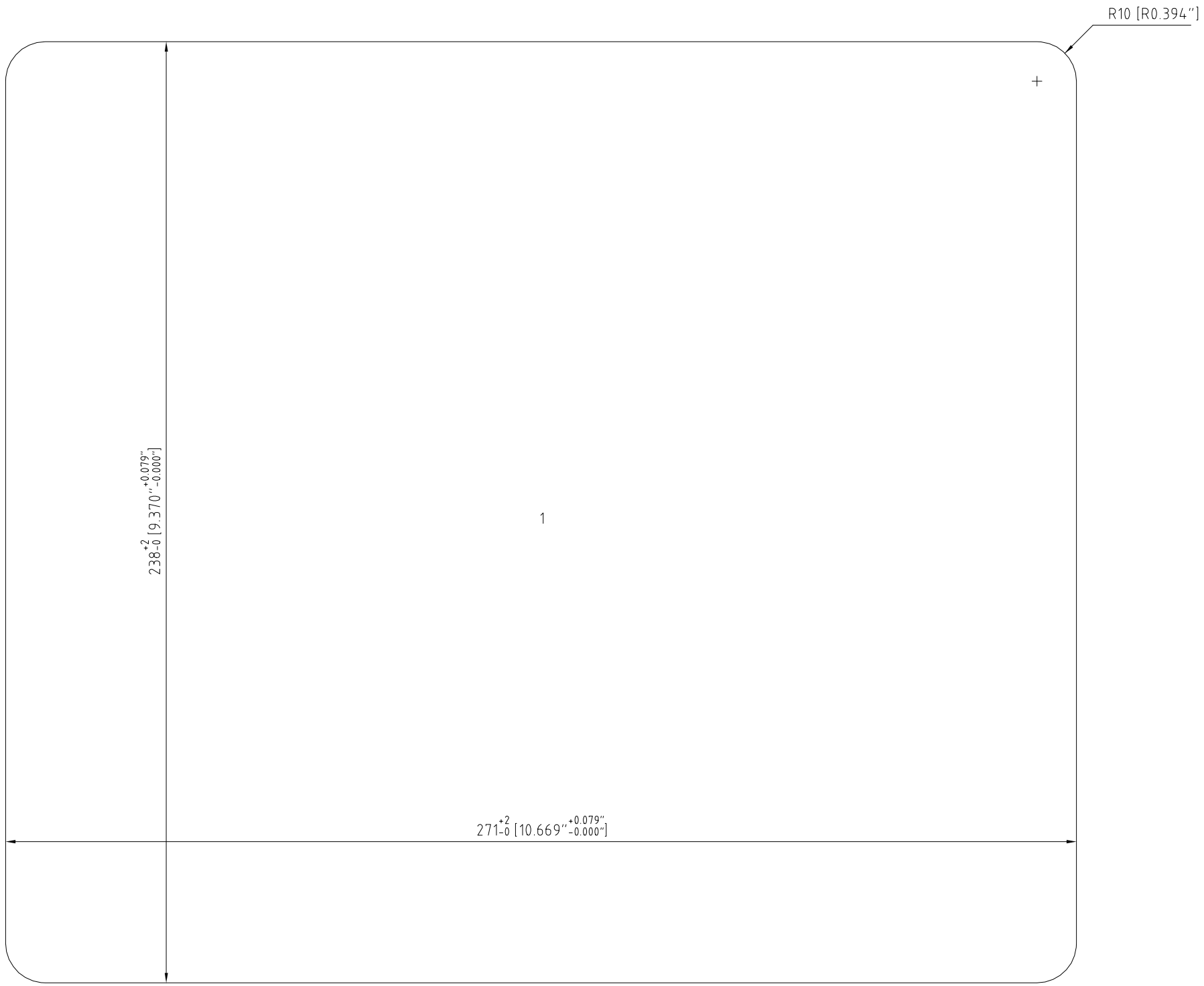
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x2 AISI316 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: 11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-101	Sheet No: 1/3
	Client		Drawing number	Rev

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RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDI

VALID FOR CONSTRUCTION

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

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VALID FOR CONSTRUCTION

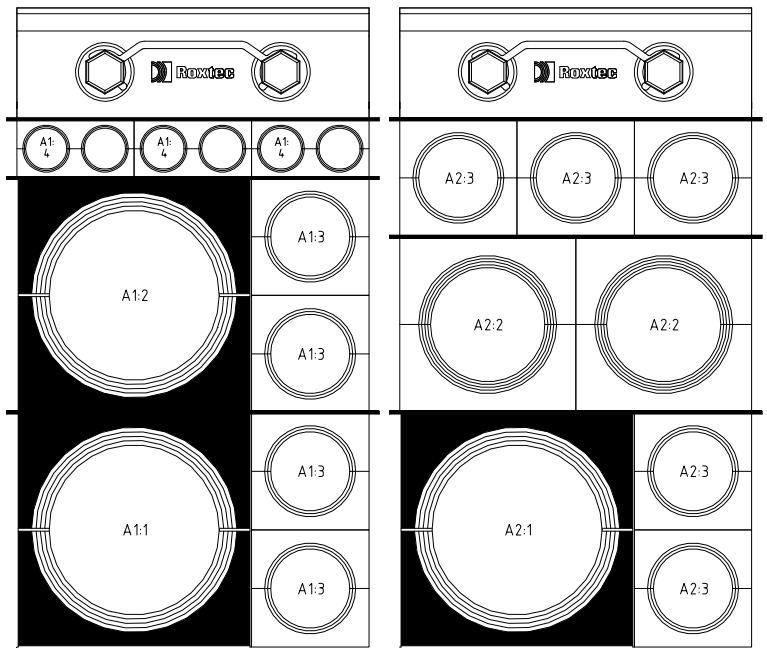
Item	Qty	Roxtec Packing Material	mm [“]	Roxtec Art No	Weight Kg [lb]
7	6	Stayplate 120 AISI 316		ASP0001200021	0.1 [0.22]
6	2	Wedge 120 AISI 316		ARW0001201021	0.8 [1.76]
5	2	RM 60 28-54 [1.102"-2.126"]		RM0010060l000	0.3 [0.73]
4	3	RM 20W40 3.5-16.5 [0.138"-0.650"]		RM0012040l000	0.1 [0.15]
3	9	RM 40 21.5-34.5 [0.846"-1.358"]		RM0010040l000	0.1 [0.31]
2	3	RM 80 48-71 [1.890"-2.795"]		5RM0000003350	0.6 [1.30]
1	1	S 6x2 AISI316		S0060000000221	5.8 [12.79]

Responsible	Created Date	Modify Date	Project / Location/ Sublocation	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS	11.9 [26.24]
	Format: NTS		Transit name: E-MCT-101	Sheet No: 2/3
	Client		Drawing number	Rev

Roxtec

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

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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
A2:3						RM 40 21.5-34.5 [0.846"-1.358"]
A2:2						RM 60 28-54 [1.102"-2.126"]
A2:1	81002-CEH-L2	66/6.6 kV, 7MVA Transformer	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
A1:4						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3						RM 40 21.5-34.5 [0.846"-1.358"]
A1:2	81002-CEH-L3	66/6.6 kV, 7MVA Transformer	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
A1:1	81002-CEH-L1	66/6.6 kV, 7MVA Transformer	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]



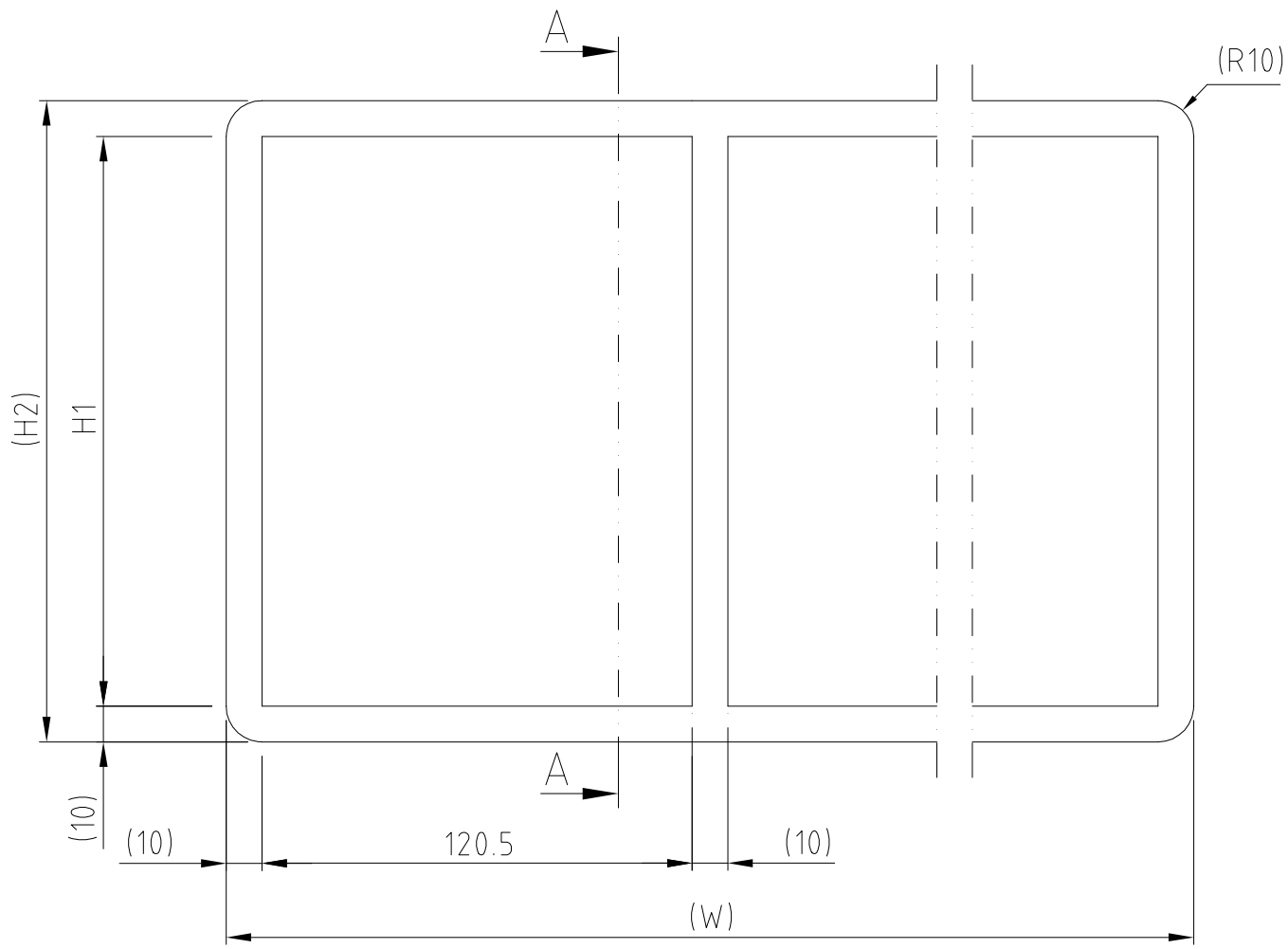
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	11.9 [26.24]
Roxtec	Format NTS		Transit name E-MCT-101	Sheet No 3/3
	Client	Drawing number		Rev

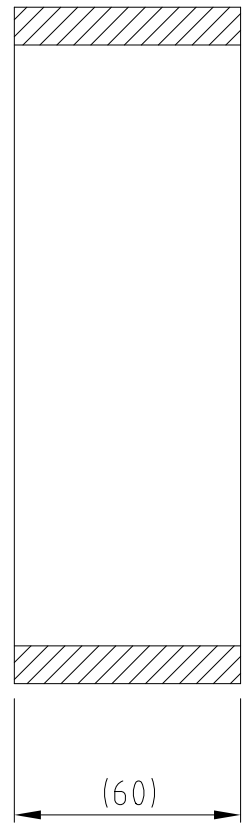
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FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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-102	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001863		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

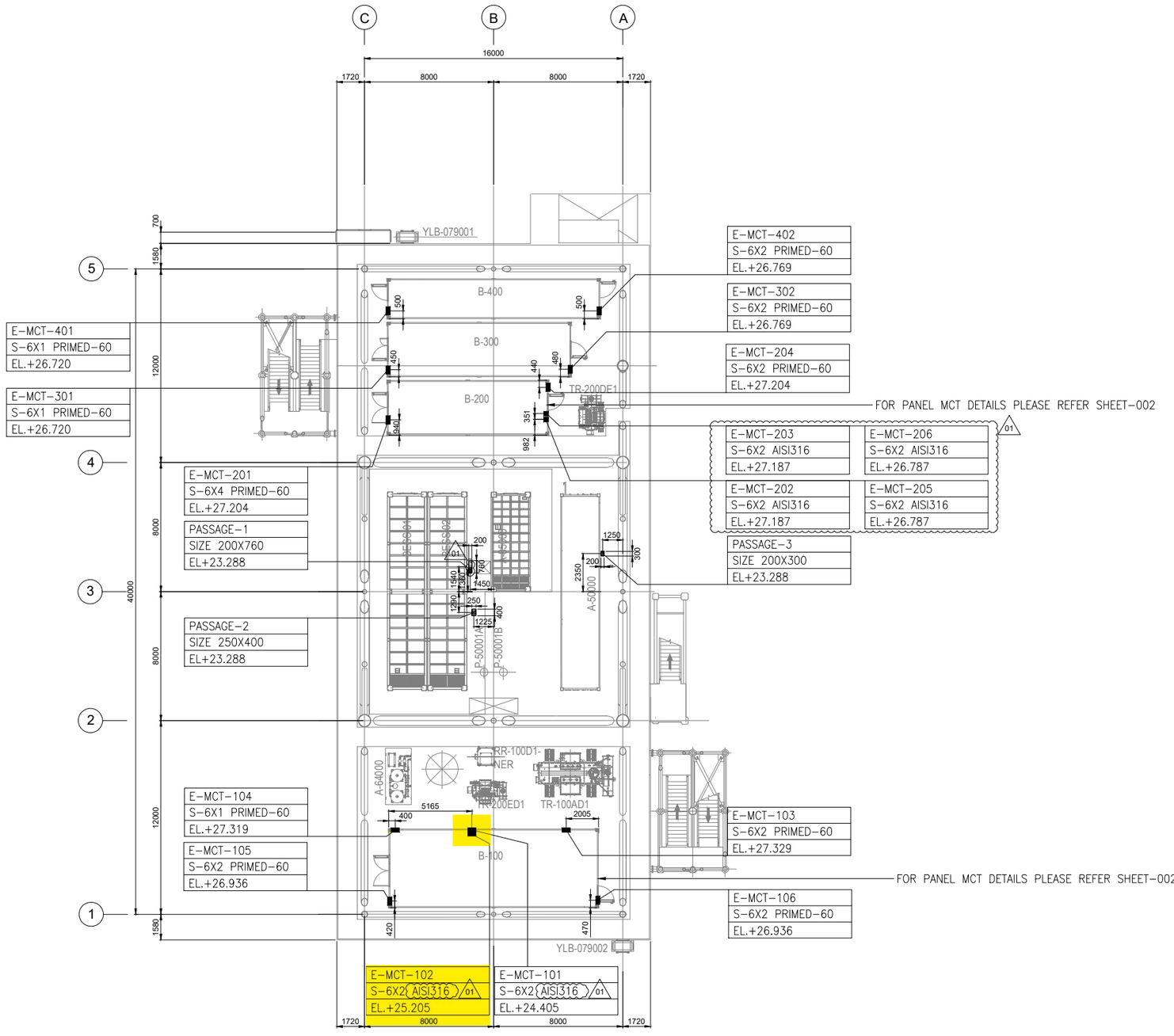
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is 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

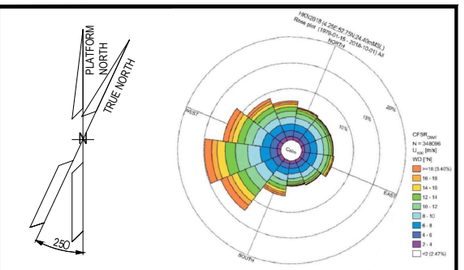
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-03	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:07:11.969Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T08:32:40.761Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

GENERAL NOTES:

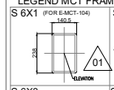
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

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

LEGEND

LEGEND MCT FRAME



LEGEND PASSAGE FRAME



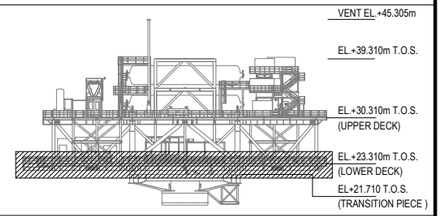
	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT

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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	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-20115
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
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 18/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20115	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20115

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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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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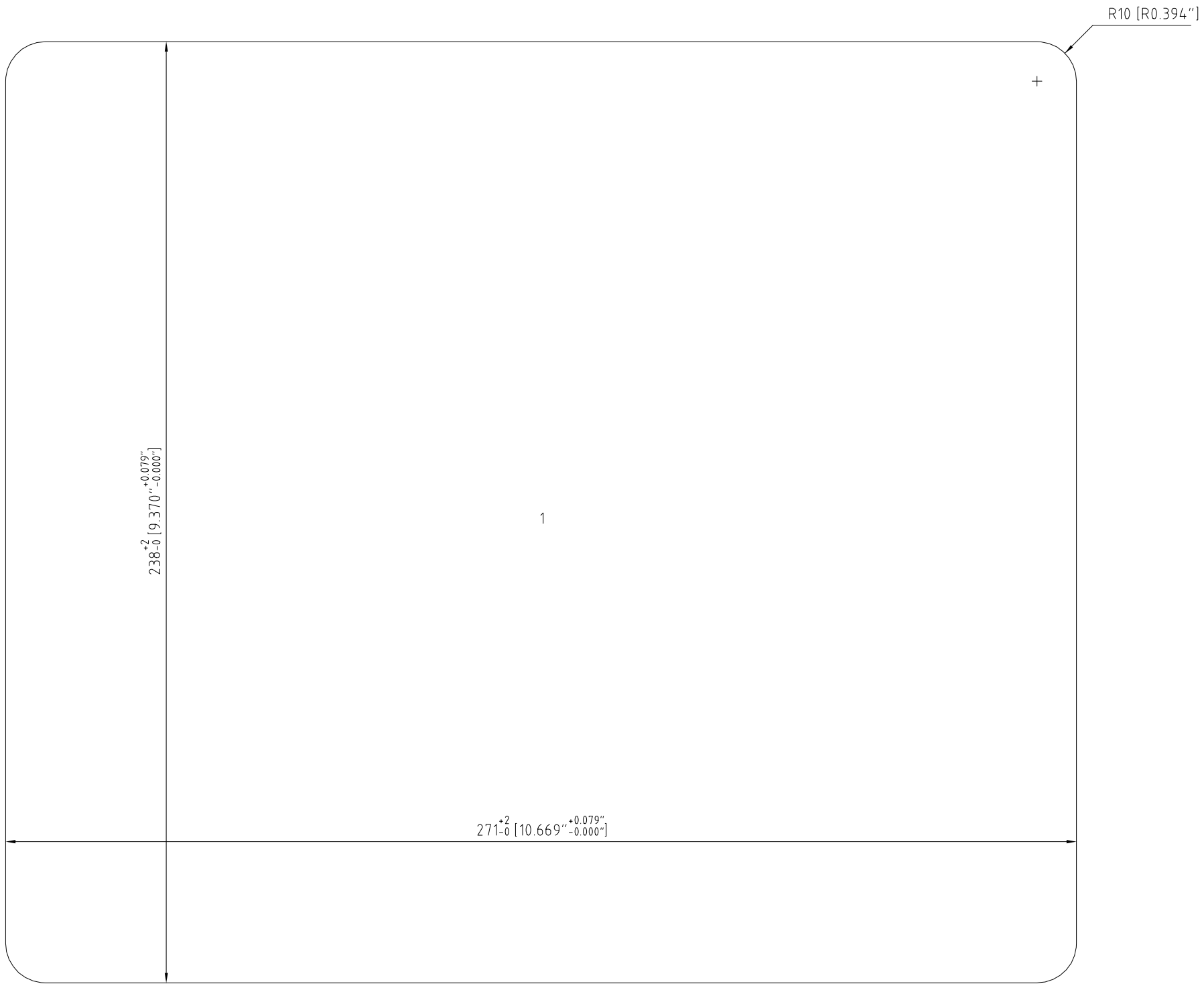
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1_A	08/08/24	G.Randi

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 6x2 AISI316 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: 11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-102	Sheet No: 1/3
	Client	Drawing number		Rev

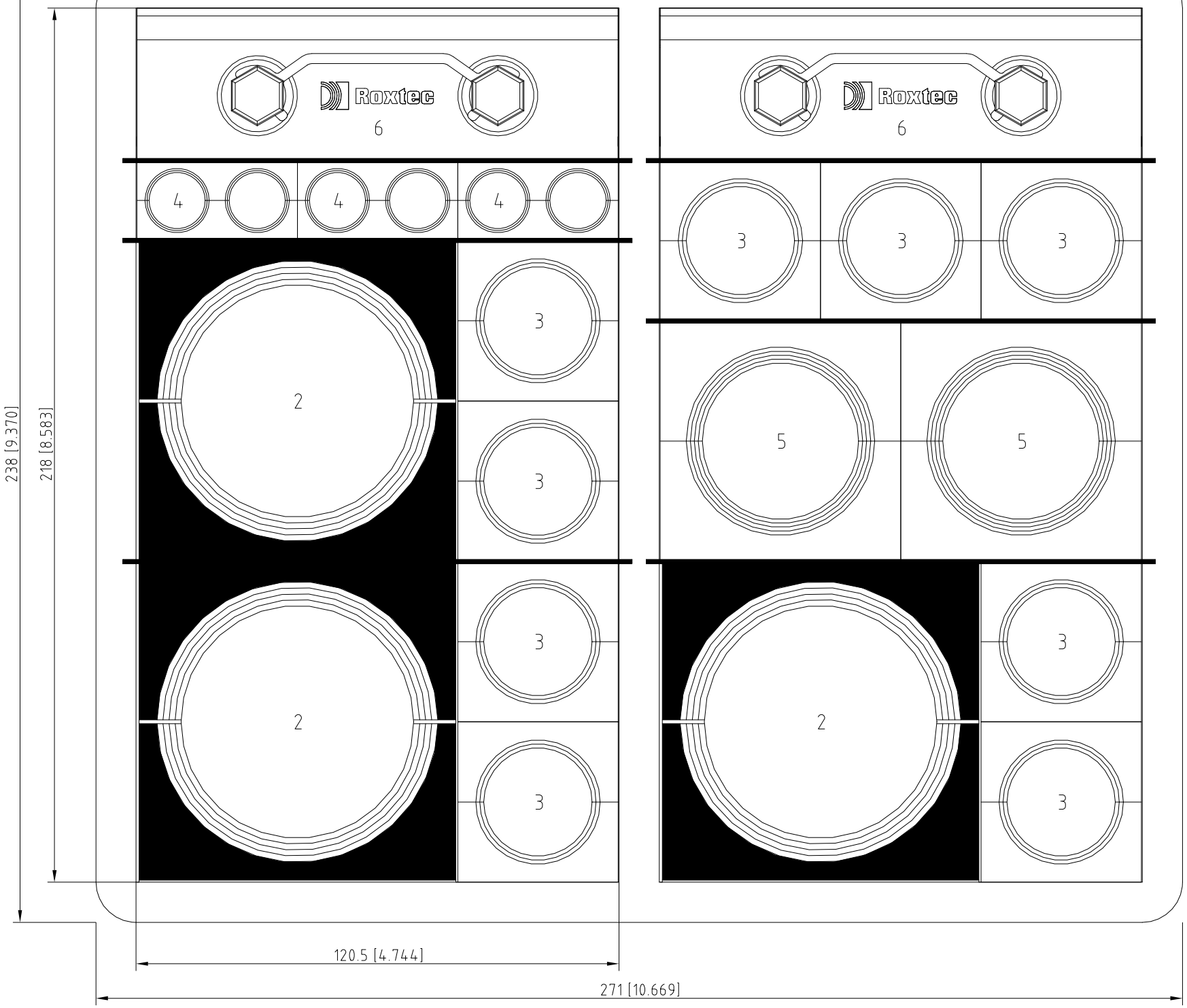
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"x9.370"]

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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]
7	6	Stayplate 120 AISI 316	ASP0001200021	0.1 [0.22]
6	2	Wedge 120 AISI 316	ARW0001201021	0.8 [1.76]
5	2	RM 60 28-54 [1.102"-2.126"]	RM00100601000	0.3 [0.73]
4	3	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
3	9	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
2	3	RM 80 48-71 [1.890"-2.795"]	5RM0000003350	0.6 [1.30]
1	1	S 6x2 AISI316	S006000000221	5.8 [12.79]

Responsible	Created Date	Modify Date	Project / Location/ Sublocation	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS	11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-102	Sheet No: 2/3
Client			Drawing number	Rev

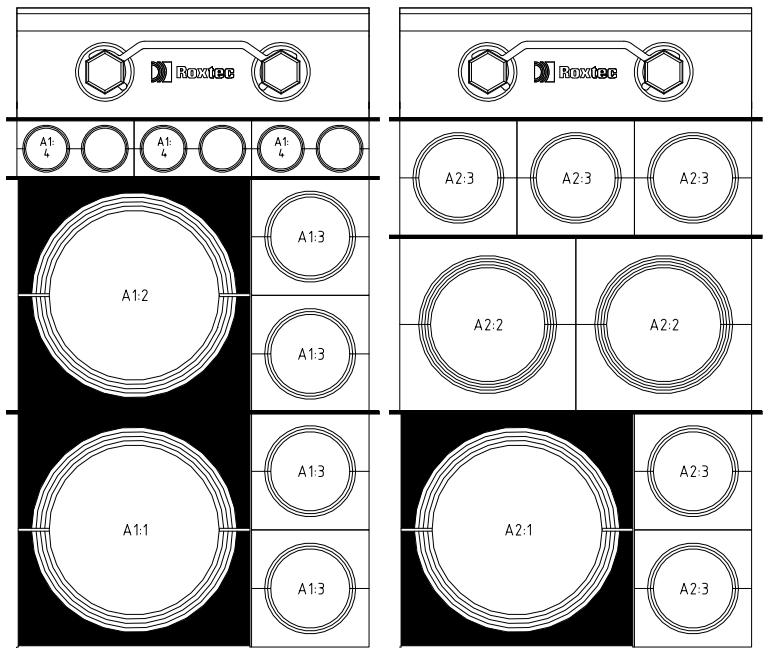
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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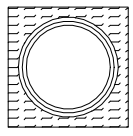
FDL DWG: **123A90-FDL-EL-DD-20095**

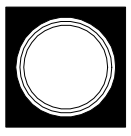
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

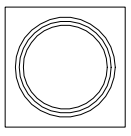
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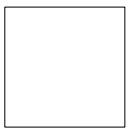
Note 1: The Diameter of 66kV cable (52mm) is from ELAND cable catalogue.

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
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"]
A1:4						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3						RM 40 21.5-34.5 [0.846"-1.358"]
A1:2	81001-CEH-L3	66kV GIS	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
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

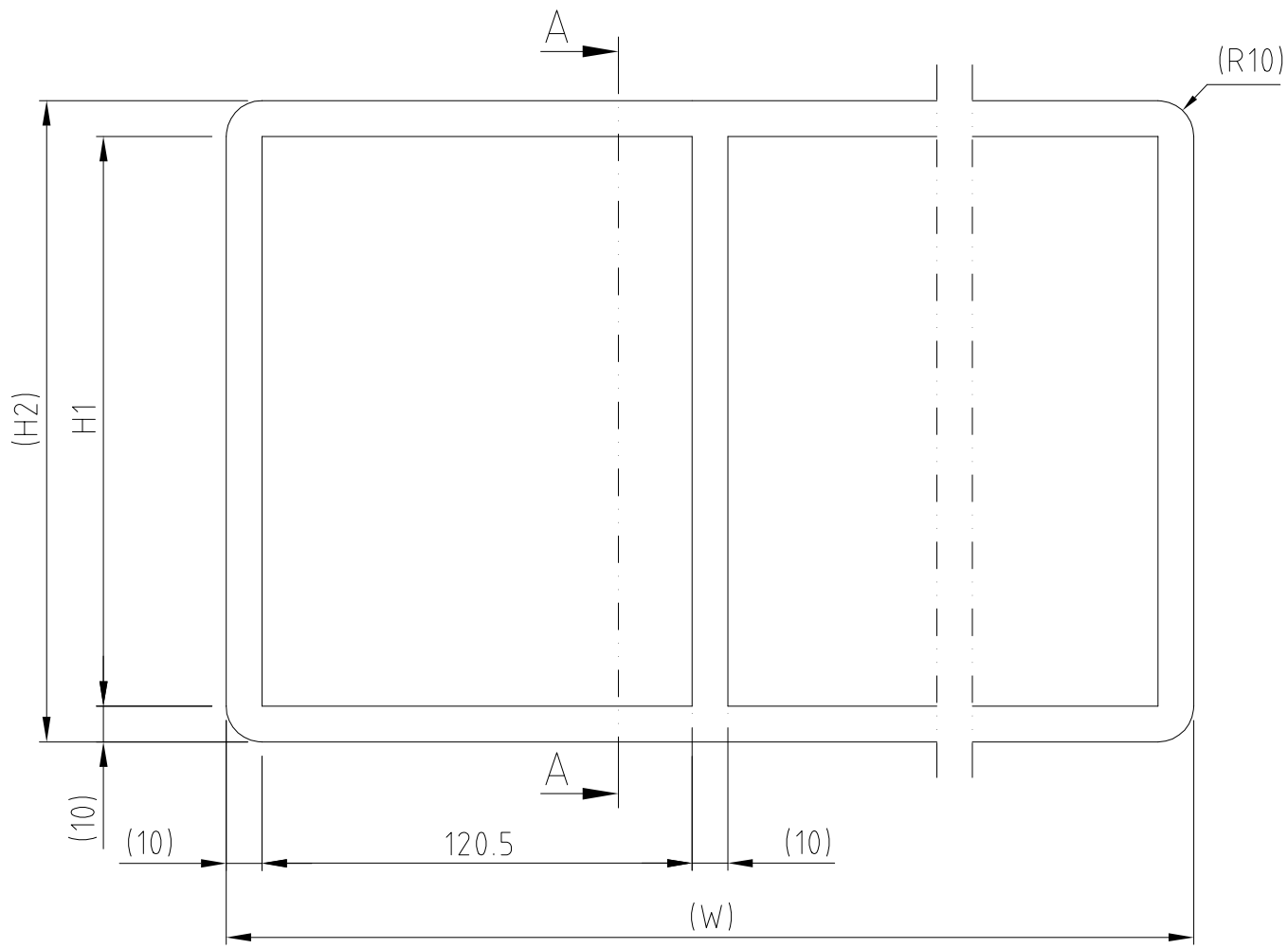
Responsible: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-102	Sheet No: 3/3
	Client	Drawing number		Rev

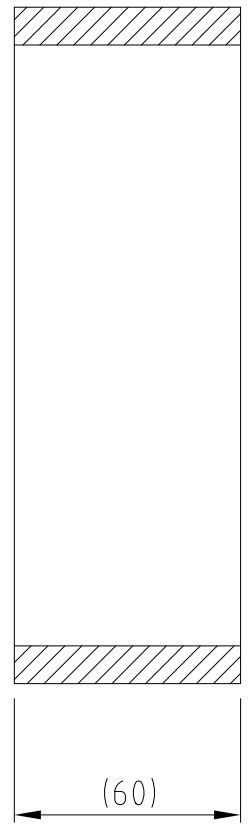
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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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-103	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001864		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

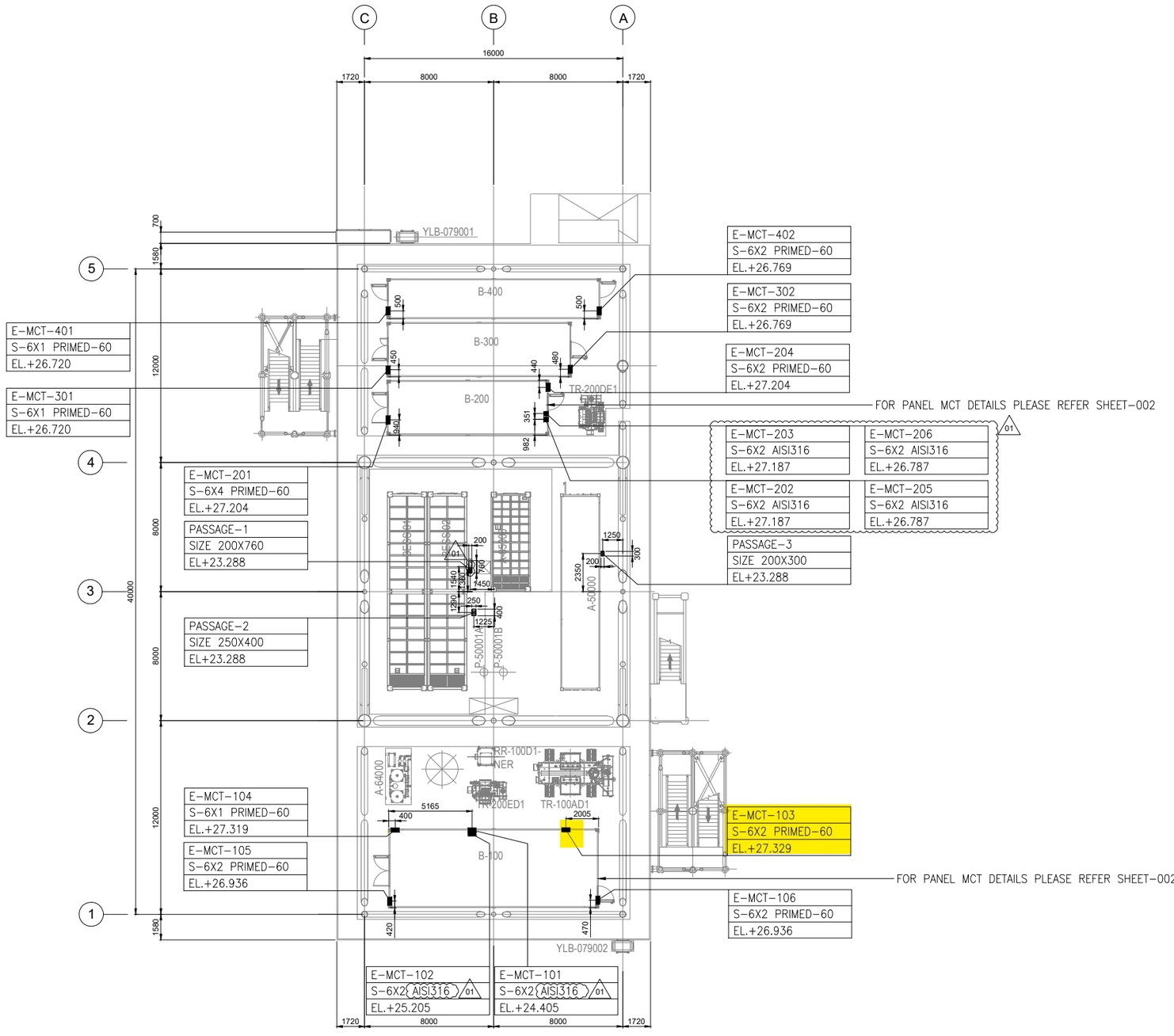
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is 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

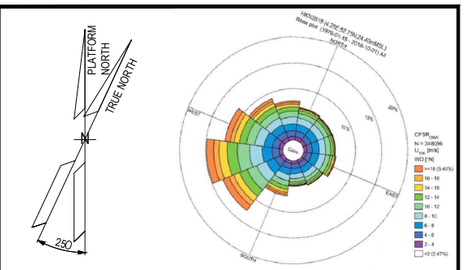
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-11-29	2024-12-10	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-29T10:39:09.783Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-12-10T19:16:42.967Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

GENERAL NOTES:

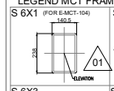
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

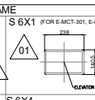
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

LEGEND MCT FRAME



LEGEND PASSAGE FRAME



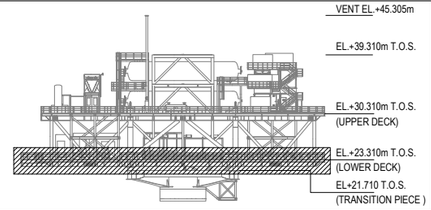
	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT

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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	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-20115
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
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 18/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20115	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20115

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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10	E-MCT-105	S 6X2 PRIMED	35
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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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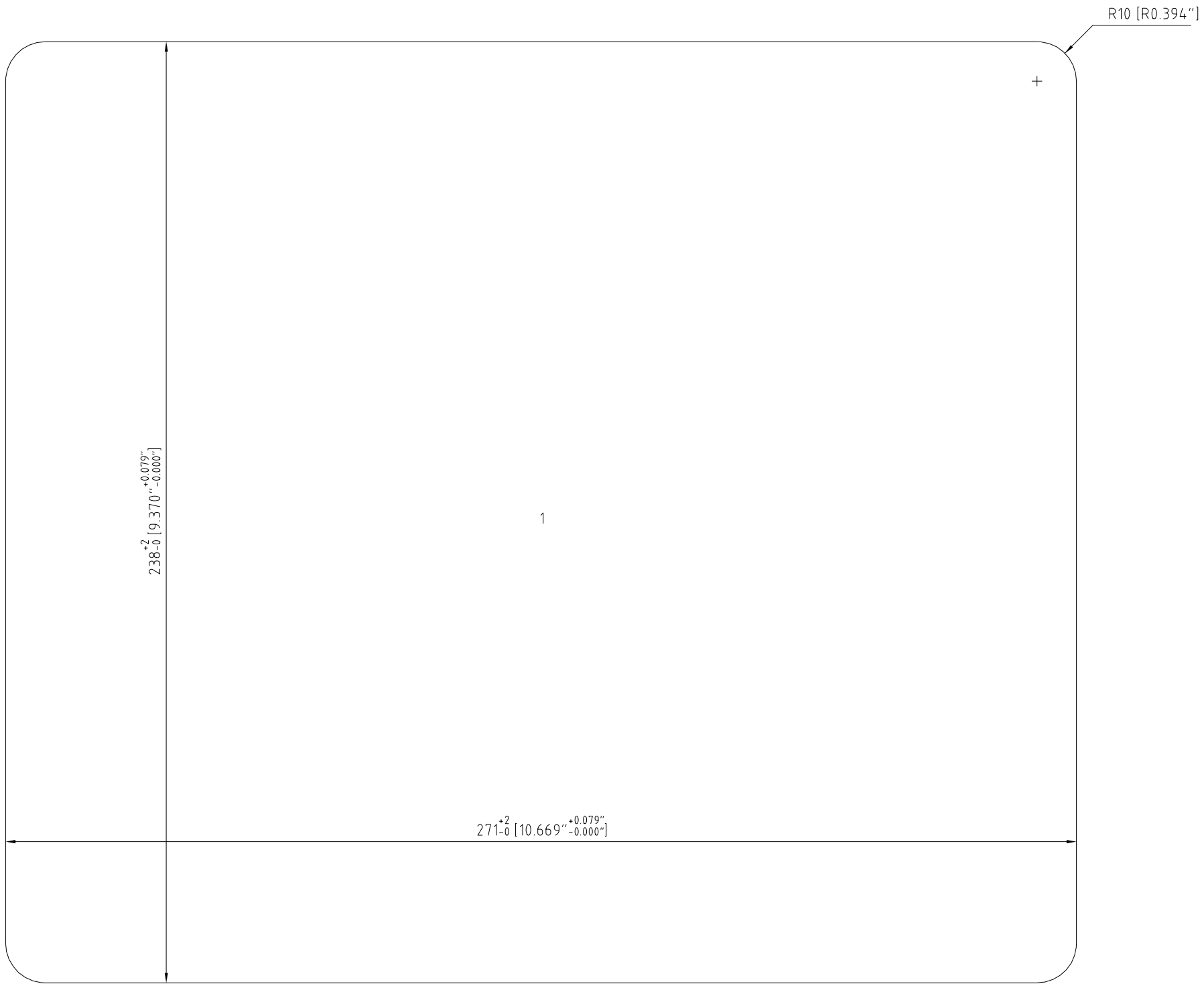
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x2 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: 12 [26.35]
Roxtec	Format: NTS		Transit name: E-MCT-103	Sheet No: 1/3
Client		Drawing number		Rev

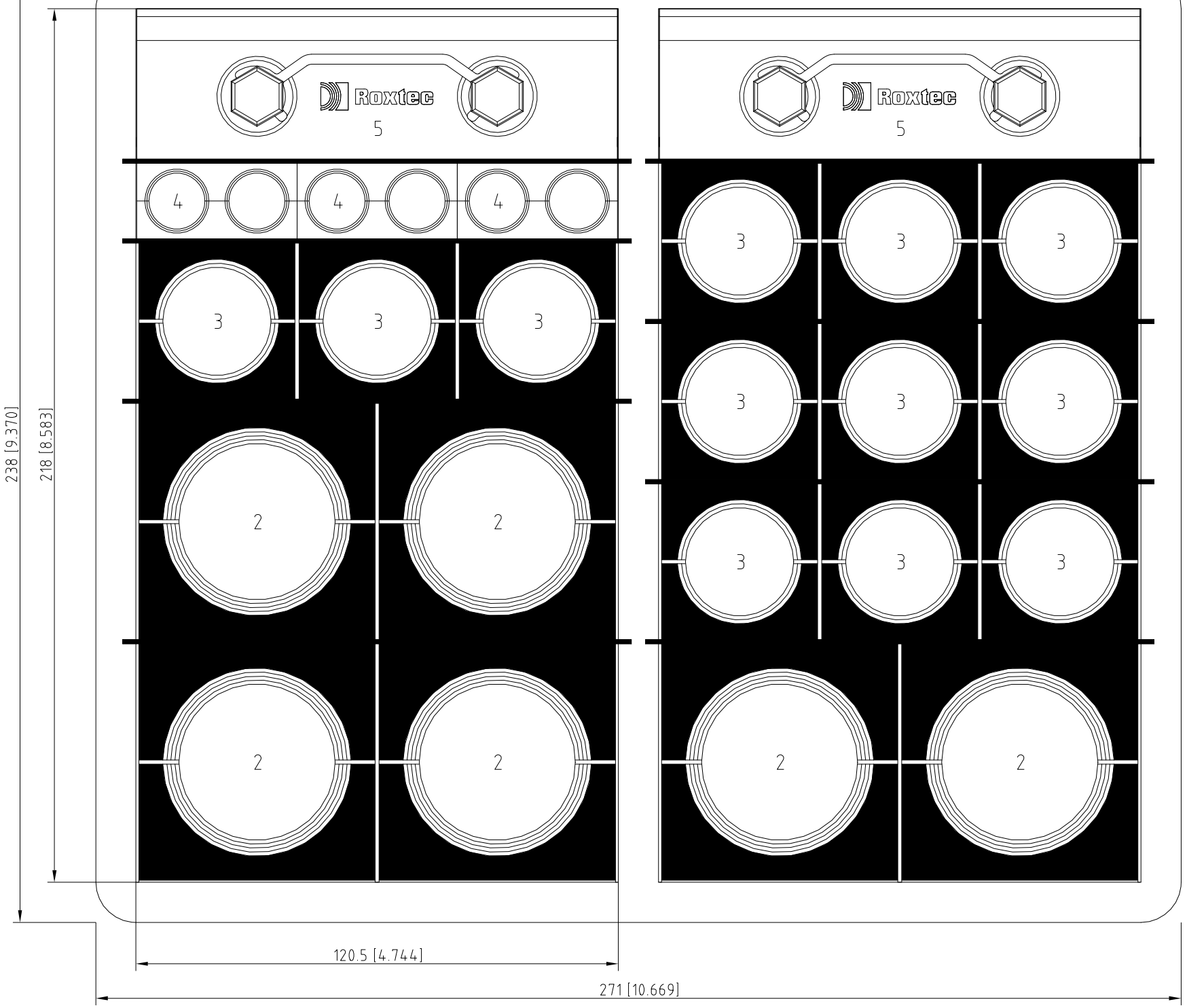
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"x9.370"]

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

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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	8	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	2	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	3	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
3	12	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
2	6	RM 60 28-54 [1.102"-2.126"]	RM00100601000	0.3 [0.73]
1	1	S 6x2 PRIMED	S006000000212	5.6 [12.35]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12 [26.35]
	Format: NTS		Transit name: E-MCT-103	Sheet No: 2/3
Roxtec	Client		Drawing number	Rev

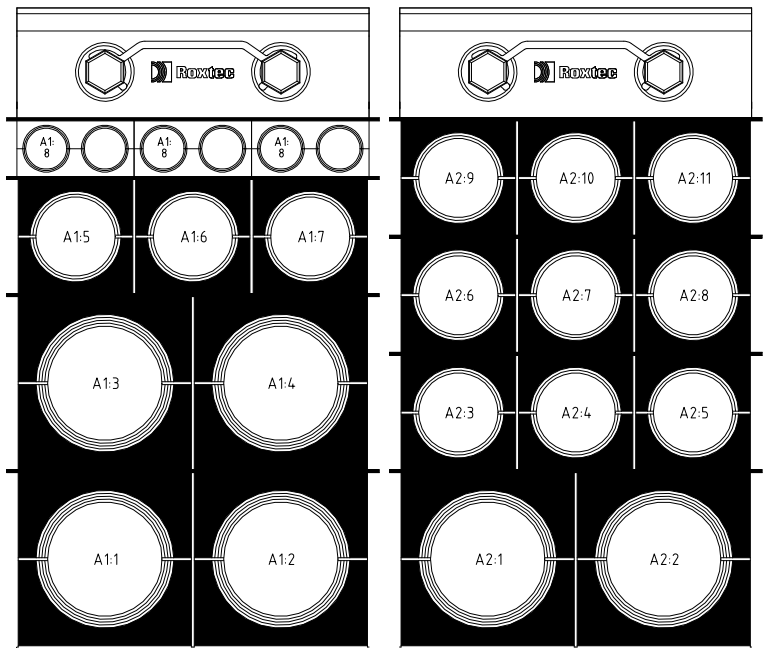
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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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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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A2:11	82006-CEM-1-L3	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:10	82006-CEM-1-L2	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:9	82006-CEM-1-L1	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:8	82003-CEM-1-L3	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:7	82003-CEM-1-L2	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:6	82003-CEM-1-L1	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:5	82002-CEM-1-L3	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:4	82002-CEM-1-L2	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:3	82002-CEM-1-L1	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:2	82001-CEM-2-L1	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A2:1	82001-CEM-1-L3	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:8						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	82005-CEM-1-L3	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:6	82005-CEM-1-L2	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:5	82005-CEM-1-L1	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:4	82001-CEM-2-L3	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:3	82001-CEM-2-L2	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:2	82001-CEM-1-L2	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:1	82001-CEM-1-L1	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]



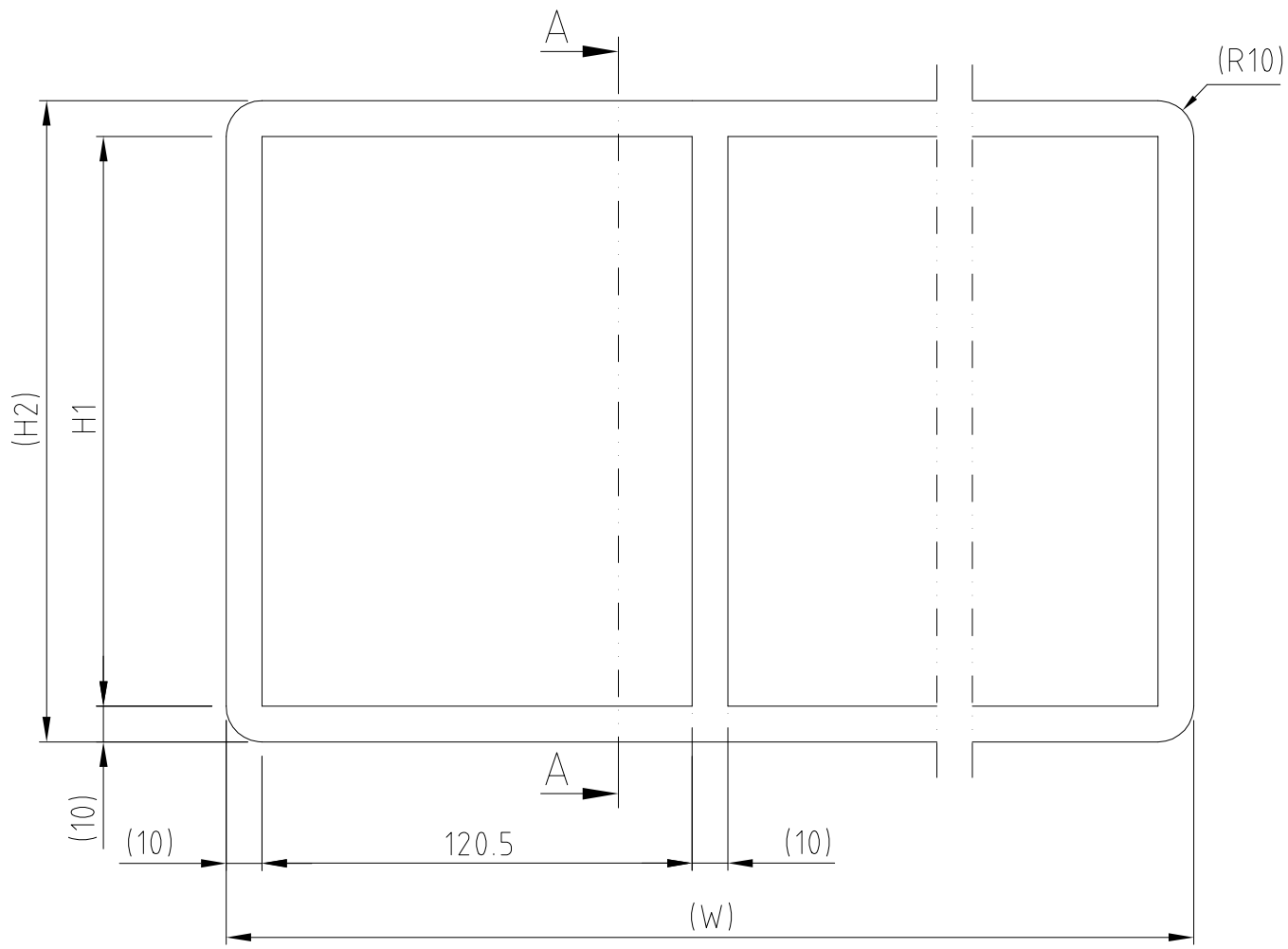
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12 [26.35]
Roxtec	Format NTS		Transit name E-MCT-103	Sheet No 3/3
	Client	Drawing number		Rev

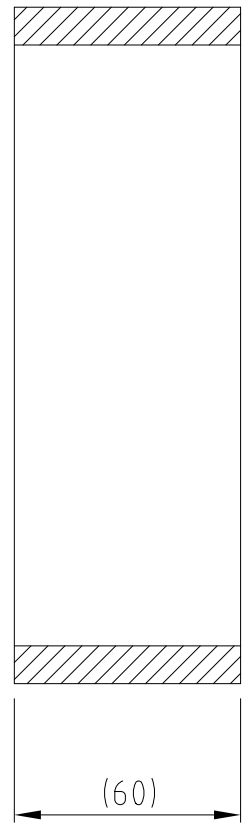
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1_A	08/08/24	G.Randi

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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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-104	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001865		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

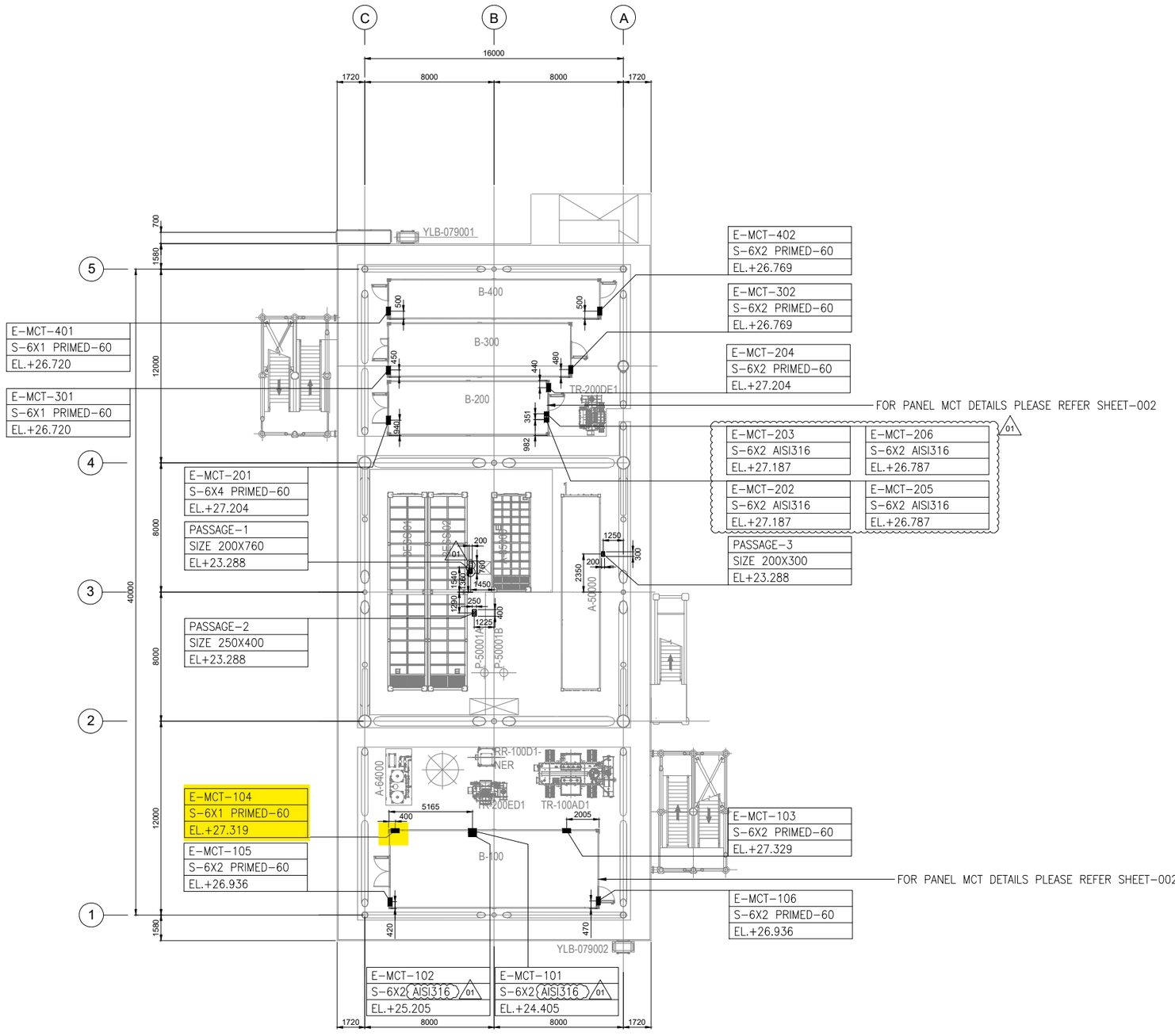
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is 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

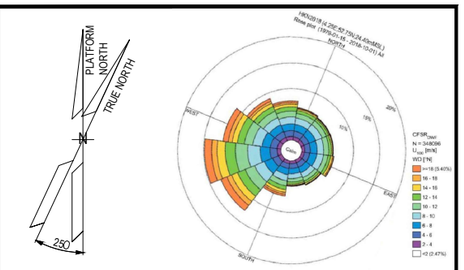
Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-11-29	2024-12-10	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-29T10:39:38.573Z	PROVERLIS Digitaly signed by Paolo Schintu 2024-12-10T19:15:26.954Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

GENERAL NOTES:

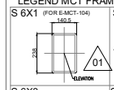
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

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

LEGEND

LEGEND MCT FRAME



LEGEND PASSAGE FRAME

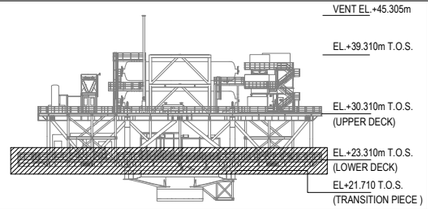


	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT
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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	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-20115
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
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 18/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20115	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20115

INDEX

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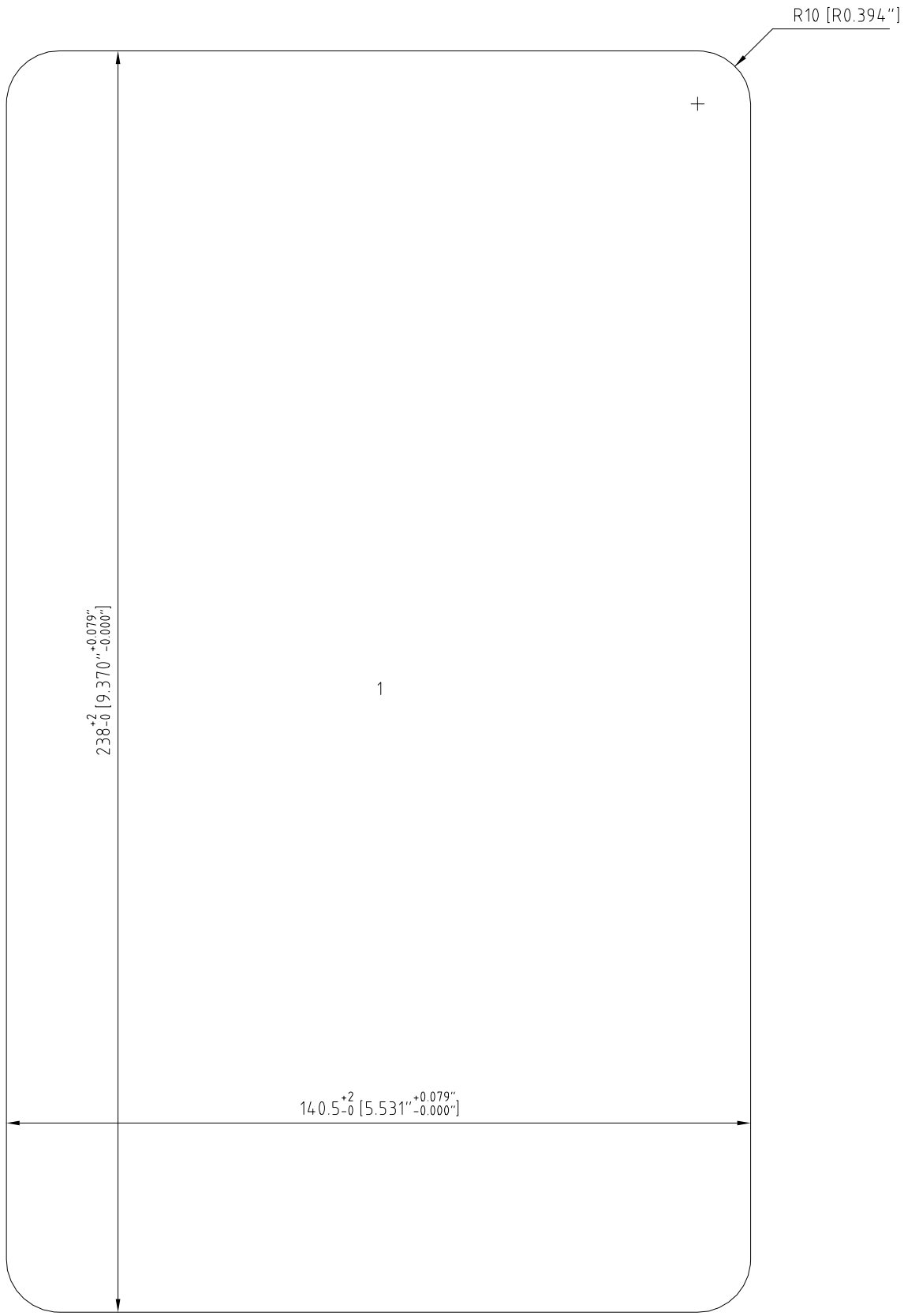
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1_A	08/08/24	G.Randi

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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.



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: 6.5 [14.35]
Roxtec	Format: NTS		Transit name: E-MCT-104	Sheet No: 1/3
	Client		Drawing number	Rev

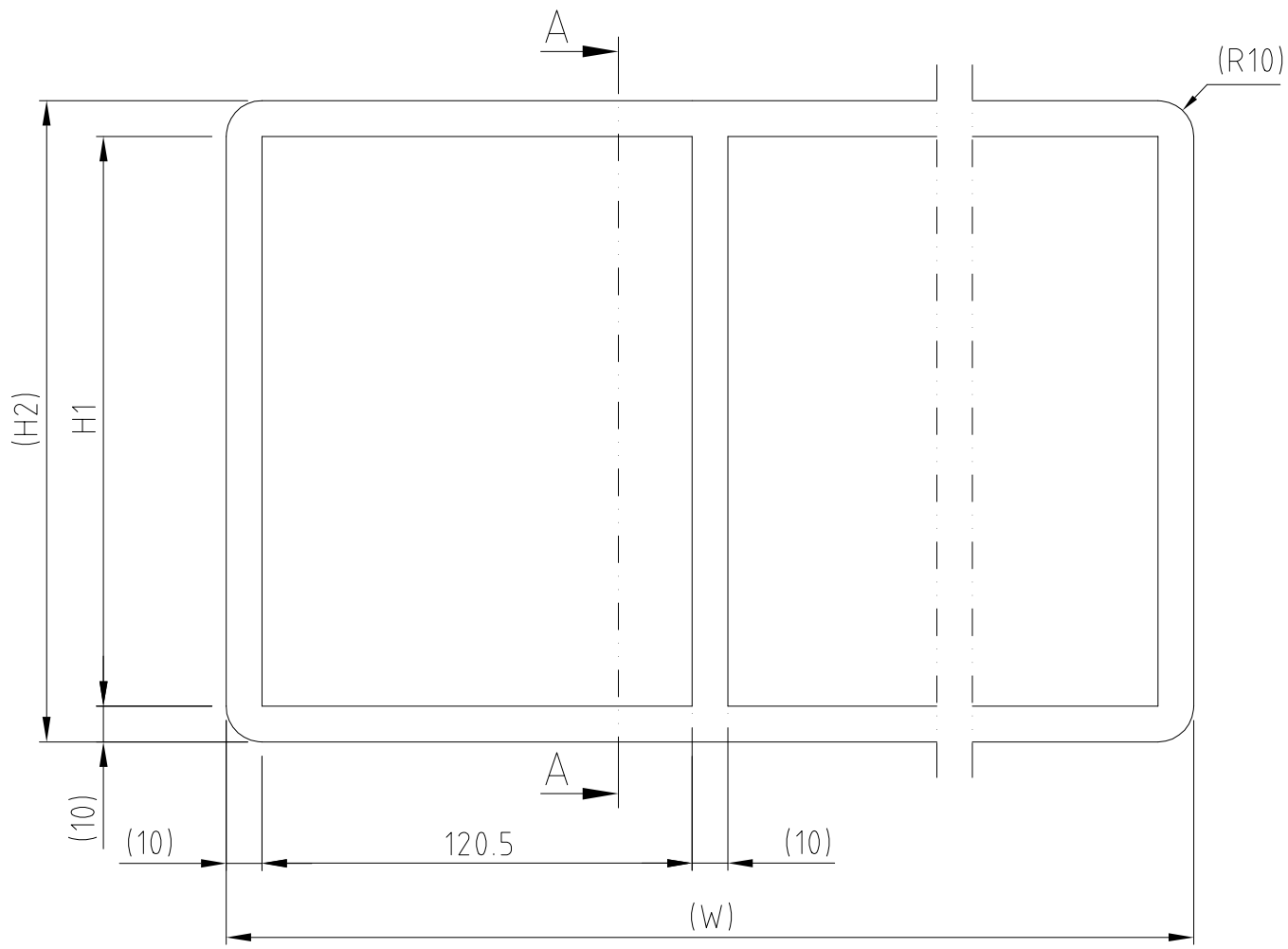
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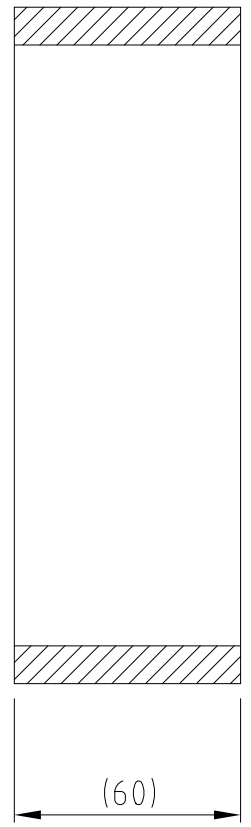
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

REV.:	DATE:	SIGNATURE:
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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

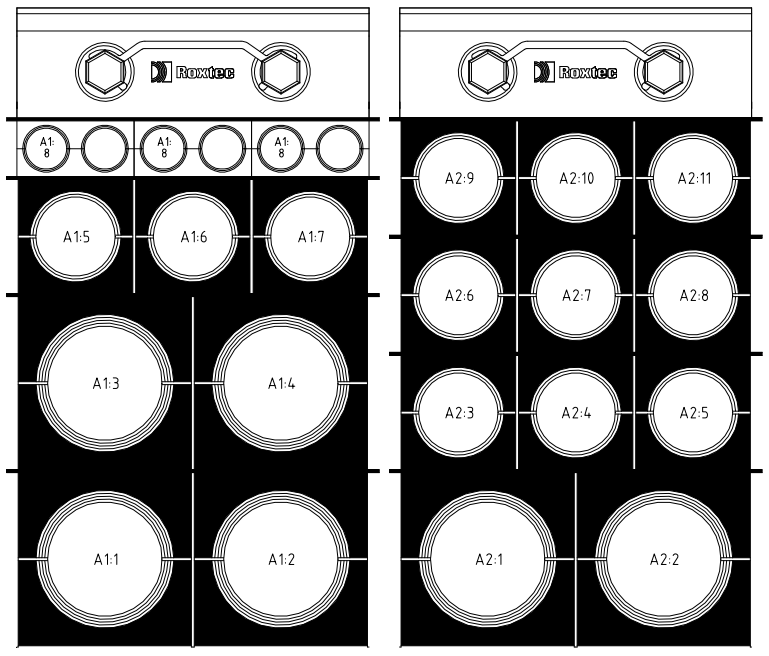
Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

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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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A2:11	82006-CEM-1-L3	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:10	82006-CEM-1-L2	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:9	82006-CEM-1-L1	6.6/0.8 KV, 0.5MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:8	82003-CEM-1-L3	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:7	82003-CEM-1-L2	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:6	82003-CEM-1-L1	6.6/0.4 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:5	82002-CEM-1-L3	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:4	82002-CEM-1-L2	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:3	82002-CEM-1-L1	6.6/0.4 KV, 1.6MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A2:2	82001-CEM-2-L1	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A2:1	82001-CEM-1-L3	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:8						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	82005-CEM-1-L3	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:6	82005-CEM-1-L2	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:5	82005-CEM-1-L1	6.6/0.62 KV, 1.25MVA Transformer	1C X 70	Power	29 [1.142"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:4	82001-CEM-2-L3	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:3	82001-CEM-2-L2	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:2	82001-CEM-1-L2	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]
A1:1	82001-CEM-1-L1	6.6KV HV Switchgear	1C X 150	Power	34 [1.339"]	RM 60 28-54 [1.102"-2.126"]



Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12 [26.35]
Roxtec	Format NTS		Transit name E-MCT-103	Sheet No 3/3
	Client	Drawing number		Rev

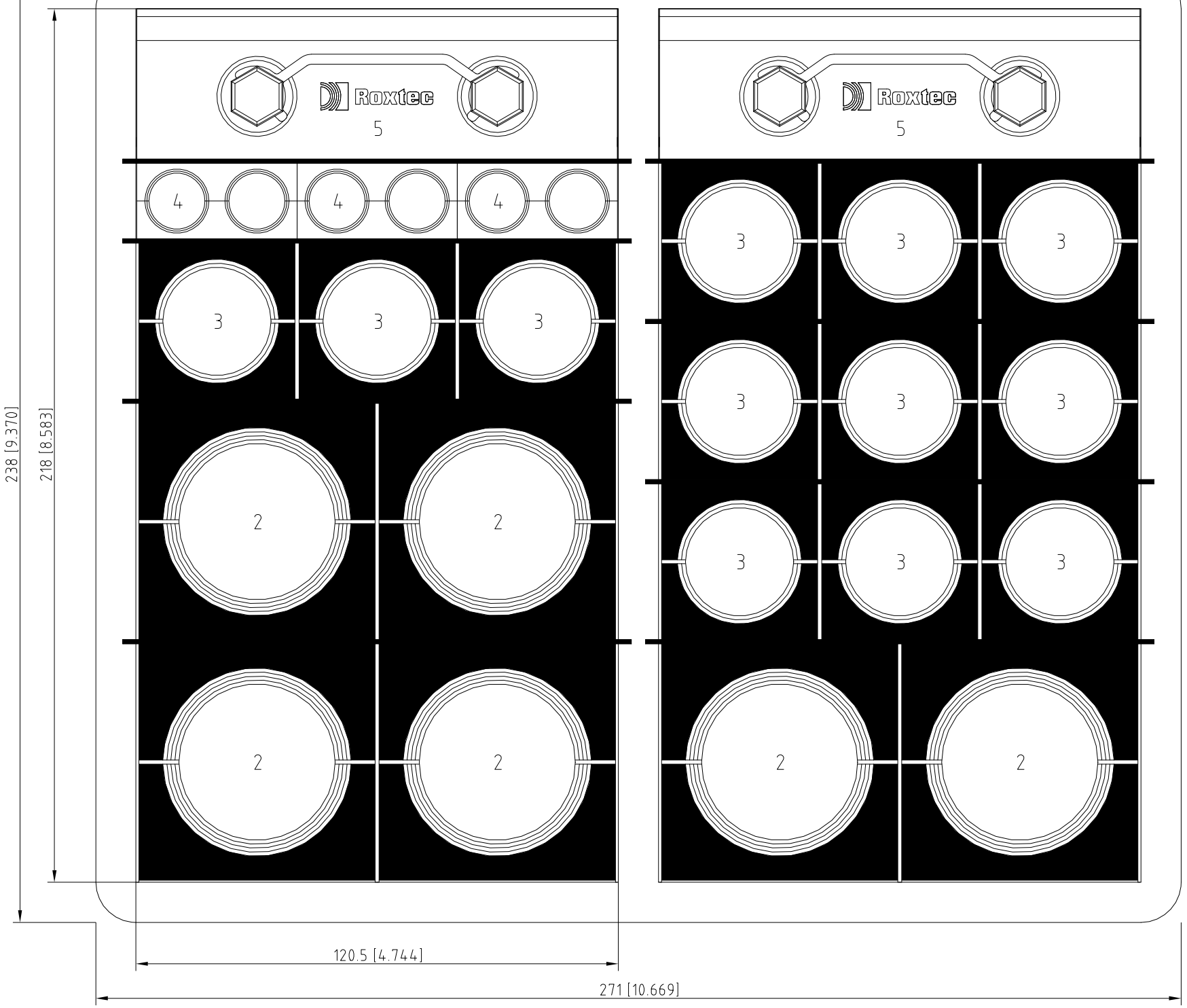
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"x9.370"]

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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]
6	8	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	2	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	3	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
3	12	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
2	6	RM 60 28-54 [1.102"-2.126"]	RM00100601000	0.3 [0.73]
1	1	S 6x2 PRIMED	S006000000212	5.6 [12.35]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12 [26.35]
	Format: NTS		Transit name: E-MCT-103	Sheet No: 2/3
Roxtec	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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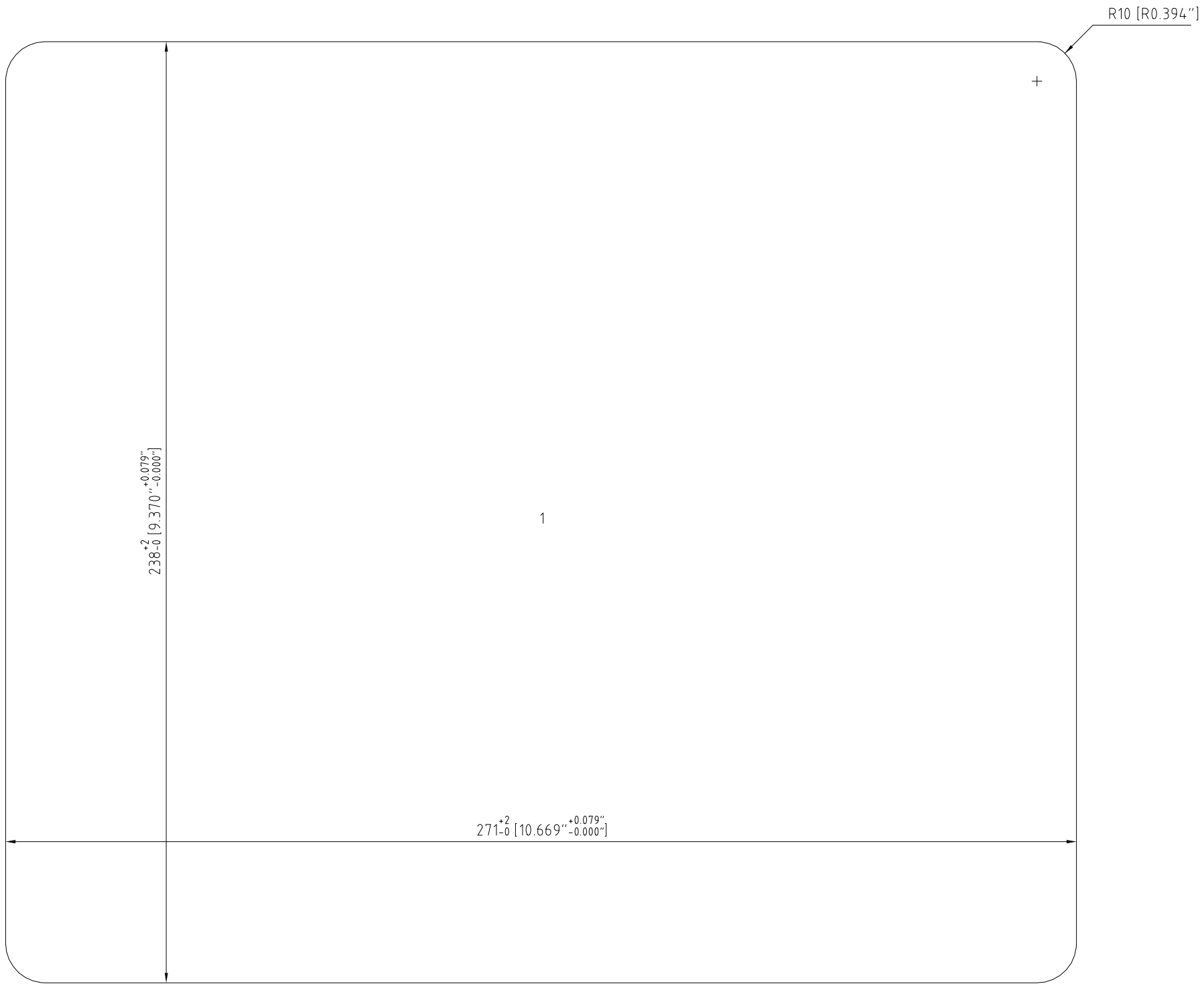
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

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

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Cutout Detail

Frame: S 6x2 PRIMED Solution: 1

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

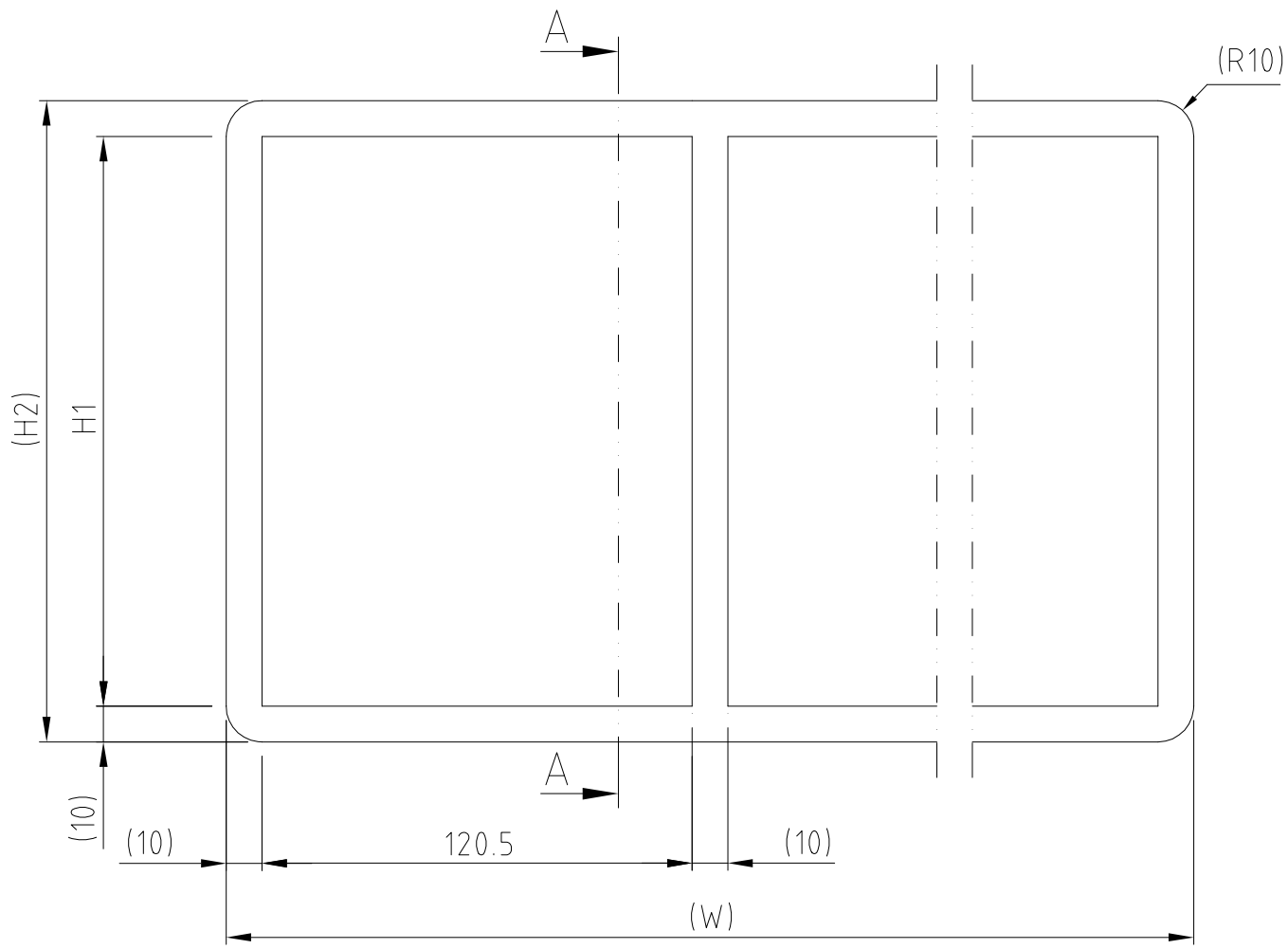
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Roxtec	Format: NTS		Transit name: E-MCT-103	Sheet No: 1/3
Client		Drawing number		Rev

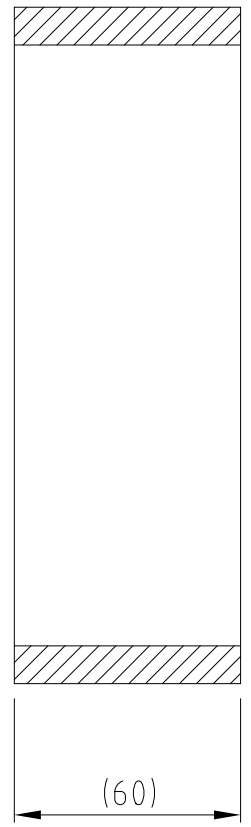
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

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

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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

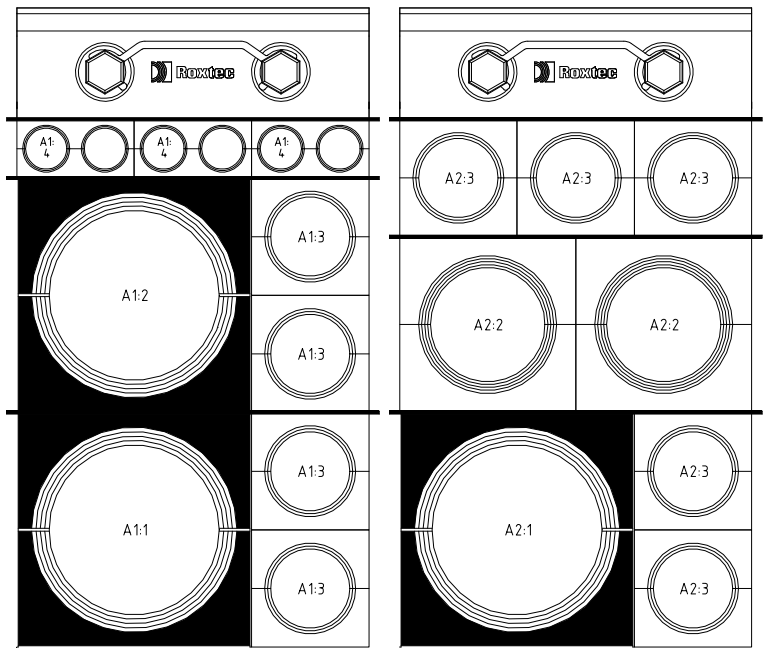
Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

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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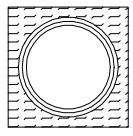
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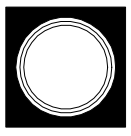
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1_A	08/08/24	G.Randi

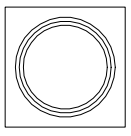
ROSETTI MARINO SpA

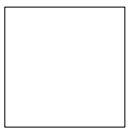
Note 1: The Diameter of 66kV cable (52mm) is from ELAND cable catalogue.

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
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"]
A1:4						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3						RM 40 21.5-34.5 [0.846"-1.358"]
A1:2	81001-CEH-L3	66kV GIS	1C X 300	Power	52 [2.047"]	RM 80 48-71 [1.890"-2.795"]
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: ARNESH	Created Date: 2024-07-10	Modify Date: 2024-07-17	Project: BLPH - ROS Location/ Sublocation	TotWeight: 11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-102	Sheet No: 3/3
	Client	Drawing number		Rev

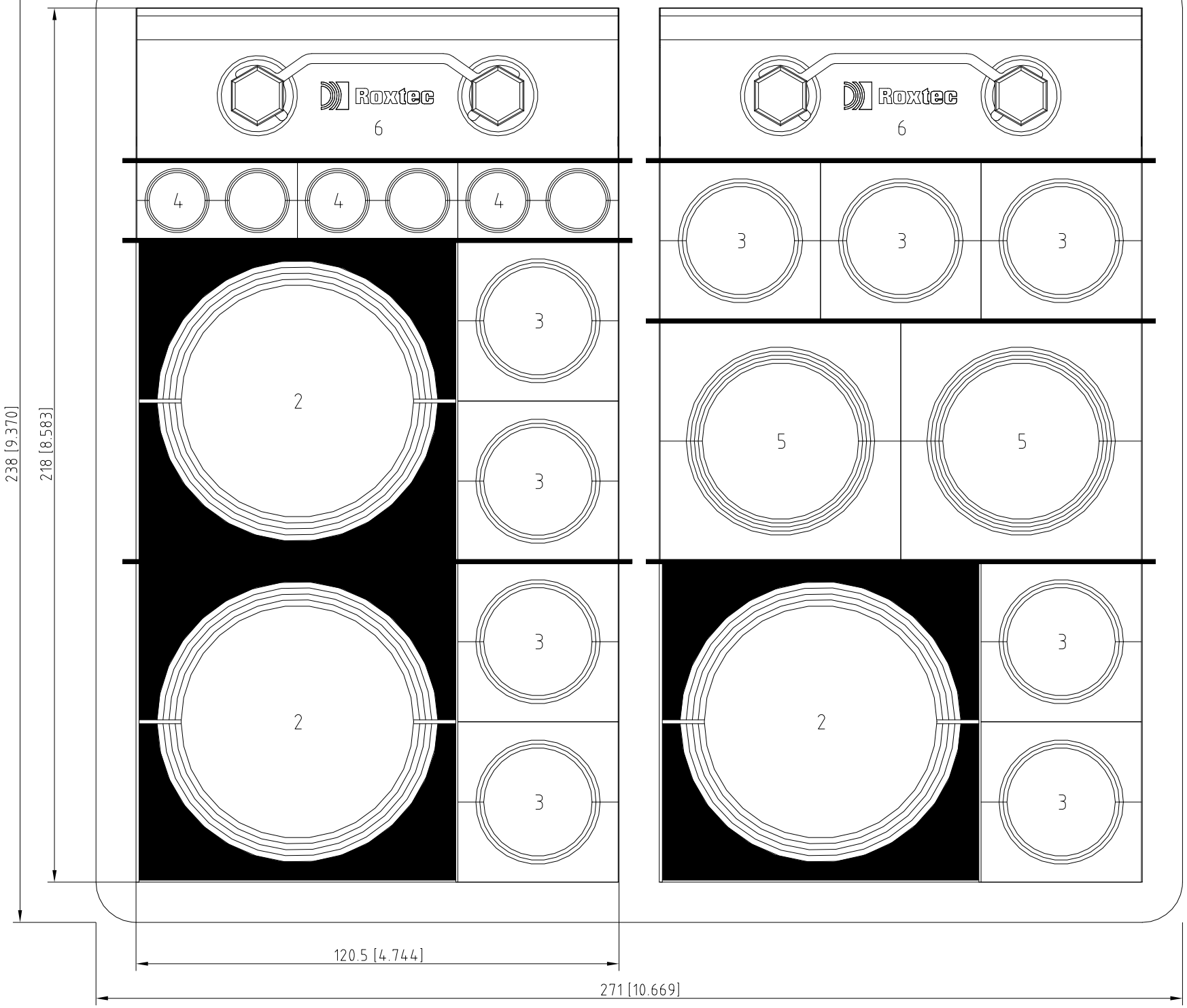
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"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]
7	6	Stayplate 120 AISI 316	ASP0001200021	0.1 [0.22]
6	2	Wedge 120 AISI 316	ARW0001201021	0.8 [1.76]
5	2	RM 60 28-54 [1.102"-2.126"]	RM00100601000	0.3 [0.73]
4	3	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
3	9	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
2	3	RM 80 48-71 [1.890"-2.795"]	5RM0000003350	0.6 [1.30]
1	1	S 6x2 AISI316	S006000000221	5.8 [12.79]

Responsible	Created Date	Modify Date	Project / Location/ Sublocation	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS	11.9 [26.24]
Roxtec	Format: NTS		Transit name: E-MCT-102	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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Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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-105	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001866		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

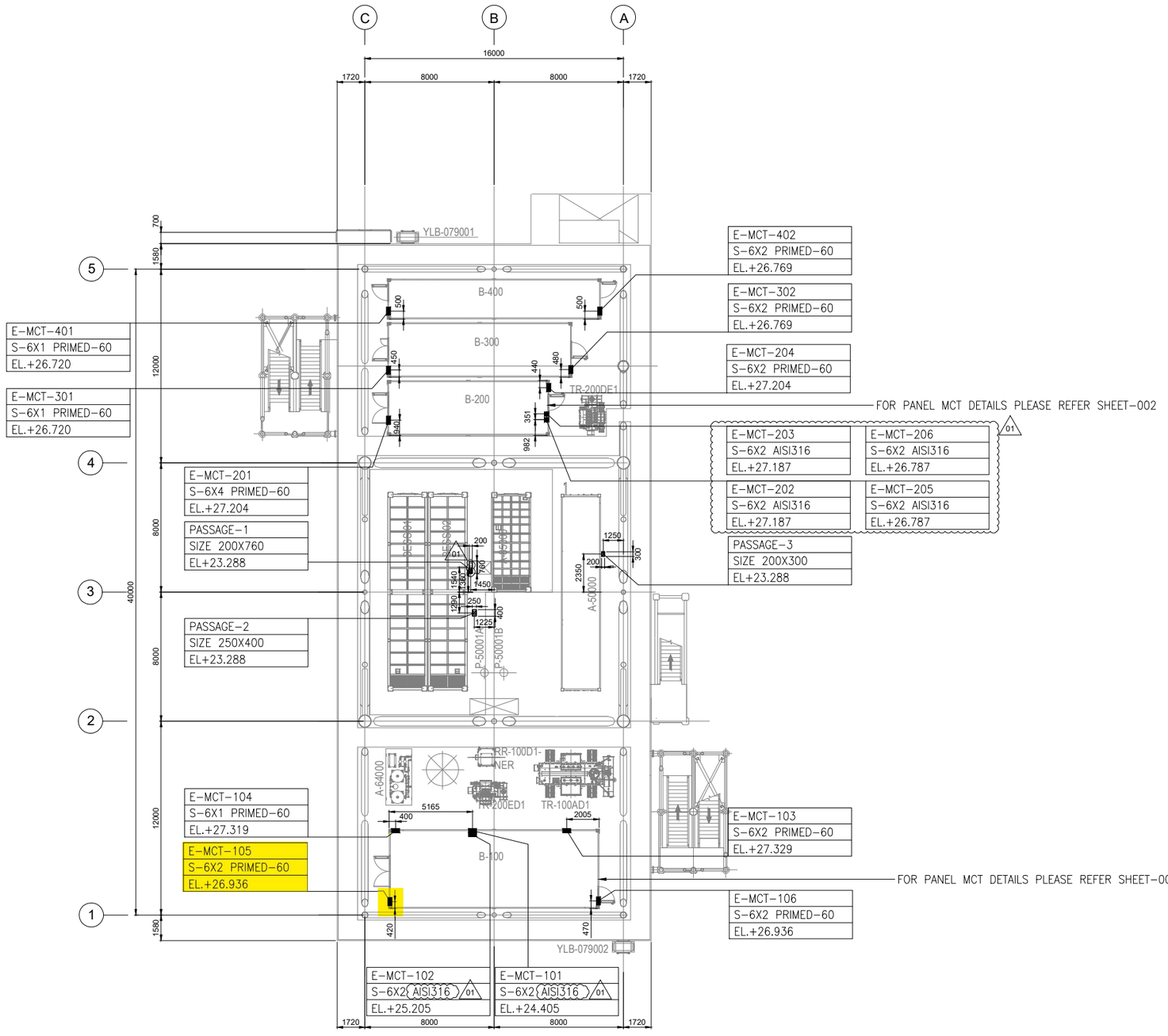
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	OK
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is 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

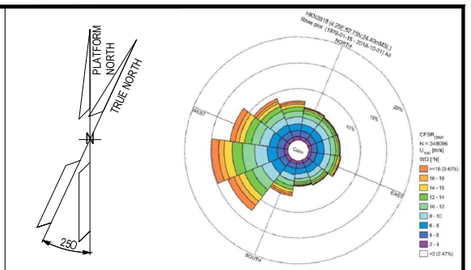
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-03	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:07:22.840Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T08:33:43.091Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

GENERAL NOTES:

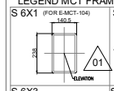
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

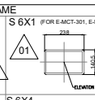
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

LEGEND MCT FRAME



LEGEND PASSAGE FRAME

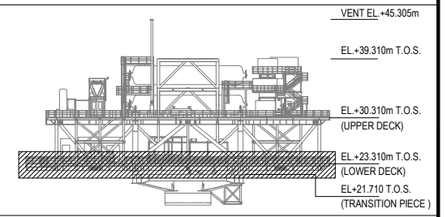


	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT
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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20115
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT 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 18/07/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20115 | SHEET 001 | REV. 01

File Name : 123A90-DDL-EL-DL-20115

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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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
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19	E-MCT-302	S 6X2 PRIMED	72
20	E-MCT-401	S 6X1 PRIMED	76
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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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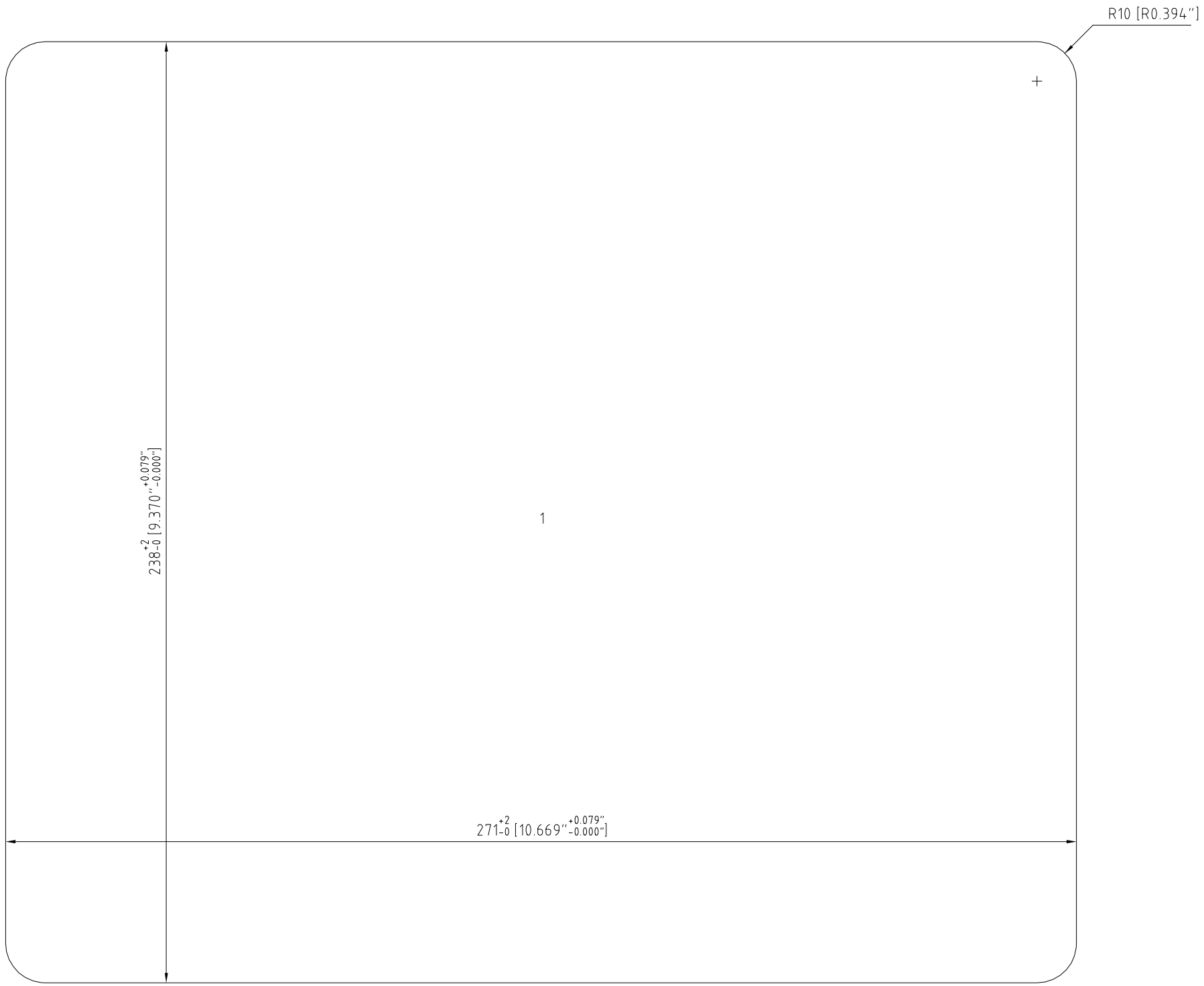
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x2 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: 12.5 [27.65]
Roxtec	Format: NTS		Transit name: E-MCT-105	Sheet No: 1/3
	Client	Drawing number		Rev

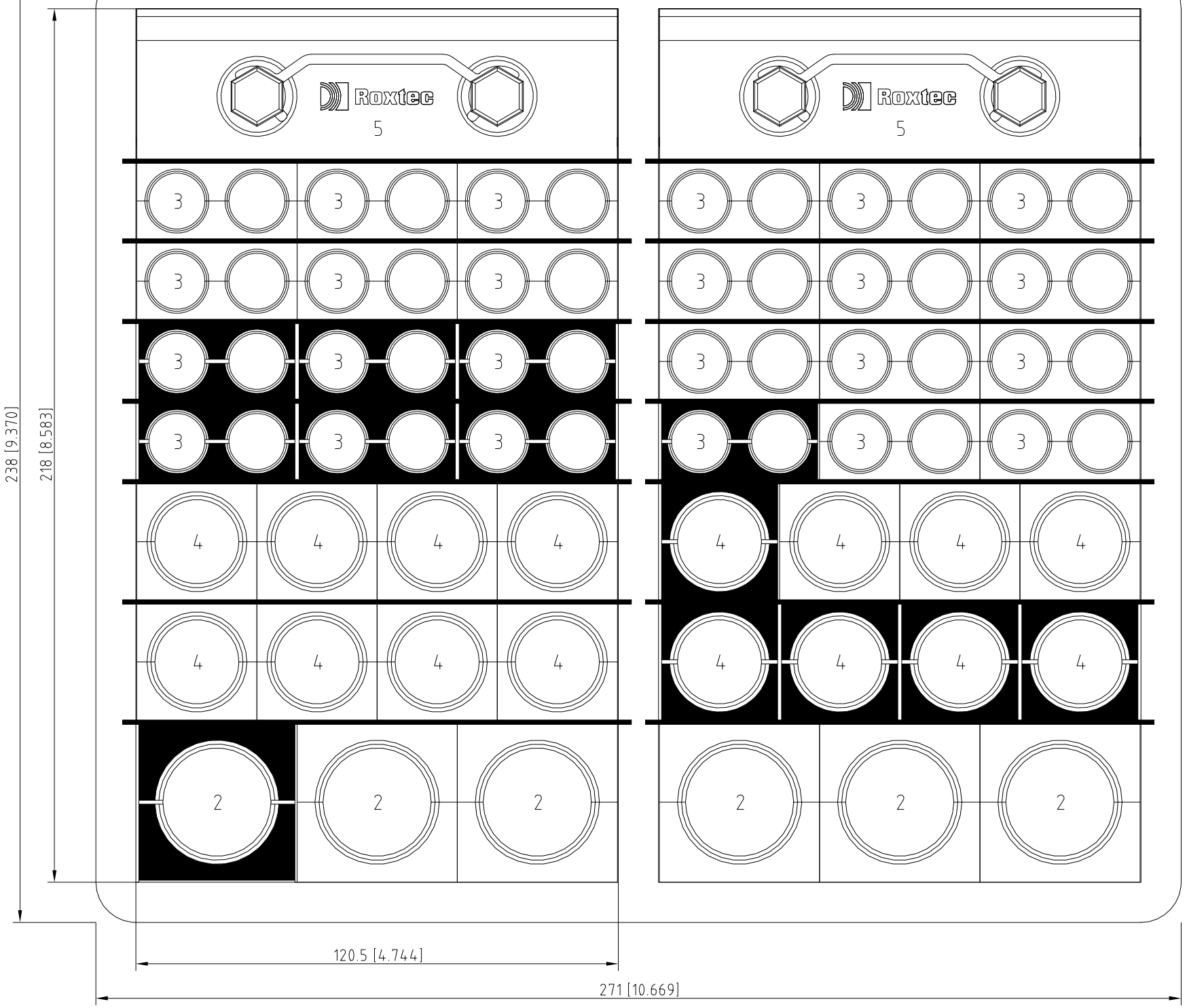
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"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	14	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	2	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	16	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
3	24	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
2	6	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
1	1	S 6x2 PRIMED	S006000000212	5.6 [12.35]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-17	BLPH - ROS Location/ Sublocation	12.5 [27.65]
Roxtec	Format: NTS		Transit name: E-MCT-105	Sheet No: 2/3
	Client	Drawing number		Rev

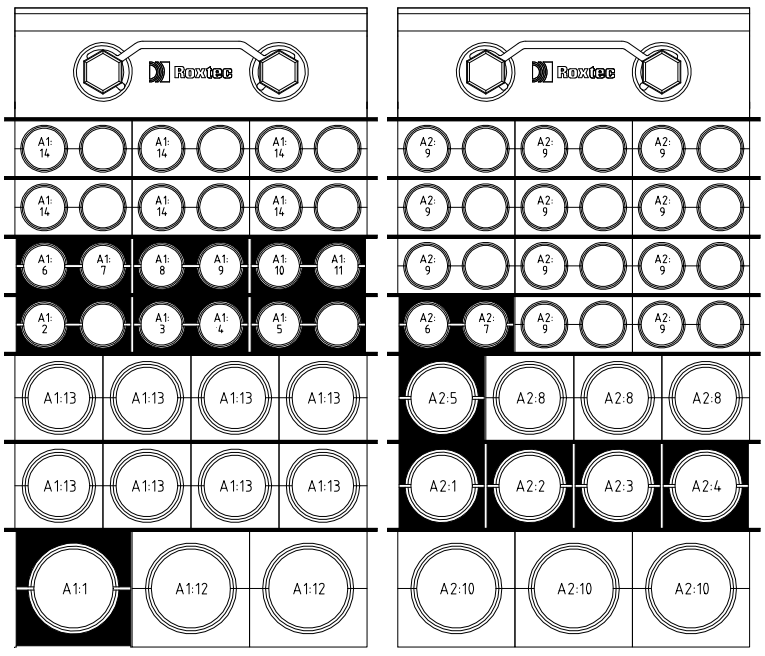
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 A2

A1 A2



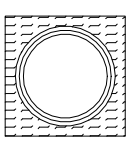
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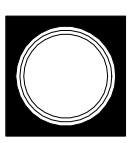
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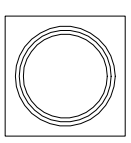
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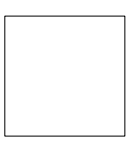
ROSETTI MARINO SpA

Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A2:10						RM 40 21.5-34.5 [0.846"-1.358"]
A2:9						RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:8						RM 30 10-25 [0.394"-0.984"]
A2:7	20001-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:6	85001-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:5	83118-CEL	Auxiliary GIS	3G6	Power	15.6 [0.614"]	RM 30 10-25 [0.394"-0.984"]
A2:4	83035-CEL	DC Battery System - Switchgears Control - Feeder B	4G16	Power	22 [0.866"]	RM 30 10-25 [0.394"-0.984"]
A2:3	83034-CEL	DC Battery System - Switchgears Control - Feeder A	4G16	Power	22 [0.866"]	RM 30 10-25 [0.394"-0.984"]
A2:2	82007-CEC	BESS UCP	4C X 4	Control	15.4 [0.606"]	RM 30 10-25 [0.394"-0.984"]
A2:1	82006-CEC	BESS UCP	4C X 4	Control	15.4 [0.606"]	RM 30 10-25 [0.394"-0.984"]
A1:14						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:13						RM 30 10-25 [0.394"-0.984"]
A1:12						RM 40 21.5-34.5 [0.846"-1.358"]
A1:11	83119-CEL	Auxiliary 6.6kV Switchboard	3G2.5	Power	13 [0.512"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:10	83124-CEL	DC BATTERY SYSTEM AUXILIARY	3G2.5	Power	13 [0.512"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:9	83015-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:8	83014-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	83013-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	83012-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5	82014-CEC	6.6KV HV Switchgear-B6	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:4	83011-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3	82013-CEC	LV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:2	82008-CEC	Solar Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:1	83023-CEL	HVAC Panels - HV Room	5G16	Power	24 [0.945"]	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	12.5 [27.65]
Roxtec	Format NTS		Transit name E-MCT-105	Sheet No 3/3
	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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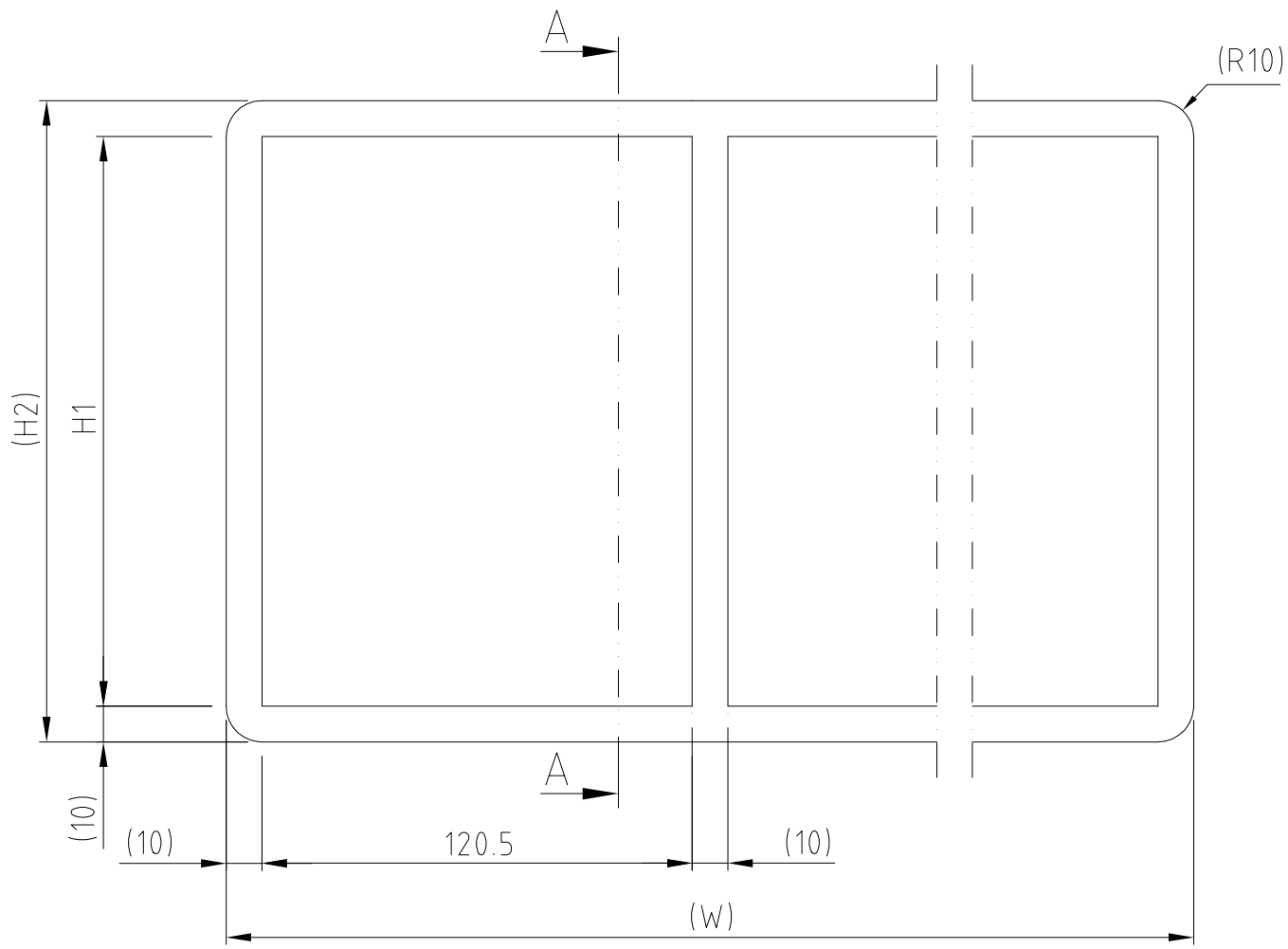
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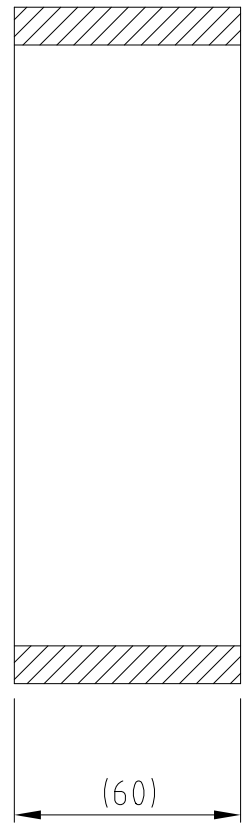
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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-106	: Multi Cable Transit			Dwg	123A90-DDL-EL-DL-20115
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100_Ext
TASK	code	C10001867		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX29 MCT Penetration Electrical

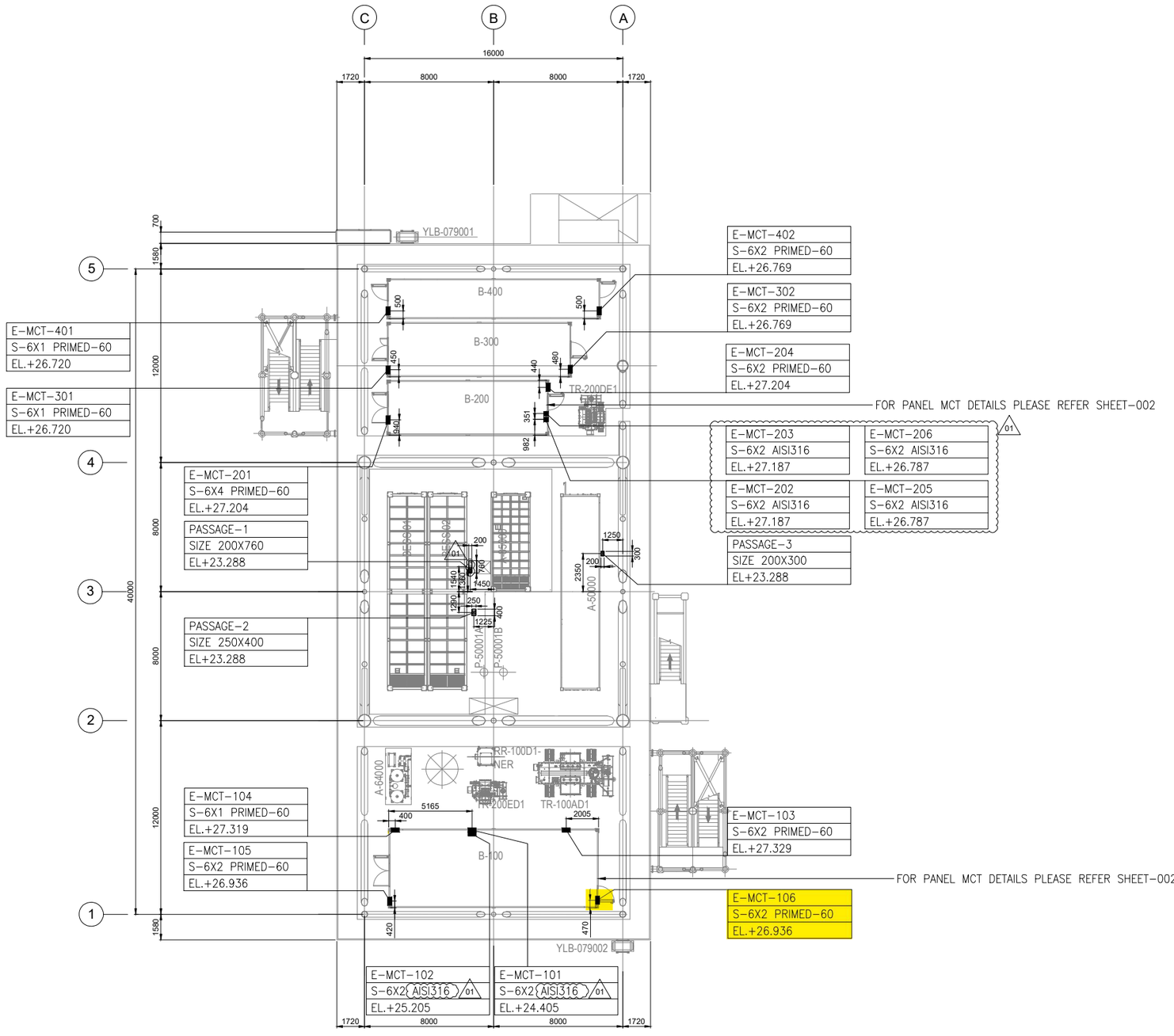
1	Check that MCT's conforms to revision and specification.	OK
2	Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment.	PL
3	Check MCT's is properly tagged, on both side of penetration	PL
4	Check the cable arrangement in MCT's is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

Comments:

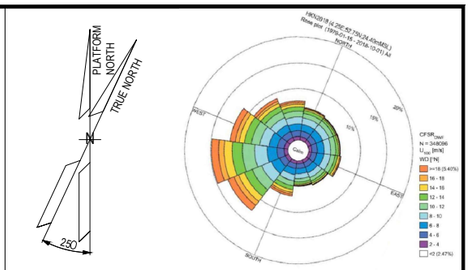
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-03	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:07:36.530Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T08:55:16.261Z	

DRAWING NO. 123A90-DDL-EL-DL-20115

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

GENERAL NOTES:

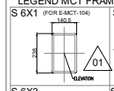
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

NOTES:

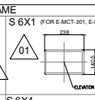
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

LEGEND

LEGEND MCT FRAME



LEGEND PASSAGE FRAME

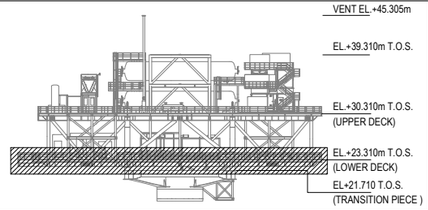


	HEIGHT in mm	WIDTH in mm
PASSAGE-1	100	300
PASSAGE-2	150	200
PASSAGE-3	100	200

MULTI CABLE TRANSIT
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-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK
123A90-DDL-EL-DD-20095	MCT COMPOSITION
123A90-DDL-EL-DL-20114	ELECTRICAL MCT LAYOUT-TOP DECK
123A90-DDL-EL-DL-20116	ELECTRICAL MCT LAYOUT- BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL MCT 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 18/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20115	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20115
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
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File Name : 123A90-DDL-EL-DL-20115

INDEX

Sl.No.	TITLE	TYPE	Page No.
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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
12	E-MCT-201	S 6X4 PRIMED	43
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14	E-MCT-203	S 6X2 **AISI316**	52
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	TOP DECK MCT		84
22	E-MCT-U02	S 6X2 **Ex** PRIMED	85
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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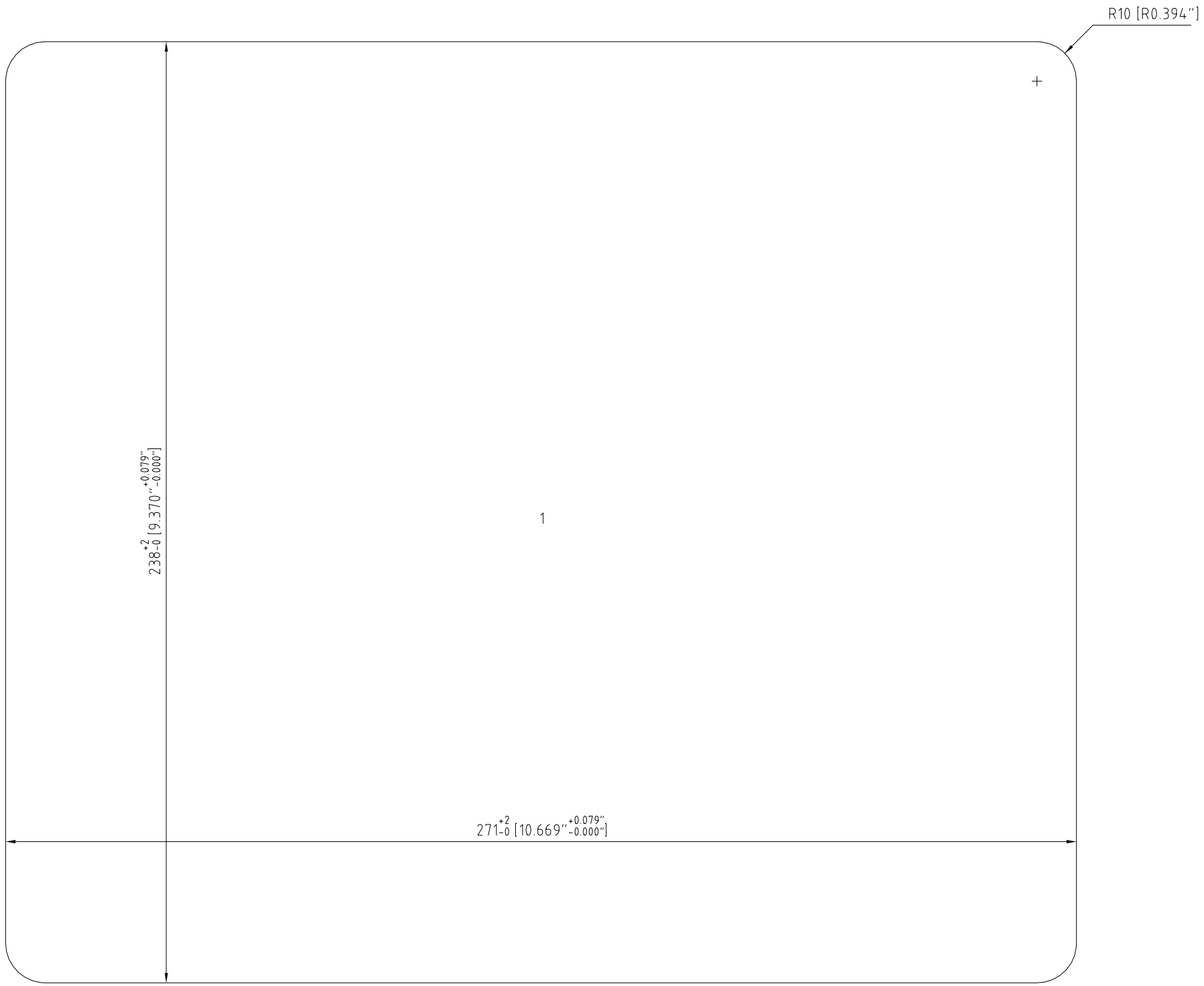
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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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Cutout Detail

Frame: S 6x2 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: 12.7 [27.91]
Roxtec	Format: NTS		Transit name: E-MCT-106	Sheet No: 1/3
	Client	Drawing number		Rev

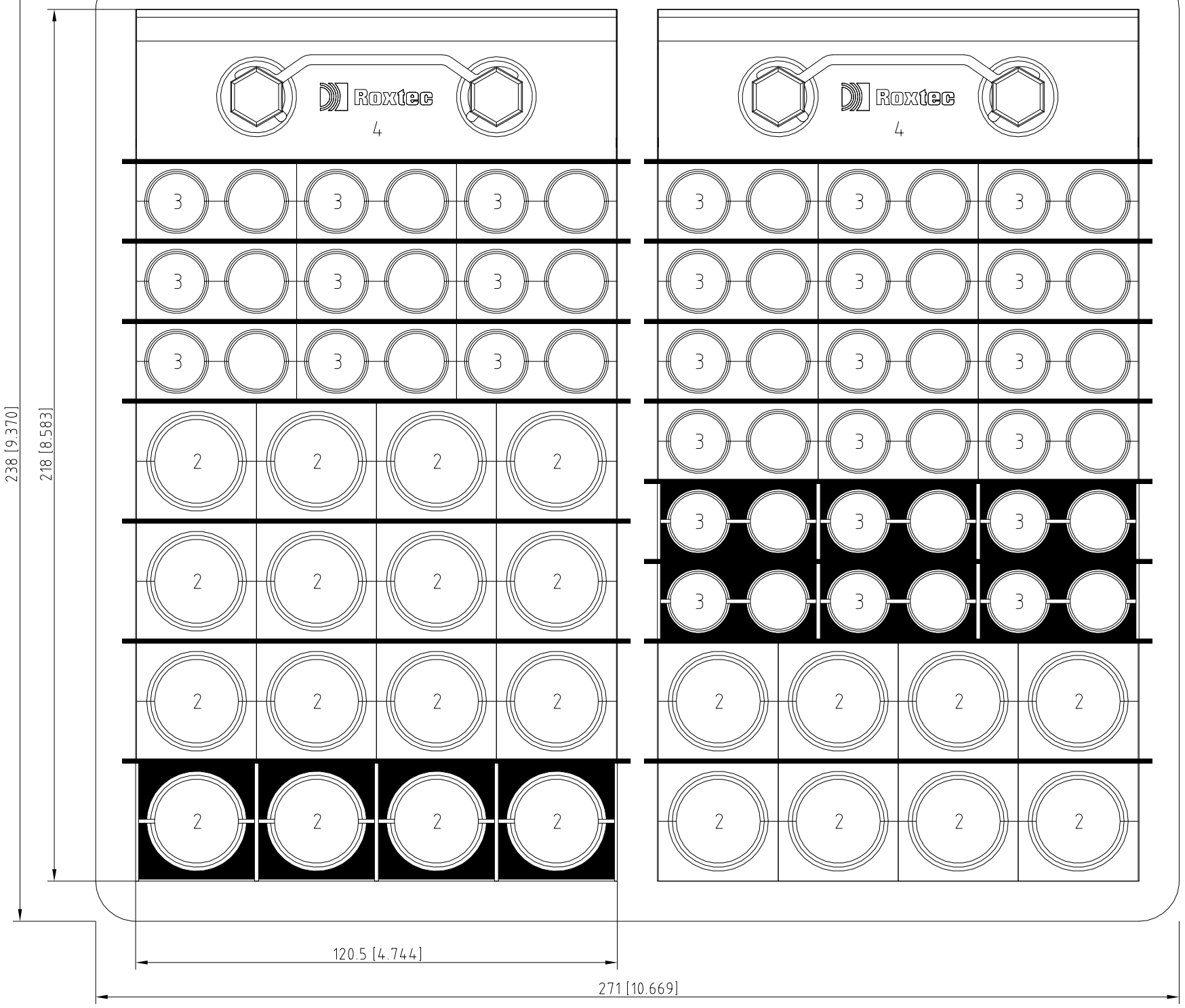
RTD Version No: 4.37.4.0

CUTOUT TO FIT SOLUTION WELDING, 271x238 [10.669"x9.370"]

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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]
5	15	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
4	2	Wedge 120 galv	ARW0001201018	0.8 [1.76]
3	27	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
2	24	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
1	1	S 6x2 PRIMED	S006000000212	5.6 [12.35]

Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	12.7 [27.91]
Roxtec	Format NTS		Transit name E-MCT-106	Sheet No 2/3
	Client		Drawing number	Rev

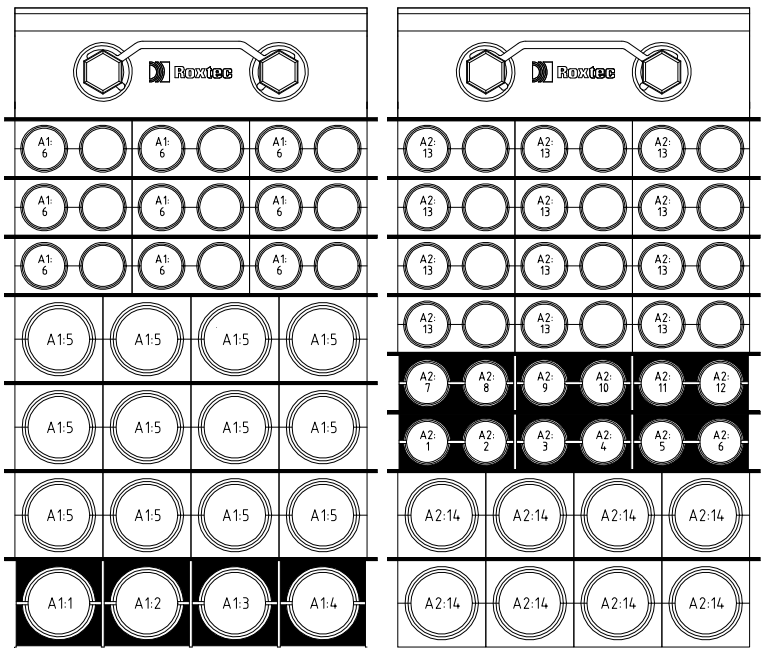
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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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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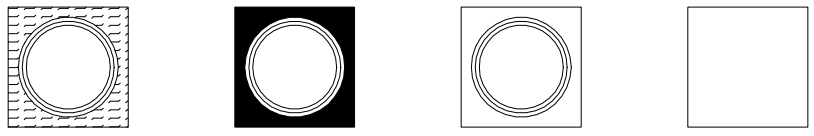
VALID FOR CONSTRUCTION

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

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

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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A2:14						RM 30 10-25 [0.394"-0.984"]
A2:13						RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:12	83006-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:11	83005-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:10	83004-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:9	83003-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:8	83002-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:7	83001-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:6	81008-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:5	81007-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:4	81006-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:3	81005-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:2	81004-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:1	81003-CEC	6.6KV HV Switchgear	7C X 1.5	Control	13.5 [0.531"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5						RM 30 10-25 [0.394"-0.984"]
A1:4	84314-CEL	UCP - HVAC HV Room	3G2.5	Power	15.5 [0.610"]	RM 30 10-25 [0.394"-0.984"]
A1:3	82002-CEC	66/6.6 kV, 7MVA Transformer	4C X 4	Control	15.4 [0.606"]	RM 30 10-25 [0.394"-0.984"]
A1:2	81002-CEC	6.6KV HV Switchgear	4C X 4	Control	15.4 [0.606"]	RM 30 10-25 [0.394"-0.984"]
A1:1	81001-CEC	LCP GIS	4C X 4	Control	15.5 [0.610"]	RM 30 10-25 [0.394"-0.984"]



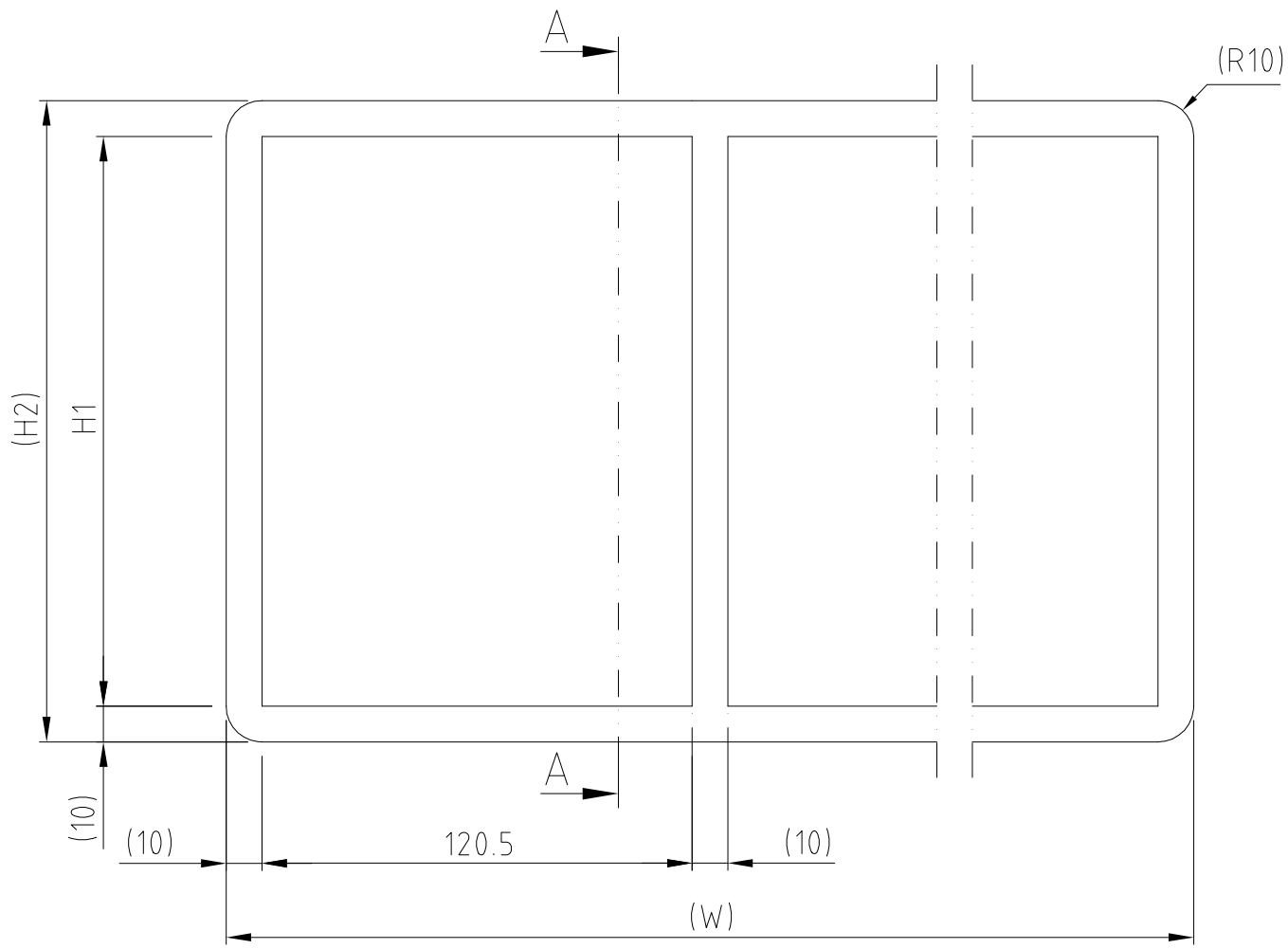
Responsible	Created Date	Modify Date	Project	TotWeight
ARNESH	2024-07-10	2024-07-10	BLPH - ROS Location/ Sublocation	12.7 [27.91]
Roxtec	Format NTS		Transit name E-MCT-106	Sheet No 3/3
	Client	Drawing number		Rev

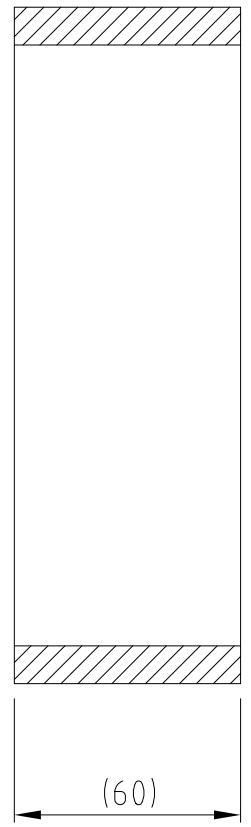
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20095**

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

ROSETTI MARINO SpA

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A - A

TYPE	H1 (mm)	H2 (mm)
S 2xN	101	121
S 4xN	159.5	179.5
S 6xN	218	238
S 8xN	278	298

COMB.	W (mm)
x2	271
x3	401.5
x4	532
x5	662.5
x6	793
x7	923.5
x8	1054
x9	1184.5
x10	1315

Rev	Type of revision	Date	Sign
B	NEW LAYOUT/TITLE BLOCK/MORE COMB. ADDED	2006-12-21	AN KARLSSON

Item	Qty	Designation	Specification	NetWeight

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

Designed by: J HELLKVIST	Date: 2003-11-03	General tolerance: DIN ISO 2768-1/2-m/K, DIN ISO 13920-BF	Welded details: EN ISO 5817-B, EN ISO 10042-B	General surface roughness, Ra 12,5	TotWeight: –
Checked by: S MILTON	Format: A3	Title: S FRAME COMBINATION FRAME			Projection method
Approved by: S MILTON	Scale: 1:2				
Restricted due to: INFORMATION DRAWING	Drawing number: S1005519				Rev: B

Row	DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT Feature	Required	Manufacturer Proposal	Comments	Rev.
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_B100_ELE_LV	: Cable Tray B100 - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20111
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002276		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

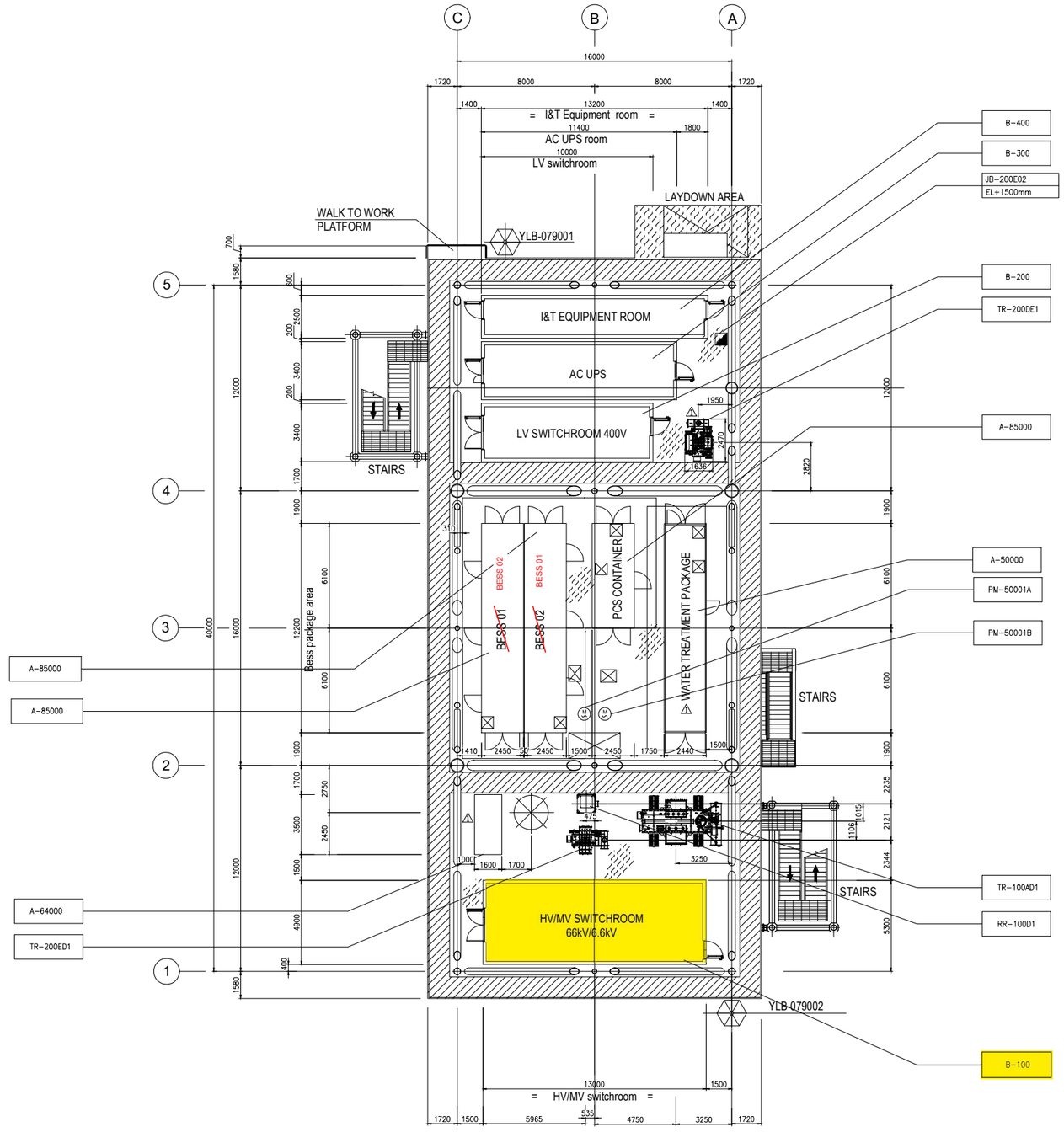
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for 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	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

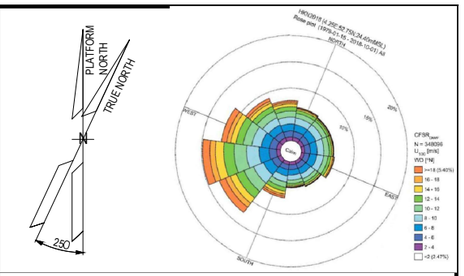
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-10-16	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-16T13:07:30.163Z	Firma Digitale Sicura Paolo Schintu 2024-10-16T16:20:22+0200	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

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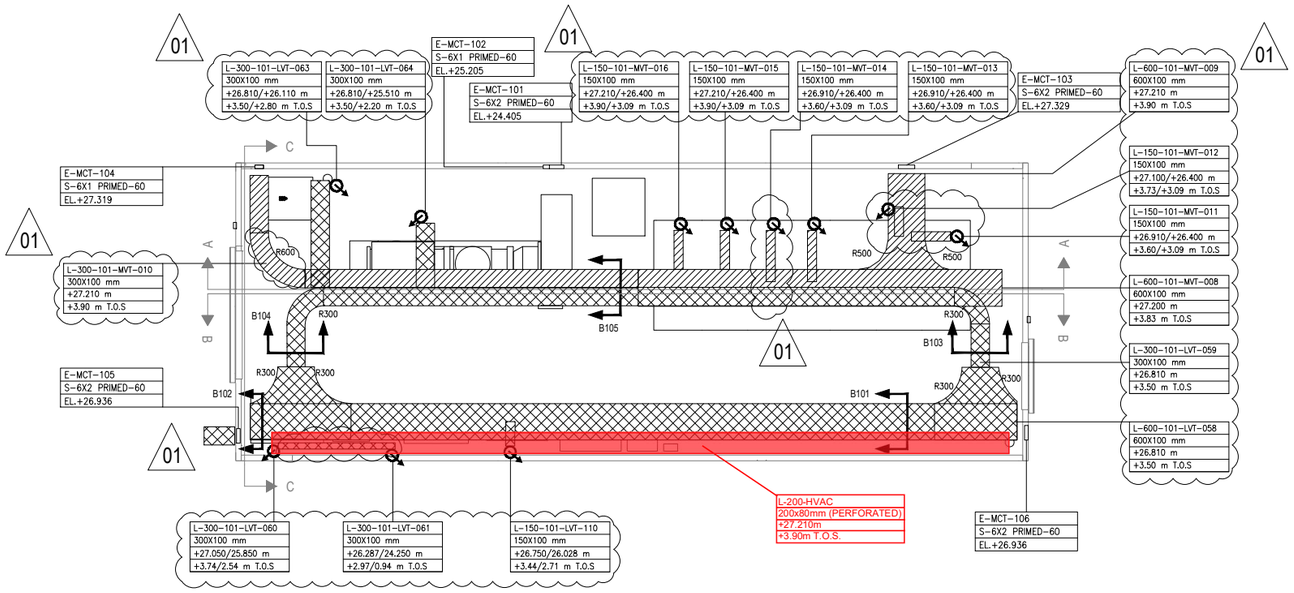
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

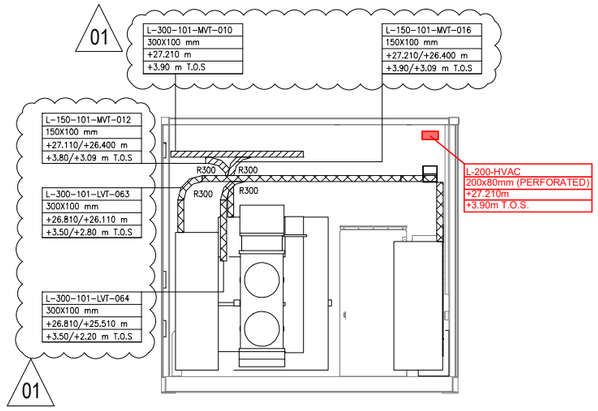
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

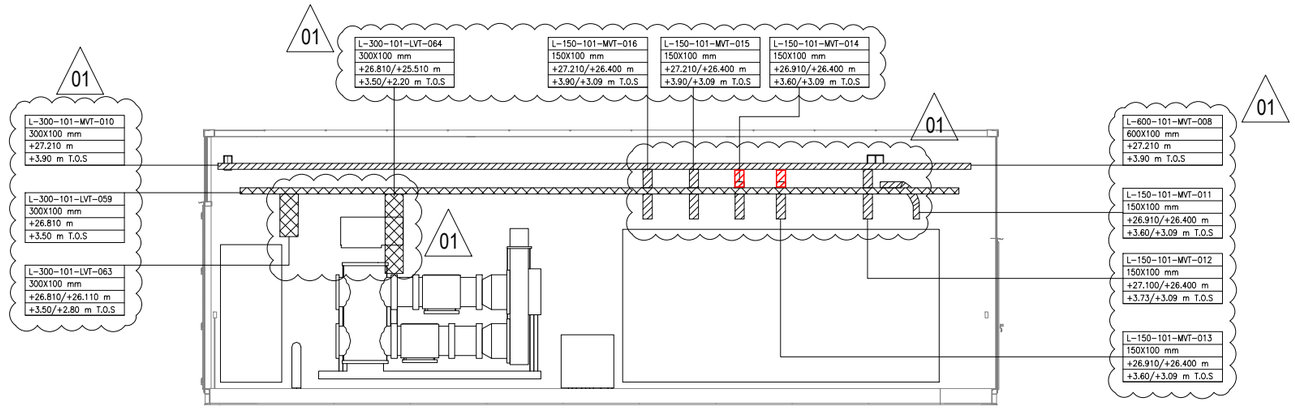
DRAWING NO. 123A90-DDL-EL-DL-20111

REV. 01

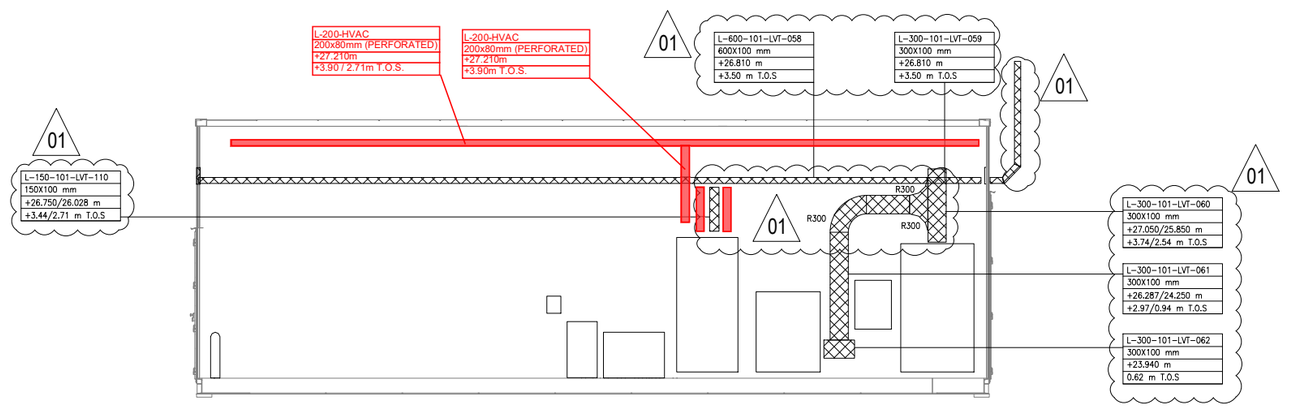




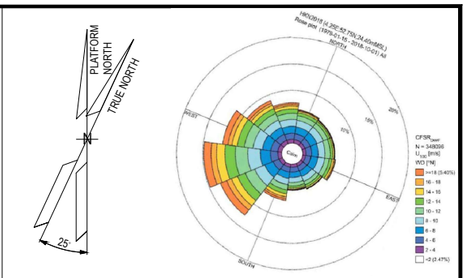
Section C-C



Section A-A



Section B-B



NOTES

1. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
2. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
3. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
4. FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20122 AND 1724000049-AR-DD-00018.
5. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
6. ELEVATIONS REFER TO T.O.S. (EL+23.310 m).
7. FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

LEGEND

ELECTRICAL 6.6 KV CABLE LADDER

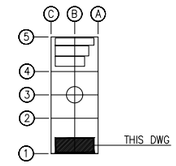
ELECTRICAL LV CABLE LADDER

ELECTRICAL CABLE LADDER (VERTICAL DROP)

E-MCT-106 — TAG
S-6X2 PRIMED-60 — SIZE
EL.+26.936 — ELEVATION

TAG
SIZE
ELEVATION
ELEVATION(T.O.S)

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DL-20122	LIGHTING & SOCKET LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DD-20095	MCT COMPOSITION
1724000049-AR-DD-00018	B-100 DETAILED DRAWING - E&I SHELTERS
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	26/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20111**

REV.:	DATE:	SIGNATURE:
1_C	06/09/24	G.Randi

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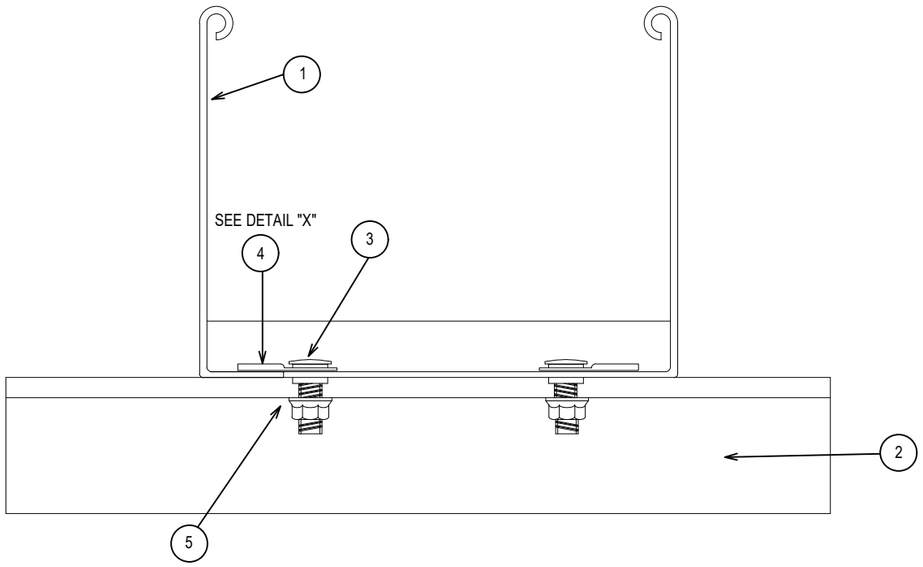
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLE ROUTING LAYOUT
HV SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 02/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20111	SHEET 1of6	REV. 01

File Name : 123A90-DDL-EL-DL-20111

CABLE LADDER FIXING ON FRP RACK

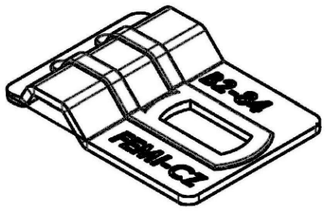
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

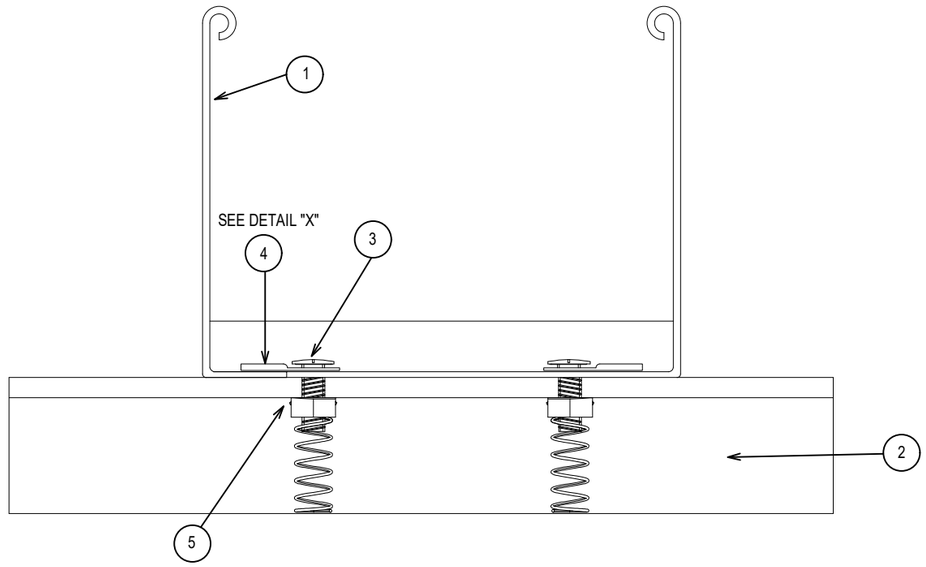
LF

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_D	06/09/24	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

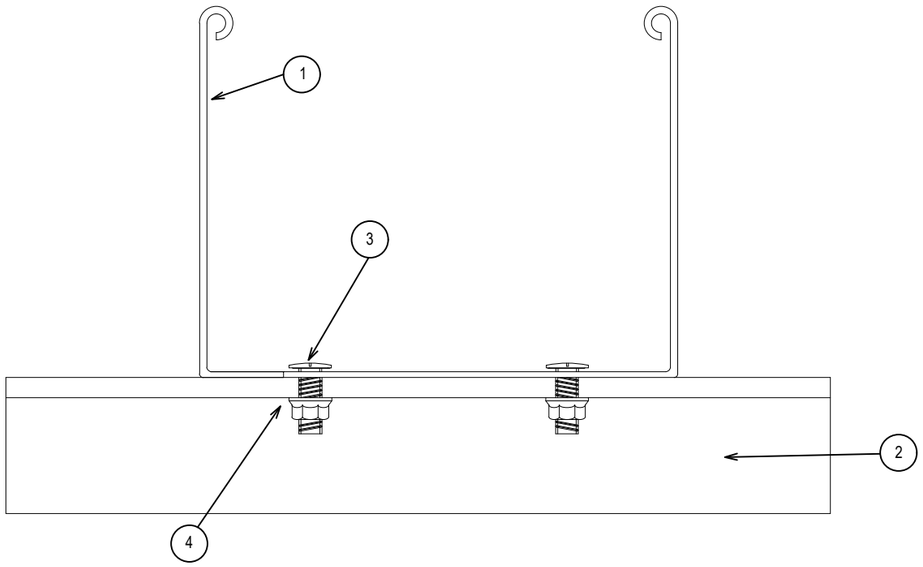
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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	

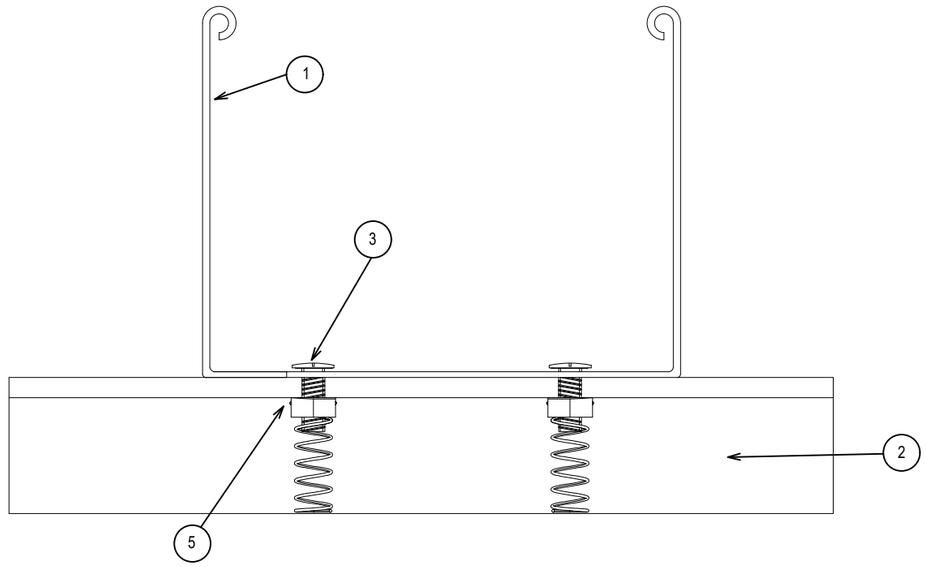


TYPICAL

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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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

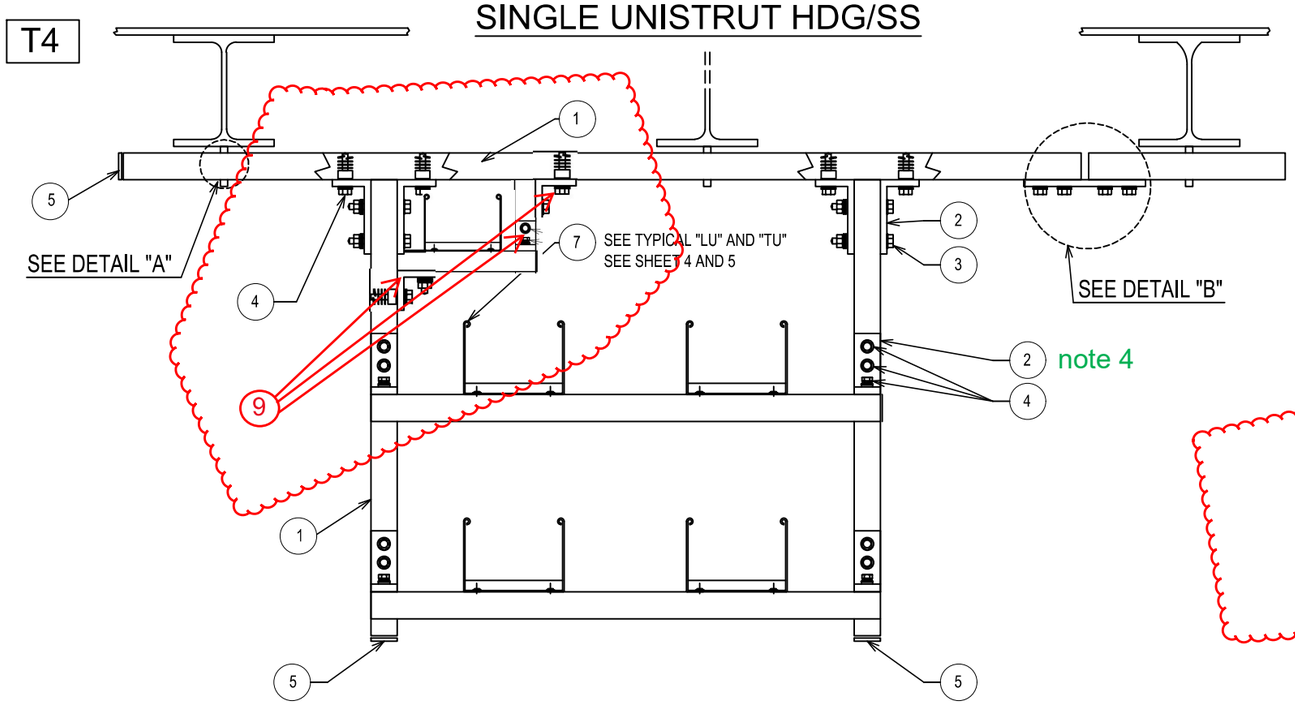
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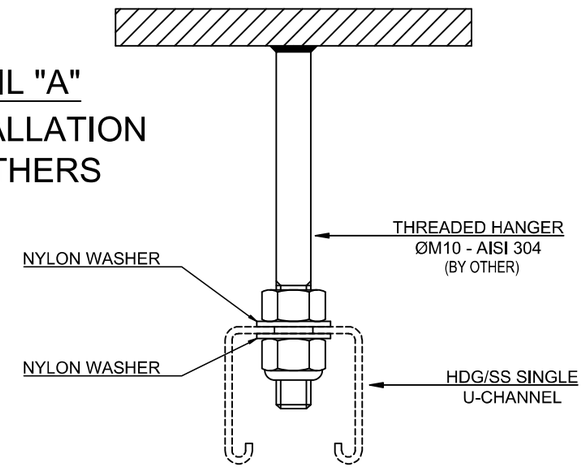
T4

SINGLE UNISTRUT HDG/SS

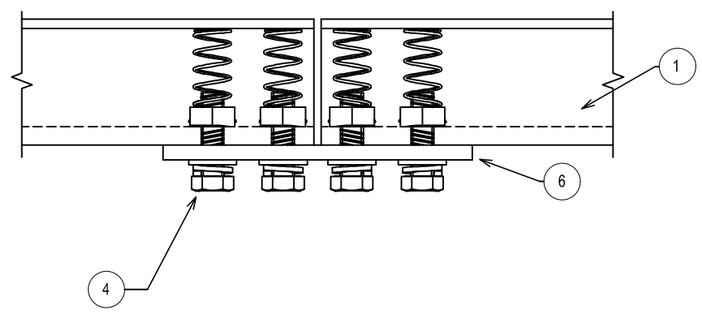


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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 FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

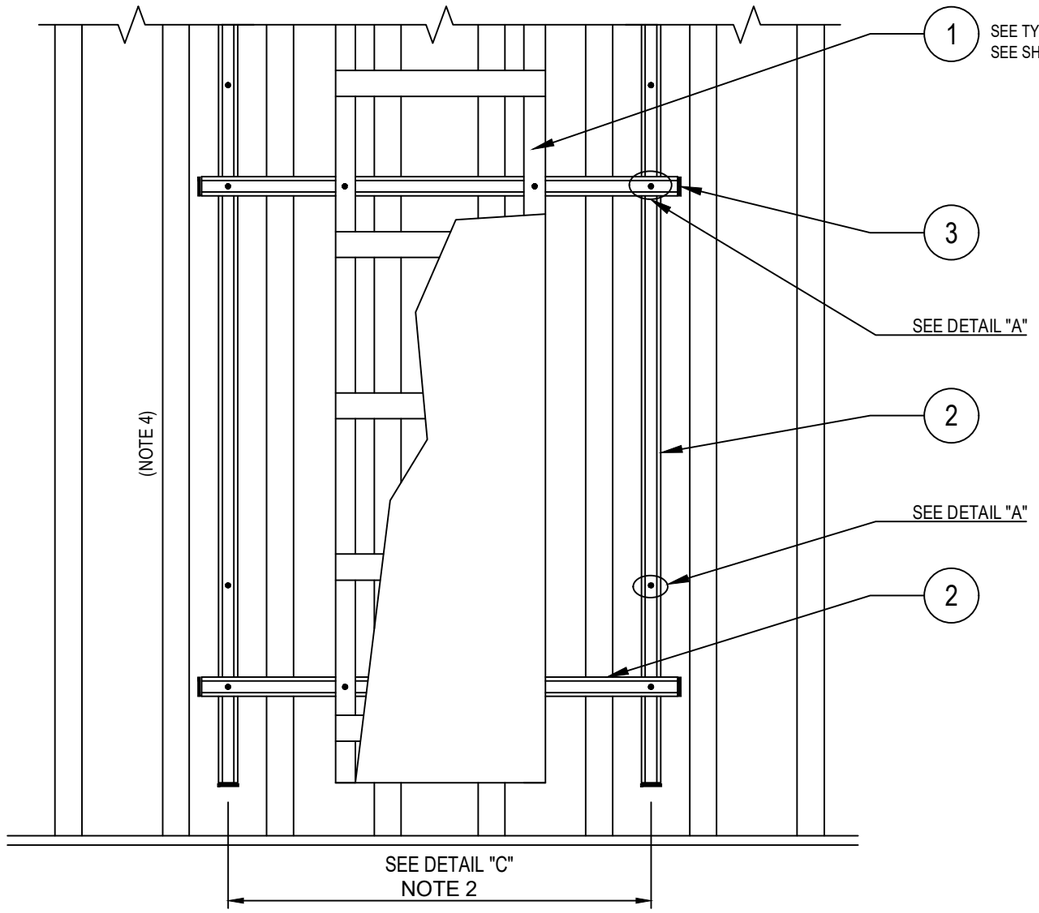
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 009 | REV. 02

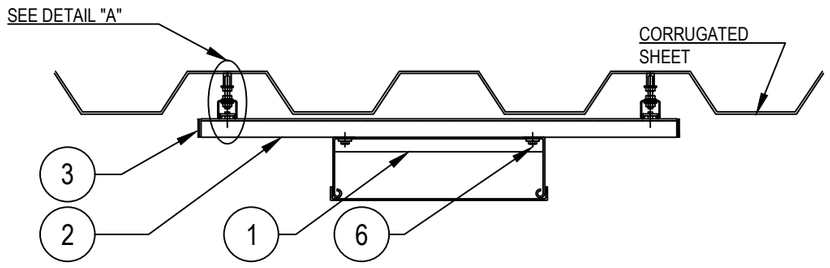
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File Name : 123A90-DDL-EL-DD-20093_02.DWG

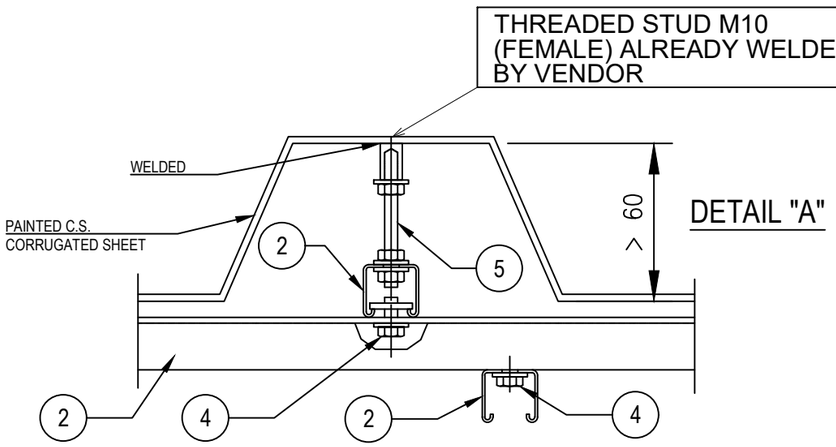
T7



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_D	06/09/24	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

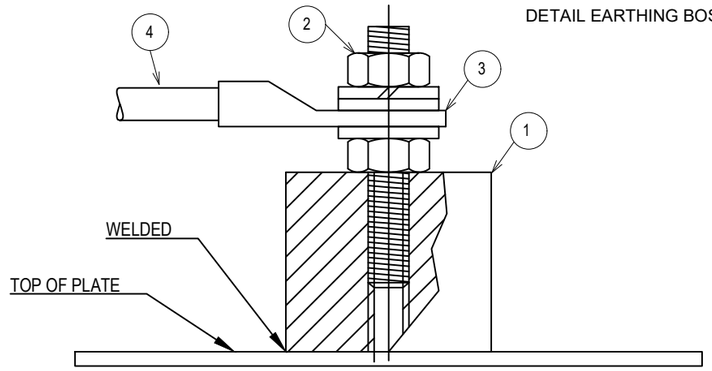
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

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

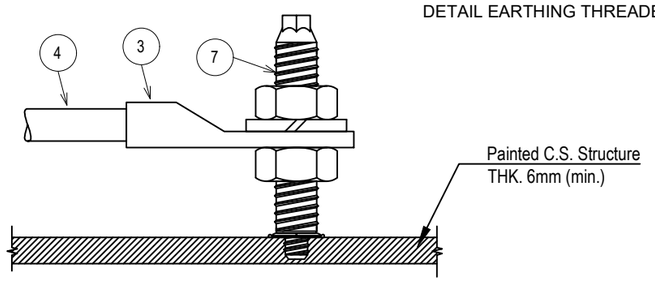


E11D

SEE NOTE 6

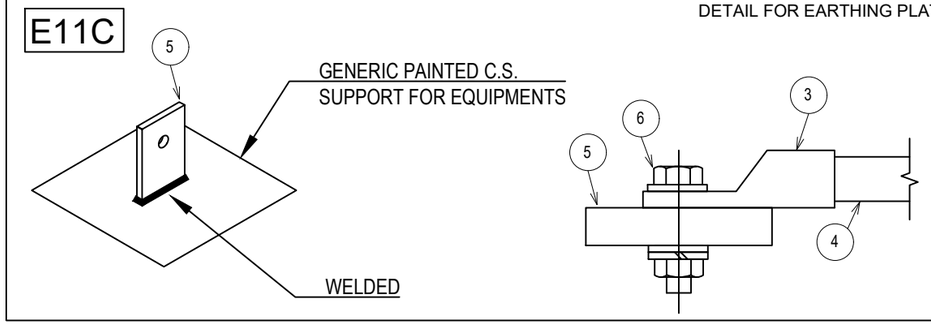
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

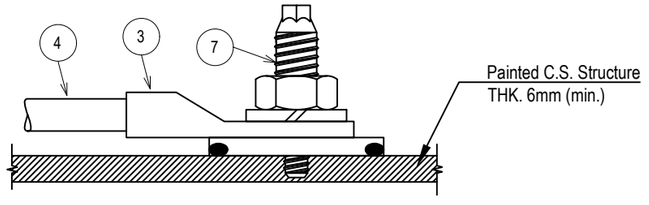


E11E

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_E	09/10/24	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

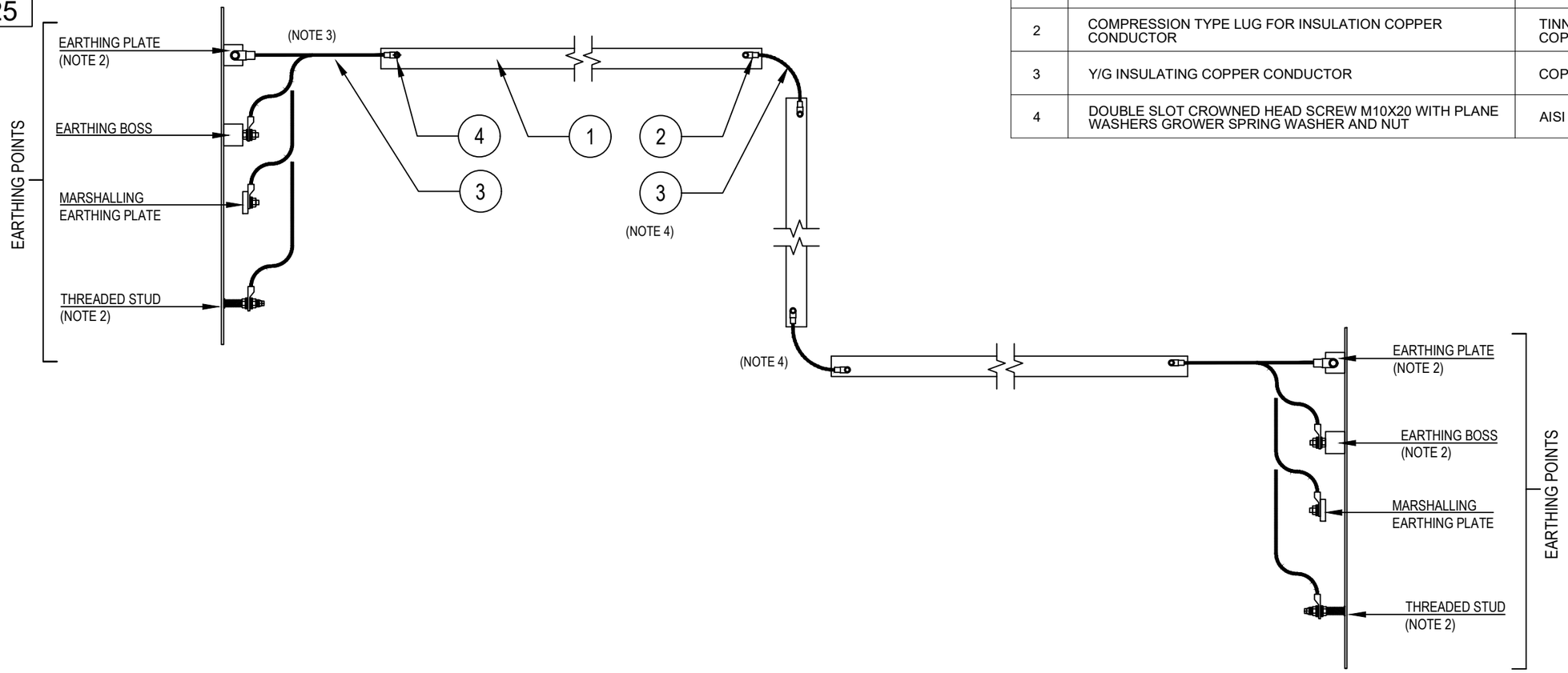
SHEET 003

REV. 02

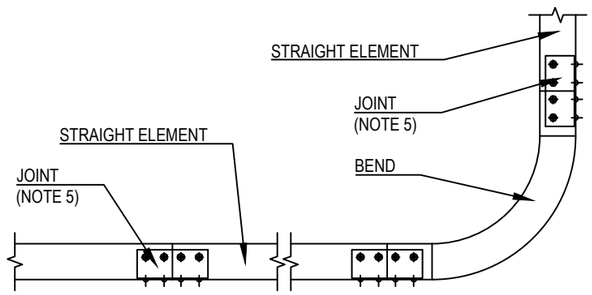
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

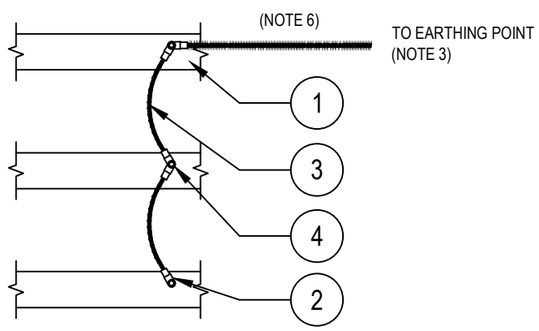
E25



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_E	09/10/24	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

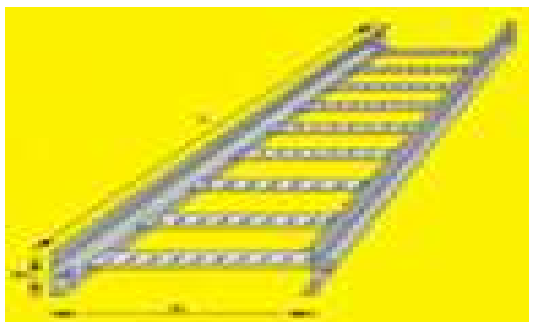
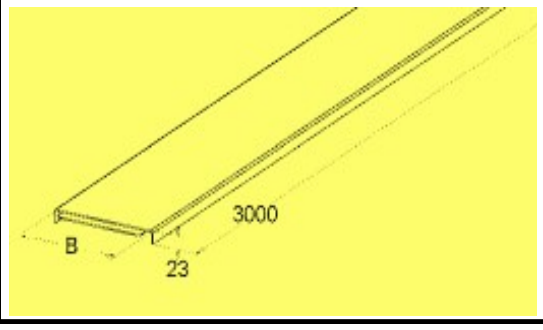
F.to UNI A3: 420mmx297mm

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:**

48

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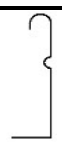
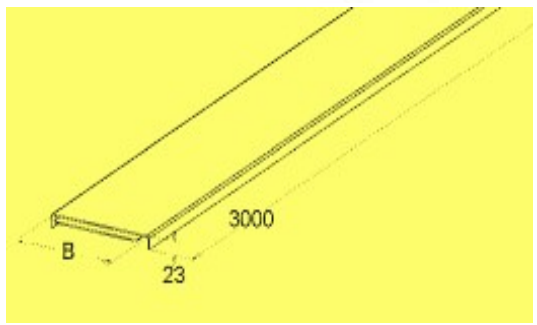
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55

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

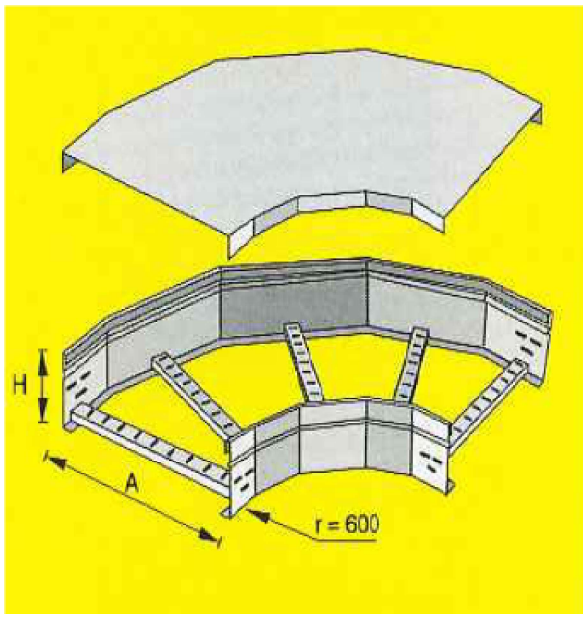
NOTES:

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		
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48		
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51 **NOTES:**

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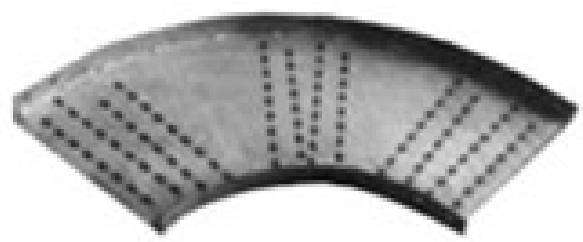
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		
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49		
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51 **NOTES:**

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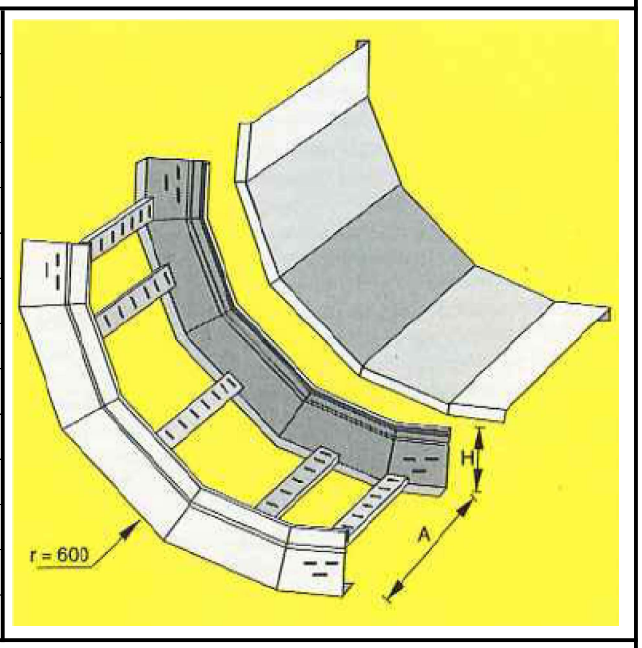
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

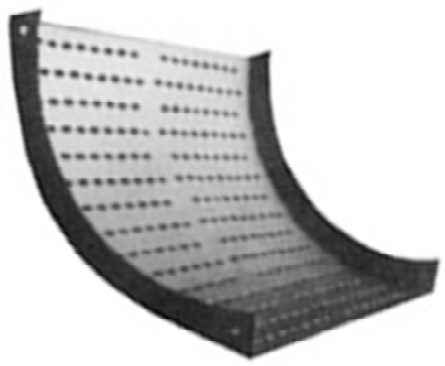
50 **NOTES:**

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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		
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47		
48		
49		

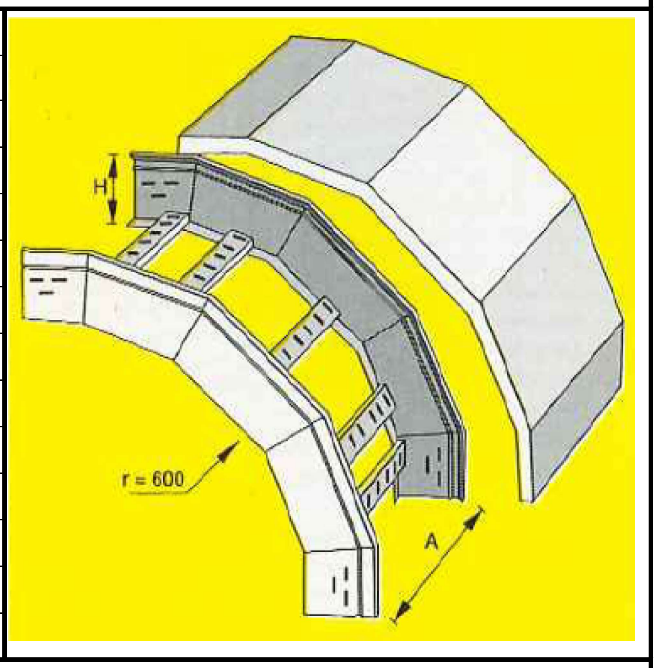
50 **NOTES:**

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 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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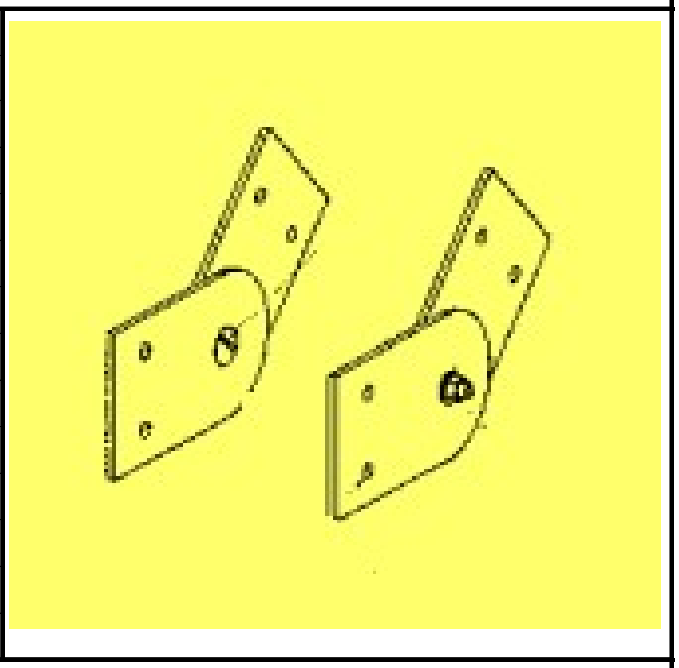
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

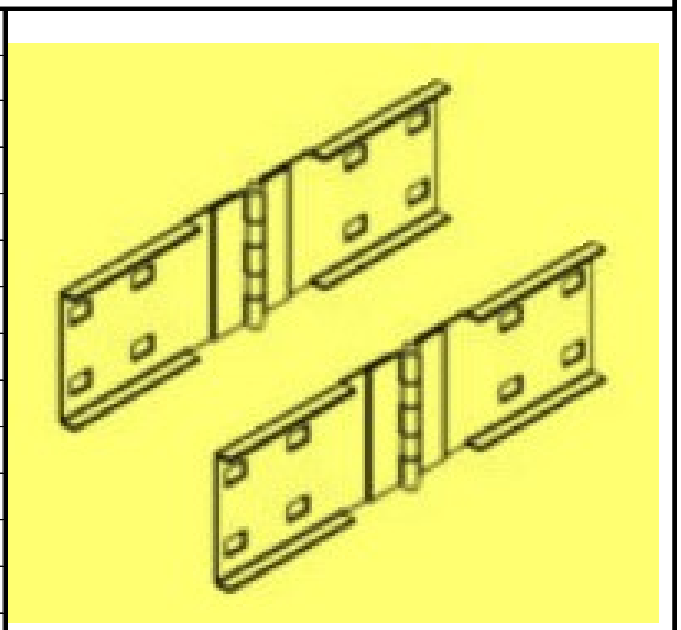
	CODE	REMARKS
28		
29		
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NOTES:

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					

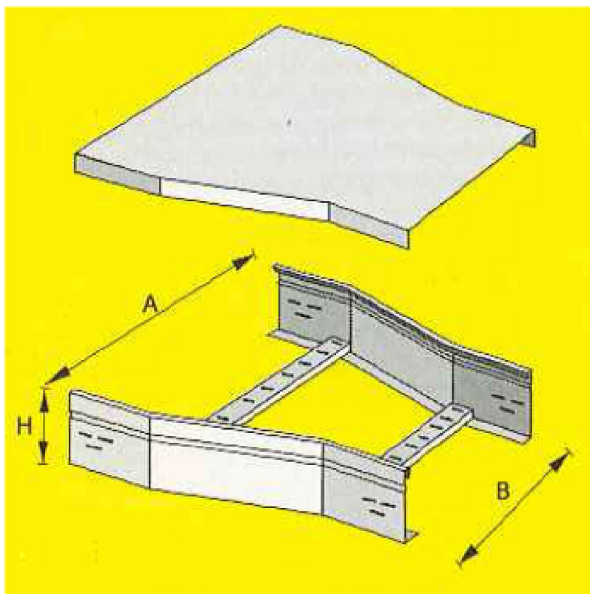
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
34		
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36		
37		
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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:**

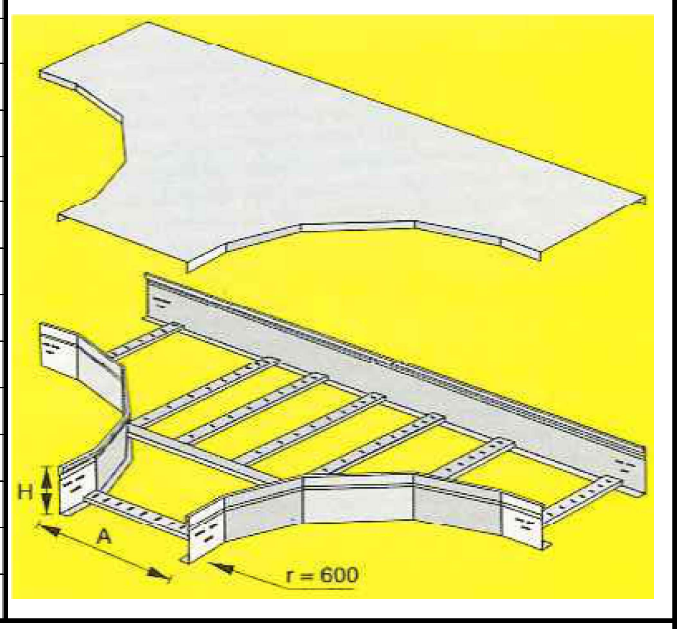
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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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41		
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50 **NOTES:**

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ITEM	Tag	CABLE_TRAY_B100_ELE_LV	: Cable Tray B100 - Electrical (Low Voltage)			Dwg	123A90-DDL-EL-DL-20111
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002277		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30B
							Cable Tray/Ladder After pulling

AFTER PULLING

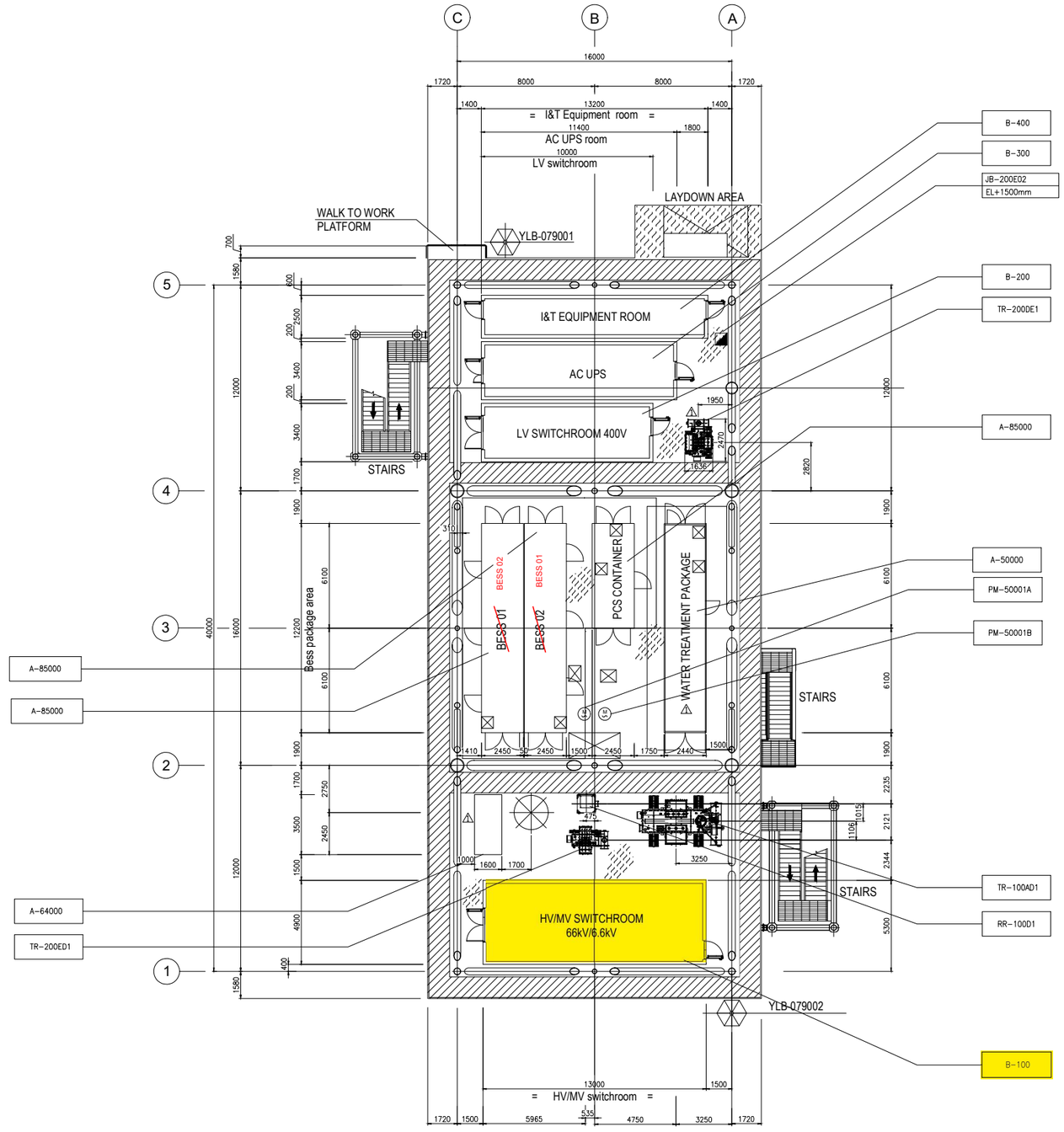
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	NA
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

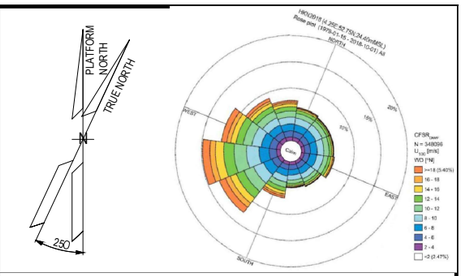
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-25	
Signature	Digitaly signed by Michele Tartaglia 2025-01-25T10:38:56.334Z	Digitaly signed by Paolo Schintu 2025-01-25T11:24:27.307Z	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

ROSETTI MARINO SpA

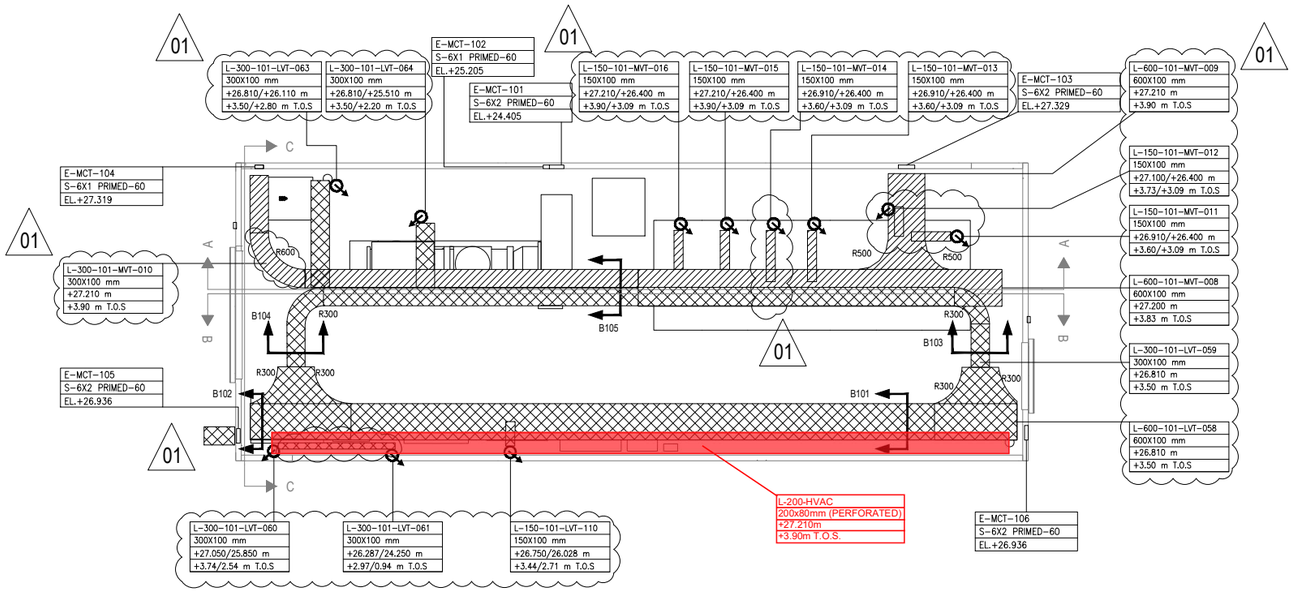
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

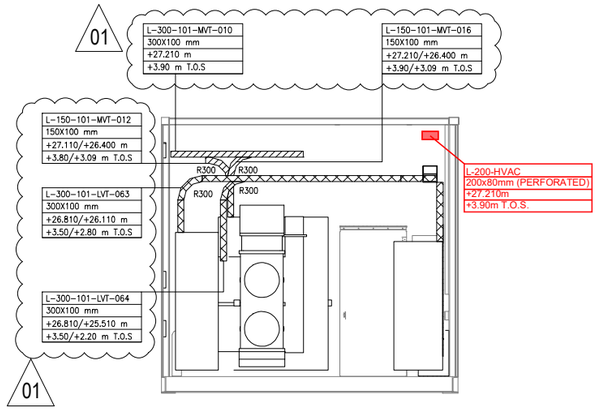
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

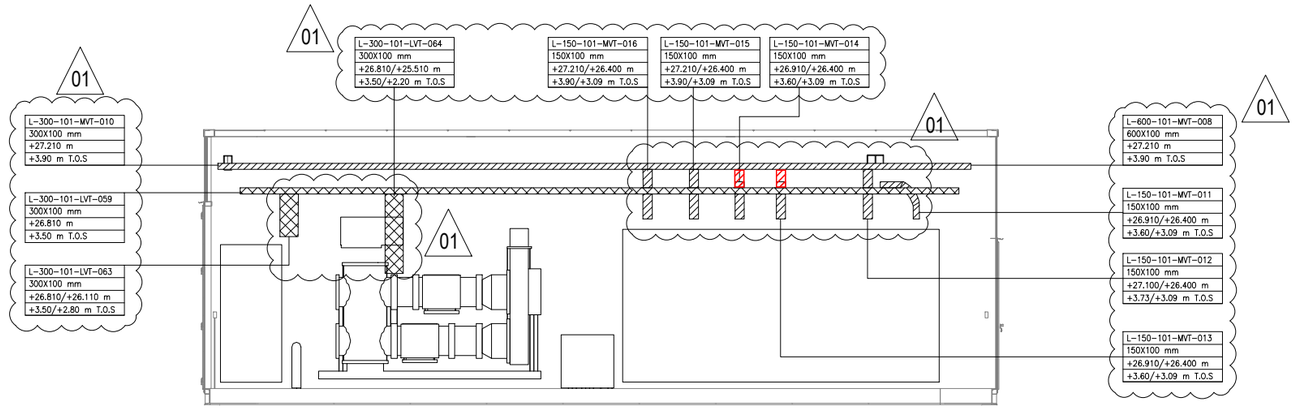
DRAWING NO. 123A90-DDL-EL-DL-20111

REV. 01

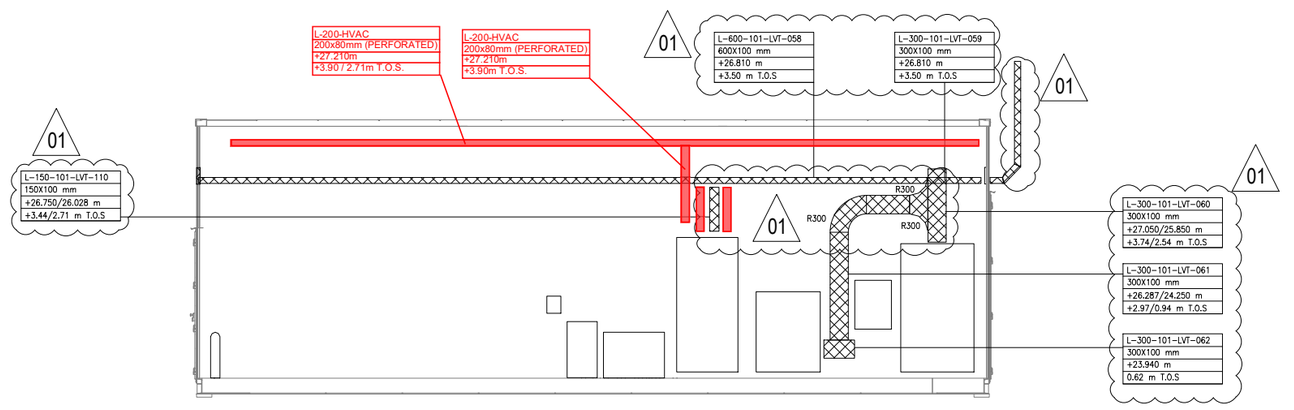




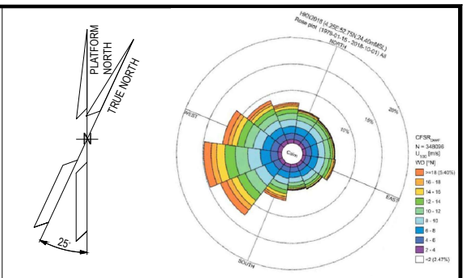
Section C-C



Section A-A



Section B-B



NOTES

1. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
2. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
3. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
4. FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20122 AND 1724000049-AR-DD-00018.
5. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
6. ELEVATIONS REFER TO T.O.S. (EL+23.310 m).
7. FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

LEGEND

ELECTRICAL 6.6 KV CABLE LADDER

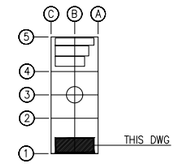
ELECTRICAL LV CABLE LADDER

ELECTRICAL CABLE LADDER (VERTICAL DROP)

E-MCT-106 — TAG
S-6X2 PRIMED-60 — SIZE
EL.+26.936 — ELEVATION

TAG
SIZE
ELEVATION
ELEVATION(T.O.S)

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DL-20122	LIGHTING & SOCKET LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DD-20095	MCT COMPOSITION
1724000049-AR-DD-00018	B-100 DETAILED DRAWING - E&I SHELTERS
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	26/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20111**

REV.:	DATE:	SIGNATURE:
1_C	06/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLE ROUTING LAYOUT
HV SWITCHROOM

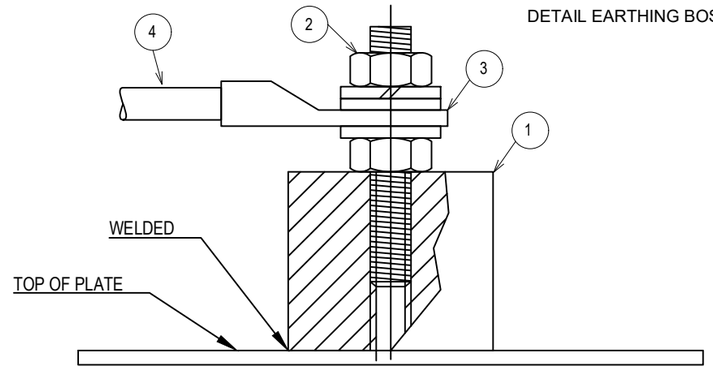
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 02/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20111	SHEET 1of6	REV. 01

File Name : 123A90-DDL-EL-DL-20111

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

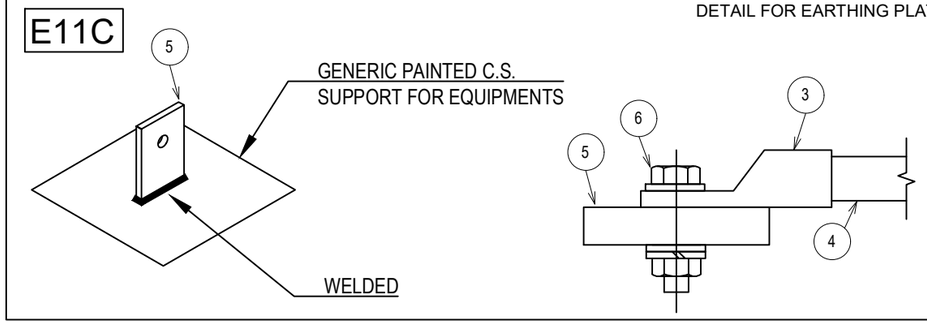
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

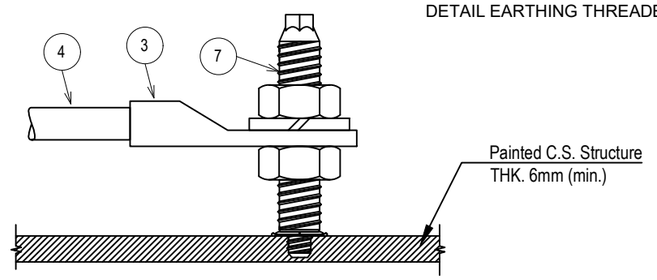


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

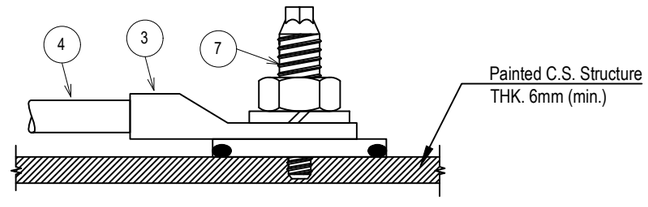


E11E

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

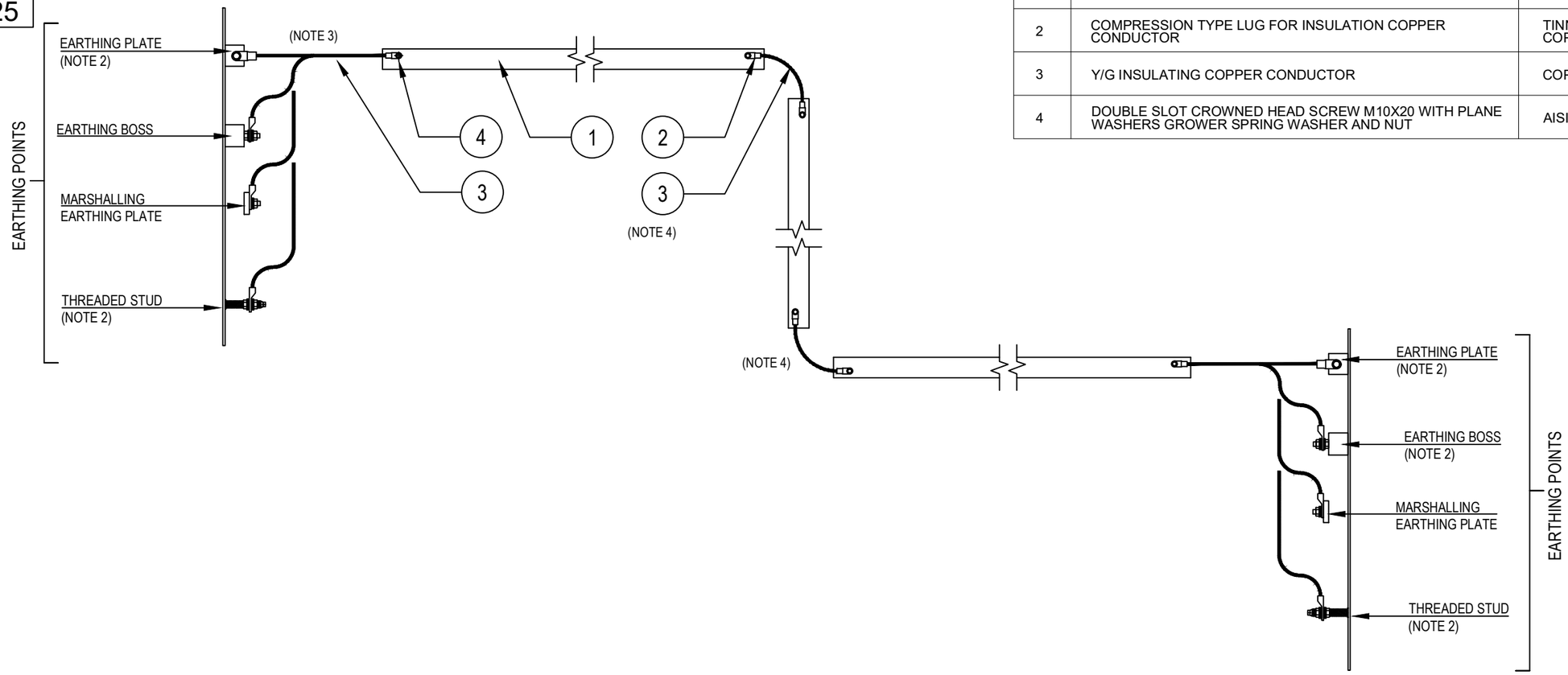
SHEET 003

REV. 02

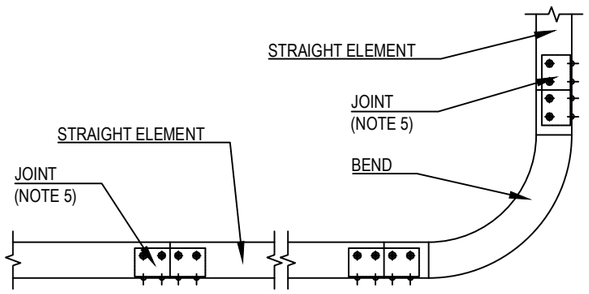
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

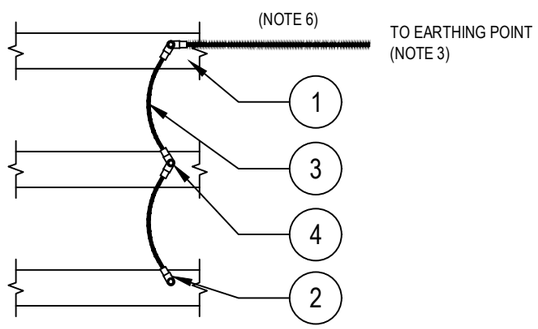
E25



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

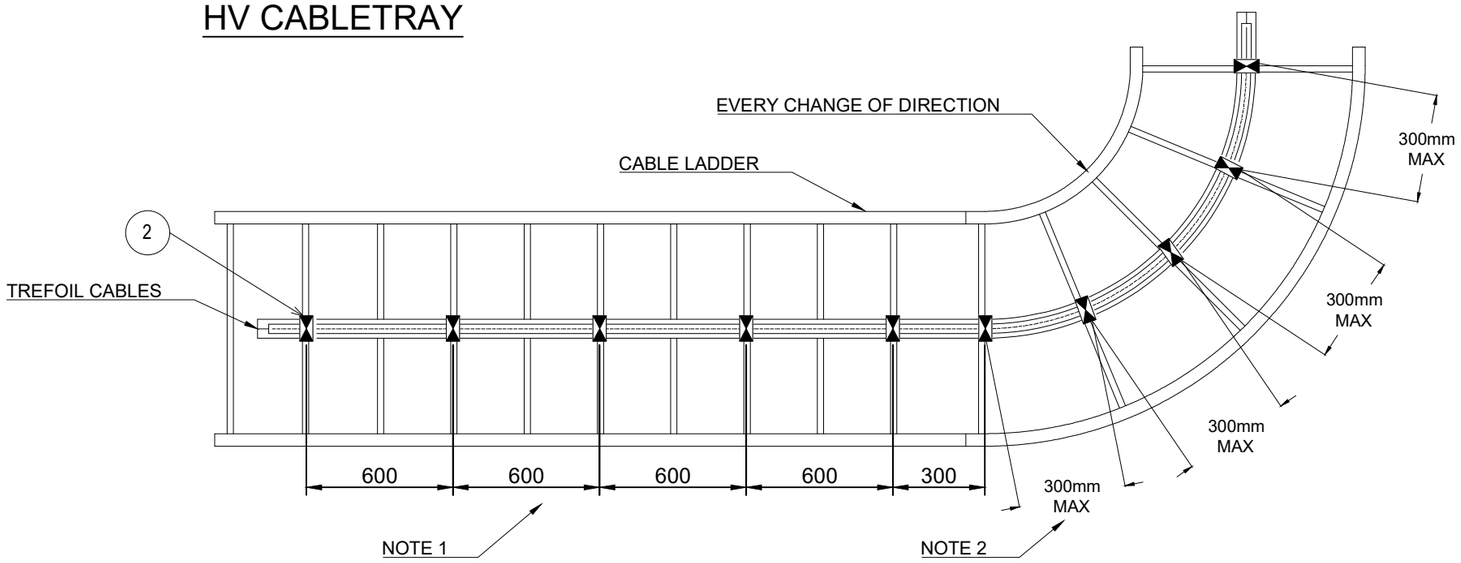
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C06

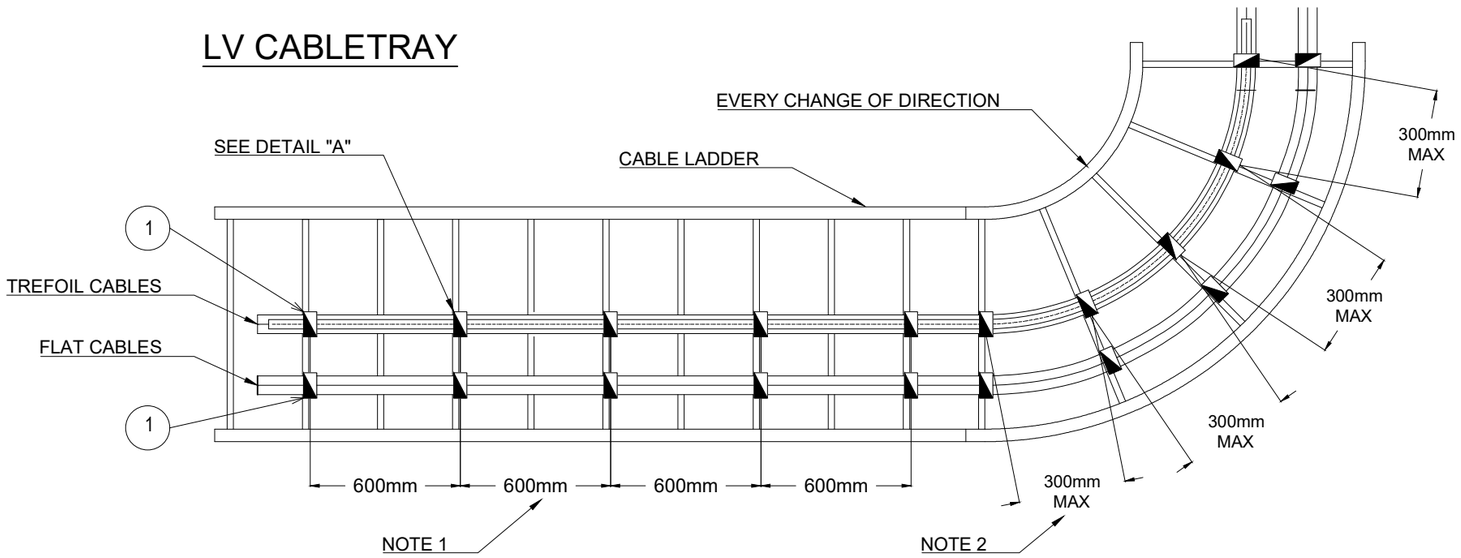
MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

MATERIALS		
POS.		DESCRIPTION
1		UV RESISTANT PVC CABLE TIES
2		STAINLESS STEEL DOUBLE WRAPPED CABLE CLEATS COMPLETE WITH TPE CUSHION SLEEVING

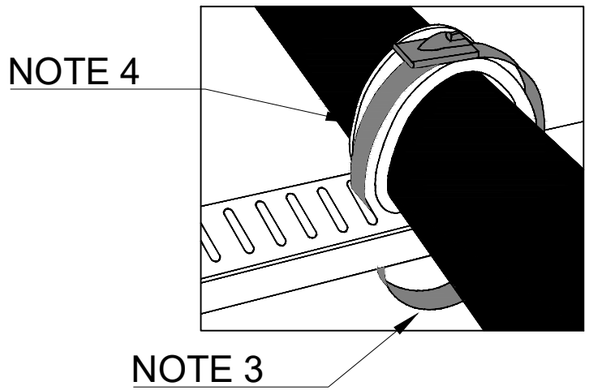
HV CABLETRAY



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

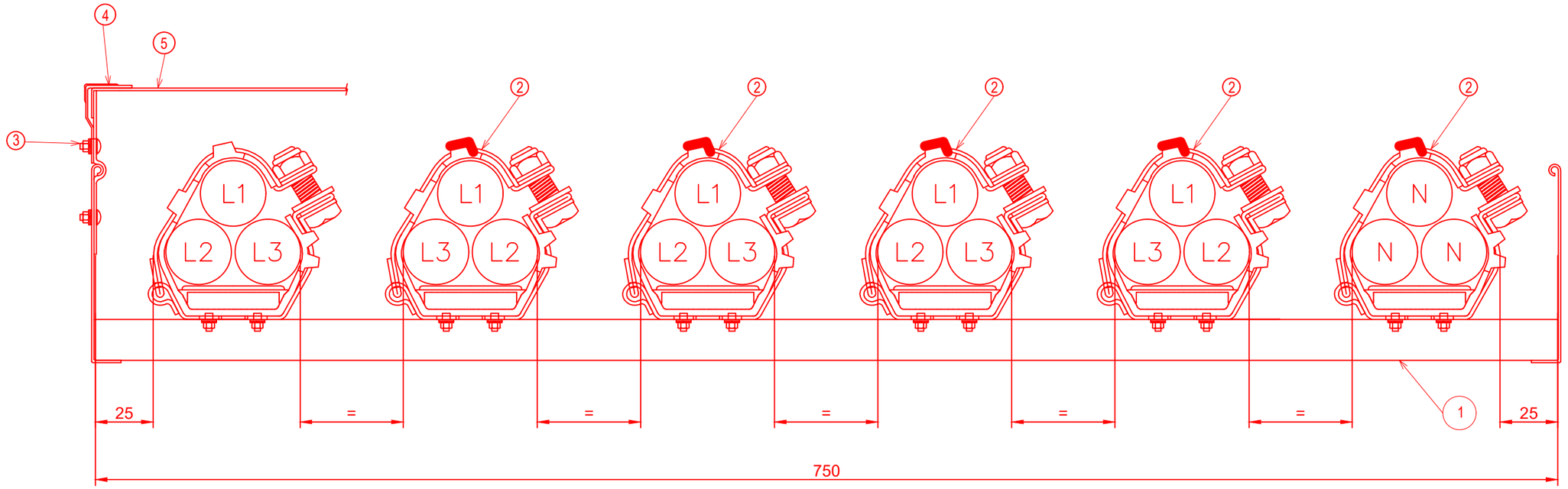
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

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

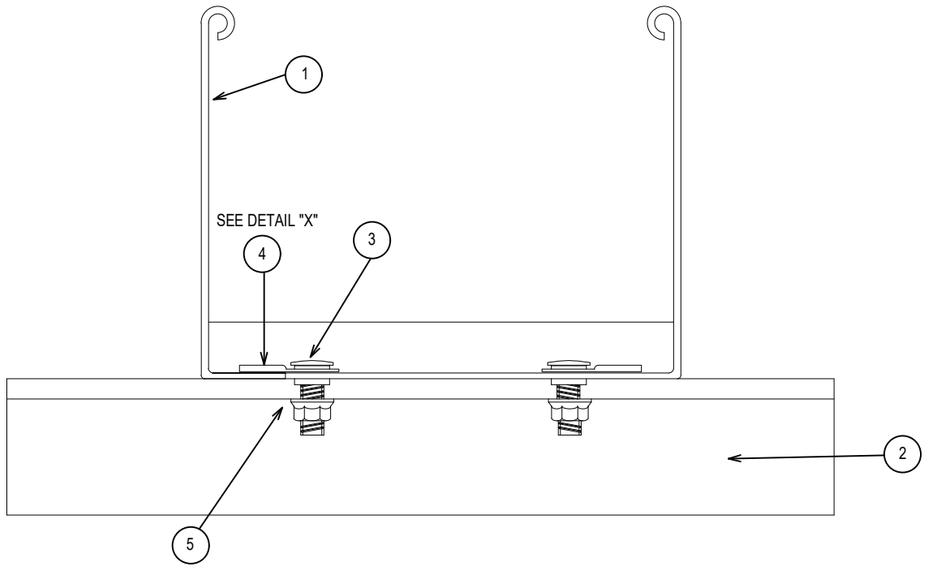
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.03 IN PROGRESS.DWG

CABLE LADDER FIXING ON FRP RACK

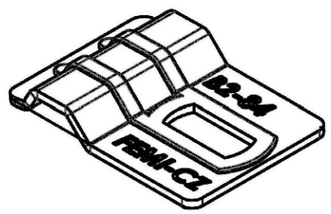
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

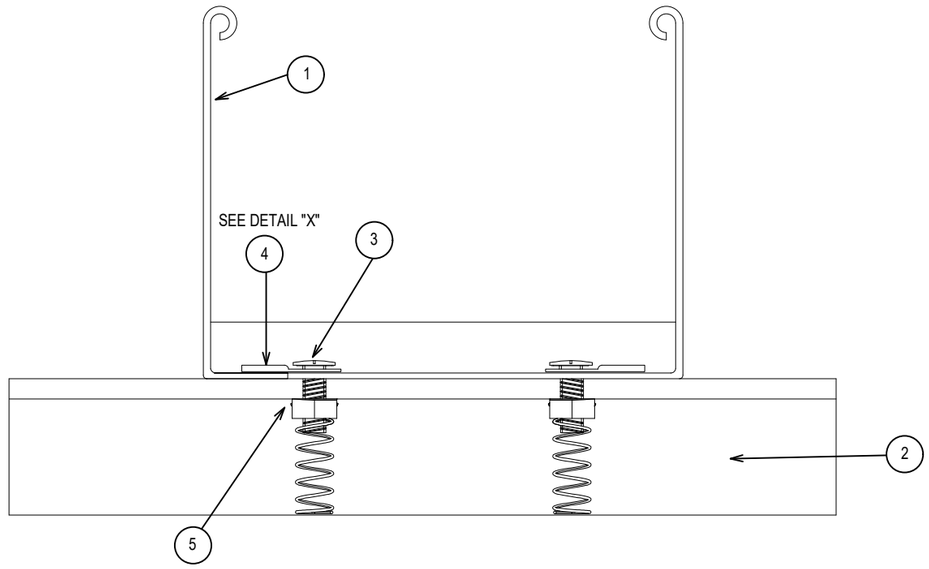
LF

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

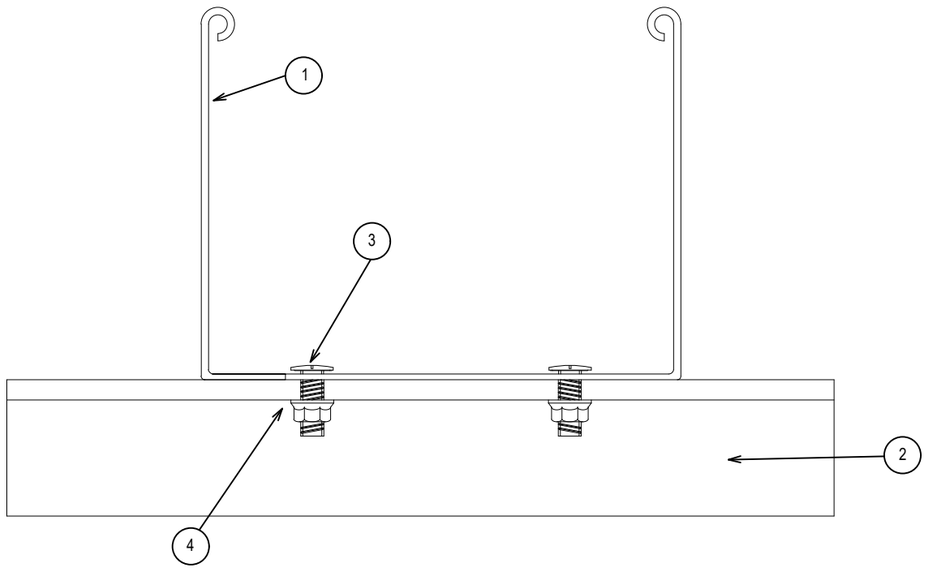
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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	

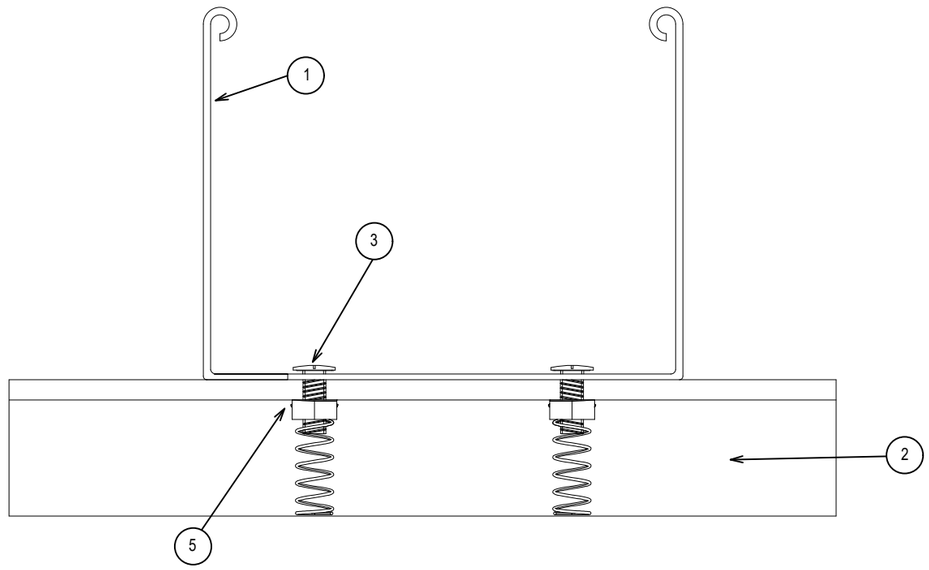


TYPICAL

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

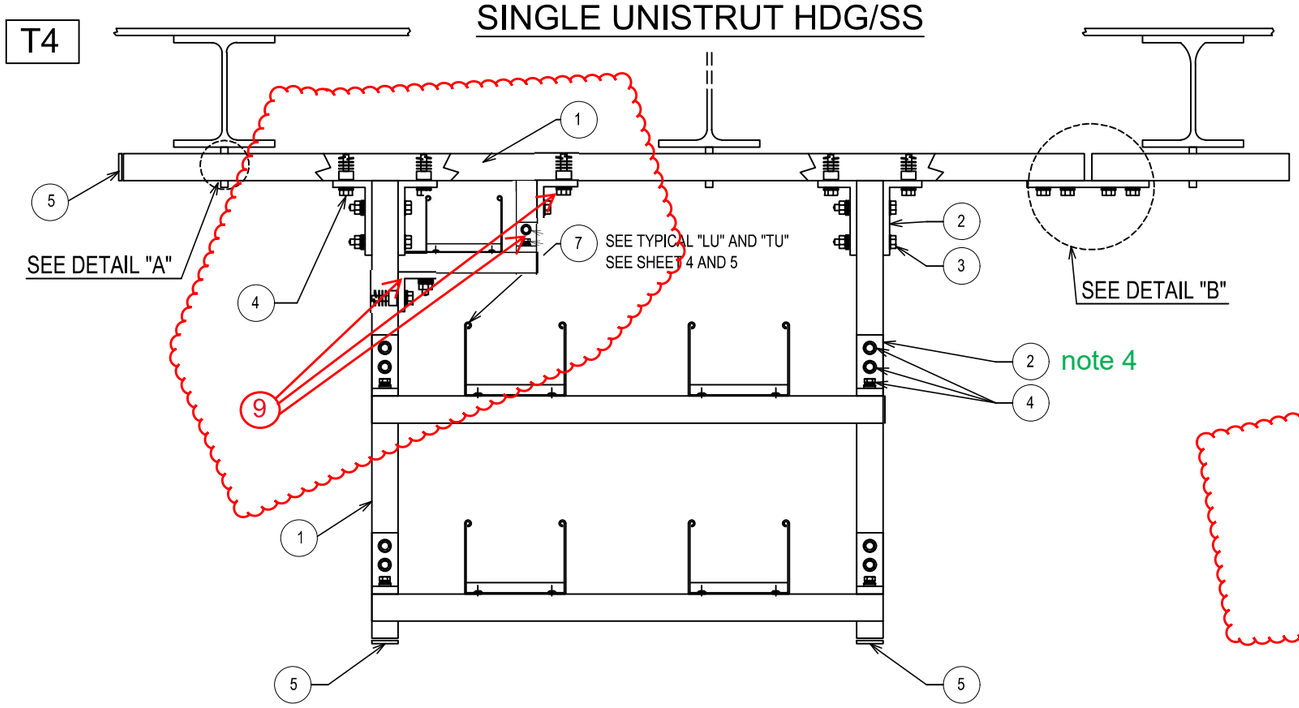
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

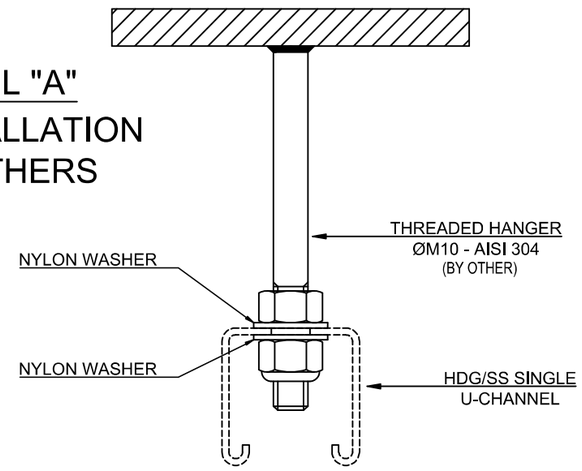
T4

SINGLE UNISTRUT HDG/SS

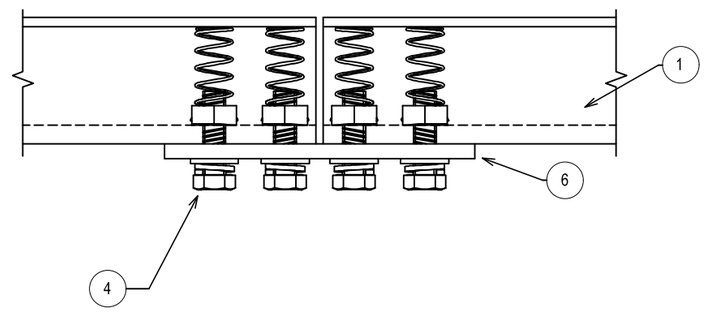


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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

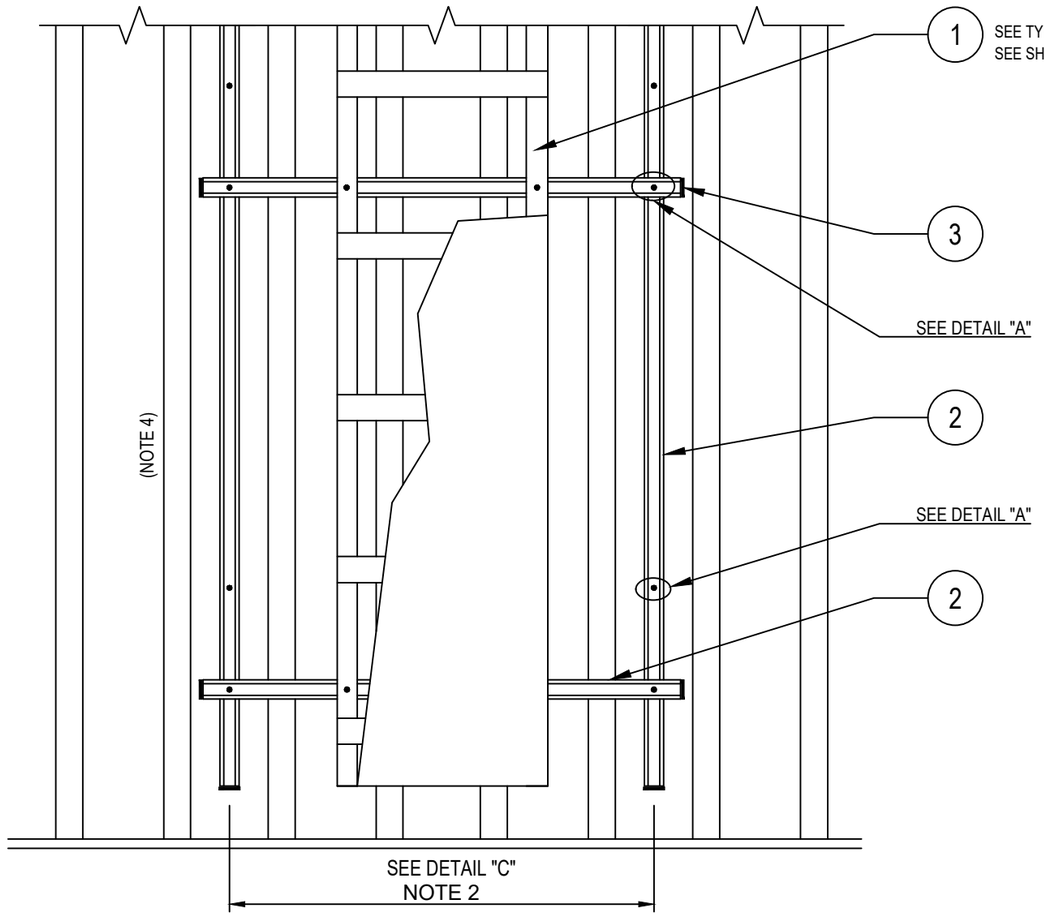
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

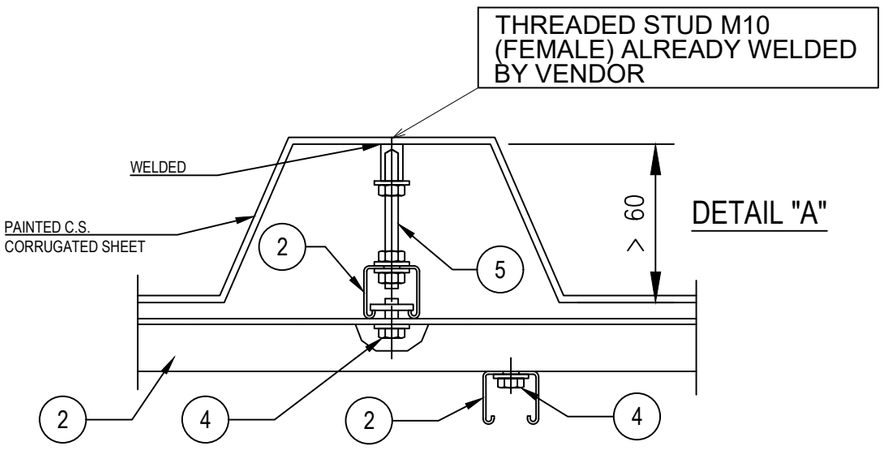
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

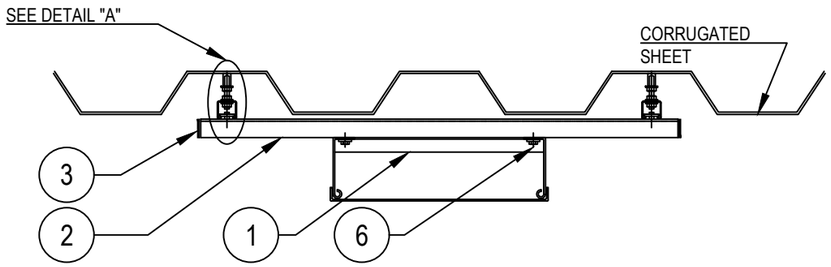
T7



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

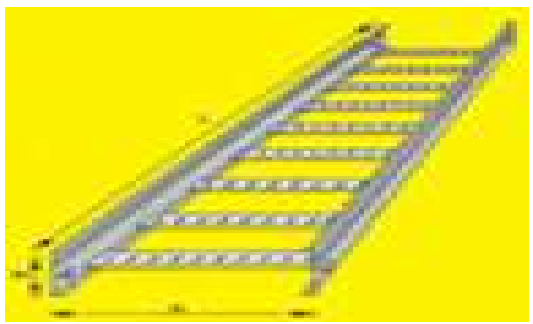
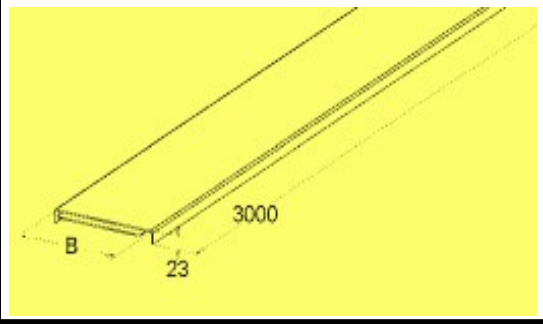
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

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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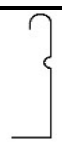
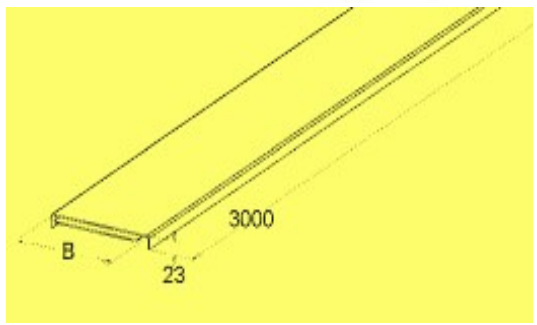
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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

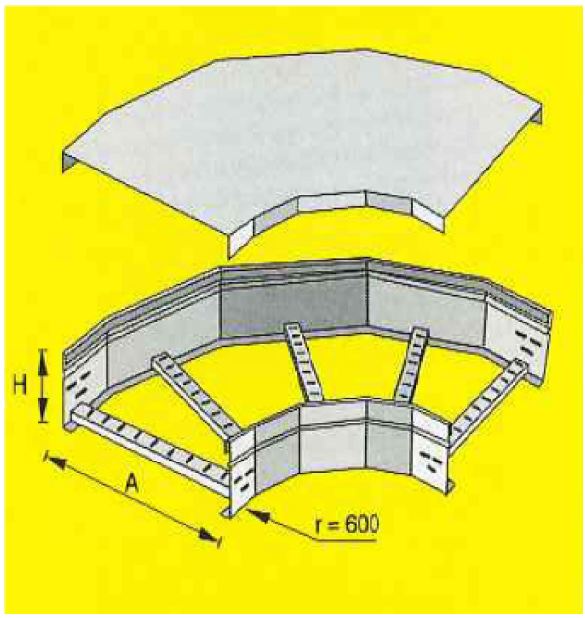
NOTES:

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:**

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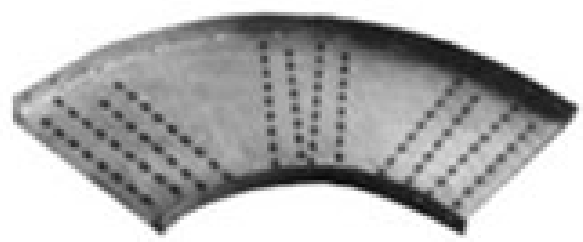
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		
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48		
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51 **NOTES:**

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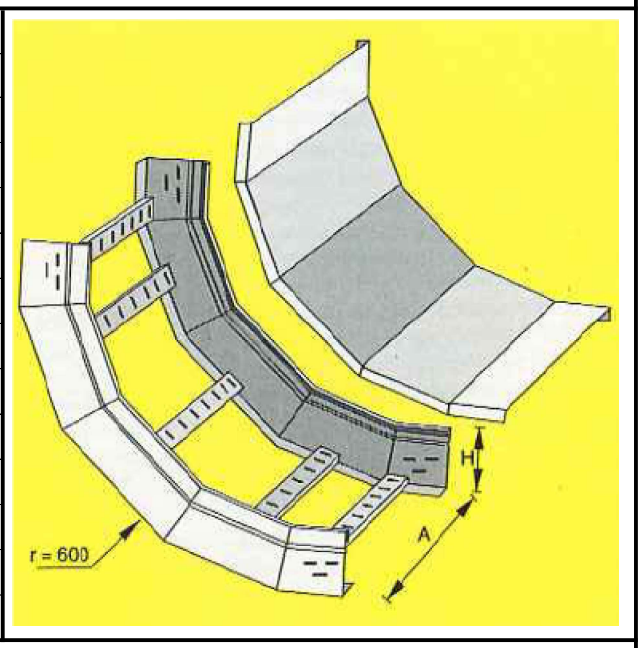
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

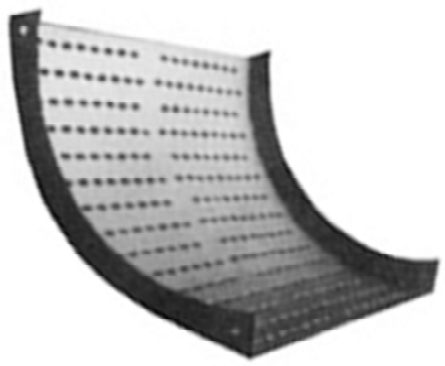
50 **NOTES:**

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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		
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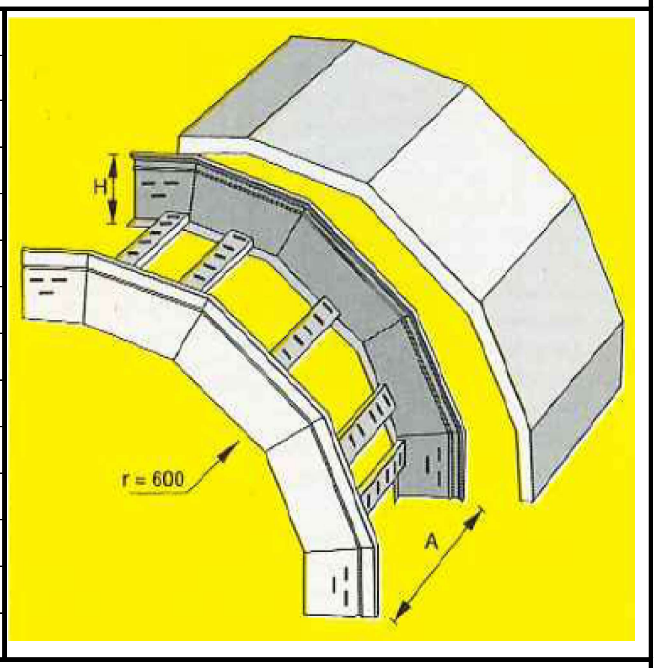
50 **NOTES:**

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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
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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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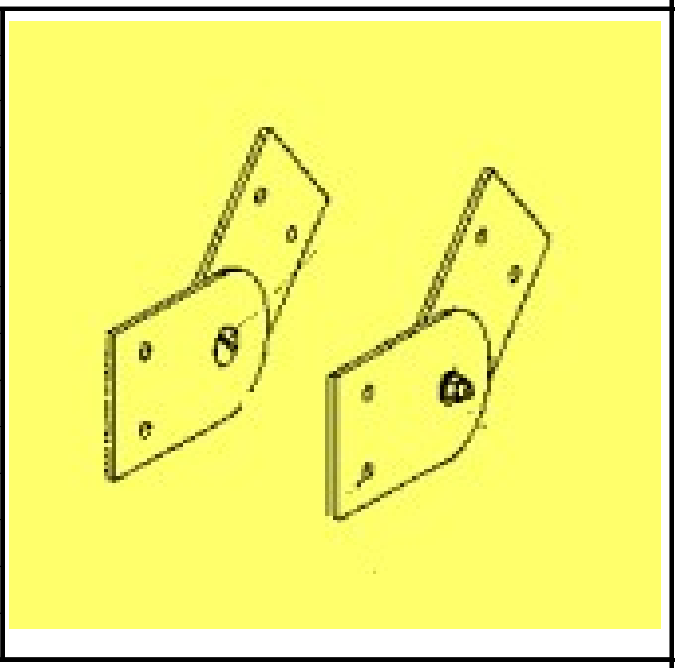
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

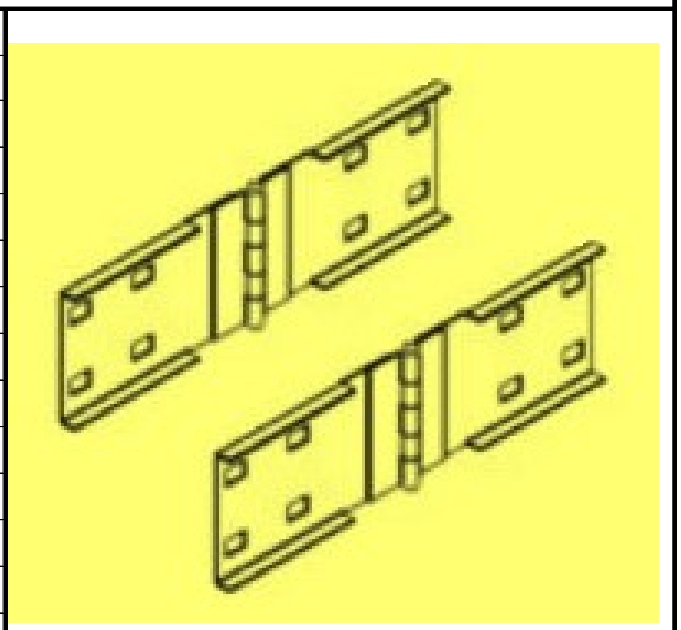
	CODE	REMARKS
28		
29		
30		
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41		

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					

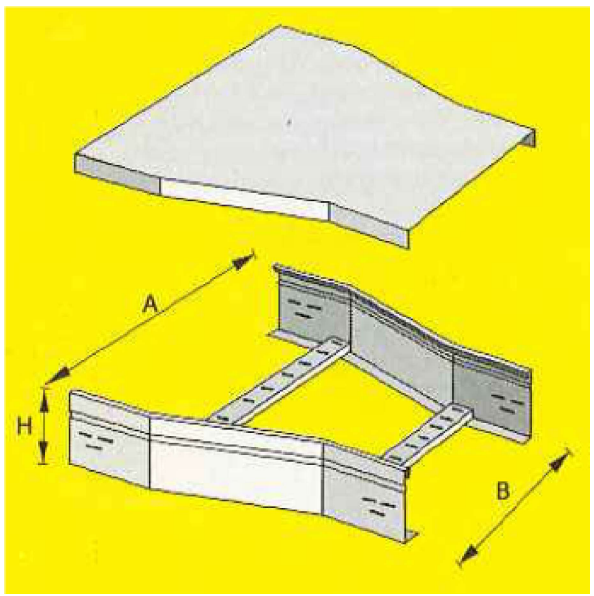
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
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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		
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42		
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45 **NOTES:**

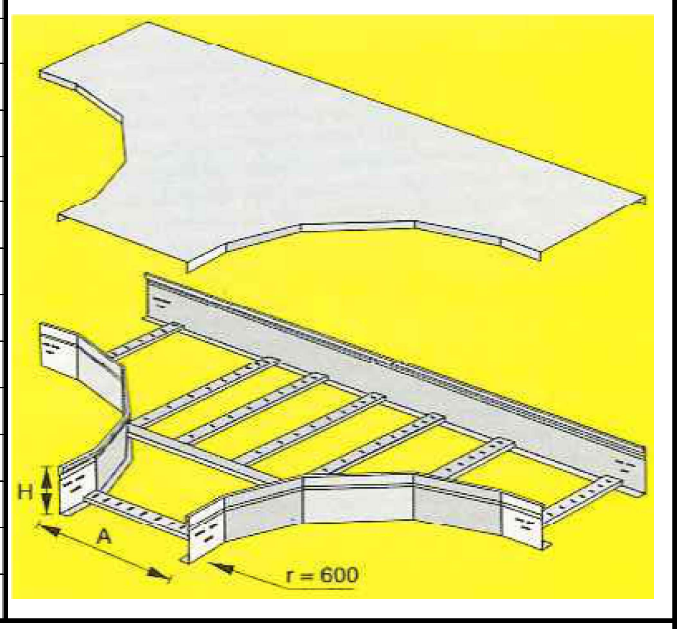
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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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TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

UNISTRUT - MATERIAL LIST

Description	U.M.	QUANTITY
Cover clamp + 1 nut+bolt M6x12 A4(316), 316L, B=25, H=50, T=2	pc	9320
DOU.SLOT.CR.H.SCR. M8X20 AI-316 100PZ Y Composed by 100PCS each box	pc	59
NUT W.SPRING M8 PROF.UR1 AI-316 100P. Y Composed by 100PCS each box	pc	59
R.HE. SCREW SN M6X12 AI-316 100PCS Y Composed by 100PCS each box	pc	23
FLANGED HEX. NUT M6 AI-316 100PCS Y Composed by 100PCS each box	pc	23
E&I Channel Single U normal, Straight element, AISI 316L, B=40mm, H=22mm, L=3000mm, T=2,0mm - U-Channel profile perforated on base p50	pc	100
E&I Channel Single U normal, Straight element, AISI 316L, B=41mm, H=41mm, L=3000mm, T=2,0mm - U-Channel profile perforated on 3 sides p50	pc	500
E&I Channel Double U normal, Straight element, AISI 316L, B=41mm, H=82mm, L=3000mm, T=2,0mm - Double U-Channel profile perforated on 3 sides p50	pc	34
BEAM ATTACHMENT W/COLLAR FOR 40X40 H15 Y	pc	160
BEAM ATTACHMENT W/COLLAR FOR 40X40 H20 Y	pc	40
Plug For Channel 40x40	pc	3000
P 01-UR1 Connection Plate - (1 holes), 40x40xTHK5mm, Material: 316L	pc	400
P 04-UR1 Connection Plate - (4 holes), 40x190xTHK5mm, Material: 316L	pc	200
L 21-UR1 Plate for orthogonal-transv. Connection - L 90° (2 holes), 40x35x53xTHK5mm, Material: 316L	pc	300
L 22-UR1 Plate for orthogonal-transv. Connection - L 90° (3 holes), 40x35x103xTHK5mm, Material: 316L	pc	300
L 24-UR1 Plate for orthogonal-transv. Connection - L 90° (4 holes), 40x84x104xTHK5mm, Material: 316L	pc	100
P 06-UR1 Adjustable Connection Plate - (3 holes), 40x140xTHK5mm, Material: 316L	pc	200
Flanged Hexagonal Nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	6
Hex head nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	30
Nuts for channel with spring 10mm - A4, Composed by 100pcs each box	pc	2
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	60
Grower Spring Washer D.10(17), Material: A4/316, Composed by 100pcs each box	pc	30
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	6
HEXAGONAL HEAD SCREW M10X20 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	6
HEXAGONAL HEAD SCREW M10X40 AISI316 100PCS Y, Composed by 100PC Each Box	pc	9
HEXAGONAL HEAD SCREW M10X70 AISI316 100PCS Y, Composed by 100PC Each Box	pc	8
Hex head nut M12, Material: AISI 316 - A4, Composed by 100pcs each box	pc	1
Nuts for channel with spring 12mm - A4, Composed by 100pcs each box	pc	20
Plane Washer D.12(24), Material: A4/316, Composed by 100pcs each box	pc	25
Grower Spring Washer D.12(19), Material: A4/316, Composed by 100pcs each box	pc	25
HEXAGONAL HEAD SCREW M12X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	20
Flanged Hexagonal Nut M6, Material: AISI 316 - A4, Composed by 100pcs each box	pc	30
Hex head nut M6, Material: AISI 316 - A4, Composed by 100pcs each box	pc	10
Nuts for channel with spring 6mm - A4, Composed by 100pcs each box	pc	30
Plane Washer D.6(12), Material: A4/316, Composed by 100pcs each box	pc	10
Grower Spring Washer D.6(11), Material: A4/316, Composed by 100pcs each box	pc	10
DOUBLE SLOT CROWNED HEAD SCREW M6X20 100PC AISI316, Composed by 100PCs each Box	pc	30
DOUBLE SLOT CROWNED HEAD SCREW M6X30 100PC AISI316, Composed by 100PCs each Box	pc	10
Hex head nut M8, Material: AISI 316 - A4, Composed by 100pcs each box	pc	6
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	24
Grower Spring Washer D.8(14), Material: A4/316, Composed by 100pcs each box	pc	6
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	12
Plane Washer D.8(24) Large, Material: A4/316, Composed by 100pcs each box	pc	5
HEXAGONAL HEAD SCREW M8X16 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	6
23-UR1/40x40 Welded Support	pc	25
Ex Nut, TE DIN 933 INOX A4 M10X40	pc	200
Hexagonal Head Screw, TE DIN 933 INOX A4 M5X35	pc	100

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

UNISTRUT - MATERIAL LIST

Description	U.M.	QUANTITY
Square tapered washers for U beams with Ø11 hole (DIN 434 UNI 6598 A4 AISI 316)	pc	200
Hex head nut M5, Nut DIN 934 INOX A4 M5 P0.8 CL.80	pc	100
Plane Washer, RON.INOX A4 DIN 125A M5 (5.3X10X1)	pc	100
U-Channel profile perforated on 3 sides p50	m	360
Plug For Channel 40x40	pc	800
Nuts for channel with spring 10mm - A4, 100pcs Each Box	pc	5
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	5
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	7
Hex head nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	7
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	7
P 01-UR1 Connection Plate - 1 Hole, 40x40xTHK5, Material: 316L	pc	200
HEXAGONAL HEAD SCREW M12X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
Hex head nut M12, Material: AISI 316 - A4, Composed by 100pcs each box	pc	2
Plane Washer D.12(24), Material: A4/316, Composed by 100pcs each box	pc	2
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
Hex head nut M8, Material: AISI 316 - A4, Composed by 100pcs each box	pc	2
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	2
DOUBLE SLOT CROWNED HEAD SCREW M6X30 100PC AISI316, Composed by 100PCs each Box	pc	1
FLANGED HEX. NUT M6 AI-316 100PCS Y, Composed by 100PCS each box	pc	1
Plane Washer D.6(12), Material: A4/316, Composed by 100pcs each box	pc	1
Nuts for channel with spring M8x40mm - A4 100pcs per box	pc	5
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	5
L21-UR1 Plate for orthogonal-transv. Connection - L 90° (2 holes), 40x35x53xTHK5mm, Material: 316L	pc	1000
L 22-UR1 Plate for orthogonal-transv. Connection - L 90° (3 holes), 40x35x103xTHK5mm, Material: 316L	pc	1000
L 24-UR1 Plate for orthogonal-transv. Connection - L 90° (4 holes), 40x84x104xTHK5mm, Material: 316L	pc	1000

Row	Data Sheet for Electrical Cable Trays & Accessories		Rev.
1	Tag No. :		
2	Service :		
3	PURCHASE ORDER SPECIFIC REQUIREMENTS		

ITEM	Tag	CABLE_TRAY_B100_ELE_MV	: Cable Tray B100 - Electrical (Medium Voltage)			Dwg	123A90-DDL-EL-DL-20111
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002280		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX30A
							Cable Tray/Ladder Before pulling

BEFORE PULLING

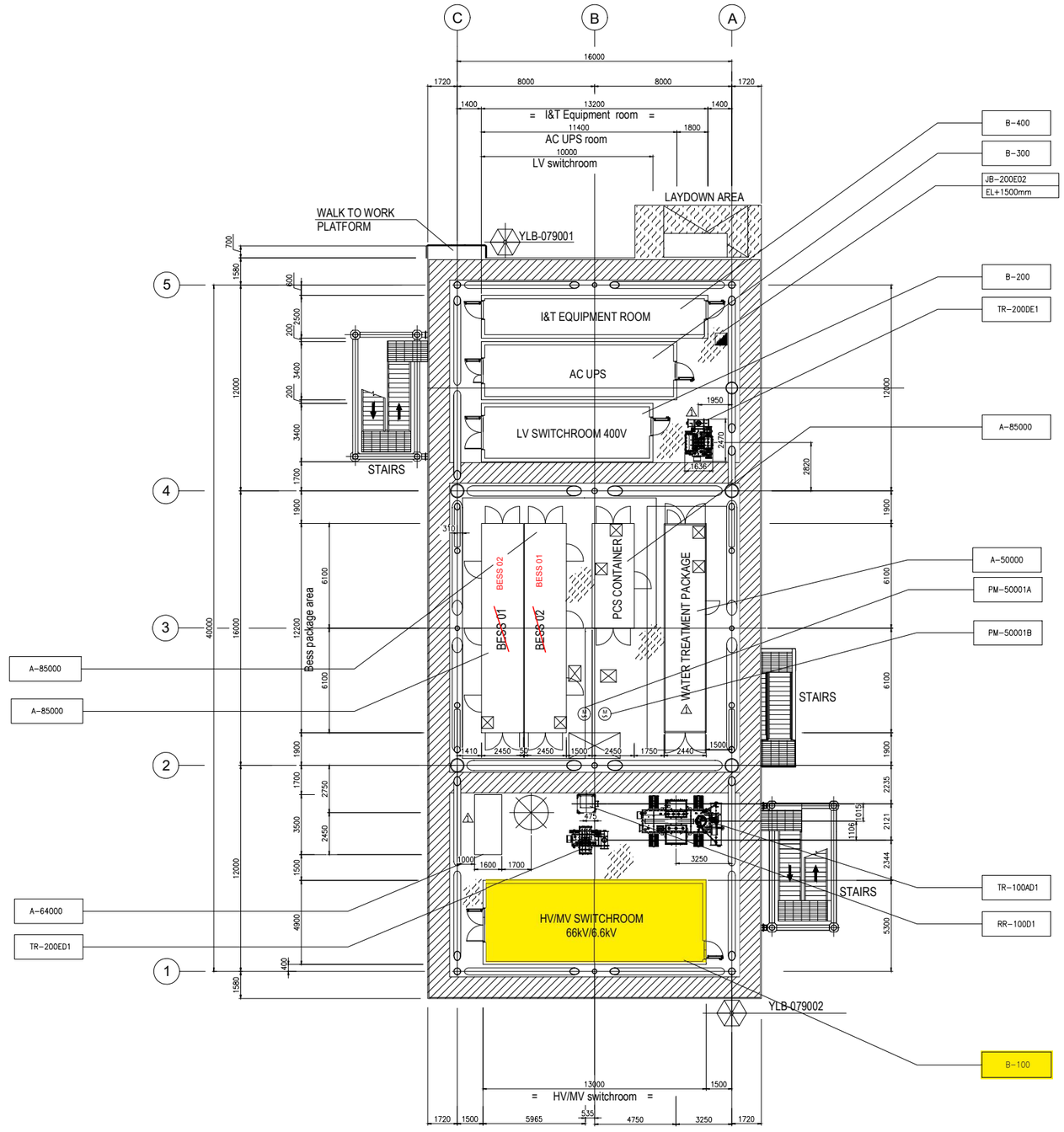
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for 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	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

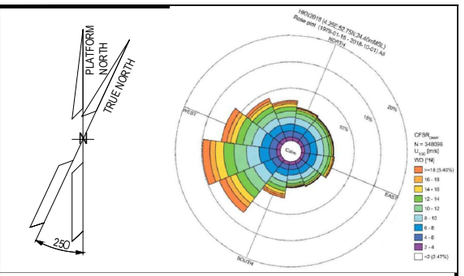
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-10-16	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-16T13:07:54.388Z	Firma Digitale Sicura Paolo Schintu 2024-10-16T16:23:43+0200	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

ROSETTI MARINO SpA

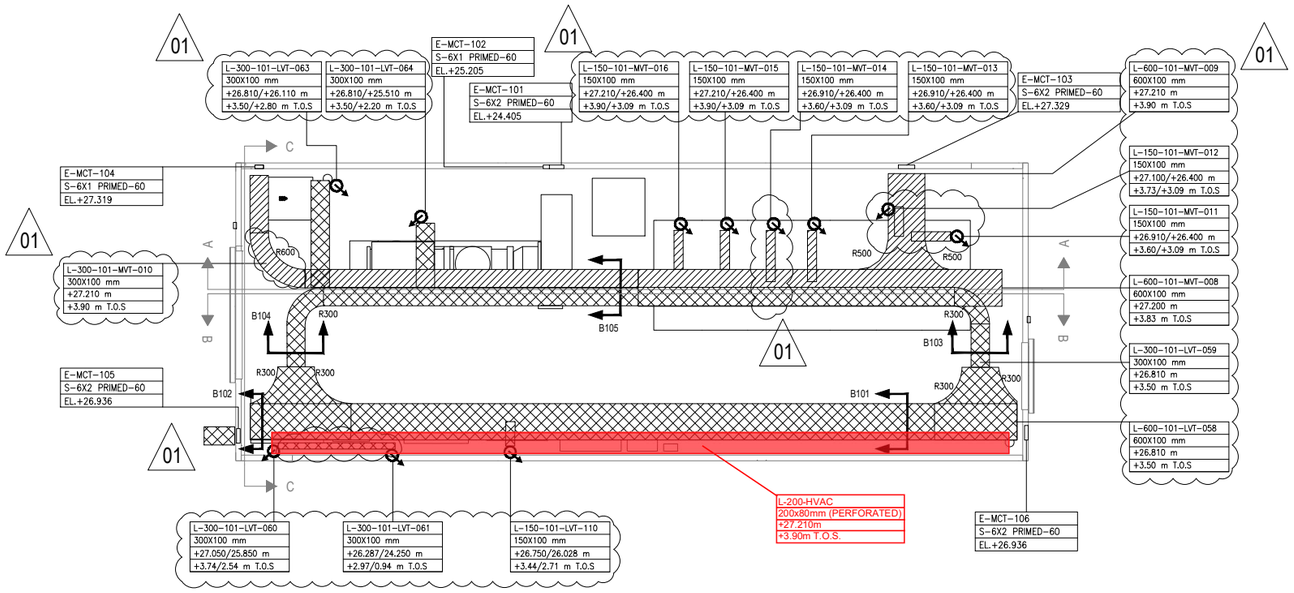
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

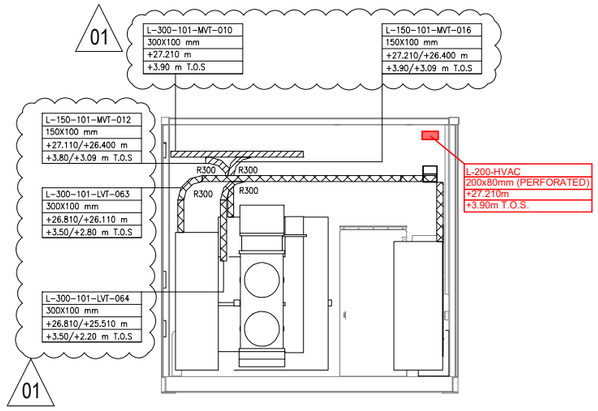
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

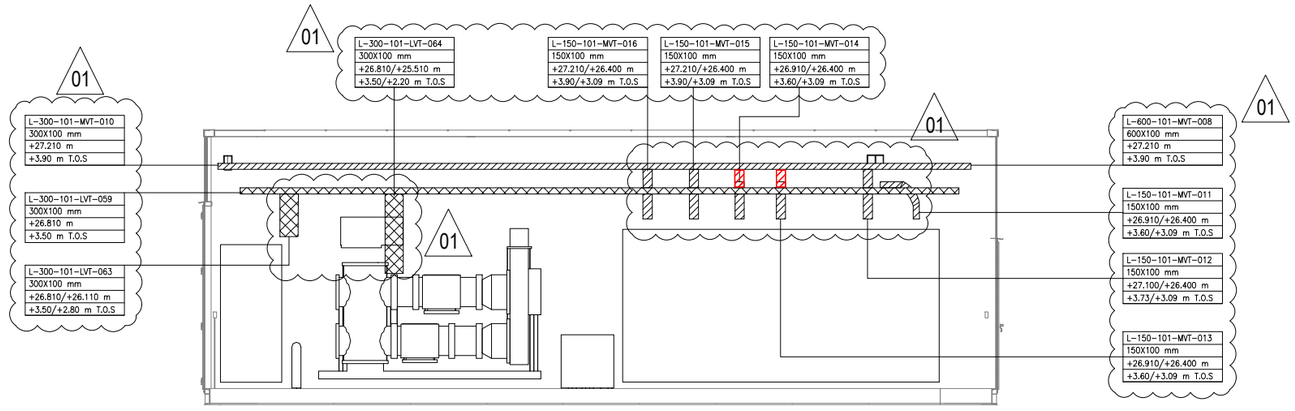
DRAWING NO. 123A90-DDL-EL-DL-20111

REV. 01

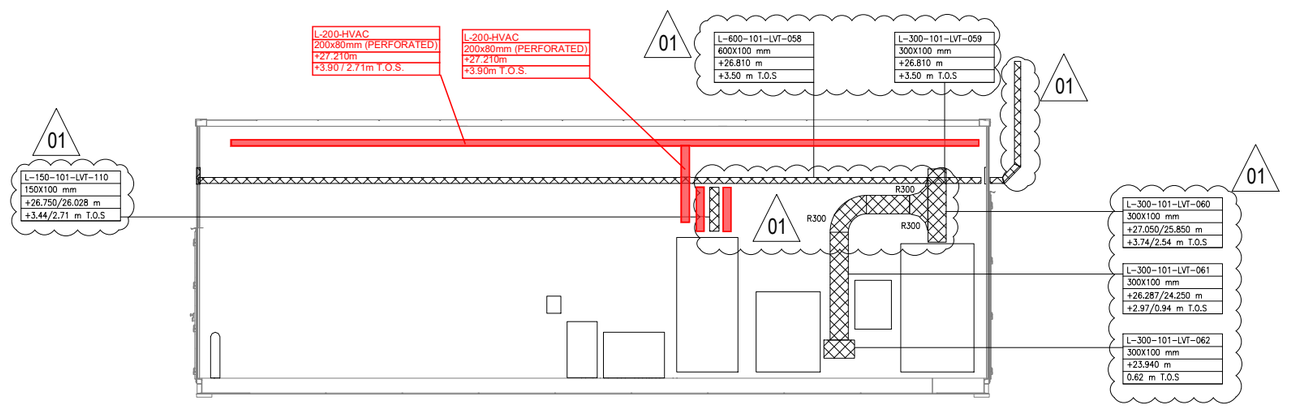




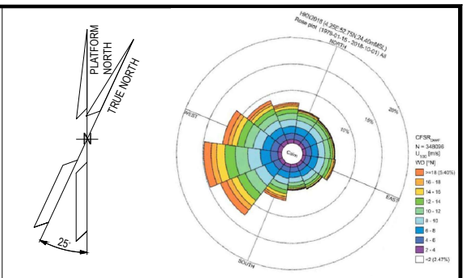
Section C-C



Section A-A



Section B-B



NOTES

1. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
2. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
3. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
4. FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20122 AND 1724000049-AR-DD-00018.
5. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
6. ELEVATIONS REFER TO T.O.S. (EL+23.310 m).
7. FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

LEGEND

ELECTRICAL 6.6 KV CABLE LADDER

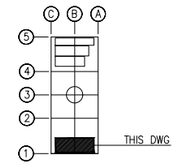
ELECTRICAL LV CABLE LADDER

ELECTRICAL CABLE LADDER (VERTICAL DROP)

E-MCT-106 — TAG
S-6X2 PRIMED-60 — SIZE
EL.+26.936 — ELEVATION

TAG
SIZE
ELEVATION
ELEVATION(T.O.S)

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DL-20122	LIGHTING & SOCKET LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DD-20095	MCT COMPOSITION
1724000049-AR-DD-00018	B-100 DETAILED DRAWING - E&I SHELTERS
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	26/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20111**

REV.:	DATE:	SIGNATURE:
1_C	06/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

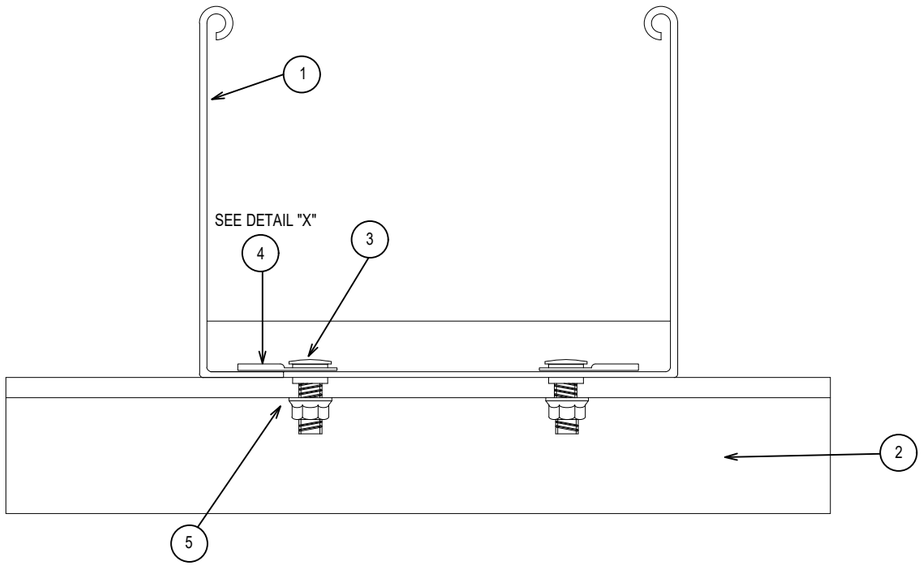
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLE ROUTING LAYOUT
HV SWITCHROOM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 02/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20111	SHEET 1of6	REV. 01

File Name : 123A90-DDL-EL-DL-20111

CABLE LADDER FIXING ON FRP RACK

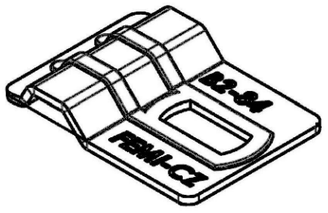
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

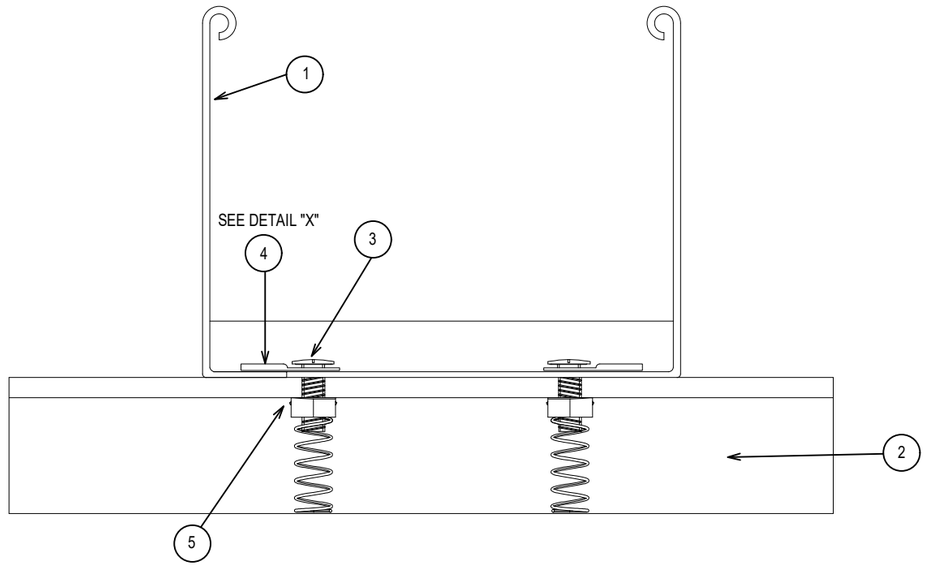
LF

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

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_D	06/09/24	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

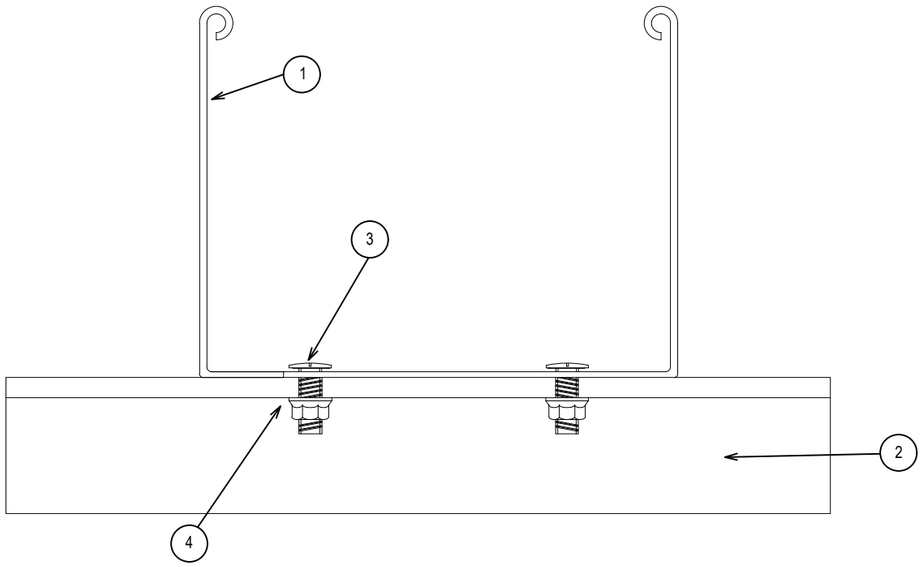
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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	

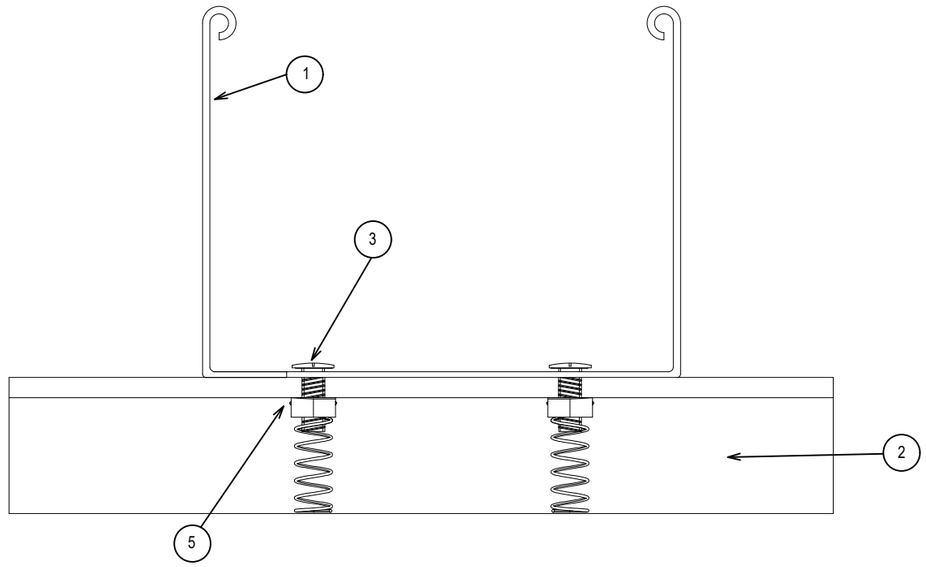


TYPICAL

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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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

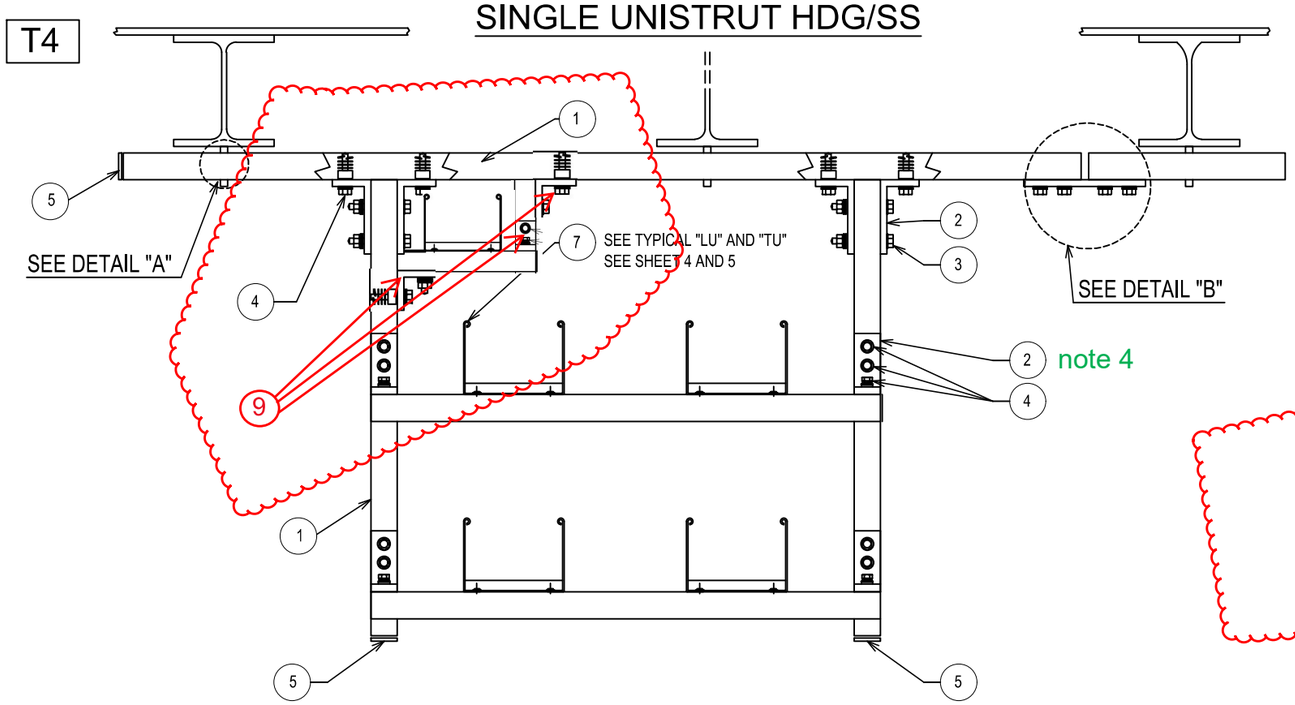
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F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

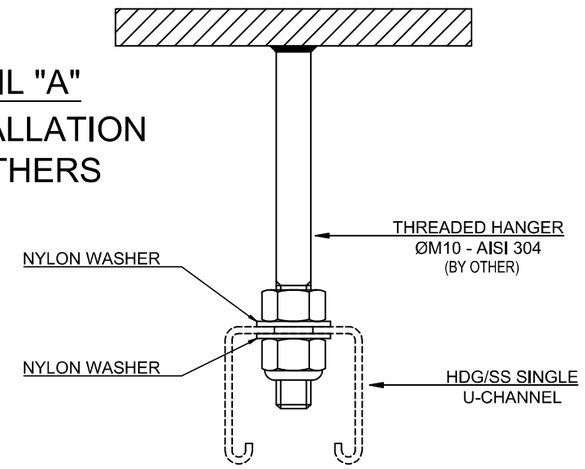
T4

SINGLE UNISTRUT HDG/SS

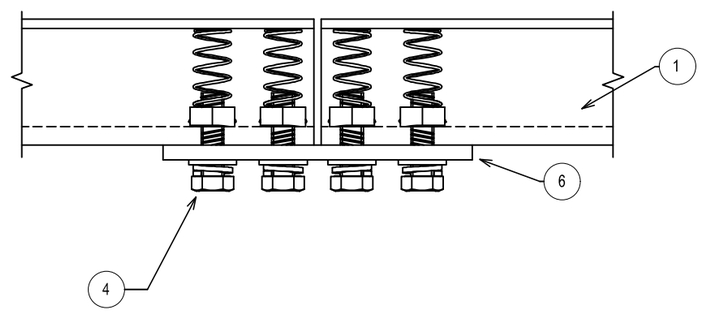


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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 FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

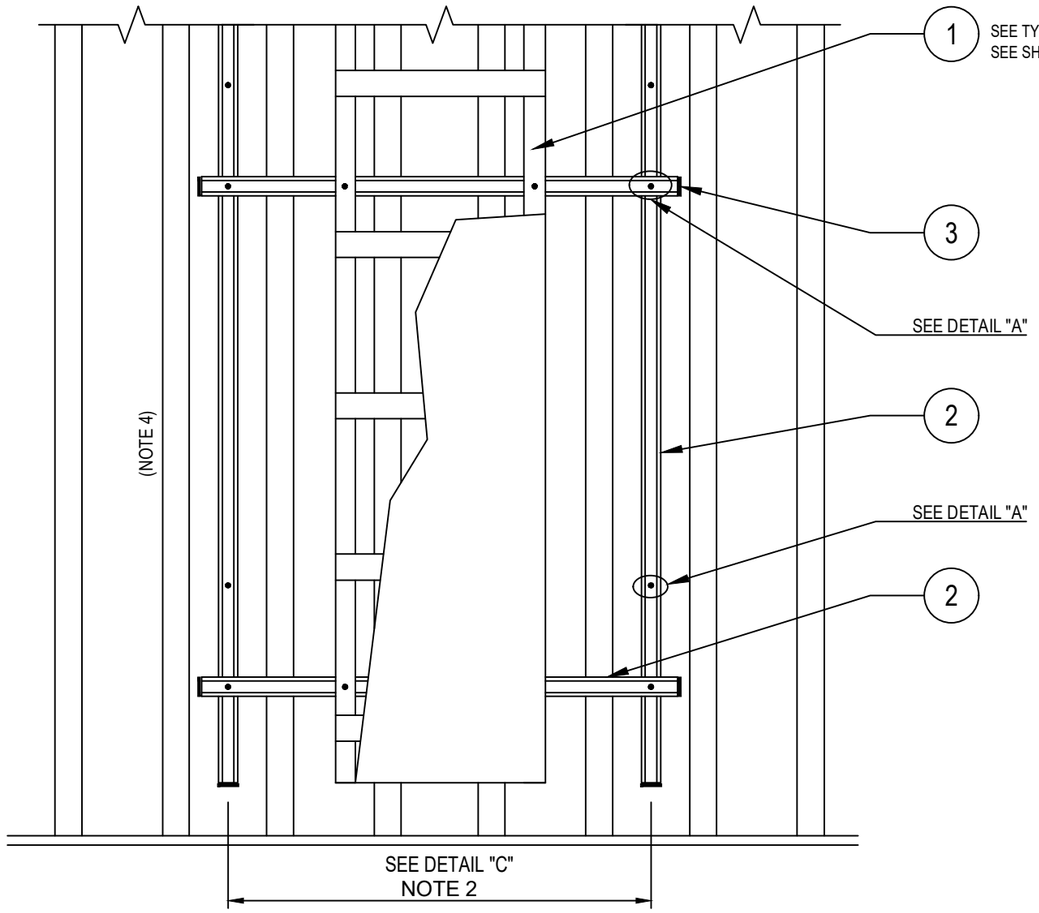
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 009 | REV. 02

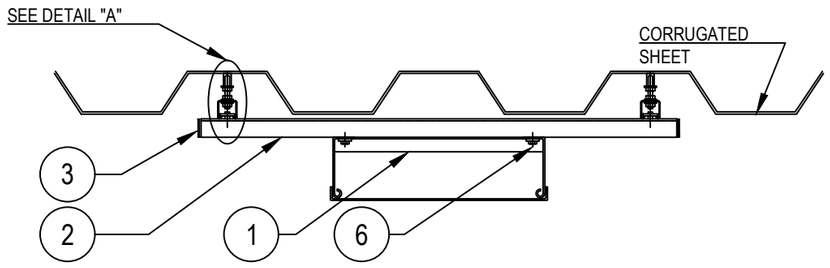
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

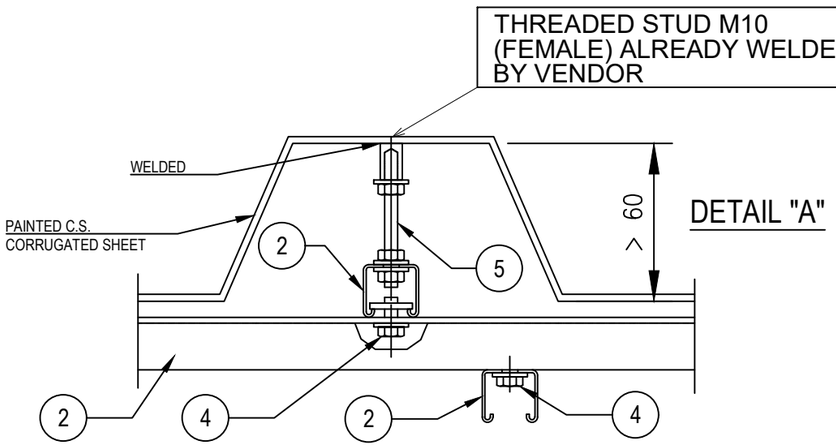
T7



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_D	06/09/24	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

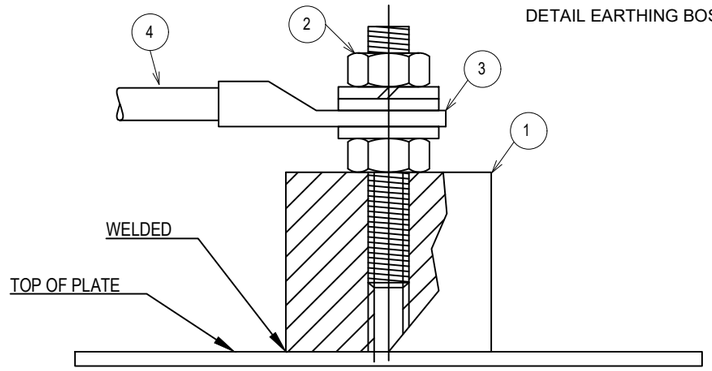
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

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

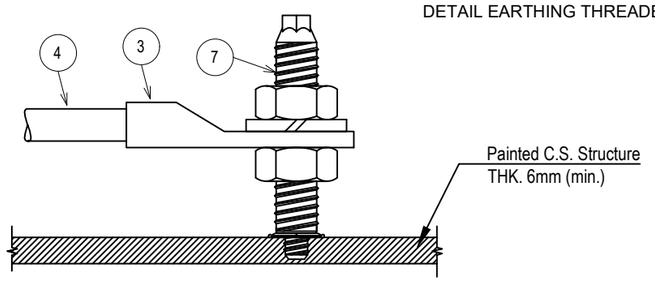


E11D

SEE NOTE 6

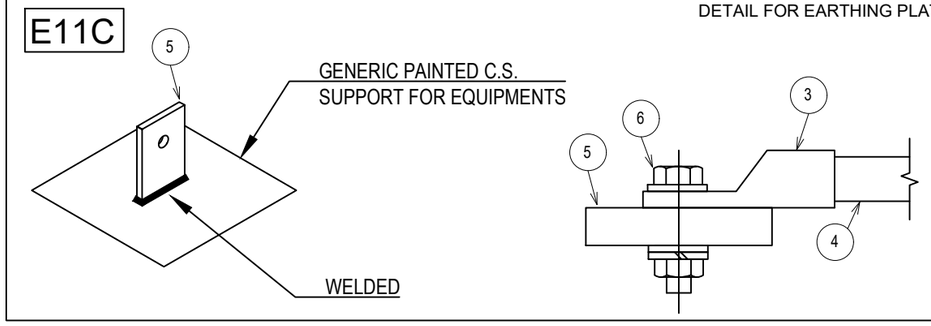
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

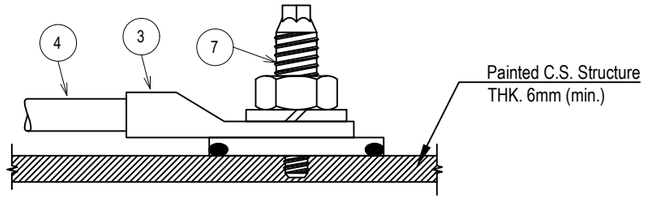


E11E

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_E	09/10/24	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

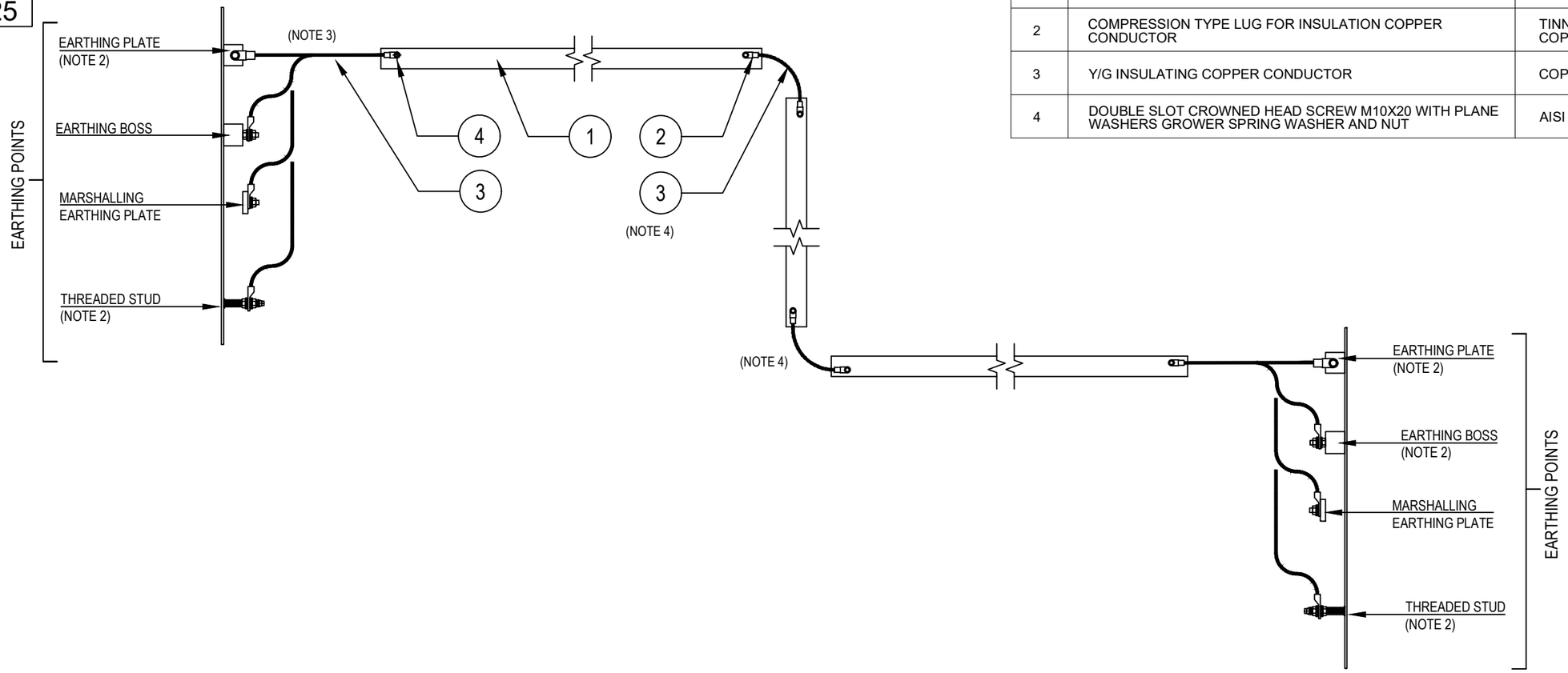
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REV. 02

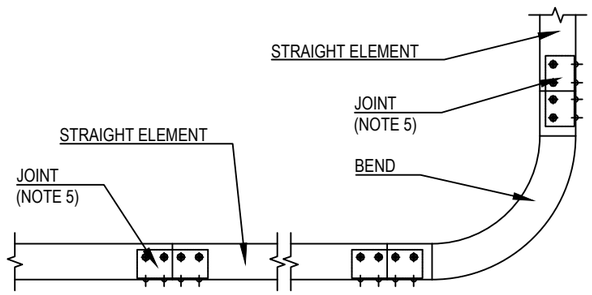
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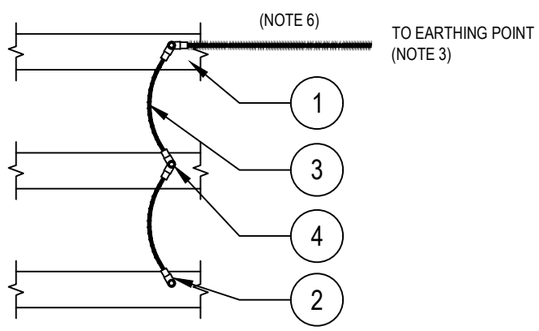
E25



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_E	09/10/24	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

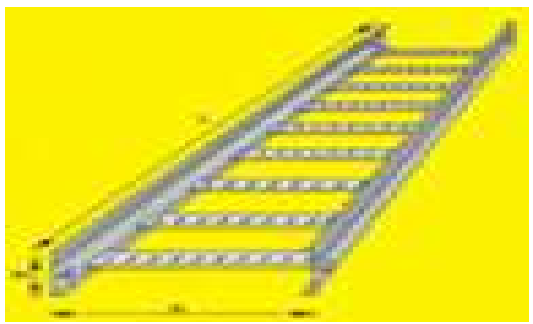
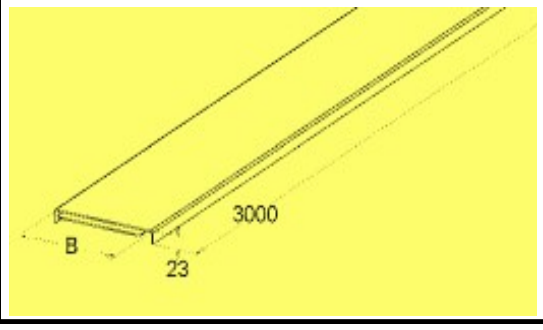
F.to UNI A3: 420mmx297mm

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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		
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41		
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43		
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46		

47 **NOTES:**

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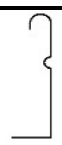
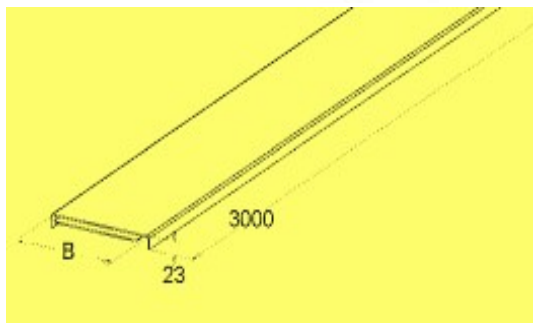
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 6 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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

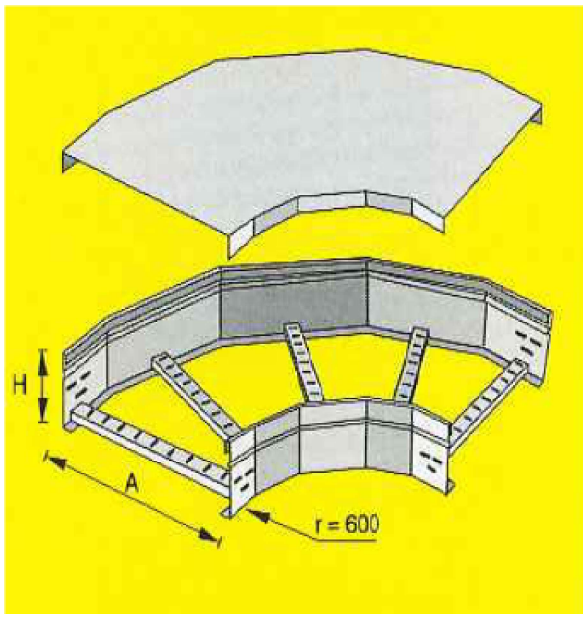
NOTES:

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:**

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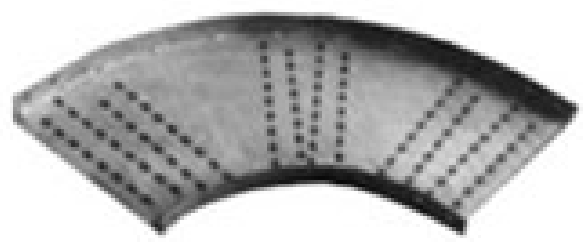
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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:**

52

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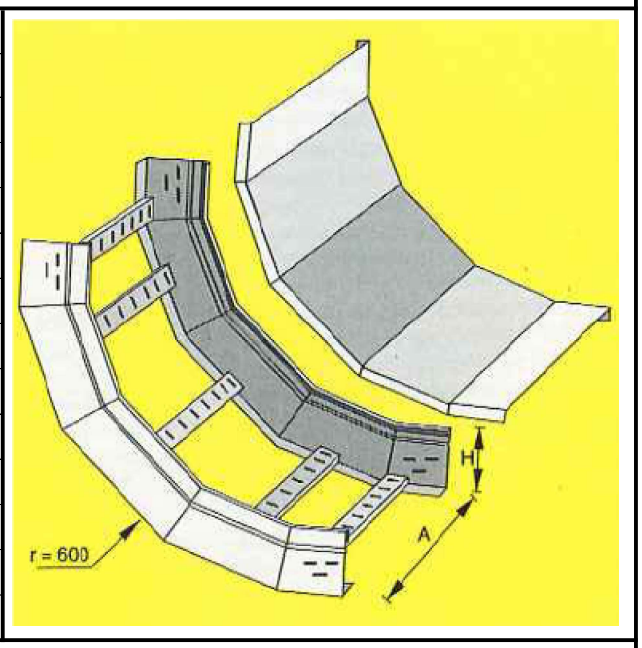
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

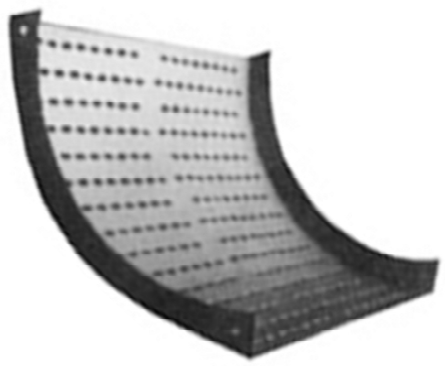
50 **NOTES:**

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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		

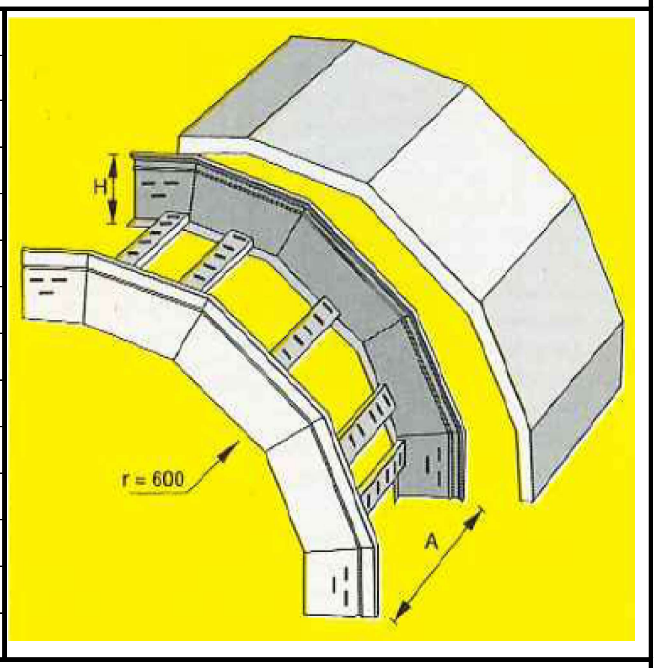
50 **NOTES:**

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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		
53		
54		
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		
46		
47		
48		
49		
50		

51 **NOTES:**

52

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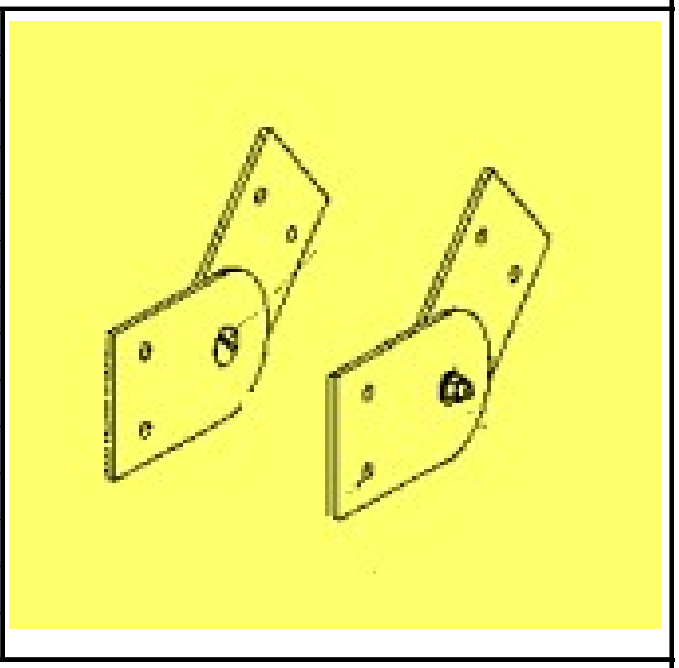
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

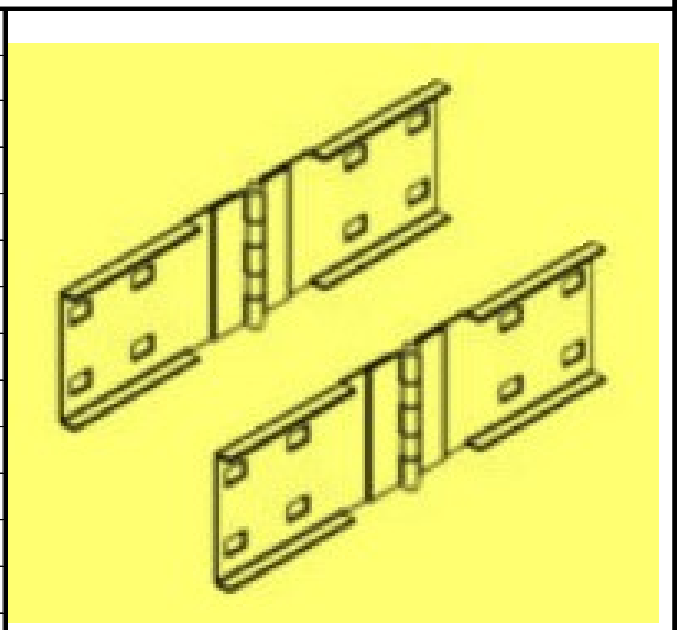
	CODE	REMARKS
28		
29		
30		
31		
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33		
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35		
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41		

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					

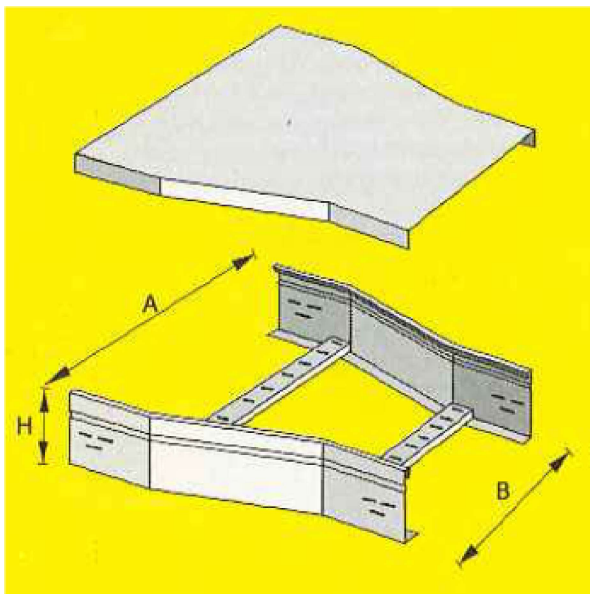
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

27		
28		
29		
30		
31	CODE	REMARKS
32		
33		
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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		
40		
41		
42		
43		
44		

45 **NOTES:**

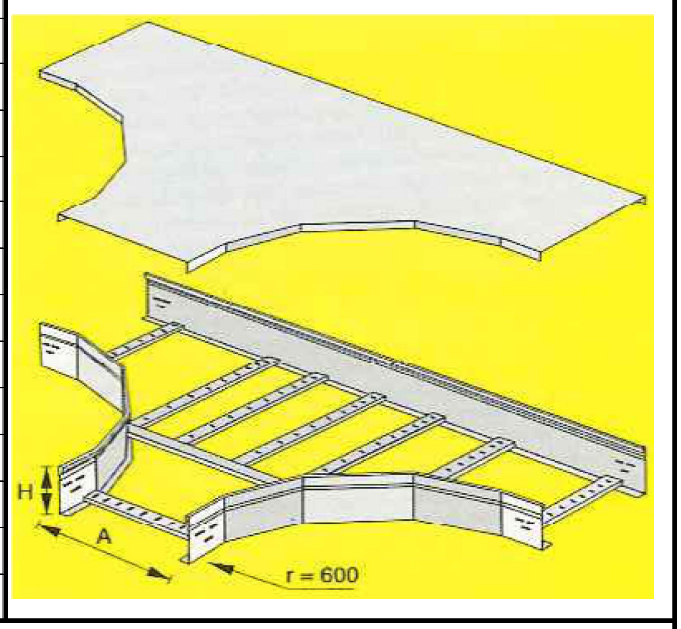
46
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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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41		
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50 **NOTES:**

51
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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	CABLE_TRAY_B100_ELE_MV	: Cable Tray B100 - Electrical (Medium Voltage)		Dwg	123A90-DDL-EL-DL-20111	
	S/Sys	90-01	: HV-MV Switchgear Room B-100		Module	LD_B-100	
TASK	code	C10002281	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX30B	Cable Tray/Ladder After pulling

AFTER PULLING

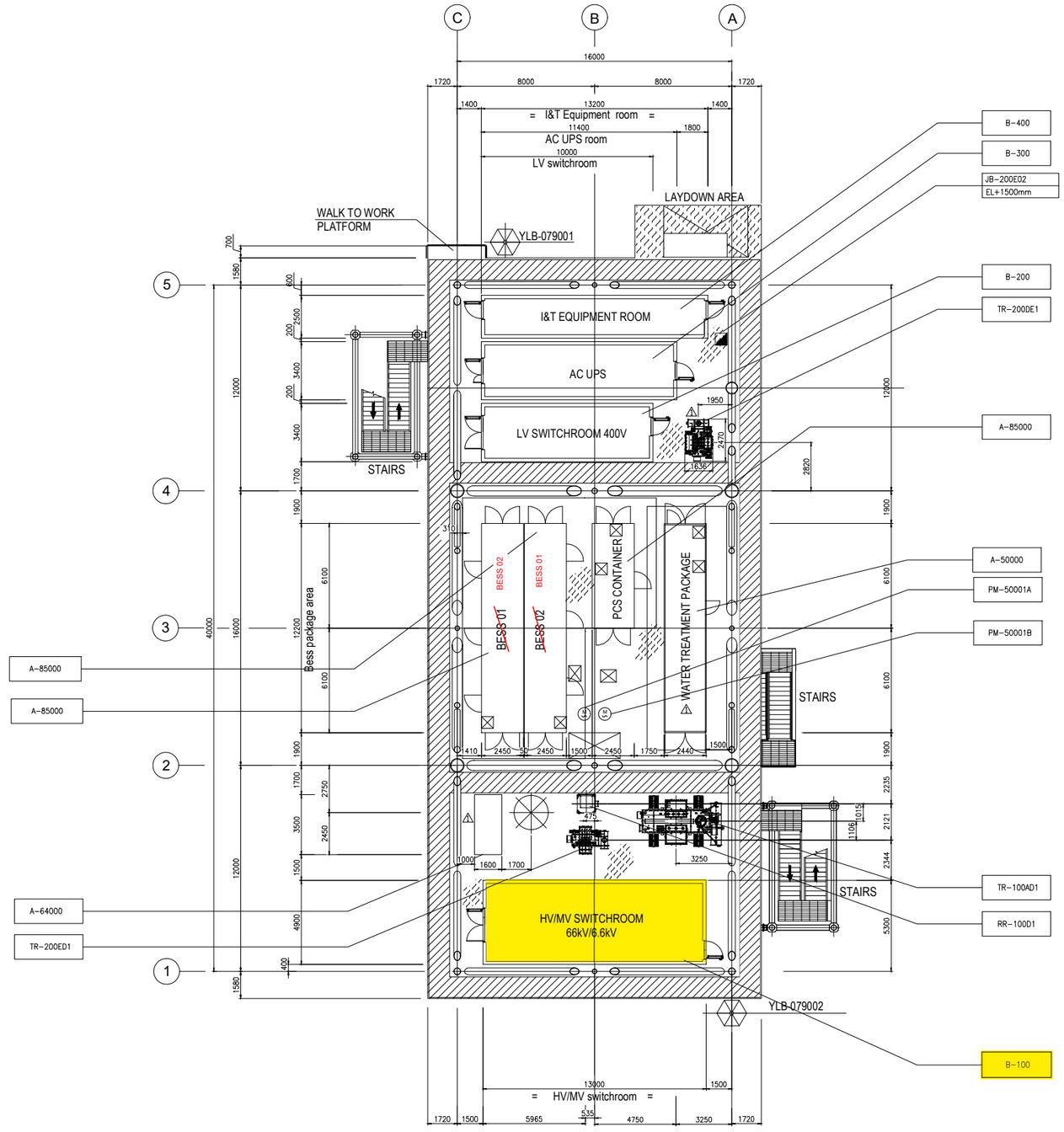
1	Check cable segregation on rack and tray	OK
2	Check Capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings	NA
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

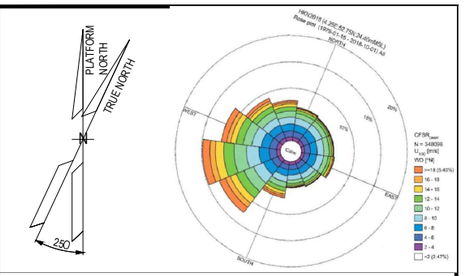
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-25	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T10:39:19.462Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-25T11:26:12.150Z	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

ROSETTI MARINO SpA

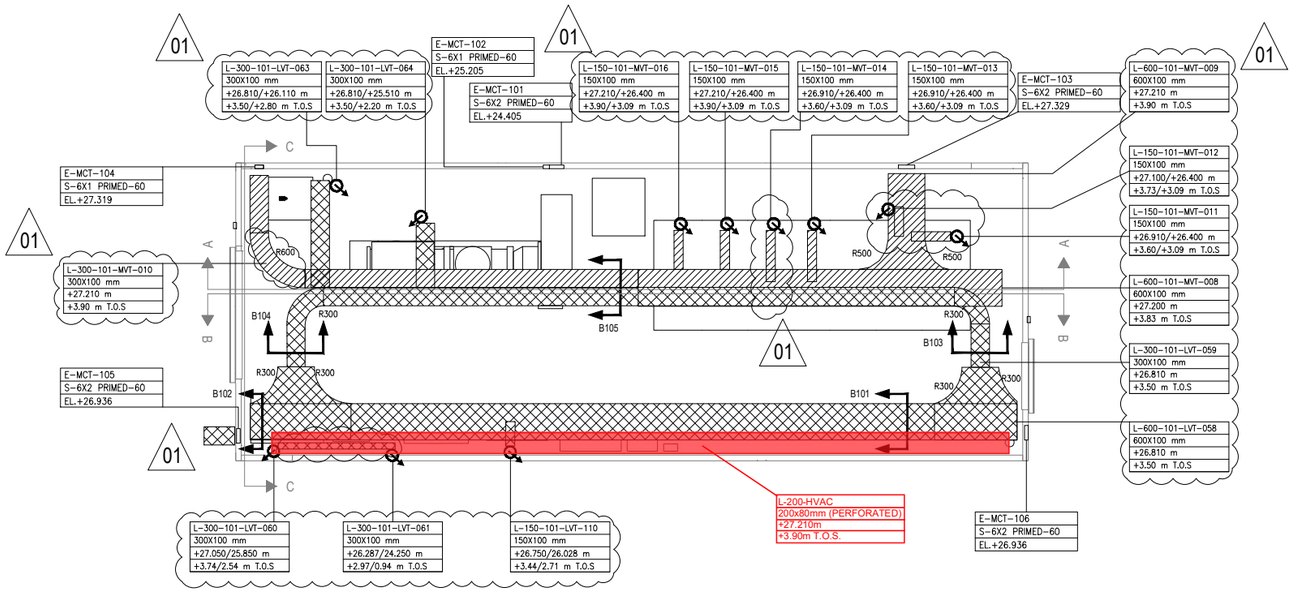
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

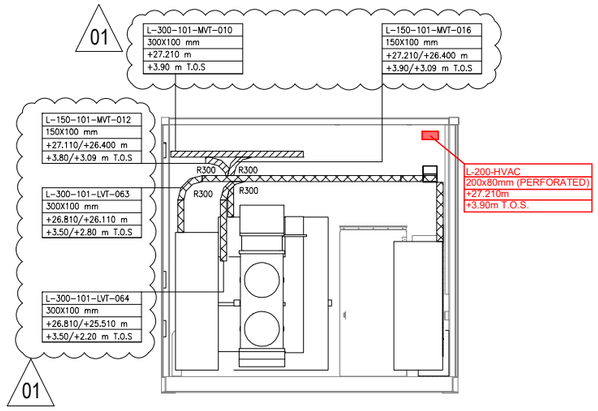
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

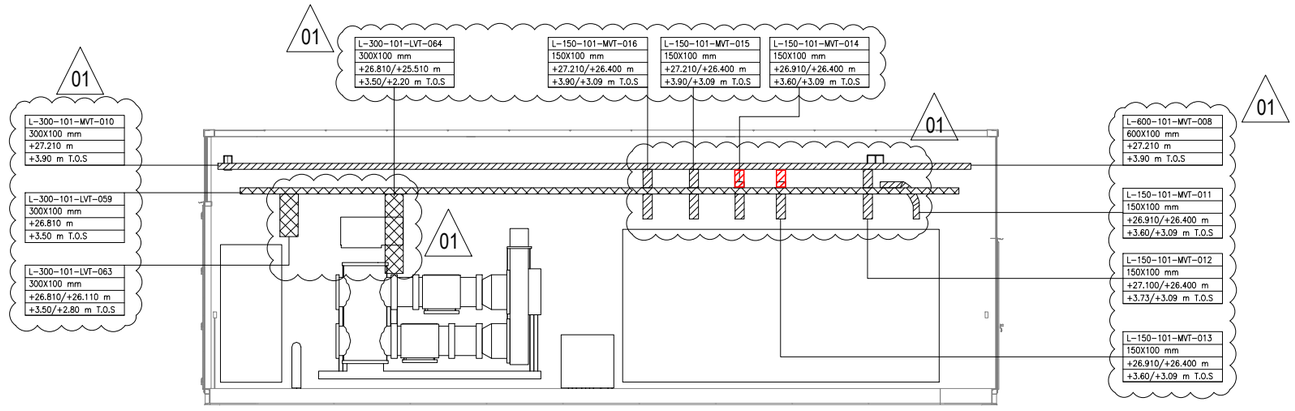
DRAWING NO. 123A90-DDL-EL-DL-20111

REV. 01

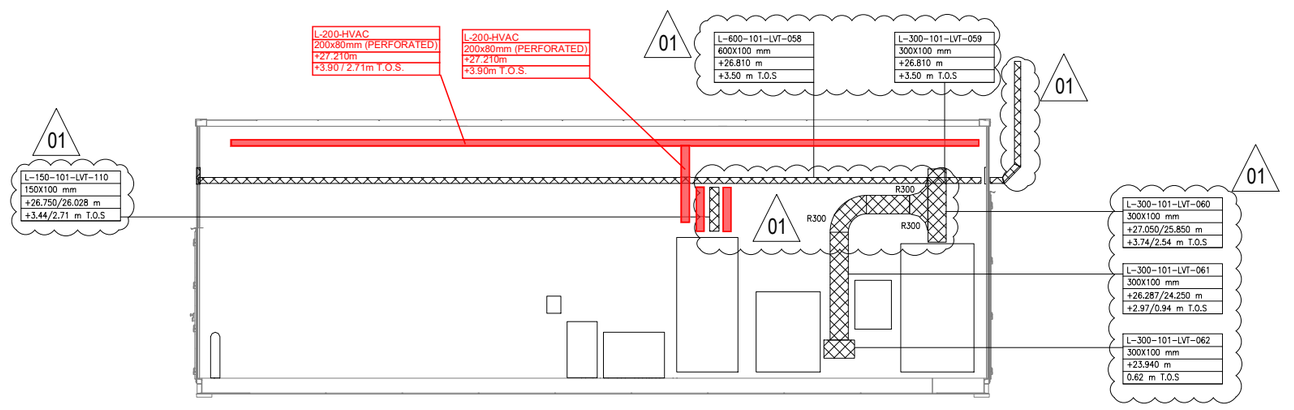




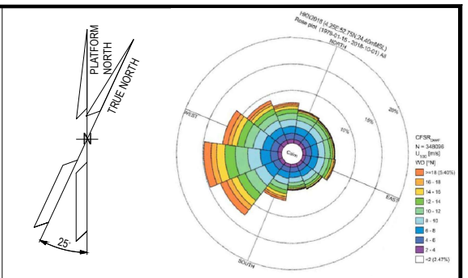
Section C-C



Section A-A



Section B-B



NOTES

1. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
2. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
3. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
4. FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20122 AND 1724000049-AR-DD-00018.
5. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
6. ELEVATIONS REFER TO T.O.S. (EL+23.310 m).
7. FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

LEGEND

ELECTRICAL 6.6 KV CABLE LADDER

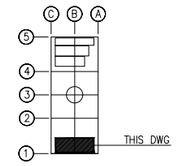
ELECTRICAL LV CABLE LADDER

ELECTRICAL CABLE LADDER (VERTICAL DROP)

E-MCT-106 — TAG
S-6X2 PRIMED-60 — SIZE
EL.+26.936 — ELEVATION

TAG
SIZE
ELEVATION
ELEVATION(T.O.S)

KEY PLAN



REFERENCE DOCUMENTS

123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DL-20122	LIGHTING & SOCKET LAYOUT - HV SWITCHROOM
123A90-DDL-EL-DD-20095	MCT COMPOSITION
1724000049-AR-DD-00018	B-100 DETAILED DRAWING - E&I SHELTERS
123A90-DDL-EL-DL-20115	ELECTRICAL MCT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/08/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	26/04/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20111**

REV.:	DATE:	SIGNATURE:
1_C	06/09/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLE ROUTING LAYOUT
HV SWITCHROOM

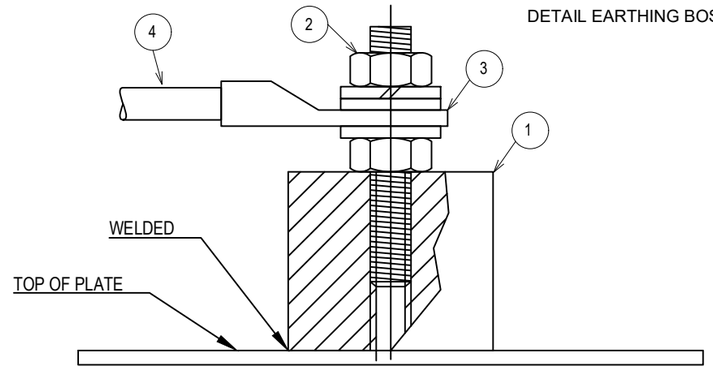
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 02/08/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20111	SHEET 1of6	REV. 01

File Name : 123A90-DDL-EL-DL-20111

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

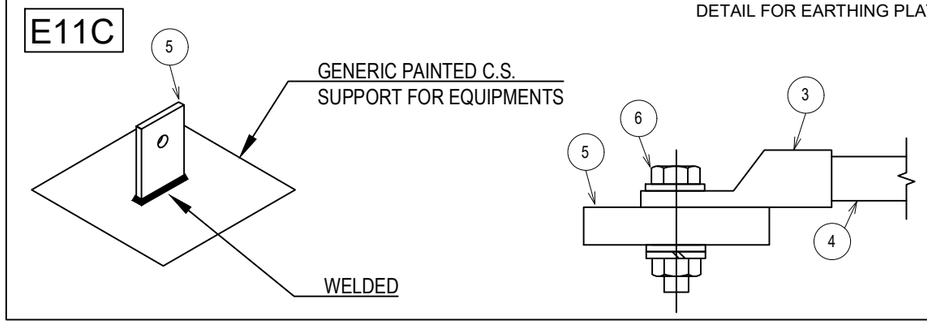
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

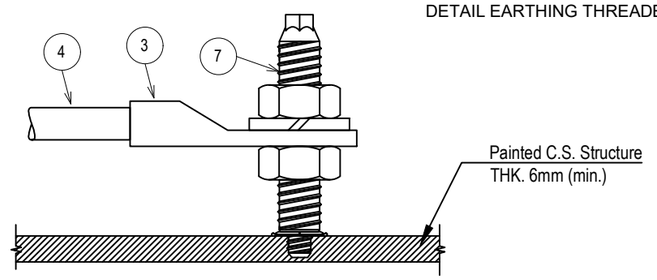


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

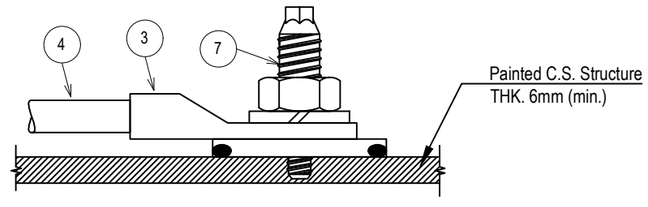


E11E

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

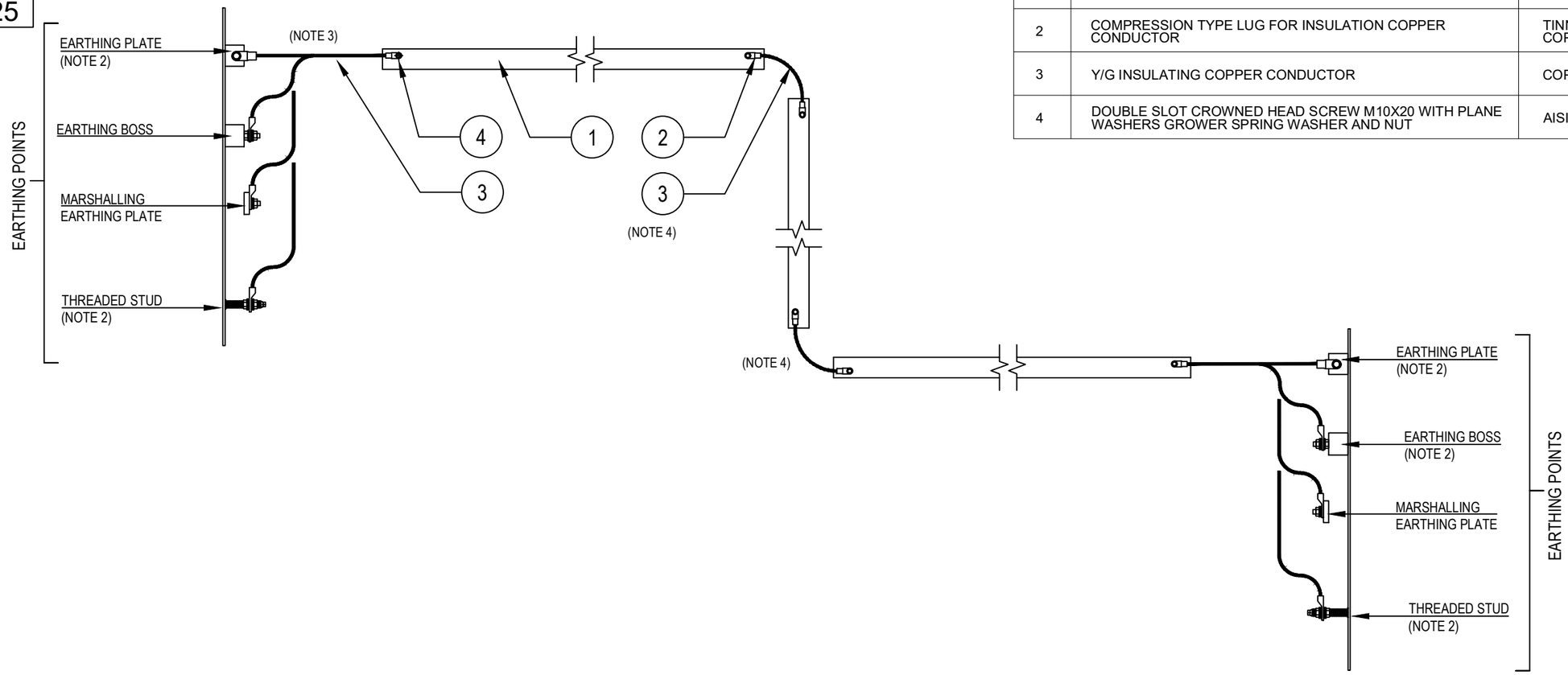
SHEET 003

REV. 02

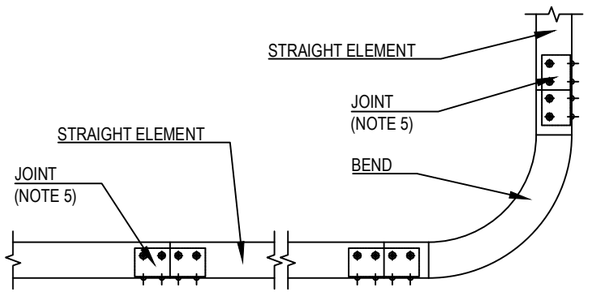
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

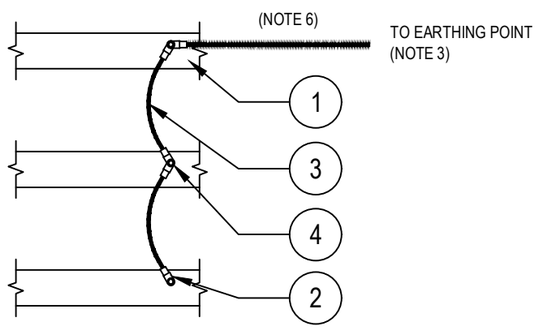
E25



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

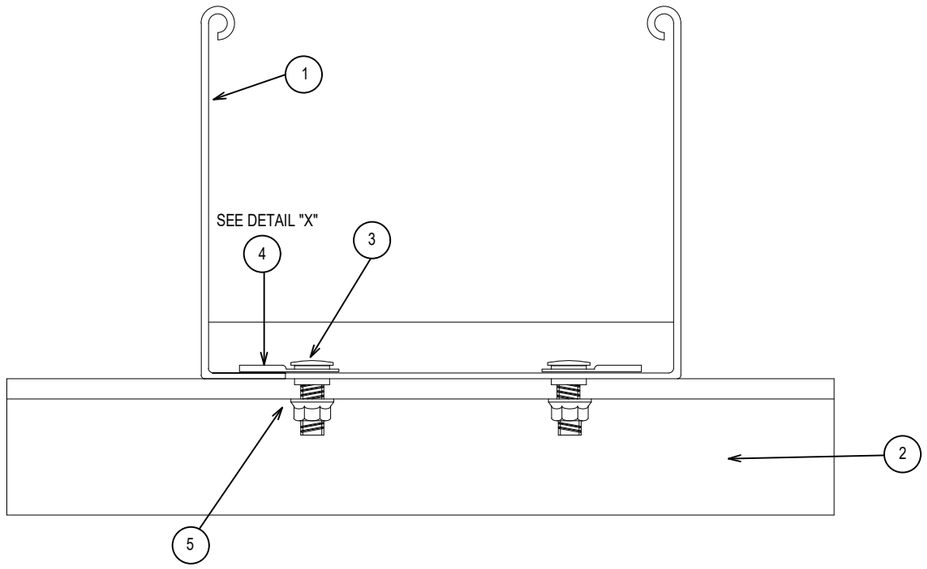
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

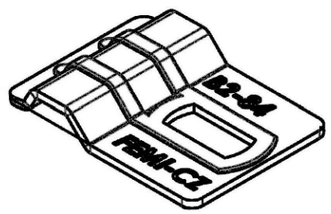
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

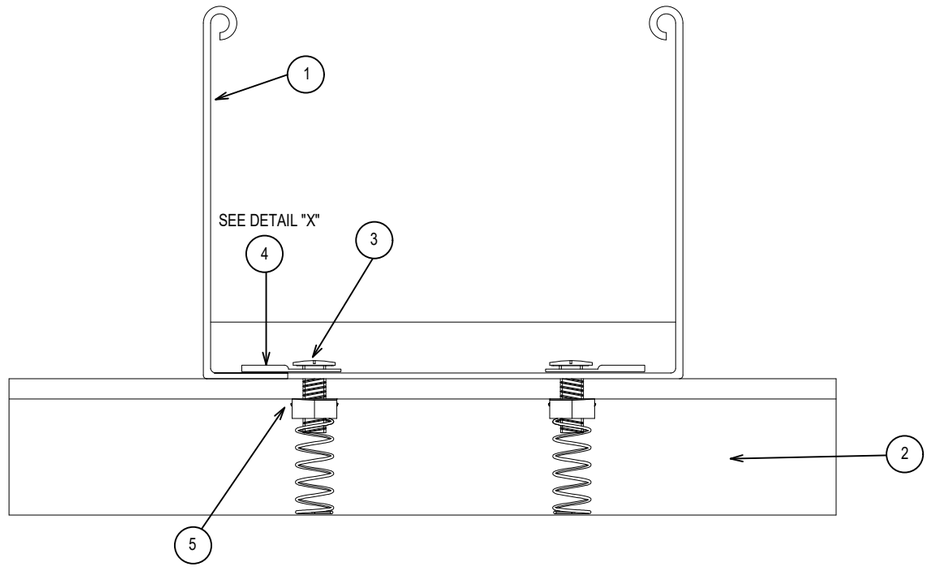
LF

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

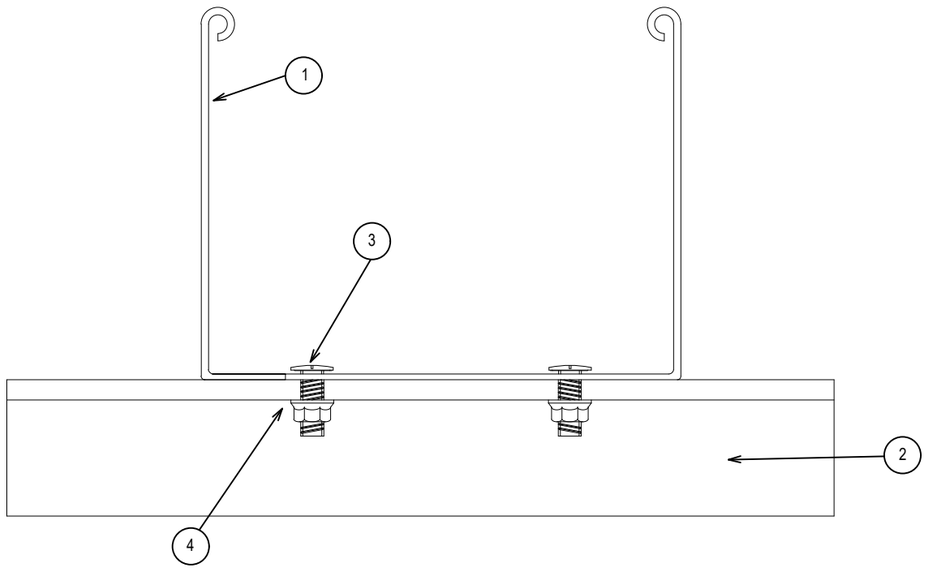
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F.to UNI A3: 420mmx297mm

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	

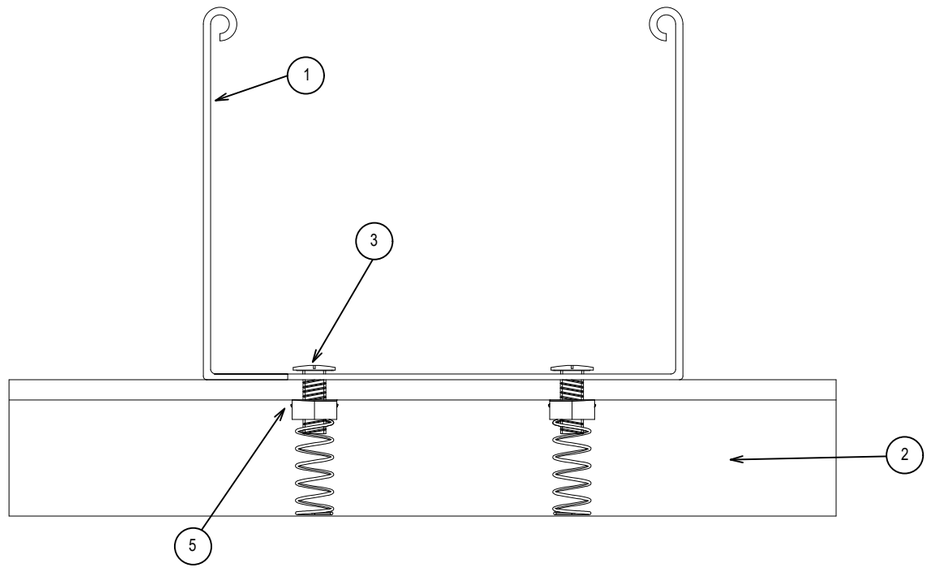


TYPICAL

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

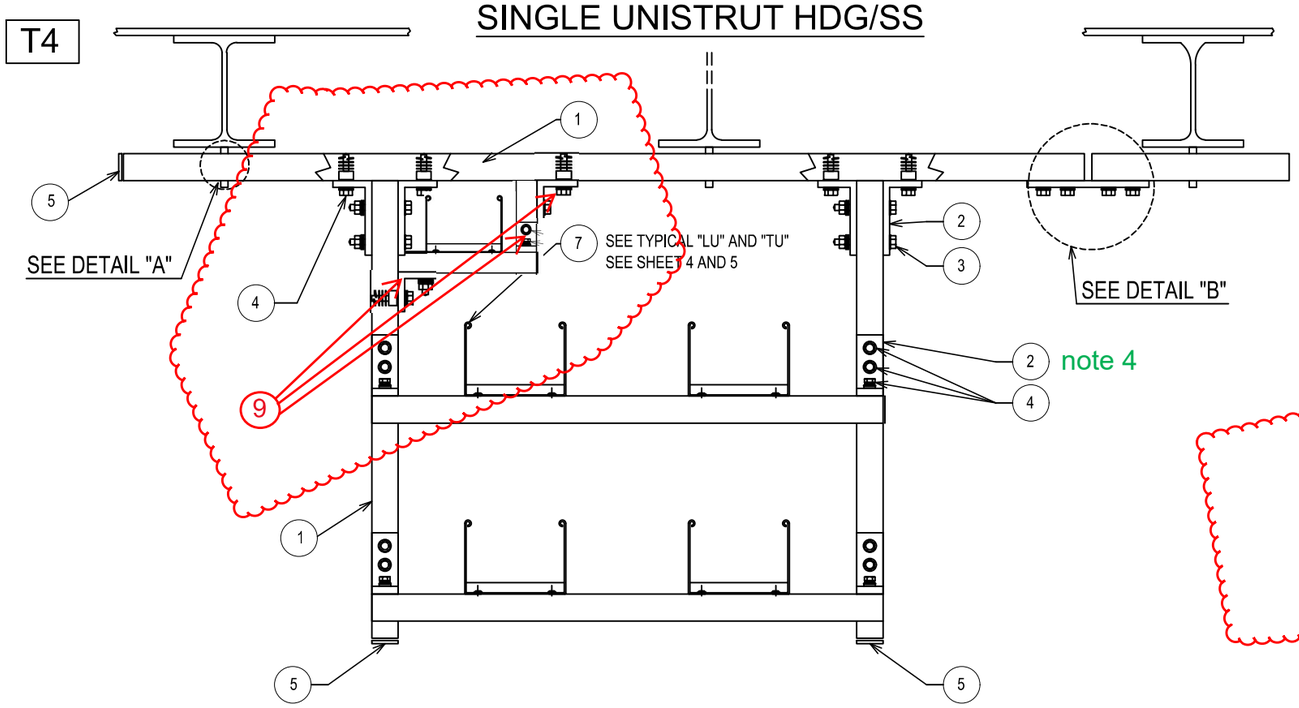
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F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

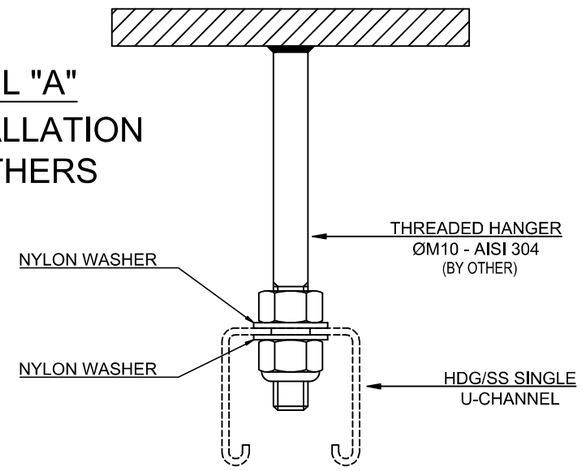
T4

SINGLE UNISTRUT HDG/SS

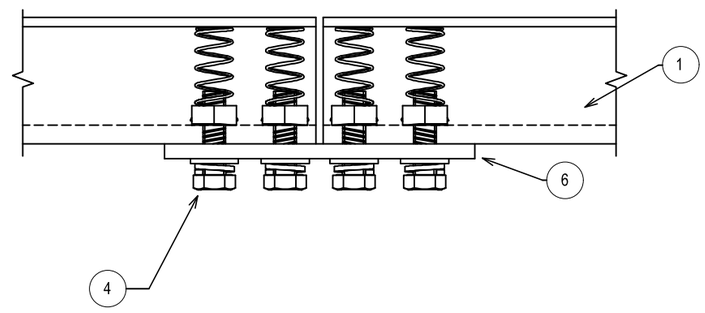


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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

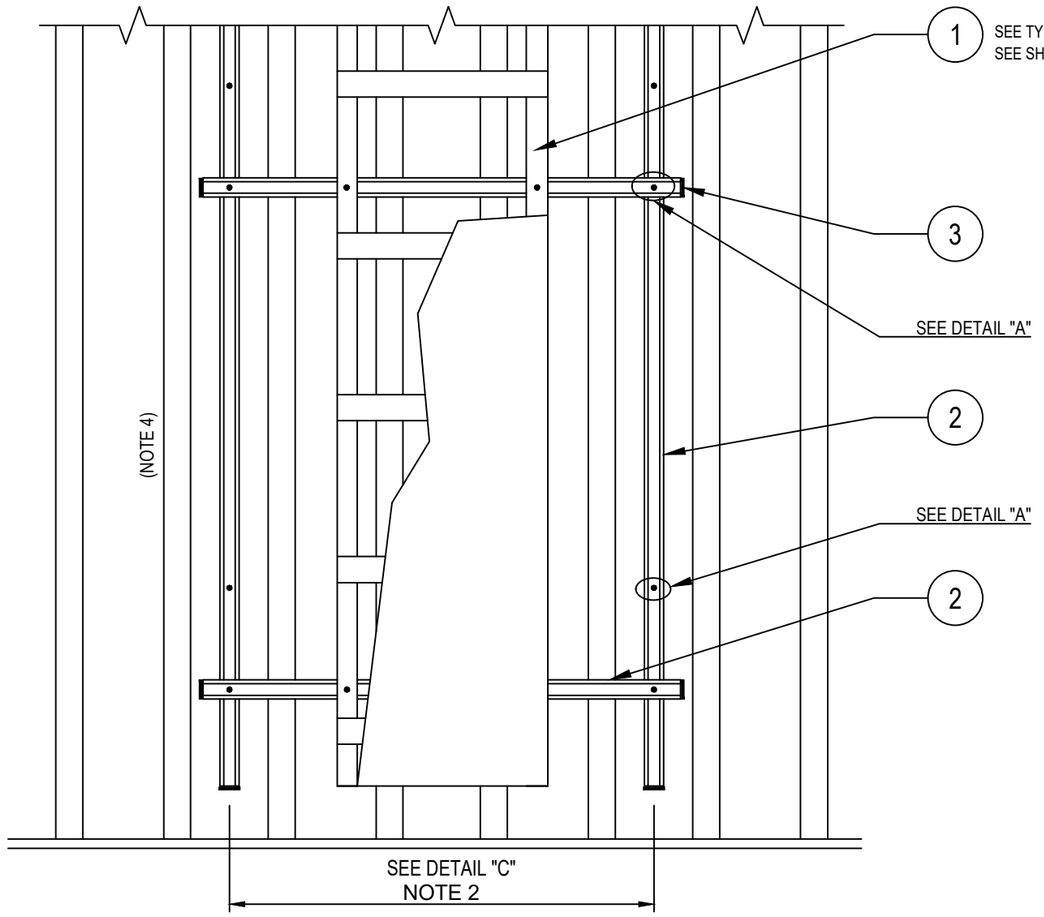
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

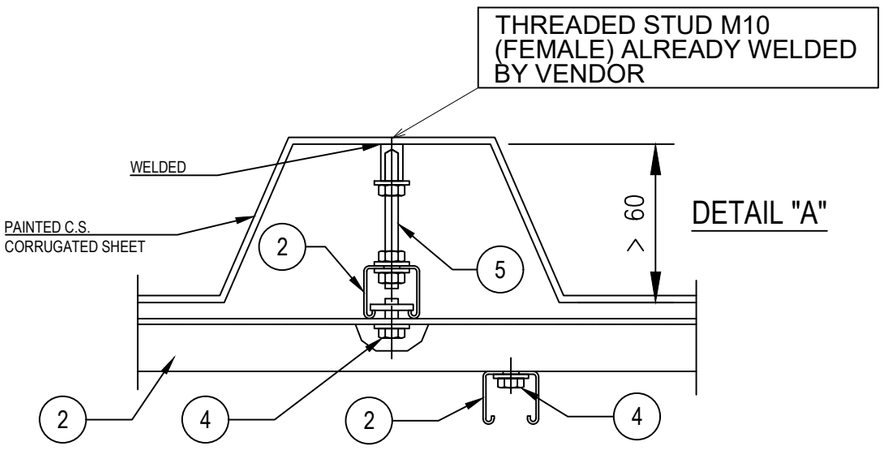
F.to UNI A3: 420mmx297mm

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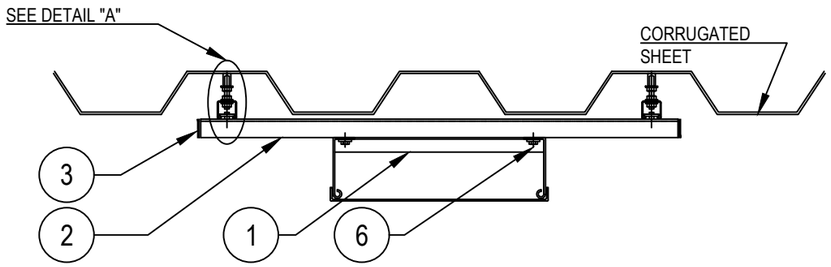
T7



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

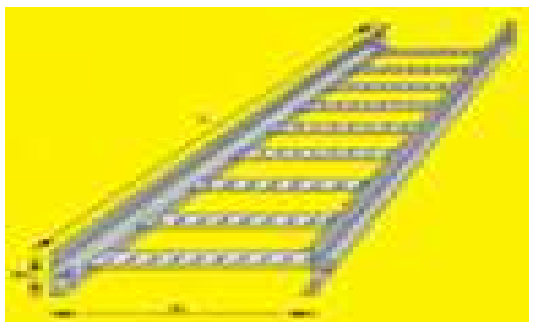
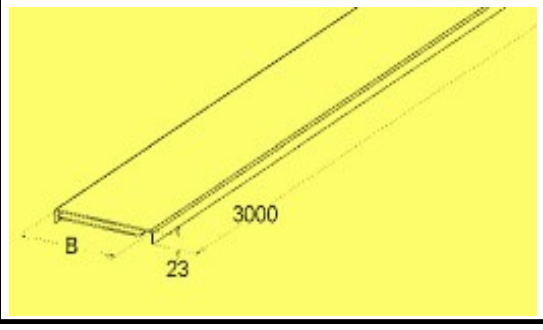
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

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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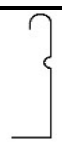
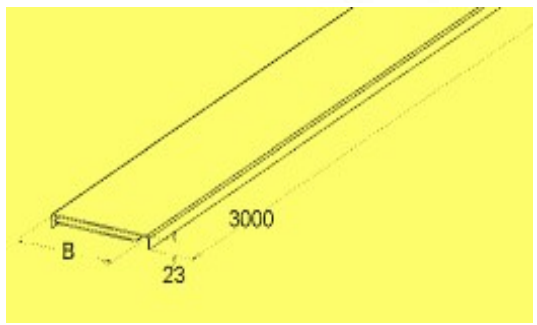
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55

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

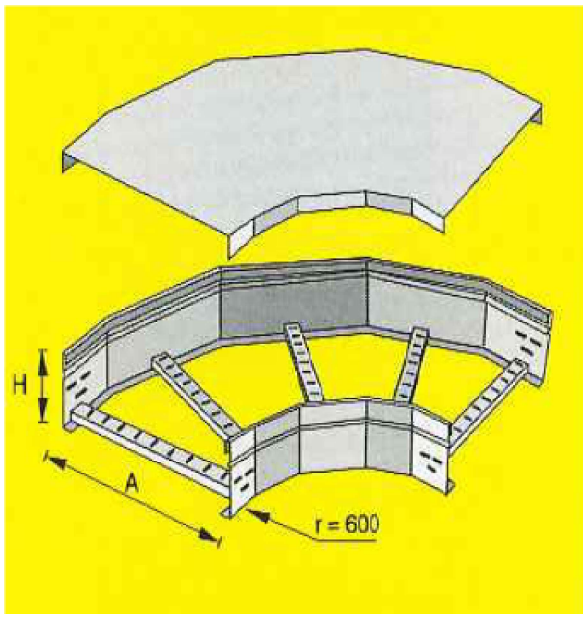
NOTES:

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		
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51 **NOTES:**

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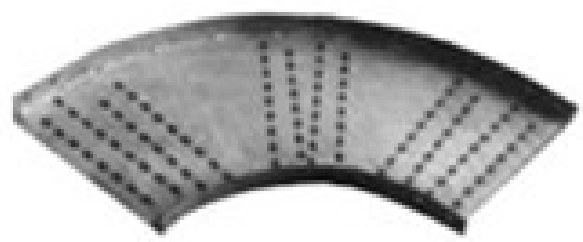
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 8 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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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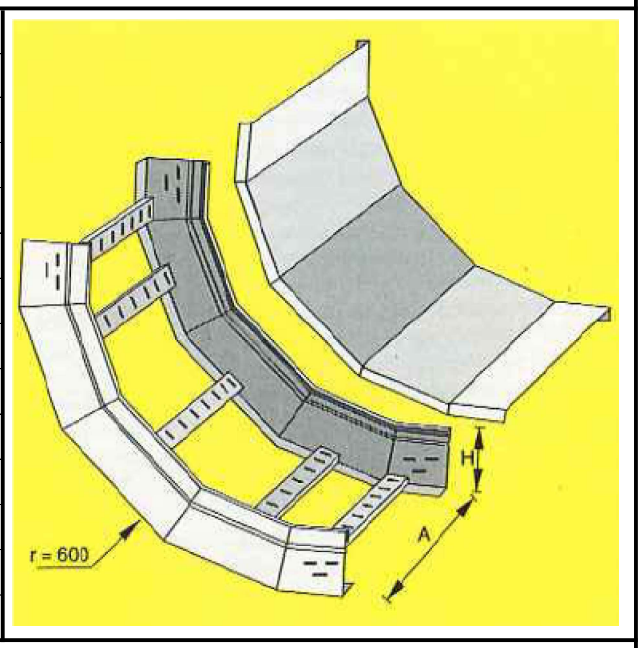
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 9 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

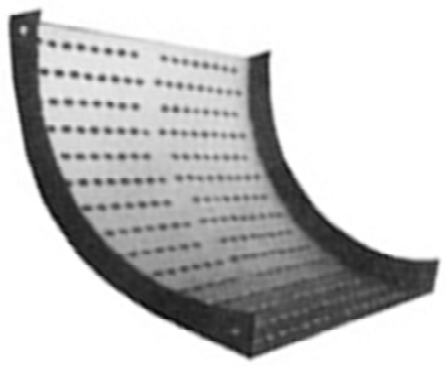
50 **NOTES:**

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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		
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48		
49		

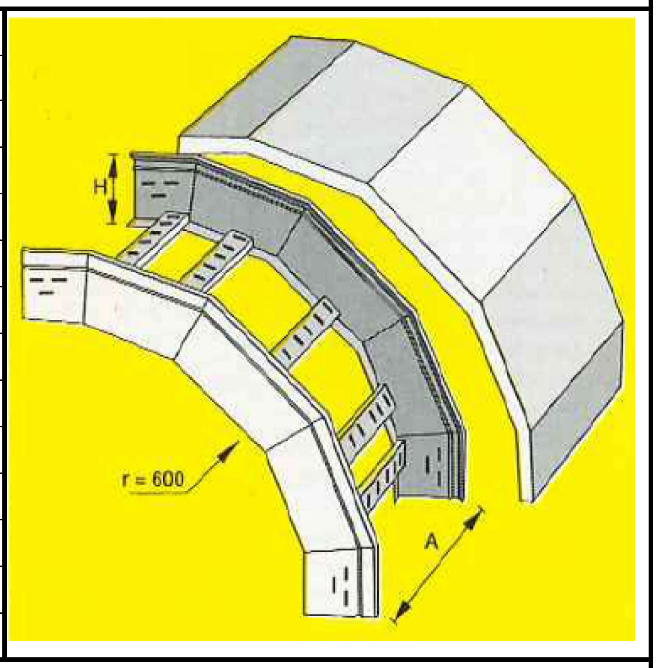
50 **NOTES:**

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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
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47		
48		
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50		
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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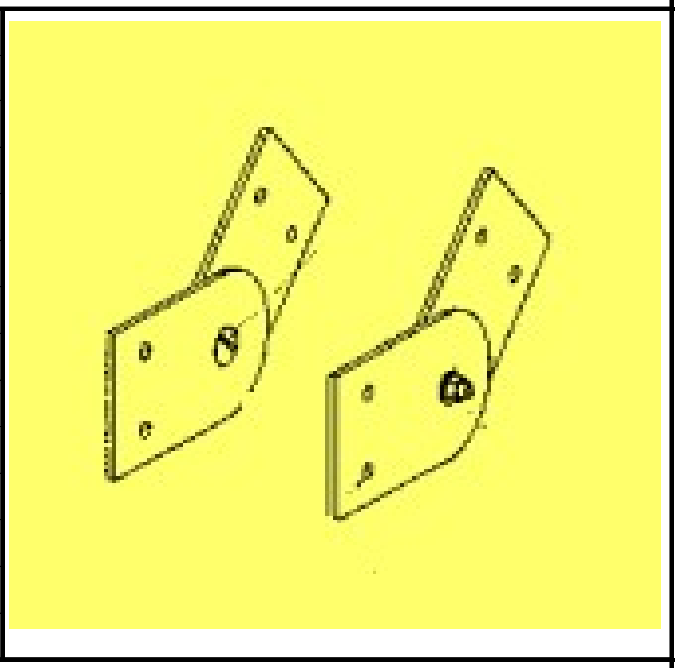
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 13 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		

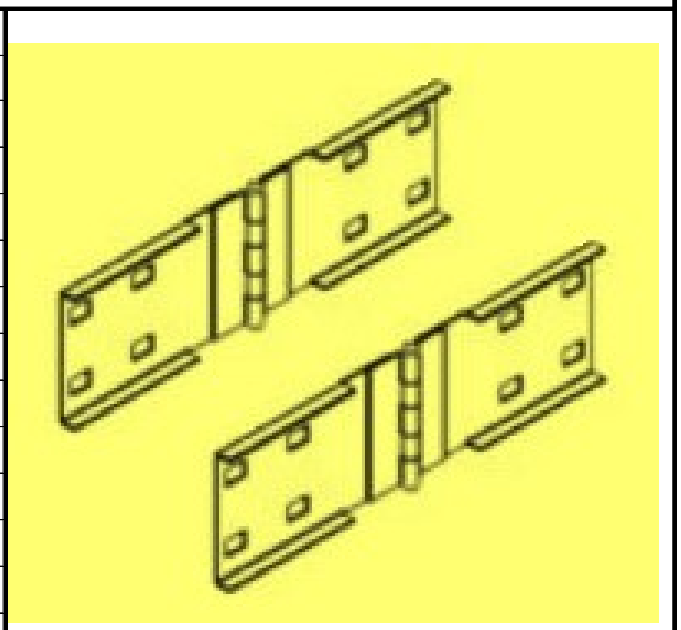
	CODE	REMARKS
28		
29		
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 14 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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					

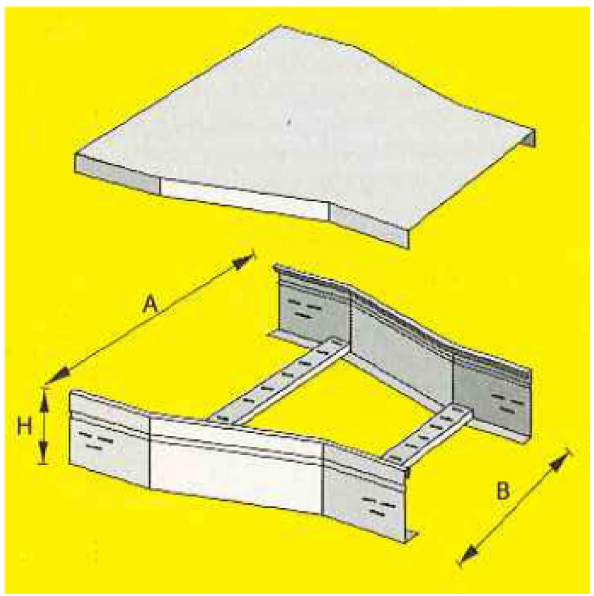
	HEIGHT [mm]	QUANTITY [pc]	
22			
23	100	50	
24	150	15	
25			
26			

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		
40		
41		
42		
43		
44		

45 **NOTES:**

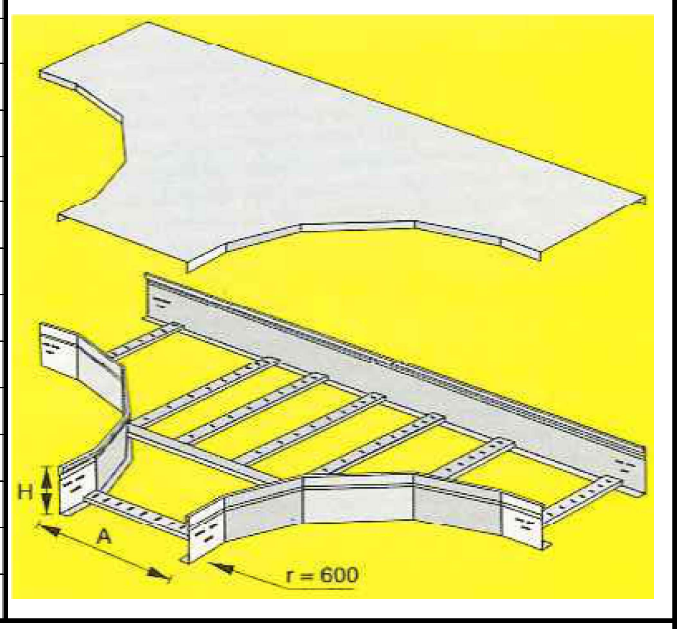
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO Sh: 16 of 19
Document Title:	Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories	Date: 30/09/2024 Rev.: 01

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		
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49		

50 **NOTES:**

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TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

UNISTRUT - MATERIAL LIST

Description	U.M.	QUANTITY
Cover clamp + 1 nut+bolt M6x12 A4(316), 316L, B=25, H=50, T=2	pc	9320
DOU.SLOT.CR.H.SCR. M8X20 AI-316 100PZ Y Composed by 100PCS each box	pc	59
NUT W.SPRING M8 PROF.UR1 AI-316 100P. Y Composed by 100PCS each box	pc	59
R.HE. SCREW SN M6X12 AI-316 100PCS Y Composed by 100PCS each box	pc	23
FLANGED HEX. NUT M6 AI-316 100PCS Y Composed by 100PCS each box	pc	23
E&I Channel Single U normal, Straight element, AISI 316L, B=40mm, H=22mm, L=3000mm, T=2,0mm - U-Channel profile perforated on base p50	pc	100
E&I Channel Single U normal, Straight element, AISI 316L, B=41mm, H=41mm, L=3000mm, T=2,0mm - U-Channel profile perforated on 3 sides p50	pc	500
E&I Channel Double U normal, Straight element, AISI 316L, B=41mm, H=82mm, L=3000mm, T=2,0mm - Double U-Channel profile perforated on 3 sides p50	pc	34
BEAM ATTACHMENT W/COLLAR FOR 40X40 H15 Y	pc	160
BEAM ATTACHMENT W/COLLAR FOR 40X40 H20 Y	pc	40
Plug For Channel 40x40	pc	3000
P 01-UR1 Connection Plate - (1 holes), 40x40xTHK5mm, Material: 316L	pc	400
P 04-UR1 Connection Plate - (4 holes), 40x190xTHK5mm, Material: 316L	pc	200
L 21-UR1 Plate for orthogonal-transv. Connection - L 90° (2 holes), 40x35x53xTHK5mm, Material: 316L	pc	300
L 22-UR1 Plate for orthogonal-transv. Connection - L 90° (3 holes), 40x35x103xTHK5mm, Material: 316L	pc	300
L 24-UR1 Plate for orthogonal-transv. Connection - L 90° (4 holes), 40x84x104xTHK5mm, Material: 316L	pc	100
P 06-UR1 Adjustable Connection Plate - (3 holes), 40x140xTHK5mm, Material: 316L	pc	200
Flanged Hexagonal Nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	6
Hex head nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	30
Nuts for channel with spring 10mm - A4, Composed by 100pcs each box	pc	2
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	60
Grower Spring Washer D.10(17), Material: A4/316, Composed by 100pcs each box	pc	30
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	6
HEXAGONAL HEAD SCREW M10X20 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	6
HEXAGONAL HEAD SCREW M10X40 AISI316 100PCS Y, Composed by 100PC Each Box	pc	9
HEXAGONAL HEAD SCREW M10X70 AISI316 100PCS Y, Composed by 100PC Each Box	pc	8
Hex head nut M12, Material: AISI 316 - A4, Composed by 100pcs each box	pc	1
Nuts for channel with spring 12mm - A4, Composed by 100pcs each box	pc	20
Plane Washer D.12(24), Material: A4/316, Composed by 100pcs each box	pc	25
Grower Spring Washer D.12(19), Material: A4/316, Composed by 100pcs each box	pc	25
HEXAGONAL HEAD SCREW M12X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	20
Flanged Hexagonal Nut M6, Material: AISI 316 - A4, Composed by 100pcs each box	pc	30
Hex head nut M6, Material: AISI 316 - A4, Composed by 100pcs each box	pc	10
Nuts for channel with spring 6mm - A4, Composed by 100pcs each box	pc	30
Plane Washer D.6(12), Material: A4/316, Composed by 100pcs each box	pc	10
Grower Spring Washer D.6(11), Material: A4/316, Composed by 100pcs each box	pc	10
DOUBLE SLOT CROWNED HEAD SCREW M6X20 100PC AISI316, Composed by 100PCs each Box	pc	30
DOUBLE SLOT CROWNED HEAD SCREW M6X30 100PC AISI316, Composed by 100PCs each Box	pc	10
Hex head nut M8, Material: AISI 316 - A4, Composed by 100pcs each box	pc	6
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	24
Grower Spring Washer D.8(14), Material: A4/316, Composed by 100pcs each box	pc	6
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	12
Plane Washer D.8(24) Large, Material: A4/316, Composed by 100pcs each box	pc	5
HEXAGONAL HEAD SCREW M8X16 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	6
23-UR1/40x40 Welded Support	pc	25
Ex Nut, TE DIN 933 INOX A4 M10X40	pc	200
Hexagonal Head Screw, TE DIN 933 INOX A4 M5X35	pc	100

TITLE

Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories

UNISTRUT - MATERIAL LIST

Description	U.M.	QUANTITY
Square tapered washers for U beams with Ø11 hole (DIN 434 UNI 6598 A4 AISI 316)	pc	200
Hex head nut M5, Nut DIN 934 INOX A4 M5 P0.8 CL.80	pc	100
Plane Washer, RON.INOX A4 DIN 125A M5 (5.3X10X1)	pc	100
U-Channel profile perforated on 3 sides p50	m	360
Plug For Channel 40x40	pc	800
Nuts for channel with spring 10mm - A4, 100pcs Each Box	pc	5
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	5
HEXAGONAL HEAD SCREW M10X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	7
Hex head nut M10, Material: AISI 316 - A4, Composed by 100pcs each box	pc	7
Plane Washer D.10(21), Material: A4/316, Composed by 100pcs each box	pc	7
P 01-UR1 Connection Plate - 1 Hole, 40x40xTHK5, Material: 316L	pc	200
HEXAGONAL HEAD SCREW M12X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
Hex head nut M12, Material: AISI 316 - A4, Composed by 100pcs each box	pc	2
Plane Washer D.12(24), Material: A4/316, Composed by 100pcs each box	pc	2
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	2
Hex head nut M8, Material: AISI 316 - A4, Composed by 100pcs each box	pc	2
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	2
DOUBLE SLOT CROWNED HEAD SCREW M6X30 100PC AISI316, Composed by 100PCs each Box	pc	1
FLANGED HEX. NUT M6 AI-316 100PCS Y, Composed by 100PCS each box	pc	1
Plane Washer D.6(12), Material: A4/316, Composed by 100pcs each box	pc	1
Nuts for channel with spring M8x40mm - A4 100pcs per box	pc	5
HEXAGONAL HEAD SCREW M8X30 AISI316 100PCS Y, Composed by 100PC Each Box	pc	5
Plane Washer D.8(17), Material: A4/316, Composed by 100pcs each box	pc	5
L21-UR1 Plate for orthogonal-transv. Connection - L 90° (2 holes), 40x35x53xTHK5mm, Material: 316L	pc	1000
L 22-UR1 Plate for orthogonal-transv. Connection - L 90° (3 holes), 40x35x103xTHK5mm, Material: 316L	pc	1000
L 24-UR1 Plate for orthogonal-transv. Connection - L 90° (4 holes), 40x84x104xTHK5mm, Material: 316L	pc	1000

Row	Data Sheet for Electrical Cable Trays & Accessories		Rev.
1	Tag No. :		
2	Service :		
3	PURCHASE ORDER SPECIFIC REQUIREMENTS		

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-01 & process: MC & discipline : I

Instrumental	90-01 HV-MV Switchgear Room B-100						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
CABLE_TRAY_B100_INS	Cable Tray B100 - Instrumental	ONSHORE	C10002282	CJX30A	100	2024-10-16	RFC 1
		ONSHORE	C10002283	CJX30B	100	2025-01-25	RFC 1
I-MCT-101	Multi Cable Transit	ONSHORE	C10001894	CJX29	100	2025-01-04	RFC 1
I-MCT-102	Multi Cable Transit	ONSHORE	C10001895	CJX29	100	2025-01-04	RFC 1
I-MCT-103	Multi Cable Transit	ONSHORE	C10001896	CJX29	100	2025-01-04	RFC 1

ITEM	Tag	I-MCT-101	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40086	
	S/Sys	90-01	: HV-MV Switchgear Room B-100		Module	LD_B-100_Ext	
TASK	code	C10001894	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.	PL
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	Francesco Zucca	Paolo Schintu	
Date	2024-12-03	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:07:47.683Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T09:02:52.559Z	

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 "D"
I-MCT-102
S-4x1 PRIMED
EL. +U 26.320

SEE DETAIL "C"
I-MCT-101
S-4x2 PRIMED
EL. +U 26.320

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

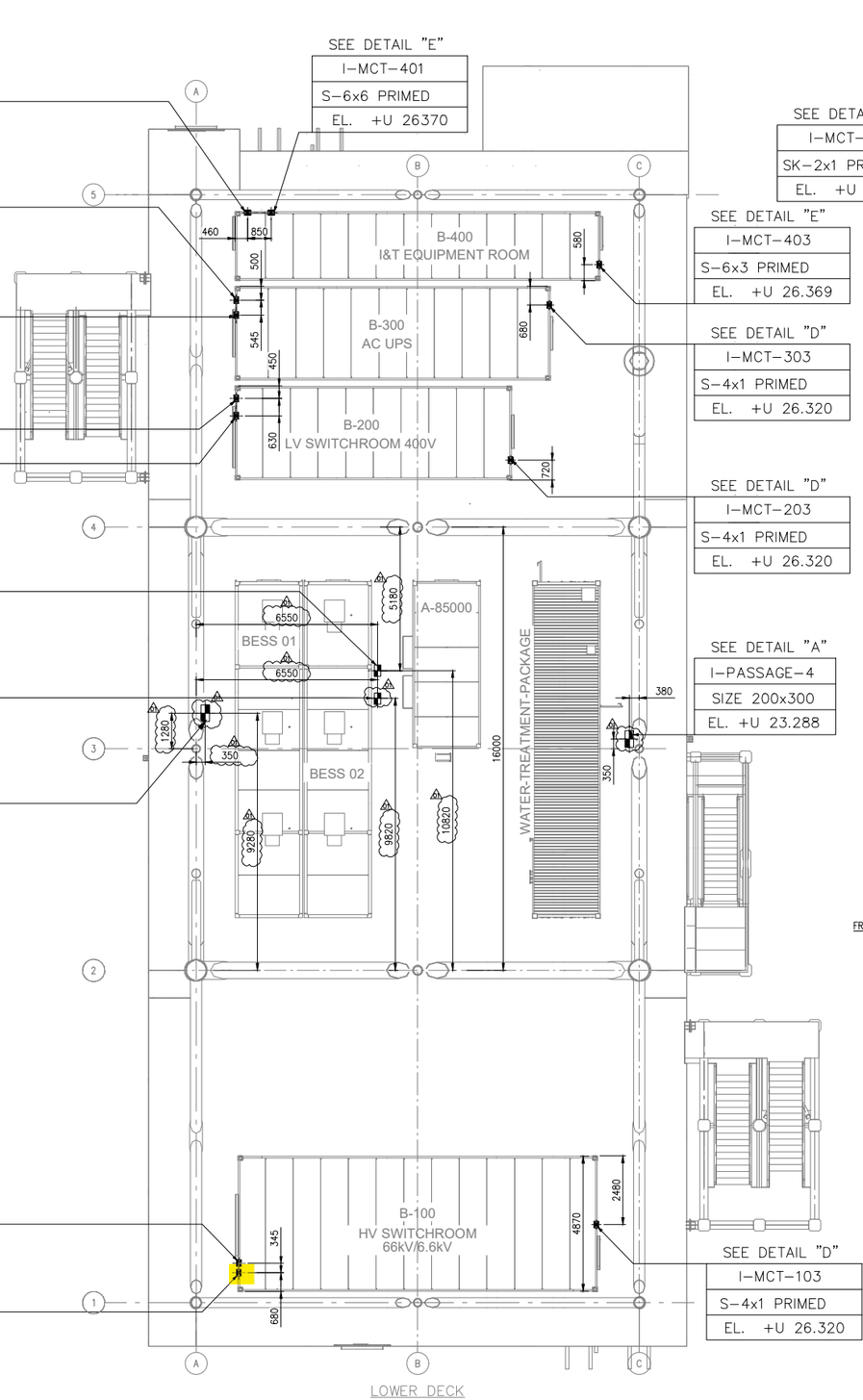
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I-MCT-403
S-6x3 PRIMED
EL. +U 26.369

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

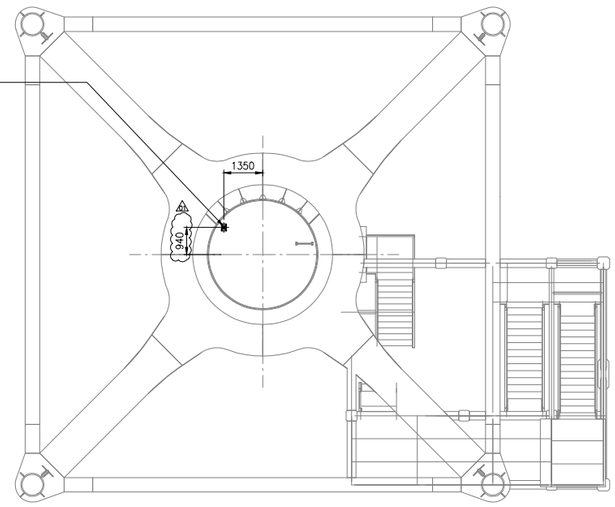
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I-PASSAGE-4
SIZE 200x300
EL. +U 23.288

SEE DETAIL "D"
I-MCT-103
S-4x1 PRIMED
EL. +U 26.320



LOWER DECK

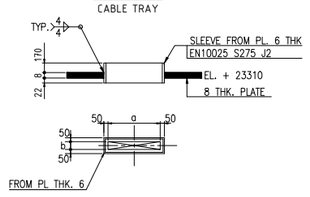
VIEW EL. +23310mm to +30310mm



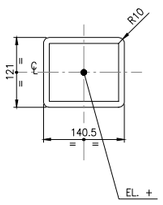
MONO PILE (TRANSITION PIECE)

VIEW EL. +17180mm to +23340mm

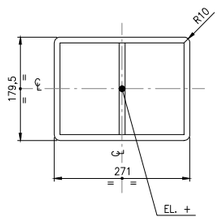
DETAIL "A"
CABLE TRAY



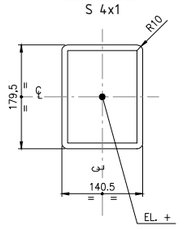
DETAIL "B"
SK 2x1



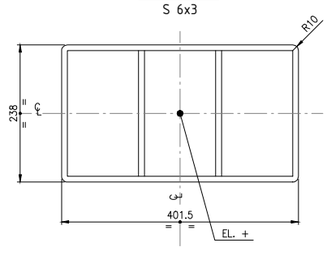
DETAIL "C"
S 4x2



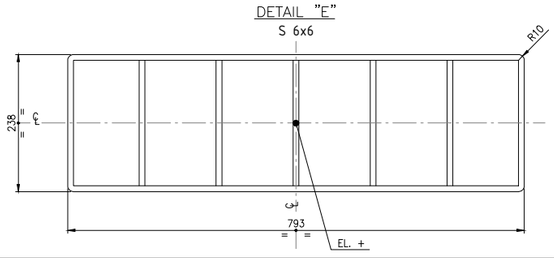
DETAIL "D"
S 4x1

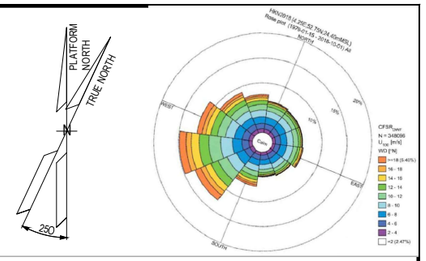


DETAIL "E"
S 6x3



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

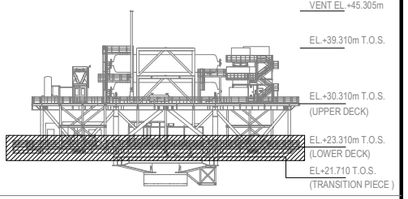
PASSAGE

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 REV.01.dwg

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40086**

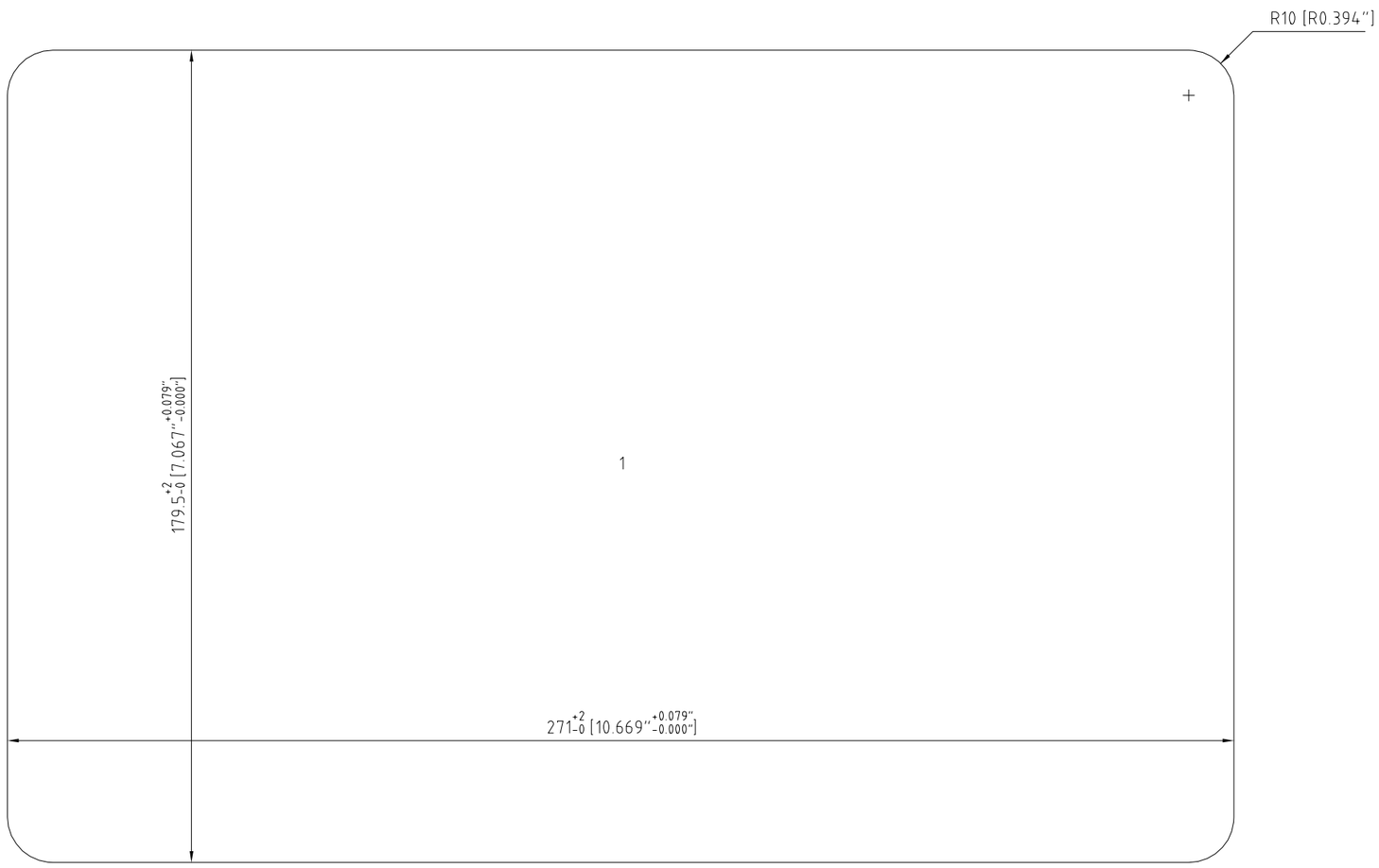
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

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

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Cutout Detail

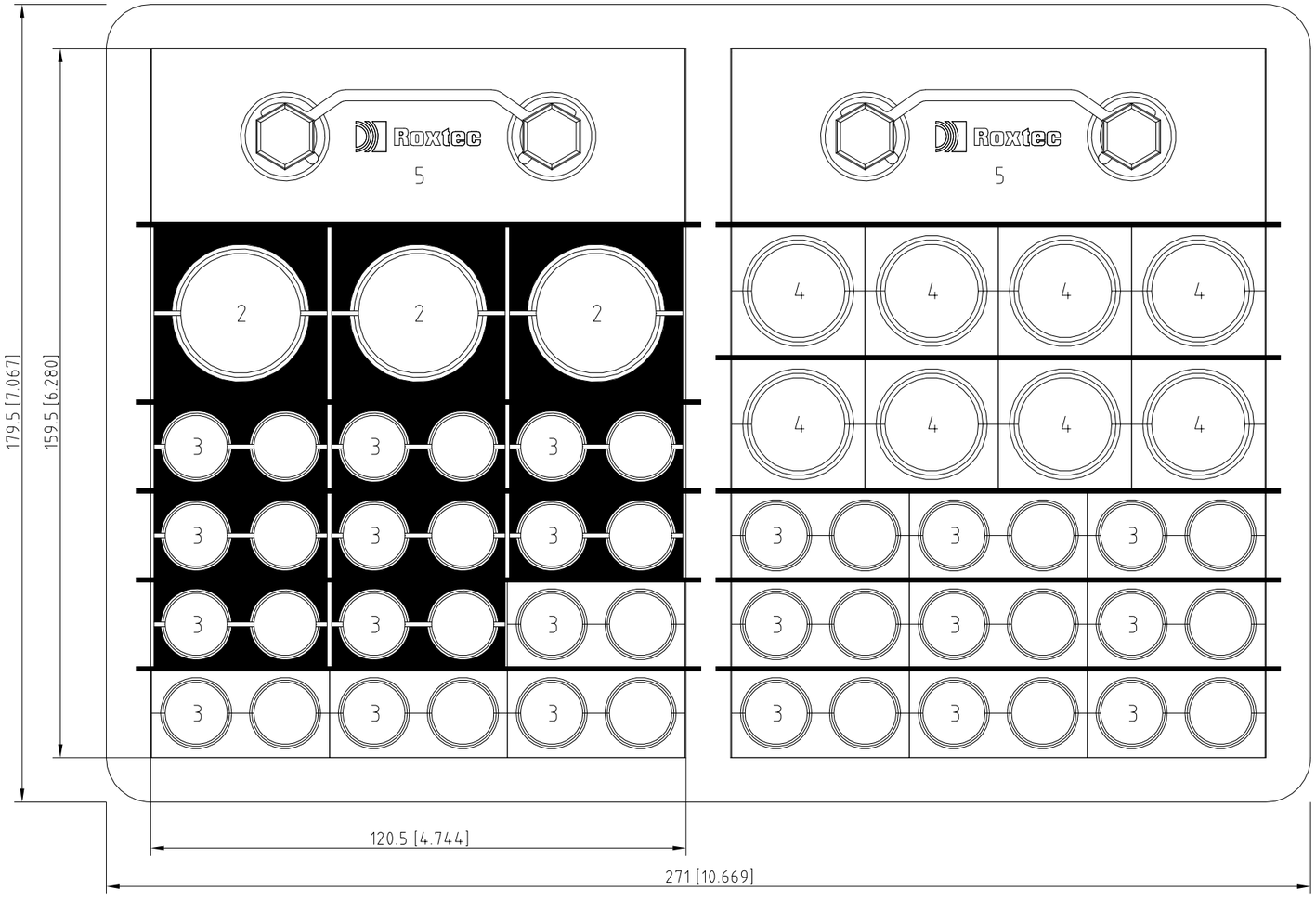
Frame: S 4x2 PRIMED Solution: 1

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

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	10 [22.11]
Roxtec	Format NTS		Transit name I-MCT-101	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, 271x179.5 [10.669"x7.067"]



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

Detail Drawing

Solution: 1

I-MCT-101 - B-100 HV-MV Switchgear Room

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	10	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
5	2	Wedge 120 galv	ARW0001201018	0.8 [1.76]
4	8	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
3	21	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
2	3	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
1	1	S 4x2 PRIMED	S004000000212	4.8 [10.58]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	10 [22.11]
Roxtec	Format NTS		Transit name I-MCT-101	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.

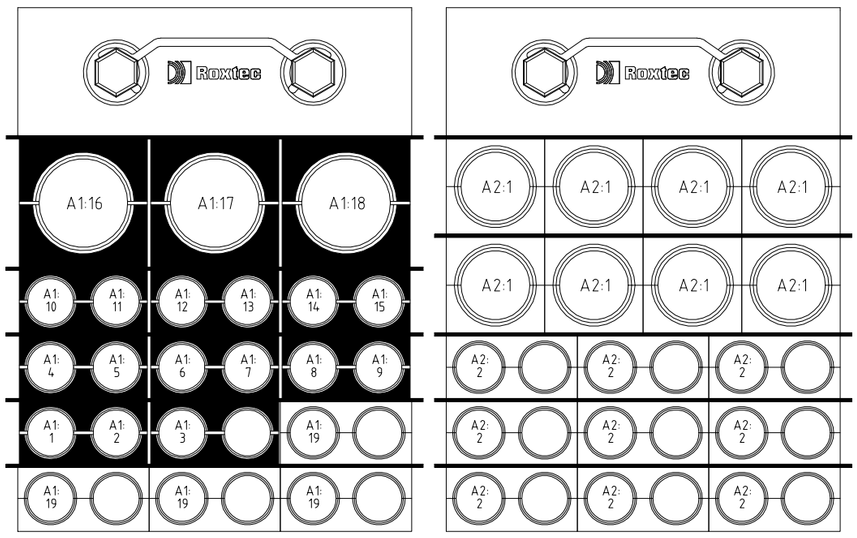
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RTD Version No: 4.37.11.0

A1 A2

A1 A2



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

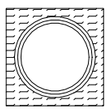
ROSETTI MARINO SpA

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

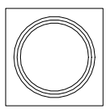
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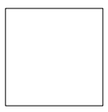
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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[“])	Module Type
A2:2						RM 20W40 3.5-16.5 [0.138"-0.650"]
A2:1						RM 30 10-25 [0.394"-0.984"]
A1:19						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:18	6	950-JE-06201/B400-FGS-002	6x3x2.5 mm2	Ex-d	32.9 [1.295"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:17	7	B100-HSB-001/B400-FGS-002	6x2x0.75 mm2	Ex-d	25.2 [0.992"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:16	8	950-JE-06203/B400-FGS-002	12x2.5 mm2	Ex-d	24.2 [0.953"]	RM 40 21.5-34.5 [0.846"-1.358"]
A1:15	9	C-950-MFA-06201/B400-FGS-002	1x2x0.75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:14	5	C-B100-TIR-001/B-400-PCS-002	2x2x0.75 mm2	Ex-d	15.2 [0.598"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:13	1	C-77-XS-001/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:12	2	C-77-XA-001/B400-SIS-001	1x2x0.75 mm2	Ex-d	11.7 [0.461"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:11	4	C-B100-TDC-002/B400-PCS-002	1x2x0.75 mm2	Ex-d	9.5 [0.374"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:10	3	C-B100-TDC-001/B400-PCS-002	1x2x0.75 mm2	Ex-d	9.5 [0.374"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:9	15	C-UP-200F1/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:8	14	C-CB-200F1/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	13	C-SG-100D1-003/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	12	C-SG-100D1-002/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5	11	C-SG-100D1-001/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:4	10	C-CP-100E1/B400-SIS-001	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3	19	C-950-GDZ-06203/950-JE-06201	3x2,5 mm2	Ex-d	14.7 [0.579"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:2	18	C-950-GDZ-06202/950-JE-06201	3x2,5 mm2	Ex-d	14.7 [0.579"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:1	17	C-950-GDZ-06201/950-JE-06201	3x2,5 mm2	Ex-d	14.7 [0.579"]	RM 20W40 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	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	10 [22.11]
Roxtec	Format NTS		Transit name I-MCT-101	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-102	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40086	
	S/Sys	90-01	: HV-MV Switchgear Room B-100		Module	LD_B-100_Ext	
TASK	code	C10001895		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.	Note
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: Note 2: Refer to PL n* C30002352

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-09	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-09T13:28:31.785Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T09:11:10.938Z	

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 "D"
I-MCT-102
S-4x1 PRIMED
EL. +U 26.320

SEE DETAIL "C"
I-MCT-101
S-4x2 PRIMED
EL. +U 26.320

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

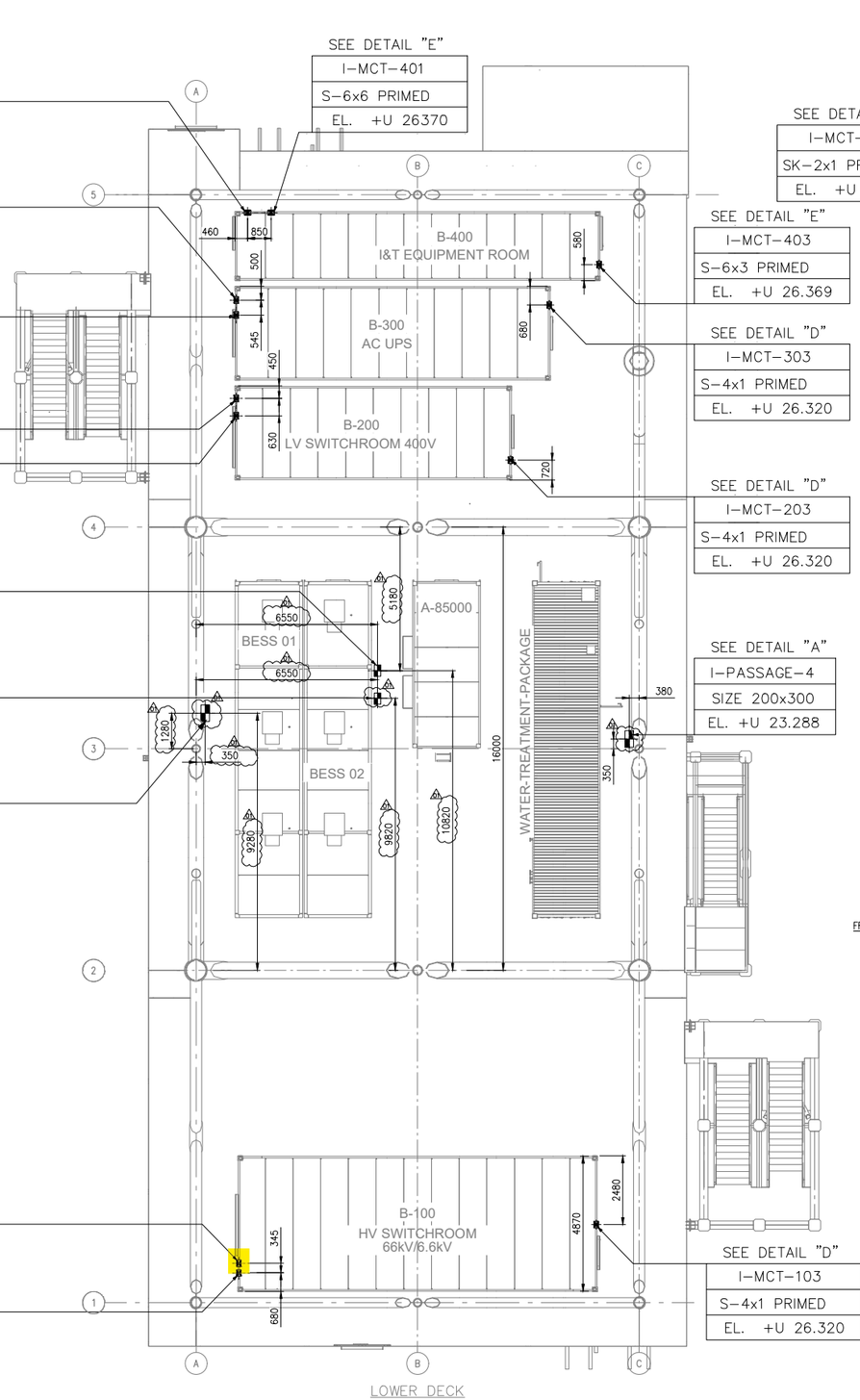
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I-MCT-403
S-6x3 PRIMED
EL. +U 26.369

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

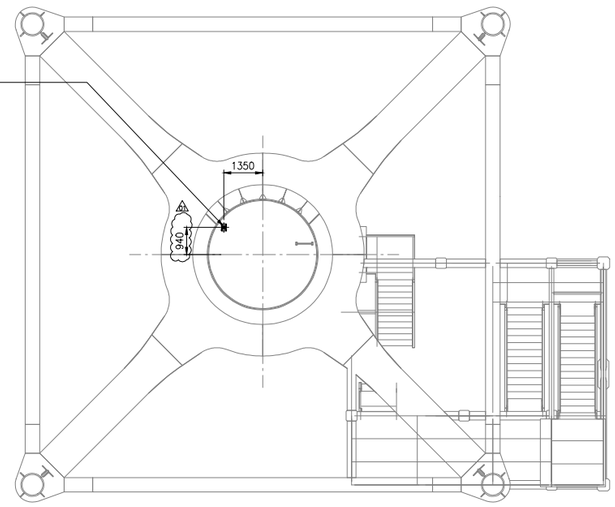
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I-PASSAGE-4
SIZE 200x300
EL. +U 23.288

SEE DETAIL "D"
I-MCT-103
S-4x1 PRIMED
EL. +U 26.320



LOWER DECK

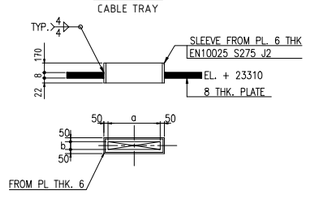
VIEW EL. +23310mm to +30310mm



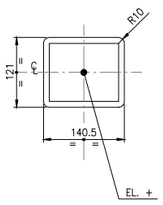
MONO PILE (TRANSITION PIECE)

VIEW EL. +17180mm to +23340mm

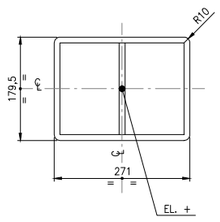
DETAIL "A"
CABLE TRAY



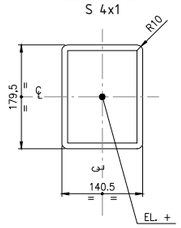
DETAIL "B"
SK 2x1



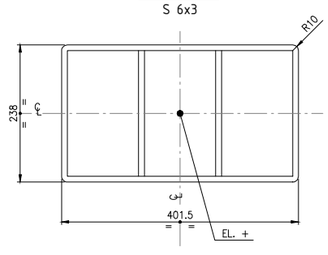
DETAIL "C"
S 4x2



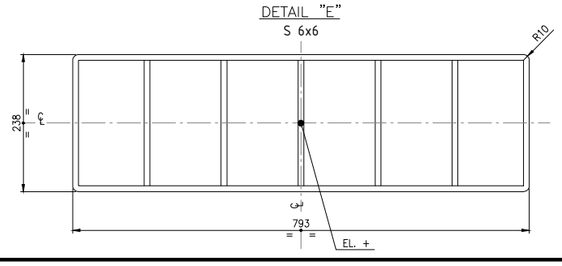
DETAIL "D"
S 4x1

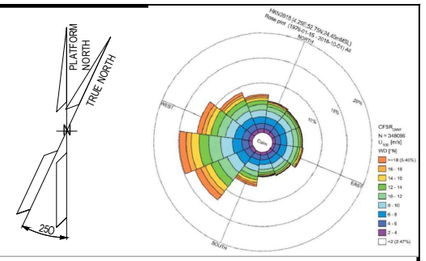


DETAIL "E"
S 6x3



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

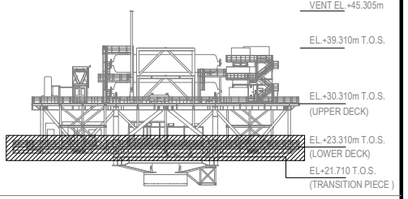
PASSAGE

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 REV.01.dwg

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40086**

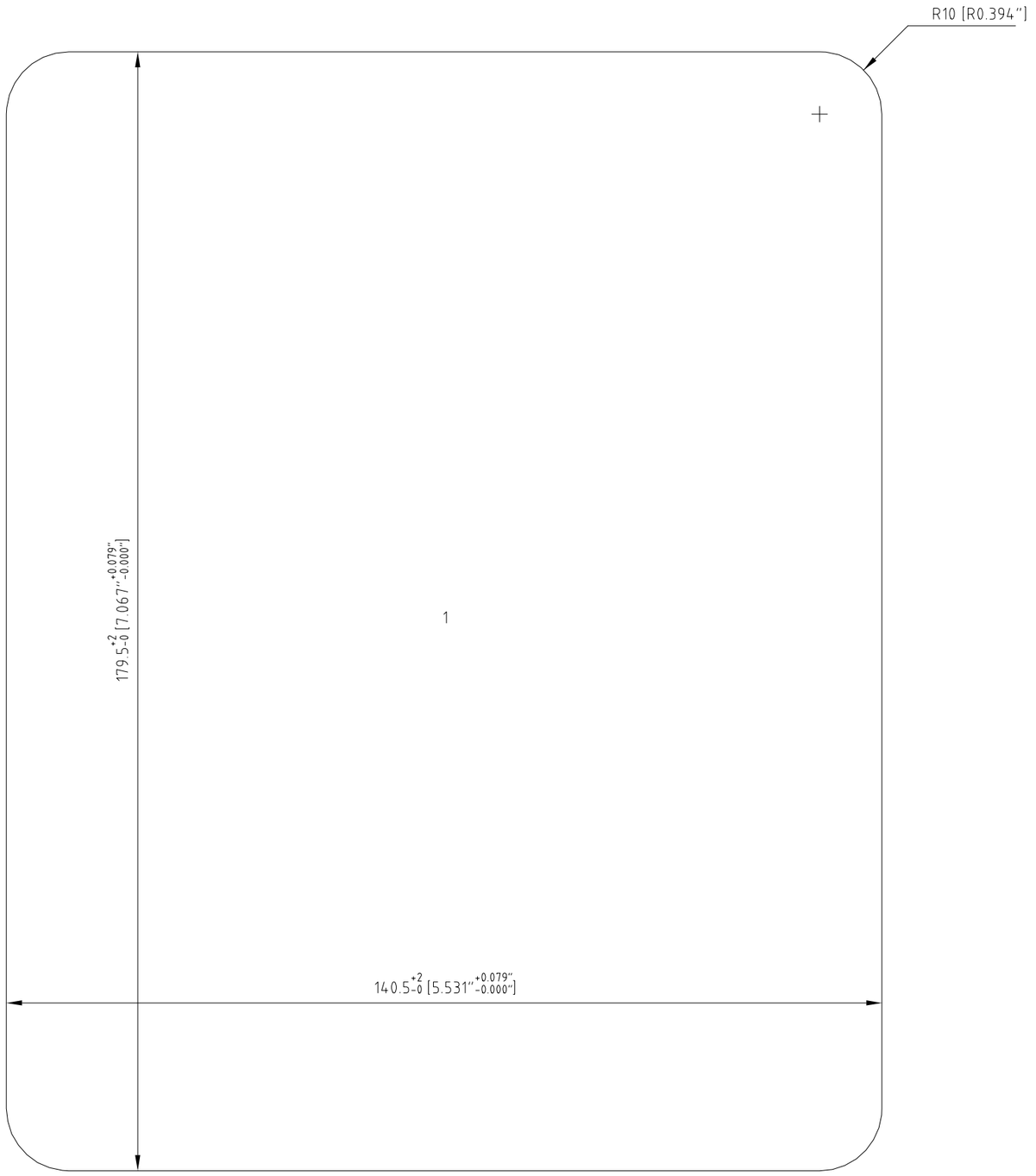
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

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

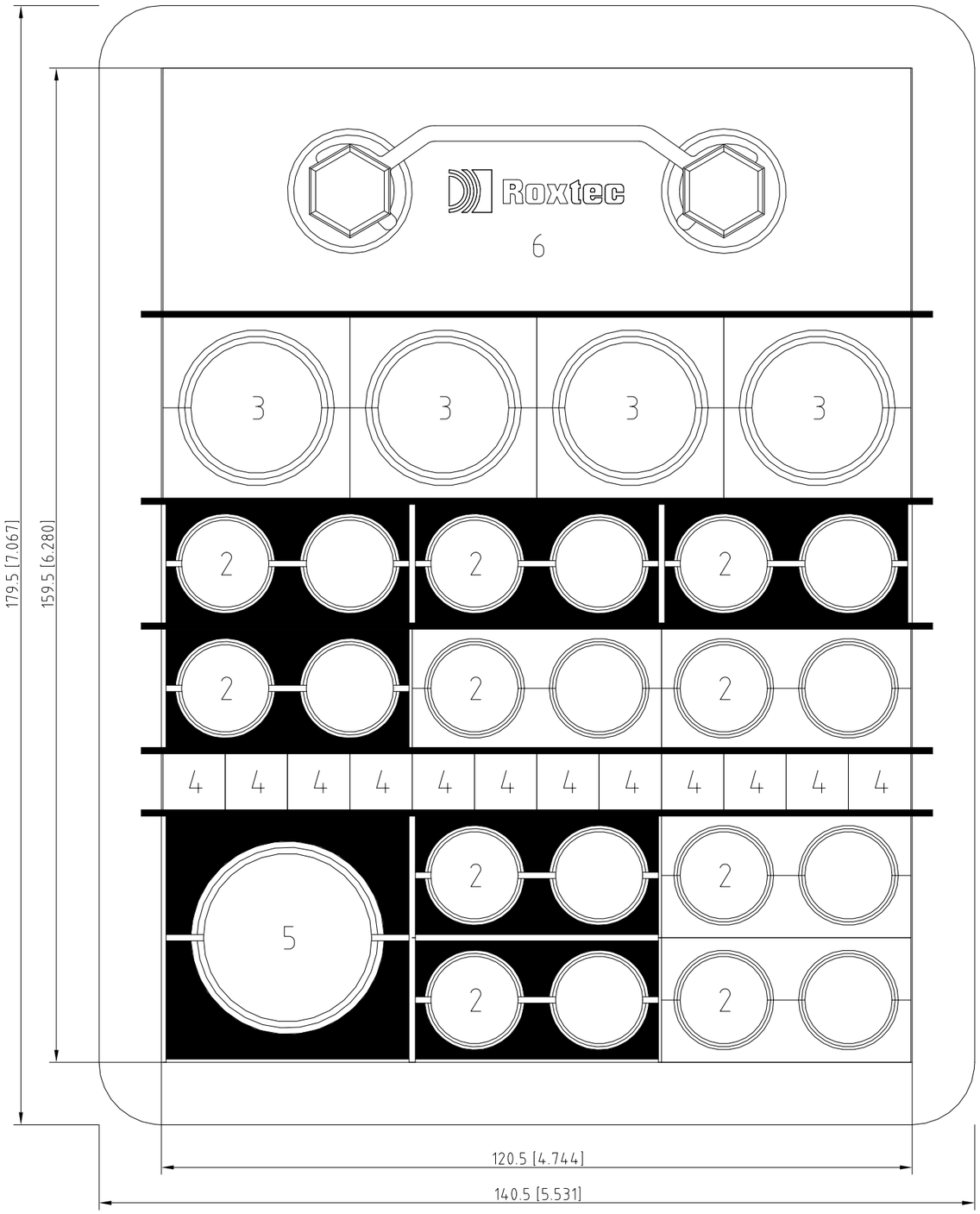
Frame: S 4x1 PRIMED Solution: 1

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

Responsible: Rosetti Marino	Created Date: 2024-05-24	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH) Location/ Sublocation	TotWeight: 6.6 [14.63]
Roxtec	Format: NTS		Transit name: I-MCT-102	Sheet No: 1/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, 140.5x179.5 [5.531"x7.067"]



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

Detail Drawing

Solution: 1

I-MCT-102 - B-100 HV-MV Switchgear Room

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	5	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
6	1	Wedge 120 galv	ARW0001201018	0.8 [1.76]
5	1	RM 40 21.5-34.5 [0.846"-1.358"]	RM00100401000	0.1 [0.31]
4	1	RM 10/0x12	RM00310121000	0.1 [0.22]
3	4	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
2	10	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
1	1	S 4x1 PRIMED	S004000000112	2.9 [6.39]

Responsible: Rosetti Marino	Created Date: 2024-05-24	Modify Date: 2024-09-30	Project: Base Load Power Hub (BLPH) Location/ Sublocation	TotWeight: 6.6 [14.63]
Roxtec	Format: NTS		Transit name: I-MCT-102	Sheet No: 2/3
	Client		Drawing number: 123A90-DDL-IN-DD-40074	Rev: 01

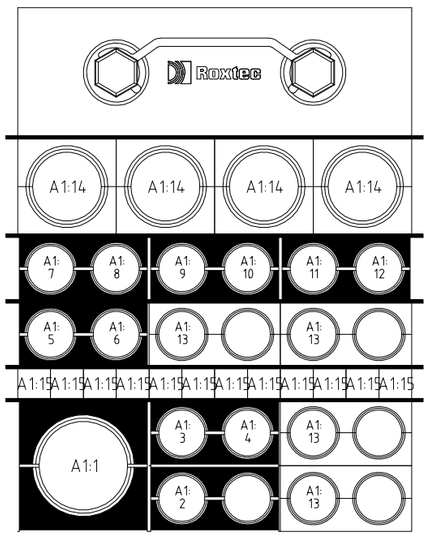
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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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

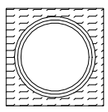
ROSETTI MARINO SpA

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

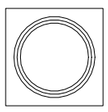
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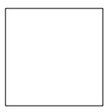
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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/ ["])	Module Type
A1:15						RM 10/0x12
A1:14						RM 30 10-25 [0.394"-0.984"]
A1:13						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:12	6	SG-100D1/B400-NET-001.03	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:11	5	SG-100D1/B400-NET-001.02	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:10	4	SG-100D1/B400-NET-001.01	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:9	1	B100-HSB-001/B400-NET-001	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:8	3	CP-100E1/B400-NET-001.02	FO12 OM2	COMM	8.5 [0.335"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:7	2	CP-100E1/B400-NET-001.01	FO12 OM2	COMM	8.5 [0.335"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	8	UP-200F1/B400-NET-001.02	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5	7	UP-200F1/B400-NET-001.01	CAT.6A 4x2xAWG23	COMM	10.7 [0.421"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:4	11	C-950-SDZ-06202/950-JE-06204	1x2x0.75 mm2	Ex-i	11.7 [0.461"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3	10	C-950-SDZ-06201/950-JE-06204	1x2x0.75 mm2	Ex-i	11.7 [0.461"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:2	12	C-950-SDZ-06203/950-JE-06204	1x2x0.75 mm2	Ex-i	11.7 [0.461"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:1	9	950-JE-06204/B400-FGS-002	6x2x0.75 mm2	Ex-i	25.2 [0.992"]	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
Rosetti Marino	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	6.6 [14.63]
Roxtec	Format NTS		Transit name I-MCT-102	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

This document undergoes an issuance cycle within EDMS "Fusionlive".
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ITEM	Tag	I-MCT-103	: Multi Cable Transit		Dwg	123A90-DDL-IN-DL-40086	
	S/Sys	90-01	: HV-MV Switchgear Room B-100		Module	LD_B-100_Ext	
TASK	code	C10001896	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.	Note
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: Note 2: Refer to PL n* C30002352

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Paolo Schintu	
Date	2024-12-09	2025-01-04	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-09T13:35:42.111Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-04T09:11:02.686Z	

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 "D"
I-MCT-102
S-4x1 PRIMED
EL. +U 26.320

SEE DETAIL "C"
I-MCT-101
S-4x2 PRIMED
EL. +U 26.320

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

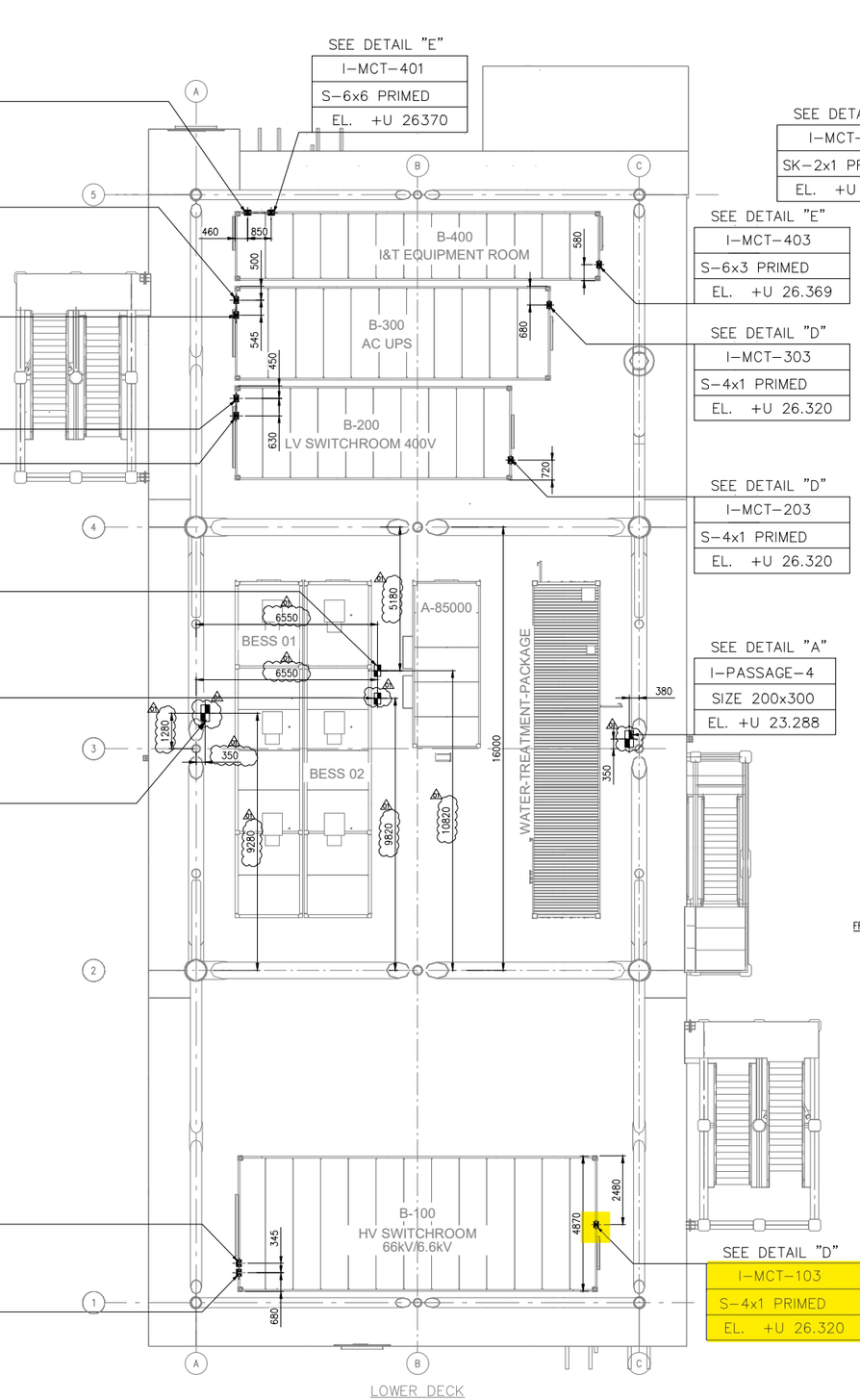
SEE DETAIL "E"
I-MCT-403
S-6x3 PRIMED
EL. +U 26.369

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

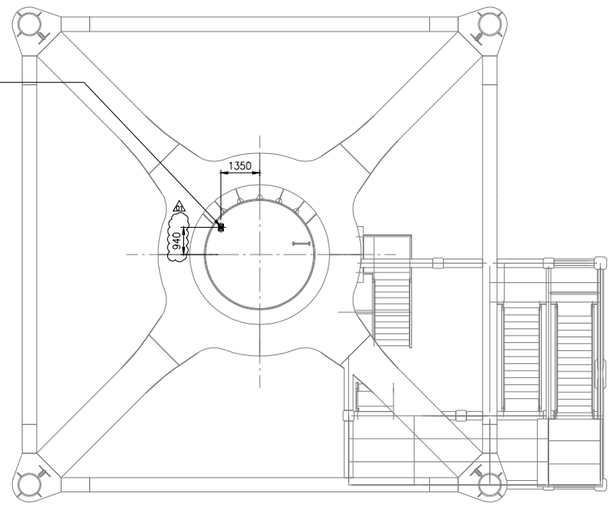
SEE DETAIL "A"
I-PASSAGE-4
SIZE 200x300
EL. +U 23.288

SEE DETAIL "D"
I-MCT-103
S-4x1 PRIMED
EL. +U 26.320



LOWER DECK

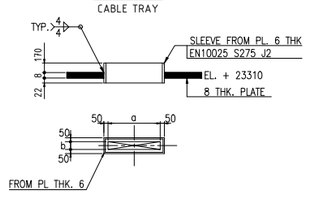
VIEW EL. +23310mm to +30310mm



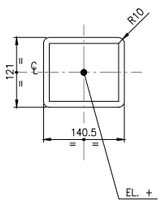
MONO PILE (TRANSITION PIECE)

VIEW EL. +17180mm to +23340mm

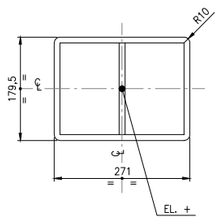
DETAIL "A"
CABLE TRAY



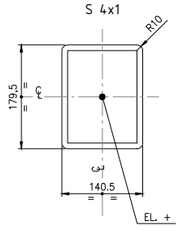
DETAIL "B"
SK 2x1



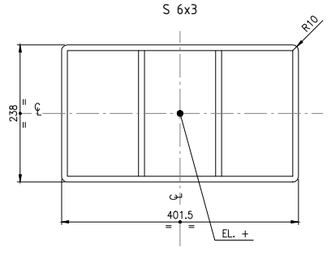
DETAIL "C"
S 4x2



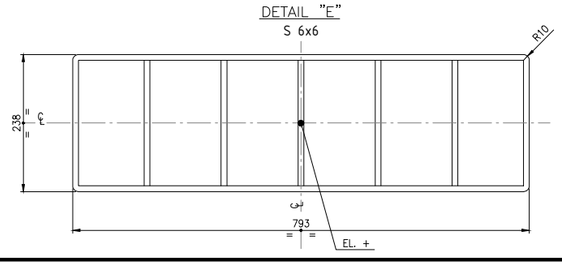
DETAIL "D"
S 4x1

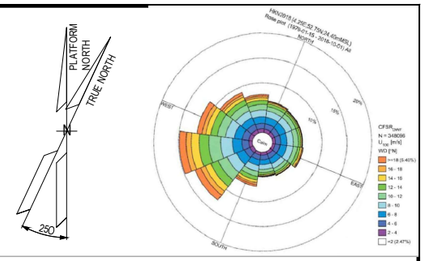


DETAIL "E"
S 6x3



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

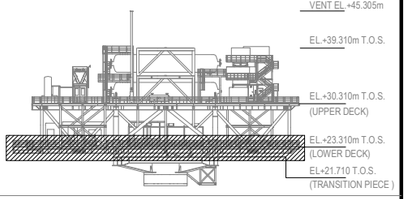
PASSAGE

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 REV.01.dwg

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40086**

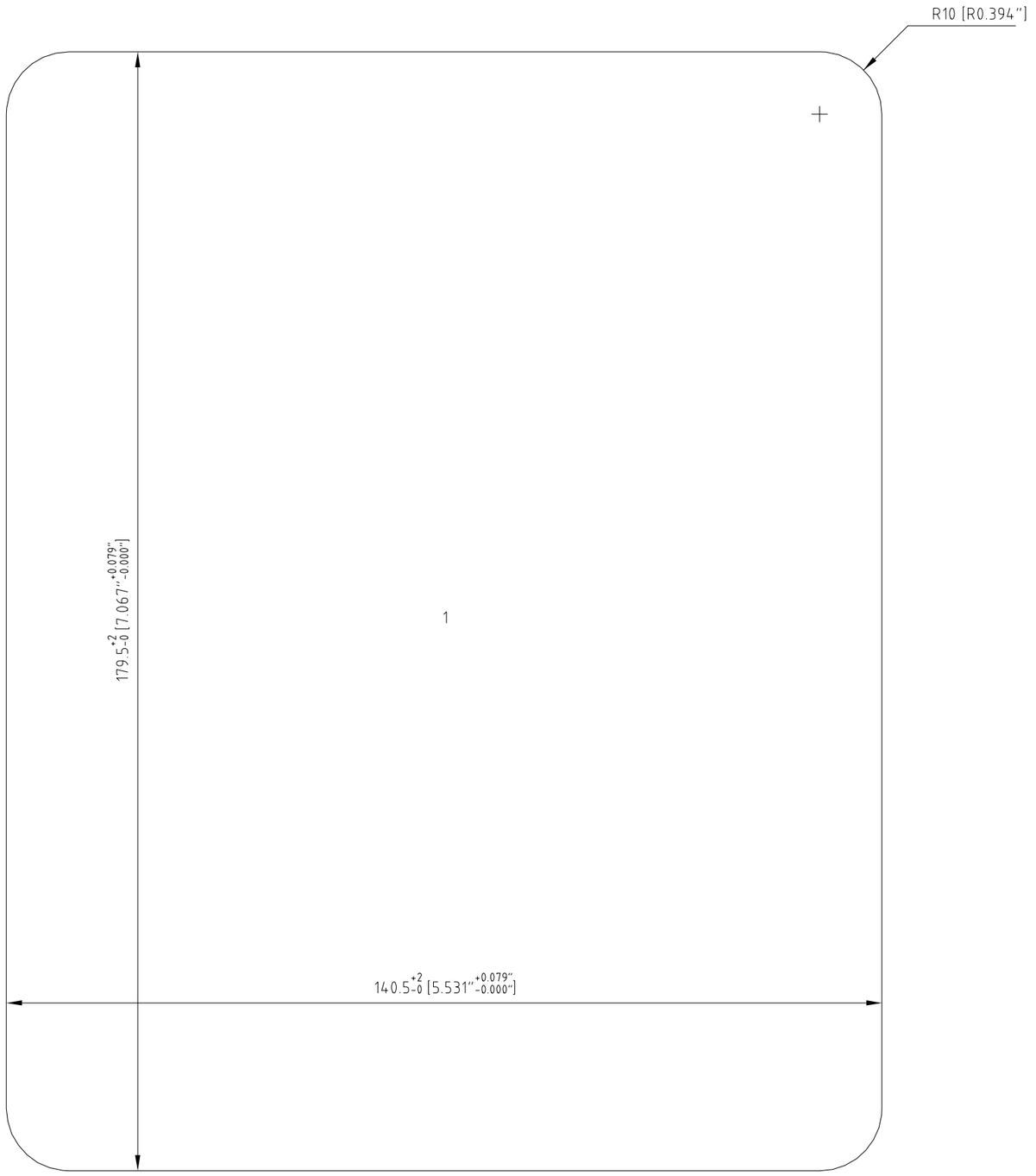
REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

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

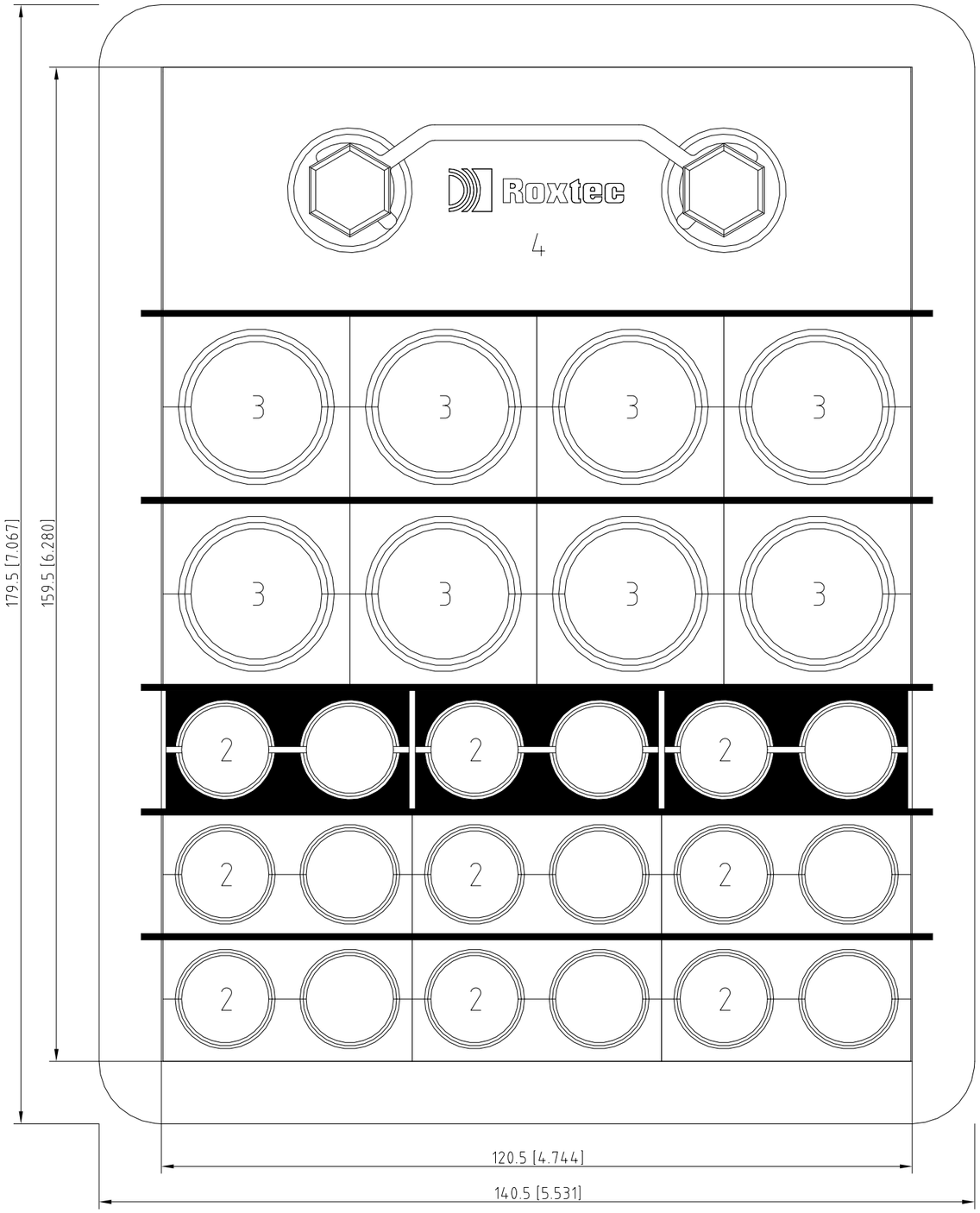
Frame: S 4x1 PRIMED Solution: 1

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

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.5 [12.17]
Roxtec	Format NTS		Transit name I-MCT-103	Sheet No 1/3
	Client		Drawing number 123A90-DDL-IN-DD-40074	Rev 01

RTD Version No: 4.37.11.0

CUTOUT TO FIT SOLUTION WELDING, 140.5x179.5 [5.531"x7.067"]



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

Detail Drawing

Solution: 1

I-MCT-103 - B-100 HV-MV Switchgear Room

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]
5	5	Stayplate 120 galv	ASP0001200018	0.1 [0.24]
4	1	Wedge 120 galv	ARW0001201018	0.8 [1.76]
3	8	RM 30 10-25 [0.394"-0.984"]	RM00100301000	0.1 [0.18]
2	9	RM 20W40 3.5-16.5 [0.138"-0.650"]	RM00120401000	0.1 [0.15]
1	1	S 4x1 PRIMED	S004000000112	2.9 [6.39]

Responsible	Created Date	Modify Date	Project	TotWeight
Rosetti Marino	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.5 [12.17]
Roxtec	Format NTS		Transit name I-MCT-103	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.

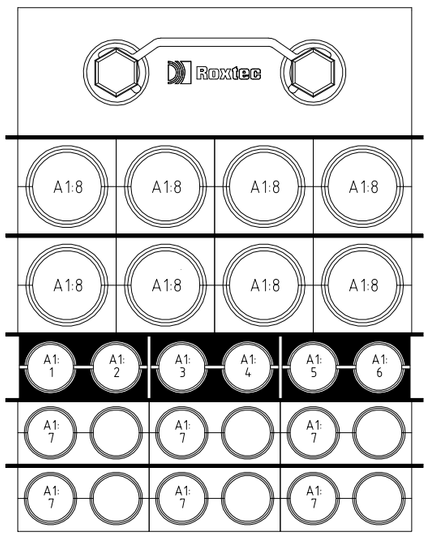
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RTD Version No: 4.37.11.0

A1

A1



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DD-40074**

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

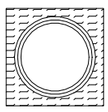
ROSETTI MARINO SpA

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

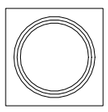
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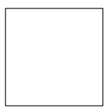
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Pos	Cable ID	Name	Cable Type	Cable Category	OD (mm/[“])	Module Type
A1:8						RM 30 10-25 [0.394"-0.984"]
A1:7						RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:6	6	C-77-HY-003/77-HS-003B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:5	3	C-77-HS-003A/77-HS-003B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:4	5	C-77-HY-002/77-HS-002B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:3	2	C-77-HS-002A/77-HS-002B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:2	4	C-77-HY-001/77-HS-001B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 3.5-16.5 [0.138"-0.650"]
A1:1	1	C-77-HS-001A/77-HS-001B	2x2.5 mm2	Ex-d	14.1 [0.555"]	RM 20W40 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	2024-05-24	2024-09-30	Base Load Power Hub (BLPH) Location/ Sublocation	5.5 [12.17]
Roxtec	Format NTS		Transit name I-MCT-103	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	CABLE_TRAY_B100_INS	: Cable Tray B100 - Instrumental			Dwg	123A90-DDL-IN-DL-40113
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002282		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX30A		Cable Tray/Ladder Before pulling

BEFORE PULLING

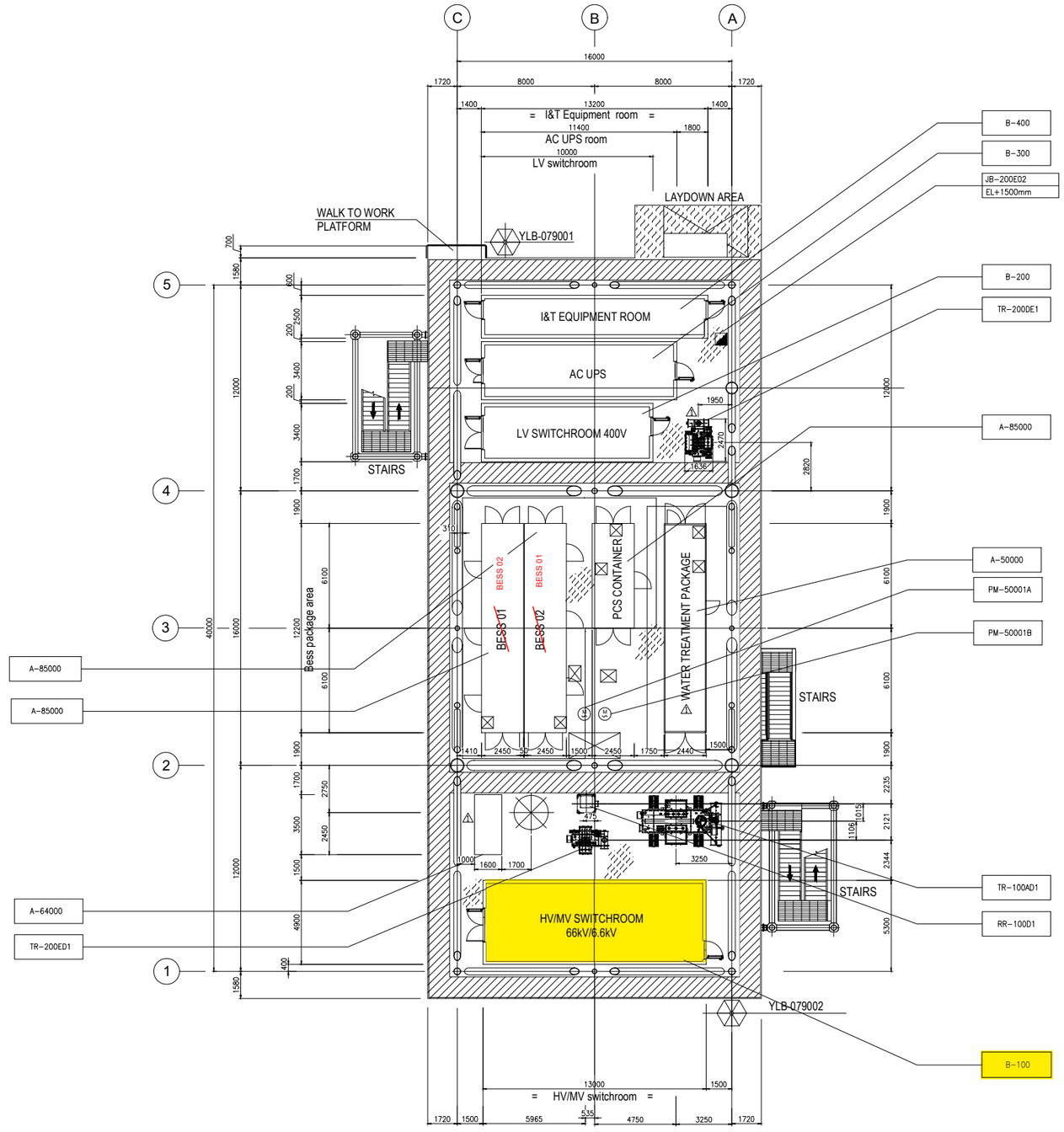
1	Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment.	OK
2	Check cable tray / ladder is adequately supported against drawings (no excessive deflection).	OK
3	Check cable tray / ladder segregation between racks	OK
4	Check Material for 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:

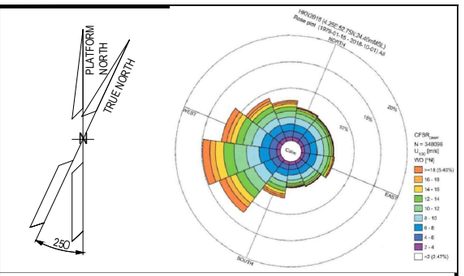
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Paolo Schintu	
Date	2024-10-16	2024-10-16	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-16T13:08:11.507Z	Firma Digitale Sicura Paolo Schintu 2024-10-16T16:29:48+0200	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

ROSETTI MARINO SpA

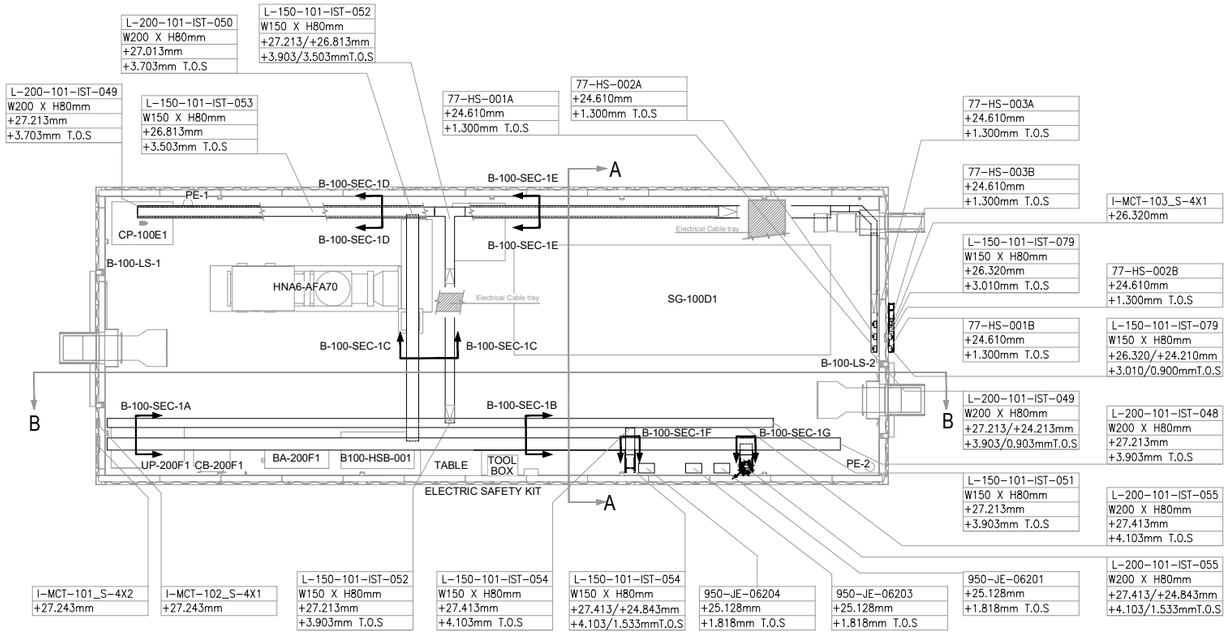
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

DRAWING NO. 123A90-DDL-IN-DL-40113

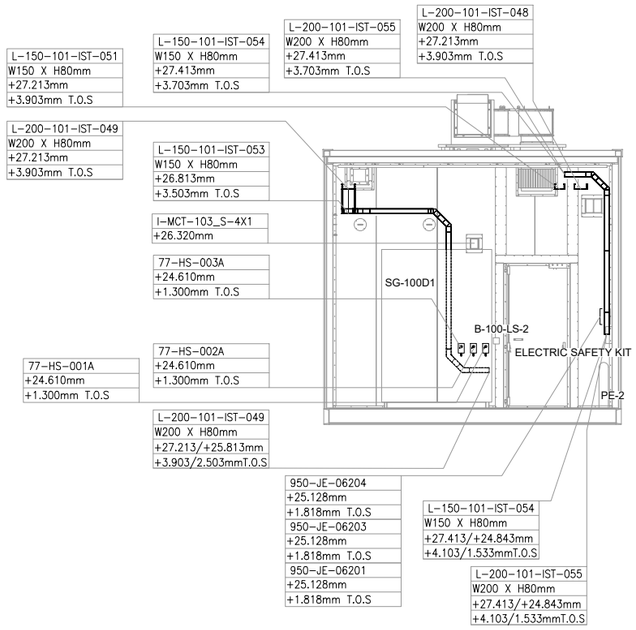
REV. 01



PLAN VIEW

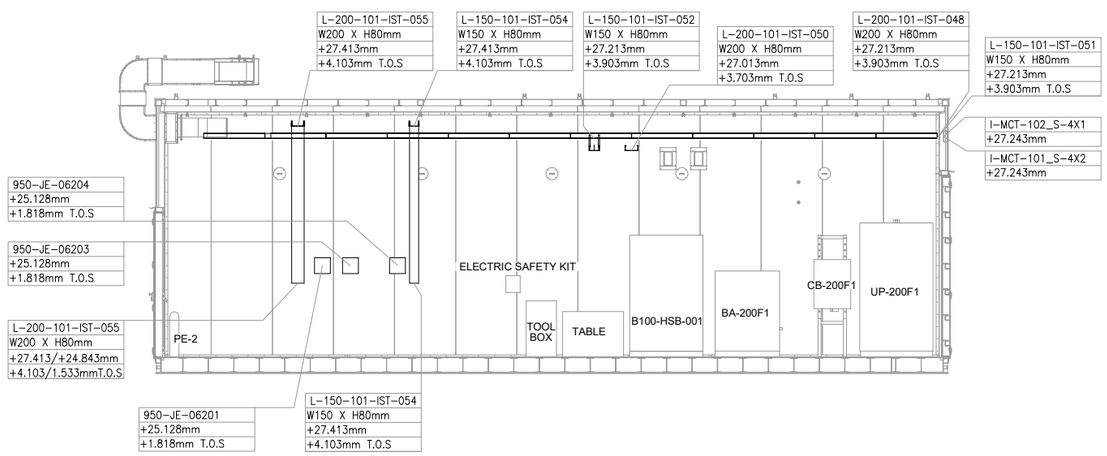
B-100 HV/MV SWITCHROOM

SCALE-1:1



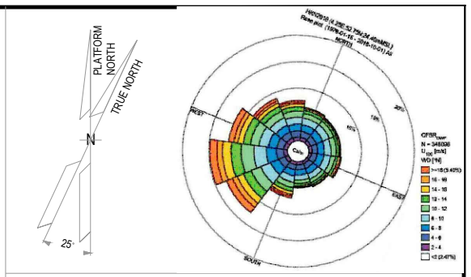
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



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 CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER 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-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

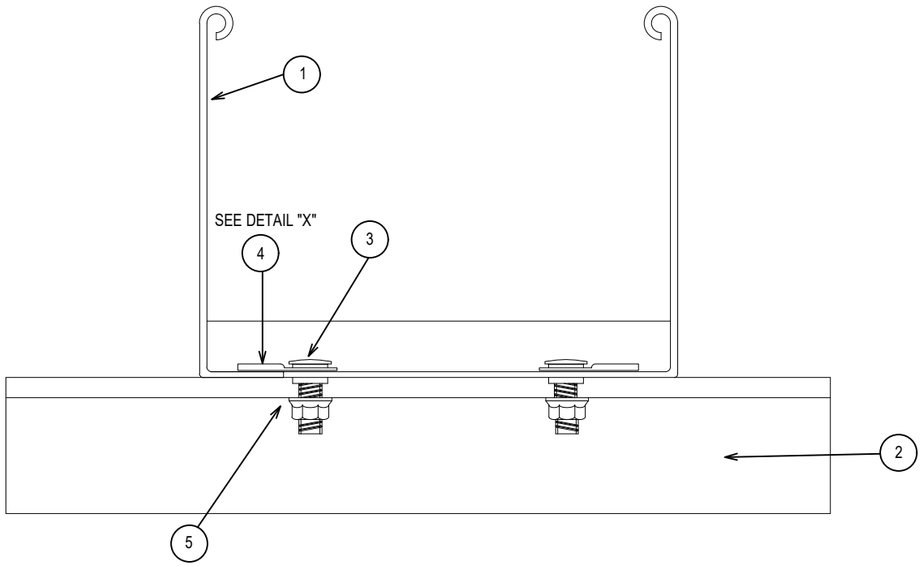
TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.dwg

CABLE LADDER FIXING ON FRP RACK

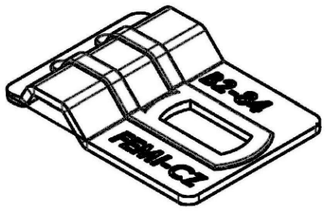
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

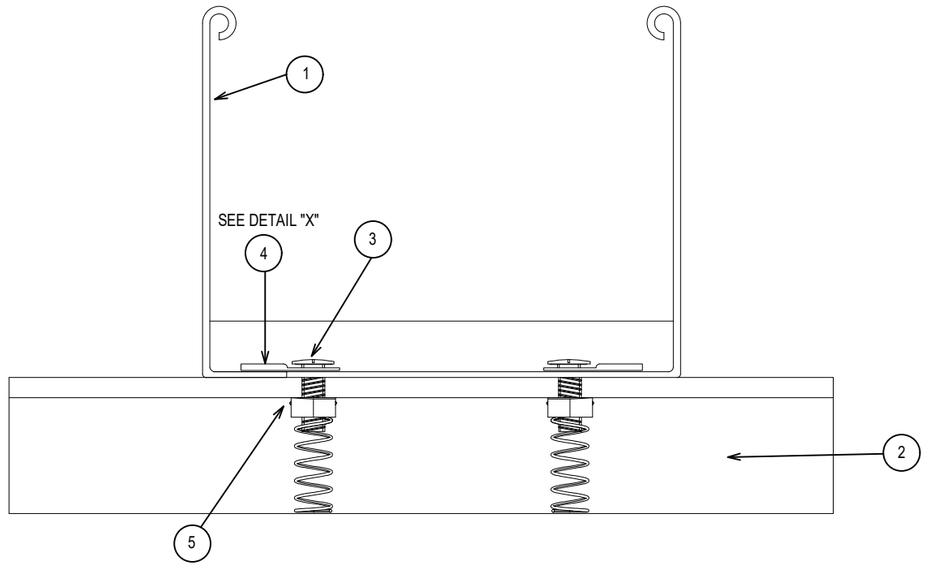
LF

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

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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20093**

REV.:	DATE:	SIGNATURE:
2_D	06/09/24	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

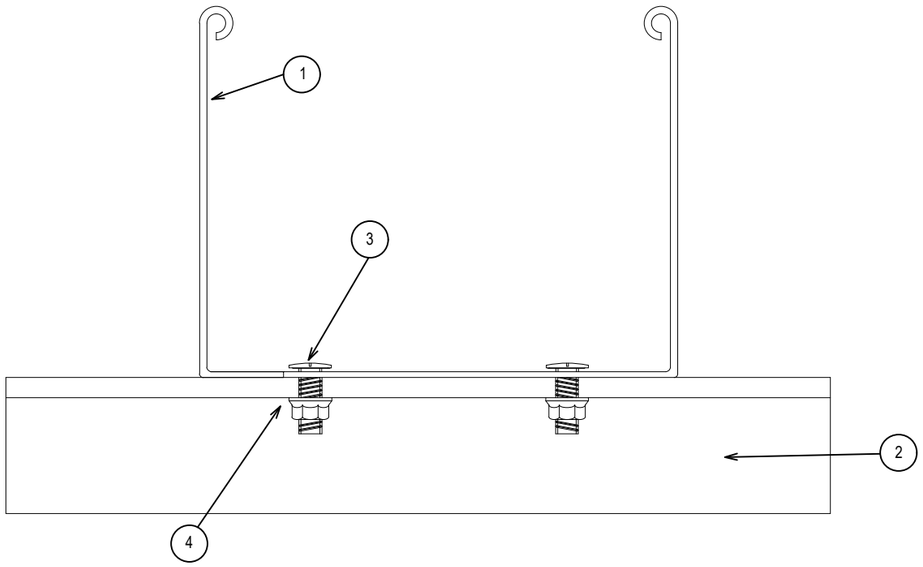
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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	

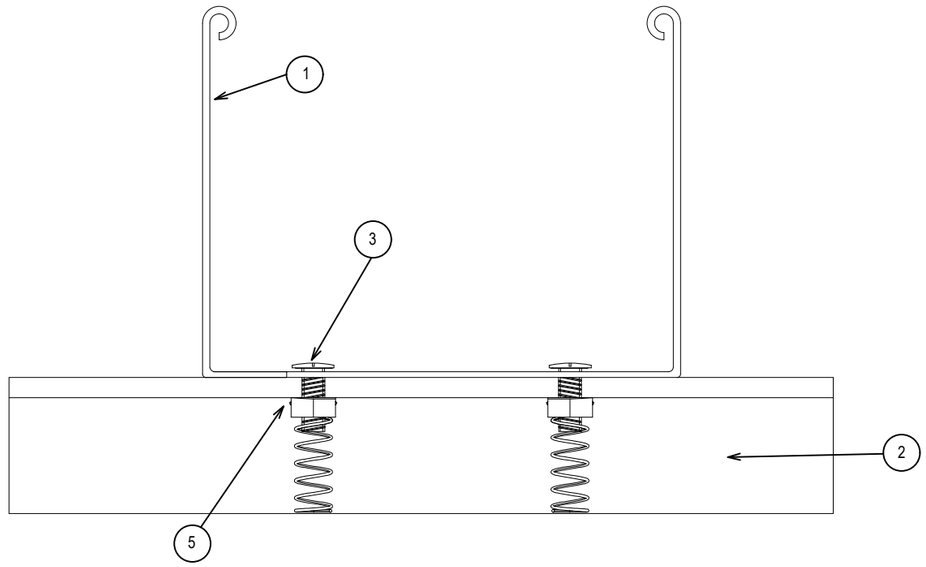


TYPICAL

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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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

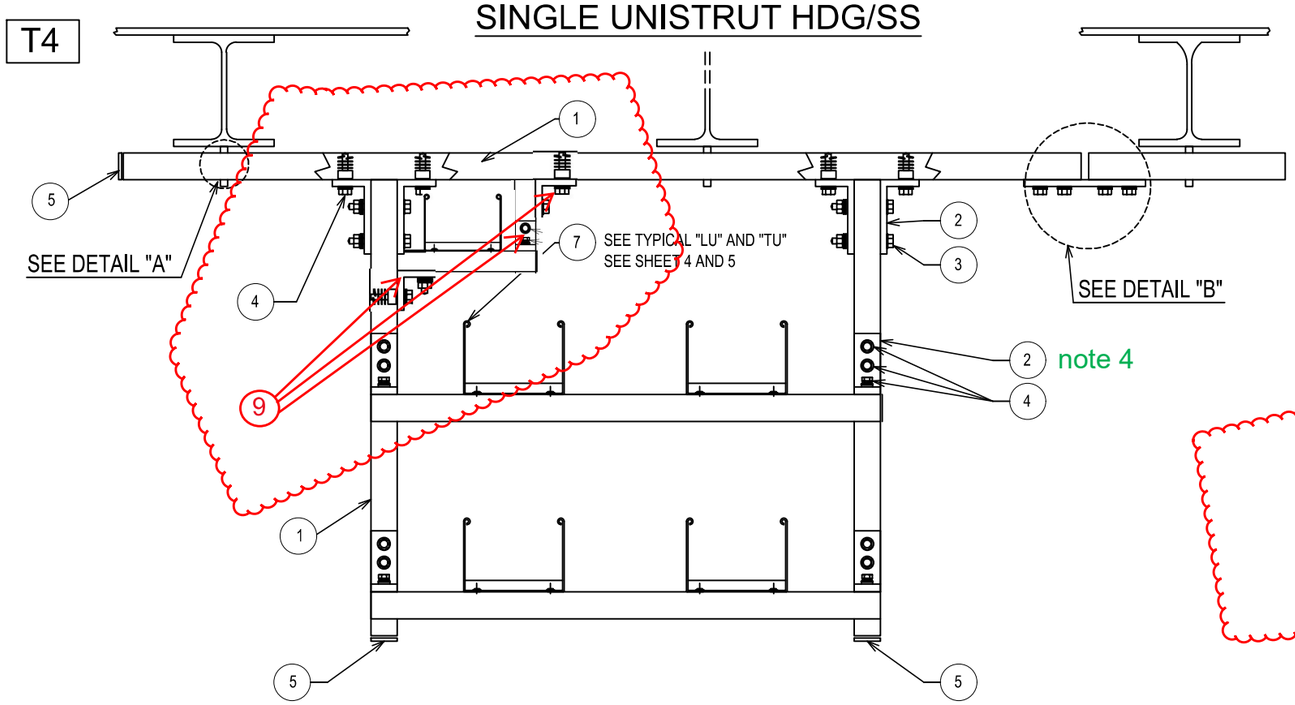
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

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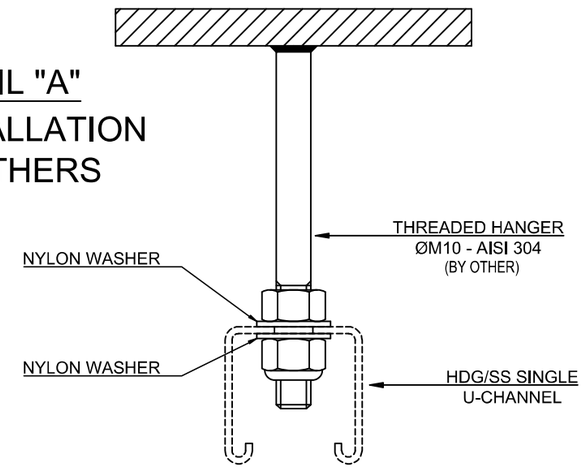
T4

SINGLE UNISTRUT HDG/SS

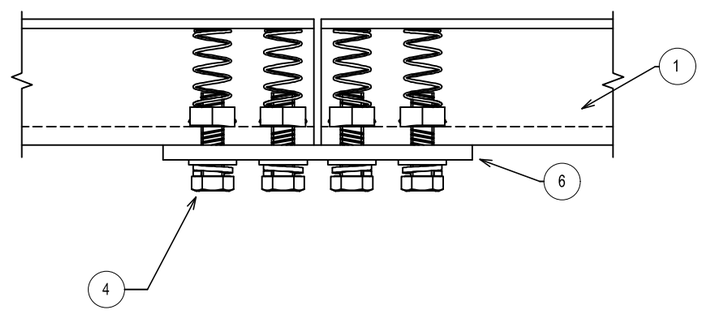


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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.: 2_D | DATE: 06/09/24 | SIGNATURE: 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 FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

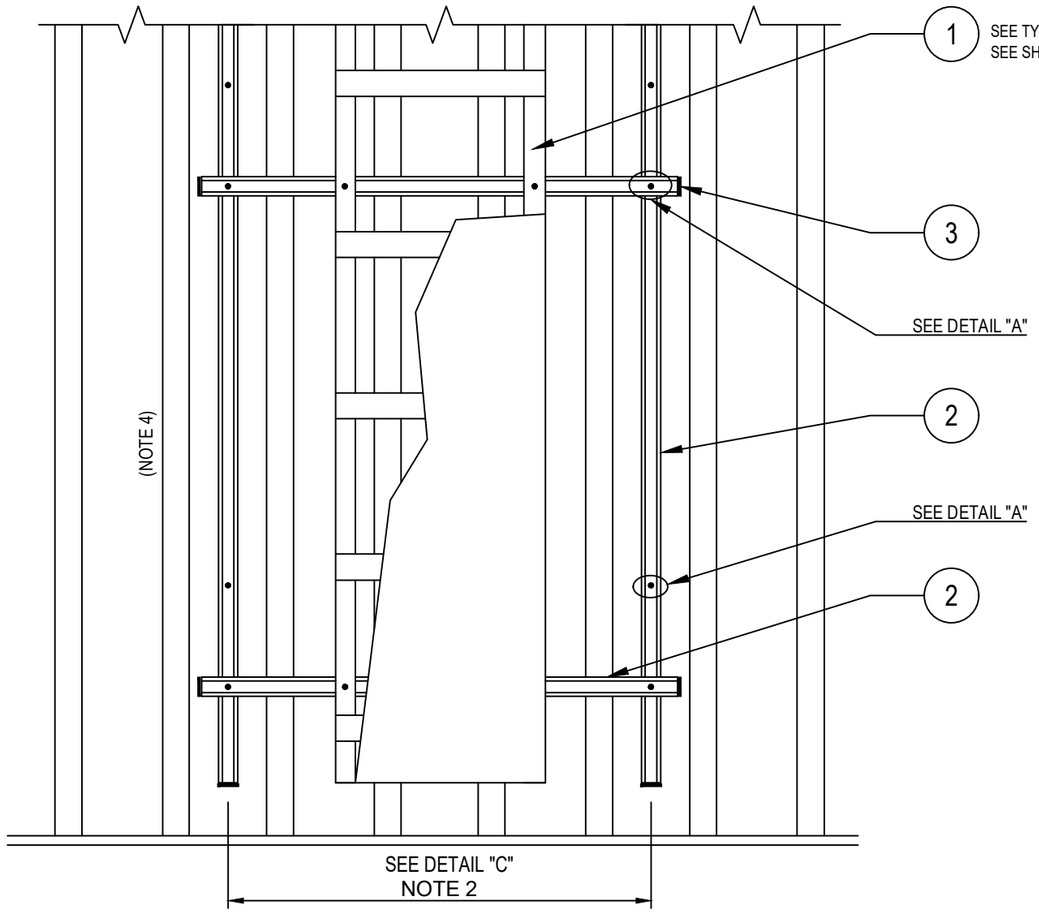
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 009 | REV. 02

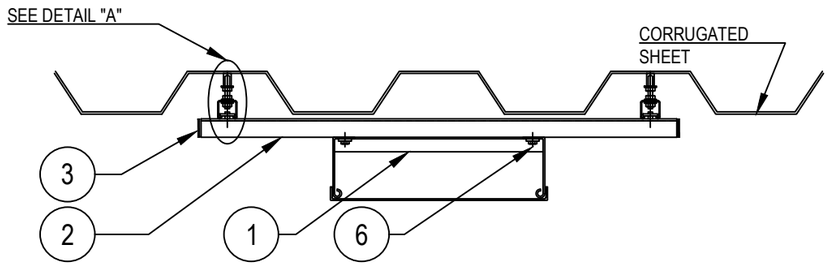
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

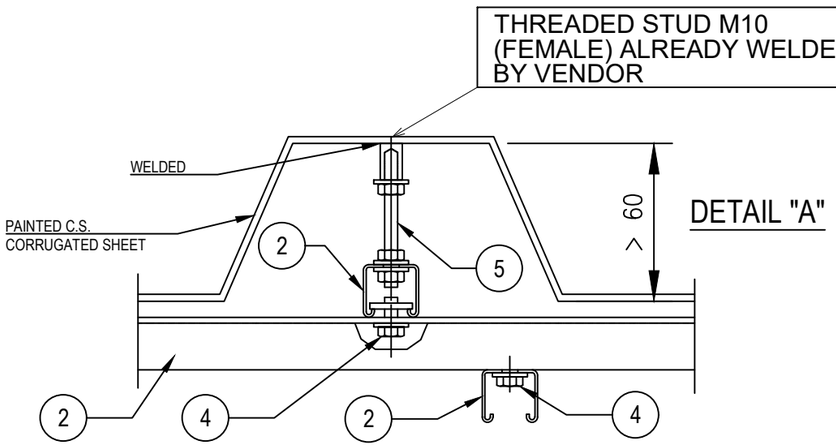
T7



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_D	06/09/24	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

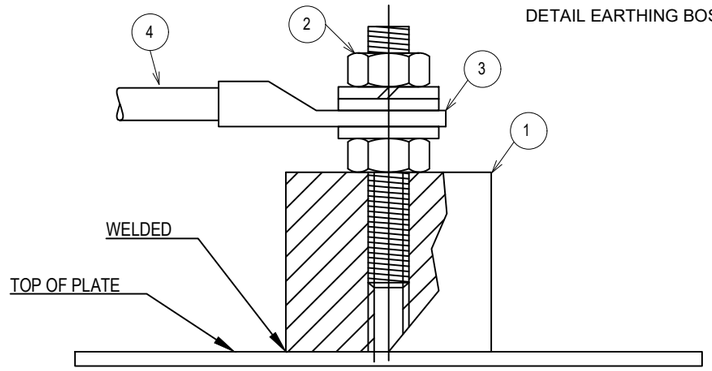
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

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

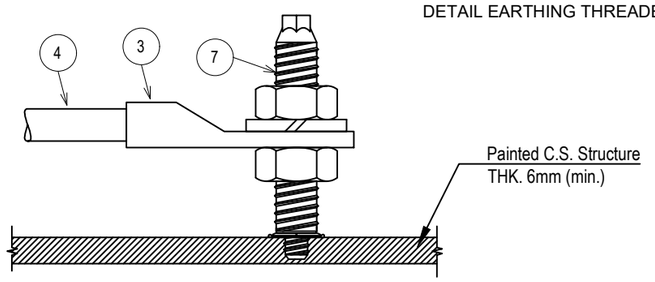


E11D

SEE NOTE 6

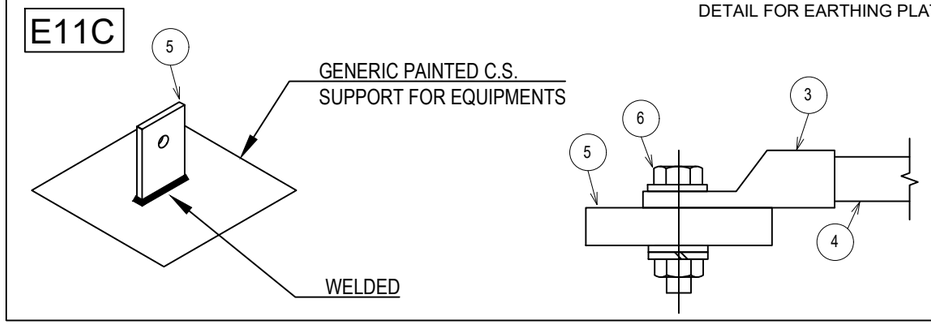
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

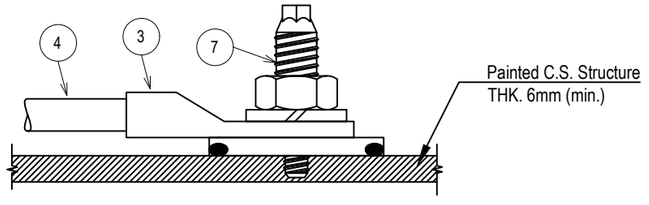


E11E

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_E	09/10/24	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

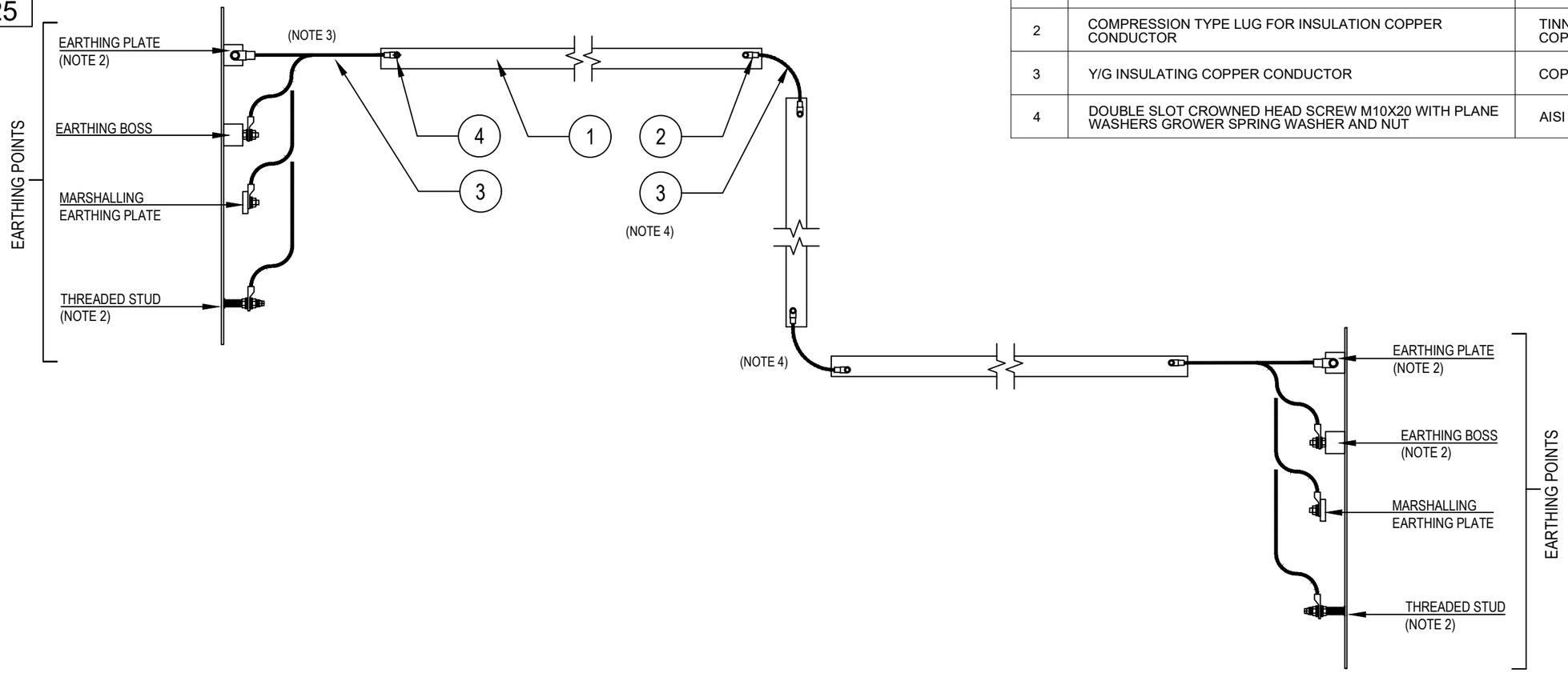
SHEET 003

REV. 02

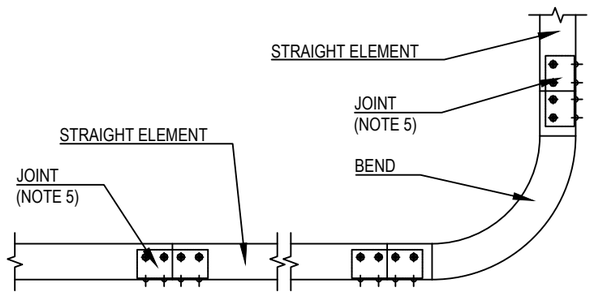
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

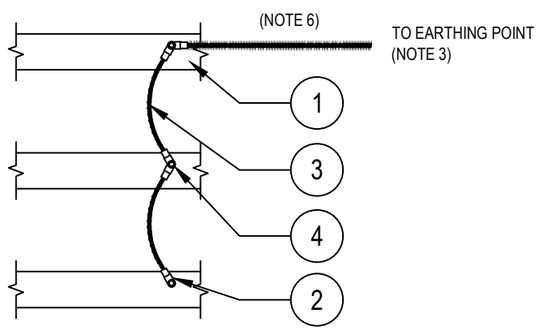
E25



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_E	09/10/24	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

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.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	Straight section 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

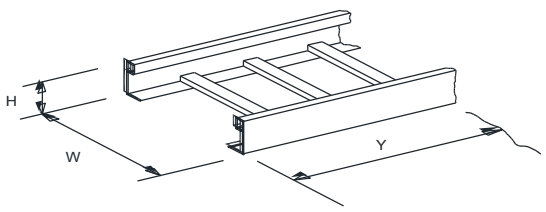


Fig. A
STRAIGHT ELEMENT

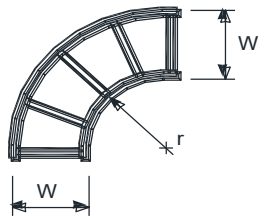


Fig. B
PLANE 90° BEND

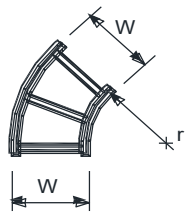


Fig. C
PLANE 45° BEND

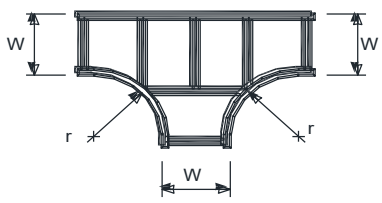


Fig. D
TEE JUNCTION

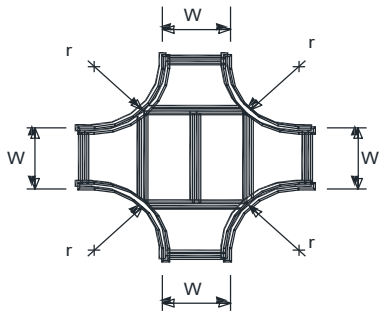


Fig. E
CROSS JUNCTION

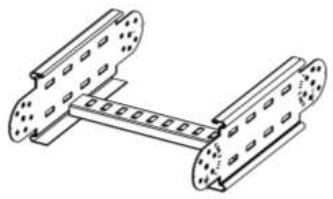


Fig. F
SINGLE ELEMENT FOR VERTICAL BENDS

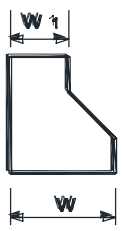


Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

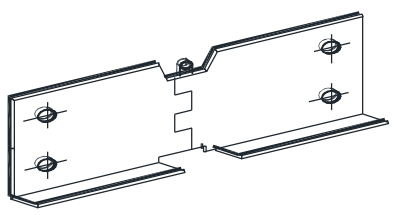


Fig. L
HORIZONTAL HINGED JOINT

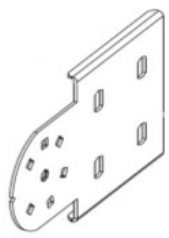


Fig. M
VERTICAL HINGED JOINT

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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	Straight section 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

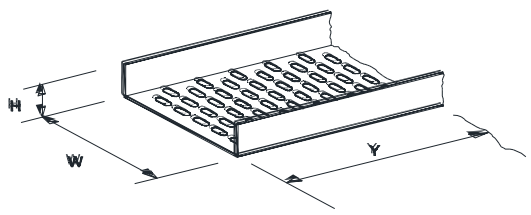


Fig. A
STRAIGHT ELEMENT

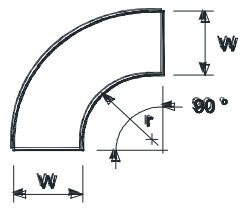


Fig. B
PLANE 90° BEND

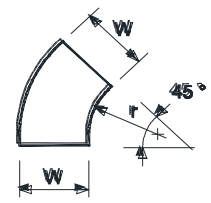


Fig. C
PLANE 45° BEND

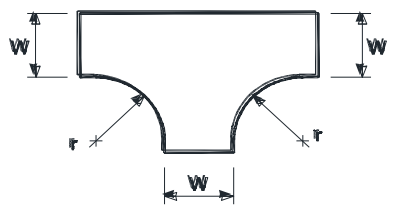


Fig. D
TEE JUNCTION

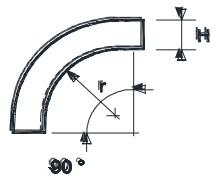


Fig. E
VERTICAL CONVEX 90° BEND

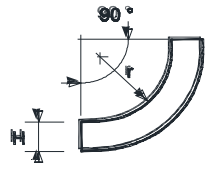


Fig. F
VERTICAL CONCAVE 90° BEND

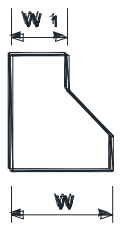


Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION

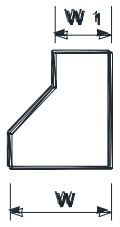


Fig. I
PLANE RIGHT - HAND REDUCING SECTION

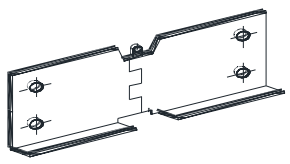


Fig. L
HORIZONTAL HINGED JOINT

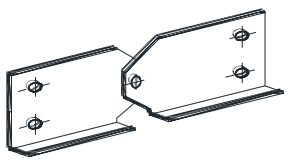


Fig. M
VERTICAL HINGED JOINT

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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_B100_INS	: Cable Tray B100 - Instrumental			Dwg	123A90-DDL-IN-DL-40113
	S/Sys	90-01	: HV-MV Switchgear Room B-100			Module	LD_B-100
TASK	code	C10002283		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX30B		Cable Tray/Ladder After pulling

AFTER PULLING

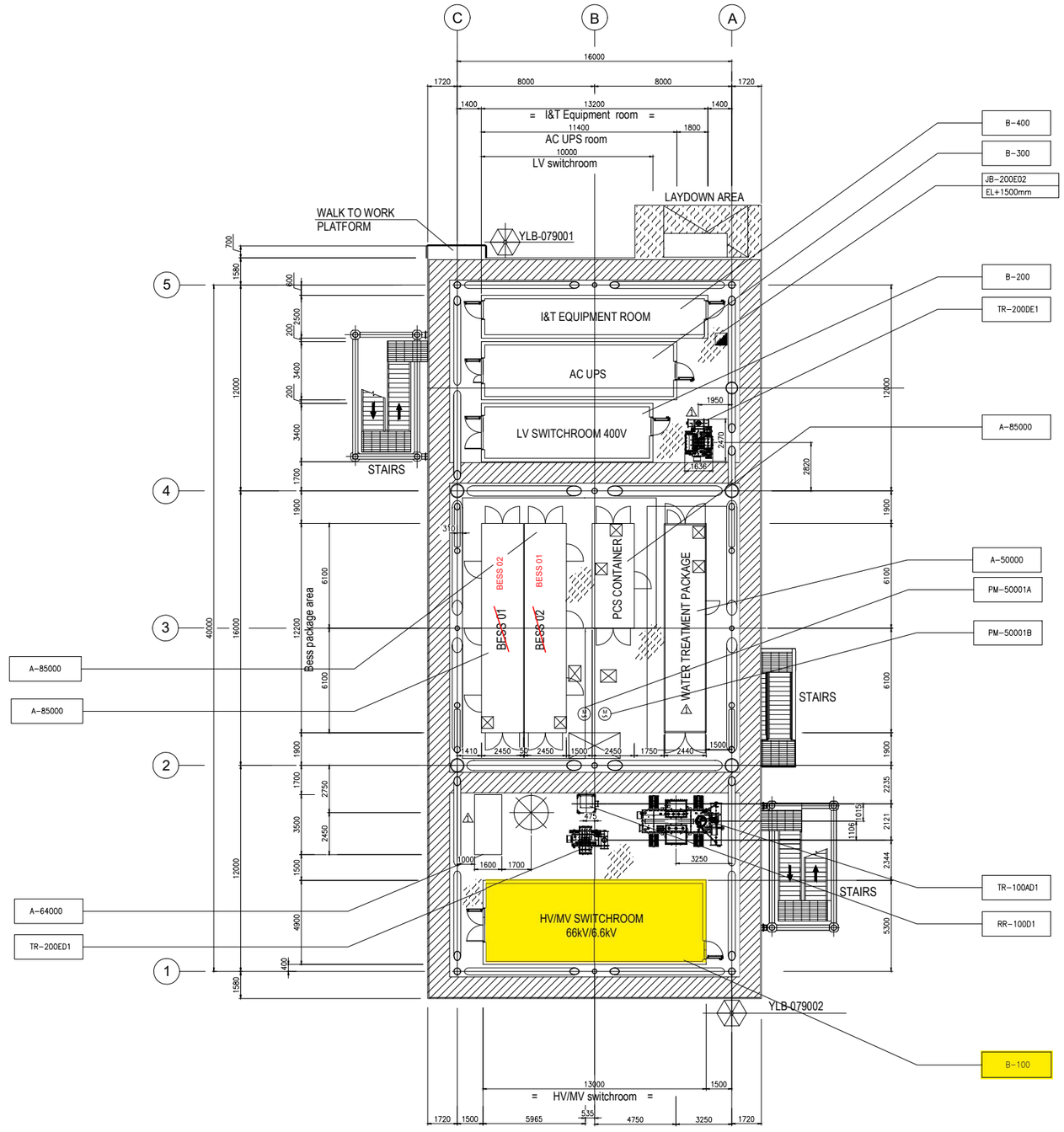
1	Check cable segregation on rack and tray	OK
2	Check capacity of cable rack and tray (bunching, size of cables, spare capacity, etc.)	OK
3	Check cable tray / ladder for Damages and cleanliness	OK
4	Check of proper cable bending radius	OK
5	Check proper fastening of cables (distance and material)	OK
6	Check lids intallation (if any) against drawings OR Proper protection until additional cable pulling or all work completed in the vicinity	NA
7	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

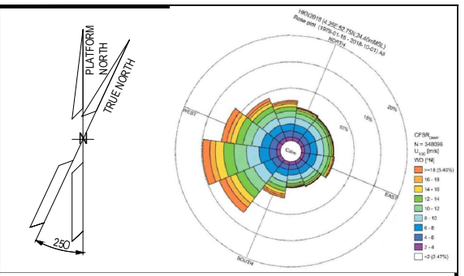
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-25	2025-01-25	
Signature	Digitaly signed by Michele Tartaglia 2025-01-25T10:39:33.361Z	Digitaly signed by Paolo Schintu 2025-01-25T11:30:37.015Z	

DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



PLAN ON LOWER DECK
EL+23.310 T.O.S.



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

ROSETTI MARINO SpA

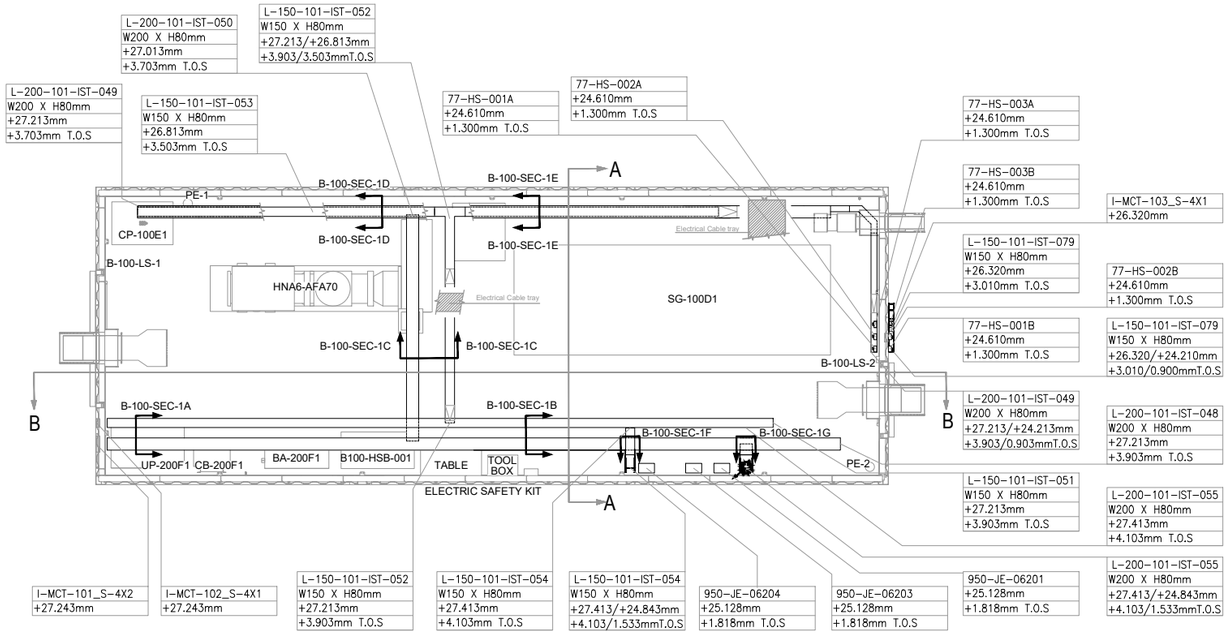
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout - Lower Deck

DRAWING NO. 123A90-DDL-IN-DL-40113

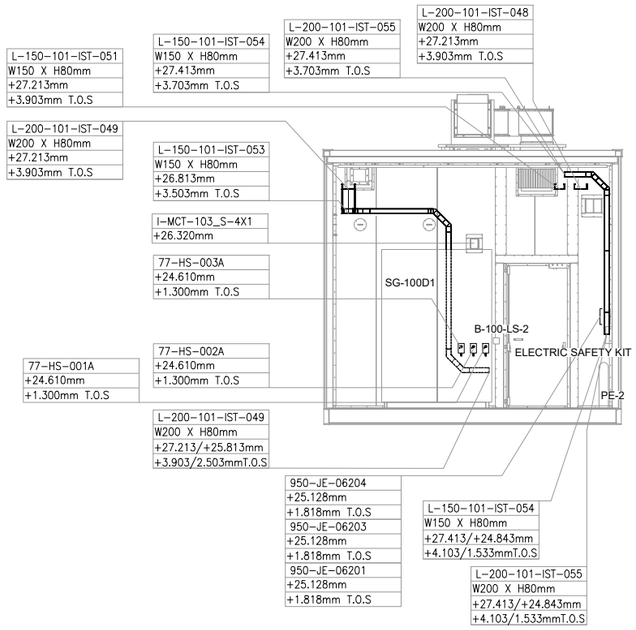
REV. 01



PLAN VIEW

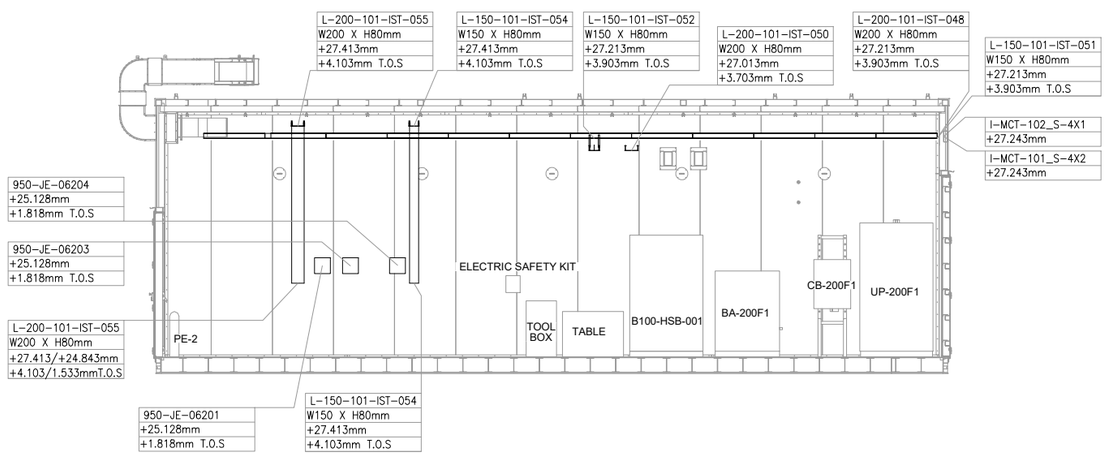
B-100 HV/MV SWITCHROOM

SCALE-1:1



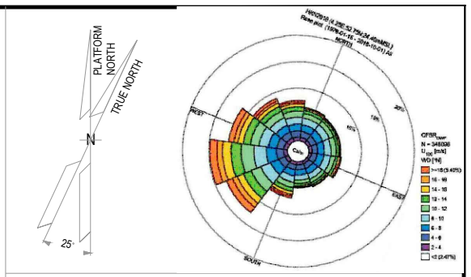
SECTION A-A

SCALE-1:1



SECTION B-B

SCALE-1:1



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 CONTAINER CABLE TRAY LAYOUT.

LEGEND

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40113

REV.:	DATE:	SIGNATURE:
1_A	07/10/24	G.Randi

ROSETTI MARINO SpA

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER 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-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/08/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B-100 Container Lower Deck - TOS EL. 23.310m

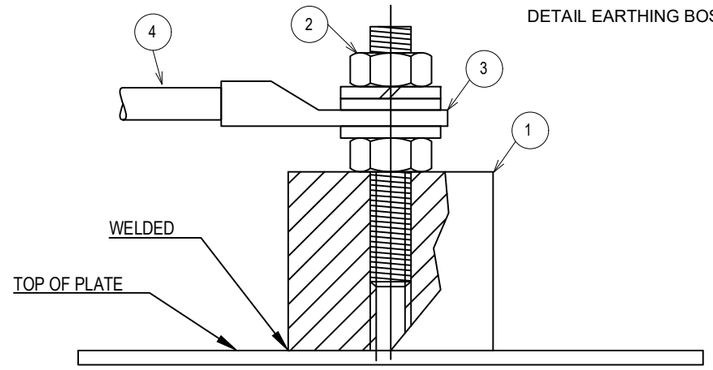
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40113	SHEET 001	REV. 01

File Name : 123A90-DDL-IN-DL-40113 REV01.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

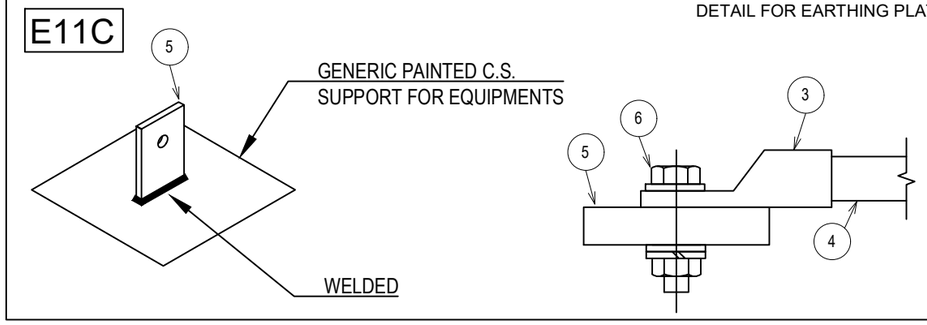
E11A

DETAIL EARTHING BOSS 50x50



E11C

DETAIL FOR EARTHING PLATE

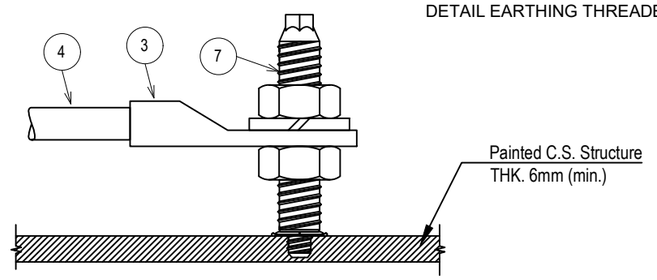


E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

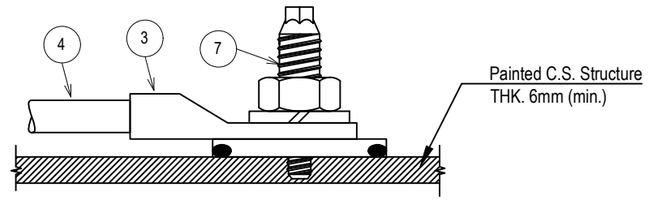


E11E

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

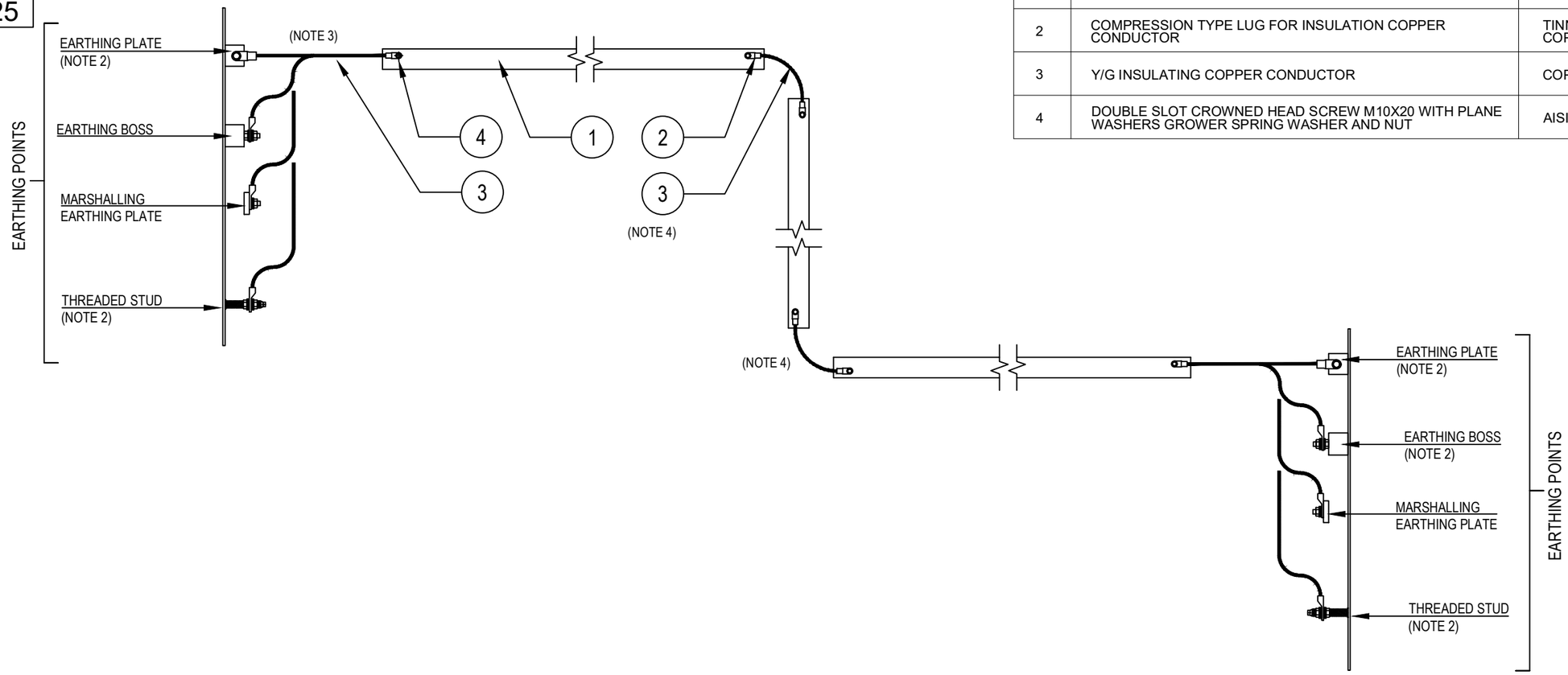
SHEET 003

REV. 02

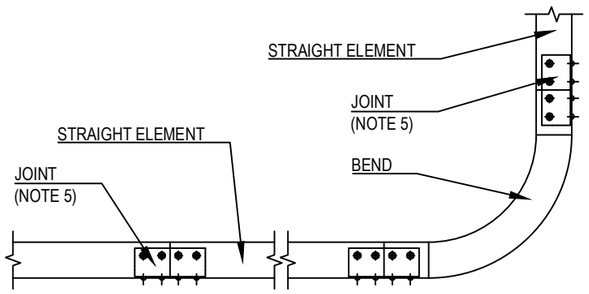
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

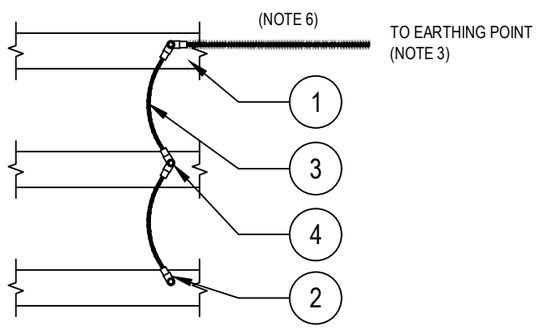
E25



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

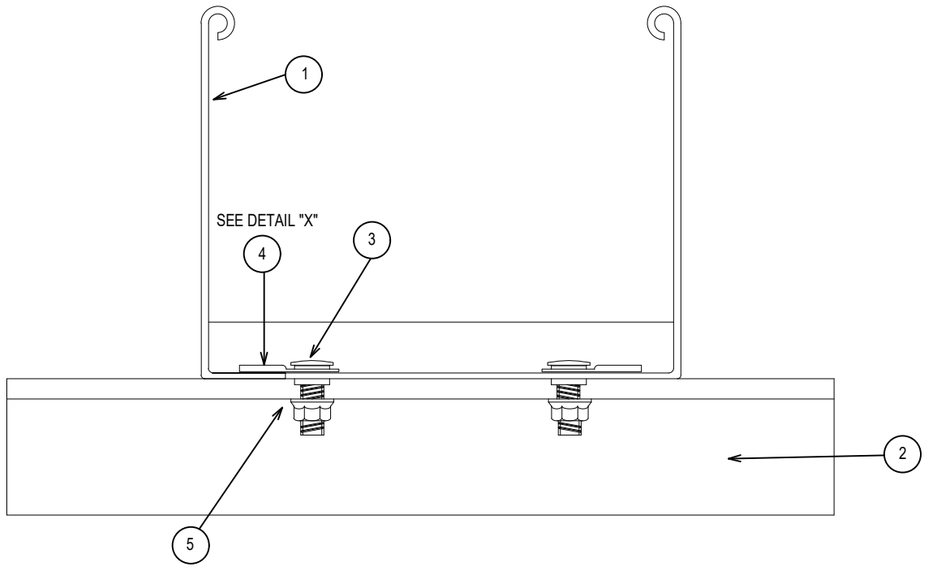
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20090	013	02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CABLE LADDER FIXING ON FRP RACK

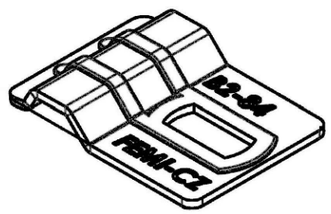
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



TYPICAL

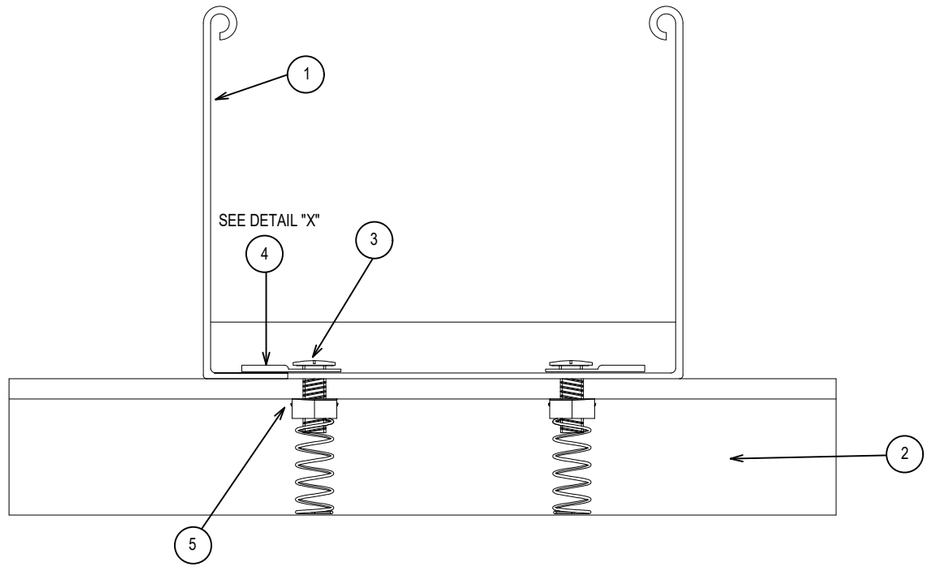
LF

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

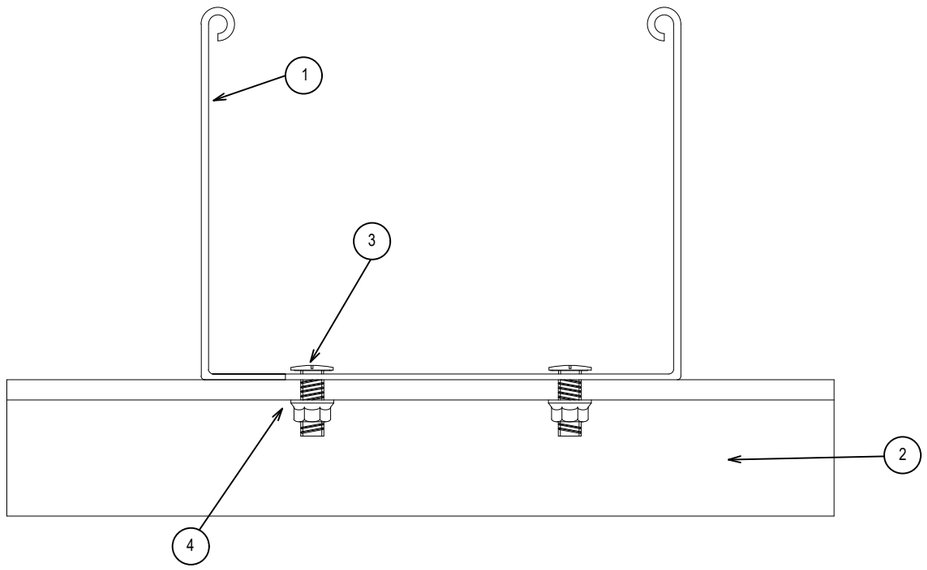
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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	

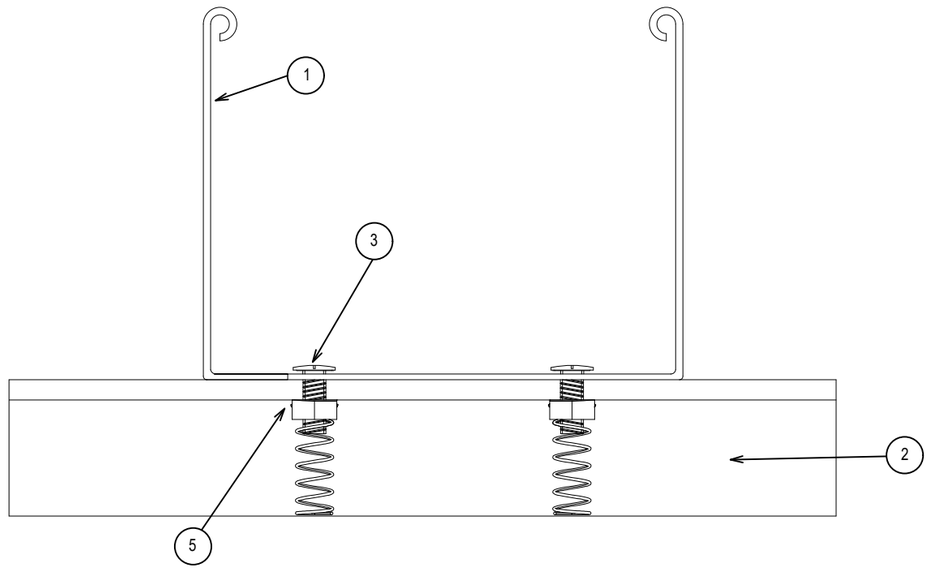


TYPICAL

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

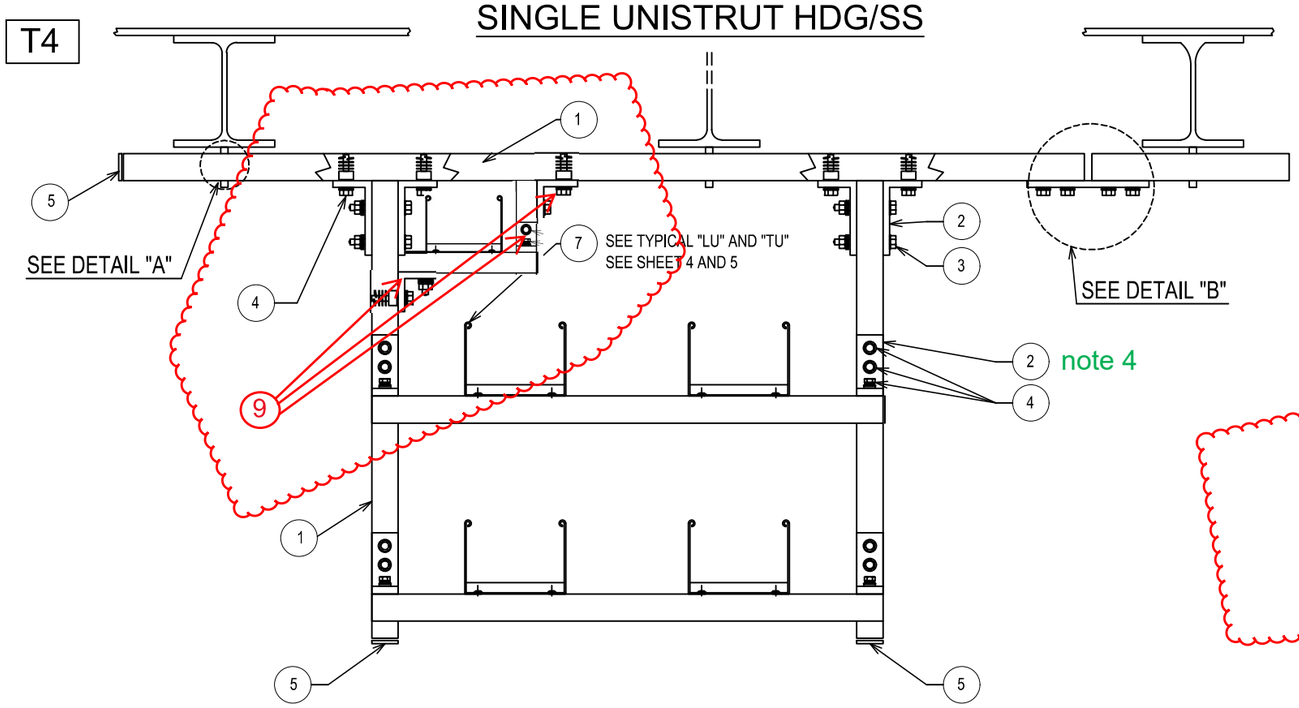
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

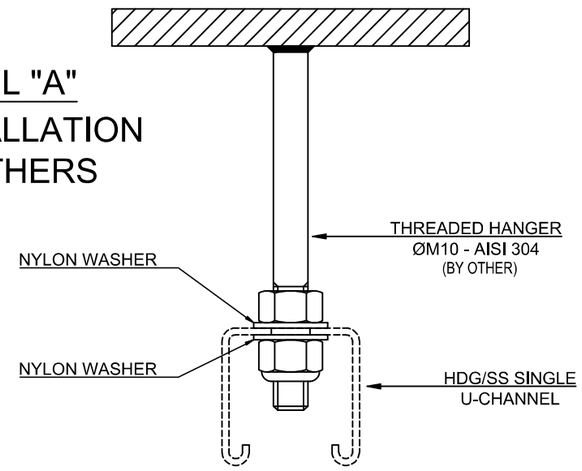
T4

SINGLE UNISTRUT HDG/SS

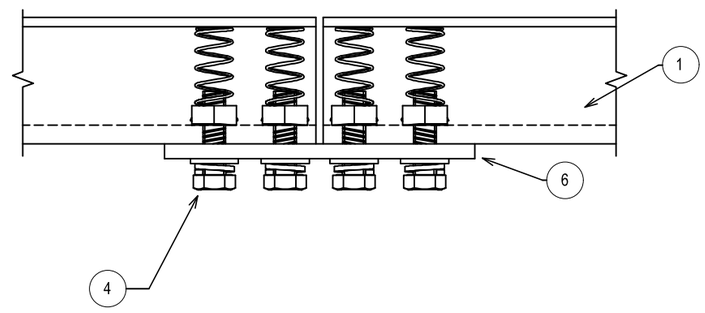


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE 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

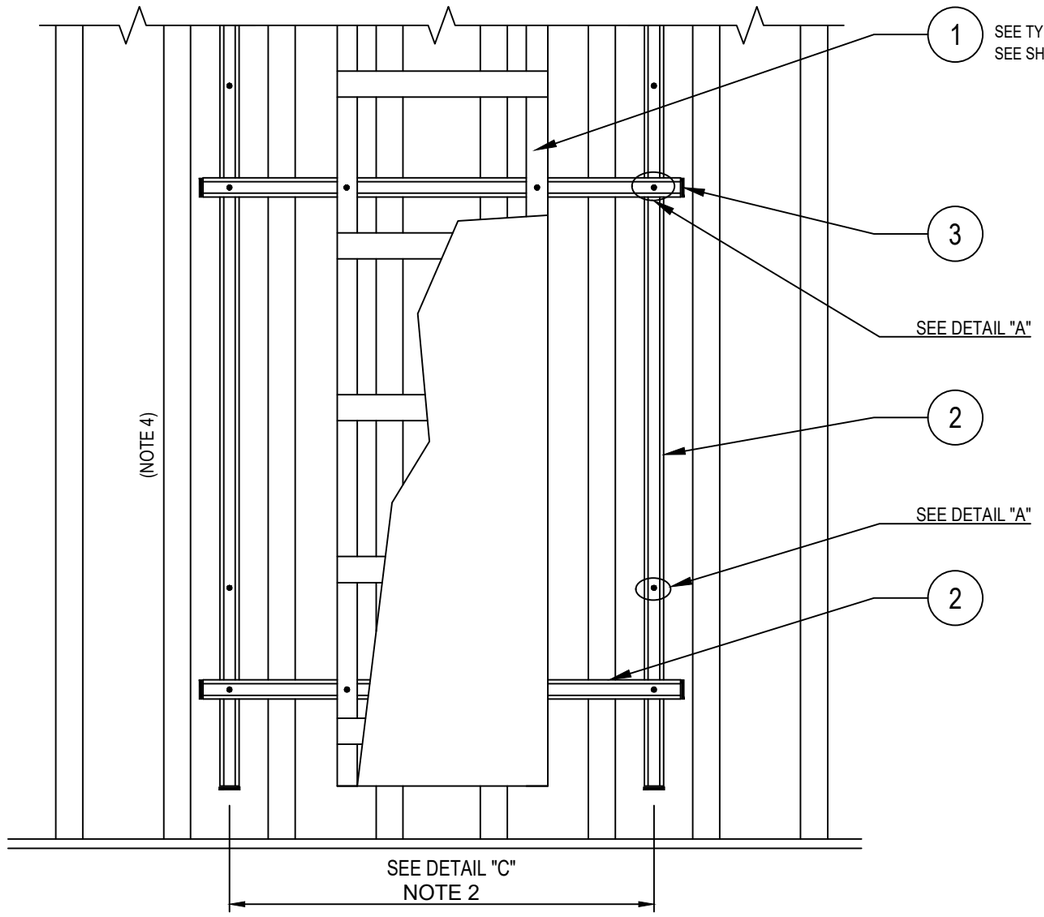
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DD-20093	009	02

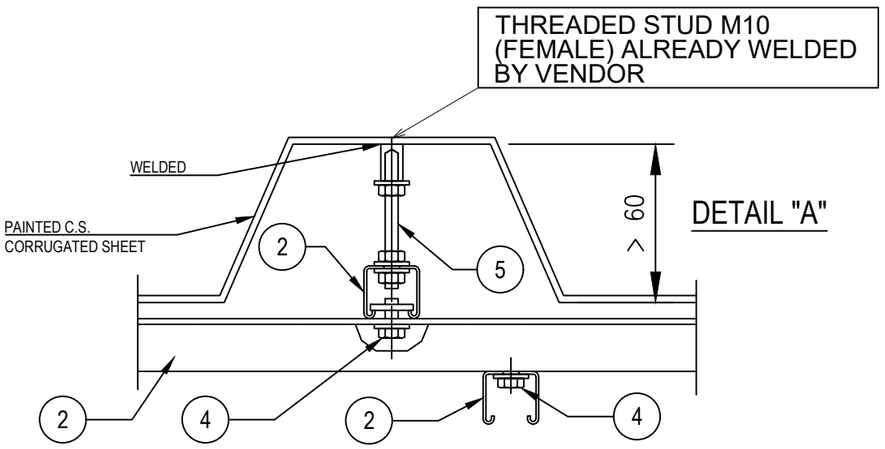
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

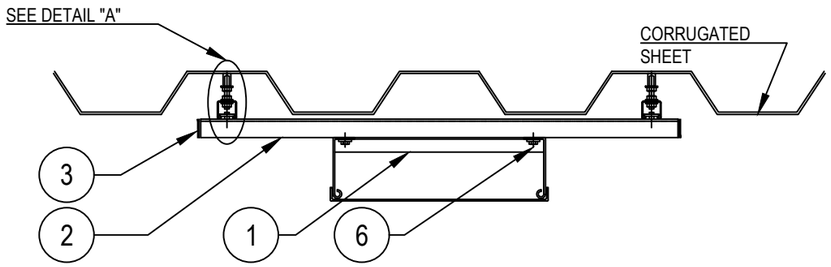
T7



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

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	Straight section 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

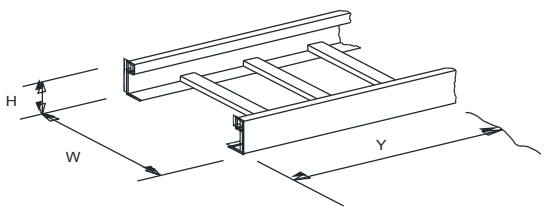


Fig. A
STRAIGHT ELEMENT

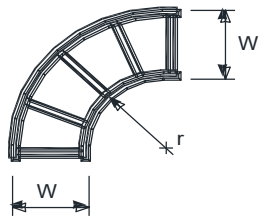


Fig. B
PLANE 90° BEND

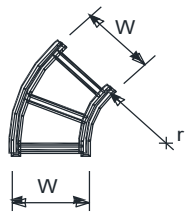


Fig. C
PLANE 45° BEND

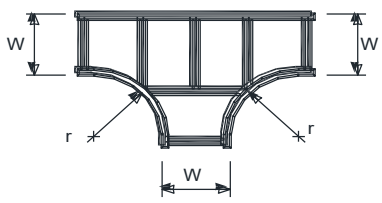


Fig. D
TEE JUNCTION

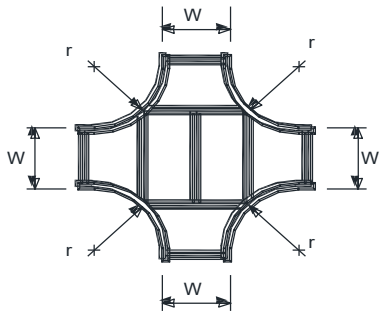


Fig. E
CROSS JUNCTION

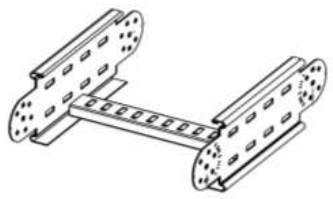


Fig. F
SINGLE ELEMENT FOR VERTICAL BENDS

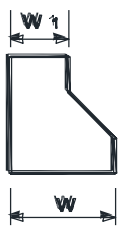


Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION



Fig. I
PLANE RIGHT - HAND REDUCING SECTION

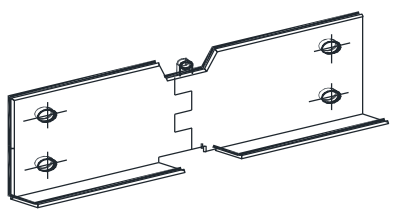


Fig. L
HORIZONTAL HINGED JOINT

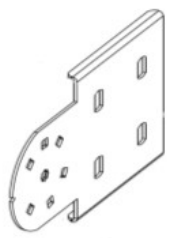


Fig. M
VERTICAL HINGED JOINT

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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	Straight section 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

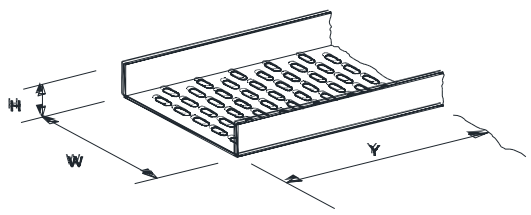


Fig. A
STRAIGHT ELEMENT

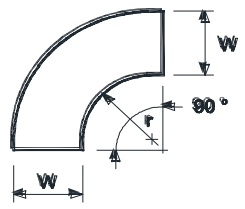


Fig. B
PLANE 90° BEND

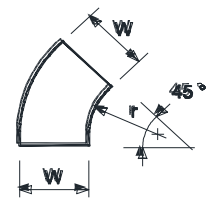


Fig. C
PLANE 45° BEND

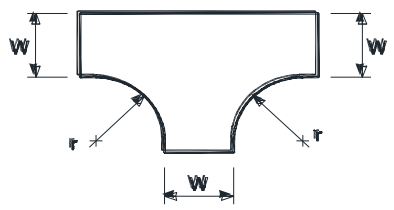


Fig. D
TEE JUNCTION

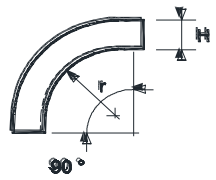


Fig. E
VERTICAL CONVEX 90° BEND

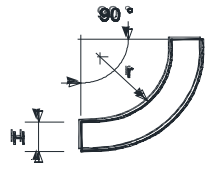


Fig. F
VERTICAL CONCAVE 90° BEND

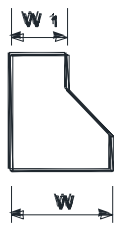


Fig. G
PLANE LEFT - HAND REDUCING SECTION



Fig. H
PLANE SYMMETRIC REDUCING SECTION

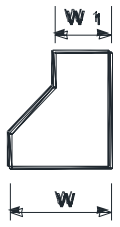


Fig. I
PLANE RIGHT - HAND REDUCING SECTION

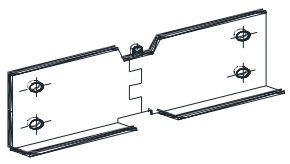


Fig. L
HORIZONTAL HINGED JOINT

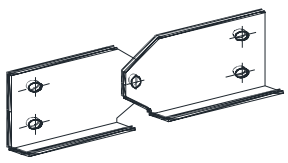


Fig. M
VERTICAL HINGED JOINT

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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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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

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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