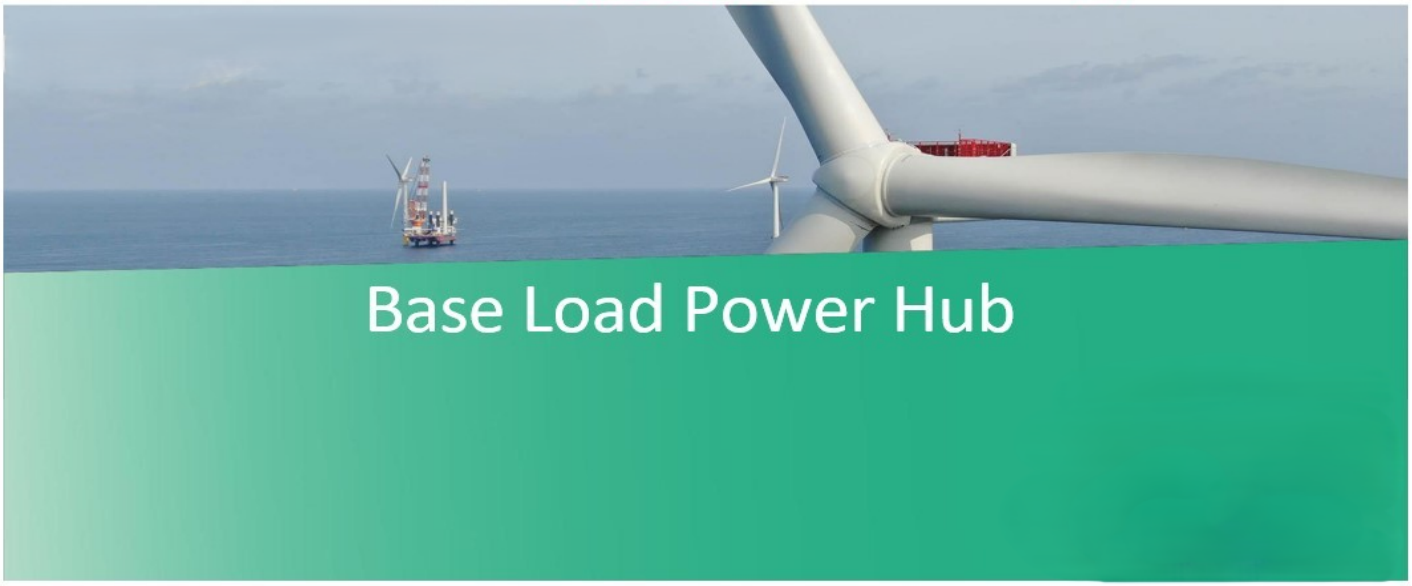
CROSSWIND

ROSETTI MARINO

PROVERLIS

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




# MECHANICAL COMPLETION DOSSIER (ONSHORE)

| | |
|---|---|
| SYSTEM | 90<br>Structural, Architectural |
| SUBSYSTEM | 90-02<br>LV Switchgear Room B-200 |

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

| Sub System N°: | 90-02 | Tick as appropriate | ONSHORE | O |
|---|---|---|---|---|
| Description: | LV Switchgear Room B-200 | | OFFSHORE | NA |

| | | |
|---|---|---|
| 1. | ***READY FOR COMMISSIONING CERTIFICATE***<br>*Ready For Commissioning Certificate (RFC)* | O |
| 2. | ***CONSOLIDATED PUNCH LISTS***<br>*Cleared and Residual Items* | O |
| 3. | ***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS***<br>*Mark-up drawings showing the limits of the relevant System/Sub-System* | NA |
| 4. | ***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE***<br>*Building Sub-System Status Index (Print out) and Check/Test sheets* | NA |
| 5. | ***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE***<br>*Electrical Sub-System Status Index (Print out) and Check/Test Sheets*<br>*Hazardous Area Equipment Detailed Inspection* | O |
| 6. | ***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE***<br>*Instrumental Sub-System Status Index (Print out) and Check/Test Sheets* | O |
| 7. | ***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE***<br>*Mechanical SubSystem Status Index (Print out) and Check/Test Sheets* | NA |
| 8. | ***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE***<br>*Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 9. | ***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE***<br>*HVAC Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 10. | ***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE***<br>*Piping Sub-System Status Index and Check/Test Sheets* | NA |
| 11. | ***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE***<br>*Safety Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 12. | ***FAT / VENDOR REPORTS***<br>*Fat reports issued by vendors and/or vendor reports* | NA |
| 13. | ***MECHANICAL COMPLETION CHANGES / MARK-UPS***<br>*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: | 90-02 | / | LV Switchgear Room B-200 | | |

| | |
|---|---|
| 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)<br>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 2025-01-27T14:58:04.751Z | PROVERLIS Digitaly signed by Anthony Iveson 2025-01-27T15:04:42.429Z | PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:16:17.023Z | PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-27T15:16:25.273Z |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-02 & process: MC

| Electrical | 90-02 LV Switchgear Room B-200 | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| CABLE_TRAY_B200_ELE_LV | Cable Tray B200 - Electrical (Low Voltage) | ONSHORE | C10002284 | CPX30A | 100 | 2024-10-02 | RFC 1 |
| | | ONSHORE | C10002285 | CPX30B | 100 | 2025-01-25 | RFC 1 |
| E-MCT-201 | Multi Cable Transit | ONSHORE | C10001868 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-202 | Multi Cable Transit | ONSHORE | C10001869 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-203 | Multi Cable Transit | ONSHORE | C10001870 | CPX29 | 100 | 2025-01-08 | RFC 1 |
| E-MCT-204 | Multi Cable Transit | ONSHORE | C10001871 | CPX29 | 100 | 2025-01-08 | RFC 1 |
| E-MCT-205 | Multi Cable Transit | ONSHORE | C10004538 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-206 | Multi Cable Transit | ONSHORE | C10004539 | CPX29 | 100 | 2025-01-09 | RFC 1 |

# Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-02 & process: MC

| Instrumental | 90-02 LV Switchgear Room B-200 | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| CABLE_TRAY_B200_INS | Cable Tray B200 - Instrumental | ONSHORE | C10002286 | CJX30A | 100 | 2024-10-02 | RFC 1 |
| | | ONSHORE | C10002287 | CJX30B | 100 | 2025-01-25 | RFC 1 |
| I-MCT-201 | Multi Cable Transit | ONSHORE | C10001897 | CJX29 | 100 | 2025-01-09 | RFC 1 |
| I-MCT-202 | Multi Cable Transit | ONSHORE | C10001898 | CJX29 | 100 | 2025-01-22 | RFC 1 |
| I-MCT-203 | Multi Cable Transit | ONSHORE | C10001899 | CJX29 | 100 | 2025-01-22 | RFC 1 |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

PUNCH LIST REPORT

| | | |
|---|---|---|
| SYSTEM | 90 | Structural, Architectural |
| SUBSYSTEM | 90-02 | LV Switchgear Room B-200 |

Instrumental

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30000126 | B | CABLE_TRAY_B200_INS C10002286 | Cabletray not installed L-150-101-IST-061 | - | | Gtangianu 2024-10-02 | 2024-12-14 | Ecarotenuto 2024-12-14 | 2024-12-14 |
| C30000128 | B | CABLE_TRAY_B200_INS C10002286 | wide of cabletray is different from drawing L-50-101-INST-060 is 150mm instead of 50mm as per drawing. | . | | Gtangianu 2024-10-02 | 2024-12-27 | Ecarotenuto 2024-12-27 | 2024-12-27 |
| C30000129 | B | CABLE_TRAY_B200_INS C10002286 | Missing copper grease on all earthing connection | . | | Gtangianu 2024-10-02 | Alambertini 2024-10-16 | Ecarotenuto 2024-10-16 | 2024-10-16 |
| C30002507 | B | I-MCT-201 C10001897 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-09 | | | |
| C30003152 | B | I-MCT-203 C10001899 | Missing Traffolyte tag on both MCT side | . | | Pschintu 2025-01-22 | | | |
| C30003160 | B | I-MCT-202 C10001898 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-22 | | | |

# Project CROSSWIND

PUNCH LIST REPORT



SYSTEM 90 Structural, Architectural
SUBSYSTEM 90-02 LV Switchgear Room B-200

Electrical

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30000130 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Cable ladder not installed L-300-101-LVT-032 | . | | Gtangianu 2024-10-02 | 2025-01-25 | Pschintu 2025-01-25 | 2025-01-25 |
| C30000131 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Cable ladder and special piece not installed L-600-101-LVT-016 | . | | Gtangianu 2024-10-02 | 2025-01-25 | Pschintu 2025-01-25 | 2025-01-25 |
| C30000132 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Missing copper grease on all earthing connection | . | | Gtangianu 2024-10-02 | Alambertini 2024-10-16 | Ecarotenuto 2024-10-16 | 2024-10-16 |
| C30002361 | B | E-MCT-205 C10004538 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-07 | | | |
| C30002374 | B | E-MCT-202 C10001869 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-07 | | | |
| C30002409 | B | E-MCT-201 C10001868 | Missing Traffolyte tag both sides | . | | Pschintu 2025-01-07 | | | |
| C30002477 | B | E-MCT-203 C10001870 | Missing Traffolyte tag on both side of MCT | . | | Pschintu 2025-01-08 | | | |
| C30002478 | B | E-MCT-204 C10001871 | Missing Traffolyte tag on both side of MCT | . | | Pschintu 2025-01-08 | | | |
| C30002485 | B | E-MCT-206 C10004539 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-09 | | | |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

PUNCH LIST REPORT

| | | |
|---|---|---|
| SYSTEM | 90 | Structural, Architectural |
| SUBSYSTEM | 90-02 | LV Switchgear Room B-200 |

Electrical

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30002684 | B | E-MCT-205<br>C10004538 | MCT composition to be checked after temporary cables are removed | . | | Pschintu<br>2025-01-11 | | | |

# Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

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# Project CROSSWIND

PUNCH LIST REPORT

| | | |
|---|---|---|
| SYSTEM | 90 | Structural, Architectural |
| SUBSYSTEM | 90-02 | LV Switchgear Room B-200 |

Instrumental

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30000126 | B | CABLE_TRAY_B200_INS C10002286 | Cabletray not installed L-150-101-IST-061 | - | | Gtangianu 2024-10-02 | 2024-12-14 | Ecarotenuto 2024-12-14 | 2024-12-14 |
| C30000128 | B | CABLE_TRAY_B200_INS C10002286 | wide of cabletray is different from drawing L-50-101-INST-060 is 150mm instead of 50mm as per drawing. | . | | Gtangianu 2024-10-02 | 2024-12-27 | Ecarotenuto 2024-12-27 | 2024-12-27 |
| C30000129 | B | CABLE_TRAY_B200_INS C10002286 | Missing copper grease on all earthing connection | . | | Gtangianu 2024-10-02 | Alambertini 2024-10-16 | Ecarotenuto 2024-10-16 | 2024-10-16 |
| C30002507 | B | I-MCT-201 C10001897 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-09 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |
| C30003152 | B | I-MCT-203 C10001899 | Missing Traffolyte tag on both MCT side | . | | Pschintu 2025-01-22 | 2025-02-07 | Pschintu 2025-02-07 | 2025-02-07 |
| C30003160 | B | I-MCT-202 C10001898 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-22 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |

# Project CROSSWIND

PUNCH LIST REPORT



| | | |
|---|---|---|
| SYSTEM | 90 | Structural, Architectural |
| SUBSYSTEM | 90-02 | LV Switchgear Room B-200 |

Electrical

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30000130 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Cable ladder not installed L-300-101-LVT-032 | . | | Gtangianu 2024-10-02 | 2025-01-25 | Pschintu 2025-01-25 | 2025-01-25 |
| C30000131 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Cable ladder and special piece not installed L-600-101-LVT-016 | . | | Gtangianu 2024-10-02 | 2025-01-25 | Pschintu 2025-01-25 | 2025-01-25 |
| C30000132 | B | CABLE_TRAY_B200_ELE_LV C10002284 | Missing copper grease on all earthing connection | . | | Gtangianu 2024-10-02 | Alambertini 2024-10-16 | Ecarotenuto 2024-10-16 | 2024-10-16 |
| C30002361 | B | E-MCT-205 C10004538 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-07 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |
| C30002374 | B | E-MCT-202 C10001869 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-07 | 2025-02-07 | Pschintu 2025-02-07 | 2025-02-07 |
| C30002409 | B | E-MCT-201 C10001868 | Missing Traffolyte tag both sides | . | | Pschintu 2025-01-07 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |
| C30002477 | B | E-MCT-203 C10001870 | Missing Traffolyte tag on both side of MCT | . | | Pschintu 2025-01-08 | 2025-02-07 | Pschintu 2025-02-07 | 2025-02-07 |
| C30002478 | B | E-MCT-204 C10001871 | Missing Traffolyte tag on both side of MCT | . | | Pschintu 2025-01-08 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |
| C30002485 | B | E-MCT-206 C10004539 | Missing traffolyte tag on both side of MCT | . | | Pschintu 2025-01-09 | 2025-02-03 | Pschintu 2025-02-03 | 2025-02-03 |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

PUNCH LIST REPORT

| | | |
|---|---|---|
| SYSTEM | 90 | Structural, Architectural |
| SUBSYSTEM | 90-02 | LV Switchgear Room B-200 |

Electrical

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30002684 | B | E-MCT-205<br>C10004538 | MCT composition to be checked after temporary cables are removed | . | | Pschintu<br>2025-01-11 | 2025-03-04 | JKrizanic<br>2025-03-04 | 2025-03-04 |

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30003152

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001899 | 1.4 Discipline | Instrumental |
| 1.2 Item | I-MCT-203 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing Traffolyte tag on both MCT side

Name: Paolo Schintu

Date: 2025-01-22

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

INSTALLED

Name: Paolo Schintu

Date: 2025-02-07

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30003160

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001898 | 1.4 Discipline | Instrumental |
| 1.2 Item | I-MCT-202 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-22

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

Done

Name: Paolo Schintu

Date: 2025-02-03

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000126

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002286 | 1.4 Discipline | Instrumental |
| 1.2 Item | CABLE_TRAY_B200_INS | Cable Tray B200 - Instrumental | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Cabletray not installed L-150-101-IST-061

Name: Giovanni Tangianu

Date: 2024-10-02

Signature:

## 3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Done

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-14

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000128

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002286 | 1.4 Discipline | Instrumental |
| 1.2 Item | CABLE_TRAY_B200_INS | Cable Tray B200 - Instrumental | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

wide of cabletray is different from drawing L-50-101-INST-060 is 150mm instead of 50mm as per drawing.

Name: Giovanni Tangianu
Date: 2024-10-02
Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:
Date:
Signature:

## 5 - CLEARANCE CHECK

RLMU DONE

Name: Eleonora Carotenuto
Date: 2024-12-27
Signature:

## 6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000129

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002286 | 1.4 Discipline | Instrumental |
| 1.2 Item | CABLE_TRAY_B200_INS | Cable Tray B200 - Instrumental | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing copper grease on all earthing connection

Name: Giovanni Tangianu

Date: 2024-10-02

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

-

Name: Andrea Lambertini

Date: 2024-10-16

Signature:

## 5 - CLEARANCE CHECK

Point Not Applicable

Name: Eleonora Carotenuto

Date: 2024-10-16

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000130

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002284 | 1.4 Discipline | Electrical |
| 1.2 Item | CABLE_TRAY_B200_ELE_LV | Cable Tray B200 - Electrical (Low Voltage) | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Cable ladder not installed L-300-101-LVT-032

Name: Giovanni Tangianu

Date: 2024-10-02

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

INSTALLED

Name: Paolo Schintu

Date: 2025-01-25

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000131

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002284 | 1.4 Discipline | Electrical |
| 1.2 Item | CABLE_TRAY_B200_ELE_LV | Cable Tray B200 - Electrical (Low Voltage) | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Cable ladder and special piece not installed L-600-101-LVT-016

Name: Giovanni Tangianu

Date: 2024-10-02

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

INSTALLED

Name: Paolo Schintu

Date: 2025-01-25

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000132

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002284 | 1.4 Discipline | Electrical |
| 1.2 Item | CABLE_TRAY_B200_ELE_LV | Cable Tray B200 - Electrical (Low Voltage) | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing copper grease on all earthing connection

Name: Giovanni Tangianu

Date: 2024-10-02

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-10-02 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

-

Name: Andrea Lambertini

Date: 2024-10-16

Signature:

## 5 - CLEARANCE CHECK

Point Not Applicable

Name: Eleonora Carotenuto

Date: 2024-10-16

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30002361

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10004538 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-205 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-07

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 | 2025-01-07 |
| 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

C30002374

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001869 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-202 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-07

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 | 2025-01-07 |
| 3.5 Action by | RM Rosetti Marino Quality | 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

C30002409

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001868 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-201 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing Traffolyte tag both sides

Name: Paolo Schintu

Date: 2025-01-07

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 | 2025-01-07 |
| 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

C30002477

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001870 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-203 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing Traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-08

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 | 2025-01-08 |
| 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

C30002478

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001871 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-204 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing Traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-08

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 | 2025-01-08 |
| 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

C30002485

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10004539 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-206 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-09

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 | 2025-01-09 |
| 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

C30002507

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10001897 | 1.4 Discipline | Instrumental |
| 1.2 Item | I-MCT-201 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 2 - OBSERVATION

Missing traffolyte tag on both side of MCT

Name: Paolo Schintu

Date: 2025-01-09

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 | 2025-01-09 |
| 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

C30002684

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10004538 | 1.4 Discipline | Electrical |
| 1.2 Item | E-MCT-205 | Multi Cable Transit | |
| 1.3 Subsystem | 90-02 | LV Switchgear Room B-200 | |

## 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: 90-02 & process: MC & discipline : E

| Electrical | 90-02 LV Switchgear Room B-200 | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| CABLE_TRAY_B200_ELE_LV | Cable Tray B200 - Electrical (Low Voltage) | ONSHORE | C10002284 | CPX30A | 100 | 2024-10-02 | RFC 1 |
| | | ONSHORE | C10002285 | CPX30B | 100 | 2025-01-25 | RFC 1 |
| E-MCT-201 | Multi Cable Transit | ONSHORE | C10001868 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-202 | Multi Cable Transit | ONSHORE | C10001869 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-203 | Multi Cable Transit | ONSHORE | C10001870 | CPX29 | 100 | 2025-01-08 | RFC 1 |
| E-MCT-204 | Multi Cable Transit | ONSHORE | C10001871 | CPX29 | 100 | 2025-01-08 | RFC 1 |
| E-MCT-205 | Multi Cable Transit | ONSHORE | C10004538 | CPX29 | 100 | 2025-01-07 | RFC 1 |
| E-MCT-206 | Multi Cable Transit | ONSHORE | C10004539 | CPX29 | 100 | 2025-01-09 | RFC 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | E-MCT-201 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10001868 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Electrical | Form | CPX29 MCT Penetration Electrical |

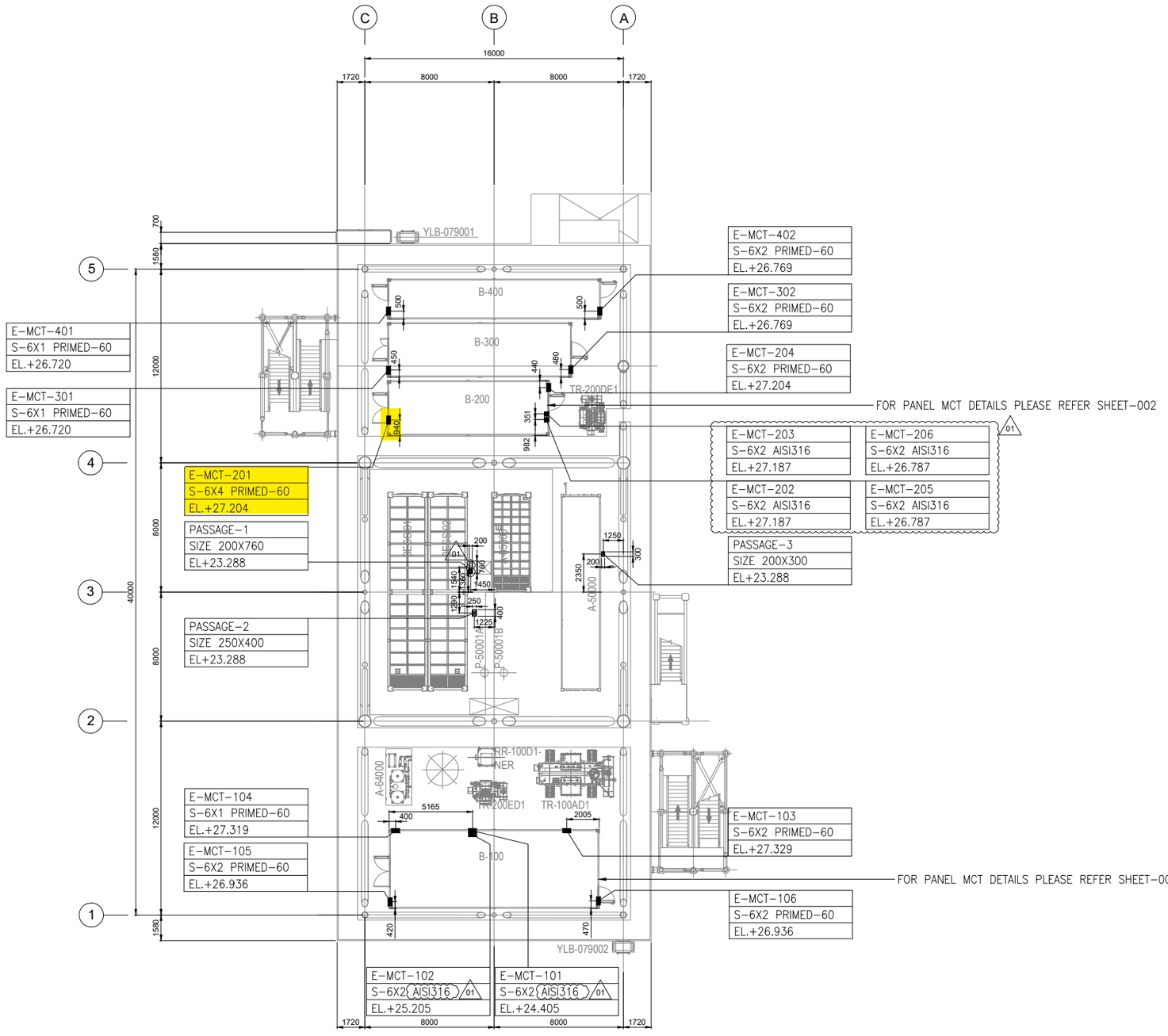
| | | |
|---|---|---|
| **1** | Check that MCT's conforms to revision and specification. | OK |
| **2** | Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment. | Note |
| **3** | Check MCT's is properly tagged, on both side of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

Comments: Note 2: Refer to PL n* C30002351

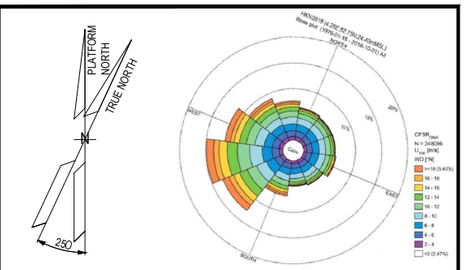
| **Page 1/1** | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Francesco Zucca | Paolo Schintu | |
| **Date** | 2024-12-11 | 2025-01-07 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T06:20:48.764Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-07T15:37:57.552Z | |

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

REV. 01




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




## NOTES

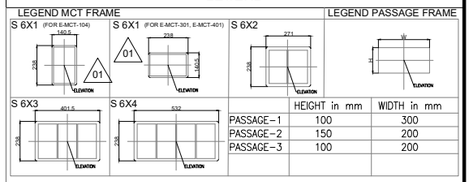
### GENERAL NOTES:

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

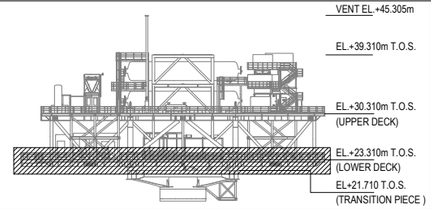



| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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) |

CROSSWIND | ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20115

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

ROSETTI MARINO SpA

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

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

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| 2 | INDEX | | 3 |
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| | | | |



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|---|---|---|
| 1_A | 08/08/24 | G.Randi |

ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

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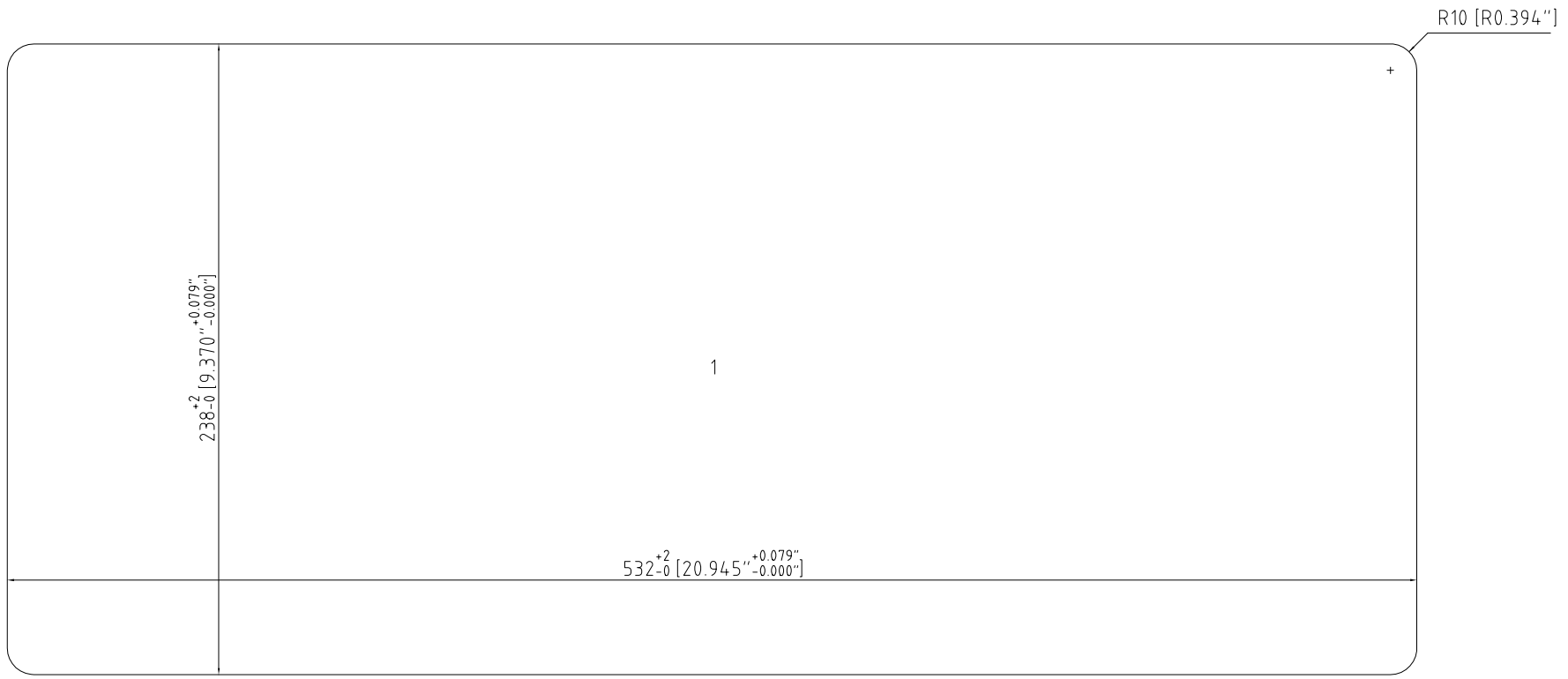
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|---|---|---|
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**ROSETTI MARINO SpA**

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

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Cutout Detail

Frame: S 6x4 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<br>Location/ Sublocation | TotWeight: 23.5 [51.72] |
| Roxtec | Format: NTS | | Transit name: E-MCT-201 | Sheet No: 1/4 |
| | Client | | Drawing number | Rev |

RTD Version No: 4.37.4.0

# CUTOUT TO FIT SOLUTION WELDING, 532x238 [20.945"x9.370"]

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

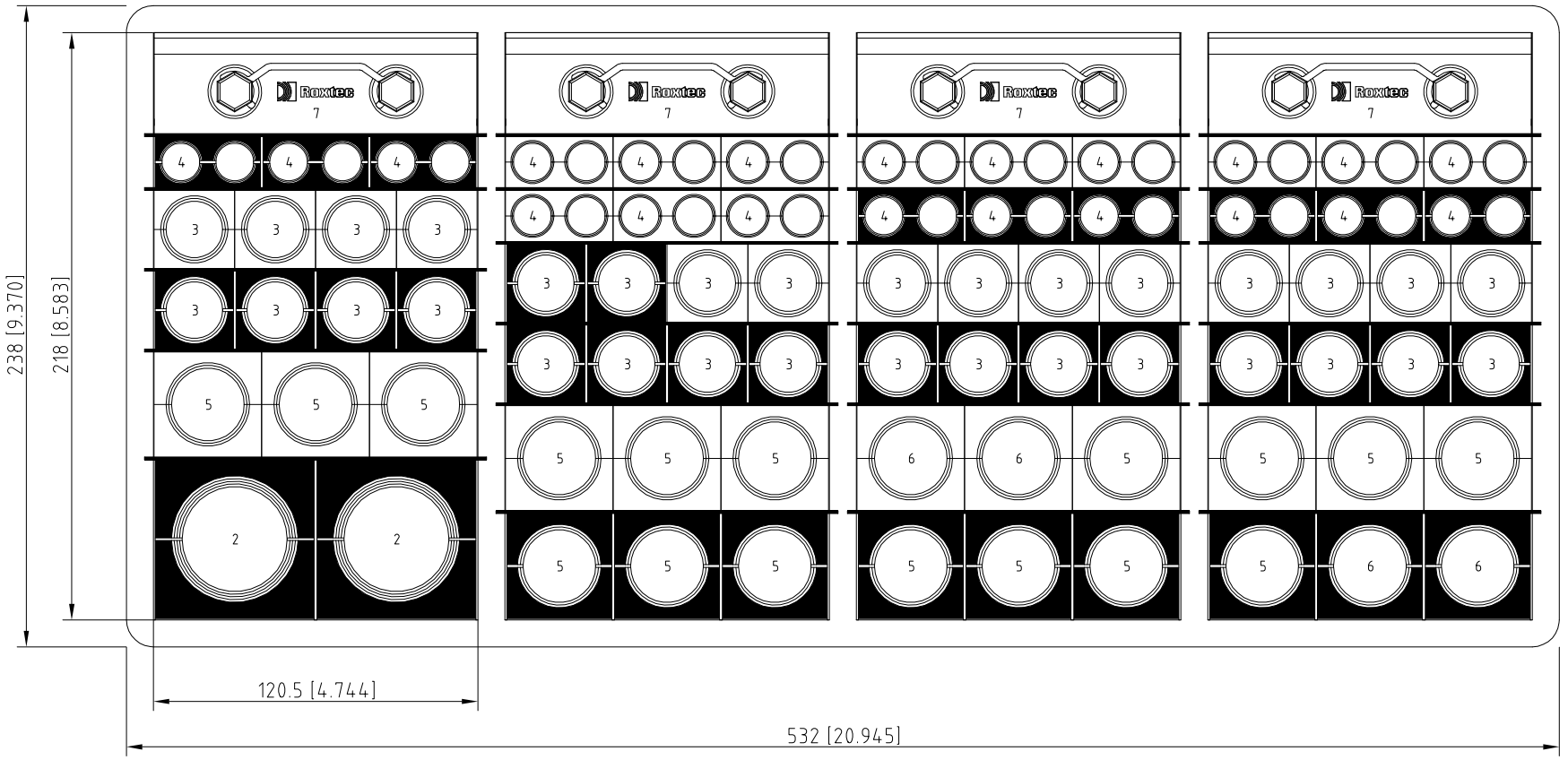
| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_A | 08/08/24 | G.Randi |

**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] |
|---|---|---|---|---|
| 8 | 23 | Stayplate 120 galv | ASP0001200018 | 0.1 [0.24] |
| 7 | 4 | Wedge 120 galv | ARW0001201018 | 0.8 [1.76] |
| 6 | 4 | RM 40/10-32 9.5-32.5 [0.374"-1.280"] | RM00140101000 | 0.1 [0.31] |
| 5 | 17 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 4 | 21 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 3 | 32 | RM 30 10-25 [0.394"-0.984"] | RM00100301000 | 0.1 [0.18] |
| 2 | 2 | RM 60 28-54 [1.102"-2.126"] | RM00100601000 | 0.3 [0.73] |
| 1 | 1 | S 6x4 PRIMED | S006000000412 | 10.1 [22.27] |

| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 23.5 [51.72] |
| Roxtec | Format: NTS | | Transit name: E-MCT-201 | Sheet No: 2/4 |
| | Client | | Drawing number | Rev |

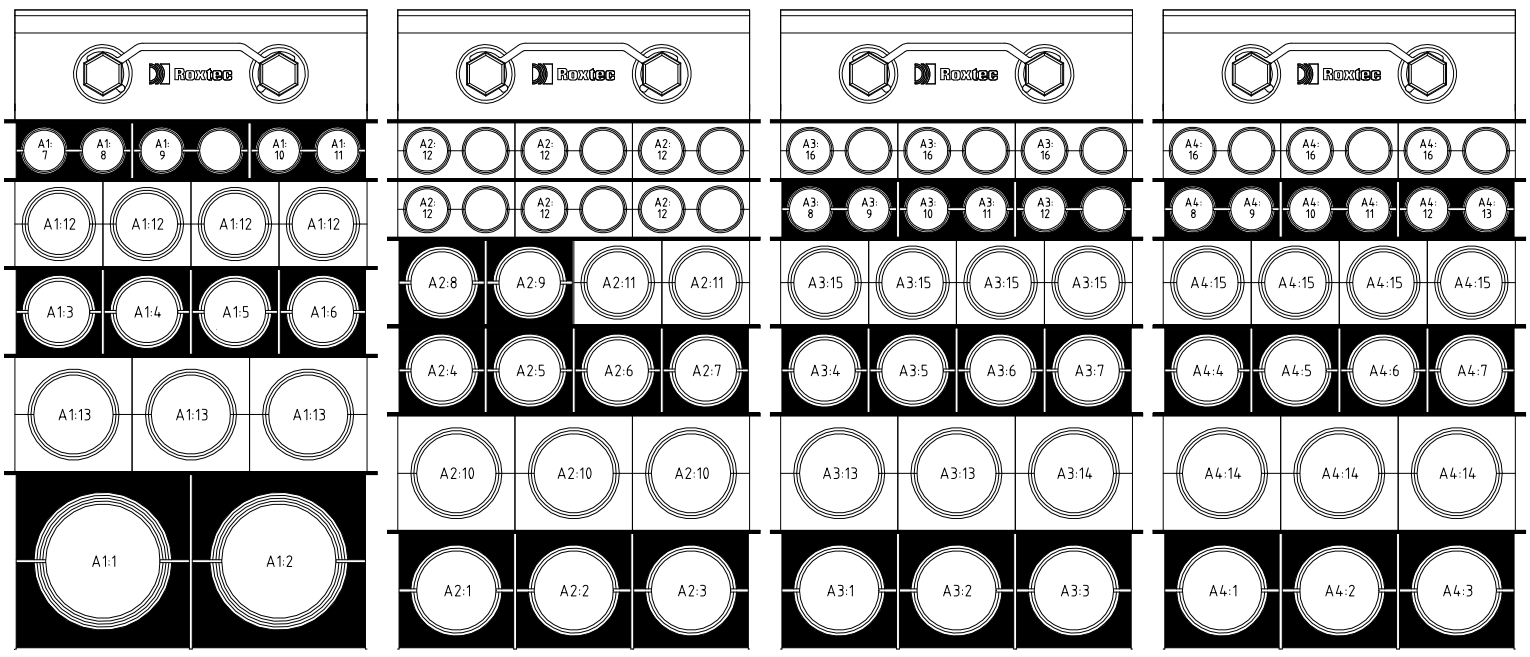
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A1 A2 A3 A4

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

**ROSETTI MARINO SpA**




| | | | | | | |
|---|---|---|---|---|---|---|
| | | OPENING TABLE CONTINUE ON THE NEXT PAGE | | | | |
| A4:3 | 83037-CEL | DC UPS - NAVAID System - Feeder B | 3G16 | Power | 23.6 [0.929"] | RM 40/10-32 9.5-32.5 [0.374"-1.280"] |
| A4:2 | 83036-CEL | DC UPS NAVAID System - Feeder A | 3G16 | Power | 23.6 [0.929"] | RM 40/10-32 9.5-32.5 [0.374"-1.280"] |
| A4:1 | 83023-CEL | HVAC Panels - HV Room | 5G16 | Power | 24 [0.945"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A3:16 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A3:15 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A3:14 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A3:13 | | | | | | RM 40/10-32 9.5-32.5 [0.374"-1.280"] |
| A3:12 | 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"] |
| A3:11 | 82013-CEC | LV Switchgear | 7C X 1.5 | Control | 13.5 [0.531"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A3:10 | 82008-CEC | Solar Switchgear | 7C X 1.5 | Control | 13.5 [0.531"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A3:9 | 6W2.1 | EAJ-200-01 | 2C X 2.5 | Control | 9.5 [0.374"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A3:8 | 5W2.1 | EAJ-200-02 | 2C X 2.5 | Control | 9.5 [0.374"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A3:7 | 83034-CEL | DC Battery System - Switchgears Control - Feeder A | 4G16 | Power | 22 [0.866"] | RM 30 10-25 [0.394"-0.984"] |
| A3:6 | 83019-CEL | Sea water intake pump B | 4G4 | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A3:5 | 83018-CEL | Sea water intake pump A | 4G4 | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A3:4 | 83015-CEL | BESS LV2 Cabinet (+DISTR 2) | 4C X 10 | Power | 19.3 [0.760"] | RM 30 10-25 [0.394"-0.984"] |
| A3:3 | 83003-CEL-L3 | 6.6/0.8 kV Transformer | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A3:2 | 83003-CEL-L2 | 6.6/0.8 kV Transformer | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A3:1 | 83003-CEL-L1 | 6.6/0.8 kV Transformer | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A2:12 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:11 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A2:10 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:9 | P-ETB-200N1-20-L1-01 | Trace Heating - Process Lines - Feeder 7 (Sea Water Pumps) | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A2:8 | P-ETB-200N1-19-L3-01 | Trace Heating - Process Lines - Feeder 6 (H2 Vent) | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A2:7 | 83014-CEL | BESS LV1 Cabinet (+DISTR 1) | 4C X 10 | Power | 19.3 [0.760"] | RM 30 10-25 [0.394"-0.984"] |
| A2:6 | 83011-CEL | BESS PCS Cabinet | 4C X 10 | Power | 19.3 [0.760"] | RM 30 10-25 [0.394"-0.984"] |
| A2:5 | 7WD6.1 | EAJ-200-01 | 1C X 70 | Power | 17 [0.669"] | RM 30 10-25 [0.394"-0.984"] |
| A2:4 | 7WD3 | EAJ-200-02 | 1C X 70 | Power | 17 [0.669"] | RM 30 10-25 [0.394"-0.984"] |
| A2:3 | 83002-CEL-L3 | LV SWBD 800/460V | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:2 | 83002-CEL-L2 | LV SWBD 800/460V | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:1 | 83002-CEL-L1 | LV SWBD 800/460V | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A1:13 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:12 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A1:11 | 83104-CEL | SIS -Controller and I/O Cabinet - Auxiliary | 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 | 83119-CEL | Auxiliary 6.6kV Switchboard | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:8 | 83111-CEL | UCP - N2 Package - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:7 | 83117-CEL | Auxiliary Trafo SOLAR 0,5MVA | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:6 | P-ETB-200N1-18-L2-01 | Trace Heating - Remote Instrument - Feeder 5 | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A1:5 | P-EJB-200N1-17-L1-01 | Trace Heating - Process Lines - Feeder 4 (WW lines) | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A1:4 | P-EJB-200N1-09-L2-01 | Emergency Lighting Lower Deck - Circuit No. 1 | 4G4_E | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:3 | P-EJB-200N1-06-L2-01 | Small Power Socket JB (Lower Deck) | 3G10 | Power | 17.7 [0.697"] | RM 30 10-25 [0.394"-0.984"] |
| A1:2 | 83017-CEL-2 | Instrument Air Package | 5G70 | Power | 39.5 [1.555"] | RM 60 28-54 [1.102"-2.126"] |
| A1:1 | 83017-CEL-1 | Instrument Air Package | 5G70 | Power | 39.5 [1.555"] | RM 60 28-54 [1.102"-2.126"] |
| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |



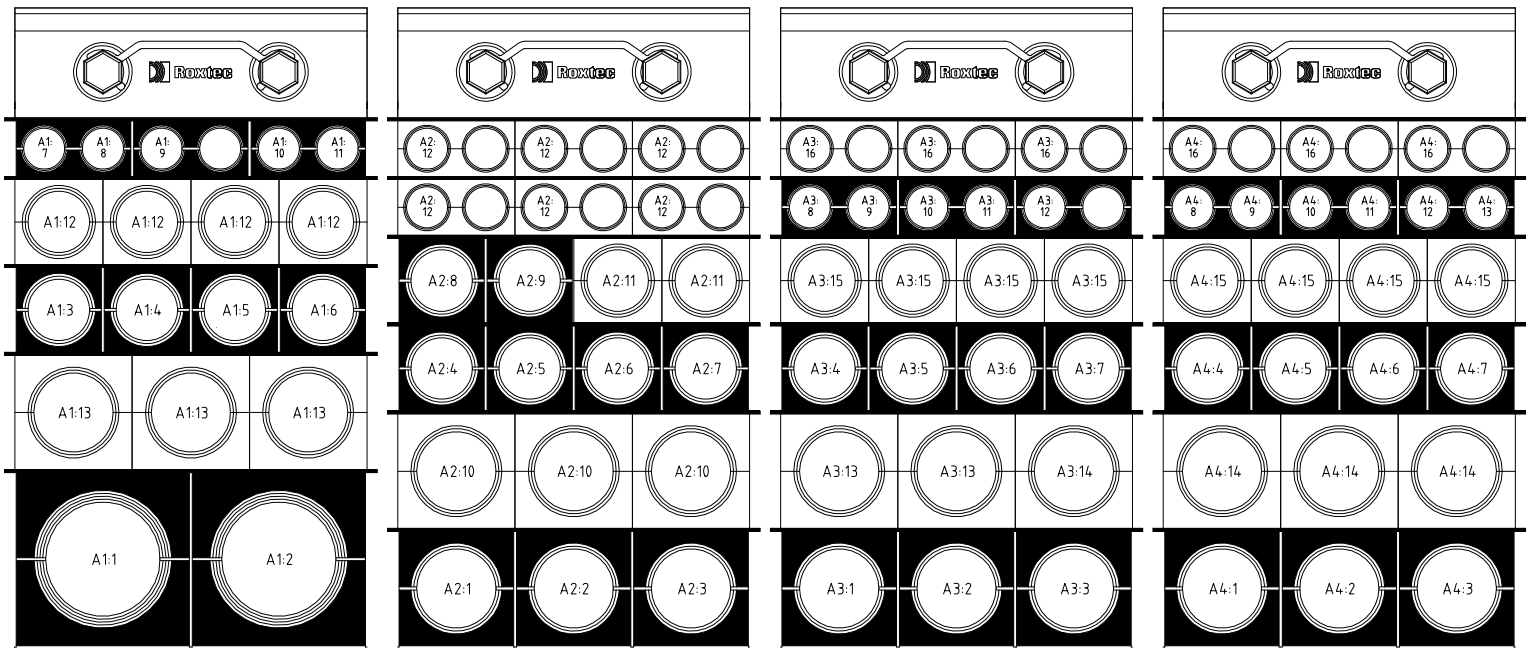

| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 23.5 [51.72] |
| Roxtec | Format NTS | | Transit name E-MCT-201 | Sheet No 3/4 |
| | Client | Drawing number | | Rev |

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

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A1 A2 A3 A4




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

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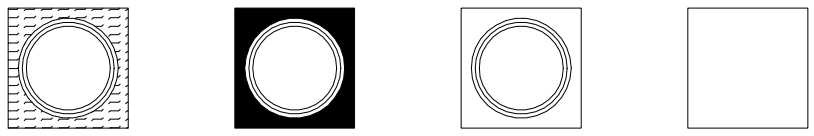
**VALID FOR CONSTRUCTION**

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

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

**ROSETTI MARINO SpA**

| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |
|---|---|---|---|---|---|---|
| A4:16 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:15 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A4:14 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A4:13 | 83110-CEL | UCP - Instrument Air Package -A-63000 - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:12 | 83109-CEL | Server cabiner ITER - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:11 | 83108-CEL | System Server / Network Cabinet - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:10 | 83107-CEL | FGS Fire & Gas Panel - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:9 | 83106-CEL | EMCS -Controller and I/O Cabinet - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:8 | 83105-CEL | PCS -Controller and I/O Cabinet - Auxiliary | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A4:7 | P-EJB-200N1-05-L1-01 | Small Power Socket JB(Upper Deck) | 3G10 | Power | 17.7 [0.697"] | RM 30 10-25 [0.394"-0.984"] |
| A4:6 | P-EJB-200N1-04-L3-01 | Normal Lighting - Stairs | 3G4 | Power | 14.3 [0.563"] | RM 30 10-25 [0.394"-0.984"] |
| A4:5 | 83118-CEL | Auxiliary GIS | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A4:4 | 83035-CEL | DC Battery System - Switchgears Control - Feeder B | 4G16 | Power | 22 [0.866"] | RM 30 10-25 [0.394"-0.984"] |




| | | | | |
|---|---|---|---|---|
| Responsible: ARNESH | Created Date: 2024-07-10 | Modify Date: 2024-07-17 | Project: BLPH - ROS<br>Location/ Sublocation | TotWeight: 23.5 [51.72] |
| Roxtec | Format: NTS | | Transit name: E-MCT-201 | Sheet No: 4/4 |
| | Client | Drawing number | | Rev |

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

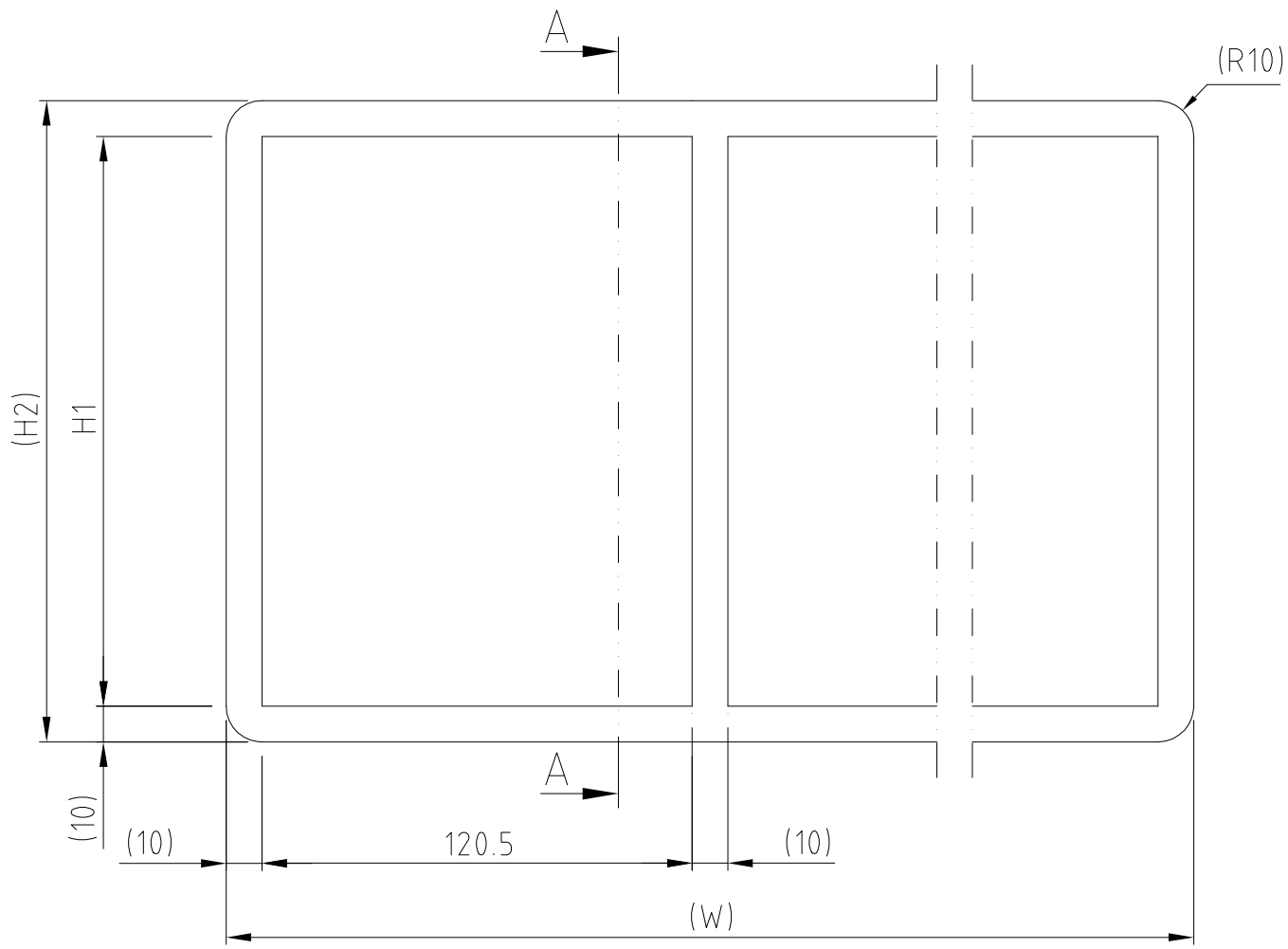
| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_A | 08/08/24 | G.Randi |

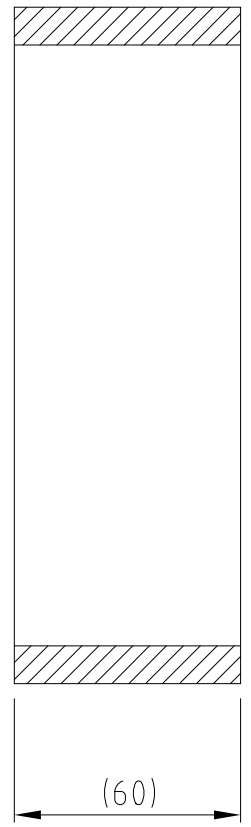
**ROSETTI MARINO SpA**

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| 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 |




A - A

| 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

Roxtec

| | | | | |
|---|---|---|---|---|
| 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 |

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

| Row | DATA SHEET ELECTRICAL MULTI-CABLE TRANSIT | | | | Rev. |
|---|---|---|---|---|---|
| | Feature | Required | Manufacturer Proposal | Comments | 00 |
| 1 | GENERAL DATA | | | | 00 |
| 2 | Location | Outdoor | | | 00 |
| 3 | Depth | 60 mm | | | 00 |
| 4 | Construction type | Primed Mild Steel - PRIMED | | | 00 |
| 5 | Type of Installation | by Welding | | | 00 |
| 6 | Fire Resistant Class | A0 | | | 00 |
| 7 | Position | Shelter, Wall penetration, Floor penetration | | | 00 |
| 8 | Certification ATEX | Yes | | | 00 |
| | | | | | |
| 9 | MULTI CABLE TRANSIT SYSTEM - FRAMES | | | | 00 |
| 10 | Description | | Quantity | Notes | 00 |
| 11 | S 6x1 Ex PRIMED | | 14 | | 00 |
| 12 | Manufacturer: Roxtec | | | | 00 |
| 13 | Art. No.: EXS006000000112 | | | | 00 |
| | | | | | |
| 14 | S 6x2 Ex PRIMED | | 1 | | 00 |
| 15 | Manufacturer: Roxtec | | | | 00 |
| 16 | Art. No.: EXS006000000212 | | | | 00 |
| | | | | | |
| 17 | MULTI CABLE TRANSIT SYSTEM - MODULES | | | | 00 |
| 18 | Module: RM 40 EX 21.5-34.5 [0.846"-1.358"] | | 57 | 48 Spares out of 57 | 01 |
| 19 | Manufacturer: Roxtec | | | | 00 |
| 20 | Art. No. EXRM00100401000 | | | | 00 |
| | | | | | |
| 21 | Module: RM 20W40 EX 3.5-16.5 [0.138"-0.650"] | | 21 | 19 Spares out of 21 | 01 |
| 22 | Manufacturer: Roxtec | | | | 01 |
| 23 | Art. No. EXRM00120401000 | | | | 01 |
| | | | | | |
| 24 | Module: RM 30 EX 10-25 [0.394"-0.984"] | | 176 | 153 Spares out of 176 | 01 |
| 25 | Manufacturer: Roxtec | | | | 00 |
| 26 | Art. No. EXRM00100301000 | | | | 00 |
| | | | | | |
| 27 | Module: RM 60 EX 28-54 [1.102"-2.126"] | | 22 | 17 Spares out of 22 | 01 |
| 28 | Manufacturer: Roxtec | | | | 00 |
| 29 | Art. No. EXRM00100601000 | | | | 00 |
| | | | | | |
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| | NOTES | | | | 00 |
| | | | | | |
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| | 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 |
| | | | | | |
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| | 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-202 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10001869 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Electrical | Form | CPX29 MCT Penetration Electrical |

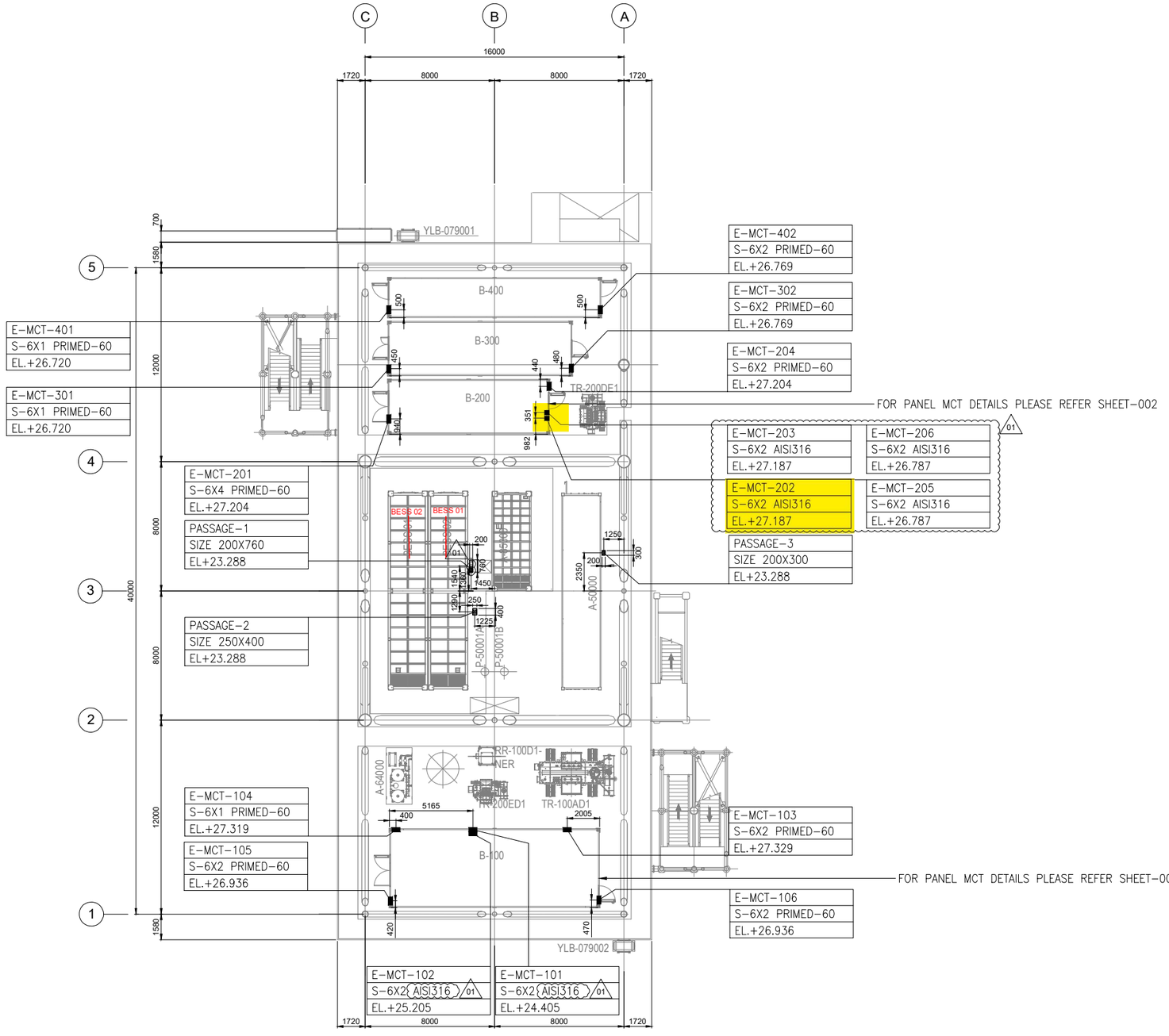
| | | |
|---|---|---|
| **1** | Check that MCT's conforms to revision and specification. | OK |
| **2** | Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment. | Note |
| **3** | Check MCT's is properly tagged, on both side of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

Comments: Note 2: Refer to PL n* C30002351

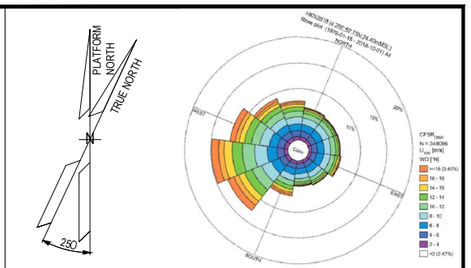
| **Page 1/1** | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Francesco Zucca | Paolo Schintu | |
| **Date** | 2024-12-31 | 2025-01-07 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-31T09:38:45.601Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-07T10:31:49.264Z | |

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

REV. 01




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




## NOTES

### GENERAL NOTES:

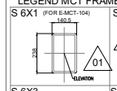
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

### NOTES:

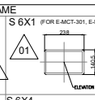
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

## LEGEND

LEGEND MCT FRAME




LEGEND PASSAGE FRAME

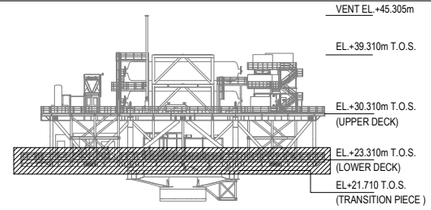



| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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**

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

**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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|---|---|---|---|
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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 |
| 15 | E-MCT-204 | S 6X2 PRIMED | 56 |
| 16 | E-MCT-205 | S 6X2 **AISI316** | 60 |
| 17 | E-MCT-206 | S 6X2 **AISI316** | 64 |
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| 19 | E-MCT-302 | S 6X2 PRIMED | 72 |
| 20 | E-MCT-401 | S 6X1 PRIMED | 76 |
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| 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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VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20095
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

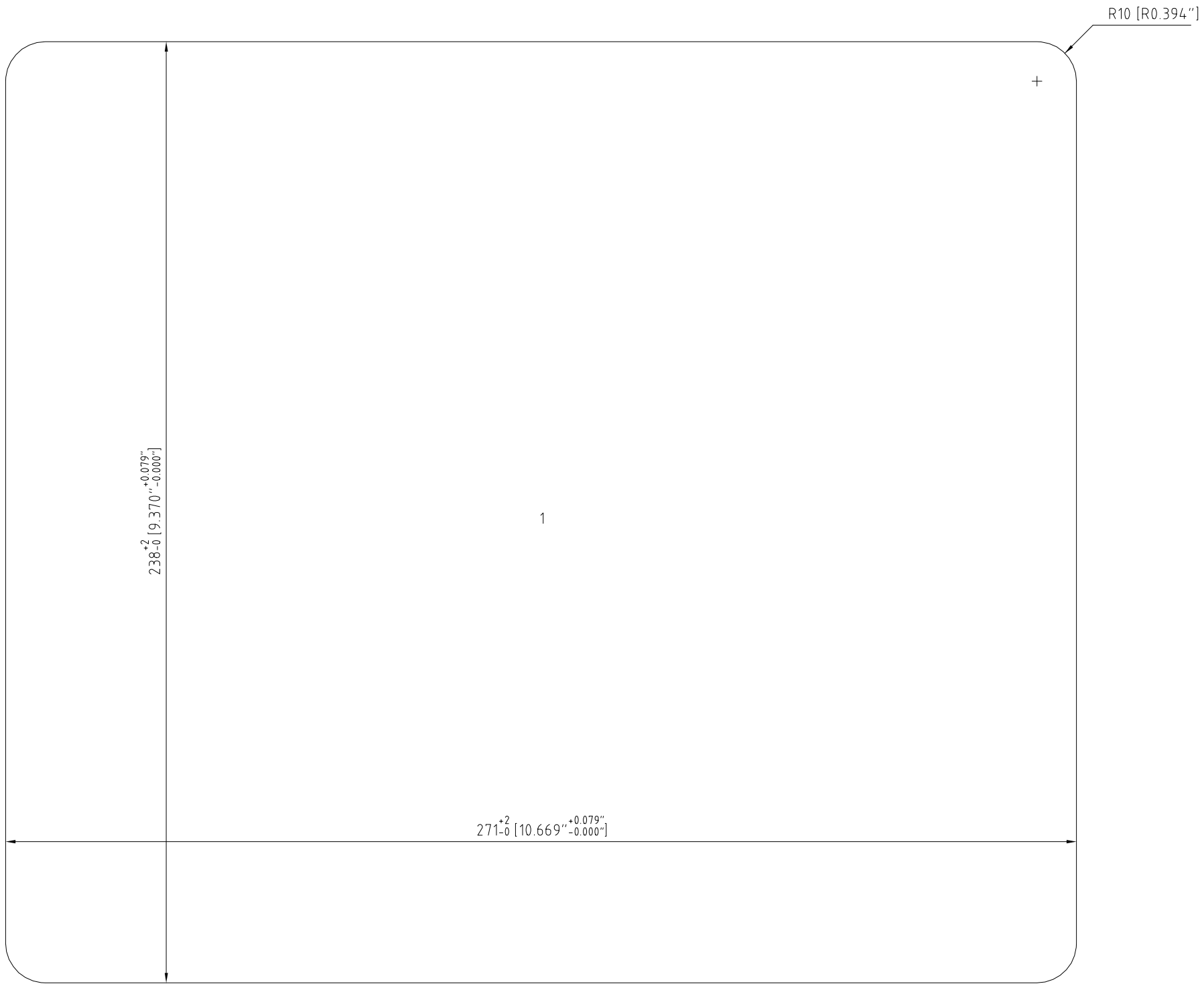
RTD Version No: 4.37.4.0

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

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

**ROSETTI MARINO SpA**

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




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## Cutout Detail

Frame: S 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<br>Location/ Sublocation | TotWeight: 13.3 [29.40] |
| Roxtec | Format: NTS | | Transit name: E-MCT-202 | Sheet No: 1/3 |
| | Client | | Drawing number | Rev |

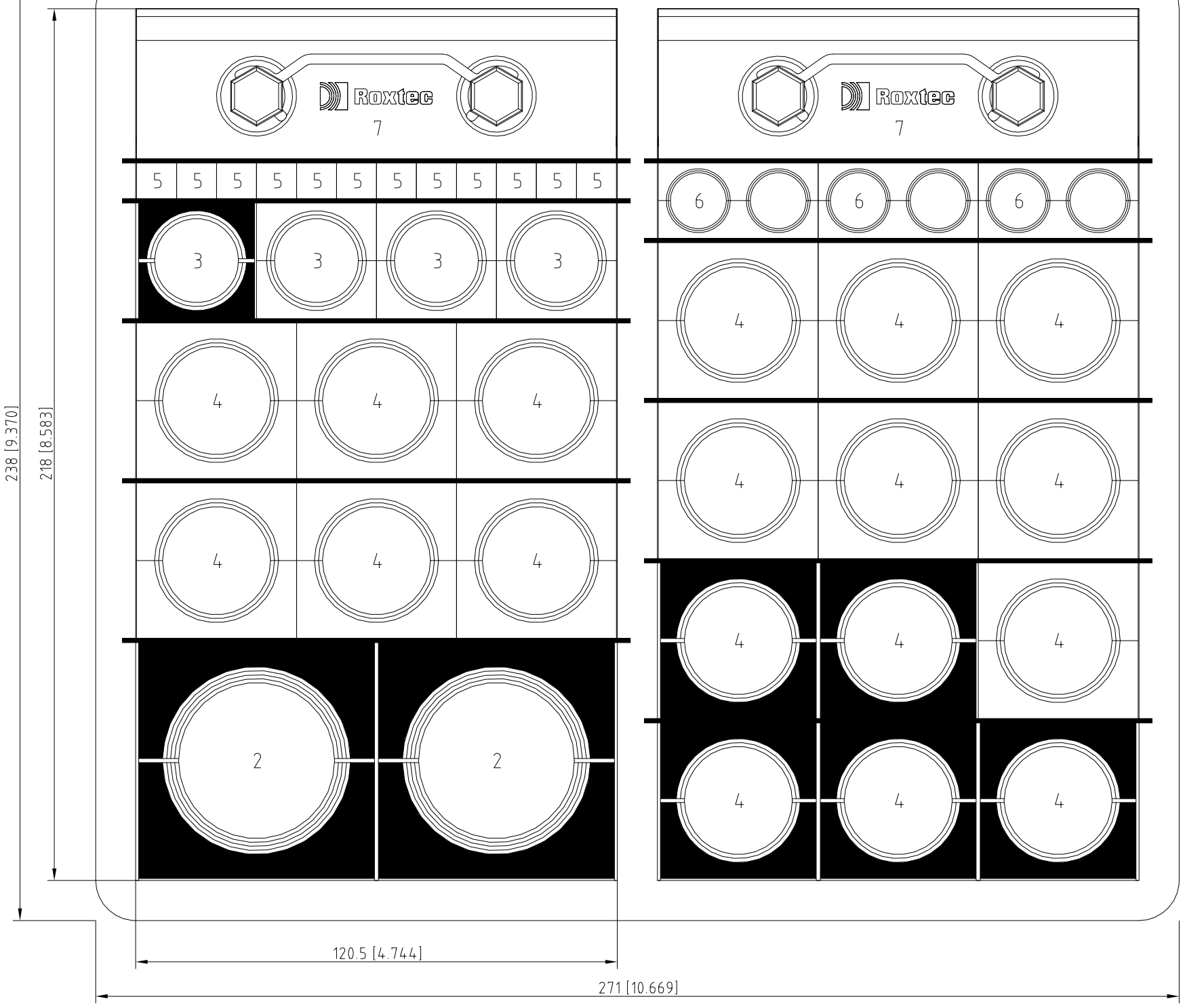
RTD Version No: 4.37.4.0

# 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] |
|---|---|---|---|---|
| 8 | 10 | Stayplate 120 AISI 316 | ASP0001200021 | 0.1 [0.22] |
| 7 | 2 | Wedge 120 AISI 316 | ARW0001201021 | 0.8 [1.76] |
| 6 | 3 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 5 | 1 | RM 10/0x12 | RM00310121000 | 0.1 [0.22] |
| 4 | 18 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 3 | 4 | RM 30 10-25 [0.394"-0.984"] | RM00100301000 | 0.1 [0.18] |
| 2 | 2 | RM 60 28-54 [1.102"-2.126"] | RM00100601000 | 0.3 [0.73] |
| 1 | 1 | S 6x2 AISI316 | S006000000221 | 5.8 [12.79] |

| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 13.3 [29.40] |
| | Format: NTS | | Transit name: E-MCT-202 | Sheet No: 2/3 |
| Roxtec | Client | | Drawing number | Rev |

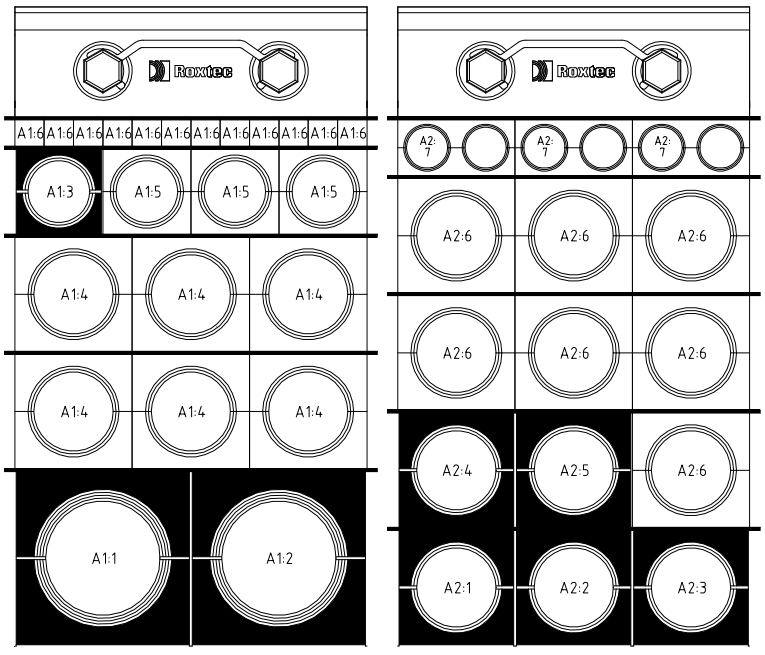

Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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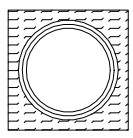
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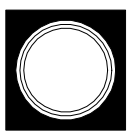
**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20095**

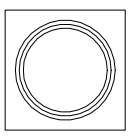
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|---|---|---|
| 1_A | 08/08/24 | G.Randi |

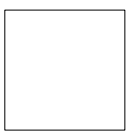
**ROSETTI MARINO SpA**

| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |
|---|---|---|---|---|---|---|
| A2:7 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:6 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:5 | 83013-CEL-N | Electrolyser Auxiliary load | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:4 | 83013-CEL-L3 | Electrolyser Auxiliary load | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:3 | 83013-CEL-L2 | Electrolyser Auxiliary load | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:2 | 83013-CEL-L1 | Electrolyser Auxiliary load | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:1 | 83012-CEL | Fuel Cell Auxiliary Load | 5G16 | Power | 24 [0.945"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A1:6 | | | | | | RM 10/0x12 |
| A1:5 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A1:4 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:3 | 83013-CEL-E | Electrolyser Auxiliary load | 1C X 150 | PE | 17.7 [0.697"] | RM 30 10-25 [0.394"-0.984"] |
| A1:2 | 83022-CEL | Welding Sockets (Lower Deck) JB's | 5G50 | Power | 35 [1.378"] | RM 60 28-54 [1.102"-2.126"] |
| A1:1 | 83016-CEL | Water Package | 5G70 | Power | 39.5 [1.555"] | RM 60 28-54 [1.102"-2.126"] |


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

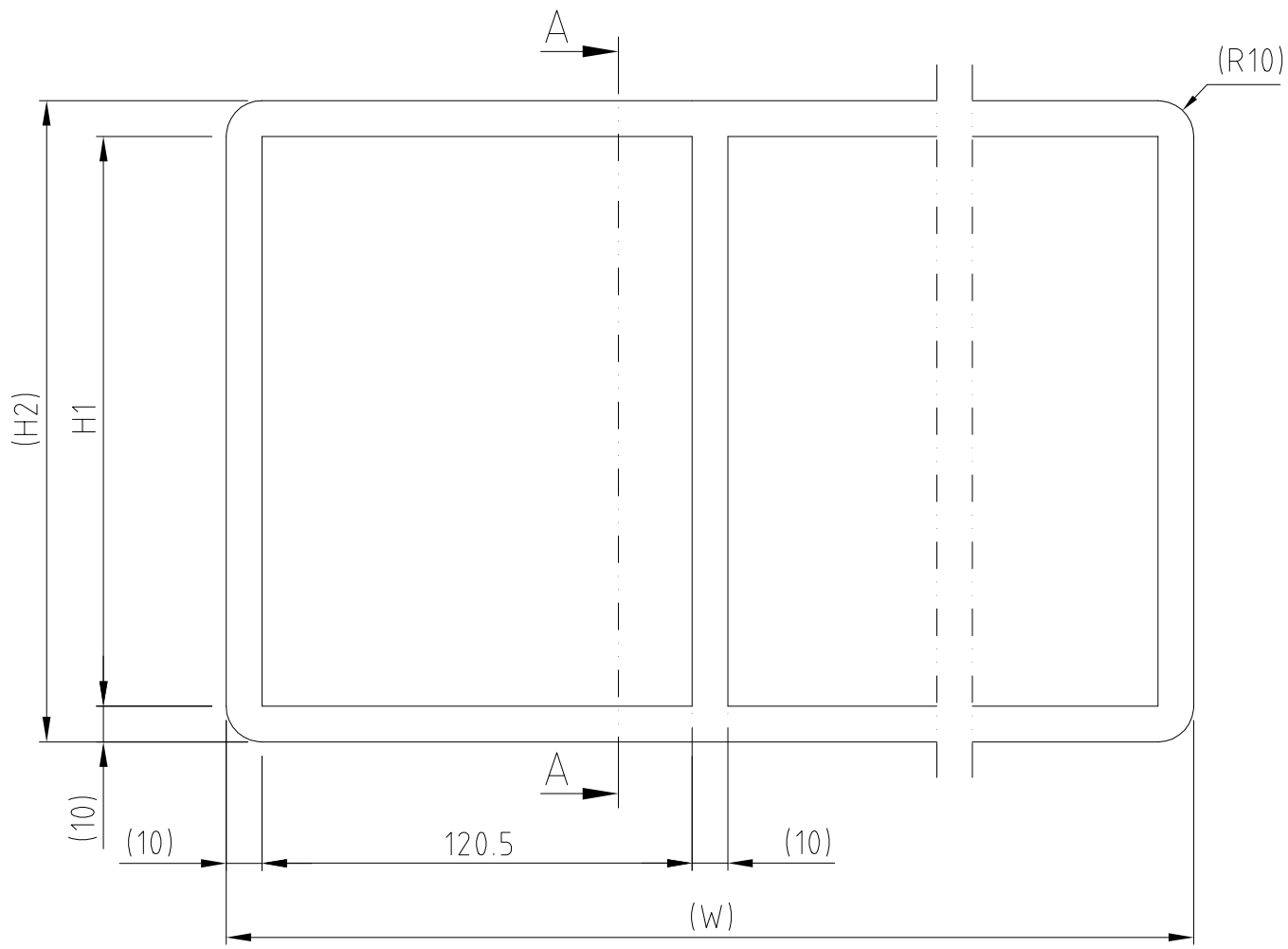
| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 13.3 [29.40] |
| Roxtec | Format NTS | | Transit name E-MCT-202 | Sheet No 3/3 |
| | Client | | Drawing number | Rev |

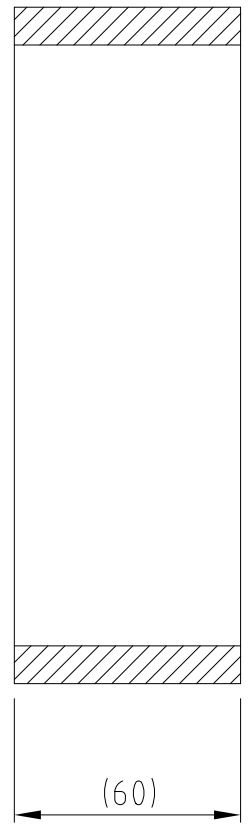
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FDL DWG: **123A90-FDL-EL-DD-20095**

| 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<br>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 |
| | | | | | |
| | | | | | |
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| | | | | | |
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| | | | | | |
| | 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-203 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10001870 | | 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. | 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 | If required produce Red Line Mark Up for "AS BUILT" | |

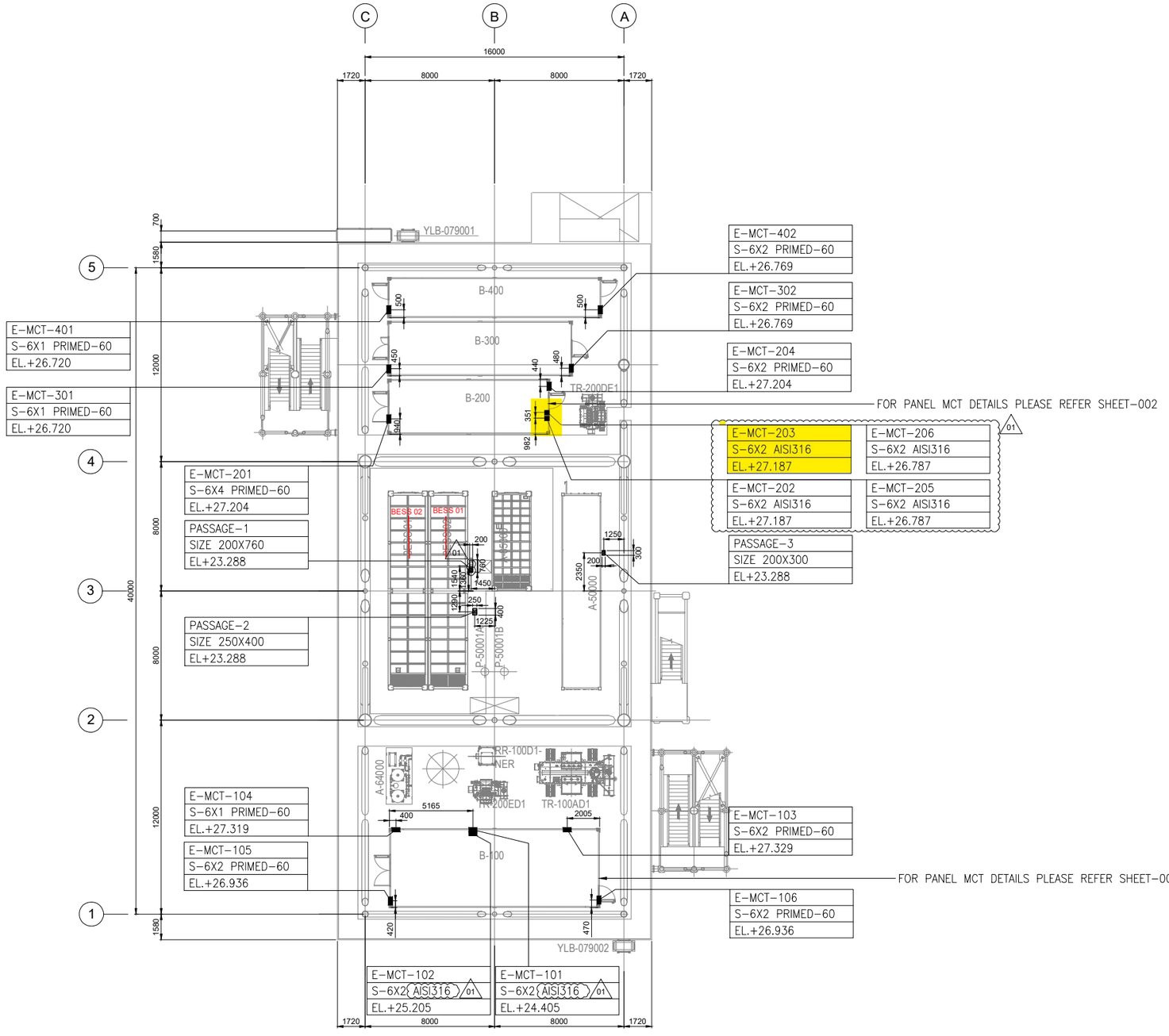
Comments: Note 2: Refer to PL n* C30002351



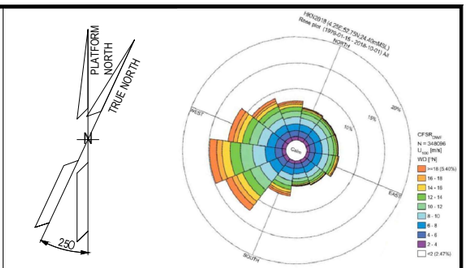
| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Michele Tartaglia | Paolo Schintu | |
| **Date** | 2025-01-04 | 2025-01-08 | |
| **Signature** | PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T10:53:30.231Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-08T18:26:00.632Z | |

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

S 6X1 (FOR E-MCT-104) S 6X1 (FOR E-MCT-301, E-MCT-401) S 6X2

S 6X3 S 6X4

LEGEND PASSAGE FRAME

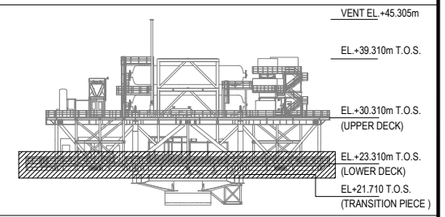
| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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**

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

**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

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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 |
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| 7 | E-MCT-102 **(NOTE-1)** | S 6X2 **AISI316** | 23 |
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| 15 | E-MCT-204 | S 6X2 PRIMED | 56 |
| 16 | E-MCT-205 | S 6X2 **AISI316** | 60 |
| 17 | E-MCT-206 | S 6X2 **AISI316** | 64 |
| 18 | E-MCT-301 | S 6X1 PRIMED | 68 |
| 19 | E-MCT-302 | S 6X2 PRIMED | 72 |
| 20 | E-MCT-401 | S 6X1 PRIMED | 76 |
| 21 | E-MCT-402 | S 6X2 PRIMED | 80 |
| | **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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VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20095
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

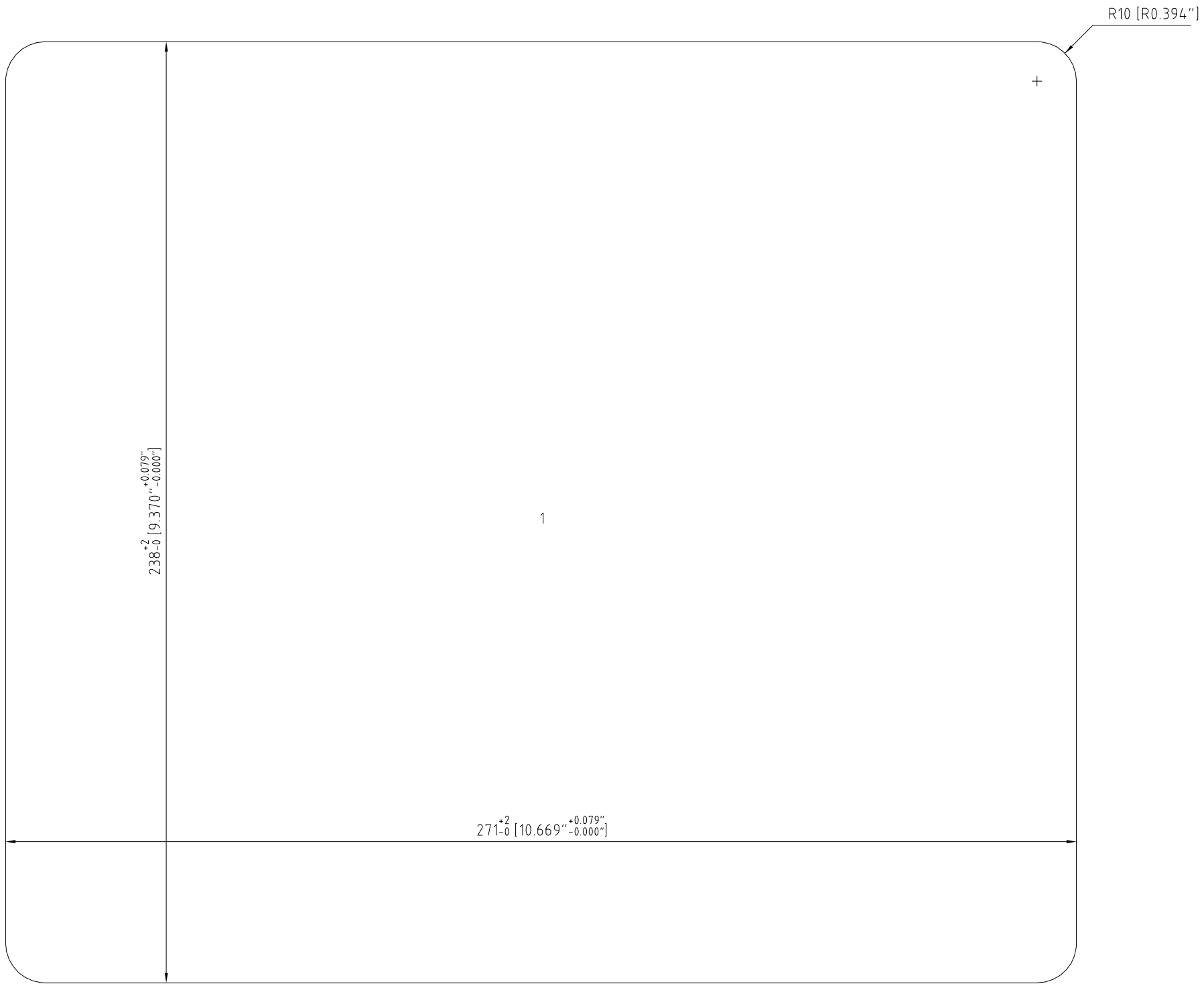
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FDL DWG: **123A90-FDL-EL-DD-20095**

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

**ROSETTI MARINO SpA**

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

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Cutout Detail

Frame: S 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<br>Location/ Sublocation | TotWeight: 12.6 [27.82] |
| Roxtec | Format: NTS | | Transit name: E-MCT-203 | Sheet No: 1/3 |
| Client | | Drawing number | | Rev |

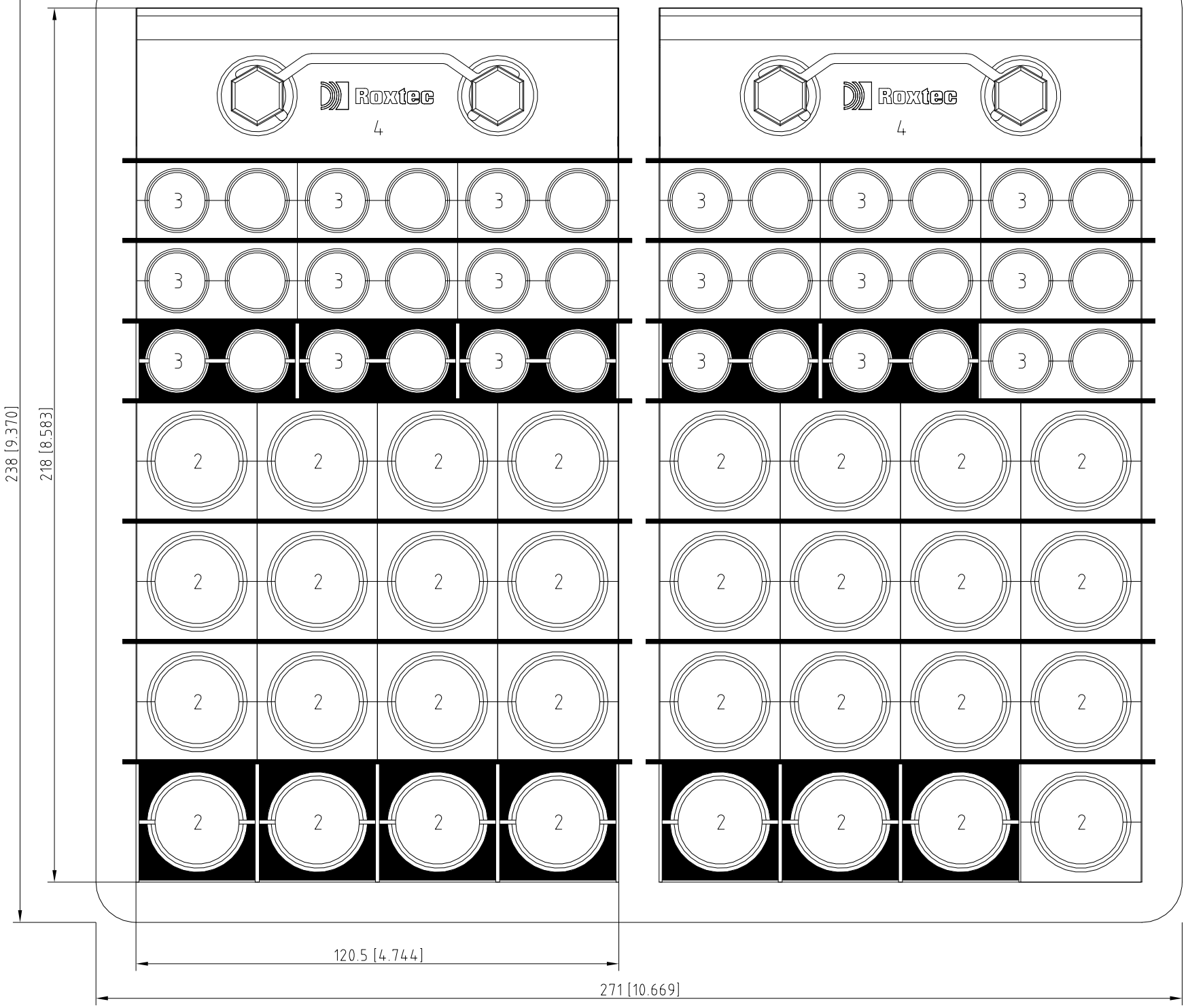
RTD Version No: 4.37.4.0

# 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**




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

## Detail Drawing

Solution: 1

| Item | Qty | Roxtec Packing Material mm [ "] | Roxtec Art No | Weight Kg [lb] |
|---|---|---|---|---|
| 5 | 14 | Stayplate 120 AISI 316 | ASP0001200021 | 0.1 [0.22] |
| 4 | 2 | Wedge 120 AISI 316 | ARW0001201021 | 0.8 [1.76] |
| 3 | 18 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 2 | 32 | RM 30 10-25 [0.394"-0.984"] | RM00100301000 | 0.1 [0.18] |
| 1 | 1 | S 6x2 AISI316 | S006000000221 | 5.8 [12.79] |

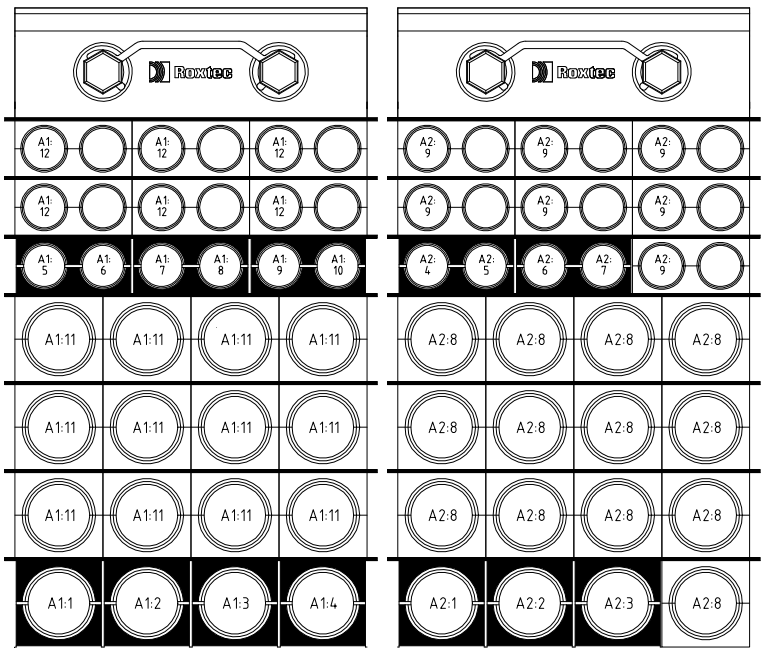
| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 12.6 [27.82] |
| Roxtec | Format: NTS | | Transit name: E-MCT-203 | Sheet No: 2/3 |
| | Client | | Drawing number | Rev |

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




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

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

**ROSETTI MARINO SpA**

| | | | | | | |
|---|---|---|---|---|---|---|
| A2:9 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:8 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A2:7 | 83116-CEL | Auxiliary Trafo 1,6MVA | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:6 | 83115-CEL | Auxiliary NER | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:5 | 83114-CEL | Auxiliary Trafo 7MVA | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:4 | 83113-CEL | Auxiliary Trafo AVR | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:3 | P-ETB-200N1-16-L3-01 | Trace Heating - Process Lines - Feeder 3 | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A2:2 | P-EJB-200N1-15-L2-01 | Trace Heating - Process Lines - Feeder 2 | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| A2:1 | P-EJB-200N1-14-L1-01 | Trace Heating - Process Lines - Feeder 1 | 3G6 | Power | 15.6 [0.614"] | RM 30 10-25 [0.394"-0.984"] |
| | | | | | | |
| A1:12 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:11 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A1:10 | 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"] |
| A1:9 | 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"] |
| A1:8 | 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"] |
| A1:7 | 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"] |
| A1:6 | 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"] |
| A1:5 | 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"] |
| A1:4 | P-EJB-200N1-10-L3-01 | Emergency Lighting stairs | 4G4_E | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:3 | P-EJB-200N1-08-L1-04 | Emergency Lighting Upper Deck - Circuit No. 1 | 4G4_E | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:2 | P-EJB-200N1-02-L1-01 | Normal Lighting Upper Deck - Circuit No. 1 | 3G4 | Power | 14.3 [0.563"] | RM 30 10-25 [0.394"-0.984"] |
| A1:1 | 83112-CEL | Auxiliary Trafo OLTC | 5G4 | Power | 17 [0.669"] | RM 30 10-25 [0.394"-0.984"] |
| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

| | | | |
|---|---|---|---|
| Responsible: ARNESH | Created Date: 2024-07-10 | Modify Date: 2024-07-17 | Project: BLPH - ROS |
| Roxtec | Format: NTS | | Location/ Sublocation |
| | Client | Drawing number | Transit name: E-MCT-203 |

TotWeight: 12.6 [27.82] | Sheet No: 3/3 | 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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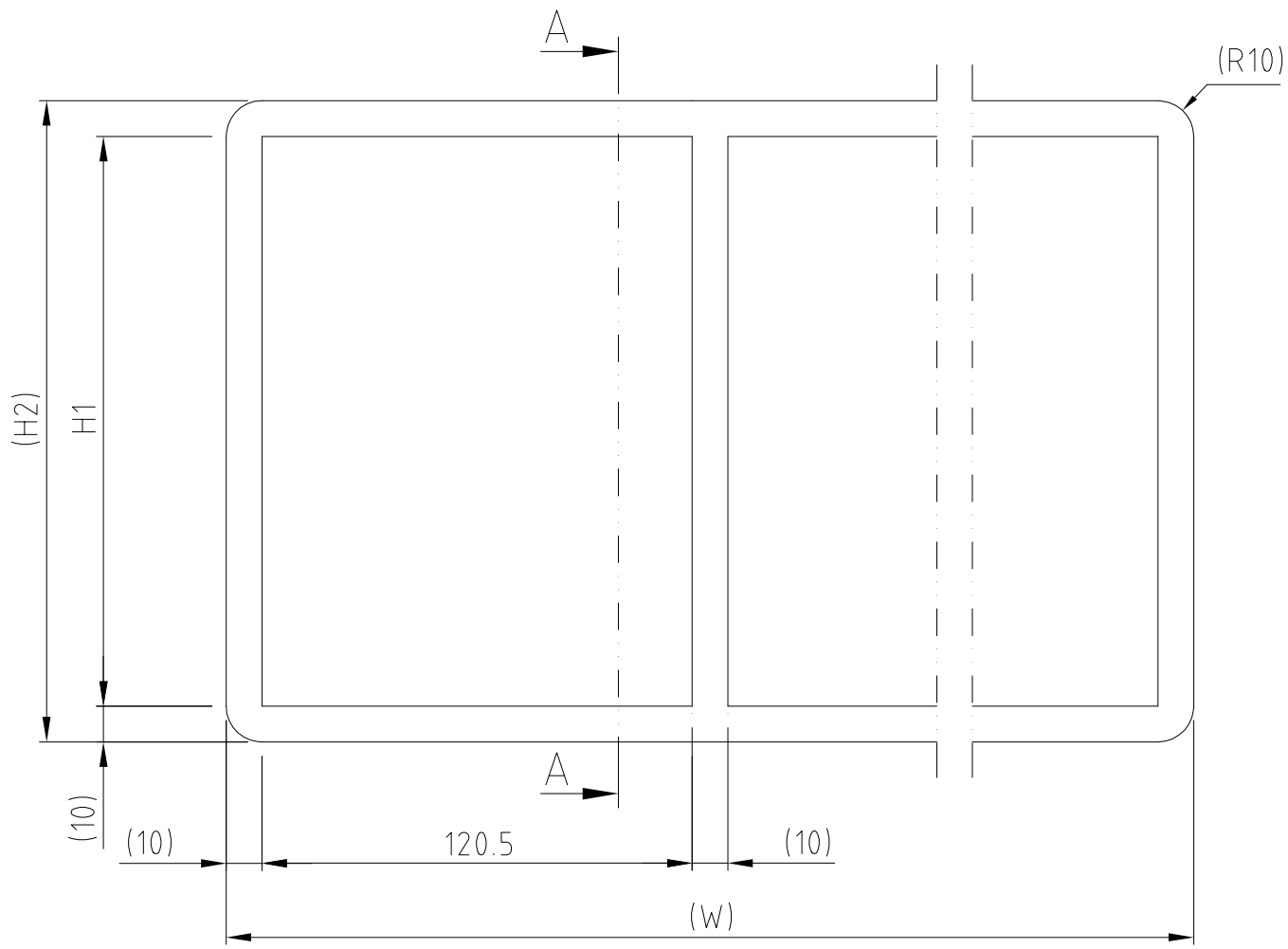
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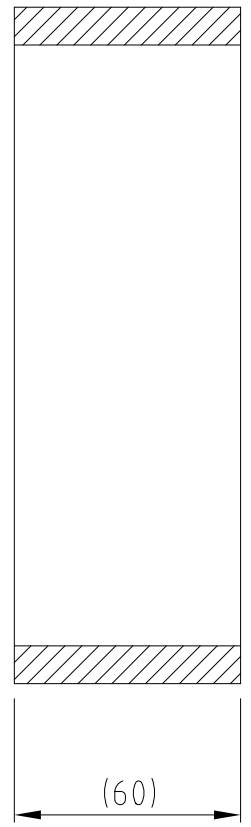
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FDL DWG: **123A90-FDL-EL-DD-20095**

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

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

ROSETTI MARINO

CROSSWIND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | E-MCT-204 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10001871 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Electrical | Form | CPX29 | | MCT Penetration Electrical |

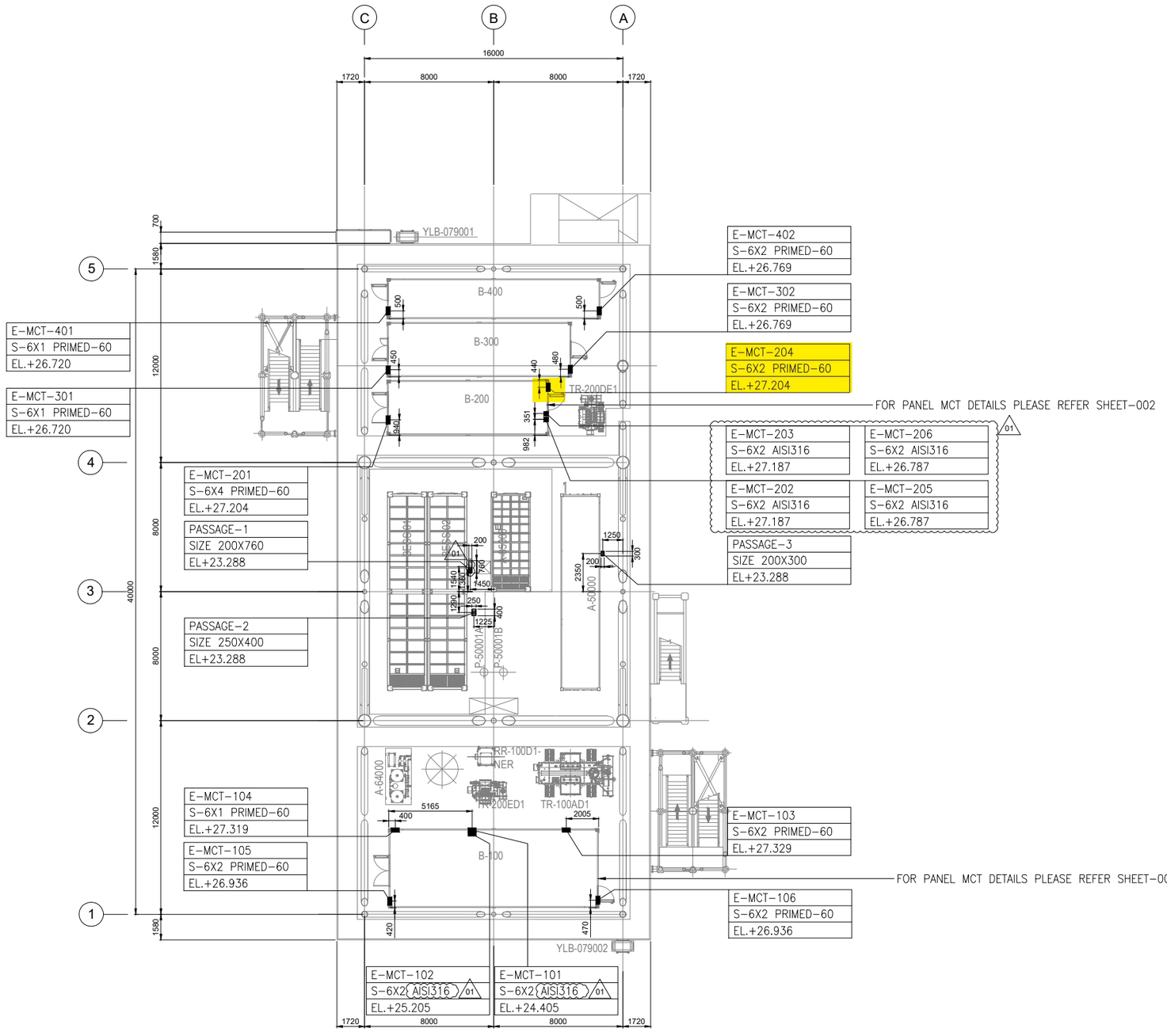
| | | |
|---|---|---|
| **1** | Check that MCT's conforms to revision and specification. | OK |
| **2** | Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment. | Note |
| **3** | Check MCT's is properly tagged, on both side of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

Comments: Note 2: Refer to PL n* C30002351

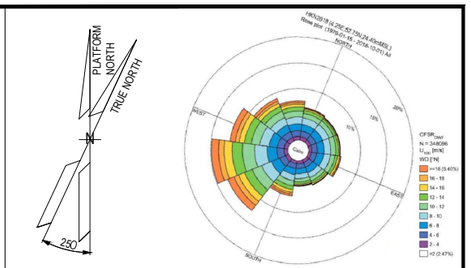
| **Page 1/1** | Performed by | ☉ WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Francesco Zucca | Paolo Schintu | |
| **Date** | 2024-12-11 | 2025-01-08 | |
| **Signature** | Digitaly signed by Francesco Zucca 2024-12-11T06:21:25.011Z | Digitaly signed by Paolo Schintu 2025-01-08T18:32:05.098Z | |

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

REV. 01




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




## NOTES

### GENERAL NOTES:

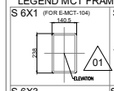
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

### NOTES:

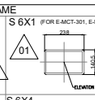
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

## LEGEND

LEGEND MCT FRAME




LEGEND PASSAGE FRAME



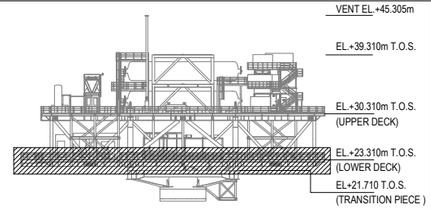

| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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-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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| 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 |
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| 16 | E-MCT-205 | S 6X2 **AISI316** | 60 |
| 17 | E-MCT-206 | S 6X2 **AISI316** | 64 |
| 18 | E-MCT-301 | S 6X1 PRIMED | 68 |
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| 20 | E-MCT-401 | S 6X1 PRIMED | 76 |
| 21 | E-MCT-402 | S 6X2 PRIMED | 80 |
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| 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 |
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| 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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ROSETTI MARINO SpA

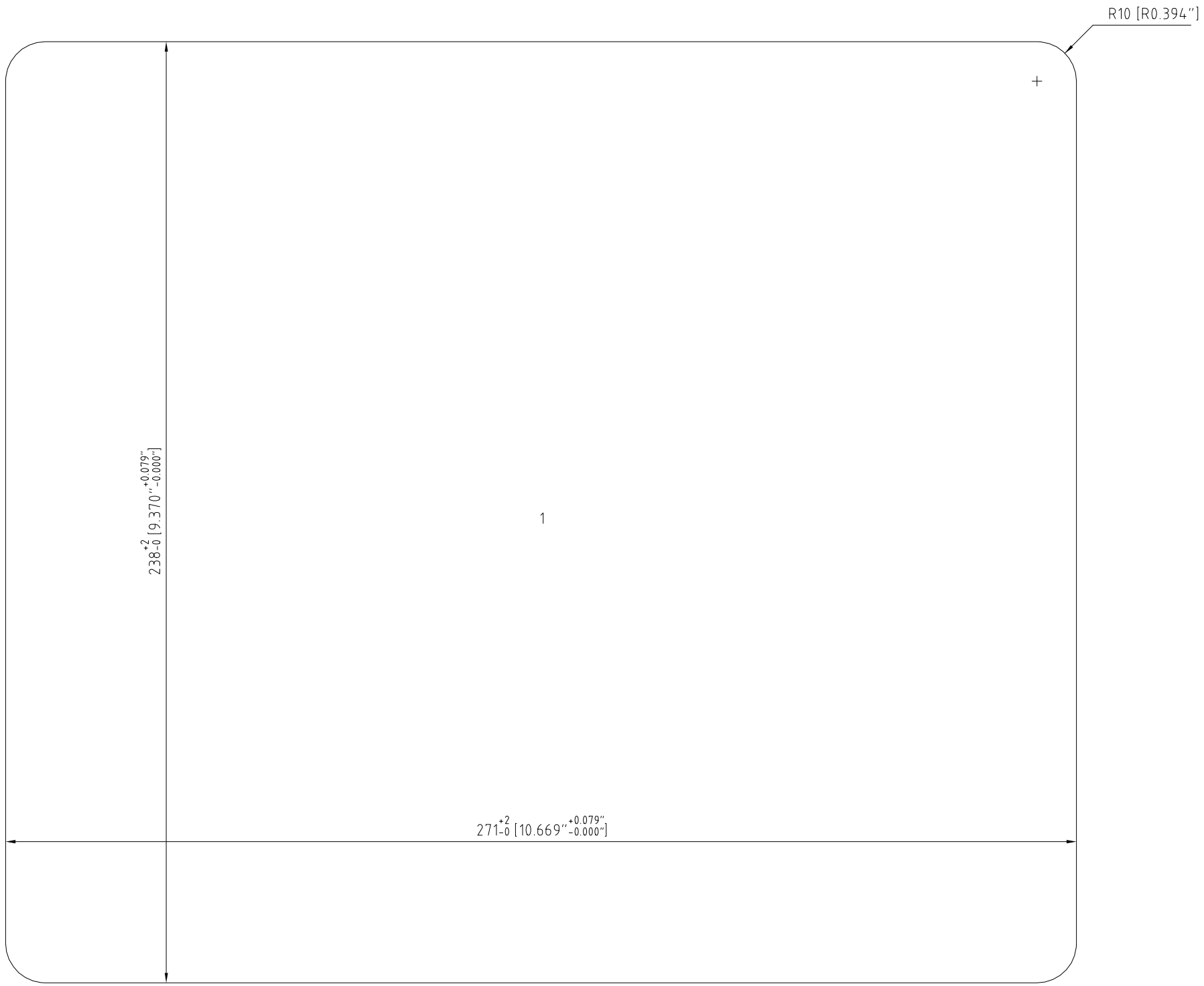
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| 1_A | 08/08/24 | G.Randi |

**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 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<br>Location/ Sublocation | TotWeight: 12.1 [26.74] |
| Roxtec | Format: NTS | | Transit name: E-MCT-204 | Sheet No: 1/3 |
| | Client | | Drawing number | Rev |

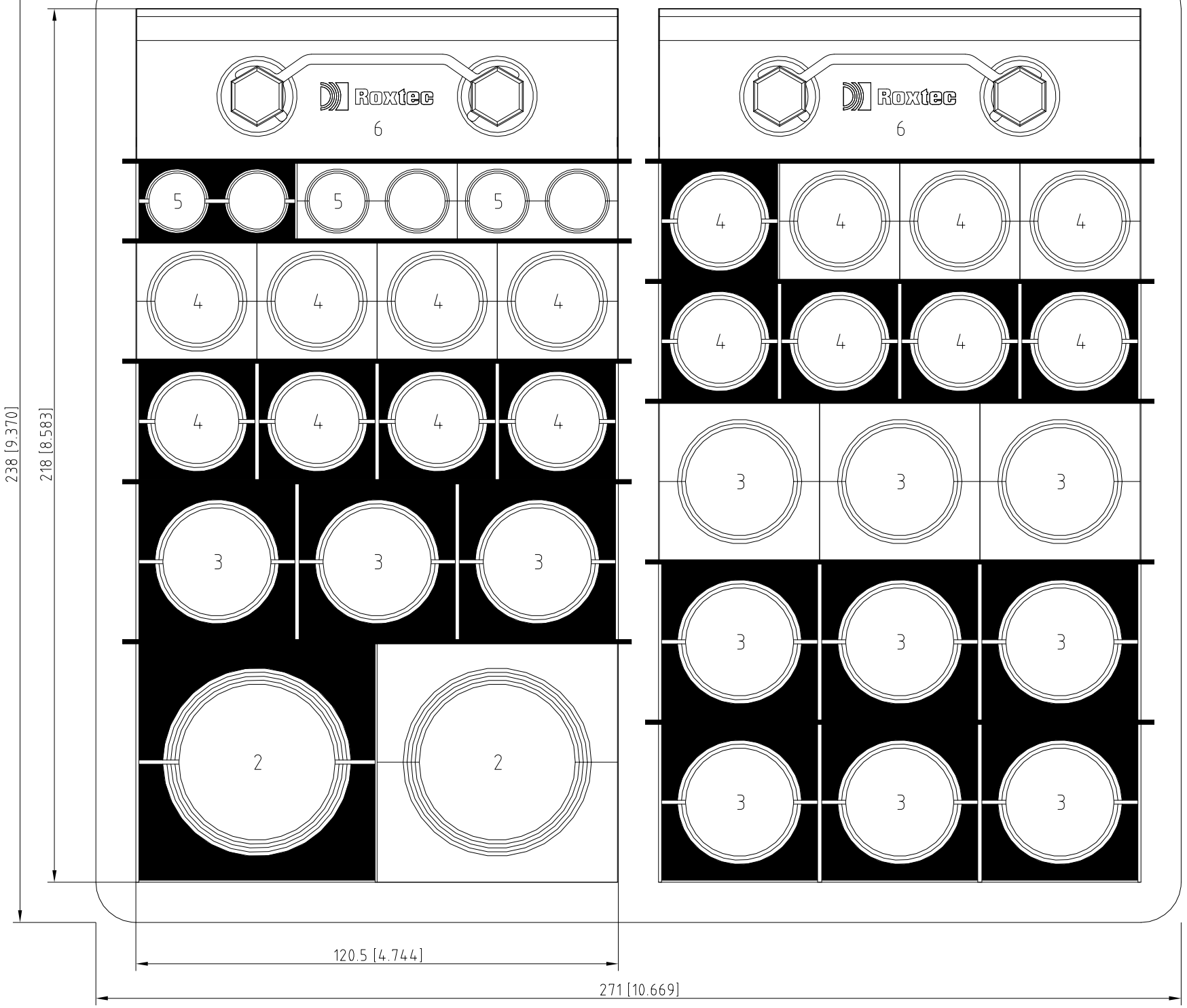
RTD Version No: 4.37.4.0

# 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] |
|---|---|---|---|---|
| 7 | 10 | Stayplate 120 galv | ASP0001200018 | 0.1 [0.24] |
| 6 | 2 | Wedge 120 galv | ARW0001201018 | 0.8 [1.76] |
| 5 | 3 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 4 | 16 | RM 30 10-25 [0.394"-0.984"] | RM00100301000 | 0.1 [0.18] |
| 3 | 12 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 2 | 2 | RM 60 28-54 [1.102"-2.126"] | RM00100601000 | 0.3 [0.73] |
| 1 | 1 | S 6x2 PRIMED | S006000000212 | 5.6 [12.35] |

| | | | | |
|---|---|---|---|---|
| Responsible: ARNESH | Created Date: 2024-07-10 | Modify Date: 2024-07-17 | Project: BLPH - ROS, Location/ Sublocation | TotWeight: 12.1 [26.74] |
| Roxtec | Format: NTS | | Transit name: E-MCT-204 | Sheet No: 2/3 |
| | Client | Drawing number | | Rev |

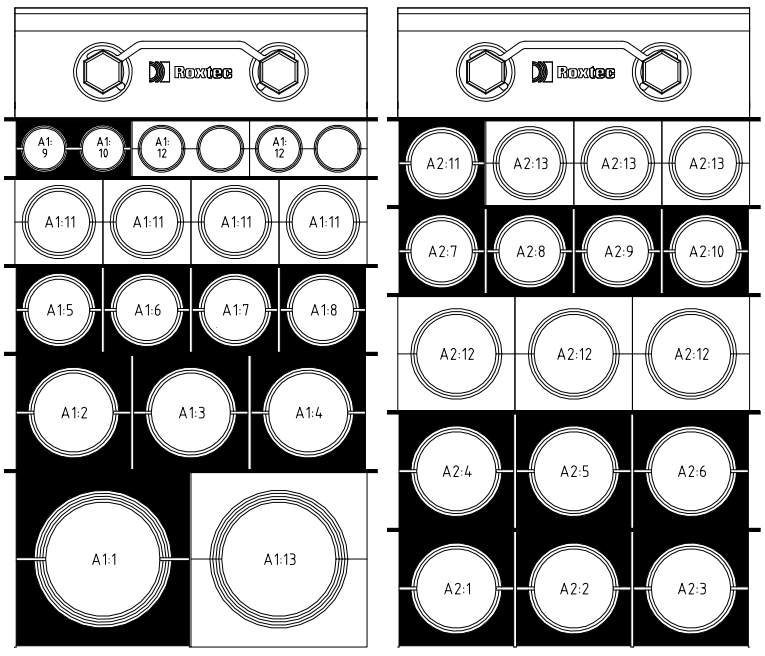
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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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 |

**ROSETTI MARINO SpA**

| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |
|---|---|---|---|---|---|---|
| A2:13 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A2:12 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:11 | P-EJB-200N1-03-L2-01 | Normal Lighting Lower Deck - Circuit No. 1 | 3G4 | Power | 14.3 [0.563"] | RM 30 10-25 [0.394"-0.984"] |
| A2:10 | 83010-CEL-N | Temporary Generator / Mobile Battery Pack | 1C X 95 | Power | 17.3 [0.681"] | RM 30 10-25 [0.394"-0.984"] |
| A2:9 | 83010-CEL-L3 | Temporary Generator / Mobile Battery Pack | 1C X 95 | Power | 17.3 [0.681"] | RM 30 10-25 [0.394"-0.984"] |
| A2:8 | 83010-CEL-L2 | Temporary Generator / Mobile Battery Pack | 1C X 95 | Power | 17.3 [0.681"] | RM 30 10-25 [0.394"-0.984"] |
| A2:7 | 83010-CEL-L1 | Temporary Generator / Mobile Battery Pack | 1C X 95 | Power | 17.3 [0.681"] | RM 30 10-25 [0.394"-0.984"] |
| A2:6 | 83030-CEL | AC UPS PAS - 30min - Bypass | 4G35 | Power | 27.4 [1.079"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:5 | 83029-CEL | AC UPS PAS - 30min - Line B | 4G35 | Power | 27.4 [1.079"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:4 | 83028-CEL | AC UPS PAS - 30min - Line A | 4G35 | Power | 27.4 [1.079"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:3 | 83026-CEL | HVAC panels - ITER | 5G16 | Power | 24 [0.945"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:2 | 83025-CEL | HVAC panels - UPS Room | 5G16 | Power | 24 [0.945"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:1 | 83020-CEL | Crane | 5G16 | Power | 24 [0.945"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A1:13 | | | | | | RM 60 28-54 [1.102"-2.126"] |
| A1:12 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:11 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A1:10 | 83123-CEL | AC UPS F&G AUXILIARY | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:9 | 83122-CEL | AC UPS PAS AUXILIARY | 3G2.5 | Power | 13 [0.512"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:8 | 84319-CEL | LV SWBD 800/460V Auxiliary | 3G2.5 | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:7 | 84318-CEL | LV Switchboard Auxiliary | 3G2.5 | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:6 | 84315-CEL | UCP - HVAC LV Room | 3G2.5 | Power | 15.5 [0.610"] | RM 30 10-25 [0.394"-0.984"] |
| A1:5 | 83010-CEL-PE | Temporary Generator / Mobile Battery Pack | 1C X 95 | Power | 14.5 [0.571"] | RM 30 10-25 [0.394"-0.984"] |
| A1:4 | 83033-CEL | AC UPS F&G - 8h - Bypass | 4G35 | Power | 27.4 [1.079"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:3 | 83032-CEL | AC UPS F&G - 8h - Line B | 4G35 | Power | 24.4 [0.961"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:2 | 83031-CEL | AC UPS F&G - 8h - Line A | 4G35 | Power | 27.4 [1.079"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:1 | 83021-CEL | Welding Sockets (Top Deck) JB's | 5G50 | Power | 35 [1.378"] | RM 60 28-54 [1.102"-2.126"] |



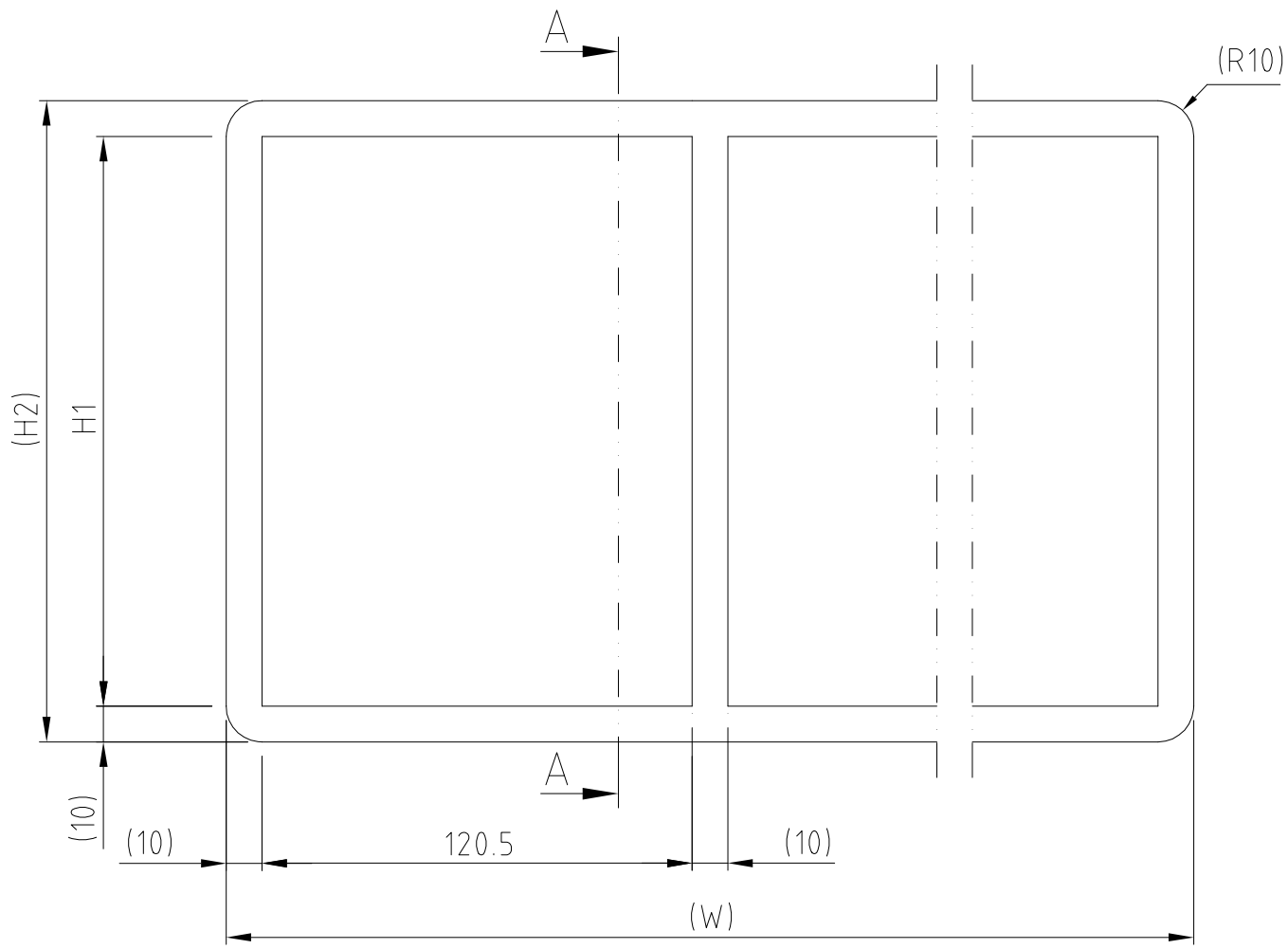

| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-17 | BLPH - ROS<br>Location/ Sublocation | 12.1 [26.74] |
| Roxtec | Format NTS | | Transit name E-MCT-204 | Sheet No 3/3 |
| | Client | | Drawing number | Rev |

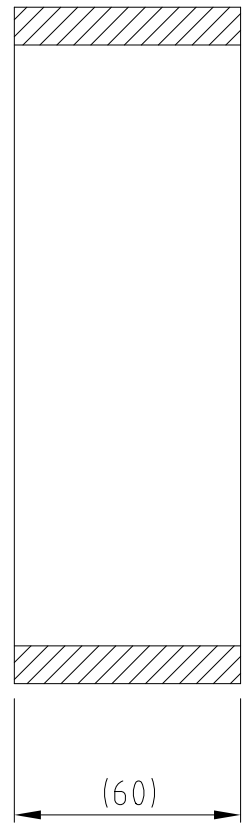
**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20095**

| 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<br>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 |
| | | | | | |
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| | NOTES | | | | 00 |
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|---|---|---|---|---|
| | 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 |
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| | 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_B200_ELE_LV | : Cable Tray B200 - Electrical (Low Voltage) | | | Dwg | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200 |
| **TASK** | code | C10002284 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Electrical | Form | CPX30A | | Cable Tray/Ladder Before pulling |

## BEFORE PULLING

| | | |
|---|---|---|
| 1 | Check cable tray / ladder is undamaged and installed against drawings without clashes with pipe runs or other equipment. | PL |
| 2 | Check cable tray / ladder is adequately supported against drawings ( no excessive deflection). | OK |
| 3 | Check cable tray / ladder segregation between racks | OK |
| 4 | Check Material for Bolt and splices | OK |
| 5 | Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder. | OK |
| 6 | Check cable tray / ladder cleanness. | OK |
| 7 | Check cable tray / ladder earthed and bonded against drawings. | PL |
| 8 | Check Continuity and Resistance test on tray (spot check) | OK |
| 9 | Check proper mitigations against sharp edges that could damage the cables | OK |
| 10 | Check Transitions to ensure proper cables bending radius | OK |
| 11 | Check Proper protection of racks and trays until cable pulling | OK |
| 12 | Check Labelling with system and segment number | NA |
| 13 | If required produce Red Line Mark Up for "AS BUILT" | |

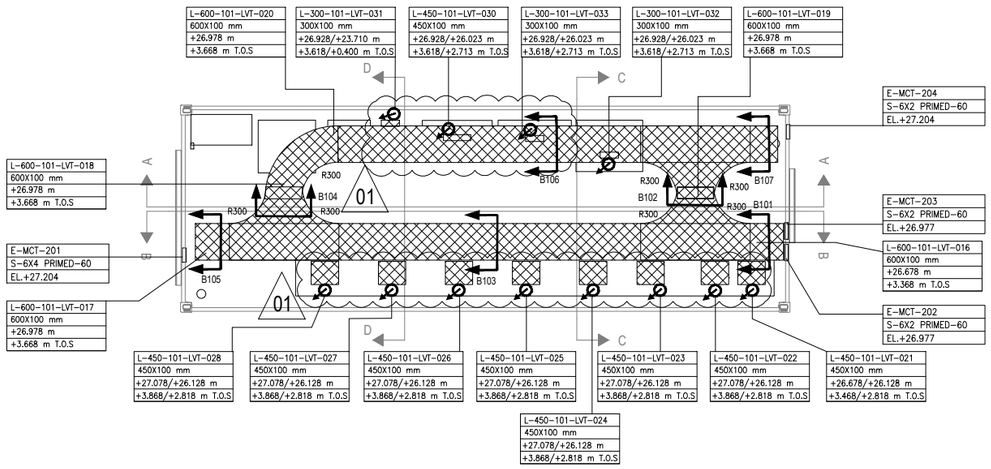
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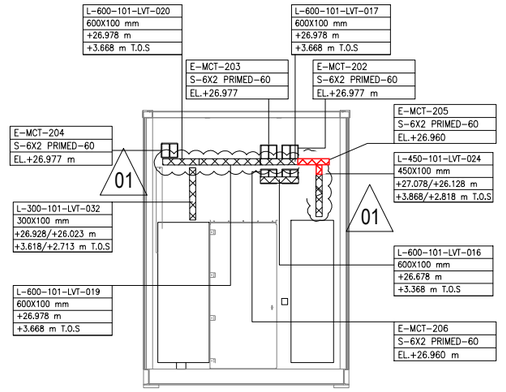


| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Carmelo Bongiovanni | Giovanni Tangianu | |
| **Date** | 2024-10-02 | 2024-10-02 | |
| **Signature** | PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-02T14:05:38.843Z | PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-02T15:47:30.843Z | |

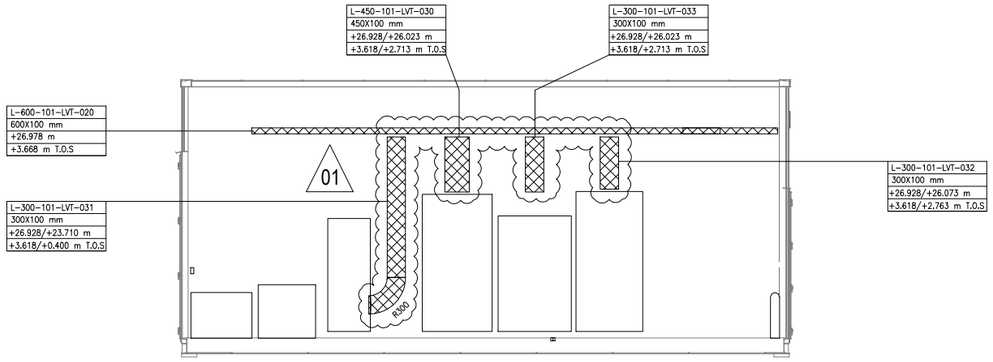
DRAWING NO. 123A90-DDL-EL-DL-20112

REV. 01

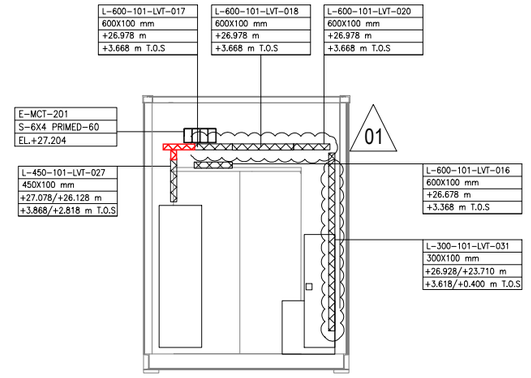


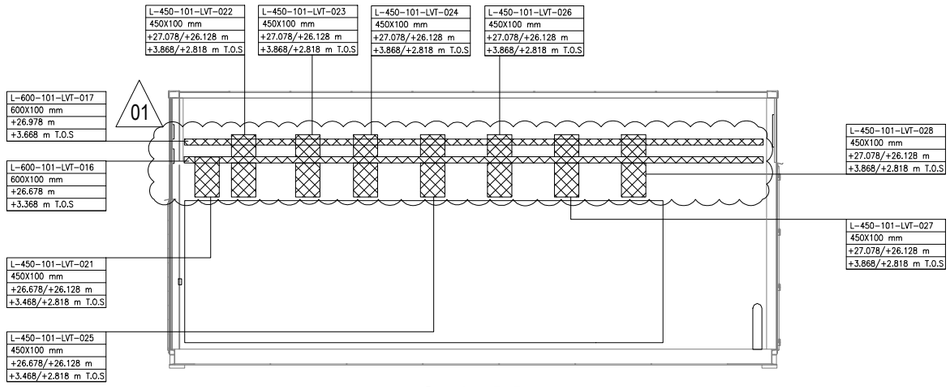

Section C-C



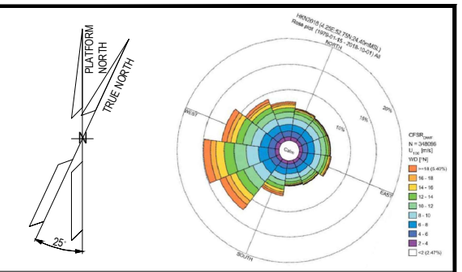

Section A-A




Section D-D




Section B-B




## NOTES

1.ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.

2.THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.

3.DRAWING SPLIT INTO MULTIPLE SHEETS FOR CLARITY.

4.FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.

5.FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20123 AND 1724000049-EL-LIS-00044

6.ELEVATIONS REFER TO T.O.S. (EL+23.310m)

7.FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

## LEGEND

ELECTRICAL LV CABLE LADDER

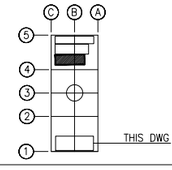
ELECTRICAL CABLE LADDER (VERTICAL DROP)

MCT TAG
TAG
MCT FRAME
ELEVATION

B100
CABLE SECTION

CABLE LADDER TAG
WIDTH X HEIGHT
TAG
SIZE
ELEVATION
ELEVATION IN 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-20105 | ELECTRICAL EQUIPMENT LAYOUT - LV SWITCHROOM |
| 123A90-DDL-EL-DL-20123 | LIGHTING & SOCKET LAYOUT - LV SWITCHROOM |
| 123A90-DDL-EL-DD-20095 | MCT COMPOSITION |
| 1724000049-EL-LIS-00044 | B-200 ELECTRICAL COMPONENTS LIST AND DS - 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 | 18/07/24 | ASR | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DL-20112**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_B | 02/09/24 | G.Randi |

**ROSETTI MARINO SpA**

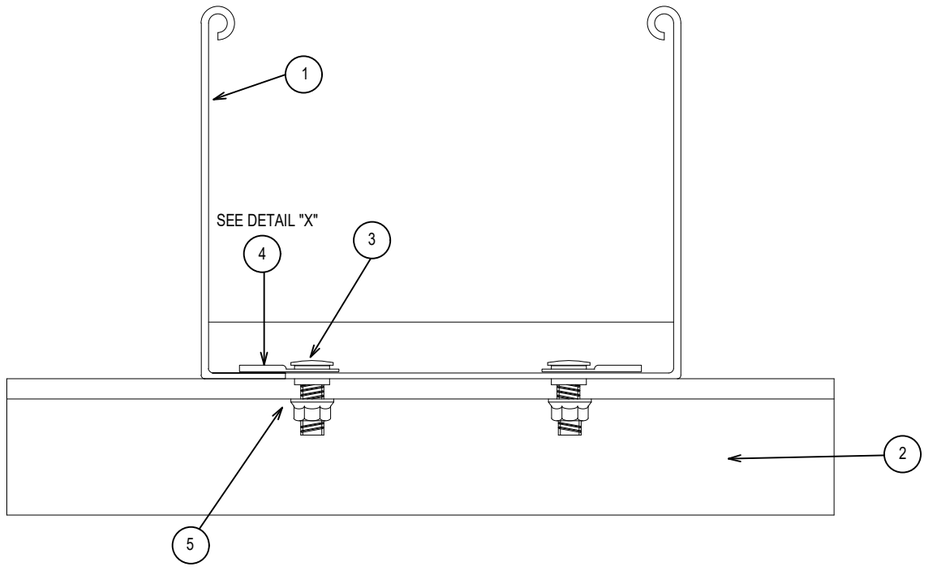
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLE ROUTING LAYOUT
LV SWITCHROOM

| | | | |
|---|---|---|---|
| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:50 |
| DRAWN ASR | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 02/08/24 |
| A1 | DRAWING NO. 123A90-DDL-EL-DL-20112 | SHEET 1of11 | REV. 01 |

File Name : 123A90-DDL-EL-DL-20112

# CABLE LADDER FIXING ON FRP RACK

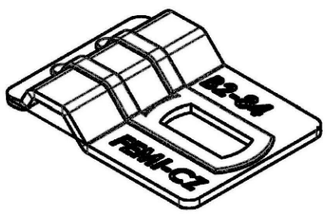
| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | PROFILE SUPPORT | FRP | | | |
| 3 | ROUND HEAD SQUARE NECK SCREW | AISI 316L | M8x20 | 2 | |
| 4 | HOLD DOWN CLAMP | AISI 316L | | 2 | |
| 5 | FLANGED NUT | AISI 316L | M8 | 2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




TYPICAL

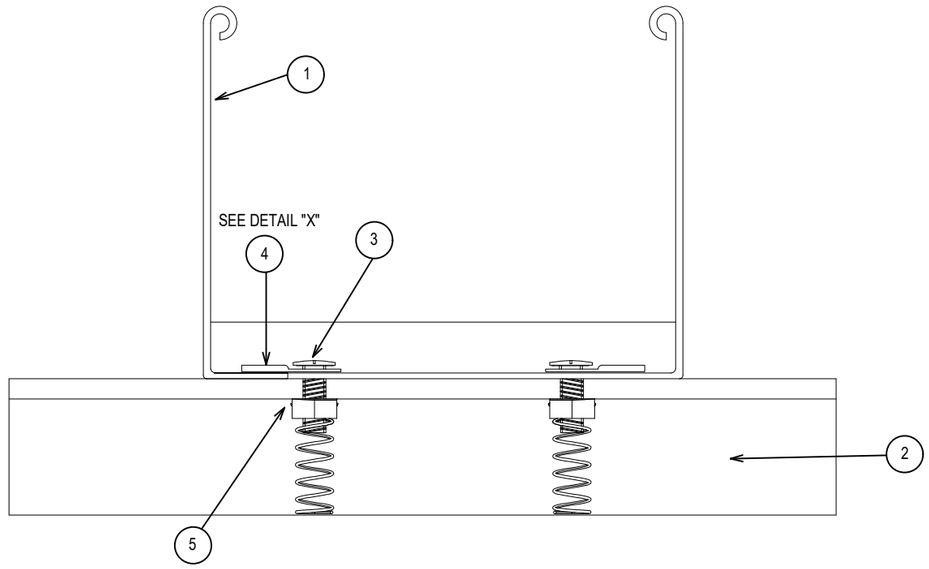
LF

## 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.: 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 LADDER FIXING

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

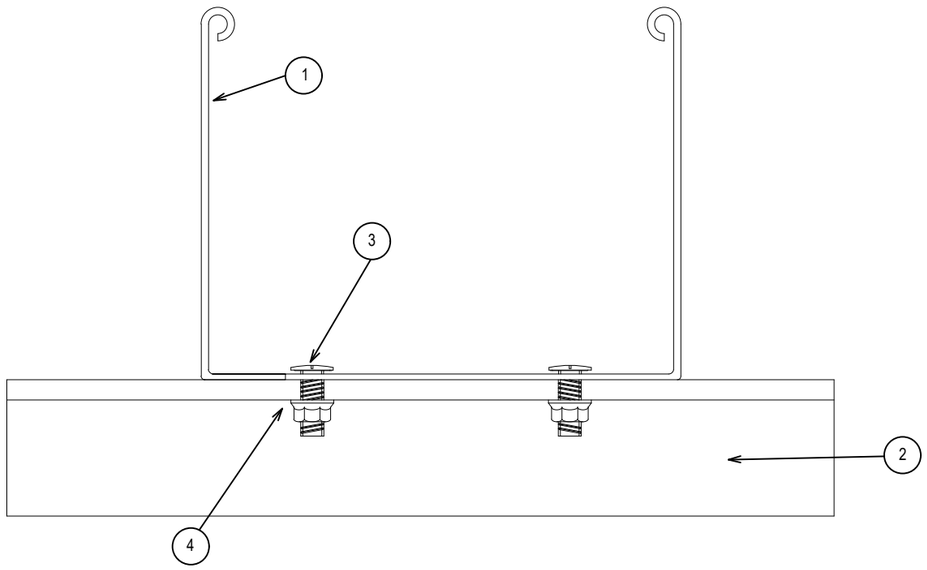
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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 | |

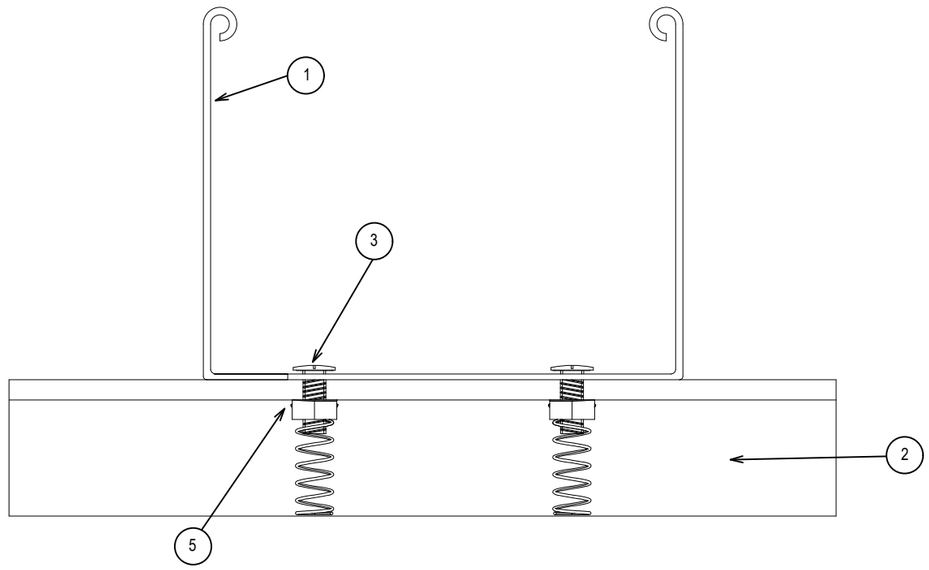



TYPICAL

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

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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

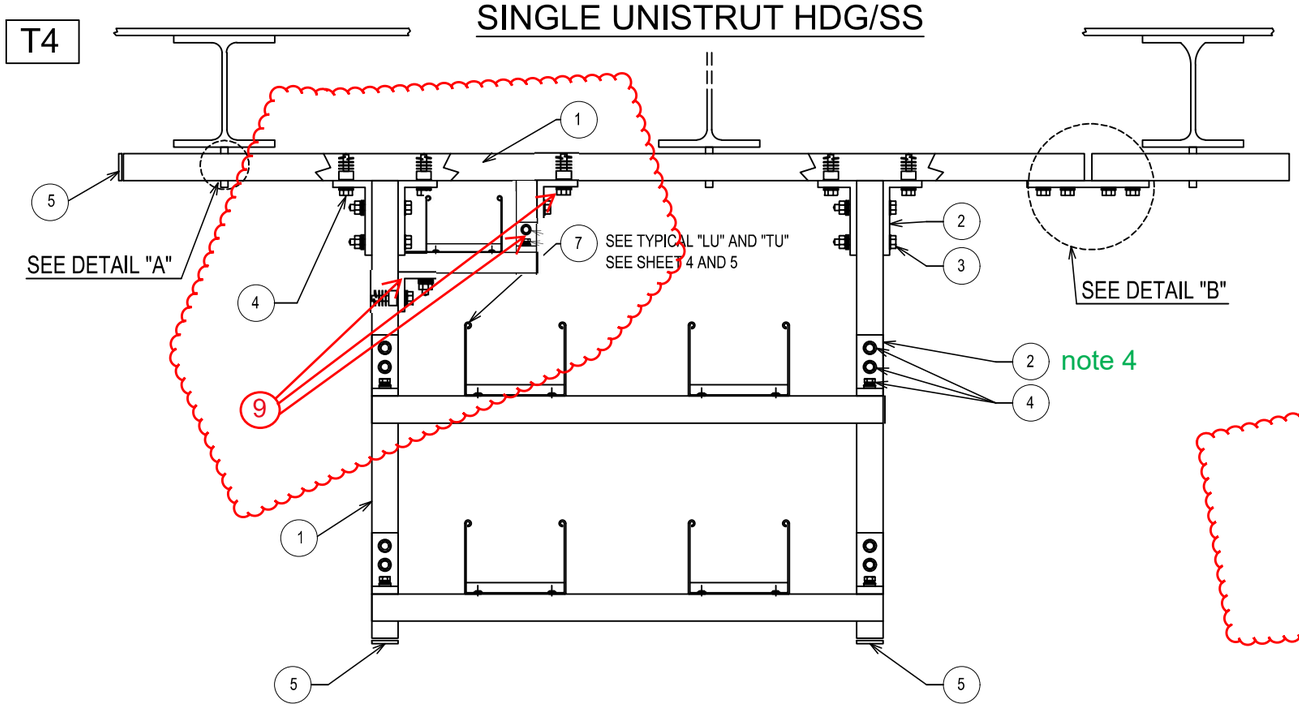
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

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

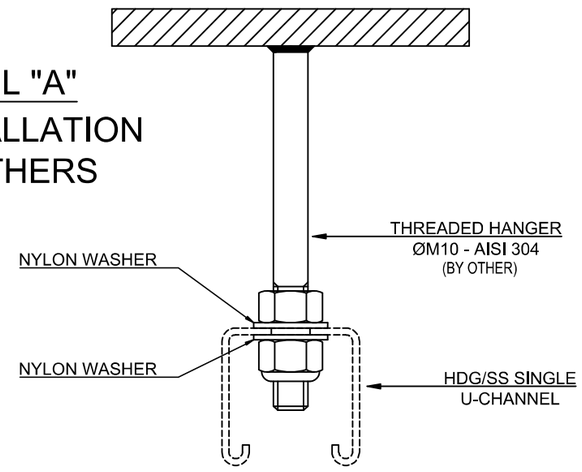
T4

# SINGLE UNISTRUT HDG/SS

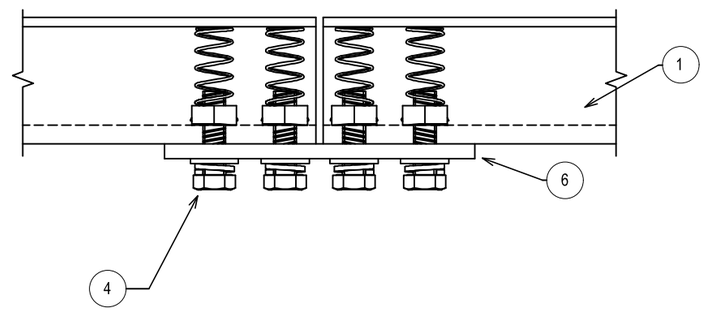



| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | NOTE 1 |
| 2 | PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES | AISI 316L | | 8 | |
| 3 | HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER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

| 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

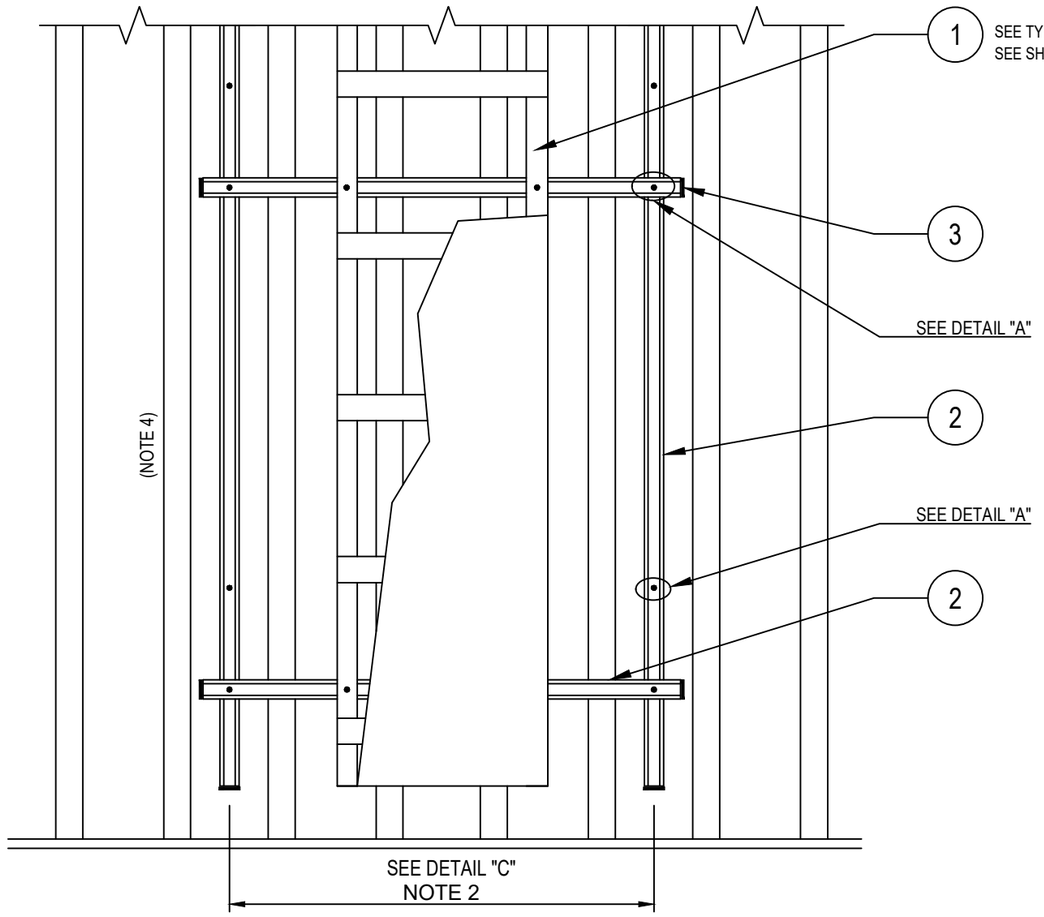
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

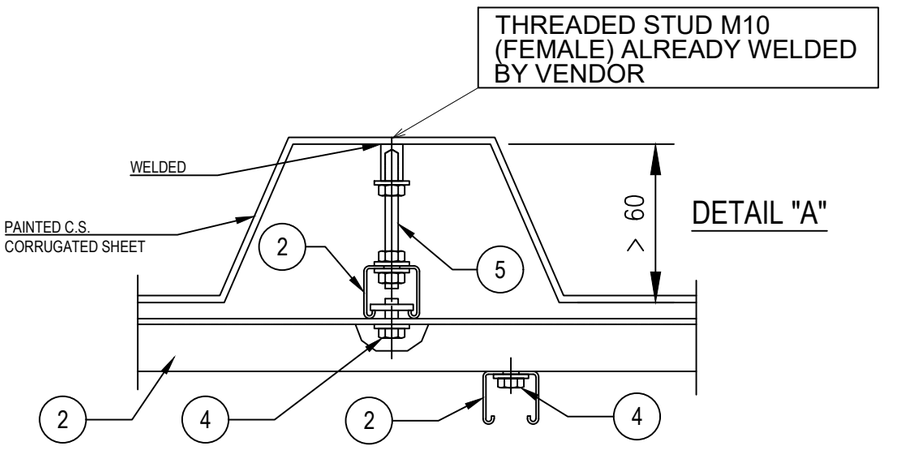
F.to UNI A3: 420mmx297mm

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

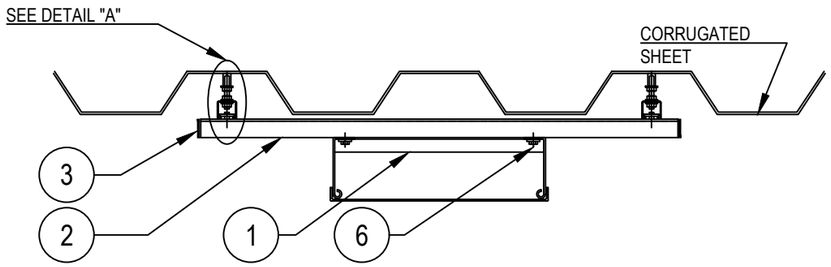
T7




| 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.: 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 WITH NELSON STARTER ON SHELTER

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

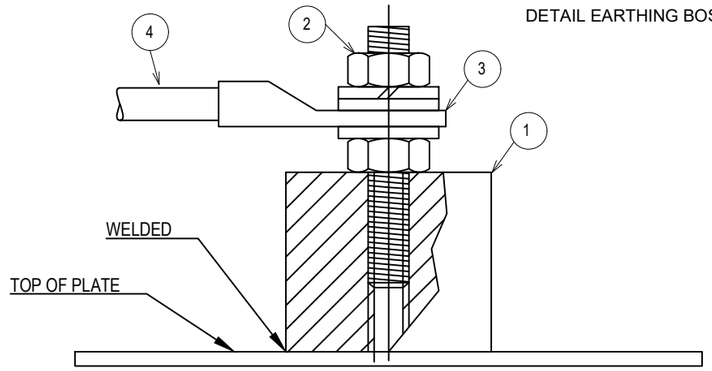
F.to UNI A3: 420mmx297mm

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

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | EARTHING BOSS WITH THREADED HOLE M10 | AISI 316L | 50X50<br>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<br>NOTE 5 |
| 5 | EARTHING PLATE | AISI 316L<br>(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<br>NOTE 7 |

E11A

DETAIL EARTHING BOSS 50x50

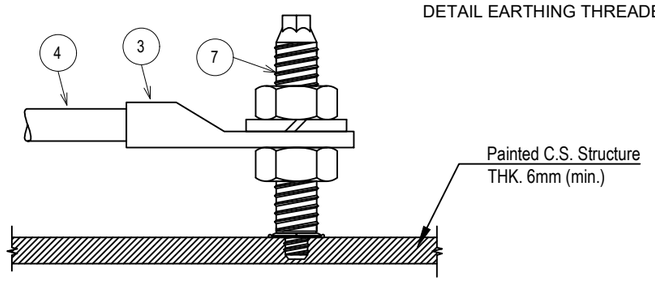



E11D

SEE NOTE 6

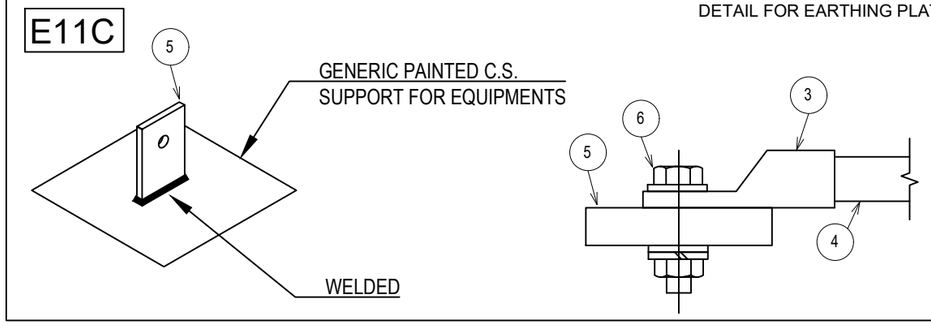
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD




E11C

DETAIL FOR EARTHING PLATE

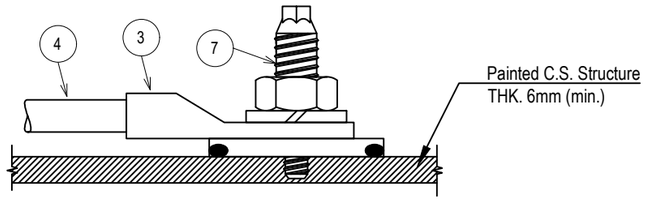



E11E

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_C | 09/09/24 | G.Randi |

**ROSETTI MARINO SpA**

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
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| | | | | | |
| 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

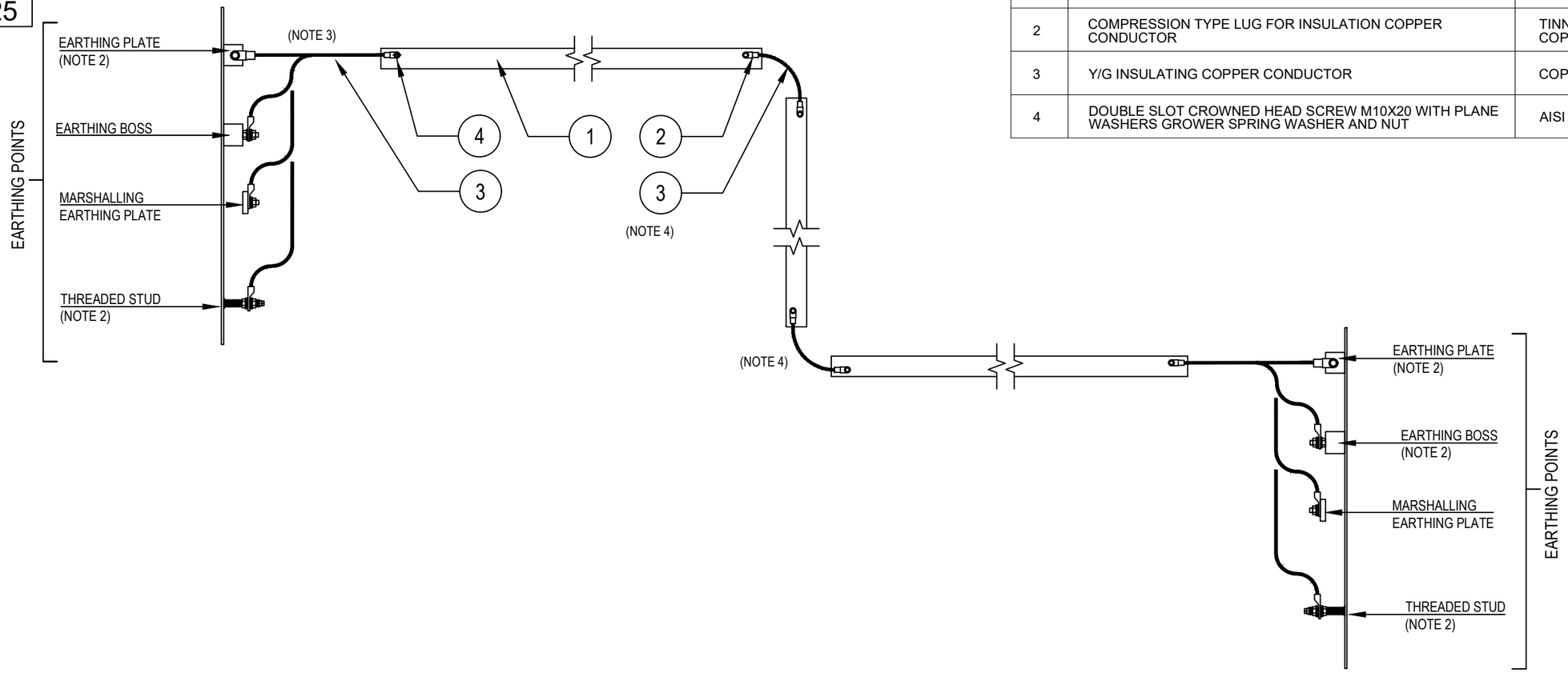
SHEET 003

REV. 02

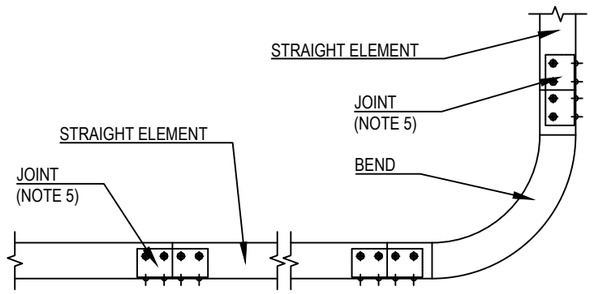
F.to UNI A3: 420mmx297mm

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

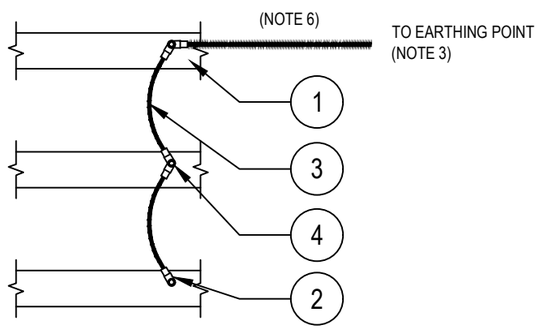
E25




| 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_C | 09/09/24 | G.Randi |

**ROSETTI MARINO SpA**

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| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

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

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

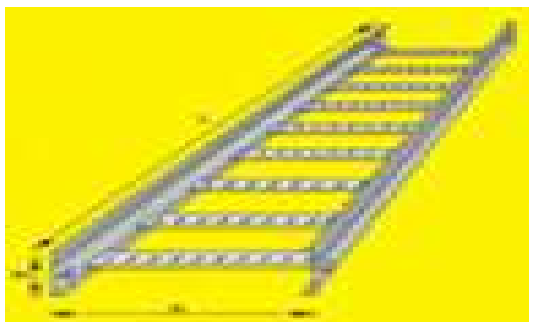
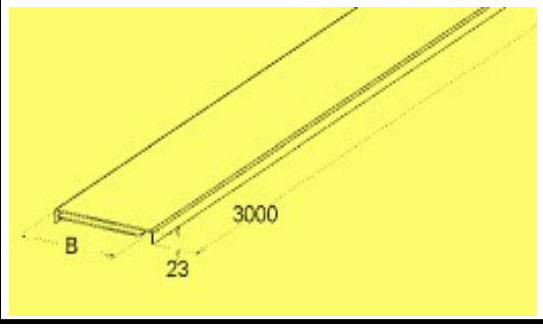
F.to UNI A3: 420mmx297mm

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

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 5 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 01 |

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | |  |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALVANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

## STRAIGHT ELEMENT with COVER

| | | | | |
|---|---|---|---|---|
| 18 | LENGTH [mm] | 3000 ☑ | 5000 ☐ | |
| 19 | | 4000 ☐ | 6000 ☐ | |
| 20 | HEIGTH [mm] | 50 ☐ | 100 ☑ | |
| 21 | | 75 ☐ | 150 ☑ | |
| 22 | WIDTH [mm] | 50 ☐ | 300 ☑ | 600 ☑ |
| 23 | | 100 ☐ | 400 ☐ | 750 ☑ |
| 24 | | 150 ☑ | 450 ☑ | |
| 25 | | 200 ☐ | 500 ☐ | |

## QUANTITY

| | HEIGHT x WIDTH [mm] | QUANTITY [m] | HEIGHT x WIDTH [mm] | QUANTITY [m] | HEIGHT x WIDTH [mm] | QUANTITY [m] |
|---|---|---|---|---|---|---|
| 29 | 150x300 | 34 | 100x150 | 523 | | |
| 30 | STRAIGHT JOINT (1) | 35 | 100x300 | 269 | | |
| 31 | | | 100x450 | 58 | | |
| 32 | | | 100x600 | 129 | | |
| 33 | | | 100x750 | 43 | | |
| 34 | | | STRAIGHT JOINT (1) | 850 | | |
| 35 | | | | | | |

| 36 | CODE | REMARKS |
|---|---|---|
| 37 | | (1) Complete of the bolts, nuts and washer |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |

47 **NOTES:**

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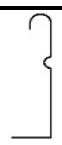
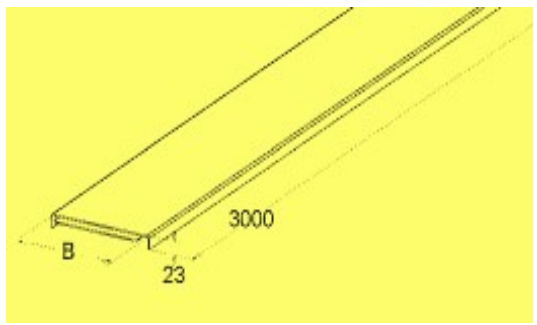
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 6 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

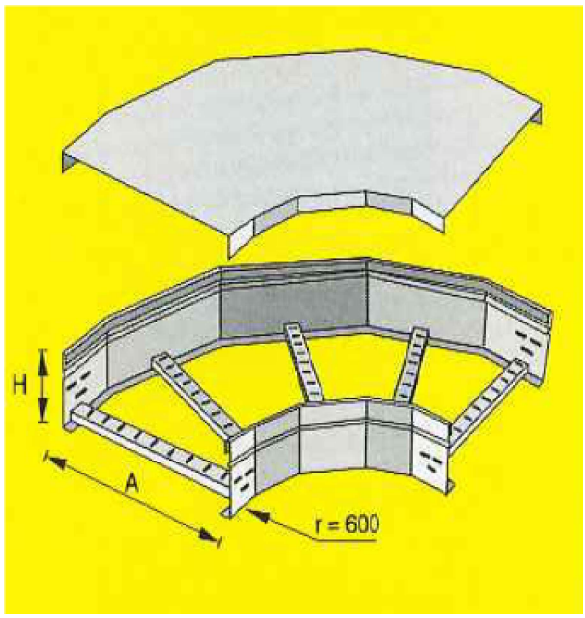
**NOTES:**

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 7 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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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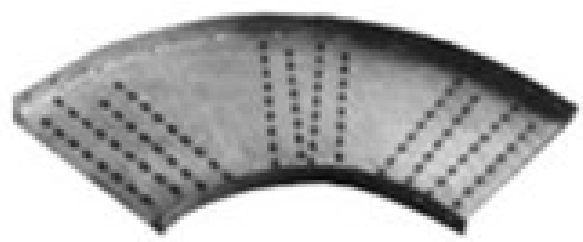
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 8 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 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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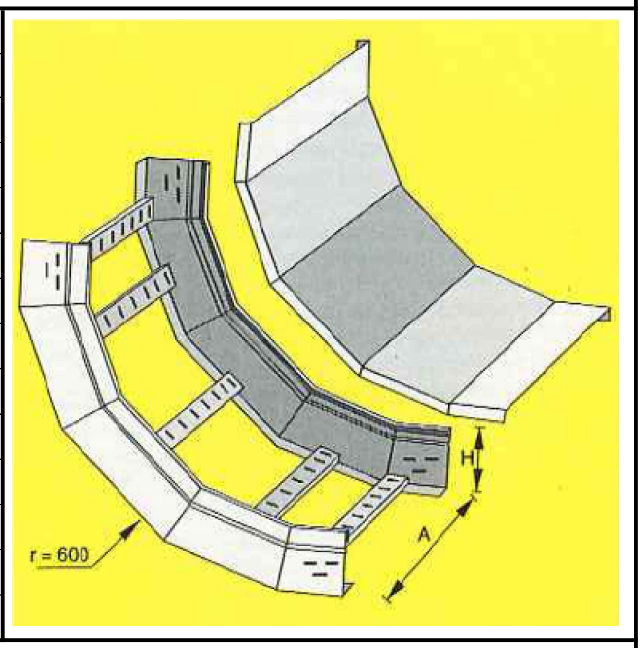
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 9 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 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 | | |

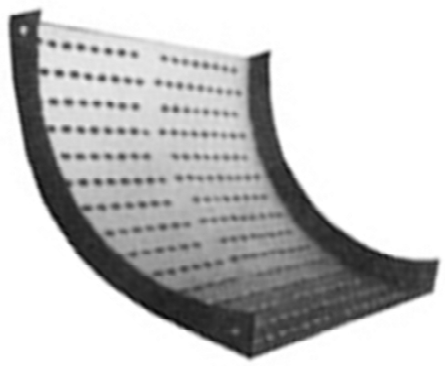
50 **NOTES:**

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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 10 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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 | | |

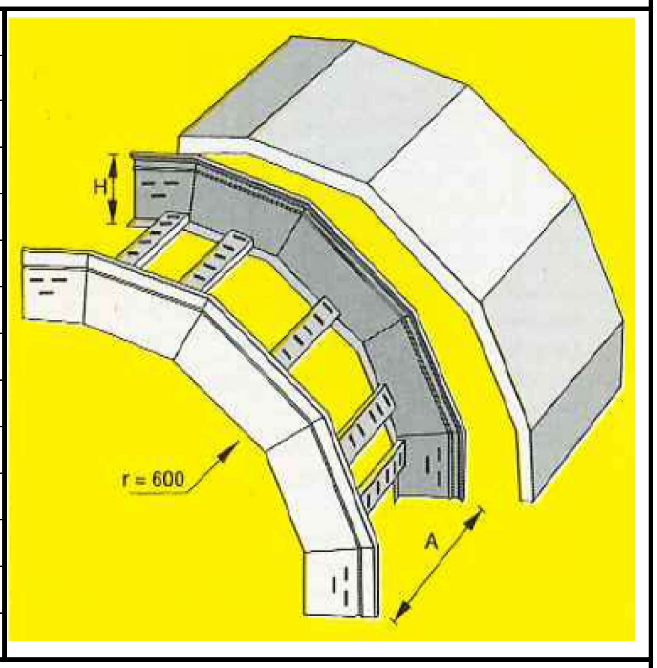
50 **NOTES:**

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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 11 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 01 |

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

## OUTSIDE RISER INCLUDING COVER + FIXING CLIP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18 | RISER DEGREE | 30° | ☐ | 60° | ☐ | | |
| 19 | | 45° | ☐ | 90° | ☑ | | |
| 20 | HEIGTH [mm] | 50 | ☐ | 100 | ☑ | | |
| 21 | | 75 | ☐ | 150 | ☑ | | |
| 22 | WIDTH [mm] | 50 | ☐ | 300 | ☑ | 600 | ☑ |
| 23 | | 100 | ☐ | 400 | ☐ | 750 | ☑ |
| 24 | | 150 | ☑ | 450 | ☑ | | |
| 25 | | 200 | ☐ | 500 | ☐ | | |
| 26 | INTERNAL RADIUS [mm] | 150 | ☐ | 400 | ☐ | 600 | ☑ |
| 27 | | 300 | ☑ | 500 | ☐ | 900 | ☑ |

## QUANTITY

| 30 | HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°] | QUANTITY [pc] | HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°] | QUANTITY [pc] |
|---|---|---|---|---|
| 31 | H100 x W150 R300 90 | 38 | H150 x W300 R900 90 | 3 |
| 32 | H100 x W300 R300 90 | 14 | | |
| 33 | H100 x W450 R300 90 | 11 | | |
| 34 | H100 x W150 R600 90 | 1 | | |
| 35 | H100 x W300 R600 90 | 4 | | |
| 36 | H100 x W450 R600 90 | 1 | | |
| 37 | H100 x W600 R600 90 | 1 | | |
| 38 | H100 x W750 R600 90 | 4 | | |
| 39 | | | | |
| 40 | | | | |
| 41 | | | | |
| 42 | | | | |
| 43 | | | FIXING CLIP | 308 |

| 44 | CODE | REMARKS |
|---|---|---|
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | **NOTES:** | |
| 52 | | |
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 12 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 01 |

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☐ | |  |
| 2 | | PERFORATED | ☑ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

## OUTSIDE RISER INCLUDING COVER + FIXING CLIP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18 | RISER DEGREE | 30° | ☐ | 60° | ☐ | | |
| 19 | | 45° | ☐ | 90° | ☑ | | |
| 20 | HEIGTH [mm] | 50 | ☑ | 100 | ☐ | | |
| 21 | | 75 | ☐ | 150 | ☐ | | |
| 22 | WIDTH [mm] | 50 | ☑ | 300 | ☐ | 600 | ☐ |
| 23 | | 100 | ☐ | 400 | ☐ | 750 | ☐ |
| 24 | | 150 | ☐ | 450 | ☐ | | |
| 25 | | 200 | ☐ | 500 | ☐ | | |
| 26 | INTERNAL RADIUS [mm] | 150 | ☐ | 400 | ☐ | 600 | ☐ |
| 27 | | 300 | ☑ | 500 | ☐ | 900 | ☐ |

## QUANTITY

| 30 | HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°] | QUANTITY [pc] | HEIGHT x WIDTH , RADIUS , ANGLE [mm] [°] | QUANTITY [pc] |
|---|---|---|---|---|
| 31 | H50 x W50 R300 90 | 5 | | |
| 32 | | | | |
| 33 | | | | |
| 34 | | | | |
| 35 | | | | |
| 36 | | | | |
| 37 | | | | |
| 38 | | | | |
| 39 | | | | |
| 40 | | | | |
| 41 | | | | |
| 42 | | | | |
| 43 | FIXING CLIP | 20 | | |

| 44 | CODE | REMARKS |
|---|---|---|
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |

51 **NOTES:**

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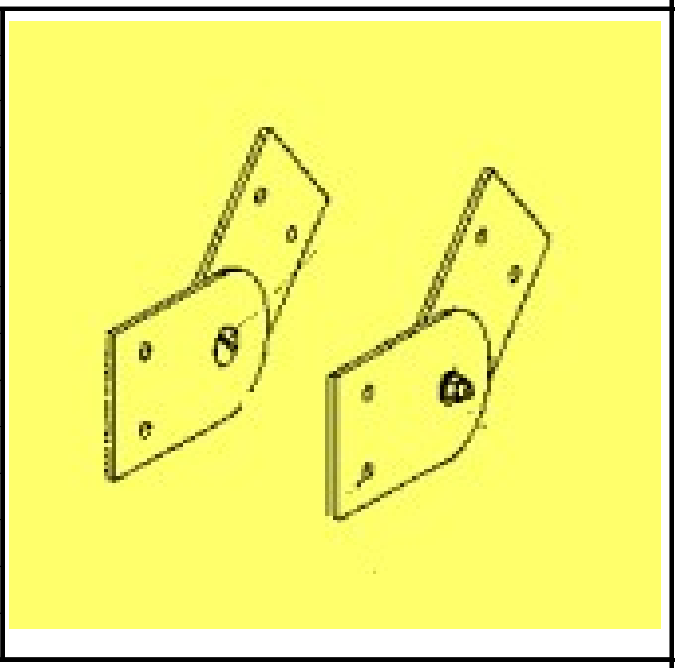
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 13 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

**VERTICAL HINGED JOINT (complete of bolts,nuts and washer)**

| | | | | | |
|---|---|---|---|---|---|
| 18 | HEIGTH [mm] | 50 | ☐ | 100 | ☑ |
| 19 | | 75 | ☐ | 150 | ☑ |

**QUANTITY**

| | HEIGHT [mm] | QUANTITY [pc] |
|---|---|---|
| 22 | | |
| 23 | 100 | 125 |
| 24 | 150 | 25 |
| 25 | | |
| 26 | | |

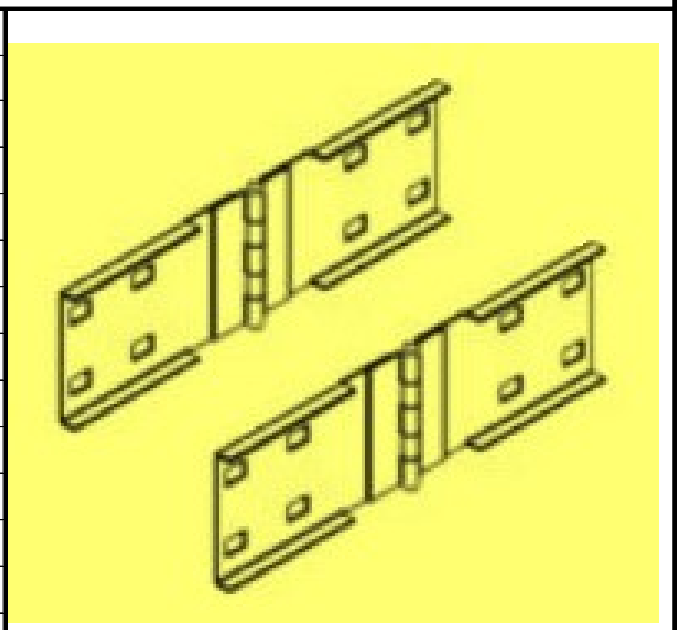
| | CODE | REMARKS |
|---|---|---|
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
| 36 | | |
| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |

**NOTES:**

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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |
| 16 | **HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)** | | | | |
| 17 | | | | | |
| 18 | HEIGTH [mm] | 50 | ☐ | 100 ☑ | |
| 19 | | 75 | ☐ | 150 ☑ | |
| 20 | **QUANTITY** | | | | |
| 21 | | | | | |

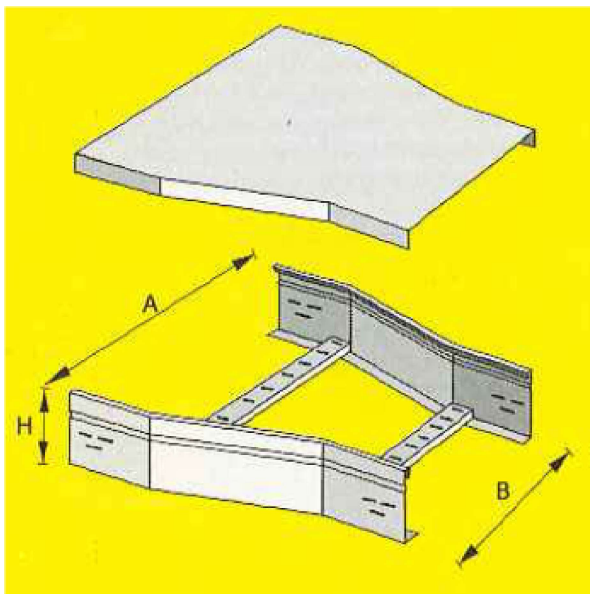
| | HEIGHT [mm] | QUANTITY [pc] | |
|---|---|---|---|
| 22 | | | |
| 23 | 100 | 50 | |
| 24 | 150 | 15 | |
| 25 | | | |
| 26 | | | |

| | | |
|---|---|---|
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | CODE | REMARKS |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
| 36 | | |
| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | **NOTES:** | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | | |
| 52 | | |
| 53 | | |
| 54 | | |
| 55 | | |

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 15 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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:**

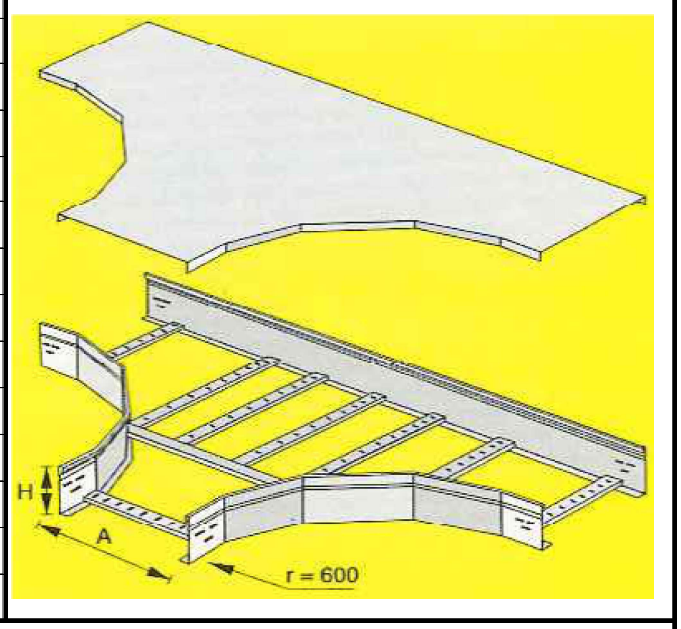
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 16 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | | |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |




15

## TEE CONNECTION INCLUDING COVER + FIXING CLIP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18 | INTERNAL RADIUS [mm] | 300 | ☑ | 500 | ☐ | 900 | ☑ |
| 19 | | 400 | ☐ | 600 | ☑ | | |
| 20 | HEIGTH [mm] | 50 | ☐ | 100 | ☑ | | |
| 21 | | 75 | ☐ | 150 | ☐ | | |
| 22 | WIDTH [mm] | 50 | ☐ | 300 | ☑ | | |
| 23 | | 100 | ☐ | 450 | ☑ | | |
| 24 | | 150 | ☑ | 600 | ☑ | | |
| 25 | | 200 | ☐ | 750 | ☑ | | |

26
27

## QUANTITY

| | HEIGHT x WIDTH , RADIUS [mm] | QUANTITY [pc] |
|---|---|---|
| 28 | | |
| 29 | H100 x W300 , R300 | 3 |
| 30 | H100 x W450 , R600 | 3 |
| 31 | H100 x W600 , R600 | 4 |
| 32 | H100 x W150 , R900 | 3 |
| 33 | H100 x W300 , R900 | 6 |
| 34 | H100 x W600 , R900 | 3 |
| 35 | H100 x W750 , R900 | 3 |
| 36 | FIXING CLIP | 150 |

37

| | CODE | REMARKS |
|---|---|---|
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |

50 **NOTES:**

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | CABLE_TRAY_B200_ELE_LV | : Cable Tray B200 - Electrical (Low Voltage) | | Dwg | 123A90-DDL-EL-DL-20112 | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | Module | LD_B-200 | |
| **TASK** | code | C10002285 | 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" | |

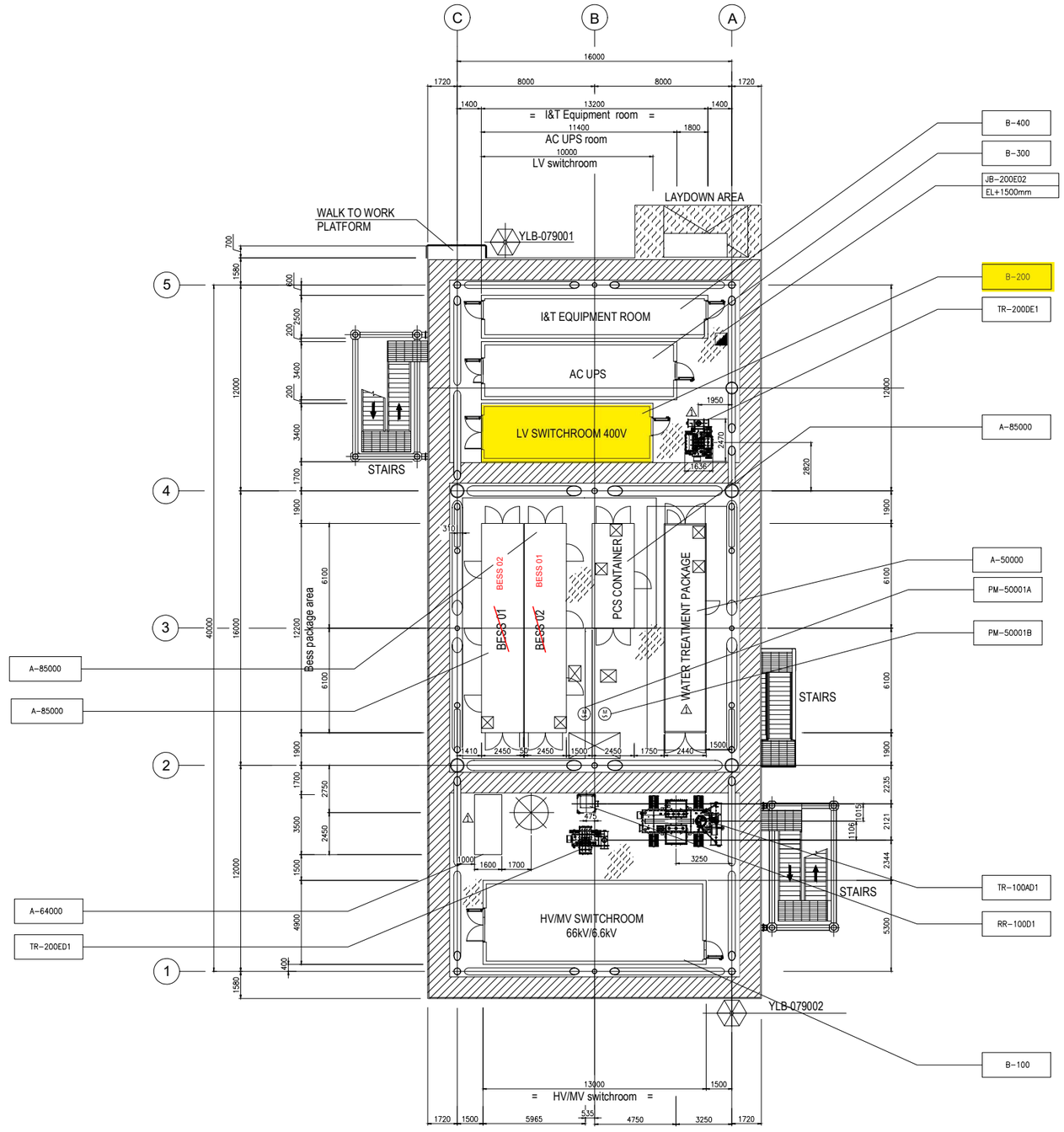
Comments:



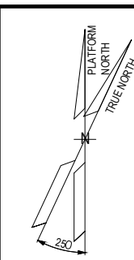
| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Michele Tartaglia | Paolo Schintu | |
| **Date** | 2025-01-25 | 2025-01-25 | |
| **Signature** | PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T10:39:49.456Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-25T11:31:09.590Z | |

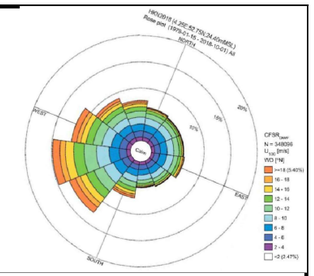
DRAWING NO. 123A90-DDL-EL-DL-20101

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

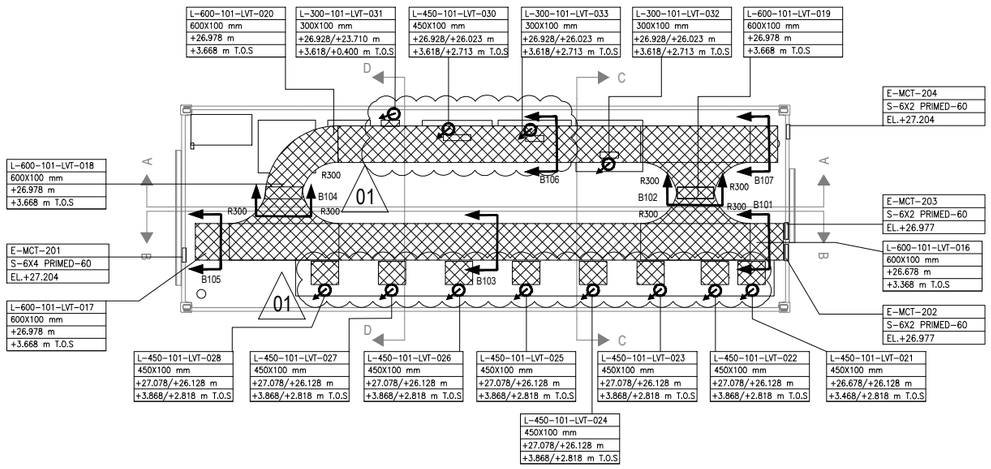
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| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:150 |
| DRAWN SAM | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 04/03/24 |

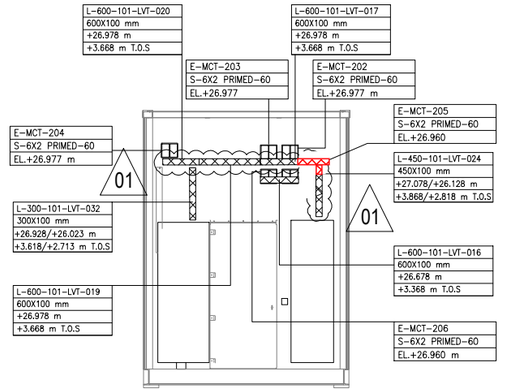
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|---|---|---|---|
| A1 | DRAWING NO. 123A90-DDL-EL-DL-20101 | SHEET 001 | REV. 01 |

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

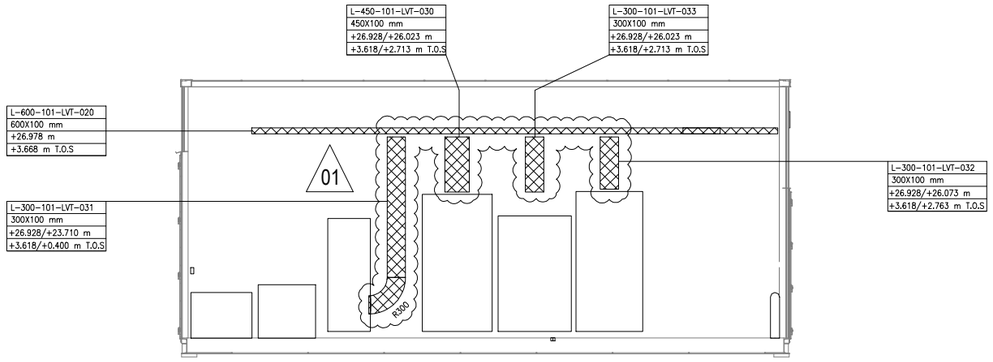
DRAWING NO. 123A90-DDL-EL-DL-20112

REV. 01

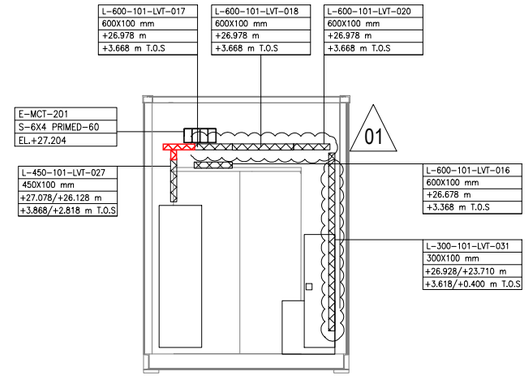


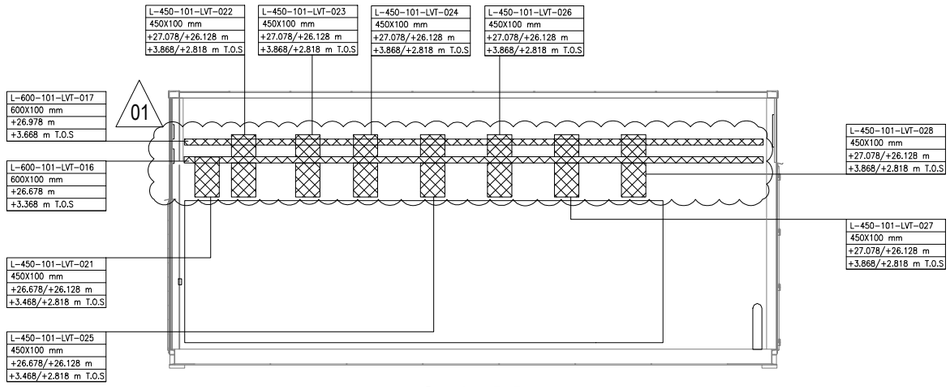

Section C-C



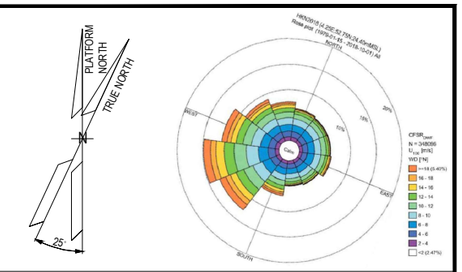

Section A-A




Section D-D




Section B-B




## NOTES

1.ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.

2.THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.

3.DRAWING SPLIT INTO MULTIPLE SHEETS FOR CLARITY.

4.FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.

5.FOR LIGHTING AND SOCKET EQUIPMENTS SEE DRAWING 123A90-DDL-EL-DL-20123 AND 1724000049-EL-LIS-00044

6.ELEVATIONS REFER TO T.O.S. (EL+23.310m)

7.FOR PANEL MCTs DETAILS PLEASE REFER TO 123A90-DDL-EL-DL-20115.

## LEGEND

ELECTRICAL LV CABLE LADDER

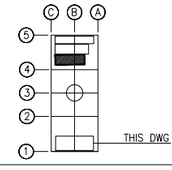
ELECTRICAL CABLE LADDER (VERTICAL DROP)

MCT TAG
TAG
MCT FRAME
ELEVATION

B100
CABLE SECTION

CABLE LADDER TAG
WIDTH X HEIGHT
TAG
SIZE
ELEVATION
ELEVATION IN 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-20105 | ELECTRICAL EQUIPMENT LAYOUT - LV SWITCHROOM |
| 123A90-DDL-EL-DL-20123 | LIGHTING & SOCKET LAYOUT - LV SWITCHROOM |
| 123A90-DDL-EL-DD-20095 | MCT COMPOSITION |
| 1724000049-EL-LIS-00044 | B-200 ELECTRICAL COMPONENTS LIST AND DS - 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 | 18/07/24 | ASR | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DL-20112**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_B | 02/09/24 | G.Randi |

**ROSETTI MARINO SpA**

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

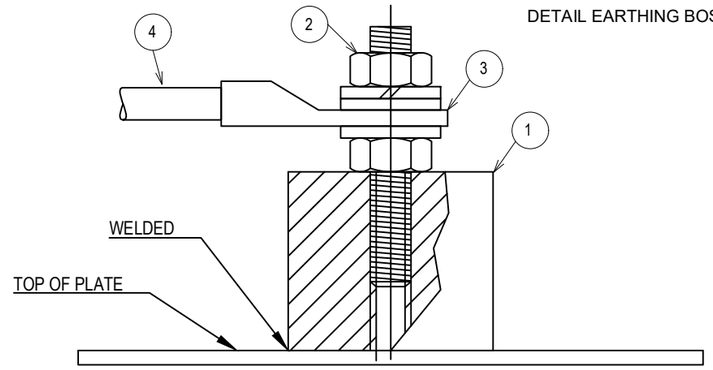
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| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:50 |
| DRAWN ASR | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 02/08/24 |
| A1 | DRAWING NO. 123A90-DDL-EL-DL-20112 | SHEET 1of11 | REV. 01 |

File Name : 123A90-DDL-EL-DL-20112

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | EARTHING BOSS WITH THREADED HOLE M10 | AISI 316L | 50X50<br>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<br>NOTE 5 |
| 5 | EARTHING PLATE | AISI 316L<br>(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<br>NOTE 7 |

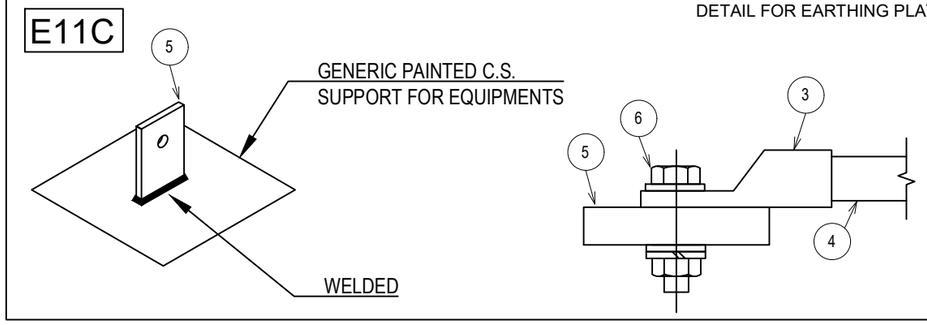
E11A

DETAIL EARTHING BOSS 50x50




E11C

DETAIL FOR EARTHING PLATE

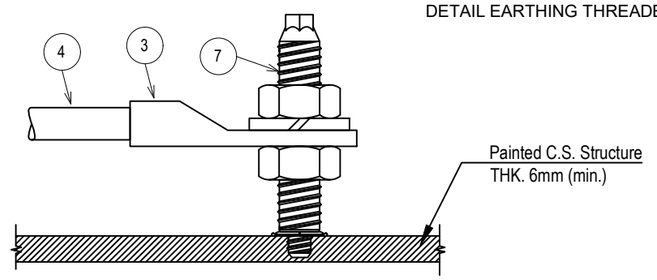



E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

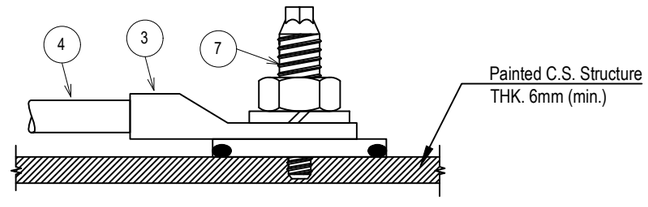



E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD




NOTES:
1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20090**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_I | 07/11/24 | G.Randi |

**ROSETTI MARINO SpA**

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| 02 | 26/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 10/06/24 | SPS | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
SINGLE EARTHING CONNECTION

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

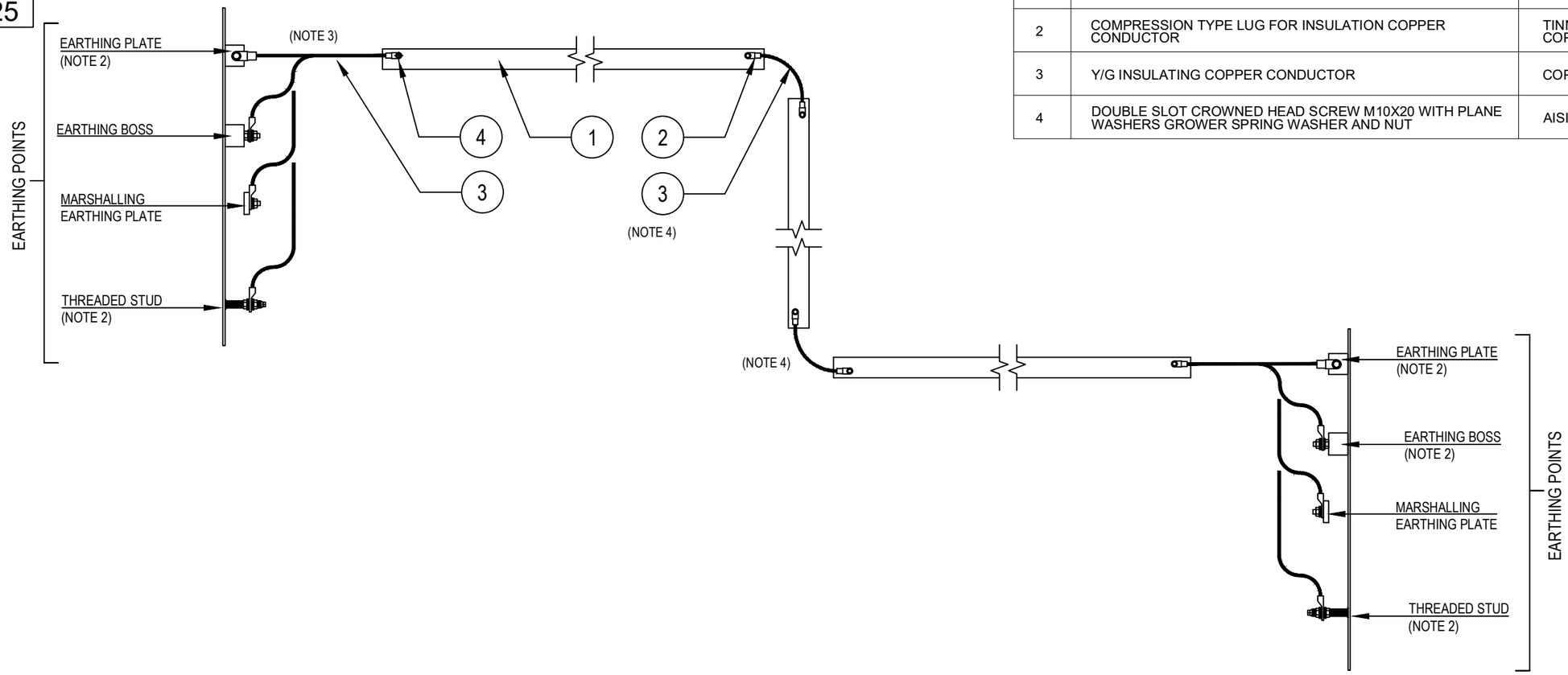
SHEET 003

REV. 02

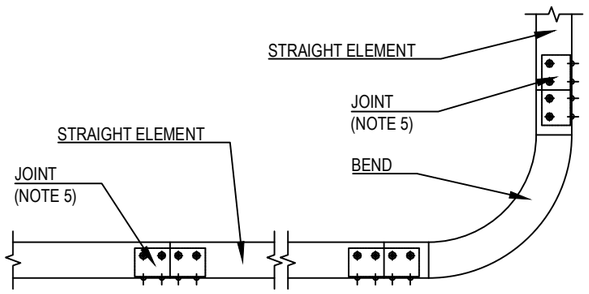
F.to UNI A3: 420mmx297mm

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

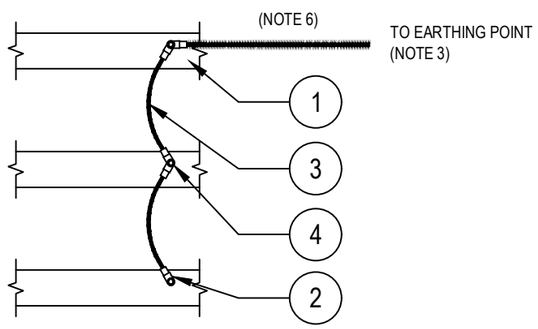
E25




| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER/TRAY | FRP/GRP | | | |
| 2 | COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR | TINNED COPPER | 16mm$^2$ | | ~~NOTE 1~~ |
| 3 | Y/G INSULATING COPPER CONDUCTOR | COPPER | 16mm$^2$ | | |
| 4 | DOUBLE SLOT CROWNED HEAD SCREW M10X20 WITH PLANE WASHERS GROWER SPRING WASHER AND NUT | AISI 316L | ~~M10X20~~ M6x20 | | |




## PARALLEL ROUTING




NOTES:
1) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
2) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E.
3) FOR EARTHING USE NEAREST EXISTING EARTHING POINT OR A NEW DEDICATED.
4) ON EVERY CHANGE OF DIRECTION MADE WITHOUT A PREFABBRICATED BEND, BONDING CONNECTION IS REQUIRED BY MEAN OF INSULATED Y/G EARTHING CONDUCTOR.
5) THE ELECTRIC CONTINUITY BETWEEN THE VARIOUS PREFABRICATED COMPONENTS IS GUARANTEED BY THE JOINTS INSTALLED ACCORDING TO THE ASSEMBLY INSTRUCTIONS OF THE CABLE TRAY/LADDER MANUFACTURER.
6) CABLE LADDER/TRAY SHALL BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM AT BOTH ENDS. FULL CONTINUITY SHALL BE ENSURED. IN CASE OF SHORT LENGHT ELEMENTS (LESS THAN 3 m) ONE END ONLY MAY BE CONNECTED TO THE EQUIPOTENTIAL BONDING SYSTEM.
7) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20090**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_I | 07/11/24 | G.Randi |

**ROSETTI MARINO SpA**

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| 02 | 26/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 10/06/24 | SPS | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR CABLE LADDERS & TRAYS

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

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

F.to UNI A3: 420mmx297mm

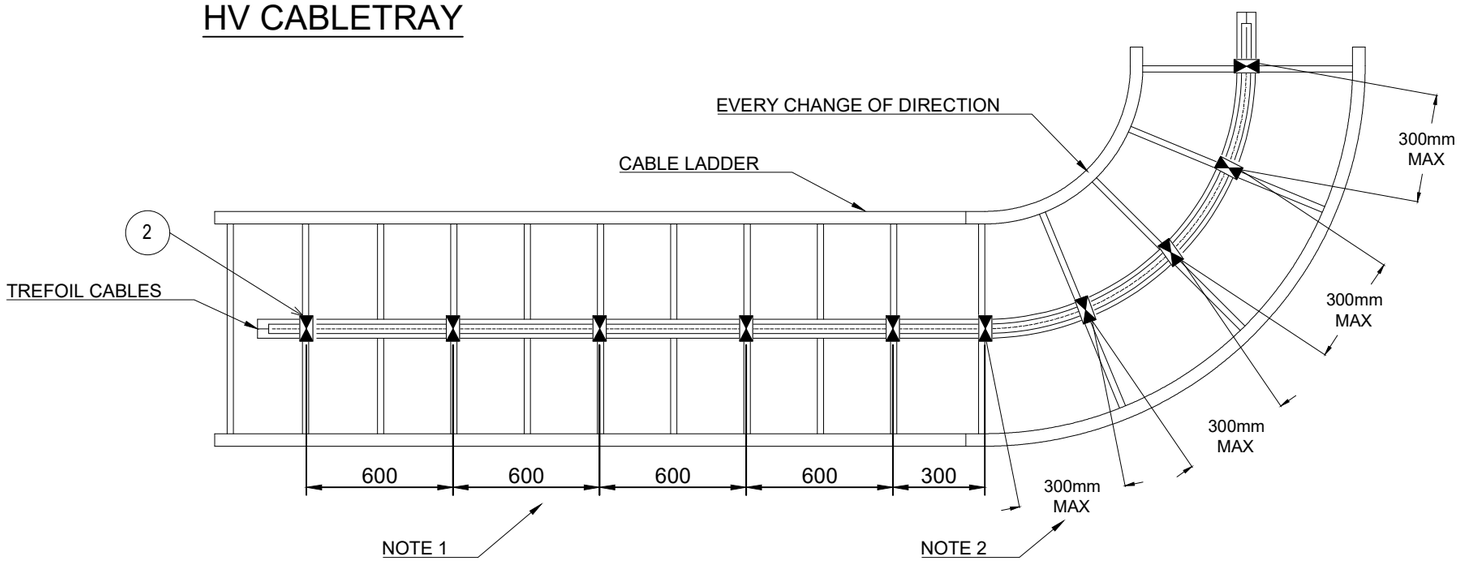
File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

C06

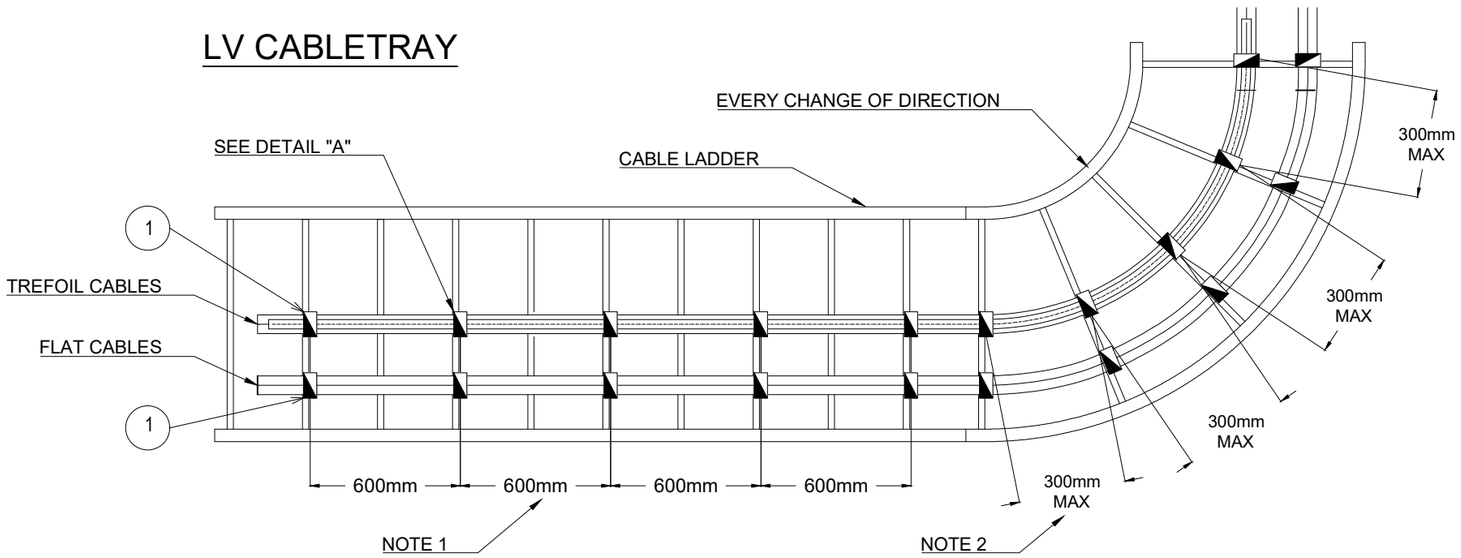
# MAXIMUM CABLE TIES/CLEATS SPACING INSTALLATION DETAILS

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

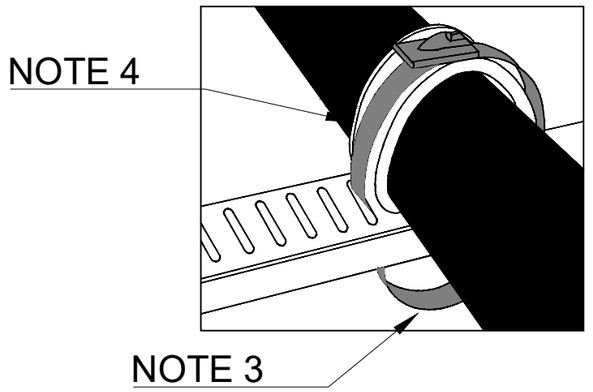
## HV CABLETRAY




## LV CABLETRAY




## DETAIL "A" CABLE CLEATS




NOTES:

1) CABLES TIES SHALL BE HELD EVERY 600mm (CLEATS EVERY 600mm) ON HORIZONTAL RUNS.
2) CABLES SHALL BE HELD EVERY 300mm ON HORIZONTAL/VERTICAL ELBOW AND ON VERTICAL RUNS.
3) CABLE CLEATS WRAPPED TWO TIME AROUND THE CABLE RUNS.
4) TO PROTECT THE CABLE, INSTALL THE CUSHION SLEEVE BETWEEN THE CLAMP AND THE CABLE.

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20092**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_D | 20/12/24 | V.Ramponi |

**ROSETTI MARINO SpA**

CROSSWIND

ROSETTI MARINO

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 02 | 28/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 04/07/24 | NLK | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
MAXI. CABLE TIES SPACING TYPICAL INSTALLATION DETAILS CABLE FASTENING IN TRAYS/LADDER

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

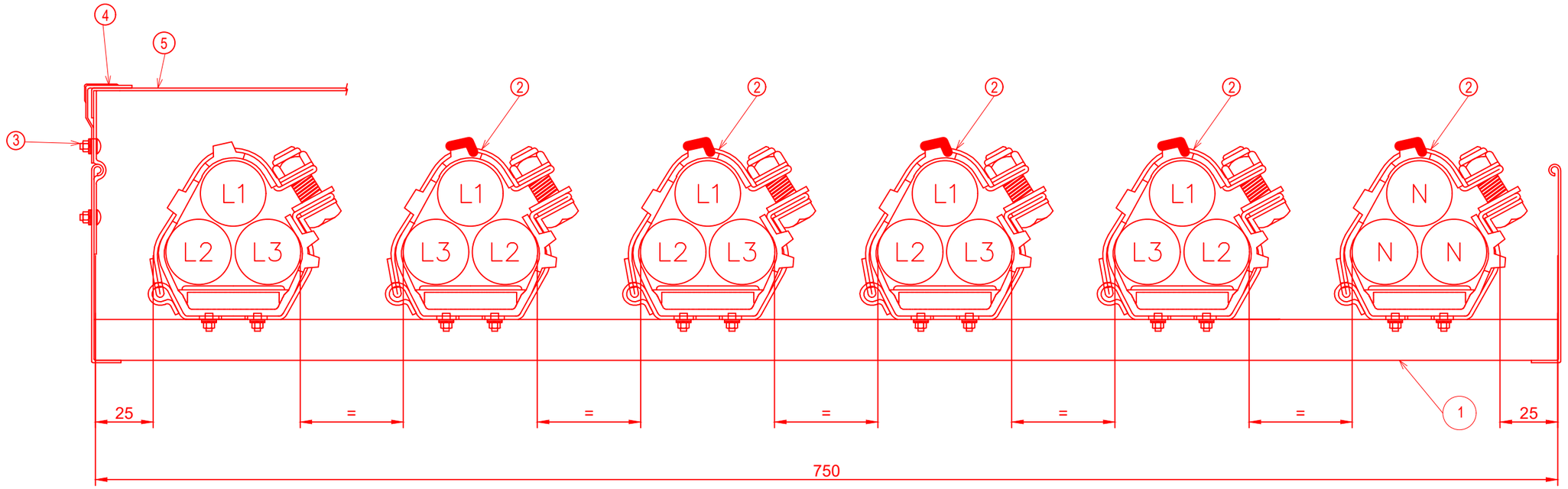
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

C05B

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | CABLE CLEATS | AISI 316L | | | |
| 3 | BOLT, WASHER AND LOCK NUT | AISI 316L | M8x20 | | |
| 4 | COVER SPACER | AISI 316L | | | |
| 5 | COVER | AISI 316L | | | |




NOTES:

1) CABLE CLEATS TO BE USED EXCLUSIVELY FOR CONNECTION WITH 1X300 mm² CABLE BETWEEN TRANSFORMER AND PMCC PANEL

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20092**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_D | 20/12/24 | V.Ramponi |

**ROSETTI MARINO SpA**

CROSSWIND

ROSETTI MARINO

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| 02 | 28/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 04/07/24 | NLK | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES ARRANGEMENT IN CABLE LADDER FOR HIGH SCCR CABLES

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

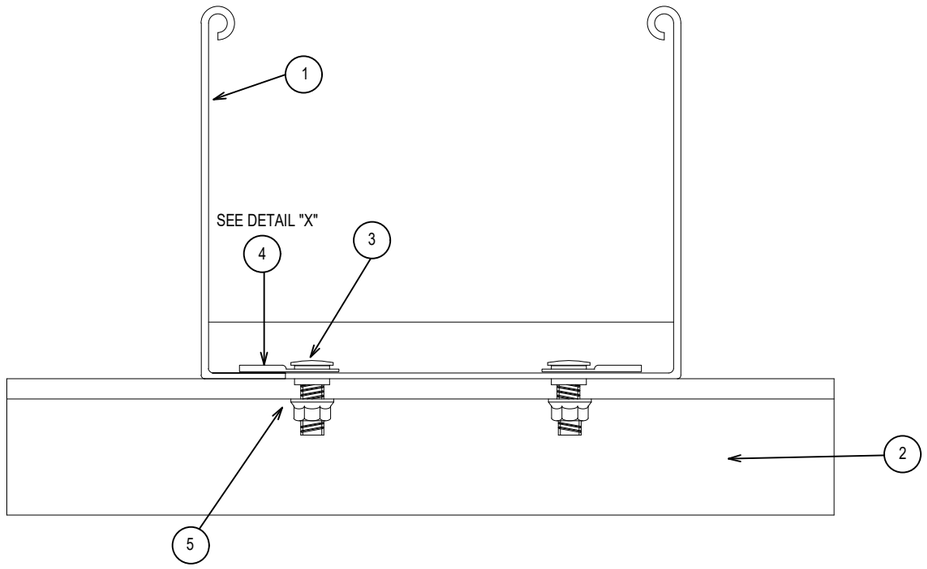
A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

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

# CABLE LADDER FIXING ON FRP RACK

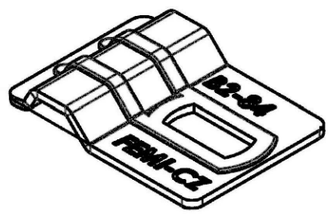
| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | PROFILE SUPPORT | FRP | | | |
| 3 | ROUND HEAD SQUARE NECK SCREW | AISI 316L | M8x20 | 2 | |
| 4 | HOLD DOWN CLAMP | AISI 316L | | 2 | |
| 5 | FLANGED NUT | AISI 316L | M8 | 2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




TYPICAL

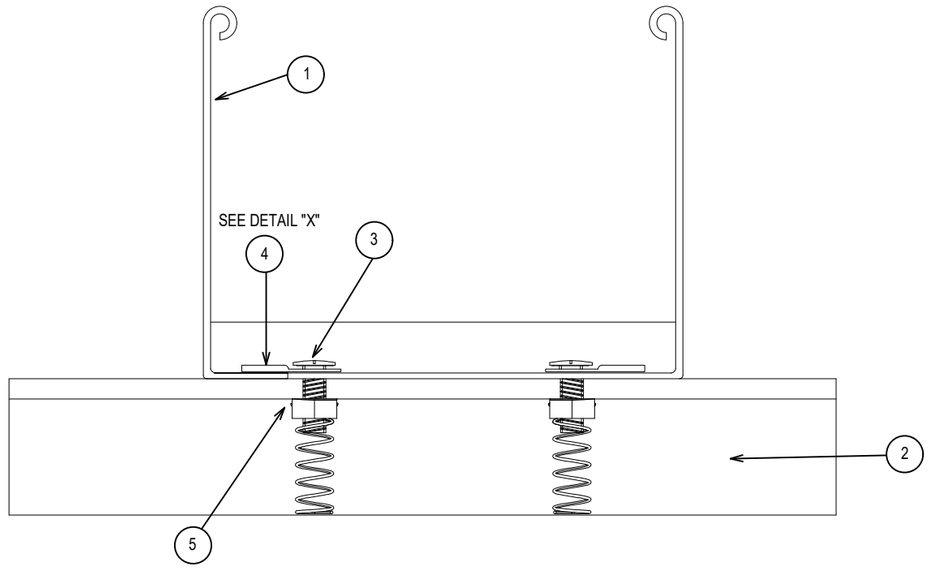
LF

## DETAIL "X"




# CABLE LADDER FIXING ON UNISTRUT

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | |
| 3 | ROUND HEAD SCREW DOUBLE SLOT | AISI 316L | M8x20 | 2 | |
| 4 | HOLD DOWN CLAMP | AISI 316L | | 2 | |
| 5 | NUT FOR CHANNEL WITH SPRING | AISI 316L | M8x40 | 2 | |




TYPICAL

LU

SEE SHEET 18 FOR FIXING OF CABLE LADDER ON UNISTRUT ON VERTICAL RUNS

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_F | 09/01/25 | G.Randi |

**ROSETTI MARINO SpA**

02

CROSSWIND

ROSETTI MARINO

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 02 | 05/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 29/04/24 | SPS | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

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

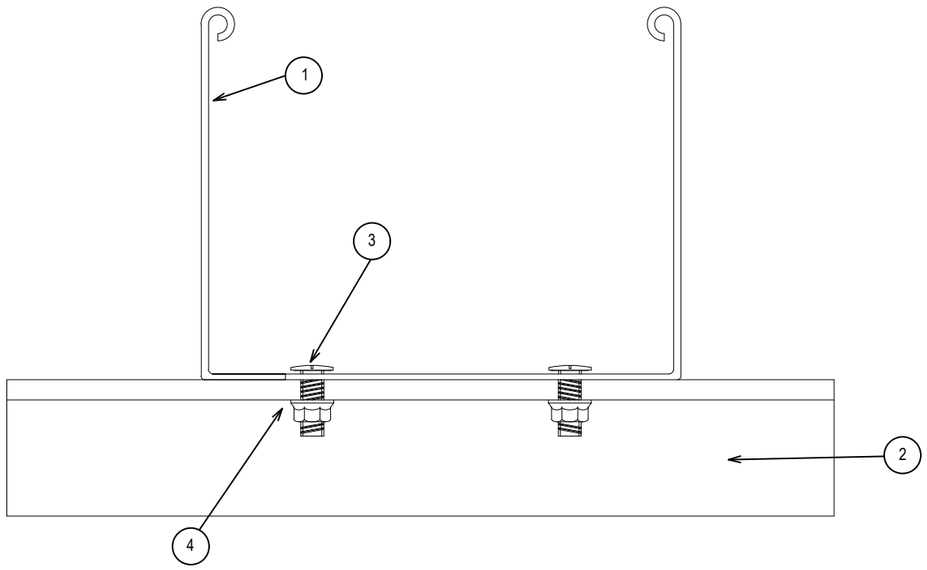
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

F.to UNI A3: 420mmx297mm

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

# CABLE TRAY PERFORATED FIXING ON FRP RACK

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE TRAY PERFORATED | AISI 316L | | | |
| 2 | PROFILE SUPPORT | FRP | | | |
| 3 | ROUND HEAD SCREW DOUBLE SLOT | AISI 316L | M6x20 | 2 | |
| 4 | FLANGED NUT | AISI 316L | M6 | 2 | |

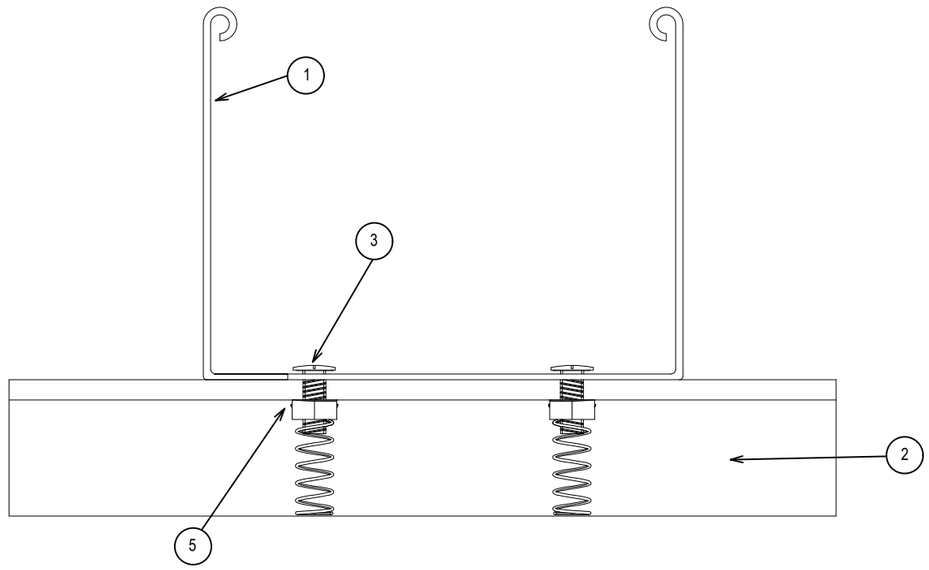



TYPICAL

TF

# CABLE TRAY PERFORATED FIXING ON UNISTRUT

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE TRAY PERFORATED | AISI 316L | | | |
| 2 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | |
| 3 | ROUND HEAD SCREW DOUBLE SLOT | AISI 316L | M6x20 | 2 | |
| 5 | NUT FOR CHANNEL WITH SPRING | AISI 316L | M6x40 | 2 | |




TYPICAL

TU

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_F | 09/01/25 | G.Randi |

ROSETTI MARINO SpA

02

CROSSWIND

ROSETTI MARINO

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 02 | 05/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 29/04/24 | SPS | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

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

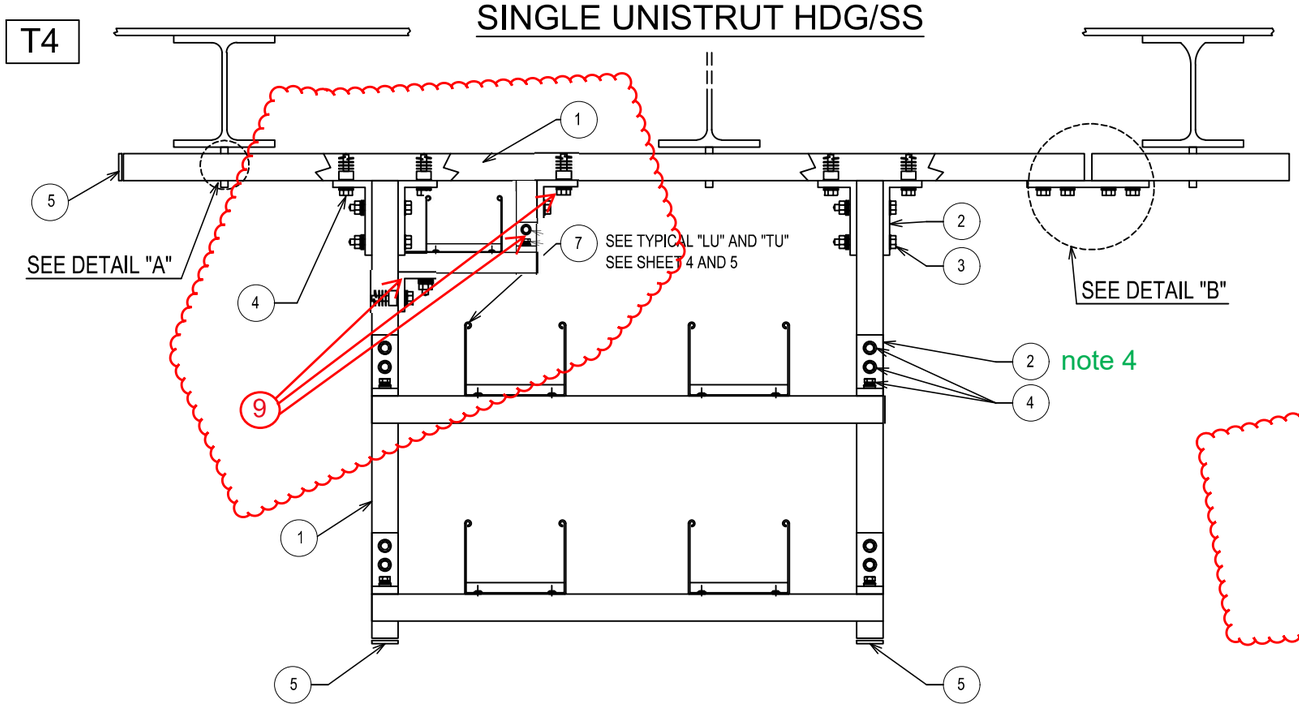
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

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

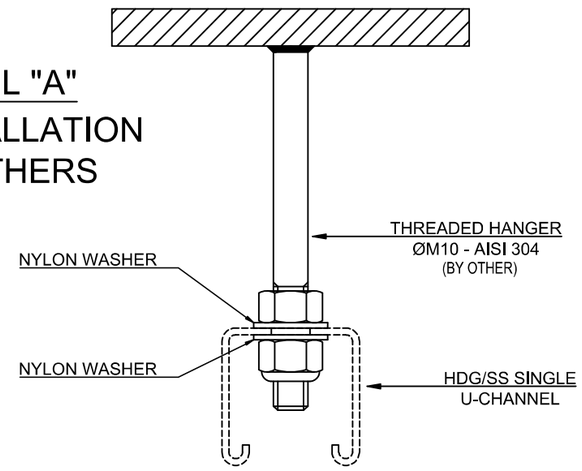
T4

# SINGLE UNISTRUT HDG/SS

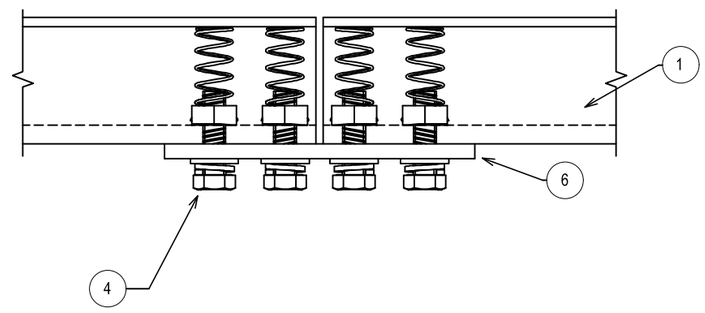



| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | NOTE 1 |
| 2 | PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES | AISI 316L | | 8 | |
| 3 | HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT | AISI 316L | M10x70 | 4 | |
| 4 | HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING | AISI 316L | ~~M10~~ M12 | 16 | |
| 5 | PLUG FOR U-CHANNEL | LPDE | | AS R | |
| 6 | CONNECTION PLATE (4 HOLES) | AISI 316L | | AS R | |
| 7 | CABLE LADDER OR PERFORATED TRAY | AISI 316L | | | |
| 8 | DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING | AISI 316L | M6x20 | AS R | |
| 9 | PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 2 HOLES | AISI 316L | | 3 | |

## DETAIL "A"
INSTALLATION
BY OTHERS




## DETAIL "B"




4) ALTERNATIVELY, USE PLATE FOR CONNECTION WITH 2 HOLES

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

## TYPICAL VALID INSIDE TECHNICAL ROOMS

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_F | 09/01/25 | G.Randi |

**ROSETTI MARINO SpA**

02

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| 02 | 05/08/24 | GRA | AMA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 29/04/24 | SPS | FMA/AMA | FPA/DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 21/11/23 | SPS | FMA/AMA | FPA/DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

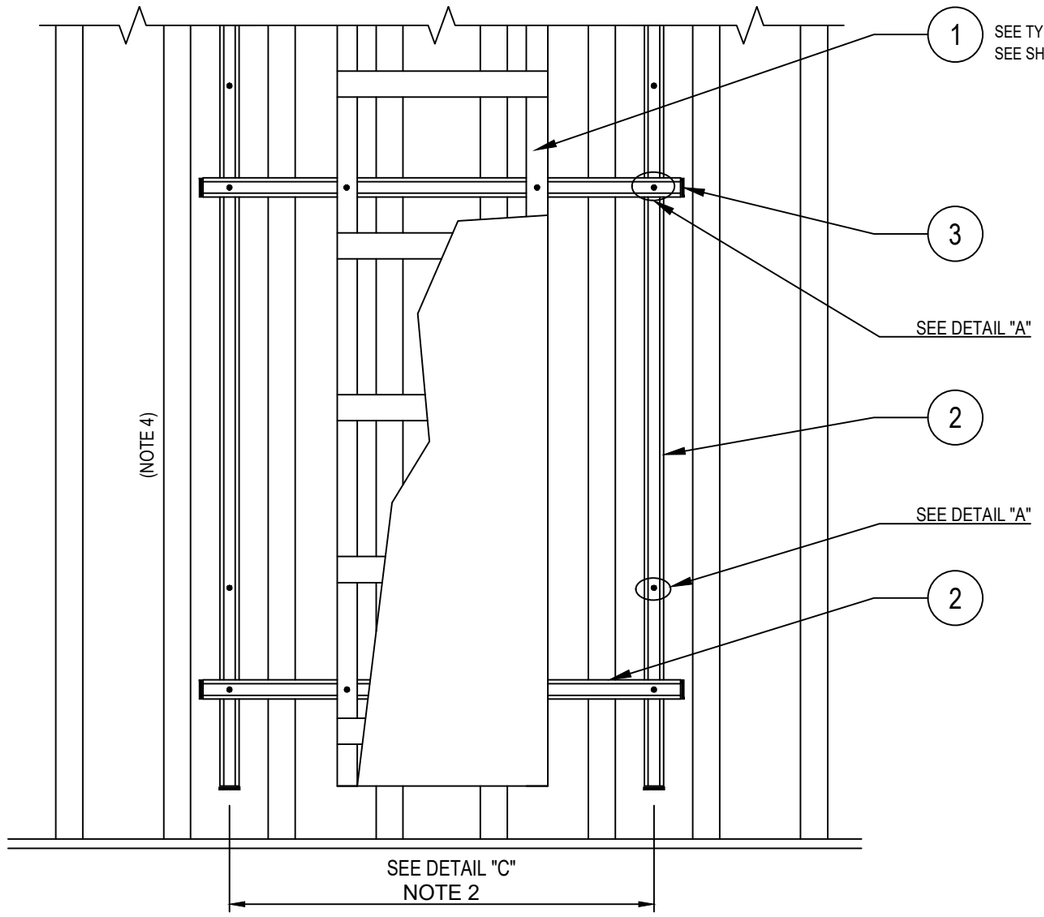
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

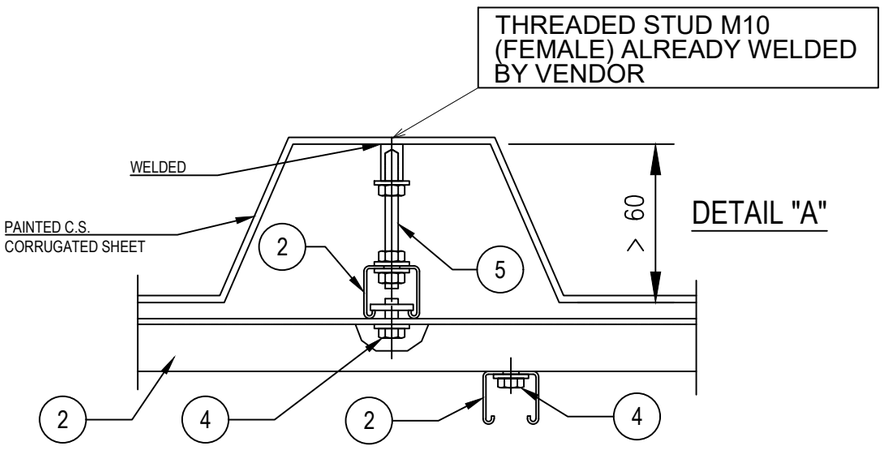
F.to UNI A3: 420mmx297mm

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

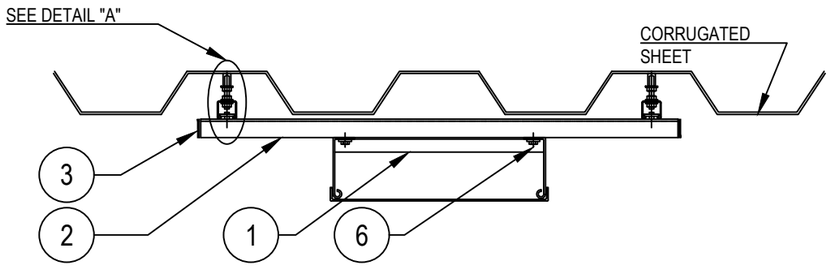
T7




| 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

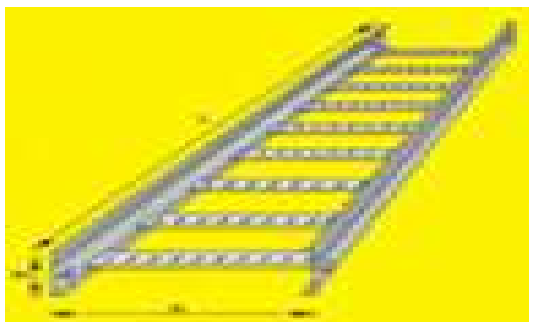
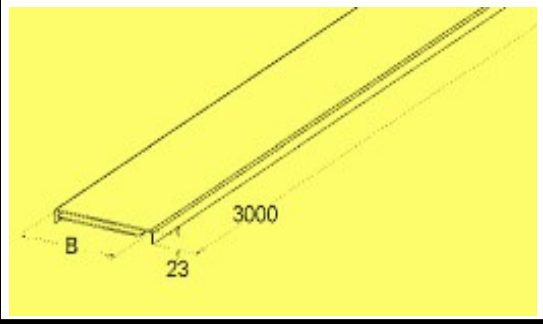
F.to UNI A3: 420mmx297mm

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

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 5 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 01 |

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | |  |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALVANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

## STRAIGHT ELEMENT with COVER

| | | | | |
|---|---|---|---|---|
| 18 | LENGTH [mm] | 3000 ☑ | 5000 ☐ | |
| 19 | | 4000 ☐ | 6000 ☐ | |
| 20 | HEIGTH [mm] | 50 ☐ | 100 ☑ | |
| 21 | | 75 ☐ | 150 ☑ | |
| 22 | WIDTH [mm] | 50 ☐ | 300 ☑ | 600 ☑ |
| 23 | | 100 ☐ | 400 ☐ | 750 ☑ |
| 24 | | 150 ☑ | 450 ☑ | |
| 25 | | 200 ☐ | 500 ☐ | |

## QUANTITY

| | HEIGHT x WIDTH [mm] | QUANTITY [m] | HEIGHT x WIDTH [mm] | QUANTITY [m] | HEIGHT x WIDTH [mm] | QUANTITY [m] |
|---|---|---|---|---|---|---|
| 29 | 150x300 | 34 | 100x150 | 523 | | |
| 30 | STRAIGHT JOINT (1) | 35 | 100x300 | 269 | | |
| 31 | | | 100x450 | 58 | | |
| 32 | | | 100x600 | 129 | | |
| 33 | | | 100x750 | 43 | | |
| 34 | | | STRAIGHT JOINT (1) | 850 | | |
| 35 | | | | | | |

| 36 | CODE | REMARKS |
|---|---|---|
| 37 | | (1) Complete of the bolts, nuts and washer |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |

47 **NOTES:**

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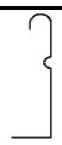
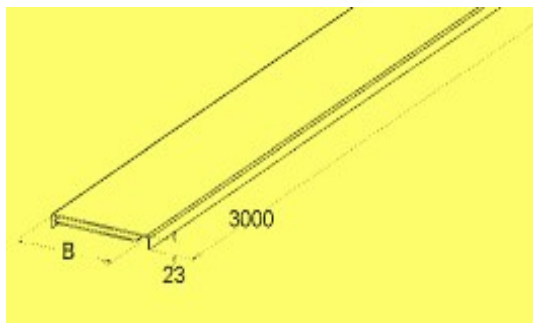
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 6 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

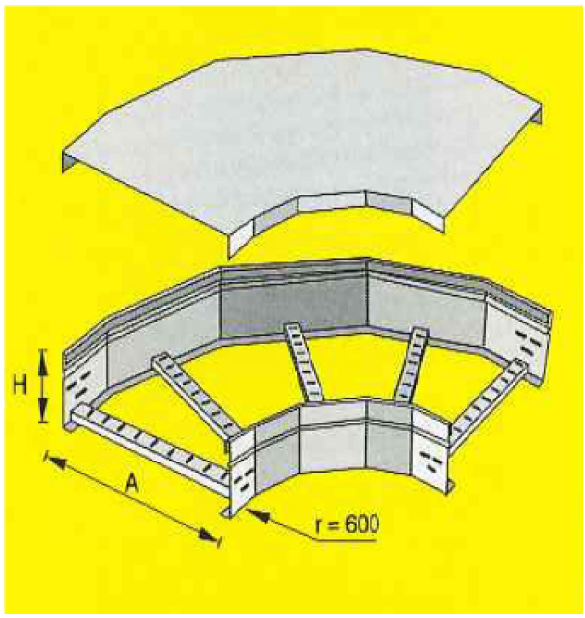
**NOTES:**

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 7 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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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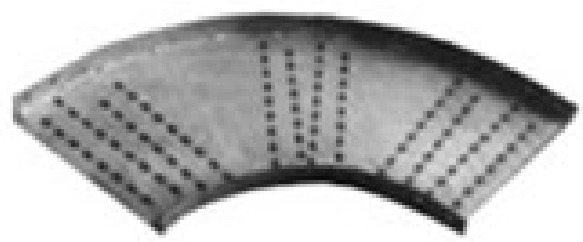
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 8 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 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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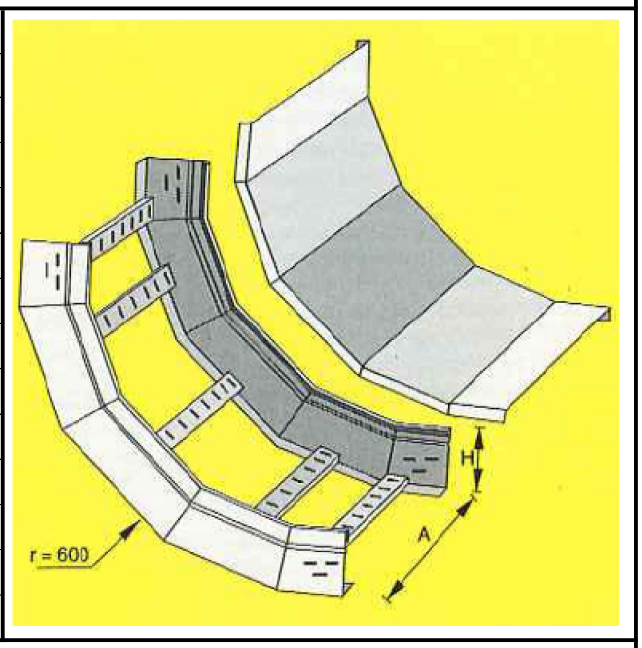
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 9 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: 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 | | |

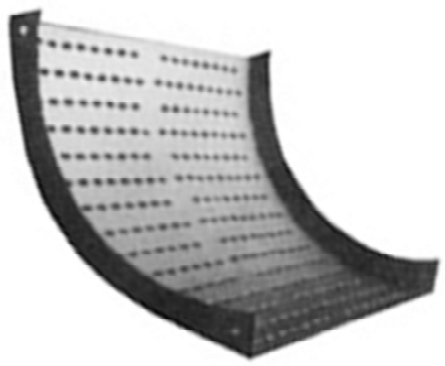
50 **NOTES:**

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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 10 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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 | | |

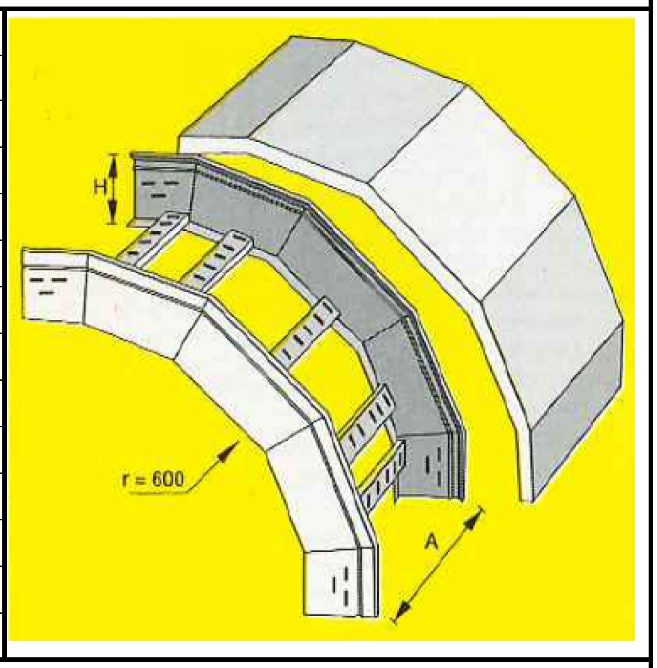
50 **NOTES:**

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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 11 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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 | | |
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| 49 | | |
| 50 | | |
| 51 | **NOTES:** | |
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 12 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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 | | |
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| 49 | | |
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51 **NOTES:**

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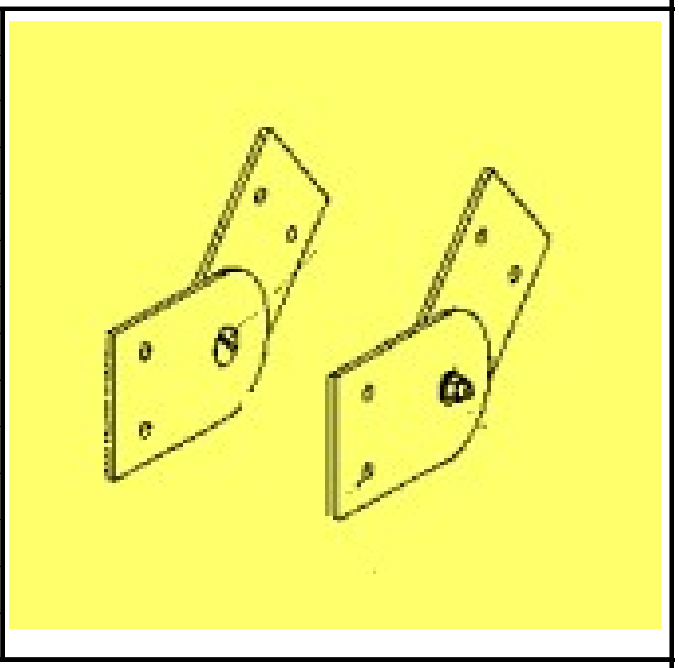
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 13 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |

**VERTICAL HINGED JOINT (complete of bolts,nuts and washer)**

| | | | | | |
|---|---|---|---|---|---|
| 18 | HEIGTH [mm] | 50 | ☐ | 100 | ☑ |
| 19 | | 75 | ☐ | 150 | ☑ |

**QUANTITY**

| | HEIGHT [mm] | QUANTITY [pc] |
|---|---|---|
| 22 | | |
| 23 | 100 | 125 |
| 24 | 150 | 25 |
| 25 | | |
| 26 | | |

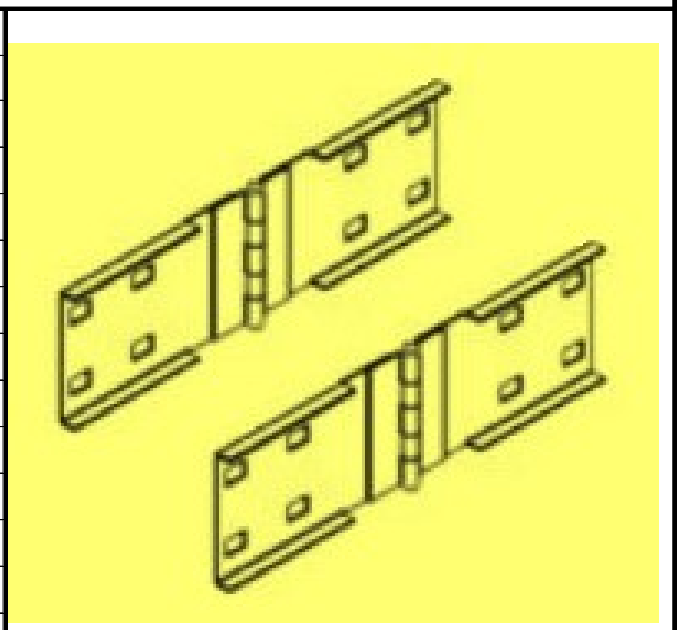
| | CODE | REMARKS |
|---|---|---|
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
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| 35 | | |
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| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |

**NOTES:**

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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | |  |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | |  |  | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |
| 15 | | | | | |
| 16 | **HORIZONTAL ADJUSTABLE JOINT (complete of bolts,nuts and washer)** | | | | |
| 17 | | | | | |
| 18 | HEIGTH [mm] | 50 | ☐ | 100 ☑ | |
| 19 | | 75 | ☐ | 150 ☑ | |
| 20 | **QUANTITY** | | | | |
| 21 | | | | | |

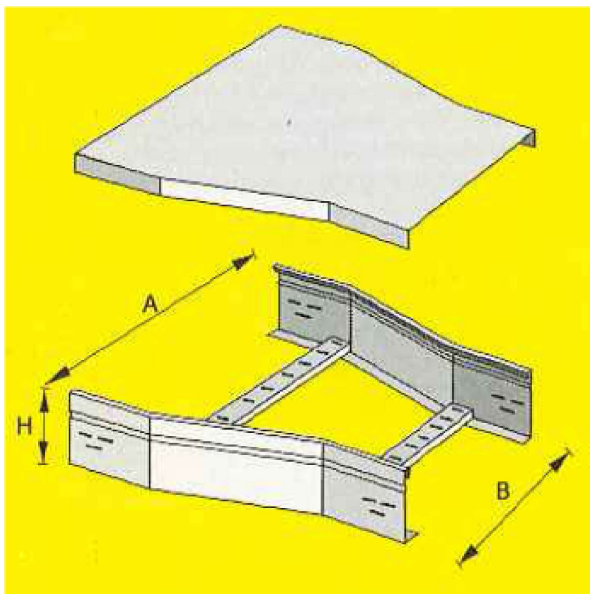
| | HEIGHT [mm] | QUANTITY [pc] | |
|---|---|---|---|
| 22 | | | |
| 23 | 100 | 50 | |
| 24 | 150 | 15 | |
| 25 | | | |
| 26 | | | |

| | | |
|---|---|---|
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | CODE | REMARKS |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
| 36 | | |
| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | **NOTES:** | |
| 46 | | |
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| 48 | | |
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| 54 | | |
| 55 | | |

| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 15 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>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:**

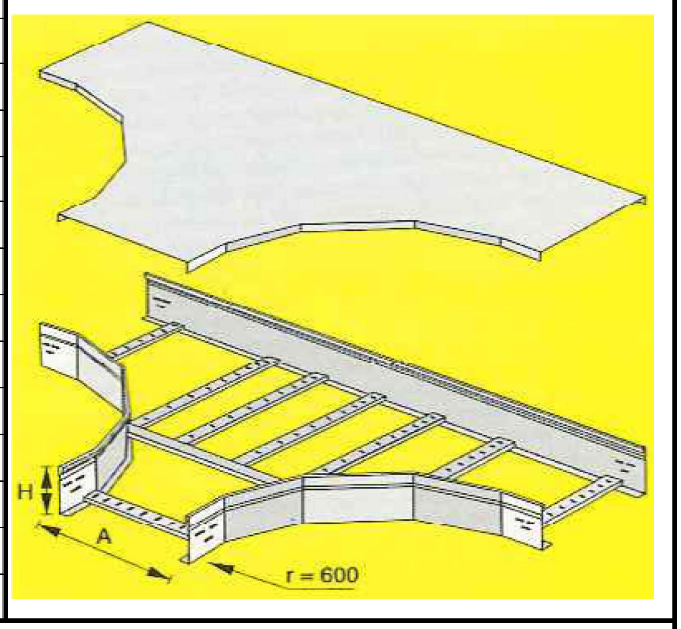
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| CROSSWIND | HOLLANDSE KUST NOORD WIND PARK Project<br>Contract No. CW-I-WP4-2023-05 | ROSETTI MARINO<br>Sh: 16 of 19 |
|---|---|---|
| Document Title: | Technical Data Sheet (TDS) for Electrical Cable Trays & Accessories | Date: 30/09/2024<br>Rev.: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

TITLE

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

| | | | | | |
|---|---|---|---|---|---|
| 1 | TYPE | CABLE LADDER | ☑ | | |
| 2 | | PERFORATED | ☐ | | |
| 3 | | CLOSED | ☐ | | |
| 4 | | FLANGE | SIMPLE ☐ | BORDERED ☑ | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | MATERIAL | HOT DIP GALVANIZED STEEL | ☐ | | |
| 9 | | ELECTROLYTICALLY GALVANIZED STEEL | ☐ | | |
| 10 | | SENDZIMIR GALCANIZED STEEL | ☐ | | |
| 11 | | STAINLESS STEEL AISI 304 | ☐ | | |
| 12 | | STAINLESS STEEL AISI 316 | ☑ | | |
| 13 | | ALLUMINIUM | ☐ | | |
| 14 | | FRP / GRP for Hazardous Area | ☐ | | |




15

## TEE CONNECTION INCLUDING COVER + FIXING CLIP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18 | INTERNAL RADIUS [mm] | 300 | ☑ | 500 | ☐ | 900 | ☑ |
| 19 | | 400 | ☐ | 600 | ☑ | | |
| 20 | HEIGTH [mm] | 50 | ☐ | 100 | ☑ | | |
| 21 | | 75 | ☐ | 150 | ☐ | | |
| 22 | WIDTH [mm] | 50 | ☐ | 300 | ☑ | | |
| 23 | | 100 | ☐ | 450 | ☑ | | |
| 24 | | 150 | ☑ | 600 | ☑ | | |
| 25 | | 200 | ☐ | 750 | ☑ | | |

26
27

## QUANTITY

| | HEIGHT x WIDTH , RADIUS [mm] | QUANTITY [pc] |
|---|---|---|
| 28 | | |
| 29 | H100 x W300 , R300 | 3 |
| 30 | H100 x W450 , R600 | 3 |
| 31 | H100 x W600 , R600 | 4 |
| 32 | H100 x W150 , R900 | 3 |
| 33 | H100 x W300 , R900 | 6 |
| 34 | H100 x W600 , R900 | 3 |
| 35 | H100 x W750 , R900 | 3 |
| 36 | FIXING CLIP | 150 |

37

| | CODE | REMARKS |
|---|---|---|
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 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 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | E-MCT-205 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10004538 | | 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. | Note |
| **5** | If required produce Red Line Mark Up for "AS BUILT" | |

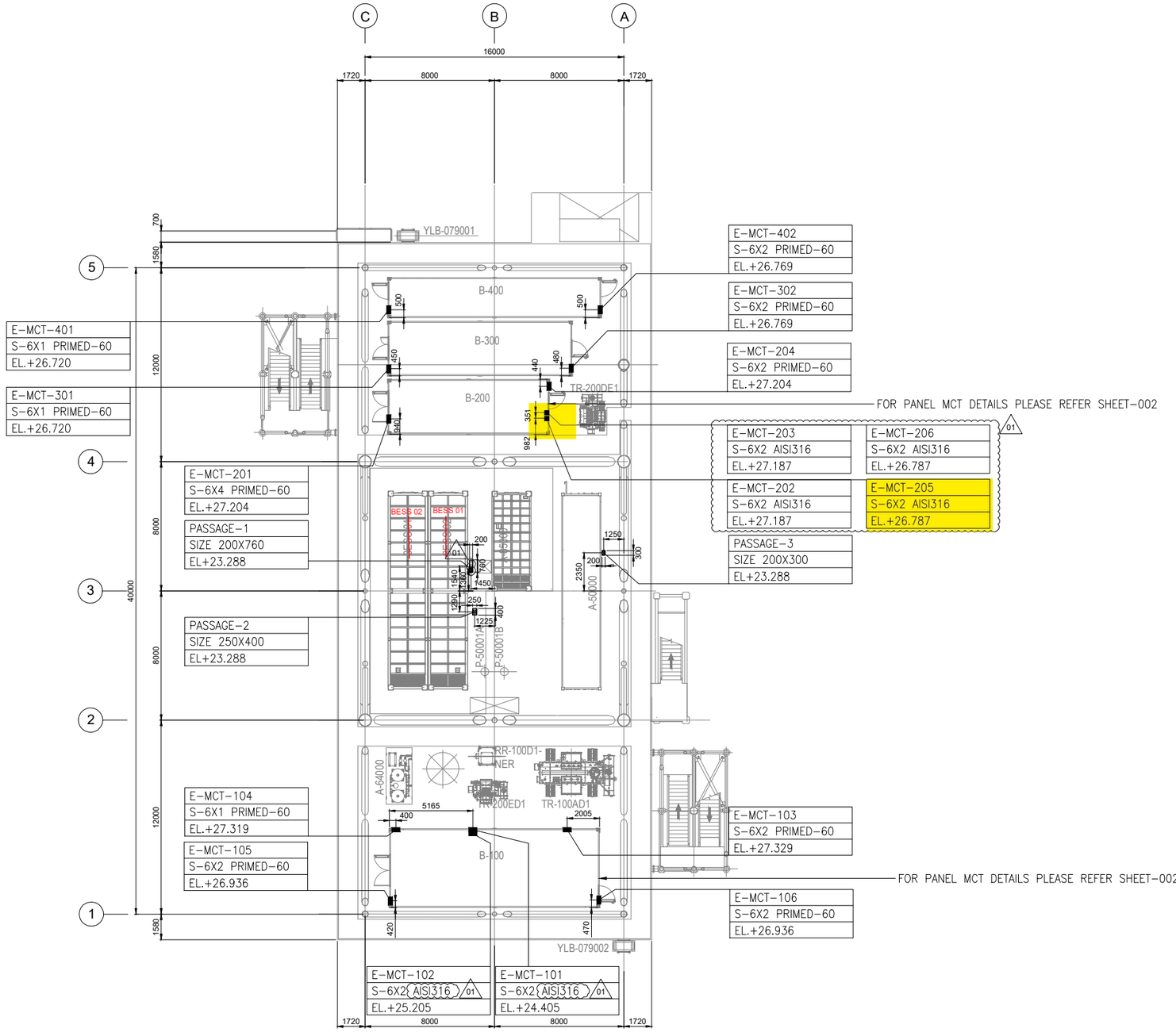
Comments: Note 4: Refer to PL n* C30002351



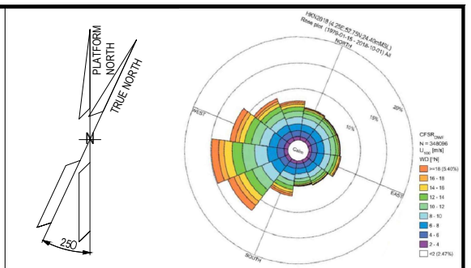
| | Performed by | ☉ WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Francesco Zucca | Paolo Schintu | |
| **Date** | 2024-12-31 | 2025-01-07 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-31T09:39:26.253Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-07T08:25:50.243Z | |

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

S 6X1 (FOR E-MCT-104) S 6X1 (FOR E-MCT-301, E-MCT-401) S 6X2

S 6X3 S 6X4

LEGEND PASSAGE FRAME

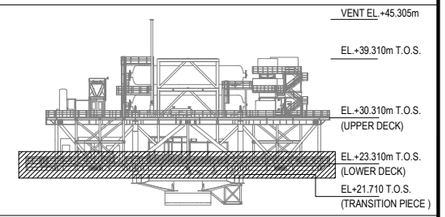
| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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**

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

**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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| 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 |
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| 13 | E-MCT-202 | S 6X2 **AISI316** | 48 |
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| 15 | E-MCT-204 | S 6X2 PRIMED | 56 |
| 16 | E-MCT-205 | S 6X2 **AISI316** | 60 |
| 17 | E-MCT-206 | S 6X2 **AISI316** | 64 |
| 18 | E-MCT-301 | S 6X1 PRIMED | 68 |
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| 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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FDL DWG: **123A90-FDL-EL-DD-20095**

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

ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

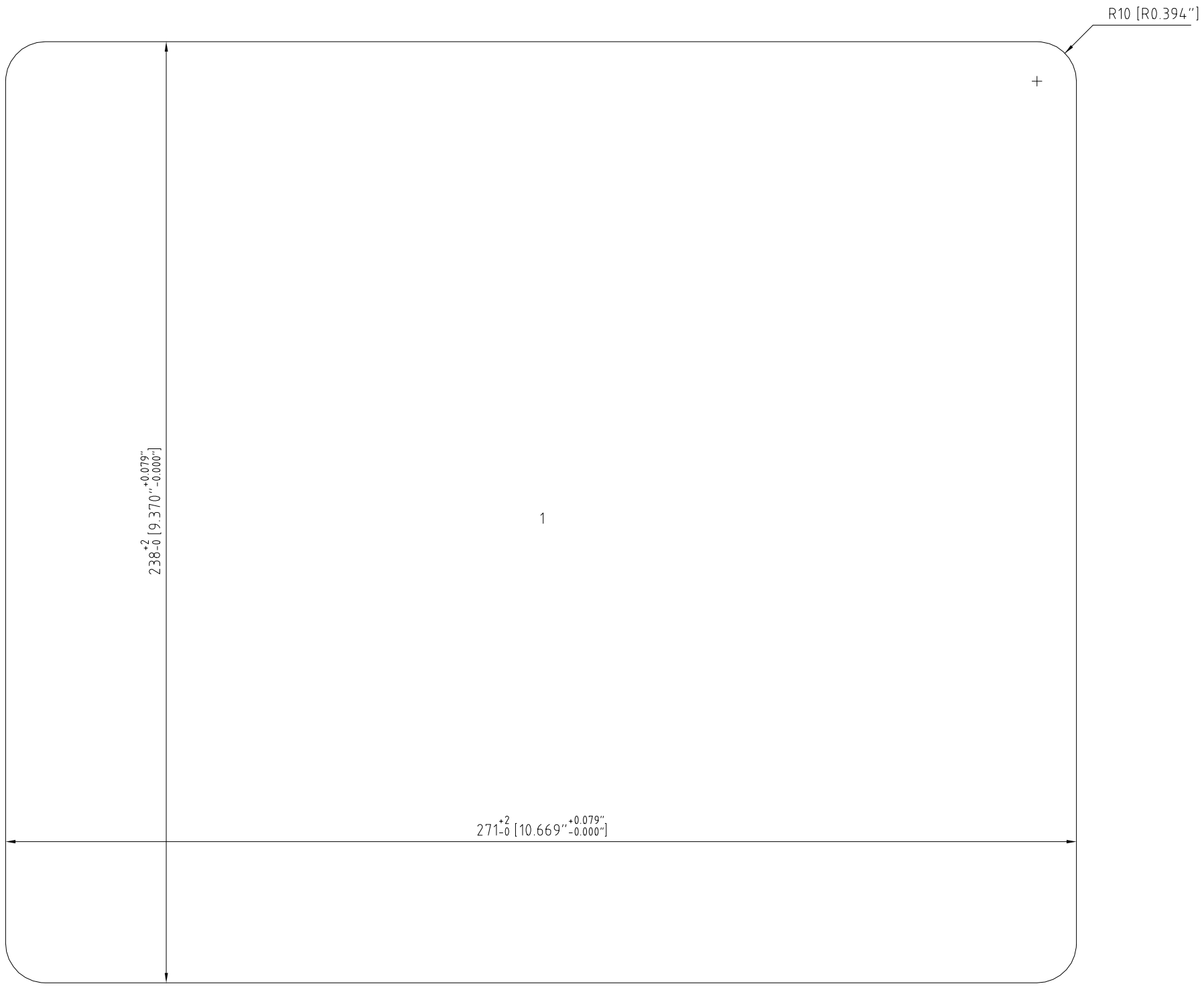
**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20095**

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

**ROSETTI MARINO SpA**

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

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Cutout Detail

Frame: S 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: 2024-07-10 | Project: BLPH - ROS<br>Location/ Sublocation | TotWeight: 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-205 | Sheet No: 1/3 |
| | Client | | Drawing number | Rev |

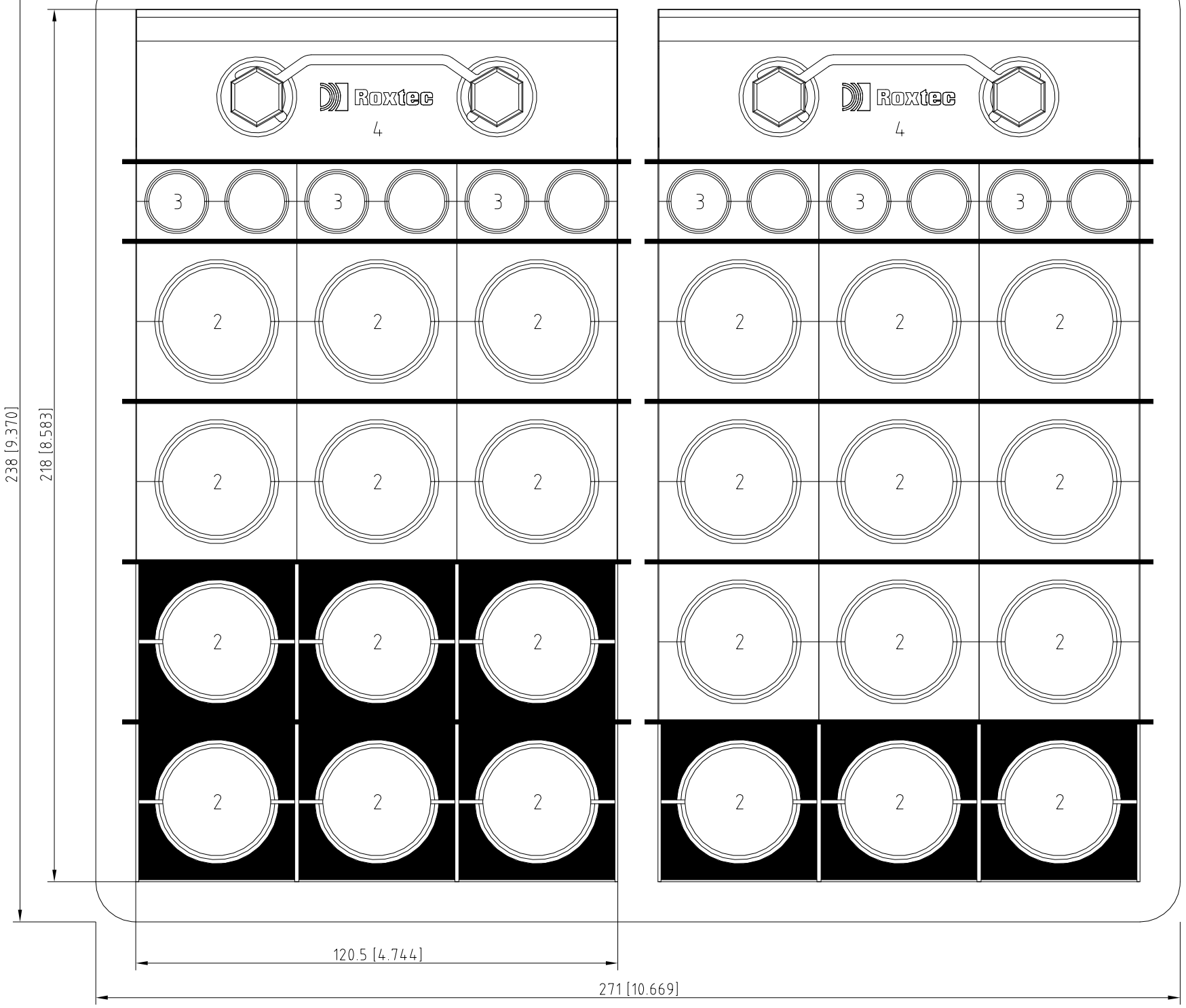
RTD Version No: 4.37.4.0

# 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**




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

## Detail Drawing

Solution: 1

| Item | Qty | Roxtec Packing Material mm [ "] | Roxtec Art No | Weight Kg [lb] |
|---|---|---|---|---|
| 5 | 10 | Stayplate 120 AISI 316 | ASP0001200021 | 0.1 [0.22] |
| 4 | 2 | Wedge 120 AISI 316 | ARW0001201021 | 0.8 [1.76] |
| 3 | 6 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 2 | 24 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 1 | 1 | S 6x2 AISI316 | S006000000221 | 5.8 [12.79] |

| Responsible | Created Date | Modify Date | Project | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-10 | BLPH - ROS<br>Location/ Sublocation | 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-205 | Sheet No: 2/3 |
| | Client | | Drawing number | Rev |

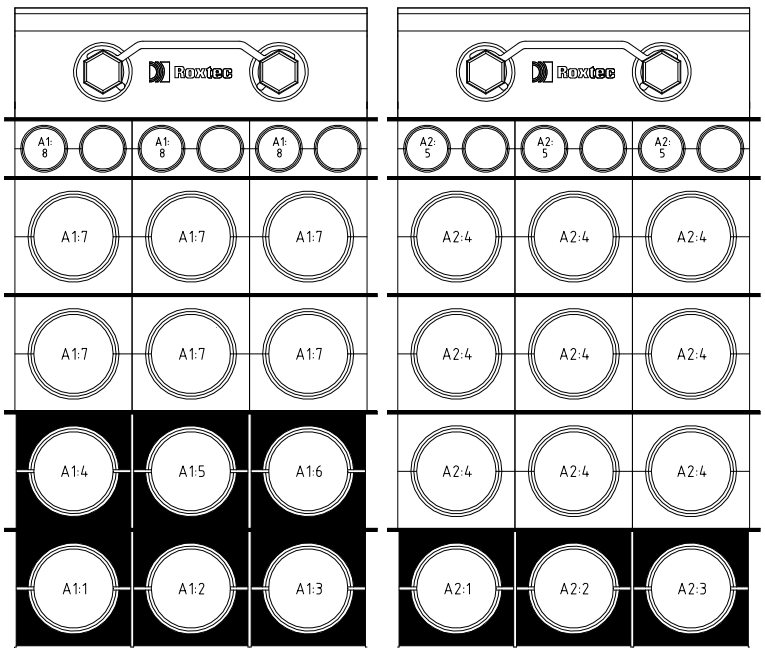

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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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A1 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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|---|---|---|
| 1_A | 08/08/24 | G.Randi |

**ROSETTI MARINO SpA**

| | | | | | | |
|---|---|---|---|---|---|---|
| A2:5 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:4 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:3 | 83001-CEL-2-L3 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:2 | 83001-CEL-2-L2 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:1 | 83001-CEL-2-L1 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A1:8 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:7 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:6 | 83001-CEL-3-L3 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:5 | 83001-CEL-3-L2 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:4 | 83001-CEL-3-L1 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:3 | 83001-CEL-1-L3 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:2 | 83001-CEL-1-L2 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:1 | 83001-CEL-1-L1 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

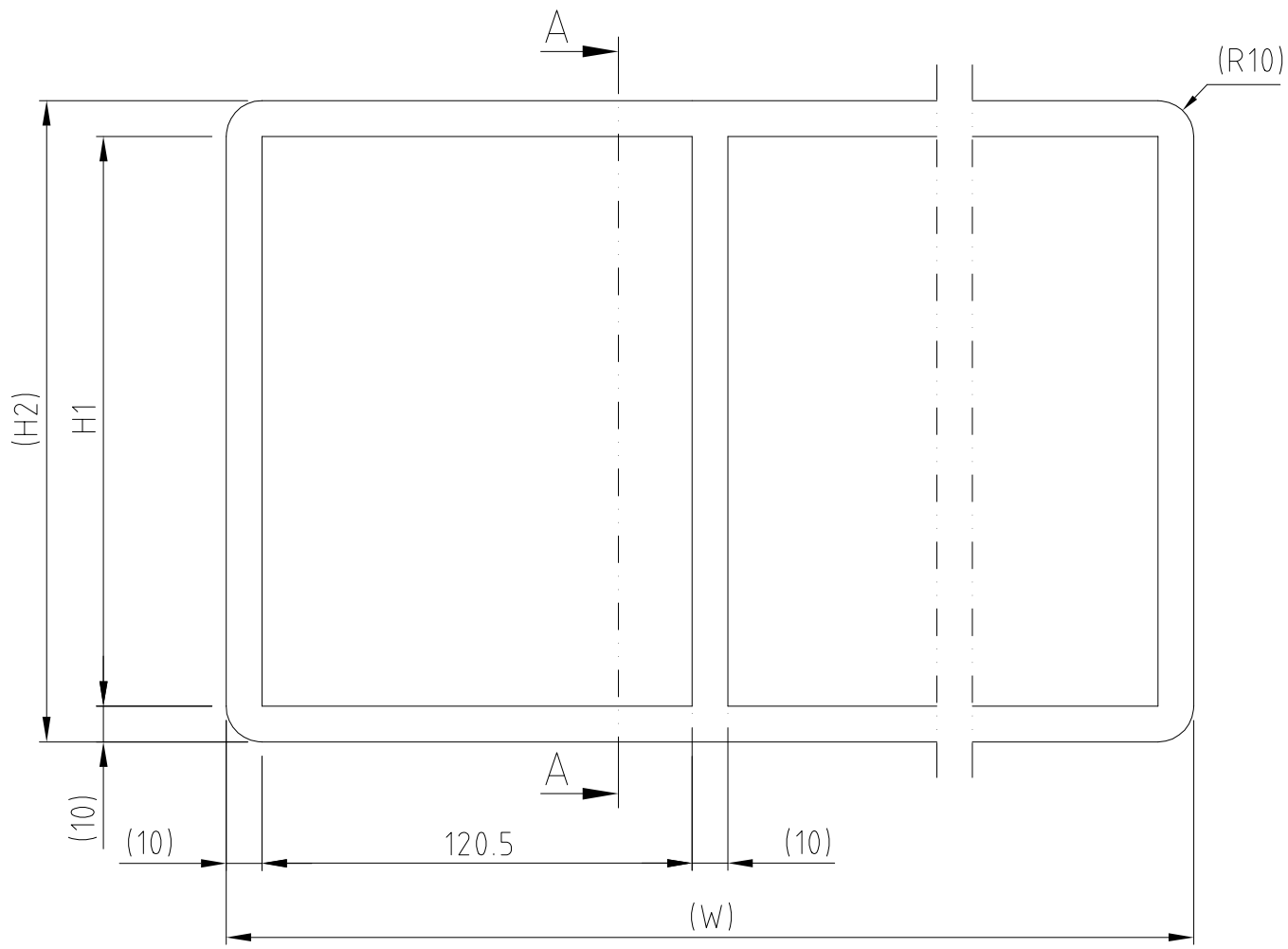
| | | | | |
|---|---|---|---|---|
| Responsible: ARNESH | Created Date: 2024-07-10 | Modify Date: 2024-07-10 | Project: BLPH - ROS<br>Location/ Sublocation | TotWeight: 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-205 | Sheet No: 3/3 |
| | Client | Drawing number | | Rev |

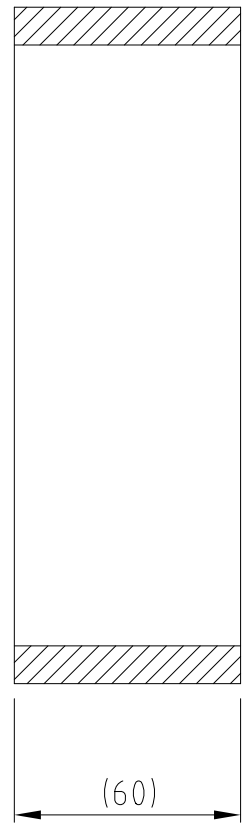
**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DD-20095**

| 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<br>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 |
| | | | | | |
| | | | | | |
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| | | | | | |
| | 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-206 | : Multi Cable Transit | | | Dwg | 123A90-DDL-EL-DL-20115 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10004539 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Electrical | Form | CPX29 MCT Penetration Electrical |

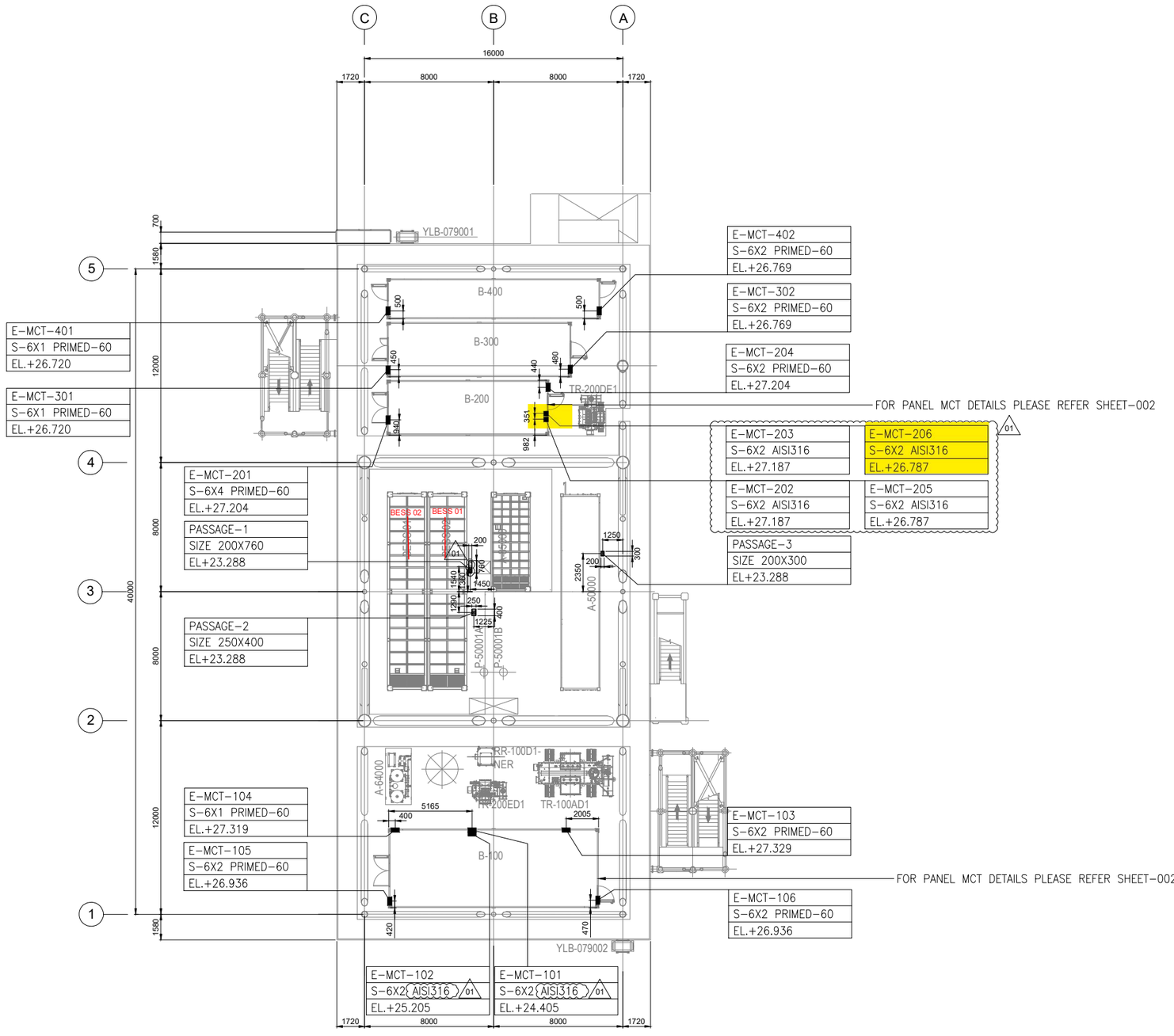
| | | |
|---|---|---|
| **1** | Check that MCT's conforms to revision and specification. | OK |
| **2** | Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment. | Note |
| **3** | Check MCT's is properly tagged, on both side of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

Comments: Note 2: Refer to PL n* C30002351

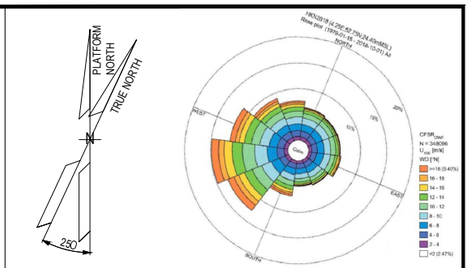
| **Page 1/1** | Performed by | ☉ WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Michele Tartaglia | Paolo Schintu | |
| **Date** | 2025-01-04 | 2025-01-09 | |
| **Signature** | PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-04T11:01:30.155Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-09T07:48:37.032Z | |

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

REV. 01




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




## NOTES

### GENERAL NOTES:

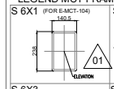
1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. ALL ELEVATIONS RELATE TO LOWEST ASTRONOMICAL TIDE (LAT) = 0.000.

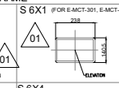
### NOTES:

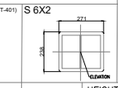
1. THIS DOCUMENT IS VALID FOR TAGGING, SIZE AND LOCATION OF THE MCT.

## LEGEND

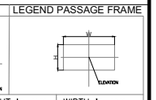
LEGEND MCT FRAME

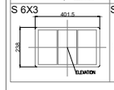


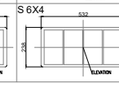




LEGEND PASSAGE FRAME



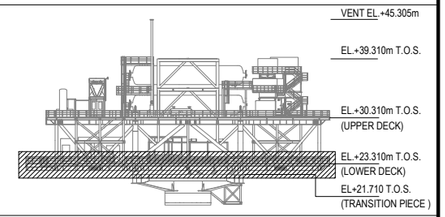

| | HEIGHT in mm | WIDTH in mm |
|---|---|---|
| PASSAGE-1 | 100 | 300 |
| PASSAGE-2 | 150 | 200 |
| PASSAGE-3 | 100 | 200 |

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**

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

**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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| 2 | INDEX | | 3 |
| | **BELOW LOWER DECK MCT** | | 5 |
| 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 |
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| 10 | E-MCT-105 | S 6X2 PRIMED | 35 |
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| 12 | E-MCT-201 | S 6X4 PRIMED | 43 |
| 13 | E-MCT-202 | S 6X2 **AISI316** | 48 |
| 14 | E-MCT-203 | S 6X2 **AISI316** | 52 |
| 15 | E-MCT-204 | S 6X2 PRIMED | 56 |
| 16 | E-MCT-205 | S 6X2 **AISI316** | 60 |
| 17 | E-MCT-206 | S 6X2 **AISI316** | 64 |
| 18 | E-MCT-301 | S 6X1 PRIMED | 68 |
| 19 | E-MCT-302 | S 6X2 PRIMED | 72 |
| 20 | E-MCT-401 | S 6X1 PRIMED | 76 |
| 21 | E-MCT-402 | S 6X2 PRIMED | 80 |
| | **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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FDL DWG: 123A90-FDL-EL-DD-20095
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

RTD Version No: 4.37.4.0

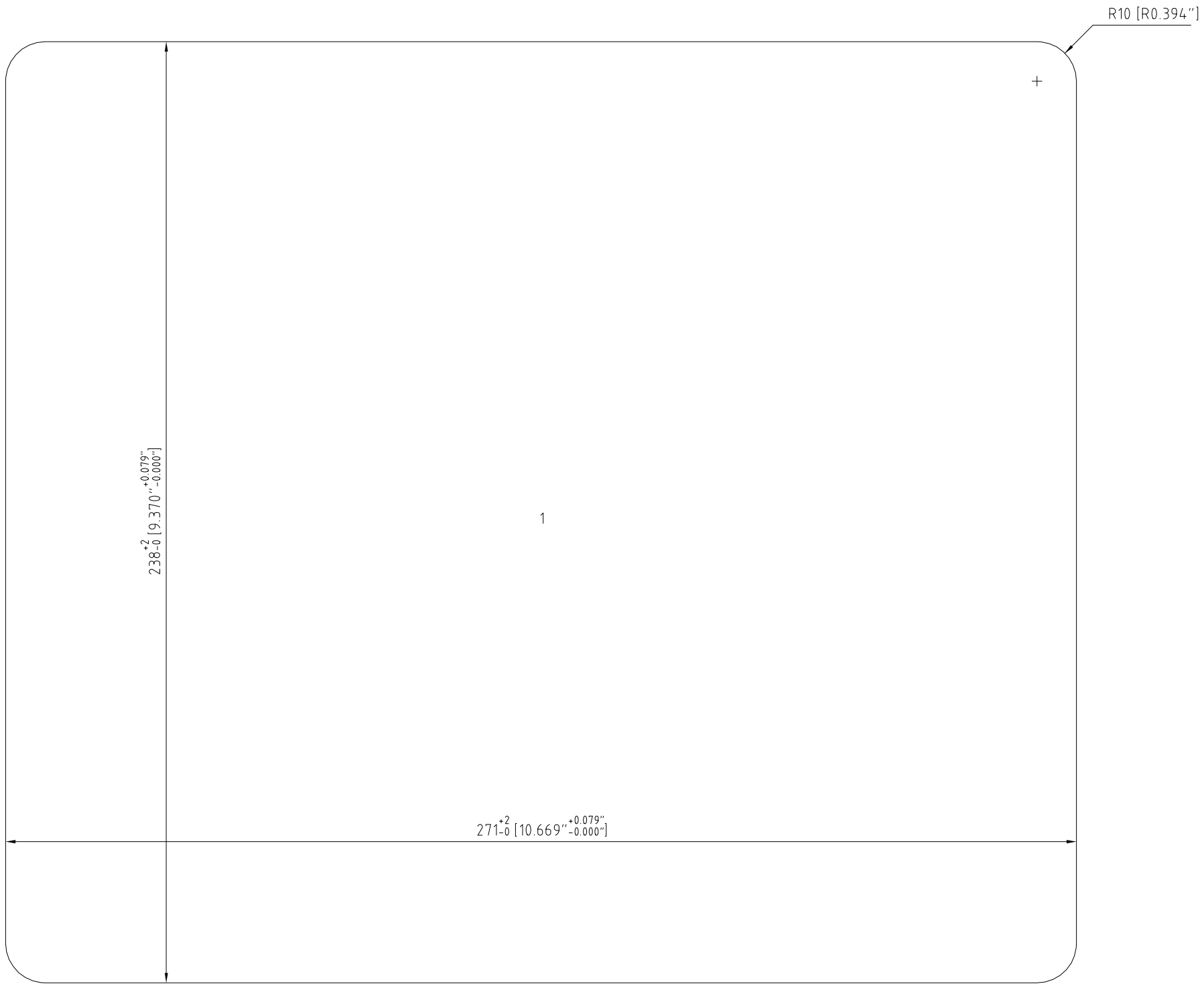
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FDL DWG: **123A90-FDL-EL-DD-20095**

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

**ROSETTI MARINO SpA**

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

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Cutout Detail

Frame: S 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: 2024-07-10 | Project: BLPH - ROS<br>Location/ Sublocation | TotWeight: 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-206 | Sheet No: 1/3 |
| | Client | | Drawing number | Rev |

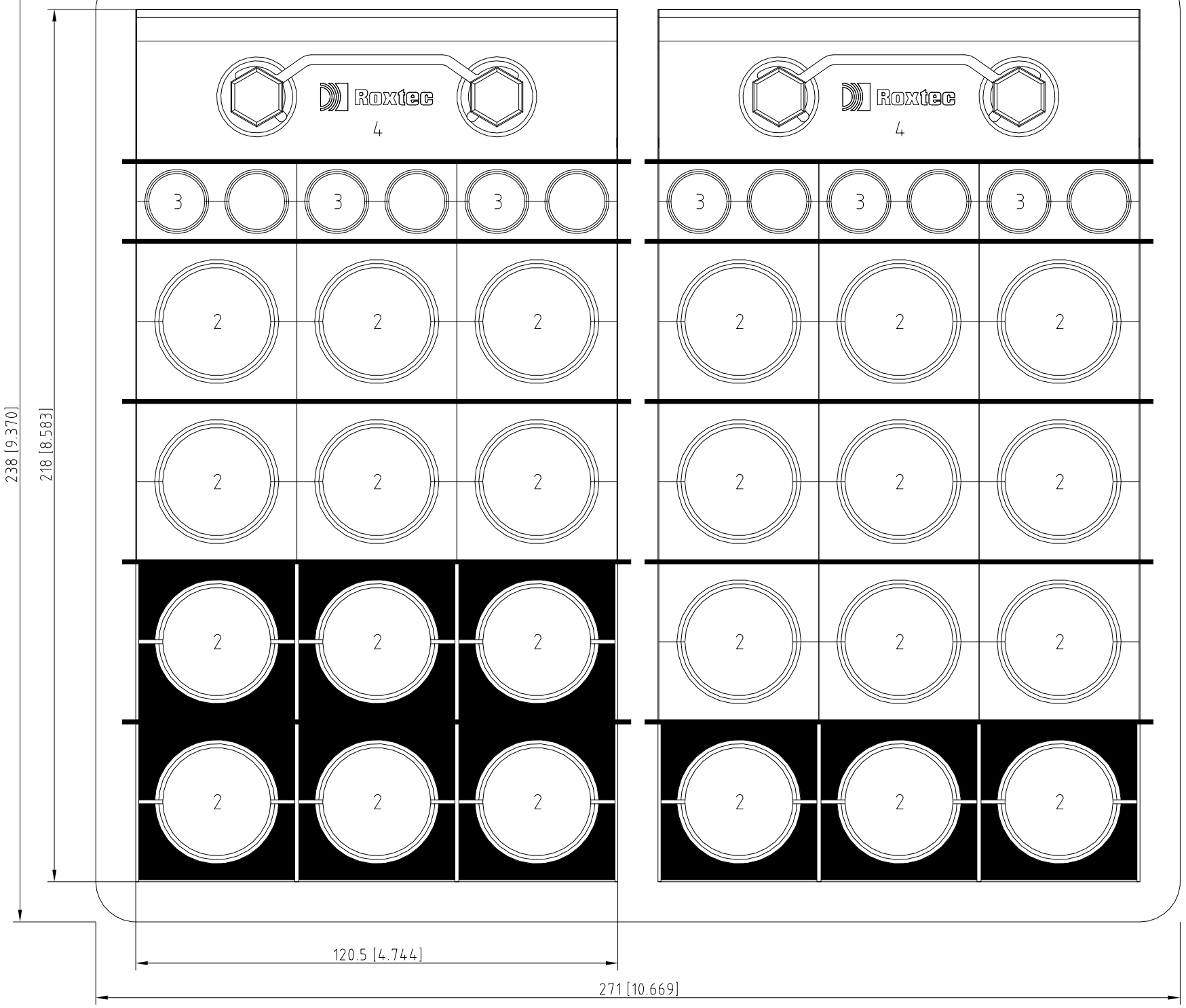
RTD Version No: 4.37.4.0

# 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**




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

## Detail Drawing

Solution: 1

| Item | Qty | Roxtec Packing Material mm [ "] | Roxtec Art No | Weight Kg [lb] |
|---|---|---|---|---|
| 5 | 10 | Stayplate 120 AISI 316 | ASP0001200021 | 0.1 [0.22] |
| 4 | 2 | Wedge 120 AISI 316 | ARW0001201021 | 0.8 [1.76] |
| 3 | 6 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 2 | 24 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 1 | 1 | S 6x2 AISI316 | S006000000221 | 5.8 [12.79] |

| Responsible | Created Date | Modify Date | Project / Location/ Sublocation | TotWeight |
|---|---|---|---|---|
| ARNESH | 2024-07-10 | 2024-07-10 | BLPH - ROS | 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-206 | Sheet No: 2/3 |
| | Client | | Drawing number | Rev |

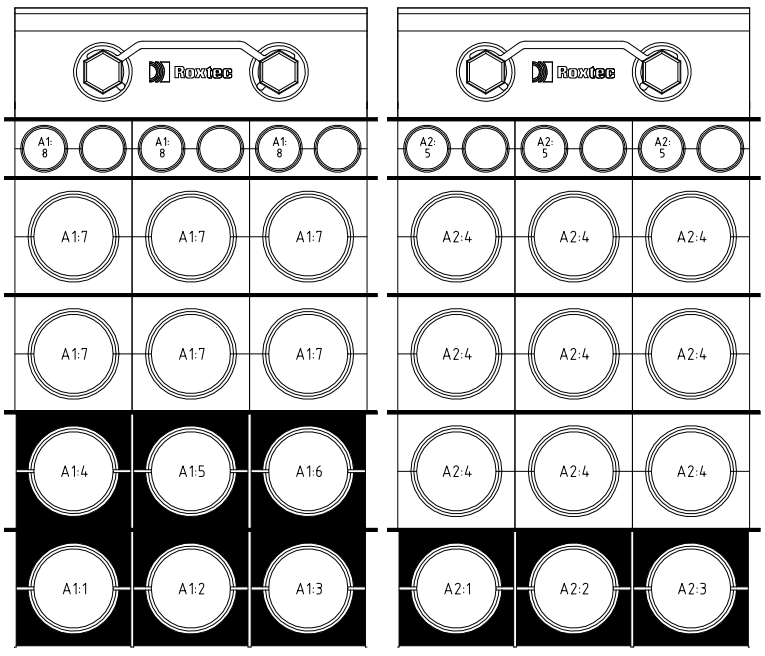

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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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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|---|---|---|
| 1_A | 08/08/24 | G.Randi |

**ROSETTI MARINO SpA**

| | | | | | | |
|---|---|---|---|---|---|---|
| A2:5 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A2:4 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:3 | 83001-CEL-4-L3 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:2 | 83001-CEL-4-L2 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A2:1 | 83001-CEL-4-L1 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| | | | | | | |
| A1:8 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:7 | | | | | | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:6 | 83001-CEL-5-L3 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:5 | 83001-CEL-5-L2 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:4 | 83001-CEL-5-L1 | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:3 | 83001-CEL-3-N | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:2 | 83001-CEL-2-N | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:1 | 83001-CEL-1-N | LV Switchgear | 1C X 300 | Power | 29.4 [1.157"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |

MODULE WITH PIPE MODULE WITH CABLE SPARE MODULE SOLID MODULE

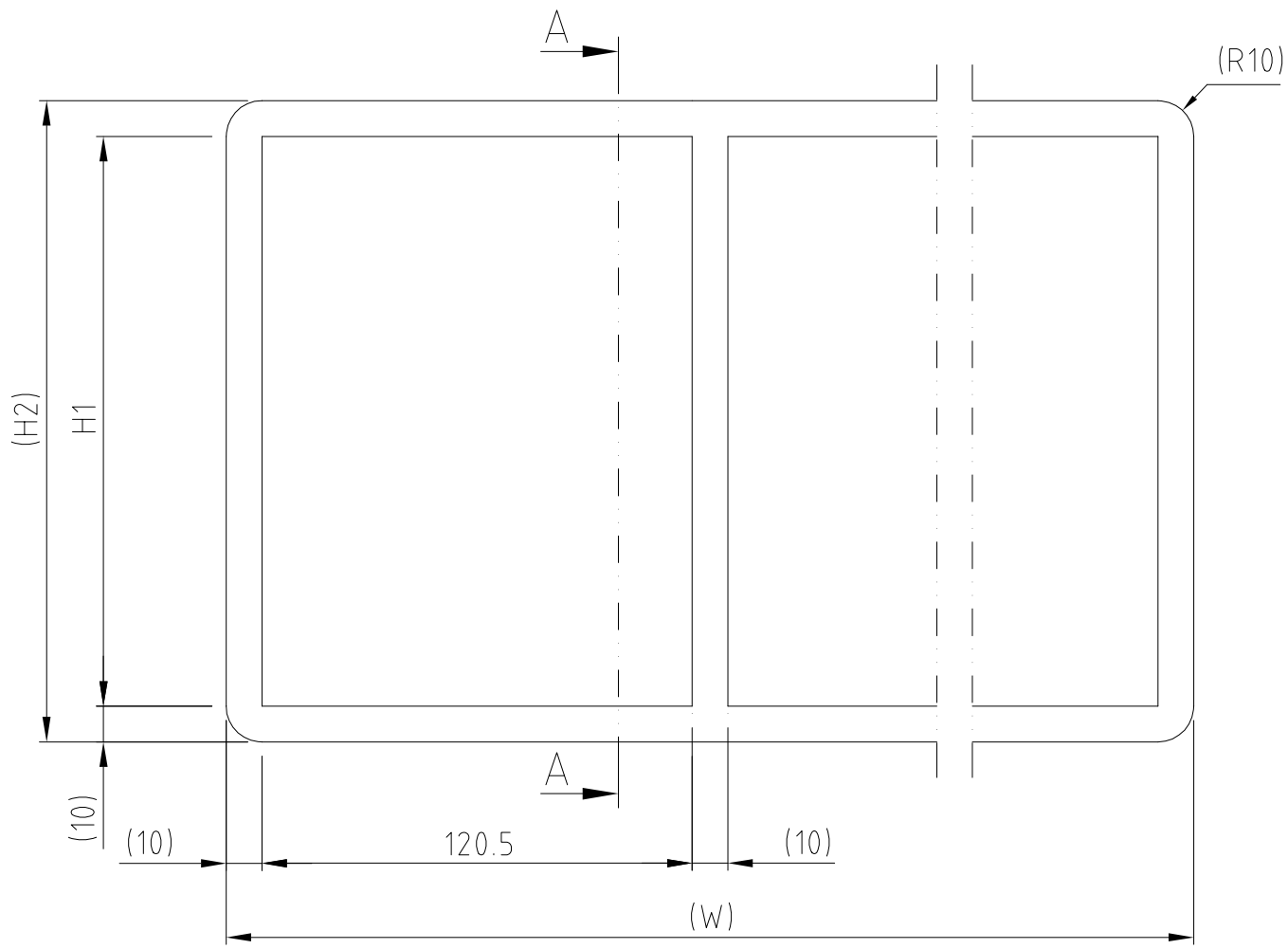
| | | | | |
|---|---|---|---|---|
| Responsible: ARNESH | Created Date: 2024-07-10 | Modify Date: 2024-07-10 | Project: BLPH - ROS<br>Location/ Sublocation | TotWeight: 12.2 [26.85] |
| Roxtec | Format: NTS | | Transit name: E-MCT-206 | Sheet No: 3/3 |
| | Client | Drawing number | | Rev |

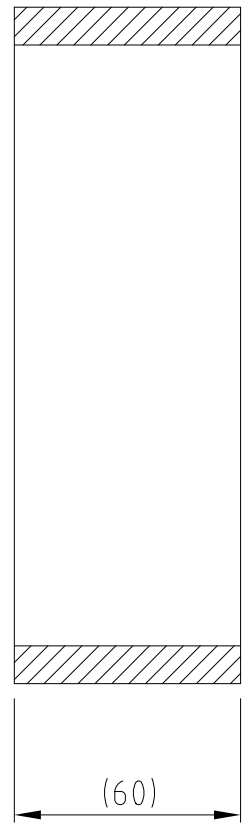
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FDL DWG: **123A90-FDL-EL-DD-20095**

| 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<br>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 |
| | | | | | |
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| | NOTES | | | | 00 |
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|---|---|---|---|---|
| | 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 |
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| | 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 |
| | | | | |

# Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 90-02 & process: MC & discipline : I

| Instrumental | 90-02 LV Switchgear Room B-200 | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| CABLE_TRAY_B200_INS | Cable Tray B200 - Instrumental | ONSHORE | C10002286 | CJX30A | 100 | 2024-10-02 | RFC 1 |
| | | ONSHORE | C10002287 | CJX30B | 100 | 2025-01-25 | RFC 1 |
| I-MCT-201 | Multi Cable Transit | ONSHORE | C10001897 | CJX29 | 100 | 2025-01-09 | RFC 1 |
| I-MCT-202 | Multi Cable Transit | ONSHORE | C10001898 | CJX29 | 100 | 2025-01-22 | RFC 1 |
| I-MCT-203 | Multi Cable Transit | ONSHORE | C10001899 | CJX29 | 100 | 2025-01-22 | RFC 1 |

ROSETTI MARINO | PROVERLIS | CROSSWIND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | I-MCT-201 | : Multi Cable Transit | | | Dwg | 123A90-DDL-IN-DL-40086 |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200_Ext |
| **TASK** | code | C10001897 | | 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** | 2024-12-11 | 2025-01-09 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T17:37:00.196Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-09T11:51:51.275Z | |

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

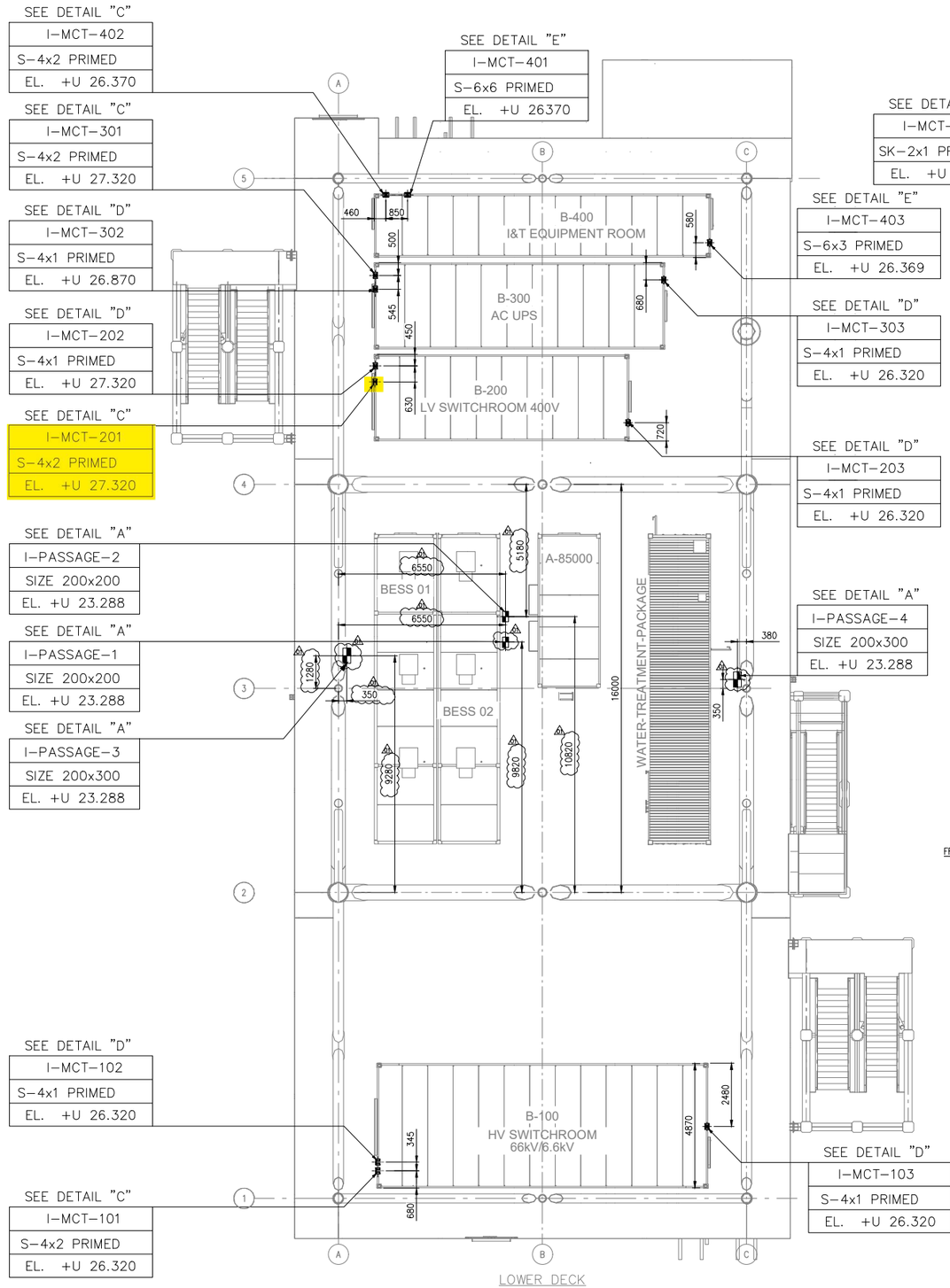
SEE DETAIL "E"
I-MCT-403
S-6x3 PRIMED
EL. +U 26.369

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

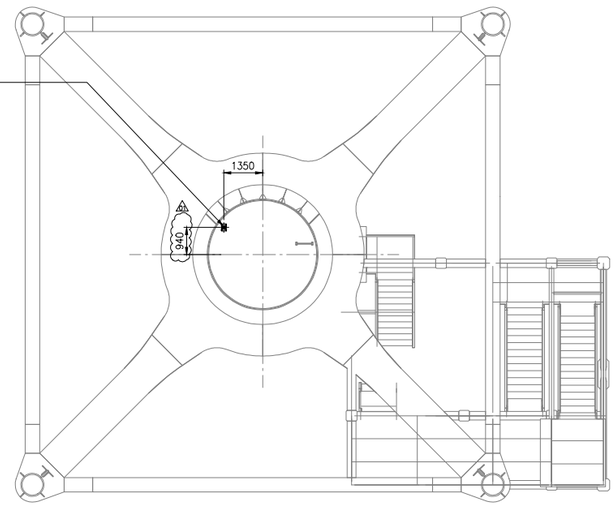
SEE DETAIL "A"
I-PASSAGE-4
SIZE 200x300
EL. +U 23.288

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




LOWER DECK

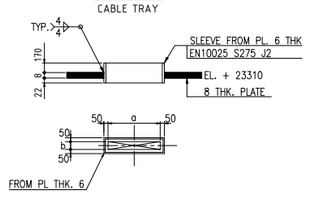
VIEW EL. +23310mm to +30310mm



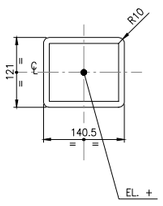

MONO PILE (TRANSISTION PIECE)

VIEW EL. +17180mm to +23340mm

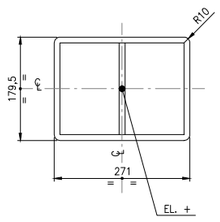
DETAIL "A"
CABLE TRAY



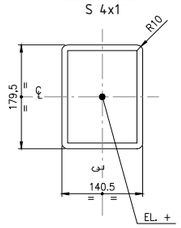

DETAIL "B"
SK 2x1



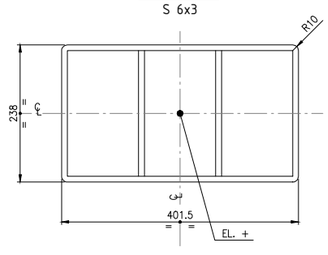

DETAIL "C"
S 4x2



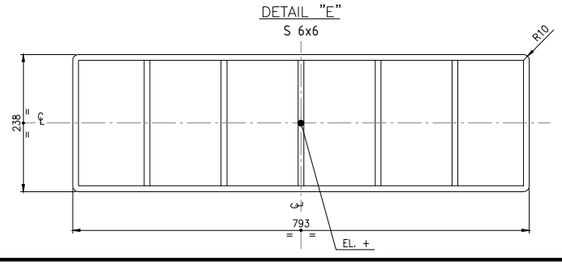

DETAIL "D"
S 4x1

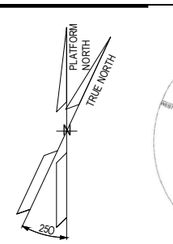


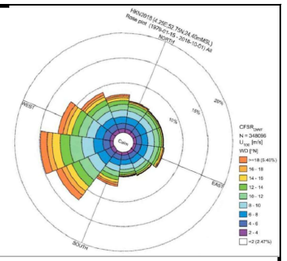

DETAIL "E"
S 6x3




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

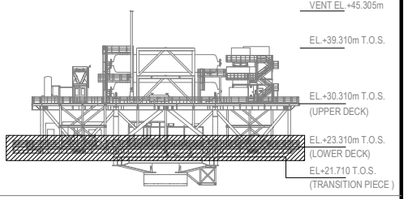
PASSAGE

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 |

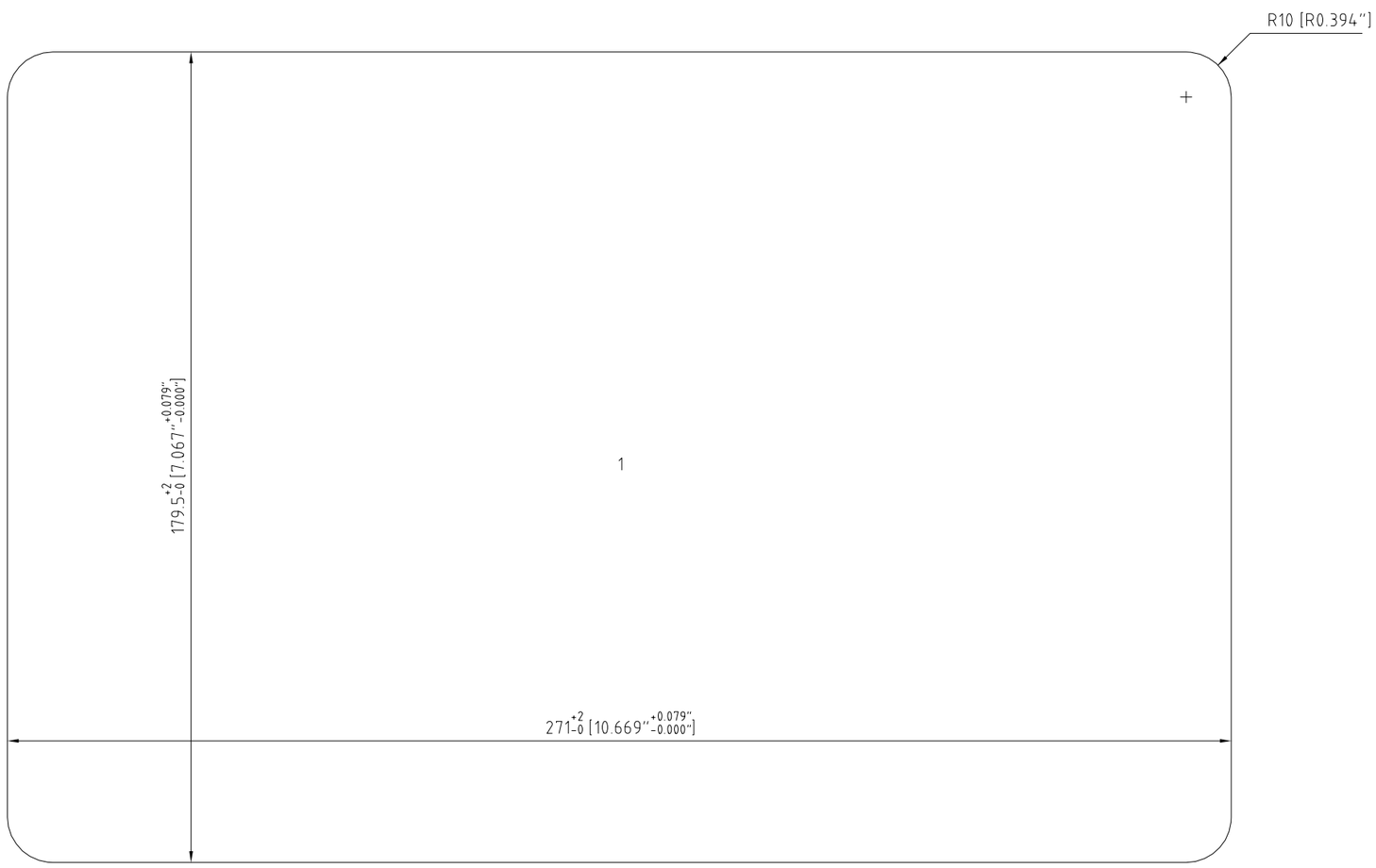
**ROSETTI MARINO SpA**

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

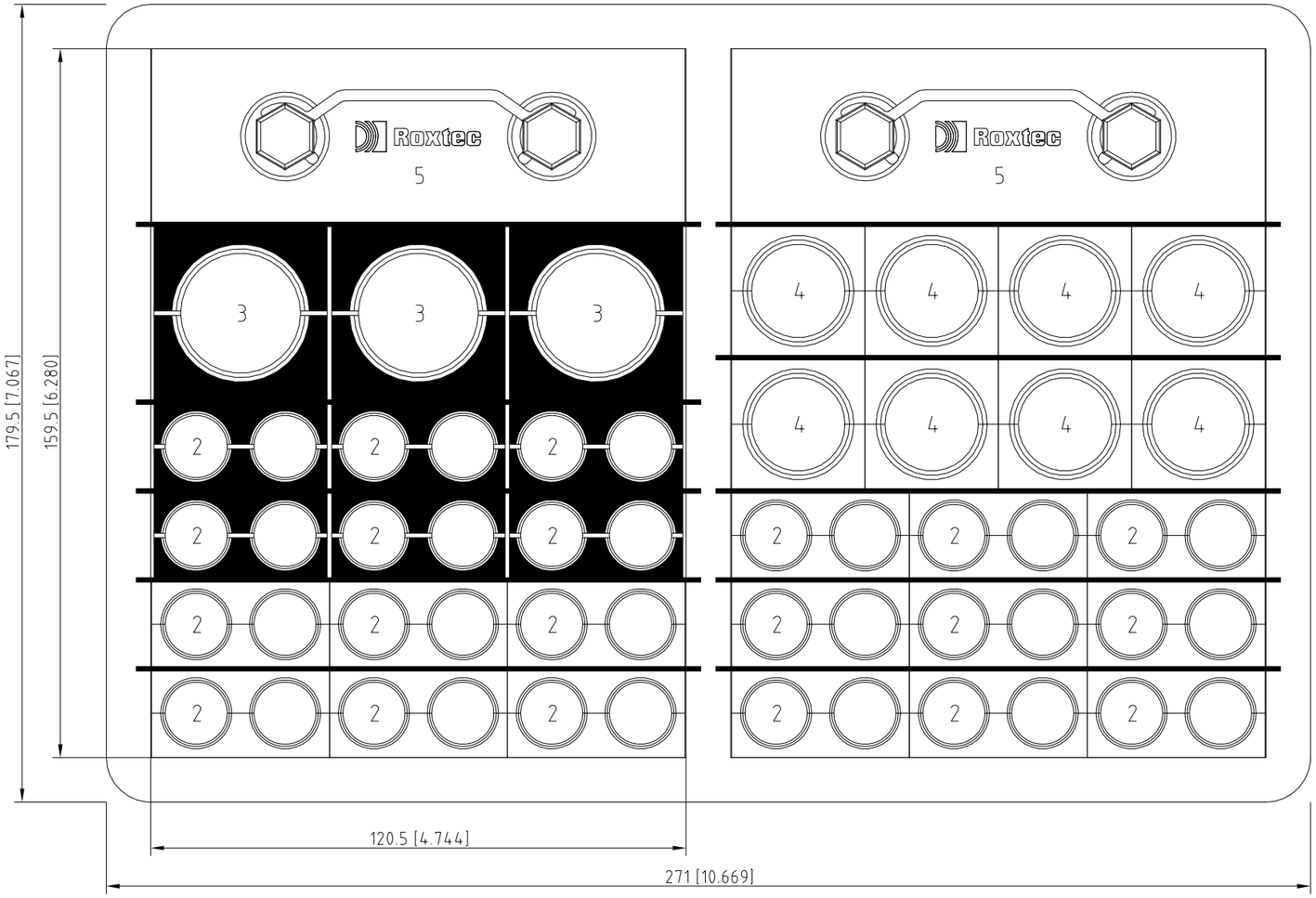
Frame: S 4x2 PRIMED Solution: 1

| 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-201 | 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-201 - B-200 LV (400V) 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 | 3 | RM 40 21.5-34.5 [0.846"-1.358"] | RM00100401000 | 0.1 [0.31] |
| 2 | 21 | RM 20W40 3.5-16.5 [0.138"-0.650"] | RM00120401000 | 0.1 [0.15] |
| 1 | 1 | S 4x2 PRIMED | S004000000212 | 4.8 [10.58] |

| | | | | |
|---|---|---|---|---|
| Responsible: Rosetti Marino | Created Date: 2024-05-24 | Modify Date: 2024-09-30 | Project: Base Load Power Hub (BLPH) Location/ Sublocation | TotWeight: 10 [22.11] |
| Roxtec | Format: NTS | | Transit name: I-MCT-201 | 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.

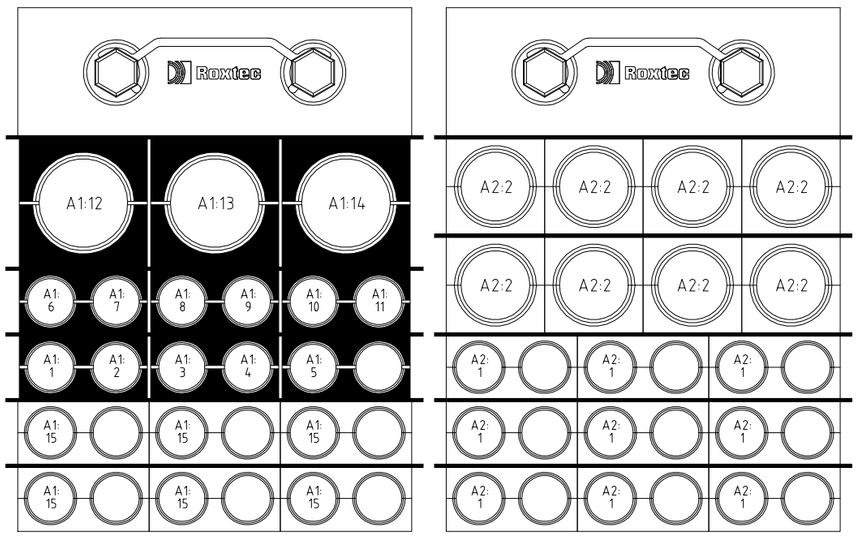
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RTD Version No: 4.37.11.0

A1 A2

# A1 A2



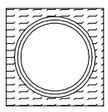

**VALID FOR CONSTRUCTION**

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

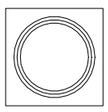
| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_A | 07/10/24 | G.Randi |

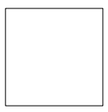
**ROSETTI MARINO SpA**

| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |
|---|---|---|---|---|---|---|
| A2:2 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A2:1 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| | | | | | | |
| A1:15 | | | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:14 | 7 | B200-HSB-001/B400-FGS-002 | 6x2x0.75 mm2 | Ex-d | 25.2 [0.992"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:13 | 6 | 950-JE-04201/B400-FGS-002 | 6x3x2.5 mm2 | Ex-d | 32.9 [1.295"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:12 | 8 | 950-JE-04203/B400-FGS-002 | 12x2.5 mm2 | Ex-d | 24.2 [0.953"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| A1:11 | 2 | C-77-XA-002/B400-SIS-001 | 1x2x0.75 mm2 | Ex-d | 11.7 [0.461"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:10 | 1 | C-77-XS-002/B400-SIS-001 | 2x2.5 mm2 | Ex-d | 14.1 [0.555"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:9 | 9 | C-950-MFA-04203/B400-FGS-002 | 1x2x0.75 mm2 | Ex-d | 11.7 [0.461"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:8 | 5 | C-B200-TIR-001/B400-PCS-002 | 2x2x0.75 mm2 | Ex-d | 15.2 [0.598"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:7 | 4 | C-B200-TDC-002/B400-PCS-002 | 1x2x0.75 mm2 | Ex-d | 9.5 [0.374"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:6 | 3 | C-B200-TDC-001/B400-PCS-002 | 1x2x0.75 mm2 | Ex-d | 9.5 [0.374"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:5 | 14 | C-950-GDZ-04215/950-JE-04201 | 3x2,5 mm2 | Ex-d | 14.7 [0.579"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:4 | 13 | C-950-GDZ-04214/950-JE-04201 | 3x2,5 mm2 | Ex-d | 14.7 [0.579"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:3 | 12 | C-950-GDZ-04213/950-JE-04201 | 3x2,5 mm2 | Ex-d | 14.7 [0.579"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:2 | 11 | C-SG-200N1-002/B400-SIS-001 | 2x2.5 mm2 | Ex-d | 14.1 [0.555"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:1 | 10 | C-SG-200N1-001/B400-SIS-001 | 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 | 10 [22.11] |
| Roxtec | Format NTS | | Transit name I-MCT-201 | Sheet No 3/3 |
| | Client | | Drawing number 123A90-DDL-IN-DD-40074 | Rev 01 |


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

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| 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<br>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-202 | : Multi Cable Transit | | Dwg | 123A90-DDL-IN-DL-40086 | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | Module | LD_B-200_Ext | |
| **TASK** | code | C10001898 | 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** | 2024-12-11 | 2025-01-22 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T17:37:13.316Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:37:14.337Z | |

DRAWING NO. 123A90-DDL-IN-DL-40086

REV. 01

SEE DETAIL "C"
I-MCT-402
S-4x2 PRIMED
EL. +U 26.370

SEE DETAIL "C"
I-MCT-301
S-4x2 PRIMED
EL. +U 27.320

SEE DETAIL "D"
I-MCT-302
S-4x1 PRIMED
EL. +U 26.870

SEE DETAIL "D"
I-MCT-202
S-4x1 PRIMED
EL. +U 27.320

SEE DETAIL "C"
I-MCT-201
S-4x2 PRIMED
EL. +U 27.320

SEE DETAIL "A"
I-PASSAGE-2
SIZE 200x200
EL. +U 23.288

SEE DETAIL "A"
I-PASSAGE-1
SIZE 200x200
EL. +U 23.288

SEE DETAIL "A"
I-PASSAGE-3
SIZE 200x300
EL. +U 23.288

SEE DETAIL "E"
I-MCT-401
S-6x6 PRIMED
EL. +U 26370

SEE DETAIL "B"
I-MCT-T01
SK-2x1 PRIMED
EL. +U 21.680

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

SEE DETAIL "D"
I-MCT-303
S-4x1 PRIMED
EL. +U 26.320

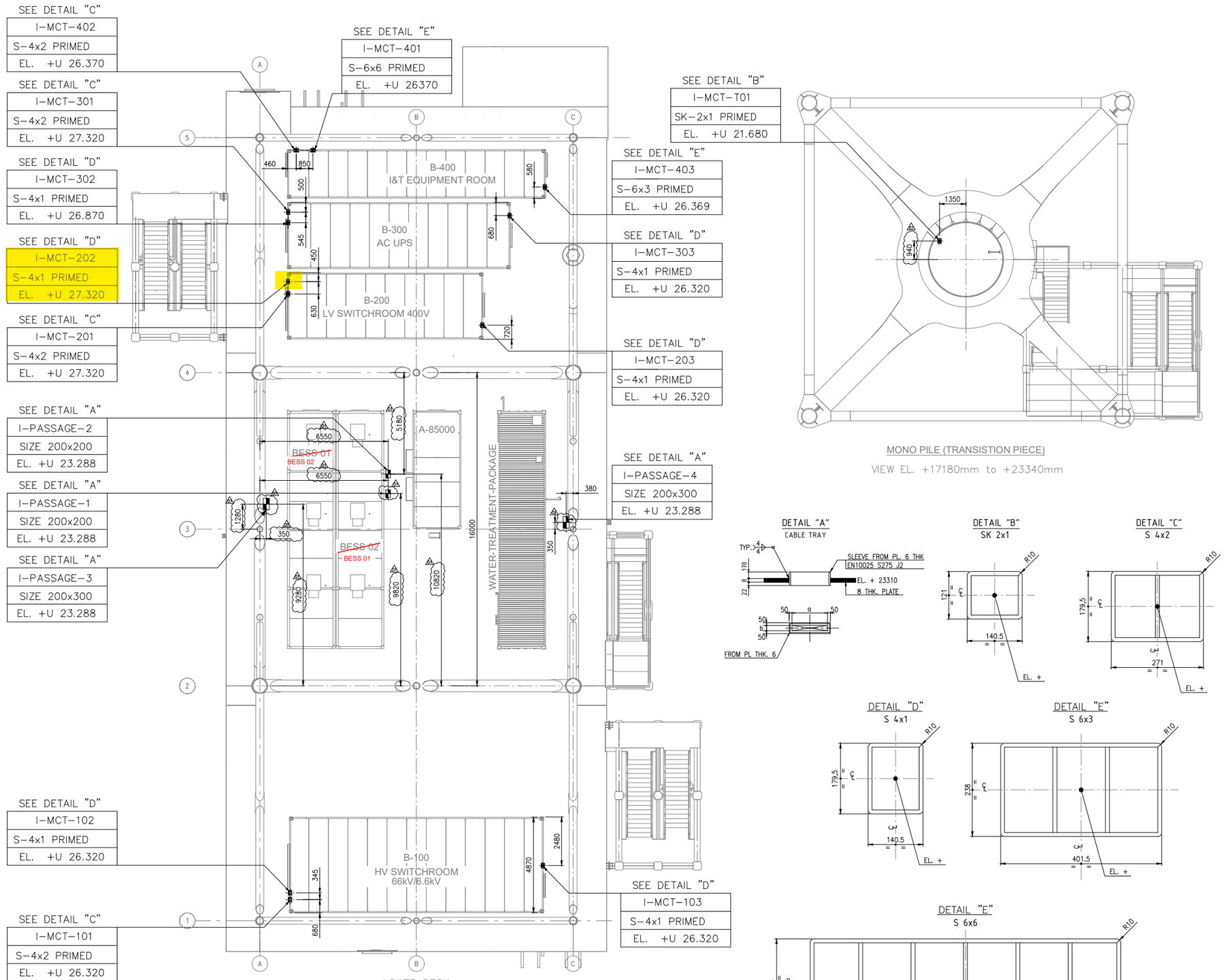
SEE DETAIL "D"
I-MCT-203
S-4x1 PRIMED
EL. +U 26.320

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

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 "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



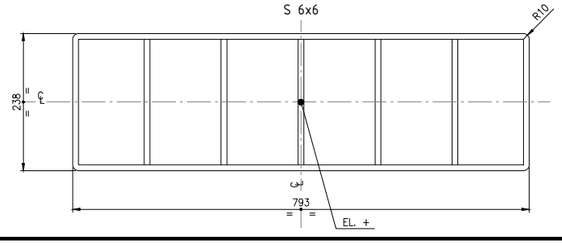

DETAIL "D"
S 4x1

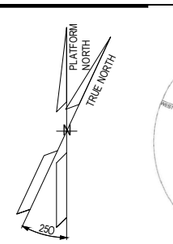


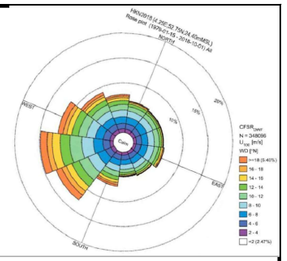

DETAIL "E"
S 6x3




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

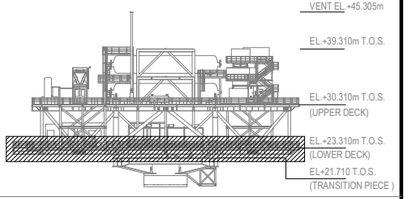
PASSAGE

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 REV01.dwg

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40086

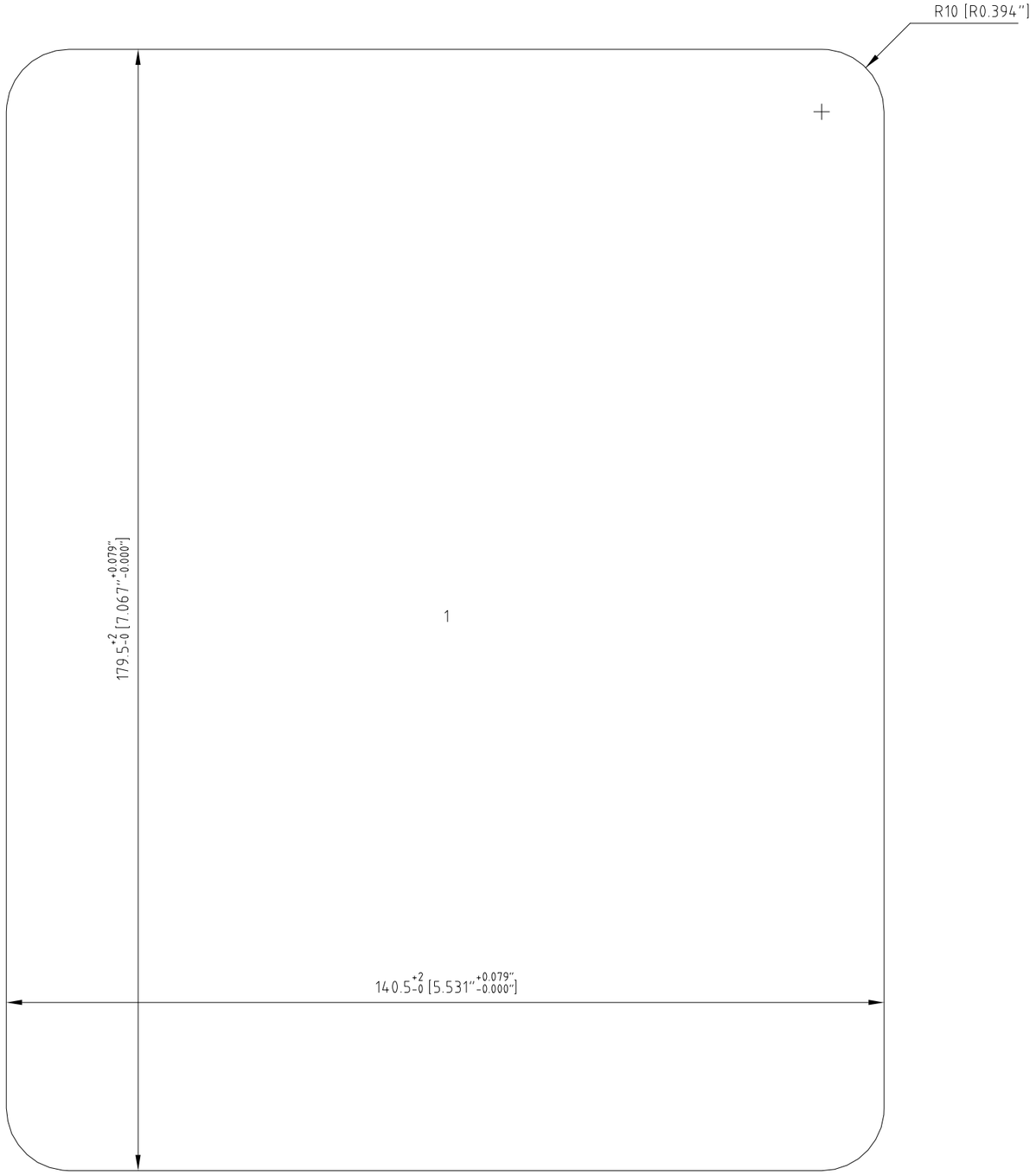
| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_B | 12/12/24 | C.Pilato |

ROSETTI MARINO SpA

RTD Version No: 4.37.11.0

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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

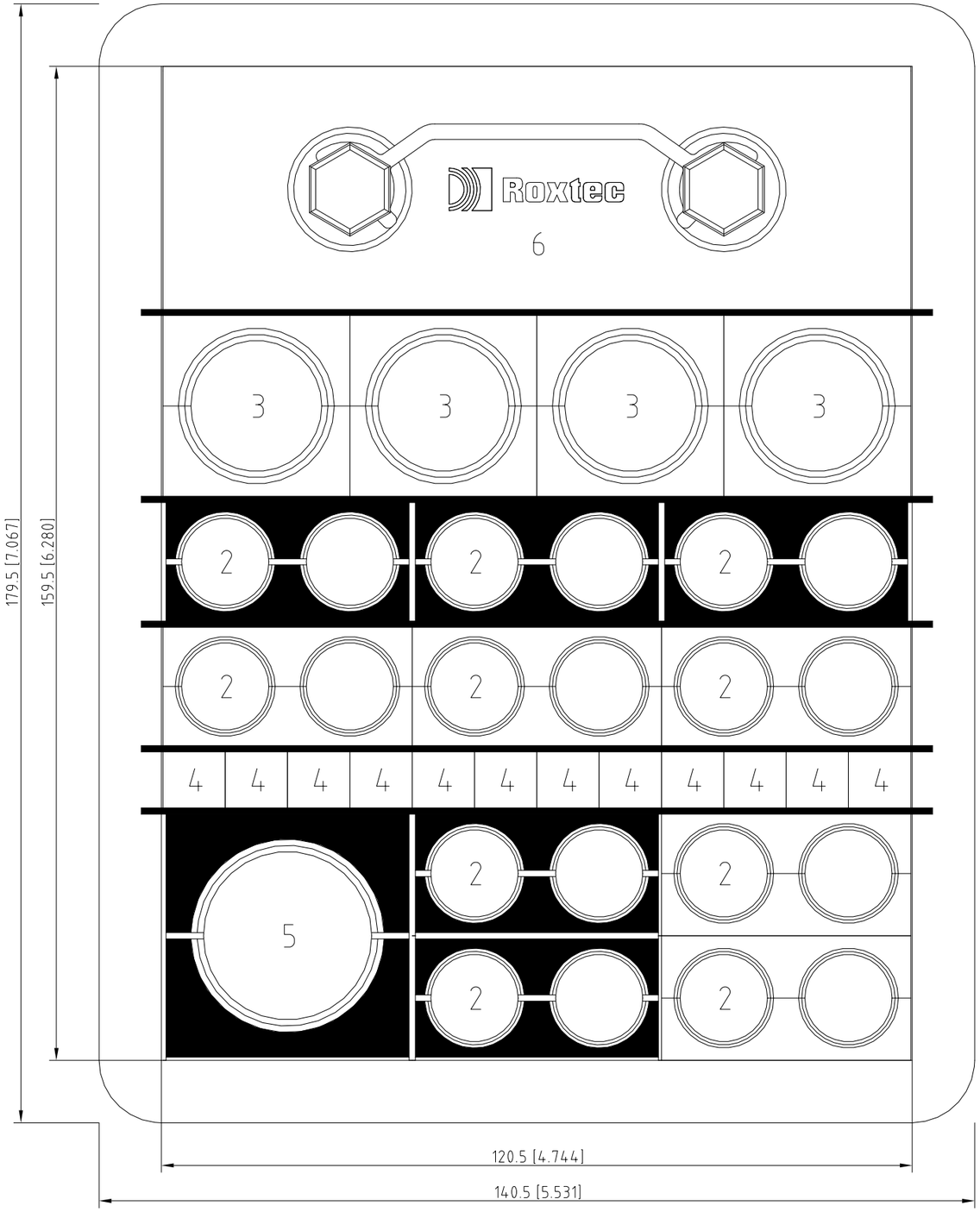
Frame: S 4x1 PRIMED Solution: 1

| 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-202 | 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-202 - B-200 LV (400V) Switchgear Room

| 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-202 | Sheet No: 2/3 |
| | Client | | Drawing number: 123A90-DDL-IN-DD-40074 | Rev: 01 |

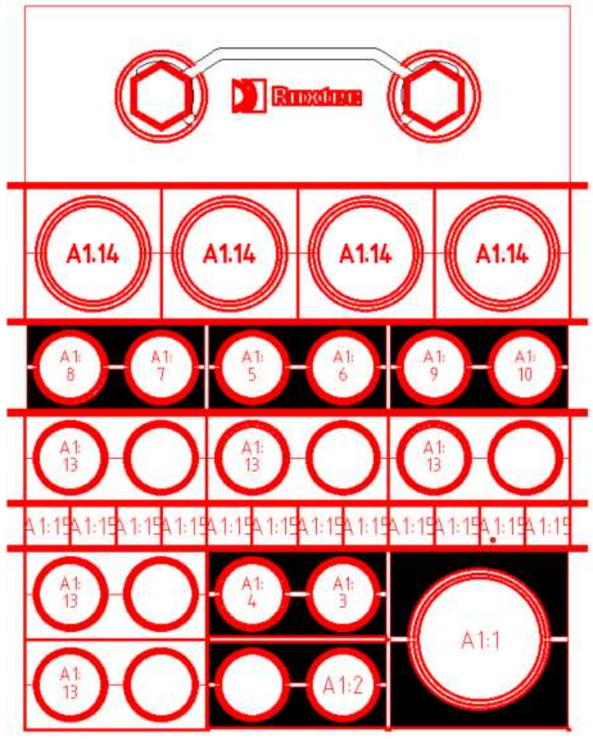
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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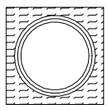
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A1

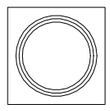
# A1

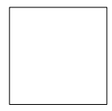



| | | | | | | |
|---|---|---|---|---|---|---|
| A1:12 | | | | | | RM 10/0x12 |
| A1:11 | | | | | | RM 30 10-25 [0.394"-0.984"] |
| A1:10 | | HNA6/CN-200N1 | | | | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:9 | 1 | B200-HSB-001/B400-NET-001 | CAT.6A 4x2xAWG23 | COMM | 10.7 [0.421"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:8 | 5 | SG-200D2/B400-NET-001 | CAT.6A 4x2xAWG23 | COMM | 10.7 [0.421"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:7 | 4 | SG-200N1/B400-NET-001.03 | CAT.6A 4x2xAWG23 | COMM | 10.7 [0.421"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:6 | 3 | SG-200N1/B400-NET-001.02 | CAT.6A 4x2xAWG23 | COMM | 10.7 [0.421"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:5 | 2 | SG-200N1/B400-NET-001.01 | CAT.6A 4x2xAWG23 | COMM | 10.7 [0.421"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:4 | 8 | C-950-SDZ-04214/950-JE-04204 | 1x2x0.75 mm2 | Ex-i | 11.7 [0.461"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:3 | 7 | C-950-SDZ-04213/950-JE-04204 | 1x2x0.75 mm2 | Ex-i | 11.7 [0.461"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:2 | 9 | C-950-SDZ-04215/950-JE-04204 | 1x2x0.75 mm2 | Ex-i | 11.7 [0.461"] | RM 20W40 3.5-16.5 [0.138"-0.650"] |
| A1:1 | 6 | 950-JE-04204/B400-FGS-002 | 6x2x0.75 mm2 | Ex-i | 25.2 [0.992"] | RM 40 21.5-34.5 [0.846"-1.358"] |
| Pos | Cable ID | Name | Cable Type | Cable Category | OD ( mm/ [ "] ) | Module Type |


MODULE WITH PIPE


MODULE WITH CABLE


SPARE MODULE


SOLID MODULE

| | | | | | |
|---|---|---|---|---|---|
| Responsible: 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-202 | | Sheet No: 3/3 |
| | Client | | Drawing number: 123A90-DDL-IN-DD-40074 | | Rev: 01 |

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

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| 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<br>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-203 | : Multi Cable Transit | | Dwg | 123A90-DDL-IN-DL-40086 | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | Module | LD_B-200_Ext | |
| **TASK** | code | C10001899 | Location | Onshore Activities | User | Rosetti Marino Quality Control | |
| **FORM** | Process | MC | Activity CCK | Discipline Instrumental | Form | CJX29 | MCT Penetration Instrument |

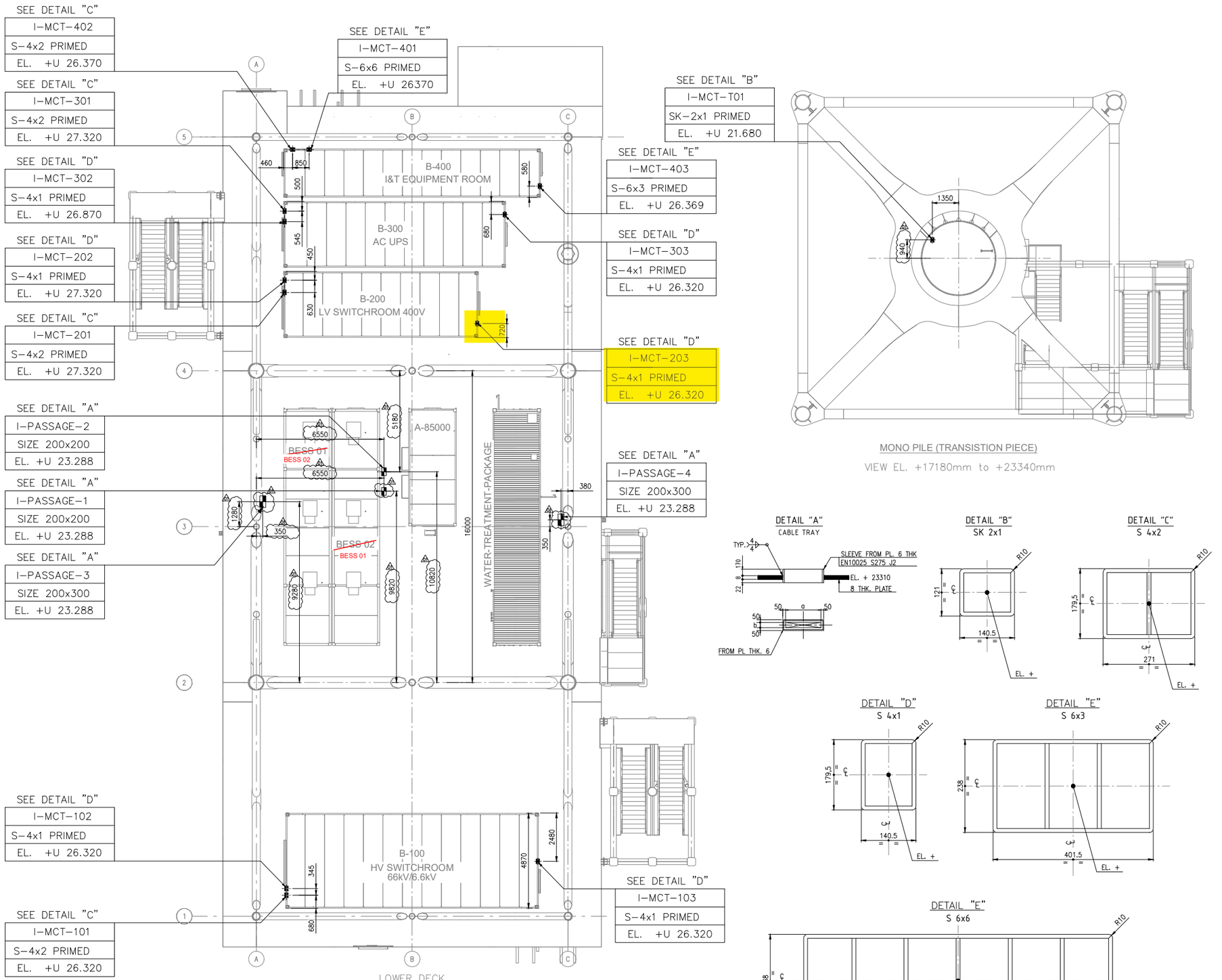
| | | |
|---|---|---|
| 1 | Check that MCT's conforms to latest project standards and specification. | OK |
| 2 | Check MCT's is installed correctly in accordance with latest layout drawings without clashes with pipe runs or other equipment. | OK |
| 3 | Check MCT's is properly tagged, on both side of penetration | PL |
| 4 | Check the cable arrangement in MCT's is conform with the latest drawing. | Note |
| 5 | Check that product marking is matching with hazardous area certification document data | OK |
| 6 | If required produce Red Line Mark Up for "AS BUILT" | |

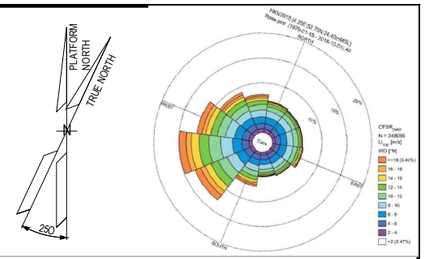
Comments: Note 4: Refer to PL n* C30002352

| Page 1/1 | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Michele Tartaglia | Paolo Schintu | |
| **Date** | 2025-01-15 | 2025-01-22 | |
| **Signature** | PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-15T10:32:32.643Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-22T17:20:52.479Z | |

DRAWING NO. 123A90-DDL-IN-DL-40086

REV. 01




## NOTES

GENERAL NOTES:

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

NOTES:

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

## LEGEND

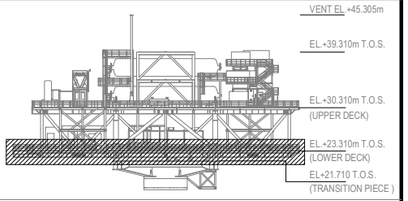
PASSAGE

MCT

| | |
|---|---|
| TAG | TAGGING |
| SIZE-MATERIAL | TYPICAL |
| EL. | ELEVATION |

## HOLDS

## KEY PLAN




## REFERENCE DOCUMENTS

| | |
|---|---|
| 123A90-DDL-IN-DL-40087 | Instrument and Telecom MCT Layout - Upper Deck |
| 123A90-DDL-PP-DL-70070 | Plot Plan - Lower & Upper Deck |
| 123A90-DDL-IN-DS-40072 | TDS - Instrument and Telecom MCTs |
| 123A90-DDL-IN-DD-40074 | MCT Composition |

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 01 | 28/06/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 24/04/24 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE :

INSTRUMENT AND TELECOM MCT LAYOUT-LOWER DECK
TOS EL. +23.310M

| | | | |
|---|---|---|---|
| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:100 |
| DRAWN VBA | CHECKED LCA | APPROVED DLO | DATE 24/04/24 |
| A1 | DRAWING NO. 123A90-DDL-IN-DL-40086 | SHEET 001 | REV. 01 |

File Name : 123A90-DDL-IN-DL-40086 REV01.dwg

**VALID FOR CONSTRUCTION**

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

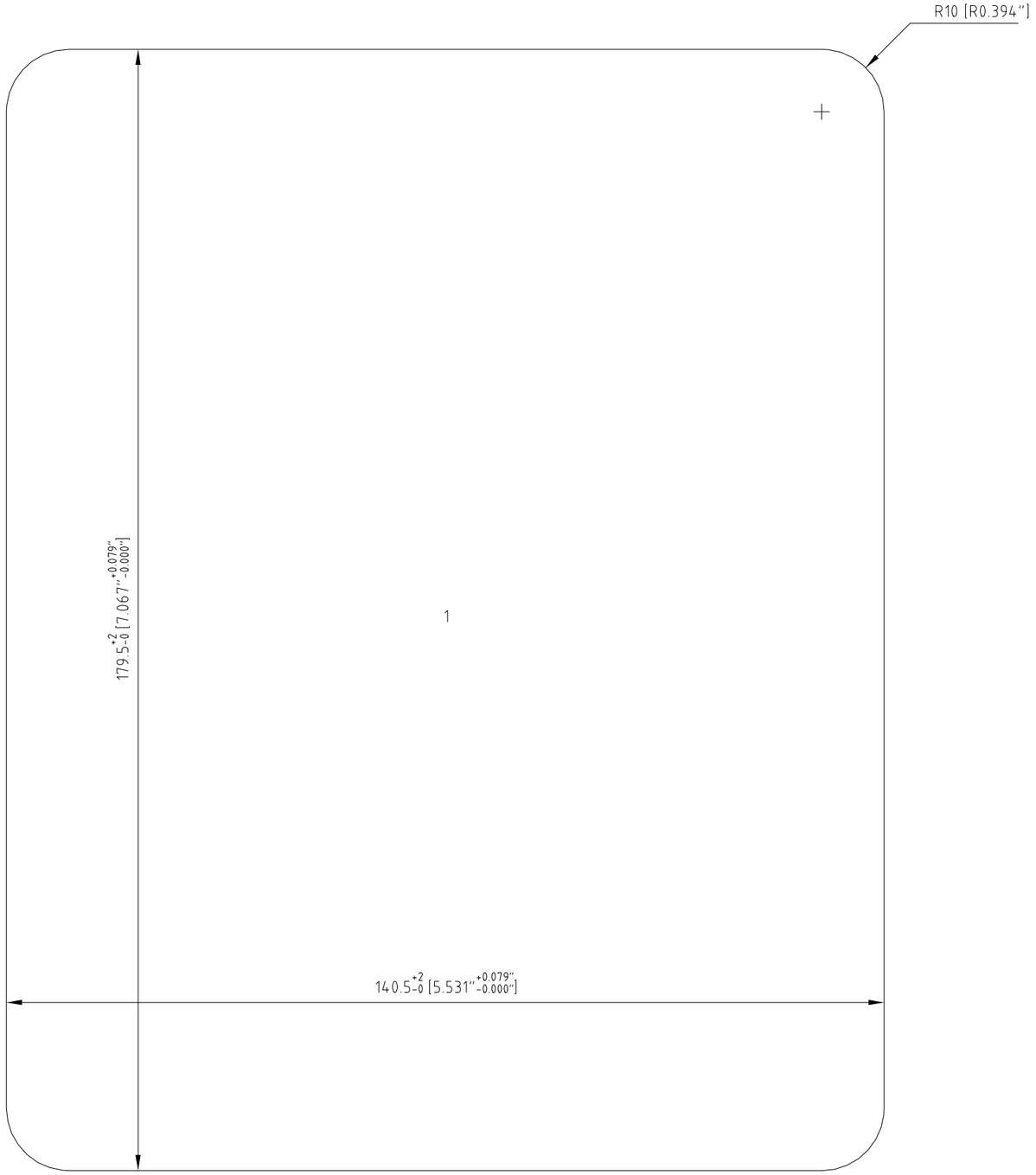
| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_B | 12/12/24 | C.Pilato |

**ROSETTI MARINO SpA**

RTD Version No: 4.37.11.0

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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

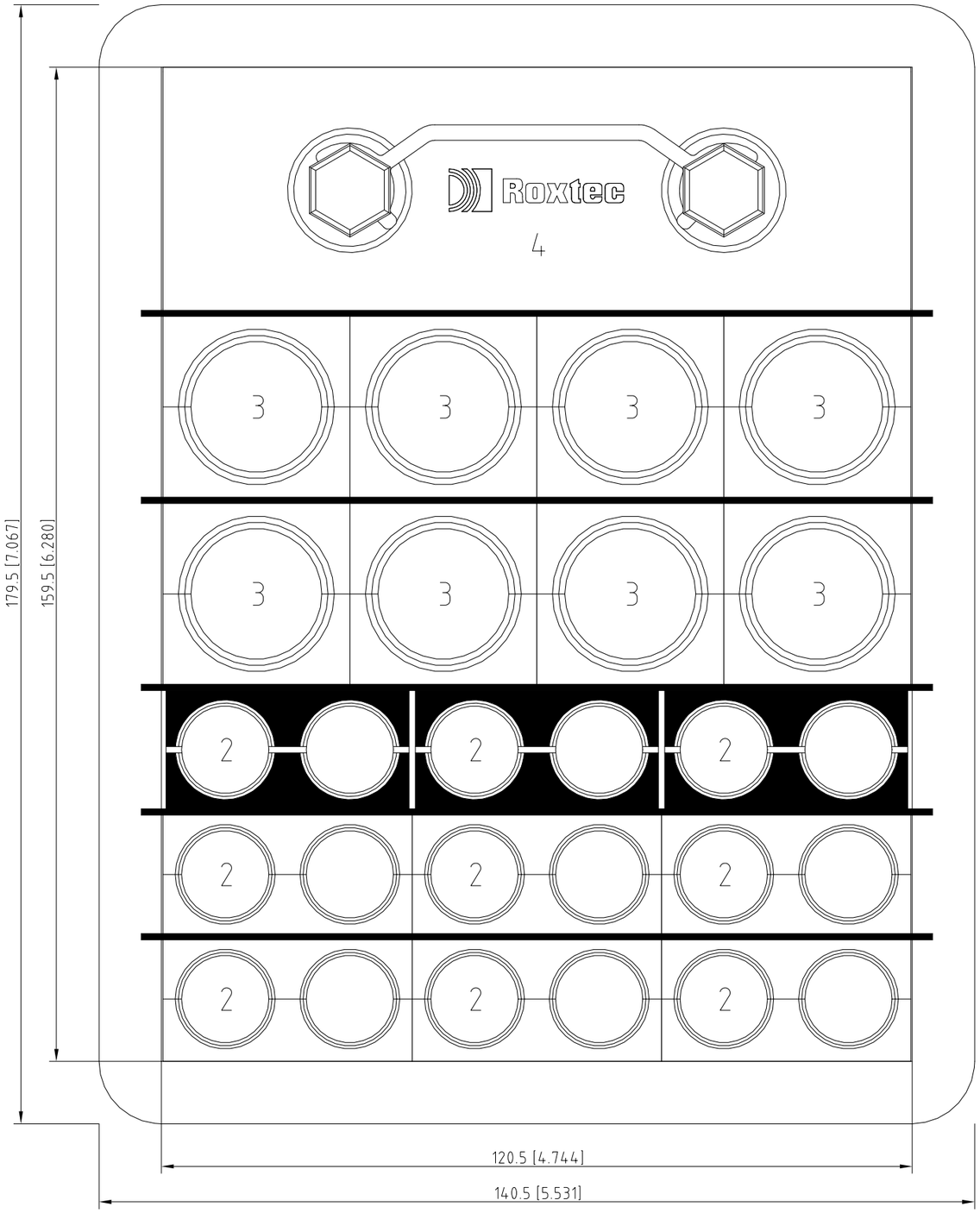
Frame: S 4x1 PRIMED Solution: 1

| 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: 5.5 [12.17] |
| Roxtec | Format: NTS | | Transit name: I-MCT-203 | 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-203 - B-200 LV (400V) Switchgear Room

| 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: Rosetti Marino | Created Date: 2024-05-24 | Modify Date: 2024-09-30 | Project: Base Load Power Hub (BLPH) Location/ Sublocation | TotWeight: 5.5 [12.17] |
| Roxtec | Format: NTS | | Transit name: I-MCT-203 | Sheet No: 2/3 |
| | Client: | | Drawing number: 123A90-DDL-IN-DD-40074 | Rev: 01 |

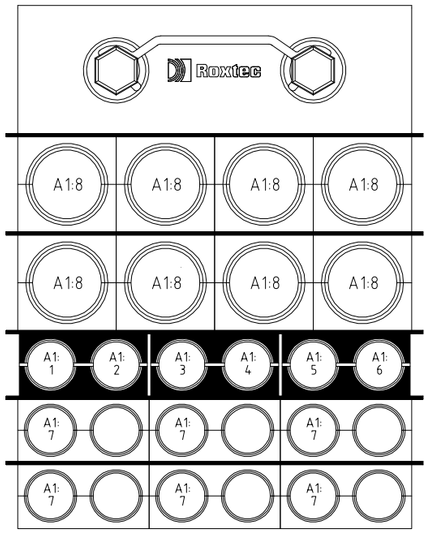
Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.

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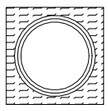
A1

# A1

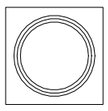


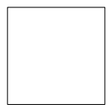

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Drawing shows component layout according to design. Verification is needed to check if the configuration is valid for the application/certification intended.
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| Pos | Cable ID | Name | Cable Type | 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-006/77-HS-006B | 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-006A/77-HS-006B | 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-005/77-HS-005B | 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-005A/77-HS-005B | 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-004/77-HS-004B | 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-004A/77-HS-004B | 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: Rosetti Marino | Created Date: 2024-05-24 | Modify Date: 2024-09-30 | Project: Base Load Power Hub (BLPH) | | TotWeight: 5.5 [12.17] |
| Roxtec | Format: NTS | | Location/ Sublocation | Transit name: I-MCT-203 | 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<br>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_B200_INS | : Cable Tray B200 - Instrumental | | | Dwg | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | | Module | LD_B-200 |
| **TASK** | code | C10002286 | | 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. | PL |
| 2 | Check cable tray / ladder is adequately supported against drawings (no excessive deflection). | OK |
| 3 | Check cable tray / ladder segregation between racks | OK |
| 4 | Check Material for Bolt and splices | OK |
| 5 | Check insulation pads are adapted to stainless steel or aluminium cable tray /ladder. | OK |
| 6 | Check cable tray / ladder cleanness. | OK |
| 7 | Check cable tray / ladder earthed and bonded against drawings. | PL |
| 8 | Check Continuity and Resistance test on tray | OK |
| 9 | Check proper mitigations against sharp edges that could damage the cables | OK |
| 10 | Check Transitions to ensure proper cables bending radius | OK |
| 11 | Check Proper protection of racks and trays until cable pulling | OK |
| 12 | Painting touch-up as necessary, if applicable | OK |
| 13 | Check Labelling with system and segment number | NA |
| 14 | If required produce Red Line Mark Up for "AS BUILT" | |

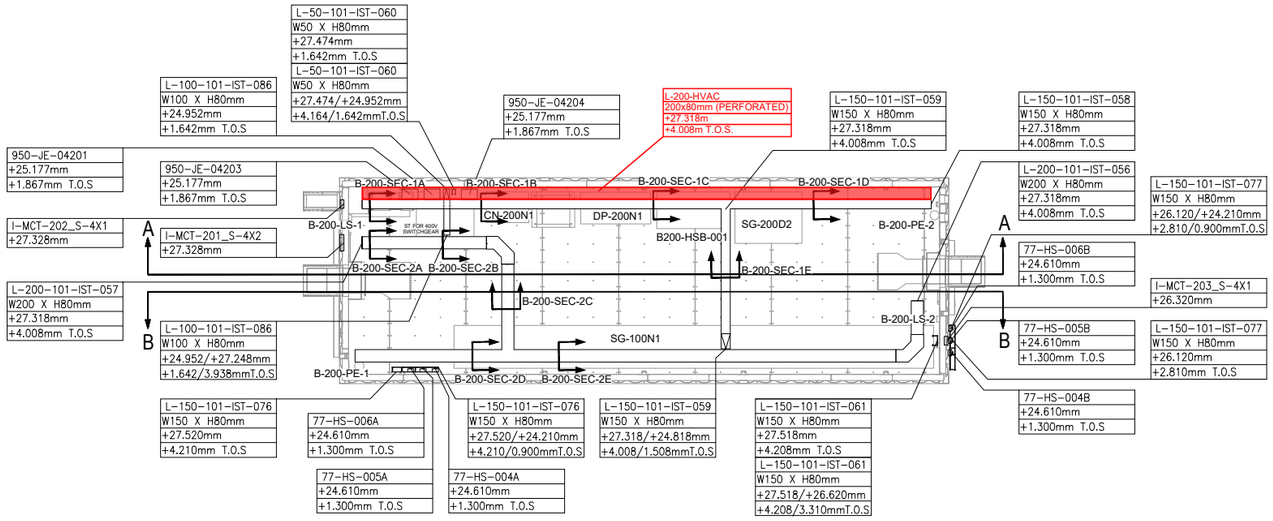
Comments:



| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Carmelo Bongiovanni | Giovanni Tangianu | |
| **Date** | 2024-10-02 | 2024-10-02 | |
| **Signature** | PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-02T14:06:01.711Z | PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-02T16:04:35.226Z | |

DRAWING NO. 123A90-DDL-IN-DL-40114

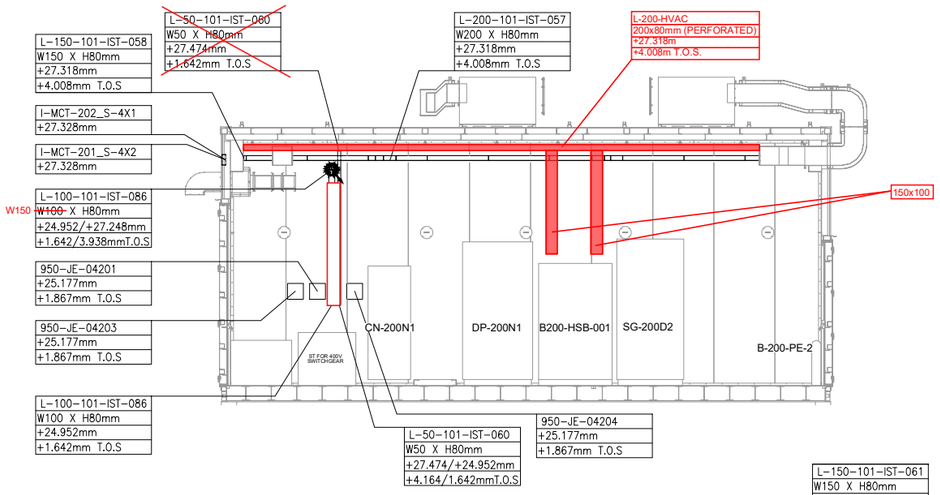
REV. 00




## PLAN VIEW

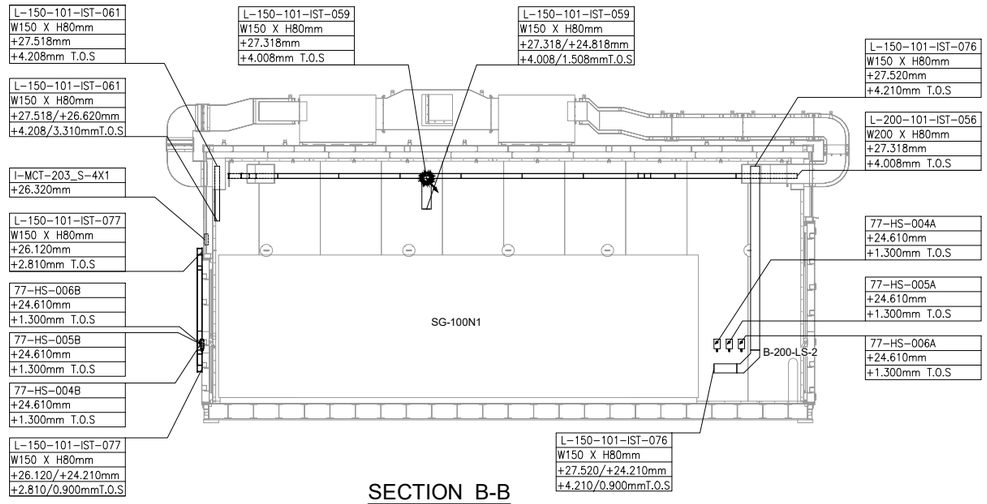
B-200 – LV SWITCHROOM

SCALE–1:1




## SECTION A-A

SCALE–1:1




## SECTION B-B

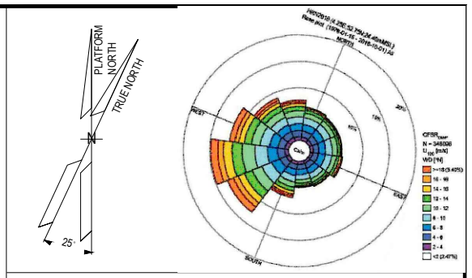
SCALE–1:1

**VALID FOR CONSTRUCTION**

FDL DWG: **123A90-123A90-FDL-IN-DL-40114**

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 0_D | 18/09/24 | G.Randi |

**ROSETTI MARINO SpA**




## 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

## 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 |
|---|---|---|---|---|---|
| 00 | 23/08/24 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

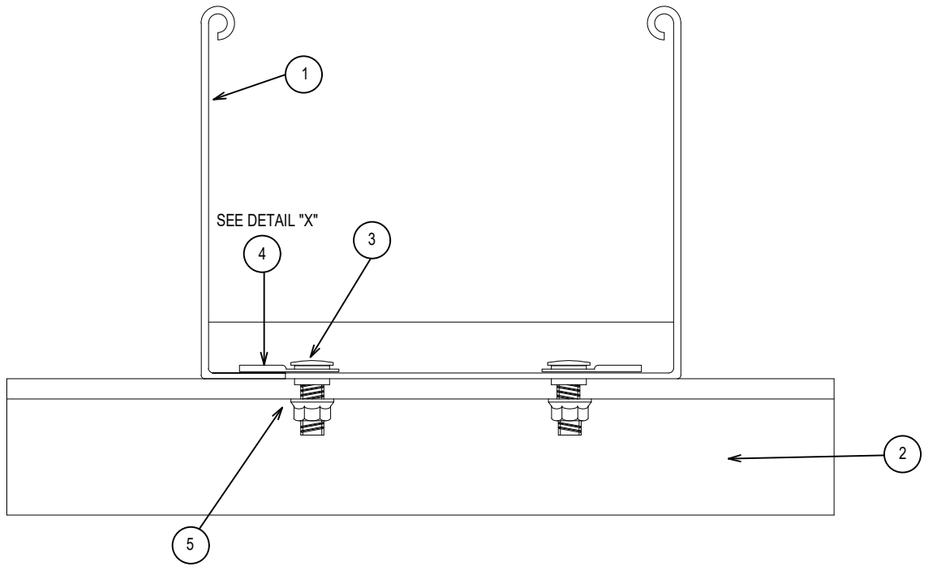
TITLE : BASE LOAD POWER HUB (BLPH)
Base Load Power HUB Cables Tray Layout
B–200 Container Lower Deck – TOS EL. 23.310m

| CONTRACT NO./TITLE | CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | SCALE 1:50 |
|---|---|---|---|
| DRAWN VBA | CHECKED LCA | APPROVED DLO | DATE 23/08/24 |
| A1 | DRAWING NO. 123A90-DDL-IN-DL-40114 | SHEET 001 | REV. 00 |

File Name : 123A90-DDL-IN-DL-40114 REV00.dwg

# CABLE LADDER FIXING ON FRP RACK

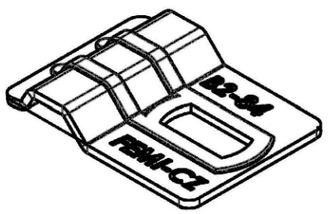
| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | PROFILE SUPPORT | FRP | | | |
| 3 | ROUND HEAD SQUARE NECK SCREW | AISI 316L | M8x20 | 2 | |
| 4 | HOLD DOWN CLAMP | AISI 316L | | 2 | |
| 5 | FLANGED NUT | AISI 316L | M8 | 2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




TYPICAL

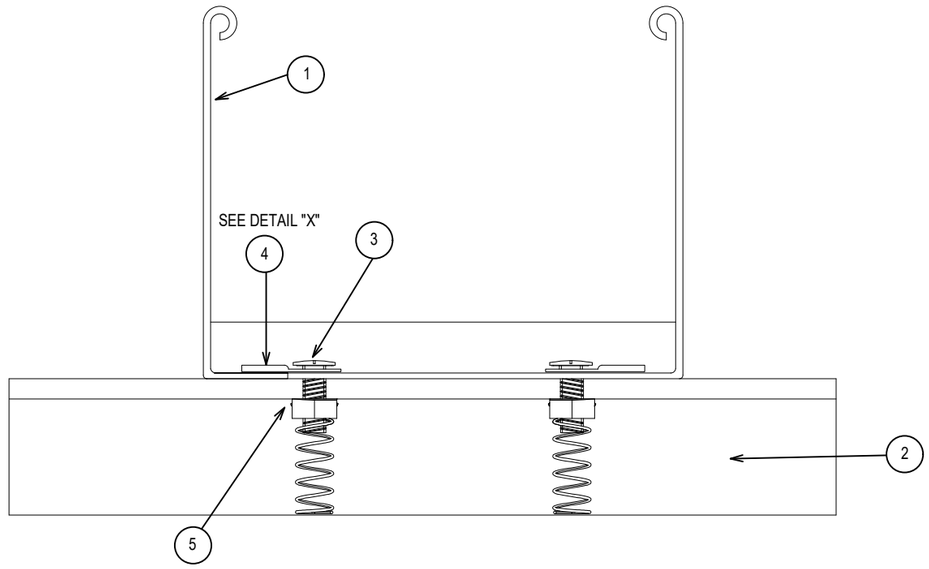
LF

## 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

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 LADDER FIXING

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

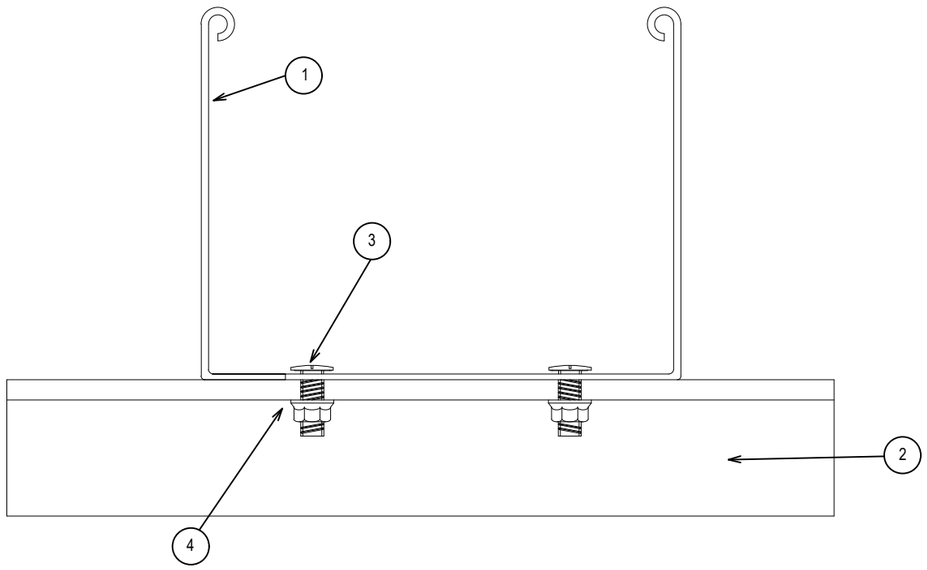
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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 | |

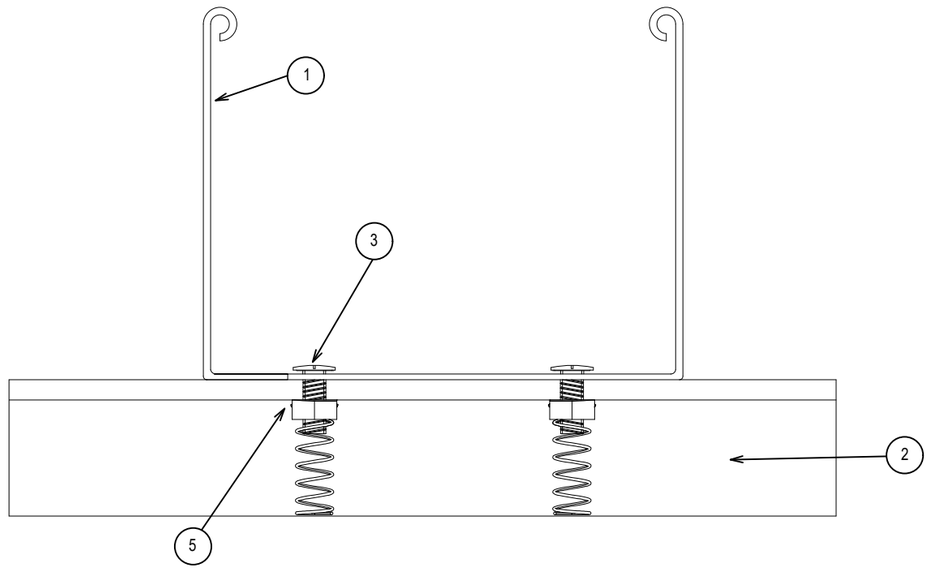



TYPICAL

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

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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

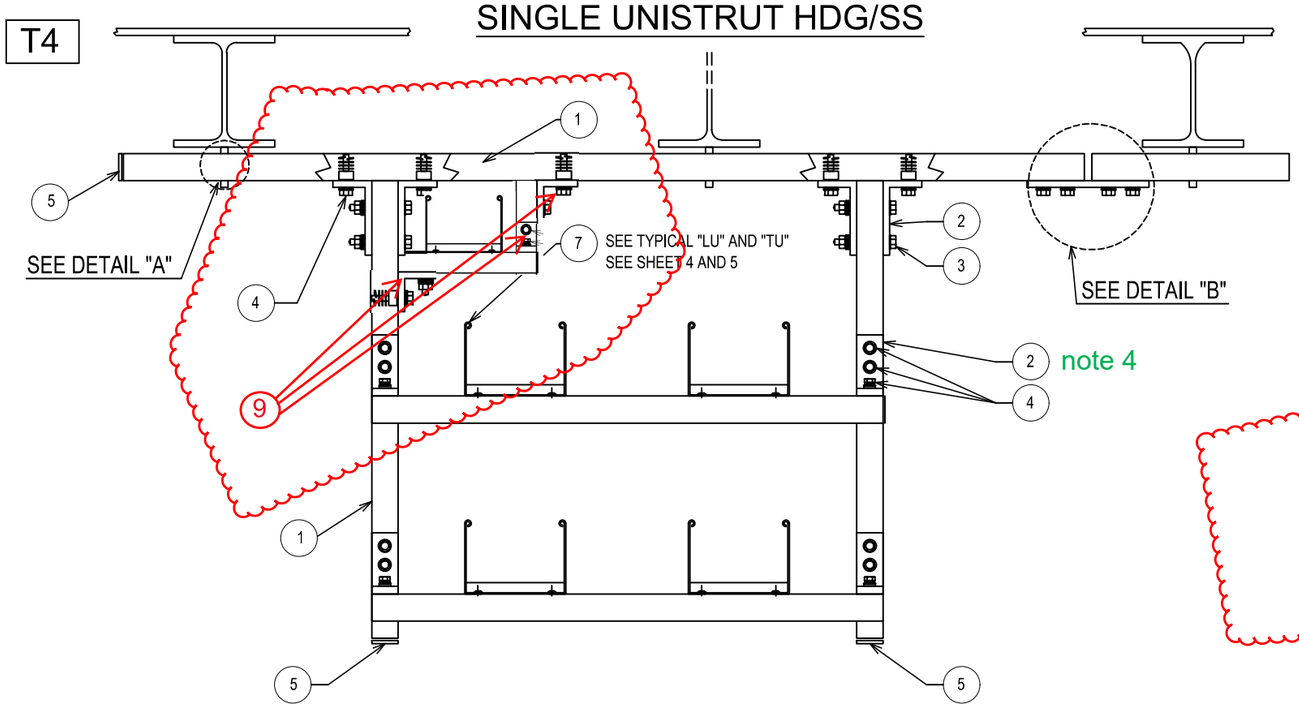
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

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

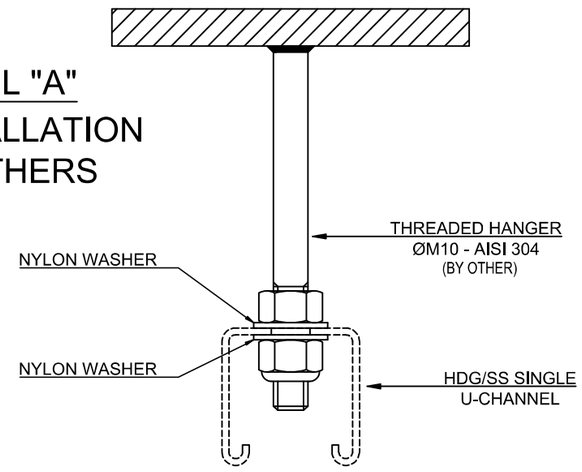
T4

# SINGLE UNISTRUT HDG/SS

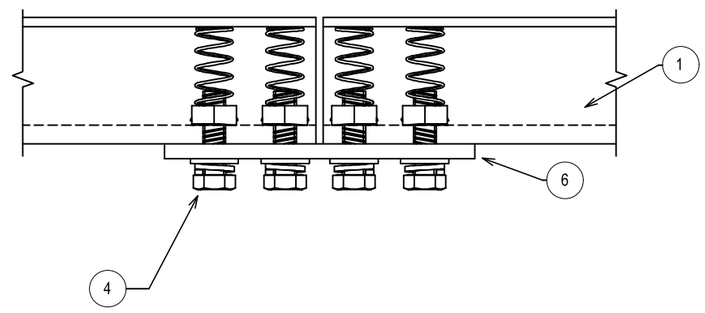



| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | NOTE 1 |
| 2 | PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES | AISI 316L | | 8 | |
| 3 | HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER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

| 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

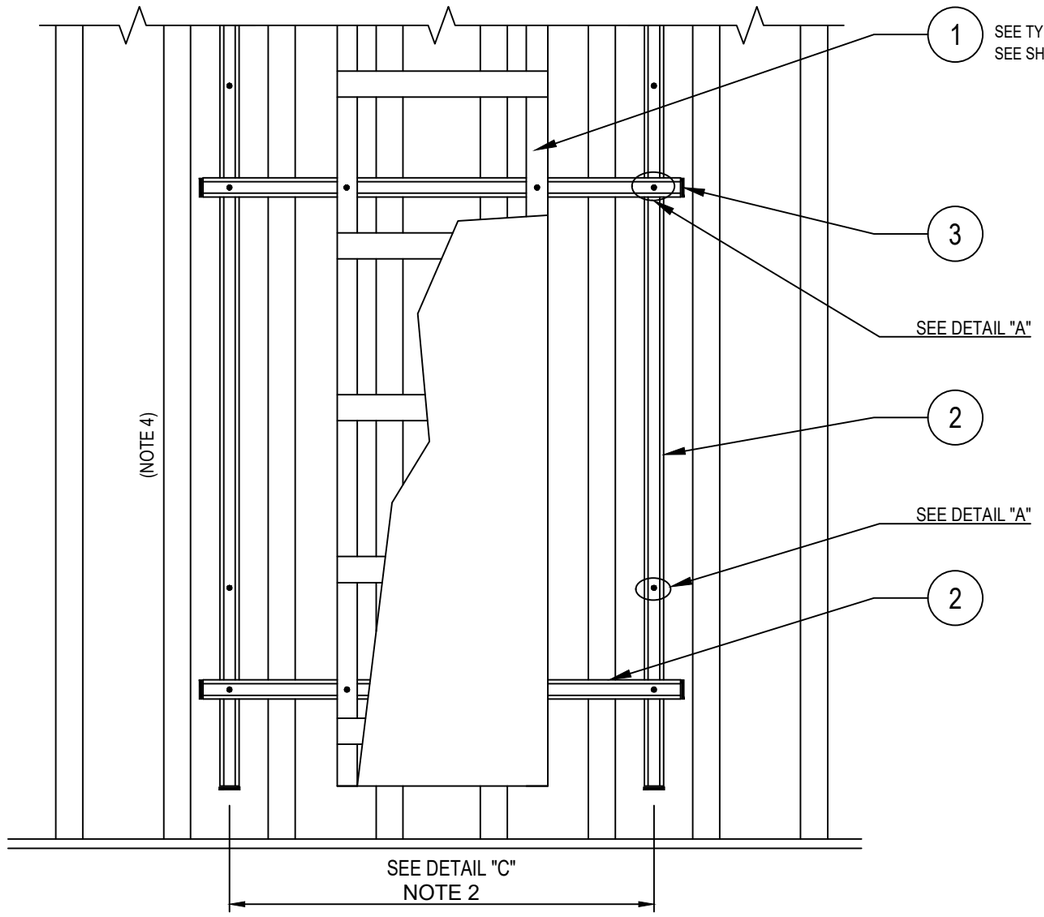
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

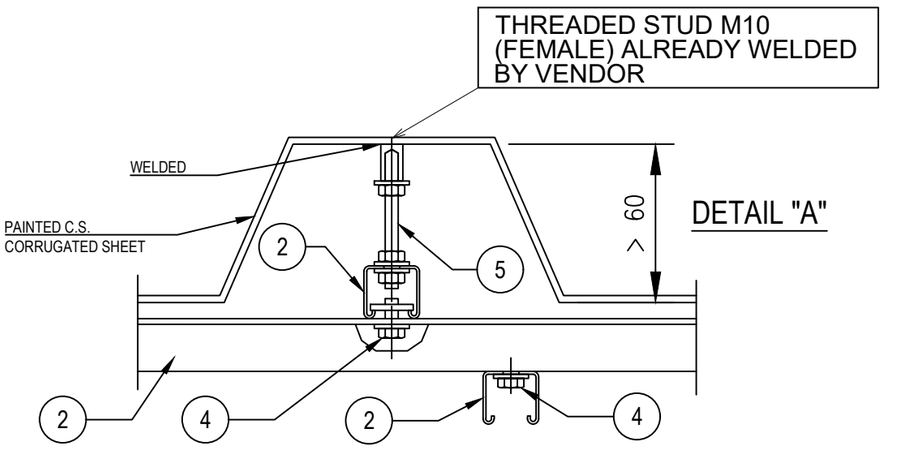
F.to UNI A3: 420mmx297mm

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

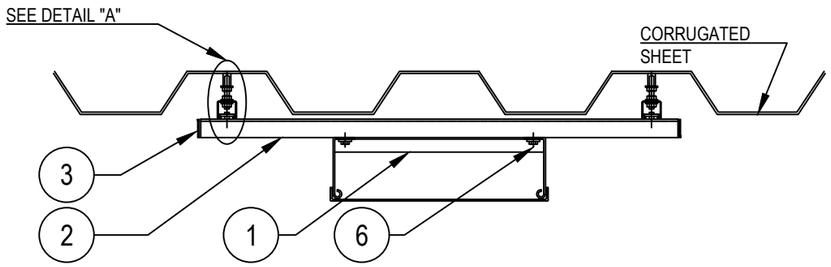
T7




| 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.: 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 WITH NELSON STARTER ON SHELTER

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

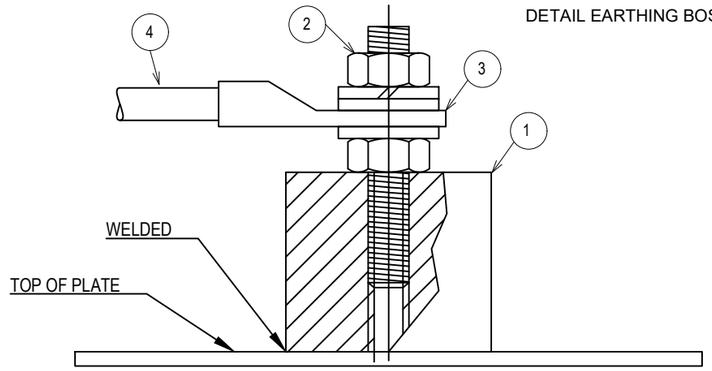
F.to UNI A3: 420mmx297mm

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

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | EARTHING BOSS WITH THREADED HOLE M10 | AISI 316L | 50X50<br>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<br>NOTE 5 |
| 5 | EARTHING PLATE | AISI 316L<br>(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<br>NOTE 7 |

E11A

DETAIL EARTHING BOSS 50x50

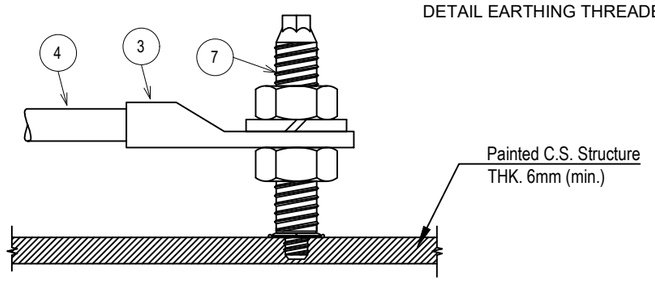



E11D

SEE NOTE 6

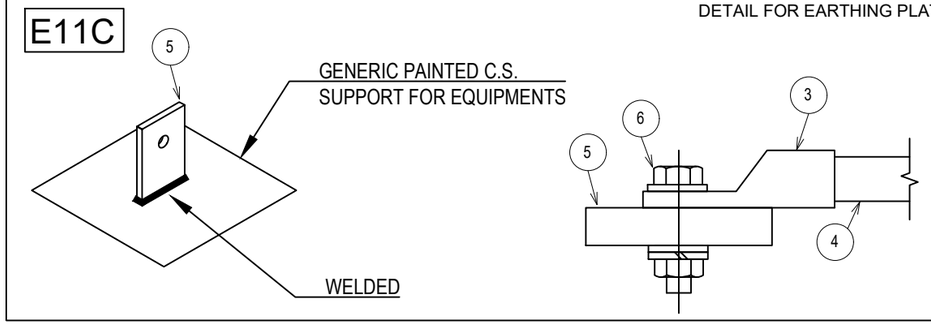
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD




E11C

DETAIL FOR EARTHING PLATE

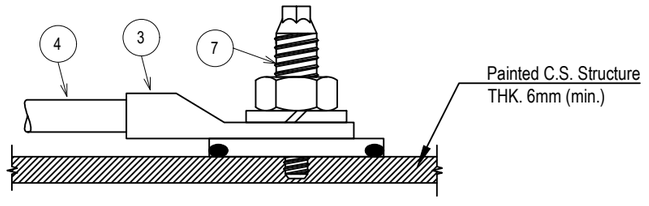



E11E

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_C | 09/09/24 | 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

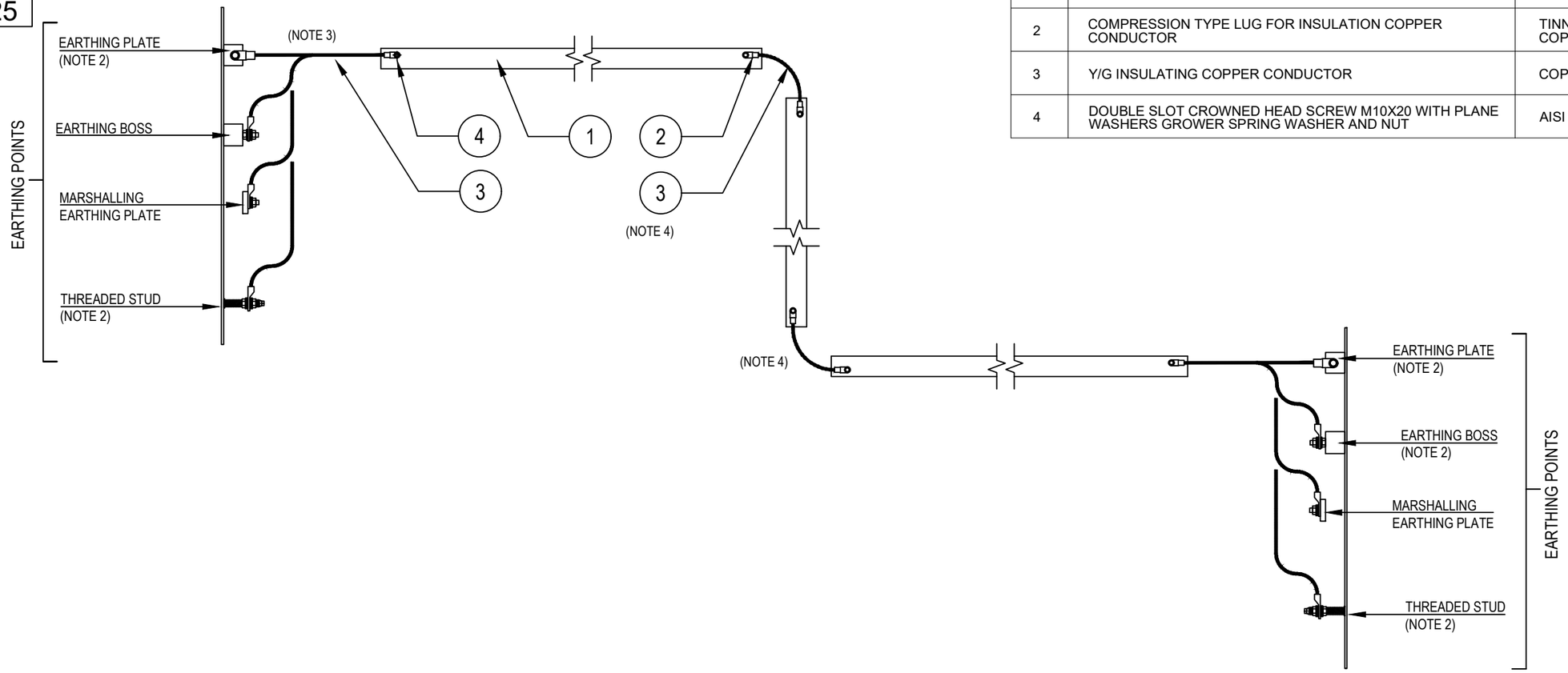
SHEET 003

REV. 02

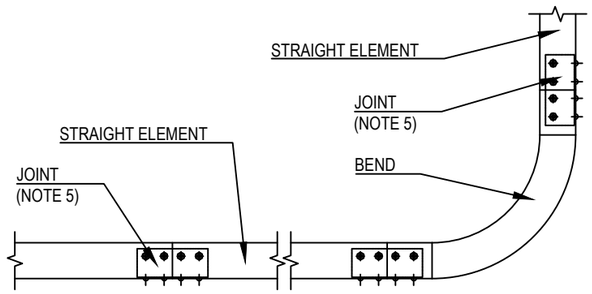
F.to UNI A3: 420mmx297mm

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

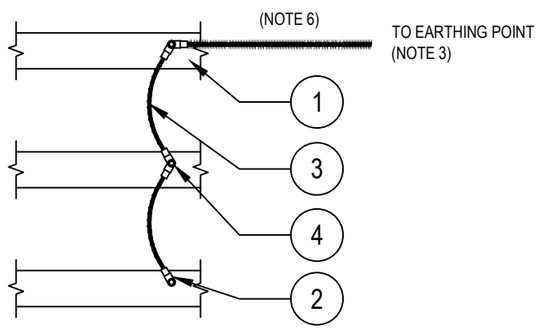
E25




| 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_C | 09/09/24 | 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

## 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<br>Supplier: HILTI<br>Series: FOE100<br>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

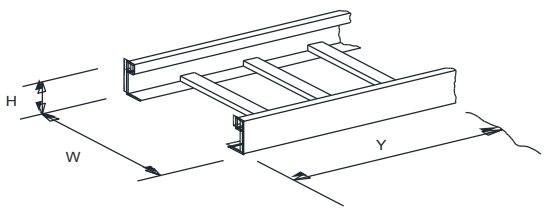



Fig. A
*STRAIGHT ELEMENT*

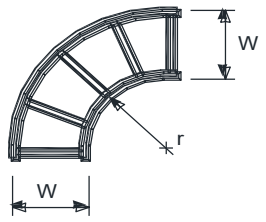



Fig. B
*PLANE 90° BEND*

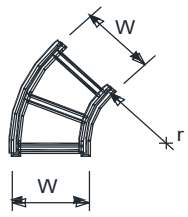



Fig. C
*PLANE 45° BEND*

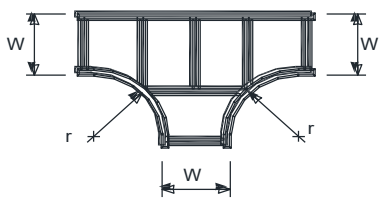



Fig. D
*TEE JUNCTION*

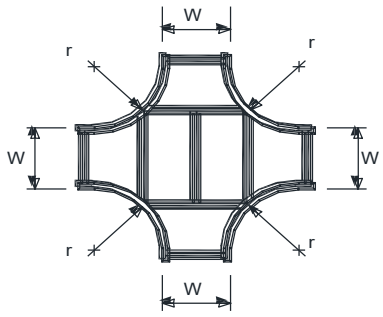



Fig. E
*CROSS JUNCTION*

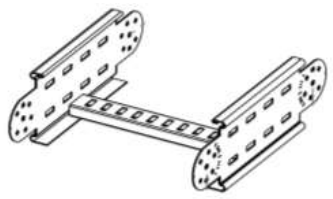


Fig. F
*SINGLE ELEMENT FOR VERTICAL BENDS*

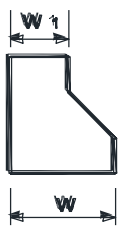



Fig. G
*PLANE LEFT - HAND REDUCING SECTION*




Fig. H
*PLANE SYMMETRIC REDUCING SECTION*




Fig. I
*PLANE RIGHT - HAND REDUCING SECTION*

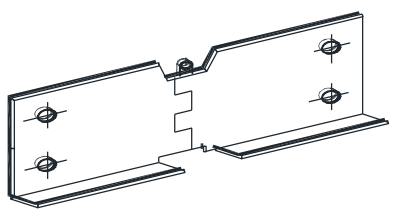


Fig. L
*HORIZONTAL HINGED JOINT*

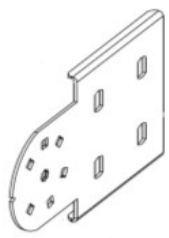


Fig. M
*VERTICAL HINGED JOINT*



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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<br>Supplier: HILTI<br>Series: FTE80<br>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

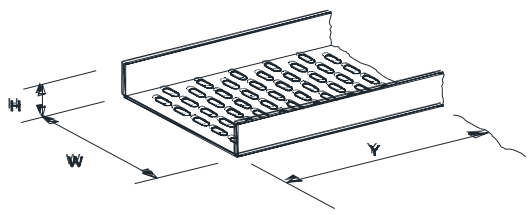



Fig. A
*STRAIGHT ELEMENT*

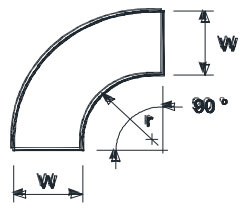



Fig. B
*PLANE 90° BEND*

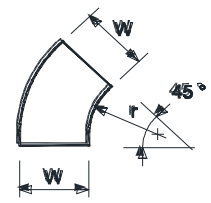



Fig. C
*PLANE 45° BEND*

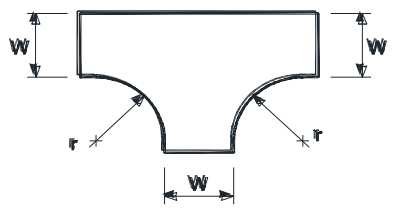



Fig. D
*TEE JUNCTION*

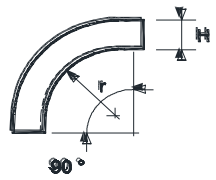



Fig. E
*VERTICAL CONVEX 90° BEND*

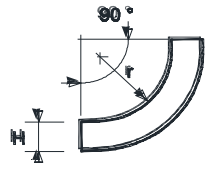



Fig. F
*VERTICAL CONCAVE 90° BEND*

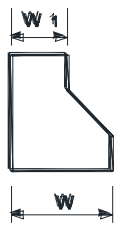



Fig. G
*PLANE LEFT - HAND REDUCING SECTION*




Fig. H
*PLANE SYMMETRIC REDUCING SECTION*

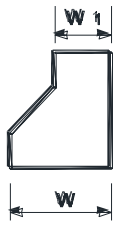



Fig. I
*PLANE RIGHT - HAND REDUCING SECTION*

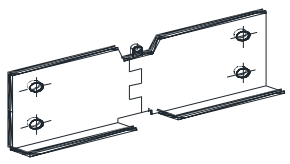


Fig. L
*HORIZONTAL HINGED JOINT*

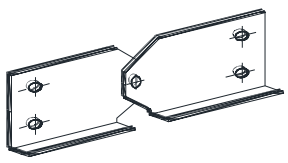


Fig. M
*VERTICAL HINGED JOINT*



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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<br>1) Vendor shall estimate fixing clamp quantities | | | | |



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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | CABLE_TRAY_B200_INS | : Cable Tray B200 - Instrumental | | Dwg | 123A90-DDL-IN-DL-40114 | |
| | S/Sys | 90-02 | : LV Switchgear Room B-200 | | Module | LD_B-200 | |
| **TASK** | code | C10002287 | 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" | |

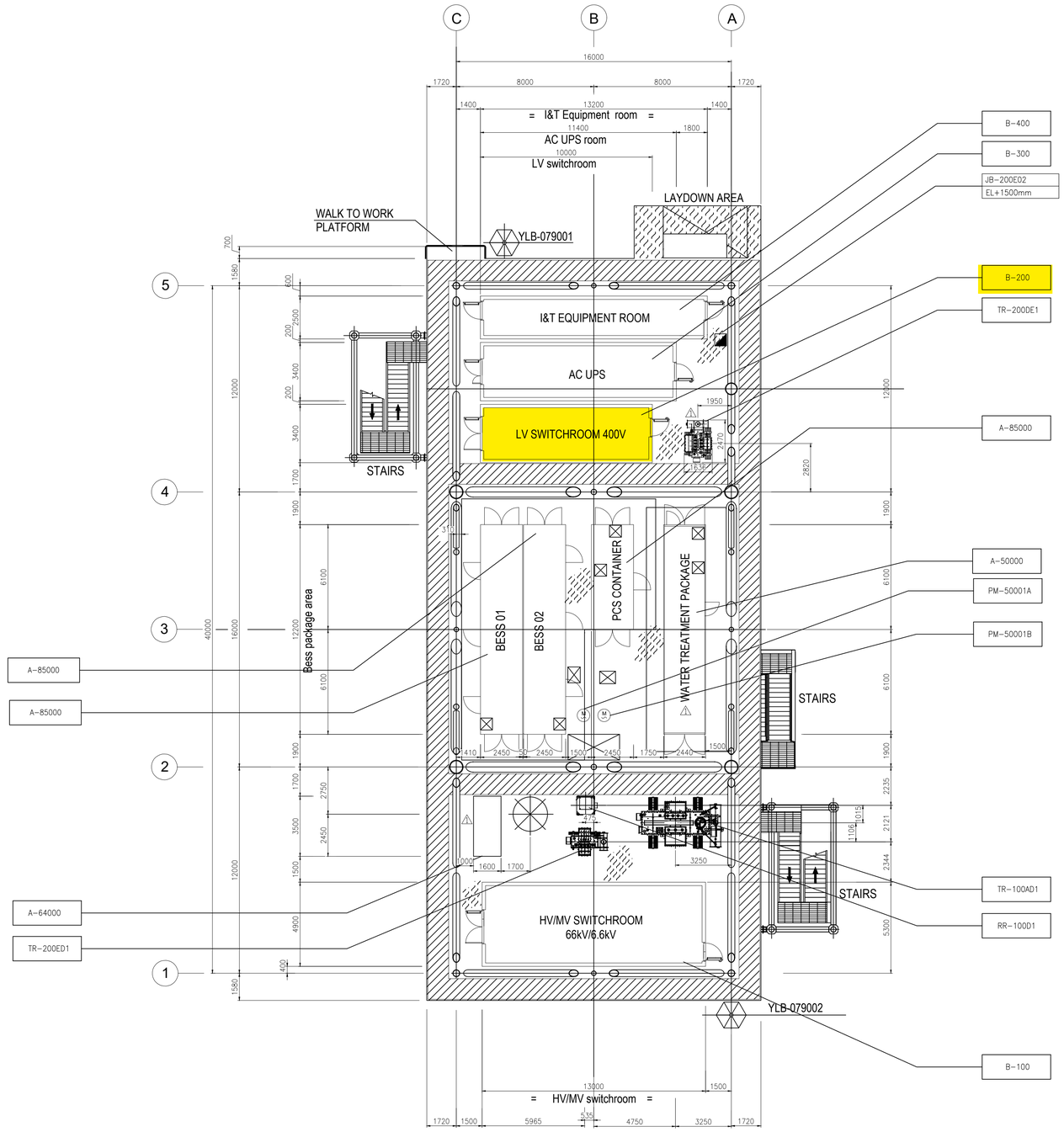
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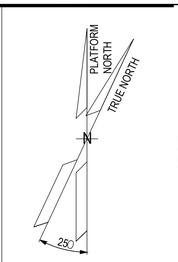
| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| **Name** | Michele Tartaglia | Paolo Schintu | |
| **Date** | 2025-01-25 | 2025-01-25 | |
| **Signature** | PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T10:40:11.709Z | PROVERLIS Digitaly signed by Paolo Schintu 2025-01-25T11:31:35.135Z | |

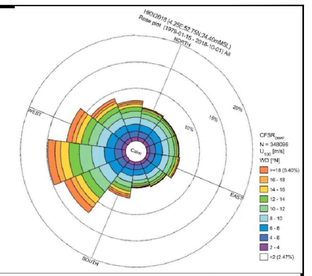
DRAWING NO. 123A90-DDL-EL-DL-20101

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) |

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-EL-DL-20101**

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

**ROSETTI MARINO SpA**

CROSSWIND | ROSETTI MARINO

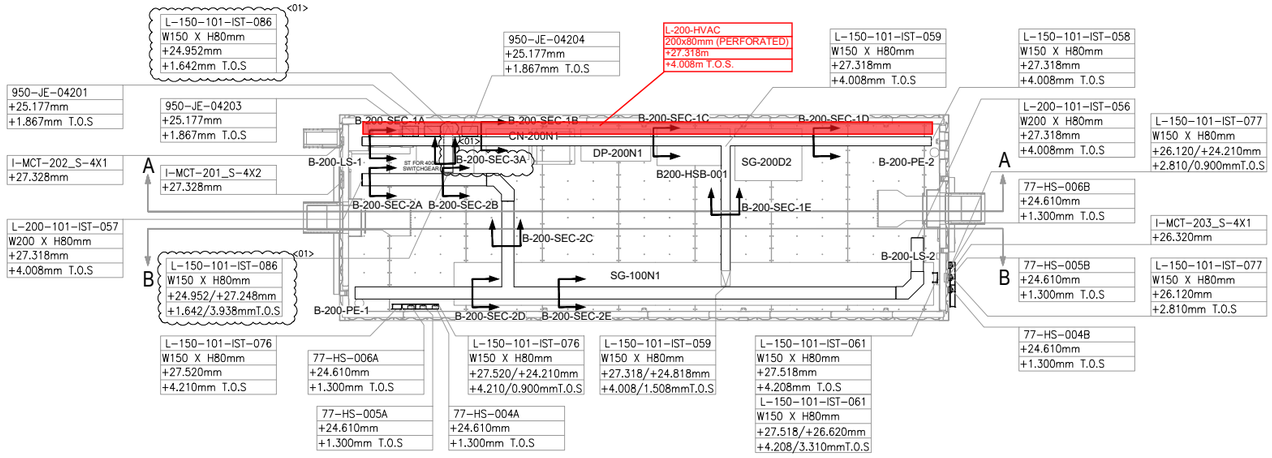
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

| | | | |
|---|---|---|---|
| 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-40114

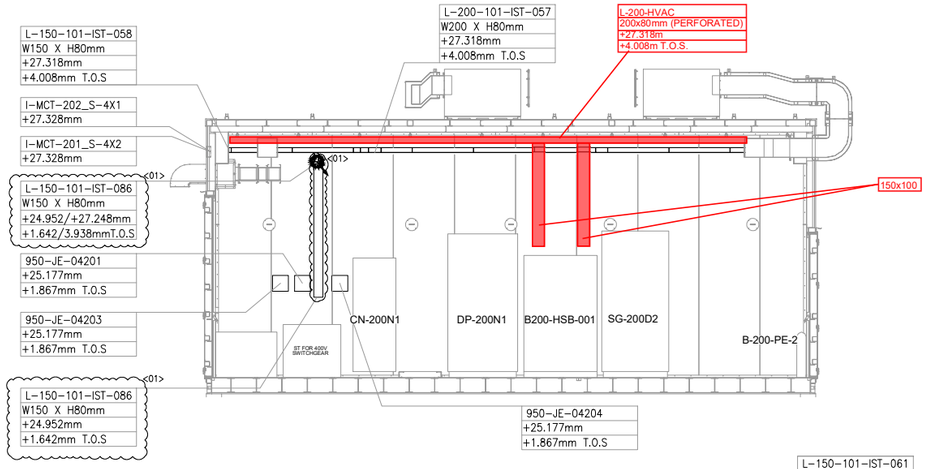
REV. 01




## PLAN VIEW

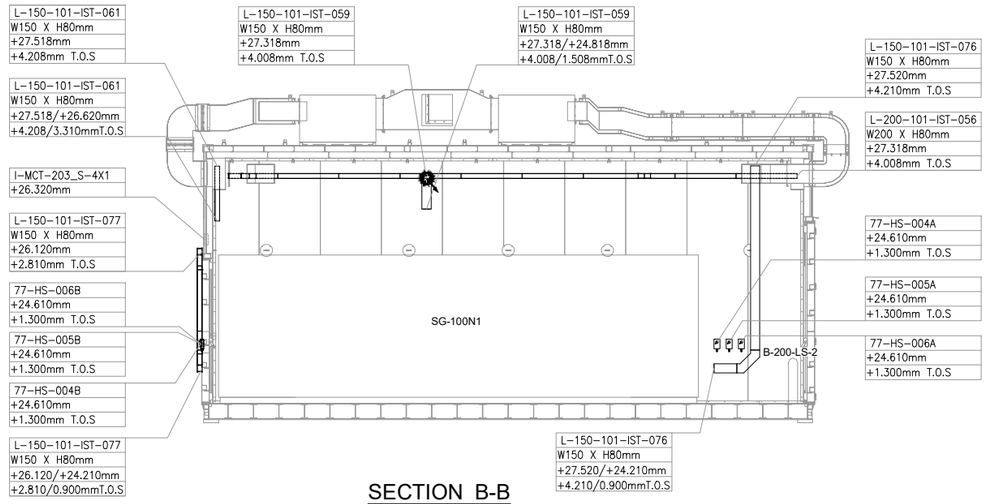
B-200 – LV SWITCHROOM

SCALE-1:1



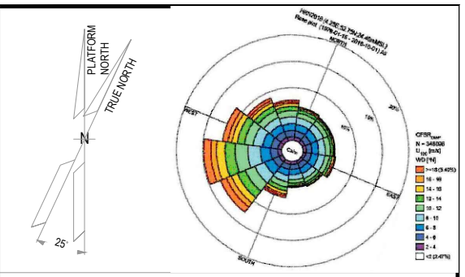

## SECTION A-A

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-40114**

| 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-200 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 |

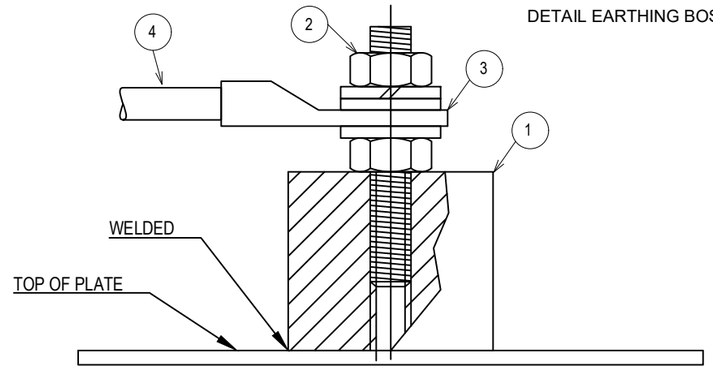
| A1 | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| | 123A90-DDL-IN-DL-40114 | 001 | 01 |

File Name : 123A90-DDL-IN-DL-40114 REV:01.dwg

| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | EARTHING BOSS WITH THREADED HOLE M10 | AISI 316L | 50X50<br>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<br>NOTE 5 |
| 5 | EARTHING PLATE | AISI 316L<br>(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<br>NOTE 7 |

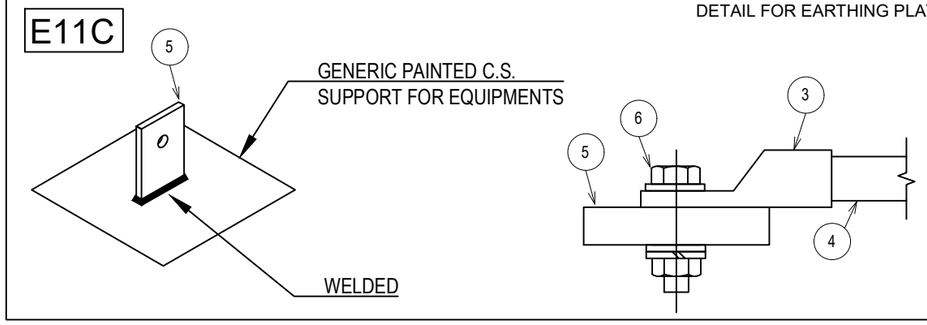
E11A

DETAIL EARTHING BOSS 50x50




E11C

DETAIL FOR EARTHING PLATE

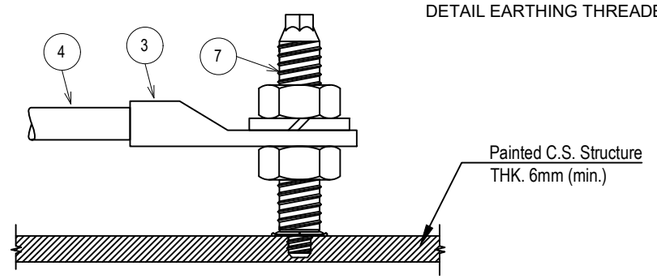



E11D

SEE NOTE 6

FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD

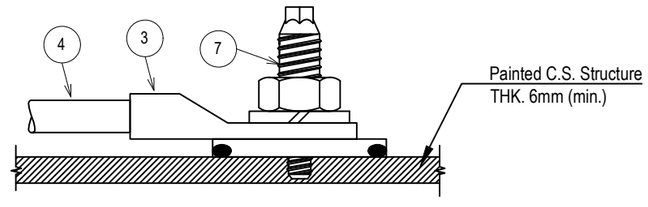



E11E

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

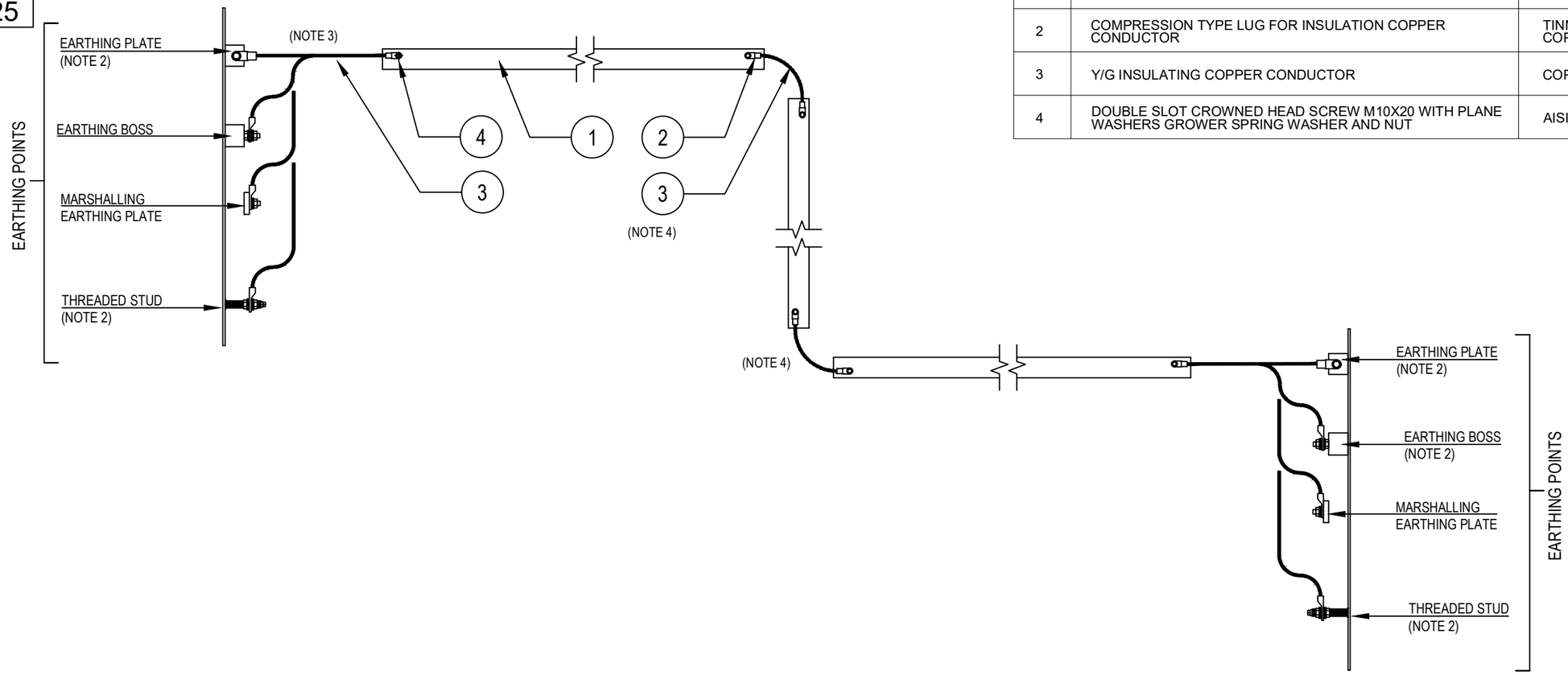
SHEET 003

REV. 02

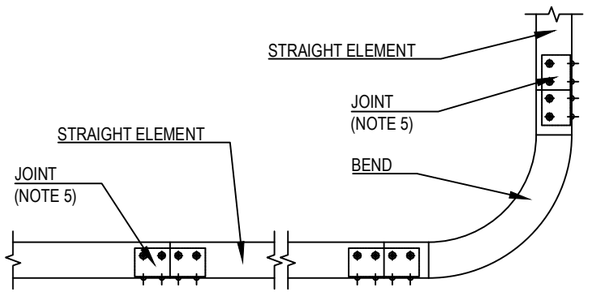
F.to UNI A3: 420mmx297mm

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

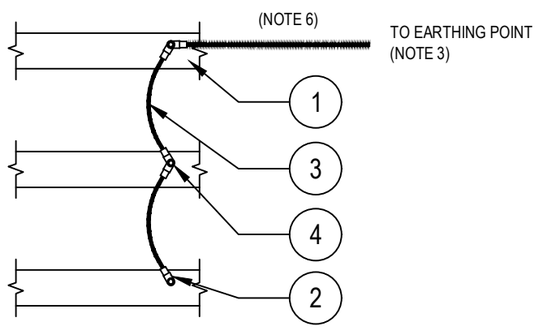
E25




| 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

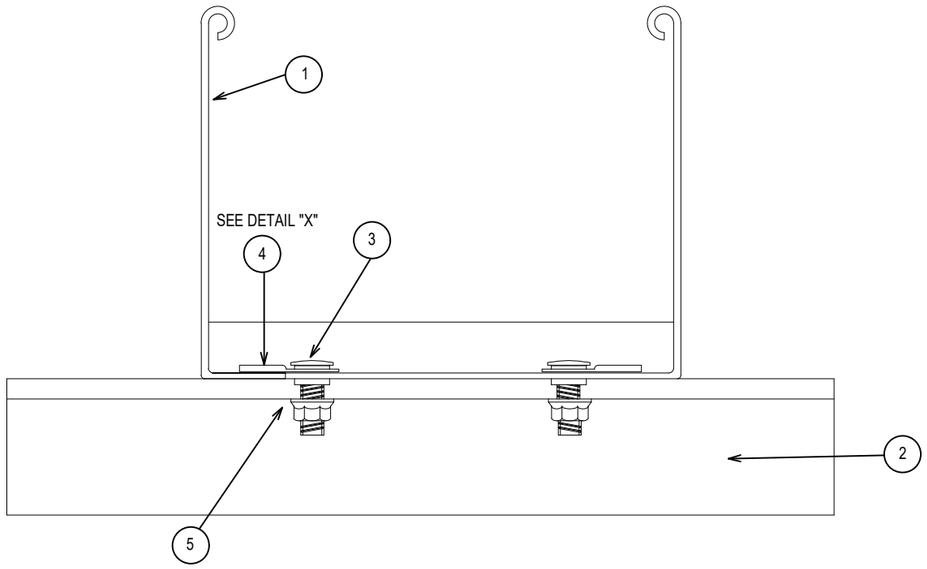
| A3 | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| | 123A90-DDL-EL-DD-20090 | 013 | 02 |

F.to UNI A3: 420mmx297mm

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

# CABLE LADDER FIXING ON FRP RACK

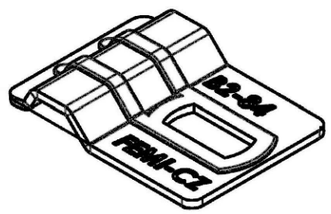
| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | CABLE LADDER | AISI 316L | | | |
| 2 | PROFILE SUPPORT | FRP | | | |
| 3 | ROUND HEAD SQUARE NECK SCREW | AISI 316L | M8x20 | 2 | |
| 4 | HOLD DOWN CLAMP | AISI 316L | | 2 | |
| 5 | FLANGED NUT | AISI 316L | M8 | 2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




TYPICAL

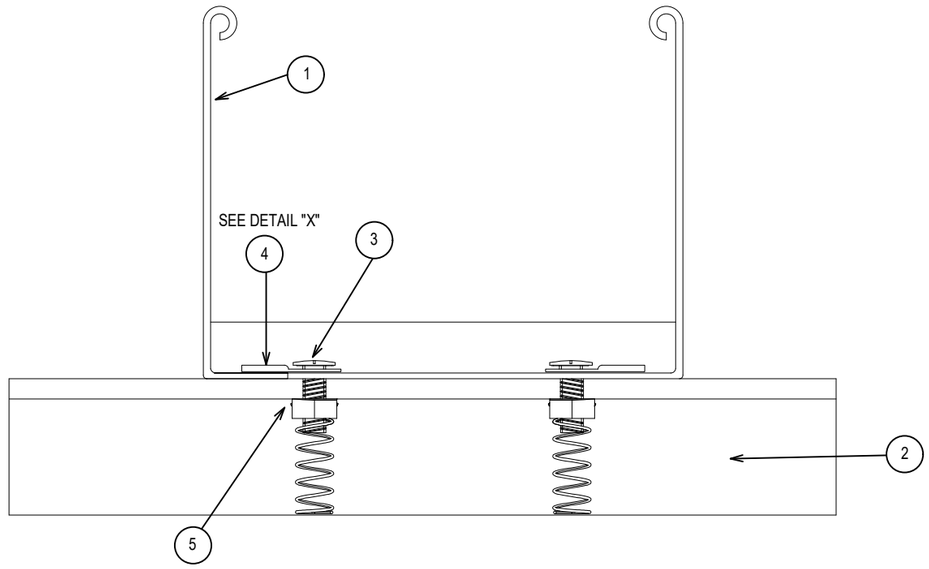
LF

## 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

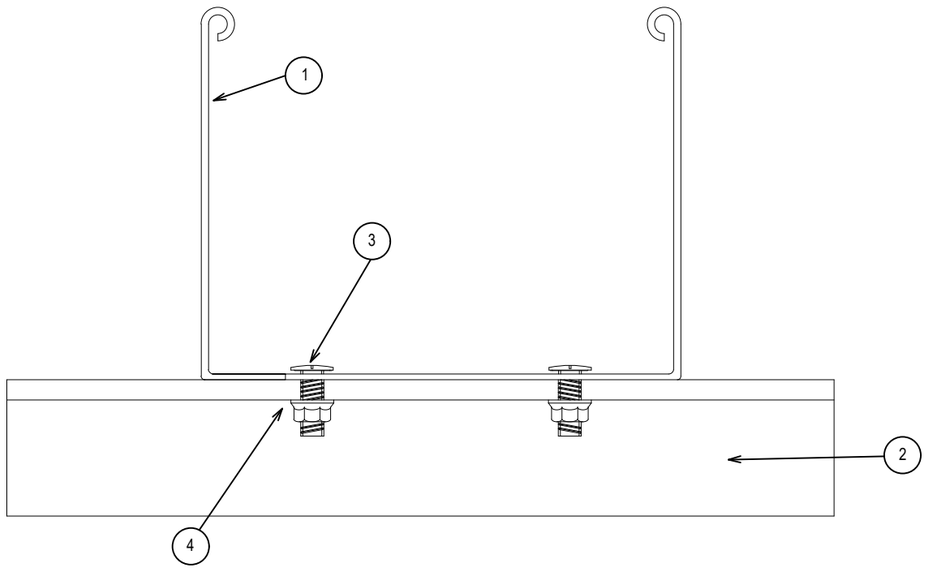
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 004 | REV. 02

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 | |

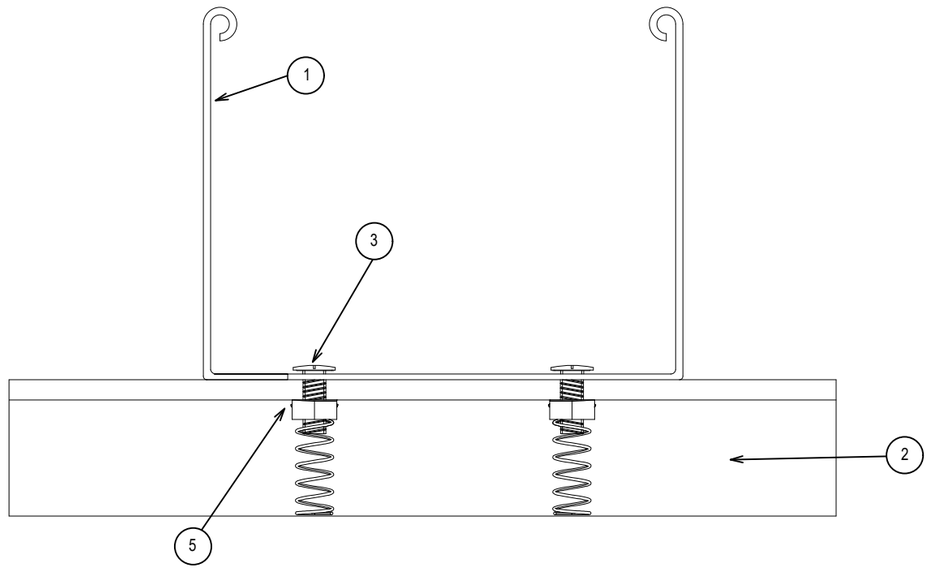



TYPICAL

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

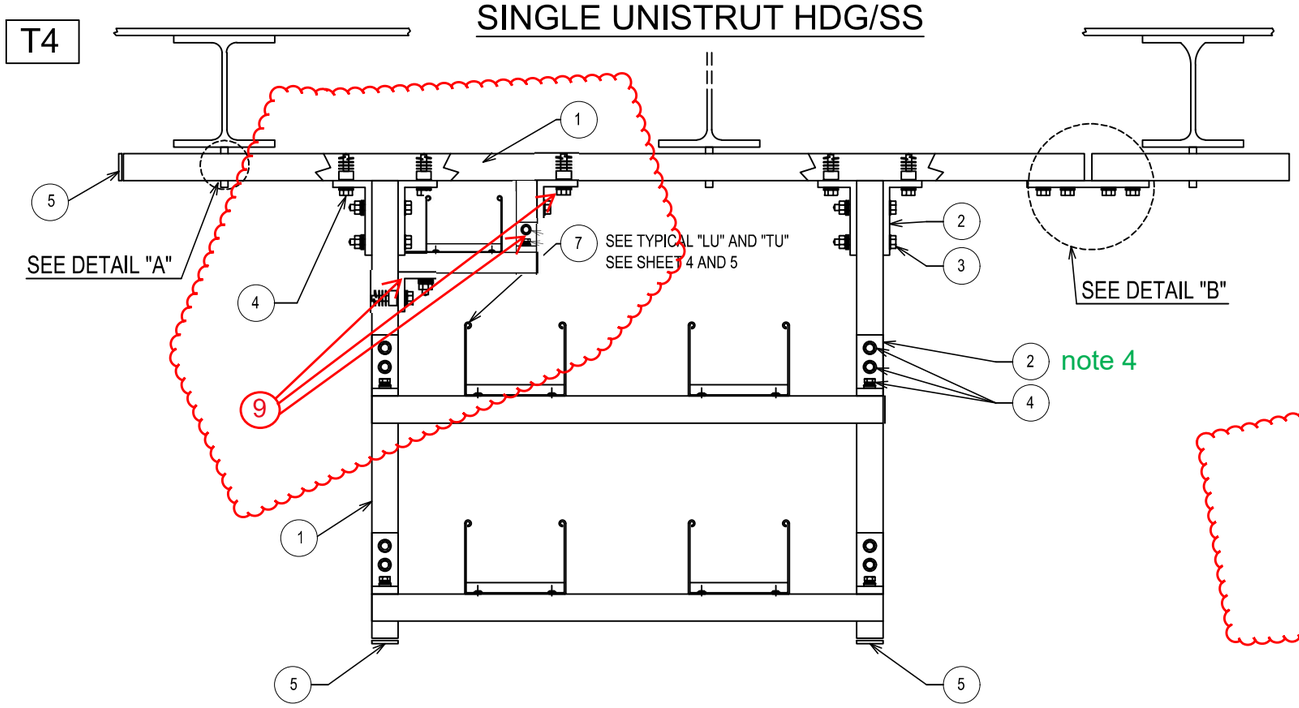
A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 005 | REV. 02

F.to UNI A3: 420mmx297mm

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

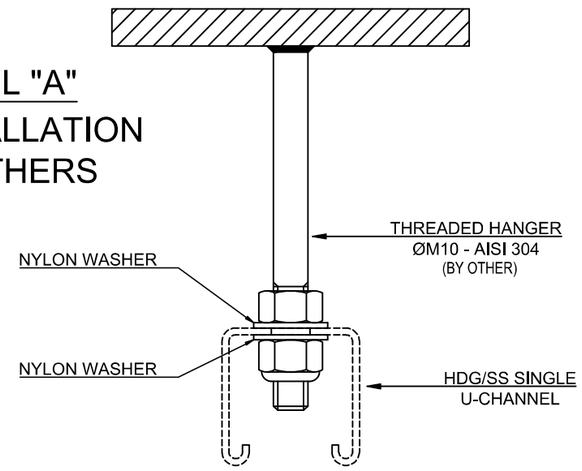
T4

# SINGLE UNISTRUT HDG/SS

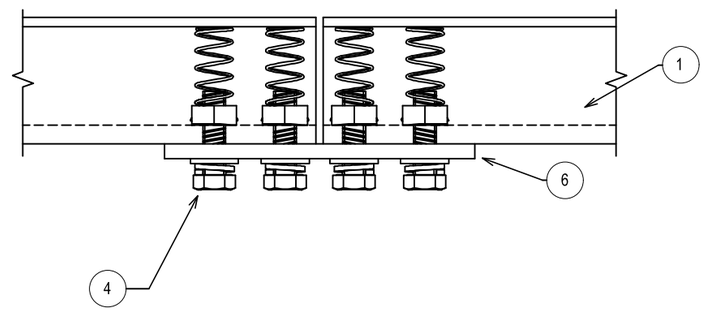



| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE | AISI 316L | 41x41x2 | | NOTE 1 |
| 2 | PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES | AISI 316L | | 8 | |
| 3 | HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER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

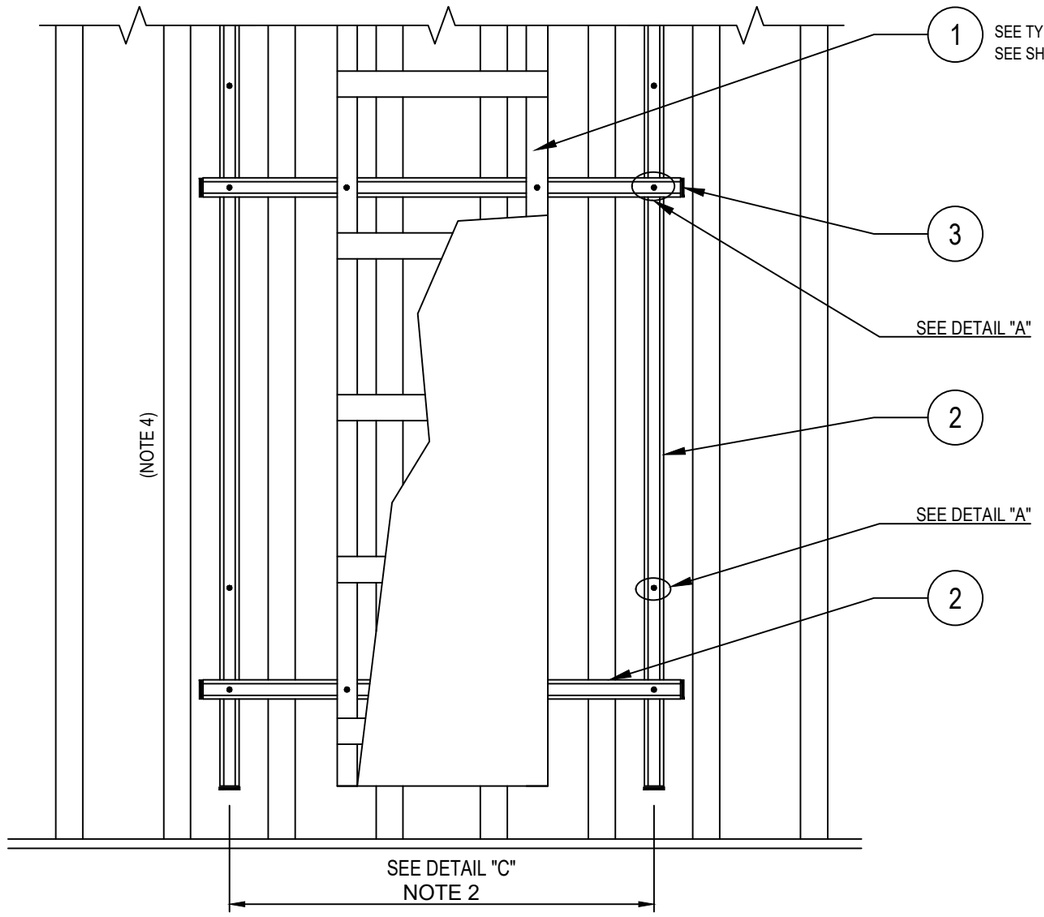
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

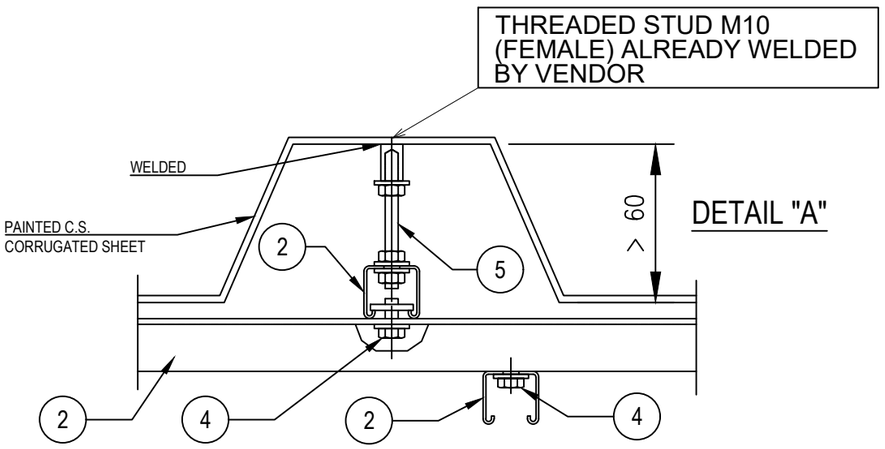
F.to UNI A3: 420mmx297mm

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

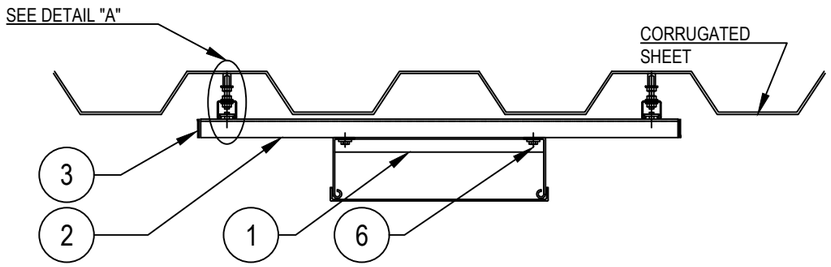
T7




| 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<br>Supplier: HILTI<br>Series: FOE100<br>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

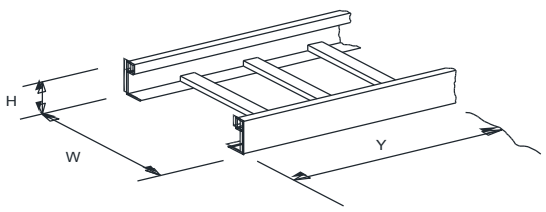



Fig. A
*STRAIGHT ELEMENT*

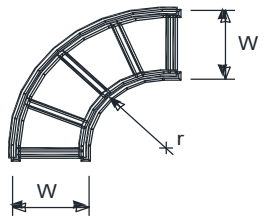



Fig. B
*PLANE 90° BEND*

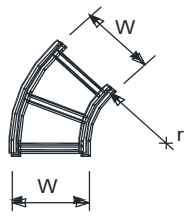



Fig. C
*PLANE 45° BEND*

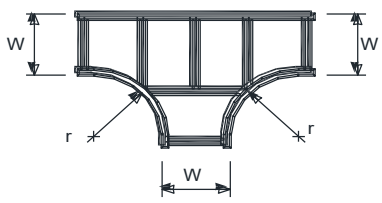



Fig. D
*TEE JUNCTION*

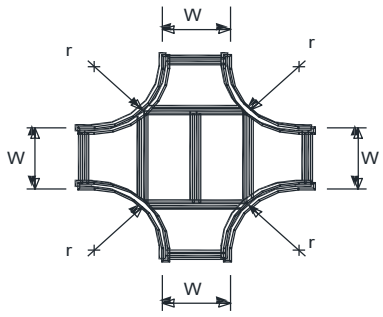



Fig. E
*CROSS JUNCTION*

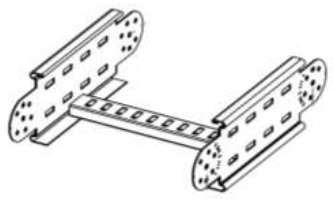


Fig. F
*SINGLE ELEMENT FOR VERTICAL BENDS*

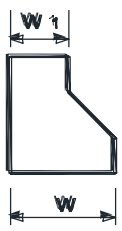



Fig. G
*PLANE LEFT - HAND REDUCING SECTION*




Fig. H
*PLANE SYMMETRIC REDUCING SECTION*




Fig. I
*PLANE RIGHT - HAND REDUCING SECTION*

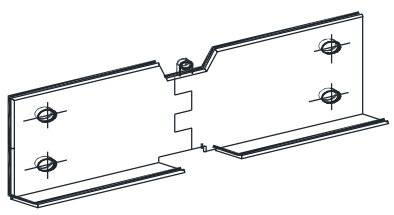


Fig. L
*HORIZONTAL HINGED JOINT*

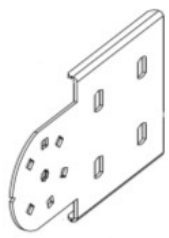


Fig. M
*VERTICAL HINGED JOINT*



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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<br>Supplier: HILTI<br>Series: FTE80<br>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

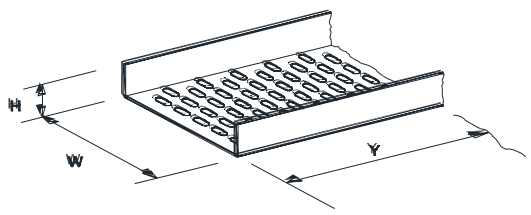



Fig. A
*STRAIGHT ELEMENT*

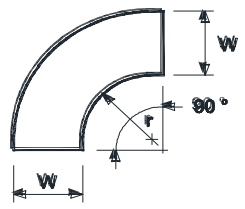



Fig. B
*PLANE 90° BEND*

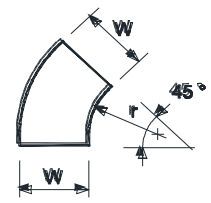



Fig. C
*PLANE 45° BEND*

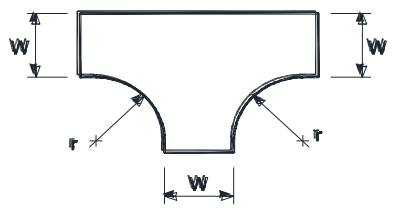



Fig. D
*TEE JUNCTION*

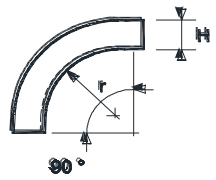



Fig. E
*VERTICAL CONVEX 90° BEND*

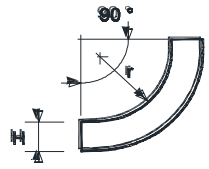



Fig. F
*VERTICAL CONCAVE 90° BEND*

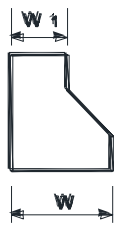



Fig. G
*PLANE LEFT - HAND REDUCING SECTION*




Fig. H
*PLANE SYMMETRIC REDUCING SECTION*

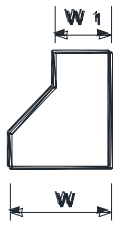



Fig. I
*PLANE RIGHT - HAND REDUCING SECTION*

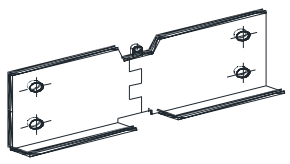


Fig. L
*HORIZONTAL HINGED JOINT*

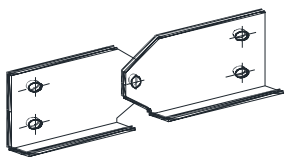


Fig. M
*VERTICAL HINGED JOINT*



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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<br>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

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