# BASE LOAD POWER HUB (BLPH)

# TR-100AD1 General arrangment drawings

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CROSSWIND

ROSETTI MARINO

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |
| 03 | 16/05/24 | ML | MF | MF | ACCEPTED FOR COSTRUCTION (AFC) |
| 02 | 10/04/24 | ML | MF | MF | ISSUE FOR REVIEW (IFR) |
| 01 | 22/02/24 | ML | MF | MF | ISSUE FOR REVIEW (IFR) |
| 00 | 18/01/24 | ML | MF | MF | ISSUE FOR REVIEW (IFR) |

TITLE : BASE LOAD POWER HUB (BLPH)
TR-100AD1 General arrangment drawings
FRONT PAGE

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

SCALE : NTS

A3

DRAWING NO. 1723001697-EL-DA-00006

SHEET 001

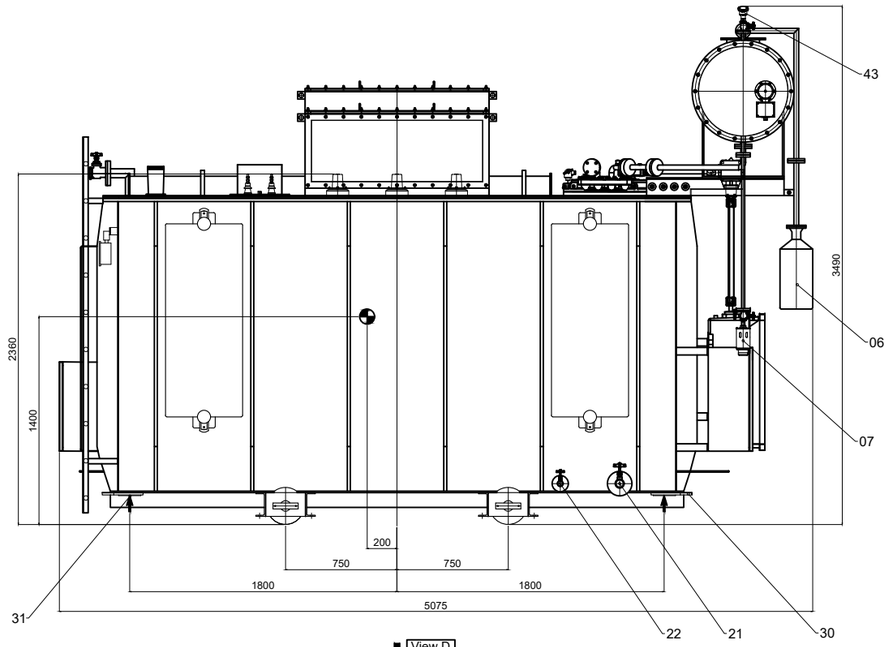
REV. 03

File Name : 1723001697-EL-DA-00006 Rev. 03

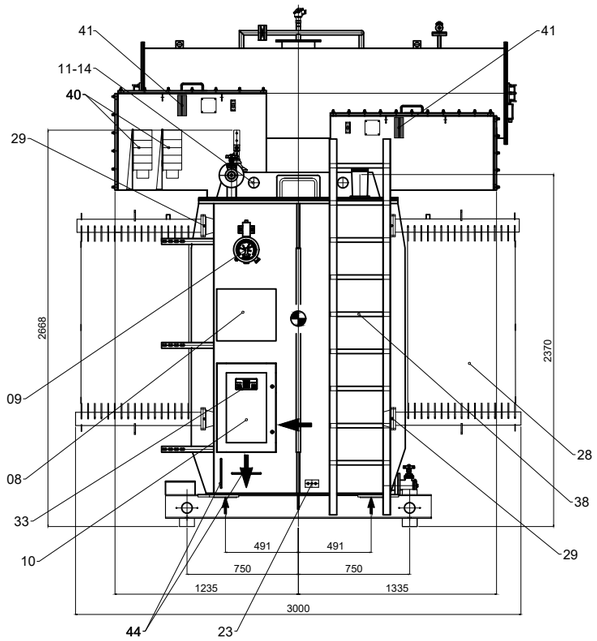
F.to UNI A3: 420mmx297mm

| REV. | SHEET NUMBER | DESCRIPTION | REF. CODE |
|---|---|---|---|
| 03 | 001 | FRONT PAGE | |
| 03 | 002 | SUMMARY and GENERAL NOTES | |
| 03 | 003 | GENERAL ARRANGEMENT | |
| 03 | 004 | GENERAL ARRANGEMENT | |
| 03 | 005 | EQUIPMENT LIST | |
| 03 | 006 | H.V. 66kV - PROTECTION BOX DETAIL | |
| 03 | 007 | H.V. 6.9kV - PROTECTION BOX DETAIL | |
| 03 | 008 | DETAIL BASE FRAME | |
| 03 | 009 | RATING PLATE | |
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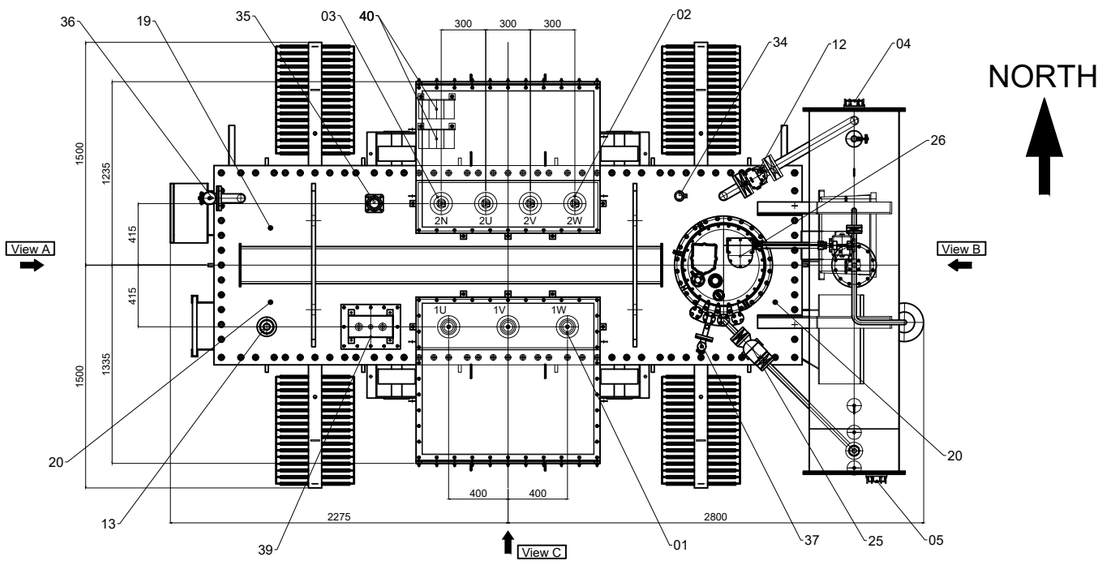
View C




View A




View D




NORTH

Note:

| | |
|---|---|
| - Minimum height of the crane hook for lifting the transformer | 5m |
| - Rated power: | 7MVA (KNAN) |
| - Rated voltage: | 66±8x1.25% / 6.9kV |
| - Vector group: | Dyn11 |
| - Oil weight: | 7000kg |
| - Total weight: | 22750kg |
| - Painting: | RAL7031 (CX) |
| - Short circuit impedance: | 8% |
| - Tag transformers: | TR-100AD1 |
| Tolerance: | ±20mm |

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TITLE : BASE LOAD POWER HUB (BLPH)
TR-100AD1 General arrangment drawings
GENERAL ARRANGEMENT

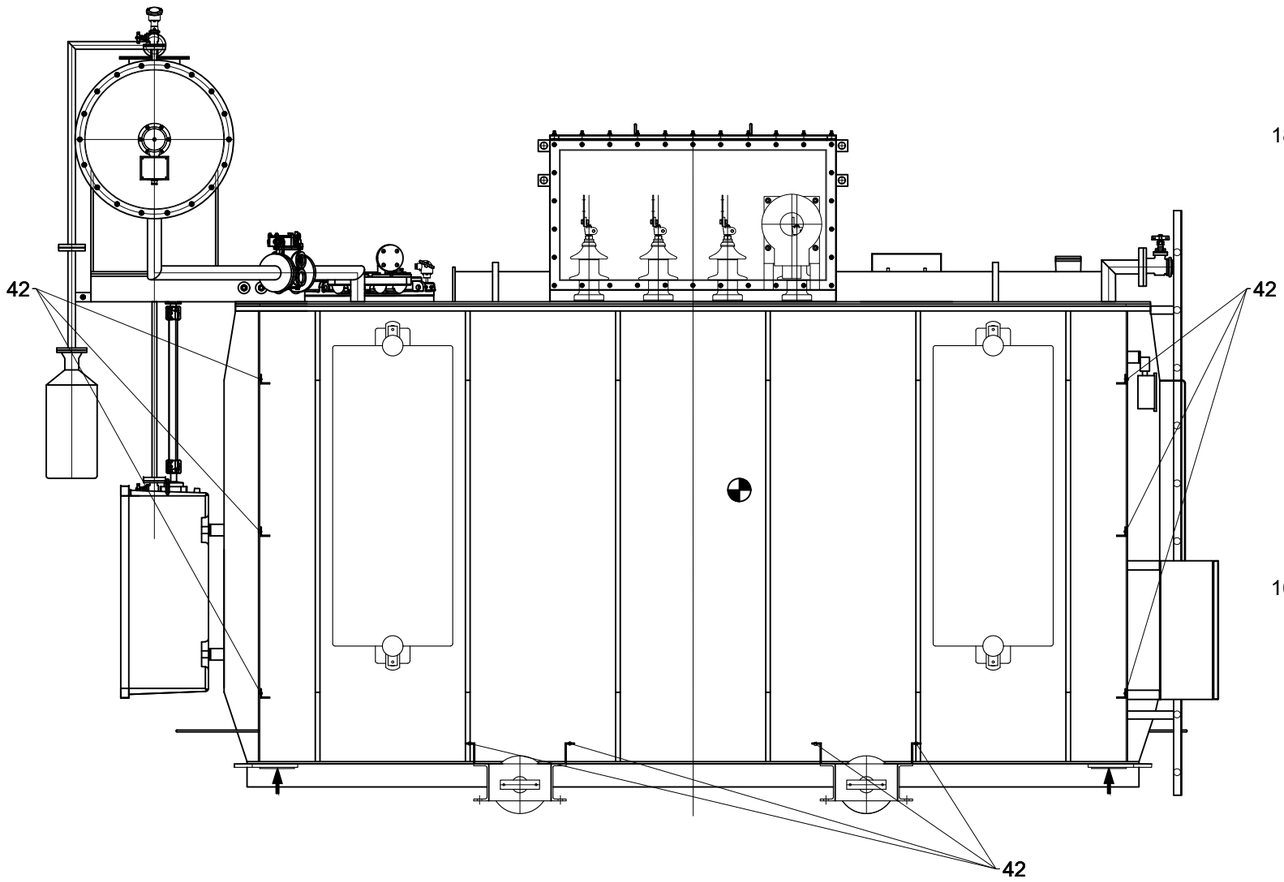
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723001697-EL-DA-00006 | SHEET 003 | REV. 03

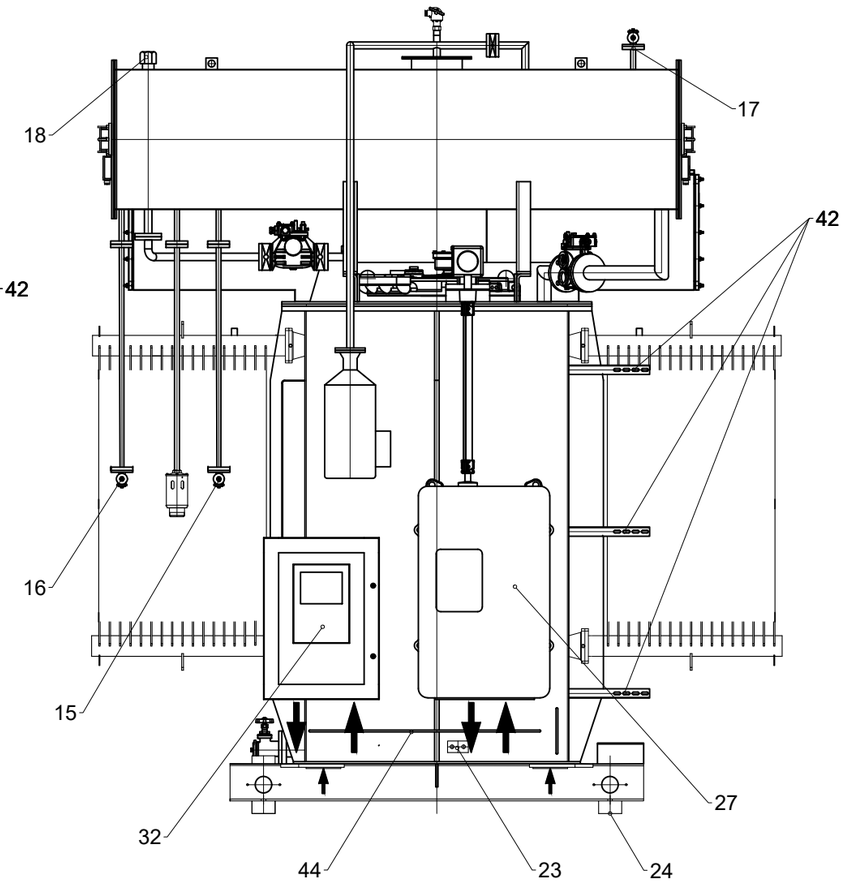
F.to UNI A3: 420mmx297mm

File Name : 1723001697-EL-DA-00006 Rev. 03

View D




View B




| | | | | | |
|---|---|---|---|---|---|
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TR–100AD1 General arrangment drawings
GENERAL ARRANGEMENT

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

SCALE : NTS

A3

DRAWING NO. 1723001697–EL–DA–00006

SHEET 004

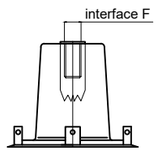
REV. 03

File Name : 1723001697–EL–DA–00006 Rev. 03

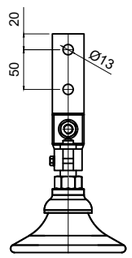
F.to UNI A3: 420mmx297mm

# EQUIPMENTS LIST

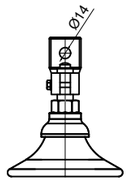
| ITEM | DESCRIPTION | N° | SUPPLIER | TYPE | ITEM | DESCRIPTION | N° | SUPPLIER | TYPE |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 66kV H.V. Terminals | 03 | NEXANS | R900AR-8-L | 23 | Earthing terminal | 02 | MF | Stainless steel plate 90x50 with n.2 holes MA16 - distance 50 |
| 02 | 6.9kV H.V. Terminals with extention copper bars | 03 | EMC | UNEL 12kV/630A | 24 | Bi-directional wheels | 04 | MF | Ø250x100 |
| 03 | 6.9kV H.V. Neutral Terminal | 01 | EMC | UNEL 12kV/630A | 25 | Protection relay with 1contact - OLTC | 01 | MR | RS2001 |
| 04 | Oil level indicator with 2 contacts - TRANSFO | 01 | COMEM | LB14XON | 26 | On Load Tap Changer | 01 | MR | VACUTAP VV III 250D-76-10 19 3W |
| 05 | Oil level indicator with 2 contacts - OLTC | 01 | COMEM | LA14XON | 27 | Motor Drive Unit (MDU) - OLTC Panel - CP-100E2 | 01 | MR | ED100 |
| 06 | Dehydrating breather - TRANSFO | 01 | COMEM | ESDB 14C | 28 | Cooling elements | 04 | WARM | 17 El. - Int. 1300 |
| 07 | Dehydrating breather - OLTC | 01 | COMEM | EM1DB | 29 | Cooling element valves | 08 | ETI | WU080 |
| 08 | Rating plate | 01 | MF | | 30 | Haulage lugs | 04 | MF | Ø50 |
| 09 | Oil thermometer with 2 contacts | 01 | TERMAF | Type A - DS150 | 31 | Jacking pads | 04 | MF | Ø150x10 |
| 10 | Auxiliary panel - Protection devices - CP-100E4 | 01 | MF | Stainless steel - IP65 | 32 | AVR control panel - CP-100E3 | 01 | MF | Stainless steel - IP65 |
| 11 | Lifting eyebolts for removable part | 04 | MF | Ø70 | 33 | Winding Temperature Indicator | 01 | TECSYSTEM | NT133/3 |
| 12 | Buchholz relay with 2 contacts | 01 | COMEM | BR50 | 34 | Thermal sensor for WTI | 01 | TECSYSTEM | PTO |
| 13 | Pressure relay with 1 contact | 01 | QUALITROL | 900-FLA-T-NO-STD | 35 | Current transformer signal for WTI | 01 | ETI | SM2-X |
| 14 | Lifting eyebolts transformer | 04 | MF | Ø70 | 36 | Oil treatment valve - TRANSFO | 01 | MF | DN50-PN10 |
| 15 | Conservator oil drain valve - TRANSFO | 01 | BARBERI | DN15-PN10 | 37 | Oil treatment valve - OLTC | 01 | MR | DN25-PN10 |
| 16 | Conservator oil drain valve - OLTC | 01 | BARBERI | DN15-PN10 | 38 | Ladder | 01 | MF | |
| 17 | Conservator air release valve - TRANSFO | 01 | BARBERI | DN15-PN10 | 39 | Core earthing terminals | 02 | MF | |
| 18 | Conservator air release cap - OLTC | 01 | MF | 2" | 40 | Current transformer | 02 | STE | 250/1A - 5P20 - 5VA |
| 19 | Thermal pocket for pos. 09 | 01 | MF | 3/4" | 41 | Heating element with thermostat | 02 | MF | 100W |
| 20 | Thermal pocket (spare) | 02 | MF | 3/4" | 42 | Support cable duct | 06 | MF | |
| 21 | Oil drain valve - TRANSFO | 01 | BARBERI | DN50-PN10 | 43 | Diaphragm failure device with alarm contact | 01 | PRONAL | STP-BBR |
| 22 | Oil sampling valve - TRANSFO | 01 | BARBERI | DN15-PN10 | 44 | Support auxiliary cables | 02 | MF | |



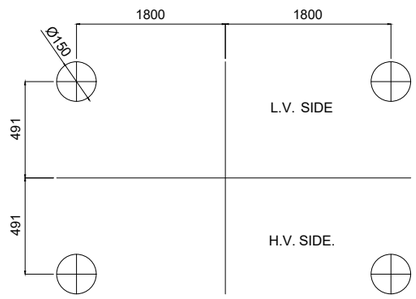

Pos. 1
Detail H.V. Terminal



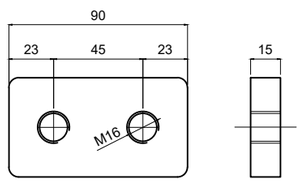

Pos. 2
Detail L.V. Terminal




Pos. 3
Detail Neutral Terminal




Pos. 31
Detail jacking pads




Pos. 23
Detail earthing terminal

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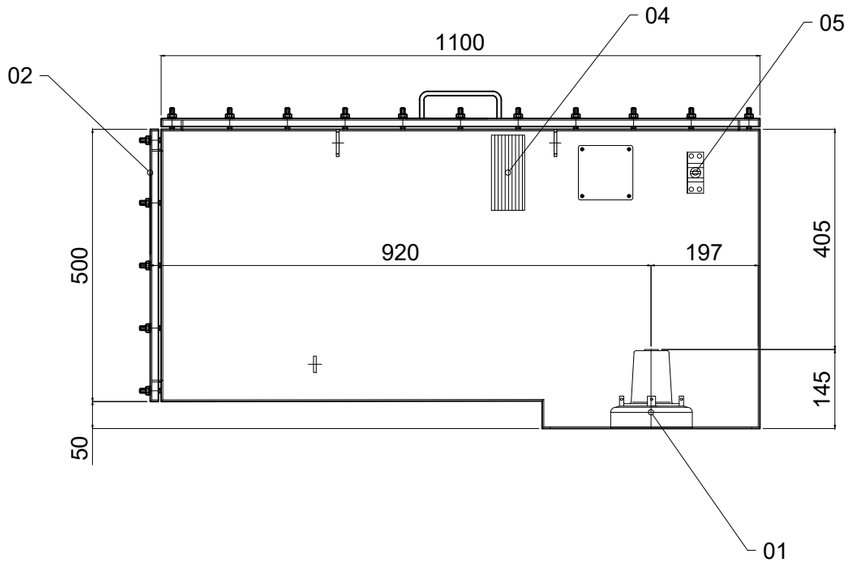
TITLE : BASE LOAD POWER HUB (BLPH)
TR-100AD1 General arrangment drawings
EQUIPMENT LIST

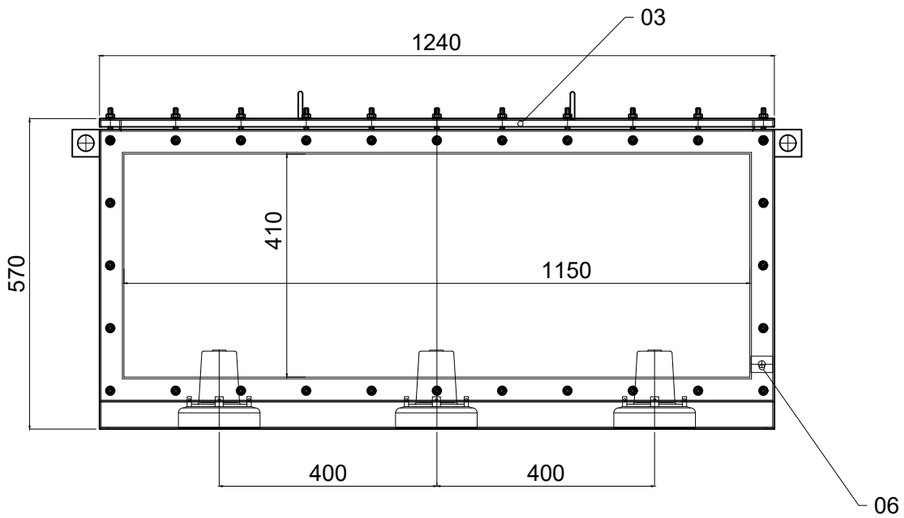
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1723001697-EL-DA-00006 | SHEET 005 | REV. 03

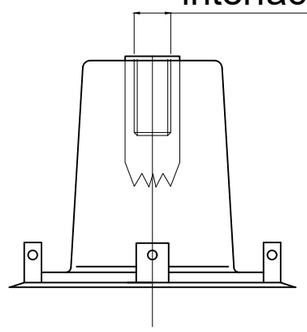
File Name : 1723001697-EL-DA-00006 Rev. 03

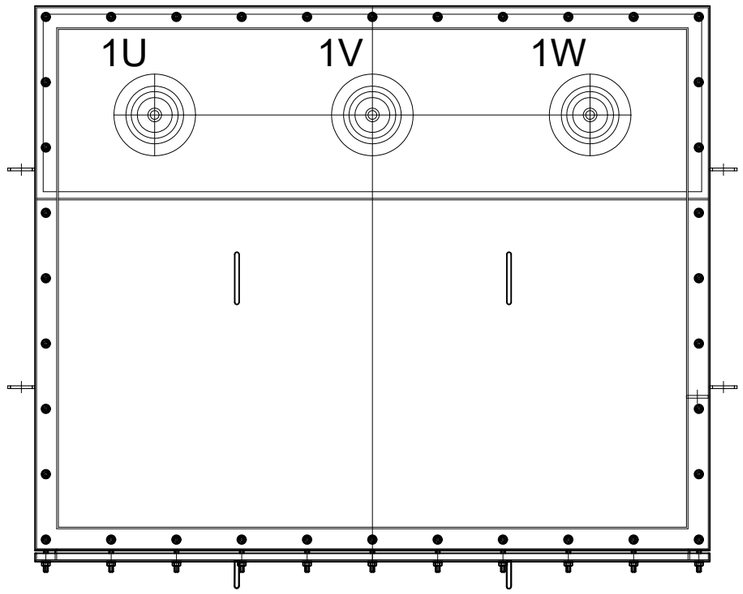
F.to UNI A3: 420mmx297mm




interface F






| Item | Description | Q.ty | Type |
|---|---|---|---|
| 01 | 66kV H.V. Terminal | 3 | R900AR-8 |
| 02 | Cable inlet plate | 1 | Aluminium - th. 5mm |
| 03 | Removable plate | 1 | Painted steel - th. 3mm |
| 04 | Heating element | 1 | 100W |
| 05 | Thermostat | 1 | |
| 06 | Earthing terminal | 1 | Stainless steel 40x30x5 - Ø13 |

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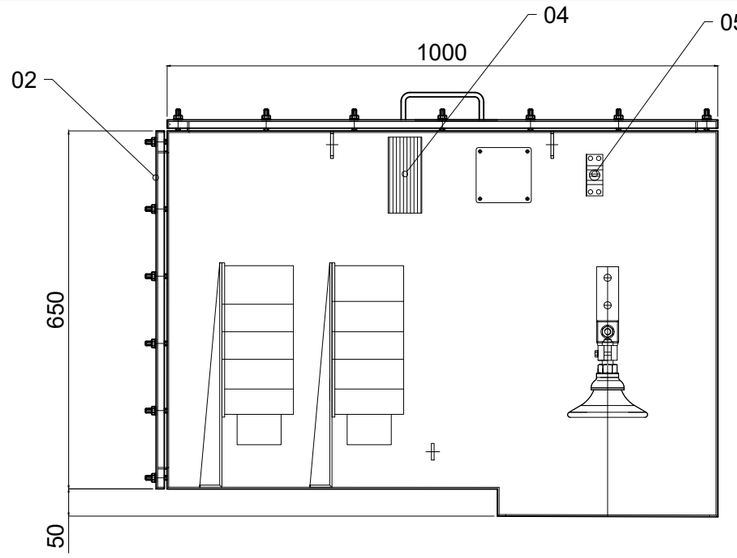
TITLE : BASE LOAD POWER HUB (BLPH)
TR-100AD1 General arrangment drawings
H.V. 66kV - PROTECTION BOX DETAIL

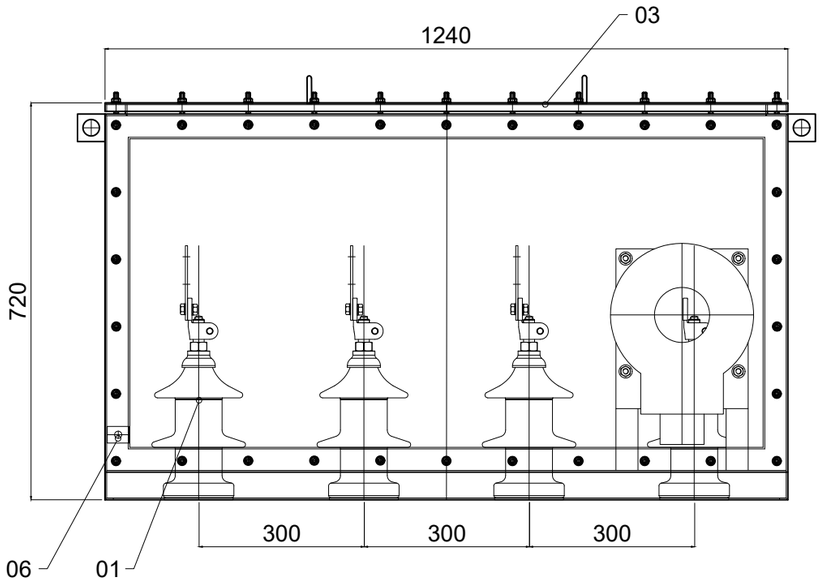
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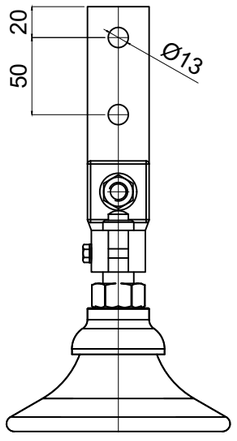
A3 | DRAWING NO. 1723001697-EL-DA-00006 | SHEET 006 | REV. 03

F.to UNI A3: 420mmx297mm

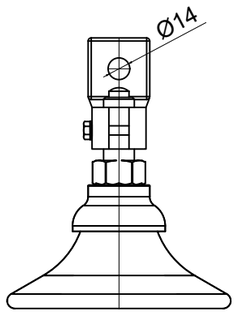
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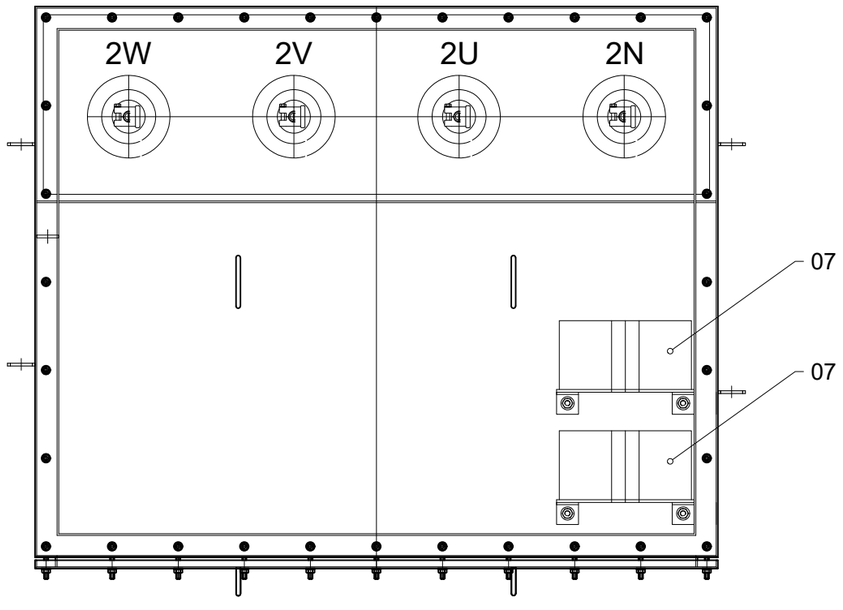




Detail
6.9kV H.V. Terminal




Detail
6.9kV H.V. Neutral Terminal




| Item | Description | Q.ty | Type |
|---|---|---|---|
| 01 | 6.9kV H.V. Terminal | 4 | UNEL 12kV/630A |
| 02 | Cable inlet plate | 1 | Aluminium - th. 5mm |
| 03 | Removable plate | 1 | Painted steel - th. 3mm |
| 04 | Heating element | 1 | 100W |
| 05 | Thermostat | 1 | |
| 06 | Earthing terminal | 1 | Stainless steel 40x30x5 - Ø13 |
| 07 | Current transformer | 2 | 250/1A - 5P20 - 5VA |

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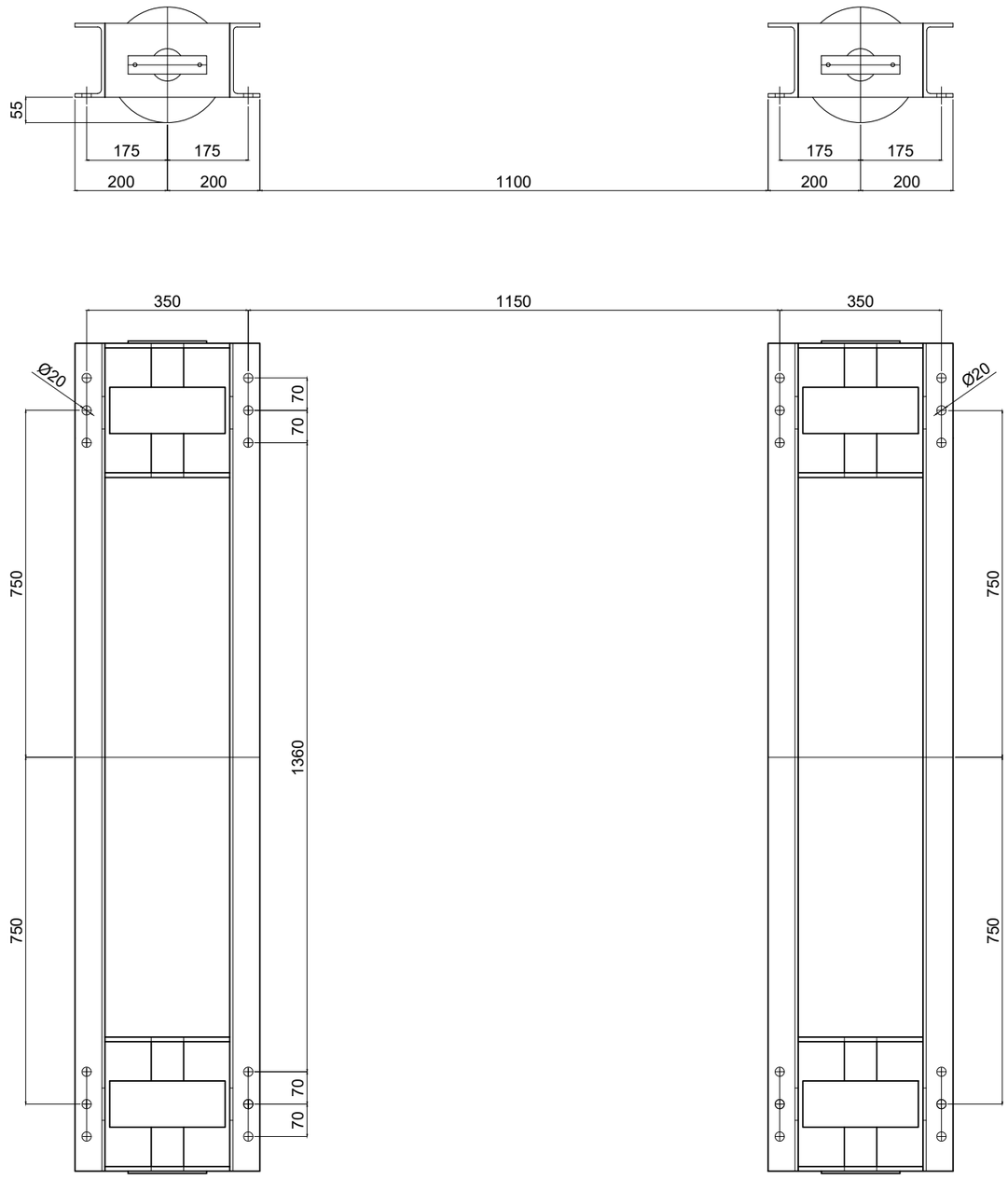
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H.V. 6.9kV - PROTECTION BOX DETAIL

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A3 | DRAWING NO. 1723001697-EL-DA-00006 | SHEET 007 | REV. 03

F.to UNI A3: 420mmx297mm

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TITLE : BASE LOAD POWER HUB (BLPH)
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DETAIL BASE FRAME

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

SCALE : NTS

A3

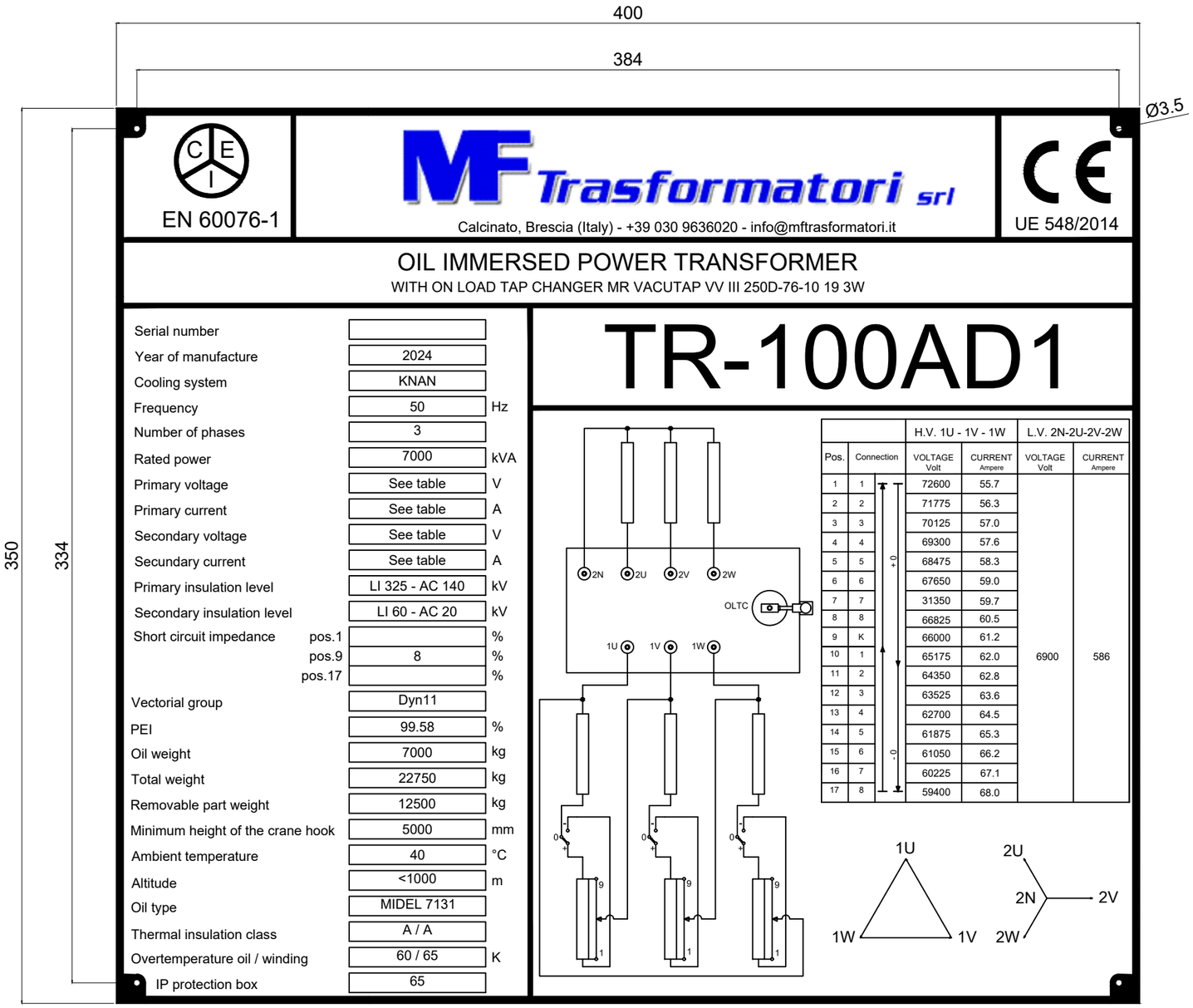
DRAWING NO. 1723001697-EL-DA-00006

SHEET 008

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723001697-EL-DA-00006 Rev. 03




| | | H.V. 1U - 1V - 1W | | L.V. 2N-2U-2V-2W | |
|---|---|---|---|---|---|
| Pos. | Connection | VOLTAGE Volt | CURRENT Ampere | VOLTAGE Volt | CURRENT Ampere |
| 1 | 1 | 72600 | 55.7 | | |
| 2 | 2 | 71775 | 56.3 | | |
| 3 | 3 | 70125 | 57.0 | | |
| 4 | 4 | 69300 | 57.6 | | |
| 5 | 5 | 68475 | 58.3 | | |
| 6 | 6 | 67650 | 59.0 | | |
| 7 | 7 | 31350 | 59.7 | | |
| 8 | 8 | 66825 | 60.5 | | |
| 9 | K | 66000 | 61.2 | | |
| 10 | 1 | 65175 | 62.0 | 6900 | 586 |
| 11 | 2 | 64350 | 62.8 | | |
| 12 | 3 | 63525 | 63.6 | | |
| 13 | 4 | 62700 | 64.5 | | |
| 14 | 5 | 61875 | 65.3 | | |
| 15 | 6 | 61050 | 66.2 | | |
| 16 | 7 | 60225 | 67.1 | | |
| 17 | 8 | 59400 | 68.0 | | |

Note:
- Material: stainless steel
- Black write on neutral background

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TITLE : BASE LOAD POWER HUB (BLPH)
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RATING PLATE

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

A3 | DRAWING NO. 1723001697-EL-DA-00006 | SHEET 009 | REV. 03

F.to UNI A3: 420mmx297mm

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