





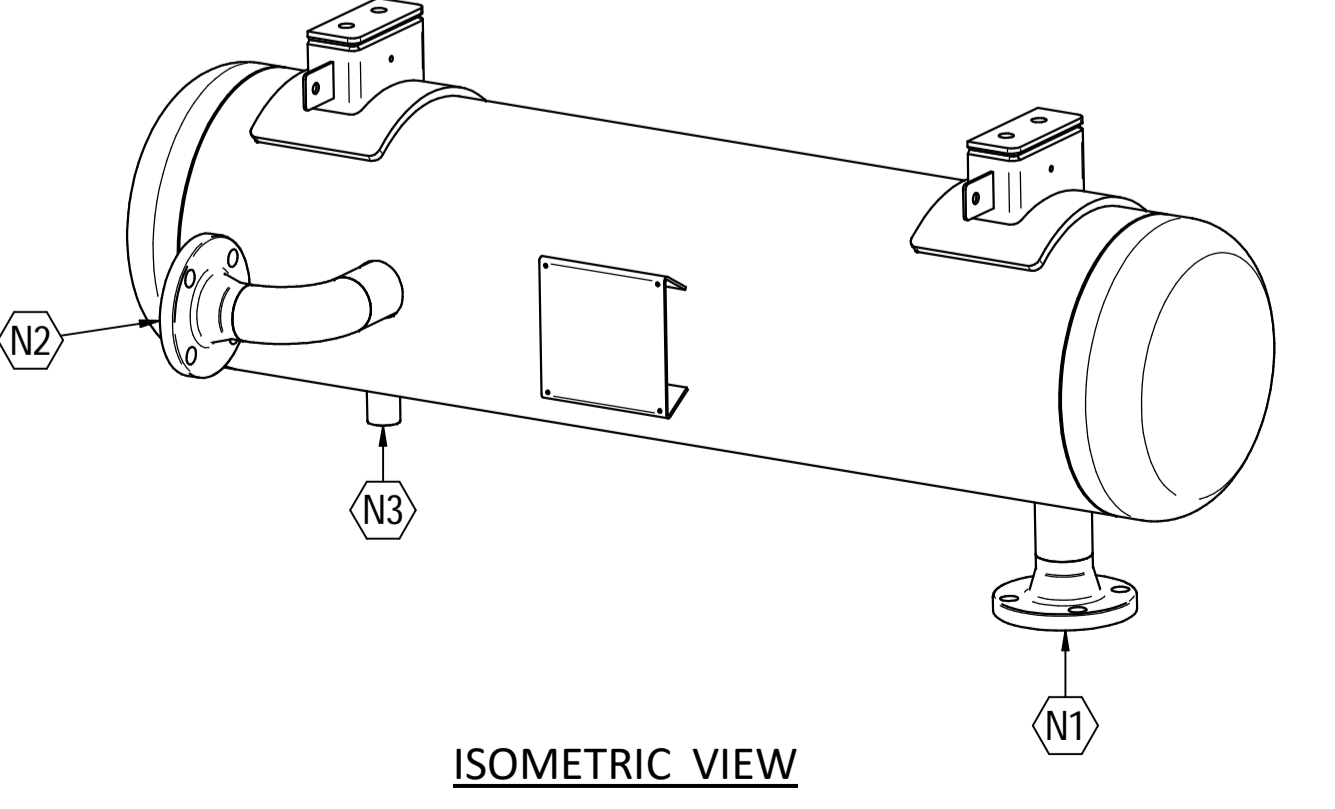
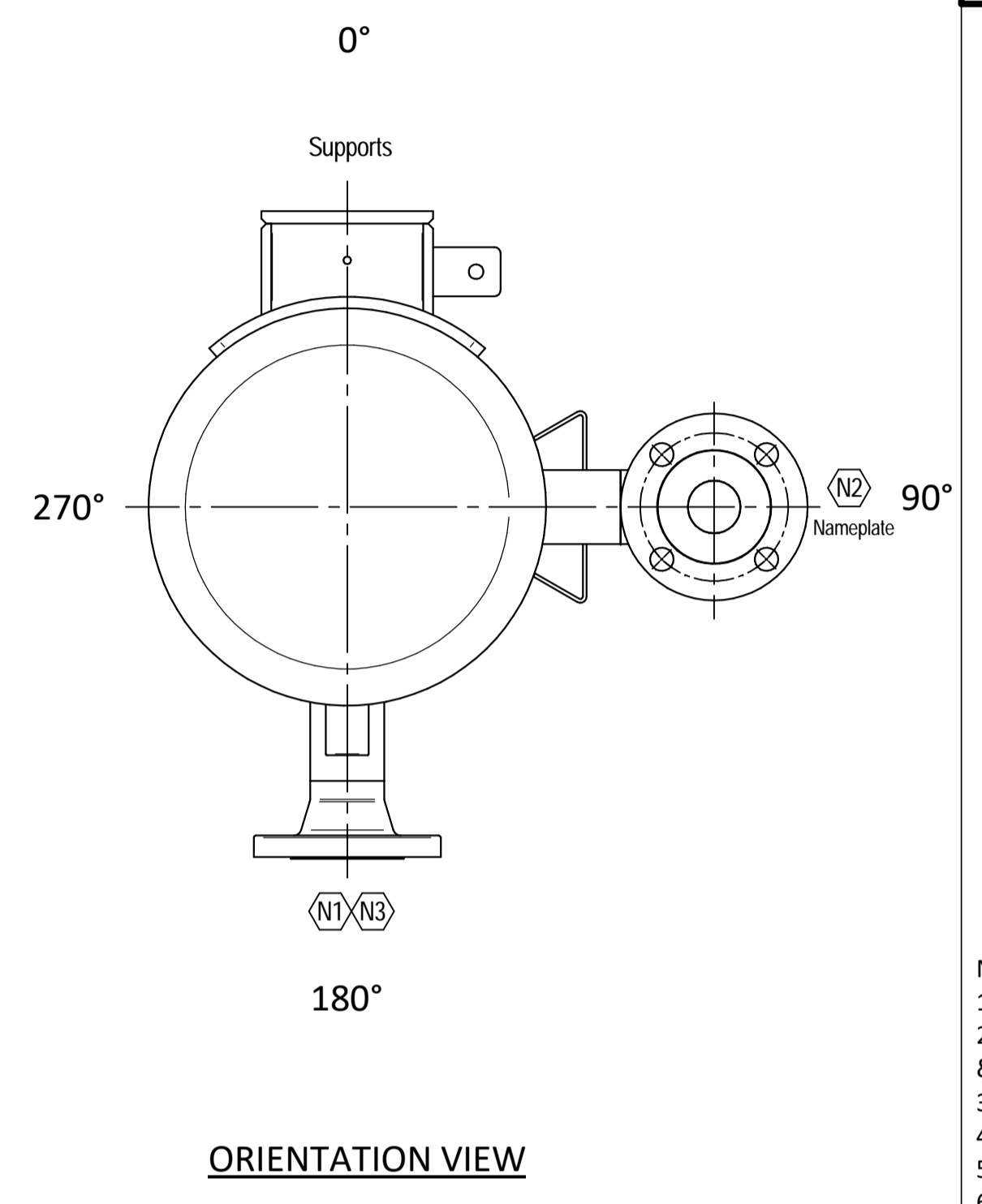
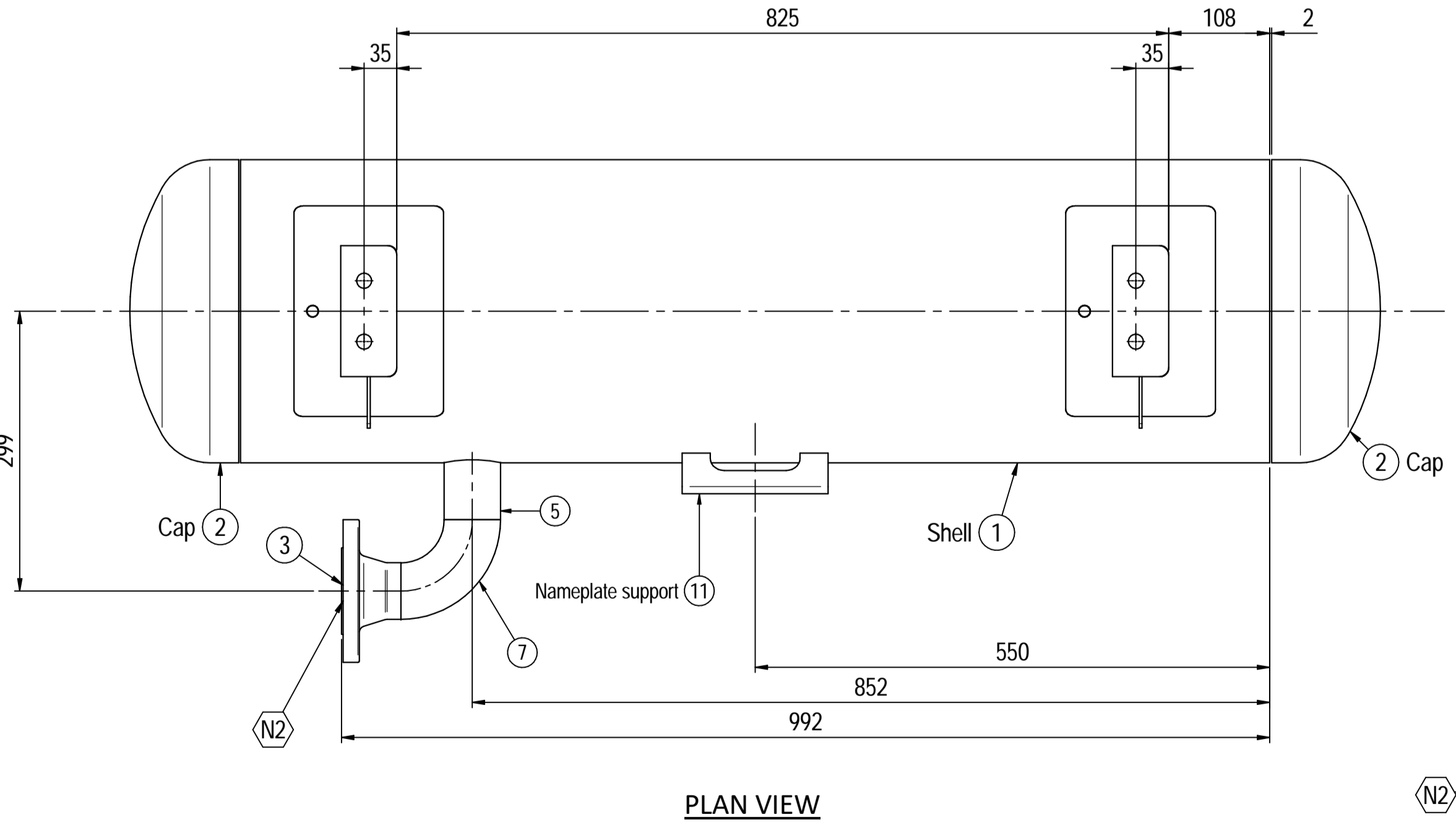
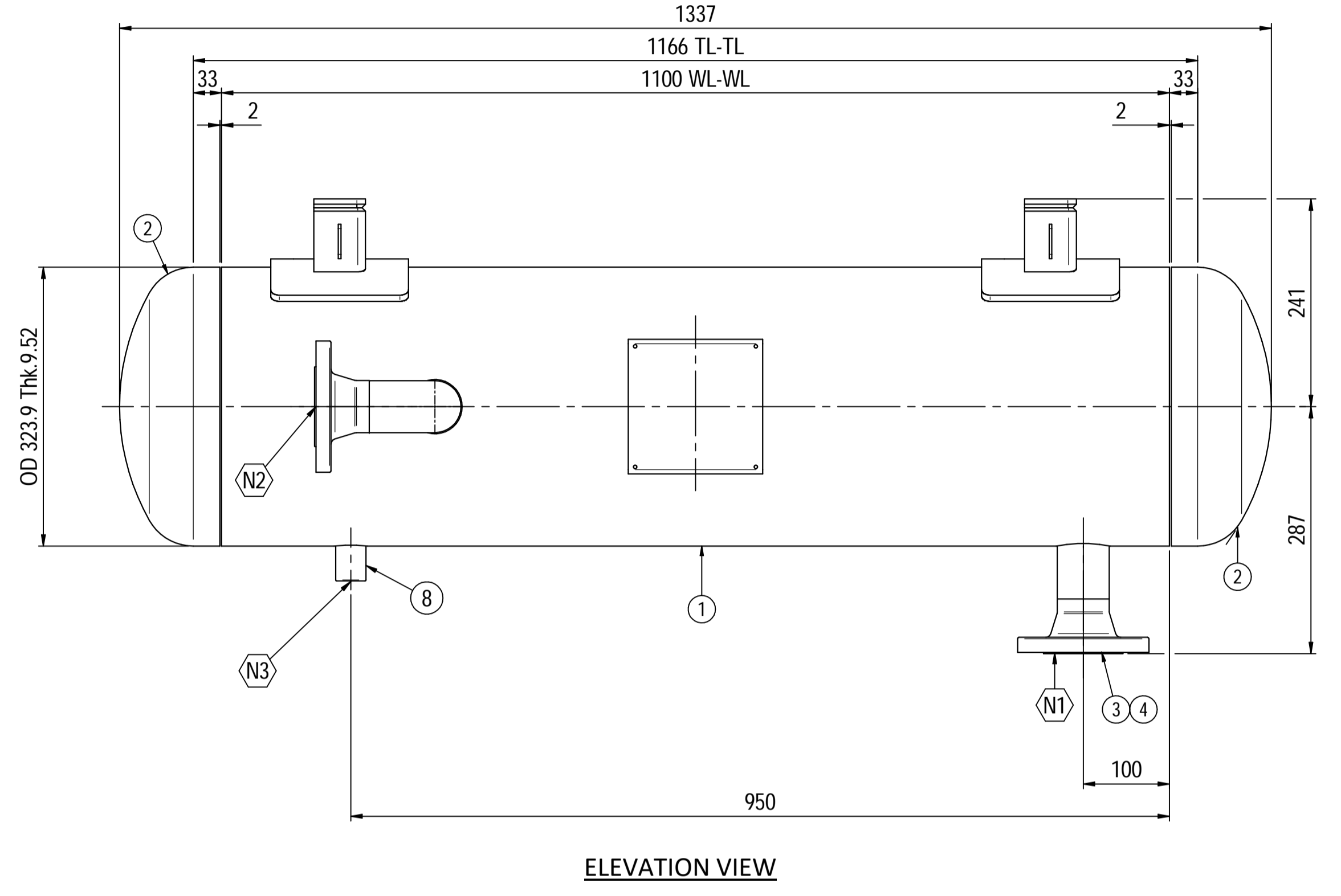
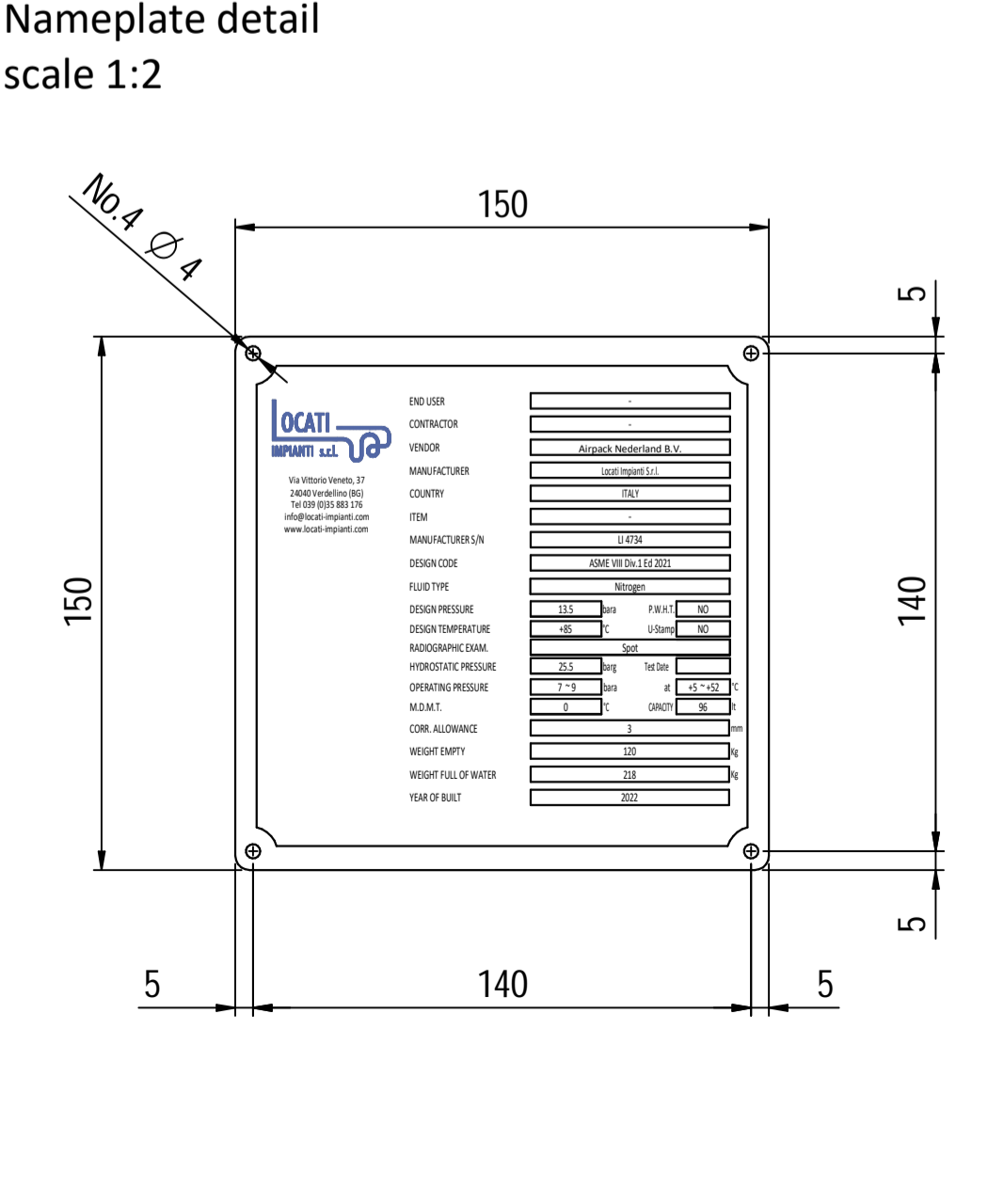
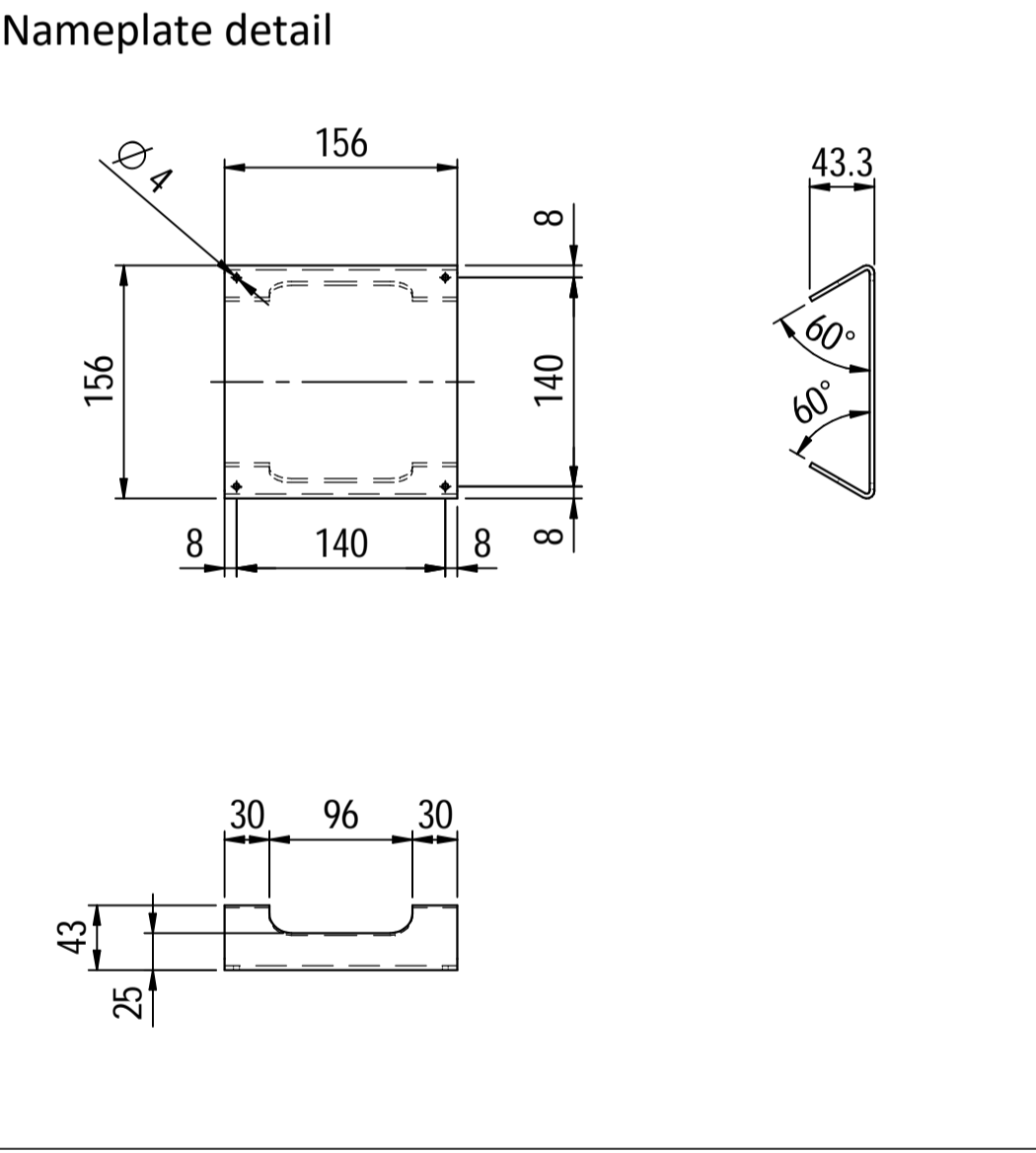
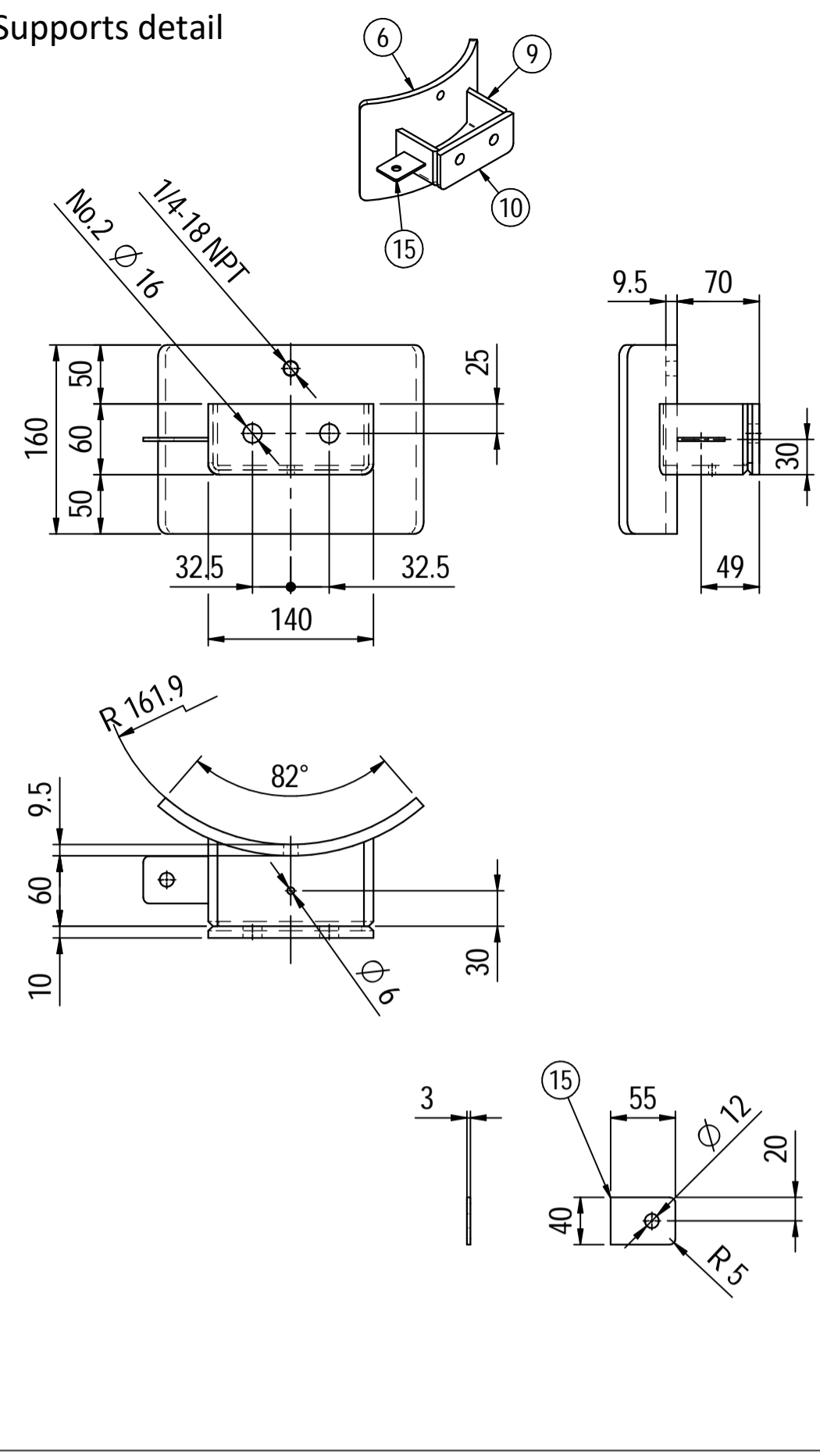


| | | | | | | | | | |
|--|---|----|----|-----|----|-----|--|---------|--------|
| OWNER:  شرکت سست و سویی توپه ایرایشان (سهامی خاص) | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | | EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | | |
| | PULSATION DAMPER DETAIL DRAWING FOR NITROGEN GAS BOOSTER | | | | | |  | | |
| MC : | | | | | | |  شرکت سست و سویی توپه ایرایشان (سهامی خاص) | Project | Area |
| Owner Document Number: 17811-23C | BU | 20 | VD | 303 | ME | DWG | 0079 | Rev.: | Page |
| | | | | | | | | 07 | 1 of 6 |

PULSATION DAMPER DETAIL DRAWING FOR NITROGEN GAS BOOSTER

| | | |
|--|---|---|
|  شرکت سست و سویی توپه ایرایشان (سهامی خاص) |  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT |
| Document Review | | |
| Issue Purpose: | AB | |
| Result Code: AP,AN,CM,RE,NC | AP | |
| Next Status : IFC,IFA,IFI,AFC,AB | - | |
| Responsible Department | MECHANIC | |
| Commented Date | Apr.30.2023 | |
| Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract. | | |

| | | | | | | |
|------|------------|---------------------------|----------|---------|----------|----------|
| 07 | 26/04/2023 | As Built | KP | CL | JR | |
| 06 | 13/07/2022 | Approved for Construction | KP | CL | JR | |
| 05 | 16/06/2022 | For approval | KP | CL | JR | |
| 04 | 03/06/2022 | For approval | KP | CL | JR | |
| 03 | 13/05/2022 | For approval | KP | CL | JR | |
| 02 | 06/05/2022 | For approval | KP | CL | JR | |
| 01 | 26/04/2022 | For approval | KP | CL | JR | |
| 00 | 06/04/2022 | For approval | KP | CL | JR | |
| Rev. | Date | Purpose of Issue | Prepared | Checked | Approved | AC Code |
| | | | | | Class: 1 | Phase: P |



| Material List | | | | |
|---------------|------|---|-------------|-------|
| Pos. | Q.ty | Description | Mat. | Cert. |
| 1 | 1 | Shell by seamless pipe 12" Sch.STD L=1100 | SA106 Gr.B | 3.1 |
| 2 | 2 | Reduced cap 12" Sch.STD | SA234 WPB | 3.1 |
| 3 | 2 | Flange 2" WN 150# Sch160 | SA105 | 3.1 |
| 4 | 1 | Seamless pipe 2" Sch160 L=74 | A106 GrB | 3.1 |
| 5 | 1 | Seamless pipe 2" Sch.160 L=73 | A106 GrB | 3.1 |
| 6 | 2 | Pad by pipe 12" Sch.STD | A106 Gr.B | 3.1 |
| 7 | 1 | Seamless elbow 2" 90° LR Sch160 | A234 WPB | 3.1 |
| 8 | 1 | Coupling 1/2" NPT #6000 | A105 | 3.1 |
| 9 | 2 | Plate 74.5x231 Thk.8 | A516 70 | 3.1 |
| 10 | 2 | Plate 16x65 Thk.10 | A516 70 | 3.1 |
| 11 | 1 | Nameplate support 156x241 Thk.3mm | A516 70 | 3.1 |
| 15 | 2 | Earthing Plate 55 x 40 Thk.3 | A240 TP316L | |

Note:
 1) Governing measurement S.I. unless otherwise specified;
 2) Flange bolt holes have to be straddled from main vessel center line in plan & vertical & horizontal centreline in elevation;
 3) Material: certification 3.1 EN 10204;
 4) All internal edge shall be rounded off;
 5) Nozzle flanges in accordance with ASME B16.5: 2013;
 6) Flange fittings in accordance with ASME B16.9: 2012;
 7) The flange dimensions are in accordance to ASME B16.5: 2013;
 8) All fillet welds not detailed on "WELDING MAP" or drawing shall have the weld; throated equal to 0,7 times the minimum thickness to be welded;
 9) All welds are continuous except where indicate;
 10) See document C220006CLC009 for vessel calculation.

| ITEM | QTY | SERVICE | SIZE | PIPE O.D. | THK | RATING | FLANGE TYPE | FACE | O.D. | THK. | Tc |
|------|-----|------------|------|-----------|------|--------|-------------|-------|------|------|----------|
| N3 | 1 | DRAIN | 1/2" | 38.1 | 8.38 | #6000 | - | NPT-F | - | - | 8.5 + 10 |
| N2 | 1 | AIR OUTLET | 2" | 60.3 | 8.74 | #150 | WN | RF | - | - | 8.5 + 10 |
| N1 | 1 | AIR INLET | 2" | 60.3 | 8.74 | #150 | WN | RF | - | - | 8.5 + 10 |

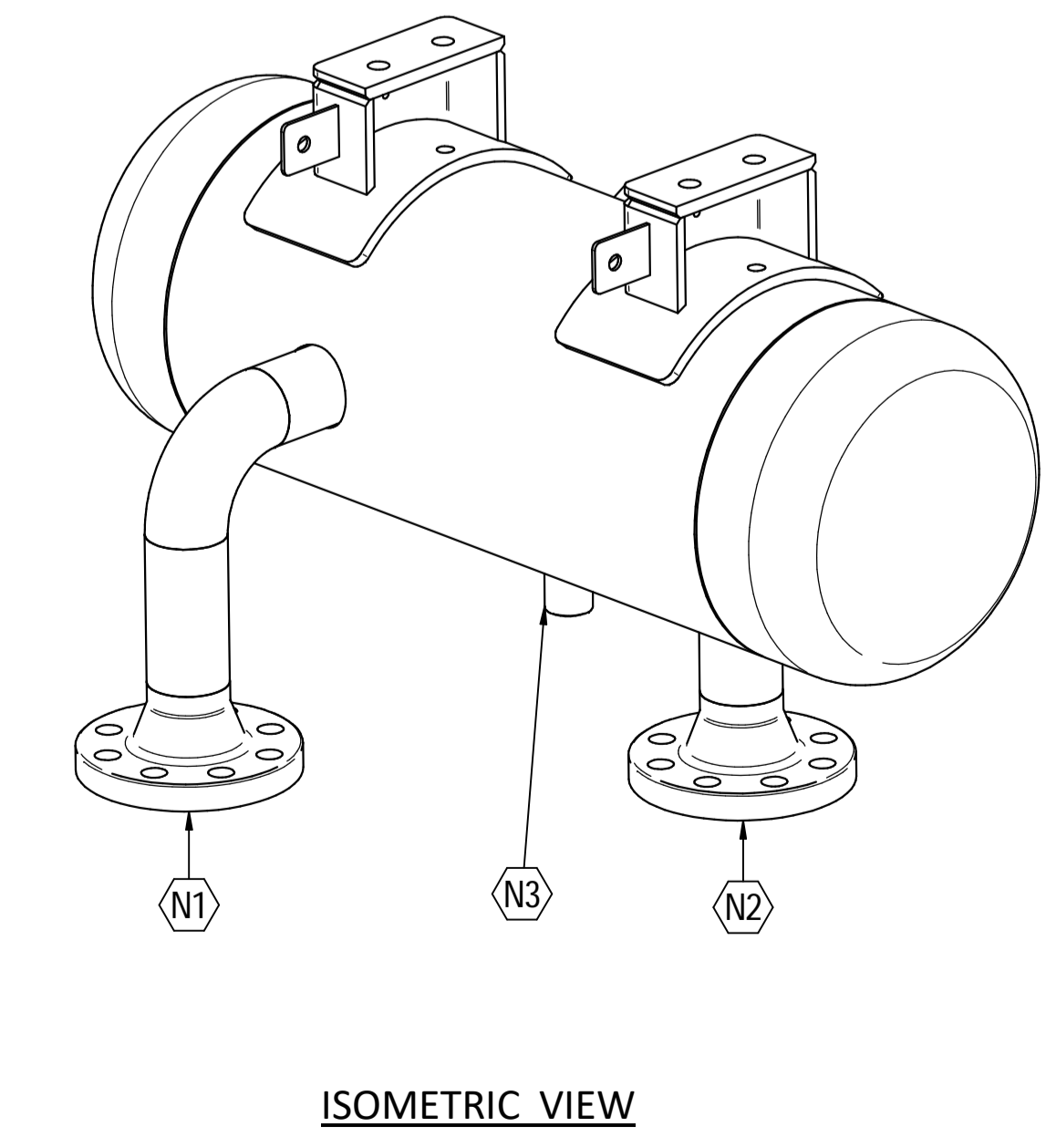
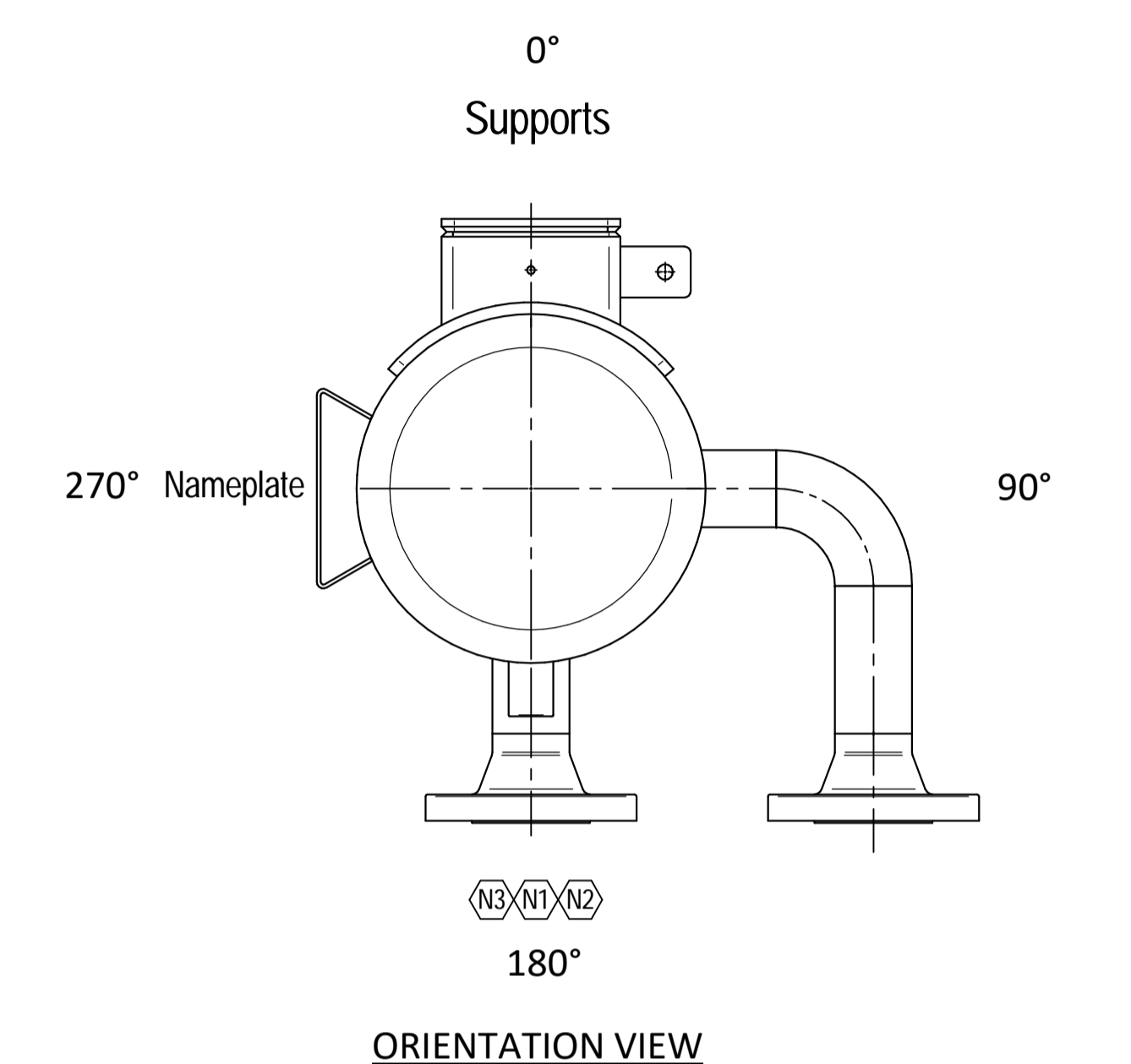
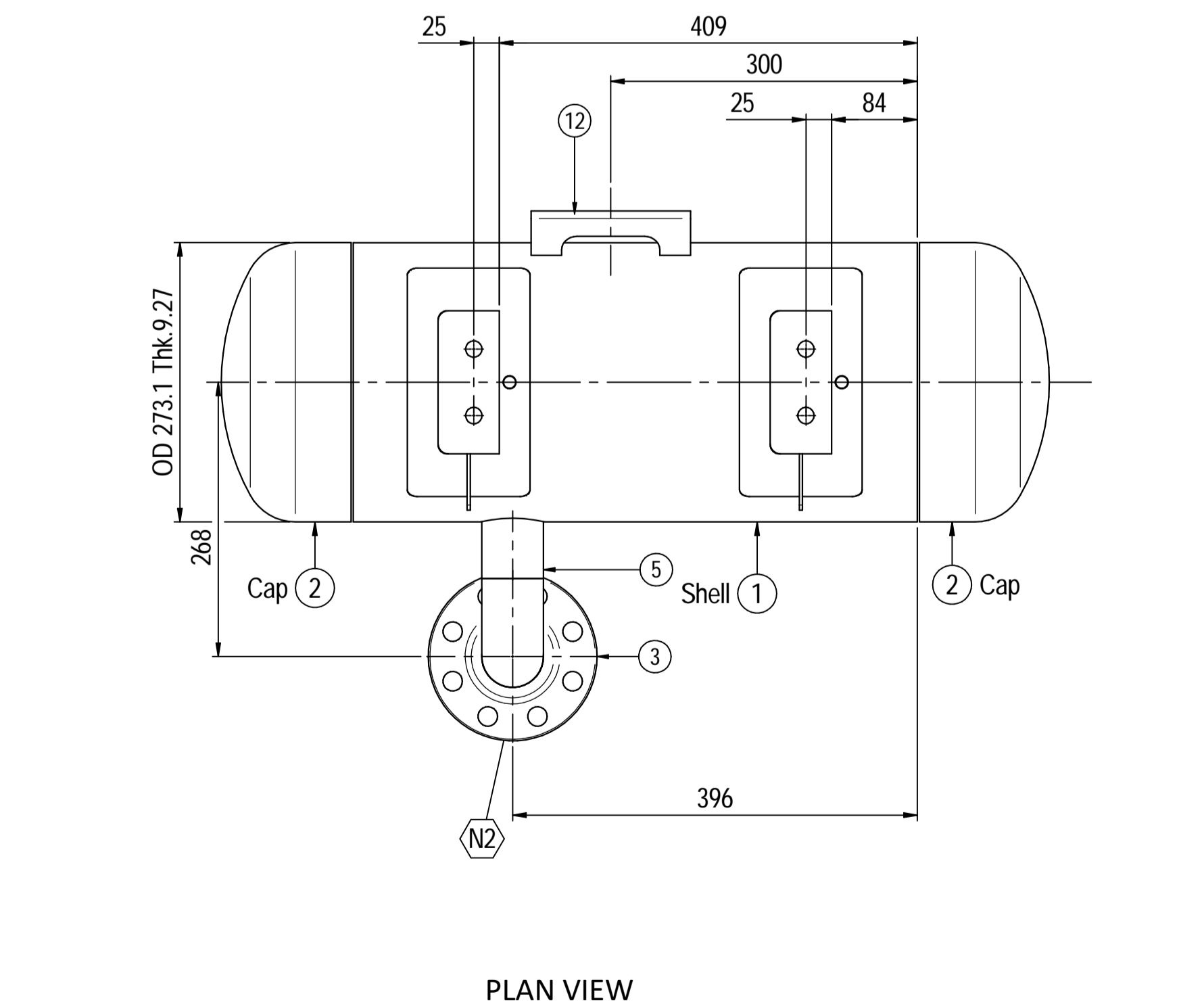
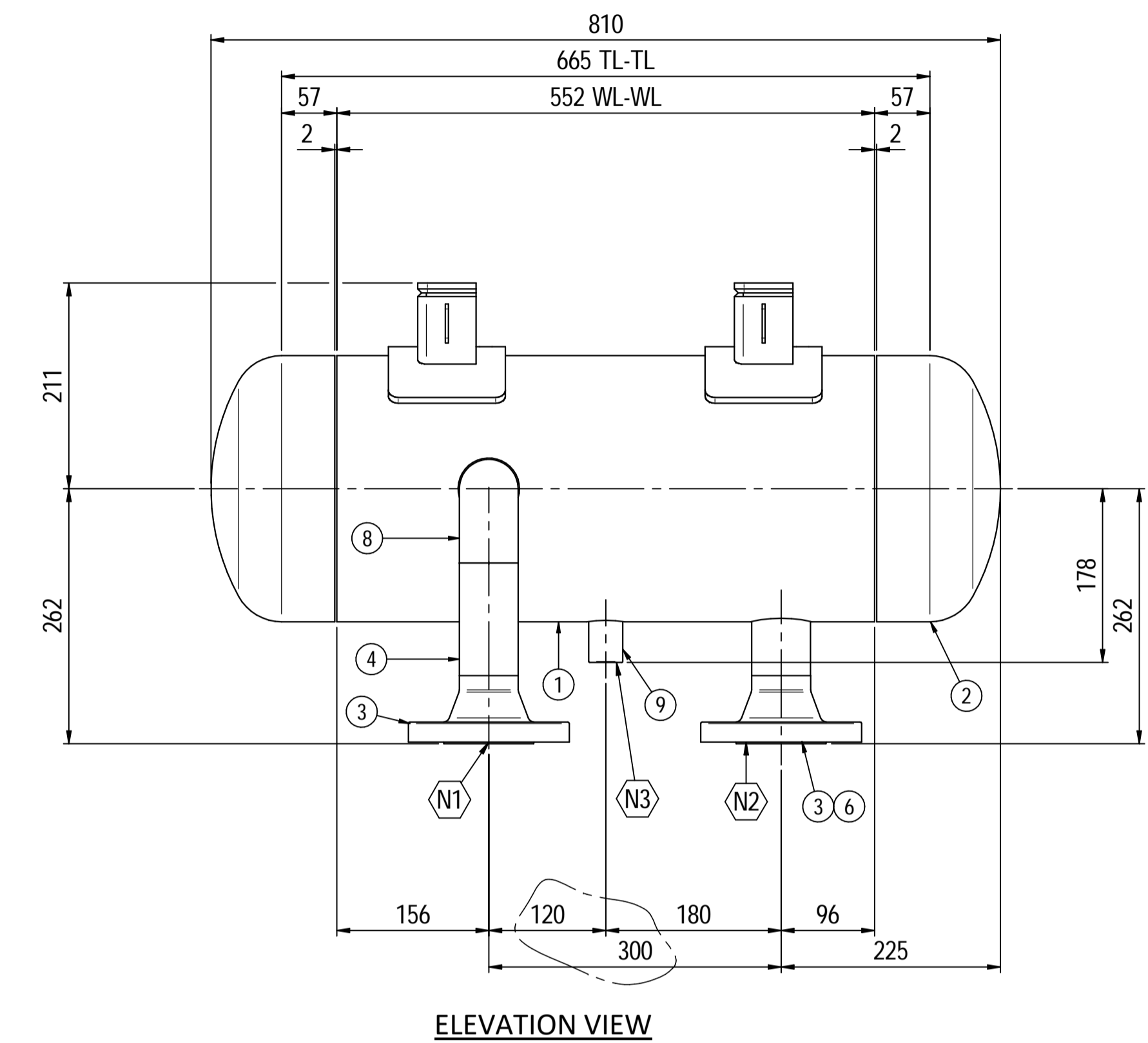
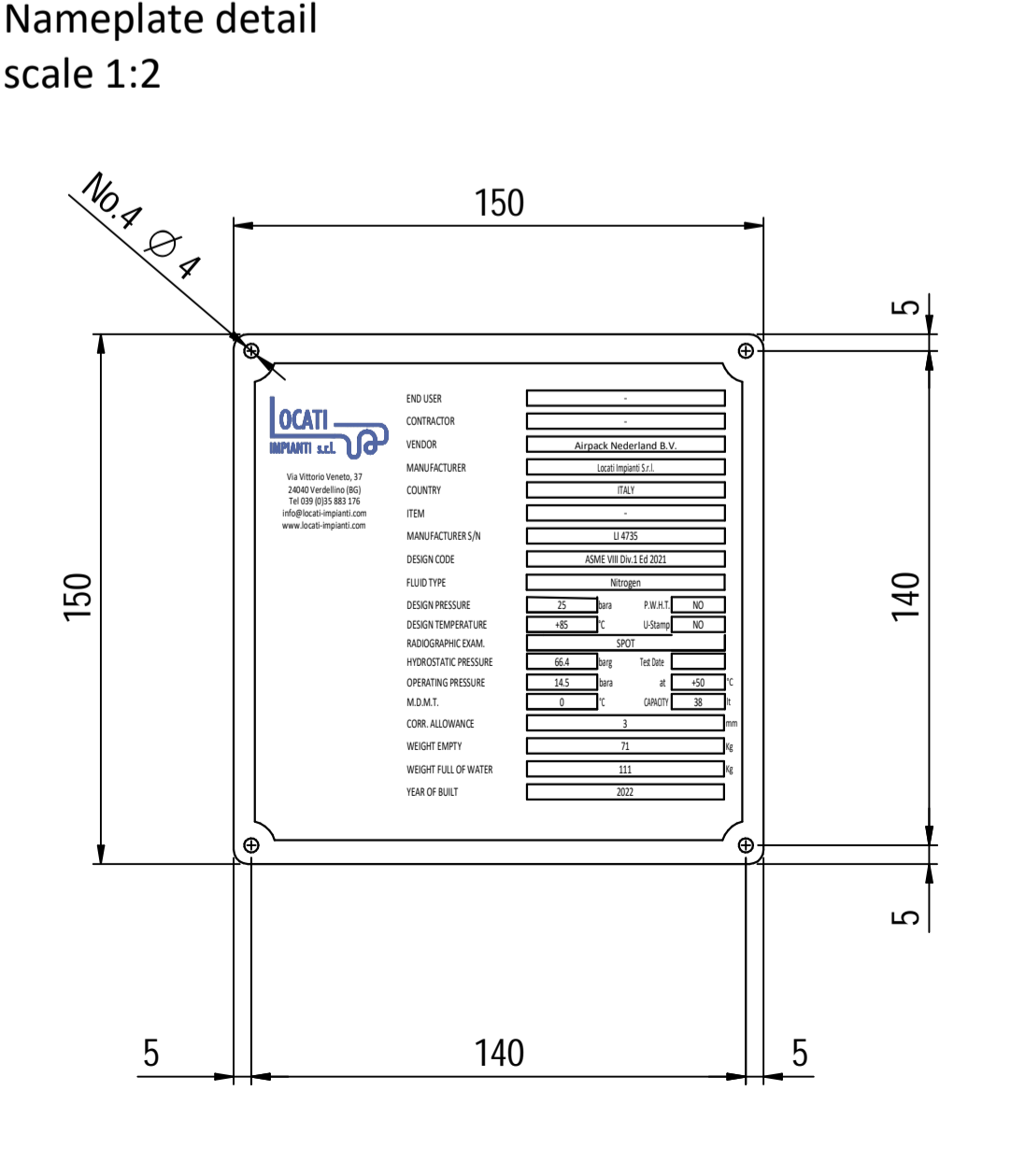
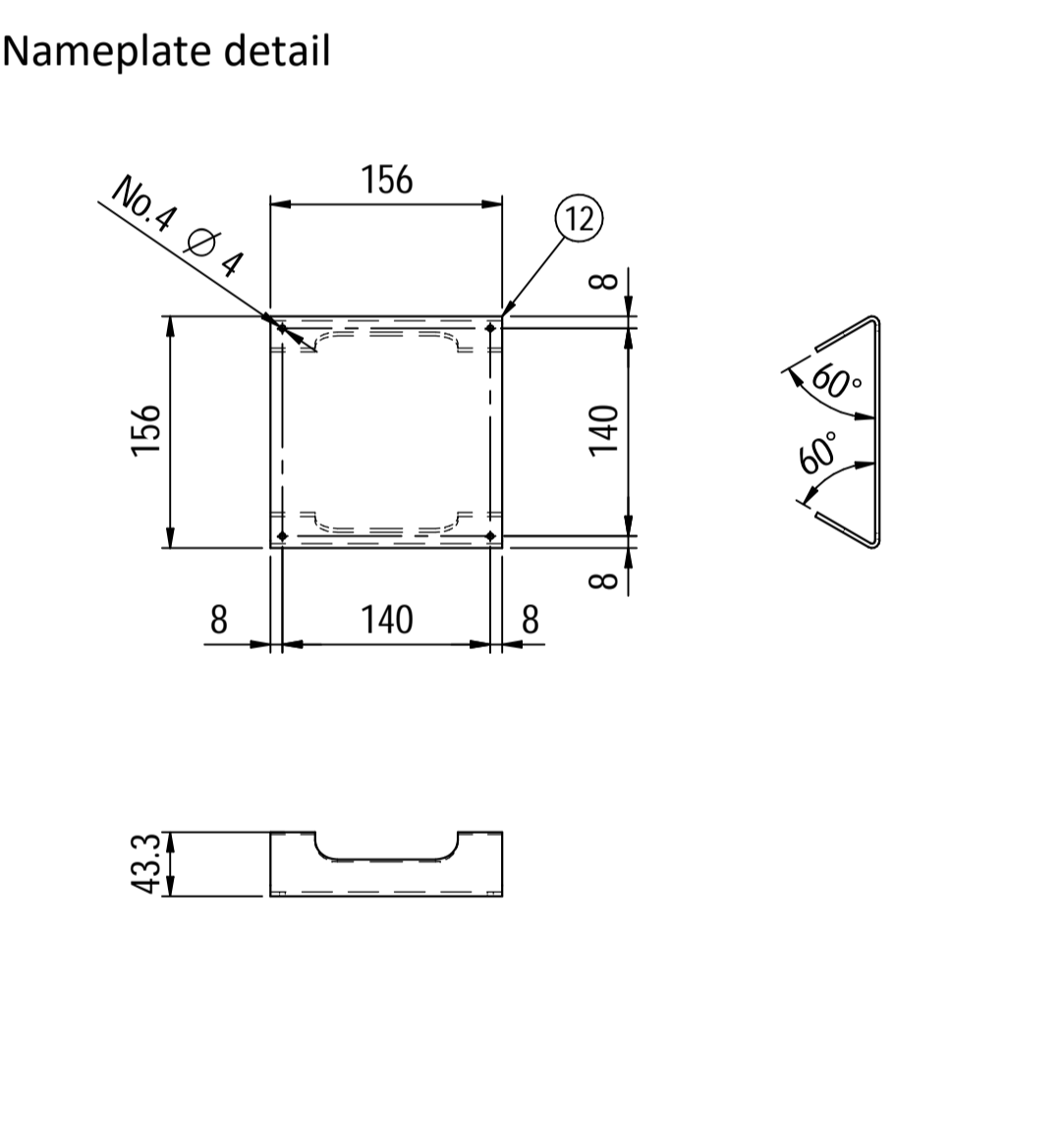
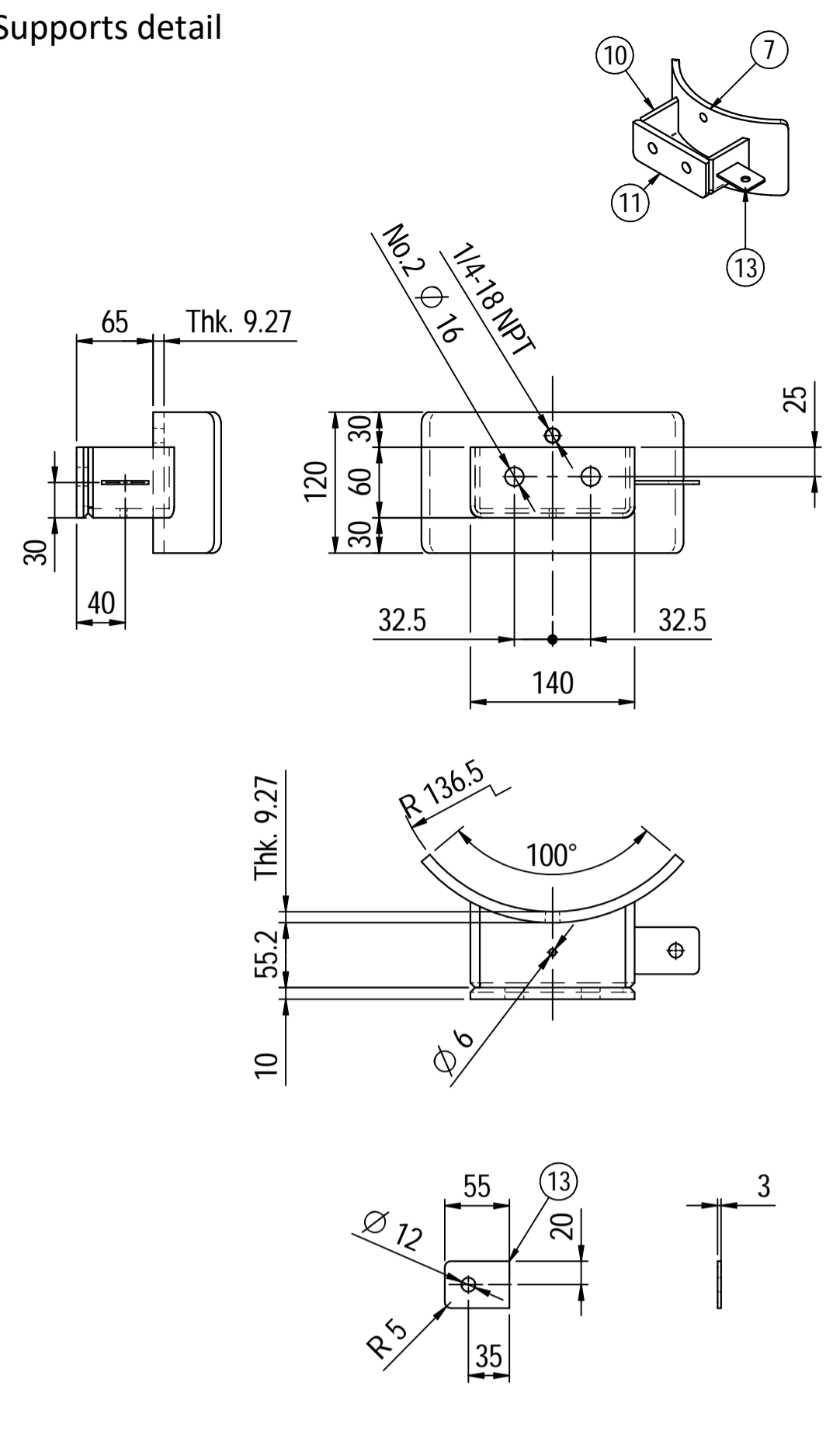
| DATI DI PROGETTO / Design data | | | |
|--------------------------------|--------------------------|-------------------------------|-----------------------------|
| FLUIDO | Nitrogen | COLLAUDO | Lloyd Register |
| STATO FISICO DEL FLUIDO | Gas | Test | NATIONAL BOARD REGISTRATION |
| Physical state of fluid | Gas | NATIONAL BOARD REGISTRATION | NO |
| CODICE DI CALCOLO | ASME VIII Div. 1 Ed.2021 | CANADIAN REGISTER NUMBER | NO |
| Construction code | ASME VIII Div. 1 Ed.2021 | CANADIAN REGISTER NUMBER | NO |
| PRESSIONE DI ESERCIZIO | 7-9 bara | SERVIZIO LETALE | NO |
| Operating pressure | 7-9 bara | Lethal service | NO |
| PRESSIONE DI PROGETTO | 13,5 bara (12,5 barg) | X-RAY | RT examination |
| Design pressure | 13,5 bara (12,5 barg) | RT examination | Spot (RT3) |
| PRESSIONE ESTERNA | NO | LIQUIDI PENETRANTI | NO |
| External pressure | NO | Dye penetrant extension | NO |
| PRESSIONE DI PROVA IDRAULICA | 25.5 barg | ULTRASUONI | NO |
| Hydraulic test pressure | 25.5 barg | Ultrasonic extension | NO |
| TEMPERATURA DI ESERCIZIO | +5 +52 °C | CONTROLLO MAGNETOSCOPICO | NO |
| Operating temperature | +5 +52 °C | Magnetic particle examination | NO |
| TEMPERATURA DI PROGETTO | +85 °C | TALONE DI SALDATURA | NO |
| Design temperature | +85 °C | Weld tehs coupon | NO |
| SOVRAMETALLO DI CORROSIONE | 3 mm | PROCEDIMENTO DI SALDATURA | See doc:C220006WBK013 |
| Corrosion allowance | 3 mm | Welding procedure | See doc:C220006WBK013 |
| CAPACITA' | 96 l | TIPO DI FONDO | CAP |
| Capacity | 96 l | Head type | CAP |
| EFFICIENZA GIUNTI | 0.85 | FORMATURA FONDO | HOT |
| Joint efficiency | 0.85 | Head form | HOT |
| MAWP @ Design Temperature | 18.15 barg @ +85 °C | PESO A VUOTO | 120 kg |
| MAWP(EXT) | NO | PESO IN ESERCIZIO | 120 kg |
| MDMT @ MAWP | 0 °C @ 18.15 barg | PESO PIENO D'ACQUA | 218 kg |
| P.W.H.T. | NO | DATI DEL VENTO | - |
| IMPACT TEST | NO | WIND DATAS | - |
| Exemption | NO | DATI SISMICI | - |
| | | Seismological datas | - |

| Rev. | Descrizione / Description | Disegnato/Draw | Controllato/Checked | Approvato/Approved | Data/Date |
|------|--|----------------|---------------------|--------------------|------------|
| 05 | Modified as per Client comments | CM | MV | GL | 16/06/2022 |
| 04 | Modified as per Client comments | CM | MV | GL | 16/06/2022 |
| 03 | Modified as per Client comments | CM | MV | GL | 11/05/2022 |
| 02 | Modified as per Client comments | CM | MV | GL | 15/04/2022 |
| 01 | Modified straight flange length on cap | CM | MV | GL | 30/03/2022 |
| 00 | FIRST ISSUE | CM | MV | GL | 16/03/2022 |

Oggetto/Object: N2 PULSATION DAMPER INLET

Scala/Scale: 1 : 5 Formato/Size: A1
 Comm. N°/Job No.: C220006 Foglio/Sheet: 1 - 1
 Cliente/Customer: Airpack Nederland B.V.
 Ord. No.: 18498-VV-0901
 Dis. N°/Dwg No.: C220006DWG003 Rev.: 06

LOCATI IMPIANTI s.r.l.



| Material List | | | | | |
|---------------|------|--|-------------|-------|--|
| Pos. | Q.ty | Description | Mat. | Cert. | |
| 1 | 1 | Shell by seamless pipe 10" Sch.STD L=552 | SA106 Gr.B | 3.1 | |
| 2 | 2 | Cap 10" Sch40 | A234 WPB | 3.1 | |
| 3 | 2 | Flange 2" WN #300 RF Sch.160 | A105 | 3.1 | |
| 4 | 1 | Seamless pipe 2" Sch160 L=115.5 | A106 GrB | 3.1 | |
| 5 | 1 | Seamless pipe 2" Sch160 L=69 | A106 GrB | 3.1 | |
| 6 | 1 | Seamless pipe 2" Sch160 L=68 | A106 GrB | 3.1 | |
| 7 | 2 | Pad by pipe 10" Sch.STD | A106 Gr.B | 3.1 | |
| 8 | 1 | Seamless elbow 2" 90° LR Sch160 | A234 WPB | 3.1 | |
| 9 | 1 | Coupling 1/2" NPT #6000 | A105 | 3.1 | |
| 10 | 2 | Plate 74.5x231 Thk.8 | A516 70 | 3.1 | |
| 11 | 2 | Plate 16x65 Thk.10 | A516 70 | 3.1 | |
| 12 | 1 | Nameplate support 156x241 Thk.3mm | A516 70 | 3.1 | |
| 13 | 2 | Earthing Plate 55 x 40 Thk.3 | A240 TP316L | 3.1 | |

| ITEM | QTY | SERVICE | SIZE | O.D. | THK | RATING | TYPE | FACE | O.D. | THK. | Tc |
|------|-----|------------|------|------|------|--------|------|-------|------|------|----------|
| N3 | 1 | DRAIN | 1/2" | 38.1 | 8.38 | #6000 | - | NPT-F | - | - | 8.5 ± 10 |
| N2 | 1 | AIR OUTLET | 2" | 60.3 | 8.74 | #300 | WN | RF | - | - | 8.5 ± 10 |
| N1 | 1 | AIR INLET | 2" | 60.3 | 8.74 | #300 | WN | RF | - | - | 8.5 ± 10 |

| ITEM | Qtà | SERVIZIO | NPS/DN | O.D. | THK | RATING | TYPE | FACE | O.D. | THK. | RINFORZO |
|--------------------------------|--------------------------|----------|-------------------------------|------|------------------------|--------|----------------|------|------|------|----------|
| DATI DI PROGETTO / Design data | | | | | | | | | | | |
| FLUIDO | Nitrogen | | COLLAUDO | | Test | | Lloyd Register | | | | |
| STATO FISICO DEL FLUIDO | Gas | | NATIONAL BOARD REGISTRATION | | NO | | | | | | |
| CODICE DI CALCOLO | ASME VIII Div. 1 Ed.2021 | | CANADIAN REGISTER NUMBER | | NO | | | | | | |
| PRESSIONE DI ESERCIZIO | 14.5 bara | | SERVIZIO LETALE | | NO | | | | | | |
| PRESSIONE DI PROGETTO | 25 bara (24 barg) | | X-RAY | | RT examination | | Spot (RT3) | | | | |
| PRESSIONE ESTERNA | NO | | LIQUIDI PENETRANTI | | NO | | | | | | |
| PRESSIONE DI PROVA IDRAULICA | 66.4 barg | | ULTRASUONI | | NO | | | | | | |
| TEMPERATURA DI ESERCIZIO | +50 °C | | CONTROLLO MAGNETOSCOPICO | | NO | | | | | | |
| TEMPERATURA DI PROGETTO | +85 °C | | MAGNETIC PARTICLE EXAMINATION | | NO | | | | | | |
| SOVRAME TALLO DI CORROSIONE | 3 mm | | PROCEDIMENTO DI SALDATURA | | See doc: C220006WBK013 | | | | | | |
| CAPACITA' | 38 l | | TIPO DI FONDO | | CAP | | | | | | |
| EFFICIENZA GIUNTI | 0.85 | | FORMAZIONE FONDO | | HOT | | | | | | |
| MAWP @ Design Temperature | 38.12 bar @ +85 °C | | PESO A VUOTO | | 71 kg | | | | | | |
| MAWP(EXT) | NO | | PESO IN ESERCIZIO | | 71 kg | | | | | | |
| MDMT @ MAWP | 0 °C @ 38.12 bar | | PESO PIENO D'ACQUA | | 111 kg | | | | | | |
| TRATTAMENTO TERMICO | NO | | DATI DEL VENTO | | | | | | | | |
| IMPACT TEST | NO | | DATI SISMICI | | | | | | | | |

| Rev. | Descrizione / Description | Disegnato/Draw | Controllato/Checked | Approvato/Approved | Data/Date |
|------|-----------------------------------|----------------|---------------------|--------------------|------------|
| 06 | as built | CM | MV | GL | 25/04/2022 |
| 04 | Modified as per Client commnets | CM | MV | GL | 11/05/2022 |
| 03 | Modified as per Client commnets | CM | MV | GL | 15/04/2022 |
| 02 | Modified as per Customer commnets | CM | MV | GL | 02/04/2022 |
| 01 | Modified shell length | CM | MV | GL | 30/03/2022 |
| 00 | FIRST ISSUE | CM | MV | GL | 16/03/2022 |

| Scala/Scale | 1 : 5 | Formato/Size | A1 |
|------------------|------------------------|--------------|-------|
| Comm. N°/Job No. | C220006 | Foglio/Sheet | 1 - 1 |
| Cliente/Customer | Airpack Nederland B.V. | | |
| Ord. No. | 18498-VV-0901 | | |
| Dis. N°/Dwg No. | C220006DWG005 | Rev. | 06 |

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