







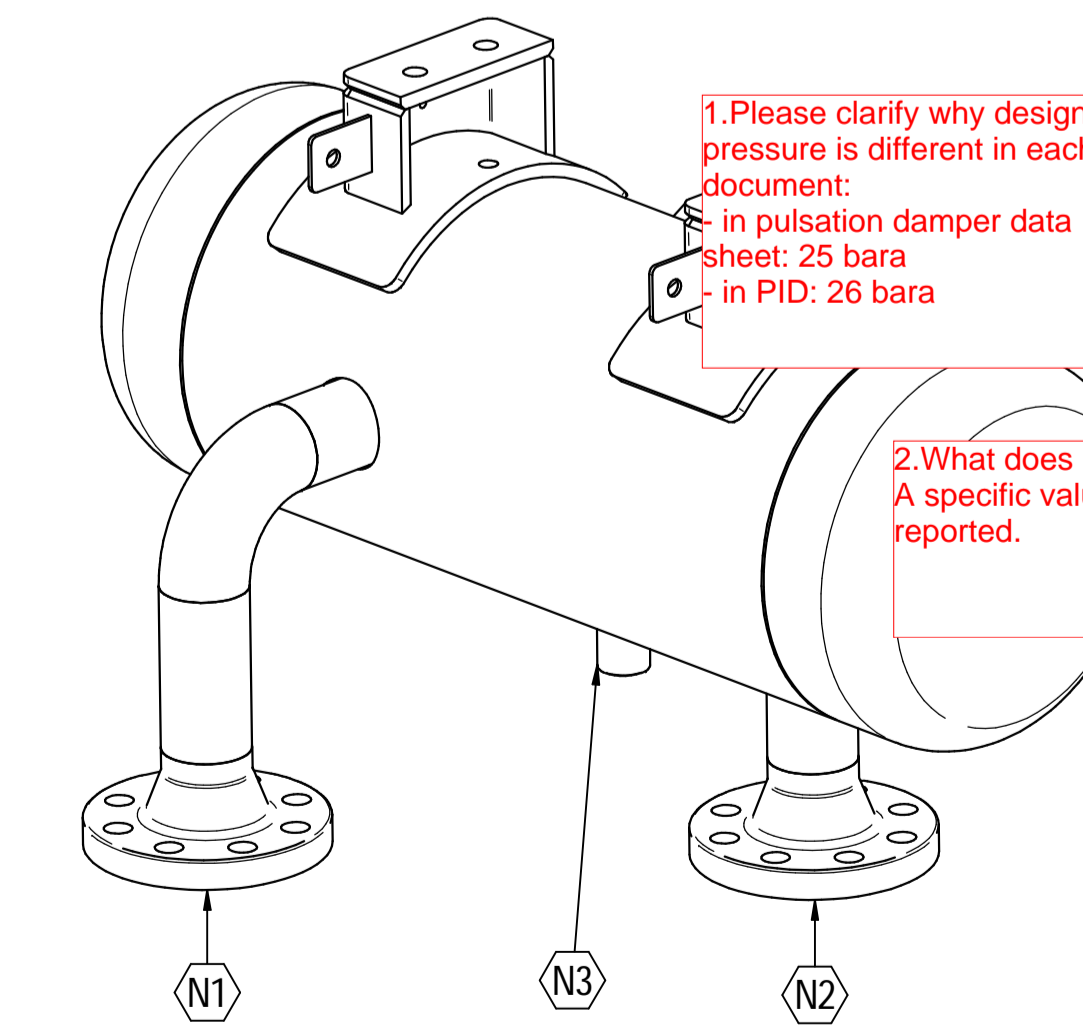
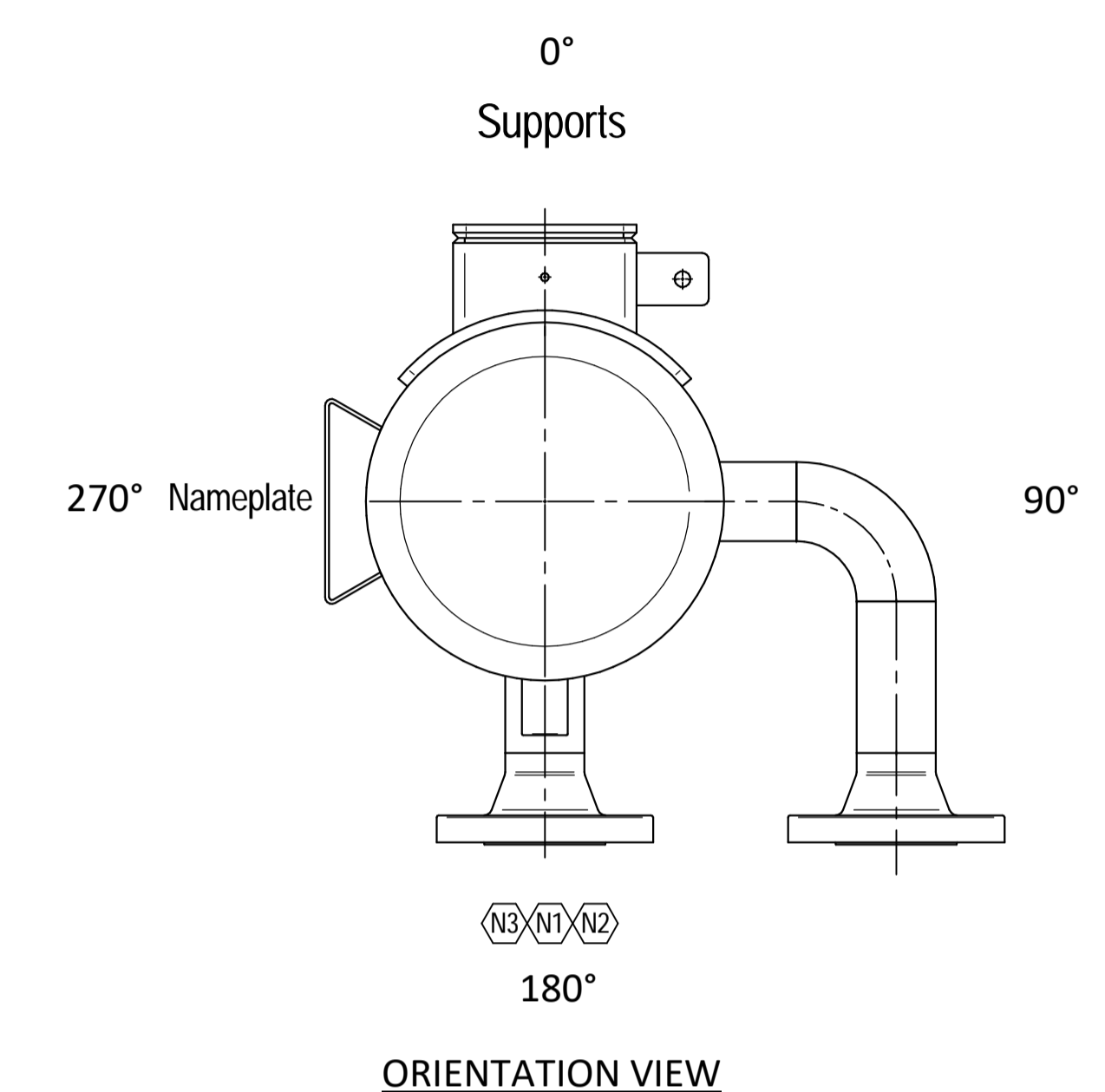
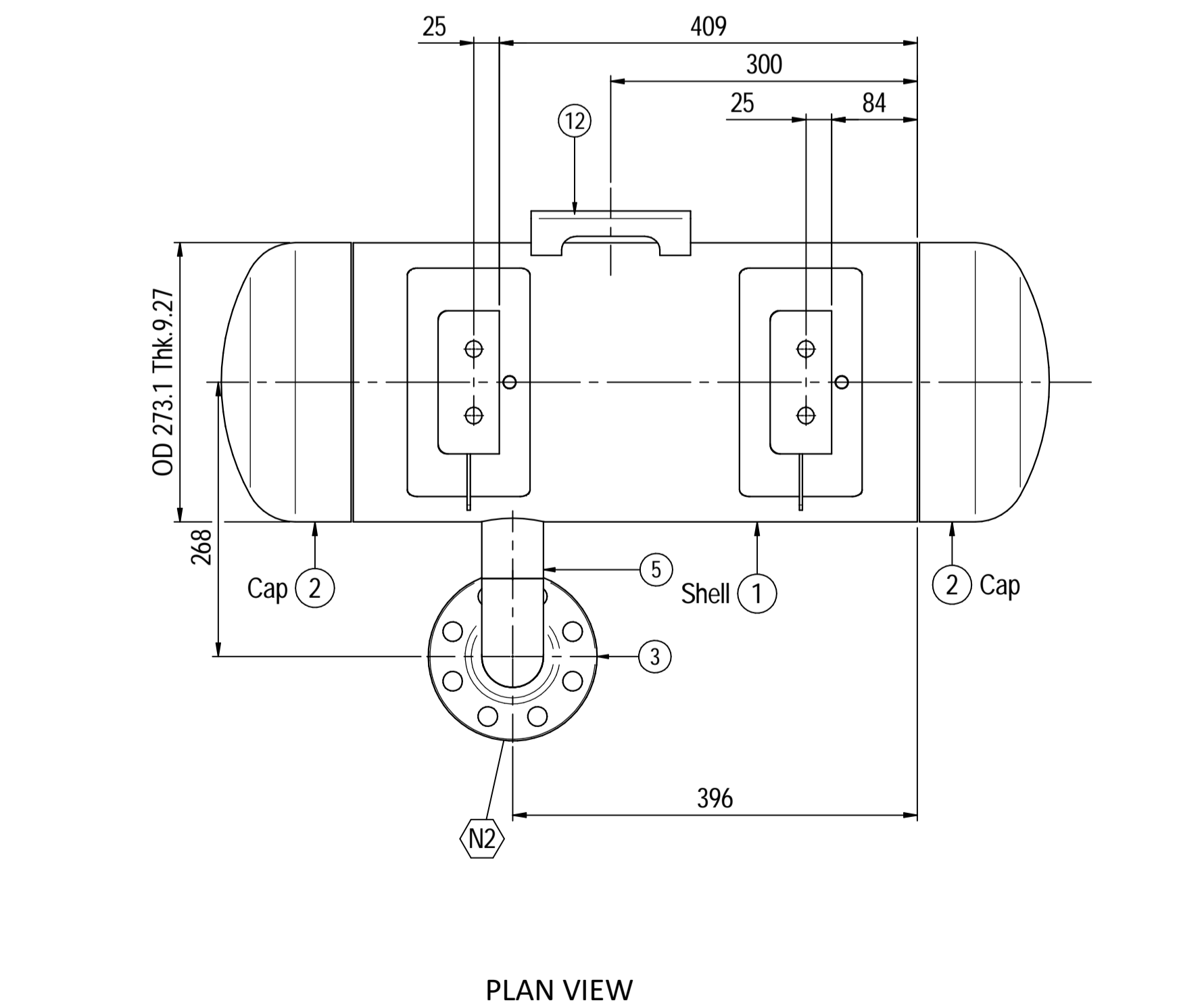
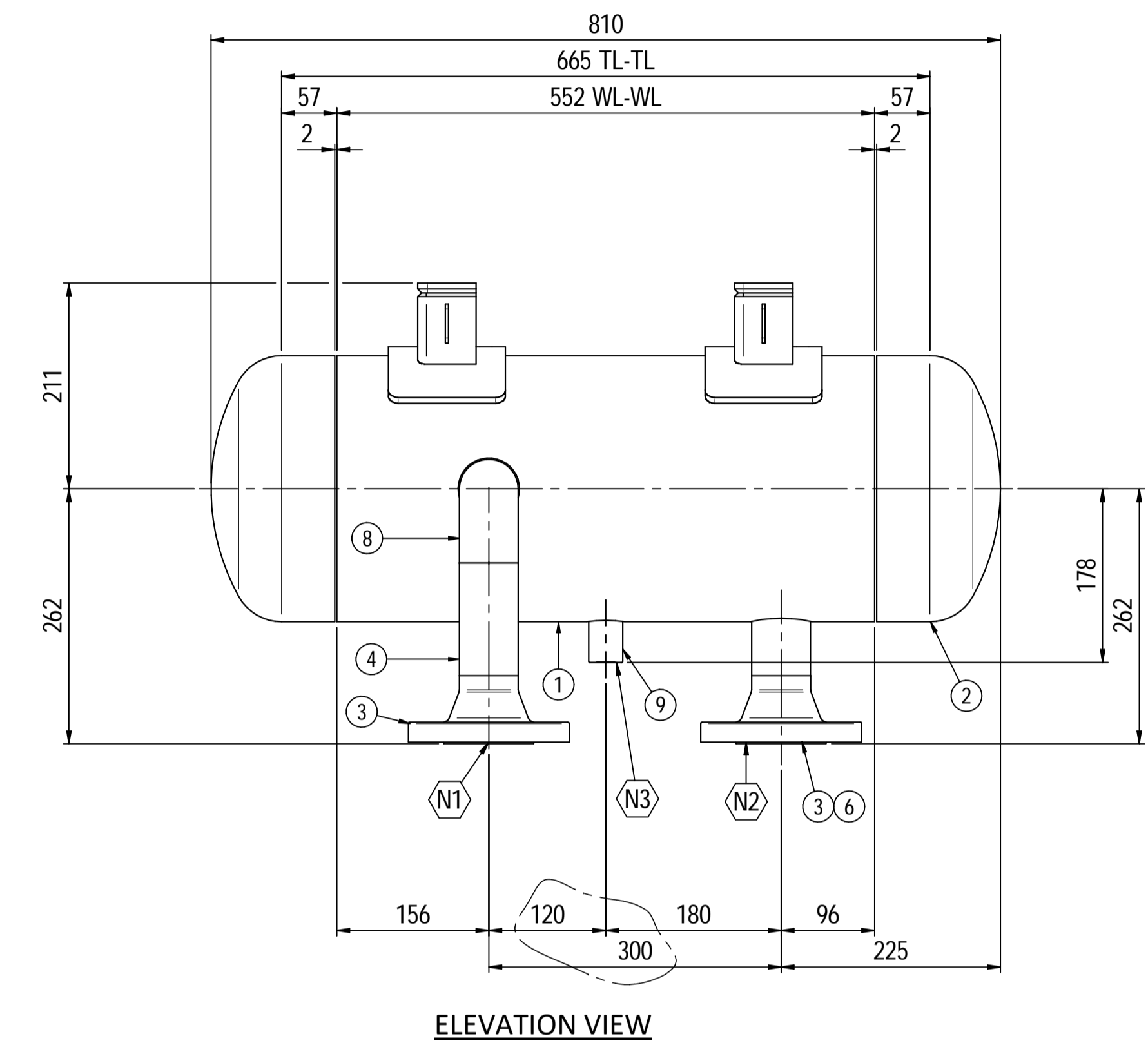
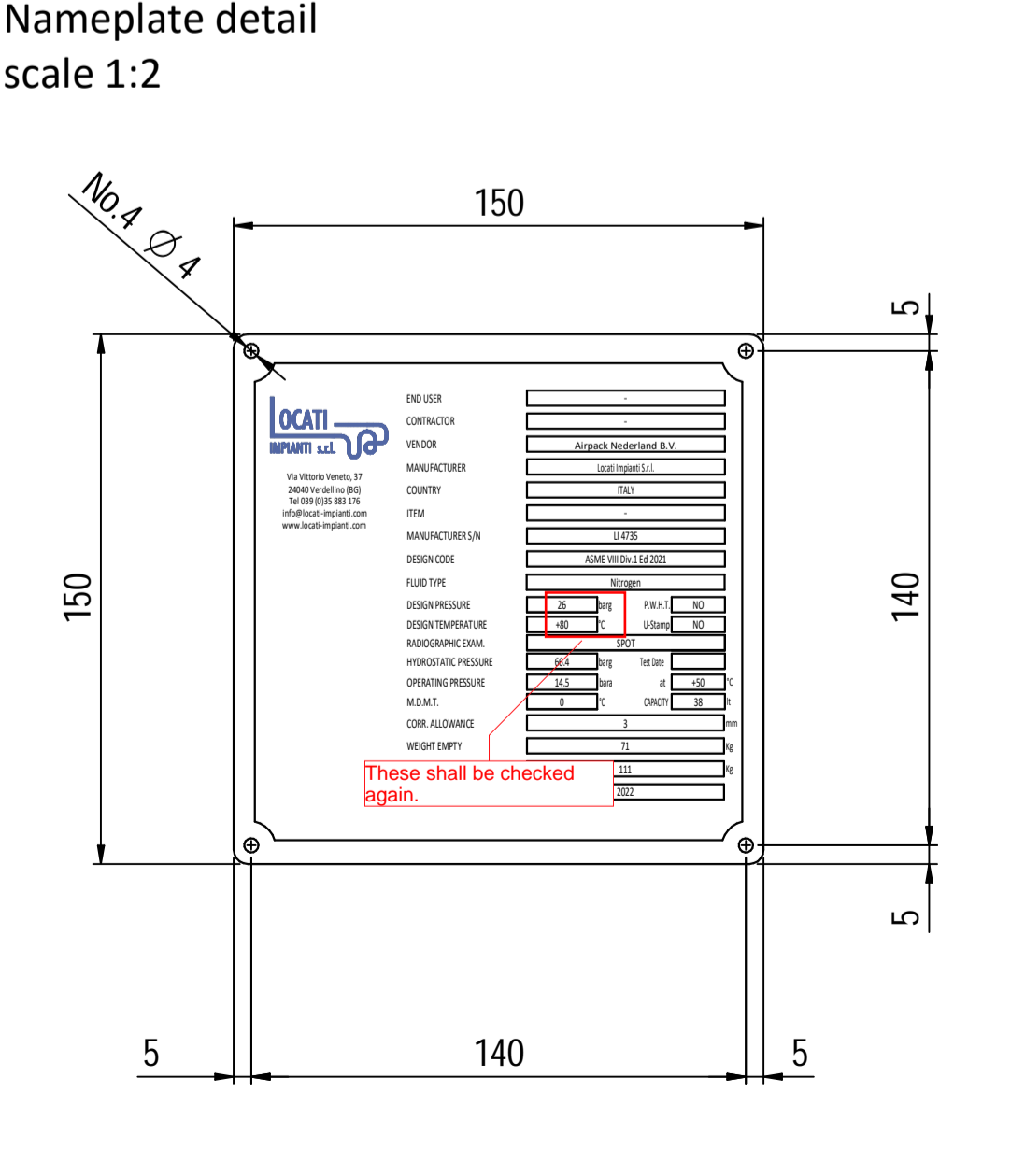
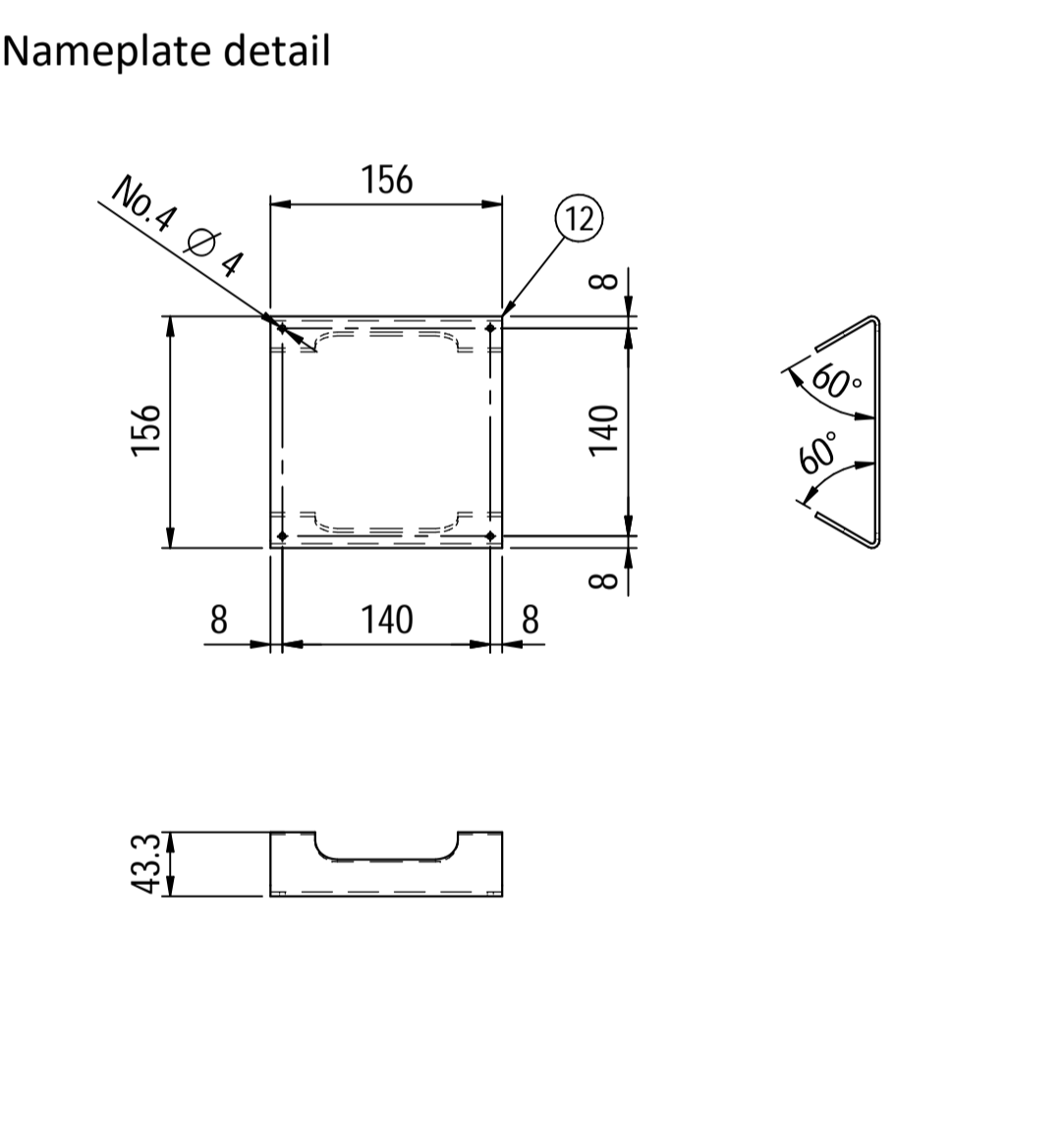
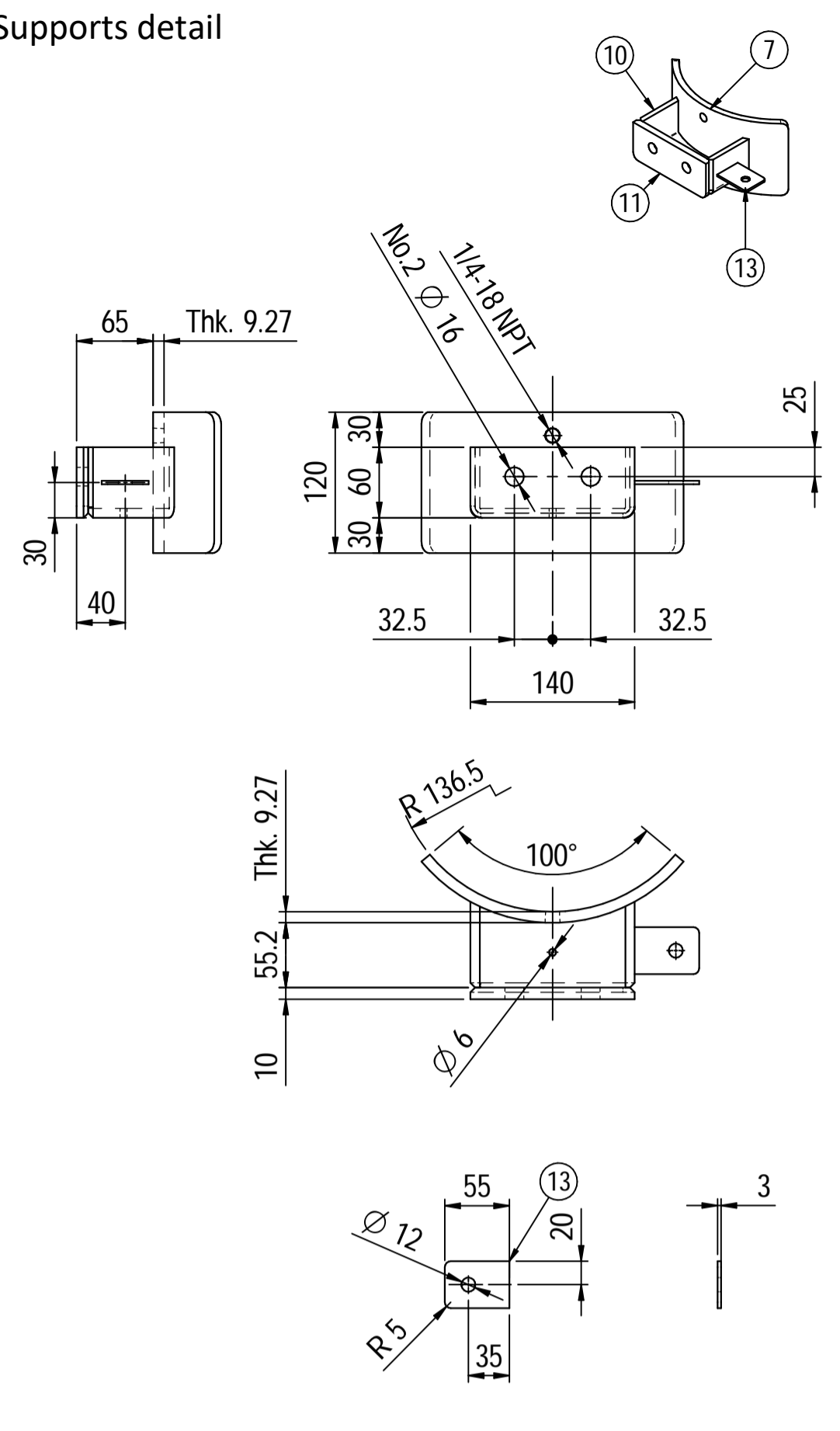
OWNER:  شرکت سست و سویی گستره ایرانیان (سهامی عامه)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
	PULSATION DAMPER DETAIL DRAWING FOR NITROGEN GAS BOOSTER								
MC :  شرکت سست و سویی گستره ایرانیان (سهامی عامه)	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
Owner Document Number: 17811-23C	BU	20	VD	303	ME	DWG	0079	Rev.:	Page
								00	1 of 6

General comment:
Vendor is expected to check all document carefully and eliminate discrepancy between them. For example design temperature, design pressure and capacity of pulsation dampener are different in P&ID, data sheets and drawing.

PULSATION DAMPER DETAIL DRAWING FOR NITROGEN GAS BOOSTER

 شرکت سست و سویی گستره ایرانیان (سهامی عامه)	 Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
Document Review		
Issue Purpose:	IFA	
Result Code: AP,AN,CM,RE,NC	CM	
Next Status : IFC,IFA,IFI,AFC,AB	IFA	
Responsible Department	MECHANICAL	
Commented Date	Apr/13/2022	
Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract.		

00	06/04/2022	For approval	KP	CL	JR	
Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
					Class: 1	Phase: P



1. Please clarify why design pressure is different in each document:
 - in pulsation damper data sheet: 25 bara
 - in PID: 26 bara

2. What does +80 mean?
 A specific value must be reported.

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	

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 with 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 C220006CLC011 for vessel calculation.

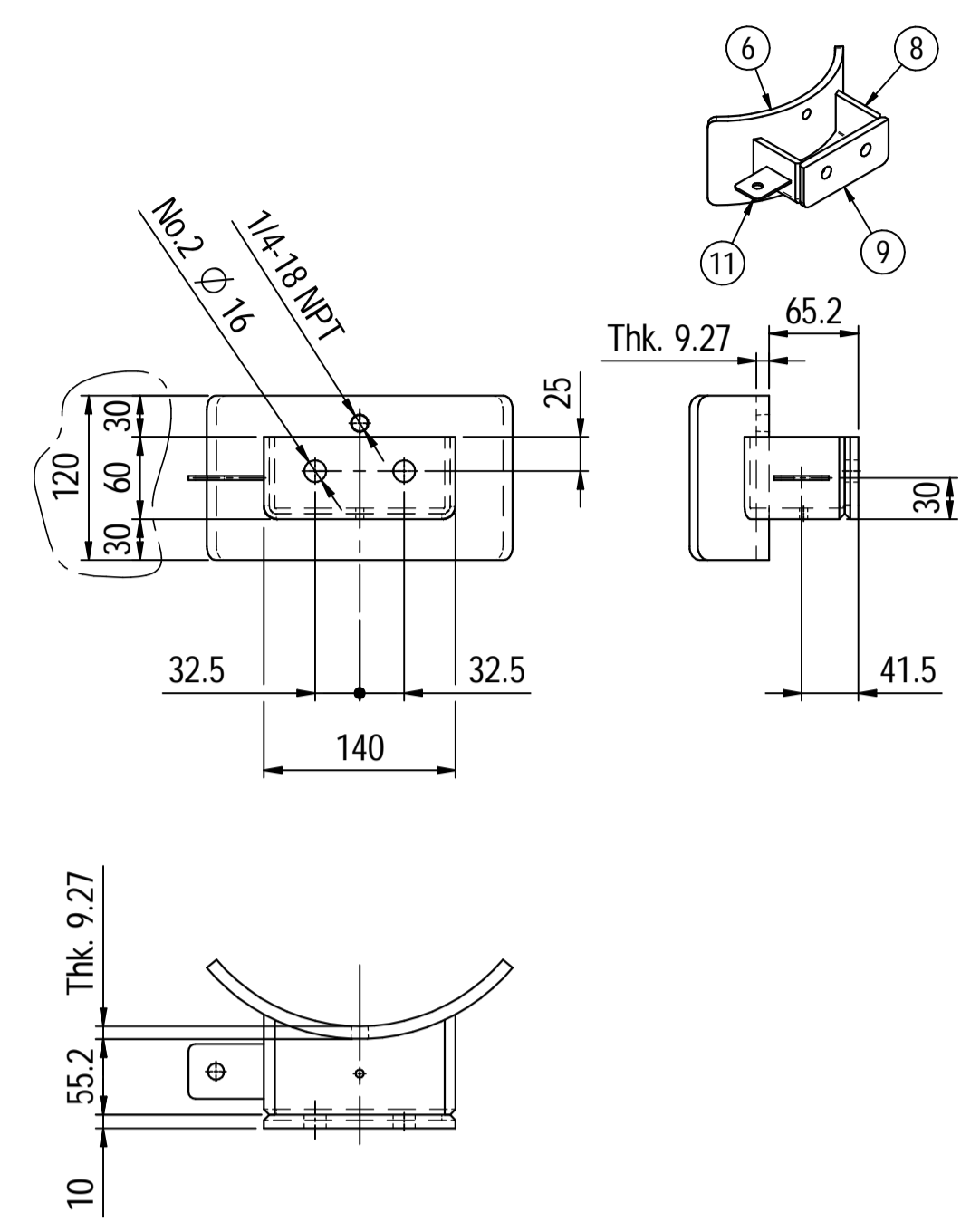
ITEM	QTY	SERVICE	SIZE	O.D.	THK	RATING	TYPE	FACE	O.D.	THK.	Tc
N3	1	DRAIN	1/2"	38.1	8.38	#6000	-	NPT-F	-	-	8.5 ± 10
N2	1	AIR OUTLET	2"	60.3	8.74	#300	WN	RF	-	-	8.5 ± 10
N1	1	AIR INLET	2"	60.3	8.74	#300	WN	RF	-	-	8.5 ± 10

DATI DI PROGETTO / Design data			
STATO FISICO DEL FLUIDO / Physical state of fluid	Nitrogen	COLLAUDO / Test	Lloyd Register
CODICE DI CALCOLO / Construction code	ASME VIII Div. 1 Ed.2021	CANADIAN REGISTER NUMBER	NO
PRESSIONE DI ESERCIZIO / Operating pressure	14.5 bara	SERVIZIO LETALE / Lethal service	NO
PRESSIONE DI PROGETTO / Design pressure	26 barg	X-RAY / RT examination	Spot (RT3)
PRESSIONE ESTERNA / External pressure	NO	LICUIDI PENETRANTI / Dye penetrant extension	NO
PRESSIONE DI PROVA IDRAULICA / Hydraulic test pressure	66.4 barg	ULTRASUONI / Ultrasonic extension	NO
TEMPERATURA DI ESERCIZIO / Operating temperature	+50 °C	CONTROLLO MAGNETOSCOPICO / Magnetic particle examination	NO
TEMPERATURA DI PROGETTO / Design temperature	+80 °C	TALONARE DI SALDATURA / Weld test coupon	NO
SOVRAMETALLO DI CORROSIONE / Corrosion allowance	3 mm	PROCEDIMENTO DI SALDATURA / Welding procedure	See doc: C220006WBK013
PACITA' / Capacity	38 l	TIPO DI FONDO / Head type	CAP
EFFICIENZA GIUNTI / Joint efficiency	0.85	FORMAZIONE FONDO / Head form	HOT
WP @ Design Temperature	38.12 bar @ +80 °C	PESO A VUOTO / Empty weight	71 kg
WP(EXT)	NO	PESO IN ESERCIZIO / Operating weight	71 kg
MDMT @ MAWP	0 °C @ 38.12 bar	PESO PIENO D'ACQUA / Full water weight	111 kg
TRATTAMENTO TERMICO / P.W.H.T.	NO	DATI DEL VENTO / Wind datas	-
IMPACT TEST / Exemption	NO	DATI SISMICI / Seismological datas	-

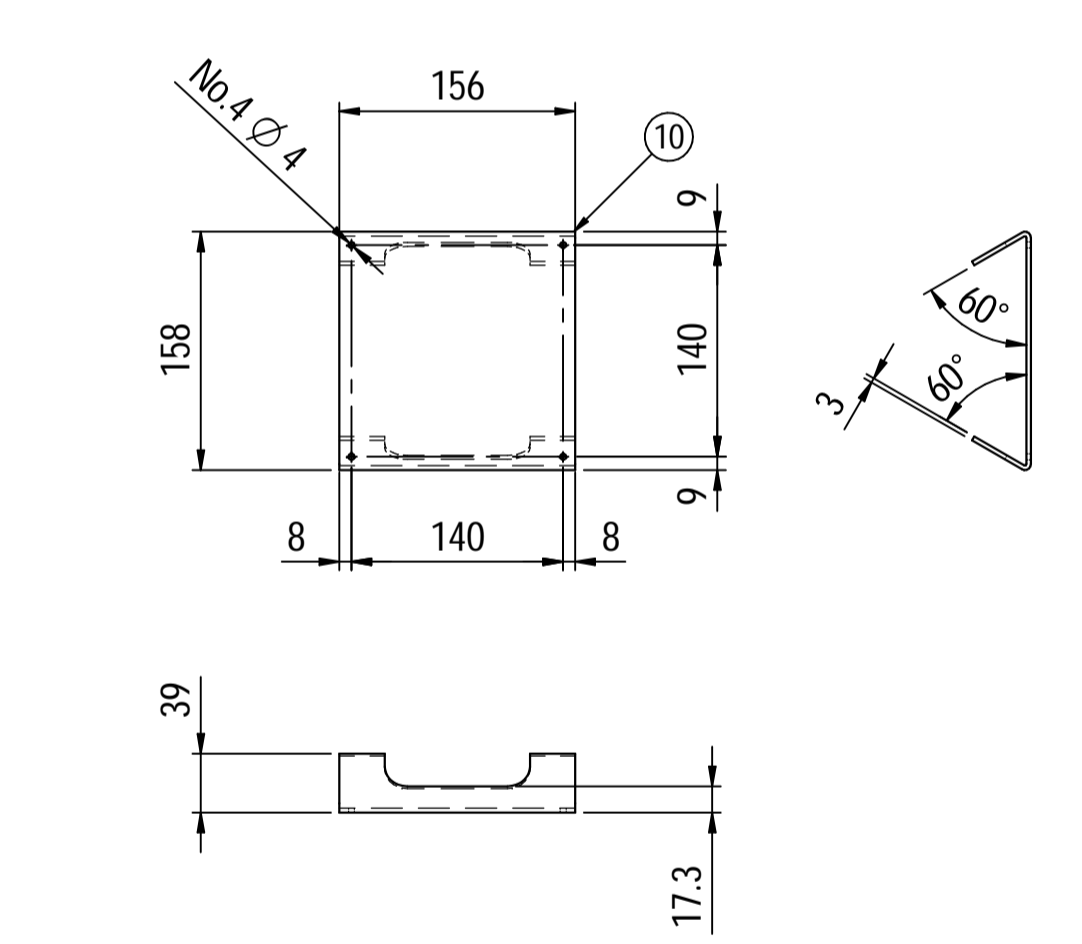
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02	Modified as per Customer comments	CM	MV	GL	02/04/2022
01	Modified shell length	CM	MV	GL	30/03/2022
00	FIRST ISSUE	CM	MV	GL	16/03/2022

Oggetto/Object			
N2 PULSATION DAMPER 2nd STAGE SUCTION			
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.	02

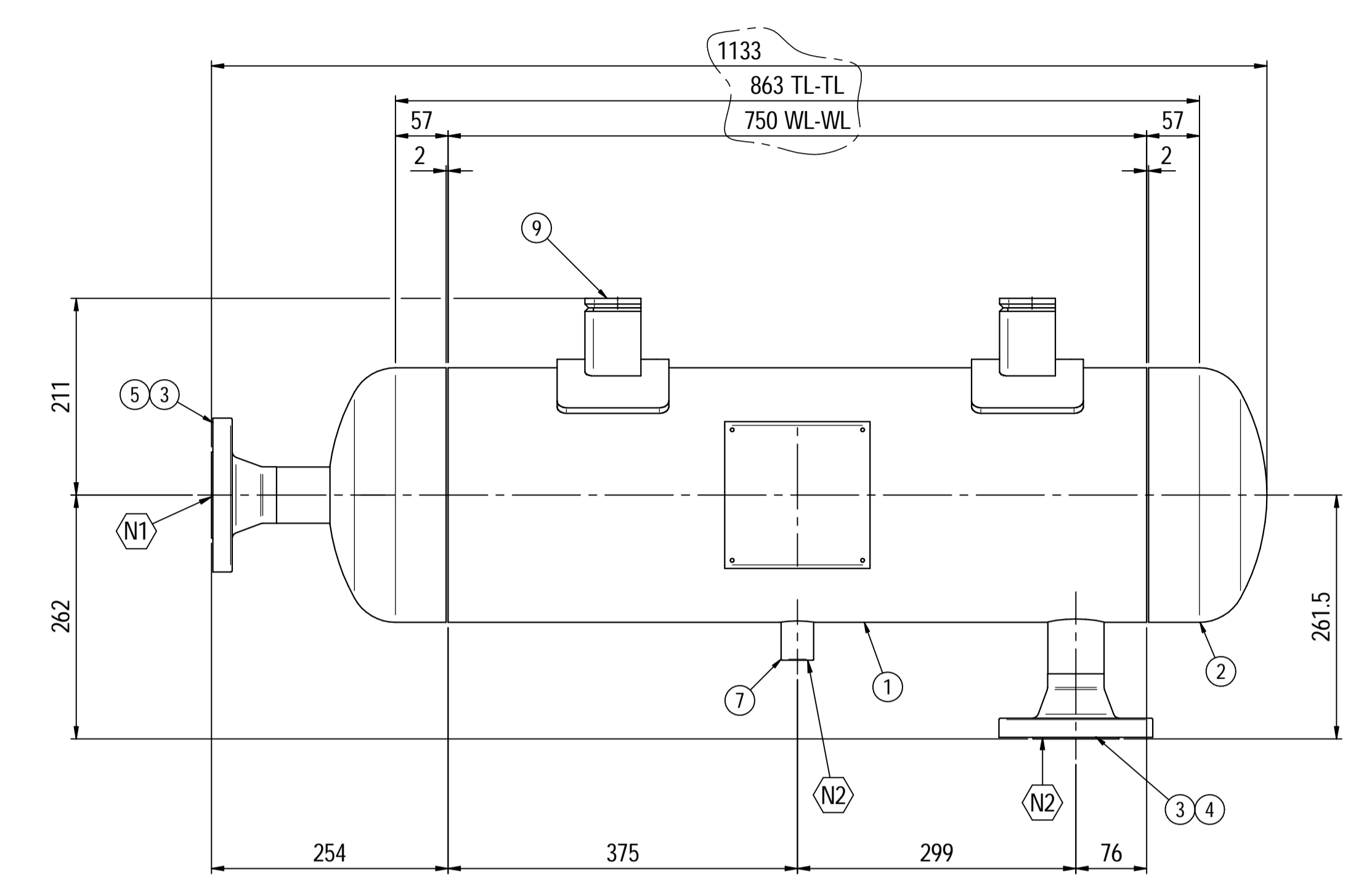
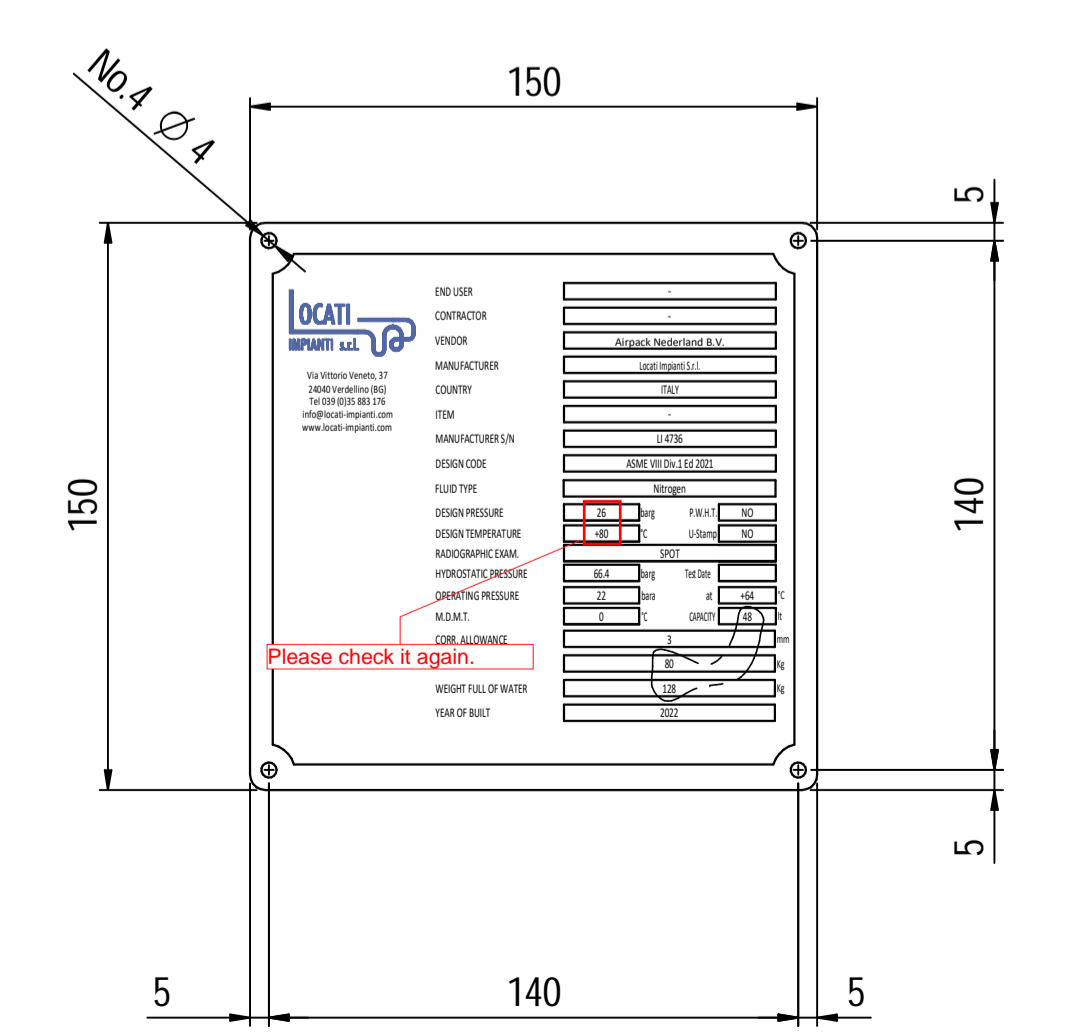
Supports detail



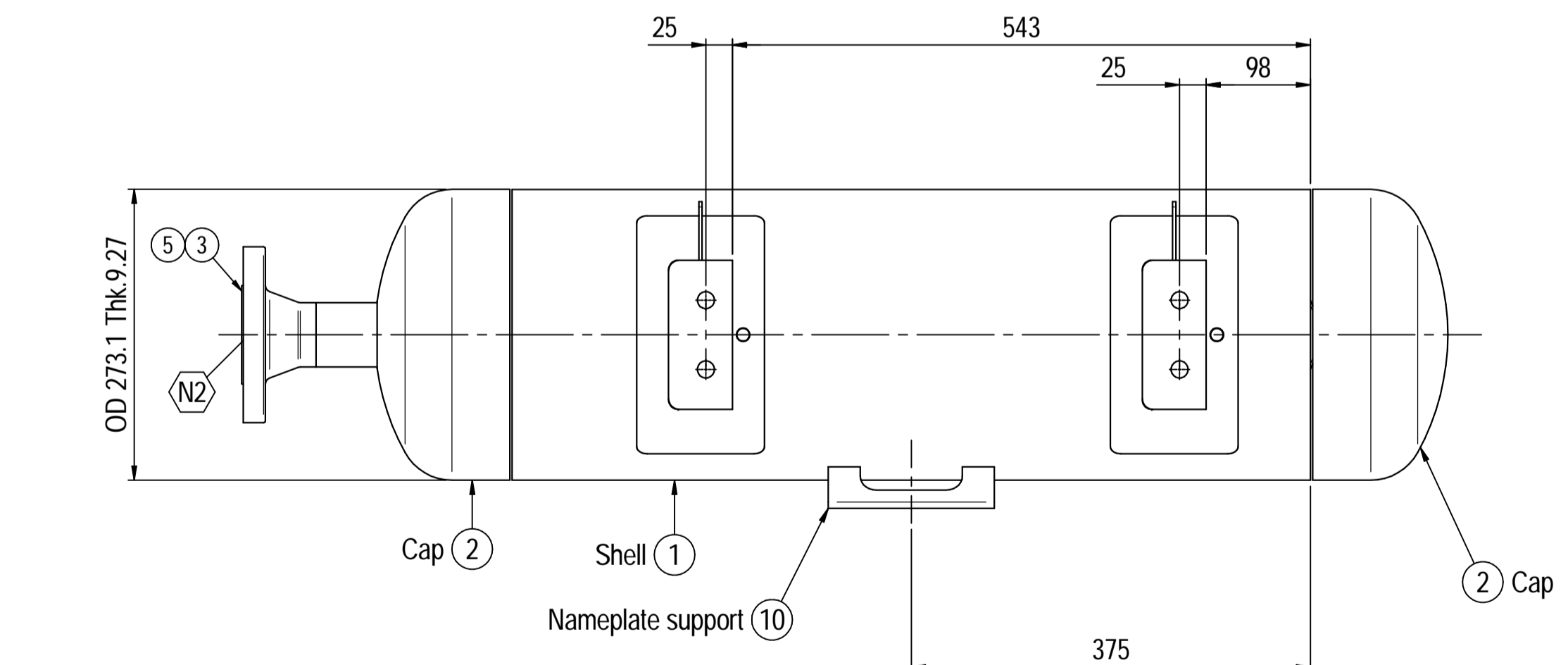
Nameplate detail



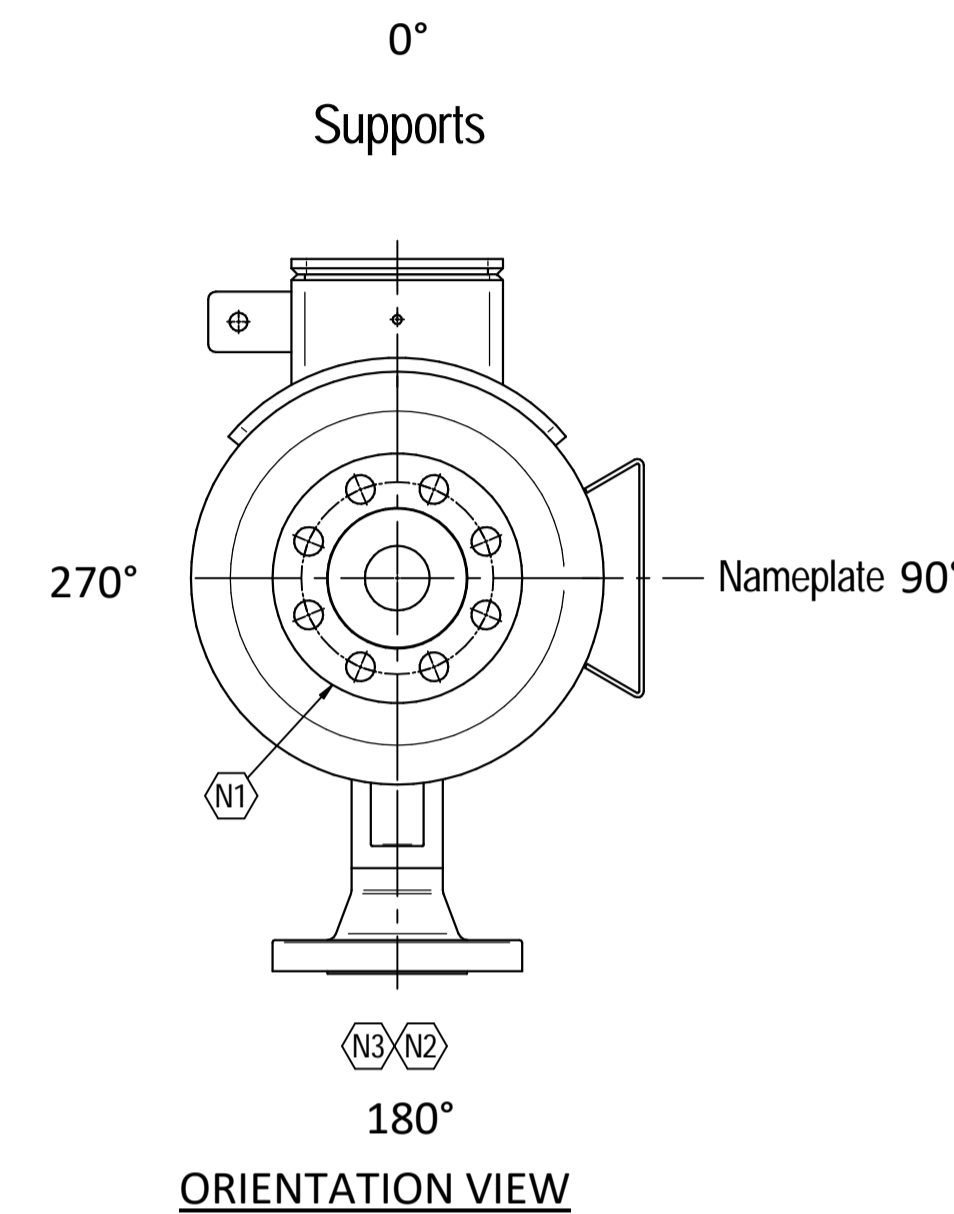
Nameplate detail scale 1:2



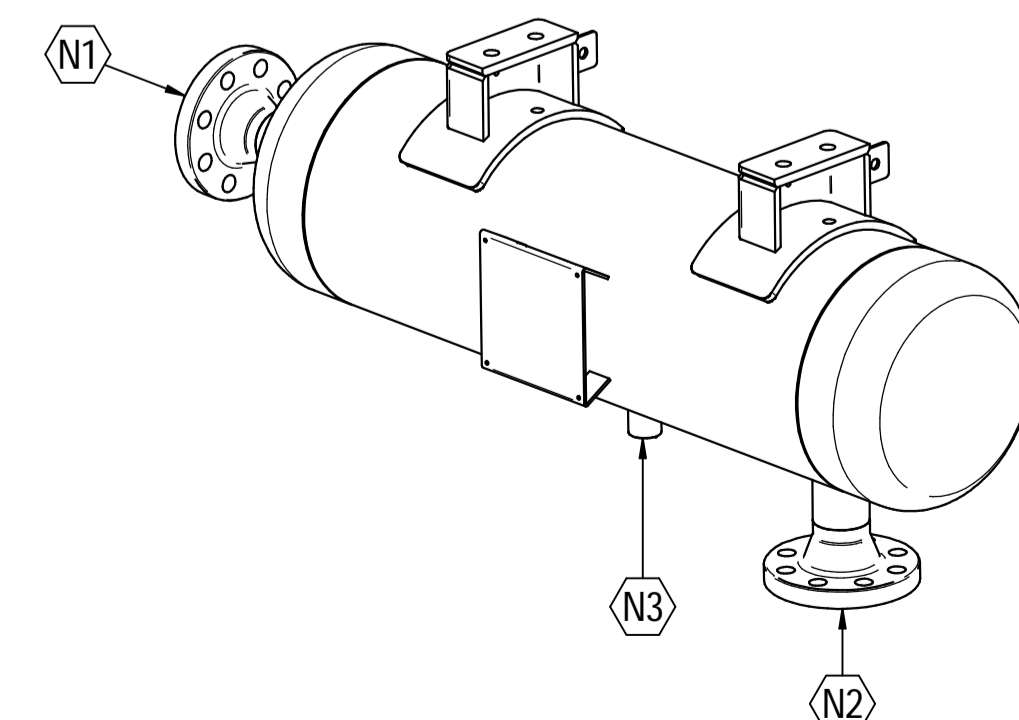
ELEVATION VIEW



PLAN VIEW



ORIENTATION VIEW



ISOMETRIC VIEW scale 1:8

Material List					
Pos.	Q.ty	Description	Mat.	Cert.	
1	1	Shell by seamless pipe 10" Sch.STD (L=750)	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=68	A106 GrB	3.1	
5	1	Seamless pipe 2" Sch160 L=65	A106 GrB	3.1	
6	2	Pad by pipe 10" Sch.STD	A106 Gr.B	3.1	
7	1	Coupling 1/2" NPT #6000	A105	3.1	
8	2	Plate 74.5x231 Thk.8	A516 70	3.1	
9	2	Plate 16x65 Thk.10	A516 70	3.1	
10	1	Nameplate support 234 x 156 thk3mm	S275 JR	3.1	
11	2	Earthing Plate 55 x 40 Thk.3	A240 TP316L	3.1	

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 C220006CLC012 for vessel calculation.

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

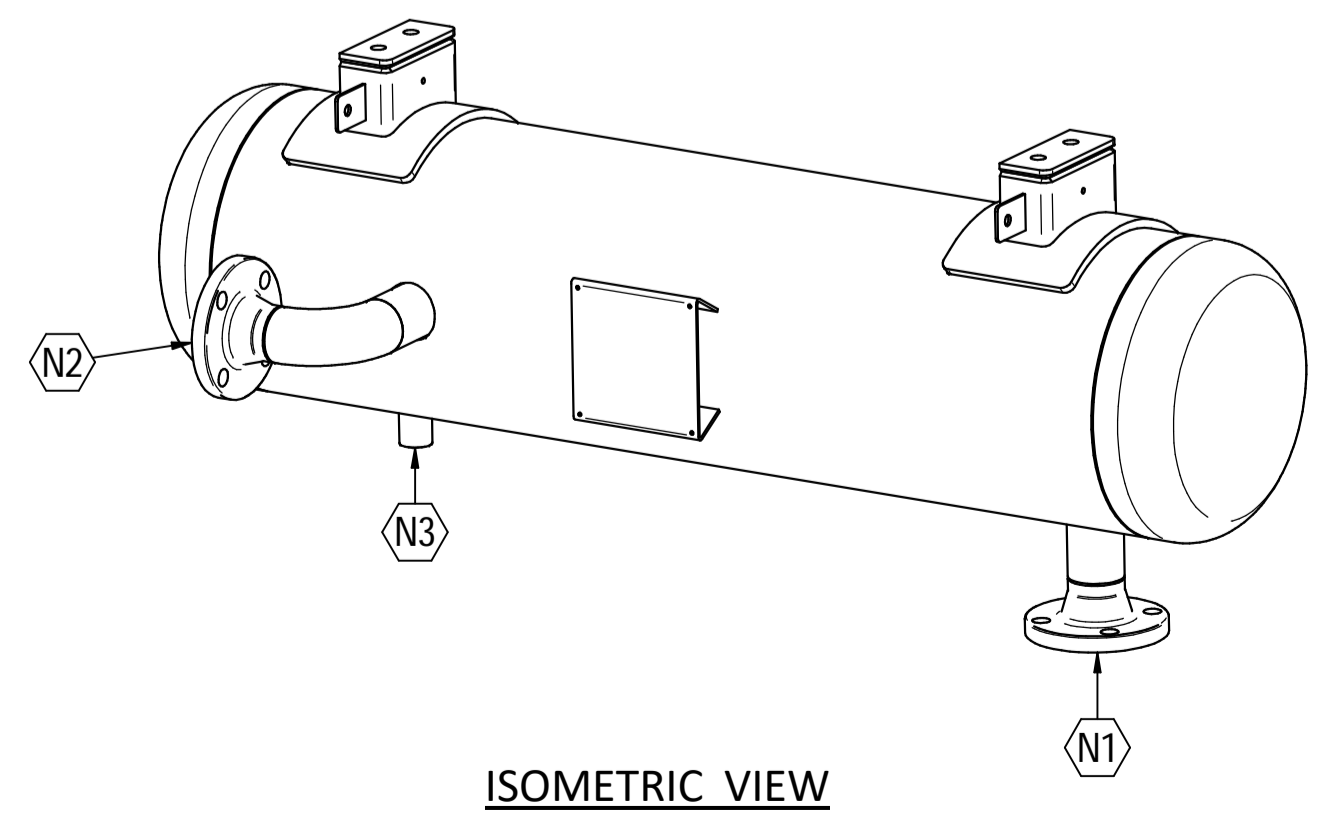
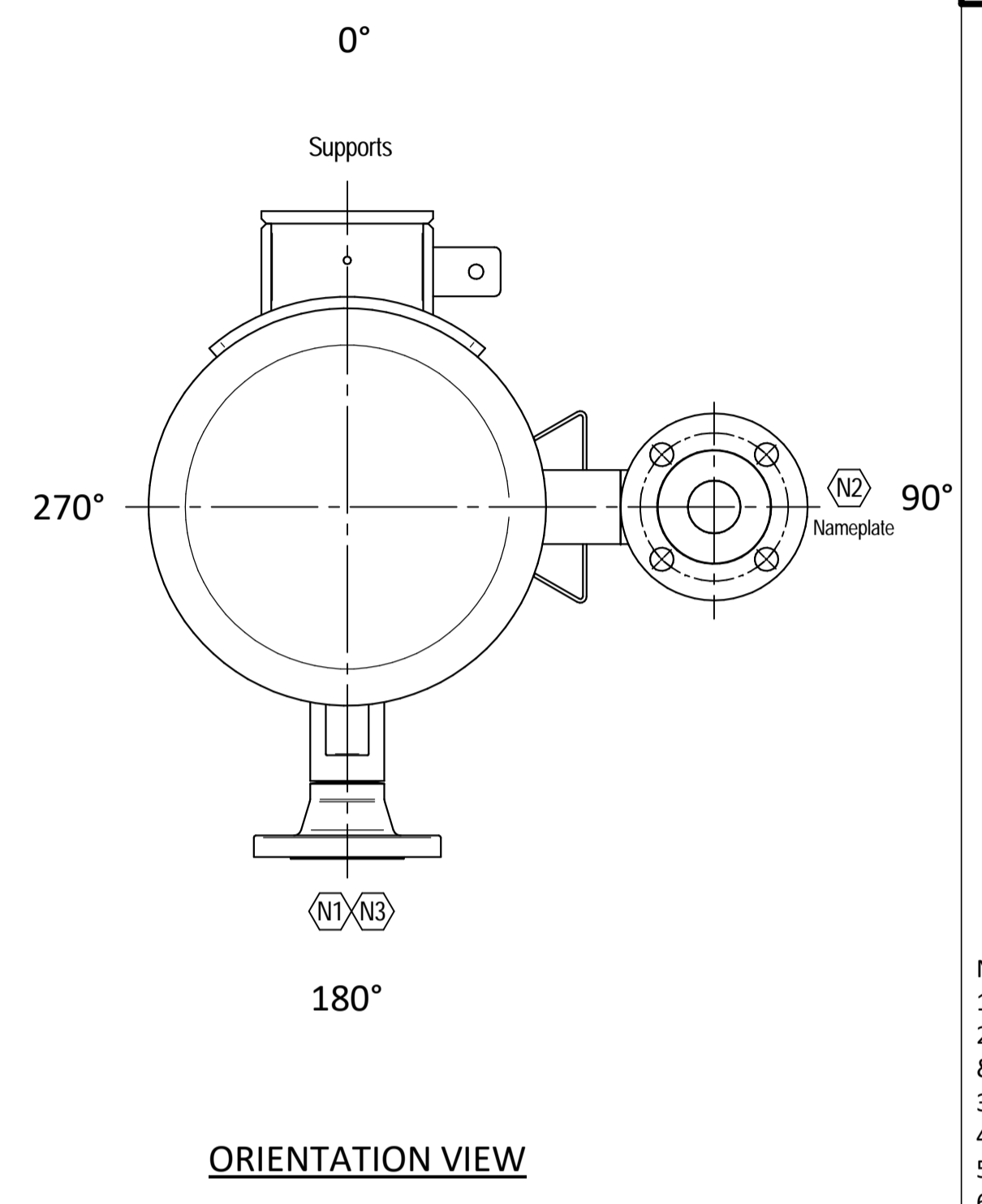
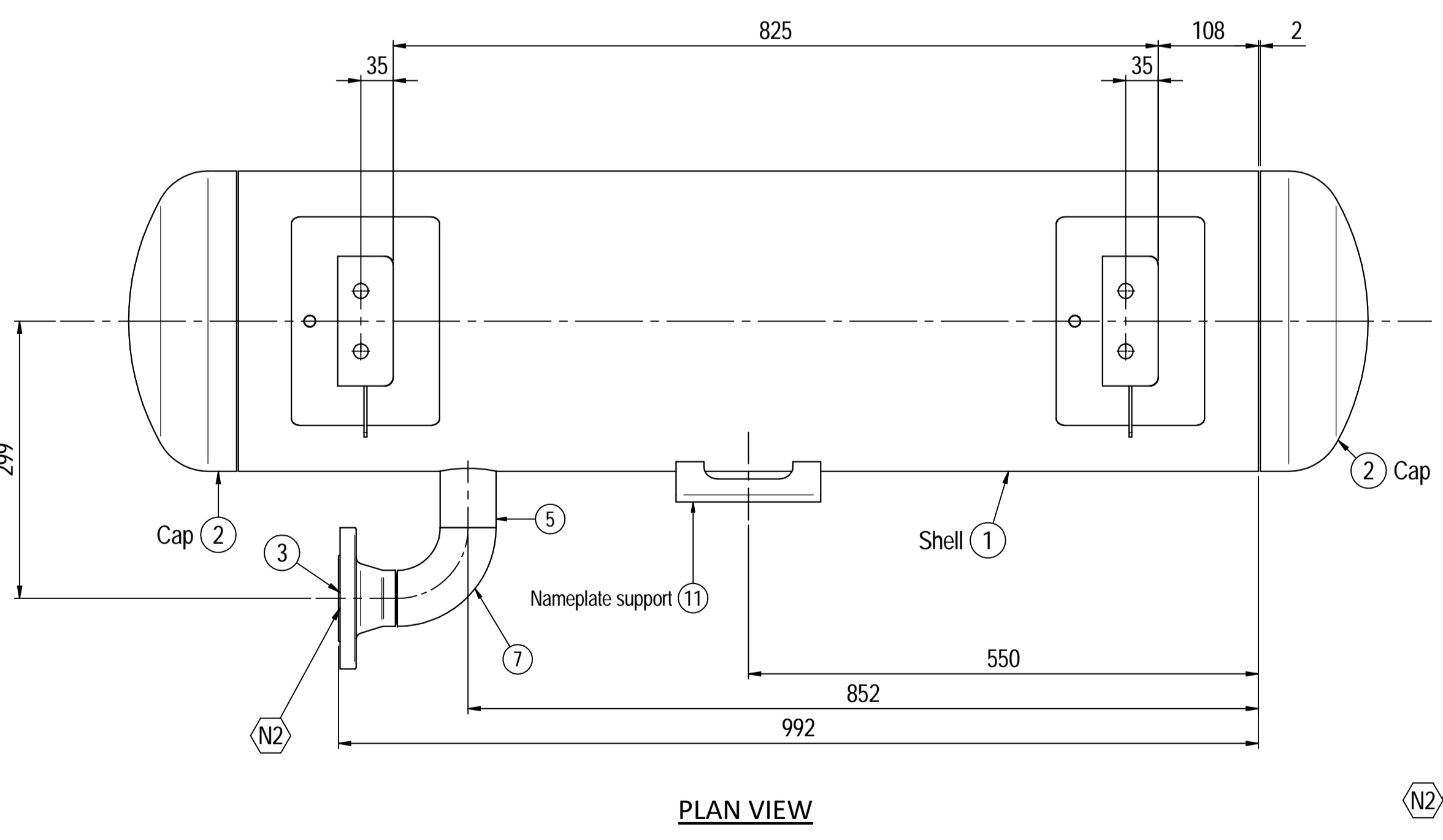
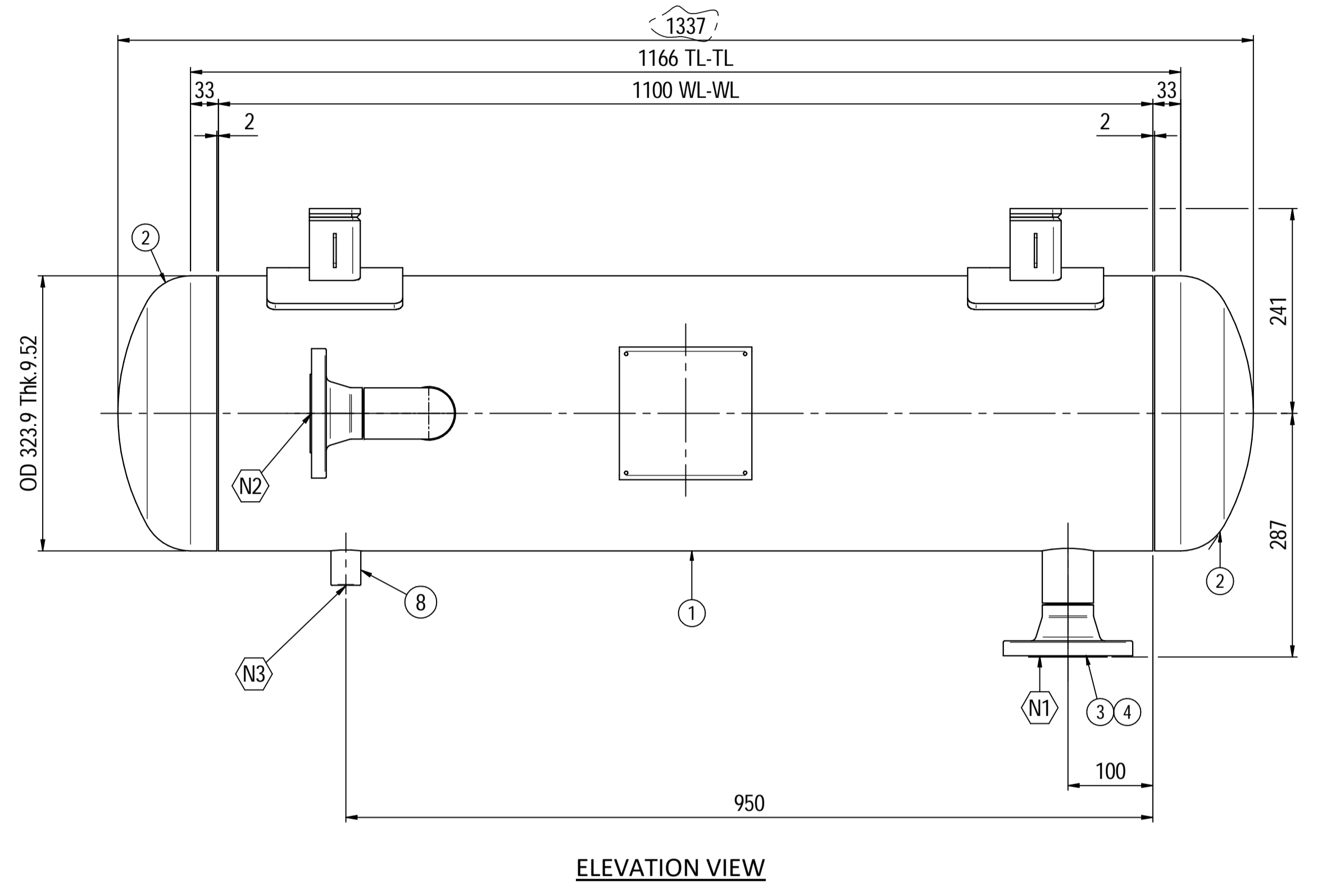
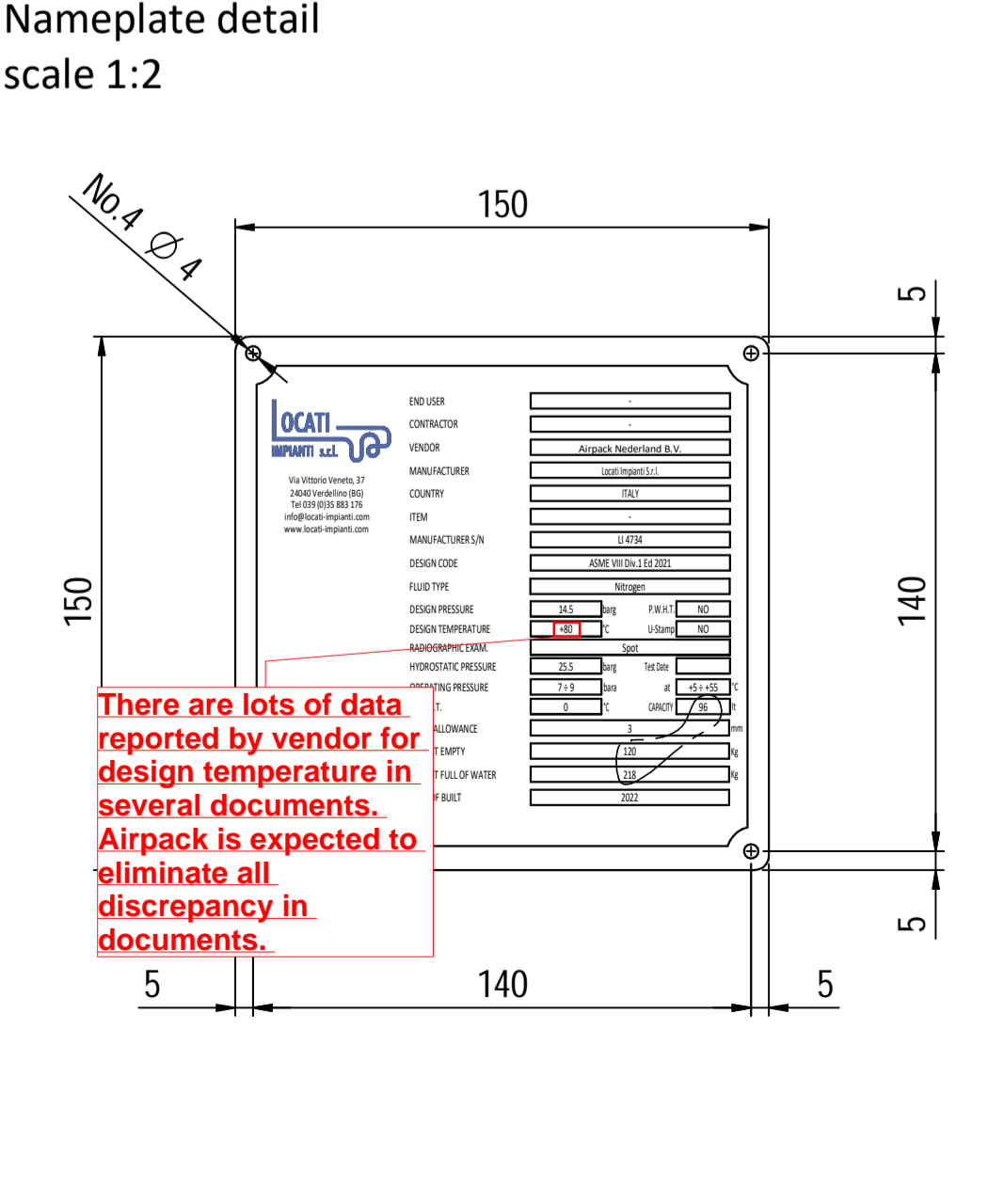
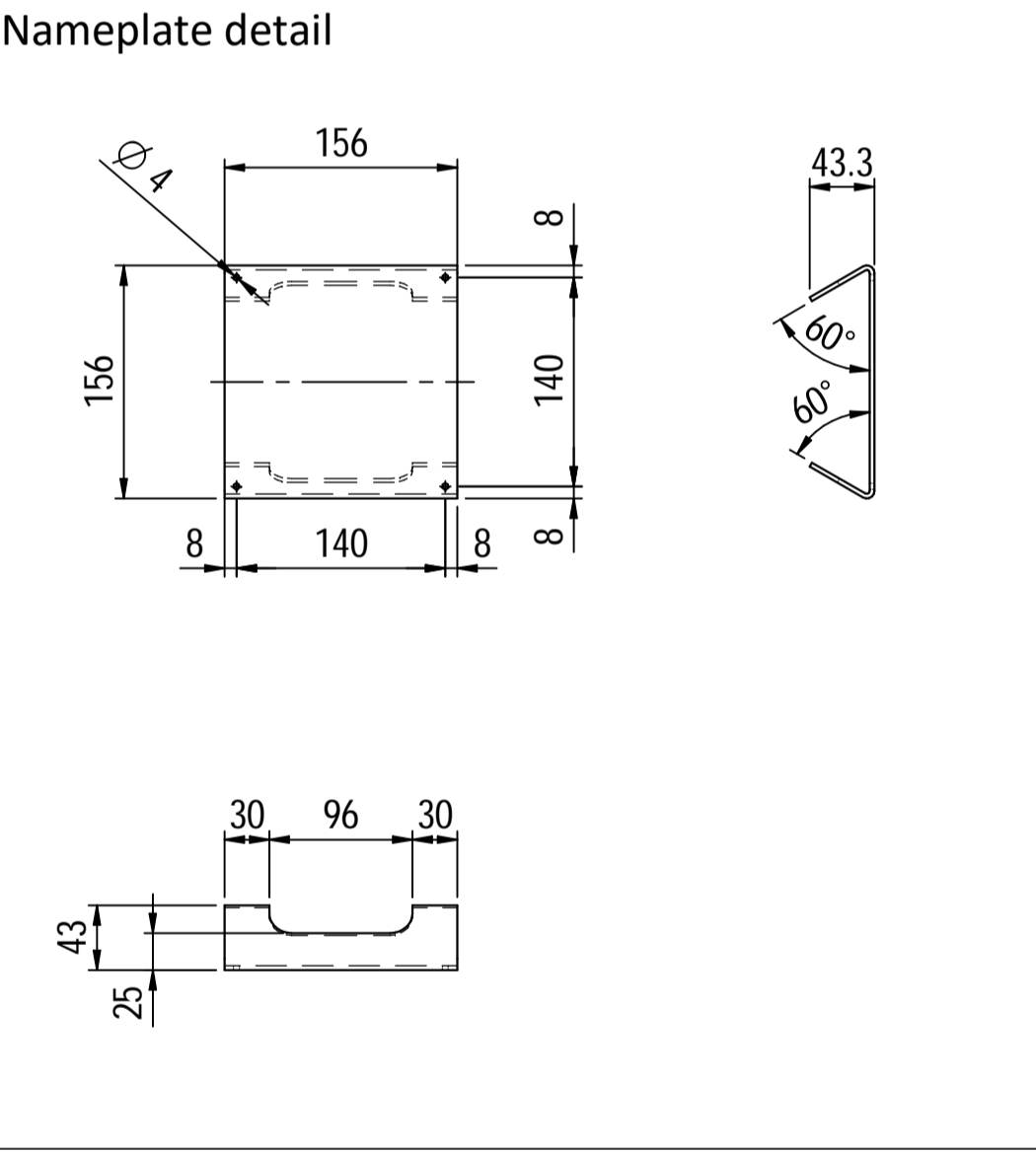
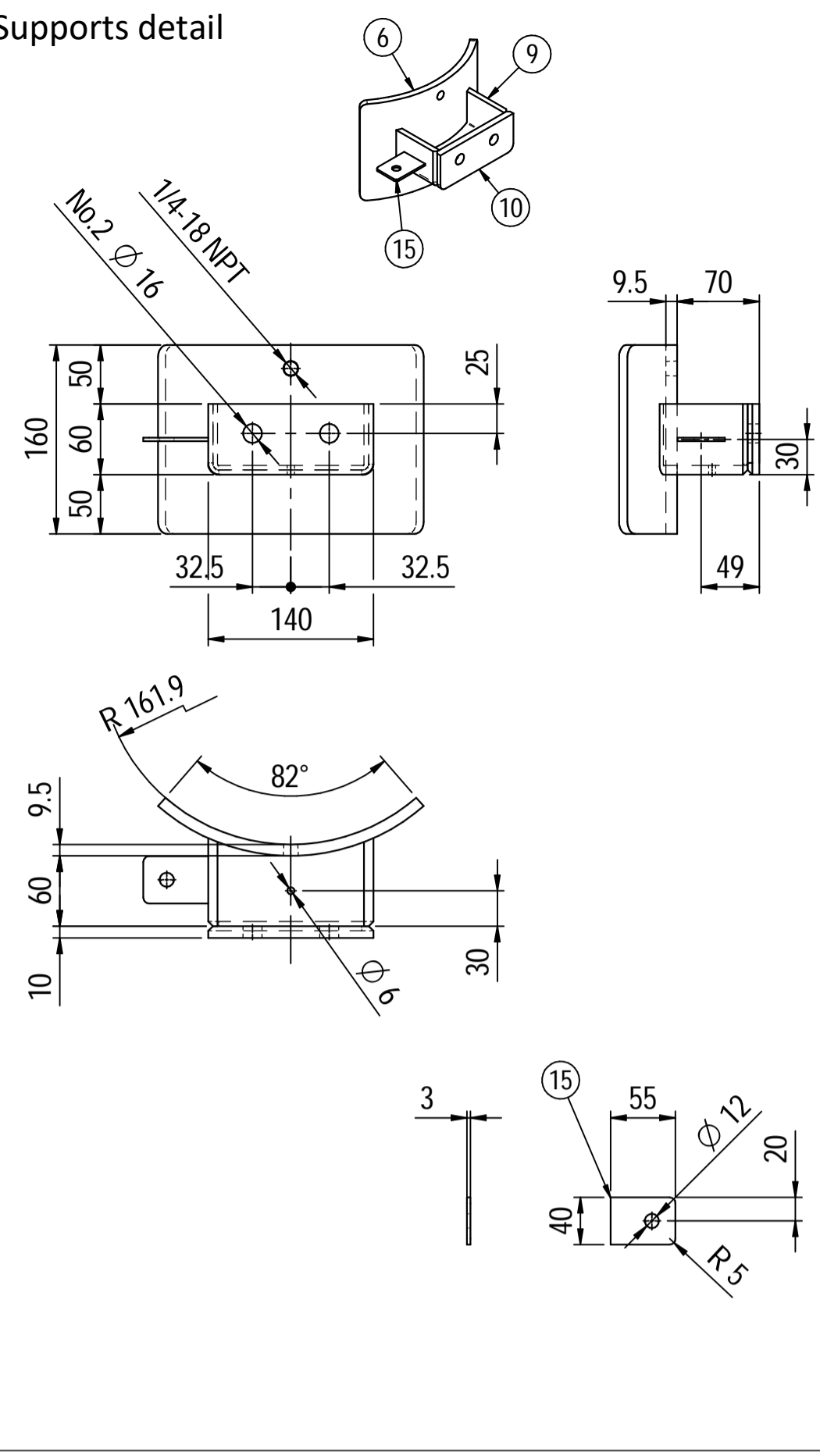
DATI DI PROGETTO / Design data			
FLUIDO	Nitrogen	COLLAUDO	Test
STATO FISICO DEL FLUIDO	Gas	NATIONAL BOARD REGISTRATION	NO
CODICE DI CALCOLO	ASME VIII Div. 1 Ed.2021	CANADIAN REGISTER NUMBER	NO
PRESSIONE DI ESERCIZIO	23 barg	SERVIZIO LETALE	NO
PRESSIONE DI PROGETTO	26 barg	EX-RAY	RT examination
PRESSIONE ESTERNA	NO	EXAMINAZIONE PER PENETRANTI	Spot (RT3)
PRESSIONE DI PROVA IDRAULICA	66.4 barg	ESTENSIONE	NO
TEMPERATURA DI ESERCIZIO	+64 °C	MAGNETOSCOPICO	NO
TEMPERATURA DI PROGETTO	+80 °C	PROCEDIMENTO DI SALDATURA	See doc:C220006WBK013
SOVRAMEZZA DI CORROSIONE	3 mm	TIPO DI FONDO	Cap
CAPACITA'	48 l	FORMAZIONE FONDO	HOT
EFFICIENZA GIUNTI	0.85	PESO A VUOTO	80 kg
MAMP @ Design Temperature	38.12 barg @ +80 °C	PESO IN ESERCIZIO	80 kg
MDMT @ MAMP	0 °C @ 38.12 barg	PESO PIENO D'ACQUA	128 kg
TRATTAMENTO TERMICO	NO	DATI DEL VENTO	-
IMPACT TEST	NO	DATI SISMICI	-

Please check. 26 barg or 26 barg.

Rev.	Descrizione / Description	Disegnato/Draw	Controllato/Checked	Approvato/Approved	Data/Date
01	Modified shell length	CM	MV	GL	30/03/2022
00	FIRST ISSUE	CM	MV	GL	16/03/2022

Oggetto/Object: N2 PULSATION DAMPER 2nd STAGE DISCHARGE

Scale/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.: C220006DWG006 Rev.: 01



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	3.1	

- 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.	PAD	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
CODICE DI CALCOLO	ASME VIII Div. 1 Ed.2021	CONSTRUCTION CODE	CANADIAN REGISTER NUMBER
PRESSIONE DI ESERCIZIO	7 + 9 bara	OPERATING PRESSURE	SERVIZIO LETALE
PRESSIONE DI PROGETTO	14.5 barg	DESIGN PRESSURE	RT examination
PRESSIONE ESTERNA	NO	EXTERNAL PRESSURE	LICUIDI PENETRANTI
PRESSIONE DI PROVA IDRAULICA	25.5 barg	HYDRAULIC TEST PRESSURE	ULTRASUONI
TEMPERATURA DI ESERCIZIO	+5 + 55 °C	OPERATING TEMPERATURE	CONTROLLO MAGNETOSCOPICO
TEMPERATURA DI PROGETTO	+210 °C	DESIGN TEMPERATURE	MAGNETIC PARTICLE EXAMINATION
SOVRAMEZZA DI CORROSIONE	3 mm	CORROSION ALLOWANCE	WELD TEST COUPON
CAPACITA'	96 l	CAPACITY	PROCEDIMENTO DI SALDATURA
EFFICIENZA GIUNTI	0.85	JOINT EFFICIENCY	FORMAZIONE FONDO
MAWP @ Design Temperature	18.3 barg @ +80 °C	MAWP (EXT)	HEAD FORMATION
MDMT @ MAWP	0 °C @ 18.3 barg	MINIMUM DESIGN METAL TEMPERATURE	PESO A VUOTO
TRATTAMENTO TERMICO	NO	THERMAL TREATMENT	PESO IN ESERCIZIO
IMPACT TEST	NO	IMPACT TEST	PESO PIENO D'ACQUA

Rev.	Descrizione / Description	Disegnato/Draw	Controllato/Checked	Approvato/Approved	Data/Date
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.	01