



LIDCO, Pars SEE Zone, Assaluyeh,  
Integrated Methanol and Ammonia  
Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT



Detail Drawings for Coolers



Document No. 17735-23A

Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision	Page
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**Airpack B.V. - Air Compressor –  
Integrated Methanol and Ammonia Plant  
17735-COM Detail Drawings for Coolers (K020)**

03	25-04-2024	Issued for Information	S.K.	J.J.	S.K.
02	12-02-2024	Issued for Information	S.K.	J.J.	S.K.
01	13-12-2023	Issued for Information	S.K.	J.J.	S.K.
REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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Detail Drawings for Coolers

Document No. 17735-23A

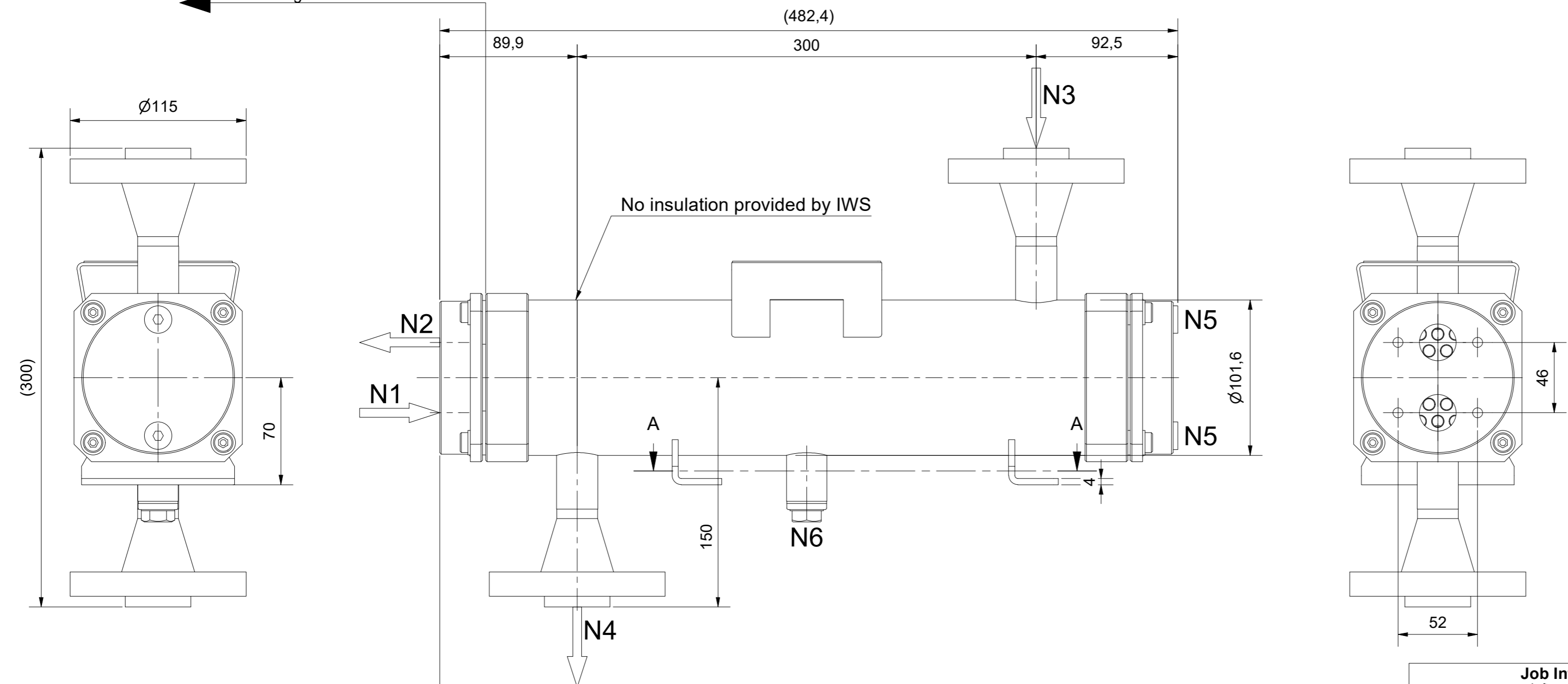
Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision	Page
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4		X	X			29						54						79					
5			X			30						55						80					
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Nozzle Table / Stutzentabelle		
No. / Nr.	Function / Funktion	Size / Größe
N1	Tubeside In	G 3/4" - integrated in header
N2	Tubeside Out	G 3/4" - integrated in header
N3	Shellside In	ASME B16.5 - 3/4" - Class 600 - WNRF - Schedule 80
N4	Shellside Out	ASME B16.5 - 3/4" - Class 600 - WNRF - Schedule 80
N5	Tubeside Drain/Vent	G 1/4" - integrated in header
N6	Shellside Drain	G 1/2"

Bundle removable to both sides.  
Bundle length = 444mm.



Design Parameters Design Bedingungen		
TEMA Class/Type TEMA Klasse/Typ	Class C - Type BEW	
Mech. Design Code Konstruktionsvorschrift	ASME VIII Div.1:2023	
Code Case(s) Code Case(s)	none	
Lethal Service Tödliche/Giftige Medien	no	
Impact Test Req. Kerbschlagversuch	no per UHA-51 (d)	
PWHT Wärmebehandlung	none	
Loadings acc. UG-22 Lasten gem. UG-22	(a), (b), (d)(2), (j)	
Wind Loads Windlasten	none considered	
Seismic Loads Erdbebenlasten	none considered	
	Tubeside Rohrseite	Shellside Mantelseite
Operating Medium Betriebsmedium	Water	Air
Volume (V) Volumen	0,8L	1,7L
Design Pressure (MAWP) Max. zul. Druck (MAWP) / (PS)	-1/10bar(g)	-1/39bar(g)
Test Pressure (PT) Prüfdruck	14,3bar(g)	64,35bar(g)
Design Temperature (AT) Zul. Betriebstemperatur (AT) / (TS)	-10/100°C	-10/175°C
Corrosion Allowance Korrosionszuschlag	0mm	0mm
	Number of Passes Anzahl der Wege	2
	Weld Joint Efficiency Schweißnahtfaktor	0,85

Job Information Auftragsinformationen		
IWS Item No. IWS Artikel Nr.	704233207	
IWS Project No. IWS Projekt Nr.	104234198	
Serial No. Serien Nr.	See Table	
Customer Item No. Kunden Artikel Nr.	See Table	
		<b>Certification / Registration</b> Zertifizierung / Registrierung
		<input checked="" type="checkbox"/> ASME VIII Div. 1
		U-Stamp no
		NB Registration no
		<b>Corresponding Documents</b> Zugehörige Dokumente
Strength Calculation Festigkeitsberechnung	BZ-704233207	Nondestructive Testing Zerstörungsfreie Prüfungen
Weld- and Test Plan Schweiß- und Prüfplan	SZ-704233207	Surface Treatment Oberflächenbehandlung
Parts List Stückliste	Sheet 2	Empty Weight Leergewicht
		ca.15kg

Revisions Revisionen					
Rev.	Reason for Issue Grund der Ausgabe	Date Datum	Drawn Gezeichnet	Checked Geprüft	Approved Freigegeben
R03	Issued for review. Changed shell flange ring.	23.04.2024	K.Kraft	O.Latta	S.Monjé
R02	Issued for review	19.01.2024	K.Kraft	O.Latta	S.Monjé

IWS Type Code IWS Typenschlüssel		Description Beschreibung
RLP 400/100-36-2-2/3-SS/AL-IW		Intercooler / Aircooler
IWS-Monjé Heat Exchangers GmbH Wittener Straße 102 44789 Bochum Germany www.iws-monje.com		Drawing No. Zeichnungsnummer
		Z-704233207

This drawing and all data contained is exclusive property of IWS-Monjé Heat Exchangers GmbH and must not be disclosed to others without written consent.						
Tolerances in acc. to EN ISO 13920-DH and ASME VIII Div. 1 UW-33, UW-35, UG-79, UG-80, UG-81	Scale Maßstab	1 : 2,5	Format Format	A2	Page Blatt	1

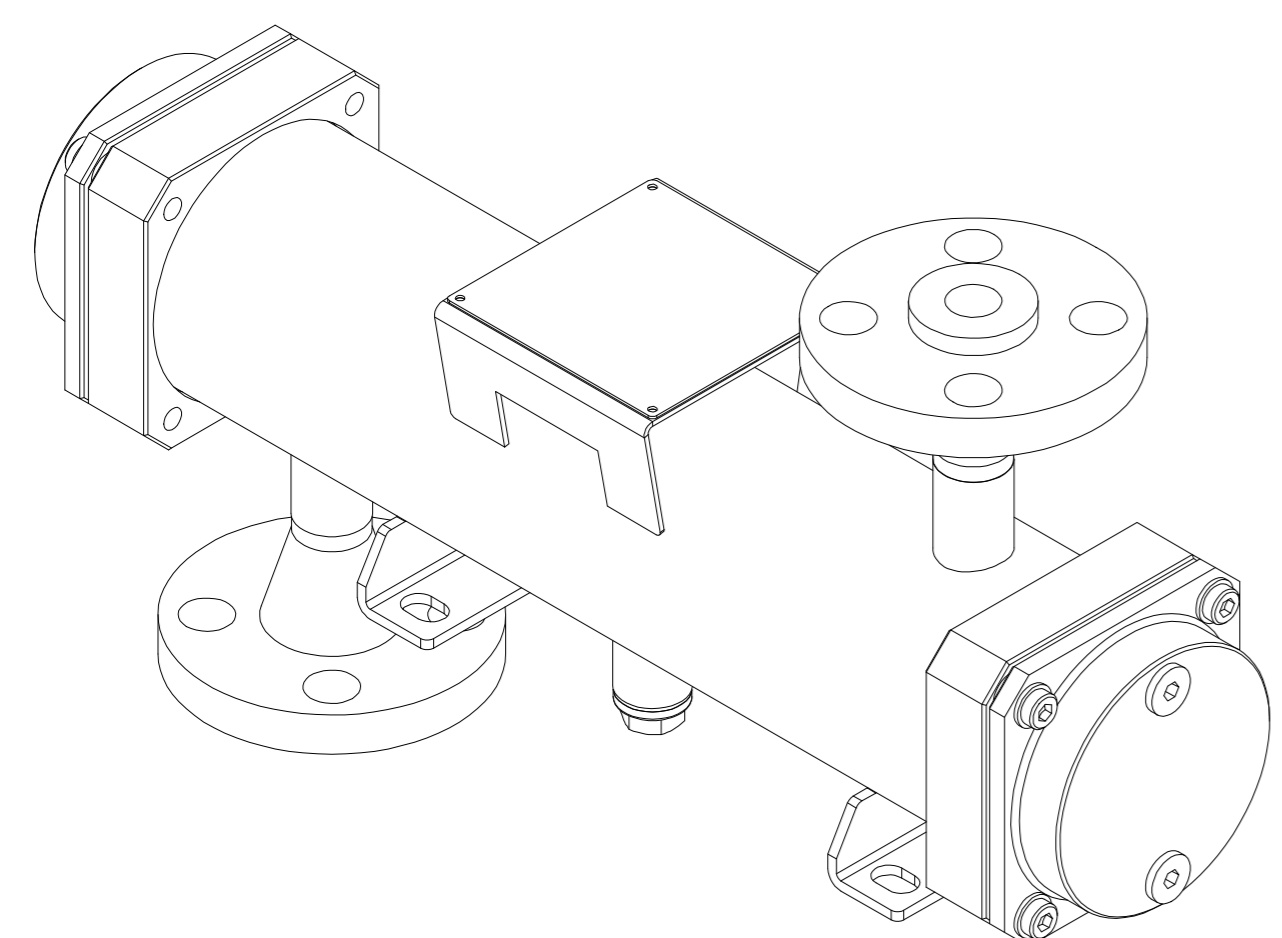
IWS-Monjé HE GmbH Hersteller 901050002			
Type	RLP 400/100-36-2-2/3-SS/AL-IW	Built	2024
IWS/KD-Nr.	704233207	Emptyweight	15kg
No. Serie	See Table		
	Tubeside	Shellside	
PS	-1/10	-1/39	bar
V	0,8	1,7	L
TS	-10/100	-10/175	°C
PT	14,3	64,35	bar
Fluidgroup	2	2	Fluidgruppe

**IWS-MONJÉ**  
HEAT EXCHANGERS

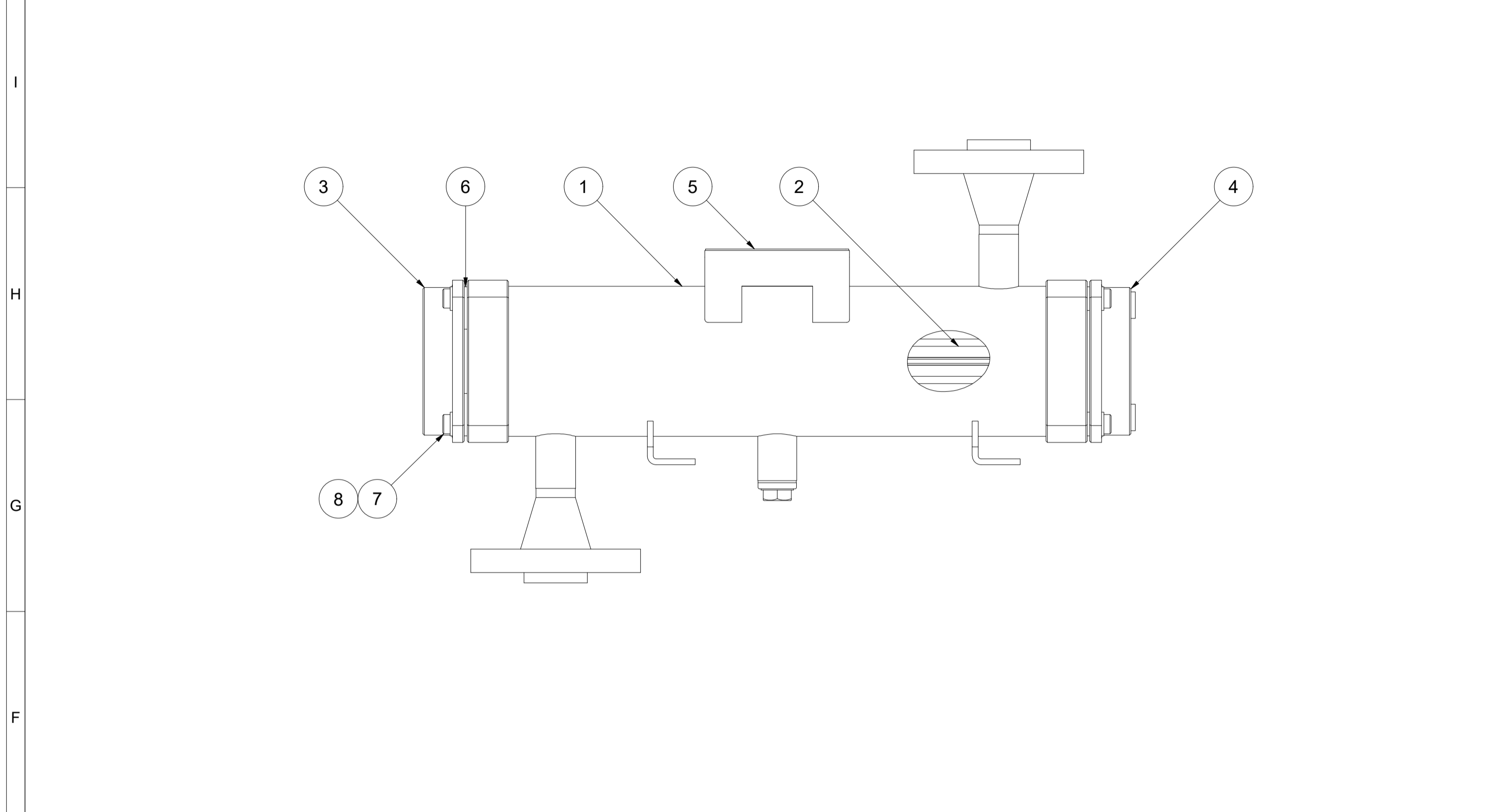
Cust. No.: See Table  
IWS No.: 704233207

Manufacturer Hersteller	901050003		
Serial No. Serien Nr.	See Table		
Built Baujahr	2024		
	Tubeside	Shellside	
PS	-1/10	-1/39	bar(g)
V	0,8	1,7	L
TS	-10/100	-10/175	°C
PT	14,3	64,35	bar(g)
Fluidgroup	2	2	Fluidgruppe
Type / Typ:	RLP 400/100-36-2-2/3-SS/AL-IW		

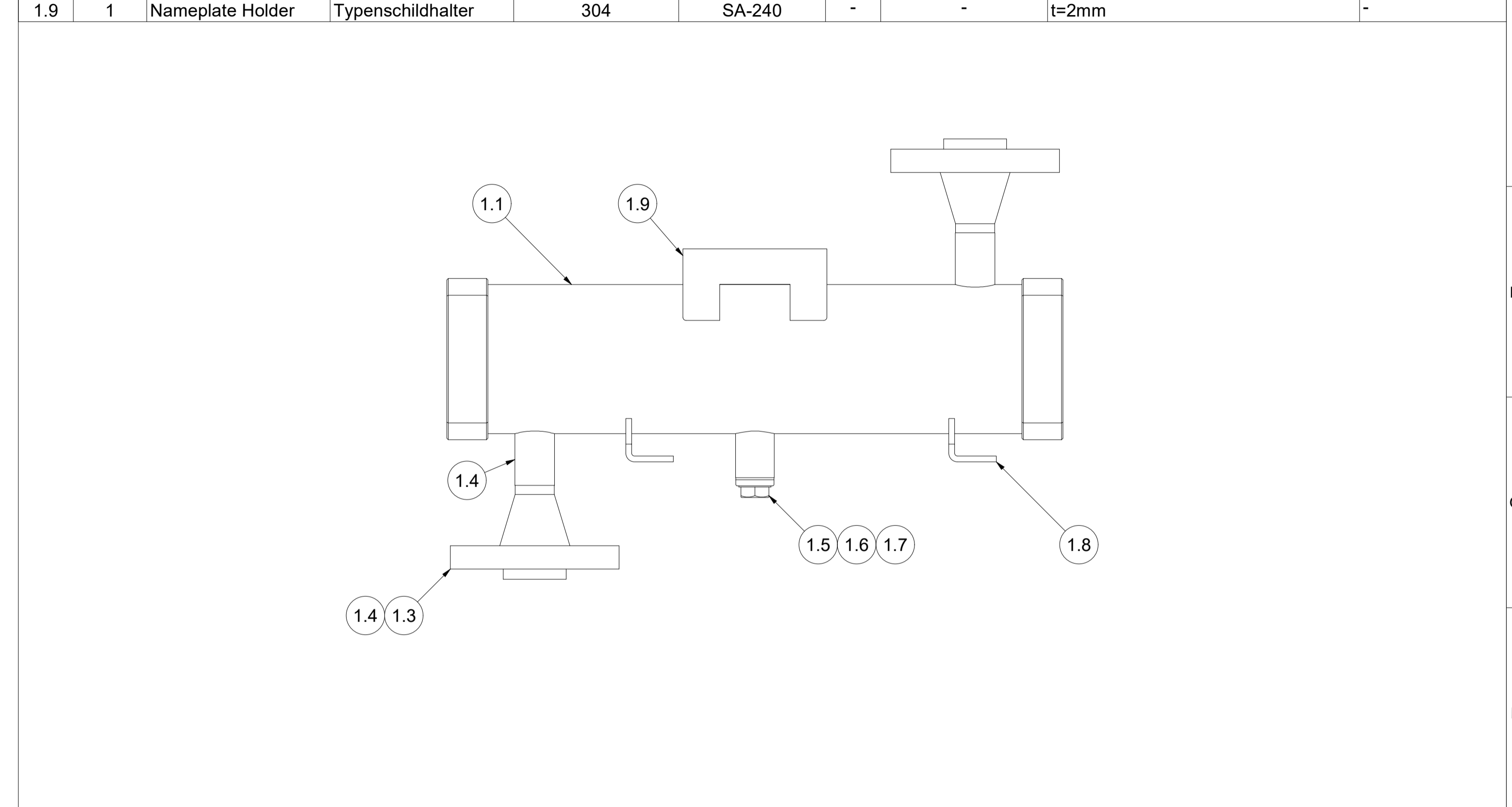
Item	Item No.	Serial No.
Intercooler	320-KE-020-001	231135-1
Aftercooler	320-KE-020-002	231135-2



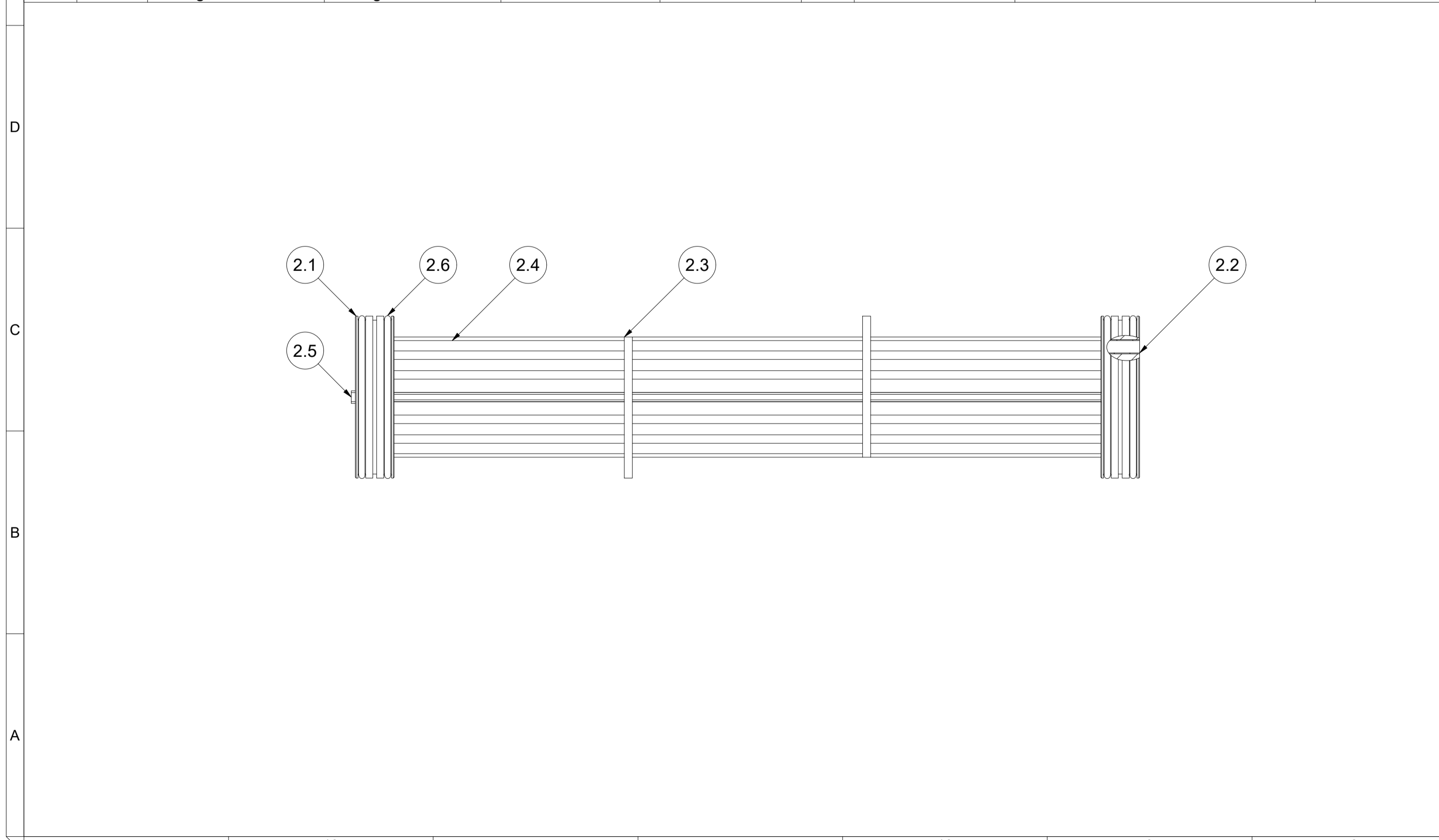
14	13	12	11	10	9	8			
Pos.	Qty. / Menge	Description	Bezeichnung	Material / Werkstoff	Material Standard / Werkstoff Norm	Cert. / Zgn.	Standard / Norm	Dimensions / Abmessungen	Notes / Bemerkungen
1	1	Shell Assembly	Mantel Baugruppe	-	-	-	-	-	-
2	1	Bundle Assembly	Bündel Baugruppe	-	-	-	-	-	-
3	1	Inlet/Outlet Bonnet	Einlass-/Auslasskammer	304	SA-240	3.1	-	KL10-F-14	-
4	1	Return Bonnet	Umlenkammer	304	SA-240	3.1	-	KL10-F-15	-
5	1	Nameplate - IWS	Typenschild - IWS	304	-	-	-	t=1mm	-
6	4	Fixing Plate	Fixierblech	304	SA-240	-	-	-	-
7	8	Bolt	Schraube	B8	SA-193	3.1	DIN 6912	M8 x 30	-
8	12	Washer	Scheibe	304	SA-240	-	DIN 125 A	D9	-



7	6	5	4	3	2	1			
Pos.	Qty. / Menge	Description	Bezeichnung	Material / Werkstoff	Material Standard / Werkstoff Norm	Cert. / Zgn.	Standard / Norm	Dimensions / Abmessungen	Notes / Bemerkungen
1.1	1	Shell	Mantel	TP316	SA-312	3.1	-	Ø101,6mm x 4,5mm x 379,8mm	-
1.2	2	Flanging	Flanschring	F316	SA-182	3.1	-	K10-2881-02	-
1.3	2	Welding Neck Flange	Vorschweißflansch	F316	SA-182	3.1	ASME B16.5	3/4" Class 600 RF	-
1.4	2	Nozzle Pipe	Stutzenrohr	TP316	SA-312	3.1	-	Ø26,9mm x 3,9mm	-
1.5	1	Socket	Muffe	TP316	SA-312	3.1	-	G 1/2"	-
1.6	1	Plug	Stopfen	316	SA-182	3.1	-	G 1/2"	-
1.7	1	Sealing Ring	Dichtring	Aluminium	-	-	-	-	-
1.8	2	Foot	Fuß	304	SA-240	-	-	-	-
1.9	1	Nameplate Holder	Typenschildhalter	304	SA-240	-	-	t=2mm	-



Pos.	Qty. / Menge	Description	Bezeichnung	Material / Werkstoff	Material Standard / Werkstoff Norm	Cert. / Zgn.	Standard / Norm	Dimensions / Abmessungen	Notes / Bemerkungen
2.1	2	Tubesheet	Rohrplatte	316L	SA-182	3.1	-	Ø91,8mm x 22mm	-
2.2	36	Tube	Rohr	TP316L	SA-312	3.1	-	Ø8mm x 0,5mm	-
2.3	2	Baffle	Umlenkblech	Aluminium	-	-	-	t=4,5mm	-
2.4	1	Fin	Rippe	Aluminium	-	-	-	-	-
2.5	1	Divider Gasket	Trennsteg	PE-1000	-	-	-	-	-
2.6	4	O-Ring	O-Ring	Viton	-	-	-	-	-



Pos.	Qty. / Menge	Description	Bezeichnung	Material / Werkstoff	Material Standard / Werkstoff Norm	Cert. / Zgn.	Standard / Norm	Dimensions / Abmessungen	Notes / Bemerkungen
2.1	2	Tubesheet	Rohrplatte	316L	SA-182	3.1	-	Ø91,8mm x 22mm	-
2.2	36	Tube	Rohr	TP316L	SA-312	3.1	-	Ø8mm x 0,5mm	-
2.3	2	Baffle	Umlenkblech	Aluminium	-	-	-	t=4,5mm	-
2.4	1	Fin	Rippe	Aluminium	-	-	-	-	-
2.5	1	Divider Gasket	Trennsteg	PE-1000	-	-	-	-	-
2.6	4	O-Ring	O-Ring	Viton	-	-	-	-	-



Revisions				
Rev.	Reason for Issue	Date	Drawn	Checked
R03	Issued for review. Changed shell flange ring.	23.04.2024	K.Kraft	O.Latta
R02	Issued for review	19.01.2024	K.Kraft	O.Latta

IWS Type Code	Description
RPL 400/100-36-2-2/3-SS/AL-IW	Intercooler / Aircooler

IWS Typenschlüssel	Drawing No.
Z-704233207	Zeichnungsnummer

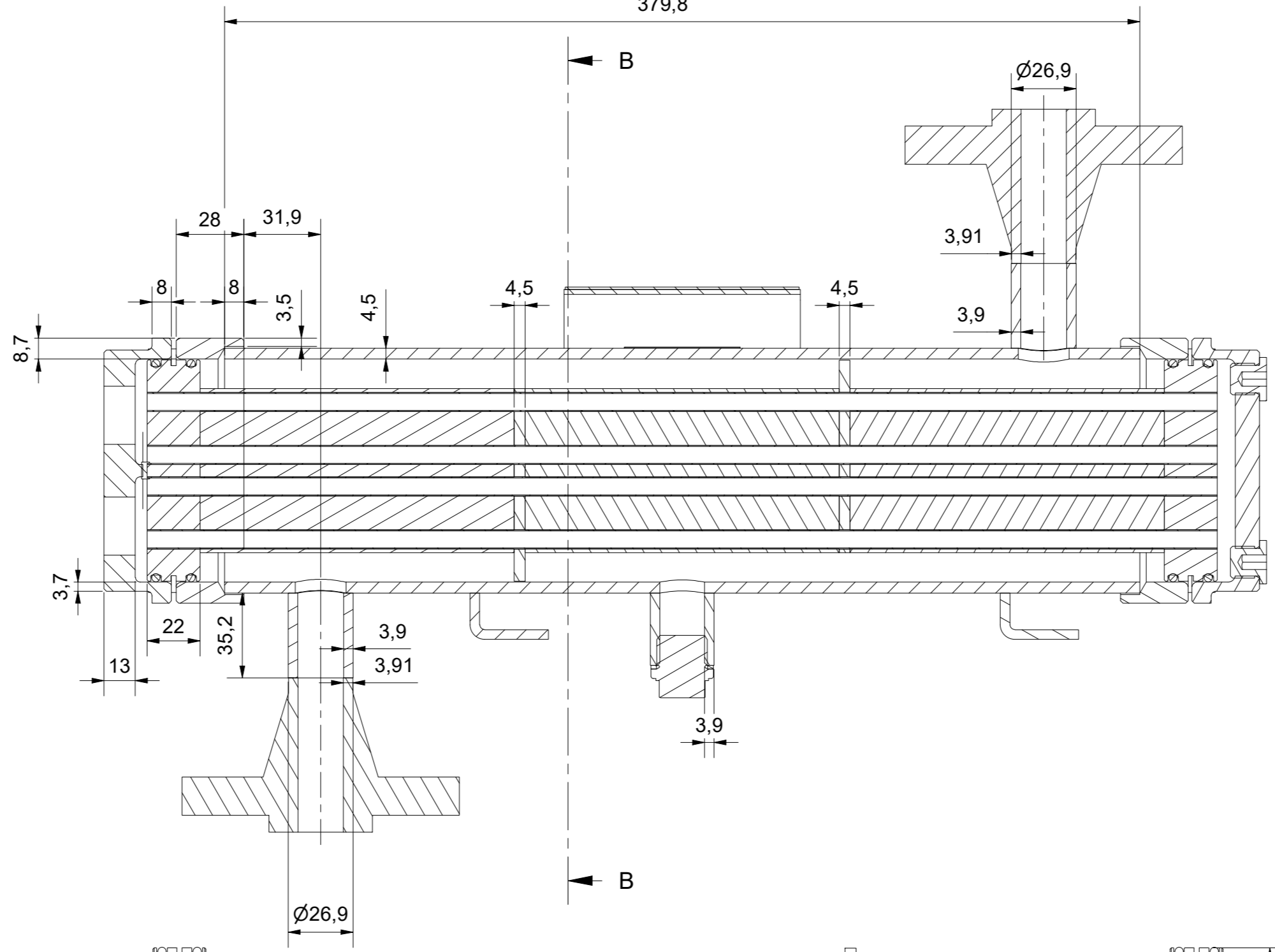
Tolerances in acc. to EN ISO 13920-DH and ASME VIII Div. 1 UW-33, UW-35, UG-79, UG-80, UG-81

Scale	1 : 2,5
Format	A1
Page	2

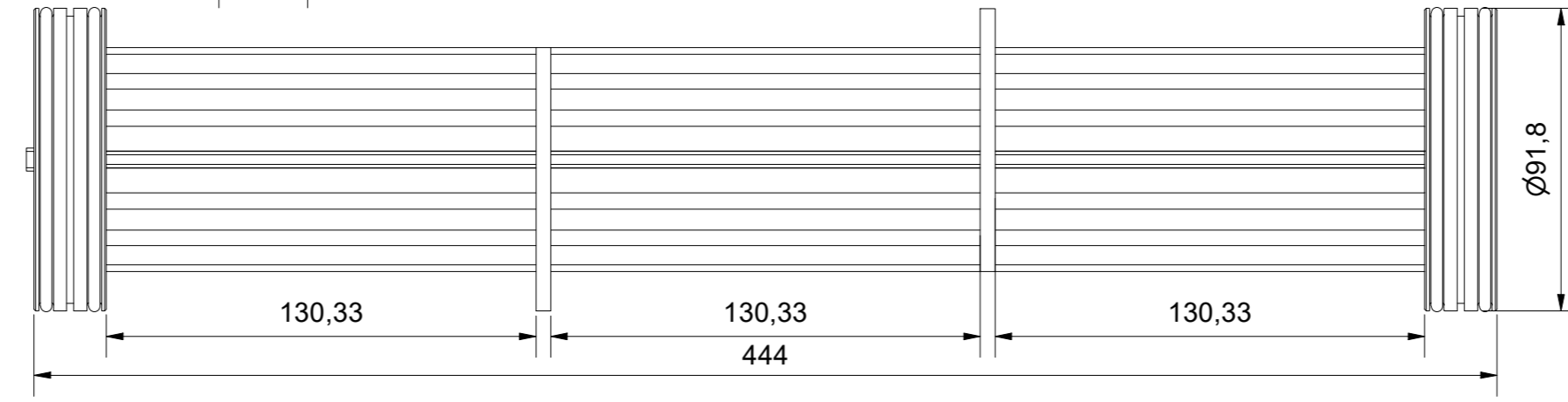
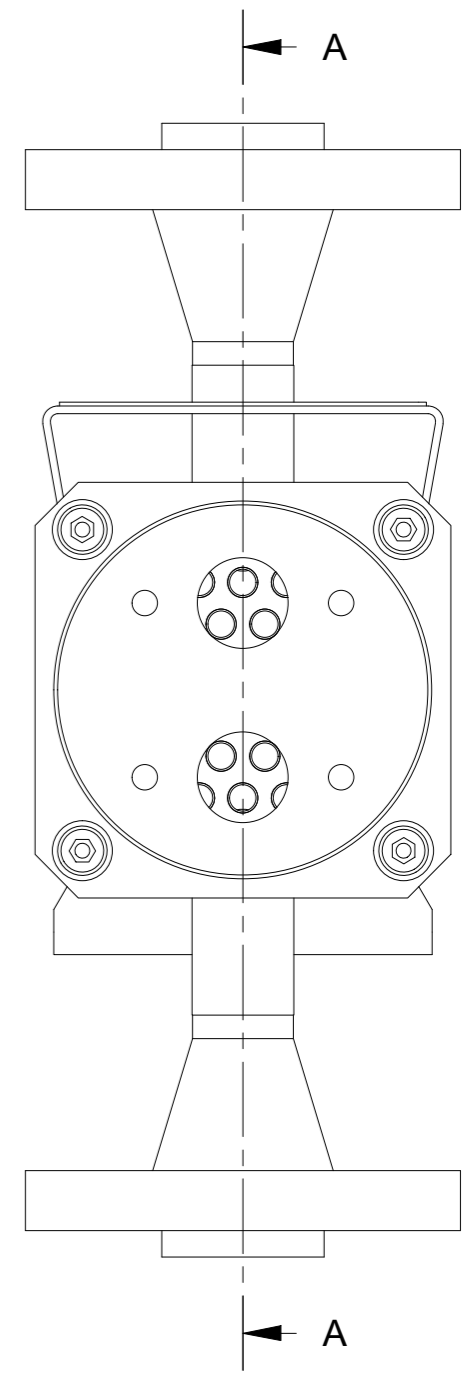
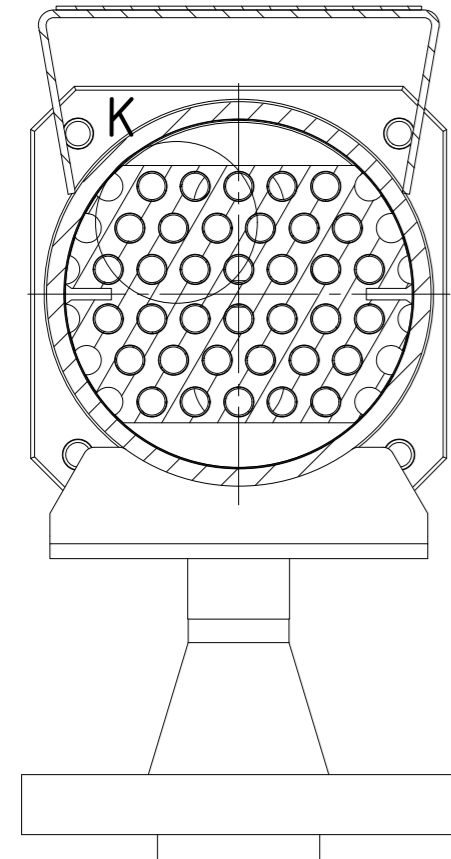
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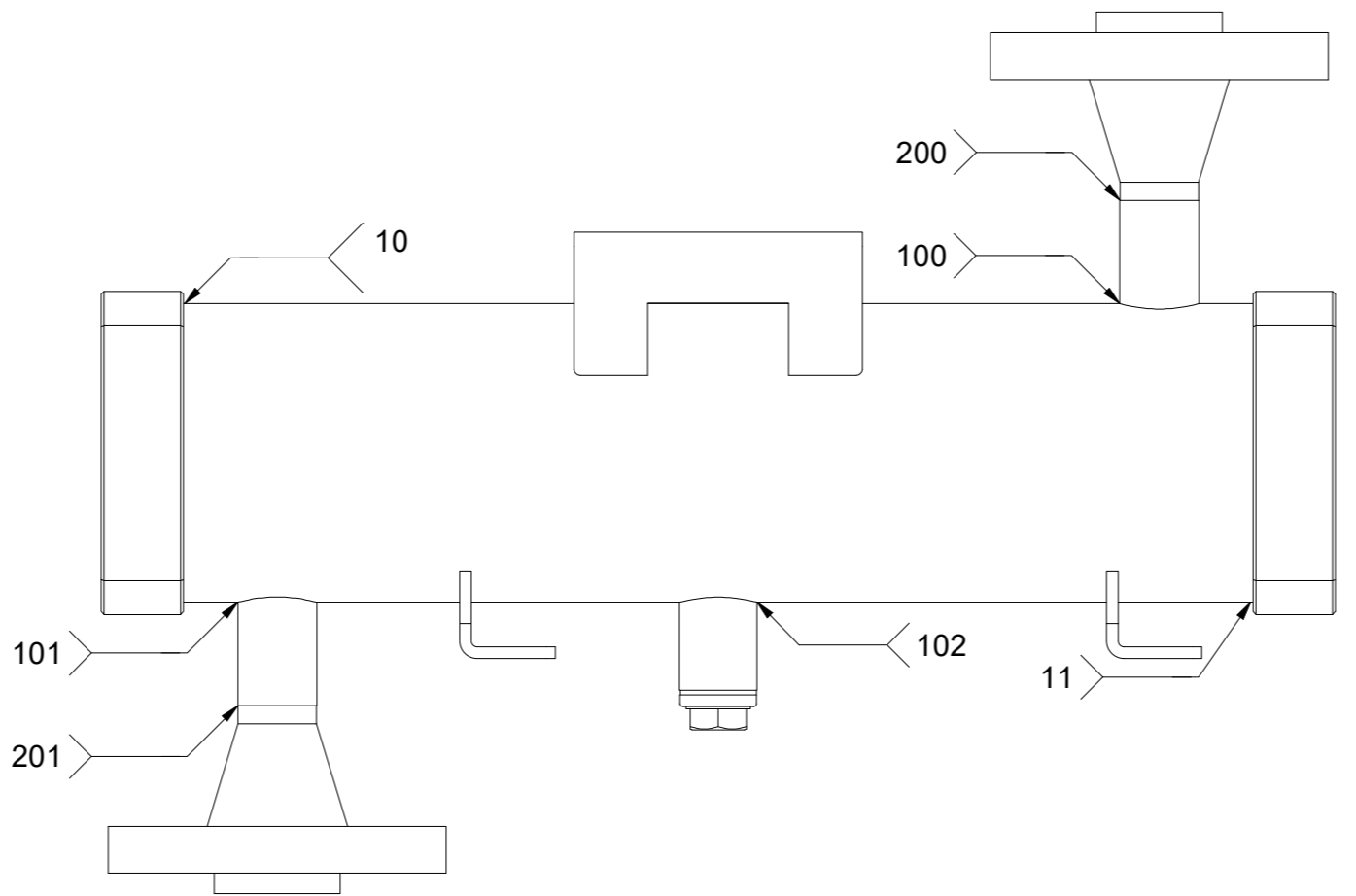
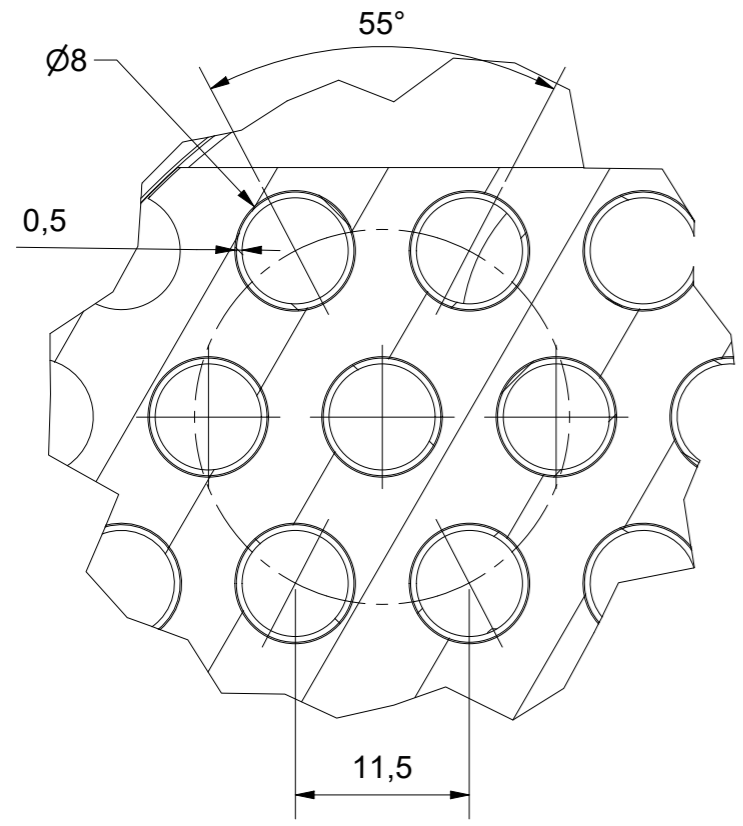
A-A (1:2)  
379,8




B-B (1:2)



K (2:1)



Revisions					
Revisionen					
Rev.	Reason for Issue	Date	Drawn	Checked	Approved
Rev.	Grund der Ausgabe	Datum	Gezeichnet	Geprüft	Freigegeben
R03	Issued for review. Changed shell flange ring.	23.04.2024	K.Kraft	O.Latta	S.Monjé
R02	Issued for review	19.01.2024	K.Kraft	O.Latta	S.Monjé

<b>IWS Type Code</b> IWS Typenschlüssel	<b>Description</b> Beschreibung
RPL 400/100-36-2-2/3-SS/AL-IW	Intercooler / Aircooler
 <b>IWS-MONJÉ</b> HEAT EXCHANGERS	<b>Drawing No.</b> Zeichnungsnummer
IWS-Monjé Heat Exchangers GmbH Wittener Straße 102 44789 Bochum Germany www.iws-monje.com	Z-704233207
Tolerances in acc. to EN ISO 13920-DH and ASME VIII Div. 1 UW-33, UW-35, UG-79, UG-80, UG-81	
Scale Maßstab	1:2
Format	A2
Page	3

14 13 12 11 10 9 8 7 6 5 4 3 2 1