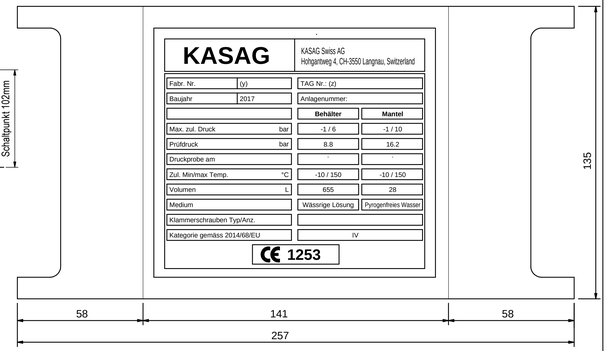
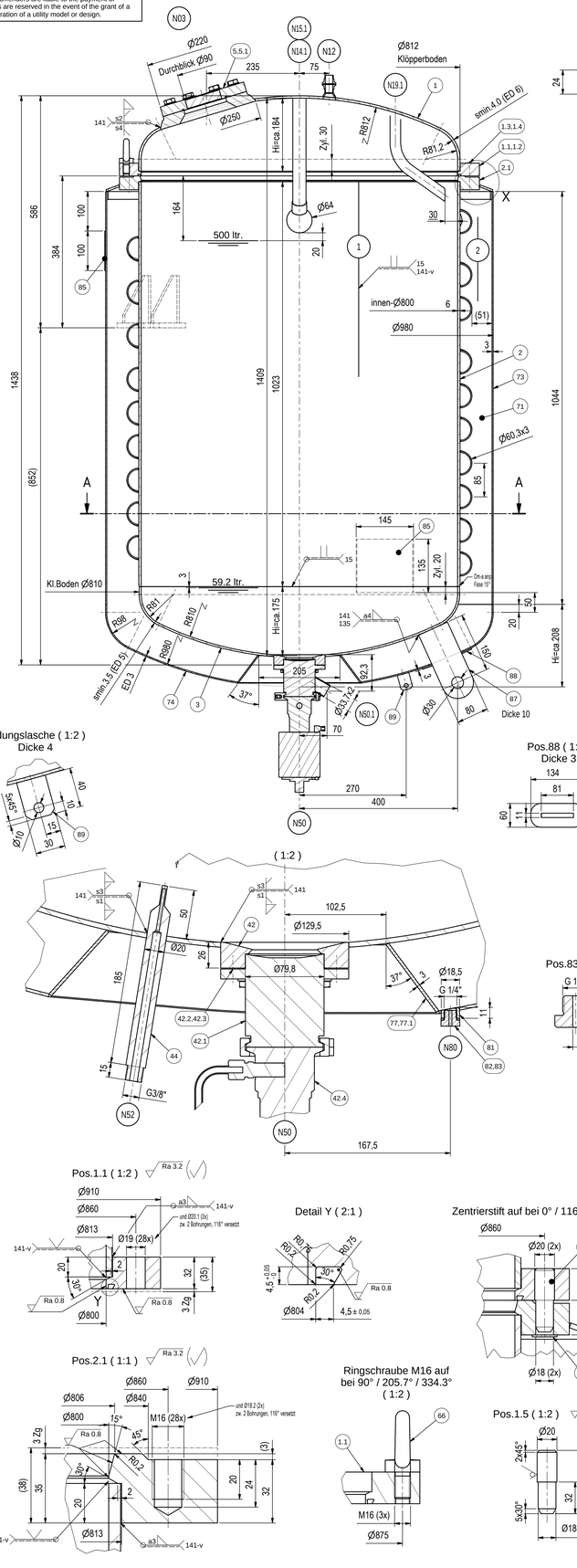
Stückliste / Parts list	027597
Benennung / Name	Nummer / Number
Dazugehörige Unterlagen / Additional Documents	

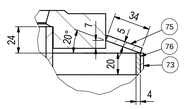
Pratzen- und Stutzenstellung nach Grundriss

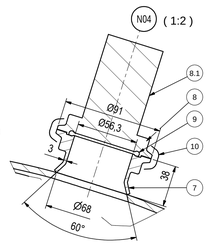
Pos. 85 1:1
Dicke 2



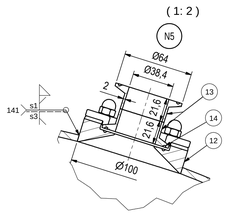


Detail X (1:2)





(1: 2)



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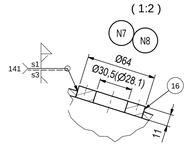
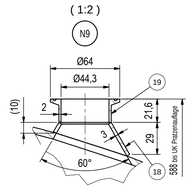


(1:2)



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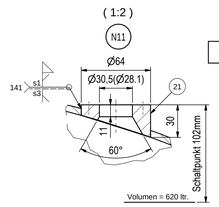

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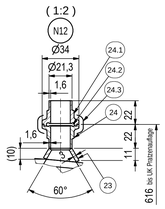

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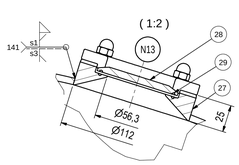

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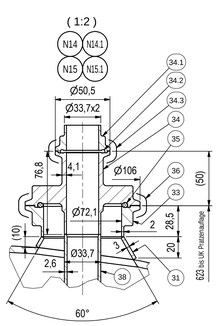

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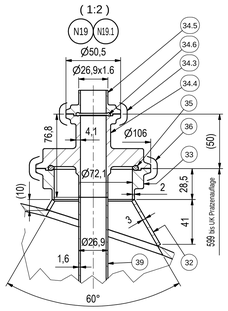
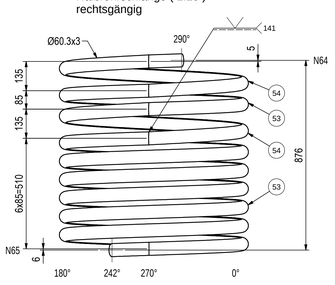
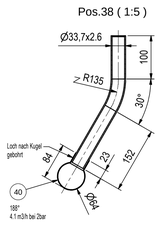


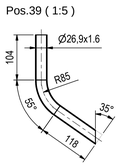
Halbrohrschlange (1:10)
rechtsgängig



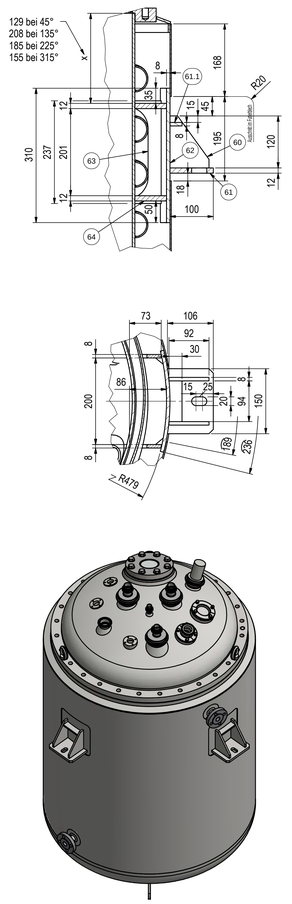
Pos.38 (1:5)



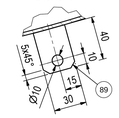
Pos.39 (1:5)



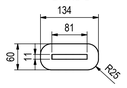
Pratze (1:5) 4x
Alle Nähte: 135 / 141
a = 0.5 x s min.



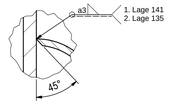
Erdungslasche (1:2)
Dicke 4



Pos.88 (1:5)
Dicke 3

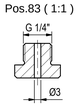


Detail (1:1)
Halbrohrschlange



(1:2)

Pos.83 (1:1)



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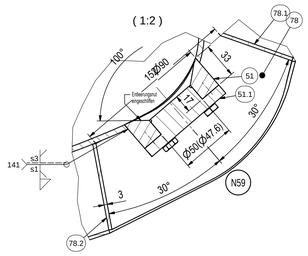

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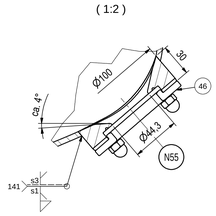
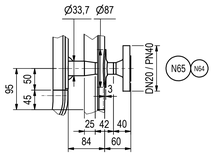
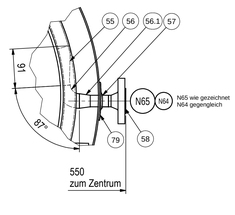


HKS "EIN" / "AUS" (1:5)

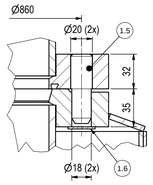




Pos.1.1 (1:2) Ra 3.2

Detail Y (2:1)

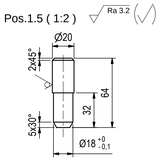
Zentrierstift auf bei 0° / 116° (1:2)



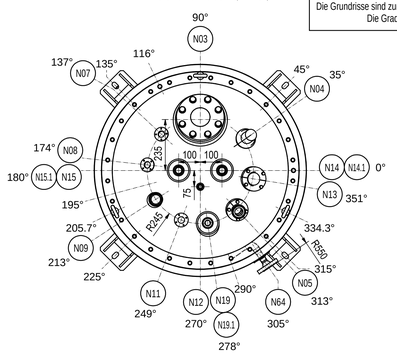
Pos.2.1 (1:1) Ra 3.2

Ringschraube M16 auf
bei 90° / 205.7° / 334.3°
(1:2)

Pos.1.5 (1:2) Ra 3.2

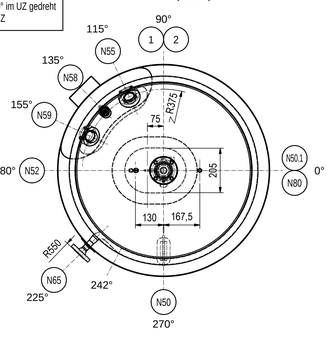


Ansicht von oben (1:10)



Achtung:
Die Grundrisse sind zur Leitzeichnung um 90° im UZ gedreht
Die Gradzahlen steigen im GUZ

Schnitt A-A (1:10)

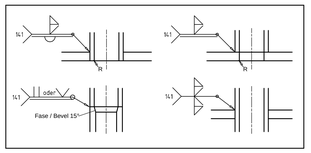


Schweissangaben:
Zusatzwerkstoffe:
- Produktberührt CN 20/25
und am Produkt- Mantel / Kl. Böden angeschw. Teile
- Alle übrigen Thermanit GE316L
- Nicht bezeichnete Schweissnähte 141

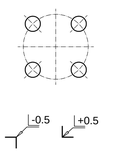
y =	z =
A102663-004	1B4140
A102663-104	1B4700

Ferritgehalt: produktberührt
- Grundwerkstoff <3%
- Schweissnähte <3%

Schweissnähte Stutzen / Weld seams nozzle



Achsen lochfrei!



Havariegewicht = 1143 kg

Schweissnähte	Welding seams	innen / inside	aussen / outside
Blech	Sheet	geschliffen Ra < 0.6 µm	gemäss Blatt: Oberfläche der Schweissnähte aussen
Beizen / Passivieren	Pickling / Passivate	geschliffen Ra < 0.6 µm	geschliffen Ra < 1.2 µm
C-Teile	Unalloyed parts	Nein	Nur die Schweissnähte

Oberfläche / Surface

Behälter	Vessels	DIN 28005-1
Schweisskonstruktionen	Welded constructions	EN ISO 13920-DH
Mechanisch bearbeitete Teile	Machined parts	ISO 2768-mK
Längenmasse für Halbzeuge	Linear measurements for semi-finished material	ISO 2768-c

Toleranzen / Tolerances

Berechnungsvorschrift / Regelwerk	Calculation regulation / code	AD-2000 / SIA 261 Erdbebenzone 1	
Entwurfsprüfung	Design test	Swiss TS	
Bau- und Druckprüfung	Construction- and pressure test	Swiss TS	
Schweissnahtbewertung	Preparation of welds	EN 1708-1	
Qualitätsstufe nach EN ISO 5817	Quality level according EN ISO 5817	Standard B	
Aufstellungsland	Installation country	Schweiz	
Raum	Chamber	Innen / in der Rohre: Inside / in the pipes	Aussen / Um die Rohre: Outside / Around the pipes
Medium	Medium	Aqueous solution	Pyrogen free water
Medieneigenschaft 1=gefährlich 2=andere	Properties of fluid 1=dangerous 2=others	1	2
Medienzustand 1=gasförmig oder flüssig 2=flüssig	Condition of fluid 1=gaseous or liquid 2=liquid	1	1
Volumen brutto	Volume gross	ltr. 655	28
Min./ max. zulässige Temperatur	Min./ max. permissible temperature	°C -10 / 150	-10 / 150
Berechnungstemperatur	Design temperature	°C -10 / 150	-10 / 150
Min./ max. zulässiger Druck	Min./ max. permissible pressure	bar -1 / 6	-1 / 10
Berechnungsdruck	Design pressure	bar -1 / 6	-1 / 10
Prüfdruck	Test pressure	bar 8.8	16.2
Dichte	Density	kg/m³ 1200	1000
Druckgeräterichtlinie 2014/68/EU	Pressure Equipment Directive 2014/68/EU		
Kategorie I II III IV	Category I II III IV	IV	
Modul A A2 B+F; B+C2 B+F; G	Modul A A2 B+F; B+C2 B+F; G	B+F	
Korrosionszuschlag	Corrosions allowance	mm 0	
Schweissnahtfaktor	Welding seam factor	0.85	
Nicht bemastete Kehlnähte	Non- dimensioned fillet welds	mm a = 0.7 x s min; a min = 2 mm	
Gewicht Druckbehälter (leer)	Weight of pressure vessel (empty)	kg 515	
Lastspielzahl	Load cycles	± 327000 (-1 bis 2.1 bar bei 0 bis 135°C)	
Werkstoff	Material		
Produktberührte Teile	Product contacted parts	1.4539 / 2.4602 / EPDM	
Doppelmantel	Jacket	1.4404 / 1.4435	
Übrige Teile	Other parts	1.4301 / 1.4404	
Isoliermaterial	Insulating material	Mineralwolle (Fabrikat ISOVER) gemäss AGI Q132	

ZFP / NDT (zerstörungsfreie Prüfung / non-destructive testing)

Prüfungsart	Test type	RT / x-ray	PT	VT	Perml
Längsnähte	Longitudinal weld seams	% 100	10	100	-
Rundnähte	Circumferential weld seams	% 25	10	100	-
Stossstellen	Butt joint seams	% 100	-	100	-
Stutzennähte	Nozzle weld seams	% -	10	100	-
Kehlnähte	Fillet weld seams	% -	10	100	-
Grundmaterial	Basic material	% -	-	-	-

Auslegungs- und Betriebsdaten / Design and operating data

Technische Daten / Technical data

N80	1	G 1/4"	-	-	Test socket insulation	S-E-AT 0149
N65	1	20 (ISO)	40	EN 1092-1, 11, B1	Inlet tempering media	WN-Flange
N64	1	20 (ISO)	40	EN 1092-1, 11, B1	Outlet tempering media	WN-Flange
N59	1	B50	-	BioControl	Spare (Conductivity)	S-E-AT 0142
N58	1	G1 1/4"	-	Ingold Ø25 H7	Spare (pH)	S-E-AT 0330
N55	1	40 (ISO)	-	TC-Connect, ISO 2852	Sampling (9 port)	S-E-AT 0304
N52	1	G 3/8"	-	Thermowell TM411	Temperature measurement	S-E-AT 0352
N50.1	1	25 (ISO)		DIN 11866-B	Product outlet	S-E-AT 0318
N50	1	25	6	Südmo SVP A386 D-E 30°	Bottom outlet	S-E-AT 0318
N19.1	1	20 (ISO)	40	DIN 11864-3-A (BKS)	Inlet pipe (J-tube)	S-E-AT 0349
N19	1	65 (ISO)	16	DIN 11864-3-A (BKS)	Inlet pipe (Vessel connection)	S-E-AT 0349
N15.1	1	25 (ISO)	40	DIN 11864-3-A (BKS)	CIP 2	S-E-AT 0350
N15	1	65 (ISO)	16	DIN 11864-3-A (BKS)	CIP 2 (Vessel connection)	S-E-AT 0350
N14.1	1	25 (ISO)	40	DIN 11864-3-A (BKS)	CIP 1	S-E-AT 0350
N14	1	65 (ISO)	16	DIN 11864-3-A (BKS)	CIP 1 (Vessel connection)	S-E-AT 0350
N13	1	50 (ISO)	-	TC-Connect, ISO 2852	Spare port	-
N12	1	15 (ISO)	40	DIN 11864-3-A (BKS)	Ventilation	-
N11	1	B25	-	BioControl	Level switch	S-E-AT 0142
N09	1	40 (ISO)	16	DIN 32676	Filling level	-
N08	1	B25	-	BioControl	Pressure probe	S-E-AT 0143
N07	1	B25	-	BioControl	Pressure gauge	S-E-AT 0143
N05	1	32 (ISO)	-	TC-Connect, ISO 2852	Rupture disc	S-E-AT 0125
N04	1	50 (ISO)	25	DIN 11864-3-A (BKS)	Sight glass with light	S-E-AT 0348
N03	1	100	16	Aseptic block flange	Sight glass	S-E-AT 0106
N01						

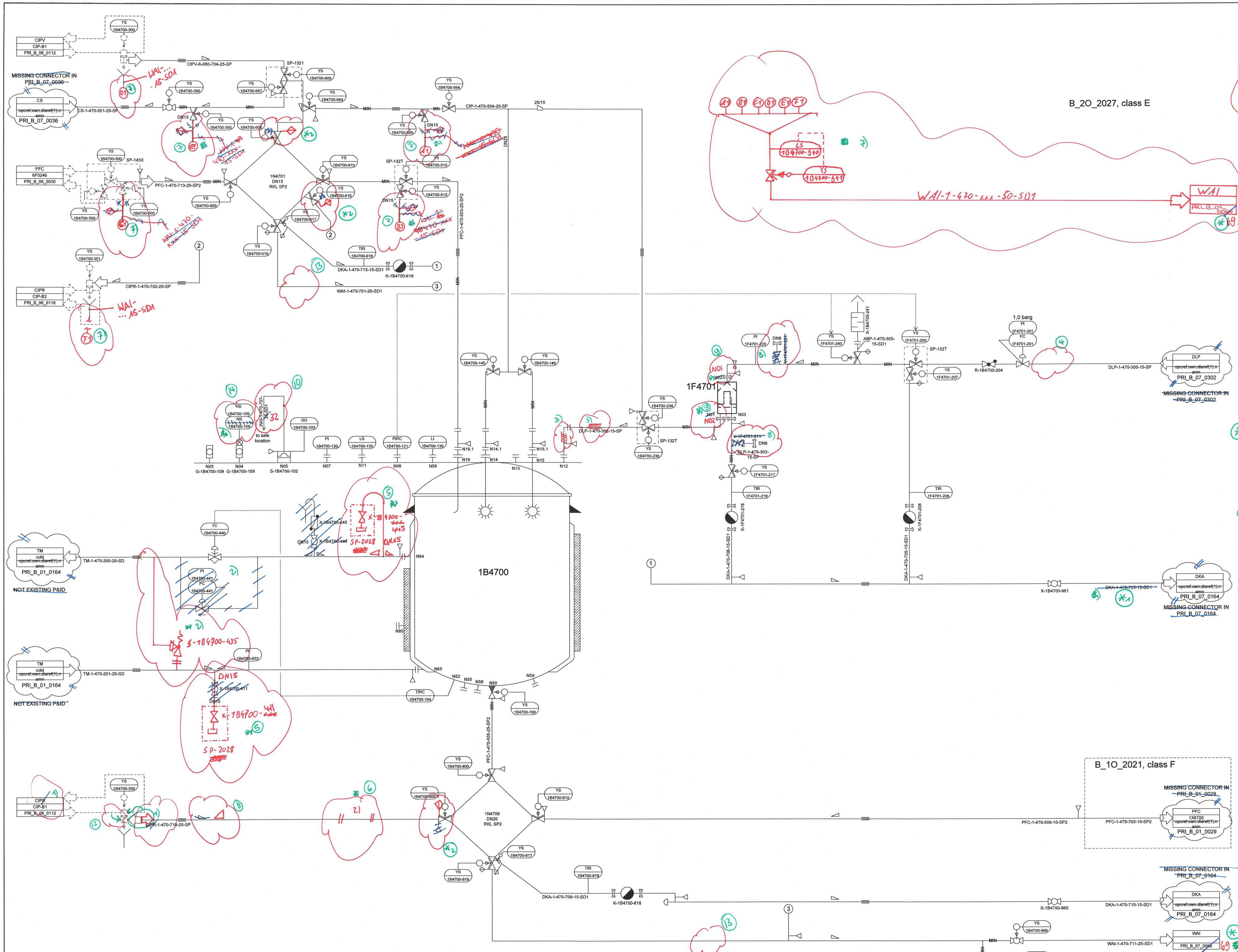
Kontrz Index	Anz. Quant.	DN	PN	Typ Type	Benennung Name	Bemerkung Remarks

Stutzentabelle / Nozzle table

a	Diverse Änderungen gemäss Kunde	31.08.2017 mg	Gezeichnet / Drawn
b	Diverse Änderungen gemäss Kunde	21.09.2017 mg	Geprüft / Checked
c			Freigegeben / Released
d			Ersatz für / Replaced
e			Ersatz durch / Substituted

20.07.2017 P.Glanzmann — Massstab / Scale: 1:5, 1:10, 1:2 / 1:1

Auftrags-Nr. / Order No.	A102663
Kunde / Client	CSL Lengnau AG, Lengnau
KASAG Swiss AG CH-3550 Langnau	Benennung / Name: Buffer Hold Vessel 500 ltr. 1B4140 / 1B4700
Zeichnungs-Nr. / Drawing No.	E 11078
Index	b
Format	A0



Notes:

1) Double block and bleed principle applied at the interfaces between CIP and product, media / buffer ,clean utilities. Only double block applied for lines which would lose their sterile status by bleeding.

2) ~~Number and location of funnels to be defined in next project phase based on 3D design.~~

Funnel typical bleed lines

2) spool piece to connect a mobile derouging skid

Master
07.06.17 NST

1) 12.06.17 NST
2) 11.07.17 THRU
(*) korrigiert 13/07/2017
3) 13.07.17 NST
4) 12.06.17 NST
5) 11.07.17 NST
6) 11.07.17 NST
7) 11.07.17 NST
8) 13.07.17 NST
9) 13.07.17 NST
10) 3.8.17 NST
11) 3.8.17 NST
12) 3.8.17 NST
13) 12.06.17 NST
14) 02.08.17 NST

TAG-No.				1B4700		1F4701	
Name				Buffer Hold Vessel 14		Vent Filter	
Design Temperature (°C)		I	O	-10-150	-10-150	150	
Design Pressure (barg)		I	O	-1/6	-1/10	-1/6	
Material of Construction				1.4539		1.4435	
Techn. Data	Volume (l) Vol.- Flow (m³/h)			500 l		8 (N)m³/h	
	Dimensions (mm)			D 800x H 1400			
	Special Features					0.2 µm, 1x5 in	
	Producer/Distrib./Year of Constr.						
Remarks							

Client
Project-No.: 16004
CSL Behring Recombinant Facility AG
Wankdorfstrasse 10
CH-3000 Bern 22, Switzerland

Architect
Project-No.:
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Telefon: +41 31 838-8080
Telefax: +41 31 838-8085

General contractor
Project-No.: 2304996
M+W Central Europe GmbH
Business Unit Life Sciences and Process Facilities
Lotterbergstrasse, 30
70499, Stuttgart, Germany
Telefon: +49 711 8804-1800
Telefax: +49 711 8804-1865

Design Partner
Project-No.: 2304996
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Telefon: +49 711 8804-1800
Telefax: +49 711 8804-1865

RELEASE NAME & DATE:
ARCHIVING FLAG (DRW CL 2 & 3):
DATE OF IMPRESSION:

CSL Behring AG
RCF Project Lengnau

INDEX	TITLE OF CHANGE	DATE	NAME
01	Update after AFD	02.06.17	EKU
00	First issue	21.11.16	JPO

Draftsman: JPO
Date: 21.11.16
Layout Bloc:
DRAWING-CODE / DRAWING-NO.: PRI_B_01_0081
DRW CL.: -
SCALE:
DESCRIPTION: rVIII-Buffer Hold Vessel 14
1B4700
LAYOUT NAME:

Data Sheet Vessel

1B4700 Buffer Hold Vessel 14
1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4

Version 02

Status: RFQ

This datasheet does also apply to: Total number: 2

1B4140

History:

Vers.	Date
02.0	12/19/2016
01.0	12/8/2016

Function	Company	Name	Date	Signature
Author	M+W		12/19/2016	
Review				
Approval				

CSL Behring	M+W
CSL Behring Recombinant Facility AG Wankdorfstrasse 10 CH-3000 Bern 22 Switzerland	M+W Central Europe GmbH Lotterbergstr. 30 D-70499 Stuttgart Germany
Project Number CSL Behring **16004**	Project Number M+W **2304996**
Document Number CSL Behring	Document Number M+W **D-P-DA-0162**
	Version **02.0**
Project **RCF Project Lengnau**	Document Type / Description **Data Sheet**
	Page **1**

Project-No.	2304996	**Data Sheet**	M+W GROUP
Code	NRCFF		
Tag-No.	1B4700	**Vessel**	

PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14
Drawing-No.		Room-No.	B_1O_2027	Type	Vessel

		v	General				v	Design Data		
02	0		**Inquiry No. / Date**	/		0		**Pressure Vessel Code**	AD2000; PED	
03	0		**Bid No. / Date**	/		0	v	**Inside Diameter**	800	mm
04	0		**Order No. / Date**	/		0	v	**Length w/o Support**	1400	mm
05	0		**Standard / Regulation**	compliant to technical specification		0	v	**Bottom Outlet Height**		mm
06	0		**Inspection**	compliant to technical specification		0		**Nominal volume**	500	l
07	0		**Manufacturer / Supplier**	/		0	v	**Total volume**	603	l
08	0		**Necessary Certificates**	compliant to technical specification			v	**Design Temperature**		
09	0		**Documentation**	compliant to docu requirements		2	v	Inside	-10-150	°C
10	0					2	v	Jacket (Heating / Cooling)	-10-150	°C
11	0						v	**Design Pressure²**		
12			**Operating Data**			0	v	Inside	-1 / 6	bar
13	0	v	**Medium**	Process Media		0	v	Jacket (Heating / Cooling)	-1 / 10	bar
14	0		Characteristics	wässrige Lsg.		0	v	**Type of bottom**	dished end DIN 28011	
15	0	v	Working Volume min./max.	59.2 500	l	0	v	**Type of top**	DIN 28011, removeable	
16	0	v	Operating Temp. Min./max.		°C			**Wall Thickness**		
17	0	v	Op. Pressure min./max.²		bar	0		Top / Bottom / Cylinder	/ /	mm
18	0		Filling Rate min./max.		m³/h	0		Heating-/ Cooling Jacket		mm
19	0		Draining Rate min./max.		m³/h	0		Inliner		mm
20	0	v	Density / Bulk Density at [T]	1200 20	kg/m³ °C	0		Insulation / Insulation Jacket		mm
21	0	v	Specific Heat Capacity		kJ/kg K	0		**Corrosion Allowance**	0	mm
22	0		Dynamic Viscosity at [T]	0.002 20	Pa s °C	0		**Welding Factor**		
23	0	v	pH-Value min./max.	1 - 14		0	v	**Vessel Orientation**	vertical	
24	0	v	Flash Point	N/A	°C	0		**Reinforcing Sheet(s)**		
25	0	v	Inertisation ²	N/A	mbar	0		**Test press. in-/outside²**		bar
26	0	v	**Cleaning in Place**	Yes		0		**Gaskets / Type**		
27	0		Medium	0.5M NaOH, 0.1M HNO3		0		**Heat Ex. Surface / Content**		m² / l
28	0		Temperature	<=80	°C			**Weight of Vessel**		
29	0	v	**Sterilisation in Place**	Yes		0		Empty / Disaster	/	kg
30	0		Medium	pyrogen free steam				**Construction Details**		
31	0		Temperature	<135	°C	0		**Heating / Cooling**	cylinder	
32	0	v	**Heating-/Cooling Medium**	Tempering Media		2		Type	coil or jacket*³	
33	0		Inlet Temperature	14	°C			**Support**		
34	0		Outlet Temperature	20	°C	0		Type / No. / Norm	brackets / 4 / acc. Typical	
35	0		Operating Pressure ²	~3	bar			**Fixing**		
36	0		Density at [T]	1000 25	kg/m³ °C	0		Type / No. / Norm	lifting lugs / /	
37	0		Specific Heat Capacity	4,182	kJ/kg K	0			name plate / 1 / acc. Typical	
38	0		Dyn. Viscosity at [T]	0,001 25	Pa s °C	0			Earthing Connectio / 1 /	
39	0		Thermal Output (max)	cf Spec	kW	0			/ /	
40	0		Thermal Input (max)	cf Spec	kW	0		**Accessories**	/ /	
41	0	v	Heating-/ Cooling Rate	N/A / cf Spec	°C/min	0		Type / No. / Norm	/ /	
42	0	v	Insulation	yes		0			/ /	
43			**Materials**			0			/ /	
44	0	v	**Product Contacted Parts**	1.4539		0	v	**Agitator seal**		
45	0		d-Ferrite Content	Fe <3%		0	v	Arrangement	none	
46	0		Gaskets	EPDM / MVQ-silicone		0	v	**Aseptic Design**	yes	
47	0		Sight Glasses	DIN 7080		0				
48	0		Inliner	N/A				**Surface Treatment**		
49	0		**Non Prod. Contacted**	ds/coil:1.4404/1.4435/1.4571				**Outer surface**		
50			**Parts / Insulation Jacket**	rest:1.4301 or equi.*5)		0		Surface finish	uniform grinding	
51	0		Gaskets	Gylon		0		Surface Roughness	RA <=1.2µm	
52	0		**Supports**	V4A		2		Welding Seam	polished eg. Scotch bride	
53	0		**Insulation**	mineral wool, AS quality			v	**Inner surface**		
54	0		**Screws, Nuts, Bolts**	A2-70; A4		2	v	Surface finish	grinded	
55			**Exterior coating**			0	v	Surface properties	RA <=0.6µm	
56	0		Primer			0		Welding Seam	grinded	
57	0		Final Coating			0				
58	0									

59		**Remarks**
60		1. Lines marked with "**v**" contain process information
61		2. Overpressure. Vacuum is marked with a negative sign.
62		
63	0	4. dynamic loads need to be considered acc to regulations
64	0	5. Cladding optionial in offer: 1.4301 and 1.4404/1.4435
65	0	6. operation data: see document "scope of order"

Version 24b

Project-No.	2304996	**Data Sheet**	M+W GROUP
Code	NRCFF		
Tag-No.	1B4700	**Vessel**	

PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14
Drawing-No.		Room-No.	B_1O_2027	Type	Vessel

Table of Nozzles

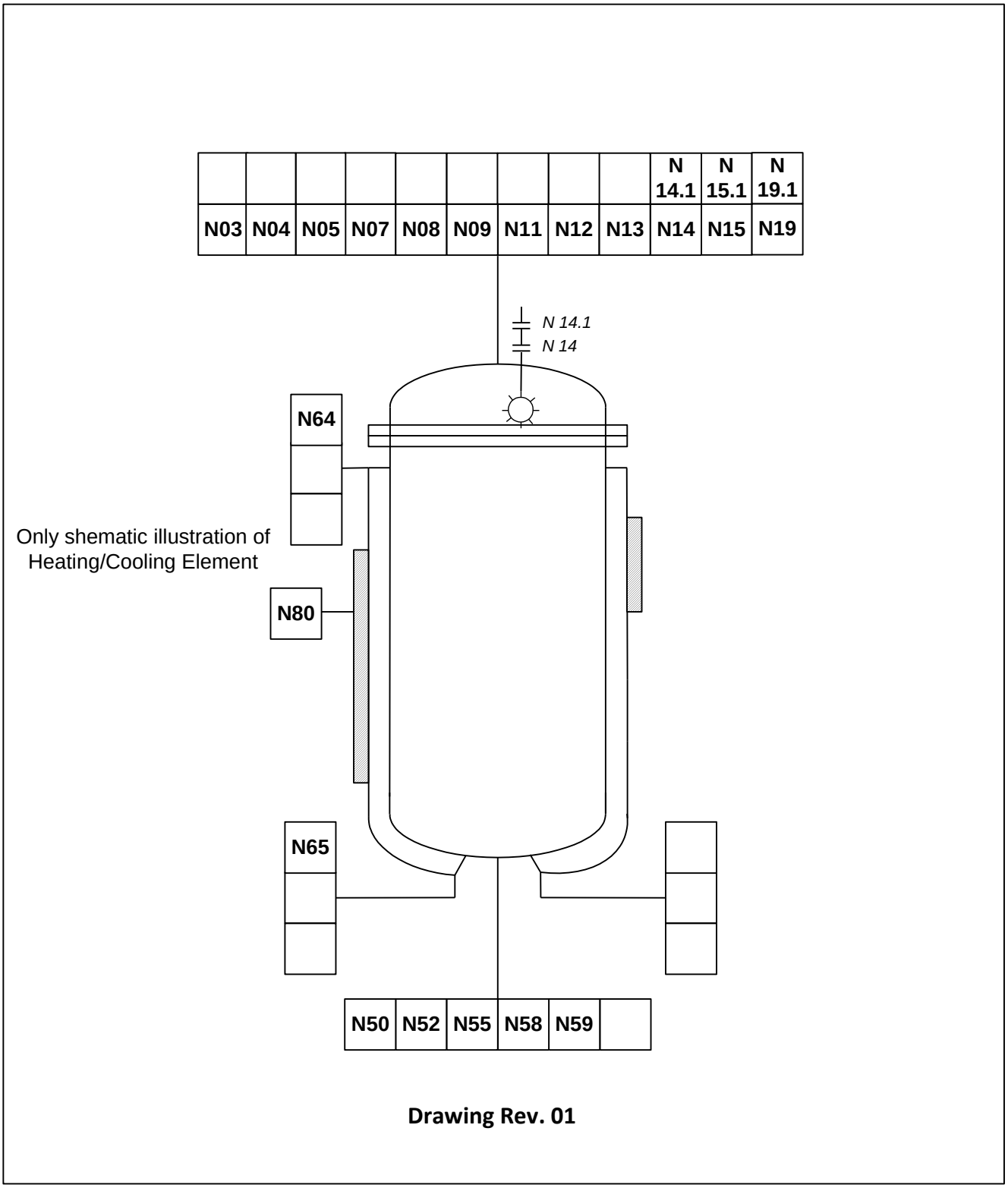
Rev		Ident.	No.	DN	PN	Norm	Flange-/Nozzletype	Sealing Face	Service
1		N03	1	80		similar DIN 28117	aseptic block flange, radial	O-ring	0106 - Sight glass
1		N04	1	50		similar DIN 28117	aseptic block flange, radial	O-ring	0317 - Sight glass with light
1		N05	1	2"		ASTM	Na-connect, radial	Flat, ISO 2852	0125 - Rupture disc
1		N07	1	B50			Neumo BioControl, radial	O-ring	0143 - Pressure gauge
1		N08	1	B50			Neumo BioControl, radial	O-ring	0143 - Pressure probe
1		N09	1	B50			Neumo BioControl, vertical	O-ring	0142 - filling level
1		N11	1	B50			Neumo BioControl, vertical	O-ring	0142 - Level switch
1		N12	1	15		weld in	Gemü B600	N/A	0337 - Ventilation
1		N13	1	2"		ASTM	Na-connect, radial	Flat, ISO 2852	spare port
1		N14	1	B50			Neumo Biocontrol, radial	O-ring	0303 - CIP 1 (vessel-connection)
1		N14.1	1	25	25	DIN 11864-2 BF	Dim. DIN 11866-B	O-ring; Form A	0303 - CIP inlet 1
1		N15	1	B50			Neumo Biocontrol, radial	O-ring	0303 - CIP 2 (vessel-connection)
1		N15.1	1	25	25	DIN 11864-2 BF	Dim. DIN 11866-B	O-ring; Form A	0303 - CIP inlet 2
1		N19	1	B25			Neumo Biocontrol, radial	O-ring	0316 - Inlet pipe (J-tube)
1		N19.1	1	15	25	DIN 11864-2 BF	Dim. DIN 11866-B	O-ring; Form A	0316 - inlet pipe
1		N50	1	25		Südmo block flang	Type Südmo SVP	O-ring	0318 - Bottom outlet
1		N52	1	N/A			Thermowell		0332 - Temperature measurement
1		N55	1	1 1/2"		ASTM	Na-connect; Nova Septum	Flat, ISO 2852	0304 - Sampling (5 port)
1		N58	1	G 1 1/4"		Ingold	25H7	O-ring	0330 - Spare (pH)
1		N59	1	B50			Neumo Biocontrol, radial	O-ring	0143 - Spare (conductivity)
1		N64	1	25	40	DIN EN 1092-1 11	welding neck flange	Form B1	Outlet Tempering Media
1		N65	1	25	40	DIN EN 1092-1 11	welding neck flange	Form B1	Inlet Tempering Media
1		N80	1	1/4"		supplier standard	socket with thread		0149 - testsocket insulation

Remarks Nozzles

Rev		
0		Nozzle typical number: S-E-AT-XXXX(number in Service column)
0		
0		
0		
0		
0		

Project-No.	2304996	**Data Sheet**			M+W GROUP
Code	NRCFF				
Tag-No.	1B4700	**Vessel**			
PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14
Drawing-No.		Room-No.	B_1O_2027	Type	Vessel

Sketch



Drawing Rev. 01

Project-No.	2304996	**Data Sheet**			M+W GROUP
Code	NRCFF				
Tag-No.	1B4700	**Vessel**			
PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14
Drawing-No.		Room-No.	B_1O_2027	Type	Vessel

Additional Information for Equivalent Equipment

Tag-No.	Description	Process	PFD-No./PID-No./ Drawing-No.	Building-No./ Level/Room-No.
1B4140	Buffer Hold Vessel 5 (C1/C2 HETP 1)	1 (rVIII-SC) / 1UB41 Buffer Hold Chroma 1	PVF_B_01_0062 PRI_B_01_0074	B 1O B_1O_2027

Data Sheet Vessel

1B4700 Buffer Hold Vessel 14 (C4 Equil.+ Flush + Elution) 1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4

Version 03

Status: As Built

This datasheet does also apply to: Total number: 2

1B4140

History:

Vers.	Date
03.0	10/23/2017
02.0	12/19/2016
01.0	12/8/2016

Function	Company	Name	Date	Signature
Author	M+W	[illegible]	10/23/2017	[signature]
Review	M+W	[illegible]	10/23/2017	
Approval				

CSL Behring	M+W
CSL Behring Biotherapies for Life™ CSL Behring Recombinant Facility AG Wankdorfstrasse 10 CH-3000 Bern 22 Switzerland	M+W GROUP M+W Central Europe GmbH Lotterbergstr. 30 D-70499 Stuttgart Germany
Project Number CSL Behring **16004**	Project Number M+W **2304996**
Document Number CSL Behring	Document Number M+W **D-P-DA-0162** — Version: **03.0**
Project **RCF Project Lengnau**	Document Type / Description **Data Sheet** — Page: **1**

Project-No.	2304996	**Data Sheet**	M+W GROUP
Code	NRCFF		
Tag-No.	1B4700	**Vessel**	

PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14 (C4 Equil.+ Flush + Elution)
Drawing-No.	E11078	Room-No.	B_1O_2027	Type	Vessel

		v	General				v	Design Data		
02	3		**Inquiry No. / Date**	N/A /		0		**Pressure Vessel Code**	AD2000; PED	
03	3		**Bid No. / Date**	0103705004 / 4/7/2017		0	v	**Inside Diameter**	800	mm
04	3		**Order No. / Date**	4500971482 / 4/27/2017		3	v	**Length w/o Support**	980	mm
05	3		**Standard / Regulation**	RS.00042 / RS.00043 / RS.00044		3	v	**Bottom Outlet Height**	N/A	mm
06	3		**Inspection**	RS.00042 / RS.00043 / RS.00044		0		**Nominal volume**	500	l
07	3		**Manufacturer / Supplier**	KASAG / KASAG		3	v	**Total volume**	655	l
08	3		**Necessary Certificates**	RS.00042 / RS.00043 / RS.00044			v	**Design Temperature**		
09	3		**Documentation**	RS.00042 / RS.00043 / RS.00044		2	v	Inside	-10-150	°C
10	0					2	v	Jacket (Heating / Cooling)	-10-150	°C
11	0						v	**Design Pressure²**		
12			**Operating Data**			0	v	Inside	-1 / 6	bar
13	0	v	**Medium**	Process Media		0	v	Jacket (Heating / Cooling)	-1 / 10	bar
14	3		Characteristics	aqueous solution		0	v	**Type of bottom**	dished end DIN 28011	
15	0	v	Working Volume min./max.	59.2 500	l	0	v	**Type of top**	DIN 28011, removeable	
16	3	v	Operating Temp. Min./max.	19 - 23	°C			**Wall Thickness**		
17	3	v	Op. Pressure min./max.²	0 - 2.1	bar	3		Top / Bottom / Cylinder	6 / 6 / 5	mm
18	3		Filling Rate min./max.	N/A	m³/h	3		Heating-/ Cooling Jacket	3	mm
19	3		Draining Rate min./max.	N/A	m³/h	3		Inliner	N/A	mm
20	0	v	Density / Bulk Density at [T]	1200 20	kg/m³ °C	3		Insulation / Insulation Jacket	3	mm
21	3	v	Specific Heat Capacity	~4.2	kJ/kg K	0		**Corrosion Allowance**	0	mm
22	0		Dynamic Viscosity at [T]	0.002 20	Pa s °C	3		**Welding Factor**	acc. PED	
23	0	v	pH-Value min./max.	1 - 14		0	v	**Vessel Orientation**	vertical	
24	0	v	Flash Point	N/A	°C	3		**Reinforcing Sheet(s)**	no	
25	0	v	Inertisation ²	N/A	mbar	3		**Test press. in-/outside²**	8.8 / 16.2	bar
26	0	v	**Cleaning in Place**	Yes		3		**Gaskets / Type**	acc. pipe class	
27	0		Medium	0.5M NaOH, 0.1M HNO3		3		**Heat Ex. Surface / Content**	N/A	m² / l
28	0		Temperature	<=80	°C			**Weight of Vessel**		
29	0	v	**Sterilisation in Place**	Yes		3		Empty / Disaster	515 / 1200	kg
30	0		Medium	pyrogen free steam				**Construction Details**		
31	0		Temperature	<135	°C	0		**Heating / Cooling**	cylinder	
32	0	v	**Heating-/Cooling Medium**	Tempering Media		3		Type	coil	
33	0		Inlet Temperature	14	°C			**Support**		
34	0		Outlet Temperature	20	°C	3		Type / No. / Norm	brackets / 4 /	
35	0		Operating Pressure ²	~3	bar			**Fixing**		
36	0		Density at [T]	1000 25	kg/m³ °C	3		Type / No. / Norm	lifting lugs / 3 /	
37	0		Specific Heat Capacity	4,182	kJ/kg K	3			name plate / 1 /	
38	0		Dyn. Viscosity at [T]	0,001 25	Pa s °C	0			Earthing Connectio / 1 /	
39	3		Thermal Output (max)	N/A	kW	0			/ /	
40	3		Thermal Input (max)	N/A	kW	0		**Accessories**	/ /	
41	3	v	Heating-/ Cooling Rate	N/A / N/A	°C/min	0		Type / No. / Norm	/ /	
42	0	v	Insulation	yes		0			/ /	
43			**Materials**			0			/ /	
44	0	v	**Product Contacted Parts**	1.4539		0	v	**Agitator seal**		
45	0		d-Ferrite Content	Fe <3%		0	v	Arrangement	none	
46	3		Gaskets	EPDM peroxid cured		0	v	**Aseptic Design**	yes	
47	0		Sight Glasses	DIN 7080		0				
48	0		Inliner	N/A				**Surface Treatment**		
49	3		**Non Prod. Contacted**	coil:1.4404 / 1.4435				**Outer surface**		
50			**Parts / Insulation Jacket**	rest:1.4301 / 1.4404		3		Surface finish	grinded	
51	3		Gaskets	N/A		0		Surface Roughness	RA <=1.2µm	
52	3		**Supports**	1.4301 / 1.4404		3		Welding Seam	grinded	
53	3		**Insulation**	Fabr. ISOVER, AGI Q 132			v	**Inner surface**		
54	3		**Screws, Nuts, Bolts**	A4-70; A4		2	v	Surface finish	grinded	
55			**Exterior coating**			0	v	Surface properties	RA <=0.6µm	
56	3		Primer	N/A		0		Welding Seam	grinded	
57	3		Final Coating	N/A		0				
58	0									
59			**Remarks**							
60			1. Lines marked with "**v**" contain process information							
61			2. Overpressure. Vacuum is marked with a negative sign.							
62										
63	3									
64	3									
65	3									Version 24b

Project-No.	2304996	**Data Sheet**	M+W GROUP
Code	NRCFF		
Tag-No.	1B4700	**Vessel**	

PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14 (C4 Equil.+ Flush + Elution)
Drawing-No.	E11078	Room-No.	B_1O_2027	Type	Vessel

Table of Nozzles

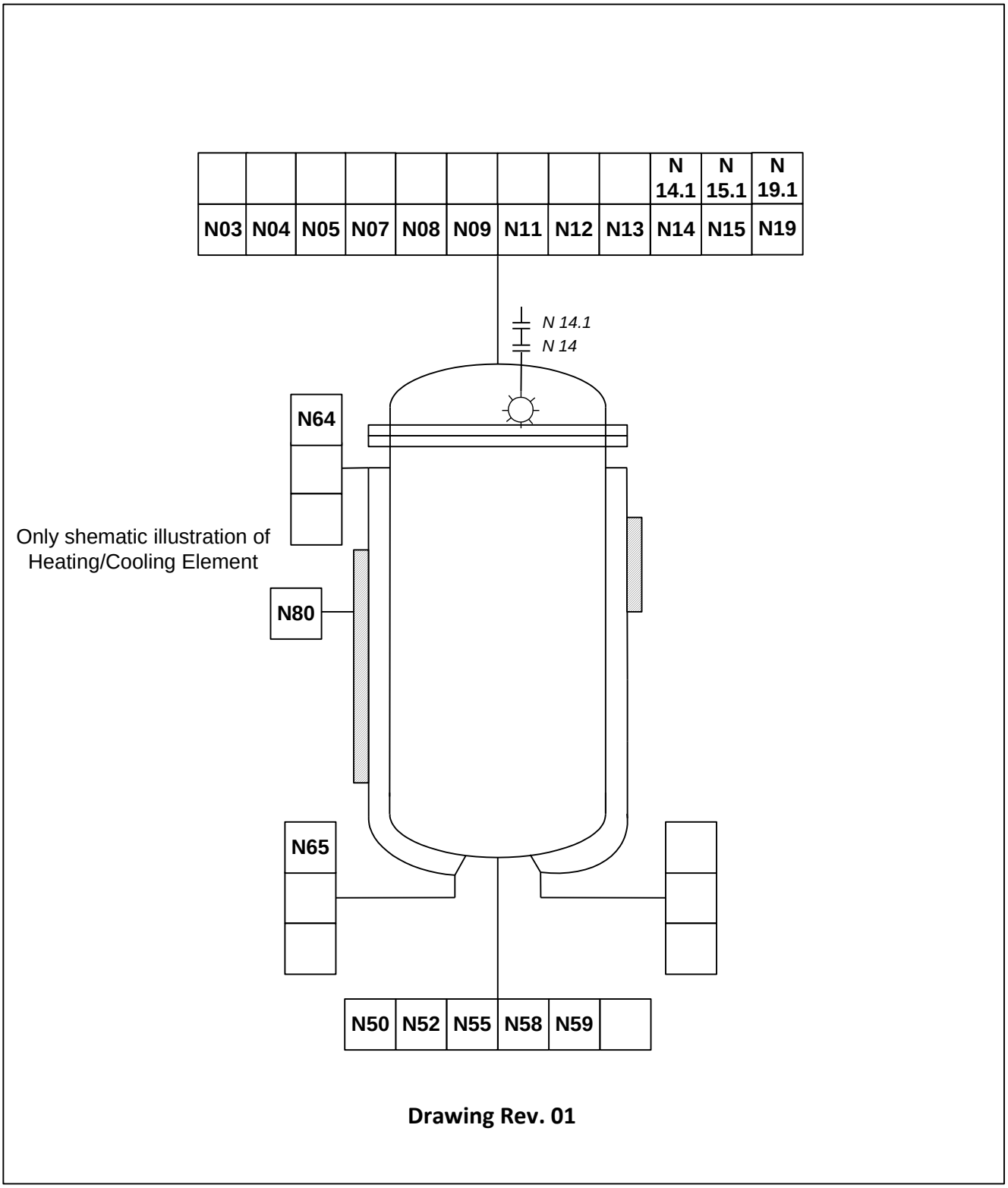
Rev		Ident.	No.	DN	PN	Norm	Flange-/Nozzletype	Sealing Face	Service
3		N03	1	100		similar DIN 28117	block flange, radial	O-ring	0106 - Sight glass
3		N04	1	50		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0348 - Sight glass with light
3		N05	1	32		Dim. DIN 11866-B	Na-connect	Flat	0125 - Rupture disc
3		N07	1	B25			Neumo BioControl	O-ring	0142 - Pressure gauge
3		N08	1	B25			Neumo BioControl	O-ring	0142 - Pressure probe
3		N09	1	40		DIN 32676	Dim. DIN 11866-B	Flat	Filling level
3		N11	1	B25			Neumo BioControl	O-ring	0142 - Level switch
3		N12	1	15		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0351 - Ventilation
3		N13	1	50		Dim. DIN 11866-B	Na-connect	Flat	spare port
3		N14	1	65		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0350 - CIP 1 (vessel-connection)
3		N14.1	1	25		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0350 - CIP inlet 1
3		N15	1	65		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0350 - CIP 2 (vessel-connection)
3		N15.1	1	25		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0350 - CIP inlet 2
3		N19	1	65		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0316 - Inlet pipe (vessel-connection)
3		N19.1	1	20		DIN 11864-3 BKS	Dim. DIN 11866-B	O-ring; Form A	0316 - Inlet pipe (J-tube)
1		N50	1	25		Südmo block flang	Type Südmo SVP	O-ring	0318 - Bottom outlet
3		N52	1	G 3/8"			Thermowell		0352 - Temperature measurement
3		N55	1	40		Dim. DIN 11866-B	Na-connect	Flat	0304 - Sampling (9 port)
1		N58	1	G 1 1/4"		Ingold	25H7	O-ring	0330 - Spare (pH)
3		N59	1	B50			Neumo Biocontrol	O-ring	0142 - Spare (conductivity)
3		N64	1	20	40	DIN EN 1092-1 11,	welding neck flange	Form B1	Outlet Tempering Media
3		N65	1	20	40	DIN EN 1092-1 11,	welding neck flange	Form B1	Inlet Tempering Media
1		N80	1	1/4"		supplier standard	socket with thread		0149 - Testsocket insulation

Remarks Nozzles

Rev		
0		Nozzle typical number: S-E-AT-XXXX(number in Service column)
0		
0		
0		
0		
0		

Project-No.	2304996	**Data Sheet**			M+W GROUP
Code	NRCFF				
Tag-No.	1B4700	**Vessel**			
PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14 (C4 Equil.+ Flush + Elution)
Drawing-No.	E11078	Room-No.	B_1O_2027	Type	Vessel

Sketch



Drawing Rev. 01

Project-No.	2304996	**Data Sheet**			M+W GROUP
Code	NRCFF				
Tag-No.	1B4700	**Vessel**			
PFD-No.	PVF_B_01_0068	Building-No.	B	Process	1 (rVIII-SC) / 1UB47 Buffer Hold Chroma 4
P&ID -No.	PRI_B_01_0081	Level	1O	Name	Buffer Hold Vessel 14 (C4 Equil.+ Flush + Elution)
Drawing-No.	E11078	Room-No.	B_1O_2027	Type	Vessel

Additional Information for Equivalent Equipment

Tag-No.	Description	Process	PFD-No./PID-No./ Drawing-No.	Building-No./ Level/Room-No.
1B4140	Buffer Hold Vessel 5 (C1/C2 HETP 1)	1 (rVIII-SC) / 1UB41 Buffer Hold Chroma 1	PVF_B_01_0062 PRI_B_01_0074 E11078	B 1O B_1O_2027