

Data Sheet Vessel

**1B4900 Buffer Hold Vessel 12 (C5 Flush + HETP 1)
1 (rVIII-SC) / 1UB49 Buffer Hold Chroma 5
Version 07**

Status: As Built


This datasheet does also apply to:

3B4630	3B4610	3B4210	3B4200
3B4130	2B4710	2B4150	

History:

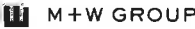
Vers. Date

07.0	21.11.2017
06.0	25.10.2017
05.0	19.12.2016
04.0	08.12.2016
03.0	07.07.2016

Function	Company	Name	Date	Signature
Author	M+W	<i>Alm</i>	21.11.2017	<i>A. Fink</i>
Review	<i>M+W</i>	<i>SMI</i>	<i>21.11.2017</i>	<i>[Signature]</i>
Approval	<i>CSL</i>	<i>Drei</i>	<i>14.12.17</i>	<i>[Signature]</i>
CSL Behring		M+W		
<p>CSL Behring Biotherapies for Life™</p> <p>CSL Behring Recombinant Facility AG Wankdorfstrasse 10 CH-3000 Bern 22 Switzerland</p>		<p> M+W GROUP</p> <p>M+W Central Europe GmbH Lotterbergstr. 30 D-70499 Stuttgart Germany</p>		
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Project RCF Project Lengnau		Document Type / Description Data Sheet	Page 1	

Project-No.		2304996		Data Sheet			M+W GROUP						
Code		NRCFF		Vessel									
Tag-No.		1B4900											
PFD-No.		PVF_B_01_0067		Building-No.		B		Process		1 (rVIII-SC) / 1UB49 Buffer Hold Chroma 5			
P&ID -No.		PRI_B_01_0079		Level		10		Name				Buffer Hold Vessel 12 (C5 Flush + HETP 1)	
Drawing-No.		116685		Room-No.		B_10_2027		Type				Vessel	
01	v	General						v	Design Data				
02	6	Inquiry No. / Date		N/A /		0		Pressure Vessel Code		AD2000; PED			
03	6	Bid No. / Date		401522 / 10.04.2017		4 v		Inside Diameter		1600 mm			
04	6	Order No. / Date		4500971529 / 27.04.2017		6 v		Length w/o Support		~2550 mm			
05	6	Standard / Regulation		RS.00035 / RS00046 / RS.00047		6 v		Bottom Outlet Height		N/A mm			
06	6	Inspection		RS.00035 / RS00046 / RS.00047		0		Nominal volume		4000 l			
07	6	Manufacturer / Supplier		SKRLJ d.o.o. / SKRLJ d.o.o.		6 v		Total volume		4700 l			
08	6	Necessary Certificates		RS.00035 / RS00046 / RS.00047		v		Design Temperature					
09	6	Documentation		RS.00035 / RS00046 / RS.00047		5 v		Inside		-10-150 °C			
10	0					5 v		Jacket (Heating / Cooling)		-10-150 °C			
11	0					v		Design Pressure ²					
12		Operating Data						2 v	Inside				
13	4 v	Medium		Process Media		0 v		Jacket (Heating / Cooling)		-1 / 6 bar			
14	4	Characteristics		aqueous solution		0 v		Type of bottom		dished end DIN 28011			
15	6 v	Working Volume min./max.		341,6 - 4000 l		0 v		Type of top		dished end DIN 28011			
16	6 v	Operating Temp. Min./max.		19 - 23 °C		6		Wall Thickness					
17	6 v	Op. Pressure min./max. ²		0 - 2,1 bar		6		Top / Bottom / Cylinder		15 / 8 / 12 mm			
18	6	Filling Rate min./max.		N/A m ³ /h		6		Heating-/ Cooling Jacket		3 mm			
19	6	Draining Rate min./max.		N/A m ³ /h		6		Inliner		N/A mm			
20	4 v	Density / Bulk Density at [T]		1200 20 kg/m ³ °C		6		Insulation / Insulation Jacket		3 mm			
21	6 v	Specific Heat Capacity		~4.2 kJ/kg K		0		Corrosion Allowance		0 mm			
22	4 v	Dynamic Viscosity at [T]		0.002 20 Pa s °C		6		Welding Factor		acc. PED			
23	6 v	pH-Value min./max.		1 - 14		0 v		Vessel Orientation		vertical			
24	4 v	Flash Point		N/A °C		6		Reinforcing Sheet(s)		no			
25	4 v	Inertisation ²		N/A mbar		6		Test press. in-/outside ²		8.91 / 14.77 bar			
26	0 v	Cleaning in Place		Yes		6		Gaskets / Type		acc. pipe class			
27	0	Medium		0.5M NaOH, 0.1M HNO3		6		Heat Ex. Surface / Content		N/A m ² / l			
28	0	Temperature		<=80 °C		6		Weight of Vessel					
29	0 v	Sterilisation in Place		Yes		6		Empty / Disaster		1961 / 6878 kg			
30	0	Medium		pyrogen free steam				Construction Details					
31	0	Temperature		<135 °C		2		Heating / Cooling		cylinder			
32	0 v	Heating-/Cooling Medium		Tempering Media		6		Type		coil			
33	0	Inlet Temperature		14 °C		6		Support					
34	0	Outlet Temperature		20 °C		3		Type / No. / Norm		tubular legs / 3 /			
35	0	Operating Pressure ²		~3 bar		6		Fixing					
36	0	Density at [T]		1000 25 kg/m ³ °C		6		Type / No. / Norm		lifting lugs / 2 /			
37	0	Specific Heat Capacity		4,182 kJ/kg K		6				name plate / 1 /			
38	0	Dyn. Viscosity at [T]		0.001 25 Pa s °C		0				earthing Connection/ 1 /			
39	6	Thermal Output (max)		N/A kW		0				/ /			
40	6	Thermal Input (max)		N/A kW		0		Accessories		/ /			
41	6 v	Heating-/ Cooling Rate		N/A / N/A °C/min		0		Type / No. / Norm		/ /			
42	0 v	Insulation		yes		0				/ /			
43		Materials						0	/ /				
44	4 v	Product Contacted Parts		1.4539		0 v		Agitator seal					
45	4	d-Ferrite Content		Fe <3%		0 v		Arrangement		none			
46	6	Gaskets		EPDM peroxid cured		0 v		Aseptic Design		yes			
47	0	Sight Glasses		DIN 7080		0							
48	0	Inliner		N/A				Surface Treatment					
49	6	Non Prod. Contacted Parts / Insulation Jacket		coil:1.4571 rest:1.4301		6		Outer surface					
50						6		Surface finish		scotch bride			
51	0	Gaskets		Gylon		2		Surface Roughness		RA <=1.2µm			
52	6	Supports		1.4301		5		Welding Seam		polished eg. Scotch bride			
53	6	Insulation		Fabr. ISOVER, AGI Q132		v		Inner surface					
54	6	Screws, Nuts, Bolts		A2-70; A2-70		5 v		Surface finish		grinded			
55		Exterior coating				2 v		Surface properties		RA <=0.6µm			
56	6	Primer		N/A		2		Welding Seam		grinded			
57	6	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	6												
64	6												
65	6												

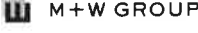
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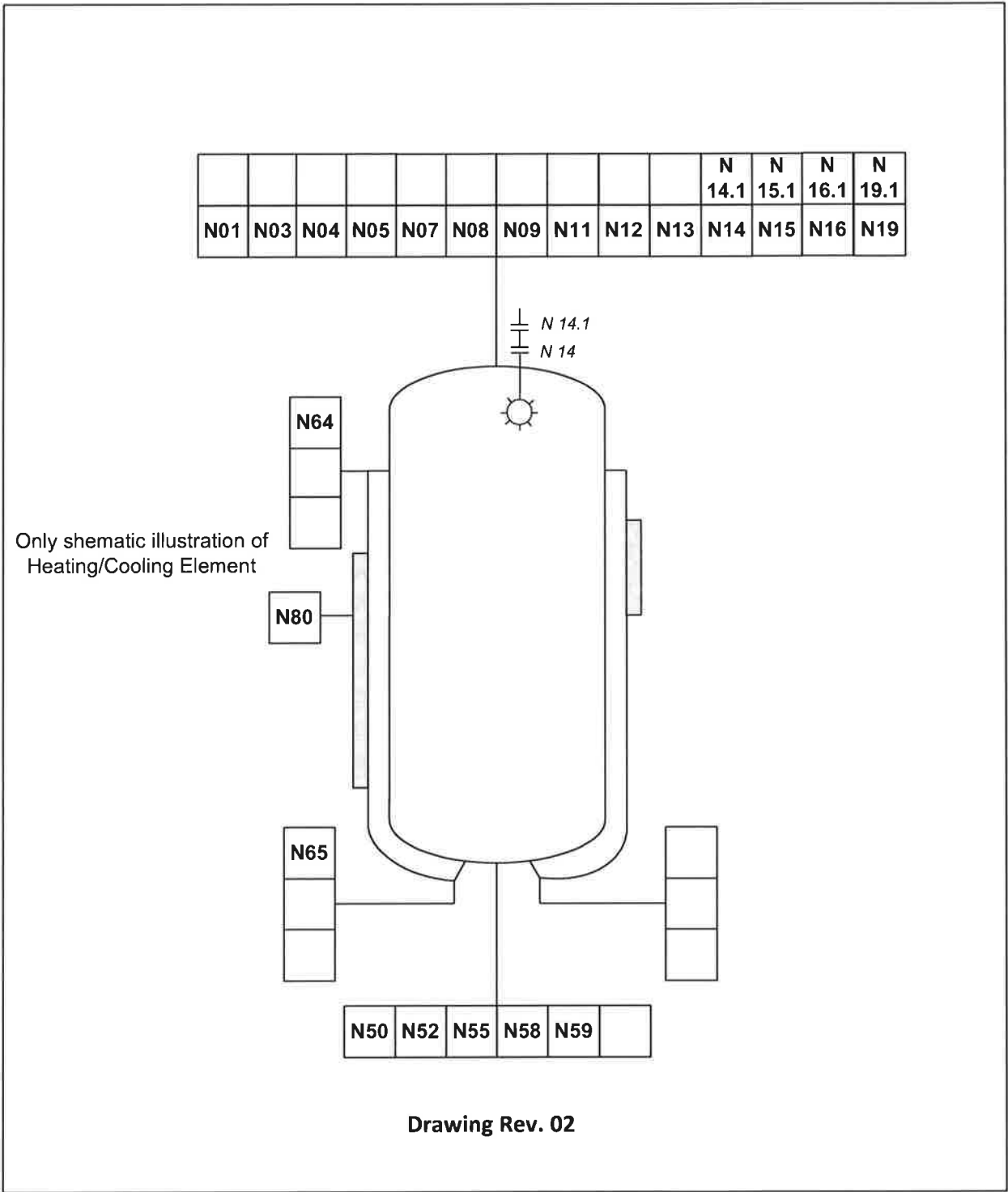
Project-No.	2304996	Data Sheet				
Code	NRCFF					
Tag-No.	1B4900					
Vessel						
PFD-No.	PVF_B_01_0067	Building-No.	B	Process	1 (rVIII-SC) / 1UB49 Buffer Hold Chroma 5	
P&ID -No.	PRI_B_01_0079	Level	10	Name	Buffer Hold Vessel 12 (C5 Flush + HETP 1)	
Drawing-No.	116685	Room-No.	B_10_2027	Type	Vessel	

Rev	Table of Nozzles							
	Ident.	No.	DN	PN	Norm	Flange-/Nozzletype	Sealing Face	Service
2	N01	1	600			Zimmerlin lid	O-ring	0315 - Manhole with safety switch / indicator
6	N03	1	150		similar DIN 28117	aseptic block flange, radial	O-ring	0106 - Sight glass
6	N04	1	50		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring, Form A	0348 - Sight glass with light
6	N05	1	32		Dim, DIN 11866-B	Na-connect	Flat	0125 - Rupture disc
6	N07	1	B25			Neumo BioControl	O-ring	0142 - Pressure gauge
6	N08	1	B25			Neumo BioControl	O-ring	0142 - Pressure probe
Z	N09	1	40		DIN 32676	Dim, DIN 11866-B	Flat	0304 - Filling level
6	N11	1	B25			Neumo BioControl	O-ring	0142 - Level switch
6	N12	1	25		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring, Form A	0351 - Ventilation
Z	N13	1	50		Dim, DIN 11866-B	Na-connect	Flat	0304 - Sampling (Spare port)
6	N14	1	65		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP 1 (vessel-connection)
6	N14.1	1	32		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP inlet 1
6	N15	1	65		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP 2 (vessel-connection)
6	N15.1	1	32		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP inlet 2
6	N16	1	65		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP 3 (vessel-connection)
6	N16.1	1	32		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0350 - CIP inlet 3
6	N19	1	65		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0316 - Inlet pipe (J-tube)
6	N19.1	1	20		DIN 11864-3 BKS	Dim, DIN 11866-B	O-ring; Form A	0316 - inlet pipe
6	N50	1	40		Südmo block flang	Type Südmo SVP	O-ring	0318 - Bottom outlet
6	N52	1	3/8"			Thermowell		0352 - Temperature measurement
6	N55	1	40		Dim, DIN 11866-B	Na-connect; Nova Septum	Flat	0304 - Sampling (5 port)
4	N58	1	G 1 1/4"		Ingold	25H7	O-ring	0330 - Spare (pH)
6	N59	1	B50			Neumo Biocontrol	O-ring	0143 - Spare (conductivity)
2	N64	1	32	40	DIN EN 1092-1 11	welding neck flange	Form B1	Outlet Tempering Media
2	N65	1	32	40	DIN EN 1092-1 11	welding neck flange	Form B1	Inlet Tempering Media
2	N80	1	1/4"		supplier standard	socket with thread		0149 - testsocket insulation


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

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Project-No.	2304996	Data Sheet			
Code	NRCFF				
Tag-No.	1B4900				
Vessel		Building-No.	B	Process	1 (rVIII-SC) / 1UB49 Buffer Hold Chroma 5
PFD-No.	PVF_B_01_0067	Level	10	Name	Buffer Hold Vessel 12 (C5 Flush + HETP 1)
P&ID -No.	PRI_B_01_0079	Room-No.	B_10_2027	Type	Vessel
Drawing-No.	116685				
Sketch					



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Project-No.	2304996	Data Sheet			 M+W GROUP
Code	NRCFF				
Tag-No.	1B4900				
Vessel					
PFD-No.	PVF_B_01_0067	Building-No.	B	Process	1 (rVIII-SC) / 1UB49 Buffer Hold Chroma 5
P&ID -No.	PRI_B_01_0079	Level	10	Name	Buffer Hold Vessel 12 (C5 Flush + HETP 1)
Drawing-No.	116685	Room-No.	B_10_2027	Type	Vessel
Additional Information for Equivalent Equipment					

Tag-No.	Description	Process	PFD-No./PID-No./ Drawing-No.	Building-No./ Level/Room-No.
2B4150	Buffer Hold Vessel 6 (C1/C2 Regeneration)	2 (rIX-FP) / 2UB41 Buffer Hold Chroma 1	PVF_B_02_0058 PRI_B_02_0075 115162	B 10 B_10_2020
2B4710	Buffer Hold Vessel 20 (C4 Equil. + Post Load Wash)	2 (rIX-FP) / 2UB47 Buffer Hold Chroma 4	PVF_B_02_0066 PRI_B_02_0088 116684	B 10 B_10_2020
3B4130	Buffer Hold Vessel 4 (C1 Elution + DF Equil.)	3 (rVIIa-FP) / 3UB41 Buffer Hold Chroma 1	PVF_B_03_0058 PRI_B_03_0073	B 10 B_10_1033
3B4200	Buffer Hold Vessel 7 (UF/DF Buffer 1)	3 (rVIIa-FP) / 3UB42 Buffer Hold UF/DF 1	PVF_B_03_0060 PRI_B_03_0076	B 10 B_10_1033
3B4210	Buffer Hold Vessel 8 (DF/Micro/Nanofiltration Buf)	3 (rVIIa-FP) / 3UB42 Buffer Hold UF/DF 1	PVF_B_03_0060 PRI_B_03_0077	B 10 B_10_1033
3B4610	Buffer Hold Vessel 17 (C3 Eq. + Post Load Wash)	3 (rVIIa-FP) / 3UB46 Buffer Hold Chroma 3	PVF_B_03_0064 PRI_B_03_0086	B 10 B_10_1033
3B4630	Buffer Hold Vessel 19 (C3 Elution)	3 (rVIIa-FP) / 3UB46 Buffer Hold Chroma 3	PVF_B_03_0065 PRI_B_03_0088	B 10 B_10_1033

