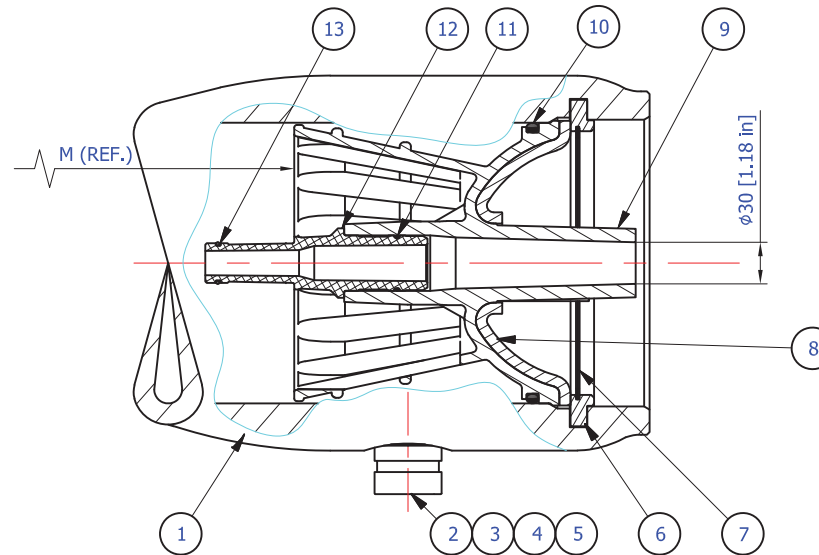


Shell length code	L (l.o.a.) <u>mm.</u> inch	P, port to port <u>mm.</u> inch	S # (span) <u>mm.</u> inch	M, mm/in length for membranes elements	W weight <u>kg.</u> lb.	Article number
1	1542	1194	500	1032	39.8	81450-1
	60.7	47	20	40.6	87.7	
2	2558	2210	1500	2048	50.9	81450-2
	100.7	87	59	80.6	112.3	
3	3574	3226	2500	3064	62	81450-3
	140.7	127	98	120.6	136.8	
4	4590	4242	3250	4080	73.2	81450-4
	180.7	167	128	160.6	161.3	
5	5606	5258	4250	5096	84.3	81450-5
	220.7	207	167	200.6	185.9	
6	6622	6274	5250	6112	95.4	81450-6
	260.7	247	207	240.6	210.4	
7	7638	7290	6250	7128	106.5	81450-7
	300.7	287	246	280.6	234.9	
8	8654	8306	7250	8144	117.7	81450-8
	340.7	327	285	320.6	259.5	



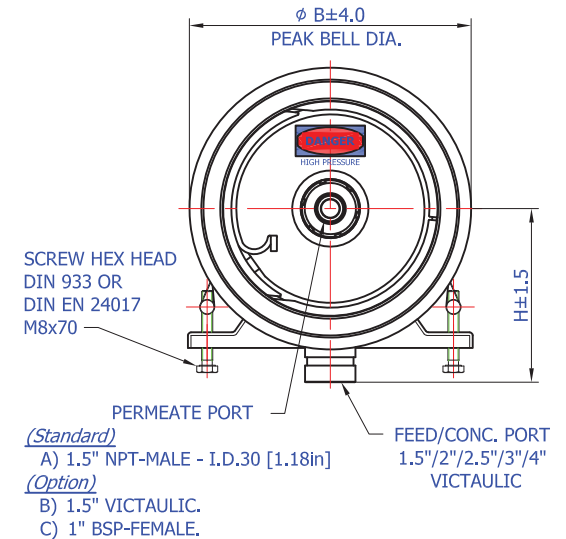
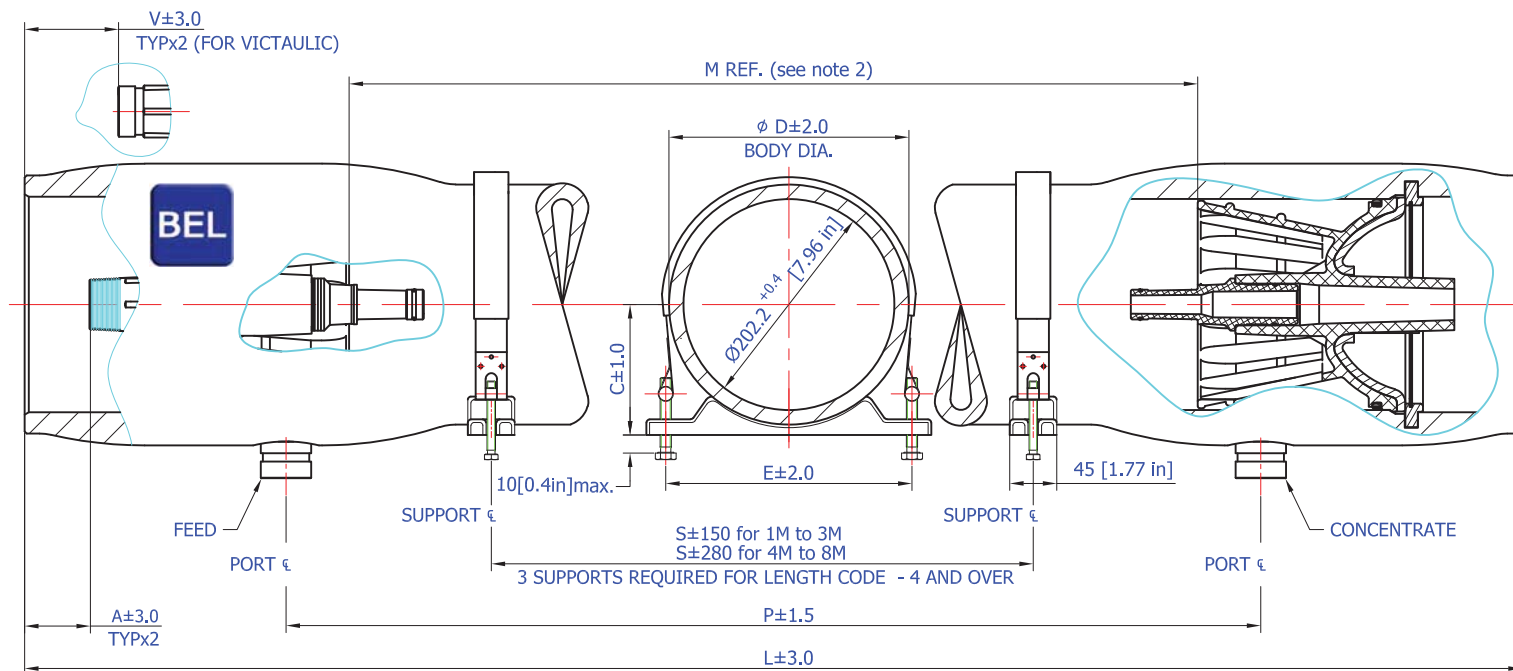
1. Never pressurize a pressure vessel that was not loaded with membrane elements.
2. Wrong manifolding may cause an excessive load on port what can lead to leaks.
3. Max. allowable working pressure not to exceed 450 psi. (31 bar).
4. Permeate internal pressure not to exceed 125 psi. (8.6 bar).
5. Operating temperature not to exceed 65°C (150°F).



1. **All dimensions are for reference only, not for construction unless certified.**
2. Item 14 & 15 should be located on feed side.
3. Drawing unit: mm. (inches)
4. Saddles can be shimmed if required.
5. Do not scale drawing, may be reprinted on any paper size or copied.
6. **Length between ports (P) can be changed to adapt old dimension - with customer's special request.**
7. **The vessel is supplied with two strap assembly.**
8. Storage & installation: Indoor.
9. **For tolerances & sizes, please check the drawing in page 2.**
10. **Vessel's Port diameters, according to ANSI Standards.**

Item	Q-ty	Part Number	Description	Material
1	1	81450-0	Body of Pressure Vessel	Glass/Epoxy
2	2	040-156-0458	F/C port 1.5"	Stainless steel
3	2	006-156-0452	Disk for sideport	Stainless steel
4	2	014-150-0506	Seal for sideport	EPDM
5	4	011-150-1202	Retaining ring for SP	Stainless steel
6	2	55410299	Support ring	Aluminum
7	2	011-801-1202	Retaining ring (finger hook)	Stainless steel
8	2	285453003	Metal cap 3mm	Stainless steel
9	2	285779010/v/g	End cap	Engineering plastic
10	2	007-080-0092	Seal for End cap	EPDM
11	2	285773918	Seal for Adapter	EPDM
12	2	As required	Adapter	Engineering plastic
13	2-4	As required	Membrane seal	EPDM
14	0-3	285779231	Disk spacer - 1mm	Engineering plastic
15	0-7	285779233	Disk spacer - 3mm	Engineering plastic
16	2	55410310	Strap Assy.	Stainless steel
17	2-3	55410351	Saddle	Engineering plastic
18				

	TITLE: BEL8-S-450 psi. RO PRESSURE VESSEL	DESIGN	DMG	04/05/2020
		CHECK	JME	04/05/2020
DRAWING NO.: BEL8-S(1.5")-450		APPR.	MAF	04/05/2020
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Notes:

1. All dimensions are for reference only, not for construction unless certified.
2. For membranes shimming (if needed) use disks spacers on feed side of the vessels.
3. Drawing unit: mm. (inches)
4. Saddles can be shimmed if required.
5. Do not scale drawing, may be reprinted on any paper size or copied.
6. The vessel is supplied with two strap assembly.
7. For 1500 psi vessels see the General Drawing for BEL8-S-1500-PV / R14.
8. Storage & installation: Indoor.
9. Vessel's Port diameters, according to ANSI Standards.

This drawing is an integral part of the general statement of use and Technical Manual

* Ports with special height (H) in vessel and Length between ports (P), can be changed to adapt old dimension - with customer's special request.

** NC (Non Code)

Working pressure, psi (bar)	A, mm / in. from permeate to edge	V, mm / in. from permeate to edge	C, mm / in. from support to center line	D, mm / in. vessel's outer diameter	E, mm / in. distance between fasten bolts
300 NC** (20.7)	2	29	117	214	229
300 Code (20.7)	0.08	1.14	4.61	8.43	9.02
450 (31)	9	36	117	214	229
450 (31)	0.35	1.42	4.61	8.43	9.02
600 (41.4)	9	36	118	216	229
600 (41.4)	0.35	1.42	4.65	8.50	9.02
1000 (69)	21	48	120	220	229
1000 (69)	0.83	1.89	4.72	8.66	9.02
1200 (82.7)	45	72	122.5	225	236
1200 (82.7)	1.77	2.83	4.82	8.86	9.29
1500 (103.4)	65	92	124.5	229	236
1500 (103.4)	2.56	3.62	4.90	9.02	9.29

Membranes quantity	Length between ports, supports & internal space for membranes elements, mm./inch							
P, port to port	1	2	3	4	5	6	7	8
47	1194	2210	3226	4242	5258	6274	7290	8306
19.7	500	1500	2500	3250	4250	5250	6250	7250
19.7	59.1	150.0	250.0	325.0	425.0	525.0	625.0	725.0
19.7	59.1	150.0	250.0	325.0	425.0	525.0	625.0	725.0
19.7	59.1	150.0	250.0	325.0	425.0	525.0	625.0	725.0
19.7	59.1	150.0	250.0	325.0	425.0	525.0	625.0	725.0
19.7	59.1	150.0	250.0	325.0	425.0	525.0	625.0	725.0

Membranes quantity	L (Length of pressure vessels), mm./inch							
Working pressure, psi (bar)	1	2	3	4	5	6	7	8
300 NC** (20.7)	1526	2542	3558	4574	5590	6606	7622	8638
300 code (20.7)	60.08	100.08	140.08	180.08	220.08	260.08	300.08	340.08
450 (31)	1542	2558	3574	4590	5606	6622	7638	8654
450 (31)	60.71	100.71	140.71	180.71	220.71	260.71	300.71	340.71
600 (41.4)	1566	2582	3598	4614	5630	6646	7662	8678
600 (41.4)	61.65	101.65	141.65	181.65	221.65	261.65	301.65	341.65
1000 (69)	1612	2628	3644	4660	5676	6692	7708	8724
1000 (69)	63.46	103.46	143.46	183.46	223.46	263.46	303.46	343.46
1200 (82.7)	1652	2668	3684	4700	5716	6732	7748	8764
1200 (82.7)	65.04	105.04	145.04	185.04	225.04	265.04	305.04	345.04

B (Peak bell diameter), mm./inch						
Side port dia.	1.5"	2"	2.5"	3"	4"	
300 (20.7)	249	257	265	282	288	
300 (20.7)	9.80	10.12	10.43	11.10	11.34	
450 (31)	249	257	266	282	288	
450 (31)	9.80	10.12	10.47	11.10	11.34	
600 (41.4)	254	268	278	290	298	
600 (41.4)	10.00	10.55	10.94	11.42	11.73	
1000 (69)	276	286	291	301	312	
1000 (69)	10.87	11.26	11.46	11.85	12.28	
1200 (82.7)	278	288	292	303	314	
1200 (82.7)	10.94	11.34	11.50	11.93	12.36	

H (Height of side port), mm./inch						
Side port dia.	1.5"	2"	2.5"	3"	4"	
300 (20.7)	166	166	166	166	175	
300 (20.7)	6.54	6.54	6.54	6.54	6.89	
450 (31)	166	166	166	166	175	
450 (31)	6.54	6.54	6.54	6.54	6.89	
600 (41.4)	171	171	171	171	180	
600 (41.4)	6.73	6.73	6.73	6.73	7.09	
1000 (69)	175	175	175	175	183	
1000 (69)	6.89	6.89	6.89	6.89	7.20	
1200 (82.7)	175	175	175	175	183	
1200 (82.7)	6.89	6.89	6.89	6.89	7.20	

Warning.

1. Never pressurize a pressure vessel that was not loaded with membrane elements.
2. Wrong manifolding may effect an excessive load on port what can lead to leaks.
3. Max. allowable pressure not to exceed the indicated working pressure.
4. Permeate internal pressure not to exceed 125 psi. (8.6 bar).
5. Operating temperature not to exceed 65°C (150°F).

	TITLE:		DESIGN	DMG	04/05/2020
	BEL 8" Side Port RO PRESSURE VESSEL		CHECK	JME	04/05/2020
	DRAWING NO: BEL8-S-PV			APPR.	MAF
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ORDER / R.F.Q. FORM - 8" SIDE PORT PRESSURE VESSELS

Please fill and send it to your contact at BEL

P.O. / R.F.Q. Number:

Customer name:

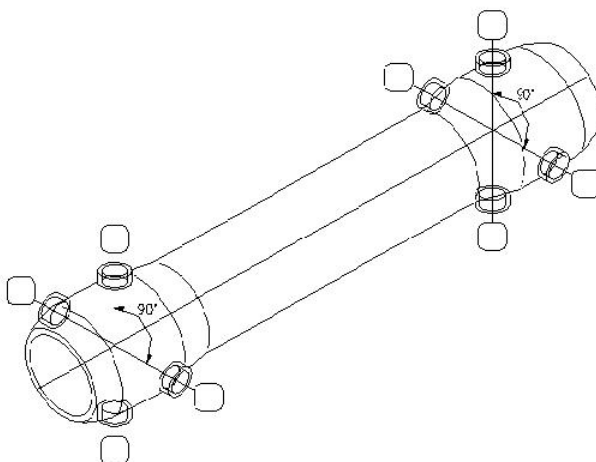
1. NEW SYSTEM / EXISTING SYSTEM or Replacement , please provide details:

2. F/C PORTS CONFIGURATION: Please indicate side port requirement on each side of the vessel
(Mark the letter indicating port diameter in the box at each required port location)

A – 1.5" B – 2" C – 2.5" D – 3" E – 4"

Vessel's Port diameters, according to ANSI Standards.

(Ports with a diameter of 2.5" & 3" & 4" cannot be mounted in 90° from with any other port)



3. NUMBER OF VESSELS: Units

(Please use separate forms for each type in case of multi-type orders)

4. WORKING PRESSURE RATE (PSI): 300 450 600 1,000 1,200

5. NUMBER OF MEMBRANE ELEMENTS IN EACH VESSEL: (1,,,,,,8)

6. MEMBRANE BRAND AND TYPE:

7. CONFIRM TYPE: BEL8-S - (x) - - M

of ports dia. of port pressure # of membranes - (Example: BEL8 - S(4 x 2.5") – 1,000 - 7M)

8. PERMEATE PORTS OUTLET: 1.5" NPT male 1.5" Victaulic grooved 1" BSP female

9. ASME code SEC. X, RP stamped vessel: NO YES (please contact for pricing)

10. ADAPTERS OPTIONS: Two Standard adapters Standard & Solid (blind) adapter

11. COLOR: Standard (white, RAL 9010) Other RAL number: (contact for pricing)

Customer signature:

Date:

FOR DETAILS PLEASE VISIT OUR WEBSITE: www.belvessels.com

May, 2020