

Protec Pressure Vessels PRO-8-450-SP

PRO-8-450-SP



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The PROTEC Model PRO-8-450-SP is designed for continuous use as housing for membrane filtration elements to purify typical brackish waters at any positive pressure up to 450 PSI.

What separates this SP model from the traditional side port is the addition of the 3 " port designed specifically for systems using multiple port technology.

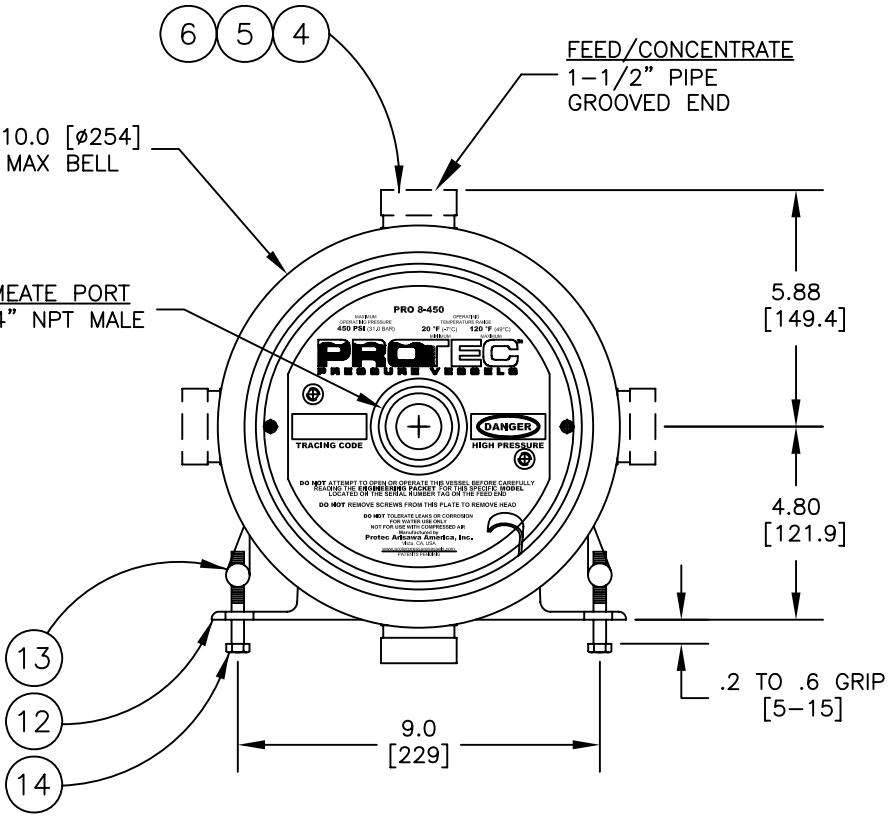
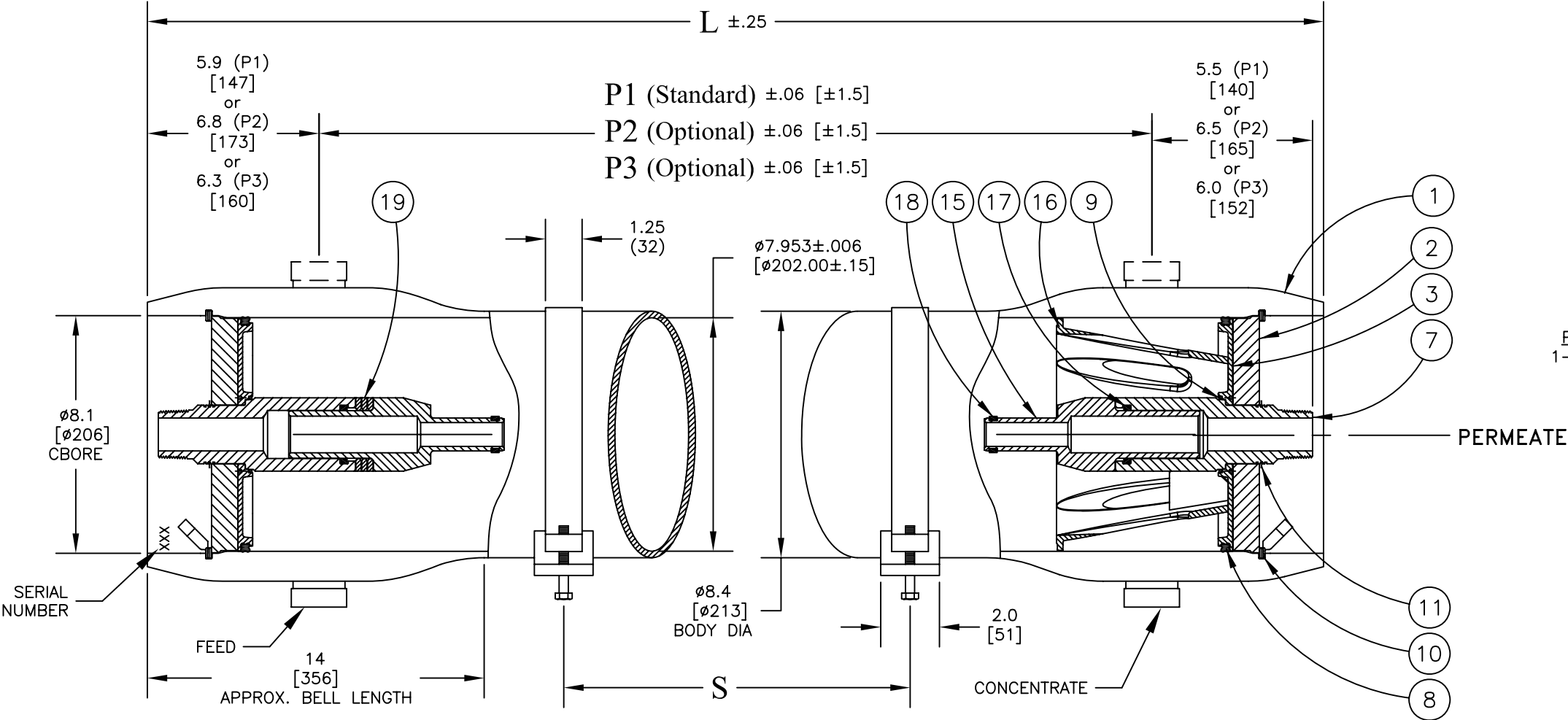
The PRO-8-450-SP will accommodate any make of eight-inch nominal diameter spiral-wound element as well as many hollow fiber elements. The element interface hardware for the specified element is supplied with the vessel.

The Model PRO-8-450-SP has been designed to meet the standards of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section X. At an additional cost, vessels can be inspected during fabrication by an ASME Authorized Inspector and Code stamped.

Design Pressure	450 PSI	Operating pH Range	3-11
Minimum Operating Temp.	20°F	Cleaning pH Range (less than 30 min)	2-12
Maximum Operating Temp.	120°F		
Factory Test Pressure	495 PSI	Application	Typ. Brackish Water
Burst Pressure	2700 PSI		

Design Pressure = 450 PSI @ 120 °F
Min. Design Temperature = 20 °F @ 450 PSI
Hydrotest Pressure = 495 PSI

450 PSI
SIDE PORT



NOTE: STANDARD PARTS ARE SHOWN FOR REFERENCE ONLY
CHECK ORIGINAL ORDER FOR ORDERING SPARE PARTS

Shell Length Code	L inch (mm)	P1 Standard inch (mm)	P2 Optional inch (mm)	P3 Optional inch (mm)	S Span in (mm)	Empty Weight lb (kg)
-1	58.7 (1490.98)	47 (1193.80)	45 (1143.00)	46 [1168.40]	1 @ 28 (711.20)	76 (35)
-1.5	78.7 (1998.98)	67 (1701.80)	65 (1651.00)	66 [1676.40]	1 @ 42 (1066.80)	88 (40)
-2	98.7 (2506.98)	87 (2209.80)	85 (2159.00)	86 [2184.40]	1 @ 56 (1422.40)	99 (45)
-3	138.7 (3522.98)	127 (3225.80)	125 (3175.00)	126 [3200.40]	1 @ 80 (2032.00)	122 (55)
-4	178.7 (4538.98)	167 (4241.80)	165 (4191.00)	166 [4216.40]	2 @ 64 [1625.60]	145 (66)
-5	218.7 (5554.98)	207 (5257.80)	205 (5207.00)	206 [5232.40]	2 @ 78 [1981.20]	168 (76)
-6	258.7 (6570.98)	247 (6273.80)	245 (6223.00)	246 [6248.40]	2 @ 92 [2336.80]	191 (87)
-7	298.7 (7586.98)	287 (7289.80)	285 (7239.00)	286 [7264.40]	2 @ 106 [2692.40]	214 (97)
-7.5	318.7 (8094.98)	307 (7797.80)	305 (7747.00)	306 [7772.40]	2 @ 114 [2895.60]	226 (103)
-8	338.7 (8602.98)	327 (8305.80)	325 (8255.00)	326 [8280.40]	2 @ 120 [3048.00]	237 (108)

ITEM	QTY	P/N	DESCRIPTION	MATERIAL
1	1	4080020	Shell	Filament Wound, Epoxy FRP
2	2	4080030	Bearing Plate	6061-T6 Aluminum, SB-221, Anodized
3	2	4080177-3	Sealing Plate	Noryl GFN2
4	2	4080250	Feed/Concentrate Port, 1-1/2", "D"	Stainless Steel, 316, SA-312
5	4	6121187	Retaining Ring, F/C Port, 1-1/2", "D"	Stainless Steel, 316, SA-479
6	2	6184604-N	O-Ring Seal, F/C Port, 1-1/2", "D"	Ethylene Propylene
7	2	4080309	Permeate Port	Noryl GFN2
8	2	6100442MK	Head Seal	Ethylene Propylene
9	2	6110229-N	Permeate Port Seal	Ethylene Propylene
10	2	4080320	Retaining Ring w/ Finger Pull	Stainless Steel, 316, SA-479
11	2	6121200	Retaining Ring, Permeate Port	Stainless Steel, 316
12	2*	4080174	Support Saddle	Thermoplastic Rubber
13	2	4080137	Strap Assembly	Stainless Steel, 316L
14	4	6150001	Strap Screw	Stainless Steel, 18-8
15	2	A/R	Adapter	Thermoplastic
16	1	4080165-1	Thrust Cone	PVC Thermoplastic
17	2	6110326-N	Adapter Seal	Ethylene Propylene
18	A/R	A/R	PWT Seal	Ethylene Propylene
19	3	4080062-4	Shim, Adapter	Noryl GFN2

*3 each with shell lengths -4 and longer.

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NOTES:

DIMENSIONS IN INCHES (MM APPROX.)

FOR REFERENCE ONLY, NOT FOR CONSTRUCTION UNLESS CERTIFIED

SHIMMING OF THE SADDLES MAY BE REQUIRED

CENTER VESSEL ON 2 OR 3 SUPPORTS AT SPAN(S) "S".

INCORRECT MANIFOLDING WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE. TAKE EVERY PRECAUTION LISTED IN THE ENGINEERING PACKET OR USERS MANUAL.

INTERNAL PERMEATE PRESSURE MUST NOT EXCEED 125 PSI.

ASME SECTION X, 2010
RP CODE STAMP OPTIONAL

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



PRO 8-450-SP

APPROVED AP 12/1/00	ECO	REVISED 4/28/11	DRAWING 101003	REV U
CHECKED AP 12/1/00				
DRAWN AP 12/1/00				