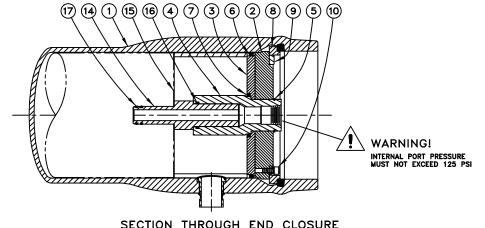


Dwg.			Description	Materials/Remarks		
Ket.	Per	Number	Description SHELL	•		
1	1	Shell		Filament wound epoxy/glass composite— Head locking grooves integrally wound in-place, with Superduplex steel (CD3MWCuN) ports.		
HEAD						
2	2	50665	Bearing Plate	6061-T6 aluminum alloy-hard anodized		
2 3 4 5 6 7	2	50667	Sealing Plate	PVC Thermoplastic		
④	2	50669	Permeate Port	PVC Thermoplastic		
(5)	2	45248	Port Retainer	316 Stainless Steel		
6	2	45320	Head Seal	Ethylene Propylene, Quad Ring		
Ø	2	45350	Perm Port Seal	Ethylene Propylene, square-cut		
			HEAD INTER	RLOCK		
8	6	45098	Locking Ring	316 Stainless Steel		
9	2	50676	Securing Ring	Reinforced Plastic - Yellow Color		
10	6	45228	Securing Screws	316 Stainless Steel		
			VESSEL SUI	PPORT		
11)	*3	52169	Universal Saddle	Engineering Thermoplastic		
1 2	*3	45042	Strap Assy	304 Stainless Steel - PVC cushion		
13	4	46265	Strap Screw	5/16-18 UNC, 18-8 Stainless Steel		
			ELEMENT INT	ERFACE		
14)	2	As Required	Adapter	Engineering Thermoplastic		
14) 15) 16) 17)	1	50733	Thrust Ring	PVC Thermoplastic, White		
16	2	45308	Adapter Seal	Ethylene Propylene - 0-Ring		
①	A/R	As Required	PWT Seal	Ethylene Propylene - 0-Ring		
	* 2 e	ach furnishe	d with length code	1, 2 & 3		

CENTER VESSEL ON 2 OR 3 SUPPORTS AT SPAN(S) "S"; 3 SUPPORTS REQUIRED FOR LENGTHS -4 AND OVER

WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE; TAKE EVERY PRECAUTION LISTED ON REVERSE, SEE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS



SECTION THROUGH END CLOSURE

ITEM (15) DOWNSTREAM ONLY

NOTES

- SHELL EXTERIOR COATED WITH WHITE, HIGH GLOSS POLYURETHANE PAINT
- . DIMENSION IN INCHES (MM APPROX.)
- NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED

Snell Length Code	L.O.A. IN (MM)	Port to Port IN (MM)	Span (MM) NI	Empty Weight LB (KG)
1	60.5	45.0	28 X 1	115
	(1536)	(1143)	(711)	(52)
2	100.5	85.0	56 X 1	155
	(2553)	(2159)	(1422)	(70)
3	140.5	125.0	80 X 1	200
	(3569)	(3175)	(2032)	(91)
4	180.5	165.0	64 X 2	240
	(4585)	(4191)	(1626)	(109)
5	220.5	205.0	78 X 2	285
	(5601)	(5207)	(1981)	(129)
6	260.5	245.0	92 X 2	325
	(6617)	(6223)	(2337)	(147)
7	300.5	285.0	106 X 2	365
	(7633)	(7239)	(2692)	(166)

 \mathbf{D}

T

C



Pentair Water

DRAWN KR 22JAN08 MODEL E8S/SP SEAWATER RO PRESSURE VESSEL SIDEWALL PORTING CHECKED MD 22JAN08

APPROVED SS 22JAN08 ECN SHEET SIZE NUMBER REV 1698 1 OF 2 В 507030 Ρ

RATING:

DESIGN PRESSURE1000 PSI at 120°F (6.9 MPa at 49°C)
MIN. OPERATING TEMP20°F (-7°C)
FACTORY TEST PRESSURE1100 PSI (7.584 MPa)
BURST PRESSURE6000 PSI 41.4 MPa)

INTENDED USE

The Model E8S/SP Fiberglass RO Pressure Vessel is designed for continuous, long-term use as a housing for reverse osmosis membrane elements to desalt typical seawater at pressures up to 1000 psi. Any make of eight-inch nominal diameter spiral-wound element is easily accommodated; the appropriate interfacing hardware for the element specified is furnished with the vessel.

The model E8S/SP is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code). At small additional cost, vessels can be inspected during construction by an ASME Authorized Inspector and ASME Code stamped.

The Model E8S/SP must be installed, operated and maintained in accordance with the precautions listed and good industrial practice to assure safe operation over a long service life.

The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell. This side—ported vessel requires special precautions in mounting and connection to piping so that the vessel will not be subjected to excessive stress due to bending moments acting at the side openings in the fiberglass shell.

The end closures, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the heads.

Pentair Water Treatment will assist the purchaser in determining the suitability of this standard vessel for their specific operating conditions. The final determination however, including evaluation of the standard materials of construction for compatibility with the specific corrosive environment, shall be the responsibility of the purchaser. Alternate materials with enhanced corrosion resistance are available on special order.

Specifications subject to change without notice.

PRECAUTIONS

- DO... read, understand and follow all instructions; failure to take every precaution will void warranty and may result in vessel failure
- DO... mount shell centered on horizontal members spaced at recomended span(s) "S" using compliant mounting hardware furnished; tighten hold down straps just snug
- DO... align and center side ports with the manifold header; correct causes of misalignment in a row of vessels connected to the same header
- DO... use flexible type grooved-end pipe couplings, Victaulic® Style 77 or equal, at sideports; allow full .125 inch gap between port and piping, and position piping to maximize flexibility of connection
- DO... provide flexibility in, and support for piping manifold so that vessel can grow in length under pressure without undue restraint; provide additional flexible joints in large pipes leading to manifold header
- DO... provide overpressure protection for vessel set at not more than 105% of design pressure
- DO... inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion
- DO NOT... work on any component until first verifying that pressure is relieved from vessel
- DO NOT... make rigid piping connections to ports or clamp vessel in any way that restricts growth of fiberglass shell under pressure; ▲DIA = 0.02 in. (0.5mm) and ▲L = 0.3 in. (8mm) for a length code -8 vessel
- DO NOT... hang piping manifolds from ports or use vessel in any way to support other components
- DO NOT... tighten Permeate Port connection more than one turn past hand tight
- DO NOT... operate vessel without connecting both Permeate Ports internally to a complete set of elements or otherwise plug ports internally so that external piping connection is not subjected to feed pressure
- DO NOT... install Spacer on downstream end of vessel
 DO NOT... operate vessel without Thrust Ring installed
 downstream
- DO NOT... pressurize vessel until double checking to verify that all three segments of Locking Ring Set are in place, and that the Securing Ring is fully seated and secured by all three Securing Screws
- DO NOT... operate vessel at pressures and temperatures in excess of its rating
- DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120°F (0.9 MPa at 49°C)
- DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way

For complete information on proper use of this vessel please refer to the E8 Series USER'S GUIDE, Bulletin 507011

ORDERING

Using the chart below, please check the features you require and fax them with your purchase order to our customer service department for expedited processing.

For optional materials and or feature not listed below, please

Please note that we require your membrane brand and model number when ordering. If this information is not initially available, you may provide it at a later date by checking the appropriate box below

			s and or feature not listed below, please appropriate box below or pricing and availability.
VESSE	EL I	LENG	TH CODE - please check one
MODE	L E8	S/SP	□-1 □-2 □-3 □-4 □-5 □-6 □-7
EXTER	IOF	R FIN	ISH - please check one
		Standa	rd — white high—gloss polyurethane coating over sanded surface.
CERTII	FIC	ATION	l — please check one
			rd — certified by CodeLine, not code stamped.
			 Certified by ASME Authorized Inspector, Code stamped and registered with National Board. tory for pricing details.
мемв	RAN	NE BI	RAND AND MODEL — please check one and fill in information
			supply adapters for the following membrane brand and specific model. Model
			ne brand and model information is not currently available, but will be supplied to CodeLine before the following date//
MATER	RIAL	. ANI	PORT CONFIGURATIONS OPTIONS - please check one
		Standa	rd — all materials and port configurations per drawing 507030 on the opposite page.
		NOTE:	The options listed below will increase the vessel price. Call factory for pricing details.
		Option	<u>Customer specified port configuration.</u> Using the chart below, please indicate the custom options
			you require for each end of the pressure vessel (many options are required only at one end). Please consult the factory as these options will affect pricing and vessel lead time.
number		osite	
nd -		nd —	PERMEATE PORT MATERIAL
-			Standard - PVC Thermoplastic (for applications up to 120° F) Option - PET Thermoplastic (for up to 176° and high back pressure operation)
า์		┪	Option — 316L Stainless Steel (for up to 176" and high back pressure operation)

Serial number	Opposite						
end	end	PERMEATE PORT MATERIAL				\perp	
		Standard — PVC Thermoplastic (for applications up to 120	O'F)		79	
		Option — PET Thermoplastic (for up to 176° and high back p			6	1 1	8
		Option — 316L Stainless Steel (for up to 176° and high back	pre	essure operation)			
		PERMEATE PORT CONFIGURATION	PORT SIZE CODE		7	∫ 5₿	
		Standard - 1" NPT Female Threads	D	1 1/2" GROOVED END	7		
H	H	Option — 3/4" NPT Female Threads; 4.5" Port Offset Option — 1/2" NPT Female Threads; 4.5" Port Offset	Ε	2" GROOVED END	7	Į.	
		Option - 1 1/2" IPS Grooved End; 6.3" Port Offset	F	2 1/2" GROOVED END	7	F	
		Option - 1 1/4" IPS Grooved End; 6.3" Port Offset	s	2" SANITARY	7	P.	
		FEED PORT CONFIGURATION			PORT	LOCATION	CODE
		Standard — 1 1/2" IPS pipe, grooved ends, with ports in- Optional — Multi-Ports ™, increased port diameter or port clor Using the instructions in CodeLine Bullentin #507054 please fill out your feed port configuration in the space below List port location first followed by port size for each choice. 2 1/2" ports & 2" Sanitary ports are not allowed 90" from a	king				
Serial numbe	er end				2] 3₽	
Opposite end					~ [# *
		DRAIN HOLE LOCATION		DRAIN))
Serial numbe	er end	Drain Hole Size \$5/32". Only Two Holes per Vessel, one	per			rial Number	End
Opposite end							

DWG. NO. 507030 P

© Pentair Water Treatment