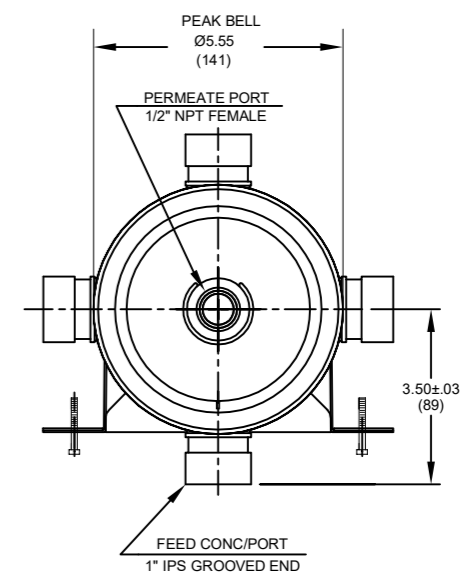
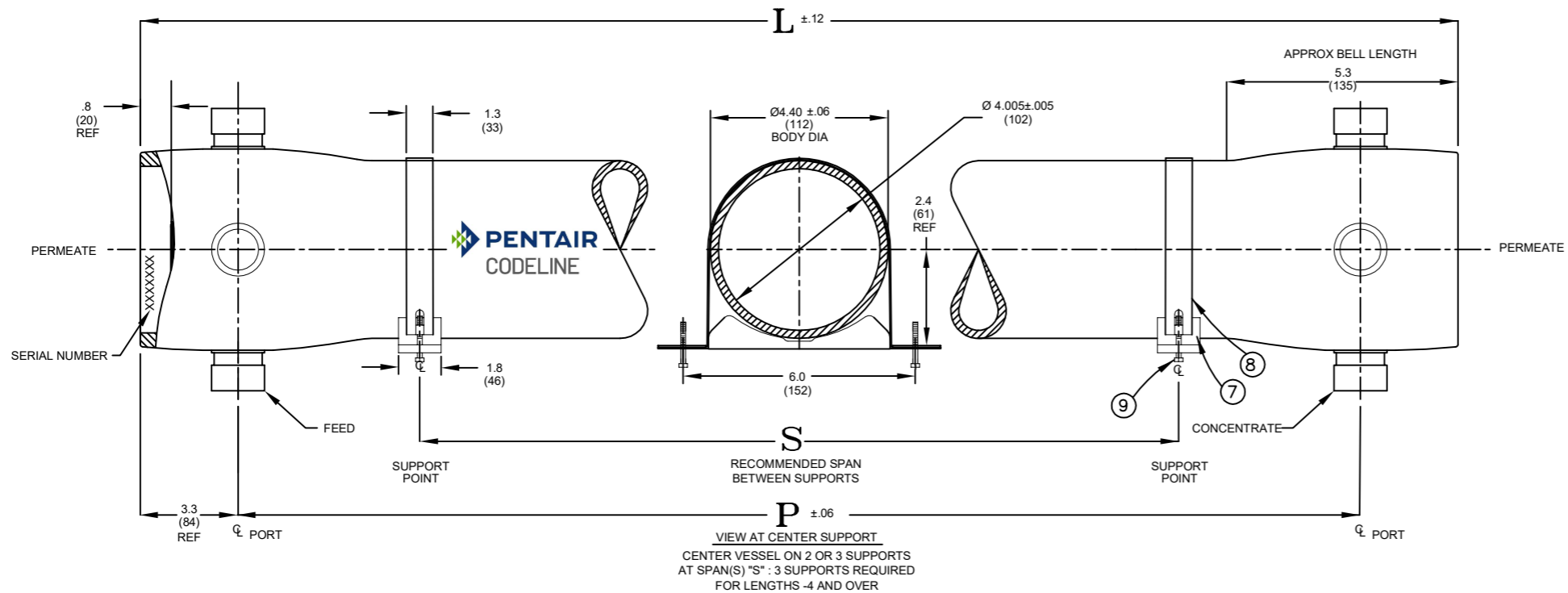
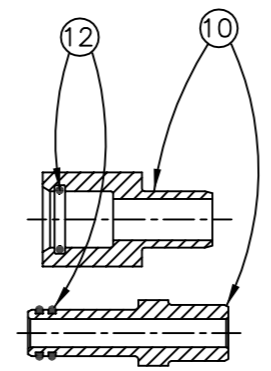


450
PSI

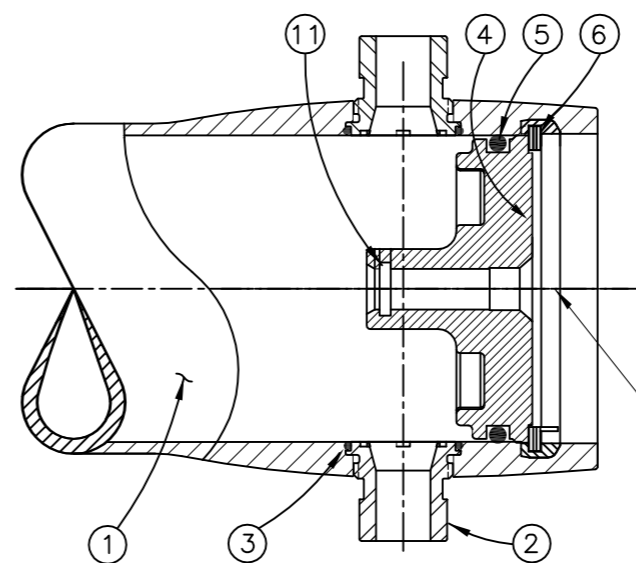


CAUTION: INCORRECT MANIFOLDING WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE; TAKE EVERY PRECAUTION LISTED ON PAGE 02, SEE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS

DWG REF	QTY	PART NUMBER	DESCRIPTION	MATERIAL
SHELL				
1	1	200138	SHELL	Filament Wound Epoxy/Glass composites - Head locking grooves integrally wound in place.
2	A/R	A/R	F/C Port	SA-351 CF3M
3	A/R	196596	F/C Port Seal	Ethylene Propylene - O - Ring
HEAD				
4	2	96827	End Plug	Engineering Thermoplastic.
5	2	196266	Head Seal	Ethylene Propylene - O - Ring
HEAD INTERLOCK				
6	2	45260	Spiral Ring	SA-479 316
VESSEL SUPPORT				
7	2*	45058	Saddle	Engineering Thermoplastic.
8	2*	47459	Strap Assy.	304 Stainless Steel-PVC Cushion.
9	4**	97821	Strap Screw	5/16-18 UNC x 1.5" Long, 304 Stainless Steel
ELEMENT INTERFACE				
10	2	A/R	Adapter	Engineering Thermoplastic.
11	2	196271	Adapter seal	Ethylene Propylene - O - Ring
12	A/R	A/R	PWT seal	Ethylene Propylene - O - Ring



PORT SIZE CODE	
A	¾ NPT FEMALE
C	1" GROOVED END



WARNING INTERNAL PORT PRESSURE NOT TO EXCEED 125 PSI

SECTION THROUGH END CLOSURE
(ENDS ARE IDENTICAL)

NO. OF PORTS		PORT LOCATION			VESSEL QTY.
Dash Length	L IN(MM)	P IN(MM)	S IN(MM)	Approx Weight LB(KG)**	
-1	48.50 (1232)	42.00 (1067)	25X1 (635)	24 (11)	
-2	88.50 (2248)	82.00 (2083)	56X1 (1422)	35 (16)	
-3	128.50 (3264)	122.00 (3099)	80X1 (2032)	44 (20)	
-4	168.50 (4280)	162.00 (4115)	64X2 (1626)	55 (25)	
-5	208.50 (5296)	202.00 (5131)	78X2 (1981)	64 (29)	
-6	248.50 (6312)	242.00 (6147)	92X2 (2337)	73 (33)	

*3 each & **6 nos. furnished with length code 4,5 & 6.

GENERAL NOTES:
 1. MAX. ANGULAR VARIATION BETWEEN ANY PORT ±0.5°.
 2. DIMENSIONS IN INCHES (MM APPROX)
 3. SHELL EXTERIOR COATED WITH WHITE RAL 9003, HIGH GLOSS POLYURETHANE PAINT.
 4. NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED
 ** WEIGHTS GIVEN IN THE TABLE ARE FOR HIGHEST CONFIGURATION AND WILL VARY WITH CHANGE IN CONFIGURATION.

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**PENTAIR
CODELINE**

VERNA, GOA
INDIA

DRAWN BY:	AN	DRAWING DESCRIPTION:	DRAWING NO.:	REV.:
DATE:	29JAN24	MODEL - 40S45 NC MEMBRANE HOUSING	200245	A
CHECKED BY:	YPS	CUSTOMER NAME:	VESSEL MODEL:	
DATE:	29JAN24	-	40S45 (NC)	
APPROVED BY:	FF	PROJECT NAME:	TOTAL QTY:	
DATE:	29JAN24	-	-	
ECN NO.:	6715	CUSTOMER P.O.#:	SIZE:	SCALE:
REV. DATE:	29JAN24	-	A3	NONE
				PAGE NO.:
				01 OF 02

RATING:

DESIGN PRESSURE.....450 PSI
(3.10 MPa)
MAX. OPERATING TEMP.120°F
(49°C)
MIN. OPERATING TEMP.....20°F
(-7°C)
FACTORY TEST PRESSURE.....CE
675 PSIG
(4.65 MPa)
BURST PRESSURE.....2700 PSI
(18.62 MPa)

INTENDED USE:

The Model 40S45 Fiberglass RO/UF Pressure Vessel is designed for continuous, long term use as housing for reverse osmosis and ultrafiltration elements in typical industrial water treatment systems at pressures up to 450 psi. Any make of four-inch nominal diameter spiral-wound element is easily accommodated. The appropriate interfacing hardware for the element specified is furnished with the vessel.

The Model 40S45 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code) Section X Edition 2023 and all metallic parts are designed as per Section VIII Division I Edition 2023.

The Model 40S45 must be installed, operated and maintained in accordance with the listed precautions 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 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 material 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 are 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 the shell on horizontal members at span "S" using compliant vessel supports furnished; shim saddles if required. 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 IPS grooved-end pipe couplings, at side ports; allow full, 0.125 inch gap between port and piping, and position piping to maximize flexibility of connection
DO...provide flexibility in, and support for piping manifolds 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... Lubricate seals sparingly, using nonpetroleum based lubricants, i.e. Glycerin or suitable lubricants.

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 resists growth of fiberglass shell under pressure; ΔDIA = 0.01 in. (0.25mm) and ΔL = 0.140 in. (3.5mm) for a length code -6 vessel
DO NOT... hang piping manifolds from ports or use vessel in any way to support other components.
DO NOT... operate vessel at pressures and temperatures in excess of its rating
DO NOT... operate vessel without connecting both Permeate Ports internally to complete set of elements or otherwise plug ports internally so that external piping connection is not subjected to feed pressure
DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120°F (0.86 MPa @ 49°C).
DO NOT...tighten Permeate Port connection more than one turn past hand tight
DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way
DO NOT...pressurize vessel until double-checking to verify that the Locking Ring is in place and fully seated.
DO NOT... operate outside the pH range 3-11.
DO NOT...operate outside the pH range 2-12 for cleaning.
DO NOT...exceed 43.5 hours in a year for cleaning with above mentioned pH range.

For complete information on proper use of the vessel Please refer to 40S series USER'S GUIDE - 96897

CAUTION:
EYE PROTECTION SHOULD BE WORN WHEN REMOVING OR INSTALLING RETAINING RING. KEEP FINGERS CLEAR FROM RETAINING RING WHILE INSTALLING LAST OF TWO TURNS. RING MAY SNAP INTO POSITION POSSIBLY PINCHING FINGERS

ORDERING:

Using the chart below, please select the features you require.

VESSEL LENGTH CODE – please select.

MODEL 40S45 □ -1 □ -2 □ -3 □ -4 □ -5 □ -6

MEMBRANE BRAND AND MODEL

□ Please supply adapters for the following membrane brand and specific model
Brand _____ Model _____

CERTIFICATION REQUIRED

□ CE Marked
□ Standard Certified by Pentair

EXTERIOR FINISH

□ White high-gloss RAL 9003 polyurethane coating over sanded surface.

FEED PORT CONFIGURATION

□ 1" IPS Grooved End
□ Multi-Ports, Port clocking.

PERMEATE PORT CONFIGURATION

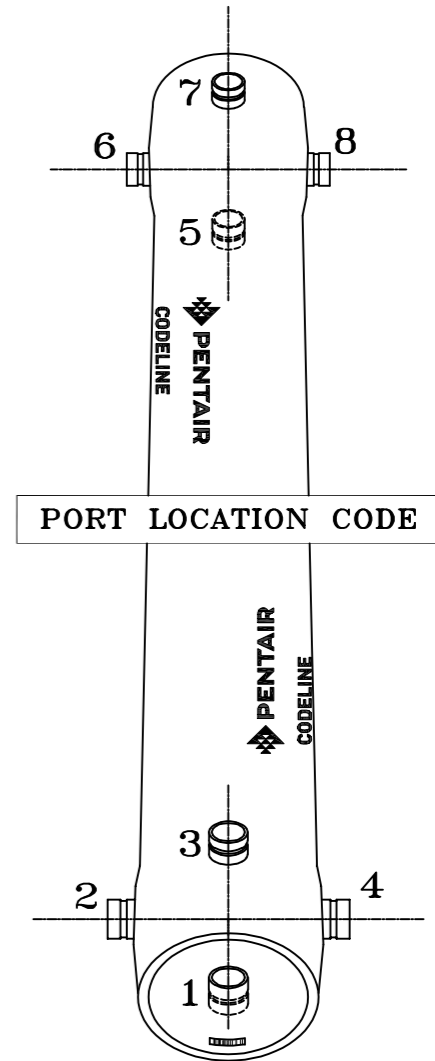
Serial number	Opposite	PERMEATE PORT SIZE
End	End	- ½" NPT Female (Standard per drawing)
□	□	
□	□	- ½" BSPT/JISPT Female

Please fill out your feed port configuration in the space below.
List port location first followed by port size for each choice.

Serial number end □ □ □ □ □ □ □ □
Opposite end □ □ □ □ □ □ □ □

	PORT SIZE CODE	P/N
A	¾" NPT FEMALE	196611
C	1" GROOVED END	196568

NOTE
Spiral Retaining Ring Removal Tool (50303) is recommended opening and closing vessel.



CODELINE BODY LABELS ARE PLACED AT 90° ON SERIAL NUMBER END AND AT 270° ON THE OPPOSITE SIDE END

1. PLEASE REFER TO 201421 FOR TRI-CLOVER DETAILS.

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DRAWN BY:	AN	DRAWING DESCRIPTION:	MODEL - 40S45 NC MEMBRANE HOUSING	DRAWING NO.:	200245	REV.:	A
DATE:	29JAN24	CUSTOMER NAME:	-	VESSEL MODEL:	40S45 (NC)		
CHECKED BY:	YPS	PROJECT NAME:	-	TOTAL QTY:	-		
DATE:	29JAN24	CUSTOMER P.O.#:	-	SIZE:	A3	SCALE:	NONE
ECN NO.:	6715			PAGE NO.:	02 OF 02		
REV. DATE:	29JAN24						