

A detailed cross-sectional diagram of a high-pressure cell assembly. The diagram shows a central sample chamber (10) surrounded by a pressure-transmitting medium (12). The assembly is contained within a thick, cylindrical pressure vessel (1) with a flange (2) at the top. Various internal components, including seals (3, 4, 5, 6, 7, 8, 9, 11) and structural supports, are labeled with numbers 1 through 12. Arrows indicate the direction of pressure transmission from the central chamber through the medium and seals. A red triangle on the right side of the diagram contains the text "600 PSI", indicating the operating pressure.

NSF
ANSI / CAN 61 & 372

THIS DRAWING CANNOT BE USED WITHOUT PRIOR APPROVAL FROM OUR COMPANY.

-INSTALLATION TO BE DONE ONLY WITH TRAINED PROFESSIONALS, IMPROPER INSTALLATION OF CONNECTIONS/MANIFOLDINGS MAY CAUSE SEVERE STRESS AROUND THE PORTS CAUSING LEAKS AND FAILURES.

-LUBRICATE SEALS SPARINGLY USING NONPETROLEUM BASED LUBRICANTS SUCH AS GLYCERIN.


-MATERIAL OF CONSTRUCTION OF SOME COMPONENTS CAN BE DIFFERED BASED ON THE REQUIREMENT.

-ADHERENCE TO THE PRECAUTIONS IS NOT ONLY RECOMMENDED BUT ESSENTIAL TO GUARANTEE THE SAFETY, LONGEVITY, AND OPTIMAL PERFORMANCE OF THE VESSEL. NEGLECTING THESE GUIDELINES MAY COMPROMISE THE INTEGRITY OF THE SYSTEM AND RESULT IN POTENTIAL HAZARDS.

-ALFA-AEROSOL LOGOS AND BRAND IS REGISTERED TRADEMARK PROPERTY OF ANU ADVANCE COMPOSITE PRODUCTS PVT LTD AND SHOULDNOT BE USED WITHOUT THE WRITTEN CONSENT OF THE COMPANY.

-SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

Manufactured By:



www.aacspindia.com

ANU ADVANCE COMPOSITE PRODUCTS PVT LTD

TELANGANA - INDIA

SIGNATURE			MODEL : MEMBRANE HOUSING - 80SP600PR		
	NAME	DATE			
DESIGNED BY:	UM	21-12-22	CUSTOMER NAME:		
DRAWN BY:	MAR	21-12-22	PURCHASE ORDER:		QTY:
APPROVED BY:	MAM	21-12-22	UNITS: mm	DRAWING NO. 607803	REV:1
DRAWING FOR REFERENCE ONLY			SIZE : A3	SCALE : N/A	SHEET 1 OF 2

SPECIFICATIONS:

- Design Pressure

4.14 MPa (600PSI)
- Test Pressure

6.21 MPa (900PSI)
- Qualification Pressure

24.83 MPa (3600PSI)
- (Burst Pressure 6 Times)
- Design Temperature

66°C (150° F)
- Minimum Temperature

-6°C (21° F)
- Working Media :

Water with pH 2-11

USE:

FRP membrane housings serve a crucial role in water treatment systems, particularly in Reverse Osmosis (RO) processes. These housings are meticulously crafted from epoxy resin and fiber materials, undergoing specialized processing through automatic winding molding under computer-controlled precision. The primary application of FRP membrane housings is in conjunction with RO membranes, forming an integral part of RO systems. Their purpose is to effectively eliminate impurities such as pigments, hardness, and high valence ions, ensuring that treated water adheres to the standards set for pure water.

Compared with traditional steel or plastic products, FRP membrane housings have excellent insulation properties, good corrosion resistance performance, optimized structural design, and have passed many official certificates such as NSF ANSI / CAN 61 & 372, ISO14001:2015,ISO9001:2015 and CE.

FRP membrane housings play a protective role for RO membranes in the water treatment process and are often used in industries such as electronics, food & beverage, metallurgy, pharmaceuticals, seawater desalination, and drinking water treatment.

- *Weights given as per heighest configuration

PRECAUTIONS:

These precautions are imperative for the safe and effective utilization of the vessel. It is crucial to thoroughly read, comprehend, and strictly adhere to all instructions outlined below.

Mounting:

- Mount the shell on horizontal members at span "S" using compliant vessel supports provided. Shim saddles if required. Tighten hold down straps just snug. Vertical mounting is permissible for up to 2 elements.

Piping:

- Use flexible IPS grooved-end pipe couplings (Victaulic) at side ports/Endports.
- Do not tighten Permeate Port connection more than one turn past hand tight.Internal Port Pressure should not increase 0.88Mpa (125PSI)
- Avoid making rigid connections as the membrane housing is designed to expand under high pressure.
- Do not support any other components from the ports.
- Do not pressurize the vessel until double-checking to verify that the Lockplates (Link Stoppers)/Retainer Rings (Circlips) are in place and fully seated.

Overpressure Protection:

- Provide a Pressure Switch set at 1.1 times the design pressure to protect against overpressure.

Work on Pressurized Vessel:

- Do not work on any component until verifying that pressure is relieved from the vessel.

Permeate Ports Inter Connections:

- Do not operate the vessel without connecting both Permeate Ports internally to complete the set of elements or otherwise plug ports internally.

Regular Inspection:

- Regularly inspect end closures and fittings to ensure they remain intact, especially in high-pressure pump vibrations.

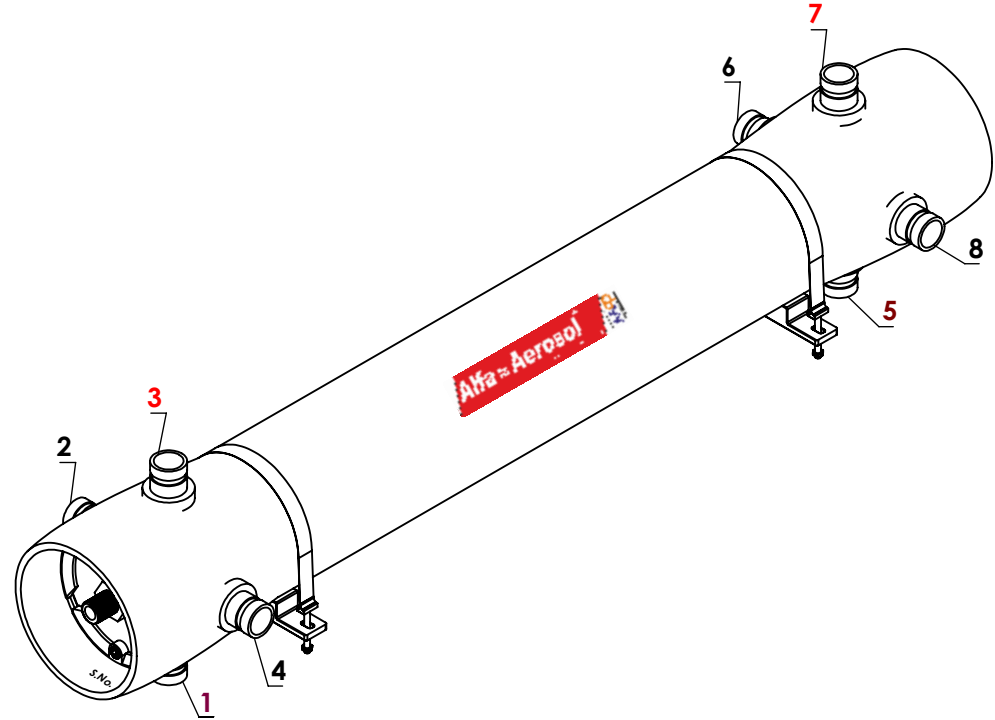
Lubrication:

- Lubricate seals sparingly using nonpetroleum-based lubricants, such as Glycerin or suitable alternatives.

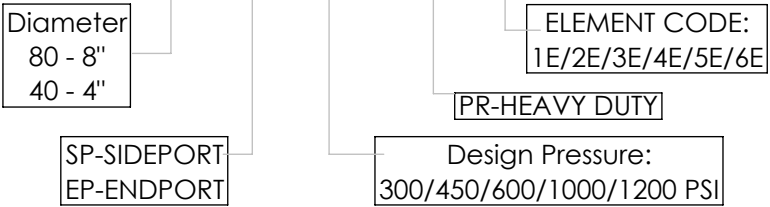
Thrust Cone:

- Do not operate the vessel without the Thrust Cone installed downstream to protect the membrane from damage due to high pressure.

ORDERING:



Coding Interpretation: **80** **SP** **600** **PR** **1E**



Port Configuration:

CONCENTRATE SIDE (BARCODE LABEL SIDE)				FEED SIDE (OPPOSITE SIDE)			
1	2	3	4	5	6	7	8

Feed/ Concentrate Port: ☐ 1.5" ☐ 2" ☐ 2.5"

Bearing Plate : ☐ 6061-T6 Aluminium ☐ Stainless Steel 316L
☐ Stainless Steel 304 ☐ FRP

Membrane Brand And Model: _____

Standard Offering:

Feed/Concentrate Port: 1.5" (1 & 5 Configuration)
Permeate Port : 1" Male Thread
Bearing Plate : 6061 Aluminium

NOTES:

- Refer Drawing Section for the Mounting Distance Span.
- Adherence to these precautions is not only recommended but essential to guarantee the safety, longevity, and optimal performance of the vessel. Neglecting these guidelines may compromise the integrity of the system and result in potential hazards.
- White Polyurethane Paint is offered as standard, This can be customized based on special request to the company.

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