

# FRP MEMBRANE HOUSING

4" & 8" SIDE PORT AND END PORT MEMBRANE HOUSINGS FOR RO APPLICATION



SIDE PORT MODEL



END PORT MODEL

## GENERAL INFORMATION

UKL membrane pressure vessels are manufactured by computer controlled filament winding machine and associated high precision processing equipments. With a team of highly skilled technical experts in the field of Composites technology and with all the state-of-art processing machines in-house, UKL offers a complete range of high quality membrane housings in sizes of 4" and 8" diameters.

UKL membrane housings are available with end entry design and also side entry design. This is used for Residential, commercial, municipal and industrial RO applications. Membrane housings are available in operating pressure of 300psi, 450psi, 600psi, 1000psi and 1200psi. They are manufactured using the fibre glass-epoxy composite to meet the stringent demands of the RO processes.

## ASME CERTIFICATION

UKL membrane housings meet the Boiler and Pressure Vessel Code (BPVC) of American Society of Mechanical Engineers (ASME, Section X) for the production of Fibre Reinforced Plastic Pressure vessels. The BPVC provides the complete rules for the design, fabrication, installation, inspection, care and use of pressure vessels.

## SALIENT FEATURES

- ★ Internal diameter is mirror finished for easy, quick loading & unloading of membranes
- ★ Quick lock head retention system for easy access to membranes
- ★ External surfaces coated with high gloss polyurethane paint for UV resistance and good aesthetics
- ★ Head assembly comprises of a single piece moulded seal plate, a unique high quality head seal and an aluminium alloy bearing plate. The unique design of the head seal prevents it from rolling while insertion and removal of head assembly thereby enables easy fitment and removal.
- ★ 8" housings are available from 1 element long to 7 element long for all the pressure ratings from 300psi to 1200 psi in both end port and multiport configurations.
- ★ For 8" housings multiporting options are available with 1.5", 2", 2.5", 3" and 4" diameter IPS grooved feed/ concentrate ports for inter connecting the vessels.
- ★ 4" housings are available from 1 element to 6 element long for all pressure rating from 300 psi to 1200psi in end port and multiport configurations with 1" port size for side entry designs.
- ★ Our side entry models have the unique design feature of flat seating surfaces in the circular membrane housing. This ensures excellent sealing of the side ports which have a threaded metallic sleeve and a nut.



## QUALITY

UKL membrane housings are produced to the highest quality standards. Each pressure vessel is subject to a series of quality inspections followed by hydro-testing before shipment.

## UNIQUE FEATURES

- ★ User friendly Head locking system using the 3 turn retainer ring. No special tools required.
- ★ Unique H-type head seal which enables easy installation, with no chance of head seal roll and excellent sealing.
- ★ Integrally wound head locking groove enhances the tensile strength for excellent performance.
- ★ The side entry design incorporates the unique flat seating surface construction which offers excellent side port sealing.
- ★ The threaded side ports are easy to mount and allow for quick and easy on-site maintenance and replacements.
- ★ Superior Feed/Concentrate port materials are used for sea water applications.

## INSTALLATIONS



## TECHNICAL SPECIFICATIONS

8" HOUSINGS										
Model	END PORT					SIDE PORT				
	80EP300	80EP450	80EP600	80EP1000	80EP1200	80SP300	80SP450	80SP600	80SP1000	80SP1200
Spec.										
Design Pressure	300 psi	450 psi	600 psi	1000 psi	1200 psi	300 psi	450 psi	600 psi	1000 psi	1200 psi
Minimum Temperature	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C
Maximum Temperature	65 °C	65 °C	65 °C	65 °C	65 °C	65 °C	65 °C	65 °C	65 °C	65 °C
No. of Elements	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7	1 to 7

4" HOUSINGS										
Model	END PORT					SIDE PORT				
	40EP300	40EP450	40EP600	40EP1000	40EP1200	40SP300	40SP450	40SP600	40SP1000	40SP1200
Spec.										
Design Pressure	300 psi	450 psi	600 psi	1000 psi	1200 psi	300 psi	450 psi	600 psi	1000 psi	1200 psi
Minimum Temperature	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C	-7 °C
Maximum Temperature	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C
No. of Elements	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6	1 to 6

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