

# Sanitary Stainless Steel Membrane Housings

## 3A Approved 8-inch Side Entry



**Figure 1: Sanitary Stainless Steel Membrane Housings**

GE Water & Process Technologies combines our rugged design of stainless steel membrane element housings (Figure 1) with 30+ years of history in the applications of RO/NF/UF machine assembly.

### General Properties

#### Features and Benefits

The design and fabrication of the membrane housing and endcap have been reviewed and approved by the USDA. Largest port available in any membrane housing design. Allows for superior flow and reduced pressure drop. All ports are tri-clamp connections with 180 grit polished ID. Welds and edges are all polished to be smooth and tapered to eliminate the potential for any product hold-up. A superior finish is available on these housings by

electropolishing or mechanically polishing the stainless steel, or by using a metallic two-coat epoxy paint.

#### Why Stainless Steel

- No seals involved in side port connections
- Unlike fiberglass, doesn't warp or weep
- Is not affected by UV rays or sunlight
- Stainless steel is a preferred and universally accepted material for water systems and sanitary process applications
- Can withstand high temperatures, up to 200°F
- Capable of supporting process piping
- During assembly, stainless housings are lighter and easier to handle than PVC and FRP housings with equivalent pressure ratings

**Table 1: Options Available**

Grade	304L Stainless Steel 316L Stainless Steel
Side Ports	2" and 3" port Multi-port; (2 port standard)
Exterior Finishes	Electropolished for a glossy, shiny, metallic look Bead blast surface Metallic painted epoxy Mechanical polished (180 grit)
Finish	Satin Finish



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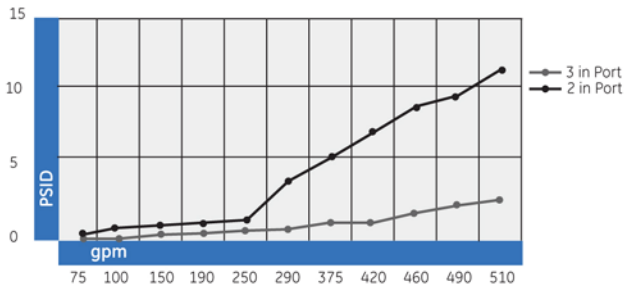


Figure 2: Housing Pressure Drop

Table 2: Materials of Construction

End Cap	316 SS
Victaulic Coupling	Galvanized Steel
Coupling Gasket	EPDM
Support Straps	304 SS
Mounting Supports	304 SS
O-Ring	EPDM
Housing Body	304/304L or 316/317L SS

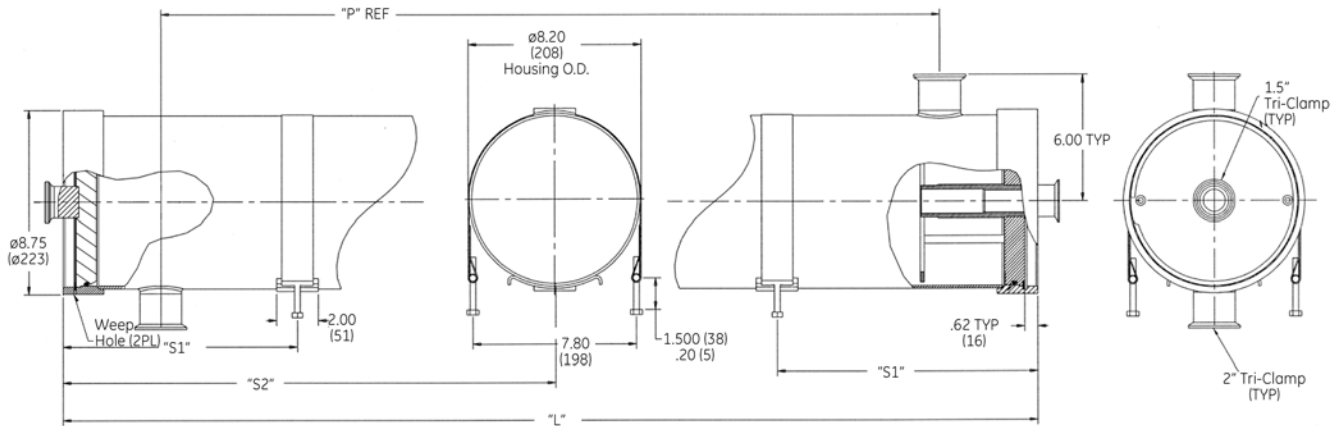


Figure 3: Membrane Housings

Table 3: Housing Lengths

Element Length	"L" Length	"P" Length	Two Supports Recommended "S1" <sup>1</sup>	3 Supports Recommended (1 Centered) "S2" <sup>1</sup>	Approx. Empty WT Lbs. (KG)
2 - 8 x 40	92.1 (2339)	82.8 (2103)	15.0 (381)	N/A N/A	106 (48)
3 - 8 x 40	132.2 (3358)	122.8 (3119)	23.0 (584)	N/A N/A	138 (62)
4 - 8 x 40	172.2 (4374)	162.9 (4138)	31.0 (787)	N/A N/A	169 (76)
5 - 8 x 40	212.3 (5392)	202.9 (5154)	28.0 (711)	106.2 (2697)	210 (91)
6 - 8 x 40	252.3 (6408)	243.0 (6172)	34.0 (864)	126.2 (3205)	232 (105)

<sup>1</sup>The S1 and S2 dimensions are the recommended housing support locations measured from each end of the housing. If there is no S2 dimension, then no middle support is required (i.e., use the two end supports only).

Table 4: Specifications

Specifications	802P - 3A	802P - TC
Material	304 or 316 SS	304 or 316 SS
Design	600 psi	600 psi
Closure Kits	316 SS	316 SS
Tested at	3 times design pressure	3 times design pressure
Tested Cycles	100,000 cycles at design pressure	100,000 cycles at design pressure
Element Capacity	2 - 6 long	2 - 6 long
Number of Side Ports	2	2
Side Port Size and Connection	2" Tri-Clamp (option for 3")	2" Tri-Clamp (option for 3")
3A Approved Design	Yes	No
Interior Finish	180 grit mechanical polish	Mill finish
Exterior Finish	Mill finish	Mill finish
End Cap & Load Transfer	SS and 3A Design	SS
Permeate Port	1.5" Tri-Clamp	1.5" Tri-Clamp

