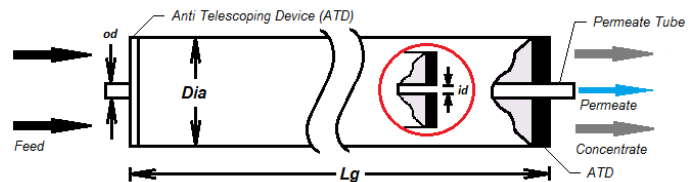




SHP Series – Super Hydrophilic Membrane for Oil/Water Separation

The SHP Series membrane filters are made of chemically modified polyacrylonitrile (PAN) polymer in spiral-wound form for WRS systems. This membrane is characterized by a pore size of 0.01 microns with an approximate molecular weight cut-off of 20K – 50K Dalton. To avoid fouling by "free" oils, the SHP series elements have been engineered to be extremely hydrophilic (water attracting) as compared to conventional membranes that are oleophilic (oil attracting). These membranes are used for oil/water separation and suspended solids removal. They are also used as pretreatment of process water before reverse osmosis or nano-filtration.

Membrane maintenance is extremely easy. Periodic cleaning with a nonionic detergent is all that is necessary to maintain optimal performance. Chemicals may be used for cleaning. Acid solutions are used to remove inorganic scale, while bleach or caustic solutions are used to remove organic materials. The maximum cleaning solution strength is not to exceed the recommended limit shown in the Table.



Filter Element Dimensions and Weight

Filter Part No.	Feed Spacer		Dimensions (Dia x Lg)		Permeate Tube		Dry Weight		Membrane Area	
	mil	(mm)	in	(cm)	in	(cm)	Lbs	(Kg)	Ft ²	(m ²)
SHP-2012	35	0.89	1.8 x 12	4.6 x 30.5	0.67 od	1.71 od	0.75	0.34	3.5	0.33
SHP-2540	35	0.89	2.4 x 40	6.1 x 101.6	0.75 od	1.91 od	3.25	1.5	23	2.14
SHP-4040	50	1.27	3.9 x 40	9.9 x 101.6	0.625 id	1.59 id	8.5	3.9	65	6.04
SHP-8040	50	1.27	7.9 x 40	20.1 x 101.6	1.125 id	2.86 id	29	13.2	288	26.75

Operating and Cleaning Parameters

Typical Operating Flux	10 - 25 GFD (17 - 43 LMH)
Max Operating Pressure	60 psi (410 kPa)
Max Temperature	122°F (50°C) - Continuous Operation 122°F (50°C) - Clean-In-Place (CIP)
pH Range	3 - 9 for Continuous Operation 2 - 10 for Clean-In-Place (CIP)
Trans-membrane Pressure	30 psi (205 kPa) - Max 3 - 25 psi (20 - 170 kPa) - Normal
Chlorine Tolerance	200,000 ppm-hours

Maximum Cleaning Solution Strength

Solutions	Maximum Strength
Bleach (NaOCl)	150 ppm <122°F (<50°C)
Caustic (NaOH)	pH 10 <122°F (<50°C)
Ciric Acid	0.5% <122°F (<50°C)

Note: Material compatibility shall be tested for applications with a content of highly concentrated solutions.

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