

# ULTRA-COR Module: 5-HFM-251-UVP

## Industrial Ultrafiltration Multitubular Modules

### PRODUCT DESCRIPTION

<b>KMS Part Number (KPN):</b>	0713095
<b>Membrane Chemistry:</b>	PVDF
<b>Membrane Type:</b>	HFM (neutral)
<b>Membrane Area:</b>	3.6 ft <sup>2</sup> (0.34 m <sup>2</sup> )
<b>Construction:</b>	7 (seven) 1/2" tubules potted in a 1-1/4" diameter shell
<b>Molecular Weight Cut-Off:</b>	100,000 Dalton (nominal)
<b>Housing Construction:</b>	PVC
<b>Seal:</b>	PVC Insert (Epoxyed in Place)
<b>Gasket:</b>	Viton®
<b>Interconnecting Components:</b>	See Reverse

### OPERATING AND DESIGN INFORMATION\*

<b>Maximum Inlet Pressure:</b>	70 psi @ 120°F (4.8 bar @ 49°C)
<b>Minimum Outlet Pressure:</b>	5 psi (0.3 bar)
<b>Maximum Operating Temperature (at pH 8.0):</b>	120°F (49°C)
<b>Maximum Permeate Side Back Pressure:</b>	5 psi (0.3 bar)
<b>Maximum Feed Side Pressure Drop:</b>	3.3 psi @ 120°F (0.4 bar @ 49°C)
<b>Allowable pH - Continuous Exposure:</b>	2.0 - 10.0 @ 120°F (49°C)
<b>Allowable pH - Short Term Exposure:</b>	1.5 - 10.5 @ 120°F (49°C)

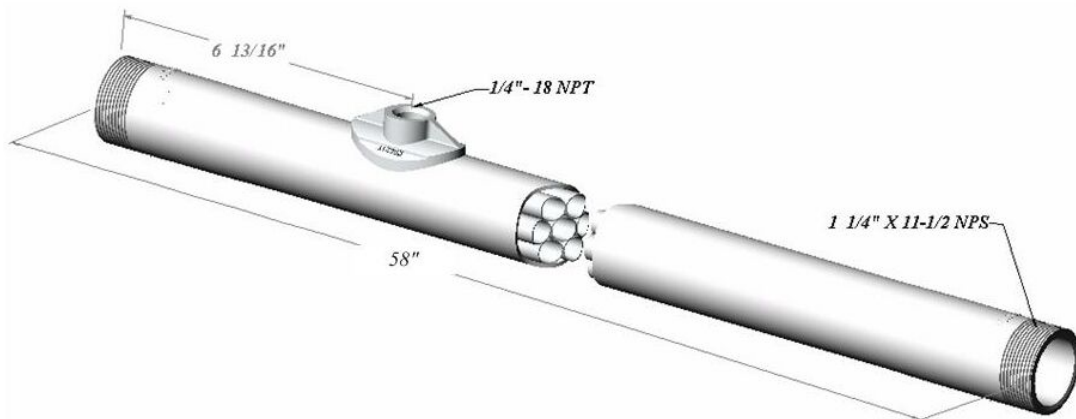
\*Consult KSS Process Technology for specific applications.

### FEED FLOW VS. PRESSURE DROP

Circulation Flow		Crossflow Velocity		Pressure Drop	
gpm	m <sup>3</sup> /hr	fps	m/s	psi	bar
23	5.2	6.4	2.0	1.0	0.08
34	7.7	9.5	2.9	2.2	0.15
42	9.5	11.7	3.6	3.0	0.21

\*Koch Separation Solutions, Inc. must review operating and cleaning conditions for all new plants as well as changes to any existing plants. Data based on Water at 77° F and a specific gravity of 1.0. Circulation rates exhibit variances of 15%.

### NOMINAL DIMENSIONS



STORAGE GUIDELINES

Ancillary Parts

KSS recommends that these membranes be used with KSS supplied ancillary parts. Sealing is provided by o-rings and gaskets. No additional sealing compound or tape is recommended for use on threaded connections.

TUBE ASSEMBLY AND COMPONENTS

Item	Description	KPN
1	U-Bend Assembly (PVC)	0020390
2	Holding Nut	0020281
3	Snap Ring	0020310
4	Membrane Washer (Viton) <sup>®*</sup>	0020375
5	Permeate Pass Kit	0211798
6	Permeate Straight Connector	0211800
7	Permeate Tee Connector	0211803
8	Permeate Elbow <sup>*</sup>	0211804

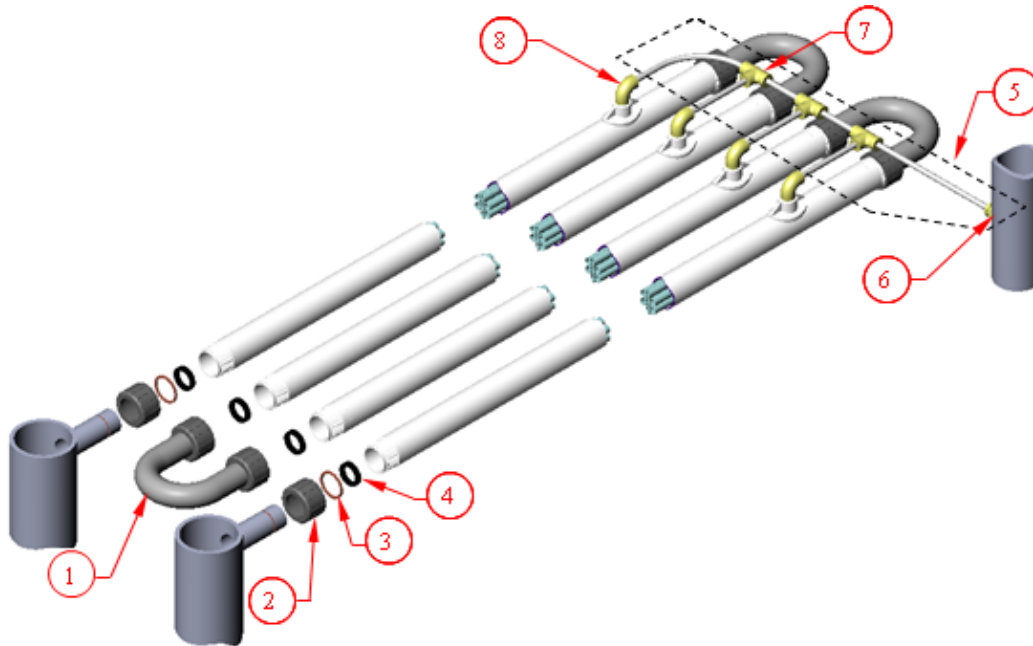
\*Supplied with Membrane

Membrane Incompatibility

Prior to exposing the membrane to any chemical, the chemical should be reviewed by Koch Separation Solutions. Aside from the listed chemicals below, synthetic coolants, semi-synthetic coolants, kerosenes, naphtha, gasoline, floc polymers may affect membrane performance.

Chemicals that should be avoided include the following:

- **Aprotic Solvent** (e.g., Dimethyl Formamide, Dimethyl Acetamide, N-Methyl Pyrolidine, etc.)
- **Chlorinated Solvents** (e.g., Methylene Chloride, Chloroform, Carbon Tetrachloride, etc.)
- **Ketones** (e.g., Acetone, Diacetone Alcohol, etc.)
- **Silicones** or Silicone based Defoamers (e.g., Siloxane)



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