

# FEG PLUS<sup>®</sup> Module: 5- HFM-251-PVI

*Tubular Ultrafiltration One-Inch Modules for Industrial Applications*

## PRODUCT DESCRIPTION

<b>KMS Part Number (KPN):</b>	0711661
<b>Membrane Chemistry:</b>	PVDF
<b>Membrane Type:</b>	HFM (neutral)
<b>Membrane Area:</b>	1.1 ft <sup>2</sup> (0.10 m <sup>2</sup> )
<b>Molecular Weight Cut-off:</b>	100,000 Dalton (nominal)
<b>Housing Construction:</b>	CPVC
<b>Seal:</b>	CPVC Insert (Epoxyed in Place)
<b>Gasket:</b>	Viton <sup>®</sup>
<b>Interconnecting Components:</b>	See second page

## OPERATING AND DESIGN INFORMATION\*

<b>Maximum Inlet Pressure:</b>	90 psi @ 140°F (6.2 bar @ 60°C)
<b>Minimum Outlet Pressure:</b>	5 psi (0.3 bar)
<b>Maximum Operating Temperature (at pH 8.0):</b>	140°F (60°C)
<b>Maximum Permeate Side Back Pressure:</b>	5 psi (0.3 bar)
<b>Maximum Feed Side Pressure Drop:</b>	5 psi @ 140° F (0.3 bar @ 60°C)
<b>Allowable pH – Continuous Exposure:</b>	2.0 - 10.0 @ 140°F (60°C)
<b>Allowable pH – Short Term Exposure:</b>	1.5 - 10.5 @ 140°F (60°C)

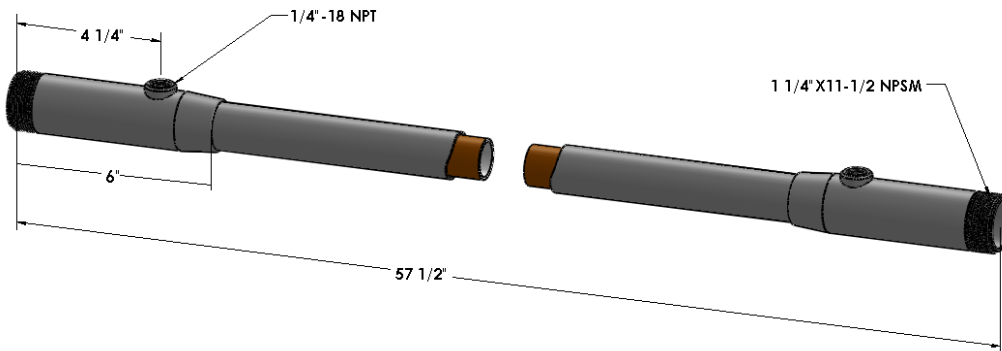
\*Consult KSS Process Technology Group for specific applications.

## FEED FLOW VS. PRESSURE DROP\*\*

Circulation Flow		Crossflow Velocity		Pressure Drop	
gpm	m <sup>3</sup> /hr	fps	m/s	psi	bar
19	4.3	7.8	2.4	1.0	0.07
30	6.8	12.3	3.7	2.2	0.15
38	8.6	15.5	4.7	3.0	0.21

\*\*Data based on Water at 77° F (25°C) and specific gravity of 1.0. Circulation rates exhibit variances of 15%.

## NOMINAL DIMENSIONS



## OPERATING GUIDELINES

**Ancillary Parts**

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

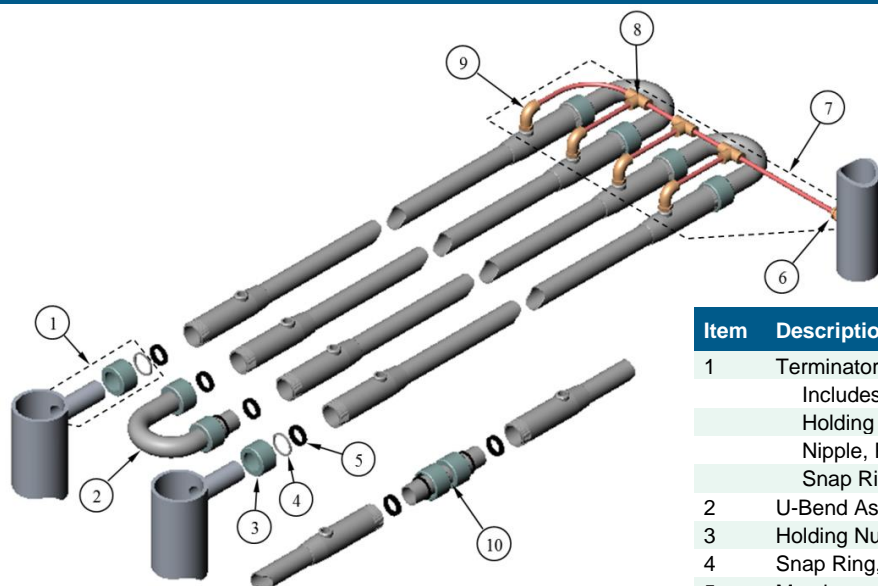
**Membrane Incompatibility**

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)

## FEG PLUS MODULE



Item	Description	KPN
1	Terminator Kit Includes: Holding Nut, PVC (x2) Nipple, PVC (x2) Snap Ring, SS304 (x2)	0230020
2	U-Bend Assembly, CPVC	0020392
3	Holding Nut (PVC)	0020281
4	Snap Ring, SS304	0020310
5	Membrane Washer, Viton®	0020375
6	Permeate Straight Connector	0211800
7	Permeate Pass Kit (for 4 tubes) Includes: Adapter ¼ to ⅜ (x1) Permeate Tee Connector (x4) Permeate Elbow Connector (x4) PE tubing	0211786
8	Permeate Tee Connector	0211803
9	Permeate Elbow Connector	0211804
10	Interconnector Kit, CPVC Includes: CPVC interconnector (x1) PVC Nut Holding (x2) Snap-Ring (x2)	0230091

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