

# SUPER-G<sup>®</sup> Plus Modules

## Ultrafiltration Multitube Modules for Juice Processing

### PRODUCT DESCRIPTION

<b>Membrane Material:</b>	PVDF
<b>Membrane Type:</b>	HFM-500 or HFM-513
<b>Molecular Weight Cutoff*:</b>	HFM-500: 100,000 Daltons HFM-513: 500,000 Daltons
<b>Configuration:</b>	Nine (9) 1" diameter tubules in polysulfone shell
<b>Applications:</b>	Juice processing for high recovery and high solids
<b>Regulatory Information:</b>	Conforms with FDA regulations (CFR Title 21)
<b>Options:</b>	HFM-500 membrane for light juices HFM-513 for all juices

\* The nominal separation range and retention characteristics of the membranes are highly dependent upon the nature of the liquid being processed and on several other operating parameters. This information should, therefore, be used as a guide only

### SPECIFICATIONS

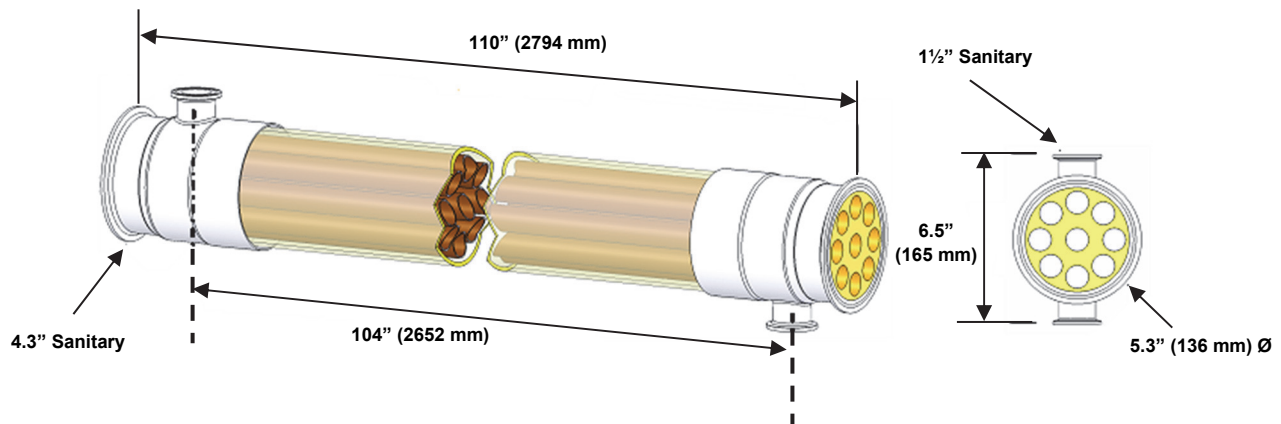
Part Number	Model	Membrane Area ft <sup>2</sup> (m <sup>2</sup> )
0712301	SUPER-G <sup>®</sup> PLUS 4310-HFM-500	20.4 (1.9)
0712371	SUPER-G <sup>®</sup> PLUS 4310-HFM-513	20.4 (1.9)

### OPERATING AND DESIGN INFORMATION\*

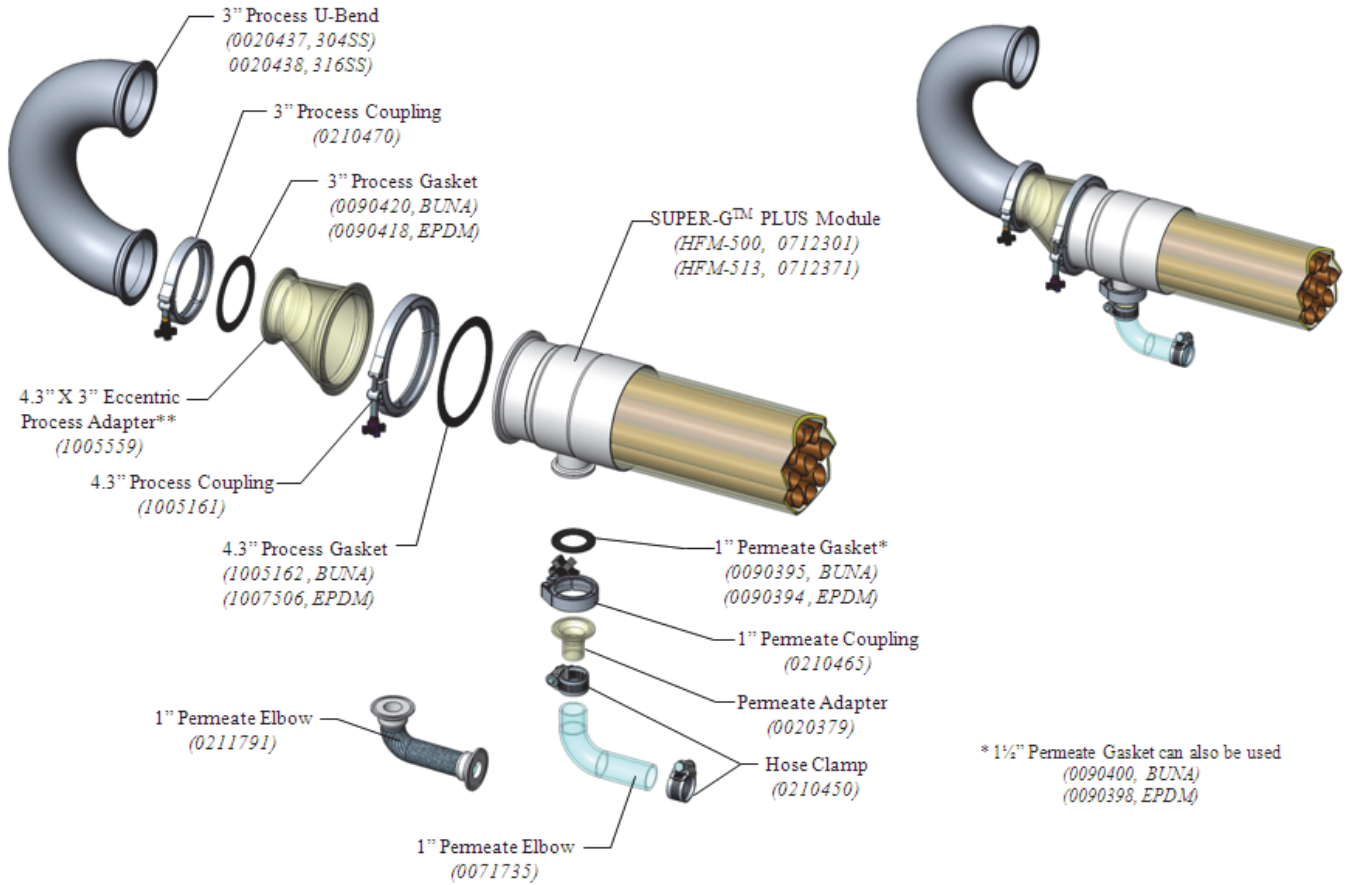
<b>Maximum Operating Pressure:</b>	90 psi @ 120°F (6.2 bar @ 49°C)
<b>Minimum Outlet Pressure:</b>	10 psi (0.7 bar)
<b>Maximum Permeate Pressure:</b>	5 psi (0.3 bar)
<b>Typical Feed Side Pressure Drop Per Module:</b>	4-6 psi (0.27-0.40 bar)
<b>Maximum Feed Side Pressure Drop Per Module:</b>	6.6 psi @ 130°F (0.5 bar @ 54°C)
<b>Maximum Operating Temperature at pH 8:</b>	130°F (54°C)
<b>Allowable pH Range at 120°F (49°C):</b>	Continuous 2.0 - 10.0 Short term 1.5 - 10.5
<b>Maximum Chlorine (cleaning):</b>	200 ppm @ pH 10-10.5, 120°F (49°C)

\*Consult KSS Process Technology Group for specific applications.

### NOMINAL DIMENSIONS



SUPER-G® TUBULAR MODULE ASSEMBLY



\*\* 4.3" X 3" Conical Process Adapter is also available (KPN 1005160)

**Service and Ongoing Technical Support:**

Koch Separation Solutions (KSS) has an experienced staff of professionals available to assist end-users and OEM's for optimization of existing systems and support with the development of new applications. Along with the availability of supplemental technical bulletins, KSS also offers a complete line of KOCHKLEEN® membrane pretreatment, cleaning and maintenance chemicals.

**KSS Capability**

KSS is the leader in crossflow membrane technology, manufacturing reverse osmosis, nanofiltration, microfiltration, and ultrafiltration membranes and membrane systems. The industries we serve include food, dairy, beverage, automotive, water and wastewater, chemical, and general manufacturing. KSS adds value by providing top quality membrane products and by sharing our experience in the design and supply of thousands of crossflow membrane systems worldwide.

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