



SUPER-COR[®] • SUPER-G[®]

An Impressive Line-Up Of Juice Clarification Modules



Introducing New Products And Higher Productivity

SUPER-COR®. SUPER-G®. Super Performance.

For over thirty years, Koch Membrane Systems (KMS) has developed and marketed cutting-edge membrane separation products, for virtually every segment of the Food, Beverage and Dairy industries throughout the world, including the SUPER-COR and SUPER-G modules for juice clarification.

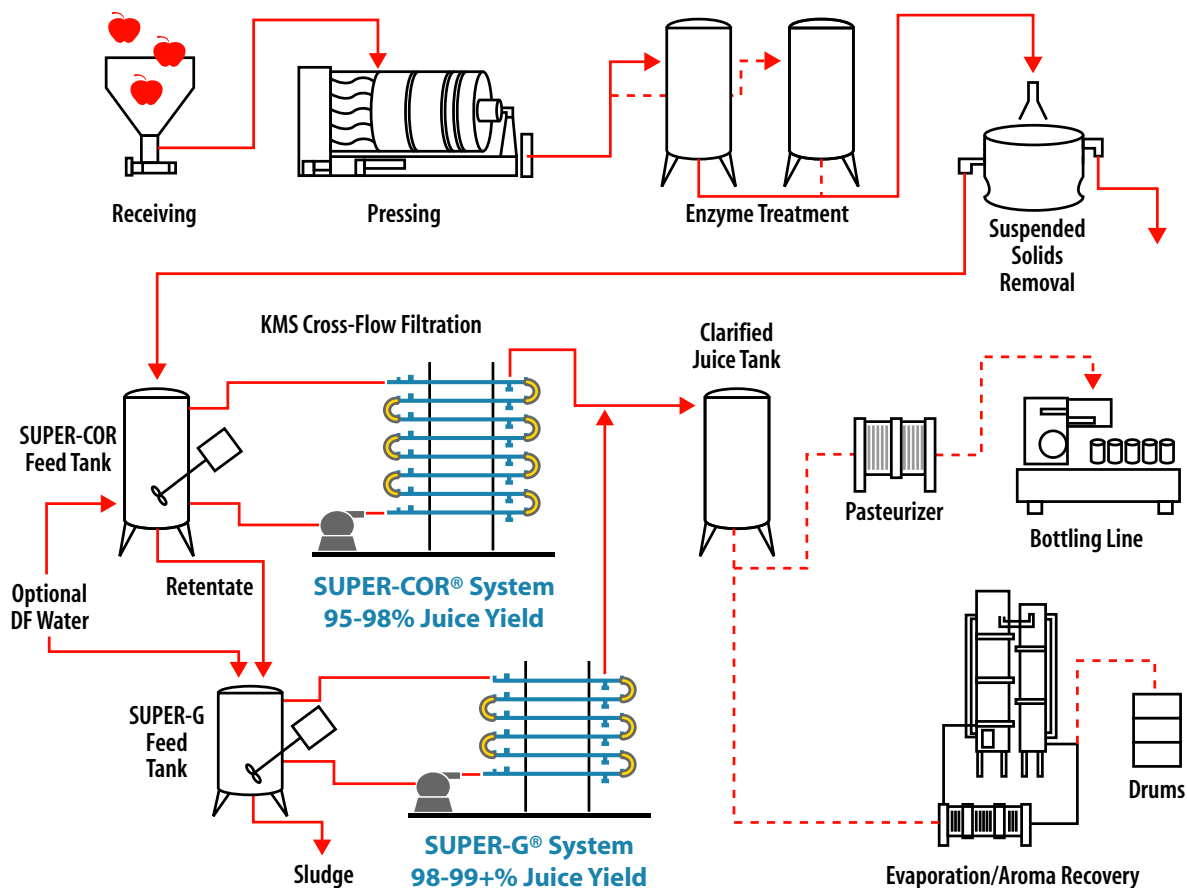
The proven durability of the SUPER-COR and SUPER-G products has established KMS as the industry standard-bearer for membrane performance, dependability, and longevity.

From processing light colored juices into a brilliant, golden, haze-free shimmer to providing total color passage for valuable dark juices, the versatility of KMS SUPER-COR membranes is unsurpassed.

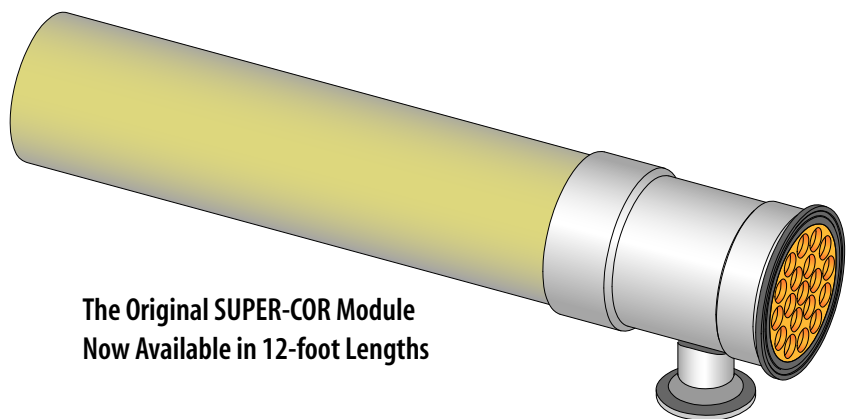
When it comes to yields, no other membrane family can deliver more.

With the addition of the SUPER-G module to the KMS line-up, processors are able to exceed SUPER-COR's impressive yields by providing a filtered juice increase of 2-3%. Using SUPER-G to capture more than 98% of the apple, grape, pear, pineapple or cranberry soluble solids in a production line achieves unprecedented yields and squeezes the most into your bottom line.

KMS Apple Juice Clarification Process



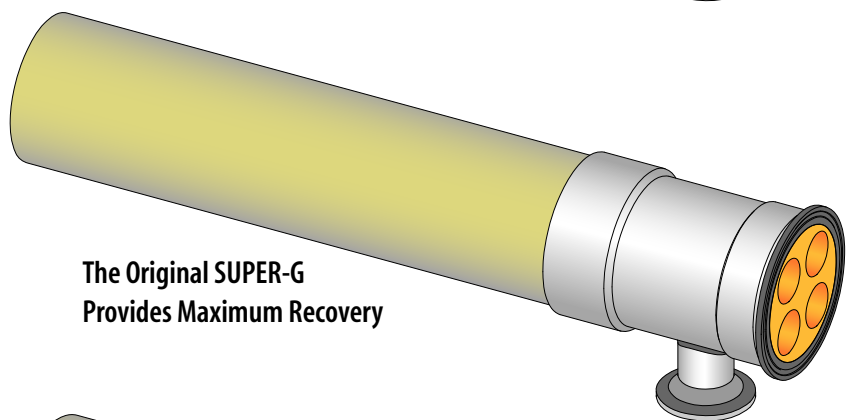
SUPER-COR® Product Family



The Original SUPER-COR Module
Now Available in 12-foot Lengths

SUPER-COR® Module

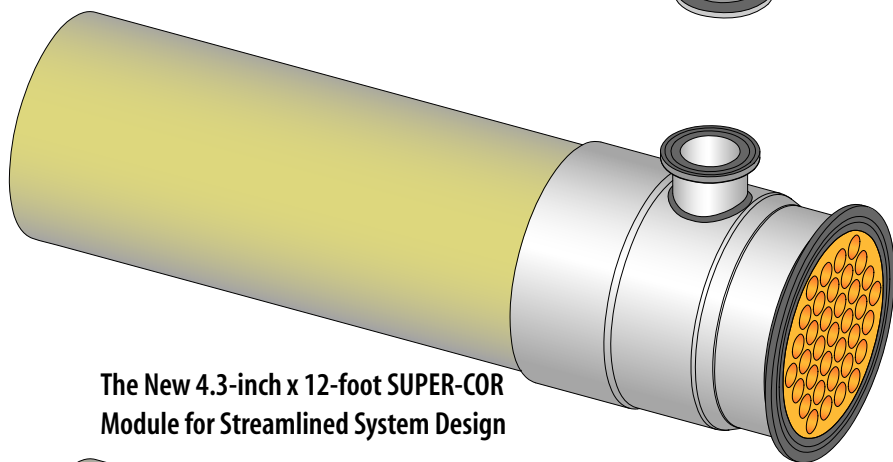
(19) 1/2" Dia. Tubules
10' Long with 24 Sq.Ft.
of Active Membrane



The Original SUPER-G
Provides Maximum Recovery

SUPER-G® Module

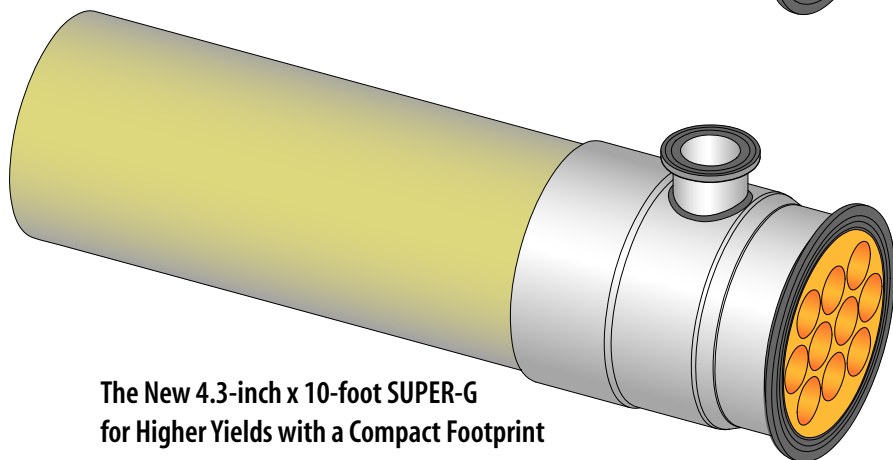
(4) 1" Dia. G-Tubes
10' Long with 9 Sq.Ft.
of Active Membrane



The New 4.3-inch x 12-foot SUPER-COR
Module for Streamlined System Design

4.3" SUPER-COR® XL PLUS Module

(37) 1/2" Dia. Tubules
12' Long with 56 Sq.Ft.
of Active Membrane



The New 4.3-inch x 10-foot SUPER-G
for Higher Yields with a Compact Footprint

4.3" SUPER-G® PLUS Module

(10) 1" Dia. G-Tubes
10' Long with 23 Sq.Ft.
of Active Membrane

A Legacy Of Innovation

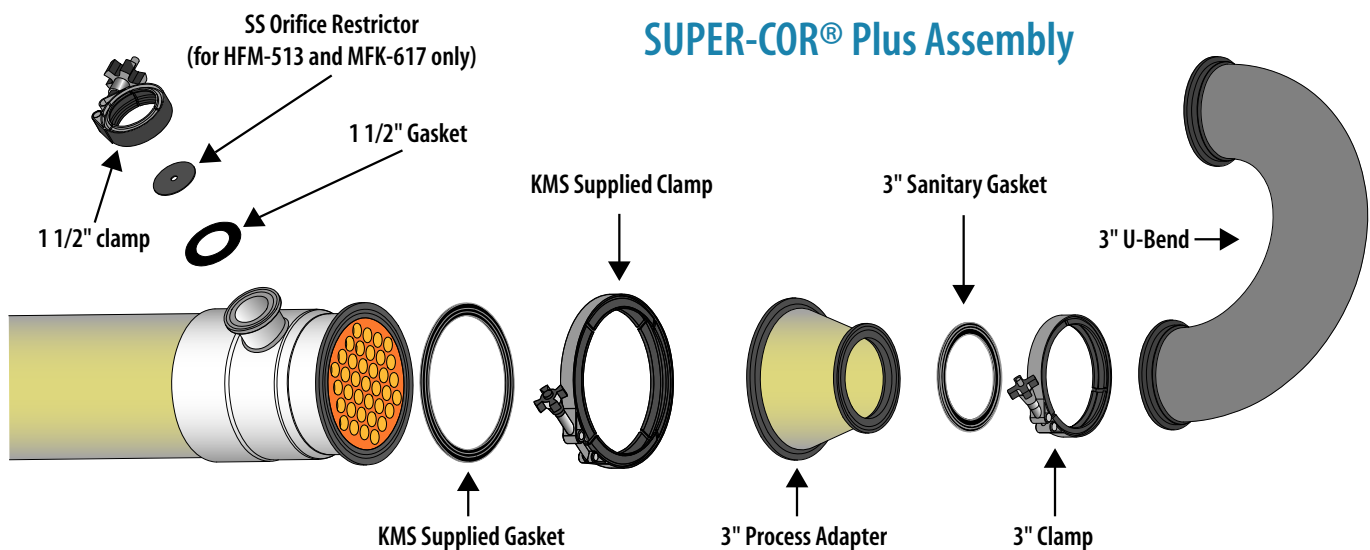
Juice clarification using membrane filtration first became viable with the development of the KMS SUPER-COR HFM-180 ultrafiltration module in 1983. It quickly became, and remains, the industry standard for the highest quality processing. As a result of continuous research and development, the MFK-617 microfiltration membrane was introduced in 1990 and opened the doors for dark juice producers to incorporate the benefits of membranes.

The SUPER-G module was added to the line-up in 1995. The one-inch SUPER-G tubes provide the means to increase juice yields by 2-3% that is especially attractive to single-strength processors who do not employ diafiltration.

The Newest Members Of The KMS Juice Family

Recently, KMS has made great strides in optimizing its product offering. This includes the HFM-513 “open” UF membrane. The HFM-513 provides significantly higher productivity than the HFM-180 plus acceptable stability and color passage making it a universal choice for all juice applications, particularly for plants processing more than one fruit variety.

KMS has also expanded the range of modules by introducing the PLUS series of 4.3-inch modules and the XL series of 12-foot modules. These innovations provide end-users and OEMs with the tools to build and retrofit systems to achieve the optimum combination of productivity and space requirements.



SUPER-COR Element Now Has Super Strength

The building block of the SUPER-COR module – the individual tubule - has been re-engineered to provide enhanced structural strength. Collapse resistance has been improved by 50% and burst pressure by 15%. It all adds up to a more robust membrane delivering longer product life, less downtime, and lower operating costs.

KMS Innovation Continues With The New HFM-513 Membrane

Greater Productivity: Processors can now achieve more juice throughput with the advanced HFM-513 ultrafiltration membrane. This is the newest all-purpose membrane for juice clarification developed by Koch Membrane Systems. The HFM-513 delivers 15-30% higher output than the KMS MFK-617 MF membrane and 30-50% higher fluxes than the standard KMS HFM-180 UF module.

Improved Results: The permeate clarity of the HFM-513 is comparable to that of the HFM-180 with less than 2 NTUs for light juices. Even more impressive is the color passage and clarity on dark juices. A distinct advantage of the HFM-513 is that there is no start-up period required to stabilize permeate turbidity.

Easy Retrofitting: Especially beneficial to actual in-plant operations, the HFM-513 can be easily retrofitted into existing systems without additional hardware.

Even More Options: The HFM-513 is available in two new SUPER-COR configurations:

- SUPER-COR XL 3-inch x 12-foot model for retrofit designs
- SUPER-COR XL PLUS 4.3-inch x 12-foot model for more economical system designs

To complete the package, the HFM-513 has been incorporated into the SUPER-G and SUPER-G PLUS modules providing both high flux and high recovery.

SUPER-COR & SUPER-G Modules Deliver Super Benefits

- Completely eliminates the need for diatomaceous earth
- Solutions for all juices and production requirements
- Higher product yields, even without diafiltration
- Improved membrane life
- Provides optimum flavor, color and stability
- Better results with activated carbon-treated juices



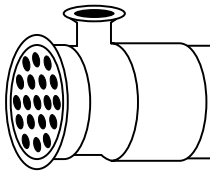
The SUPER-COR® Line-up Handles A Wide Variety Of Juices Without Altering Color Or Flavor.

More Juice Per Bushel. Higher Profits Per Gallon.

Today, the expanded selection of SUPER-COR and SUPER-G modules and their associated membranes offers producers the most filtration flexibility available. As a result, KMS provides all the high performance filtration modules and system designs you need.

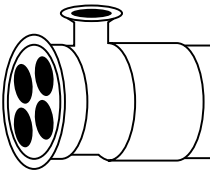
The KMS line-up offers the flexibility to address every processor's requirements:

- Three ranges of membrane pore sizes: HFM-180, HFM-513 and MFK-617
- SUPER-COR and SUPER-G tubular styles
- New 4.3-inch diameter modules *and* 12-foot lengths
- Streamlined system designs to maximize the effectiveness of each of these products



SUPER-COR, SUPER-COR XL and SUPER-COR XL PLUS Modules

Membrane	Applications	Product	Diameter in. (cm)	Length ft (m)	Surface Area ft ² (m ²)	KPN
HFM-180 UF	Light Juices	SUPER-COR®	3.0 (7.6)	10 (3.0)	24 (2.23)	0712010
		SUPER-COR® XL PLUS	4.3 (10.9)	12 (3.7)	56 (5.21)	0712310
HFM-513 UF	All Juices	SUPER-COR®	3.0 (7.6)	10 (3.0)	24 (2.23)	0712070
		SUPER-COR® XL	3.0 (7.6)	12 (3.7)	29 (2.68)	0712270
		SUPER-COR® XL PLUS	4.3 (10.9)	12 (3.7)	56 (5.21)	0712370
MFK-617 MF	Dark Juices	SUPER-COR®	3.0 (7.6)	10 (3.0)	24 (2.23)	0712004
		SUPER-COR® XL	3.0 (7.6)	12 (3.7)	29 (2.68)	0712204
		SUPER-COR® XL PLUS	4.3 (10.9)	12 (3.7)	56 (5.21)	0712304



SUPER-G and SUPER-G PLUS Modules

Membrane	Applications	Product	Diameter in. (cm)	Length ft (m)	Surface Area ft ² (m ²)	KPN
HFM-180 UF	Light Juices	SUPER-G®	3.0 (7.6)	10 (3.0)	9 (0.85)	0712001
		SUPER-G® PLUS	4.3 (10.9)	10 (3.0)	23 (2.09)	0712301
HFM-513 UF	All Juices	SUPER-G®	3.0 (7.6)	10 (3.0)	9 (0.85)	0712071
		SUPER-G® PLUS	4.3 (10.9)	10 (3.0)	23 (2.09)	0712371



Unfiltered Apple Juice

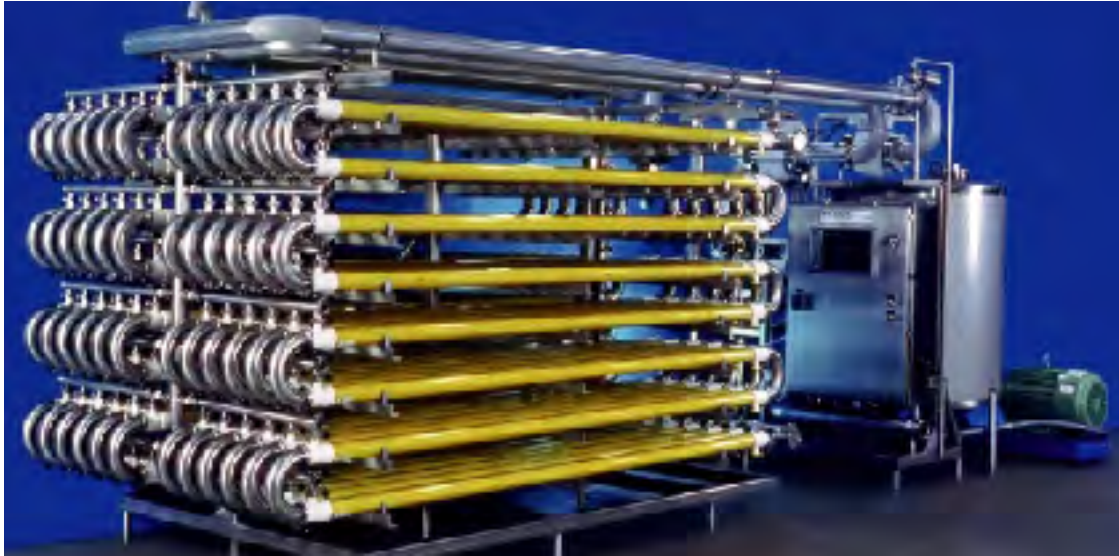


Sparkling Haze-Free Juice



Sludge From SUPER-G

KMS Provides Complete Solutions From Filter Modules To Automated Systems



The Benefits Of The KMS SUPER-COR & SUPER-G Systems Are Crystal Clear

- Full or Semi-Automated Operation
- Integral CIP System and Permeate Transfer
- Automatic Over-Concentration Feature During Batch Cycle to Prevent Plugging
- Standard Systems Sizes to Process Up to 200 gpm (45 m³/hr)
- Custom KMS Systems Available for Continuous Feed Citrus Applications
- Integrated SUPER-COR/SUPER-G Systems to Maximize Recovery

THE KMS BONUS: Add to your satisfaction and peace of mind by specifying KOCHKLEEN[®] custom-formulated cleaning chemicals. They are manufactured to strict KMS standards and formulated specifically to protect your membrane investment by minimizing downtime and providing reproducible CIP results.

The KMS ASSISTSM program provides on-the-spot technical assistance and troubleshooting at a moment's notice. Keep your system running smoothly with the expertise of KMS-trained Field Service staff.



Pressed Cranberry Juice



Clarified Highly-Colored Juice



SUPER-G Retentate

You Are Never Too Far
From An Ideal Solution
With The World's
Most Sophisticated
Membranes

We invite you to
visit our website at
www.kochmembrane.com



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