

# ROMICON® 5" HOLLOW FIBER CARTRIDGES

## 5" Diameter Hollow Fiber Ultrafiltration Cartridges

### PRODUCT DESCRIPTION

|                                                        |                                                                                                                        |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Membrane Polymer:</b>                               | Polysulfone                                                                                                            |
| <b>Housing Construction:</b>                           | Polysulfone                                                                                                            |
| <b>Seal/Potting Material:</b>                          | Proprietary Epoxy Compound                                                                                             |
| <b>Storage Solution:</b>                               | Glycerin                                                                                                               |
| <b>Options:</b>                                        |                                                                                                                        |
| <b>Lumen size:</b>                                     | 20 mil (0.5 mm), 43 mil (1.1 mm), 60 mil (1.5 mm), 75 mil (1.9 mm), 106 mil (2.7 mm)                                   |
| <b>Membrane Type:</b>                                  | PM5, PM10, PM30, PM50, PM100, or PM500                                                                                 |
| <b>Special Construction for Specific Applications:</b> |                                                                                                                        |
| <b>Vinegar Filtration:</b>                             | Selected PM50 and PM500 cartridges are available for vinegar filtration.                                               |
| <b>Citrus Filtration:</b>                              | Selected PM10, PM50 and PM500 cartridges are available for citrus filtration.                                          |
| <b>ISOCON Cartridge:</b>                               | ISOCON PM10 20-mil cartridge is available for high temperature cleaning                                                |
| <b>ROMIPRO™ Cartridges:</b>                            | Selected cartridges of all membrane types are available with components that have passed USP Class VI test guidelines. |

106 (2.7)

### CARTRIDGE AVAILABILITY AND MEMBRANE AREA

| Membrane Type                   | MWCO (Dalton) or Pore size (µm) | Fiber Diameter [mil (mm)] |          |          |          |
|---------------------------------|---------------------------------|---------------------------|----------|----------|----------|
|                                 |                                 | 20 (0.5)                  | 43 (1.1) | 60 (1.5) | 75 (1.9) |
| PM5                             | 5,000                           |                           | •        |          |          |
| PM10                            | 10,000                          | •                         | •        | •        |          |
| PM30                            | 30,000                          |                           | •        |          |          |
| PM50                            | 50,000                          |                           | •        | •        | •        |
| PM100                           | 100,000                         | •                         | •        |          |          |
| PM500                           | 500,000                         |                           | •        |          | •        |
| <b>Membrane Area [ft² (m²)]</b> |                                 | 132 (12.3)                | 66 (6.2) | 66 (6.2) | 52 (4.8) |

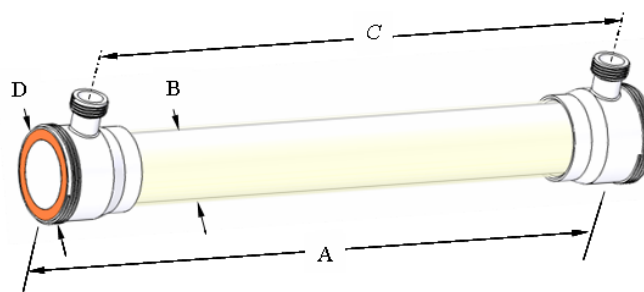
40 (3.7)

### OPERATING AND DESIGN INFORMATION\*

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| <b>Maximum Inlet Pressure:</b>                    | 40 psi (2.8 bar)                   |
| <b>Maximum Transmembrane Pressure:</b>            | 35 psi (2.4 bar)                   |
| <b>Maximum Operating Temperature (at pH 6.0):</b> | 140°F (60°C)                       |
| <b>Maximum Cleaning Temperature:</b>              | 130°F (54°C)                       |
| <b>Maximum Permeate Side Back Pressure:</b>       | 20 psi (1.4 bar)                   |
| <b>Maximum Differential Pressure Feed Side:</b>   | 30 psi (2.1 bar)                   |
| <b>Allowable pH:</b>                              | 1.5 – 13.0 @ 130°F (54°C)          |
| <b>Maximum Total Chlorine (During Cleaning):</b>  | 200 ppm @ pH 10-10.5, 130°F (54°C) |
|                                                   | 0 ppm @ pH less than 9.5           |

\* Consult KMS Process Technology Group for specific applications.

### NOMINAL DIMENSIONS



| A           | B           | C            | D           | Permeate Connection | Process Connection |
|-------------|-------------|--------------|-------------|---------------------|--------------------|
| inches (mm) | inches (mm) | inches (mm)  | inches (mm) |                     |                    |
| 43 (1092)   | 5.0 (127)   | 38 5/8 (981) | 6.0 (152)   | 1 1/2" NPSM         | 6" NPSM            |

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### Membrane Characteristics:

ROMICON® cartridges should be selected for filtration of liquids based on the separation range needed. They provide stable productivity, ease of cleaning and reliable operation. KMS ROMICON® cartridges are crossflow-type filters, in which the feed solution is pumped across the cartridge to minimize solids cake buildup on the membrane. Crossflow filters provide efficient filtration at low operating pressure, allowing long process runs while reducing cleaning time, cleaning frequency, and labor costs.

### Exposure to Chemical Oxidants:

While not recommended for use on a daily basis, exposure to chemical oxidants for thorough cleaning and sanitization may prove necessary and useful.

Potassium metabisulfite (without catalyst such as cobalt) is the preferred chemical to eliminate residual chlorine or similar oxidizers prior to processing process liquid.

### Lubricants:

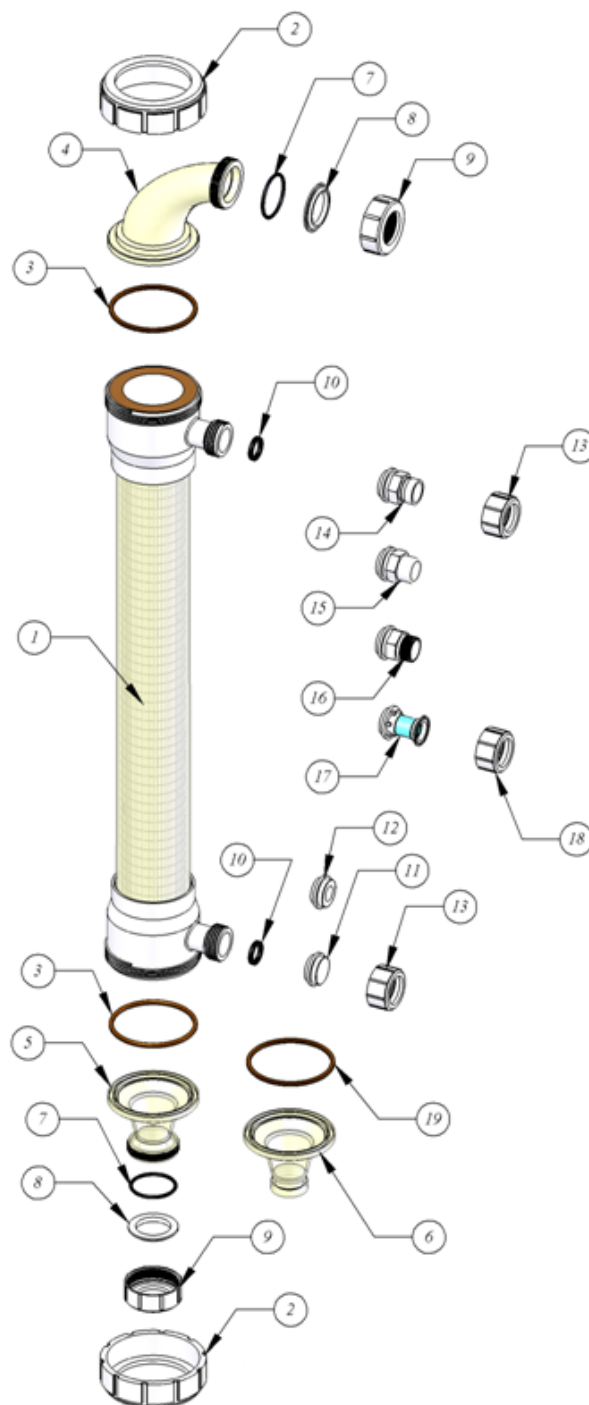
For cartridge installation, use only water or glycerin to lubricate seals. The use of petroleum or vegetable-based oils or solvents may damage the cartridge and will void the warranty.

## 5" HOLLOW FIBER CARTRIDGE HARDWARE

| Item | Part Description                       | KPN          |
|------|----------------------------------------|--------------|
| 1    | 5" HF Cartridge                        | 072XXXX      |
| 2    | Process Cap Nut                        | 0040364      |
| 3    | Cartridge Gasket                       | EPDM 0090443 |
|      | BUNA                                   | 0090444      |
| 4    | Cartridge Reducing Elbow               | 0040365      |
| 5    | Cartridge Straight adapter (threaded)  | 0040376      |
| 6    | Cartridge Straight adapter (Victaulic) | 0213000      |
| 7    | Manifold Gasket                        | EPDM 0090439 |
|      | BUNA                                   | 0090432      |
| 8    | Cartridge Backup Ring                  | 0040368      |
| 9    | Manifold Cap Nut                       | 0040367      |
| 10   | Permeate Port Gasket                   | EPDM 0090447 |
|      | BUNA                                   | 0090446      |
| 11   | Permeate Plug                          | 0040375      |
| 12   | Permeate Adapter ¾" NPTF               | 0040372      |
| 13   | Permeate Cap Nut (for 14, 15, 16)      | 0040370      |
| 14   | Permeate Adapter (Victaulic)           | 0213076      |
| 15   | Permeate Adapter Plain                 | 0213093      |
| 16   | Permeate Adapter NPT                   | 0213077      |
| 17   | Permeate Adapter Sanitary              | 0211787      |
| 18   | Permeate Cap Nut (for part 17)         | 0040377      |
| 19   | Cartridge Seal                         | 0211094      |

### SERVICE AND ONGOING TECHNICAL SUPPORT

Koch Membrane Systems, Inc. has an experienced staff of professionals available to assist end-users and OEMs for optimization of existing systems and support the development of new applications. Along with the availability of supplemental technical bulletins, Koch Membrane Systems, Inc. also offers a complete line of KOCHKLEEN® cleaning chemicals.



The information contained in this publication is believed to be accurate and reliable, but is not to be construed as implying any warranty or guarantee of performance. We assume no responsibility, obligation or liability for results obtained or damages incurred through the application of the information contained herein. Refer to Standard Terms and Conditions of Sale and Performance Warranty documentation for additional information.

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