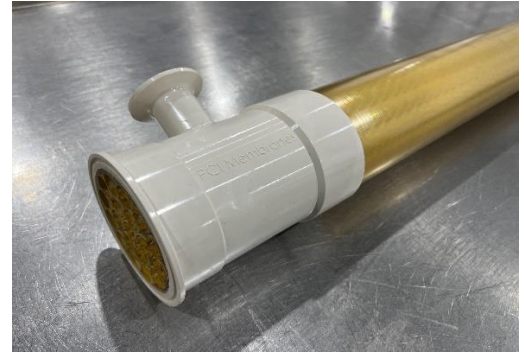


## K19 Series

The K19 Series is designed to provide the most effective juice clarification process for a large variety of juice types. The K19 Series module design with PCI's tubular membranes are available in a variety of lengths for the needs of industrial juice-production facilities. Smaller length modules are available for the replacement of existing systems for juice producers. K19 Series modules are available with membranes of different pore sizes for light or dark juice filtration, ensuring that larger particles and turbidity are retained, while color, flavor and aroma are allowed to pass through to the filtrate side. K19 module is manufactured with a BPA free housing and ideal to clarify a diverse range of juices, including orange, apple, pear, cranberry, grape, berries, carrots, açai, pomegranate and other exotic varieties.

<b>Membrane material:</b>	PVDF
<b>MWCO options:</b>	20kDa; 100kDa; 200kDa; 450kDa & 0.2 micron
<b>Membrane configuration:</b>	Tubular
<b>Application:</b>	Juice processing
<b>Tube diameter:</b>	12.5mm
<b>Filtration mode:</b>	In-to-out
<b>Housing material:</b>	BPA free
<b>Seals material:</b>	Nitrile, EPDM
<b>Compliance:</b>	FDA CFR Title 21, EU-10/2011, 1935/2004 Kosher in progress

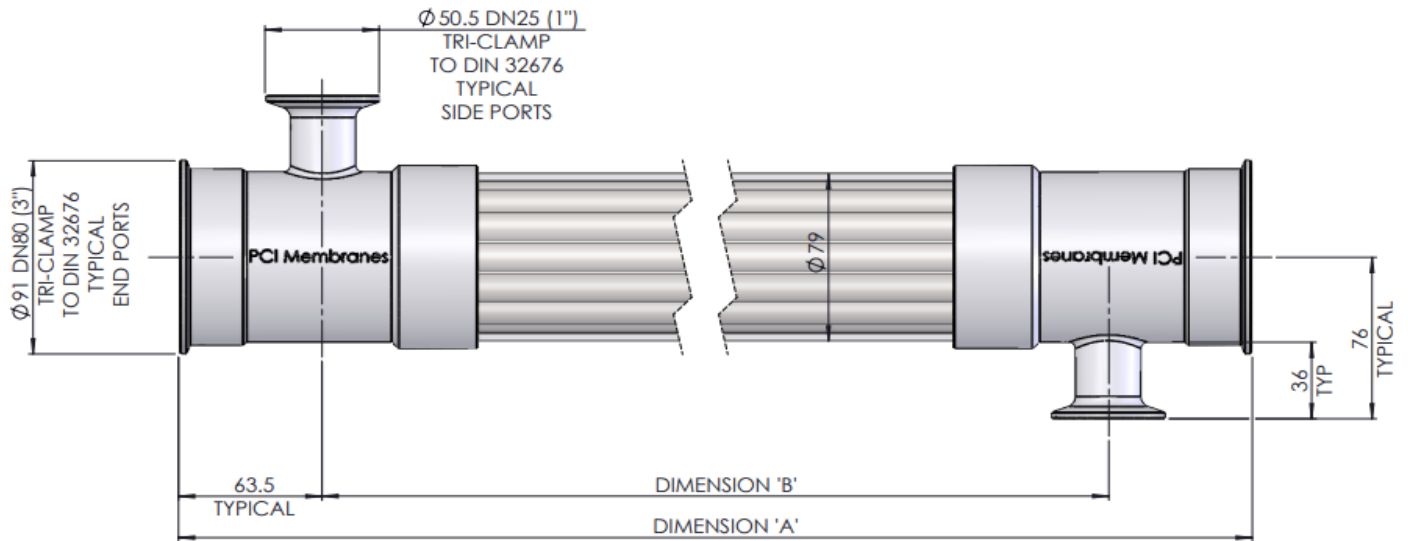


### Membrane Module Specifications

Model	MWCO [kDa]	Length (A) [mm (ft)]	Length (B) [mm(ft)]	Feed/ concentrate connections	Permeate connections	Membrane area [m <sup>2</sup> (ft <sup>2</sup> )]	Weight [kg (lb)]
FPU020/10/4	20	3048 (10)	2921 (9.58)	3" (Tri-clamp, DN80 DIN 32676)	2 x 1" (Tri-clamp, DN25 DIN 32676)	2.12 (22.82)	5.0 (11.0) ±10%
FPU10/10/4	100						
FPU20/10	200						
LPU450/10/4	450						
LMU02/10/4	0.2 µm						
FPU020/12/4	20	3658 (12)	3531(11.58)	3" (Tri-clamp, DN80 DIN 32676)	2 x 1" (Tri-clamp, DN25 DIN 32676)	2.56 / (27.56)	6.0 (13.2) ±10%
FPU10/12/4	100						
FPU20/12	200						
LPU450/12/4	450						
LMU02/12/4	0.2 µm						

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## K19 Series



**Note:** U-bends and seals are not included with the modules and are to be ordered separately.

### Recommended Operating Conditions

Parameter	Value
Maximum operating pressure	7 bar at 49°C/101.5 PSI at 120°F
Temperature range	Max 54°C/129.2°F (short term), 49°C/120°F (continuous)
pH range	1.5-10.5
Maximum chlorine concentration	250 ppm at pH > 9

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## K19 Series

### Storage Guidelines

During storage, membrane modules must always be fully protected and be stored in a dry, clean, non-corrosive, non-polluted environment, and far from sources of cold or heat. The environmental temperature range shall be between 0°C and 30°C. Modules are to be stored preserved and sealed.

### Cleaning Guidelines

The following reference CIP guidelines are referred to depectinized apple juice processing and are to be adapted based on the specific application, feed fluid and operating parameters:

- Displace the process fluid with water at 50-55°C;
- Recirculate a solution of sodium hydroxide at a pH of 10.0-10.5 and at a temperature of 50-55°C for 20 minutes;
- Displace the caustic solution from the system with water at 50-55°C;
- Recirculate a solution of sodium hydroxide around the system at a pH of 10.0-10.5 and at a temperature of 50-55°C until the system is full of the caustic solution;
- Add sodium hypochlorite to have a concentration of chlorine equal to 200 ppm;
- Recirculate for a minimum of 30 minutes, periodically check the chlorine concentration, and top it up to maintain 200 ppm (if necessary);
- Displace and rinse the spent cleaning solution to drain with clean water. During the final stages of the rinse, the bulk permeate flux should be measured. If this is carried out at the same conditions each day (i.e., at the same temperature, pressure, and flow), the effectiveness of the clean can be monitored.

Note: It is essential that the pH of 10.5 is achieved before addition of sodium hypochlorite in order to prevent attack of the membrane by the hypochlorite.

### Accessories

Description	Part Number
ENDSEAL   1 pc   3" GASKET TRI-CLAMP EPDM	22011100
ENDSEAL   1 pc   3" GASKET TRI-CLAMP NBR WHITE	22011102
PERMEATE SEAL   1 pc   1" GASKET TRI-CLAMP EPDM	22011101
PERMEATE SEAL   1 pc   1" GASKET TRI-CLAMP NBR WHITE	22011103
CLAMP 3"	22011098
CLAMP 1"	22011099
PERMEATE VALVE ASSAY 1"	37000551

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