

## PCI - HF Gmbr Module Datasheet

Reinforced submerged hollow fibre membranes are employed in the filtration stage to separate purified effluent from waste compounds, providing disinfected effluent of a very high quality. The unique design of these membranes incorporates braiding to significantly improve the membrane's ability to withstand the harsh operating environment of a Membrane Bioreactor, and thus increase their lifespan. The membranes are mounted in proprietary modules that provide the optimal degree of restraint and system robustness.

### Membrane Specifications :

- Membrane material : PVDF
- Membrane type : Reinforced Hollow Fibre
- Pore size ( micron ) : 0.02
- Filtration type : Outside-to-in
- Max operation pressure (bar) : -0.6
- Suggested operation pressure (bar) : -0.3
- Max operation temperature (°C) : 45
- pH range : 1~12



### Module Dimensions

Product	Length [L] mm (in)	Width [W] mm (in)	Height [H] mm (in)
PCI - HF Gmbr - S	720 (28)	70 (2.7)	1622 (63)
PCI - HF Gmbr - U	720 (28)	70 (2.7)	2122 (63)

### Module Technical Data

Product	Membrane Surface Area m <sup>2</sup> (ft <sup>2</sup> )	Max. Shipping Weight kg (lb)	Material	Nominal Pore Size µm	Fiber Diameter	Flow Path
PCI - HF Gmbr - S	23 (248)	13 (29)	PVDF	0.02	ID 1.0 OD 2.0	Outside-in
PCI - HF Gmbr - U	31 (334)	16 (26)				

### Operation Data

Product	TMP Range kPa (psig)	Operation pH Range	Max. Temperature °C (°F)	Max. Extraction Pressure kPa (psig)
PCI - HF Gmbr - S	-55 to 55 (-8 to 8)	1-12	40 (104)	-60 (-8.7)
PCI - HF Gmbr - U				

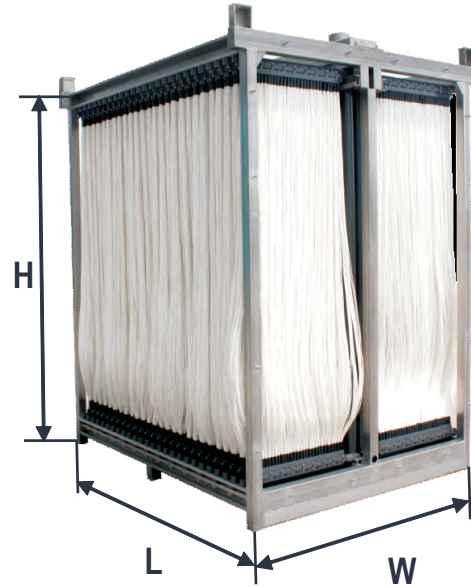
## PCI - HF Gmbr Membrane Cassette Datasheet

Reinforced submerged hollow fiber membranes are employed in the filtration stage to separate purified effluent from waste compounds, providing disinfected effluent of a very high quality. The unique design of these membranes incorporates braiding to significantly improve the membrane's ability to withstand the harsh operating environment of a Membrane Bioreactor, and thus increase their lifespan. The membranes are mounted in proprietary modules that provide the optimal degree of restraint and system robustness.

### Cleaning Chemical Resistance:

- **Sodium Hypochlorite :**
  - Typical 500-1,500 ppm, at  $\leq 40^{\circ}\text{C}$
  - Maximum 5,000 ppm
  - 2,880,000 ppm hours cumulative
- **Hydrochloric Acid**
  - Typical 2,000 ppm at  $\leq 40^{\circ}\text{C}$
  - Maximum 3%
  - 1,440,000 ppm hours cumulative
- **Citric Acid**
  - Typical 0.5% at  $\leq 40^{\circ}\text{C}$
  - Maximum 15,000 ppm
  - 1,440,000 ppm hours cumulative

NOTE :During chemical cleaning and/or disinfection, PCI Membranes suggests to keep the pH range of cleaning solution from 1 to 11, at  $\leq 40^{\circ}\text{C}$ .



### Cassette Dimension

Product	Length [L] mm (in)	Width [W] mm (in)	Height [H] mm (in)
PCI - HF Gmbr - S14	1210 (47)	805 (31)	2010 (79)
PCI - HF Gmbr - S26	2110 (83)	805 (31)	2030 (80)
PCI - HF Gmbr - U14	1210 (47)	805 (31)	2510 (99)
PCI - HF Gmbr - U26	2110 (83)	805 (31)	2530 (99)
PCI - HF Gmbr - U52	2110 (83)	1560 (62)	2520 (99)

### Cassette Technical Data

Cassette model	Max. of Gmbr Module	Max Area m <sup>2</sup>	Air Connection	Permeate Connection	Max. Shipping Weight kg (lb)	Max. Lifting Weight kg (lb)
PCI - HF Gmbr - S14	14	322	1 x 2" FNPT	1 x 3" FNPT	320 (705)	730 (1609)
PCI - HF Gmbr - S26	26	598	1 x 3" FNPT	2 x 4" FNPT	600 (1322)	1350 (2976)
PCI - HF Gmbr - U14	14	434	1 x 3" FNPT	2 x 4" FNPT	380 (837)	830 (1829)
PCI - HF Gmbr - U26	26	806	1 x 3" FNPT	2 x 4" FNPT	700 (1543)	1600 (3527)
PCI - HF Gmbr - U52	52	1612	2 x 3" pipe	1 x 6" pipe	1400 (3086)	3100 (6834)

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### Transport :

During Transportation, the modules must be protected from moisture, exposure, heavy pressure, violent collisions and bumps, and prohibit inversion. Environmental temperature range shall be 0-40°C. Please read the related data carefully before selecting transport vehicle and lifter.

There is a special protection solution inside the modules; this can protect the membrane from drying out and microorganisms growing (79% Water, 20% Glycerin, 0.5% Sodium dodecyl sulfate, 0.5% Isothiazolinone). The sealed package shall be without breakage during transportation.

### Storage :

The membrane modules must always be fully protected during storage. The new membrane modules shall be stored in a dry, clean, non-corrosive, non-polluted, far from sources of cold or heat. Environment temperature range shall be 0-40°C. During outdoor transportation, the modules must be placed in the specific area with supporting cover to avoid wind and direct sunlight.

The membrane modules have been coated with a protection solution (79% Water, 20% Glycerinum, 0.5% Sodium dodecyl sulfate, 0.5% Isothiazolinone) and sealed within a vacuum package. If they are stored within above conditions, the maximum storage time can be 1 year. After 1 year, the protection solution on the surface must be renewed, the formula is the same as above.

Once the membrane is installed in the membrane tank, during a short-term system stop, the membrane module must be completely cleaned first before re-starting. In some cases, shall be cleaned by chemical, and feed protection solution (5mg/L NaClO) into the membrane tank for soaking membrane. If the concentration of NaClO in the membrane tank is less than 0.5mg/L, the operators must renew the protection solution of the membrane tank immediately.