MICRODYN

Tubular and Capillary Modules

MICRODYN filter modules have been developed for crossflow microfiltration. This type of crossflow microfiltration represents a modern filtration method for the separation of suspended particles or emulsified liquids.

The highly porous symmetrical structure of the MICRODYN membrane leads to extremely high permeability. The pore size distribution is very narrow making sharp separations possible. The MICRODYN membrane is very resistant to abrasion and other mechanical damage due to its homogeneous construction, unlike asymmetrically structured ceramic membranes. It also has great chemical resistance because of the material properties of polypropylene.

The membranes are available as hollow fibers, capillaries and tubes. Capillary and hollow fiber membranes are potted in the module housing. The centrifugal casting of the potting material guarantees high product quality.

Tubular membranes are welded together integrally with the housing. This makes gaskets or other sealing materials unnecessary. The modules are therefore extremely chemically stable and robust (pH range 0-14).

ADVANTAGES

- » well defined flow conditions
- » high packing density per module
- » minimized dead zones
- » extremely resistant to abrasion
- » backflushing with chemicals
- » reduced specific energy consumption

Any surface deposits formed during filtration can be easily minimized by:

- » **Adjusting the velocity of the feed flow**
- » **Periodic backwashing (PRS)**
- » **Chemical cleaning in reverse flow to the filtration flow**

These techniques result in consistently high performance levels and many years of trouble-free operation.

Polypropylene is resistant to many organic and inorganic chemicals, including most acids and caustics, with the exception of oxidants. The MICRODYN microfiltration modules can be used for the filtration of most liquids and mixtures of these chemicals.

Overview MICRODYN Hollow Fiber Modules

Module Type	MD 070 FP 1L	MD 070 FP 2L
Membrane surface in m² 1)	2.2	2.2
Membrane material	Polypropylene with 0.6 mm inner diameter	
Pore size µm	0.1	0.2
Shell material	Polypropylene cartridge	Polypropylene cartridge

Note: (1) Based on inner diameter.

Overview MICRODYN Capillary Modules

Module Type	MD 020 CP 2N	MD063 CP 2N	MD 070 CP 2L	MD 150 CP 2N	MD 150 CS 2N	MD 200 CV 2N
Membrane surface in m² 1)	0.1	0.75	0.9	10	10	14
Membrane material	Polypropylene with 1.8 mm inner diameter					
Pore size µm	0.2					
Shell material	Polypropylene	Polypropylene	Polypropylene cartridge	Polypropylene	stainless steel shell	PVC shell

Note: (1) Based on inner diameter.

Overview MICRODYN Tubular Modules

Module Type	MD 020 TP 2N	MD 063 TP 2N	MD 090 TP 2N	MD 150 TP 2N	MD 150 TP 2L	MD 220 TP 2L
Membrane surface in m² 1)	0.036	0.2	1	4	8	16
Membrane material	Polypropylene with 5.5 mm inner diameter					
Pore size µm	0.2					
Shell material	Polypropylene					

Note: (1) Based on inner diameter.

Decoding of the product code: **MD150TP2LDF**

Module Type	Module Size	Membrane Geometry	Shell Material	Pore Size	Module Length	Module Connection
MICRODYN	(⌀ of the shell in mm) 020 063 070 090 150 200 220	T Tubular membrane C Capillary membrane F Hollow fiber membrane	P Polypropylene S Stainless steel 1.4571 V PVC/PVC-C U Polysulfone O without housing (exchangeable cartridge)	0.1 µm 0.2 µm	N normal L long	DL DIN Loose flange DF DIN Fixed flange JL JIS Loose flange JF JIS Fixed flange AF ANSI Fixed flange C Clamp connection F/R CC Clamp connection F/R/P AS Thread connection

Other module configurations and sizes can be supplied upon request. Not all combinations are available. The connections are available according to DIN nomenclature, JIS and ANSI. Further information can be found in our technical data sheet.

Final sizing and selection has to be approved by an official MICRODYN-NADIR representative. Please contact **phone + 49 611 962 6001** or **www.microdyn-nadir.de**

1 m² ≙ 10.764 ft² | 1L ≙ 0.26 us-gal. | 1" ≙ 2.54 cm