

# PTFE Membranes

## Grades & Dimensions

**PTFE porous membranes are manufactured from a pure PTFE. They have a good strength, but remain flexible for easy installation. PTFE membranes extremely inert and have very low absorption levels.**

Microscopic pores in the membrane allow the gas to flow through easily, but even the smallest liquid aerosols are prevented. The high surface tension of the liquid molecules cause them to be formed tightly together making them too large to fit through the pores of the membrane.

### Standard Sizes

PTFE membranes are available in a wide range of standard diameters. These are based on traditional industry standard sizes and allow the elements to be installed in other proprietary equipment.

MT.19.□ MT.33.□ MT.47.□ MT.61.□ MT.89.□ MT.101.□

Replace the □ in the part numbers shown with the grade selected from the tables below.

### Gas Applications

Grade	Type	Pore Size	Thickness
M1	Hydrophobic	0.1 µm	50 µm
M2	Hydrophobic	0.8 µm	50 µm
M3	Hydrophobic & Oleophobic	0.1 µm	50 µm
M4	Hydrophobic & Oleophobic	0.8 µm	50 µm

### Liquid/Liquid Applications

The principles are the same as for the gas application membranes - the higher surface tension of the water molecules cause them to be formed tightly together making them too large to fit through the pores of the membrane.

The M8 grade has a special support layer on the reverse of the membrane to increase the maximum pressure drop.

To ensure water is removed from the liquid hydrocarbon stream the contact time with the membrane should be maximised and the SML housings feature a special flow-path to do this.

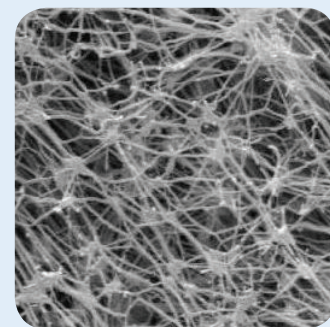
### Liquid/Liquid Applications

Grade	Type	Pore Size	Thickness
M8	Hydrophobic with Support Layer	0.8 µm	150 µm

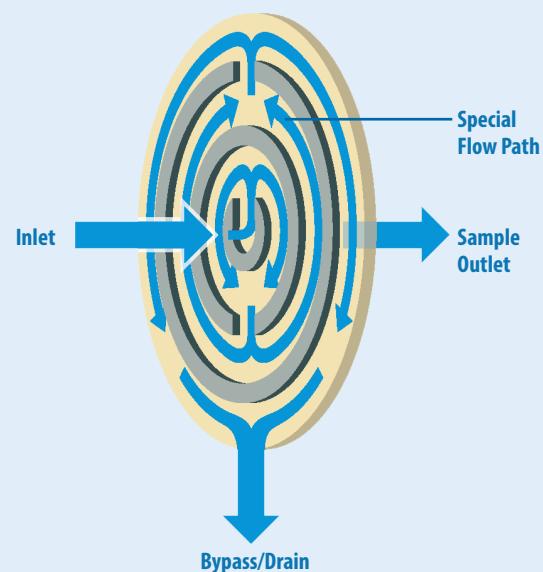
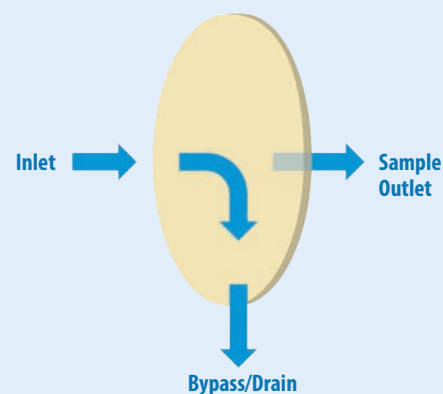
### Special Sizes

Special size membranes can also be manufactured in a range of different diameters.

Please enquire with any specific requirements.



PTFE Membrane



### Gas and Liquid Flow rates in litres/hr at 0.1 Bar pressure drop

Flow rates will depend on which membrane grade is installed in the membrane housing. First check the size of the filter element using the housing data sheets and then refer to the charts below to read the flow rate against the membrane grade. Replace the □ in the part number shown with the required grade, for example MT.33.M2

For housings that have two membranes installed the flow rates can be doubled.

#### Gas Flow Rates

#### Liquid/Liquid Flow Rates

##### MT.19.□

Grade	Air
M1	9
M2	275
M3	9
M4	275

Grade	Gasolene	Kerosene	Diesel
M8	24.6	10.6	9.0

##### MT.33.□

Grade	Air
M1	15
M2	480
M3	15
M4	480

Grade	Gasoline	Kerosene	Diesel
M8	42.7	18.4	15.7

##### MT.47.□

Grade	Air
M1	22
M2	685
M3	22
M4	685

Grade	Gasoline	Kerosene	Diesel
M8	60	26	22

##### MT.61.□

Grade	Air
M1	29
M2	890
M3	29
M4	890

Grade	Gasoline	Kerosene	Diesel
M8	79	34	29

##### MT.89.□

Grade	Air
M1	42
M2	1290
M3	42
M4	1290

Grade	Gasoline	Kerosene	Diesel
M8	115	49	42

##### MT.101.□

Grade	Air
M1	48
M2	1450
M3	48
M4	1450

Grade	Gasoline	Kerosene	Diesel
M8	130	56	48

**Notes** (1) Flow rates are generally proportional to pressure drop. If an initial drop of 0.2 bar can be tolerated flow rates can be doubled.