



# Micro-Series

## Air/Gas Microfiltration Products

Membrane Elements and Housing Assemblies For:

- Semiconductor/Microelectronics
- Medical/Pharmaceutical
- Food and Beverage

*Bulletin 1300 - 450/USA*

Compressed Air  
and Gas Filters



# Finite<sup>®</sup>

# Finite's Air and Gas Microfiltration Products - Micro-Series

**F**inite® Filter's Micro-Series filters are designed to provide absolute rated membrane filtration for the semiconductor, pharmaceutical, and food and beverage markets. Our pleated membrane media offers absolute removal ratings for contaminants as small as 0.01 µm while providing lower differential pressures than competitive membrane products.

Finite's pleated PTFE media has the lowest pressure drop at rated flow and the highest efficiency in the filtration industry. These important factors provide substantial savings for our customers.

All filter housings are constructed of 316L stainless steel and have a Maximum pressure rating of 150 PSIG/10 bar. Connection sizes range from 1" NPT to 6" flange.





# Industries & Applications

## Semiconductor/Microelectronics

Clean, dry air (CDA) final filters  
Hard disk manufacturing  
Automated disk testers

Wafer drying systems  
CDA to replace use of nitrogen  
Wafer polishing equipment

## Pharmaceutical/Medical

Bag cleaning  
Laboratory air  
Filtration of bulk gases

Bottle filling machines  
Venting of holding tanks  
Gas calibration equipment

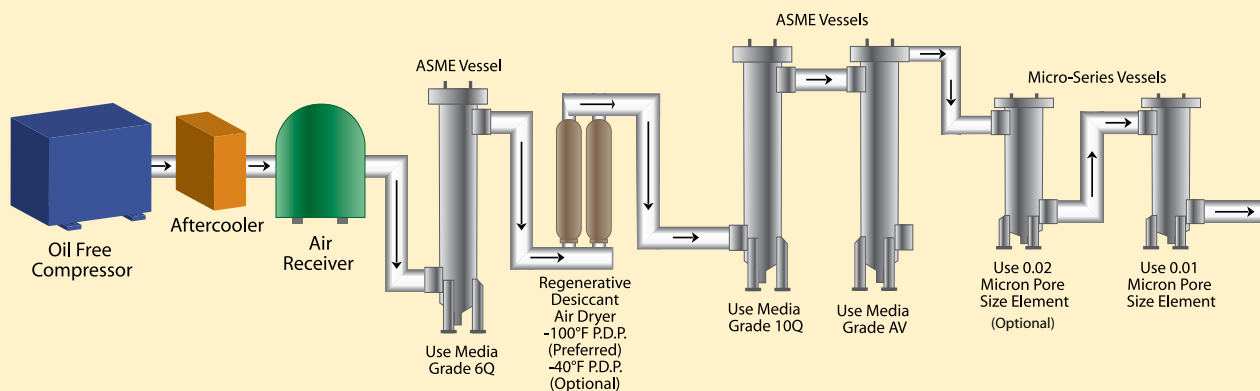
## Food and Beverage

Aseptic packaging  
Blow molding  
Purging

Air bearings/motors  
Conveying  
Tank padding

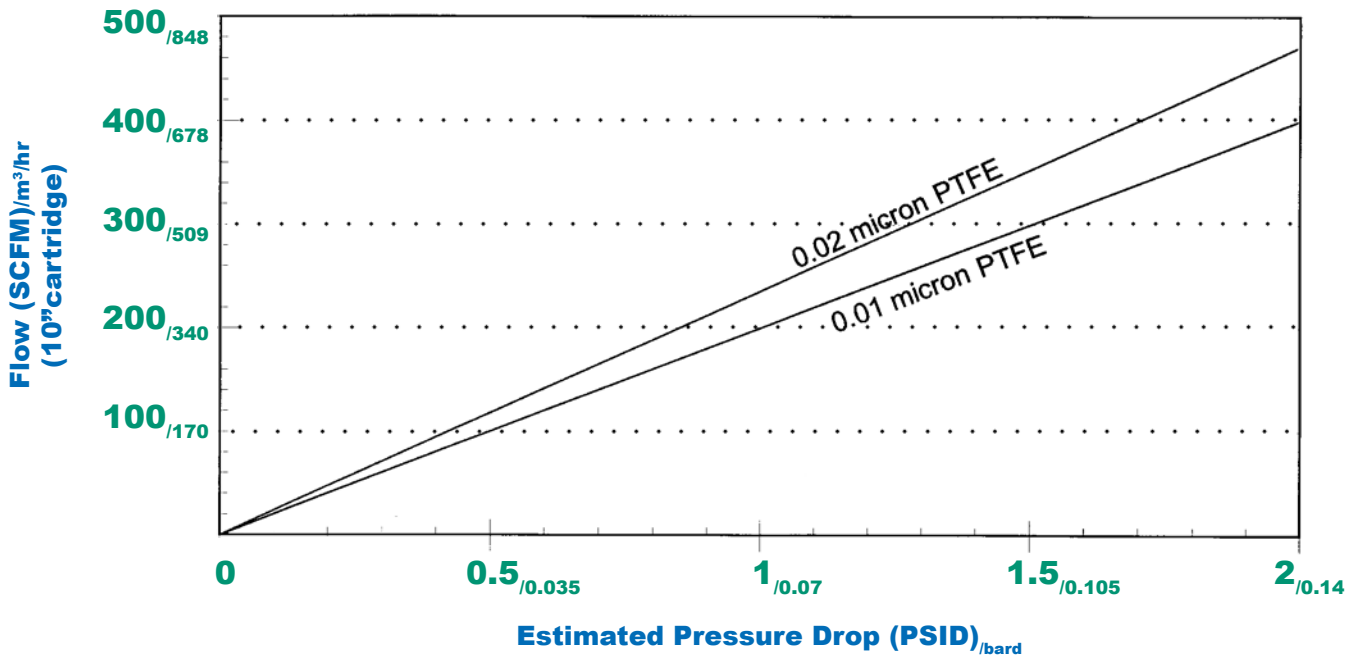
## Typical Clean, Dry Air (CDA) Installations

ASME Vessels are described on pages 23-34.



# Media Selection

Flow vs. Dry Pressure Drop  
at 100 PSIG<sub>/7 bar</sub>



## Features and Benefits - PTFE Membrane

- PTFE membrane media is non-fiber releasing and provides broad chemical compatibility
- High flow rates and optimized surface area reduce filter consumption
- 100% Integrity tested
- Pleated construction provides large high purity filtration area for Maximum yields
- Biosafe in accordance with USP Class V1-121°C Plastics Tests
- Polypropylene support hardware with fluorocarbon o-ring seals withstands demanding operating conditions
- Narrow pore size distribution ensures the ultimate in retention and flow rate
- All materials of construction are FDA listed as acceptable for food contact according to CFR Title 21
- Manufactured and packaged in Class 10 clean room
- 99.999999% (8 log) efficiency at specified removal ratings (0.01 µm, 0.02 µm)

## Membrane Element Specifications

**Sealing Technology:** Thermal Bonding

**O-Rings/Gaskets:** Fluorocarbon

**Maximum Differential Pressure (FWD):** 60 PSID

**Maximum Differential Pressure (REV):** 50 PSID

**Packaging:** Double bagged in Class 10 clean room



**Double Open Ended-D.O.E.**  
(MT Housing Series)



**222/Flat**  
(MF Housing Series)

## PTFE Membrane Elements

(PTFE Membrane Elements have polypropylene membrane support and polypropylene end caps)

	Finite P/N	Micron Rating	Bubble Point (PSIG /bar)	Surface Area (SQ. FT. /SQ. Meters)	Max. Temp. °F /°C
<b>Double Open Ended</b>	1BAP20-100V	0.01um	≥24 /1.7	7.5 /0.8	175° F /79° C
	1BAP20-200V	0.01um	≥24 /1.7	15.0 /1.6	175° F /79° C
	2BAP20-100V	0.02um	≥16 /1.1	7.5 /0.8	175° F /79° C
	2BAP20-200V	0.02um	≥16 /1.1	15.0 /1.6	175° F /79° C
<b>222/Flat</b>	1BDP20-100V	0.01um	≥24 /1.7	7.5 /0.8	175° F /79° C
	1BDP20-200V	0.01um	≥24 /1.7	15.0 /1.6	175° F /79° C
	1BDP20-300V	0.01um	≥24 /1.7	22.5 /2.4	175° F /79° C
	2BDP20-100V	0.02um	≥16 /1.1	7.5 /0.8	175° F /79° C
	2BDP20-200V	0.02um	≥16 /1.1	15.0 /1.6	175° F /79° C
	2BDP20-300V	0.02um	≥16 /1.1	22.5 /2.4	175° F /79° C

## How To Order Membrane Elements

(Housings must be ordered separately- see Housing Selection Chart on next page.)

<b>1</b>	<b>B</b>	<b>D</b>	<b>P</b>	<b>20</b>	-	<b>200</b>	<b>V</b>
Nominal Pore Size	Materials of Construction	End Cap Configuration	Pleated Media	Nominal Element Diameter		Nominal Length	O-Ring/Gasket Material
1 - 0.01 um 2 - 0.02 um	B - PTFE	A - Double Open* D - 222/Flat	P	20 - 2.7" Outside Dia.		100 - 10 in. 200 - 20 in. 300 - 30 in.	V - Fluorocarbon

\*A only available on Nominal Length 10 in.

# Housing Selection

Housing Model Number	Port Size	Port Type	# of Elements To Order Per Housing	Element Length	Element Seal Design	Flow (SCFM) <sub>/m<sup>3</sup>/hr</sub> @ 100 PSIG, 1 PSID	
						.01 um PTFE	.02 um PTFE
<b>MT1N-0110</b>	<b>1"</b>	<b>NPT</b>	<b>1</b>	<b>10"</b>	<b>D.O.E.</b>	<b>150</b> <sub>/254</sub>	<b>225</b> <sub>/381</sub>
<b>MT1N-0120</b>	<b>1"</b>	<b>NPT</b>	<b>1</b>	<b>20"</b>	<b>D.O.E.</b>	<b>250</b> <sub>/424</sub>	<b>375</b> <sub>/636</sub>
<b>MF2N-0310</b>	<b>2"</b>	<b>NPT</b>	<b>3</b>	<b>10"</b>	<b>222/FLAT</b>	<b>600</b> <sub>/1017</sub>	<b>720</b> <sub>/1220</sub>
<b>MF2F-0310</b>	<b>2"</b>	<b>FLANGE</b>	<b>3</b>	<b>10"</b>	<b>222/FLAT</b>	<b>600</b> <sub>/1017</sub>	<b>720</b> <sub>/1220</sub>
<b>MF2N-0320</b>	<b>2"</b>	<b>NPT</b>	<b>3</b>	<b>20"</b>	<b>222/FLAT</b>	<b>1200</b> <sub>/2034</sub>	<b>1440</b> <sub>/2440</sub>
<b>MF2F-0320</b>	<b>2"</b>	<b>FLANGE</b>	<b>3</b>	<b>20"</b>	<b>222/FLAT</b>	<b>1200</b> <sub>/2034</sub>	<b>1440</b> <sub>/2440</sub>
<b>MF3F-0330</b>	<b>3"</b>	<b>FLANGE</b>	<b>3</b>	<b>30"</b>	<b>222/FLAT</b>	<b>1800</b> <sub>/3051</sub>	<b>2160</b> <sub>/3661</sub>
<b>MF3F-0520</b>	<b>3"</b>	<b>FLANGE</b>	<b>5</b>	<b>20"</b>	<b>222/FLAT</b>	<b>2000</b> <sub>/3390</sub>	<b>2400</b> <sub>/4068</sub>
<b>MF3F-0530</b>	<b>3"</b>	<b>FLANGE</b>	<b>5</b>	<b>30"</b>	<b>222/FLAT</b>	<b>3000</b> <sub>/5085</sub>	<b>3600</b> <sub>/6102</sub>
<b>MF4F-0720</b>	<b>4"</b>	<b>FLANGE</b>	<b>7</b>	<b>20"</b>	<b>222/FLAT</b>	<b>2800</b> <sub>/4746</sub>	<b>3360</b> <sub>/5695</sub>
<b>MF4F-0730</b>	<b>4"</b>	<b>FLANGE</b>	<b>7</b>	<b>30"</b>	<b>222/FLAT</b>	<b>4200</b> <sub>/7119</sub>	<b>5040</b> <sub>/8543</sub>
<b>MF6F-1030</b>	<b>6"</b>	<b>FLANGE</b>	<b>10</b>	<b>30"</b>	<b>222/FLAT</b>	<b>6000</b> <sub>/10,170</sub>	<b>7200</b> <sub>/12,204</sub>
<b>MF6F-1530</b>	<b>6"</b>	<b>FLANGE</b>	<b>15</b>	<b>30"</b>	<b>222/FLAT</b>	<b>9000</b> <sub>/15,255</sub>	<b>10,800</b> <sub>/18,306</sub>



## MT1 Series

- 316L Stainless Steel
- Thru-rod housing design
- 1" NPT threaded inlet and outlet ports
- Threaded vent and drain connections
- T-Type (line mounted design)
- Single double open end element design
- Cartridge lengths 10" and 20" available
- Fluorocarbon seals used throughout

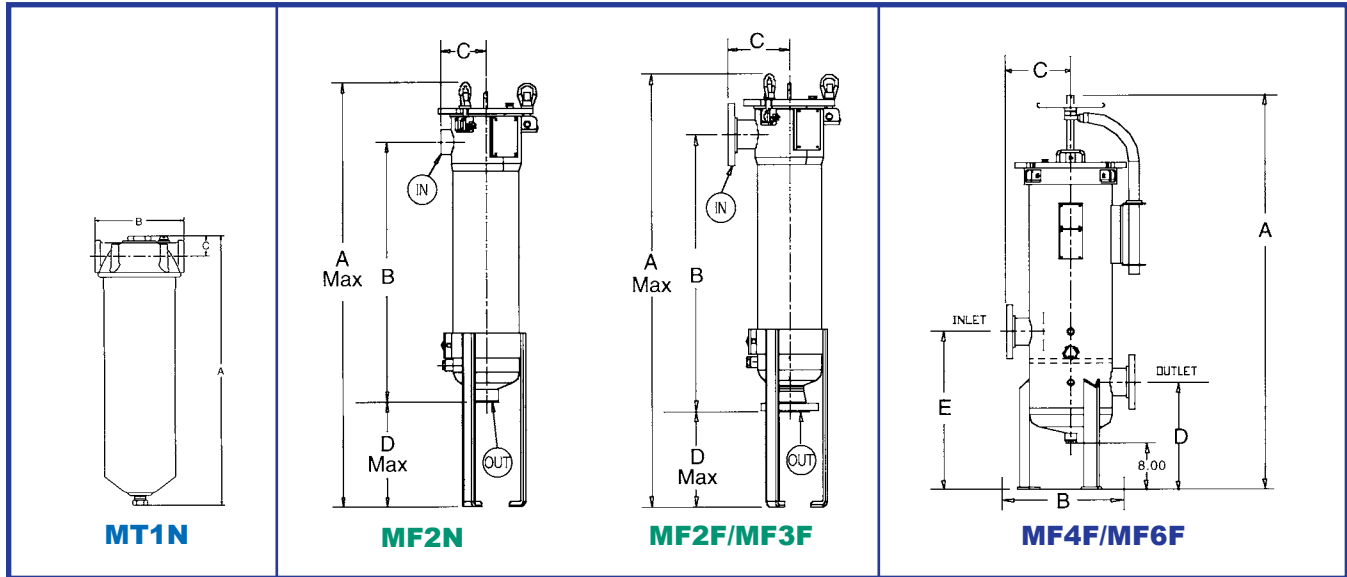
## MF2 & MF3 Series

- 316L Stainless Steel
- Single fluorocarbon o-ring for positive housing seal
- Swing bolts w/ eyenuts
- ASME Code - UM Stamped
- Threaded vent and drain connections
- Adjustable leg height
- Flanged or threaded inlet and outlet connections
- Side inlet, bottom outlet

## MF4 & MF6 Series

- 316 Stainless Steel
- Single fluorocarbon o-ring for positive housing seal
- Swing bolts w/ eyenuts
- ASME Code - UM Stamped
- Threaded vent, drain, gauge connections
- Mechanical cover lift standard

# Drawings, Dimensions & Specifications



	<b>DIMENSION</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>WEIGHT</b>					
MT1N-0110	13.38	<small>/33.98</small>	4.44	<small>/11.28</small>	1.25	<small>/3.18</small>	N/A	5	<small>/2.28</small>			
MT1N-0120	23.38	<small>/59.38</small>	4.44	<small>/11.28</small>	1.25	<small>/3.18</small>	N/A	8	<small>/3.63</small>			
MF2N-0310	33.00	<small>/83.82</small>	12.38	<small>/31.45</small>	5.75	<small>/14.60</small>	13.19	<small>/33.50</small>	N/A	82	<small>/37.23</small>	
MF2F-0310	33.00	<small>/83.82</small>	13.56	<small>/34.44</small>	8.00	<small>/20.32</small>	12.00	<small>/30.48</small>	N/A	90	<small>/40.86</small>	
MF2N-0320	43.06	<small>/109.37</small>	22.44	<small>/56.0</small>	5.75	<small>/14.60</small>	13.19	<small>/33.50</small>	N/A	87	<small>/39.50</small>	
MF2F-0320	43.06	<small>/109.37</small>	23.63	<small>/60.02</small>	8.00	<small>/20.32</small>	12.00	<small>/30.48</small>	N/A	95	<small>/43.13</small>	
MF3F-0330	53.13	<small>/134.95</small>	33.94	<small>/86.28</small>	8.00	<small>/20.32</small>	11.75	<small>/29.85</small>	N/A	110	<small>/49.94</small>	
MF3F-0520	43.06	<small>/109.37</small>	23.88	<small>/60.56</small>	8.00	<small>/20.32</small>	11.75	<small>/29.85</small>	N/A	105	<small>/47.67</small>	
MF3F-0530	53.13	<small>/134.95</small>	33.94	<small>/86.21</small>	8.00	<small>/20.32</small>	11.75	<small>/29.85</small>	N/A	110	<small>/49.94</small>	
MF4F-0720	56.13	<small>/142.57</small>	18.00	<small>/45.72</small>	9.00	<small>/22.86</small>	18.00	<small>/45.72</small>	26.50	<small>/67.31</small>	250	<small>/113.50</small>
MF4F-0730	66.19	<small>/168.12</small>	18.00	<small>/45.72</small>	9.00	<small>/22.86</small>	18.00	<small>/45.72</small>	26.50	<small>/67.31</small>	270	<small>/122.58</small>
MF6F-1030	68.19	<small>/173.20</small>	20.00	<small>/50.80</small>	10.00	<small>/25.40</small>	19.00	<small>/48.26</small>	29.50	<small>/74.93</small>	310	<small>/140.74</small>
MF6F-1530	70.38	<small>/178.70</small>	23.25	<small>/59.06</small>	11.63	<small>/29.54</small>	21.00	<small>/53.34</small>	31.50	<small>/80.01</small>	415	<small>/188.41</small>

**Note:** Dimensions are in inches /centimeters; weight is in pounds /kilograms.

## How To Order Membrane Housings

(Elements must be ordered separately)

**M**

Micro-Series

M - Microfiltration

**F**

Line or Floor Mount

T - Line Mount  
F - Floor Mount

**6**

Connection

1 - 1" Conn.  
2 - 2" Conn.  
3 - 3" Conn.  
4 - 4" Conn.  
6 - 6" Conn.

**F**

Connection Type

N - NPT (1-2" only)  
F - Flange (3-6" only)

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**15**

# Elements/Housing

01 - 1 Element  
03 - 3 Elements  
05 - 5 Elements  
07 - 7 Elements  
10 - 10 Elements  
15 - 15 Elements

**30**

Element Length

10 - 10"  
20 - 20"  
30 - 30"