



Filtration Hardware

Product Guide

Company Profile



Introduction

Established in 1976 Advanced Microdevices (**mdi**) is dedicated to research, development, and production of microporous membranes and separation products. It is part of a group of companies with diverse interests.

Starting with a single product, the Nitrocellulose membrane filters, today **mdi** develops and produces a variety of membranes and membrane based products for microfiltration, medical diagnostic tests, and biotechnology. These products are widely used in life sciences research labs, pharmaceutical, biotechnology, beverage, and electronics industries.

Infrastructure

With 15 post graduates and 20 graduates, a current constructed area of 8000 sq.m, **mdi** is well equipped for large productions. **mdi** produces thousands of sq.ft. of roll stock membrane and hundreds of thousands of membrane based filtration devices per day and has a capacity to produce more. The products are exported to all advanced nations of the world.

The current facility includes an R&D block along with a fully equipped customer lab to provide customers with hands-on experience in the use of **mdi** technologies. A new large area class 100/10,000 Clean Room Facility has been added for production of sterile products.

Strengths

Unique interdisciplinary expertise in membranes, electronics, and engineering allows rapid development and prototyping. With a strong R&D base **mdi** supports customers by developing new products to meet their special requirements.

Focus

High-quality products exceeding the specifications normally accepted in the industry.



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Introduction

mdi has been continuously working to provide to its customer high quality and reliable filtration solutions in accordance to the requirements of various international standards relating to clarification and sterilization. Its integrated solutions covering filtration, purification, fluid management, and lab technologies are supporting the pharmaceutical as well as biopharmaceutical industry to develop and produce drugs safely, timely, and economically.

A complete line of hardware products from **mdi** designed to meet the needs of high purity applications includes Stainless Steel Housings for Cartridge Filters, Membrane Filter Holders, and Vacuum Filtration Assemblies.

Quality

Keeping in view the criticality of pharmaceutical processes, quality of material of construction is assured and is tested for composition within prescribed limits as per ASTM E 1086-94. These are easy to clean, with no 'dead' corner, pressure resistant, and leakproof.

Additionally, every housing is tested for a variety of performance parameters relating to pressure, leakage, valve functionality, fitment etc. before release for dispatch.

mdi Filter Housings and Disc Filter Holders are offered along with a Certificate of Quality (CoQ) and a Certificate of Material of Construction (MoC).

Certificate of Quality

The stainless steel filter housing has been tested in mdi facility using validated quality assurance processes. The housing passed the leakage test and other tests to ensure consistent and safe performance.

Single Round Cartridge Filter Housing For Liquid Filtration

Catalog No. : T154A0SEM XLNNB1
Type : T-Line
Size : 10"
Adaptor Code : 7P
Lot Number : 5C1754X005

Specifications

Maximum Operating Pressure : 10 bars
Maximum Operating Temperature : 150 °C

Material of Construction

Shell : SS 316L
End Connections : SS 316L
All Contact Parts : SS 316L
Sealing Gasket/'O' Ring : Silicone

Surface Finish

All Surfaces : Mirror polished

Valve Type


Vent Valve : Needle Valve with 1/4" HB
Drain Valve : Valve with 1/4" HB

Connections

Inlet/Outlet End Connection : 1.5" TC
Gauge Port : 1/4" BSP (F)

Lot Release Criterion

S. No.	Item	Result	Status
1	Hydro Pressure Testing (Leakage Test)		
	Bell to Base	No leakage	Pass
	Adaptor	No leakage	Pass
	Clamps	No leakage	Pass
	Drain/Vent Valve	No leakage	Pass
2	Visual Examination		
	Dents	No dents	Pass
	Scratches	Scratch free surfaces	Pass
3	Fitments		
	Clamp Fitting	Smooth	Pass
	Vent Valve Fitting	Smooth	Pass
	Drain Valve Fitting	Smooth	Pass



Head of Quality Assurance
Issue Date: 07-Jul-15

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An ISO 9001 Company



Certificate of MoC

The Stainless Steel used for manufacture of Filter Housing has been tested for compliance to AISI-316L grade of steel.

The results are shown below:

Stainless Steel Used in Filter Housing

Catalog No. : I154A0SEEXLDDDB1
Lot No. : 0905150920

Element	Element Found (%)	Specified Limit (%)	Conformity Based on Test Results	
			Yes	No
Carbon	0.027	0.03	√	
Silicon	0.34	1.00	√	
Manganese	1.72	2.00	√	
Phosphorus	0.025	0.045	√	
Sulphur	0.025	0.030	√	
Chromium	17.38	16.0 – 18.0	√	
Molybdenum	2.01	2.0 – 3.0	√	
Nickel	10.45	10.0 – 14.0	√	

Remarks: The sample conforms to AISI-316L grade of steel with respect to above test.

Note: The results are limited to tested samples and applicable parameters.

Date: September 4, 2008

Head of Quality Assurance

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Filter Housings for Aseptic Processing

Integrating its expertise in filtration technology with industry concerns, **mdi** offers a complete range of specially designed filter housings for aseptic processing in highly regulated pharmaceutical and biopharmaceutical industries.

mdi Filter housings for aseptic processing are made from SS 316L grade stainless steel, electro-polished with a roughness average of $<0.5 \mu\text{m}$, suitable for operating at high pressures and temperatures. These are integrity testable and engineered to offer:

- Low installation and maintenance cost
- Optimum flow rates
- Low holdup volumes
- Efficient air-venting mechanism with diaphragm vent valves
- Quick and easy filter change out
- Crevice/Groove-free construction

On the basis of application, these can be categorized into the following categories:

1. Sterilization Grade Liquid Filtration Housings
2. Sterilization Grade Membrane Disc Filter Holders
3. Sterilization Grade Air Filtration Housings
4. Vent Filter Housings

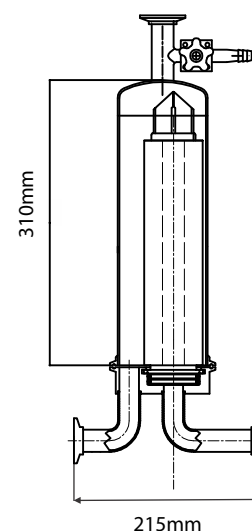
Sterilization Grade Cartridge Filter Housings and Membrane Disc Holders for Aseptic Liquid Filtration

Electropolished Single Round Filter Housings for Aseptic Liquid Filtration

mdi Electropolished stainless steel housings for aseptic processing with a roughness average of < 0.5 µm have an easy to clean crevice free construction. The housings offer diaphragm vent valves and drain valves to ensure complete sterilization.

The cartridge filter sits safely in the adaptor in the housing base to ensure proper sealing to prevent bacterial and particulate bypass. These housings are pressure tested for safety and performance.

Specially designed diaphragm vent valves with Quick Coupling Connection are available to assist online integrity testing of these housings.



Specifications

Type	In-Line/ T-Line
Inlet /Outlet Connection	1.5" Triclover
Size	10" / 20" / 30"
Adaptor Code	7P
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone/ Viton/ EPDM
Surface Finish	Electropolished
Roughness Average	< 0.5 µm
Vent Valve	Diaphragm Valve with Quick Coupling Connection
Drain Valve	Diaphragm Valve with 8mm Hose Connection
Gauge Port	¼" BSP or 1.5" TC
Sterilization	SIP/Autoclaving

Dimensions

	10"	20"	30"
Bell Height (mm)	310	550	790
Width (mm)	215	215	215
Bell Removal Clearance (mm)	320	550	790
Housing Bell Volume (ml)	2300	4300	5700
Weight (Kg)	4.5	5.5	7.2

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
T-Line SS316L	T	Single Round	1	10"	54	7P	A0	Silicon	S	1.5" TC	E	Electro polished	E	Steam	S	Liquid	L	Needle Valve with 6mm Hose Barb	N	Needle Valve with 6mm Hose Barb	N	1.5" TC	E	1	1
In-Line SS316L	I			20"	55			Viton	V					None	X			Diaphragm with 8mm Hose Barb	D	Diaphragm with 8mm	D				
				30"	56			EPDM	E									Diaphragm with Quick Coupling	S						

Example: T 1 54 A0 S E E X L D D E 1

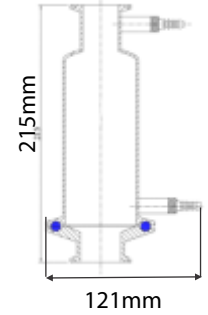
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Sterilization Grade Cartridge Filter Housings and Membrane Disc Holders for Aseptic Liquid Filtration

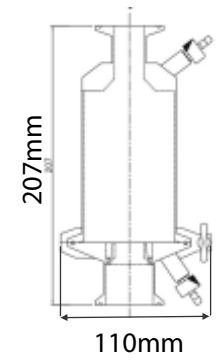
Electropolished Mini-Cartridge Filter Housings for Aseptic Liquid Filtration

These mini-sized stainless steel housings are designed to house cartridges filters with 5" nominal length. These housings meet all performance parameters of aseptic filtration.

All fluid contact surfaces are electropolished with roughness average of < 0.5 µm provides crevice free construction. This along with diaphragm valves ensure complete sterilization.



Seal-K



O-Seal

Specifications

Type	In-Line
Inlet /Outlet Connection	1.5" Triclover
Size	5"
Adaptor Code	4463/O-Seal/Seal-K
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone/ Viton/ EPDM
Surface Finish	Electropolished
Roughness Average	< 0.5 µm
Vent Valve	Needle Valve or Diaphragm Valve (Only in T-Line)
Drain Valve	Needle Valve or Diaphragm Valve (Only in T-Line)
Sterilization	SIP/Autoclaving

Dimensions

	Seal-O	Seal-K	4463	7P
	T-Line	InLine	InLine	InLine
	T-Line	InLine	InLine	T-Line (Jacketed)
Bell Height (mm)	160	160	185	135
Width (mm)	177	110	121	152
Bell Removal Clearance (mm)	170	170	195	145

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
	Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code
T-Line SS316L	T	Single Round	1	5"	53	4463	E0	Silicon	S	1.5"TC	E	Electro polished	E	Steam	S	Liquid	L	*Diaphragm with 8mm Hose Barb	D	Diaphragm with 8mm Hose Barb	D	1/4" BSP	B	1	1
In-Line SS316L	I					O-Seal	FO	Viton	V					None	X			*Diaphragm with Quick Coupling	S	Needle Valve with 5mm Hose Barb	N	1.5"TC	E		
						Seal-K	GO	EPDM	E									Needle valve with 5 mm Hose Barb	N						

*Diaphragm vent valves with 8 mm Hose Barb or Quick coupling Connections is available with T line housings only

Example: T 1 53 E0 S E E S L D D B 1

ORDERING INFORMATION

Sterilization Grade Cartridge Filter Housings and Membrane Disc Holders for Aseptic Liquid Filtration

Electropolished Stainless Steel Membrane Disc Holders for Aseptic Liquid Filtration

mdi stainless steel disc filter holders are made up of corrosion resistant SS 316L grade to fit membrane filters for aseptic filtration of liquids.

These holders are autoclavable and can be cleaned easily to avoid cross-contamination.



Specifications

Size	142 mm, 293 mm
Inlet Connection	1.5"TC
Outlet Connection	1.5"TC
Size of Membrane Used	142 mm, 293 mm
Max. Operating Pressure	100 psi
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone
Surface Finish	Electropolished
Filtration Area	142 mm – 120 cm ² 293 mm – 572 cm ²
Sterilization	Autoclaving

Housing Type		Size		Inlet /Outlet		Finish		Air /Liquid		X	Vent Valve		Drain Valve		X	X	Pack Size	
SS316L Membrane Filter Holder	Code SSMH	293 mm	Code 19	1.5"TC	Code E	Electro polished	Code E	Liquid	Code L		Diaphragm with 8mm Hose Barb	Code D	Diaphragm with 8mm Hose Barb	Code D			1	Code 1
		142 mm	Code 16								Diaphragm with Quick Coupling	Code S	Needle Valve with 6mm Hose Barb	Code N				
											Needle Valve with 6mm Hose Barb	Code N						

Example: SSMH 19 E E L X D N X X 1

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Sterilization Grade Cartridge Filter Housings for Air/Gas Filtration

Electropolished Single Round Filter Housings for Air/Gas Filtration

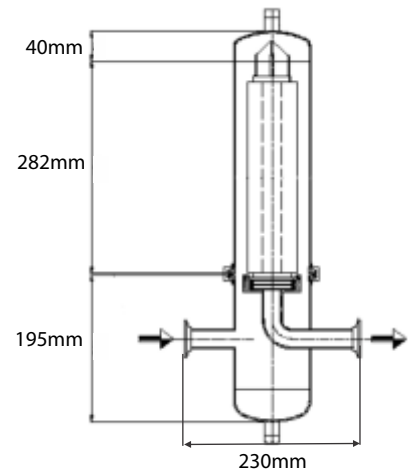
mdi Electropolished stainless steel housings for aseptic processing have a sump at the base that allows collection of moisture entrained in the air/gas being filtered. The liquid so collected is drained off through the drain valve.

The cartridges sit safely in the adaptor of housings base to ensure proper sealing to prevent bacterial and particulate bypass. Entire internal surface is electropolished with roughness average of <math><0.5\mu\text{m}</math>.



Specifications

Type	T-Line
Inlet Connection	1.5" TC
Outlet Connection	1.5" TC
Number of Cartridges	Single
Size	10"
Adaptor Code	7P
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone
Surface Finish	Electropolished
Roughness Average	<math>< 0.5 \mu\text{m}</math>
Vent Valve	Diaphragm Valve with 8mm Hose Barb/Diaphragm Valve with Quick Coupling Connection
Drain Valve	Diaphragm Valve with 8mm Hose Barb/Needle Valve with 6mm Hose Barb
Gauge Port	1/4" BSP or 1.5" TC
Sterilization	SIP/Autoclaving



Dimensions

	10"
Bell Height (mm)	322
Width (mm)	230
Bell Removal Clearance (mm)	332
Housing Bell Volume (ml)	2300
Weight (Kg)	4.3

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
T-Line SS316L	T	Single Round	1	10"	54	7P	A0	Silicon	S	1.5"TC	E	Electro polished	E	None	X	Air	A	Needle Valve with 6mm Hose Barb	N	Needle Valve with 6mm Hose Barb	N	1/4" BSP	B	1	1
				20"	55													Diaphragm with 8mm Hose Barb	D	Diaphragm with 8mm Hose Barb	D	1.5"TC	E		
				30"	56													Diaphragm with Quick Coupling	S						

Example: T 1 54 A0 S E E X A D D B 1

ORDERING INFORMATION

Sterilization Grade Cartridge Filter Housings for Air/Gas Filtration

Electropolished Mini Cartridge Filter Housings for Air/Gas Filtration

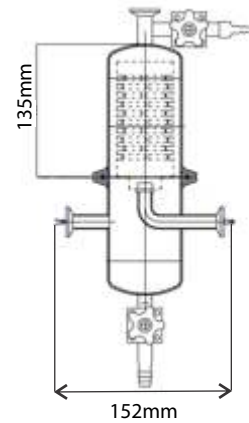
mdi electropolished stainless steel mini cartridge filter housing for air/gas filtration have a sump at the base that allows collection of moisture entrained in the air/gas being filtered. The liquid so collected is drained off through the drain valve.

These housings are designed to house mini cartridges filters with 5" nominal length. All fluid contact surfaces are electropolished with roughness average of < 0.5 µm providing crevice free construction, devoid of grooves on the fluid contact surfaces to ensure complete sterilization.



Specifications

Type	T-Line
Inlet Connection	1.5" TC
Outlet Connection	1.5" TC
Number of Cartridges	Single
Size	5"
Adaptor Code	7P/4463
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone
Vent Valve	Diaphragm Valve with 8mm Hose Barb/Diaphragm Valve with Quick Coupling Connection
Drain Valve	Diaphragm Valve with 8mm Hose Barb/Needle Valve with 6mm Hose Barb
Gauge Port	1/4" BSP or 1.5" TC
Sterilization	SIP/Autoclaving



Dimensions

	4463
Bell Height (mm)	135
Width (mm)	152
Bell Removal Clearance (mm)	205
Housing Bell Volume (ml)	400
Weight (Kg)	2.2

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
	Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code
T-Line SS316L	T	Single Round	1	5"	53	4463	E0	Silicon	S	1.5"TC	E	Electro polished	E	None	X	Air	A	Diaphragm with 8mm HB	D	Diaphragm with 8mm HB	D	1/4" BSP	B	1	1
						7P	A0											Diaphragm with Quick Coupling	S	Needle Valve with 6mm Hose Barb	N	1.2" TC	E		

Example: T 1 53 A0 S E E X A D D B 1

ORDERING INFORMATION

Sterilization Grade Vent Filter Housings

Single Round Steam Jacketed Filter Housings for Venting

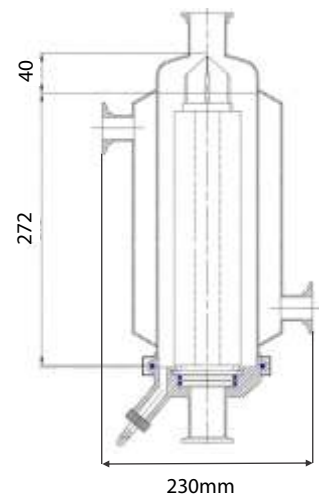
mdi Jacketed Filter Housings are fabricated with corrosion resistant 316 L Stainless steel jacket for temperature control using hot water or steam for venting of high temperature storage tanks.

All fluid contact surfaces are electropolished with roughness average of < 0.5 µm providing crevice free construction, devoid of grooves on the fluid contact surfaces to ensure complete sterilization.



Specifications

Type	T-Line
Inlet Connection	1.5" TC
Outlet Connection	1.5" TC
Number of Cartridges	Single
Size	10"
Adaptor Code	7P
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone
Surface Finish	Electropolished
Roughness Average	< 0.5 µm
Jacket Inlet	1" TC
Jacket Outlet	1" TC
Gauge Port	¼" BSP or 1.5" TC
Sterilization	SIP/Autoclaving



Dimensions

	10"
Bell Height (mm)	354
Width (mm)	230
Bell Removal Clearance (mm)	364
Housing Bell Volume	2300
Weight	6.0

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Jacket Inlet/Outlet		Air /Liquid		Drain Valve		Gauge Port		Pack Size		
	Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
In-Line SS316L	I	Single Round	1	5"	53	7P	A0	Silicon	S	1.5" TC	E	Electro polished	E	Steam	S	1" TC	C	Vent	V	Needle Valve with 1/4" HB	N	None	X	1	1	
				10"	54	O-Seal	F0									1/4" BSP	B									
																½" BSP	K									

Example:

I	1	54	A0	S	E	E	S	V	X	X	X	1
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ORDERING INFORMATION

Sterilization Grade Vent Filter Housings

Single Round Electrical Jacketed Filter Housings for Venting

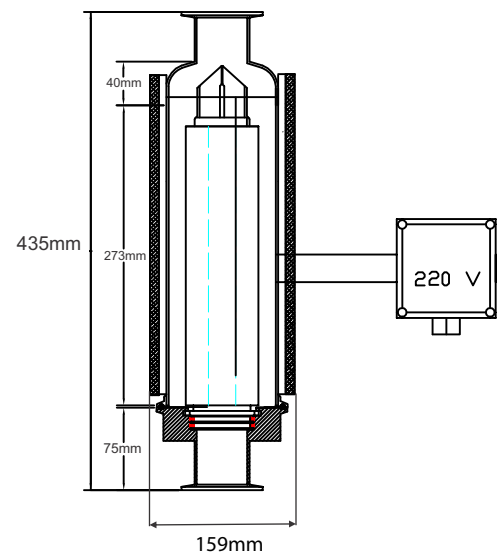
mdi housings are made up of corrosion resistant 316 L Stainless steel, electropolished with roughness average of < 0.5 µm. Electric Jacketed Filter Housings incorporate an electrical heating system with temperature control.

An effective removable, insulated electric heater jacket that also prevents heat loss, aids the temperature control mechanism.



Specifications

Type	In-Line
Inlet Connection	1.5" TC
Outlet Connection	1.5" TC
Number of Cartridges	Single
Size	10"
Adaptor Code	7P
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone
Surface Finish	Electropolished
Roughness Average	< 0.5 µm
Operating Voltage (Heating System)	220 V AC
Power Consumption	300 watts



Dimensions

	10"
Bell Height (mm)	360
Width (mm)	159
Bell Removal Clearance (mm)	370

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
In-Line SS316L	I	Single Round	1	10"	54	7P	A0	Silicon	S	1.5"TC	E	Electro polished	E	Electrical	E	Vent	V	None	X	None	X	None	X	1	1

Example:

I	1	54	A0	S	E	E	E	V	X	X	X	1
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ORDERING INFORMATION

Liquid Filtration Housings for General Filtration

Mirror Polished Single Round Filter Housings for Liquid Filtration

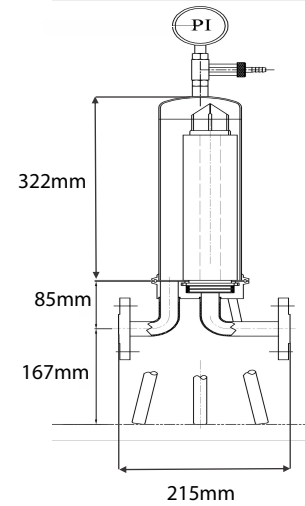
mdi Mirror polished stainless steel housings are made up of SS 316L grade. These filter housings are suitable for pre-filtration, clarification and separation applications in pharmaceuticals, fine chemicals, beverage and other process industries.

These are also suitable for terminal filtration in non-critical processes.



Specifications

Type	T-Line
Inlet Connection	1.5" TC/1" Flange/1.5" Flange
Outlet Connection	1.5" TC/1" Flange/1.5" Flange
Size	10", 20", 30"
Adaptor Code	7P
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone/Viton/EPDM
Surface Finish	Mirror Polished
Vent Valve	Needle Valve with 6mm Hose Barb
Drain Valve	Needle Valve with 6mm Hose Barb
Gauge Port	¼" BSP or 1.5" TC
Sanitization	80°C Water



Dimensions

	10"	20"	30"
Bell Height (mm)	322	565	810
Width (mm)	215	215	215
Bell Removal Clearance (mm)	332	565	810
Housing Bell Volume (ml)	2300	4300	5700
Weight (Kg)	6.8	7.4	9.2

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
T-Line SS316L	T	Single Round	1	10"	54	7P	A0	Silicon	S	1.5"TC	H	Mirror Polished	M	Steam	S	Liquid	L	Needle Valve with 6mm Hose Barb	N	Needle Valve with 6mm Hose Barb	N	1/4" BSP	B	1	1
				20"	55			Viton	V	1.5" Flange	G			None	X							1.5"TC	E		
				30"	56			EPDM	E	1" Flange	F														

Example:

T	1	54	A0	S	H	M	S	L	N	N	B	1
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ORDERING INFORMATION

Liquid Filtration Housings for General Filtration

Mirror Polished Multi-Round Filter Housings for Liquid Filtration

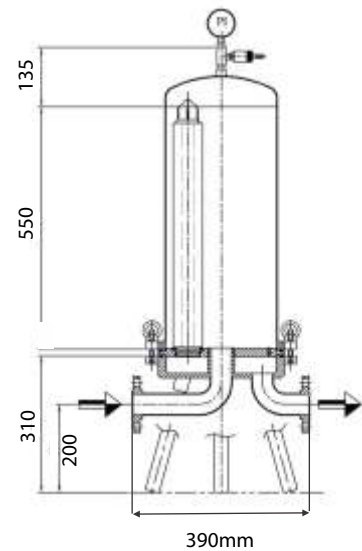
mdi Mirror polished multi-round stainless steel housings are made up of corrosion resistant SS 316L grade. These filter housings can house more than one filter element, and are meant for pre-filtration, clarification and terminal filtration of larger volumes in non-critical processes.

The Housing bell is locked to the base with the help of clamp screws to prevent any leakage.



Specifications

Type	T-Line
Inlet Connection	1.5" Flange /2" Flange
Outlet Connection	1.5" Flange /2" Flange
Size	10", 20", 30"
Adaptor Code	7P, BEO
Max. Operating Pressure	10 bar
Max. Operating Temperature	150°C
Material of Construction	SS 316L
Gaskets and Rings	Silicone/Viton/EPDM
Surface Finish	Mirror Polished
Vent Valve	Needle Valve with 6mm Hose Barb
Drain Valve	Needle Valve with 6mm Hose Barb
Gauge Port	¼" BSP or 1.5" TC
Sanitization	80°C Water



Dimensions

	10" X 3R	20" X 3R	30" X 3R
Bell Height (mm)	370	610	850
Width (mm)	290	390	390
Bell Removal Clearance (mm)	380	610	850

Housing Type		No. of Cartridges		Size		Adaptor		O-Rings /Gaskets		Inlet /Outlet		Finish		Jacket		Air /Liquid		Vent Valve		Drain Valve		Gauge Port		Pack Size	
Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code		Code	
T-Line SS316L	T	3 Round	3	10"	54	7P	A0	Silicon	S	1.5" Flange	G	Mirror Polished	M	Steam	S	Liquid	L	Needle Valve with 6mm Hose Barb	N	Needle Valve with 6mm Hose Barb	N	1/4" BSP	B	1	1
		5 Round	5	20"	55	BEO	B0	Viton	V	2" Flange	H	None	X									1.5" TC	E		
		7 Round	7	30"	56			EPDM	E																

Example: T 3 54 A0 S H M S L N N B 1

ORDERING INFORMATION

Vacuum Filtration Assemblies

Glass Vacuum Filtration Assembly for 25mm Disc Filters

mdi Glass Vacuum Filtration Assembly (25mm) is meant for water microbiology or particulate contaminant removal/analysis and similar applications.

The glass funnel is held on glass base meant for the disc filter. These are held together with anodized aluminium clamp.

Components:

- Funnel
- Clamp
- Stopper
- Frit Glass/Stainless Steel Filter Support



Specifications

Funnel	Borosilicate Glass
Filter Support	Fritted Glass/Stainless Steel
Clamp	Anodized Aluminum Spring
Stopper	Silicone
Filter Size (Diameter)	25mm
Funnel Capacity	15ml
Flask Capacity	125ml
Vacuum	850mm of Hg
Sterilization	Autoclavable @ 121°C for 30 minutes

Housing Type		Size		Support		Funnel Capacity		Flask Capacity		Stopper		Pack Size	
	Code		Code		Code		Code		Code		Code		Code
Glass Filter Holder Assembly	GFHA	25mm	25	SS Screen	R	15ml	02	125ml	01	Perforated Silicone	S		
				Frit Glass	X			Without Flask	XX			1	1

Example: GFHA 25 R 10 01 S X X 1

ORDERING
INFORMATION

Stainless Steel Pressure Vessels

Pressure Vessel for CFSP-S

mdi Capsule Filtration System for solvents is ideal for pharmaceutical process development labs and for analytical labs requiring relatively larger volumes of particle free high purity solvents.

The specially designed pressure vessel for these systems has a SS 316 L construction with an extended outlet that allows direct fitment of the capsule filter, doing away with elastomeric seals; thus offering very wide chemical compatibility.



Specifications

MOC	
Main Body Construction	SS 316 L
Inlet	SS 316 L
Gauge	
Diaphragm	SS 316L
End Connection	¼" BSP
Accuracy	± 2%
Size	2.5" Dial
Range	0-100 psi
Extended Outlet	SS 316 L
Gaskets and Rings	Silicone
Surface Finish	Mirror Polished
Capacity	5/10 Liters
Inlet End Connection	½" Hose Barb
Outlet End Connection	¼" FNPT
Maximum Operating Pressure	100 psi
Maximum Operating Temperature	150°C

Housing Type		Capacity		O-Rings /Seals		Inlet		Outlet		Finish		Vent Valve		Gauge Port		XX	Pack Size	
	Code		Code		Code		Code		Code		Code		Code		Code			Code
Pressure Vessel with Extended Outlet	EPVX	5 Litre	05	Silicon	S	½" Hose Barb	D	¼" FNPT	O	Mirror Polished	M	Needle Valve	N	¼" BSP (F)	B		1	1

Example: EPVX 05 S D O M N B XX 1

ORDERING INFORMATION

Vacuum Filtration Assemblies

All Glass Vacuum Filtration Assembly for 47mm Disc Filters

mdi Glass Vacuum Filtration Assembly (47mm) is meant for water microbiology or liquids for particulate contaminant removal, HPLC solvent purification or analysis of particulate contaminants retained on a membrane filter membrane disc filters and similar applications.

This assembly is also available in all-glass version.

Components

- Funnel
- Clamp
- Stopper
- Frit Glass Base/Glass base with SS Screen/Base with Tabulated Cap



Specifications

Funnel	Borosilicate Glass
Base	Glass
Support	Frit Glass/ Stainless Steel / Frit Glass with Tabulated Cap
Clamp	Anodized Aluminum Spring
Stopper	Silicone
Funnel Capacity	300ml
Flask Capacity	1000ml/2000ml
Filter Size (Diameter)	47mm
Vacuum	850mm of Hg
Sterilization	Autoclavable @ 121°C for 30 minutes

Housing Type	
	Code
Glass Filter Holder Assembly	GFHA

Size	
	Code
47	47

Support	
	Code
SS Screen	R
Frit Glass	X
Frit Glass Tabulated Cap for All Glass	T

Funnel Capacity	
	Code
300ml	04

Flask Capacity	
	Code
1000ml	10
2000ml	20
5000ml	50

Stopper	
	Code
Perforated Silicone	S
None (In All Glass)	X

X

X

Pack Size	
	Code
1	1

Example: GFHA 47 R 04 10 S X X 1

ORDERING INFORMATION

Vacuum Filtration Assemblies

Glass Vacuum Filtration Assembly for 90mm Disc Filters

mdi Glass Vacuum Filtration Assembly (90mm) is made up of borosilicate glass for filtration of aqueous, organic or corrosive liquid for particulate contamination analysis. This is also use when large volumes of mobile phase are required.

Components

- Funnel
- Base + Tabulated Cap
- Screen
- Clamp



Specifications

Funnel	Borosilicate Glass
Base	Glass
Support	PTFE Coated SS Screen
Clamp	Anodized Aluminum Spring
Stopper	Silicone
Funnel Capacity	1000ml
Filter Size (Diameter)	90mm
Fitting Inlet	Funnel
Fitting Outlet	Tabulated Cap Side Arm
Seal/Gasket	PTFE
Filter Size (Diameter)	47mm
Vacuum	850mm of Hg
Sterilization	Autoclave
Flask Capacity	1, 2,5 liters

Housing Type		Size		Support		Funnel Capacity		Flask Capacity		Stopper		X	X	Pack Size	
	Code		Code		Code		Code		Code		Code				Code
Glass Filter Holder Assembly	GFHA	90mm	90	PTFE Coated SS Screen	R	1000ml	10	1000ml	10	Perforated Silicone	S			1	1
								2000ml	20						
								5000ml	50						

Example: GFHA 90 R 10 50 S X X 1

ORDERING
INFORMATION

Vacuum Filtration Assemblies

Stainless Steel Funnels for 47mm Disc Filters

The 47mm Stainless Steel Filter Holders are designed for vacuum filtering of liquids for particulate or biological contamination analysis. These fit are placed on manifold (three or six place) models to facilitate simultaneous filtration of three or six test samples through a single vacuum source.

The holder accommodates standard 47 mm disc filters Type GCN, GCN-S, RGCN-S etc.



Specifications

MOC	
Funnel Construction	SS 316 L
Other Body Parts	SS 316 L
Disc Filter Size	47 mm
Funnel Capacity	300 ml
Vacuum	850mm of Hg
Outlet Connection	½" SHB
Perforated Stopper	Silicone
Sterilization	Autoclavable at 121°C for 30 minutes

Housing Type		Size		Support		Funnel Capacity		Bung		XXX	Pack Size	
	Code		Code		Code		Code		Code			Code
Stainless Steel Holder Assembly	SSHA	47	47	SS Screen	S	300ml	04	Silicone	SS		1	1

Example:

SSHA	47	S	04	SS	X	X	X	1
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ORDERING INFORMATION

Vacuum Filtration Manifolds

SS Manifolds for mdi Disposable Funnel

These 316 L Stainless Filter manifolds are specially designed for mdi Disposable Funnel used for water as well as product microbiology. The special adaptors provide a leakproof platform for proper fitting of the funnels.

The manifolds are available to accommodate 3 or 6 funnels at a time and have individual port control valves at each funnel location to facilitate selective filtration, if required.



Specifications

Main Body Construction	SS 316 L
Compatible Funnel	mdi M-Funnel
Funnel Adaptor	Stainless Steel
Number of Ports	3 or 6
Vacuum	850mm of Hg
Outlet Connection	1/2" SHB
Valve	SS Ball Valve
Sterilization	Autoclavable @ 125°C for 30 minutes

Accessories

- 1 Ltr Bottle with 45mm neck and vacuum adaptor
- 1/8" HP, 650mm Hg oil free Vacuum pump



Vacuum Pump

Housing Type		Places		XX	Outlet Port		Valve		X	X	X	Pack Size	
	Code		Code			Code		Code					Code
SS316L Manifold	SSFM	3 Place	03		1/2" Hose Barb	D	1/2"SS Ball Valve	SB				1	1
		6 Place	06										

Example: **SSMF 03 XX D SB X X X 1**

ORDERING INFORMATION

Vacuum Filtration Manifolds

Vacuum Manifolds with 47mm Vacuum Filtration Assemblies

These manifolds are designed for vacuum filtering of liquids for particulate or biological contamination analysis and are available in 3 and 6 place models to facilitate simultaneous filtration of 3 or 6 test samples through a single vacuum source.

The manifolds with standard 47mm stainless steel vacuum filtration assemblies to accommodate 47mm membrane disc filters and have individual port control valves at each assembly location to facilitate selective filtration, if required.



Specifications

Main Body Construction	SS 316 L
Compatible Funnels	SS 316 L
Number of Ports	3 or 6
Vacuum	850mm of Hg
Outlet Connection	1/2" SHB
Valves	1/2" SS Ball Valve
Sterilization	Autoclavable @ 121°C for 30 minutes

Accessories

- 1 Ltr Bottle with 45mm neck and vacuum adaptor
- 1/8" HP, 650mm Hg oil free Vacuum pump



Vacuum Pump

Housing Type		Places		XX	Outlet Port		Valve		X	X	X	Pack Size	
	Code		Code			Code		Code					Code
SS316L Manifold	SSMF	3 Place	03		1/2" Hose Barb	D	1/2" SS Ball Valve	SB				1	1
		6 Place	06										

Example: SSMF 06 XX D SB X X X 1

Quality Policy

Quality is built into **mdi** products and services by not only adhering to well designed quality systems to consistently produce high quality, internationally acceptable products but also by striving to incorporate superior performance parameters into all our products and services and provide our customers with a unique performance advantage in their application. Our quality policy provides a glimpse of our commitment:

"**mdi** strives to provide to its customers products and services of highest standards possible, consistently superior, and more satisfying than what is available anywhere else."

Stride Towards Excellence

At **mdi**, our mission is to constantly strive to achieve excellence in all our endeavors by establishing systems to create excellent products and services to fulfil the needs of our customers. To achieve this we

- Frequently compare our products with competing brands
- Simulate tests for functional use
- Develop easy-to-use innovative products

We are constantly working on improvements and welcome suggestions from our customers.

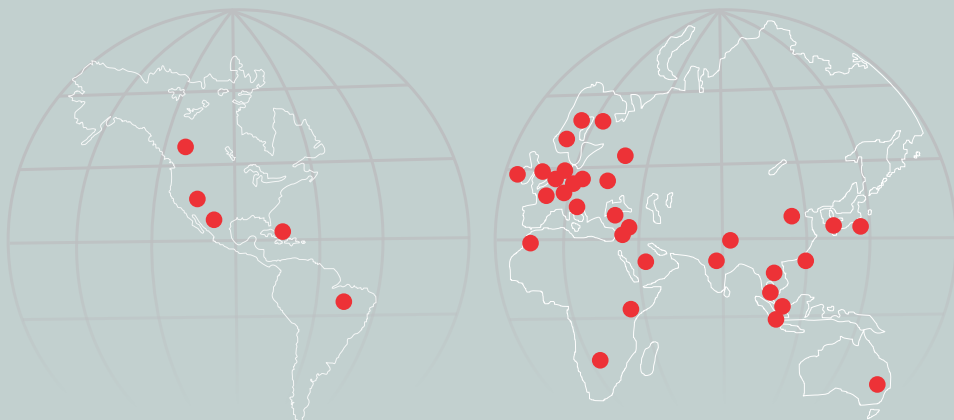
Guarantee

All **mdi** products are guaranteed and are backed by our

- Technical expertise and experience of over 30 years
- 'Special **mdi** process' for consistency and repeatability
- Strict quality control and quality assurance regimen
- Certificate of Analysis accompanying all shipments

We have an unconditional replacement policy in case of any defects.





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Other Literature available

mdi Process Filtration Product Guide

mdi Laboratory Filtration Product Guide

mdi Biotech Product Guide

mdi Diagnostic Product Guide

mdi Validation Guides

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