

ADSORBING FILTERS, DRYERS, CLEAN AIR PACKAGES

OIL REMOVAL ADSORBING FILTERS



The adsorbing filters are designed to remove vapors from the air line that cannot be removed by a coalescing filter. They produce air that is virtually free of oil and hydrocarbons as required by industries such as food processing, electronics, and instrumentation.

The filter cartridges contain activated carbon to adsorb hydrocarbon vapors and odors from alcohols, esters, and ketones. An optional extended bowl includes a higher capacity adsorbing cartridge which allows as much as 50 percent greater air flow.

Series **BFC70-E9** adsorbing filters have aluminum bowls and are offered with 1/4, 3/8, or 1/2 ports. Series **FC350-E9** and the **FC380-E9** units have either polycarbonate plastic or aluminum bowls. The **FC350-E9** are offered with 1/4, 3/8, or 1/2 ports. The **FC380-E9** are offered with 3/8, 1/2, or 3/4 ports.

An adsorbing filter should always be preceded by a particulate filter and a coalescing filter. Such an assembly is one of Master Pneumatic's Clean Air Packages which will provide air with no more oil than 10 mg/m³ or 0.008 ppm.

CLEAN AIR PACKAGES



In critical applications when vapor impurities are a potential problem, the installation of a Clean Air Package provides the solution. Ultra clean air is provided by using the particulate filters as the first line of defense against gross contaminants found in all air lines. Elements remove

solid particles larger than 5 micron, while automatic drains eliminate liquid water and oil emulsions that collect in the sump area. The particulate filter serves as a pre-filter to extend the life of the more costly coalescing element used for the next stage of filtration.

The coalescing filter element will further clean the air of residual oil mists, aerosols, and minute particles, larger than 0.3 micron. A standard differential pressure gauge warns when the pressure drop exceeds 8 to 10 psi, indicating that the coalescing element should be changed.

Finally, the adsorber filter will provide air, virtually free of oil and most hydrocarbons. It effectively eliminates odors from freons, alcohols, esters, ketones, and up to 99% of most hydrocarbons.

Clean Air Packages are available with port sizes ranging from 1/4 to 1.

MP-FILENCO DRYER/FILTERS

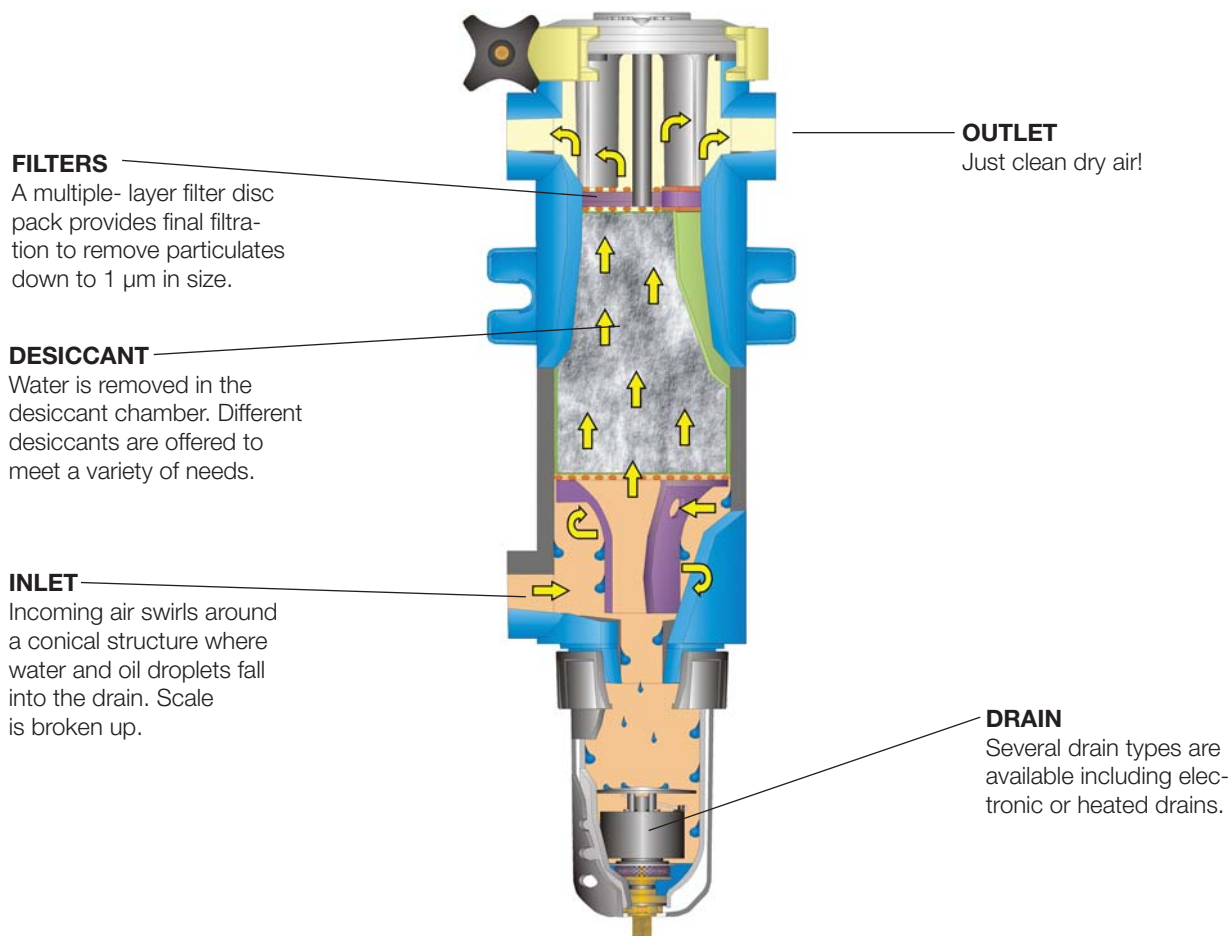


Many compressed air systems require point-of-use cleaning and drying of the air to supplement a central system. Dryer/filters do this extremely well because of their triple-action cleaning process and their ability to substantially reduce pressure dew points.

Available desiccants for these units include clay, clay with activated carbon, and molecular sieves for as much as 80° dew point suppression.

Automatic drains are strongly recommended, although there are a variety of options offered — from simple manual drains to the Warrior electronic drain.

MP-FILENCO DRYER CROSS SECTION



GUIDE to ADSORBING FILTERS, DRYERS and CLEAN AIR PACKAGES

Product	Port Sizes							Pages
	1/4	3/8	1/2	3/4	1	1-1/2	2	
ADSORBING FILTERS								
BFC70-E9	X	X	X					106-107
FC350-E9	X	X	X					108-109
FC380-E9		X	X	X				110-111
CLEAN AIR PACKAGES								
Guardzman II	X	X	X					112-113
Series 350	X	X	X					114-115
Series 380		X	X	X				116-117
High-flow BFD FCD100				X	X			118-119
350-4SA447 (2 Drop)			X					112-113
380-4SA446 (4 Drop)			X					114-115
MP-FILENCO DRYER/FILTERS								
Series 25	X							120-121
Series 36		X						122-123
Series 38			X					122-123
Series 418					X			124-125
Series 625						X		126-127
Series 832							X	126-127

MP-FILENCO Dryer/Filters

Series 25
Port Size: 1/4



Model Shown: CD25-2D3M

SPECIFICATIONS

Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

Drain: Automatic drain; optional manual or electronic drains.

Desiccant: Choice of three.

Flow Rate: 7 scfm (3.3 l/s).

Fluid Media: Compressed air.

Inlet Pressure: 150 psig (10 bar) maximum. Consult Master Pneumatic for higher pressure ratings.

Many compressed air systems require point-of-use cleaning and drying of the air to supplement a central system. MP-Fileenco dryer/filter units perform superbly because of their triple-action cleaning process and their ability to reduce the pressure dew point. See the sketch on page 95 for a cross-section view of a typical dryer/filter.

The filtering and drying functions result in super clean, super dry air. Several drain options and choices of desiccants are available to suit various operating needs.

DESICCANTS

The desiccants in **MP-Fileenco** dryer/filters have the ability to drop the pressure dew point thereby preventing the recurrence of water in the air system. They also adsorb sulfur compounds that form abrasive, gummy varnish or shellac. Three different desiccants are available.

CLAY DESICCANT (CD) — This is a general purpose desiccant which produces initial dew point depressions of 20 to 25 degrees Fahrenheit. It is effective for removing both water and oil, and requires no air preparation. Life expectancy is up to three months, depending on humidity, flow rate, and frequency of use.

CLAY DESICCANT WITH ACTIVATED CARBON (CDC) — This desiccant provides a higher degree of air purification than the plain clay desiccant. A layer of activated carbon produces slightly lower initial dew points, and also provides better removal of noxious gases and oil aerosols.

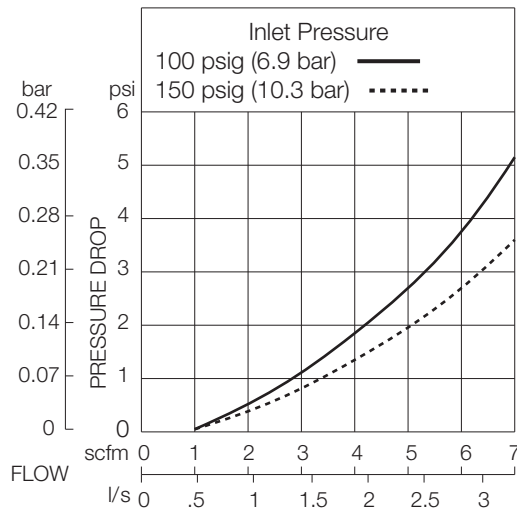
MOLECULAR SIEVE DESICCANT (MS) — Highly porous alumina-silicate complexes in this desiccant produce exceptionally low pressure dew points, as much as 80 Fahrenheit degrees initially. A dryer/filter with this desiccant must be preceded by a coalescing filter. The presence of oil in the air will contaminate the molecular sieve material and greatly reduce its efficiency. The coalescing pre-filter, of course, should be preceded by a general purpose filter.

DIMENSIONS inches (mm)

Series	A with Drain						Depth
	A No Drain	D1, D2 D3, D4	D6	D7	D8	B	
25	7.0 (178)	12.3 (311)	10.5 (267)	11.6 (295)	9.5 (241)	2.6 (67)	3.5 (89)

Lbs (Kg)	CD25	MS25	CDC25
Approx. Weight	2.11 (0.96)	2.11 (0.96)	2.11 (0.96)

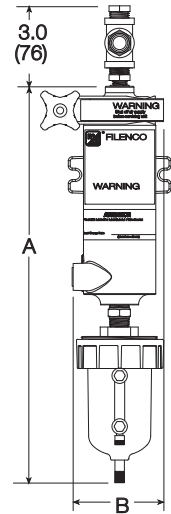
FLOW CHART



REPLACEMENT DESICCANT ELEMENT KITS

Description	Quantity (per case)	Kit Number
Clay Desiccant Elements Series 25.....	4	CD-25NRE
Clay with Activated Carbon Series 25.....	4	CDC-25NRE
Molecular Sieve Elements Series 25.....	4	MS-25NRE

Note: Replacement kits include parts for both the older and current designs of filter discs.



ORDERING INFORMATION

Change the letters in the sample model number below to specify the dryer/filter you want.

CD 25-2 D1 M W

DESICCANT

Clay CD
Clay with carbon CDC
Molecular sieve MS

DRAIN

None Leave Blank
Polycarbonate bowl; plastic bowl guard:
Manual drain PGM-25..... D1
Automatic float drain D2
PGA-25
Metal bowl with sight glass:
Manual drain MSM-25..... D3
Automatic float drain..... D4
MBA-25
Air poppet (actuator required);
24v heated drain; D6
temperature controlled
Air poppet with 24v adjustable D7
cycle heated electronic timer
Warrior electronic 115vac drain D8

PORT TYPE

NPTF threads Leave Blank
BSPP threads W

MOISTURE INDICATOR

None Leave Blank
With moisture indicator..... M
MI375

MP-FILENCO Dryer/Filters

Series 36 and 38 Port Sizes: 3/8 and 1/2



Model Shown: CD36-3D1M



Model Shown: CD38-4D1M

SPECIFICATIONS

Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

Drain: Automatic drain; optional manual or electronic drains.

Desiccant: Choice of three.

Fluid Media: Compressed air.

Inlet Pressure: 150 psig (10 bar) maximum. Consult Master Pneumatic for higher pressure ratings.

Mounting: Flanges and front ports for flush mounting.

Many compressed air systems require point-of-use cleaning and drying of the air to supplement a central system. MP-Fileenco dryer/filter units perform superbly because of their triple-action cleaning process and their ability to reduce the pressure dew point. See the sketch on page 95 for a cross-section view of a typical dryer/filter.

The filtering and drying functions result in super clean, super dry air. Several drain options and choices of desiccants are available to suit various operating needs. Units have flanges and front ports for flush mounting.

DESICCANTS

The desiccants in MP-Fileenco dryer/filters have the ability to drop the pressure dew point thereby preventing the recurrence of water in the air system. They also adsorb sulfur compounds that form abrasive, gummy varnish or shellac. Three different desiccants are available.

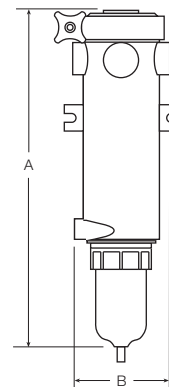
CLAY DESICCANT (CD) — This is a general purpose desiccant which produces initial dew point depressions of 20 to 25 degrees Fahrenheit. It is effective for removing both water and oil, and requires no air preparation. Life expectancy is up to three months, depending on humidity, flow rate, and frequency of use.

CLAY DESICCANT WITH ACTIVATED CARBON (CDC) — This desiccant provides a higher degree of air purification than the plain clay desiccant. A layer of activated carbon produces slightly lower initial dew points, and also provides better removal of noxious gases and oil aerosols.

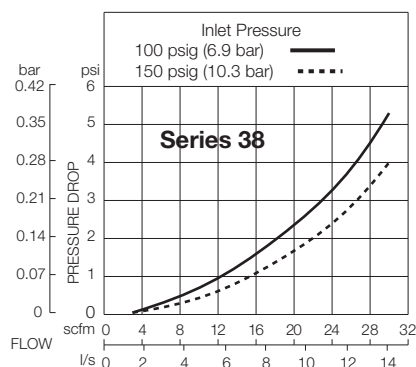
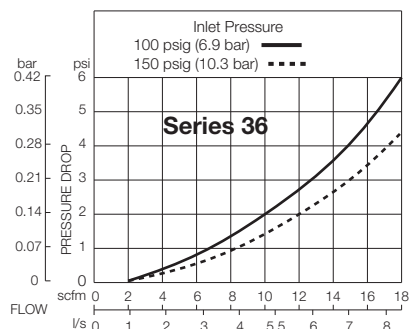
MOLECULAR SIEVE DESICCANT (MS) — Highly porous alumina-silicate complexes in this desiccant produce exceptionally low pressure dew points, as much as 80 Fahrenheit degrees initially. A dryer/filter with this desiccant must be preceded by a coalescing filter. The presence of oil in the air will contaminate the molecular sieve material and greatly reduce its efficiency. The coalescing pre-filter, of course, should be preceded by a general purpose filter.

DIMENSIONS inches (mm)

A with Drain							
Series	A No Drain	D1, D2 D3, D4	D6	D7	D8	B	Depth
36	9.5 (241)	13.5 (343)	12.3 (311)	13.4 (295)	12.4 (314)	4.0 (102)	5.0 (127)
38	11.5 (178)	15.5 (311)	14.3 (362)	15.4 (391)	14.4 (314)	4.5 (114)	5.0 (127)



FLOW CHARTS



Lbs (Kg)	CD36	MS36	CDC36
Approx. Weight	5 (2.27)	5 (2.27)	5 (2.27)
Lbs (Kg)	CD38	MS38	CDC38
Approx. Weight	6 (2.7)	6 (2.7)	6 (2.7)

REPLACEMENT DESICCANT ELEMENT KITS

Description	Quantity (per case)	Kit Number
Clay Desiccant Elements		
Series 36.....	4	CD-36NRE
Series 38.....	4	CD-38NRE
Clay with Activated Carbon		
Series 36.....	4	CDC-36NRE
Series 38.....	4	CDC-38NRE
Molecular Sieve Elements		
Series 36.....	4	MS-36NRE
Series 38.....	4	MS-38NRE

Note: Replacement kits include parts for both the older and current designs of filter discs.

ORDERING INFORMATION

Change the letters in the sample model number below to specify the dryer/filter you want.

DESICCANT

Clay..... CD

Clay with carbon..... CDC

Molecular sieve..... MS

SIZE

3/8 NPTF — 18 scfm 36-3

1/2 NPTF — 30 scfm 38-4

PORT TYPE

NPTF threads Leave Blank

BSP threads W

MOISTURE INDICATOR

None Leave Blank

With moisture indicator M (MI375)

DRAIN

None Leave Blank

Polycarbonate bowl; plastic bowl guard:

Manual drain PGM D1

Automatic float drain D2

PGA

Metal bowl with sight glass:

Manual drain MSM D3

Automatic float drain D4

MBA

Air poppet (actuator required);

24v heated drain; temperature

controlled D6

Air poppet with 24v adjustable D7

cycle heated electronic timer

Warrior electronic 115vac drain D8

MP-FILENCO Dryer/Filters

Series 418
Port Size: 1



Model Shown: CD418-8D1M

SPECIFICATIONS

Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

Drain: Automatic drain; optional manual or electronic drains.

Desiccant: Choice of three.

Flow Rate: 70 scfm.

Fluid Media: Compressed air.

Inlet Pressure: 150 psig (10 bar) maximum. Consult Master Pneumatic for higher pressure ratings.

Mounting: Flanges and front ports for flush mounting.

Many compressed air systems require point-of-use cleaning and drying of the air to supplement a central system. MP-Fileenco dryer/filter units perform superbly because of their triple-action cleaning process and their ability to reduce the pressure dew point. See the sketch on page 95 for a cross-section view of a typical dryer/filter.

The filtering and drying functions result in super clean, super dry air. Several drain options and choices of desiccants are available to suit various operating needs. Units have flanges and front ports for flush mounting.

DESICCANTS

The desiccants in **MP-Fileenco** dryer/filters have the ability to drop the pressure dew point thereby preventing the recurrence of water in the air system. They also adsorb sulfur compounds that form abrasive, gummy varnish or shellac. Three different desiccants are available.

CLAY DESICCANT (CD) — This is a general purpose desiccant which produces initial dew point depressions of 20 to 25 degrees Fahrenheit. It is effective for removing both water and oil, and requires no air preparation. Life expectancy is up to three months, depending on humidity, flow rate, and frequency of use.

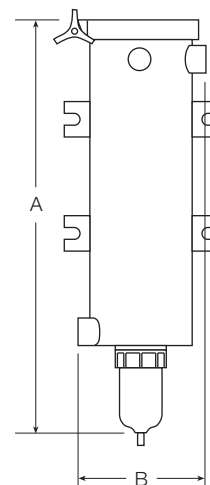
CLAY DESICCANT WITH ACTIVATED CARBON (CDC) — This desiccant provides a higher degree of air purification than the plain clay desiccant. A layer of activated carbon produces slightly lower initial dew points, and also provides better removal of noxious gases and oil aerosols.

MOLECULAR SIEVE DESICCANT (MS) — Highly porous alumina-silicate complexes in this desiccant produce exceptionally low pressure dew points, as much as 80 Fahrenheit degrees initially. A dryer/filter with this desiccant must be preceded by a coalescing filter. The presence of oil in the air will contaminate the molecular sieve material and greatly reduce its efficiency. The coalescing pre-filter, of course, should be preceded by a general purpose filter.

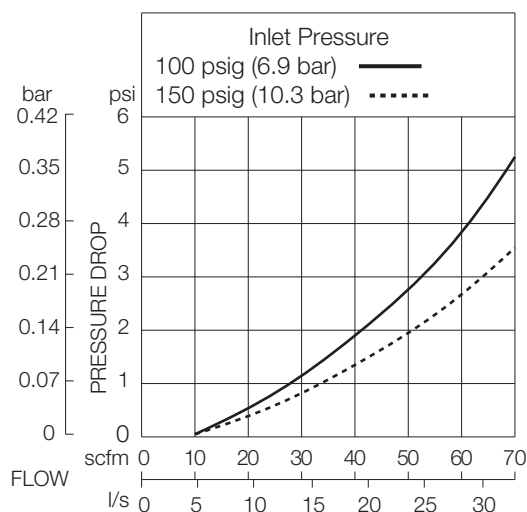
DIMENSIONS inches (mm)

Series	A with Drain						Depth
	A No Drain	D1, D2 D3, D4	D6	D7	D8	B	
418	20 (508)	24 (610)	22.8 (578)	23.9 (606)	22.9 (581)	6.0 (152)	6.5 (165)

Lbs (Kg)	CD418	MS418	CDC418
Approx. Weight	15.4 (7)	15.4 (7)	15.4 (7)



FLOW CHARTS



REPLACEMENT DESICCANT ELEMENT KITS

Description	Quantity (per case)	Kit Number
Clay Desiccant Elements Series 418.....	4	CD-418NRE
Clay with Activated Carbon Series 418.....	4	CDC-418NRE
Molecular Sieve Elements Series 418.....	4	MS-418NRE

Note: Replacement kits include parts for both the older and current designs of filter discs.

ORDERING INFORMATION

Change the letters in the sample model number below to specify the dryer/filter you want.

CD 418-8 D1 M W

DESICCANT

Clay CD
Clay with carbon.....CDC
Molecular sieve.....MS

DRAIN

NoneRemove D1
Polycarbonate bowl; plastic bowl guard:
Manual drain PGM D1
Automatic float drain D2
PGA
Metal bowl with sight glass:
Manual drain MSM D3
Automatic float drain MBA D4
Air poppet (actuator required); D6
24v heated drain; temperature
controlled
Air poppet with 24v adjustable D7
cycle heated electronic timer
Warrior electronic 115vac drain D8

PORT TYPE

NPTF threads Leave Blank
BSPP threads W

MOISTURE INDICATOR

None.. Leave Blank
With moisture indicator M
MI750

MP-FILENCO Dryer/Filters

Series 625 and 832 Port Sizes: 1-1/2 and 2



Model Shown: CD625-12D1M

Model Shown: CD832-16D1M

SPECIFICATIONS

Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

Drain:

Automatic drain; optional manual or electronic drains.

Desiccant: Choice of three.

Fluid Media: Compressed air.

Inlet Pressure: 150 psig (10 bar) maximum. Consult Master Pneumatic for higher pressure ratings.

Mounting: Flanges and front ports for flush mounting.

Many compressed air systems require point-of-use cleaning and drying of the air to supplement a central system. MP-Fileenco dryer/filter units perform superbly because of their triple-action cleaning process and their ability to reduce the pressure dew point. See the sketch on page 95 for a cross-section view of a typical dryer/filter.

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DESICCANTS

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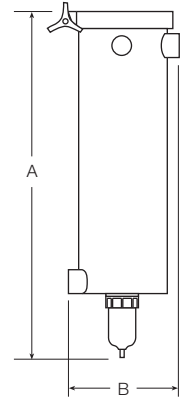
CLAY DESICCANT (CD) — This is a general purpose desiccant which produces initial dew point depressions of 20 to 25 degrees Fahrenheit. It is effective for removing both water and oil, and requires no air preparation. Life expectancy is up to three months, depending on humidity, flow rate, and frequency of use.

CLAY DESICCANT WITH ACTIVATED CARBON (CDC) — This desiccant provides a higher degree of air purification than the plain clay desiccant. A layer of activated carbon produces slightly lower initial dew points, and also provides better removal of noxious gases and oil aerosols.

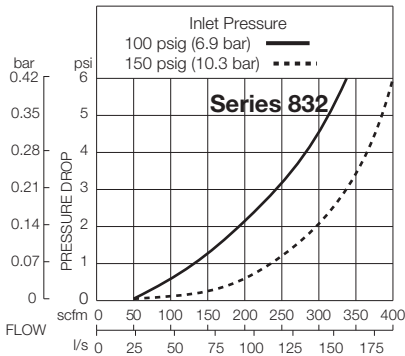
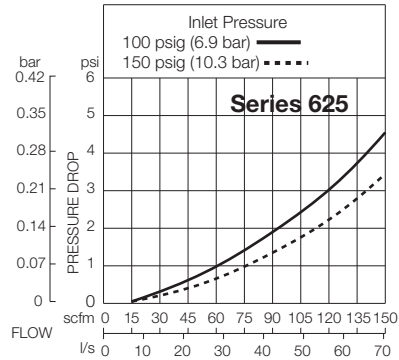
MOLECULAR SIEVE DESICCANT (MS) — Highly porous alumina-silicate complexes in this desiccant produce exceptionally low pressure dew points, as much as 80 Fahrenheit degrees initially. A dryer/filter with this desiccant must be preceded by a coalescing filter. The presence of oil in the air will contaminate the molecular sieve material and greatly reduce its efficiency. The coalescing pre-filter, of course, should be preceded by a general purpose filter.

DIMENSIONS inches (mm)

SeriesNo	A with Drain						Depth
	A Drain	D1, D2 D3, D4	D6	D7	D8	B	
625	21.3 (540)	25.3 (641)	24.0 (610)	25.1 (638)	24.1 (616)	8.5 (216)	8.0 (203)
832	34 (864)	38 (965)	37.5 (953)	39.6 (1007)	37.6 (956)	10 (254)	10.5 (267)



FLOW CHARTS



Lbs (Kg)	CD625	MS625	CDC625
Approx. Weight	27.7 (12.6)	27.7 (12.6)	27.7 (12.6)
Lbs (Kg)	CD832	MS832	CDC832
Approx. Weight	63.9 (29)	63.9 (29)	63.9 (29)

REPLACEMENT DESICCANT ELEMENT KITS

Description	Quantity (per case)	Kit Number
Clay Desiccant Elements		
Series 625	2	CD-625NRE
Series 832	1	CD-832NRE
Clay with Activated Carbon		
Series 625	2	CDC-625NRE
Series 832	1	CDC-832NRE
Molecular Sieve Elements		
Series 625	2	MS-625NRE
Series 832	1	MS-832NRE

Note: Replacement kits include parts for both the older and current designs of filter discs.

ORDERING INFORMATION

Change the letters in the sample model number below to specify the dryer/filter you want.

CD 625-12 D1 M W

DESICCANT

Clay CD
Clay with carbon..... CDC
Molecular sieve..... MS

SIZE

1-1/2 NPTF — 150 scfm625-12
2 NPTF — 300 scfm.....832-16

PORT TYPE

NPTF threads Leave Blank
BSPP threads W

MOISTURE INDICATOR

None..... Leave Blank
With moisture indicator M
MI750

DRAIN

None Leave Blank
Polycarbonate bowl; plastic bowl guard:
Manual drain PGM D1
Automatic float drain D2

PGA

Metal bowl with sight glass:
Manual drain MSM D3
Automatic float drain D4

MBA

Air poppet (actuator required); ..D6
24v heated drain; temperature controlled
Air poppet with 24v adjustable ..D7
cycle heated electronic timer
Warrior electronic 115vac drain..D8