

COALESCING FILTERS

SERIES MD

Ports with interchangeable cartridges: threaded (1/8, 1/4, 3/8) or integrated with super-rapid fitting for tube with Ø 6, 8 and 10 mm
Modular assembly
Bowl with technopolymer cover and bayonet-type mounting



- High performance and high purity compressed air
- Air quality according to ISO 8573-1:2010 standard, Classes [1:8:1] and [2:8:2]
- Visual blockage indicator
- Condensate drain options: semi-automatic manual, automatic protected depressurisation, direct G1/8 exhaust
- Bowl locking system reducing the risk of accidents
- Additional air intakes with the same characteristics of the inlet air (line)

The coalescing filter is a fine oil separator filter that removes the solids with dimensions from 0,1 to 5 µm and oil vapours with a concentration from 0,01 to 0,1 mg/m³.

For a correct functioning they require a pre-filtering.

Given the characteristic of this filter, it is recommended to replace the filter element at least every 12 months or 8000 working hours.

Thanks to the solution adopted for the pneumatic connection, it is possible to equip the same element with interchangeable cartridges that can either be threaded, or with an integrated super-rapid fitting, both types available in different sizes.

Intermediate cartridges can be also integrated to join multiple functions or with derivation to draw air.

An additional air intake, with the same characteristic of the outlet air, is available on the front side and on the rear one.

This intake can be used by utilities with limited consumption.

General Data

Construction	Modular, compact with filtering element in BOROSILICATE
Materials	See TABLE OF MATERIALS on the following page
Ports	With interchangeable cartridges: 1/8, 1/4 and 3/8 threaded or integrated with super-rapid fitting for tube with Ø 6, 8 and 10 mm
Condensate capacity	24 cm ³
Fixing	Vertical in-line Wall-mounting by means of through holes in the body or with a support bracket
Working temperature	-5°C ÷ 50°C up to 16 bar
Condensate drain	Semi-automatic manual, automatic protected depressurisation, direct G1/8 exhaust
Quality of delivered air according to ISO 8573-1:2010	Class [2:8:2] with 1 µm filtering element (pre-filtering with Class [6:8:4] is recommended) Classe [1:8:1] with 0,01 µm filtering element (pre-filtering with Classe [2:8:2] is recommended)
Working pressure	0,3 ÷ 16 bar
Nominal flow	See FLOW DIAGRAMS on the following pages
Oil retain efficiency	99,80% (0,01µm) 97% (1µm)
Particles retain efficiency	99,99999% (0,01µm) 99,999% (1µm)
Fluid	Compressed air

COALESCING FILTERS
SERIES MD - CODING EXAMPLES

Coding Example

MD	1	-	FC	0	0	0	-	1/8
MD	SERIES							
1	DIMENSION 1 = 42 mm							
FC	COALESCING FILTER							
0	FILTERING ELEMENT 0 = 0,01 µm 1 = 1 µm							
0	DRAINING OF CONDENSATE 0 = Semiautomatic-manual drain 5 = Automatic drain, protected depressurisation 8 = Direct G1/8 exhaust							
0	VISUAL BLOCKAGE INDICATOR 0 = Not present 1 = Present							
1/8	PORTS (IN - OUT) * = Without cartridges 1/8 = G1/8 1/4 = G1/4 3/8 = G3/8 6 = Tube Ø6 8 = Tube Ø8 10 = Tube Ø10 * If the inlet (IN) cartridge is different from the outlet (OUT) cartridge, both dimensions shall be indicated. Example: MD1-FC000-1/4-10							

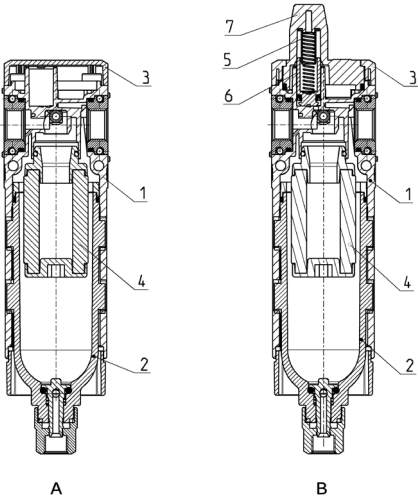
AIR TREATMENT

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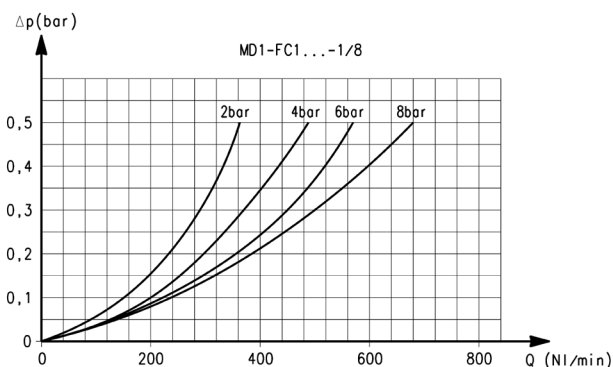
Series MD coalescing filters - materials

- A = Filter
B = Filter with visual blockage indicator

Parts	Materials
1 = Body	Polyamide
2 = Tank	Polycarbonate
3 = Covering	Polyamide
4 = Filtering element	Borosilicate
5 = Upper spring	Stainless steel
6 = Piston	Anodized aluminium
7 = Visual blockage indicator	Polycarbonate
Seals	NBR

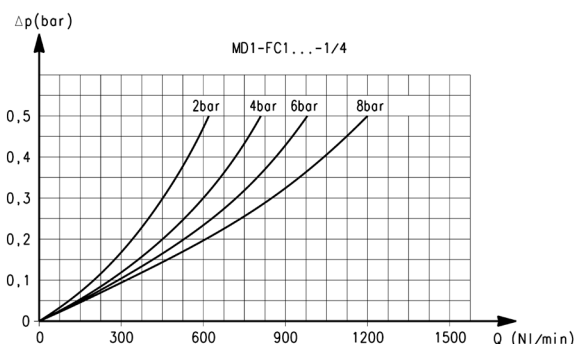


Flow diagrams for models with 1 µm filtering element



Ports with interchangeable 1/8 threaded cartridges

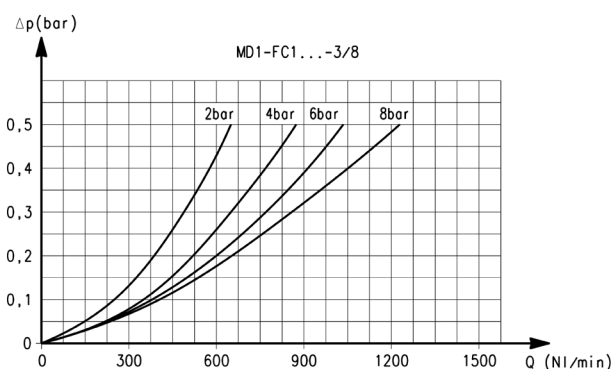
Δp = Pressure drop (bar)
Q = Flow (NL/min)



Ports with interchangeable 1/4 threaded cartridges

Δp = Pressure drop (bar)
Q = Flow (NL/min)

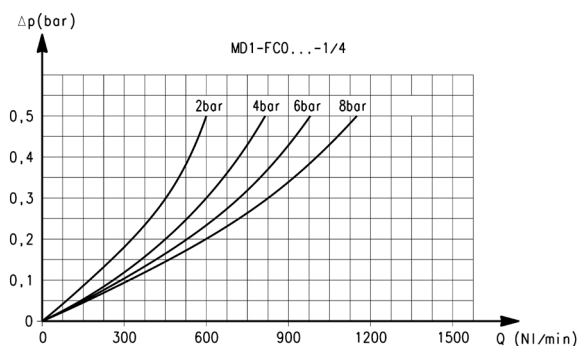
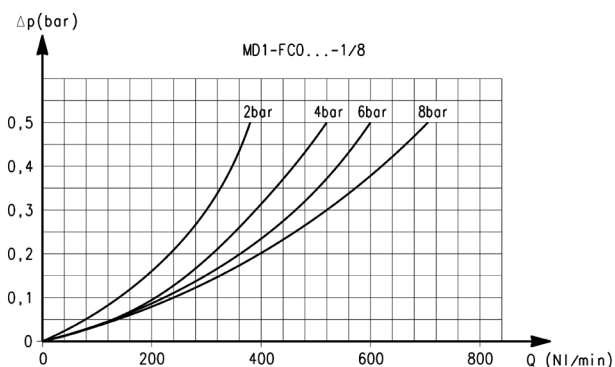
Flow diagram for models with 1 µm filtering element



Ports with interchangeable 3/8 threaded cartridges

Δp = Pressure drop (bar)
Q = Flow (NL/min)

Flow diagrams for models with 0,01 µm filtering element



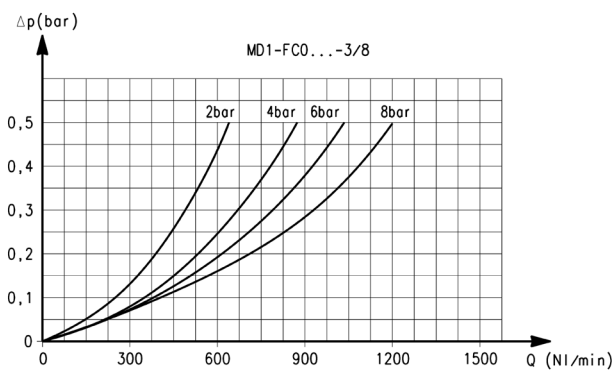
Ports with interchangeable 1/8 threaded cartridges

Δp = Pressure drop (bar)
Q = Flow (NI/min)

Ports with interchangeable 1/4 threaded cartridges

Δp = Pressure drop (bar)
Q = Flow (NI/min)

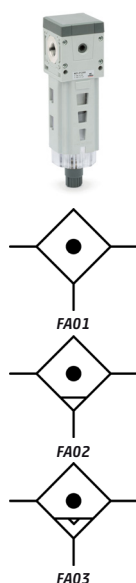
Flow diagram for models with 0,01 µm filtering element



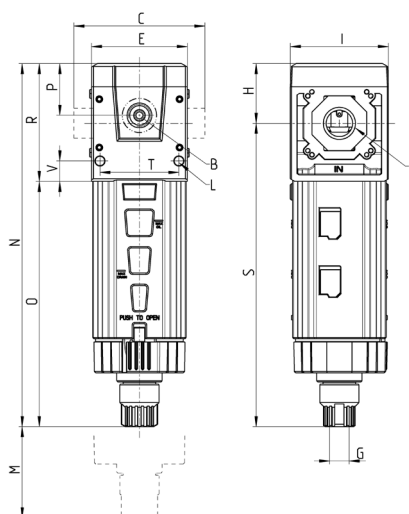
Ports with interchangeable 3/8 threaded cartridges

Δp = Pressure drop (bar)
Q = Flow (NI/min)

Series MD coalescing filters - dimensions



FA01 = Coalescing filter with direct G1/8 exhaust
FA02 = Coalescing filter with semi-automatic manual drain
FA03 = Coalescing filter with automatic/depressuring drain

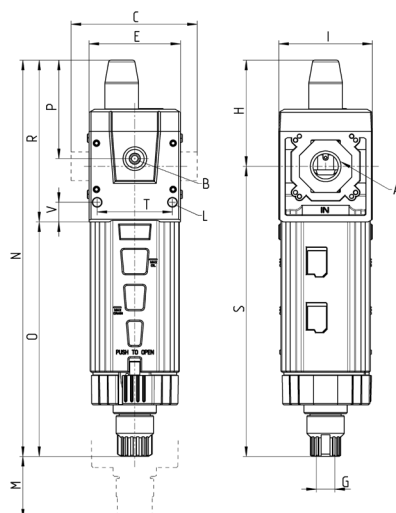


Mod.	A	B	C	E	G	H	I	L	M	N	O	P	R	S	T	V	Weight [kg]
MD1-FC000	-	G1/8	42	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-1/8	G1/8	G1/8	42	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-1/4	G1/4	G1/8	42	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-3/8	G3/8	G1/8	42	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-6	Ø6	G1/8	47	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-8	Ø8	G1/8	62	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2
MD1-FC000-10	Ø10	G1/8	67	42	G1/8	26,2	43	Ø4	90	159,4	107,7	22,7	51,7	133,2	34,6	9	0,2

Series MD coalescing filters with visual indicator - dimensions



FA04 = Coalescing filter with direct G1/8 exhaust and visual blockage indicator
FA05 = Coalescing filter with semi-automatic manual drain and visual blockage indicator
FA06 = Coalescing filter with automatic/depressuring drain and visual blockage indicator



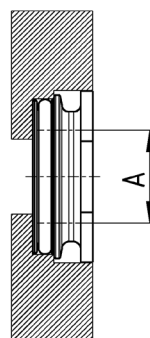
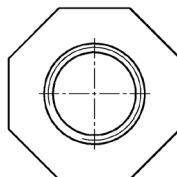
Mod.	A	B	C	E	G	H	I	L	M	N	O	P	R	S	T	V	Weight [kg]
MD1-FC001	-	G1/8	42	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-1/8	G1/8	G1/8	42	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-1/4	G1/4	G1/8	42	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-3/8	G3/8	G1/8	42	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-6	Ø6	G1/8	47	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-8	Ø8	G1/8	62	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2
MD1-FC001-10	Ø10	G1/8	67	42	G1/8	48,7	43	Ø4	90	181,9	107,7	45,2	74,2	133,2	34,6	9	0,2

Threaded cartridges



Supplied with:

2x nickel-plated threaded cartridges
4x special white zinc-plated screws Ø4,5 TC/RC



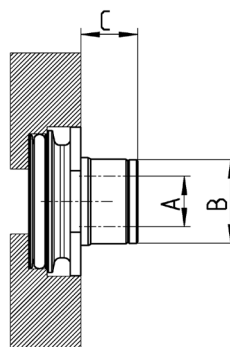
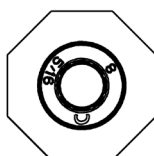
Mod.	A
MD1-A-1/8	G1/8
MD1-A-1/4	G1/4
MD1-A-3/8	G3/8
MD1-A-1/8TF	1/8 NPTF
MD1-A-1/4TF	1/4 NPTF
MD1-A-3/8TF	3/8 NPTF

Integrated cartridges with super-rapid fitting



Supplied with:

2x integrated nickel-plated cartridges with super-rapid fitting
4x special white zinc-plated screws Ø4,5 TC/RC



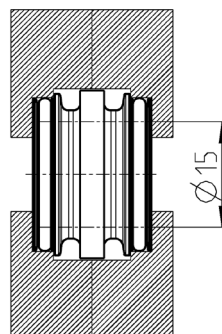
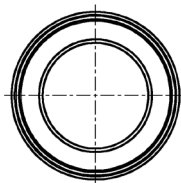
Mod.	A	B	C
MD1-A-6	Ø6	12,7	8,5
MD1-A-8	Ø8	14,2	10
MD1-A-10	Ø10	16,5	12,5
MD1-A04TF	Ø1/4"	12,7	8,5
MD1-A-05TF	Ø5/16"	14,2	10
MD1-A-06TF	Ø3/8"	16,5	12,5

Intermediate joining cartridge



Supplied with:

1x intermediate joining cartridge
4x special white zinc-plated screws Ø4,5 TC/RC



Mod.

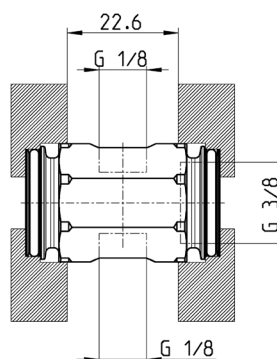
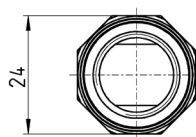
MD1-C

Screws for wall mounting



Supplied with:

2x white zinc-plated screws
M4x50



Mod.

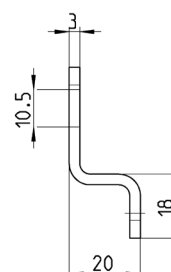
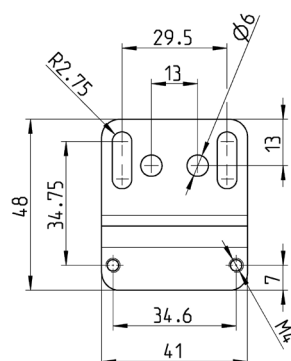
MD1-D

Rear bracket



Supplied with:

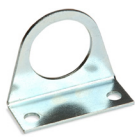
1x zinc-plated bracket
2x white zinc-plated screws
M4x50



Mod.

MD1-ST/1

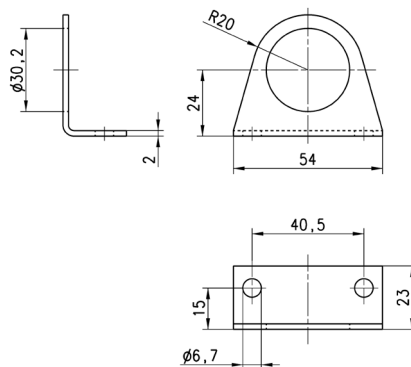
Mounting bracket Mod. C114-ST



For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket



Mod.
C114-ST

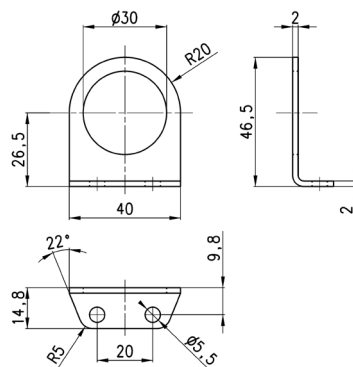
Mounting bracket Mod. C114-ST/1



For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket



Mod.
C114-ST/1

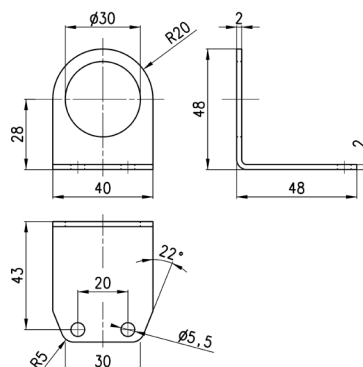
Mounting bracket Mod. C114-ST/2



For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket



Mod.
C114-ST/2

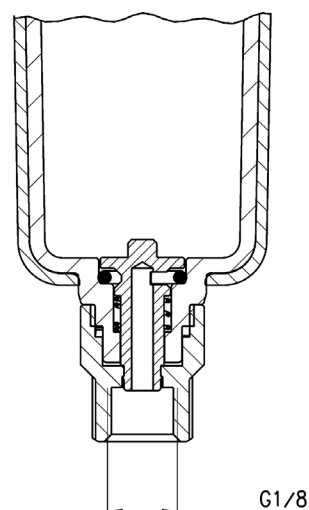
Semi-automatic manual drain Type 0



Functioning: with the operator mechanism turned clockwise, each time the pressure falls below 0,3 bar, the draining of condensate will be released; when resetting the pressure, the drain will close again.

The release can also be carried out manually; when the bowl is pressurised, the operator mechanism is pushed upwards.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.



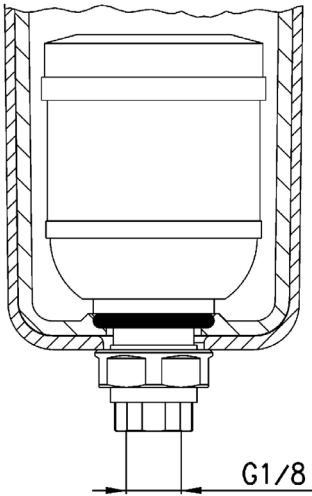
Mod. filter	Bowl with semiautomatic manual drain
N10...-F	N1-F71
N10...-D	N1-F71
N10...-FB	N1-F71
N20...-F	N2-F71
N20...-D	N2-F71
N20...-FB	N2-F71
MC104-F	MC1-F71
MC104-D	MC1-F71
MC104-FB	MC1-F71
MC202-F	MC2-F71
MC202-D	MC2-F71
MC202-FB	MC2-F71
MC238-F	MC2-F71
MC238-D	MC2-F71
MC238-FB	MC2-F71
MX2...-F	MX2-F2-P
MX2...FR	MX2-F2-P
MX2...-FC	MX2-F2-P
MX3...-F	MX3-F2-P
MX3...-FR	MX3-F2-P
MX3...-FC	MX3-F2-P
MD1-F0..	MD1-FSP01
MD1-F1..	MD1-FSP04
MD1-FR0..	MD1-FSP01
MD1-FR1..	MD1-FSP04
MD1-FC0..	MD1-FCSP01
MD1-FC1..	MD1-FCSP04

Automatic drain (Type 3)



Functioning: the presence of liquid inside the bowl raises the float, thus opening the exhaust valve.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.



Mod. filter	Bowl with automatic drain
MC202-F	MC2-F71/3
MC202-D	MC2-F71/3
MC202-FB	MC2-F71/3
MC238-F	MC2-F71/3
MC238-D	MC2-F71/3
MC238-FB	MC2-F71/3
MX2...-F	MX2-F2/1-P
MX2...FR	MX2-F2/1-P
MX2...FC	MX2-F2/1-P
MX3...-F	MX3-F2/1-P
MX3...-FR	MX3-F2/1-P
MX3...-FC	MX3-F2/1-P
MD1-F0..	MD1-FSP08
MD1-F1..	MD1-FSP07
MD1-FR0..	MD1-FSP08
MD1-FR1..	MD1-FSP07

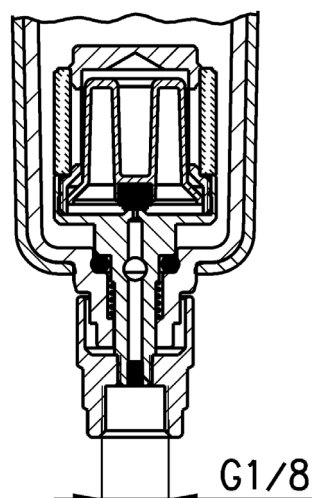
Depressurisation drain, protected (Type 5)



Solution similar to the Type 4 but requiring a ΔP = 1 bar.

Functioning: this version has a filtering element which prevents any impurities from clogging the exhaust hole.

Assembled with Filtering element 25 μ , Filtering element 5 μ , Filtering element 1 μ , Filtering element 0.01 μ .



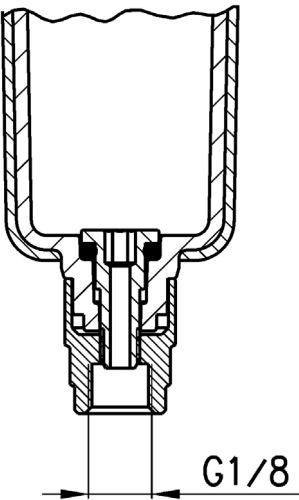
Mod. filter	Bowl with depressurization drain, protected
N20...-F	N2-F71/1
N20...-D	N2-F71/1
N20...-FB	N2-F71/1
MC104-F	MC1-F71/1
MC104-D	MC1-F71/1
MC104-FB	MC1-F71/1
MC202-F	MC2-F71/1
MC202-D	MC2-F71/1
MC202-FB	MC2-F71/1
MC238-F	MC2-F71/1
MC238-D	MC2-F71/1
MC238-FB	MC2-F71/1
MX2...-F	MX2-F2/3-P
MX2...FR	MX2-F2/3-P
MX2...-FC	MX2-F2/3-P
MX3...-F	MX3-F2/3-P
MX3...-FR	MX3-F2/3-P
MX3...-FC	MX3-F2/3-P
MD1-F0..	MD1-FSP03
MD1-F1..	MD1-FSP06
MD1-FR0..	MD1-FSP03
MD1-FR1..	MD1-FSP06
MD1-FC0..	MD1-FCSP03
MD1-FC1..	MD1-FCSP06

Bowl without drain (Type 8)



The solution with port G1/8 is used to assemble the items to the bowl which is realized with a through hole of Ø3 mm and a threaded port G1/8.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.

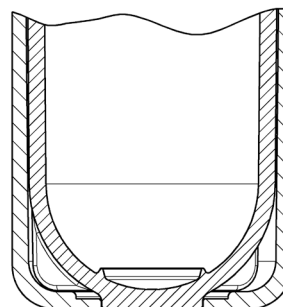


Mod. filter	Bowl without drain (1/8 port)
N10...-F	N1-F71-1/8
N10...-D	N1-F71-1/8
N10...-FB	N1-F71-1/8
N20...-F	N2-F71-1/8
N20...-D	N2-F71-1/8
N20...-FB	N2-F71-1/8
MC104-F	MC1-F71-1/8
MC104-D	MC1-F71-1/8
MC104-FB	MC1-F71-1/8
MC202-F	MC2-F71-1/8
MC202-D	MC2-F71-1/8
MC202-FB	MC2-F71-1/8
MC238-F	MC2-F71-1/8
MC238-D	MC2-F71-1/8
MC238-FB	MC2-F71-1/8
MX2...-F	MX2-F2/2-P
MX2...FR	MX2-F2/2-P
MX2...-FC	MX2-F2/2-P
MX3...-F	MX3-F2/2-P
MX3...-FR	MX3-F2/2-P
MX3...-FC	MX3-F2/2-P
MD1-F0..	MD1-FSP02
MD1-F1..	MD1-FSP05
MD1-FR0..	MD1-FSP02
MD1-FR1..	MD1-FSP05
MD1-FC0..	MD1-FCSP02
MD1-FC1..	MD1-FCSP05

Closed bowl



Assembled with Activated carbon filter.



Mod. filter	Closed bowl
N20...-FCA	N2-L71
MC104-FCA	MC1-L71
MC202-FCA	MC2-L71
MC238-FCA	MC2-L71
MX2...-FCA	MX2-L2-P
MX3...-FCA	MX3-L2-P
MD1-FCA..	MD1-FCASP01

Coalescing filters



Assembled with Semi-automatic manual drain, Automatic drain, Depressurisation drain, Depressurisation drain protected, Bowl without drain.

Mod. filter	Filtering element 0.01 µ
N10...-FB	MX1-F10
N20...-FB	MX1-F10
MC104-FB	MX1-F10
MC202-FB	MX2-F10
MC238-FB	MX2-F10
MX2...-FC	MX2-F10
MX3...-FC	MX3-F10
MD1-FC0.. *	MD1-F10

Coalescing filters



Assembled with Semi-automatic manual drain, Automatic drain, Depressurisation drain protected, Bowl without drain.

Mod. filter	Filtering element 1 µ
MX2...-FC	MX2-F9
MX3...-FC	MX3-F9
MD1-FC1...*	MD1-F9