

FILTER-REGULATORS

SERIES MC

Ports G1/4, G3/8 and G1/2
Modular
Metal bowl and bayonet-type mounting



- Quality of delivered air according to ISO 8573-1:2010, Classes [7:8:4] and [6:8:4]
- Minimal pressure decreases
- Knob with closure
- Integral return exhaust (relieving)
- Available versions:
 - with by-pass valve

Series MC filter regulators are available with ports G1/4, G3/8 and G1/2. They combine the features of the filters and regulators and have smaller overall dimensions than the two separate components.

General Data

Construction	Compact modular with filtering element in HDPE
Materials	Zama, NBR, technopolymer
Ports	G1/4, G3/8, G1/2
Condensate capacity	28 cm ³ , 72 cm ³ , 72 cm ³
Weight	0,443 kg, 0,948 kg, 0,928 kg
Mounting	Vertical, in-line or wall-mounting
Operating temperature	-5°C ÷ 50°C at 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Quality of delivered air according to ISO 8573-1:2010	Class [6:8:4] with 5µm filtering element Class [7:8:4] with 25µm filtering element
Draining of condensate	Semi-automatic manual (standard), automatic, with depressurisation, protected depressurisation, without drain with port G1/8
Finishing	Enamelled
Inlet pressure	With standard drain and protected depressurisation 0.3 ÷ 16 bar with depressurisation 0.3 ÷ 10 bar with automatic drain 1.5 ÷ 12 bar for G3/8 and G1/2
Outlet pressure	0.5 ÷ 10 bar (standard), 0.5 ÷ 2 bar; 0.5 ÷ 4 bar e 0.5 ÷ 7 bar
Nominal flow	See Flow diagrams
Fluid	Compressed air

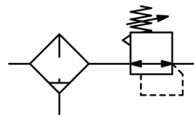
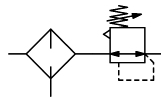
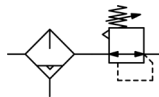
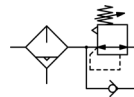
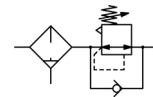
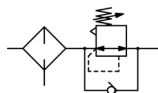
FILTER-REGULATORS
SERIES MC - CODING EXAMPLES
Coding example

MC	2	02	-	D	0	0	2	-	4	-	VS
MC	SERIES										
2	SIZE: 1 = G1/4 2 = G3/8 - G1/2										
02	PORTS: 04 = G1/4 38 = G3/8 02 = G1/2										
D	D = FILTER-REGULATOR										
0	FILTERING ELEMENT: 0 = 25µm (standard) 1 = 5µm										
0	DRAINING OF CONDENSATE (further details in the dedicated section): 0 = manual semiautomatic, self-relieving 1 = manual semiautomatic, non relieving 3 = automatic, self-relieving (only for G3/8 and G1/2) 4 = depressurisation, self-relieving (only G1/4) 5 = depressurisation, protected, self-relieving 8 = no drain, port G1/8, self-relieving										
2	PRESSURE GAUGE: ** = without pressure gauge (standard) 1 = with pressure gauge 0-2.5, with working pressure 0.5 ÷ 2 bar 2 = with pressure gauge 0-6, with working pressure 0.5 ÷ 4 bar 3 = with pressure gauge 0-10, with working pressure 0.5 ÷ 7 bar 4 = with pressure gauge 0-12, with working pressure 0.5 ÷ 10 bar										
4	WORKING PRESSURE = 0.5 ÷ 10 2 = 0.5 ÷ 2 (only G1/4) 4 = 0.5 ÷ 4 7 = 0.5 ÷ 7 (only G1/4)										
VS	REGULATION TYPE: = without by-pass valve (standard) VS = with by-pass valve (only G1/4)										

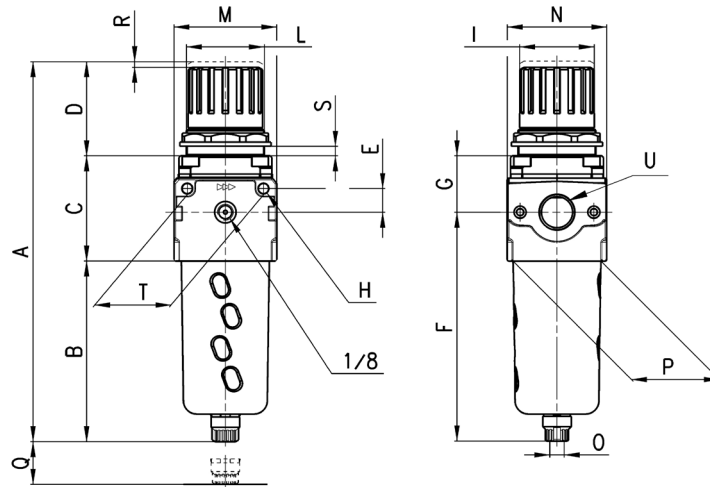
** the pressure gauges are supplied disassembly for size 1 pressure gauge mod. M043-P. for size 2 pressure gauge mod. M053-P.

Pneumatic symbols

- FR01 = filter-reg. with relieving and manual/semiautomatic drain
- FR02 = filter-reg. with relieving and direct exhaust
- FR18 = filter-reg. with relieving and automatic drain
- FR22 = filter-reg. relieving, with pressure gauge, automatic depressurisation drain and by-pass valve
- FR24 = filter-reg. with relieving and manual/semiautomatic drain and bypass valve
- FR25 = filter-reg. with relieving, direct exhaust and by-pass valve

FR01

FR02

FR18

FR22

FR24

FR25


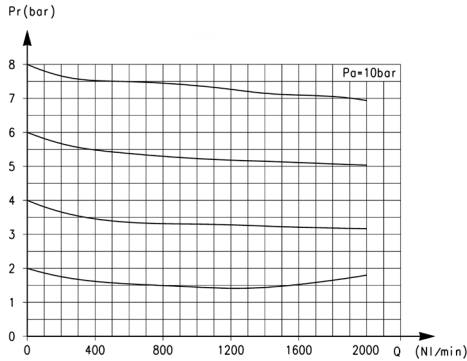
Filter-regulators



Mod.	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U
MC104-D00	190,5	102	52	38	11	126,5	27,5	4,5	28	M30x1,5	45	45	G1/8	37	58	3	0 ÷ 6	35	G1/4
MC238-D00	256,5	133	64	59	14	162	35	5,5	45	M47x1,5	62	59	G1/8	53	72	3,5	0 ÷ 9	46	G3/8
MC202-D00	256,5	133	64	59	14	162	35	5,5	45	M47x1,5	62	59	G1/8	53	72	3,5	0 ÷ 9	46	G1/2

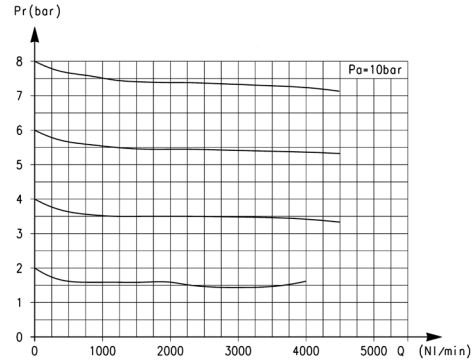
Flow diagrams

MC104-D00



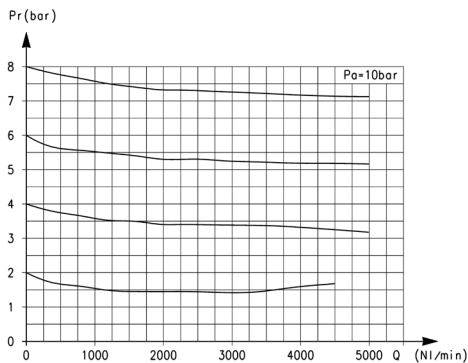
Pa = Inlet pressure (bar)
Pr = Regulated pressure (bar)
Q = Flow (NL/min)

MC238-D00



Pa = Inlet pressure (bar)
Pr = Regulated pressure (bar)
Q = Flow (NL/min)

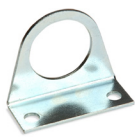
MC202-D00



Pa = Inlet pressure (bar)
Pr = Regulated pressure (bar)
Q = Flow (bar)

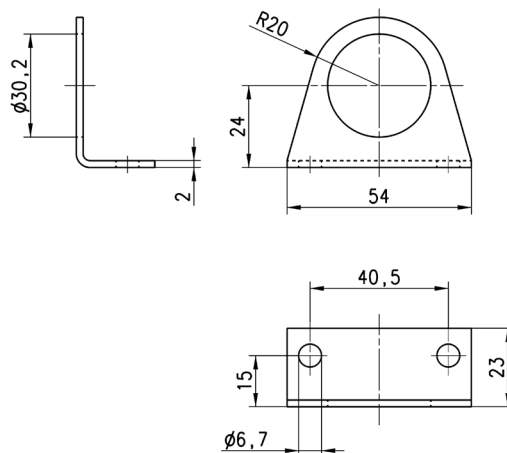
Mounting bracket Mod. C114ST

For regulators and filter-regulators MC1



Supplied with:
 1x bracket

Material:
 zinc-plated steel



Mod.
C114-ST

AIR TREATMENT

9

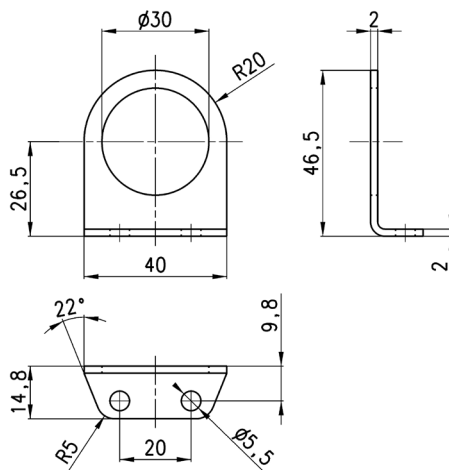
Mounting bracket Mod. 114-ST/1

For regulators and filter-regulators MC1



Supplied with:
 1x bracket

Material:
 zinc-plated steel



Mod.
C114-ST/1

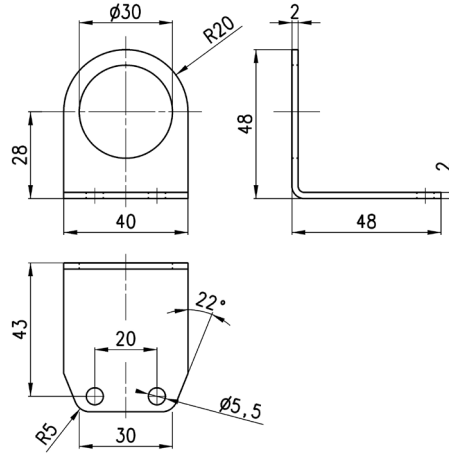
Mounting bracket C114-ST/2

For regulators and filter-regulators MC1



Supplied with:
1x bracket

Material:
zinc-plated steel



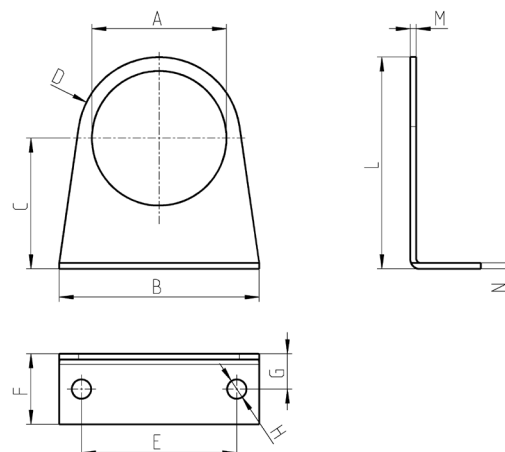
Mod.
C114-ST/2

Fixing bracket for regulators

For regulators MC2



Supplied with:
1x zinc-plated steel bracket



Mod.	A	B	C	D	E	F	G	H	L	M	N
MX2-S	Ø47,2	73	60,5	R29,5	54	25	15	Ø6,2	90	2,5	2,5

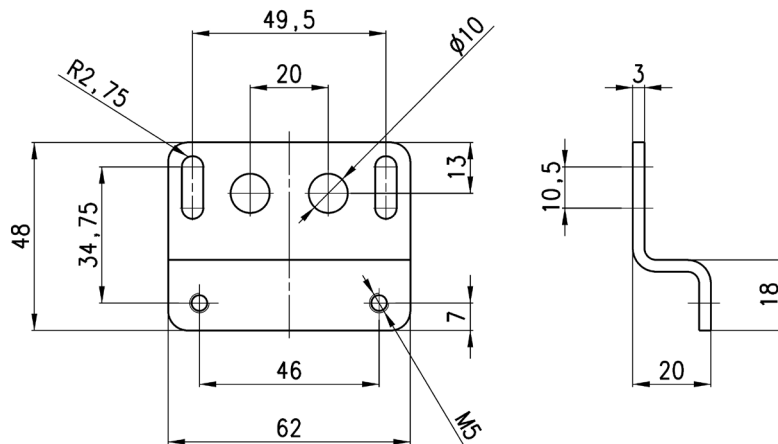
Mounting bracket Mod. C238-ST/1

For MC2



Supplied with:
 1x bracket
 2x screws M5X65.

Materials:
 zinc-plated steel bracket
 and screws.



Mod.	
C238-ST/1	

AIR TREATMENT

9

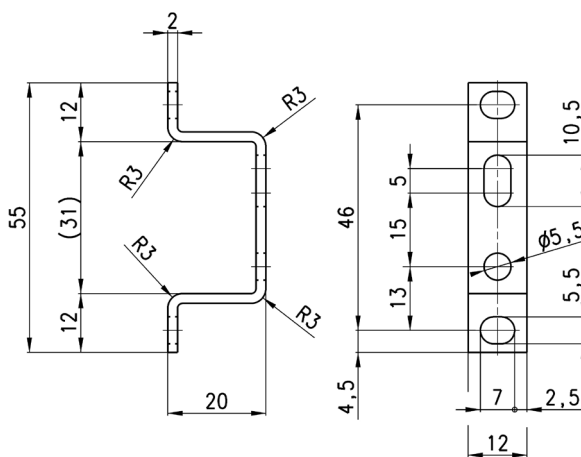
Mounting bracket for (Kit B)

The kit MC104-ST is supplied with:
 2x terminal brackets
 4x screws M5x10.



Mounting bracket for terminals 1/4, 3/8, 1/2.

Materials:
 zinc-plated steel brackets
 and screws.



Mod.	
MC104-ST	

Terminal flanges (Kit A)



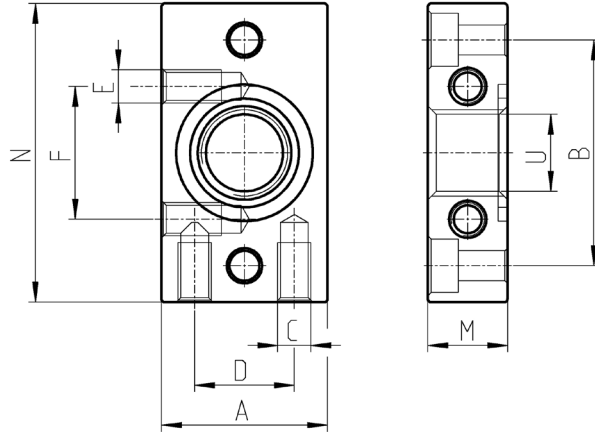
The kit MC104-FL is supplied with:

- 1x left flange;
- 1x right flange;
- 4x screws M4x14;
- 2x O-Ring 2068.

Each of the kits MC202-FL and MC238-FL is supplied with:

- 1x left flange;
- 1x right flange;
- 4x screws M5x14;
- 2x O-Ring 3100.

Materials:
painted aluminium flanges,
zinc-plated steel screws and
NBR O-ring.



Mod.	A	B	C	D	E	F	N	M	U	Size
MC104-FL	25	34	M5	15	M5	20	45	12	G1/4	1
MC238-FL	35	44,5	M5	20	-	-	60	14	G3/8	2
MC202-FL	35	44,5	M5	20	-	-	60	14	G1/2	2

Tie-rods for assembling (Kit C)



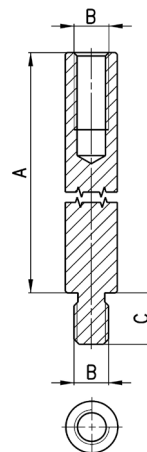
The kit MC1-TMF is supplied with:

- 2x male/female tie-rods
- 1x O-ring 2068.

The kit MC2-TMF is supplied with:

- 2x male/female tie-rods
- 1x O-ring 3100.

Materials:
nickel-plated steel tie-rods
and NBR O-ring.



Mod.	A	B	C	Size
MC1-TMF	45	M4	6	1
MC2-TMF	62	M5	6	2

FILTER-REGULATORS
SERIES MC - ACCESSORIES

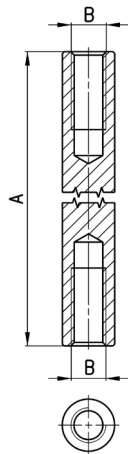
Tie-rods for assembling (Kit D)

The kit MC1-TFF is supplied with:
2x female tie-rods.



The kit MC2-TFF is supplied with:
2x female tie-rods.

Materials:
nickel-plated steel tie-rods.



Mod.	A	B	Size
MC1-TFF	44	M4	1
MC2-TFF	61	M5	2

AIR TREATMENT

9

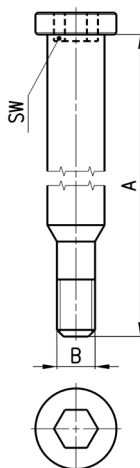
Screws for assembling (Kit E)

The kit MC1-VM is supplied with:
2x male screws
1x O-ring 2068.



The kit MC2-VM is supplied with:
2x male screws
1x O-ring 3100.

Materials:
zinc-plated steel screws and
NBR O-ring.



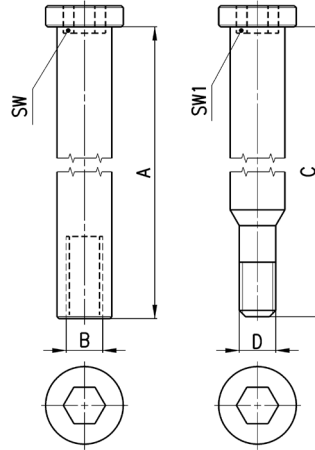
Mod.	A	B	SW	Size
MC1-VM	48,5	M4	3	1
MC2-VM	65,5	M5	4	2

Screws for assembling (Kit F)



The kit is supplied with:
2x male screws
2x female screws
1x O-ring (OR 2068 for MC1-VMF; OR 3100 for MC2-VMF).

Materials:
zinc-plated steel male screws, nickel-plated steel female screws and NBR O-ring.



Mod.	A	B	C	D	SW	SW1	Size
MC1-VMF	42	M4	48,5	M4	3	3	1
MC2-VMF	59	M5	68,5	M5	4	4	2

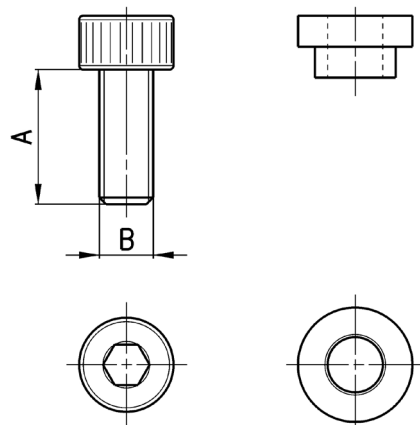
Screws (Kit G) to assemble 2 bodies type "M"



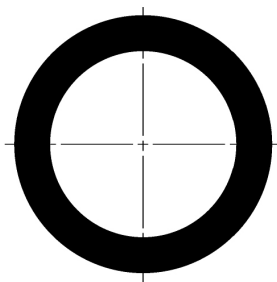
The kit MC1-VMD is supplied with:
4x screws M4X10
4x spacers
2x O-ring 2068.

The kit MC2-VMD is supplied with:
4x screws M5X12
4x spacers
2x O-ring 3100.

Materials:
zinc-plated steel screws, brass spacers and NBR O-ring.



Mod.	A	B	Size
MC1-VMD	10	M4	1
MC2-VMD	12	M5	2

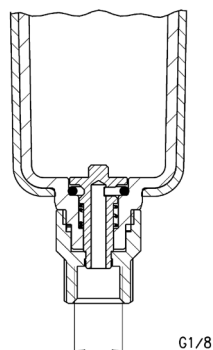
FILTER-REGULATORS
SERIES MC - ACCESSORIES
O-ring for assembling


Mod.	O-ring	For assembly
160-39-11/19	OR 3125	MX2
OR 38x2,8 NBR	OR 38x2,8	MX3

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.

AIR TREATMENT

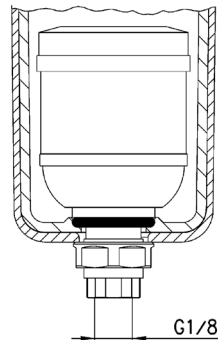
9

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.



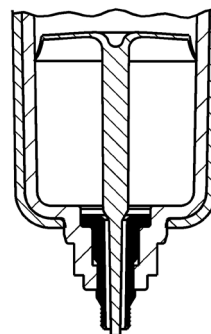
Assembled with Filtering element 25 μ , Filtering element 5 μ , Filtering element 1 μ , Filtering element 0.01 μ .

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 (Type 4)



Functioning: each time air is required from the inlet, a slight difference of pressure is created between the upper part and lower part of the drain that rises, thus opening the exhaust valve.



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

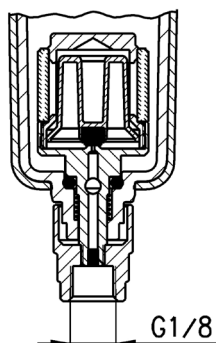
Mod. filter	Bowl with depressurization drain
N20...-F	N2-F71/2
N20...-D	N2-F71/2
N20...-FB	N2-F71/2
MC104-F	MC1-F71/2
MC104-D	MC1-F71/2
MC104-FB	MC1-F71/2

Depressurisation drain, protected (Type 5)



Solution similar to the Type 4 but requiring a $\Delta P = 1$ bar.

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



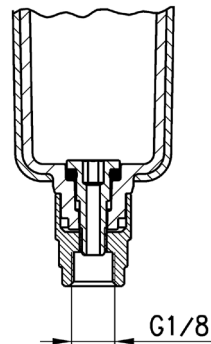
Assembled with Filtering element 25 μ , Filtering element 5 μ , Filtering element 1 μ , Filtering element 0.01 μ .

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)



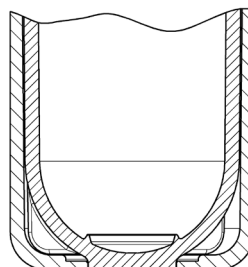
The solution with port G1/8 is used to assemble the items to the bowl which is realized with a through hole of $\varnothing 3$ mm and a threaded port G1/8.



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

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



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

FILTER-REGULATORS
SERIES MC - ACCESSORIES
Surface filters


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

Mod. filter	Filtering element 25 μ
N10...-F	C104-F20/3
N10...-D	C104-F20/3
N20...-F	C104-F20/3
N20...-D	C104-F20/3
MC104-F	C104-F20/3
MC104-D	C104-F20/3
MC202-F	C238-F11/3
MC202-D	C238-F11/3
MC238-F	C238-F11/3
MC238-D	C238-F11/3
MX2...-F	C238-F11/3
MX2...FR	C238-F11/3
MX3...-F	MX3-F7
MX3...-FR	MX3-F7
MD1-F0..*	C104-F20/3
MD1-FR0..*	C104-F20/3

Surface filters


Mod. filter	Filtering element 5 μ
N10...-F	C104-F21/3
N10...-D	C104-F21/3
N20...-F	C104-F21/3
N20...-D	C104-F21/3
MC104-F	C104-F21/3
MC104-D	C104-F21/3
MC202-F	C238-F12/3
MC202-D	C238-F12/3
MC238-F	C238-F12/3
MC238-D	C238-F12/3
MX2...-F	C238-F12/3
MX2...FR	C238-F12/3
MX3...-F	MX3-F8
MX3...-FR	MX3-F8
MD1-F1..*	C104-F21/3
MD1-FR1..*	C104-F21/3