

FILTERS

SERIES MD

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



- Removal of impurities and condensate
- 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 outlet air (line)

The Series MD air preparation product line is characterized by a modern and linear design as well as high performance. The technopolymer structure has allowed to create a simplified, product, lightweight and robust at the same time.

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 HDPE |
| 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 diameters of 6, 8 and 10 mm |
| Condensate capacity | 24 cm ³ |
| Mounting | 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 (with the dew point of the fluid lower than 2°C at the min. working temperature) |
| Condensate drain | Semi-automatic manual, automatic, protected depressurisation, direct G1/8 exhaust |
| Quality of delivered air according to ISO 8573-1:2010 | Class [6:8:4] with 5 µm filtering element Class [7:8:4] with 25 µm filtering element |
| Inlet pressure | 0,3 ÷ 16 bar (with automatic drain 1 ÷ 9 bar) |
| Exit pressure | 0,5 ÷ 2bar 0,5 ÷ 4bar 0,5 ÷ 7bar 0,5 ÷ 10bar |
| Nominal flow | See FLOW DIAGRAMS on the following pages |
| Fluid | Compressed air |

FILTERS
SERIES MD - CODING EXAMPLES
Coding Example

| | | | | | | | | |
|------------|--|----------|----------|----------|----------|----------|----------|------------|
| MD | 1 | - | F | 0 | 0 | 0 | - | 1/8 |
| MD | SERIES | | | | | | | |
| 1 | DIMENSION 1 = 42 mm | | | | | | | |
| F | FILTER | | | | | | | |
| 0 | FILTERING ELEMENT (further details in the dedicated section) 0 = 25 µm 1 = 5 µm | | | | | | | |
| 0 | DRAINING OF CONDENSATE (further details in the dedicated section) 0 = Semiautomatic-manual drain 3 = Automatic drain 5 = 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-F000-1/4-10 | | | | | | | |

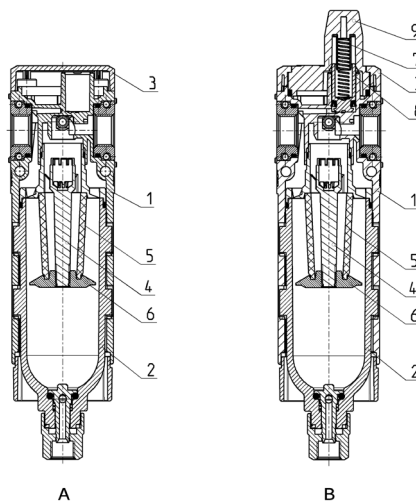
AIR TREATMENT

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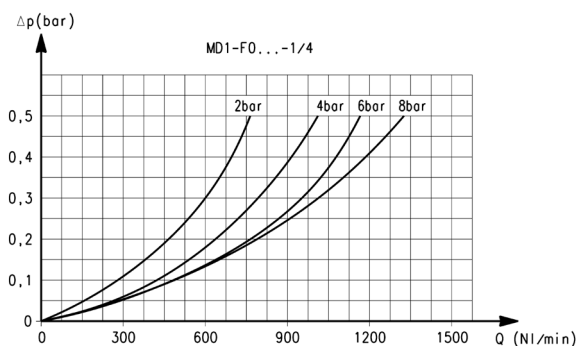
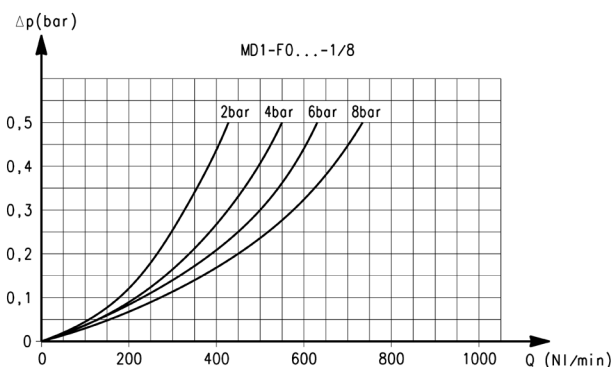
Filters Series MD - materials

 A = Filter
 B = Filter with visual blockage indicator

| Parts | Materials |
|-------------------------------|--------------------|
| 1 = Body | Polyamide |
| 2 = Tank | Polycarbonate |
| 3 = Covering | Polyamide |
| 4 = Valve-guide | Polyacetal |
| 5 = Filtering element | Polyethylene |
| 6 = Separation deflector | Polyacetal |
| 7 = Upper spring | Stainless steel |
| 8 = Piston | Anodized aluminium |
| 9 = Visual blockage indicator | Polycarbonate |
| Seals | NBR |



Flow diagrams for models with 25 µm filtering element



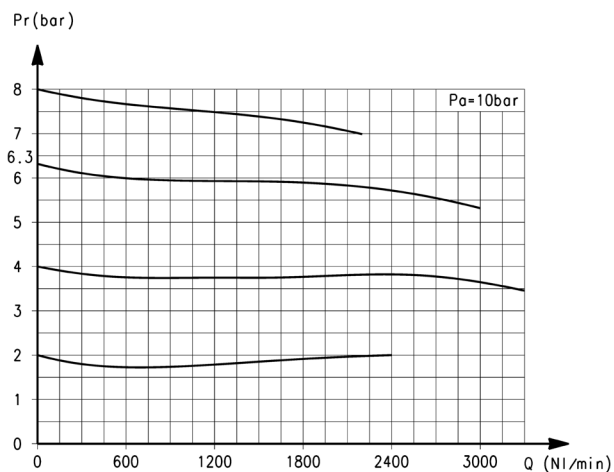
Ports with interchangeable 1/8 threaded cartridges

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



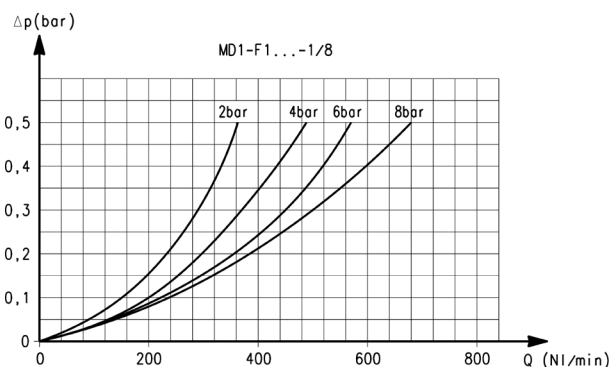
Ports with interchangeable G3/8 threaded cartridges

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

Pa = Inlet pressure (bar)

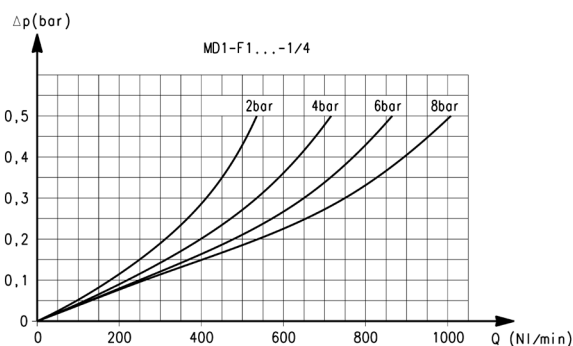
N.B: The version with automatic exhaust has a flow reduction of max 10%

Flow diagrams for models with 5 µm filtering element



Ports with interchangeable 1/8 threaded cartridges

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



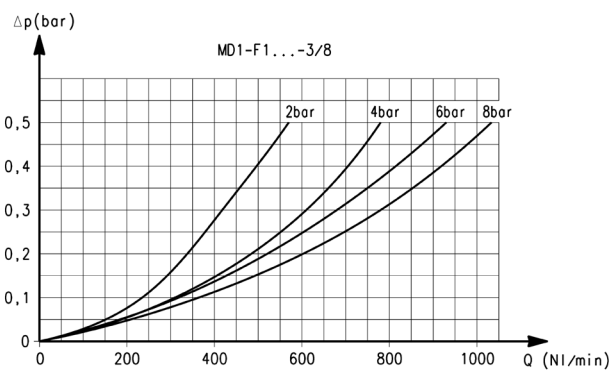
Ports with interchangeable 1/4 threaded cartridges

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

AIR TREATMENT

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Flow diagram for models with 5 µm filtering element



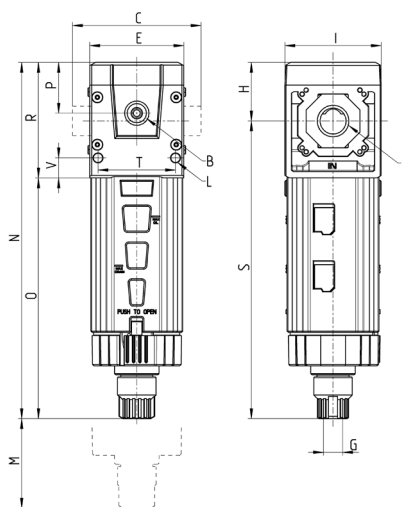
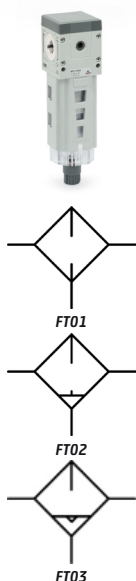
Ports with interchangeable 3/8 threaded cartridges

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

N.B The version with automatic exhaust has a flow reduction of max 10%

Series MD filters - dimensions

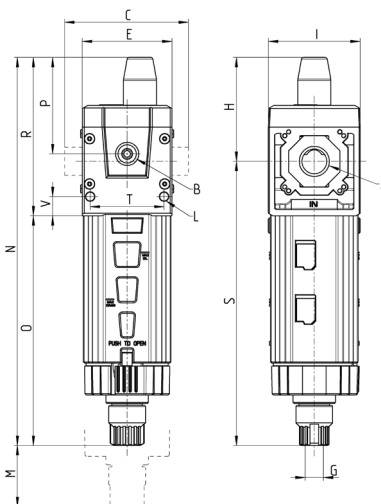
FT01 = Filter with direct G1/8 exhaust
 FT02 = Filter with semi-automatic manual drain
 FT03 = Filter with automatic/depressuring drain



| Mod. | A | B | C | E | G | H | I | L | M | N | O | P | R | S | T | V | Weight [kg] |
|--------------|------|------|----|----|-------|------|----|----|----|-------|-------|------|------|-------|------|---|-------------|
| MD1-F000 | - | 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-F000-1/8 | 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-F000-1/4 | 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-F000-3/8 | 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-F000-6 | 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-F000-8 | 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-F000-10 | 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 |
| MD1-F030 | - | G1/8 | 42 | 42 | M10x1 | 26,2 | 43 | Ø4 | 90 | 149 | 97,4 | 22,7 | 51,7 | 122,9 | 34,6 | 9 | 0,2 |

Series MD filters with visual blockage indicator - dimensions

FT05 = Filter with direct G1/8 exhaust and visual blockage indicator
 FT06 = Filter with semi-automatic manual drain and visual blockage indicator
 FT07 = Filter with automatic/depressuring drain and visual blockage indicator

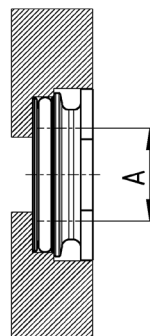
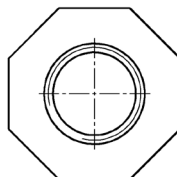


| Mod. | A | B | C | E | G | H | I | L | M | N | O | P | R | S | T | V | Weight [kg] |
|--------------|------|------|----|----|-------|------|----|----|----|-------|-------|------|------|-------|------|---|-------------|
| MD1-F001 | - | G1/8 | 42 | 42 | G1/8 | 48,7 | 43 | Ø4 | 90 | 181,9 | 107,7 | 45,2 | 74,2 | 133,2 | 34,6 | 9 | 0,2 |
| MD1-F001-1/8 | 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-F001-1/4 | 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-F001-3/8 | 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-F001-6 | 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-F001-8 | 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-F001-10 | 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 |
| MD1-F031 | - | G1/8 | 42 | 42 | M10x1 | 48,7 | 43 | Ø4 | 90 | 171,5 | 97,4 | 45,2 | 74,2 | 122,9 | 34,6 | 9 | 0,2 |

Threaded cartridges


Supplied with:

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

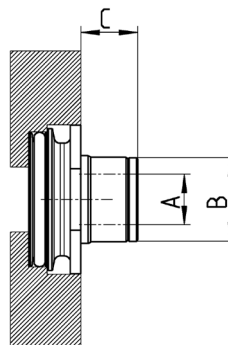


| Mod. | A |
|-------------|----------|
| MD1-A-1/8 | G1/8 |
| MD1-A-1/4 | G1/4 |
| MD1-A-3/8 | G3/8 |
| MD1-A-1/8TF | 1/8 NPTF |
| MD1-A-1/4TF | 1/4 NPTF |
| MD1-A-3/8TF | 3/8 NPTF |

Integrated cartridges with super-rapid fitting


Supplied with:

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



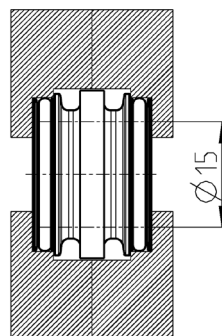
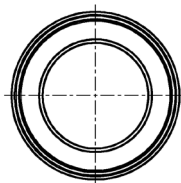
| Mod. | A | B | C |
|------------|----------------------|------|------|
| MD1-A-6 | $\varnothing 6$ | 12,7 | 8,5 |
| MD1-A-8 | $\varnothing 8$ | 14,2 | 10 |
| MD1-A-10 | $\varnothing 10$ | 16,5 | 12,5 |
| MD1-A04TF | $\varnothing 1/4''$ | 12,7 | 8,5 |
| MD1-A-05TF | $\varnothing 5/16''$ | 14,2 | 10 |
| MD1-A-06TF | $\varnothing 3/8''$ | 16,5 | 12,5 |

Intermediate joining cartridge



Supplied with:

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



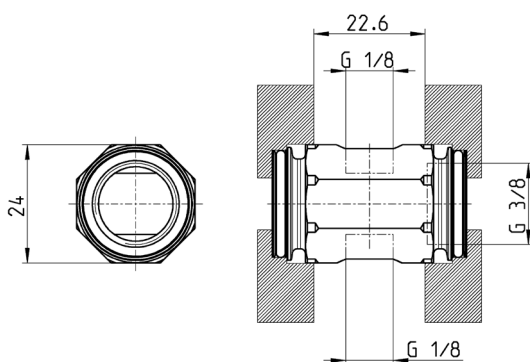
| |
|-------------|
| Mod. |
| MD1-C |

Screws for wall mounting



Supplied with:

2x white zinc-plated screws
M4x50



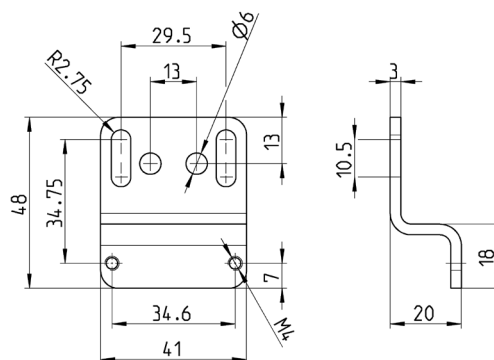
| |
|-------------|
| Mod. |
| MD1-D |

Rear bracket Mod. MD1-ST/1



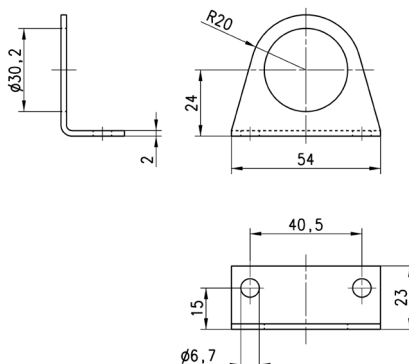
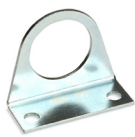
Supplied with:

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



| |
|-------------|
| Mod. |
| MD1-ST/1 |

Mounting bracket Mod. C114-ST



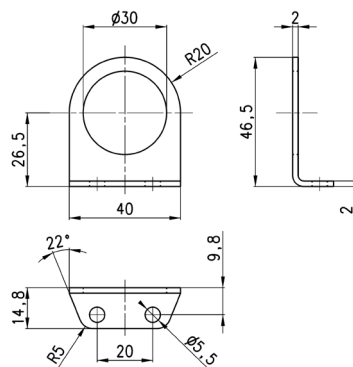
For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket

| |
|-------------|
| Mod. |
| C114-ST |

Mounting bracket Mod. C114-ST/1



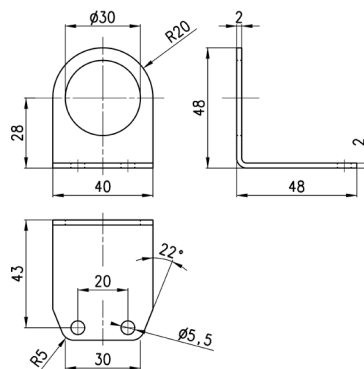
For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket

| |
|-------------|
| Mod. |
| C114-ST/1 |

Mounting bracket Mod. C114-ST/2



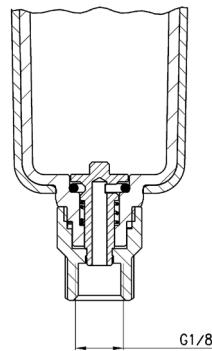
For regulators and filter-regulators (G1/4 - G1/8)

Material:
zinc-plated steel

Supplied with:
1x bracket

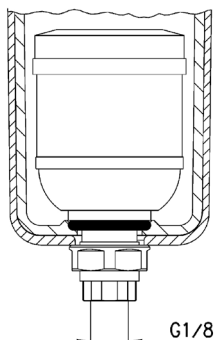
| |
|-------------|
| Mod. |
| C114-ST/2 |

Semi-automatic manual drain Type 0



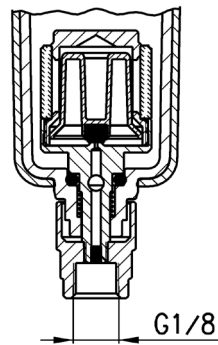
| Mod. filter | Bowl with semiautomatic manual drain |
|-------------|--------------------------------------|
| N10...-F | N1-F71 |
| N10...-D | N1-F71 |
| N10...-FB | N1-F71 |
| N20...-F | N2-F71 |
| N20...-D | N2-F71 |
| N20...-FB | N2-F71 |
| MC104-F | MC1-F71 |
| MC104-D | MC1-F71 |
| MC104-FB | 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)



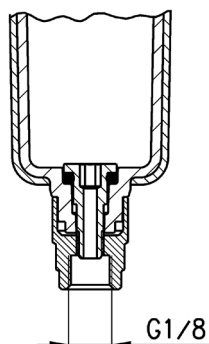
| Mod. filter | Bowl with automatic drain |
|-------------|---------------------------|
| MC202-F | MC2-F71/3 |
| MC202-D | MC2-F71/3 |
| MC202-FB | MC2-F71/3 |
| MC238-F | MC2-F71/3 |
| MC238-D | MC2-F71/3 |
| MC238-FB | MC2-F71/3 |
| MX2...-F | MX2-F2/1-P |
| MX2...FR | MX2-F2/1-P |
| MX2...FC | MX2-F2/1-P |
| 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)



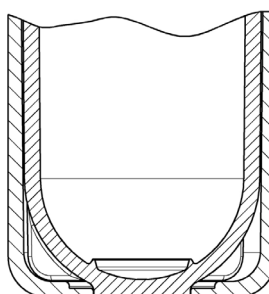
| Mod. filter | Bowl with depressurization drain, protected |
|-------------|---|
| N20...-F | N2-F71/1 |
| N20...-D | N2-F71/1 |
| N20...-FB | N2-F71/1 |
| MC104-F | MC1-F71/1 |
| MC104-D | MC1-F71/1 |
| MC104-FB | MC1-F71/1 |
| MC202-F | MC2-F71/1 |
| MC202-D | MC2-F71/1 |
| MC202-FB | MC2-F71/1 |
| 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)



| 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 |

Surface filters



| 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 |