

Series MD pressure filter-regulators



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

- Filtering between
- 25 µm or 5 µm
- Minimum pressure drops
- Knob with position lock
- Tamper-proof system (lockable regulator)
- Bowl locking system reducing the risk of accidents

Series MD filter-regulators integrate filter and pressure reducer in one unit, thus reducing their dimensions.

The by-pass valve allows the fast exhaust of the air introduced. The different springs enable a more accurate adjustment of the pressure.

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.



GENERAL DATA

| | |
|--|---|
| Construction | modular, compact with filtering element in HDPE |
| Materials | see TABLE OF MATERIALS (pag. 3/0.30.02) |
| 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 cc |
| Mounting | in-line; wall-mounting by means of through holes in the body or with a support bracket; panel mounting |
| Operating 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 |
| Operating pressure | 0,3 ÷ 16 bar |
| Nominal flow | see FLOW DIAGRAMS (pag. 3/0.30.03) |
| Fluid | compressed air |

CODING EXAMPLE

| | | | | | | | | | |
|----|---|---|----|---|---|---|---|---|-----|
| MD | 1 | - | FR | 0 | 0 | 0 | 0 | - | 1/8 |
|----|---|---|----|---|---|---|---|---|-----|

MD SERIES

1 DIMENSION:
1 = 42 mm

FR FILTER-REGULATOR

0 FILTERING ELEMENT AND DESIGN TYPE:
0 = 25 µm with relieving
1 = 5 µm with relieving
2 = 25 µm without relieving *
3 = 5 µm without relieving *
4 = 25 µm with relieving and by-pass valve
5 = 5 µm with relieving and by-pass valve
6 = 25 µm without relieving, with by-pass valve *
7 = 5 µm without relieving, with by-pass valve *

* this option is available with semiautomatic-manual drain only

0 CONDENSATE DRAIN:
0 = semiautomatic-manual drain
5 = automatic drain, protected depressurisation
8 = direct G1/8 exhaust

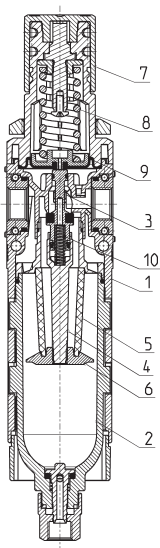
0 OPERATING PRESSURE (1 bar = 14,5 psi):
0 = 0,5 ÷ 10 bar
2 = 0 ÷ 2 bar
4 = 0 ÷ 4 bar
7 = 0,5 ÷ 7 bar

0 PRESSURE GAUGE:
0 = without pressure gauge (with 1/8 port)

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

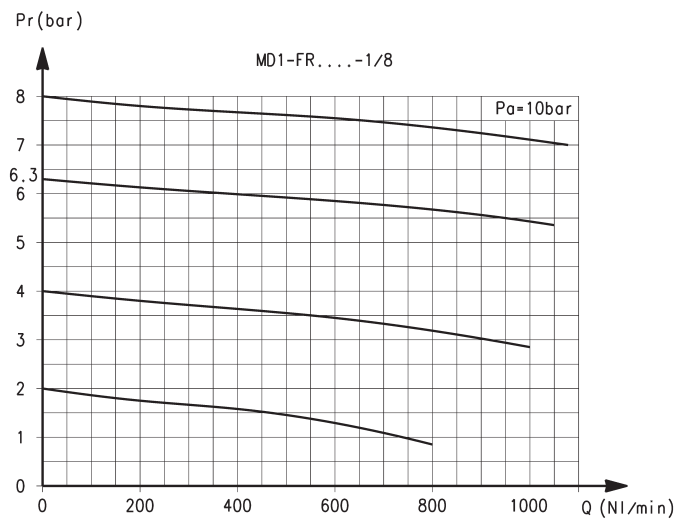
* NOTE: if the inlet (IN) cartridge is different from the outlet (OUT) cartridge, both dimensions shall be indicated.
Example: MD1-FR0000-1/4-1/8

Series MD filter-regulators - materials



| PARTS | MATERIALS |
|---------------------------------|-------------------|
| 1 = Body | Polyamide |
| 2 = Tank | Polycarbonate |
| 3 = Poppet | Brass |
| 4 = Valve guide | Polyacetal |
| 5 = Filtering element | Polyethylene |
| 6 = Separation deflector | Polyacetal |
| 7 = Knob | Polyamide |
| 8 = Upper spring | Zinc-plated steel |
| 9 = Diaphragm | NBR |
| 10 = Lower spring | Stainless steel |
| Seals | NBR |

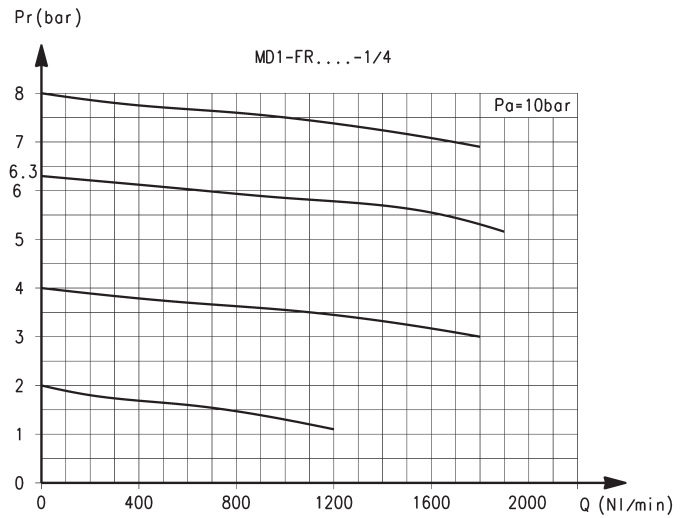
FLOW DIAGRAMS



Ports with interchangeable G1/8 threaded cartridges

Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

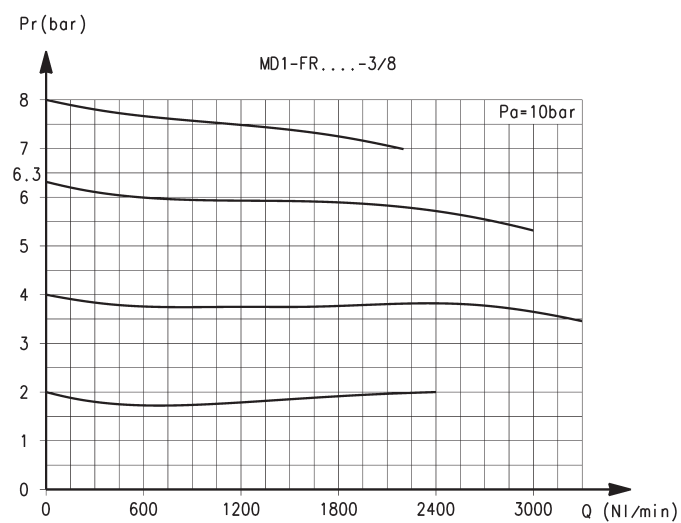


Ports with interchangeable G1/4 threaded cartridges

Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

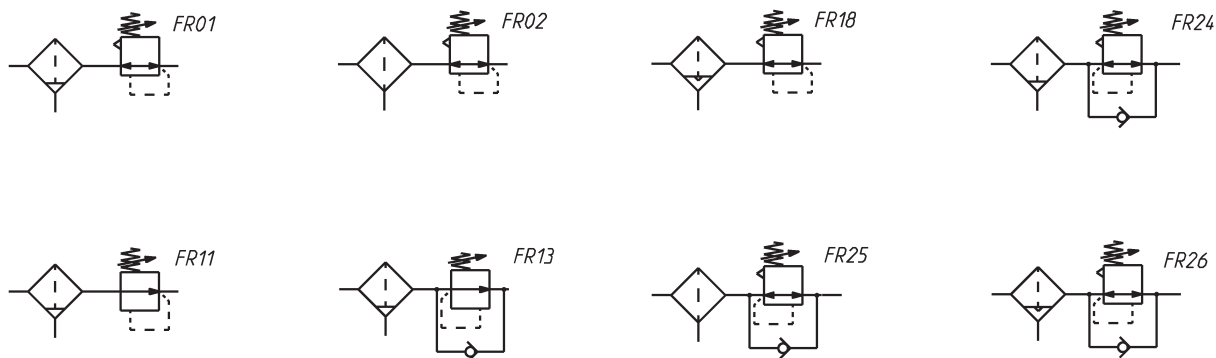
FLOW DIAGRAMS



Ports with interchangeable G3/8 threaded cartridges

Pr = Regulated pressure
Q = Flow

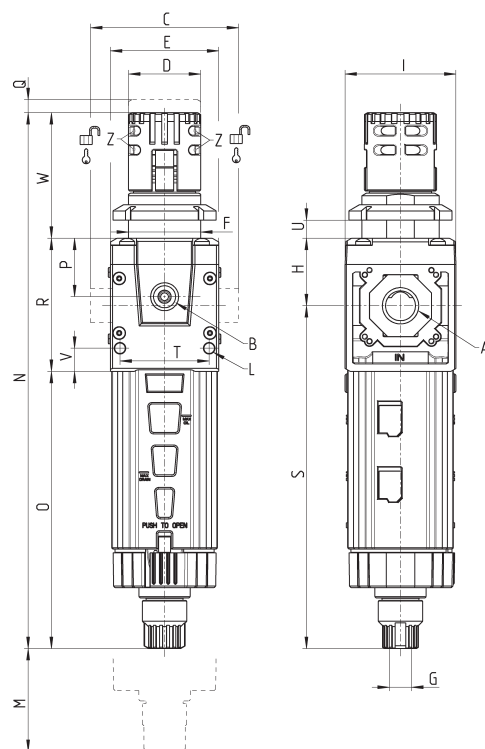
Pneumatic Symbols



FR01 = filter-regulator with relieving and semi-automatic manual drain
 FR02 = filter-regulator with relieving and direct G1/8 exhaust
 FR11 = filter-regulator without relieving, with semi-automatic manual drain
 FR13 = filter-regulator without relieving, with by-pass valve and semi-automatic manual drain

FR18 = filter-regulator with relieving and automatic/depressuring drain
 FR24 = filter-regulator with relieving, by-pass valve and semi-automatic manual drain
 FR25 = filter-regulator with relieving, by-pass valve and direct G1/8 exhaust
 FR26 = filter-regulator with relieving, by-pass valve and automatic/depressuring drain

Series MD filter-regulators - dimensions



| Mod. | A | B | C | D | E | F | G | H | I | L | M | N | O | P | Q | R | S | T | U | V | W | Z | Weight (Kg) |
|-----------------------|------|------|----|-----|----|---------|------|------|----|----|-----|-------|-------|------|---|------|-------|------|--------|---|------|------|-------------|
| MD1-FR0000 | - | G1/8 | 42 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-1/8 | G1/8 | G1/8 | 42 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-1/4 | G1/4 | G1/8 | 42 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-3/8 | G3/8 | G1/8 | 42 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-6 | Ø6 | G1/8 | 47 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-8 | Ø8 | G1/8 | 62 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |
| MD1-FR0000-10 | Ø10 | G1/8 | 67 | Ø28 | 42 | M28X1,5 | G1/8 | 26.2 | 43 | Ø4 | 110 | 208.2 | 107.7 | 22.7 | 4 | 51.7 | 133.2 | 34.6 | 0 + 11 | 9 | 48.8 | Ø3.2 | 0.2 |