

# MPF series

Maximum working pressure up to 800 kPa (8 bar) - Flow rate up to 900 l/min



Description

Return filter

Maximum working pressure up to 800 kPa (8 bar)  
Flow rate up to 900 l/min

MPF is a range of return filters for protection of the reservoir against the system contamination.  
They are directly fixed to the reservoir, in immersed or semi-immersed position.  
The filter output must be always immersed into the fluid to avoid aeration or foam generation into the reservoir.

Available features:

- Female threaded connections up to 2" and flanged connections up to 2", for a maximum flow rate of 750 l/min
- Multiple connections, to connect several return lines or drains
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve integrated into the filter element, to relieve excessive pressure drop across the filter media
- 2, 3 or 4 fixing holes for installation, to suit a variety of reservoir surfaces
- O-ring or Flat Seal to suit a variety of reservoir surfaces
- Oil dipstick, to easily check the level of the fluid into the reservoir (sold as separate item)
- Extension tube, to be used in deep reservoirs (sold as separate item)
- Diffuser, to reduce the risk of aeration, foaming and noise (sold as separate item)
- Filler plug, to fill cleaned fluid into the tank without an additional connection
- Visual, electrical and electronic clogging indicators

Common applications:

- Light industrial equipment
- Mobile application

Technical data

Filter housing materials

- Head: Aluminium
- Cover
  - Nylon: MPF 020-030-100-104-110
  - Aluminium: MPF 181-182-184-191-192-194-400-410-450-451-750
- Bowl: Nylon

Bypass valve

- Opening pressure 175 kPa (1.75 bar) ±10%
- Opening pressure 300 kPa (3 bar) ±10%

Δp element type

- Microfibre filter elements - series H: 10 bar
- Fluid flow through the filter element from OUT to IN

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

From -25 °C to +110 °C

Note

MPF filters are provided for vertical mounting



Weights [kg] and volumes [dm³]

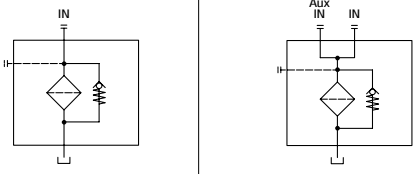
| Filter series | Weights [kg] |      |      |      |      | Volumes [dm³] |      |      |      |      |
|---------------|--------------|------|------|------|------|---------------|------|------|------|------|
|               | Length       | 1    | 2    | 3    | 4    | Length        | 1    | 2    | 3    | 4    |
| MPF 020       |              | 0.30 | -    | -    | -    |               | 0.26 | -    | -    | -    |
| MPF 030       |              | 0.40 | -    | -    | -    |               | 0.29 | -    | -    | -    |
| MPF 100       |              | 0.61 | 0.64 | 0.67 | 0.74 |               | 0.64 | 0.85 | 1.20 | 1.65 |
| MPF 104       |              | 0.82 | 0.96 | 1.02 | 1.25 |               | 0.64 | 0.85 | 1.20 | 1.65 |
| MPF 110       |              | 0.64 | 0.68 | 0.71 | 0.78 |               | -    | -    | -    | -    |
| MPF 181       |              | 2.20 | 3.00 | -    | -    |               | 2.50 | 4.00 | -    | -    |
| MPF 182       |              | 2.30 | 3.10 | -    | -    |               | 2.50 | 4.00 | -    | -    |
| MPF 184       |              | 2.55 | 3.45 | -    | -    |               | 2.65 | 4.45 | -    | -    |
| MPF 191       |              | -    | 3.00 | -    | -    |               | -    | 4.25 | -    | -    |
| MPF 192       |              | -    | 3.10 | -    | -    |               | -    | 4.25 | -    | -    |
| MPF 194       |              | -    | 3.45 | -    | -    |               | -    | 4.45 | -    | -    |
| MPF 400       |              | 3.35 | 3.65 | 3.90 | -    |               | 3.70 | 4.60 | 5.40 | -    |
| MPF 410       |              | 3.55 | 3.85 | 4.10 | -    |               | 3.70 | 4.60 | 5.40 | -    |
| MPF 450-451   |              | 3.95 | 4.25 | 4.50 | -    |               | 3.70 | 4.60 | 5.40 | -    |
| MPF 750       |              | 6.30 | -    | -    | -    |               | 8.45 | -    | -    | -    |

| Filter series   | Length | Filter element design - H series |     |     |     |     | Filter element design - N series |     |     |
|-----------------|--------|----------------------------------|-----|-----|-----|-----|----------------------------------|-----|-----|
|                 |        | A03                              | A06 | A10 | A16 | A25 | M25<br>M60<br>M90                | P10 | P25 |
| MPF 020         | 1      | 7                                | 10  | 23  | 28  | 42  | 59                               | 51  | 54  |
| MPF 030         | 1      | 7                                | 10  | 24  | 29  | 47  | 84                               | 60  | 66  |
| MPF 100-104-110 | 1      | 18                               | 20  | 53  | 56  | 65  | 153                              | 87  | 96  |
|                 | 2      | 28                               | 38  | 65  | 75  | 95  | 158                              | 111 | 123 |
|                 | 3      | 48                               | 55  | 125 | 135 | 169 | 289                              | 224 | 251 |
|                 | 4      | 79                               | 89  | 180 | 185 | 198 | 306                              | 264 | 289 |
| MPF 181-182-184 | 1      | 127                              | 148 | 235 | 243 | 278 | 441                              | 285 | 299 |
|                 | 2      | 231                              | 262 | 358 | 382 | 388 | 472                              | 404 | 412 |
| MPF 191-192-194 | 2      | 261                              | 305 | 489 | 528 | 546 | 696                              | 583 | 598 |
| MPF 400         | 1      | 150                              | 171 | 294 | 304 | 350 | 585                              | 370 | 390 |
|                 | 2      | 237                              | 252 | 454 | 462 | 589 | 868                              | 619 | 645 |
|                 | 3      | 248                              | 288 | 553 | 609 | 621 | 885                              | 680 | 703 |
| MPF 410         | 1      | 146                              | 167 | 277 | 285 | 325 | 512                              | 341 | 357 |
|                 | 2      | 226                              | 239 | 396 | 402 | 485 | 644                              | 503 | 519 |
|                 | 3      | 236                              | 269 | 462 | 497 | 505 | 653                              | 539 | 553 |
| MPF 450-451     | 1      | 150                              | 171 | 294 | 304 | 350 | 585                              | 370 | 390 |
|                 | 2      | 237                              | 252 | 454 | 462 | 589 | 868                              | 619 | 645 |
|                 | 3      | 248                              | 288 | 553 | 609 | 621 | 885                              | 680 | 703 |
| MPF 750         | 1      | 392                              | 465 | 623 | 700 | 769 | 929                              | 804 | 819 |

**Maximum flow rate for a complete return filter with a pressure drop  $\Delta p = 0.5$  bar.**  
The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.  
For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://www.mpfiltri.com).  
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.  
Please, contact our Sales Department for further additional information.

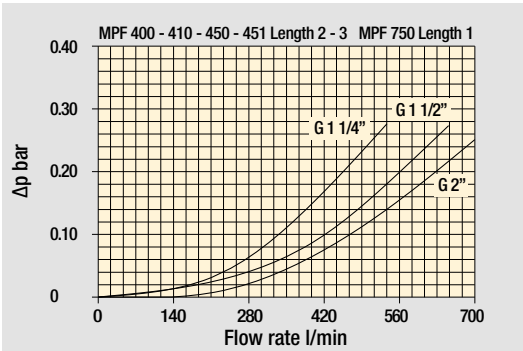
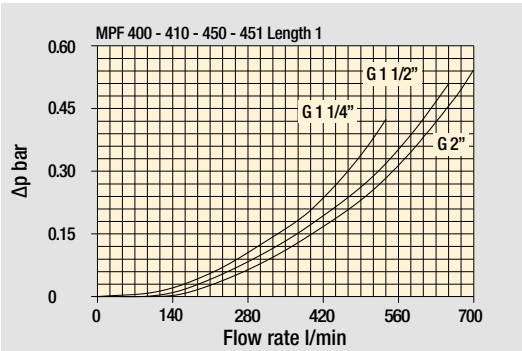
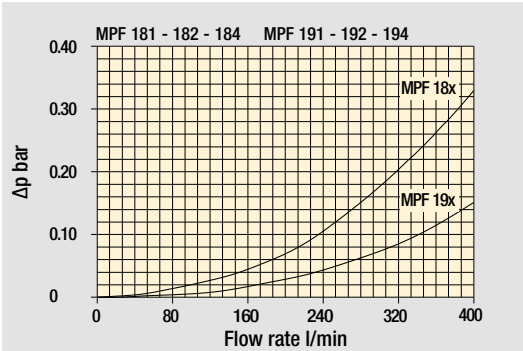
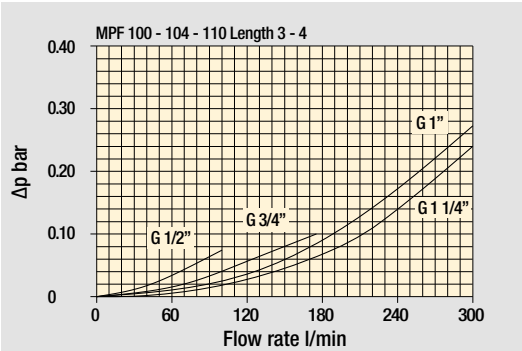
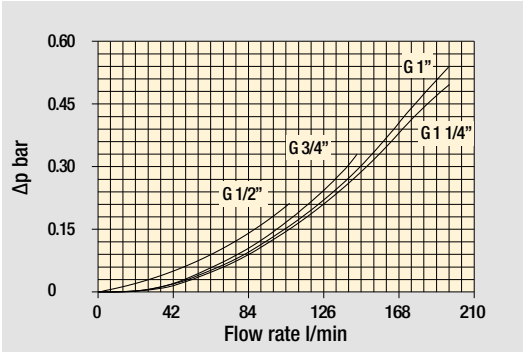
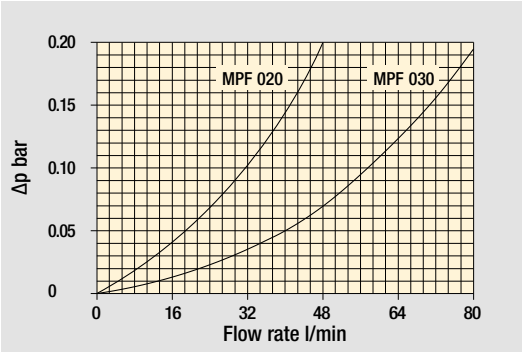
Hydraulic symbols

| Filter series | Style 1 connection | Style 2 connections |
|---------------|--------------------|---------------------|
| MPF 020       | •                  |                     |
| MPF 030       | •                  |                     |
| MPF 100       | •                  |                     |
| MPF 104       | •                  |                     |
| MPF 110       |                    | •                   |
| MPF 181       | •                  |                     |
| MPF 182       |                    | •                   |
| MPF 184       | •                  | •                   |
| MPF 191       | •                  |                     |
| MPF 192       | •                  |                     |
| MPF 194       | •                  | •                   |
| MPF 400       | •                  |                     |
| MPF 410       |                    | •                   |
| MPF 450       | •                  |                     |
| MPF 451       |                    | •                   |
| MPF 750       | •                  |                     |

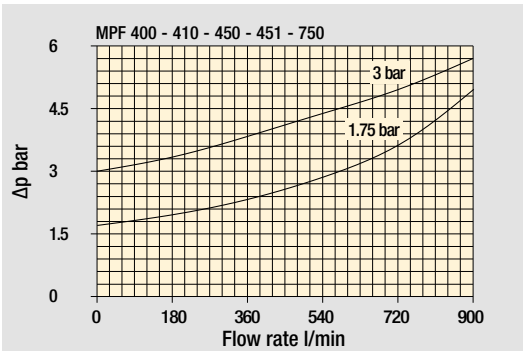
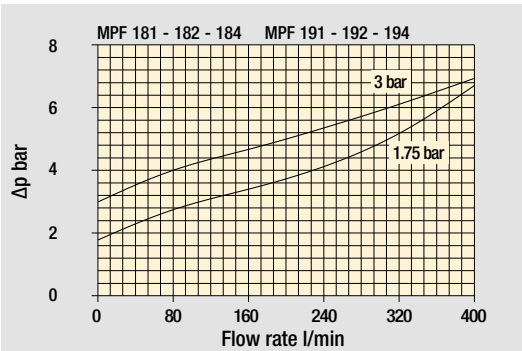
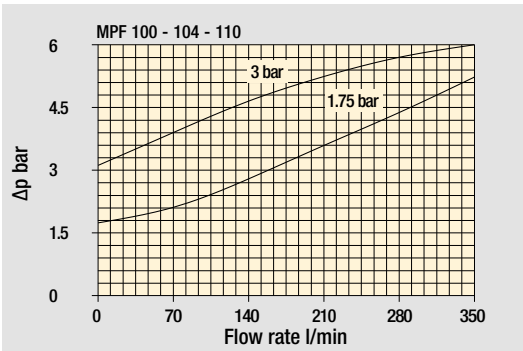
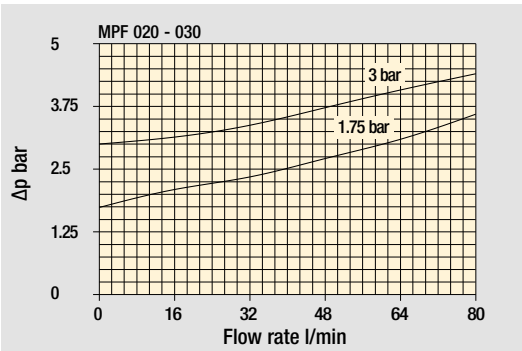


## Pressure drop

Filter housings  $\Delta p$  pressure drop



Bypass valve pressure drop

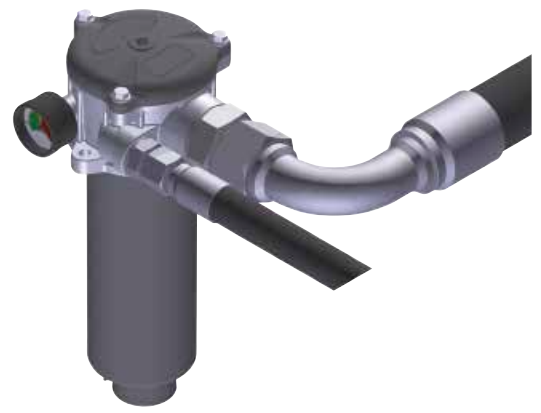


The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

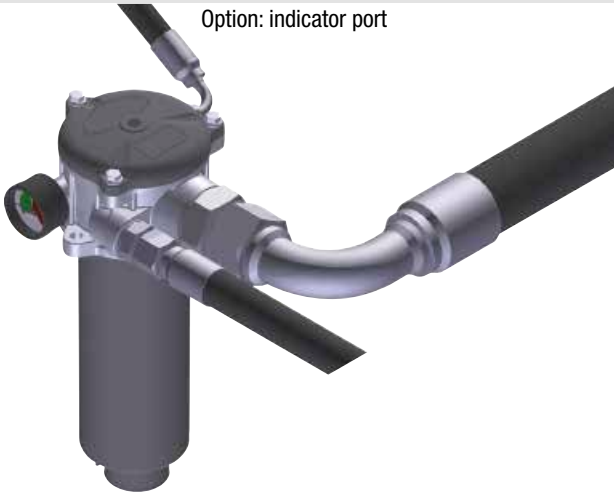
Standard - Single IN port



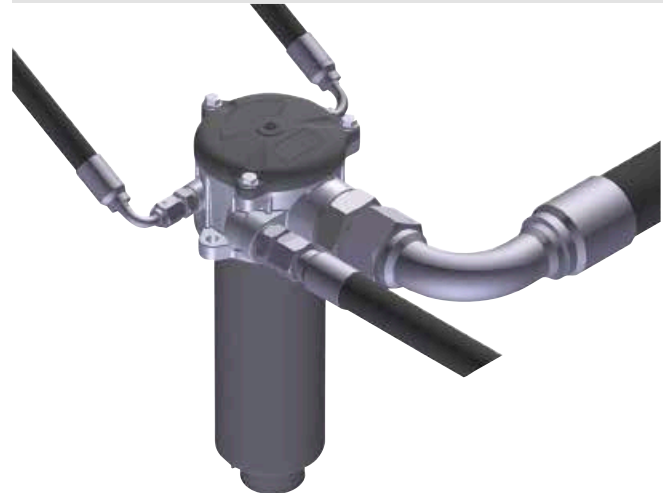
Double IN port  
Option: double indicator port



Double IN port - Drain port  
Option: indicator port



Double IN port - Double drain port



Designation & Ordering code

COMPLETE FILTER

Series and size

MPF020 MPF030

Filter element with standard spigot

Length

1

Seals and treatments

A NBR

V FPM

W NBR head anodized

Z FPM head anodized

Connections

Size 20

Size 30

P1 Hose barb ø12

G1 G 1/2"

G4 1/2" NPT

G7 SAE 8 - 3/4" - 16 UNF

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Element Δp

Axx

Mxx

Pxx

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Configuration example 1:

MPF020

1

A

P1

A10

H

E

P01

Configuration example 2:

MPF030

1

V

G1

M25

N

B

P01

Bypass valve

E 3 bar

B 1.75 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

MF030

Filter element with standard spigot

Element length

1

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Element Δp

Axx

Mxx

Pxx

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Configuration example 1:

MF030

1

A10

H

B

E

P01

Configuration example 2:

MF030

1

M25

N

V

P01

Seals

B NBR

V FPM

Bypass valve

E 3 bar

1.75 bar

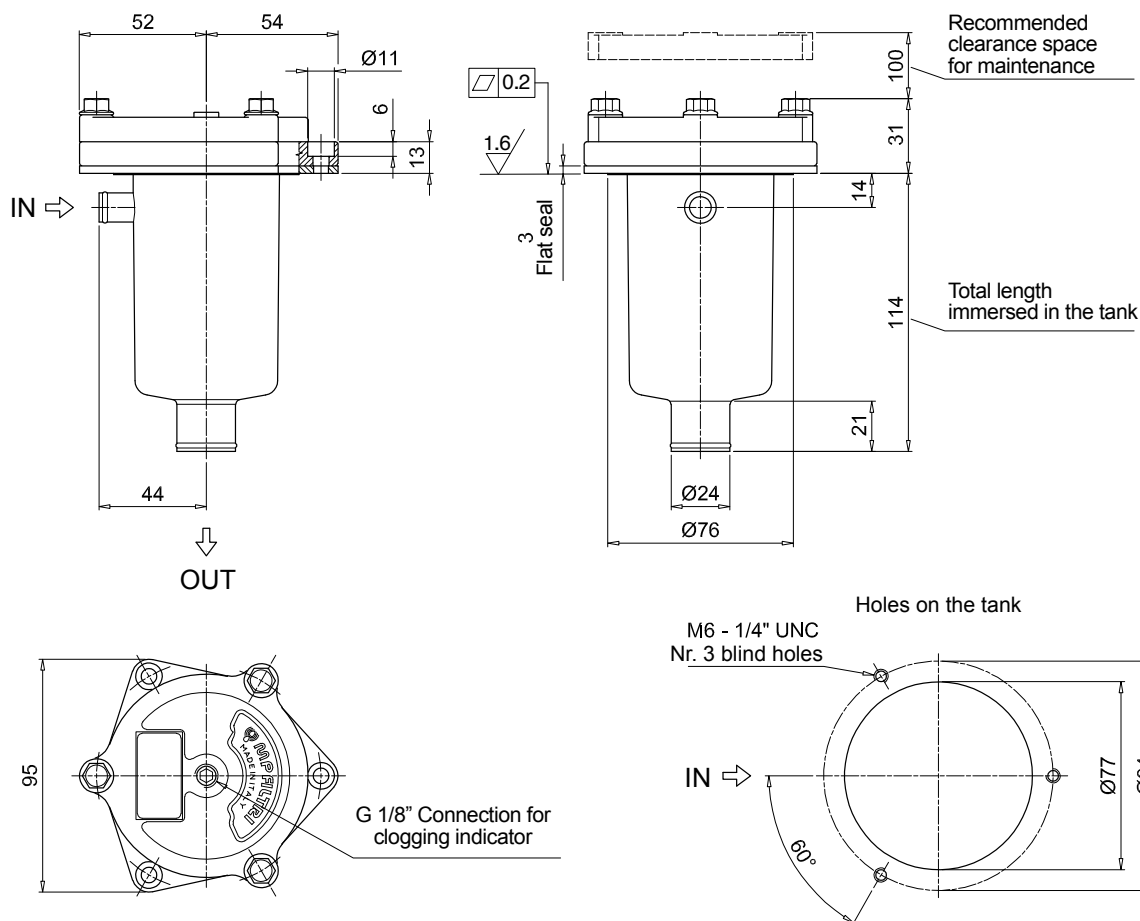
Execution

P01 MP Filtri standard

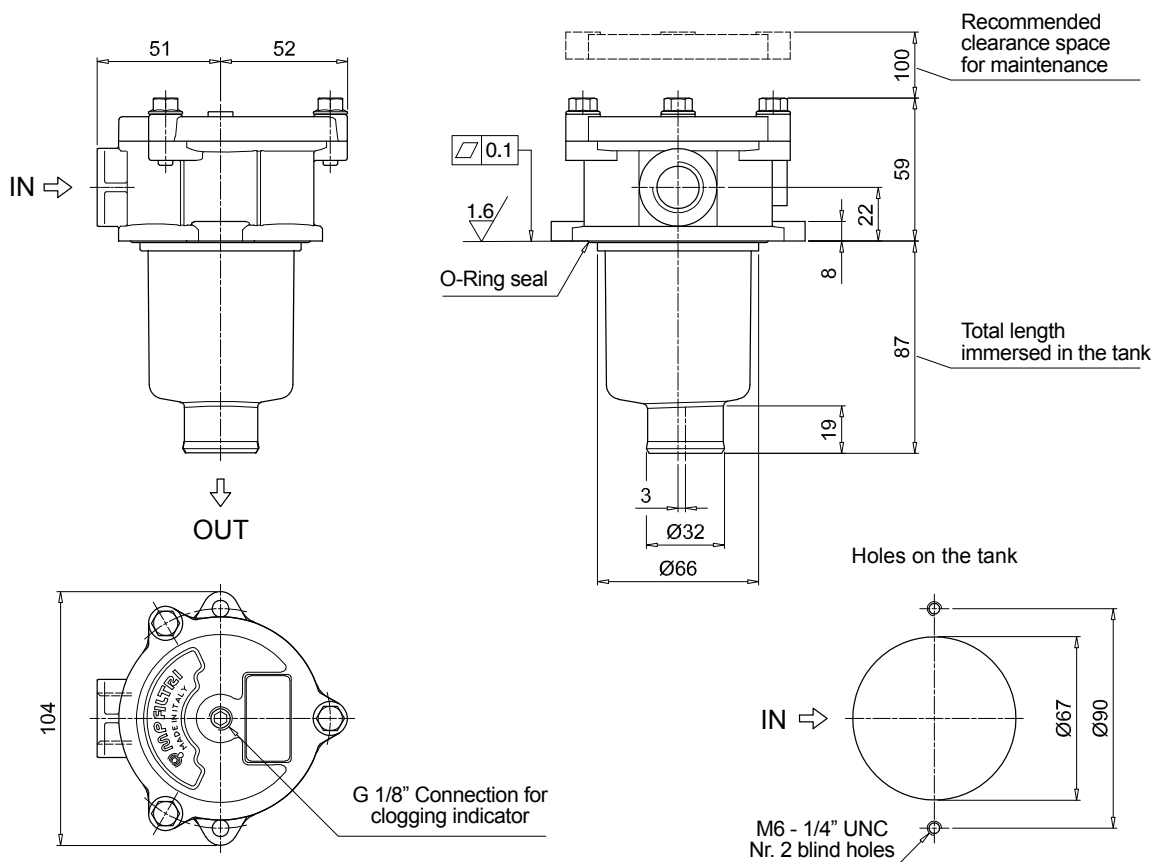
Pxx Customized

| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239     |
| BVQ                 | Visual pressure indicator with manual reset    | 241  | 239-240 |
| Additional features |                                                | page |         |
| TE                  | Extension tube                                 | 248  |         |
| T5                  | Filler plug M30x1.5                            | 249  |         |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |

## MPF020



## MPF030

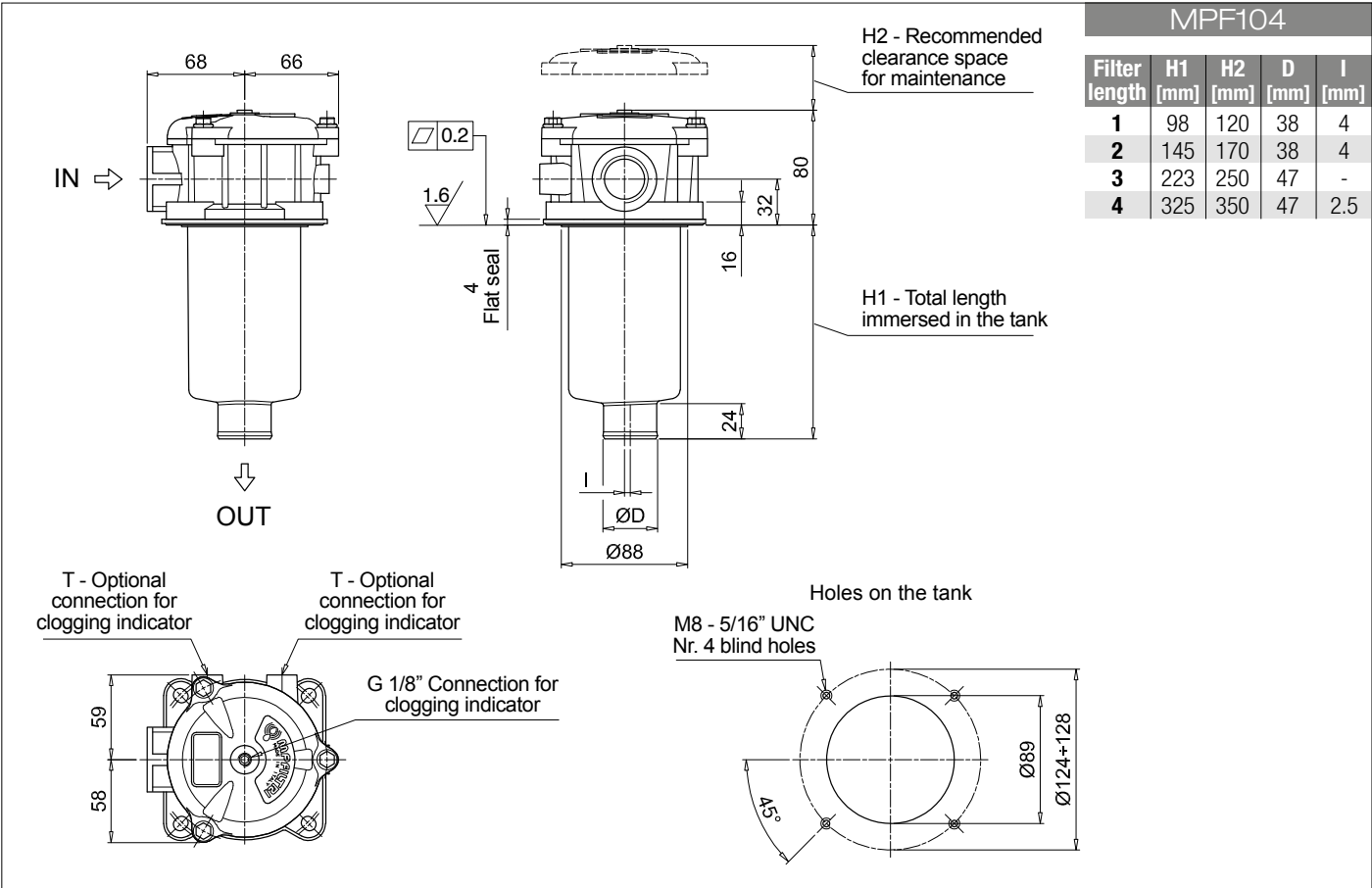
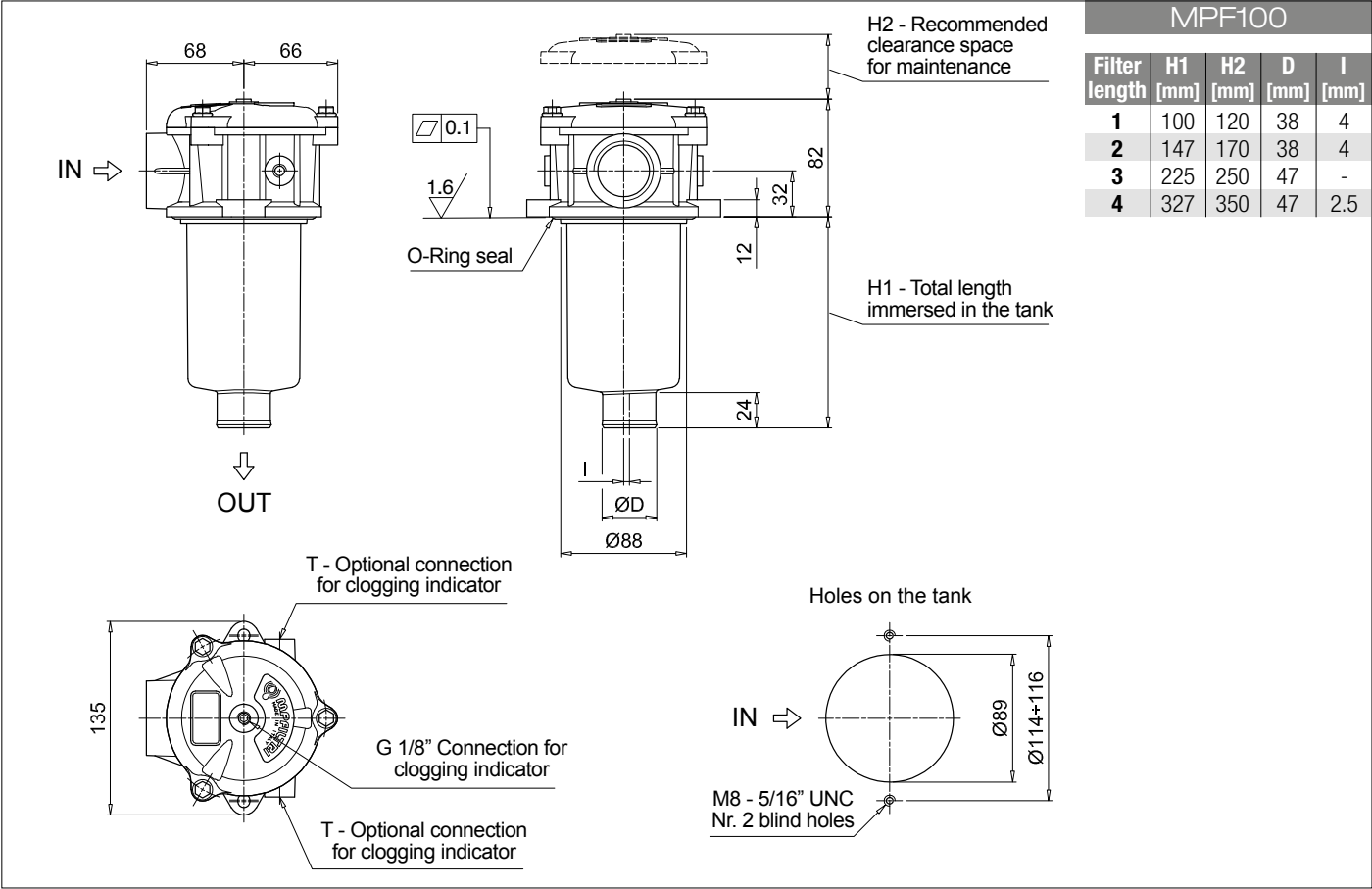


Designation & Ordering code

| COMPLETE FILTER                  |                            |                                     |                          |   |  |  |  |  |  |
|----------------------------------|----------------------------|-------------------------------------|--------------------------|---|--|--|--|--|--|
| Series and size                  |                            |                                     | Configuration example 1: |   |  |  |  |  |  |
| <b>MPF100</b>                    | <b>MPF104</b>              | Filter element with standard spigot | Configuration example 2: |   |  |  |  |  |  |
| Length                           |                            |                                     |                          |   |  |  |  |  |  |
| <b>1</b>                         | <b>2</b>                   | <b>3</b>                            | <b>4</b>                 |   |  |  |  |  |  |
| Seals and treatments             |                            |                                     |                          |   |  |  |  |  |  |
| <b>A</b>                         | NBR                        |                                     |                          |   |  |  |  |  |  |
| <b>V</b>                         | FPM                        |                                     |                          |   |  |  |  |  |  |
| <b>W</b>                         | NBR head anodized          |                                     |                          |   |  |  |  |  |  |
| <b>Z</b>                         | FPM head anodized          |                                     |                          |   |  |  |  |  |  |
| Connections                      |                            |                                     |                          |   |  |  |  |  |  |
| Size 100                         |                            |                                     | Size 104                 |   |  |  |  |  |  |
| <b>G1</b>                        | G 1/2"                     |                                     | •                        | • |  |  |  |  |  |
| <b>G2</b>                        | G 3/4"                     |                                     | •                        | • |  |  |  |  |  |
| <b>G3</b>                        | G 1"                       |                                     | •                        | • |  |  |  |  |  |
| <b>G4</b>                        | 1/2" NPT                   |                                     | •                        | • |  |  |  |  |  |
| <b>G5</b>                        | 3/4" NPT                   |                                     | •                        | • |  |  |  |  |  |
| <b>G6</b>                        | 1" NPT                     |                                     | •                        | • |  |  |  |  |  |
| Filtration rating (filter media) |                            |                                     |                          |   |  |  |  |  |  |
| <b>A03</b>                       | Inorganic microfiber 3 µm  |                                     |                          |   |  |  |  |  |  |
| <b>A06</b>                       | Inorganic microfiber 6 µm  |                                     |                          |   |  |  |  |  |  |
| <b>A10</b>                       | Inorganic microfiber 10 µm |                                     |                          |   |  |  |  |  |  |
| <b>A16</b>                       | Inorganic microfiber 16 µm |                                     |                          |   |  |  |  |  |  |
| <b>A25</b>                       | Inorganic microfiber 25 µm |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |
|                                  |                            |                                     |                          |   |  |  |  |  |  |

| FILTER ELEMENT                                    |  |  |                          |  |  |                        |  |  |  |
|---------------------------------------------------|--|--|--------------------------|--|--|------------------------|--|--|--|
| Element series and size                           |  |  | Configuration example 1: |  |  |                        |  |  |  |
| <b>MF100</b> Filter element with standard spigot  |  |  | Configuration example 2: |  |  |                        |  |  |  |
| Element length                                    |  |  |                          |  |  |                        |  |  |  |
| 1   2   3   4                                     |  |  |                          |  |  |                        |  |  |  |
| Filtration rating (filter media)                  |  |  |                          |  |  |                        |  |  |  |
| A03 Inorganic microfiber 3 µm                     |  |  |                          |  |  |                        |  |  |  |
| A06 Inorganic microfiber 6 µm                     |  |  |                          |  |  |                        |  |  |  |
| A10 Inorganic microfiber 10 µm                    |  |  |                          |  |  |                        |  |  |  |
| A16 Inorganic microfiber 16 µm                    |  |  |                          |  |  |                        |  |  |  |
| A25 Inorganic microfiber 25 µm                    |  |  |                          |  |  |                        |  |  |  |
| M25 Wire mesh 25 µm                               |  |  |                          |  |  |                        |  |  |  |
| M60 Wire mesh 60 µm                               |  |  |                          |  |  |                        |  |  |  |
| M90 Wire mesh 90 µm                               |  |  |                          |  |  |                        |  |  |  |
| P10 Resin impregnated paper 10 µm                 |  |  |                          |  |  |                        |  |  |  |
| P25 Resin impregnated paper 25 µm                 |  |  |                          |  |  |                        |  |  |  |
| Element Δp                                        |  |  | Filter media             |  |  |                        |  |  |  |
| Axx   Mxx   Pxx                                   |  |  |                          |  |  |                        |  |  |  |
| N 10 bar                                          |  |  | •                        |  |  |                        |  |  |  |
| H 10 bar                                          |  |  | •                        |  |  |                        |  |  |  |
| W 10 bar, compatible with fluids HFA, HFB and HFC |  |  | •                        |  |  |                        |  |  |  |
| Seals                                             |  |  | Bypass valve             |  |  | Execution              |  |  |  |
| B NBR                                             |  |  | E 3 bar                  |  |  | P01 MP Filtri standard |  |  |  |
| V FPM                                             |  |  | 1.75 bar                 |  |  | Pxx Customized         |  |  |  |

| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239-240 |
| BVQ                 | Visual pressure indicator with manual reset    | 241  |         |
| Additional features |                                                | page | page    |
| TE                  | Extension tube                                 | 248  | 249     |
| DFS                 | Diffuser with fast lock connection             | 249  | 249     |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |
| T5                  | Filler plug M30x1.5                            |      | 249     |
| DPT                 | Dipstick                                       |      | 249     |

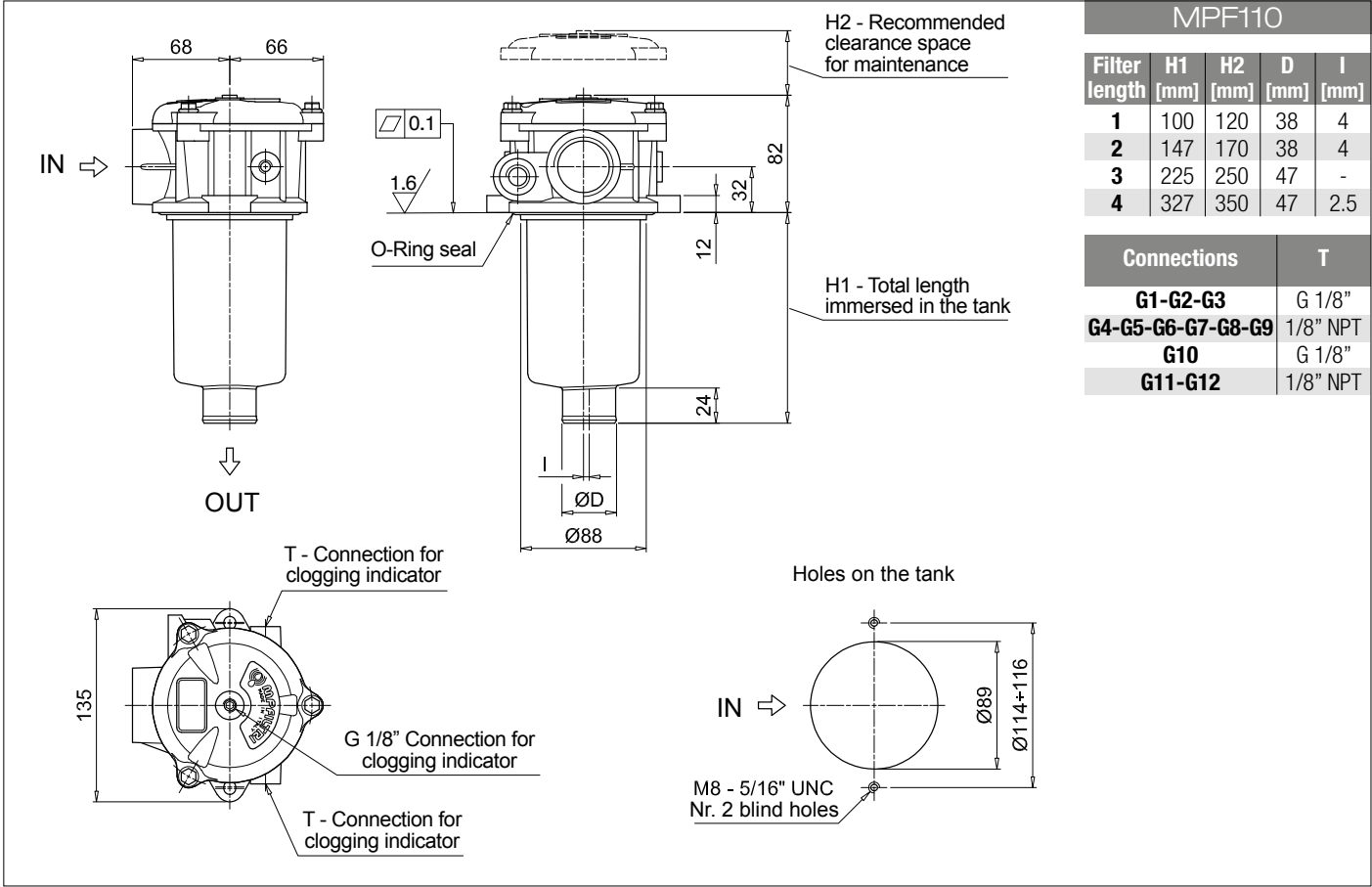


Designation & Ordering code

| COMPLETE FILTER                                   |  |  |                                   |     |            |              |                             |                        |                       |          |  |
|---------------------------------------------------|--|--|-----------------------------------|-----|------------|--------------|-----------------------------|------------------------|-----------------------|----------|--|
| Series and size                                   |  |  | Configuration example 1:          |     |            |              |                             |                        |                       |          |  |
| MPF110 Filter element with standard spigot        |  |  | Configuration example 2:          |     |            |              |                             |                        |                       |          |  |
| Length                                            |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| 1   2   3   4                                     |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| Seals and treatments                              |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| A NBR                                             |  |  | W NBR head anodized               |     |            |              |                             |                        |                       |          |  |
| V FPM                                             |  |  | Z FPM head anodized               |     |            |              |                             |                        |                       |          |  |
| Main Connections                                  |  |  | Aux size 1                        |     | Aux size 2 |              |                             |                        |                       |          |  |
| G1 G 1/2"                                         |  |  | G 3/8"                            |     | G 1/2"     |              | G7 SAE 8 - 3/4" - 16 UNF    |                        |                       |          |  |
| G2 G 3/4"                                         |  |  |                                   |     |            |              | SAE 6 - 9/16" - 18 UNF      |                        | SAE 8 - 3/4" - 16 UNF |          |  |
| G3 G 1"                                           |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| G4 1/2" NPT                                       |  |  | 3/8" NPT                          |     | 1/2" NPT   |              | G10 G 1 1/4"                |                        |                       |          |  |
| G5 3/4" NPT                                       |  |  |                                   |     |            |              | G 3/8"                      |                        |                       | G 1/2"   |  |
| G6 1" NPT                                         |  |  |                                   |     |            |              | 3/8" NPT                    |                        |                       | 1/2" NPT |  |
|                                                   |  |  |                                   |     |            |              | G11 1 1/4" NPT              |                        |                       |          |  |
|                                                   |  |  |                                   |     |            |              | G12 SAE 20 - 1 5/8" - 12 UN |                        |                       |          |  |
|                                                   |  |  |                                   |     |            |              | SAE 6 - 9/16" - 18 UNF      |                        |                       |          |  |
|                                                   |  |  |                                   |     |            |              | SAE 8 - 3/4" - 16 UNF       |                        |                       |          |  |
| Aux connection - see previous table               |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| 1 Aux size 1                                      |  |  | 2 Aux size 2                      |     |            |              |                             |                        |                       |          |  |
| Filtration rating (filter media)                  |  |  |                                   |     |            |              |                             |                        |                       |          |  |
| A03 Inorganic microfiber 3 µm                     |  |  | M25 Wire mesh 25 µm               |     |            |              |                             |                        |                       |          |  |
| A06 Inorganic microfiber 6 µm                     |  |  | M60 Wire mesh 60 µm               |     |            |              |                             |                        |                       |          |  |
| A10 Inorganic microfiber 10 µm                    |  |  | M90 Wire mesh 90 µm               |     |            |              |                             |                        |                       |          |  |
| A16 Inorganic microfiber 16 µm                    |  |  | P10 Resin impregnated paper 10 µm |     |            |              |                             |                        |                       |          |  |
| A25 Inorganic microfiber 25 µm                    |  |  | P25 Resin impregnated paper 25 µm |     |            |              |                             |                        |                       |          |  |
| Element Δp                                        |  |  | Filter media                      |     |            |              |                             |                        |                       |          |  |
|                                                   |  |  | Axx                               | Mxx | Pxx        |              |                             |                        |                       |          |  |
| N 10 bar                                          |  |  |                                   | •   | •          |              |                             |                        |                       |          |  |
| H 10 bar                                          |  |  | •                                 |     |            |              |                             |                        |                       |          |  |
| W 10 bar, compatible with fluids HFA, HFB and HFC |  |  | •                                 | •   |            |              |                             |                        |                       |          |  |
|                                                   |  |  |                                   |     |            | Bypass valve |                             | Execution              |                       |          |  |
|                                                   |  |  |                                   |     |            | E 3 bar      |                             | P01 MP Filtri standard |                       |          |  |
|                                                   |  |  |                                   |     |            | B 1.75 bar   |                             | Pxx Customized         |                       |          |  |

| FILTER ELEMENT                                    |   |   |                                   |     |     |       |   |                        |     |
|---------------------------------------------------|---|---|-----------------------------------|-----|-----|-------|---|------------------------|-----|
| Element series and size                           |   |   | Configuration example 1:          |     |     |       |   |                        |     |
| MF100 Filter element with standard spigot         |   |   | MF100                             | 2   | A16 | H     | B | E                      | P01 |
|                                                   |   |   | Configuration example 2:          |     |     |       |   |                        |     |
|                                                   |   |   | MF100                             | 4   | M60 | N     | V |                        | P01 |
| Element length                                    |   |   |                                   |     |     |       |   |                        |     |
| 1                                                 | 2 | 3 | 4                                 |     |     |       |   |                        |     |
| Filtration rating (filter media)                  |   |   |                                   |     |     |       |   |                        |     |
| A03 Inorganic microfiber 3 µm                     |   |   | M25 Wire mesh 25 µm               |     |     |       |   |                        |     |
| A06 Inorganic microfiber 6 µm                     |   |   | M60 Wire mesh 60 µm               |     |     |       |   |                        |     |
| A10 Inorganic microfiber 10 µm                    |   |   | M90 Wire mesh 90 µm               |     |     |       |   |                        |     |
| A16 Inorganic microfiber 16 µm                    |   |   | P10 Resin impregnated paper 10 µm |     |     |       |   |                        |     |
| A25 Inorganic microfiber 25 µm                    |   |   | P25 Resin impregnated paper 25 µm |     |     |       |   |                        |     |
|                                                   |   |   | Filter media                      |     |     |       |   |                        |     |
| Element Δp                                        |   |   | Axx                               | Mxx | Pxx |       |   |                        |     |
| N 10 bar                                          |   |   |                                   | •   | •   |       |   |                        |     |
| H 10 bar                                          |   |   | •                                 |     |     |       |   |                        |     |
| W 10 bar, compatible with fluids HFA, HFB and HFC |   |   | •                                 | •   |     |       |   |                        |     |
|                                                   |   |   |                                   |     |     | Seals |   | Bypass valve           |     |
|                                                   |   |   |                                   |     |     | B NBR |   | E 3 bar                |     |
|                                                   |   |   |                                   |     |     | V FPM |   | 1.75 bar               |     |
|                                                   |   |   |                                   |     |     |       |   | Execution              |     |
|                                                   |   |   |                                   |     |     |       |   | P01 MP Filtri standard |     |
|                                                   |   |   |                                   |     |     |       |   | Pxx Customized         |     |

| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239-240 |
| BVQ                 | Visual pressure indicator with manual reset    | 241  |         |
| Additional features |                                                | page | page    |
| TE                  | Extension tube                                 | 248  | 249     |
| DFS                 | Diffuser with fast lock connection             | 249  | 249     |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |
| T5                  | Filler plug M30x1.5                            |      | 249     |
| DPT                 | Dipstick                                       |      | 249     |

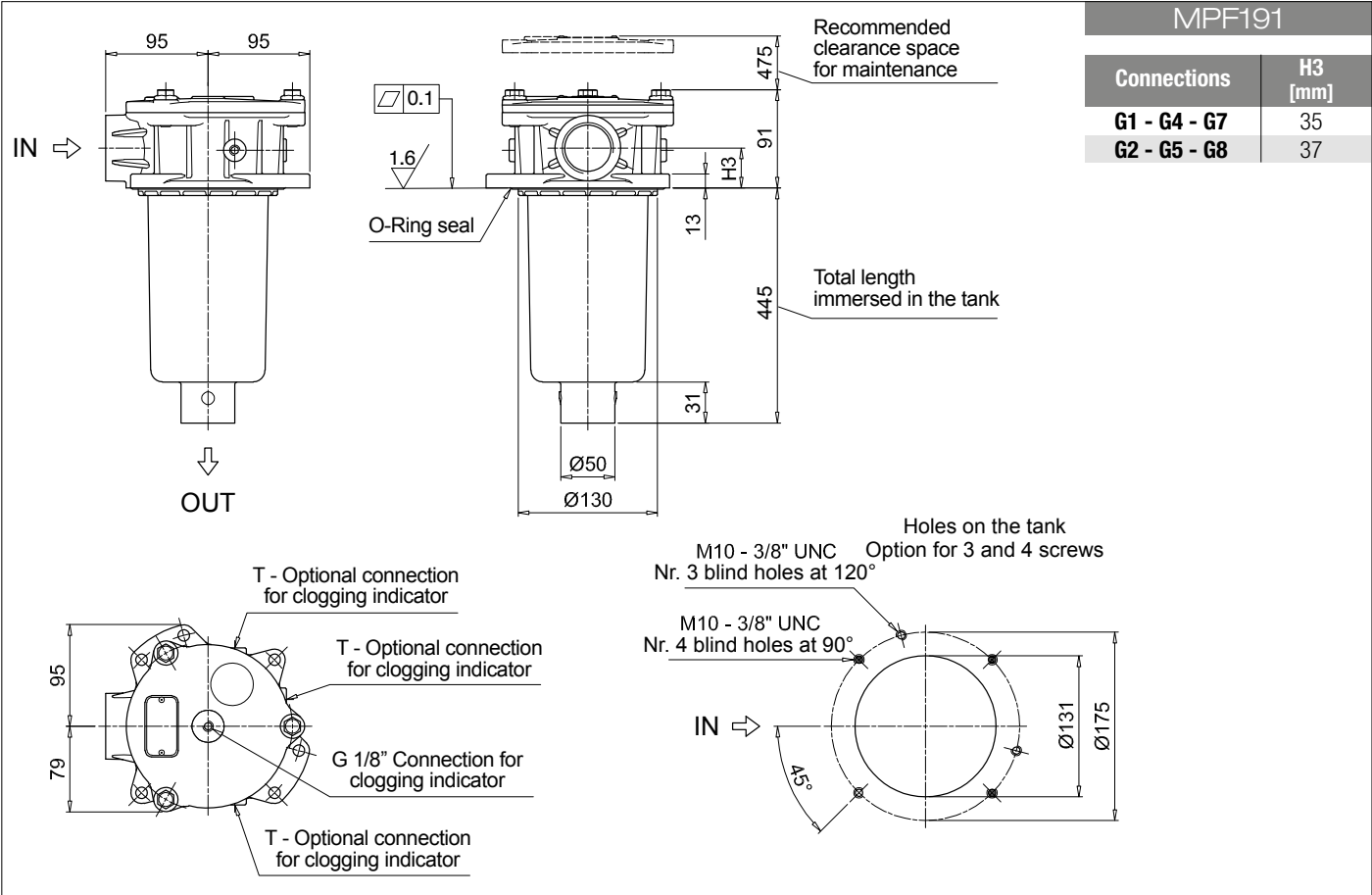
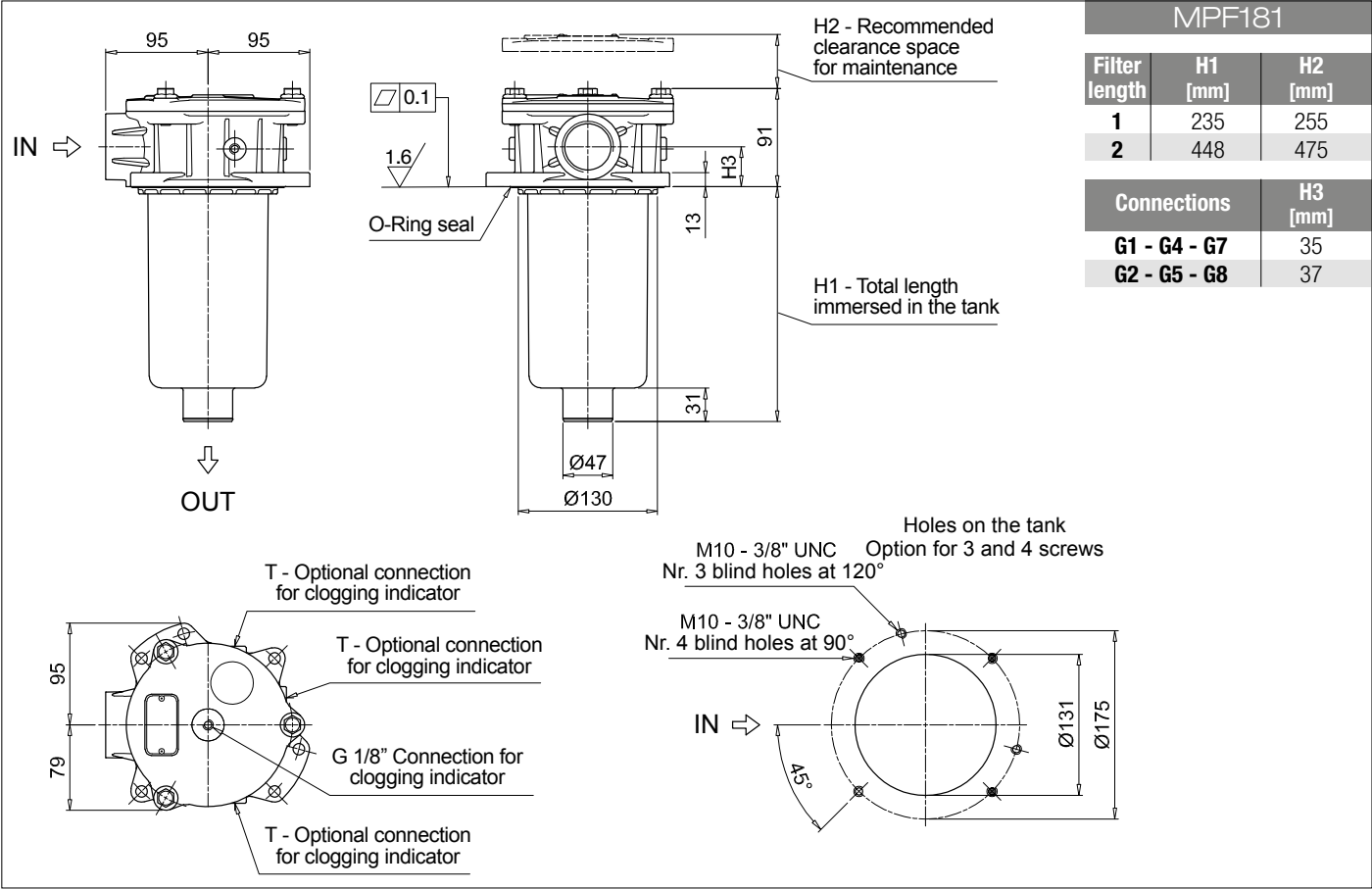


Designation & Ordering code

| COMPLETE FILTER                                   |  |                               |                                     |     |     |              |     |                        |   |     |
|---------------------------------------------------|--|-------------------------------|-------------------------------------|-----|-----|--------------|-----|------------------------|---|-----|
| Series and size                                   |  |                               | Configuration example 1:            |     |     |              |     |                        |   |     |
| MPF181   MPF191                                   |  |                               | Filter element with standard spigot |     |     |              |     |                        |   |     |
|                                                   |  |                               | Configuration example 2:            |     |     |              |     |                        |   |     |
|                                                   |  |                               | MPF181                              | 1   | A   | G1           | A25 | H                      | E | P01 |
|                                                   |  |                               | MPF191                              | 2   | V   | G2           | P10 | N                      | B | P01 |
| Length                                            |  | Size 181                      | Size 191                            |     |     |              |     |                        |   |     |
| 1                                                 |  | •                             |                                     |     |     |              |     |                        |   |     |
| 2                                                 |  | •                             | •                                   |     |     |              |     |                        |   |     |
| Seals and treatments                              |  |                               |                                     |     |     |              |     |                        |   |     |
| A                                                 |  | NBR                           |                                     |     |     |              |     |                        |   |     |
| B                                                 |  | NBR                           | flat seal on head                   |     |     |              |     |                        |   |     |
| V                                                 |  | FPM                           |                                     |     |     |              |     |                        |   |     |
| D                                                 |  | FPM                           | flat seal on head                   |     |     |              |     |                        |   |     |
| W                                                 |  | NBR                           | head anodized                       |     |     |              |     |                        |   |     |
| L                                                 |  | NBR                           | head anodized, flat seal on head    |     |     |              |     |                        |   |     |
| Z                                                 |  | FPM                           | head anodized                       |     |     |              |     |                        |   |     |
| M                                                 |  | FPM                           | head anodized, flat seal on head    |     |     |              |     |                        |   |     |
| Connections                                       |  |                               |                                     |     |     |              |     |                        |   |     |
| G1                                                |  | G 1 1/4"                      |                                     |     |     |              |     |                        |   |     |
| G2                                                |  | G 1 1/2"                      |                                     |     |     |              |     |                        |   |     |
| G4                                                |  | 1 1/4" NPT                    |                                     |     |     |              |     |                        |   |     |
| G5                                                |  | 1 1/2" NPT                    |                                     |     |     |              |     |                        |   |     |
| G7                                                |  | SAE 20 - 1 5/8" - 12 UN       |                                     |     |     |              |     |                        |   |     |
| G8                                                |  | SAE 24 - 1 7/8" - 12 UN       |                                     |     |     |              |     |                        |   |     |
| Filtration rating (filter media)                  |  |                               |                                     |     |     |              |     |                        |   |     |
| A03                                               |  | Inorganic microfiber 3 µm     |                                     |     |     |              |     |                        |   |     |
| M25                                               |  | Wire mesh 25 µm               |                                     |     |     |              |     |                        |   |     |
| A06                                               |  | Inorganic microfiber 6 µm     |                                     |     |     |              |     |                        |   |     |
| M60                                               |  | Wire mesh 60 µm               |                                     |     |     |              |     |                        |   |     |
| A10                                               |  | Inorganic microfiber 10 µm    |                                     |     |     |              |     |                        |   |     |
| M90                                               |  | Wire mesh 90 µm               |                                     |     |     |              |     |                        |   |     |
| A16                                               |  | Inorganic microfiber 16 µm    |                                     |     |     |              |     |                        |   |     |
| P10                                               |  | Resin impregnated paper 10 µm |                                     |     |     |              |     |                        |   |     |
| A25                                               |  | Inorganic microfiber 25 µm    |                                     |     |     |              |     |                        |   |     |
| P25                                               |  | Resin impregnated paper 25 µm |                                     |     |     |              |     |                        |   |     |
|                                                   |  |                               | Filter media                        |     |     |              |     |                        |   |     |
| Element Δp                                        |  |                               | Axx                                 | Mxx | Pxx |              |     |                        |   |     |
| N 10 bar                                          |  |                               |                                     | •   | •   |              |     |                        |   |     |
| H 10 bar                                          |  |                               |                                     | •   |     |              |     |                        |   |     |
| W 10 bar, compatible with fluids HFA, HFB and HFC |  |                               | •                                   | •   |     |              |     |                        |   |     |
|                                                   |  |                               |                                     |     |     | Bypass valve |     | Execution              |   |     |
|                                                   |  |                               |                                     |     |     | E 3 bar      |     | P01 MP Filtri standard |   |     |
|                                                   |  |                               |                                     |     |     | B 1.75 bar   |     | Pxx Customized         |   |     |

| FILTER ELEMENT                                    |       |                                     |                          |                               |     |              |   |                        |     |
|---------------------------------------------------|-------|-------------------------------------|--------------------------|-------------------------------|-----|--------------|---|------------------------|-----|
| Element series and size                           |       |                                     | Configuration example 1: |                               |     |              |   |                        |     |
| MF180                                             | MF190 | Filter element with standard spigot | MF180                    | 1                             | A25 | H            | B | E                      | P01 |
|                                                   |       |                                     | Configuration example 2: |                               |     |              |   |                        |     |
|                                                   |       |                                     | MF190                    | 2                             | P10 | N            | V |                        | P01 |
| Element length                                    |       | Size 180                            | Size 190                 |                               |     |              |   |                        |     |
| 1                                                 |       | •                                   |                          |                               |     |              |   |                        |     |
| 2                                                 |       | •                                   | •                        |                               |     |              |   |                        |     |
| Filtration rating (filter media)                  |       |                                     |                          |                               |     |              |   |                        |     |
| A03                                               |       | Inorganic microfiber 3 µm           | M25                      | Wire mesh 25 µm               |     |              |   |                        |     |
| A06                                               |       | Inorganic microfiber 6 µm           | M60                      | Wire mesh 60 µm               |     |              |   |                        |     |
| A10                                               |       | Inorganic microfiber 10 µm          | M90                      | Wire mesh 90 µm               |     |              |   |                        |     |
| A16                                               |       | Inorganic microfiber 16 µm          | P10                      | Resin impregnated paper 10 µm |     |              |   |                        |     |
| A25                                               |       | Inorganic microfiber 25 µm          | P25                      | Resin impregnated paper 25 µm |     |              |   |                        |     |
| Element Δp                                        |       |                                     | Filter media             |                               |     |              |   |                        |     |
|                                                   |       |                                     | Axx                      | Mxx                           | Pxx |              |   |                        |     |
| N 10 bar                                          |       |                                     |                          | •                             | •   |              |   |                        |     |
| H 10 bar                                          |       |                                     |                          | •                             |     |              |   |                        |     |
| W 10 bar, compatible with fluids HFA, HFB and HFC |       |                                     | •                        | •                             |     |              |   |                        |     |
|                                                   |       |                                     |                          | Seals                         |     | Bypass valve |   | Execution              |     |
|                                                   |       |                                     |                          | B NBR                         |     | E 3 bar      |   | P01 MP Filtri standard |     |
|                                                   |       |                                     |                          | V FPM                         |     | 1.75 bar     |   | Pxx Customized         |     |

| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239-240 |
| BVQ                 | Visual pressure indicator with manual reset    | 241  |         |
| Additional features |                                                | page |         |
| TE                  | Extension tube                                 | 248  |         |
| Sxx                 | Extension tube                                 | 248  |         |
| T5                  | Filler plug M30x1.5                            | 249  |         |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |



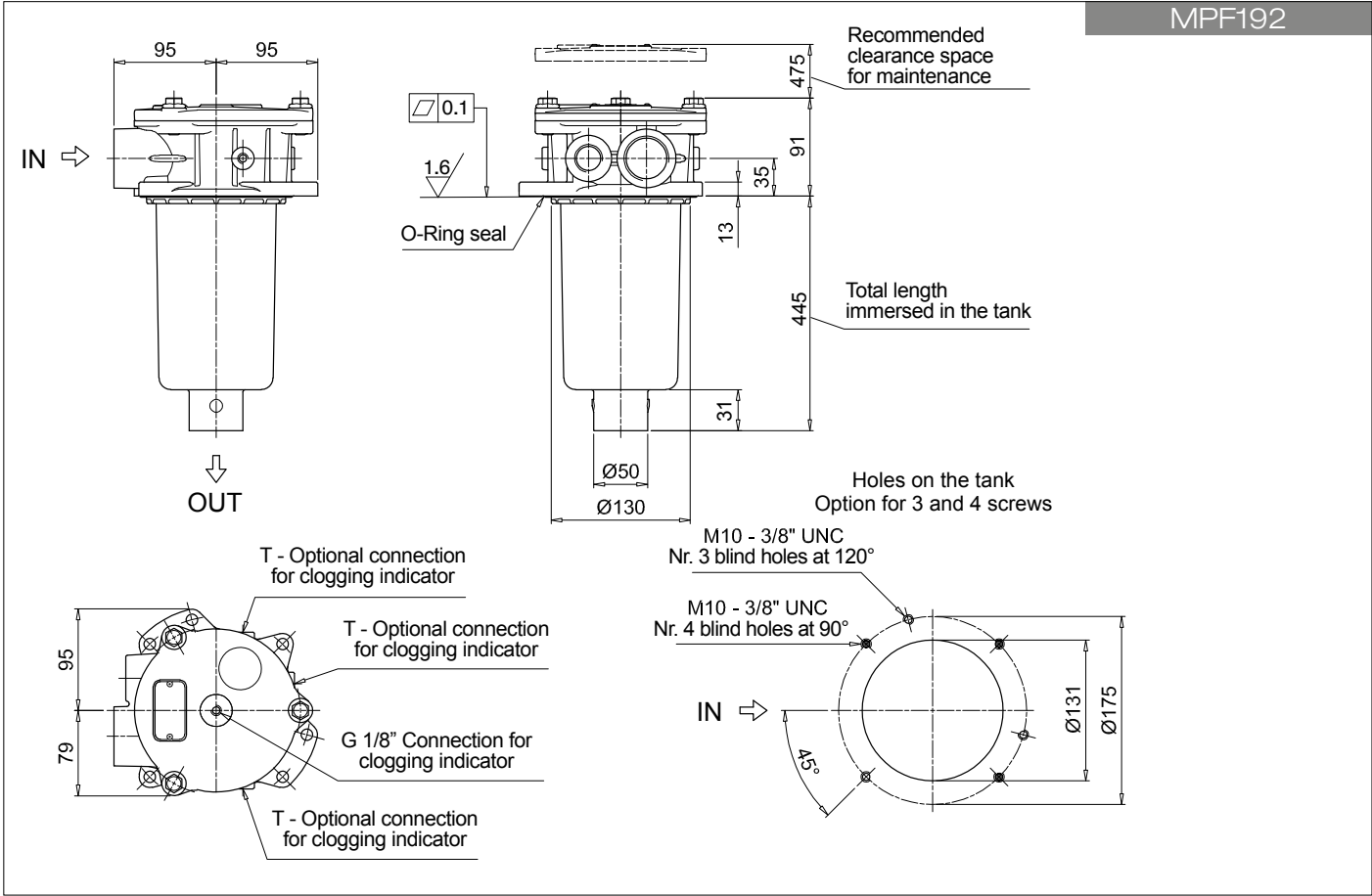
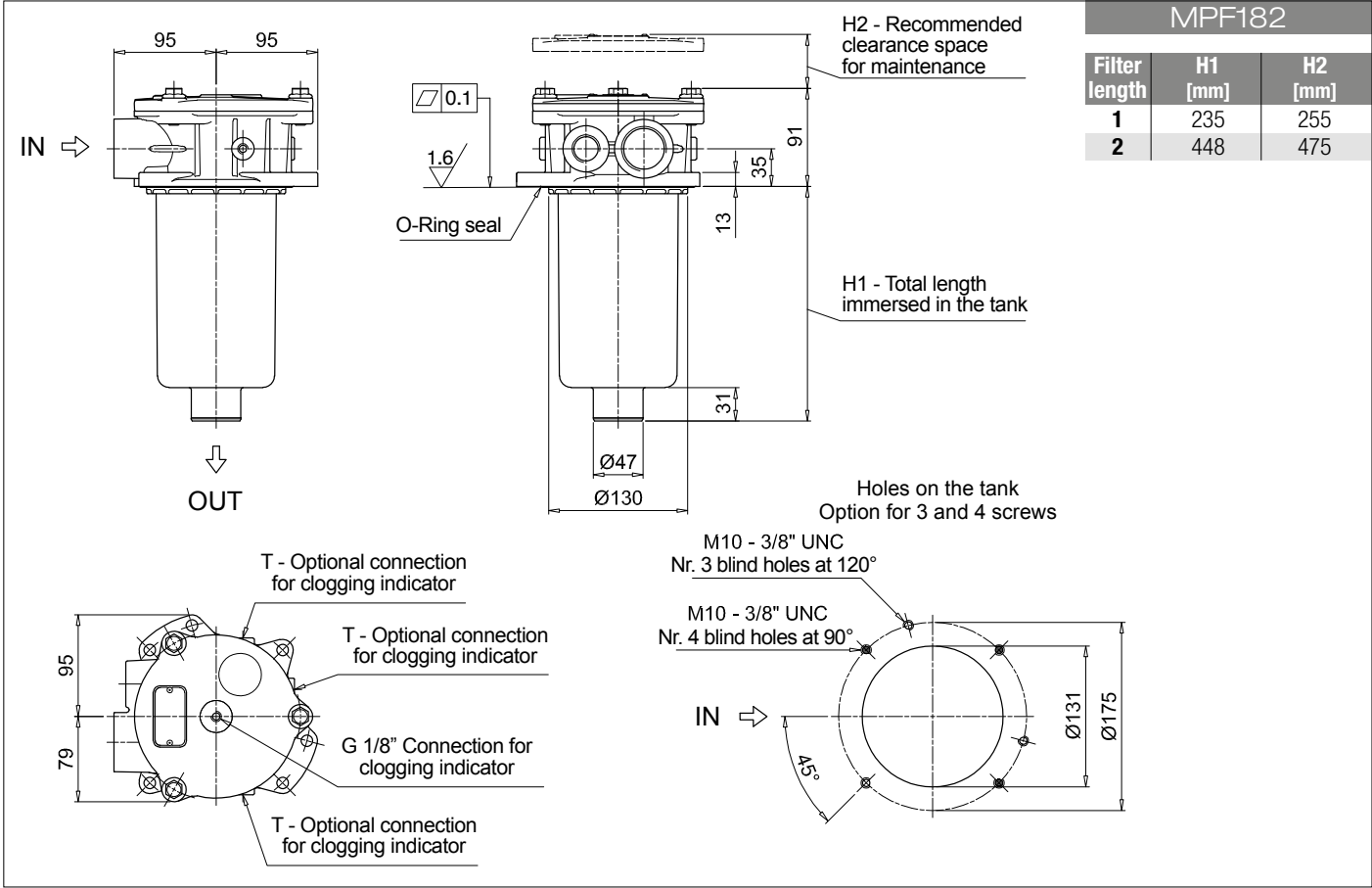
# MPF MPF182 - MPF192

## Designation & Ordering code

| COMPLETE FILTER                     |                                                 |                                     |                                   |     |                          |                                  |   |                        |   |   |     |
|-------------------------------------|-------------------------------------------------|-------------------------------------|-----------------------------------|-----|--------------------------|----------------------------------|---|------------------------|---|---|-----|
| Series and size                     |                                                 |                                     | Configuration example 1:          |     |                          |                                  |   |                        |   |   |     |
| MPF182                              | MPF192                                          | Filter element with standard spigot | MPF182                            | 1   | A                        | G1                               | 1 | A25                    | H | E | P01 |
|                                     |                                                 |                                     | Configuration example 2:          |     |                          |                                  |   |                        |   |   |     |
|                                     |                                                 |                                     | MPF192                            | 2   | V                        | G4                               | 2 | P10                    | N | B | P01 |
| Length                              |                                                 | Size 182                            | Size 192                          |     |                          |                                  |   |                        |   |   |     |
| 1                                   |                                                 | •                                   |                                   |     |                          |                                  |   |                        |   |   |     |
| 2                                   |                                                 | •                                   | •                                 |     |                          |                                  |   |                        |   |   |     |
| Seals and treatments                |                                                 |                                     |                                   |     |                          |                                  |   |                        |   |   |     |
| A                                   | NBR                                             |                                     |                                   | B   | NBR                      | flat seal on head                |   |                        |   |   |     |
| V                                   | FPM                                             |                                     |                                   | D   | FPM                      | flat seal on head                |   |                        |   |   |     |
| W                                   | NBR                                             | head anodized                       |                                   | L   | NBR                      | head anodized, flat seal on head |   |                        |   |   |     |
| Z                                   | FPM                                             | head anodized                       |                                   | M   | FPM                      | head anodized, flat seal on head |   |                        |   |   |     |
| Main Connections                    |                                                 |                                     | Aux size 1                        |     | Aux size 2               |                                  |   |                        |   |   |     |
| G1                                  | G 1 1/4"                                        |                                     | G 1/2"                            |     | G 3/4"                   |                                  |   |                        |   |   |     |
| G4                                  | 1 1/4" NPT                                      |                                     | 1/2" NPT                          |     | 3/4" NPT                 |                                  |   |                        |   |   |     |
| G7                                  | SAE 20 - 1 5/8" - 12 UN                         |                                     | SAE 8 - 3/16" - 16 UNF            |     | SAE 12 - 1 1/16" - 12 UN |                                  |   |                        |   |   |     |
| Aux connection - see previous table |                                                 |                                     |                                   |     |                          |                                  |   |                        |   |   |     |
| 1 Aux size 1                        |                                                 |                                     | 2 Aux size 2                      |     |                          |                                  |   |                        |   |   |     |
| Filtration rating (filter media)    |                                                 |                                     |                                   |     |                          |                                  |   |                        |   |   |     |
| A03 Inorganic microfiber 3 µm       |                                                 |                                     | M25 Wire mesh 25 µm               |     |                          |                                  |   |                        |   |   |     |
| A06 Inorganic microfiber 6 µm       |                                                 |                                     | M60 Wire mesh 60 µm               |     |                          |                                  |   |                        |   |   |     |
| A10 Inorganic microfiber 10 µm      |                                                 |                                     | M90 Wire mesh 90 µm               |     |                          |                                  |   |                        |   |   |     |
| A16 Inorganic microfiber 16 µm      |                                                 |                                     | P10 Resin impregnated paper 10 µm |     |                          |                                  |   |                        |   |   |     |
| A25 Inorganic microfiber 25 µm      |                                                 |                                     | P25 Resin impregnated paper 25 µm |     |                          |                                  |   |                        |   |   |     |
| Element Δp                          |                                                 |                                     | Filter media                      |     |                          |                                  |   |                        |   |   |     |
|                                     |                                                 |                                     | Axx                               | Mxx | Pxx                      |                                  |   |                        |   |   |     |
| N                                   | 10 bar                                          |                                     |                                   | •   | •                        |                                  |   |                        |   |   |     |
| H                                   | 10 bar                                          |                                     |                                   | •   |                          |                                  |   |                        |   |   |     |
| W                                   | 10 bar, compatible with fluids HFA, HFB and HFC |                                     | •                                 | •   |                          |                                  |   |                        |   |   |     |
|                                     |                                                 |                                     |                                   |     |                          | Bypass valve                     |   | Execution              |   |   |     |
|                                     |                                                 |                                     |                                   |     |                          | E 3 bar                          |   | P01 MP Filtri standard |   |   |     |
|                                     |                                                 |                                     |                                   |     |                          | B 1.75 bar                       |   | Pxx Customized         |   |   |     |

| FILTER ELEMENT                   |                                                 |                                     |                          |              |     |                        |   |   |     |  |
|----------------------------------|-------------------------------------------------|-------------------------------------|--------------------------|--------------|-----|------------------------|---|---|-----|--|
| Element series and size          |                                                 |                                     | Configuration example 1: |              |     |                        |   |   |     |  |
| MF180                            | MF190                                           | Filter element with standard spigot | MF180                    | 1            | A25 | H                      | B | E | P01 |  |
|                                  |                                                 |                                     | Configuration example 2: |              |     |                        |   |   |     |  |
|                                  |                                                 |                                     | MF190                    | 2            | P10 | N                      | V |   | P01 |  |
| Element length                   |                                                 | Size 180                            | Size 190                 |              |     |                        |   |   |     |  |
| 1                                |                                                 | •                                   |                          |              |     |                        |   |   |     |  |
| 2                                |                                                 | •                                   | •                        |              |     |                        |   |   |     |  |
| Filtration rating (filter media) |                                                 |                                     |                          |              |     |                        |   |   |     |  |
| A03 Inorganic microfiber 3 µm    |                                                 | M25 Wire mesh 25 µm                 |                          |              |     |                        |   |   |     |  |
| A06 Inorganic microfiber 6 µm    |                                                 | M60 Wire mesh 60 µm                 |                          |              |     |                        |   |   |     |  |
| A10 Inorganic microfiber 10 µm   |                                                 | M90 Wire mesh 90 µm                 |                          |              |     |                        |   |   |     |  |
| A16 Inorganic microfiber 16 µm   |                                                 | P10 Resin impregnated paper 10 µm   |                          |              |     |                        |   |   |     |  |
| A25 Inorganic microfiber 25 µm   |                                                 | P25 Resin impregnated paper 25 µm   |                          |              |     |                        |   |   |     |  |
| Element Δp                       |                                                 | Filter media                        |                          |              |     |                        |   |   |     |  |
| N                                | 10 bar                                          | Axx                                 | Mxx                      | Pxx          |     |                        |   |   |     |  |
| H                                | 10 bar                                          |                                     | •                        | •            |     |                        |   |   |     |  |
| W                                | 10 bar, compatible with fluids HFA, HFB and HFC | •                                   | •                        |              |     |                        |   |   |     |  |
|                                  |                                                 | Seals                               |                          | Bypass valve |     | Execution              |   |   |     |  |
|                                  |                                                 | B NBR                               |                          | E 3 bar      |     | P01 MP Filtri standard |   |   |     |  |
|                                  |                                                 | V FPM                               |                          | 1.75 bar     |     | Pxx Customized         |   |   |     |  |

| ACCESSORIES                                        |  |      |         |
|----------------------------------------------------|--|------|---------|
| Indicators                                         |  | page | page    |
| BVA Axial pressure gauge                           |  | 240  | 239     |
| BVR Radial pressure gauge                          |  | 240  | 239     |
| BVP Visual pressure indicator with automatic reset |  | 241  | 239-240 |
| BVQ Visual pressure indicator with manual reset    |  | 241  |         |
| Additional features                                |  | page |         |
| TE Extension tube                                  |  | 248  |         |
| Sxx Extension tube                                 |  | 248  |         |
| T5 Filler plug M30x1.5                             |  | 249  |         |



# MPF MPF184 - MPF194

## Designation & Ordering code

COMPLETE FILTER

Series and size

MPF184 MPF194

Filter element with standard spigot

Configuration example 1:

MPF184

1

A

G1

A25

H

E

P01

Configuration example 2:

MPF194

2

V

F3

P10

N

B

P01

Length

Size 184

Size 194

1

2

Seals and treatments

A NBR

W NBR

head anodized

V FPM

Z FPM

head anodized

Main Connections

Rear connections

G1 G 1 1/4"

-

G2 G 1 1/4"

G 1 1/4"

G4 1 1/4" NPT

-

G5 1 1/4" NPT

1 1/4" NPT

G7 SAE 20 - 1 5/8" - 12 UN

-

G8 SAE 20 - 1 5/8" - 12 UN

SAE 20 - 1 5/8" - 12 UN

G10 SAE 24 - 1 7/8" - 12 UN

-

G11 SAE 24 - 1 7/8" - 12 UN

SAE 20 - 1 5/8" - 12 UN

Main Connections

Rear connections

G13 G 1 1/2"

-

G14 G 1 1/2"

G 1 1/4"

G15 1 1/2" NPT

-

G16 1 1/2" NPT

1 1/4" NPT

F1 1 1/2" SAE 3000 psi/M

-

F2 1 1/2" SAE 3000 psi/UNC

-

F3 1 1/2" SAE 3000 psi/M

1 1/2" SAE 3000 psi/M

F4 1 1/2" SAE 3000 psi/UNC

1 1/2" SAE 3000 psi/UNC

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

M25 Wire mesh 25 µm

A06 Inorganic microfiber 6 µm

M60 Wire mesh 60 µm

A10 Inorganic microfiber 10 µm

M90 Wire mesh 90 µm

A16 Inorganic microfiber 16 µm

P10 Resin impregnated paper 10 µm

A25 Inorganic microfiber 25 µm

P25 Resin impregnated paper 25 µm

Element Δp

Axx

Mxx

Pxx

N 10 bar

•

•

H 10 bar

•

•

W 10 bar, compatible with fluids HFA, HFB and HFC

•

•

Bypass valve

E 3 bar

B 1.75 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

MF180 MF190

Filter element with standard spigot

Configuration example 1:

MF180

1

A25

H

B

E

P01

Configuration example 2:

MF190

2

P10

N

V

P01

Element length

Size 180

Size 190

1

2

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

M25 Wire mesh 25 µm

A06 Inorganic microfiber 6 µm

M60 Wire mesh 60 µm

A10 Inorganic microfiber 10 µm

M90 Wire mesh 90 µm

A16 Inorganic microfiber 16 µm

P10 Resin impregnated paper 10 µm

A25 Inorganic microfiber 25 µm

P25 Resin impregnated paper 25 µm

Element Δp

Axx

Mxx

Pxx

N 10 bar

•

•

H 10 bar

•

•

W 10 bar, compatible with fluids HFA, HFB and HFC

•

•

Seals

B NBR

V FPM

Bypass valve

E 3 bar

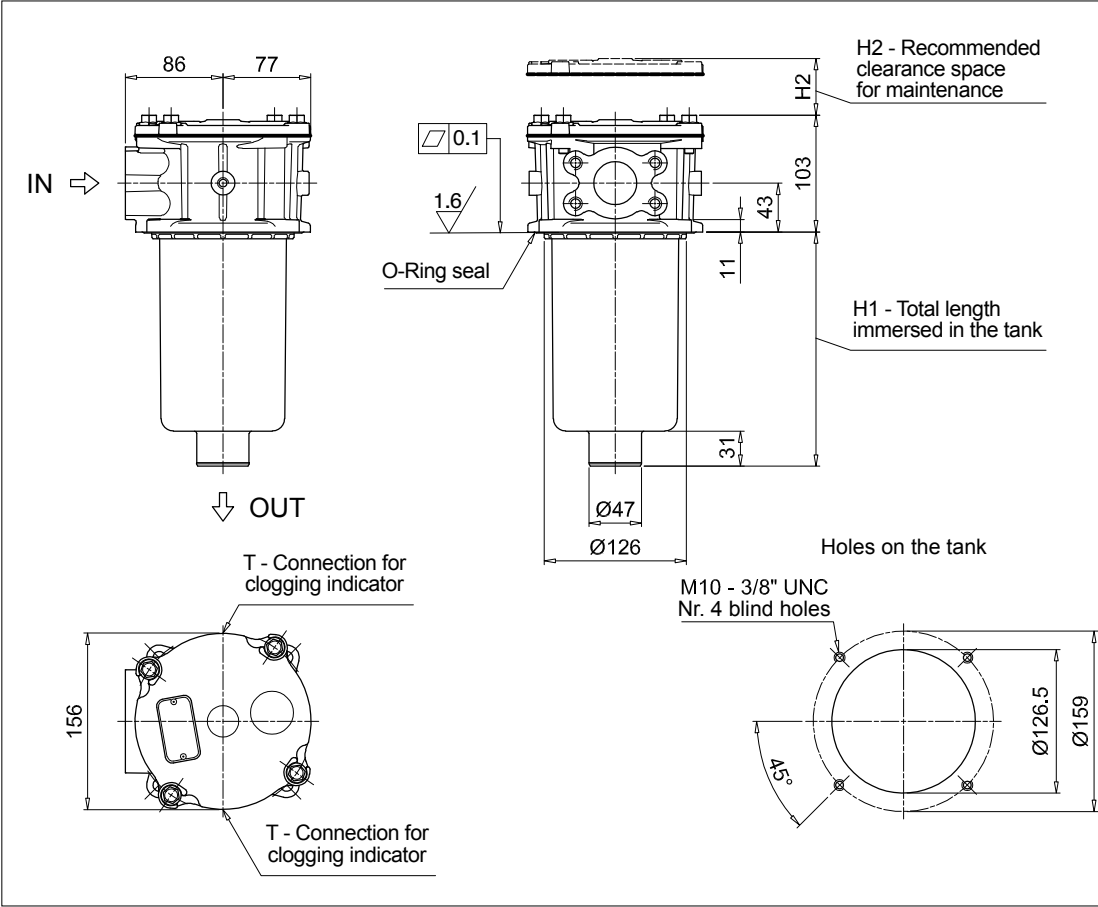
1.75 bar

Execution

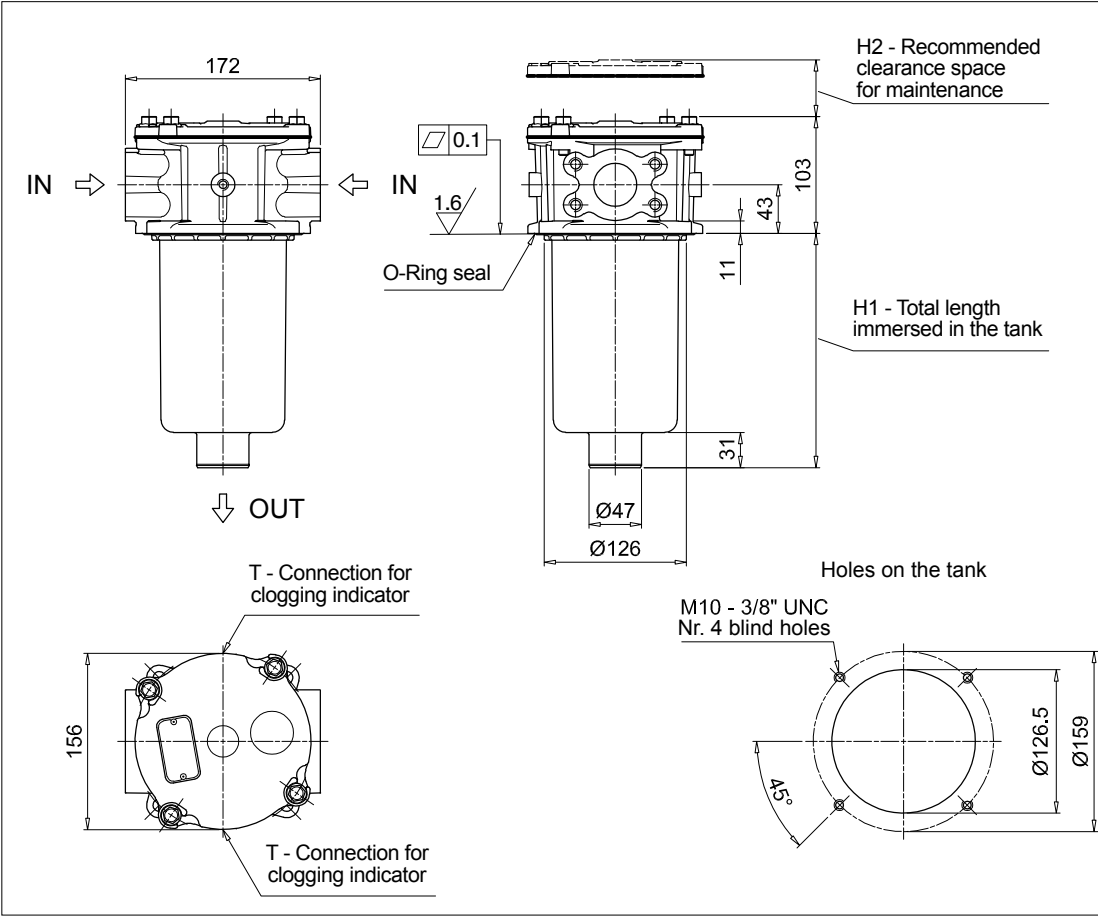
P01 MP Filtri standard

Pxx Customized

| ACCESSORIES                                        |      |                                            |         |
|----------------------------------------------------|------|--------------------------------------------|---------|
| Indicators                                         | page |                                            | page    |
| BVA Axial pressure gauge                           | 240  | BEA Electrical pressure indicator          | 239     |
| BVR Radial pressure gauge                          | 240  | BEM Electrical pressure indicator          | 239     |
| BVP Visual pressure indicator with automatic reset | 241  | BLA Electrical / visual pressure indicator | 239-240 |
| BVQ Visual pressure indicator with manual reset    | 241  |                                            |         |
| Additional features                                | page |                                            |         |
| TE Extension tube                                  | 248  |                                            |         |
| Sxx Extension tube                                 | 248  |                                            |         |
| T5 Filler plug M30x1.5                             | 249  |                                            |         |

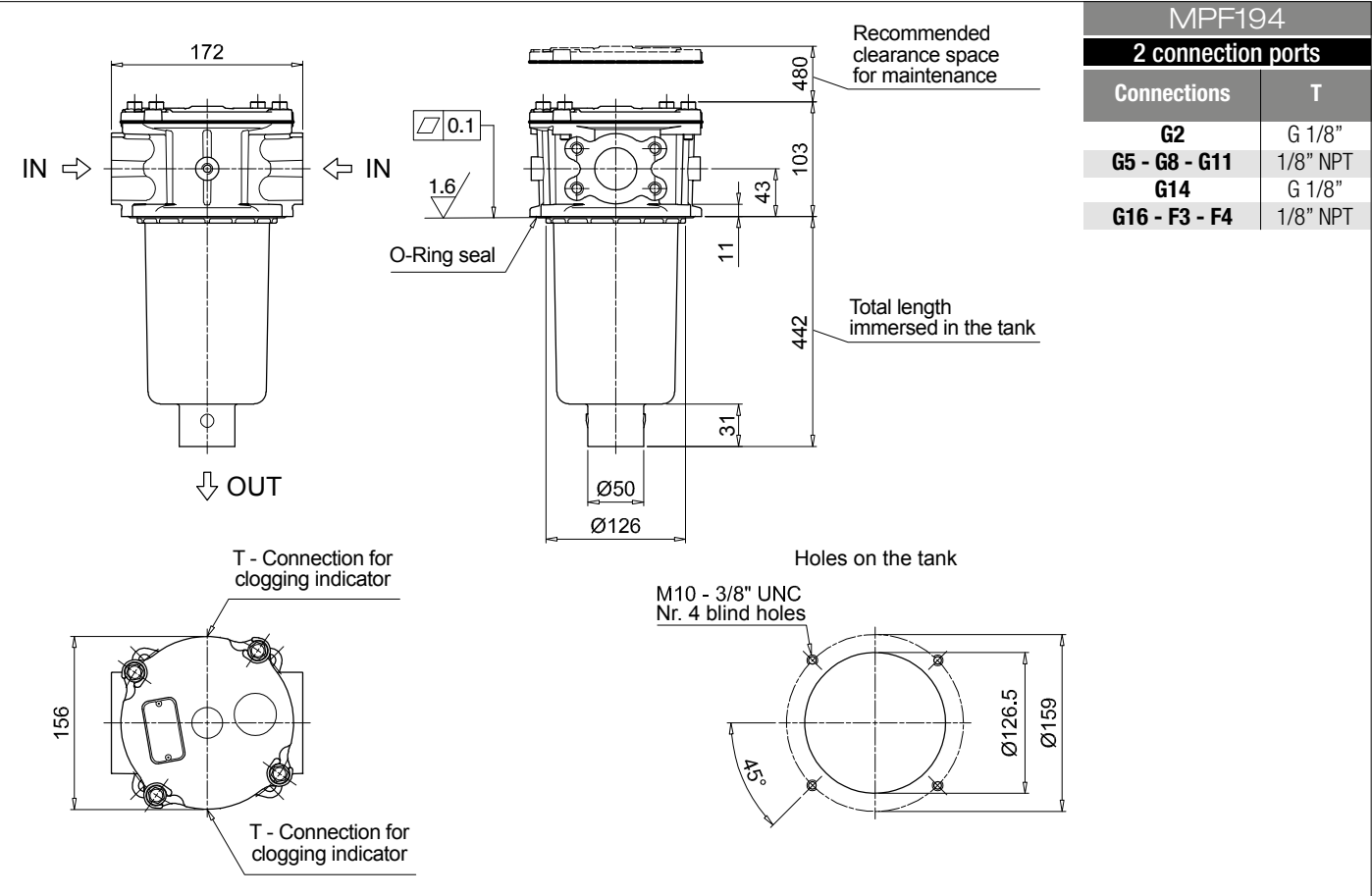
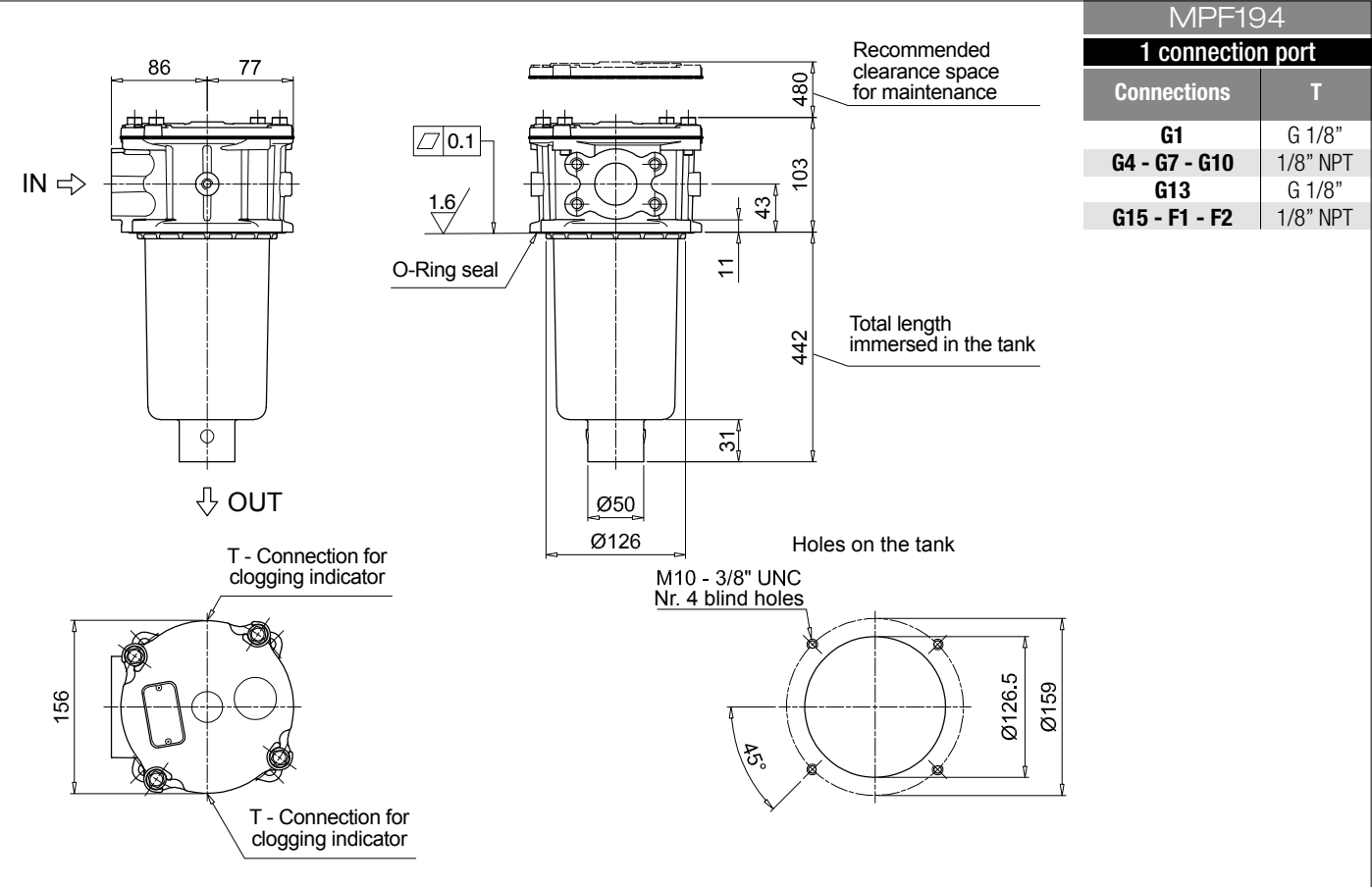


| MPF184            |         |          |
|-------------------|---------|----------|
| 1 connection port |         |          |
| Filter length     | H1 [mm] | H2 [mm]  |
| 1                 | 232     | 260      |
| 2                 | 445     | 480      |
| Connections       |         | T        |
| G1                |         | G 1/8"   |
| G4 - G7 - G10     |         | 1/8" NPT |
| G13               |         | G 1/8"   |
| G15 - F1 - F2     |         | 1/8" NPT |



| MPF184             |         |          |
|--------------------|---------|----------|
| 2 connection ports |         |          |
| Filter length      | H1 [mm] | H2 [mm]  |
| 1                  | 232     | 260      |
| 2                  | 445     | 480      |
| Connections        |         | T        |
| G2                 |         | G 1/8"   |
| G5 - G8 - G11      |         | 1/8" NPT |
| G14                |         | G 1/8"   |
| G16 - F3 - F4      |         | 1/8" NPT |

Dimensions



COMPLETE FILTER

Series and size

MPF400 Filter element with standard spigot

Length

1 | 2 | 3 |

Seals and treatments

A NBR  
V FPM  
W NBR head anodized  
Z FPM head anodized

Connections

G1 G 1 1/4"

G2 G 1 1/2"

G3 G 2"

G4 1 1/4" NPT

G5 1 1/2" NPT

G6 2" NPT

G7 SAE 20 - 1 5/8" - 12 UN

G8 SAE 24 - 1 7/8" - 12 UN

G9 SAE 32 - 2 1/2" - 12 UN

Filtration rating (filter media)

A03 Inorganic microfiber 3 μm

A06 Inorganic microfiber 6 μm

A10 Inorganic microfiber 10 μm

A16 Inorganic microfiber 16 μm

A25 Inorganic microfiber 25 μm

M25 Wire mesh 25 μm

M60 Wire mesh 60 μm

M90 Wire mesh 90 μm

P10 Resin impregnated paper 10 μm

P25 Resin impregnated paper 25 μm

Element Δp

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Axx

Mxx

Pxx

Configuration example 1:

MPF4001AG9A25HBPO1

Configuration example 2:

MPF4002VG4P10NEPO1

Bypass valve

E 3 bar  
B 1.75 bar

Execution

P01 MP Filtri standard  
Pxx Customized

FILTER ELEMENT

Element series and size

MF400 Filter element with standard spigot

Element length

1 | 2 | 3 |

Filtration rating (filter media)

A03 Inorganic microfiber 3 μm

A06 Inorganic microfiber 6 μm

A10 Inorganic microfiber 10 μm

A16 Inorganic microfiber 16 μm

A25 Inorganic microfiber 25 μm

M25 Wire mesh 25 μm

M60 Wire mesh 60 μm

M90 Wire mesh 90 μm

P10 Resin impregnated paper 10 μm

P25 Resin impregnated paper 25 μm

Element Δp

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Axx

Mxx

Pxx

Configuration example 1:

MF4001A25HBPO1

Configuration example 2:

MF4002P10NV EPO1

Seals

B NBR  
V FPM

Bypass valve

E 3 bar  
1.75 bar

Execution

P01 MP Filtri standard  
Pxx Customized

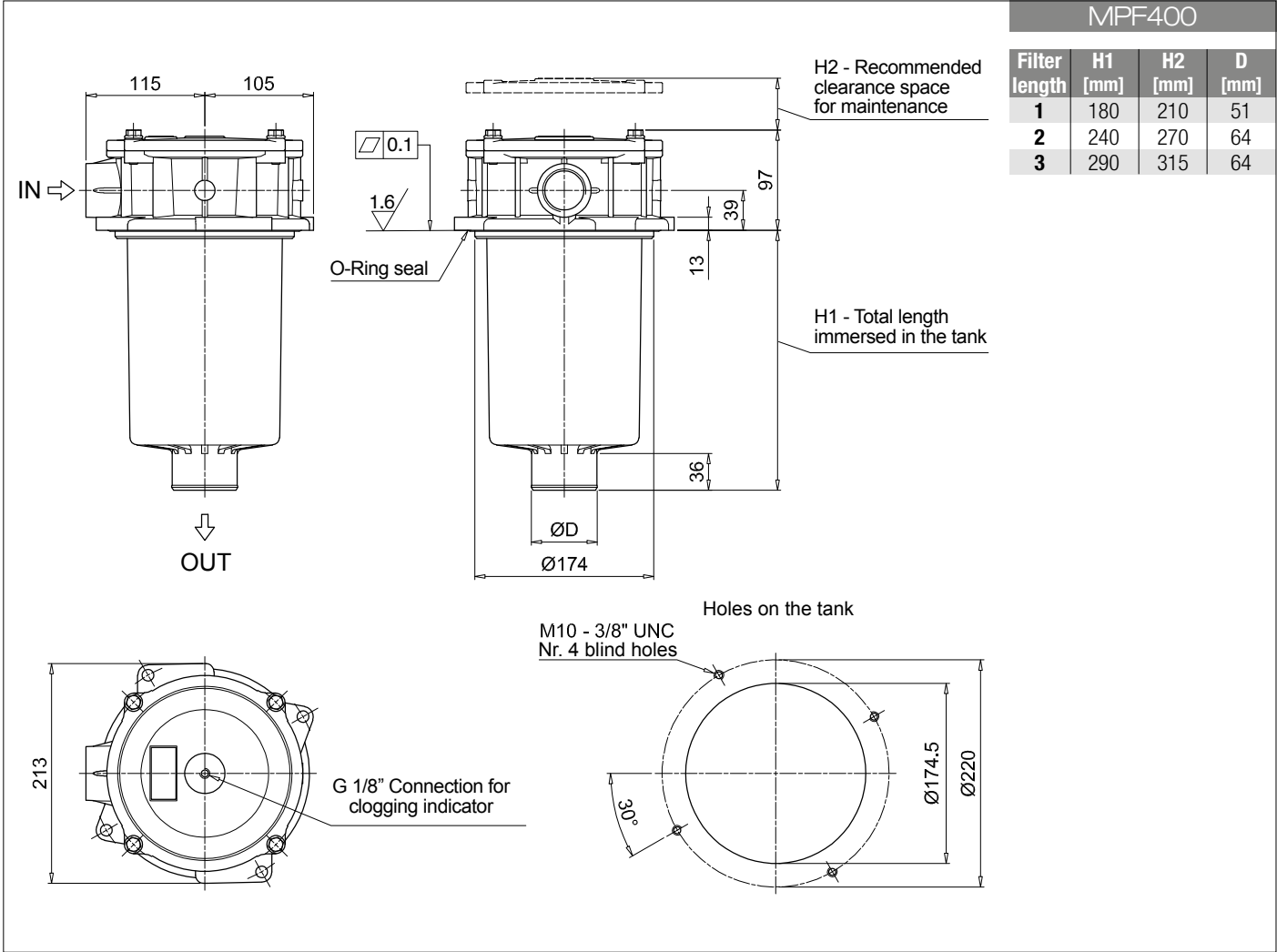
| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239-240 |
| BVQ                 | Visual pressure indicator with manual reset    | 241  |         |
| Additional features |                                                | page |         |
| Sxx                 | Extension tube                                 | 248  |         |
| T5                  | Filler plug M30x1.5                            | 249  |         |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |

Return filters

144

MPFILTRI

ТОВ "Промислова Гідравліка": <https://promhydraulic.com.ua/ua/>  
Телефонуйте: +380 (95) 670-15-32, +380 (98) 533-91-67, +380 (96) 244-48-42



Designation & Ordering code

COMPLETE FILTER

Series and size

MPF410 Filter element with standard spigot

Configuration example 1:

MPF4101AG11A25HBPO1

Configuration example 2:

MPF4101VG41P10NEPO1

Length

123

Seals and treatments

A NBR

V FPM

W NBR head anodized

Z FPM head anodized

Main Connections

G1 G 1 1/4"

G4 1 1/4" NPT

G7 SAE 20 - 1 5/8" - 12 UN

Aux size 1

G 1"

1" NPT

SAE 16 - 1 5/16" - 12 UN

Aux connection - see previous table

1 Aux size 1

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Element Δp

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Filter media

AxxMxxPxx

•••

•••

•••

Bypass valve

E 3 bar

B 1.75 bar

Execution

P01 MP Filtri standard

Pxx Customized

FILTER ELEMENT

Element series and size

MF400 Filter element with standard spigot

Configuration example 1:

MF4001A25HBPO1

Configuration example 2:

MF4001P10NVEP01

Element length

123

Filtration rating (filter media)

A03 Inorganic microfiber 3 µm

A06 Inorganic microfiber 6 µm

A10 Inorganic microfiber 10 µm

A16 Inorganic microfiber 16 µm

A25 Inorganic microfiber 25 µm

M25 Wire mesh 25 µm

M60 Wire mesh 60 µm

M90 Wire mesh 90 µm

P10 Resin impregnated paper 10 µm

P25 Resin impregnated paper 25 µm

Element Δp

N 10 bar

H 10 bar

W 10 bar, compatible with fluids HFA, HFB and HFC

Filter media

AxxMxxPxx

•••

•••

•••

Seals

B NBR

V FPM

Bypass valve

E 3 bar

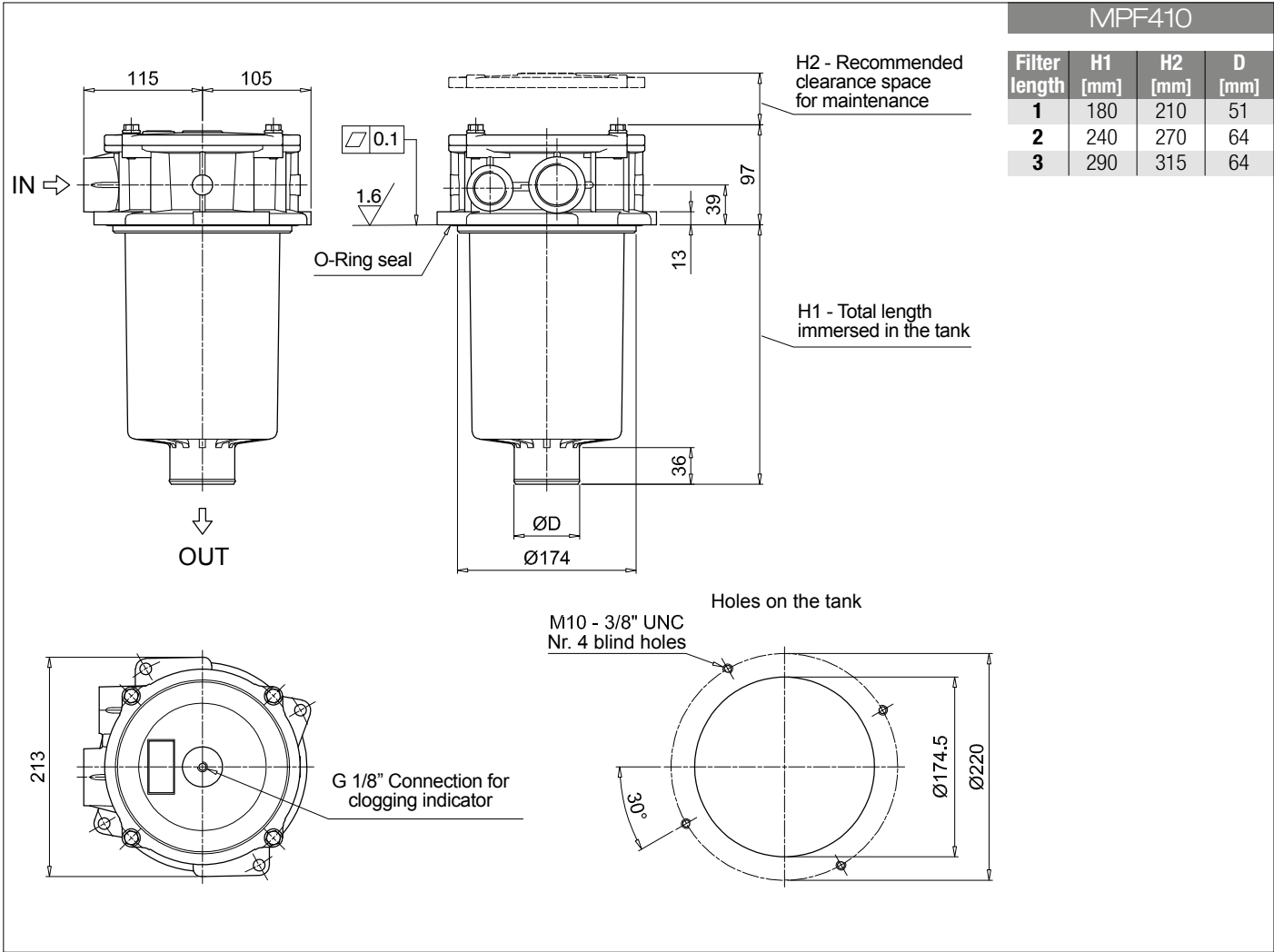
1.75 bar

Execution

P01 MP Filtri standard

Pxx Customized

| ACCESSORIES         |                                                |      |         |
|---------------------|------------------------------------------------|------|---------|
| Indicators          |                                                | page | page    |
| BVA                 | Axial pressure gauge                           | 240  | 239     |
| BVR                 | Radial pressure gauge                          | 240  | 239     |
| BVP                 | Visual pressure indicator with automatic reset | 241  | 239-240 |
| BVQ                 | Visual pressure indicator with manual reset    | 241  |         |
| Additional features |                                                | page |         |
| Sxx                 | Extension tube                                 | 248  |         |
| T5                  | Filler plug M30x1.5                            | 249  |         |
| BEA                 | Electrical pressure indicator                  |      | 239     |
| BEM                 | Electrical pressure indicator                  |      | 239     |
| BLA                 | Electrical / visual pressure indicator         |      | 239-240 |



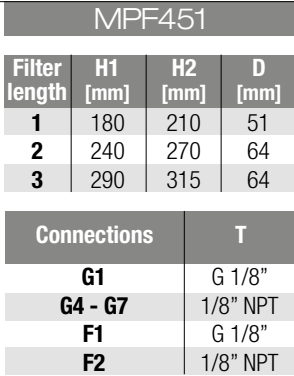
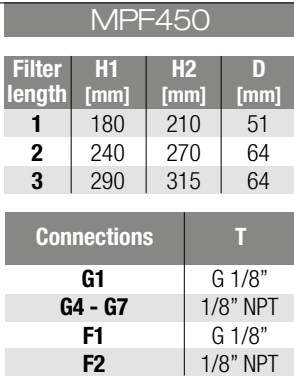
# MPF MPF450 - MPF451 - MPF750

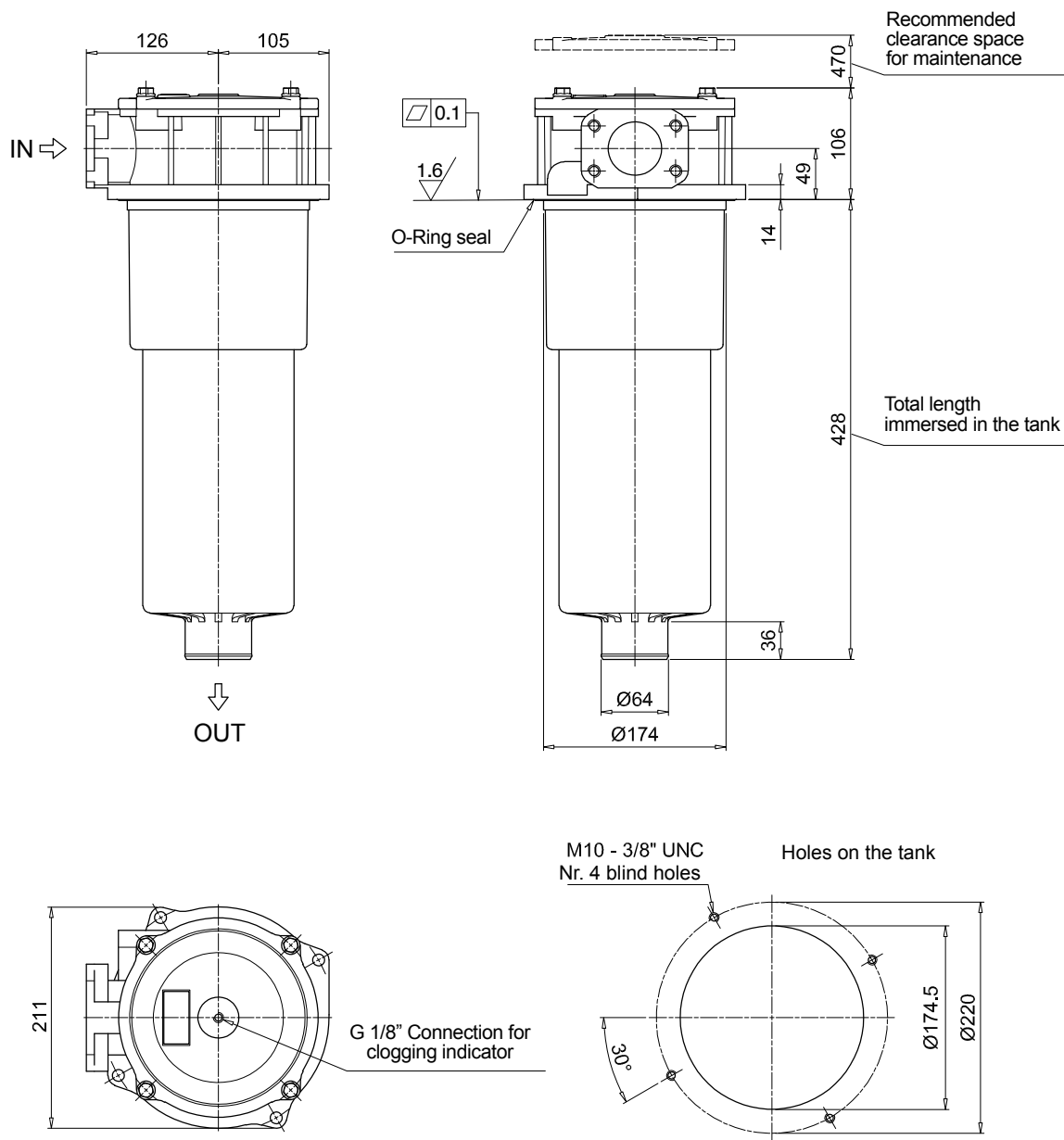
## Designation & Ordering code

| COMPLETE FILTER                  |                                                 |        |                                     |                          |               |              |          |                        |   |   |     |
|----------------------------------|-------------------------------------------------|--------|-------------------------------------|--------------------------|---------------|--------------|----------|------------------------|---|---|-----|
| Series and size                  |                                                 |        |                                     | Configuration example 1: |               |              |          |                        |   |   |     |
| MPF450                           | MPF451                                          | MPF750 | Filter element with standard spigot | MPF450                   | 1             | A            | G1       | A25                    | H | B | P01 |
|                                  |                                                 |        |                                     | Configuration example 2: |               |              |          |                        |   |   |     |
|                                  |                                                 |        |                                     | MPF750                   | 1             | V            | F2       | P10                    | N | E | P01 |
| Length                           |                                                 |        | MPF 450                             | MPF 451                  | MPF 750       |              |          |                        |   |   |     |
| 1                                |                                                 |        | •                                   | •                        | •             |              |          |                        |   |   |     |
| 2                                |                                                 |        | •                                   | •                        |               |              |          |                        |   |   |     |
| 3                                |                                                 |        | •                                   | •                        |               |              |          |                        |   |   |     |
| Seals and treatments             |                                                 |        |                                     |                          |               |              |          |                        |   |   |     |
| A                                | NBR                                             |        | W                                   | NBR                      | head anodized |              |          |                        |   |   |     |
| V                                | FPM                                             |        | Z                                   | FPM                      | head anodized |              |          |                        |   |   |     |
| Connections                      |                                                 |        | Aux (only size 451)                 |                          |               |              |          |                        |   |   |     |
| G1                               | G 2"                                            |        | G 3/4"                              |                          |               |              |          |                        |   |   |     |
| G4                               | 2" NPT                                          |        | 3/4" NPT                            |                          |               |              |          |                        |   |   |     |
| G7                               | SAE 32 - 2 1/2" - 12 UN                         |        | SAE 12 - 1 1/16" - 12 UN            |                          |               |              |          |                        |   |   |     |
| F1                               | 2" SAE 3000 psi/M                               |        | G 3/4"                              |                          |               |              |          |                        |   |   |     |
| F2                               | 2" SAE 3000 psi/UN                              |        | 3/4" NPT                            |                          |               |              |          |                        |   |   |     |
| Filtration rating (filter media) |                                                 |        |                                     |                          |               |              |          |                        |   |   |     |
| A03                              | Inorganic microfiber                            | 3 µm   | M25                                 | Wire mesh                | 25 µm         |              |          |                        |   |   |     |
| A06                              | Inorganic microfiber                            | 6 µm   | M60                                 | Wire mesh                | 60 µm         |              |          |                        |   |   |     |
| A10                              | Inorganic microfiber                            | 10 µm  | M90                                 | Wire mesh                | 90 µm         |              |          |                        |   |   |     |
| A16                              | Inorganic microfiber                            | 16 µm  | P10                                 | Resin impregnated paper  | 10 µm         |              |          |                        |   |   |     |
| A25                              | Inorganic microfiber                            | 25 µm  | P25                                 | Resin impregnated paper  | 25 µm         |              |          |                        |   |   |     |
| Element Δp                       |                                                 |        | Filter media                        |                          |               |              |          |                        |   |   |     |
|                                  |                                                 |        | Axx                                 | Mxx                      | Pxx           |              |          |                        |   |   |     |
| N                                | 10 bar                                          |        |                                     | •                        | •             |              |          |                        |   |   |     |
| H                                | 10 bar                                          |        |                                     | •                        |               |              |          |                        |   |   |     |
| W                                | 10 bar, compatible with fluids HFA, HFB and HFC |        |                                     | •                        | •             |              |          |                        |   |   |     |
|                                  |                                                 |        |                                     |                          |               | Bypass valve |          | Execution              |   |   |     |
|                                  |                                                 |        |                                     |                          |               | E            | 3 bar    | P01 MP Filtri standard |   |   |     |
|                                  |                                                 |        |                                     |                          |               | B            | 1.75 bar | Pxx Customized         |   |   |     |

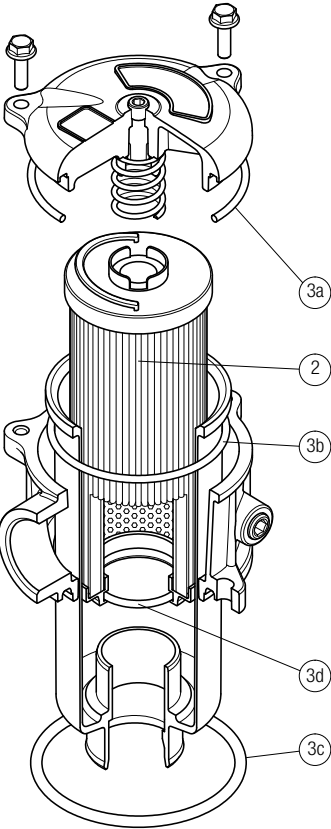
| FILTER ELEMENT                                    |       |                                     |         |                                   |   |              |   |                        |   |     |  |
|---------------------------------------------------|-------|-------------------------------------|---------|-----------------------------------|---|--------------|---|------------------------|---|-----|--|
| Element series and size                           |       |                                     |         | Configuration example 1:          |   |              |   |                        |   |     |  |
| MF400                                             | MF750 | Filter element with standard spigot |         | MF400                             | 1 | A25          | H | B                      |   | P01 |  |
|                                                   |       |                                     |         | Configuration example 2:          |   |              |   |                        |   |     |  |
|                                                   |       |                                     |         | MF750                             | 1 | P10          | N | V                      | E | P01 |  |
| Element length                                    |       | MPF 450                             | MPF 451 | MPF 750                           |   |              |   |                        |   |     |  |
| 1                                                 |       | •                                   | •       | •                                 |   |              |   |                        |   |     |  |
| 2                                                 |       | •                                   | •       |                                   |   |              |   |                        |   |     |  |
| 3                                                 |       | •                                   | •       |                                   |   |              |   |                        |   |     |  |
| Filtration rating (filter media)                  |       |                                     |         |                                   |   |              |   |                        |   |     |  |
| A03                                               |       | Inorganic microfiber                | 3 µm    | M25 Wire mesh 25 µm               |   |              |   |                        |   |     |  |
| A06                                               |       | Inorganic microfiber                | 6 µm    | M60 Wire mesh 60 µm               |   |              |   |                        |   |     |  |
| A10                                               |       | Inorganic microfiber                | 10 µm   | M90 Wire mesh 90 µm               |   |              |   |                        |   |     |  |
| A16                                               |       | Inorganic microfiber                | 16 µm   | P10 Resin impregnated paper 10 µm |   |              |   |                        |   |     |  |
| A25                                               |       | Inorganic microfiber                | 25 µm   | P25 Resin impregnated paper 25 µm |   |              |   |                        |   |     |  |
| Element Δp                                        |       |                                     |         | Filter media                      |   |              |   |                        |   |     |  |
|                                                   |       | Axx                                 | Mxx     | Pxx                               |   |              |   |                        |   |     |  |
| N 10 bar                                          |       |                                     | •       | •                                 |   |              |   |                        |   |     |  |
| H 10 bar                                          |       |                                     | •       |                                   |   |              |   |                        |   |     |  |
| W 10 bar, compatible with fluids HFA, HFB and HFC |       |                                     | •       | •                                 |   |              |   |                        |   |     |  |
|                                                   |       |                                     |         | Seals                             |   | Bypass valve |   | Execution              |   |     |  |
|                                                   |       |                                     |         | B NBR                             |   | E 3 bar      |   | P01 MP Filtri standard |   |     |  |
|                                                   |       |                                     |         | V FPM                             |   | 1.75 bar     |   | Pxx Customized         |   |     |  |

| ACCESSORIES         |                                                |      |            |                                                |
|---------------------|------------------------------------------------|------|------------|------------------------------------------------|
| Indicators          |                                                | page |            | page                                           |
| <b>BVA</b>          | Axial pressure gauge                           | 240  | <b>BEA</b> | Electrical pressure indicator 239              |
| <b>BVR</b>          | Radial pressure gauge                          | 240  | <b>BEM</b> | Electrical pressure indicator 239              |
| <b>BVP</b>          | Visual pressure indicator with automatic reset | 241  | <b>BLA</b> | Electrical / visual pressure indicator 239-240 |
| <b>BVQ</b>          | Visual pressure indicator with manual reset    | 241  |            |                                                |
| Additional features |                                                | page |            |                                                |
| <b>Sxx</b>          | Extension tube                                 | 248  |            |                                                |
| <b>T5</b>           | Filler plug M30x1.5                            | 249  |            |                                                |

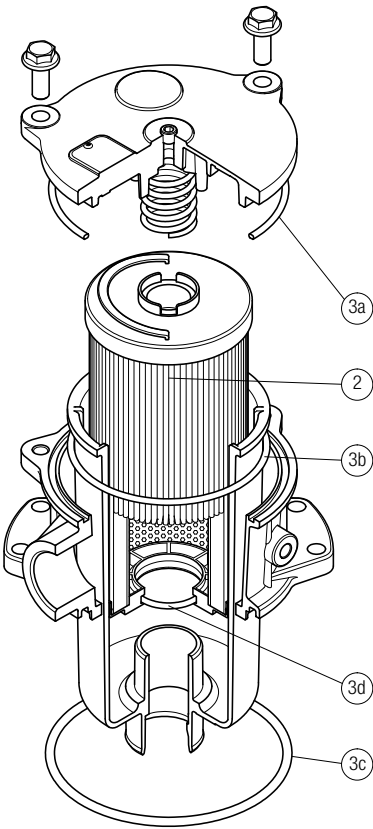




MPF 100



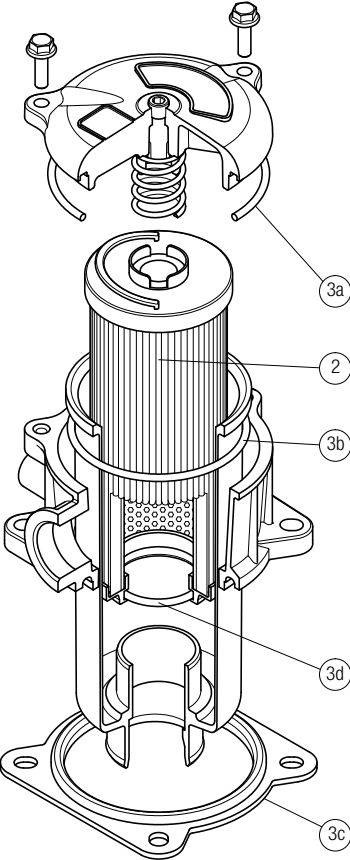
MPF 181



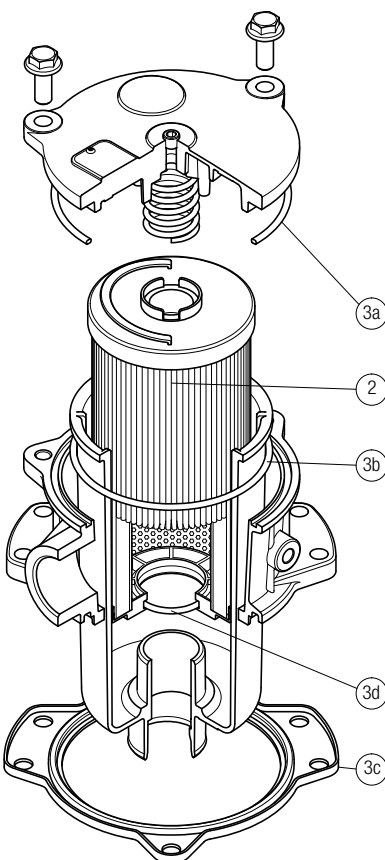
O-RING SEAL

|               |                         |                                   |          |
|---------------|-------------------------|-----------------------------------|----------|
| Item:         | Q.ty: 1 pc.<br><b>2</b> | Q.ty: 1 pc.<br><b>3</b> (3a ÷ 3d) |          |
| Filter series | Filter element          | Seal Kit code number<br>NBR       | FPM      |
| MPF 030       | See<br>order<br>table   | 02050055                          | 02050056 |
| MPF 100-110   |                         | 02050057                          | 02050058 |
| MPF 181-182   |                         | 02050059                          | 02050060 |
| MPF 184       |                         | 02050455                          | 02050456 |
| MPF 191-192   |                         | 02050457                          | 02050458 |
| MPF 194       |                         | 02050459                          | 02050460 |
| MPF 400-410   |                         | 02050061                          | 02050062 |
| MPF 450-451   |                         | 02050461                          | 02050462 |
| MPF 750       |                         | 02050106                          | 02050107 |

MPF 104



MPF 181



FLAT SEAL

|               |                         |                                   |          |
|---------------|-------------------------|-----------------------------------|----------|
| Item:         | Q.ty: 1 pc.<br><b>2</b> | Q.ty: 1 pc.<br><b>3</b> (3a ÷ 3d) |          |
| Filter series | Filter element          | Seal Kit code number<br>NBR       | FPM      |
| MPF 020       | See<br>order<br>table   | 02050438                          | 02050439 |
| MPF 104       |                         | 02050350                          | 02050408 |
| MPF 181-182   |                         | 02050659                          | 02050660 |
| MPF 191-192   |                         | 02050661                          | 02050662 |