

RF2 series

Maximum working pressure up to 2 MPa (20 bar) - Flow rate up to 615 l/min



Description

Technical data

Return filter

Maximum working pressure up to 2 MPa (20 bar)
Flow rate up to 615 l/min

RF2250 and RF2350 are ranges of return filters for side tank mounting with integrated shut-off valve for protection of the reservoir against the system contamination.

They are placed below the minimum oil level, directly connected to the return line of the system.

The shut-off valve closes automatically when the cover is removed, allowing the filter element replacement without the fluid drop.

Available features:

- Female threaded connections up to 1" and flanged connections up to 1 1/2", for a maximum flow rate of 615 l/min
- Bypass valve, to relieve excessive pressure drop across the filter media
- Magnetic filter, to hold the ferrous particles
- Visual, electrical and electronic clogging indicators

Common applications:

- Compact mobile machines
- Compact industrial equipment

Filter housing materials

- Filter body: Aluminium
- Cover: Polyamide, GF reinforced
- Valve: Polyamide, GF reinforced - Steel
- Anti-Emptying valve: Steel

Bypass valve

Opening pressure 175 kPa (1.75 bar) \pm 10%

Δp element type

- Microfibre filter elements - series CU: 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

RF2 250-350 filters mounting, see the drawings on page 235 and following

Weights [kg] and volumes [dm³]

| Filter series | Weights [kg] | | Volumes [dm ³] | |
|----------------|--------------|-----|----------------------------|-----|
| | Length | 1 | Length | 1 |
| RF2 250 | | 2.6 | | 2.0 |
| RF2 350 | | 2.8 | | 2.0 |

| Filter series | Length | Filter element design - N Series | | | | | | | |
|----------------|----------|----------------------------------|-----|-----|-----|-----|-------------------|-----|-----|
| | | A03 | A06 | A10 | A16 | A25 | M25 M60 M90 | P10 | P25 |
| RF2 250 | 1 | 148 | 184 | 278 | 307 | 447 | 615 | 447 | 485 |
| RF2 350 | 1 | 148 | 184 | 278 | 307 | 447 | 615 | 447 | 485 |

Maximum flow rate for a complete return filter with a pressure drop $\Delta p = 0.5$ bar.

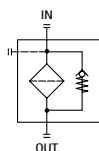
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

For different pressure drop or fluid viscosity we recommend to use our selection software available on 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.

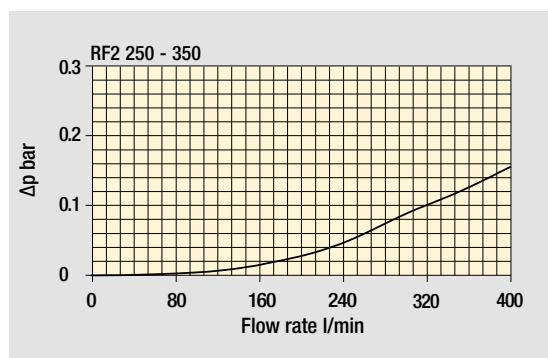
| Filter series | Style B - E |
|----------------|-------------|
| RF2 250 | • |
| RF2 350 | • |

Hydraulic symbols

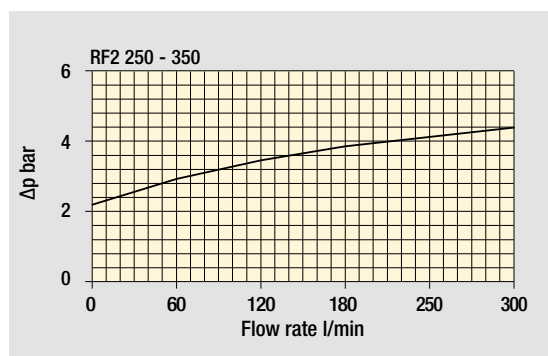


Pressure drop

Filter housings Δp pressure drop



Bypass valve pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

RF2 RF2250 - RF2350

Designation & Ordering code

COMPLETE FILTER

Series and size

RF2250
RF2350

Configuration example 1: **RF2250** **V** **F2** **E** **M25** **P01**

Configuration example 2: **RF2350** **A** **G1** **B** **A25** **P01**

Seals and treatments

A NBR
V FPM

Connections

| | Aux (only RF2350) | Mxx | Pxx |
|------------------------------------|--------------------------|-----|-----|
| G1 G 1 1/2" | G 1" | • | • |
| G2 1 1/2" NPT | - | • | - |
| G3 SAE 24 - 1 7/8" - 12 UN | SAE 16 - 1 5/16" - 12 UN | • | • |
| G4 G 1 1/4" | - | • | - |
| G5 1 1/4" NPT | - | • | - |
| G6 SAE 20 - 1 5/8" - 12 UN | - | • | - |
| G7 G 1" | - | • | - |
| G8 1" NPT | - | • | - |
| G9 SAE 16 - 1 5/16" - 12 UN | - | • | - |
| F1 1 1/2" SAE 3000 psi/M | - | • | - |
| F2 1 1/2" SAE 3000 psi/UNC | - | • | - |

Bypass valve

B With bypass 1.75 bar
E With bypass 3 bar

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 |

Execution

P01 MP Filtri standard
Pxx Customized

FILTER ELEMENT

Element series and size

CU250

Configuration example 1: **CU250** **M25** **N** **P01**

Configuration example 2: **CU250** **A25** **V** **P01**

Filtration rating (filter media)

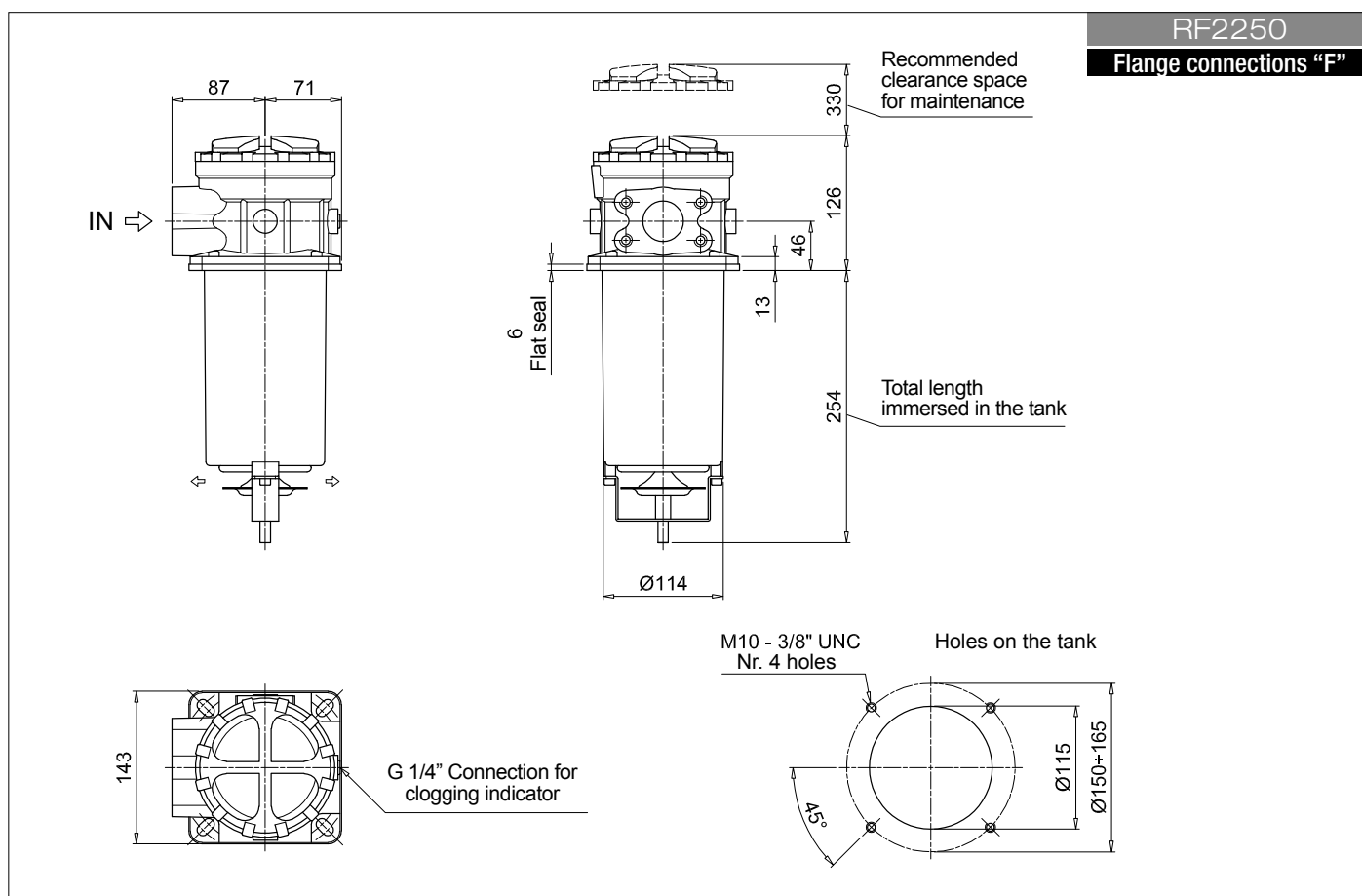
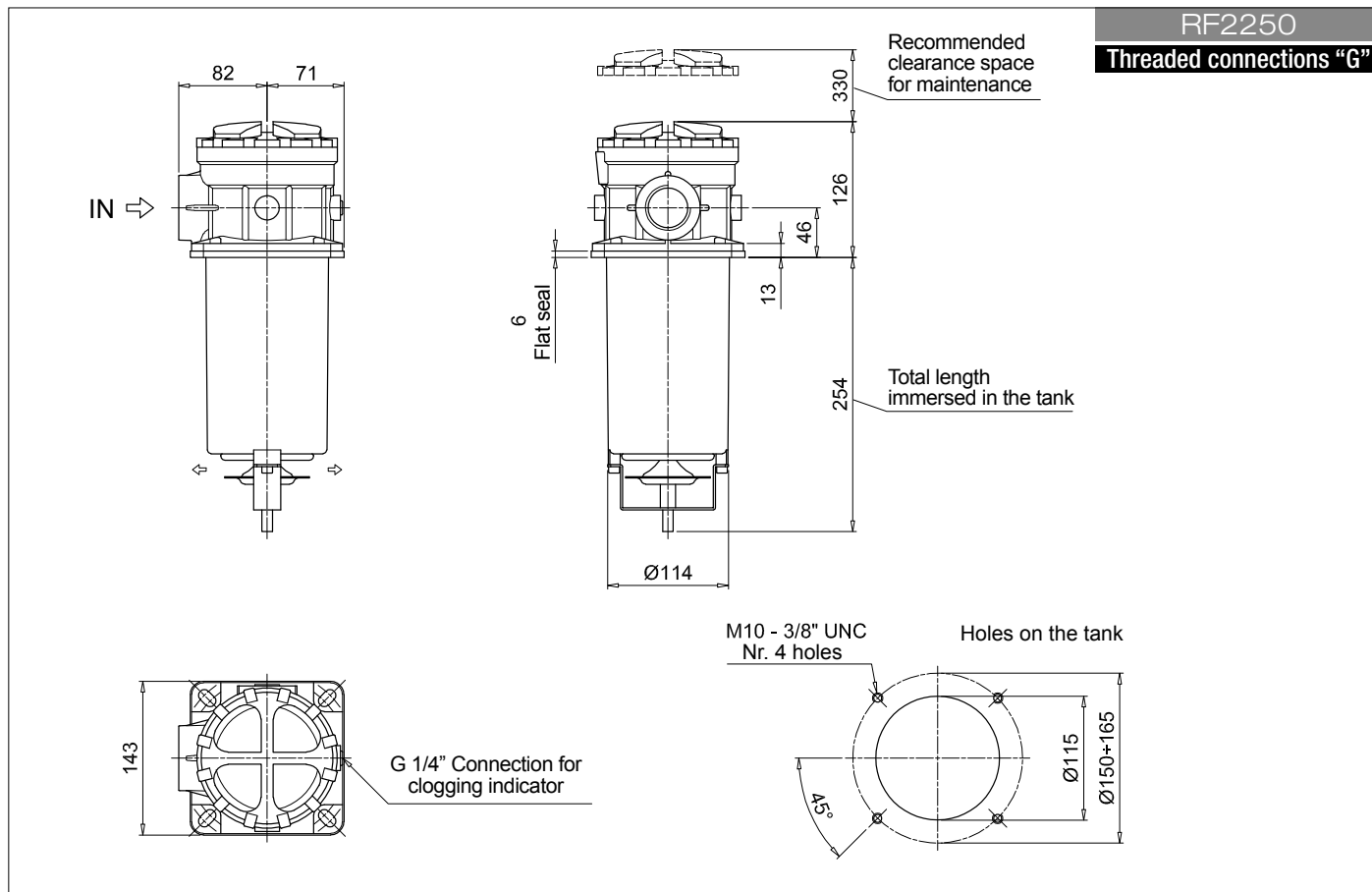
| | |
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| A10 Inorganic microfiber 10 µm | M90 Wire mesh 90 µm |
| A16 Inorganic microfiber 16 µm | P10 Resin impregnated paper 10 µm |
| A25 Inorganic microfiber 25 µm | P25 Resin impregnated paper 25 µm |

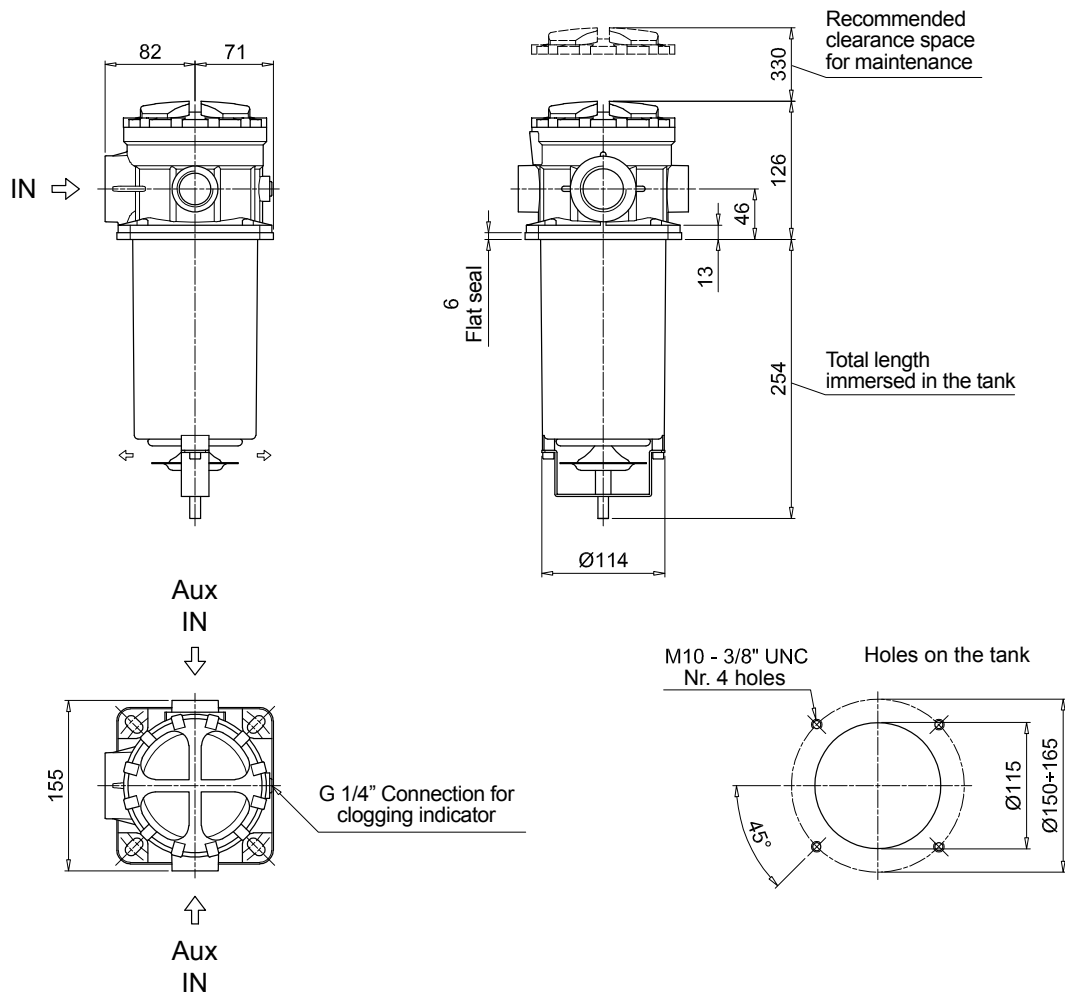
Seals and treatments

N NBR
V FPM

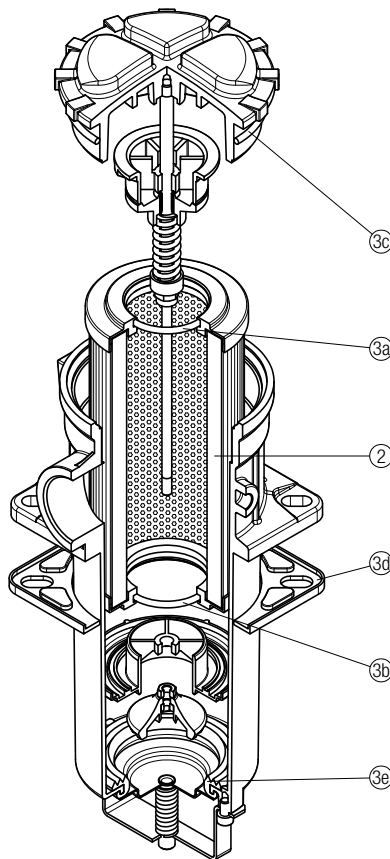
Execution

P01 MP Filtri standard
Pxx Customized





RF2 250 - 350



| Item: | Q.ty: 1 pc. 2 | Q.ty: 1 pc. 3 (3a ÷ 3e) |
|----------------|-------------------------|-----------------------------------|
| Filter series | Filter element | Seal Kit code number NBR FPM |
| RF2 250 | See order table | 02050586 02050587 |
| RF2 350 | | |

Accessories

POLYAMIDE EXTENSION TUBE

H1 - Total length immersed in the tank

Configuration example: **TE** **40** **A** **250**

| Series | Size | Material | Length | H [mm] |
|-----------|------|----------|------------|--------|
| TE | | | 200 | 200 |
| | | | 250 | 250 |
| | | | 300 | 300 |
| | | | 350 | 350 |
| | | | 400 | 400 |
| | | | 450 | 450 |
| | | | 500 | 500 |

| Size | Ø D [mm] |
|-----------|----------|
| 25 | 25 |
| 32 | 32 |
| 40 | 40 |

| Material |
|--------------------|
| A Polyamide |

| COMPATIBILITY TABLE | | | | | | | | | | | | | | | |
|---------------------|-------------|-----|-----|---------------|-------------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Filter series | Filter size | | | Filter length | Tube length | | | | | | | | | | |
| | | | | | TE25 | TE32 | TE40 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | |
| MPF - MPFX | 30 | | | 1 | • | - | - | 266 | 316 | 366 | 416 | 466 | 516 | 566 | |
| MPF | 100 | 104 | 110 | 1 | - | • | - | 275 | 325 | 375 | 425 | 475 | 525 | 575 | |
| | | | | 2 | - | - | - | 322 | 372 | 422 | 472 | 522 | 572 | 622 | |
| | | | | 3 | - | - | • | 400 | 450 | 500 | 550 | 600 | 650 | 700 | |
| | | | | 4 | - | - | - | 502 | 552 | 602 | 652 | 702 | 752 | 802 | |
| MPFX | 100 | 104 | 110 | 1 | - | - | • | 277 | 327 | 377 | 427 | 477 | 527 | 577 | |
| | | | | 2 | - | - | - | 322 | 372 | 422 | 472 | 522 | 572 | 622 | |
| | | | | 3 | - | - | • | 400 | 450 | 500 | 550 | 600 | 650 | 700 | |
| | | | | 4 | - | - | - | 502 | 552 | 602 | 652 | 702 | 752 | 802 | |
| MPF MPFX | 181 | 182 | 184 | 1 | - | - | • | 410 | 460 | 510 | 560 | 610 | 660 | 710 | |
| | | | | 2 | - | - | - | 623 | 673 | 723 | 773 | 823 | 873 | 923 | |
| MPT MPTX | 025 | | 027 | | 1 | • | - | - | 278 | 328 | 378 | 428 | 478 | 528 | 578 |
| | | | | | 2 | - | - | - | 342 | 392 | 442 | 492 | 542 | 592 | 642 |
| | | | | | 3 | - | - | - | 380 | 430 | 480 | 530 | 580 | 630 | 680 |
| MPT | 110 | 114 | 116 | 120 | 1 | - | • | - | 273 | 323 | 373 | 423 | 473 | 523 | 573 |
| | | | | | 2 | - | - | - | 320 | 370 | 420 | 470 | 520 | 570 | 620 |
| | | | | | 3 | - | - | • | 396 | 446 | 496 | 546 | 596 | 646 | 696 |
| | | | | | 4 | - | - | - | 498 | 548 | 598 | 648 | 698 | 748 | 798 |
| MPTX | 110 | 114 | 116 | 120 | 1 | - | - | • | 273 | 323 | 373 | 423 | 473 | 523 | 573 |
| | | | | | 2 | - | - | - | 318 | 368 | 418 | 468 | 518 | 568 | 618 |
| | | | | | 3 | - | - | - | 396 | 446 | 496 | 546 | 596 | 646 | 696 |
| | | | | | 4 | - | - | - | 498 | 548 | 598 | 648 | 698 | 748 | 798 |

STEEL EXTENSION TUBE

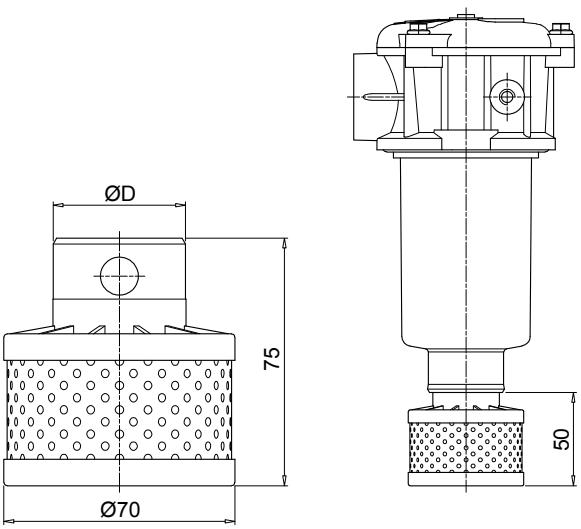
H1 - Total length immersed in the tank

Configuration example: **MPF191** **2** **A** **F1** **A10** **H** **B** **S60**

| Length | H1 [mm] |
|------------|---------|
| S30 | 300 |
| S35 | 350 |
| S40 | 400 |
| S45 | 450 |
| S50 | 500 |
| S60 | 600 |
| S70 | 700 |
| S80 | 800 |
| S90 | 900 |

| COMPATIBILITY TABLE | | | | | | | |
|---------------------|-------------|-----|-----|---------------|----------|----|---|
| Filter series | Filter size | | | Filter length | Ø D [mm] | | |
| | | | | | 52 | 65 | |
| MPF | 191 | 192 | 194 | 2 | • | - | |
| | | | | 1 | • | - | |
| | 400 | 410 | 450 | 451 | 2 | - | • |
| | | | | | 3 | - | • |
| | 750 | | | | 1 | - | • |

DIFFUSER WITH FAST LOCK CONNECTION

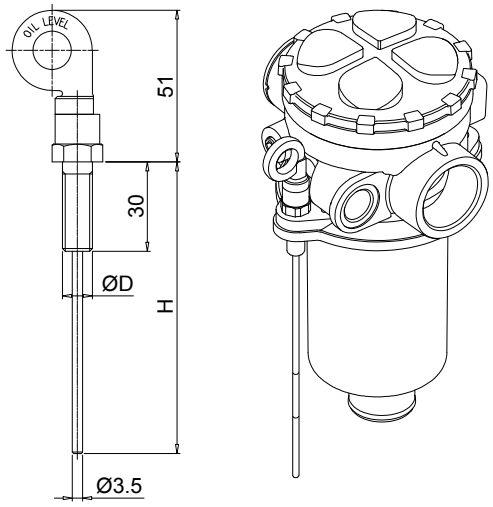


Configuration example: **DFS 32 A 075**

| Series | | DFS |
|-----------|----------|---------------------|
| Size | ø D [mm] | |
| 32 | 32 | |
| 40 | 40 | |
| Version | | A Standard |
| Length | | 075 Standard |

| COMPATIBILITY TABLE | | | | | | | |
|---------------------|-------------|-----|-----|---------------|-------|-------|---|
| Filter series | Filter size | | | Filter Length | DFS32 | DFS40 | |
| MPF | 100 | 104 | 110 | 1 | • | - | |
| | | | | 2 | - | - | |
| | | | | 3 | - | • | |
| | | | | 4 | - | - | |
| MPFX | 100 | 104 | 110 | 1 | - | • | |
| | | | | 2 | - | • | |
| | | | | 3 | - | - | |
| | | | | 4 | - | - | |
| MPT | 110 | 114 | 116 | 120 | 1 | • | - |
| | | | | | 2 | - | - |
| | | | | | 3 | - | • |
| | | | | | 4 | - | - |
| MPTX | 110 | 114 | 116 | 120 | 1 | - | • |
| | | | | | 2 | - | • |
| | | | | | 3 | - | - |
| | | | | | 4 | - | - |

DIPSTICK



Configuration example: **DPT 20 M10 A P01**

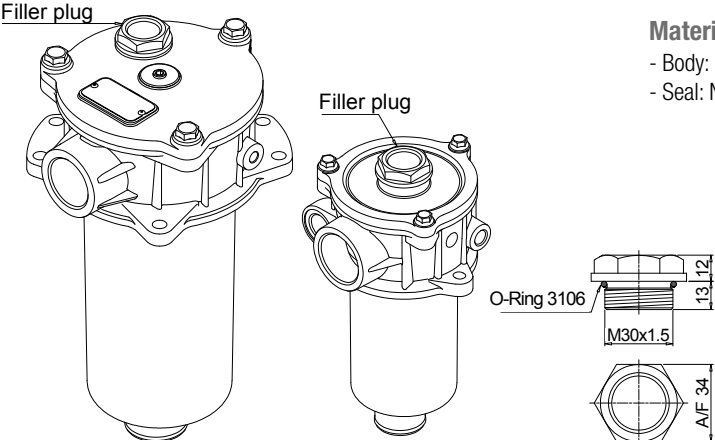
| Series | | DPT |
|-----------|--------|------------|
| Length | H [mm] | |
| 15 | 134 | |
| 20 | 184 | |
| 25 | 234 | |
| 30 | 284 | |
| 35 | 334 | |

Materials
 - Screw: phosphatized steel
 - Stick: phosphatized steel
 - Handle: Polyamide

Technical data
 Working temperature: from -25 °C to +110 °C

| Fastening | | M8 Fastening with screws ø D = M8 |
|-----------|--|--|
| | | M10 Fastening with screws ø D = M10 |
| Seals | | A NBR |
| | | V FPM |
| Execution | | P01 MP Filtri standard |
| | | Pxx Customized |

FILLER PLUG



Materials
 - Body: Polyamide
 - Seal: NBR

Technical data
 Tightening torque: 15 N·m

O-Ring 3106
 M30x1.5
 13 12
 A/F 34

For any further information, please, contact our commercial dept.