# RF2 series

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

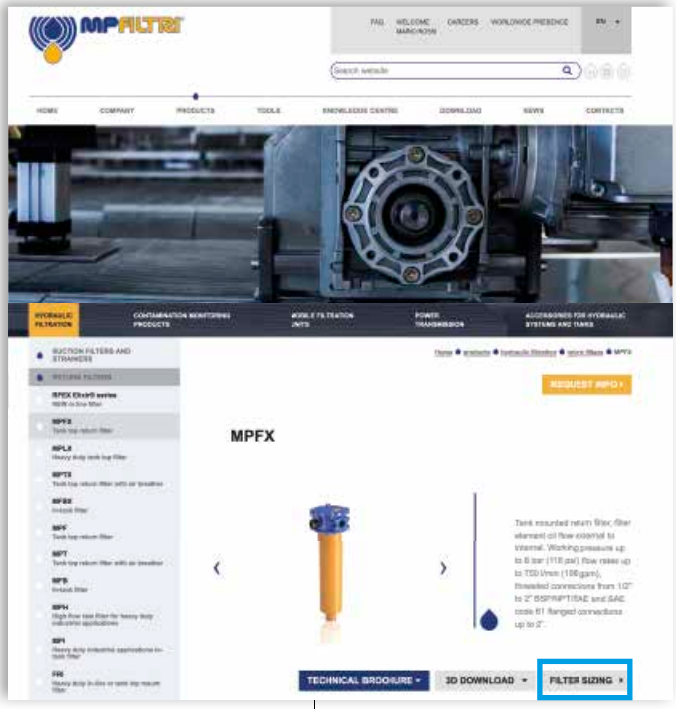
# TYPICAL FILTER SIZING Selection Software

**Step 1**

Select “FILTER SIZING SOFTWARE” after login

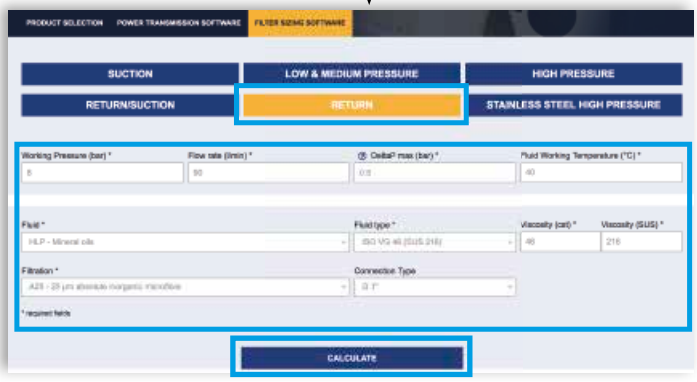

OR

Select “FILTER SIZING” after login from a product page

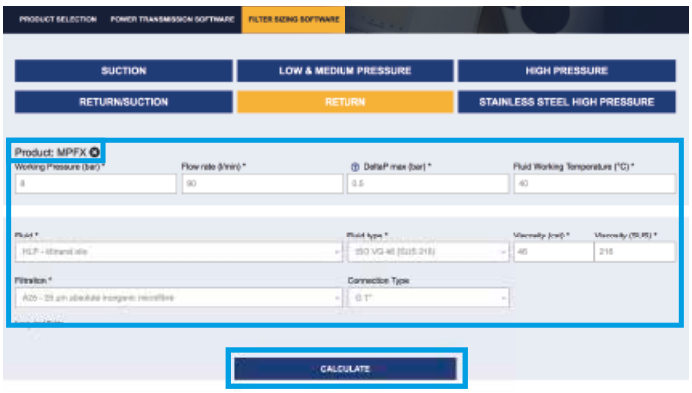



**Step 2**

Choose the type of filter family.
Enter the main data for sizing the filter then push CALCULATE.

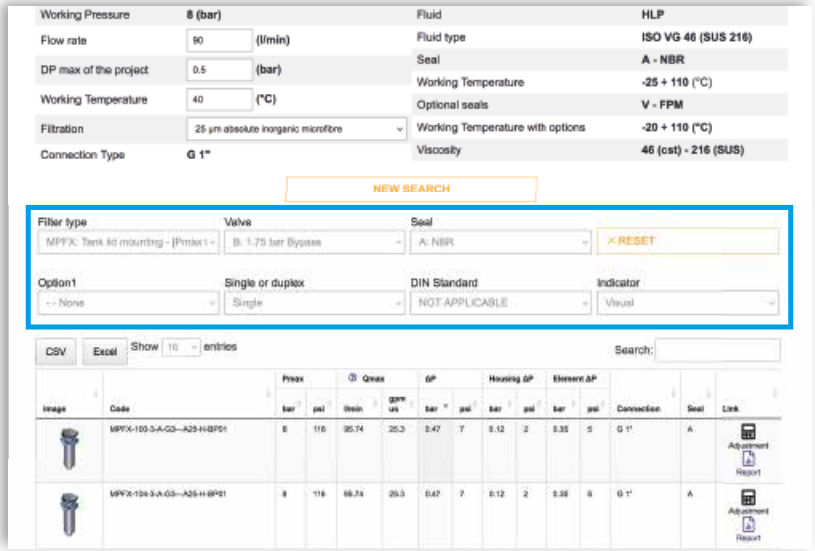



Enter the main data for sizing the filter then push CALCULATE.



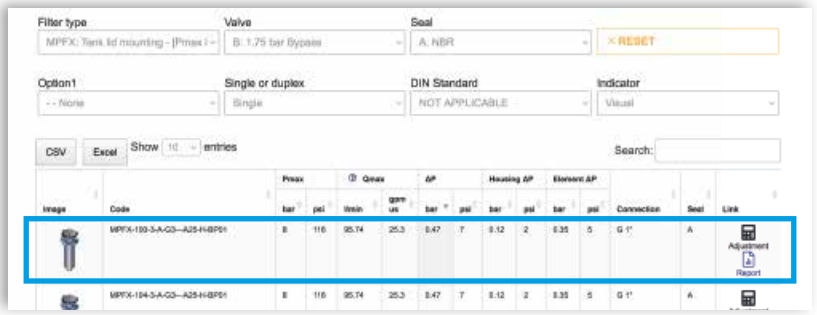

**Step 3**

Select the desidered options to choose the appropriate filter type for the application.



## Step 4

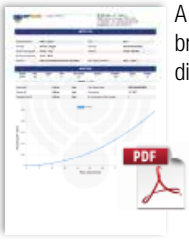
Choose the most suitable filter from the proposed list.




## Step 5

**A** SAVE YOUR FILTER'S REPORT


SAVE IN YOUR ARCHIVE
typing your reference data and then SAVE AS PDF

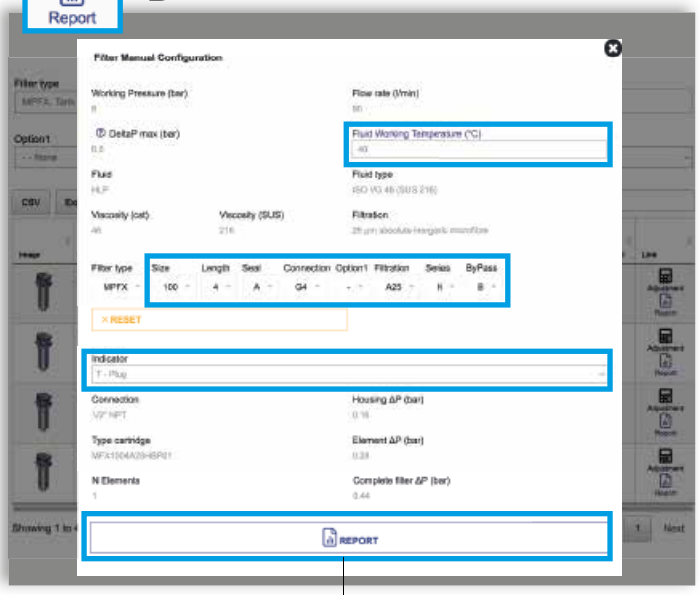




A new
browser window
displays the pdf

Close the report window

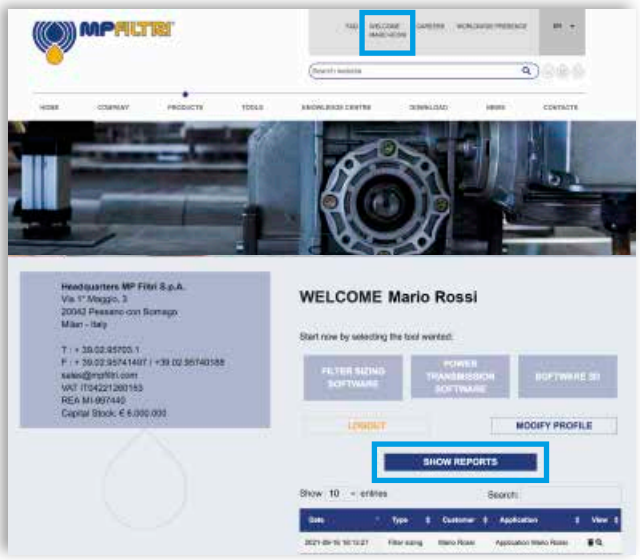

**B** MANUAL EDIT

It is possible to change the filter
modifying every parameter.




see **A**

By clicking your WELCOME button,
the SHOW REPORTS is displayed: select it to see your filters list.



# RF2 GENERAL INFORMATION

## Description

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

## Technical data

**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) ±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 [dm³] |
|---|---|---|
| | Length 1 | Length 1 |
| **RF2 250** | 2.6 | 2.0 |
| **RF2 350** | 2.8 | 2.0 |

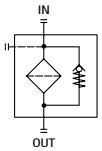
## FILTER ASSEMBLY SIZING
Flow rates [l/min]

| 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 |

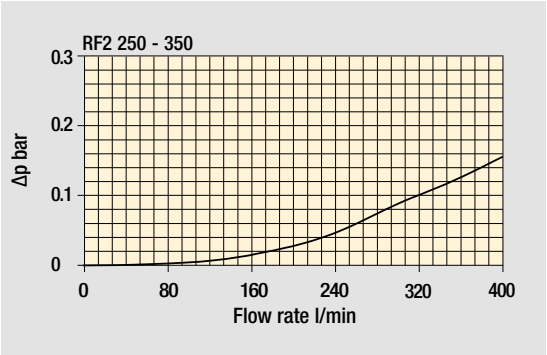
**Maximum flow rate for a complete return filter with a pressure drop Δp = 0.5 bar.**
The reference fluid has a kinematic viscosity of 30 $mm^2/s$ (cSt) and a density of 0.86 $kg/dm^3$.
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.
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** | • |

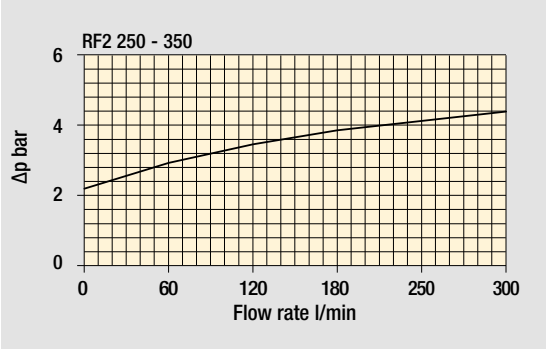
## Hydraulic symbols




## Pressure drop
Filter housings Δp pressure drop




Bypass valve pressure drop




The curves are plotted using mineral oil with density of 0.86 $kg/dm^3$ in compliance with ISO 3968. Δp varies proportionally with density.

## Designation & Ordering code

### COMPLETE FILTER

Configuration example 1: RF2250 | V | F2 | E | M25 | P01
Configuration example 2: RF2350 | A | G1 | B | A25 | P01

**Series and size**

**RF2250**
**RF2350**

**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

Configuration example 1: CU250 | M25 | N | P01
Configuration example 2: CU250 | A25 | V | P01

**Element series and size**

**CU250**

**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 |

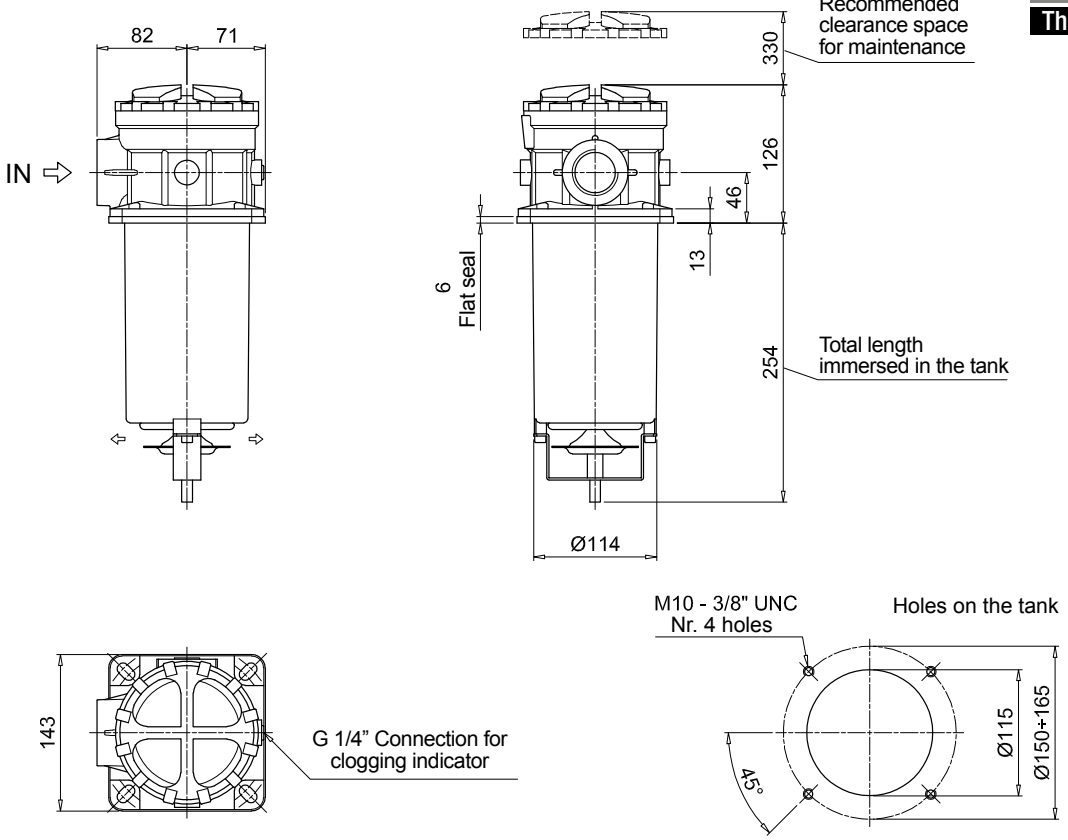
**Seals and treatments**

| | |
|---|---|
| **N** | NBR |
| **V** | FPM |

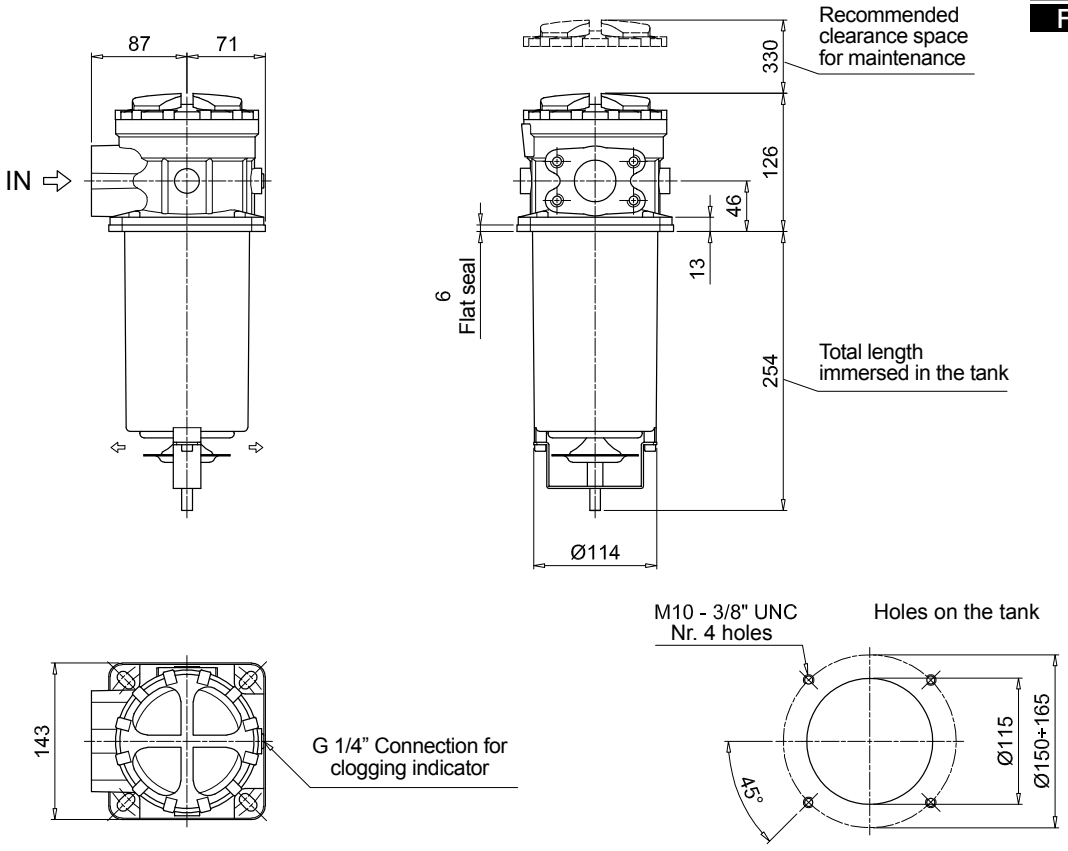
**Execution**

| | |
|---|---|
| **P01** | MP Filtri standard |
| **Pxx** | Customized |

RF2250
**Threaded connections "G"**

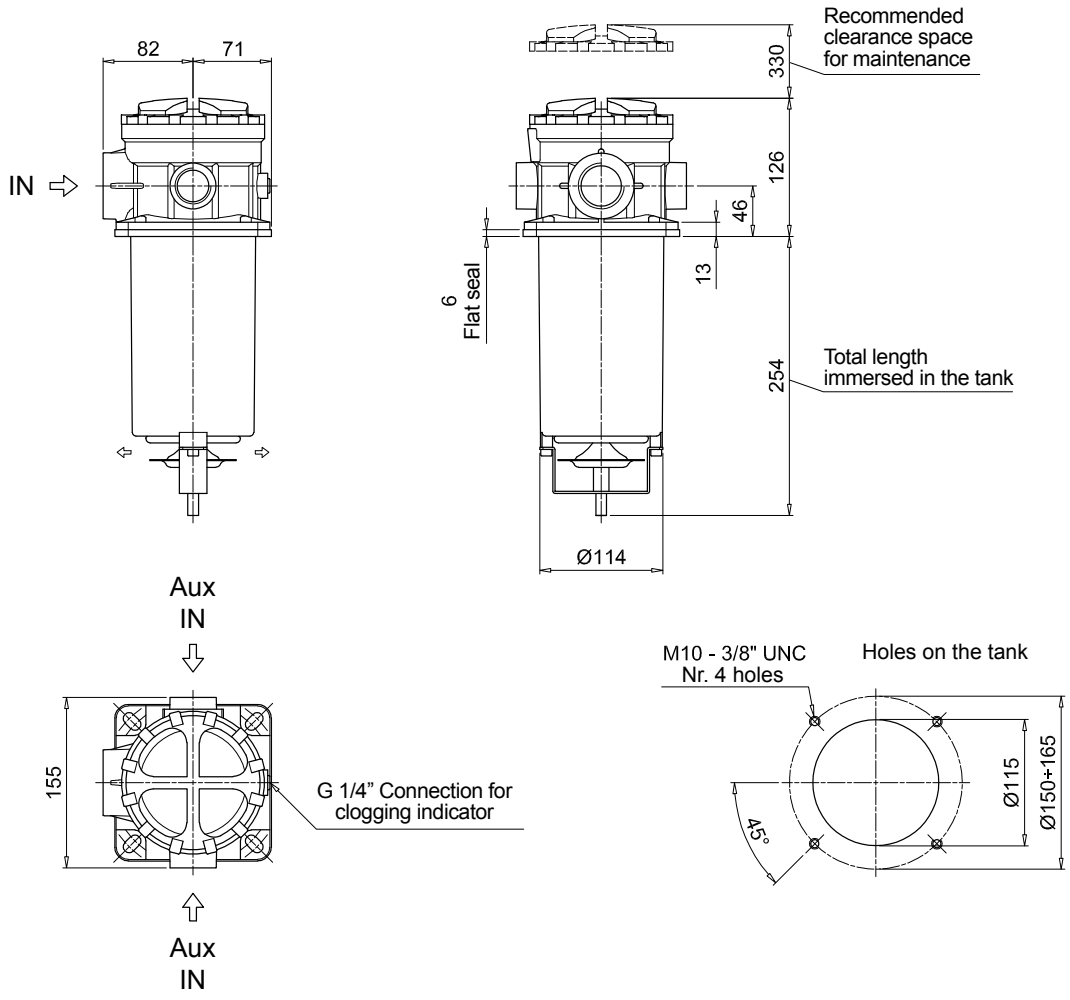



RF2250
**Flange connections "F"**

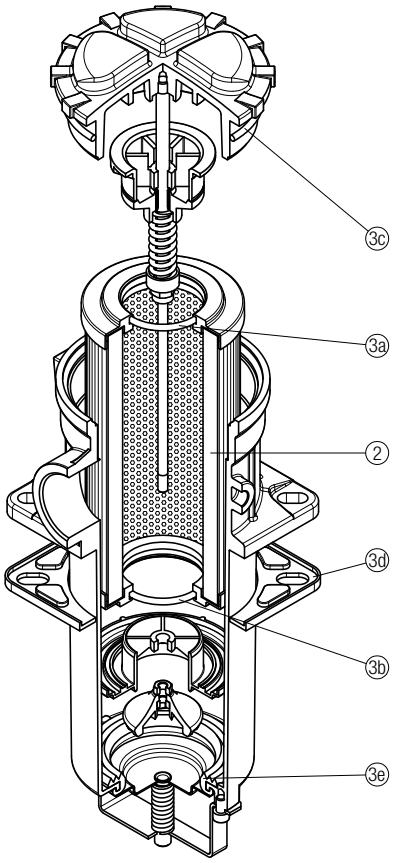


## Dimensions

RF2350



**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<br>RF2 350 | See order table | 02050586 | 02050587 |