

RFMC250 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

RFMC250 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

Pressure

- Test pressure: 3 MPa (30 bar)
- Min. Burst pressure: 6 MPa (60 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 2 MPa (20 bar)

Bypass valve

Opening pressure 0.175 MPa (1.75 bar) $\pm 10\%$

Filter element features

| Filter RFMC | | Filter element CUC | |
|---|--------------|-----------------------|------------|
| Δp Element type | | | |
| Element media | Construction | Δp Series | Δp |
| A - Microfiber | Standard | D | 10 bar |
| M - Wire mesh | Standard | D | 10 bar |
| P - Paper | Standard | D | 10 bar |
| <i>Please see ordering code tables to check element Δp series availability based on filter features.</i> | | | |
| Flow direction 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

RFMC filters mounting, see the drawings on page 265 and following

Weights [kg] and volumes [dm³]

| Filter series | Weights [kg] | | Volumes [dm ³] | |
|-----------------|--------------|-----|----------------------------|-----|
| | Length | 10 | Length | 10 |
| RFMC 250 | | 2.6 | | 2.0 |

Flow rates [l/min]

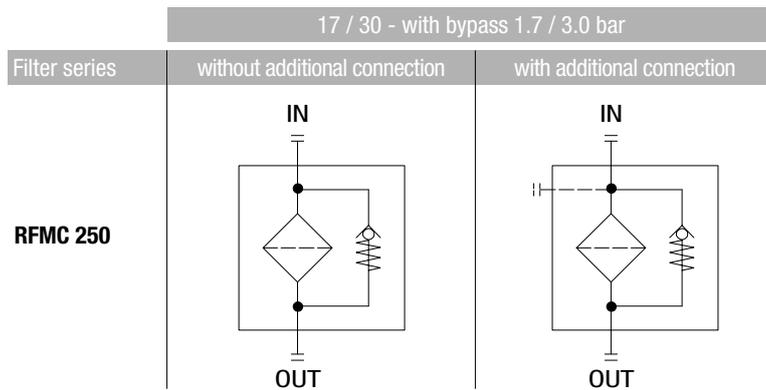
| Filter series | Length | Filter element design - D Series | | | | | | | |
|-----------------|-----------|----------------------------------|-------|-------|-------|-------|-------------------------|-------|-------|
| | | A0003 | A0006 | A0010 | A0016 | A0025 | M0025 M0060 M0090 | P0010 | P0025 |
| RFMC 250 | 10 | 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.

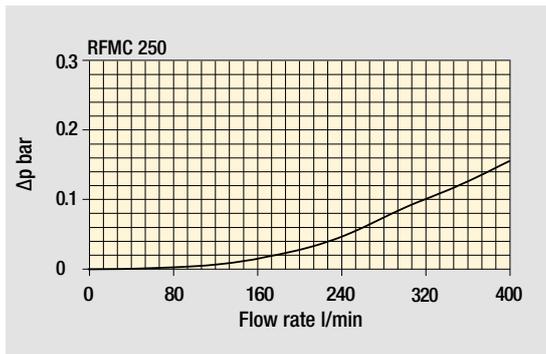
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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

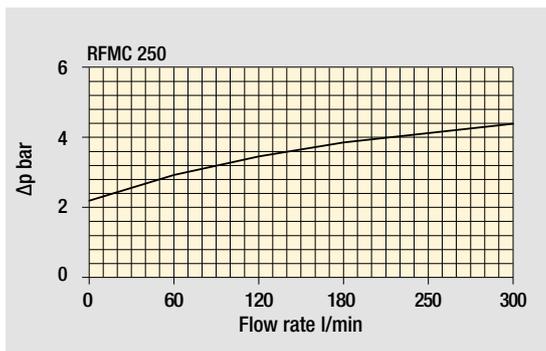
You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.



Hydraulic diagram



Pressure drop
Filter housings Δp pressure drop



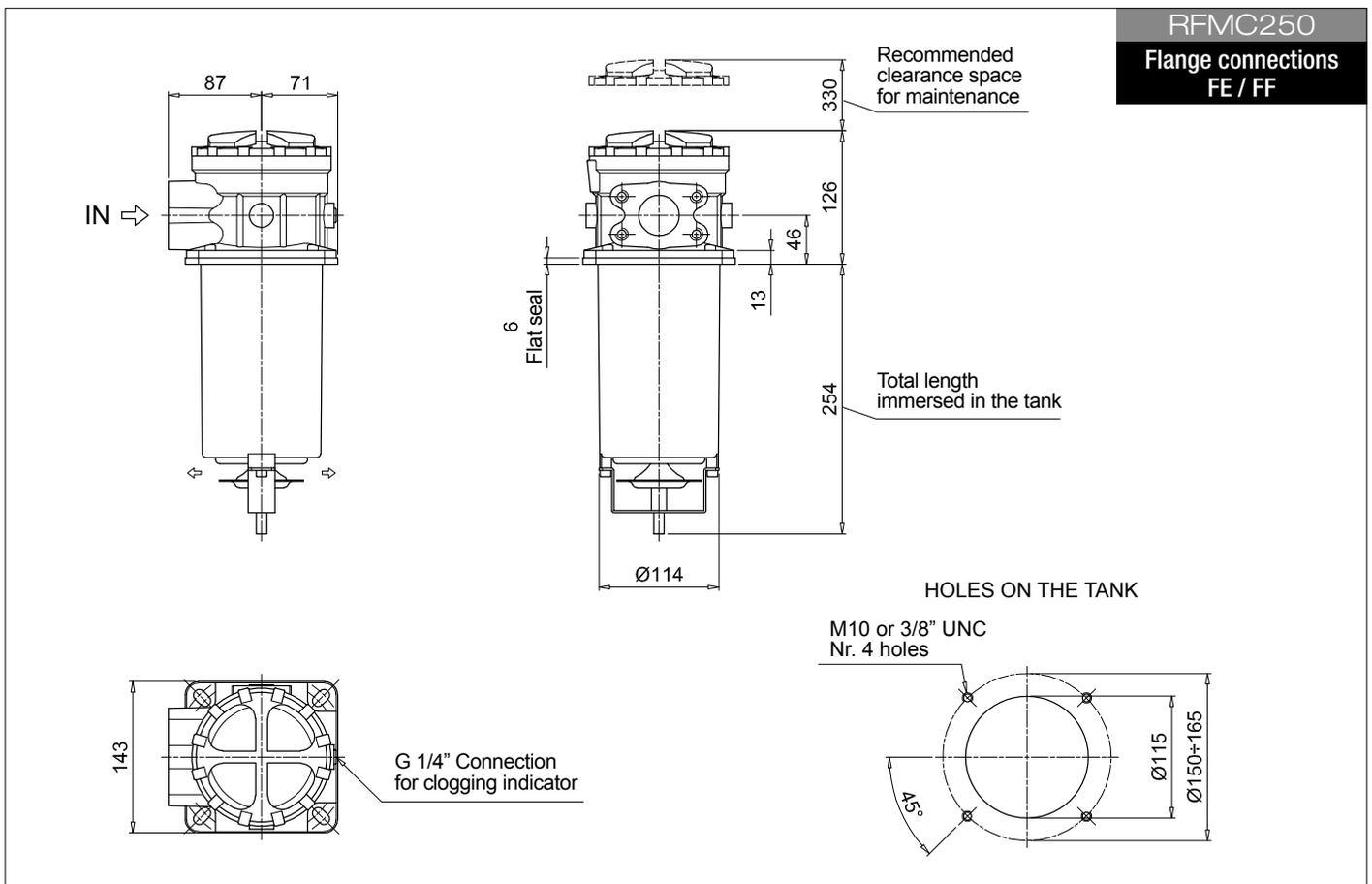
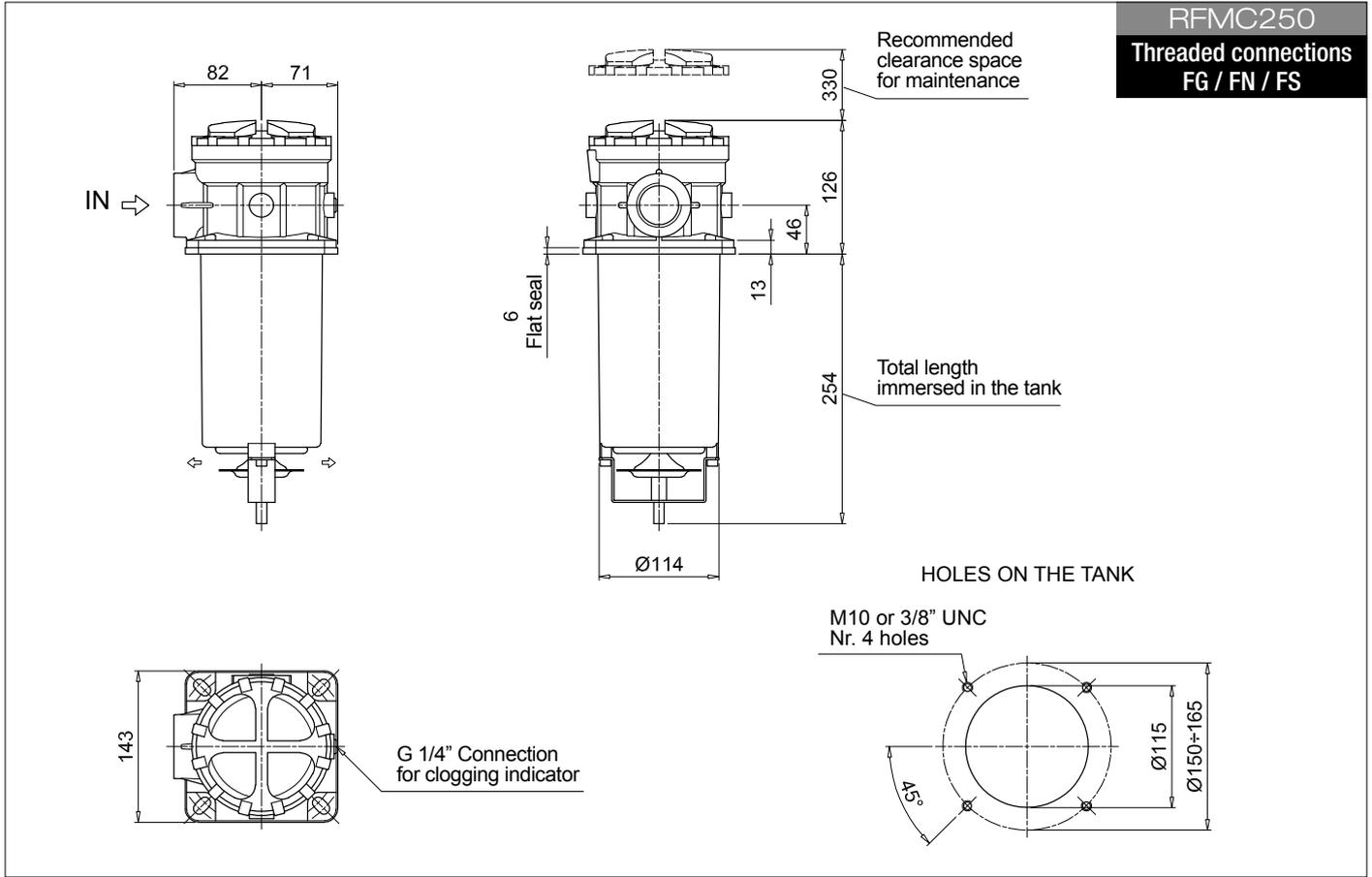
Bypass valve pressure drop

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

| FILTER ELEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-------|--|--|--|--|--|--|--|--|--------------|----------------------|----------|--------------|----------------------|------|--------------|----------------------|-------|--------------|----------------------|-------|--------------|----------------------|-------|--------------|-----------|-------|--------------|-----------|-------|--------------|-----------|-------|--------------|-------------------------|-------|--------------|-------------------------|-------|
| Series | Example 1: CUC 250 10 A0010 D A 00 NN P01 NN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUC | Example 2: CUC 250 10 M0060 D V 00 NN P01 NN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Filtration rating (filter media) | <table border="1"> <tr><td>A0003</td><td>Inorganic microfiber</td><td>3 µm</td></tr> <tr><td>A0006</td><td>Inorganic microfiber</td><td>6 µm</td></tr> <tr><td>A0010</td><td>Inorganic microfiber</td><td>10 µm</td></tr> <tr><td>A0016</td><td>Inorganic microfiber</td><td>16 µm</td></tr> <tr><td>A0025</td><td>Inorganic microfiber</td><td>25 µm</td></tr> <tr><td>M0025</td><td>Wire mesh</td><td>25 µm</td></tr> <tr><td>M0060</td><td>Wire mesh</td><td>60 µm</td></tr> <tr><td>M0090</td><td>Wire mesh</td><td>90 µm</td></tr> <tr><td>P0010</td><td>Resin impregnated paper</td><td>10 µm</td></tr> <tr><td>P0025</td><td>Resin impregnated paper</td><td>25 µm</td></tr> </table> | | | | | | | | | | A0003 | Inorganic microfiber | 3 µm | A0006 | Inorganic microfiber | 6 µm | A0010 | Inorganic microfiber | 10 µm | A0016 | Inorganic microfiber | 16 µm | A0025 | Inorganic microfiber | 25 µm | M0025 | Wire mesh | 25 µm | M0060 | Wire mesh | 60 µm | M0090 | Wire mesh | 90 µm | P0010 | Resin impregnated paper | 10 µm | P0025 | Resin impregnated paper | 25 µm |
| A0003 | Inorganic microfiber | 3 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A0006 | Inorganic microfiber | 6 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A0010 | Inorganic microfiber | 10 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A0016 | Inorganic microfiber | 16 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A0025 | Inorganic microfiber | 25 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M0025 | Wire mesh | 25 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M0060 | Wire mesh | 60 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M0090 | Wire mesh | 90 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P0010 | Resin impregnated paper | 10 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P0025 | Resin impregnated paper | 25 µm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Element Δp | D 10 bar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seals and treatments | <table border="1"> <tr><td>A</td><td>NBR</td></tr> <tr><td>V</td><td>FPM</td></tr> </table> | | | | | | | | | | A | NBR | V | FPM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | NBR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | FPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bypass | 00 Without bypass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Additional features | NN Without additional features | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Execution | P01 Standard catalogue item | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Certificates | NN None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

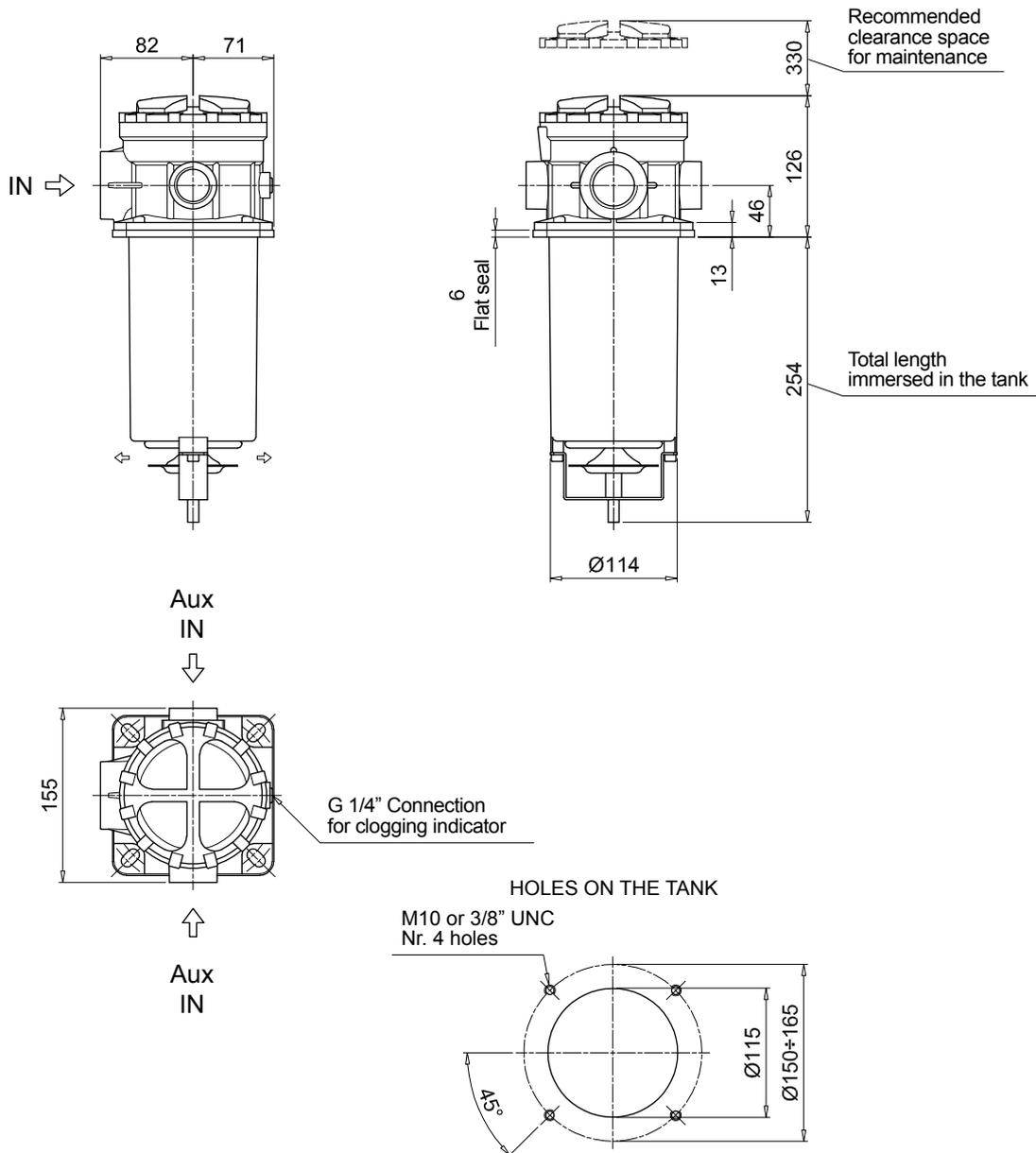
RFMC250

Dimensions



RFMC250

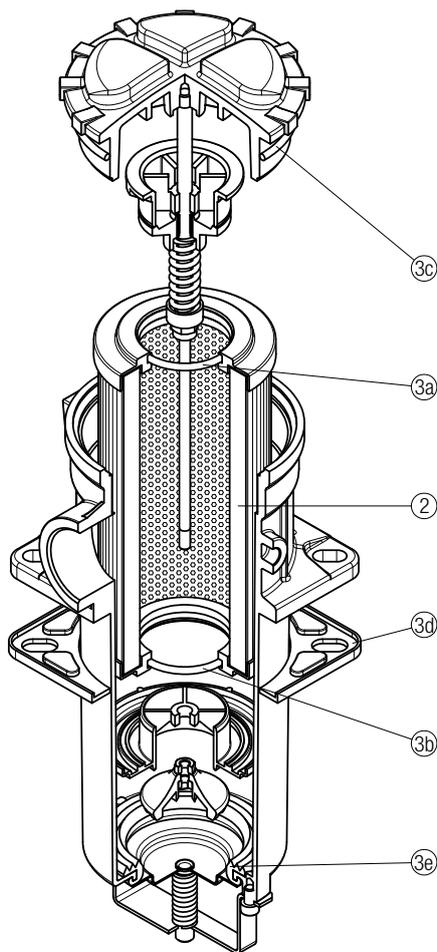
Additional connection "1"



RFMC250 SPARE PARTS

Order number for spare parts

RFMC 250



| Item: | Q.ty: 1 pc. | Q.ty: 1 pc. | |
|-----------------|-----------------|----------------------|----------|
| Filter series | Filter element | Seal Kit code number | |
| | | NBR | FPM |
| RFMC 250 | See order table | 02050586 | 02050587 |