MYCLEAN

**THE X CONCEPT FOR OUR FILTERS**

**Protect the performance of your system with MYclean.
Quality and efficiency are fundamental for MP Filtri:
this exclusive new filter element possesses polygon shape geometry and specific seal that ensures only original spare parts can be used - ensuring correct operation and higher system reliability.**

# RFEX series

## with MYCLEAN FEX Filter Element

- **Protects the machine from improper use of non-original products.**
- **Safety of constant quality protection & reliability**

With exclusive filter element you are sure that only MP Filtri filter elements can be used, ensuring the best cleaning level of the oil due to the use of originals filter elements.

The products identified as RFEX are protected by:

- Italian Patent n° 102014902261205
- Canadian Patent n° 2,937,258
- European Patent n° 3 124 092 B1
- US Patent n° 20170030384 A1

# RFEX series

**Maximum working pressure up to 1.6 MPa (16 bar) - Flow rate up to 260 l/min**

# RFEX GENERAL INFORMATION

## Description

Return filter

**Maximum working pressure up to 1.6 MPa (16 bar)**
**Flow rate up to 260 l/min**

RFEX is a range of return filters for protection of the reservoir against the system contamination.
They are mounted in line to limit aeration or foam generation into the reservoir.

**Available features:**
- Female threaded connections up to 1 1/4" and SAE connections up to 1 5/8", for a maximum flow rate of 260 l/min
- Fine filtration rating, to get a good cleanliness level into the reservoir
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical, axial and radial pressure gauges
- MYclean interface connection for the filter element, to protect the product against non-original spare parts
- External protective wrap, to optimize the flow through the element and to save the element efficiency against non-proper handling

**Common applications:**
- Light Industrial equipment
- Mobile application

## Technical data

**Filter housing materials**
- Head: Aluminium
- Bypass valve: Polyamide - Steel
- Bowl: Polyamide

**Bypass valve**
Opening pressure 175 kPa (1.75 bar) ±10%

**Δp element type**
- Microfibre filter elements - series N: 8 bar
- Fluid flow through the filter element from OUT to IN

**Seals**
Standard NBR series A

**Temperature**
From -25 °C to +110 °C

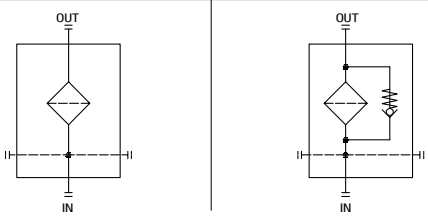
**Note**
RFEX filters are provided for vertical mounting

## Weights [kg] and volumes [dm³]

| Filter series | Weights [kg] | Volumes [dm³] |
|---|---|---|
| **RFEX 060** | 1.00 | 0.60 |
| **RFEX 080** | 1.15 | 0.80 |
| **RFEX 110** | 1.90 | 1.60 |
| **RFEX 160** | 2.10 | 2.00 |

## Hydraulic symbols

| Filter series | Style S | Style B |
|---|---|---|
| **RFEX 060** | • | • |
| **RFEX 080** | • | • |
| **RFEX 110** | • | • |
| **RFEX 160** | • | • |



## Flow rates [l/min]

**Filter element design - N Series**

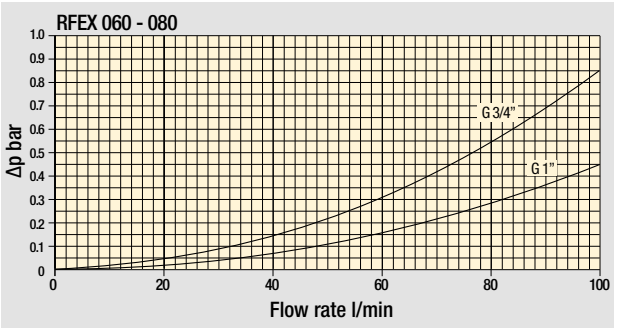
| Filter series | A10 | A16 | A25 | M60 | M90 | P10 | P25 |
|---|---|---|---|---|---|---|---|
| **RFEX 060** | 60 | 61 | 64 | 87 | 89 | 62 | 77 |
| **RFEX 080** | 69 | 70 | 75 | 91 | 92 | 79 | 93 |

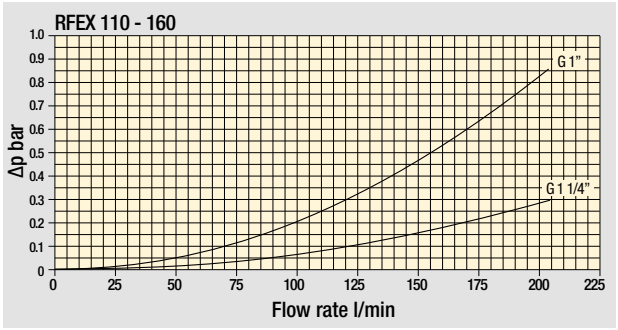
| Filter series | A10 | A16 | A25 | M60 | M90 | P10 | P25 |
|---|---|---|---|---|---|---|---|
| **RFEX 110** | 141 | 153 | 172 | 250 | 252 | 186 | 196 |
| **RFEX 160** | 166 | 168 | 191 | 255 | 256 | 207 | 215 |

**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.
Please, contact our Sales Department for further additional information.

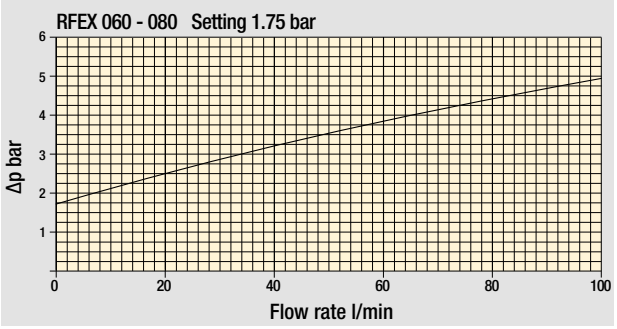
## Pressure drop

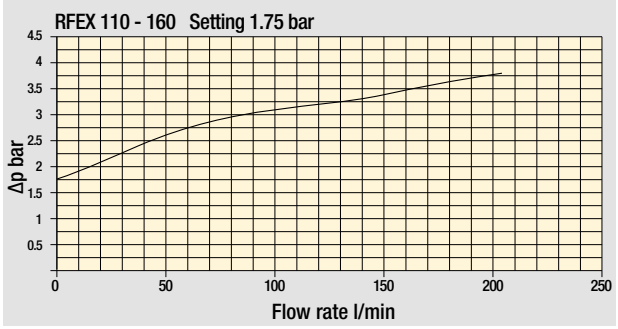
Filter housings
Δp pressure drop




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 : RFEX060 | B | A | A | 6 | A10 | N | P01

**Series and size**
- **RFEX060** Filter featuring MYCLEAN Filter Element
- **RFEX080** Filter featuring MYCLEAN Filter Element

**Bypass valve**
- **S** Without bypass
- **B** 1.75 bar

**Seals and treatments**
- **A** NBR

**Connections**
- **A** G 3/4”
- **B** G 1”
- **C** 3/4” NPT
- **D** 1” NPT
- **E** SAE 12 - 1 1/16” - 12 UN
- **F** SAE 16 - 1 5/16” - 12 UN

**Connection for clogging indicator**
- **6** With plugged connections

**Filtration rating**

| | | | | | |
|---|---|---|---|---|---|
| **A10** | Inorganic microfiber | 10 µm | **P10** | Resin impregnated paper | 10 µm |
| **A16** | Inorganic microfiber | 16 µm | **P25** | Resin impregnated paper | 25 µm |
| **A25** | Inorganic microfiber | 25 µm | | | |
| **M60** | Wire mesh | 60 µm | | | |
| **M90** | Wire mesh | 90 µm | | | |

**Element Δp**
- **N** 8 bar

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

### FILTER ELEMENT

Configuration example: FEX060 | A10 | A | N | P01

**Element series and size**
- **FEX060** Filter Element with MYCLEAN feature
- **FEX080** Filter Element with MYCLEAN feature

**Filtration rating**

| | | | | | |
|---|---|---|---|---|---|
| **A10** | Inorganic microfiber | 10 µm | **P10** | Resin impregnated paper | 10 µm |
| **A16** | Inorganic microfiber | 16 µm | **P25** | Resin impregnated paper | 25 µm |
| **A25** | Inorganic microfiber | 25 µm | | | |
| **M60** | Wire mesh | 60 µm | | | |
| **M90** | Wire mesh | 90 µm | | | |

**Seals and treatments**
- **A** NBR

**Element Δp**
- **N** 8 bar

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

### CLOGGING INDICATORS

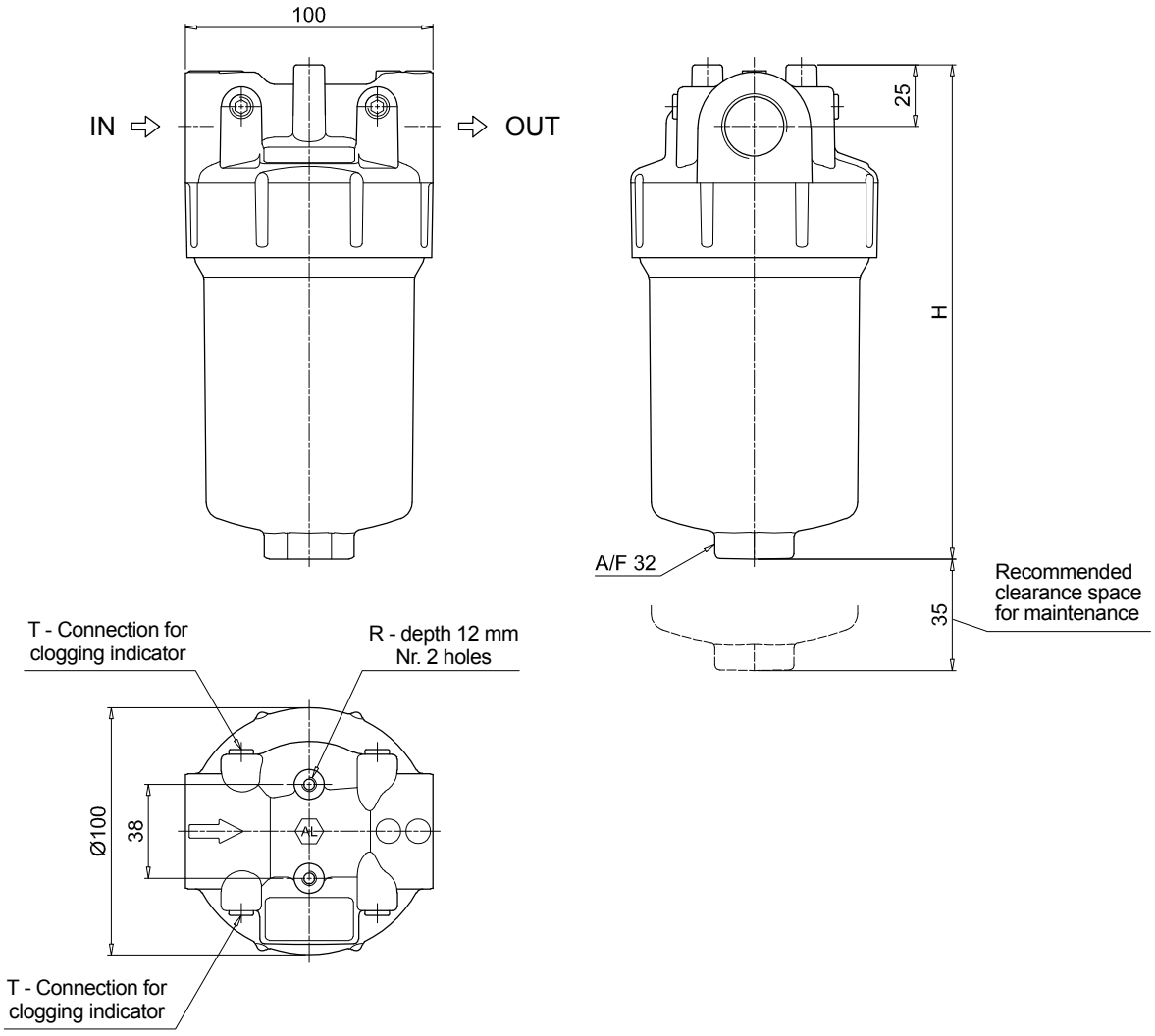
See page 720-721

- **BEA** Electrical pressure indicator
- **BEM** Electrical pressure indicator
- **BLA** Electrical / visual pressure indicator
- **BVA** Axial pressure gauge
- **BVR** Radial pressure gauge
- **BVP** Visual pressure indicator with automatic reset
- **BVQ** Visual pressure indicator with manual reset

## Dimensions

| Filter size | H [mm] |
|---|---|
| **060** | 202 |
| **080** | 265 |

| Connections | T | R |
|---|---|---|
| **A** | G 1/8" | M6 |
| **B** | G 1/8" | M6 |
| **C** | 1/8" NPT | 1/4" UNC |
| **D** | 1/8" NPT | 1/4" UNC |
| **E** | 1/8" NPT | 1/4" UNC |
| **F** | 1/8" NPT | 1/4" UNC |



## Designation & Ordering code

### COMPLETE FILTER

Configuration example : RFEX110 | B | A | A | 6 | A10 | N | P01

**Series and size**
- **RFEX110** Filter featuring MYCLEAN Filter Element
- **RFEX160** Filter featuring MYCLEAN Filter Element

**Bypass valve**
- **S** Without bypass
- **B** 1.75 bar

**Seals and treatments**
- **A** NBR

**Connections**
- **A** G 1”
- **B** G 1 1/4”
- **C** 1” NPT
- **D** 1 1/4” NPT
- **E** SAE 16 - 1 5/16” - 12 UN
- **F** SAE 20 - 1 5/8” - 12 UN

**Connection for clogging indicator**
- **6** With plugged connections

**Filtration rating**

| | | | | | |
|---|---|---|---|---|---|
| **A10** | Inorganic microfiber | 10 µm | **P10** | Resin impregnated paper | 10 µm |
| **A16** | Inorganic microfiber | 16 µm | **P25** | Resin impregnated paper | 25 µm |
| **A25** | Inorganic microfiber | 25 µm | | | |
| **M60** | Wire mesh | 60 µm | | | |
| **M90** | Wire mesh | 90 µm | | | |

**Element Δp**
- **N** 8 bar

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

### FILTER ELEMENT

Configuration example: FEX110 | A10 | A | N | P01

**Element series and size**
- **FEX110** Filter Element with MYCLEAN feature
- **FEX160** Filter Element with MYCLEAN feature

**Filtration rating**

| | | | | | |
|---|---|---|---|---|---|
| **A10** | Inorganic microfiber | 10 µm | **P10** | Resin impregnated paper | 10 µm |
| **A16** | Inorganic microfiber | 16 µm | **P25** | Resin impregnated paper | 25 µm |
| **A25** | Inorganic microfiber | 25 µm | | | |
| **M60** | Wire mesh | 60 µm | | | |
| **M90** | Wire mesh | 90 µm | | | |

**Seals and treatments**
- **A** NBR

**Element Δp**
- **N** 8 bar

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

### CLOGGING INDICATORS

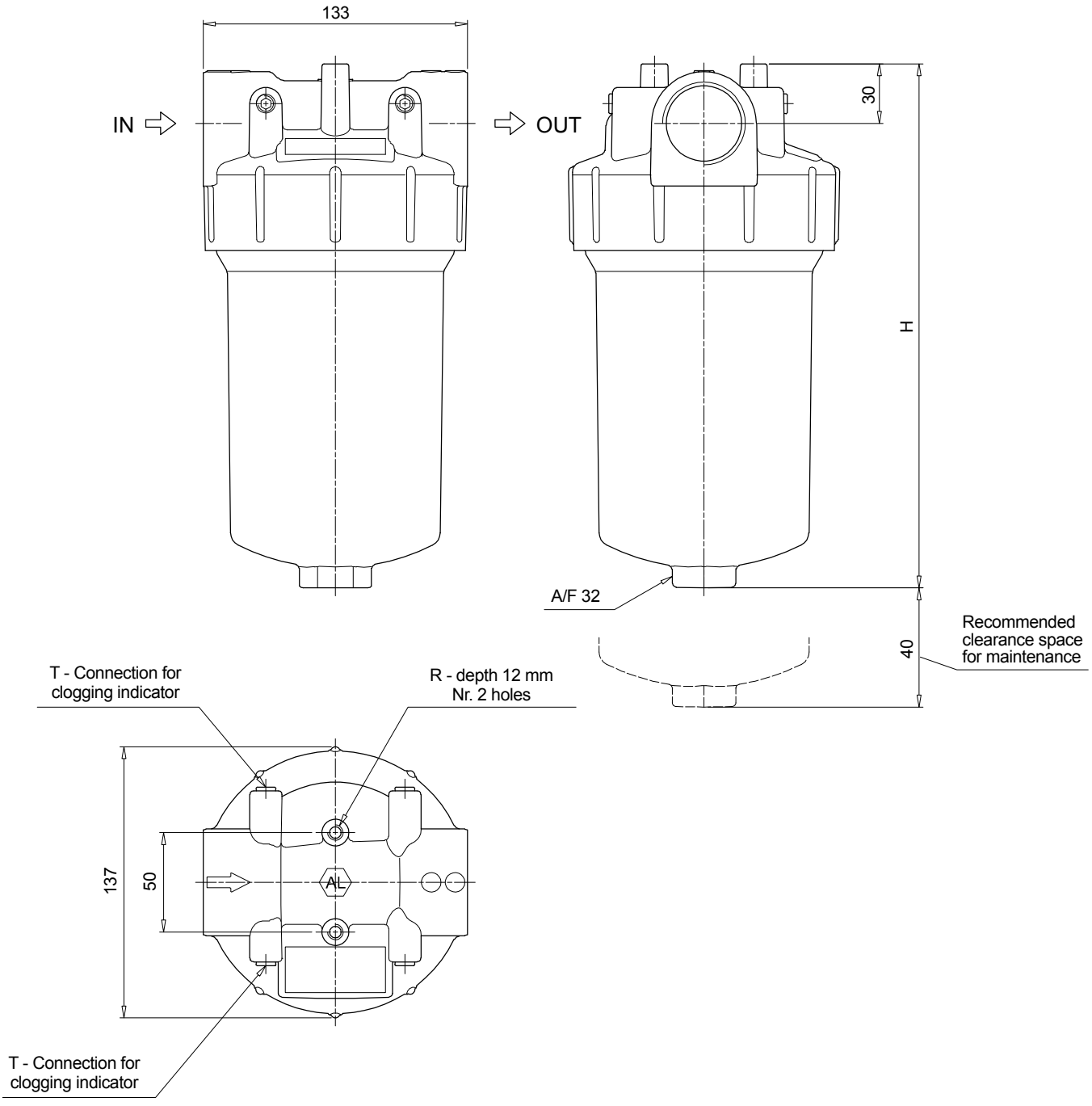
See page 720-721

- **BEA** Electrical pressure indicator
- **BEM** Electrical pressure indicator
- **BLA** Electrical / visual pressure indicator
- **BVA** Axial pressure gauge
- **BVR** Radial pressure gauge
- **BVP** Visual pressure indicator with automatic reset
- **BVQ** Visual pressure indicator with manual reset

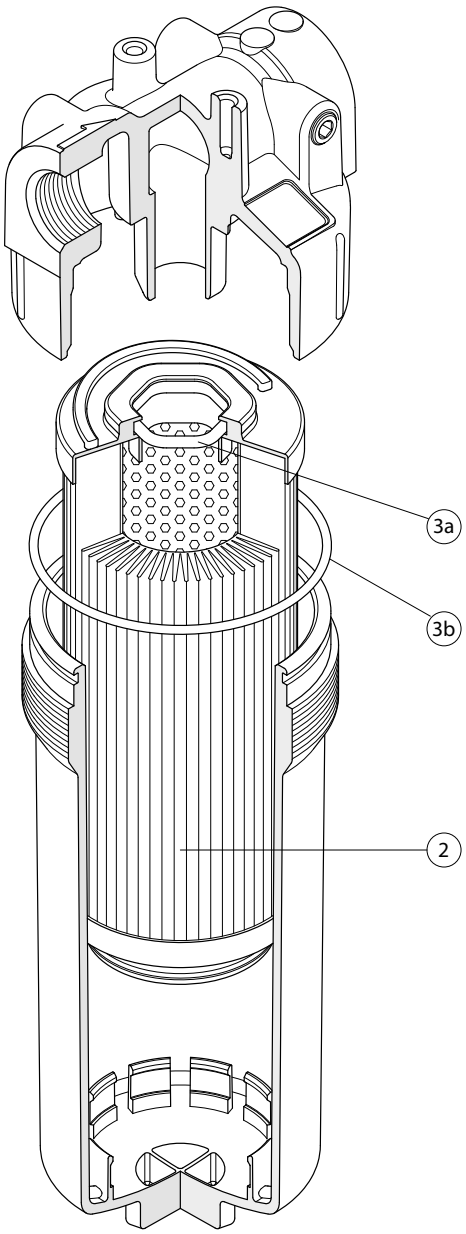
## Dimensions

| Filter size | H [mm] |
|---|---|
| **110** | 266 |
| **160** | 315 |

| Connections | T | R |
|---|---|---|
| **A** | G 1/8" | M8 |
| **B** | G 1/8" | M8 |
| **C** | 1/8" NPT | 5/16" UNC |
| **D** | 1/8" NPT | 5/16" UNC |
| **E** | 1/8" NPT | 5/16" UNC |
| **F** | 1/8" NPT | 5/16" UNC |



Order number for spare parts




| Item: | Q.ty: 1 pc. (2) | Q.ty: 1 pc. (3) (3a ÷ 3b) |
|---|---|---|
| **Filter series** | **Filter element** | **Seal Kit code number NBR** |
| **RFEX 060-080** | See order table | 02050771 |
| **RFEX 110-160** | | 02050772 |

## Designation & Ordering code

### BAROMETRIC (PRESSURE) INDICATORS

| Configuration example: | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1: | BE | A | 15 | H | A | 41 | P01 | EX |
| 2: | BL | A | 20 | H | A | 71 | P01 | |
| 3: | BV | R | 14 | | | | P01 | |
| 4: | BV | P | 20 | H | | | P01 | |

**Series**

**BE** Electrical pressure indicator
**BL** Electrical/Visual pressure indicator
**BV** Visual pressure indicator

| Type | BE | BL | BV |
|---|---|---|---|
| **A** Standard type | • | • | **A** Axial connection pressure gauge |
| **M** With wired electrical connection | • | - | **R** Radial connection pressure gauge |
| **T** With thermal switch | • | - | **P** Visual indicator with automatic reset |
| | | | **Q** Visual indicator with manual reset |

| Pressure setting | BEA-BEM | BET | BLA | BVA-BVR | BVP-BVQ |
|---|---|---|---|---|---|
| **14** 1.4 bar | - | - | - | • | - |
| **15** 1.5 bar | • | - | • | - | • |
| **20** 2.0 bar | • | • | • | - | • |
| **25** 2.5 bar | - | • | - | • | - |

| Seals | BE | BLA | BVA-BVR | BVP-BVQ |
|---|---|---|---|---|
| **H** HNBR | • | • | - | • |

| Thermostat | BEA-BEM | BET | BLA |
|---|---|---|---|
| **A** Without thermostat | • | - | • |
| **F** With thermostat | - | • | - |

| Electrical connections | BEA | BEM | BET | BL |
|---|---|---|---|---|
| **10** Connection AMP Superseal series 1,5 | - | - | • | - |
| **30** Connection Deutsch DT-04-2-P | - | - | • | - |
| **41** Connection via four-core cable | - | • | - | - |
| **50** Connection EN 175301-803 | • | - | - | - |
| **51** Connection EN 175301-803, transparent base with lamps 24 Vdc | - | - | - | • |
| **52** Connection EN 175301-803, transparent base with lamps 110 Vdc | - | - | - | • |
| **53** Connection EN 175301-803, transparent base with lamps 230 Vac | - | - | - | • |
| **71** Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc | - | - | - | • |

**Option**

**P01** MP Filtri standard
**Pxx** Customized

| Certifications | BEA | BEM-BET | BL | BV |
|---|---|---|---|---|
| Without | • | • | • | • |
| **EX** ATEX certification | • | - | - | - |
| **UL** UL certification | • | - | - | - |

## DIFFERENTIAL PRESSURE INDICATORS

| Series | |
|---|---|
| **DE** | Electrical differential pressure indicator |
| **DL** | Electrical/Visual differential pressure indicator |
| **DT** | Electrical differential pressure indicator |
| **DV** | Visual differential pressure indicator |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Configuration example 1: | DE | M | 20 | H | F | 50 | P01 | |
| Configuration example 2: | DE | U | 50 | V | A | 50 | P01 | UL |
| Configuration example 3: | DL | E | 20 | V | A | 71 | P01 | |
| Configuration example 4: | DT | A | 20 | H | F | 70 | P01 | |
| Configuration example 5: | DV | M | 20 | V | | | P01 | |

| Type | DE | DL | DT |
|---|---|---|---|
| **A** Standard type | • | • | • |
| **M** With wired electrical connection | • | - | - |
| **U** Standard type 210 bar, UL certified | • | - | - |
| **E** For high power supply | - | • | - |
| **S** Compact version | • | - | - |

| DV | |
|---|---|
| **A** | With automatic reset |
| **M** | With manual reset |
| **S** | With automatic reset |

| Pressure setting | DEA | DEM | DEU | DES | DL | DT | DVA | DVM | DVS |
|---|---|---|---|---|---|---|---|---|---|
| **12** 1.2 bar | - | - | - | • | - | - | - | - | • |
| **20** 2.0 bar | • | • | • | - | • | • | • | • | |
| **25** 2.5 bar | - | - | - | • | - | - | - | - | • |

| Seals | DEA | DEM | DEU | DES | DL | DT | DVA | DVM | DVS |
|---|---|---|---|---|---|---|---|---|---|
| **H** HNBR | • | • | - | • | • | • | • | • | • |
| **V** FPM | • | • | • | - | • | • | • | • | - |

| Thermostat | DEA | DEM | DEU | DES | DLA | DLE | DT |
|---|---|---|---|---|---|---|---|
| **A** Without thermostat | • | • | • | • | • | • | - |
| **F** With thermostat | - | • | - | - | - | • | • |

| Electrical connections | DEA | DEM | DEU | DES | DLA | DLE | DT |
|---|---|---|---|---|---|---|---|
| **10** Connection AMP Superseal series 1.5 | - | • | - | • | - | - | - |
| **20** Connection AMP Timer Junior | - | • | - | - | - | - | - |
| **30** Connection Deutsch DT-04-2-P | - | • | - | • | - | - | - |
| **35** Connection Deutsch DT-04-3-P | - | • | - | - | - | - | - |
| **50** Connection EN 175301-803 | • | - | • | - | - | • | - |
| **51** Connection EN 175301-803, transparent base with lamps 24 Vdc | - | - | - | - | • | - | - |
| **52** Connection EN 175301-803, transparent base with lamps 110 Vdc | - | - | - | - | • | - | - |
| **70** Connection IEC 61076-2-101 D (M12) | - | - | - | - | - | - | • |
| **71** Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc | - | - | - | - | • | - | - |
| **80** Connection Stud #10-32 UNF | - | - | - | • | - | - | - |

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

| Certifications | DEU | OTHERS |
|---|---|---|
| Without | - | • |
| **UL** UL certification | • | - |

## PLUGS

| Series | |
|---|---|
| **T2** | Plug |
| **T4** | Plug |

| | | |
|---|---|---|
| Configuration example | T2 | H |

| Seals | T2 | T4 |
|---|---|---|
| **A** NBR | - | • |
| **H** HNBR | • | - |
| **V** FPM | • | - |