



DOX SERIES

Duplex Pressure Filter according to API614 latest edition.

In line filters for operating pressure up to 40 bar flow rate up to 70 l/min.

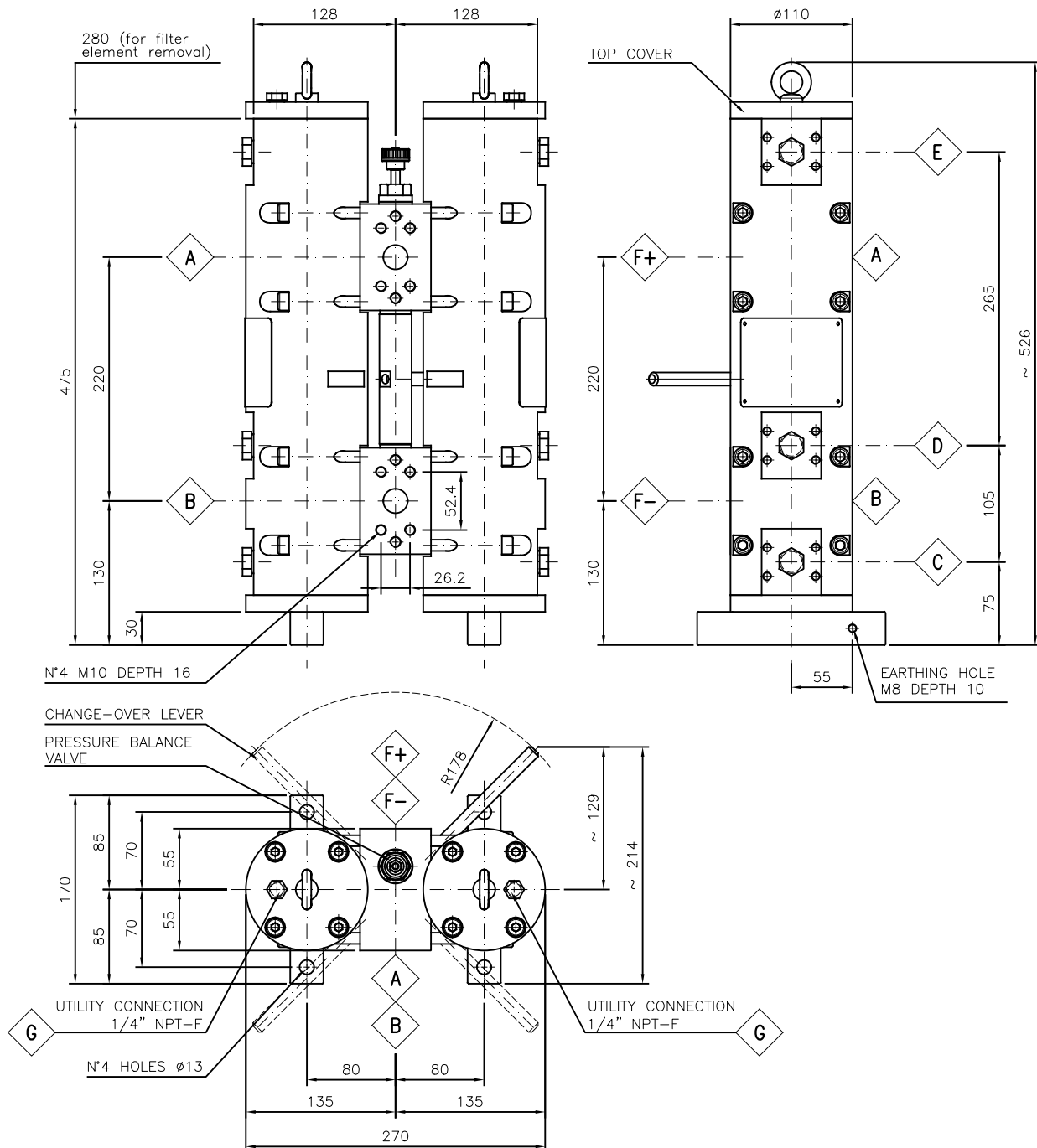


| HOUSING            |                                                                                                                                                                                                                           |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRESSURE:          | Max operating: 40 bar                                                                                                                                                                                                     |
| TEMPERATURE:       | Max operating: 100°C                                                                                                                                                                                                      |
| CONNECTIONS:       | 1" SAE 3000<br>1" Ansi 150 RF<br>1" Ansi 300 RF<br>DN25 PN16<br>DN25 PN40                                                                                                                                                 |
| MATERIALS:         | Head: St.Steel 316/316L<br>Body: St.Steel 316/316L<br>Seal: NBR (FKM option)<br>3-Way valve: Steel 316/316L                                                                                                               |
| ELEMENT            |                                                                                                                                                                                                                           |
|                    | tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968, 16889, 16908, 23181                                                                                                                                          |
| FILTER MEDIA:      | Fibreglass: G03 - G05 - G10<br>G15 - G20 - G40<br>Synthetic Media:<br>M05 - M08 - M010 - M15<br>Wire Mesh:<br>T25 - T40 - T80 - T125                                                                                      |
| COLLAPSE PRESSURE: | 20 bar                                                                                                                                                                                                                    |
| TEMPERATURE RANGE: | with NBR seal<br>from -30 °C to +100 °C<br><br>with FKM seal (OPTION)<br>from -25 °C to +120 °C<br><br>with EPDM seal (ON REQUEST)<br>from -57 °C to +150 °C<br><br>with HNBR seal (ON REQUEST)<br>from -48 °C to +150 °C |

## OVERALL DIMENSIONS

IN/OUT 1" SAE 3000

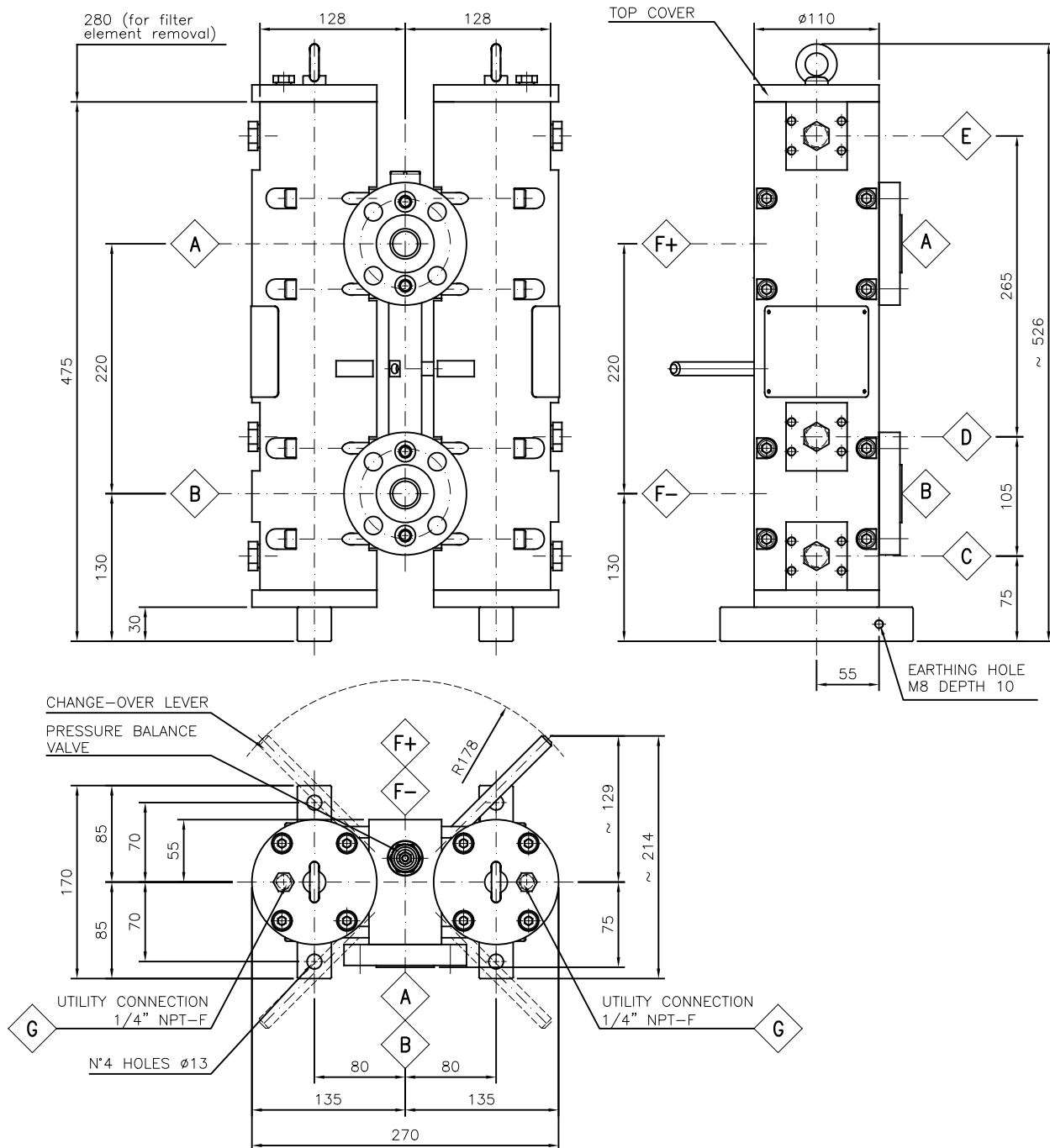
VENT/DRAIN 1/2" NPT-F



## OVERALL DIMENSIONS

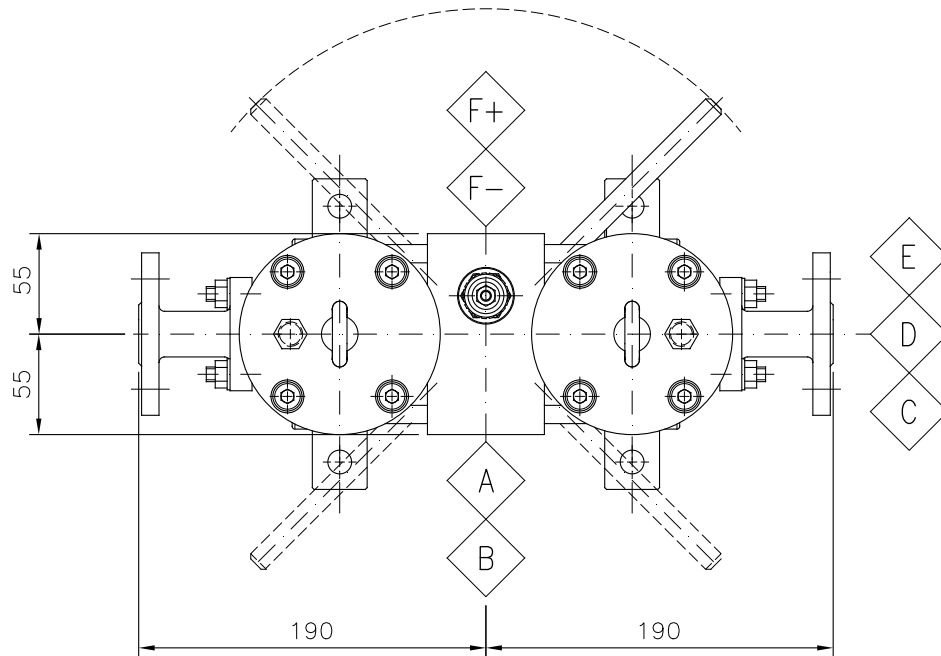
IN/OUT 1" ANSI150/300 PN16/PN40

VENT/DRAIN 1/2" NPT-F



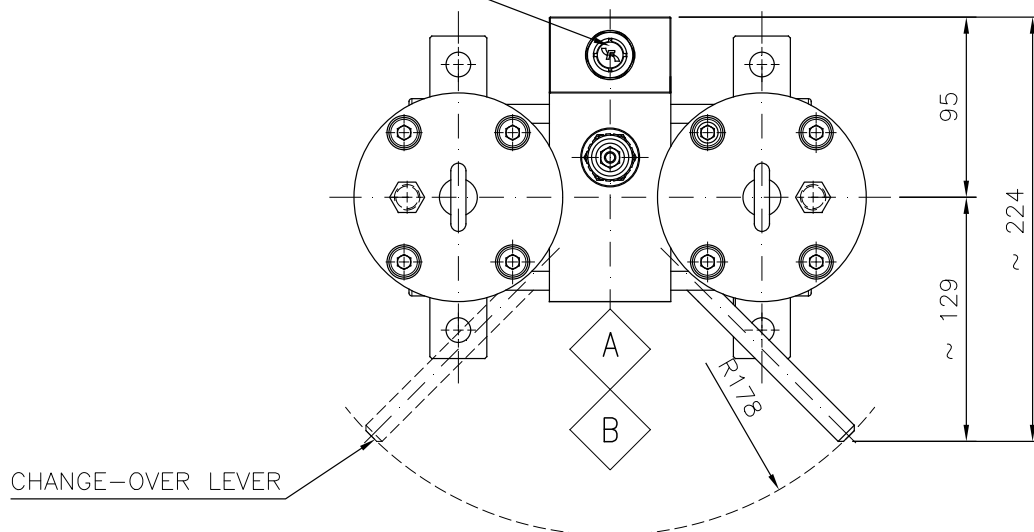
## OVERALL DIMENSIONS

### DUPLEX FILTER WITH VENT AND DRAIN FLANGED CONNESSION



### LEVER POSITION FOR DUPLEX FILTER WITH DIFFERENTIAL INDICATOR

DIFFERENTIAL VISUAL  
or ELETRICAL INDICATOR



## ORDERING INFORMATION

| 1.  | 2. | 3. | 4.   | 5. | 6.  | 7. | 8. | 9. | 10. | 11. | 12. | 13.   |
|-----|----|----|------|----|-----|----|----|----|-----|-----|-----|-------|
| DOX | S  | B  | 1012 | S  | 025 | A  | A  | 0  | G15 | ESD | 000 | -0000 |

|                                                                                |      |                                            |
|--------------------------------------------------------------------------------|------|--------------------------------------------|
| 1. FILTER SERIES                                                               | DOX  |                                            |
| 2. MATERIAL                                                                    | S    | Stainless Steel 316/316L                   |
| 3. SEALS                                                                       | B    | NBR                                        |
|                                                                                | V    | FKM (option)                               |
|                                                                                | E    | EPDM (on request)                          |
|                                                                                | H    | HNBR (on request)                          |
| 4. HOUSING SIZE                                                                | 1012 |                                            |
| 5. PORT TYPE                                                                   | A    | Ansi 150 flange                            |
|                                                                                | B    | Ansi 300 flange                            |
|                                                                                | P    | PN16 flange                                |
|                                                                                | R    | PN40 flange                                |
|                                                                                | S    | SAE 3000 (max working pressure 16 bar)     |
|                                                                                | T    | SAE 3000 (max working pressure 40 bar)     |
| 6. PORT SIZE                                                                   | 025  | 1" DN25                                    |
| 7. VENT and DRAIN                                                              | A    | 1/2" NPT-F                                 |
|                                                                                | B    | 1/2" Ansi 150 flange                       |
|                                                                                | C    | DN15 PN16 flange                           |
|                                                                                | D    | 1/2" Ansi 300 flange                       |
|                                                                                | E    | DN15 PN40 flange                           |
| 8. DESIGN CODE                                                                 | A    | ASME VIII div.1                            |
|                                                                                | B    | ASME VIII div.1, U-STAMP                   |
|                                                                                | C    | ASME VIII div.1, U-STAMP, NBR              |
|                                                                                | D    | EN13445-3                                  |
| 9. AREA CLASSIFICATIONS                                                        | 0    | Safe Area                                  |
| (*) Ambient temperature -40°C ÷ +50°C<br>Max operating temperature fluid +85°C | 1    | ATEX II 2G Ex h IIC T4 Gb (*)              |
| 10. FILTER MEDIA                                                               | G03  | Glassfiber $\beta_{5\mu m(c)} \geq 1.000$  |
|                                                                                | G05  | Glassfiber $\beta_{7\mu m(c)} \geq 1.000$  |
|                                                                                | G10  | Glassfiber $\beta_{12\mu m(c)} \geq 1.000$ |
|                                                                                | G15  | Glassfiber $\beta_{17\mu m(c)} \geq 1.000$ |
|                                                                                | G20  | Glassfiber $\beta_{22\mu m(c)} \geq 1.000$ |
|                                                                                | G40  | Glassfiber $\beta_{35\mu m(c)} \geq 1.000$ |
|                                                                                | M05  | Synthetic $\beta_{10\mu m(c)} \geq 1.000$  |
|                                                                                | M08  | Synthetic $\beta_{12\mu m(c)} \geq 1.000$  |
|                                                                                | M10  | Synthetic $\beta_{15\mu m(c)} \geq 1.000$  |
|                                                                                | M15  | Synthetic $\beta_{20\mu m(c)} \geq 1.000$  |
|                                                                                | T25  | Wire mesh 25 $\mu m$                       |
|                                                                                | T40  | Wire mesh 40 $\mu m$                       |
|                                                                                | T80  | Wire mesh 80 $\mu m$                       |
|                                                                                | T125 | Wire mesh 125 $\mu m$                      |

## ORDERING INFORMATION

|                                                                                                                                                                      |           |                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------|
| 11. ELEMENT VERSION                                                                                                                                                  | ESD       | Anti-static technology                                 |
|                                                                                                                                                                      | 002       | Stainless Steel end caps and metal parts               |
| 12. CLOGGING INDICATOR<br><br>Differential pressure indicator block and fittings are included.<br>(Y) digit for FKM seal option<br>(**) Available only for safe area | 000       | No indicator                                           |
|                                                                                                                                                                      | VX1 (VY1) | Differential visual set 1,3 bar                        |
|                                                                                                                                                                      | VX2 (VY2) | Differential visual set 2,7 bar                        |
|                                                                                                                                                                      | VX5 (VY5) | Differential visual set 5 bar                          |
|                                                                                                                                                                      | EX1 (EY1) | Differential electrical set 1,3 bar (**)               |
|                                                                                                                                                                      | EX2 (EY2) | Differential electrical set 2,7 bar (**)               |
|                                                                                                                                                                      | EX5 (EY5) | Differential electrical set 5 bar (**)                 |
| 13. VERSION                                                                                                                                                          | -0000     | Identification numbers assigned by FILTREC after order |

## DOX SERIES MAIN FEATURES

Stainless steel weld-free construction.

Continuous-flow transfer valve: double 3 ways ball valve, full bore type, zero leak with anti-static device.

Filter element made with anti-static technology, to prevent electrostatic discharge.

Beta rated elements according to ISO 16889 multipass test.

Certification of materials EN10204 type 3.1

For different seal materials, filtration degree, media and certification please contact Filtrec Customer Service.

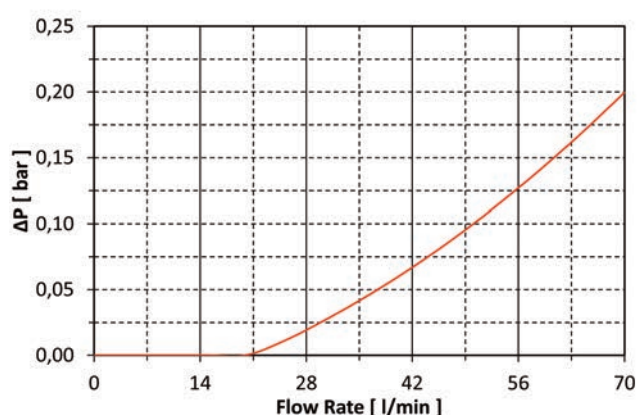
## PRESSURE DROP ( $\Delta p$ ) INFORMATION FOR FILTER SIZING

The total  $\Delta p$  through a filter assembly is given from Housing  $\Delta p$  + Element  $\Delta p$ .

N.B. All the reported data have been obtained at our laboratory, according to specification ISO3968 with mineral oil having 32 cSt viscosity and density 0,875 Kg/dm<sup>3</sup>.

### HOUSING PRESSURE DROP

The housing  $\Delta p$  is given by the curve of the considered model and port, in correspondence of the flow rate value.



### ELEMENT PRESSURE DROP (filter elements 20 bar collapse)

The element  $\Delta p$  (bar) is given by the flow rate (l/min) multiplied by the factor in the table here below corresponding to the selected media and divided by 1000.

If the oil has a viscosity  $V_x$  different than 32 cSt a corrective factor  $V_x/32$  must be applied.

50 l/min with OX1012G15B0/ESD and oil viscosity 46 cSt:  $(50 \times 2,23 / 1000) \times (46 / 32) = 0.16$  bar

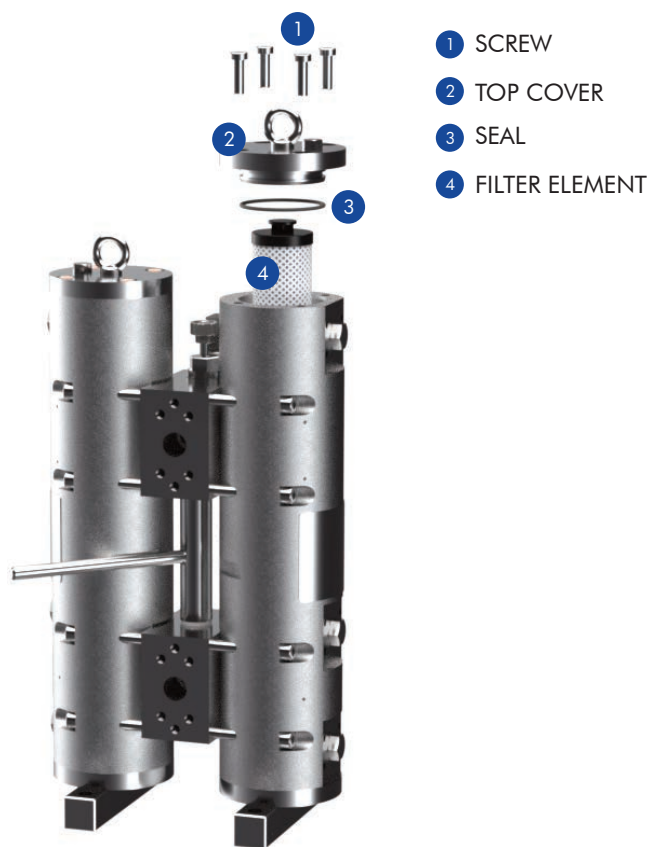
|                        | G03  | G05  | G10  | G15  | G20  | G40  | M05  | M08  | M10  | M15  | T25  | T40  | T80  | T125 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>OX1012....0/...</b> | 6.84 | 4.05 | 2.89 | 2.23 | 2.00 | 0.74 | 1.70 | 1.53 | 1.35 | 1.08 | 0.28 | 0.26 | 0.25 | 0.21 |

### EXAMPLE OF TOTAL $\Delta p$ CALCULATION

DOXSB1012S025AA0G150-0000 with 50 l/min and oil 46 cSt:

Housing  $\Delta p$  + element  $\Delta p$  = 0.1 bar +  $(50 \times 2.23 / 1000) \times (46 / 32)$  bar = 0.26 bar

## USER TIPS



### SPARE SEAL KIT PART NUMBER

|                       | NBR                                         | FKM                                         |
|-----------------------|---------------------------------------------|---------------------------------------------|
| TOP COVER<br>SEAL KIT | 10.011.00066<br>(Kit of 2<br>cover gaskets) | 10.011.00067<br>(Kit of 2<br>cover gaskets) |

## WARNING

-  Make sure that Personal Protective Equipment (PPE) is worn during installation and maintenance operation.

## DISPOSAL OF FILTER ELEMENT

-  The used filter elements and the filter parts dirty of oil are classified as "Dangerous waste material": they must be disposed according to the local laws by authorized Companies.

## INSTALLATION

-  1. Secure the frame of the filter using the fixing holes.
2. The IN and OUT ports must be connected to the hoses in the correct flow direction.
3. Verify that no tension is present on the filter after mounting.
4. Enough space must be available for filter element replacement.
5. The visual clogging indicator must be in a easily viewable position.
6. When a electrical indicator is used, make sure that it is properly wired.
-  7. Never run the system with no filter element fitted.
8. Keep in stock a spare FILTREC filter element for timely replacement when required.
9. Filter housing should be earthed.

## OPERATION

-  1. The filter must work within the operating conditions of pressure, temperature and compatibility given in the first page of this data sheet.
2. The filter element must be replaced as soon as the clogging indicator signals at working temperature (in cold start conditions, oil temperature lower than 30°C, a false alarm can be given due to oil viscosity).
3. If no clogging indicator is mounted, replace the element according to the system manufacturer's recommendations.

