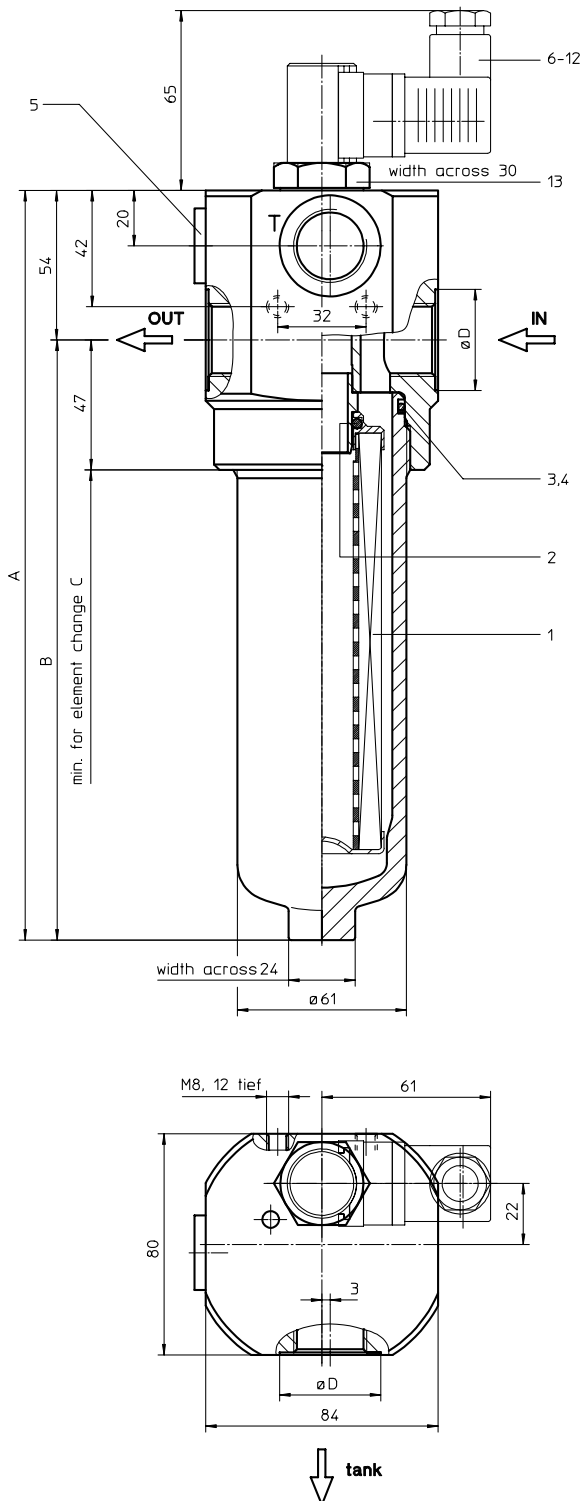


PRESSURE FILTER

Series MDV 40-63 DN 15 - 20 PN 200

Sheet No.
1419 D



1. Type index:

1.1. Complete filter: (ordering example)

MDV. 40. 10VG. HR. E. P. - . G. 3. - . D2. AE

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|----|----|----|

- 1 **series:**
MDV = medium pressure filter with differential pressure-valve
- 2 **nominal size:** 40, 63
- 3 **filter-material and filter-fineness:**
80 G = 80 μm , 40 G = 40 μm , 25 G = 25 μm
stainless steel wire mesh
25 VG = 20 $\mu\text{m}_{(c)}$, 16 VG = 15 $\mu\text{m}_{(c)}$, 10 VG = 10 $\mu\text{m}_{(c)}$,
6 VG = 7 $\mu\text{m}_{(c)}$, 3 VG = 5 $\mu\text{m}_{(c)}$ Interpor fleece (glass fibre)
- 4 **resistance of pressure difference for filter element:**
30 = Δp 30 bar
HR = Δp 160 bar (rupture strength Δp 250 bar)
- 5 **filter element design:**
E = single-end open
- 6 **sealing material:**
P = Nitrile (NBR)
V = Viton (FPM)
- 7 **filter element specification:**
- = standard
VA = stainless steel
- 8 **connection:**
G = thread connection according to ISO 228
- 9 **connection size:**
3 = G $\frac{1}{2}$
4 = G $\frac{3}{4}$
- 10 **filter housing specification:**
- = standard
- 11 **internal valve:**
D1 = differential pressure-valve Δp 3,5 bar
D2 = differential pressure-valve Δp 7,0 bar
- 12 **clogging indicator or clogging sensor:**
- = without
AOR = visual, see sheet-no. 1606
AOC = visual, see sheet-no. 1606
AE = visual-electrical, see sheet-no. 1615
VS1 = electrical, see sheet-no. 1617
VS2 = electrical, see sheet-no. 1618

1.2. Filter element: (ordering example)

01NL. 40. 10VG. HR. E. P. -

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

- 1 **series:**
01NL = standard filter element according to DIN 24550, T3
- 2 **nominal size:** 40, 63
- 3 - 7 see type index-complete filter

2. Dimensions:

| type | connection | A | B | C | D | weight kg | volume tank |
|--------|-----------------|-----|-----|-----|------|-----------|-------------|
| MDV 40 | G $\frac{1}{2}$ | 211 | 157 | 265 | 30 | 2,7 | 0,25 l |
| MDV 63 | G $\frac{3}{4}$ | 271 | 217 | 325 | 36,5 | 3,2 | 0,35 l |

Connection assignments as shown in the table are standard according to DIN 24 550 T1.

Are the connection assignments against DIN 24 550 T1, see item 9 of the type code.

3. Spare parts:

| item | qty. | designation | dimension | | article-no. | |
|------|------|--------------------------------------|--------------|---------|--------------------|--------------|
| | | | MDV 40 | MDV 63 | | |
| 1 | 1 | filter element | 01NL.40 | 01NL.63 | | |
| 2 | 1 | O-ring | 22 x 3,5 | | 304341 (NBR) | 304392 (FPM) |
| 3 | 1 | O-ring | 54 x 3 | | 304657 (NBR) | 304720 (FPM) |
| 4 | 1 | support ring | 60 x 2,6 x 1 | | 311779 | |
| 5 | 1 | screw plug | G ½ | | 304678 | |
| 6 | 1 | clogging indicator visual | AOR or AOC | | see sheet-no. 1606 | |
| 7 | 1 | clogging indicator visual-electrical | AE | | see sheet-no. 1615 | |
| 8 | 1 | clogging sensor electrical | VS1 | | see sheet-no. 1617 | |
| 9 | 1 | clogging sensor electrical | VS2 | | see sheet-no. 1618 | |
| 10 | 1 | O-ring | 15 x 1,5 | | 315357 (NBR) | 315427 (FPM) |
| 11 | 1 | O-ring | 22 x 2 | | 304708 (NBR) | 304721 (FPM) |
| 12 | 1 | O-ring | 14 x 2 | | 304342 (NBR) | 304722 (FPM) |
| 13 | 1 | screw plug | 20913-4 | | 309817 | |

item 13 execution only without clogging indicator or clogging sensor

4. Description:

The pressure filters of the series MDV are suitable for a working pressure up to 200 bar and equipped with elements according to DIN 24 550 T3.

The pressure peaks are absorbed by a sufficient margin of safety. The MDV-filter is in-line mounted.

The filter element consists of star-shaped, pleated filter material which is supported on the inside by a perforated core tube and is bonded to the end caps with a high-quality adhesive. The flow direction is from outside to the inside. Filter elements are available down to 4µm_(c).

INTERNORMEN-Filter elements are known as elements with a high intrinsic stability and an excellent filtration capability, a high dirt-retaining capacity and a long service life.

INTERNORMEN-Filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.

INTERNORMEN-Filter elements are available up to a pressure difference resistance of Δp 160 bar and a rupture strength of Δp 250 bar.

The differential pressure-valve opens independently of the operating pressure at a chosen differential pressure-valve between IN and OUT and leaves an unfiltered partial-flow flowing from „IN“ to the tank.

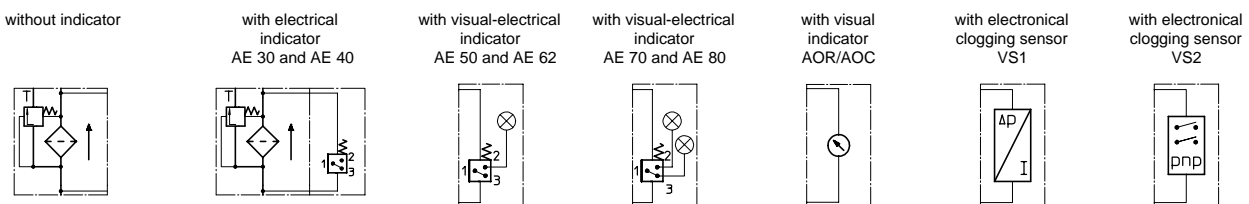
5. Technical data:

| | |
|--------------------------|--|
| temperature range: | - 10°C to + 80°C (for a short time + 100°C) |
| operating medium: | mineral oil, other media on request |
| max. operating pressure: | 200 bar |
| test pressure: | 286 bar |
| connection system: | thread connection according to ISO 228 |
| housing material: | aluminium forging alloy; C-steel |
| sealing material: | Nitrile (NBR) or Viton (FPM), other materials on request |
| installation position: | vertical |

Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.

Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

6. Symbols:



7. Pressure drop flow curves:

Precise flow rates see 'INT-Expert-System Filter' respectively Δp-curves ; depending on filter fineness and viscosity.

8. Test methods:

Filter elements are tested according to the following ISO standards:

| | |
|-----------|---|
| ISO 2941 | Verification of collapse/burst resistance |
| ISO 2942 | Verification of fabrication integrity |
| ISO 2943 | Verification of material compatibility with fluids |
| ISO 3723 | Method for end load test |
| ISO 3724 | Verification of flow fatigue characteristics |
| ISO 3968 | Evaluation of pressure drop versus flow characteristics |
| ISO 16889 | Multi-pass method for evaluating filtration performance |