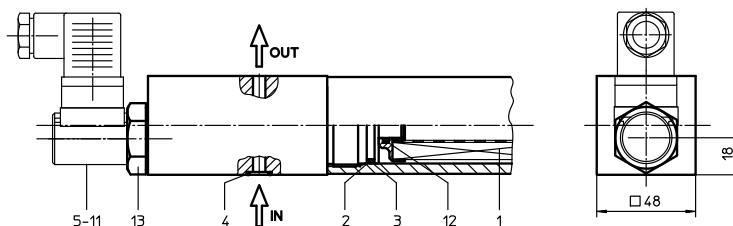


PRESSURE FILTER, for sandwich stacking

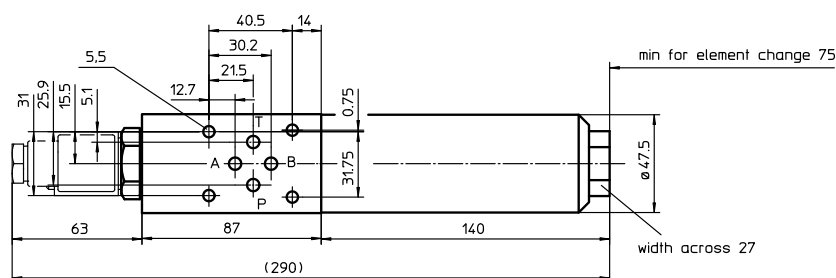
Series HPZ 32 DN 6 PN 350

Sheet No.
1491 Q

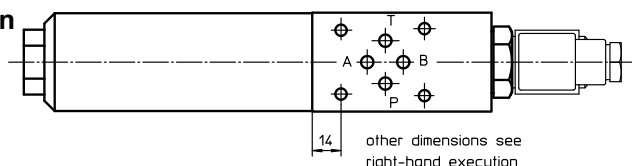
right-hand execution



right-hand execution



left-hand execution



1. Type index:

1.1. Complete filter: (ordering example)

HPZ. 32. 10VG. HR. E. P. -. Z. 1. -. R. AE

1	2	3	4	5	6	7	8	9	10	11	12
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- 1 **series:**
HPZ = pressure filter for sandwich stacking
- 2 **nominal size:** 32
- 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 $\mu\text{m}_{(c)}$,
6VG = 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:**
Z = sandwich stacking according to DIN 24340, T2
- 9 **connection size:**
1 = A 6 according to DIN 24340, T2
- 10 **filter housing specification:**
- = standard
- 11 **head design:**
R = right-hand execution L = left-hand execution
- 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 = electronical, see sheet-no. 1617
VS2 = electronical, see sheet-no. 1618

1.2. Filter element: (ordering example)

01E. 30. 10VG. HR. E. P. -

1	2	3	4	5	6	7
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- 1 **series:**
01E. = filter element according to company standard
- 2 **nominal size:** 30
- 3 - 7 see type index-complete filter

weight: 3,5 kg

EDV 08/12

Changes of measures and design are subject to alteration!

2. Spare parts:

item	qty.	designation	dimension	article-no.	
1	1	filter element	01E, 30		
2	1	support ring	SRA 27 x 2,1 x 1	305466	
3	1	O-ring	32 x 2,5	306843 (NBR)	308268 (FPM)
4	4	O-ring	9,25 x 1,78	304354 (NBR)	310268 (FPM)
5	1	clogging indicator, visual	AOR or AOC	see sheet no. 1606	
6	1	clogging indicator, visual-electrical	AE	see sheet no. 1615	
7	1	clogging sensor, electronical	VS1	see sheet no. 1617	
8	1	clogging sensor, electronical	VS2	see sheet no. 1618	
9	1	O-ring	15 x 1,5	315357 (NBR)	315427 (FPM)
10	1	O-ring	22 x 2	304708 (NBR)	304721 (FPM)
11	1	O-ring	14 x 2	304342 (NBR)	304722 (FPM)
12	1	O-ring	11 x 3	312603 (NBR)	312727 (FPM)
13	1	screw plug	20913-4	309817	

item 13 execution only without clogging indicator or clogging sensor

3. Description:

Pressure filters for sandwich stacking with master gauge for holes according to DIN 24340-A6 are designed for vertical interlink mounting. The filters are placed in the pressure feed channel in front of the hydro valve that is to be protected.

The filters are available in right-hand and left-hand execution - with or without clogging indicator - thus, the filters can be installed according to the corresponding mounting and service applications.

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 4 µm_(c).

Internormen Product Line 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 Product Line filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.

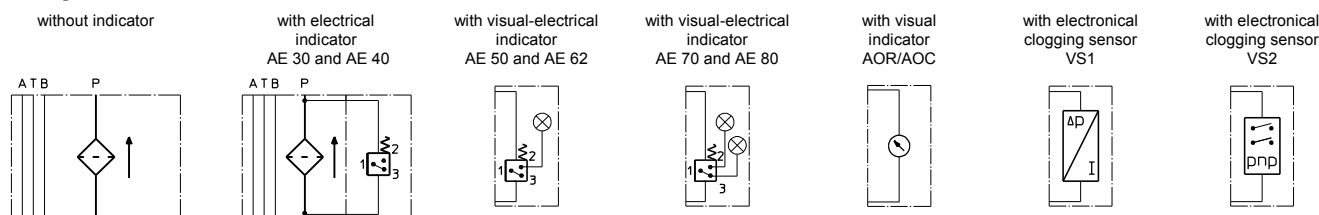
Internormen Product Line filter elements are available up to a pressure difference resistance of Δp 160bar and a rupture strength of Δp 250bar.

4. 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:	350 bar
test pressure:	500 bar
connection system:	(master gauge for holes) DIN 24340 - A6
housing material:	EN-GJS-400-18-LT; C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical (preferably) horizontal
volume tank:	0,1 l

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).

5. Symbols:



6. Pressure drop flow curves:

Precise flow rates see 'Interactive Product Specifier', respectively Δp-curves; depending on filter fineness and viscosity.

7. Test methods:

Filter elements are tested according to the following ISO standards:

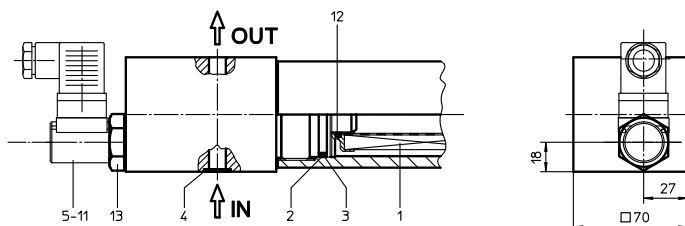
ISO 2941	Verification of collapse/burst resistance
ISO 2942	Verification of fabrication integrity
ISO 2943	Verification of material compatibility with fluids
ISO 3723	Method for end load test
ISO 3724	Verification of flow fatigue characteristics
ISO 3968	Evaluation of pressure drop versus flow characteristics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

PRESSURE FILTER, for sandwich stacking

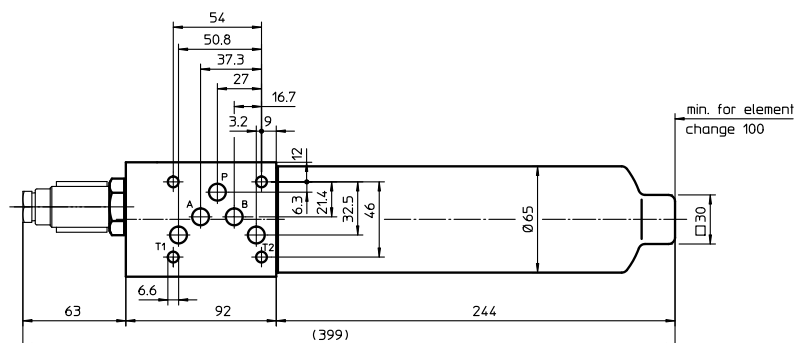
Series HPZ 90 DN 10 PN 350

Sheet No.
1493 I

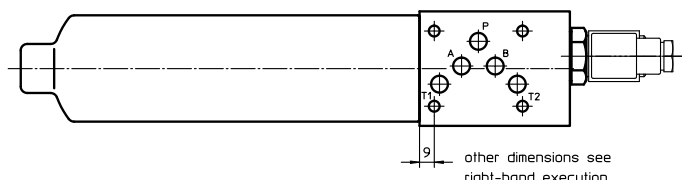
right-hand execution



right-hand execution



left-hand execution



1. Type index:

1.1. Complete filter: (ordering example)

HPZ. 90. 10VG. HR. E. P. -. Z. 2. -. R. AE

1	2	3	4	5	6	7	8	9	10	11	12
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- 1 **series:**
HPZ = pressure filter for sandwich stacking
- 2 **nominal size:** 90
- 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:**
Z = sandwich stacking according to DIN 24340, T2
- 9 **connection size:**
2 = A 10 according to DIN 24340, T2
- 10 **filter housing specification:**
- = standard
- 11 **head design:**
R = right-hand execution L = left-hand execution
- 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 = electronical, see sheet-no. 1617
VS2 = electronical, see sheet-no. 1618

1.2. Filter element: (ordering example)

01E. 90. 10VG. HR. E. P. -

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

- 1 **series:**
01E. = filter element according to company standard
- 2 **nominal size:** 90
- 3 - 7 see type index-complete filter

weight: 6,5 kg

2. Spare parts:

item	qty.	designation	dimension	article-no.	
1	1	filter element	01E.90		
2	1	support ring	SRA 52 x 2,6 x 1	311013	
3	1	O-ring	45 x 3	304991 (NBR)	304997 (FPM)
4	5	O-ring	12 x 2	311014 (NBR)	310271 (FPM)
5	1	clogging indicator, visual	AOR or AOC	see sheet no. 1606	
6	1	clogging indicator, visual-electrical	AE	see sheet no. 1615	
7	1	clogging sensor, electrical	VS1	see sheet no. 1617	
8	1	clogging sensor, electrical	VS2	see sheet no. 1618	
9	1	O-ring	15 x 1,5	315357 (NBR)	315427 (FPM)
10	1	O-ring	22 x 2	304708 (NBR)	304721 (FPM)
11	1	O-ring	14 x 2	304342 (NBR)	304722 (FPM)
12	1	O-ring	22 x 3,5	304341 (NBR)	304392 (FPM)
13	1	screw plug	20913-4	309817	

item 13 execution only without clogging indicator or clogging sensor

3. Description:

Pressure filters for sandwich stacking with master gauge for holes according to DIN 24340-A10 are designed for vertical interlink mounting. The filters are placed in the pressure feed channel in front of the hydro valve that is to be protected.

The filters are available in right-hand and left-hand execution - with or without clogging indicator - thus, the filters can be installed according to the corresponding mounting and service applications.

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 4 $\mu\text{m}_{(c)}$.

Internormen Product Line 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 Product Line filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.

Internormen Product Line filter elements are available up to a pressure difference resistance of Δp 160 bar and a rupture strength of Δp 250 bar.

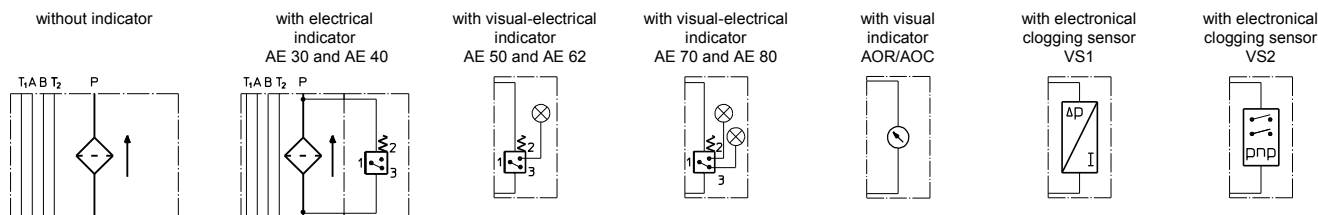
4. Technical data:

temperature range:	- 10 °C to + 80 °C (for a short time + 100 °C)
operating medium:	mineral oil, other media on request
max. operating pressure:	350 bar
test pressure:	500 bar
connection system:	(master gauge for holes) DIN 24340 - A10
housing material:	EN-GJS-400-18-LT; C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical (preferably) horizontal
volume tank:	0,4 l

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).

5. Symbols:



6. Pressure drop flow curves:

Precise flow rates see 'Interactive Product Specifier', respectively Δp -curves; depending on filter fineness and viscosity.

7. Test methods:

Filter elements are tested according to the following ISO standards:

ISO 2941	Verification of collapse/burst resistance
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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