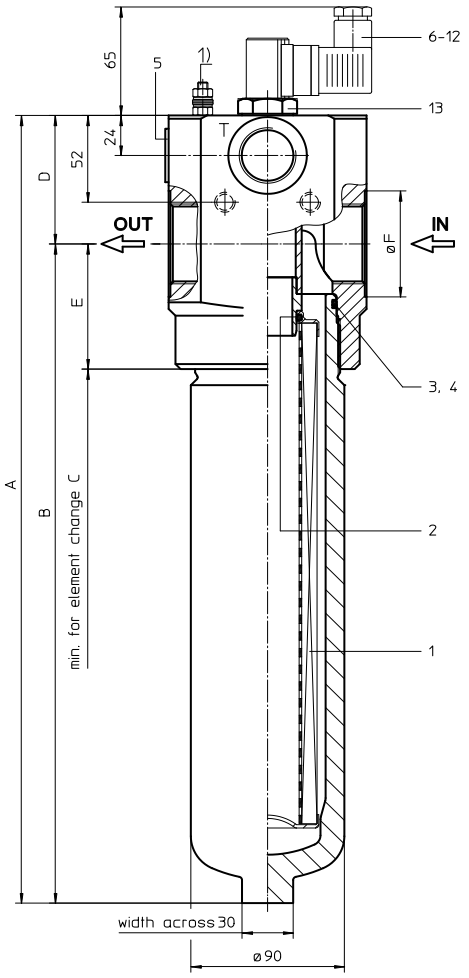
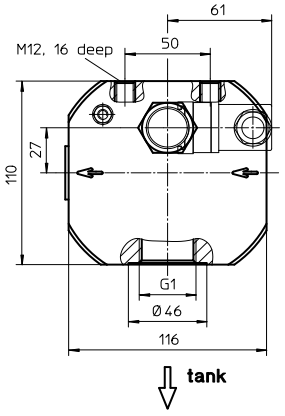
PRESSURE FILTER
Series HPV 170-450 DN 25-40 PN 420

Sheet No.
1479 E





1) connection for the potential equalisation, only for application in the explosive area

1. Type index:

1.1. Complete filter: (ordering example)

HPV.	360.	10VG.	HR.	E.	P.	-.	G.	7.	-.	D2.	AE
1	2	3	4	5	6	7	8	9	10	11	12

1 series:
HPV = pressure filter with differential pressure-valve

2 nominal size: 170, 240, 360, 450

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 $\mu m_{(c)}$, 16 VG = 15 $\mu m_{(c)}$, 10 VG = 10 $\mu m_{(c)}$,
6 VG = 7$\mu m_{(c)}$, 3 VG = 5 $\mu m_{(c)}$ 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 according to ISO 228

9 connection size:
5 = G 1
6 = G 1 ¼
7 = G 1 ½

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 = electronical, see sheet-no. 1617
VS2 = electronical, see sheet-no. 1618

1.2. Filter element: (ordering example)

01E.	360.	10VG.	HR.	E.	P.	-
1	2	3	4	5	6	7

1 series:
01E. = filter element according to company standard

2 nominal size: 170, 240, 360, 450

3 - 7 see type index-complete filter

2. Dimensions:

type	HPV 170			HPV 240			HPV 360			HPV 450		
connection	G 1	G 1 ¼	G 1 ½	G 1	G 1 ¼	G 1 ½	G 1	G 1 ¼	G 1 ½	G 1	G 1 ¼	G 1 ½
A	337	337	342	387	387	392	467	467	472	572	572	577
B	263	263	265	313	313	315	393	393	395	498	498	500
C	350	350	350	400	400	400	480	480	480	585	585	585
D	74	74	77	74	74	77	74	74	77	74	74	77
E	73	73	75	73	73	75	73	73	75	73	73	75
F	46	57	63,5	46	57	63,5	46	57	63,5	46	57	63,5
weight kg	13,5	14,5	14,9	14,8	15,8	16,2	16,7	17,7	18,1	19,2	20,2	20,6
volume tank	0,7 l			0,9 l			1,2 l			1,6 l		

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3. Spare parts:

item	qty.	designation	dimension HPV 170-450	article-no.	
1	1	filter element	01E. 170-450		
2	1	O-ring	34 x 3,5	304338 (NBR)	304730 (FPM)
3	1	O-ring	75 x 3	302215 (NBR)	304729 (FPM)
4	1	support ring	81 x 2,6 x 1	304581	
5	1	screw plug	G ¾	308529	
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, electronical	VS1	see sheet-no. 1617	
9	1	clogging sensor, electronical	VS2	see sheet-no. 1618	
10	1	O-ring	15 x 1,5	315357 (NBR)	315427 (FPM)
11		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 HPV 170-450 are suitable for a working pressure up to 420 bar.
The pressure peaks are absorbed by a sufficient margin of safety. The HPV-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 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 ∆p 160 bar and a rupture strength of ∆p 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.

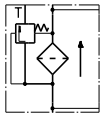
5. Technical data:

temperature range:	- 10°C to + 80°C (for a short time + 100°C)
operating medium:	mineral oil, other media on request
max. operating pressure:	420 bar
test pressure:	600 bar
connection system:	thread according to ISO 228
housing material:	C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical

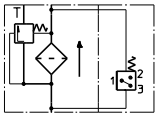
Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

6. Symbols:

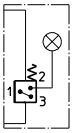
without indicator



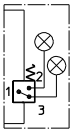
with electrical indicator AE 30 and AE 40



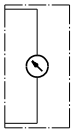
with visual-electrical indicator AE 50 and AE 62



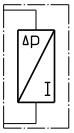
with visual-electrical indicator AE 70 and AE 80



with visual indicator AOR/AOC



with electronical clogging sensor VS1



with electronical clogging sensor VS2

7. Pressure drop flow curves:

Precise flow rates see ‘Interactive Product Specifier’, respectively ∆p-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