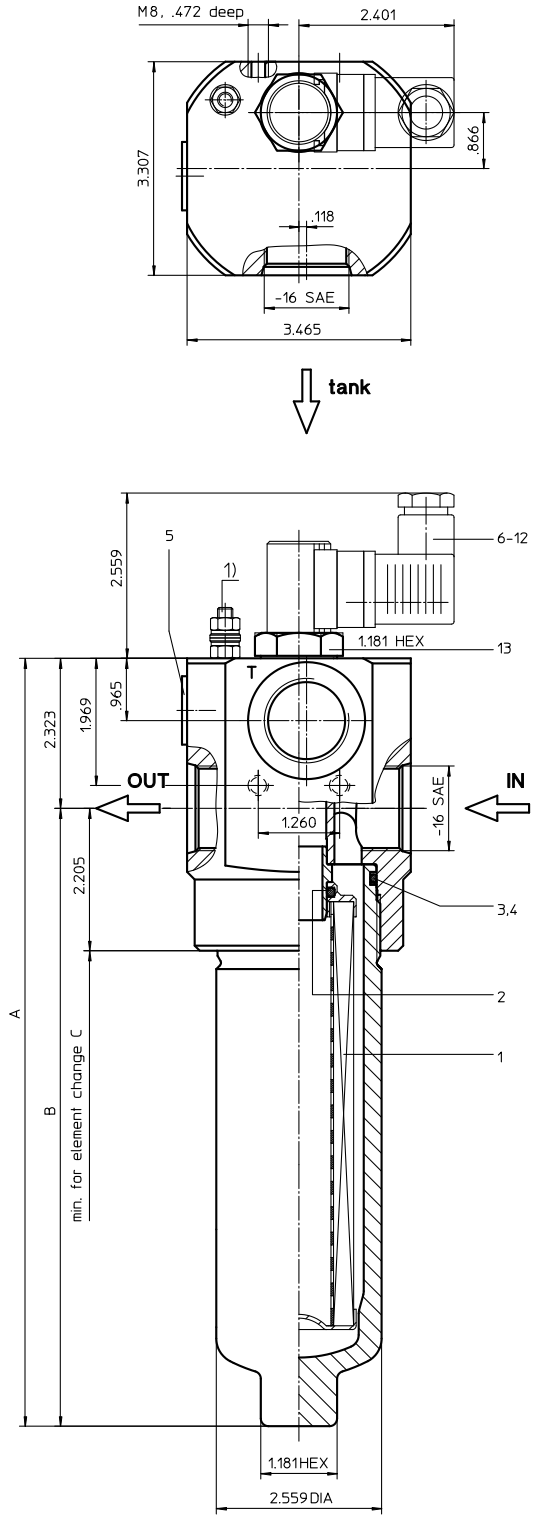
PRESSURE FILTER
Series HPV 60-150 6000 PSI

Sheet No.
1478 F



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

1. Type index:

1.1. Complete filter: (ordering example)

HPV.	90.	10VG.	HR.	E.	P.	-.	UG.	5.	-.	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:** 60, 90, 150

3 **filter-material and filter-fineness:**
80 G = 80 µm, 40 G = 40 µm, 25 G = 25µm
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 fiber)

4 **resistance of pressure difference for filter element:**
30 = Δp 435 PSI
HR = Δp 2320 PSI (rupture strength Δp 3625 PSI)

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:**
UG = thread connection

9 **connection size:**
5 = - 16 SAE

10 **filter housing specification:**
- = standard

11 **internal valve:**
D1 = differential pressure-valve Δp 51 PSI
D2 = differential pressure-valve Δp 102 PSI

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:** 60, 90, 150

3 - 7 see type index-complete filter

2. Dimensions: inch

type	HPV 60	HPV 90	HPV 150
connection		-16 SAE	
A	9.33	11.88	16.18
B	7.00	9.56	13.85
C	10.63	13.19	17.52
weight lbs.	14.30	15.40	17.60
volume tank	.08 Gal.	.10 Gal.	.16 Gal.

EDV 08/12

Changes of measures and design are subject to alteration!

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3. Spare parts:

item	qty.	designation	dimension HPV 60 -150	article-no.	
1	1	filter element	01E. 60-150		
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	61 x 2,6 x 1	304660	
5	1	screw plug	½ BSPP	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, 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 60-150 are suitable for a working pressure up to 6000 PSI.
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 4 $\mu m_{(c)}$.
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 2320 PSI and a rupture strength of Δp 3625 PSI.
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.

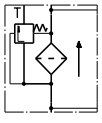
5. Technical data:

temperature range:	+ 14°F to + 176°F (for a short time + 212°F)
operating medium:	mineral oil, other media on request
max. operating pressure:	6000 PSI
test pressure:	8580 PSI
connection system:	thread connection
housing material:	C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical

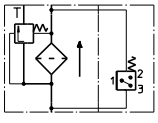
Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

6. Symbols:

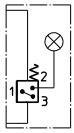
without indicator



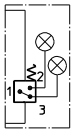
with electrical indicator AE 30 and AE 40



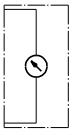
with visual-electrical indicator AE 50 and AE 62



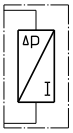
with visual-electrical indicator AE 70 and AE 80



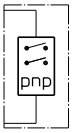
with visual indicator AOR/AOC



with electronical clogging sensor VS1



with electronical clogging sensor VS2



7. Pressure drop flow curves:

Precise flow rates see ‘Interactive Product Specifier’, respectively 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