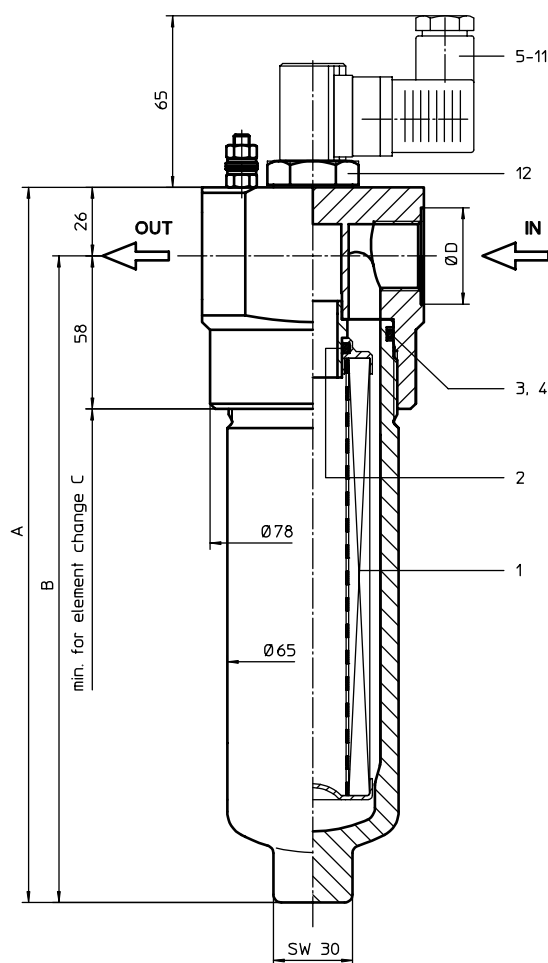


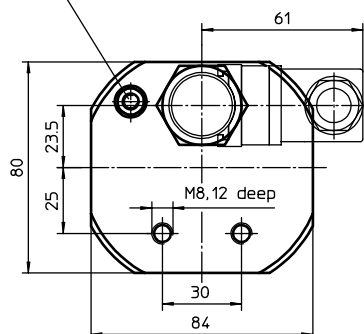
# PRESSURE FILTER

Series HP 61-151 DN 15 - 25 PN 420

Sheet No.  
**1477 E**



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



## 2. Dimensions:

type	HP 61	HP 91	HP 151
connection	G 1/2	G 3/4	G 1
A	206	271	380
B	180	245	354
C	270	335	445
D	30	36,5	46
weight kg	4	4,5	5,5
volume tank	0,3 l	0,4 l	0,6 l

Connection assignments as shown in the table are standard. To exchange connections see item 9 in type index.

## 1. Type index:

### 1.1. Complete filter: (ordering example)

**HP . 91. 10VG. HR. E. P. - . G. 4. - . - . AE**

1	2	3	4	5	6	7	8	9	10	11	12
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- 1 **series:**  
HP = pressure filter
- 2 **nominal size:** 61, 91, 151
- 3 **filter-material and filter-fineness:**  
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 =  $\Delta p$  30 bar  
HR =  $\Delta p$  160 bar (rupture strength  $\Delta p$  250 bar)
- 5 **filter element design:**  
E = single-end open
- 6 **sealing material:**  
P = Nitrile (NBR)  
V = Viton (FPM)
- 7 **filter element specification:** (see catalog)  
- = standard  
VA = stainless steel  
IS06 = see sheet-no. 31601
- 8 **connection:**  
G = thread connection according to ISO 228
- 9 **connection size:**  
3 = G 1/2  
4 = G 3/4  
5 = G 1
- 10 **filter housing specification:** (see catalog)  
- = standard  
IS06 = see sheet-no. 31605
- 11 **internal valve:**  
- = without  
S1 = with by-pass valve  $\Delta p$  3,5 bar  
S2 = with by-pass valve  $\Delta p$  7,0 bar  
R = reversing valve,  $Q \leq 70,06$  l/min
- 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
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- 1 **series:**  
01E. = filter element according to INTERNORMEN factory specification
- 2 **nominal size:** 60, 90, 150
- 3 - 7 see type index-complete filter

### 3. Spare parts:

item	qty.	designation	dimension HP 61 - 151	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	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	screw plug	20913-4	309817	

item 12 execution only without clogging indicator or clogging sensor

### 4. Description:

The pressure filters of the series HP 61-151 are suitable for a working pressure up to 420 bar.

The pressure peaks are absorbed by a sufficient margin of safety. The HP-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  $\mu\text{m(c)}$ .

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  $\Delta p$  160 bar and a rupture strength of  $\Delta p$  250 bar.

The internal valves are integrated into the centering pivot for the filter element.

After reaching the opening pressure the by-pass valve causes that an unfiltered partial flow passes the filter. With the reverse valve a protection of the filter element is given when having a reverse flow inside the filter. The reverse flow will not be filtered.

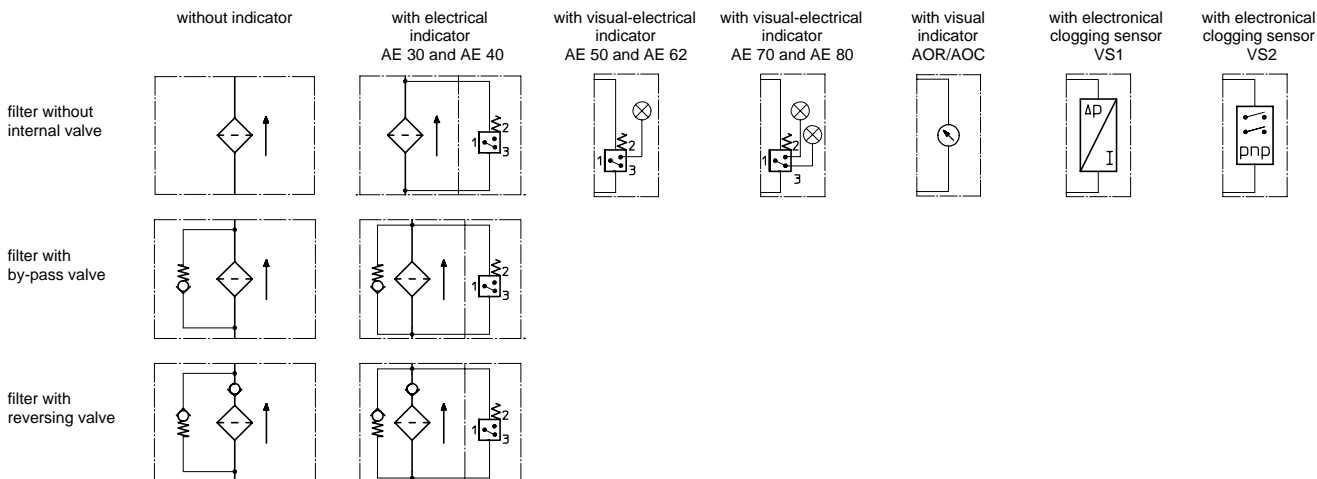
### 5. Technical data:

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:	546 bar
connection system:	thread connection 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:



### 7. Pressure drop flow curves:

Precise flow rates see 'INT-Expert-System Filter', respectively  $\Delta p$ -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