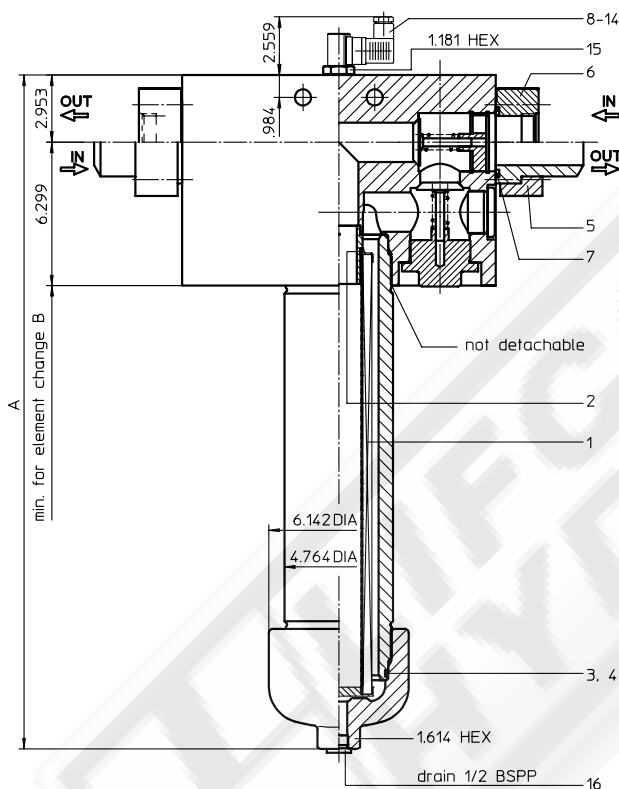
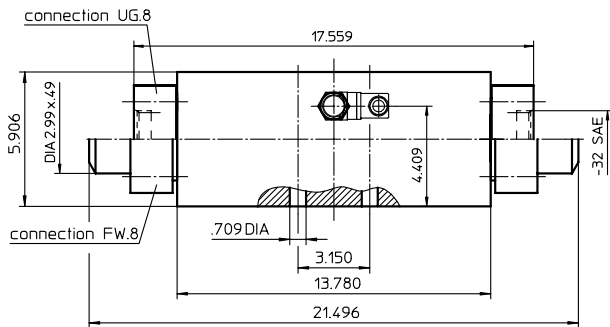


# PRESSURE FILTER for reversible filtration

## Series HPW 601 - 1351 4568 PSI

Sheet No.  
**1482 F**



### 3. Dimensions: inch

type	HPW 601	HPW 901	HPW 1351
connection	2"	2"	2"
A	23.70	29.60	39.37
B	31.10	37.00	56.70
weight lbs.	253	268	295
volume tank	.55 Gal.	.82 Gal.	1.21 Gal.

## 1. Type index:

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

**HPW. 901. 10VG. HR. E. P. -. FW. 8. -. -. AE**

1	2	3	4	5	6	7	8	9	10	11	12
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- 1 **series:**  
HPW = pressure filter for reversible filtration
- 2 **nominal size:** 601, 901, 1351
- 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 fiber)
- 4 **resistance of pressure difference for filter element:**  
30 =  $\Delta p$  435 PSI  
HR =  $\Delta p$  2320 PSI (rupture strength  $\Delta p$  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:**  
FW = flange connection factory specification  
UG = thread connection
- 9 **connection size:**  
8 = 2"
- 10 **filter housing specification:**  
- = standard
- 11 **internal valve:**  
- = without  
S1 = with by-pass valve  $\Delta p$  51 PSI  
S2 = with by-pass valve  $\Delta p$  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 = electrical, see sheet-no. 1617  
VS2 = electrical, see sheet-no. 1618

### 1.2. Filter element: (ordering example)

**01E. 900. 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:** 600, 900, 1350
- 3 - 7 | see type index-complete filter

## 2. Accessories:

- counter flange, see sheet-no. 1654

EDV 02/05

Changes of measures and design are subject to alteration!

#### 4. Spare parts:

item	qty.	designation	dimension			article-no..	
			HPW 601	HPW 901	HPW 1351		
1	1	filter element	01E.600	01E.900	01E.1350		
2	1	O-ring		48 x 3		304357 (NBR)	304404 (FPM)
3	1	O-ring		98 x 4		301914 (NBR)	304765 (FPM)
4	1	support ring		110 x 3,5 x 2		304802	
5	2	counter flange		FW 50-4-2.99 x .49		303717.1	
6	2	adapter		FW.8.UG.8		320556	
7	2	O-ring		68 x 5		304376 (NBR)	304394 (FPM)
8	1	clogging indicator visual		AOR or AOC		see sheet-no. 1606	
9	1	clogging indicator visual-electrical		AE		see sheet-no. 1615	
10	1	clogging sensor electrical		VS1		see sheet-no. 1617	
11	1	clogging sensor electrical		VS2		see sheet-no. 1618	
12	1	O-ring		15 x 1,5		315357 (NBR)	315427 (FPM)
13	1	O-ring		22 x 2		304708 (NBR)	304721 (FPM)
14	1	O-ring		14 x 2		304342 (NBR)	304722 (FPM)
15	1	screw plug		20913-4		309817	
16	1	screw plug		½ BSPP		304678	

item 15 execution only without clogging indicator or clogging sensor

#### 5. Description:

Pressure filter of the series HPW 601-1351 are intended for fields of application, where the medium that should be filtered flows through the filter in two directions and the filter effect for both directions of flow exists. Four check valves fitted in Graetz-position (see switching symbol) guarantee the function, that the flow against to the filter-element will be always from the same side even with changing flow direction. The HPW-filters are flange mounted to the hydraulic system.

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 5 µm<sub>(c)</sub>.

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 2320 PSI and a rupture strength of Δp 3625 PSI.

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.

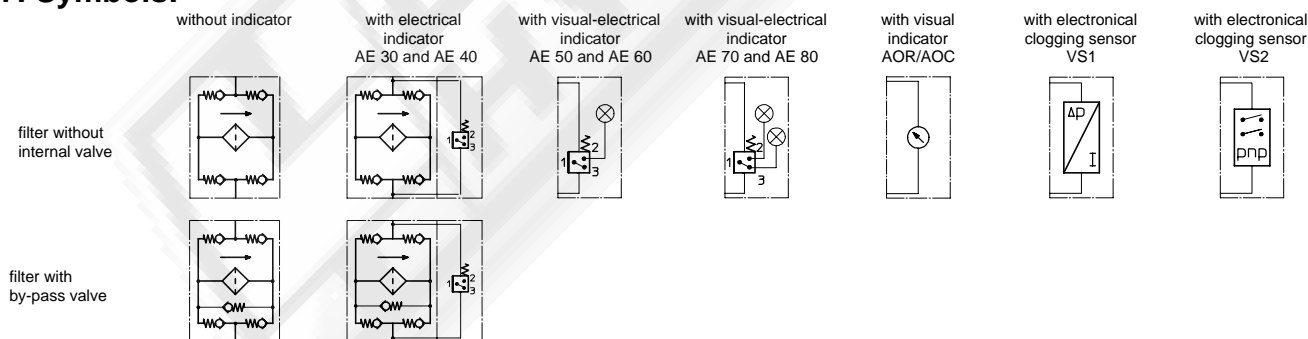
#### 6. Technical data:

temperature range:	+14°F to + 176°F (for a short time + 212°F)
operating medium:	mineral oil, other media on request
max. operating pressure:	4568 PSI
test pressure:	5945 PSI
connection system:	flange connection factory specification or thread connection
housing material:	GGG 40.3; C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical

Classified under the Pressure Vessel 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).

#### 7. Symbols:



#### 8. Pressure drop flow curves:

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

#### 9. 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