

FILTER-BATTERY

Series BHP 2x901-7x901 DN 50-100 PN 315

1. Type index:

1.1. Complete filter: (ordering example)

BHP.4x901.10VG.HR.E.P.-.FV.A.-.AE.T

1	2	3	4	5	6	7	8	9	10	11	12	13
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- 1 **series:**
BHP = battery-pressure filter
- 2 **nominal size:**
2x901; 5x901
3x901; 6x901
4x901; 7x901
- 3 **filter-material and filter-fineness:**
25 VG = 20 µm_(e), 16 VG = 15 µm_(e), 10 VG = 10 µm_(e), 6 VG = 7 µm_(e), 3 VG = 5 µm_(e) 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:**
FS = SAE-flange connection 6000 PSI
FV = AVIT-flange connection 320 bar
- 9 **connection size:**
8 = DN 50 with FS (up to BHP 3x901 preferably)
= or with FV (only BHP 2x901)
A = DN 80 with FV (up to BHP 5x901 preferably)
B = DN 100 with FV (BHP 3x901 up to 7x901 preferably)
- 10 **filter housing specification:**
- = standard
- 11 **internal valve:**
- = without
S1 = with by-pass valve, Δp 3,5 bar
S2 = with by-pass valve, Δp 7,0 bar
R = reversing valve, Q ≤ 465,348 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 = electrical, see sheet-no. 1617
VS2 = electrical, see sheet-no. 1618
- 13 **fixing:**
- = without supporting frame with fastening bores
T = with supporting frame

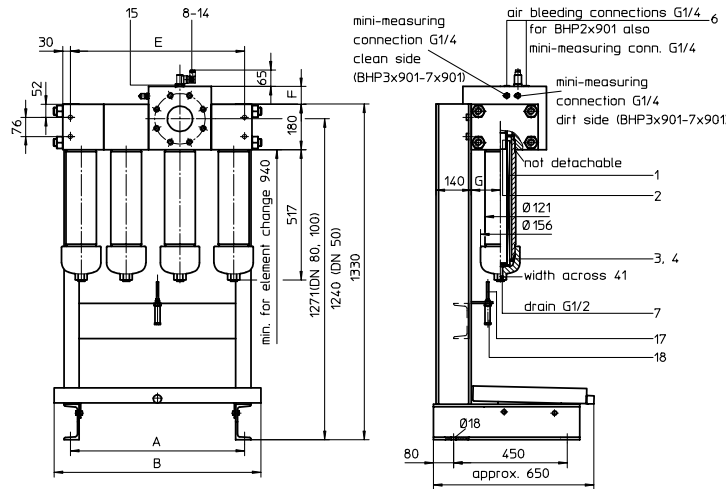
1.2. Filter element: (ordering example)

01E.900.10VG.HR.E.P.-

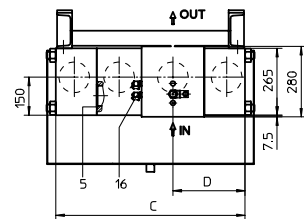
1	2	3	4	5	6	7
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- 1 **series:**
01E. = filter element according to INTERNORMEN factory specification
- 2 **nominal size:** 900
- 3 - 7 see type index-complete filter

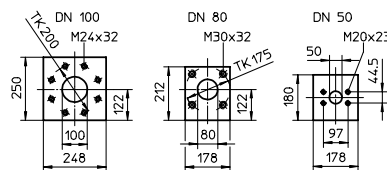
Changes of measures and design are subject to alteration!



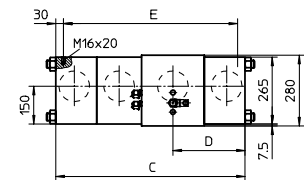
with supporting frame



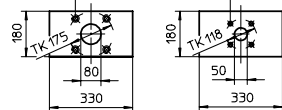
dimensions for inlet and outlet



execution with threaded bores



DN 80 (BHP2x901) M30x32
DN 50 (BHP2x901) M20x25



TK-reference circle

2. Dimensions:

filter-battery	connection DN	A	B	C	D	E	F	G	weight kg	
									without supporting frame	with supporting frame
	80	270	400	330	165	270	32	98	170	210
	50	270	400	330	165	270	-	98	170	210
	100	512	642	572	286	512	70	115	282	347
	80, 50	442	572	502	251	442	32	115	243	308
	100	690	820	750	286	690	70	115	360	428
	80, 50	620	750	680	251	620	32	115	321	389
	100	868	998	928	464	868	70	115	439	510
	80, 50	798	928	858	429	798	32	115	400	471
	100	1046	1176	1106	464	1046	70	115	517	591
	80, 50	976	1106	1036	429	976	32	115	478	552
	100	1224	1354	1284	642	1224	70	115	595	671
	80, 50	1154	1284	1214	607	1154	32	115	556	632



3. Accessories:

- counter flange see sheet-no. 1654

4. Spare parts:

item	qty. BHP2x901	qty. BHP3x901	qty. BHP4x901	qty. BHP5x901	qty. BHP6x901	qty. BHP7x901	designation	dimension	article-no.
1	2	3	4	5	6	7	filter element	01E.900	
2	2	3	4	5	6	7	O-ring	48 x 3	304357 (NBR) 304404 (FPM)
3	2	3	4	5	6	7	O-ring	98 x 4	301914 (NBR) 304754 (FPM)
4	2	3	4	5	6	7	support ring	110 x 3,5 x 2	304802
5	-	4	6	8	10	12	O-ring	85 x 3,5	311309 (NBR) 317033 (FPM)
6	2	2	2	2	2	2	screw plug	G ½	305003
7	2	3	4	5	6	7	screw plug	G ½	304678
8	1	1	1	1	1	1	clogging indicator, visual	AOR or AOC	see sheet-no. 1606
9	1	1	1	1	1	1	clogging indicator, visual-electrical	AE	see sheet-no. 1615
10	1	1	1	1	1	1	clogging sensor, electrical	VS1	see sheet-no. 1617
11	1	1	1	1	1	1	clogging sensor, electrical	VS2	see sheet-no. 1618
12	1	1	1	1	1	1	O-ring	15 x 1,5	315357 (NBR) 315427 (FPM)
13	1	1	1	1	1	1	O-ring	14 x 2	304342 (NBR) 304722 (FPM)
14	1	1	1	1	1	1	O-ring	22 x 2	304708 (NBR) 304721 (FPM)
15	1	1	1	1	1	1	screw plug	20913-4	314442
16	2	2	2	2	2	2	mini-measuring connection	MA.1.St	305453
17	1	1	1	1	1	1	high pressure hose	M16.2000	see sheet-no. 1650
18	1	1	1	1	1	1	spray protection	M16	see sheet-no. 1650

5. Description:

The filter-batteries of the series BHP are suitable for the filtration of large flow volumes up to a working pressure of 315 bar and are stressing a high filter efficiency. The filters of the filter-battery consist of spheroidal graphite cast iron (EN-GJS-400-18-LT) respectively of C-steel. For changing the filter elements the filter tubes have to be opened at the tube plug (bottom part of the filter). Filter elements are available down to a filter fineness of 4µm_(c).

INTERNORMEN-Filter elements consist of filter materials with a high intrinsic stability, an excellent particle retention, respectively a high dirt holding capacity and provide a long service life.

INTERNORMEN-Filters can be used for mineral oil based fluids, HW-emulsions, water glycols, most synthetic hydraulic fluids and lubrication fluids.

INTERNORMEN-Filter elements are available with a pressure difference resistance up to Δp 160 bar and a rupture strength up to Δp 250 bar.

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

6. 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:	315 bar
test pressure:	410 bar
connection system:	SAE-flange connection 6000 PSI, AVIT-flange connection 320 bar
air bleeding and mini-measuring connection:	G ¼
contents:	BHP 2x901 = 8 l BHP 3x901 = 18 l BHP 4x901 = 24 l BHP 5x901 = 30 l BHP 6x901 = 36 l BHP 7x901 = 42 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).

7. Pressure drop flow rates: Precise flow rates see 'INT-Expert-System Filter', respectively Δp-curves; depending on filter fineness and viscosity.

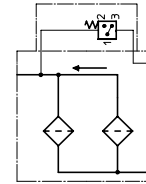
8. Test methods:

Filter elements are tested according to the following ISO standards:

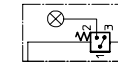
ISO 2941	Verification of collapse/burst resistance
ISO 2942	Verification of fabrication integrity
ISO 2943	Verification of material compatibility with fluids
ISO 3723	Method for end load test
ISO 3724	Verification of flow fatigue characteristics
ISO 3968	Evaluation of pressure drop versus flow characteristics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

9. Symbols:

with electrical indicator
AE30 and AE40

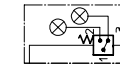


with visual-electrical indicator
AE50 and AE62

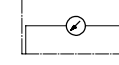


filter without internal valve

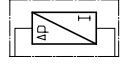
with visual-electrical indicator
AE70 and AE80



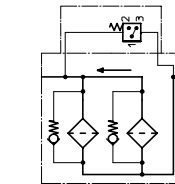
with visual clogging indicator
AOR/AOC



with electrical clogging sensor
VS1

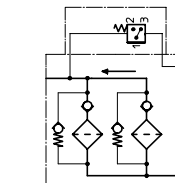


with electrical clogging sensor
VS2

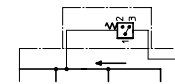


filter with by-pass valve

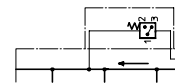
BHP 2x901



filter with reversing valve



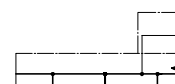
BHP 3x901



BHP 4x901



BHP 5x901



BHP 6x901



BHP 7x901