Series EH 601-1351
4568 PSI

Dimensions:

type	EH 601	EH 901	EH 1351
connection	SAE 2"		
A	20.19	26.10	35.86
B	12.20	18.11	27.95
weight lbs.	108	121	150
volume tank	.55 Gal.	.82 Gal.	1.21 Gal.
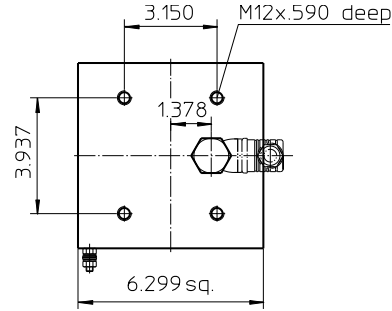
1) Connection for the potential equalization,
   only for application in the explosive area.

3.150   M12x.590 deep

3.937

1.378

6.299 sq.

M20x.984 deep

2.362

1.748

.196

3.811

1)

5-7

1.181 hex

8

2.362

OUT

IN

3.661

not detachable

2

A

1

5.709 dia

4.646 dia

3/4

1.614 hex

drain BSPP1/2

9

min. for element change B
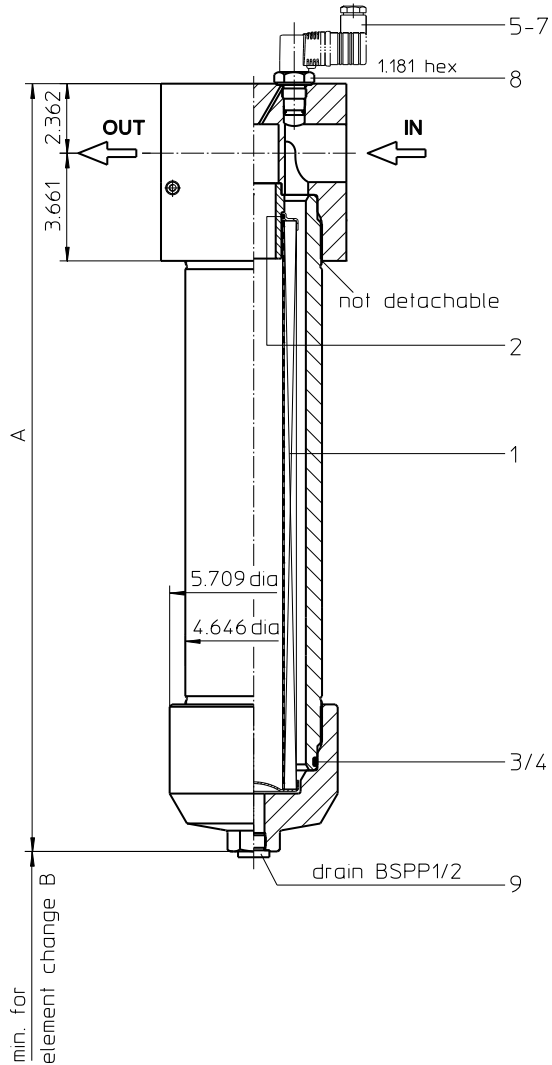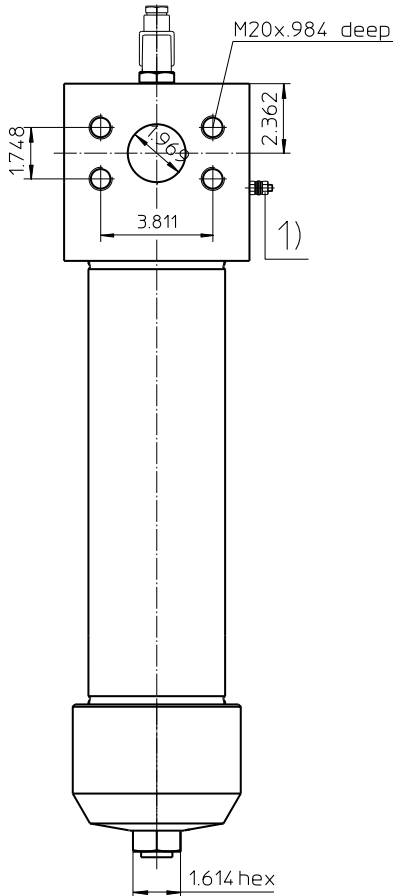
Dimensions: inches

Designs and performance values are subject to change.

E·A·T·N
Powering Business Worldwide

Pressure Filter
Series EH 601-1351
4568 PSI

Description:

Stainless steel-pressure filter series EH 601-1351 have a working pressure up to 4568 PSI. Pressure peaks can be absorbed with a sufficient safety margin. The EH-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 inside. Filter elements are available down to 5 $\mu m_{(c)}$.

Eaton filter elements are known for high intrinsic stability and an excellent filtration capability, a high dirt-retaining capacity and a long service life.

Eaton filter elements are available up to a pressure resistance of Δp 2320 PSI and a rupture strength of Δp 3625 PSI.

Eaton filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.

The internal valve is integrated into the filter head. After reaching the bypass pressure setting, the bypass valve will send unfiltered partial flow around the filter.

The reversing valve provides another level of protection for the filter element. The reverse flow will not be filtered.

1. Type index:

1.1. Complete filter: (ordering example)

EH. 901. 10VG. HR. E. P. VA. FS. 8. VA. -. -. AE
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13

1 series:
EH = stainless steel-pressure filter

2 nominal size: 601, 901, 1351

3 filter-material:
80G, 40G, 25G stainless steel wire mesh
25VG, 16VG, 10VG, 6VG, 3VG microglass

4 filter element collapse rating:
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 process connection:
FS = SAE-flange connection 6000 PSI

9 process connection size:
8 = 2"

10 filter housing specification:
VA = stainless steel

11 specification pressure vessel:
- = standard (PED 2014/68/EU)
IS20 = ASME VIII Div.1 with ASME equivalent material,
see sheet-no. 55217 (max. operating pressure 3625 PSI)

12 internal valve:
- = without
S1 = with bypass valve Δp 51 PSI
S2 = with bypass valve Δp 102 PSI
R = reversing valve, Q ≤ 122.94 GPM

13 clogging indicator or clogging sensor:
- = without
AOR = visual, see sheet-no. 1606
AOC = visual, see sheet-no. 1606
AE = visual-electric, see sheet-no. 1615
VS5 = electronic, see sheet-no. 1619

To add an indicator/sensor to your filter, use the corresponding indicator data sheet to find the indicator details and add them to the filter assembly model code.

1.2. Filter element: (ordering example)

01E. 600. 10VG. HR. E. P. VA
1 | 2 | 3 | 4 | 5 | 6 | 7

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

2 nominal size: 600, 900, 1350

3 - 7 see type index-complete filter

.

Technical data:

operating temperature:	+14 °F to +212 °F
operating medium	mineral oil, other media on request
max. operating pressure:	4568 PSI
test pressure:	6525 PSI
max. operating pressure at IS20:	3045 PSI
test pressure at IS20:	3960 PSI
process connection:	SAE-flange 6000 PSI
housing material:	EN10088-1.4571 (316 Ti according to AISI)
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical

Classified under the Pressure Equipment Directive 2014/68/EU for mineral oil (fluid group 2), Article 4, Para. 3.
Classified under ATEX Directive 2014/34/EU according to specific application (see questionnaire sheet-no. 34279-4).

Pressure drop flow curves:

Filter calculation/sizing

The pressure drop of the assembly at a given flow rate Q is the sum of the housing Δp and the element Δp and is calculated as follows:

$\Delta p_{\text{ assembly}} = \Delta p_{\text{ housing}} + \Delta p_{\text{ element}}$
$\Delta p_{\text{ housing}} = (\text{see } \Delta p = f (Q) \text{ - characteristics})$

$$\Delta p_{\text{ element}} (PSI) = \ Q\ (GPM)\ x\ \frac{MSK}{1000}\left(\frac{PSI}{GPM}\right) x\ v (SUS)\ x\ \frac{\rho}{0.876}\left(\frac{kg}{dm^3}\right)$$

For ease of calculation our Filter Selection tool is available online at www.eaton.com/hydraulic-filter-evaluation
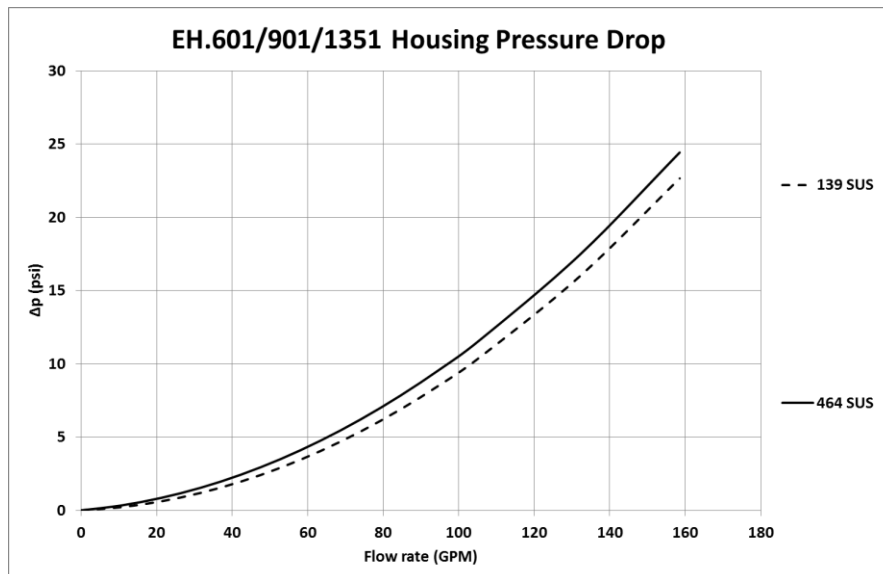
Material gradient coefficients (MSK) for filter elements

The material gradient coefficients in PSI/GPM apply to mineral oil (HLP) with a density of 0.876 kg/dm³ and a kinematic viscosity of 139 SUS (30 mm²/s). The pressure drop changes proportionally to the change in kinematic viscosity and density.
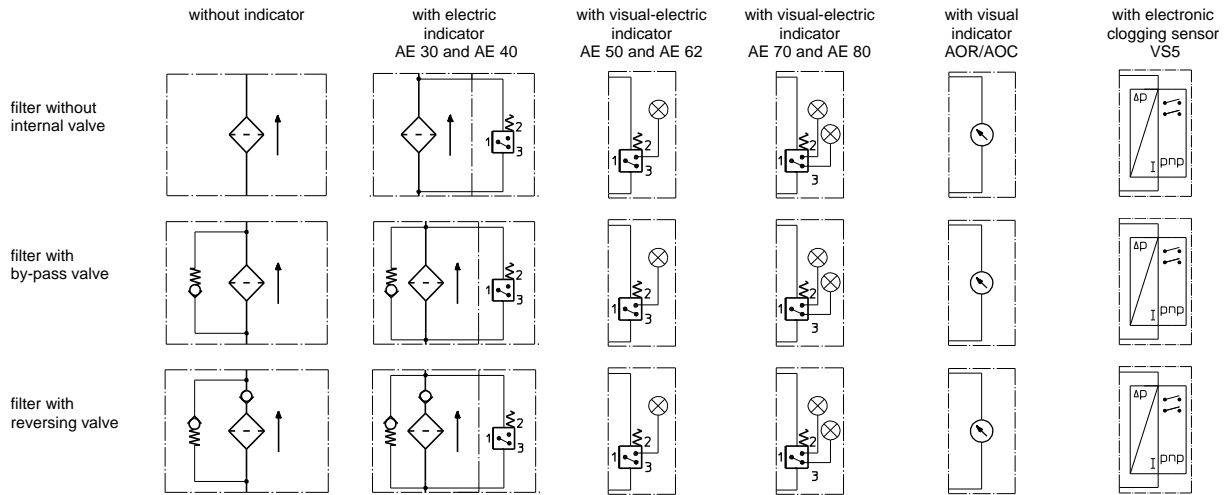
EH	VG					G		
	3VG	6VG	10VG	16VG	25VG	25G	40G	80G
601	0.963	0.669	0.428	0.368	0.251	0.0303	0.0282	0.0193
901	0.668	0.464	0.297	0.225	0.174	0.0189	0.0177	0.0121
1351	0.417	0.290	0.185	0.185	0.109	0.0122	0.0114	0.0078

Δp = f(Q) – characteristics according to ISO 3968

The pressure drop characteristics apply to mineral oil (HLP) with a density of 0,876 kg/dm³. The pressure drop changes proportionally to the density.

Symbols:

	without indicator	with electric indicator AE 30 and AE 40	with visual-electric indicator AE 50 and AE 62	with visual-electric indicator AE 70 and AE 80	with visual indicator AOR/AOC	with electronic clogging sensor VS5
filter without internal valve						
filter with by-pass valve						
filter with reversing valve						

Spare parts:

item	qty.	designation	dimension EH 601	dimension EH 901	dimension EH 1351	article-no.	
1	1	filter element	01E.600…	01E.900…	01E.1350…		
2	1	O-ring	48 x 3			304338 (NBR)	304730 (FPM)
3	1	O-ring	98 x 4			305599 (NBR)	310291 (FPM)
4	1	support ring	110 x 3,5 x 2			304802	
5	1	clogging indicator visual	AOR or AOC			siehe Blatt-Nr. 1606	
6	1	clogging indicator visual-electric	AE			siehe Blatt-Nr. 1615	
7	1	clogging sensor electronic	VS5			siehe Blatt-Nr. 1619	
8	1	screw plug	20913-4			314442	
9	1	screw plug	BSPP ½"			306966	

item 8 execution only without clogging indicator or clogging sensor

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

North America
44 Apple Street
Tinton Falls, NJ 07724

Toll Free: 800 656-3344
(North America only)
Tel: +1 732 212-4700

Europe/Africa/Middle East
Auf der Heide 2
53947 Nettersheim, Germany
Tel: +49 2486 809-0

Friedensstraße 41
68804 Altlußheim, Germany
Tel: +49 6205 2094-0

An den Nahewiesen 24
55450 Langenlonsheim, Germany
Tel: +49 6704 204-0

Greater China
No. 7, Lane 280,
Linhong Road
Changning District, 200335
Shanghai, P.R. China

Tel: +86 21 5200-0099

Asia-Pacific
100G Pasir Panjang Road
#07-08 Interlocal Centre
Singapore 118523

Tel: +65 6825-1668

For more information, please email us at *filtration@eaton.com* **or visit** *www.eaton.com/filtration*

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