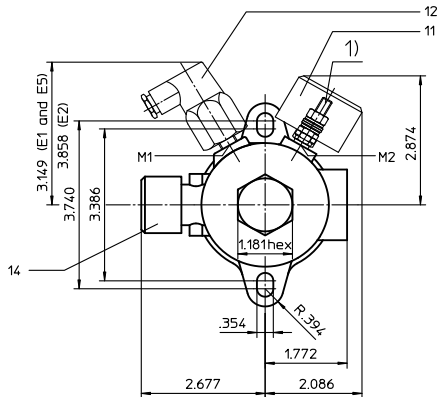


# RETURN LINE FILTER, with breather filter

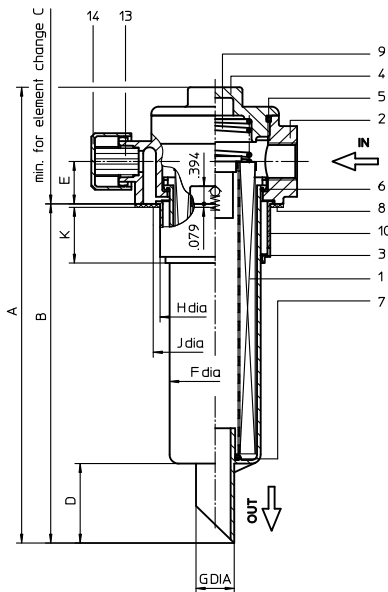
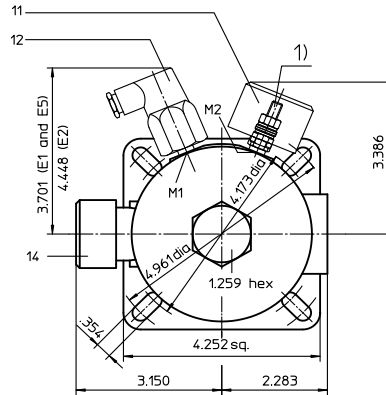
## Series TEFB 55-120 145 PSI

Sheet No.  
1061 L

views TEFB 55, 70



view TEFB 120



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

When equipped with one clogging indicator use preferably connection M2.

### 2. Dimensions: inch

type	TEFB 55	TEFB 70	TEFB 120
connection	- 8 SAE	-12 SAE	-16 SAE
A	10.24	10.24	11.42
B	7.56	7.56	8.27
C	10.63	10.63	11.81
D	1.77	1.77	2.56
E	.94	.94	1.18
F	2.05	2.05	2.76
G	.87	.87	.94
H	2.38	2.38	3.09
J	2.40	2.40	3.11
K	1.25	1.25	1.65
weight lbs.	2.20	2.20	3.30
volume tank	.08 Gal.	.08 Gal.	.15 Gal.

### 1. Type index

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

**TEFB. 120. 10VG. 16. S. P. -. UG. 5. -. E1. O. 1**

1	2	3	4	5	6	7	8	9	10	11	12	13
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- 1 **series:**  
TEFB = tank-mounted return-line-filter with breather filter
- 2 **nominal size:** 55, 70, 120
- 3 **filter-material and filter-finness:**  
80 G = 80  $\mu$ m, 40 G = 40  $\mu$ m, 25 G = 25  $\mu$ m stainless steel wire mesh,  
25 VG = 20  $\mu$ m<sub>(c)</sub>, 16 VG = 15  $\mu$ m<sub>(c)</sub>, 10 VG = 10  $\mu$ m<sub>(c)</sub>, 6 VG = 7  $\mu$ m<sub>(c)</sub>, 3 VG = 5  $\mu$ m<sub>(c)</sub> Interpor fleece (glass fiber)  
10 P = 10  $\mu$ m paper
- 4 **resistance of pressure difference for filter element:**  
16 =  $\Delta p$  232 PSI
- 5 **filter element design:**  
E = without by-pass valve  
S = with by-pass valve  $\Delta p$  29 PSI
- 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:**  
UG = thread connection
- 9 **connection size:**  
3 = - 8 SAE TEFB 55  
4 = - 12 SAE TEFB 70  
5 = - 16 SAE TEFB 120
- 10 **filter housing specification:** (see catalog)  
- = standard  
IS06 = see sheet-no. 31605  
IS011 = see sheet-no. 40530
- 11 **clogging indicator at M1:**  
- = without  
O = visual, see sheet-no. 1616  
E1 = pressure switch, see sheet-no. 1616  
E2 = pressure switch, see sheet-no. 1616  
E5 = pressure switch, see sheet-no. 1616  
PA = potential equalisation
- 12 **clogging indicator at M2:**  
possible indicators see position 11 of the type index
- 13 **oil separator:**  
- = without  
1 = with oil separator

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

**01E. 120. 10VG. 16. S. P. -**

1	2	3	4	5	6	7
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- 1 **series:**  
01E. = filter element according to company standard
- 2 **nominal size:** 70, 120
- 3 - 7 see type index-complete filter

### 3. Spare parts:

item	qty.	designation	dimension and article-no.		
			TEFB 55	TEFB 70	TEFB 120
1	1	filter element	01E, 70		01E, 120
2	1	filter head	308751	308752	308648
3	1	filter bowl	304595		303041
4	1	screw plug	M 60 x 2		M 82 x 2
5	1	O-ring	56 x 3		75 x 3
			305072 (NBR)		302215 (NBR)
			305322 (FPM)		304729 (FPM)
6	1	O-ring	50 x 2,5		68 x 4
			305239 (NBR)		303037 (NBR)
			305321 (FPM)		313046 (FPM)
7	1	O-ring	22 x 3		24 x 3
			304387 (NBR)		303038 (NBR)
			314733 (FPM)		304397 (FPM)
8	1	gasket ( filter without oil separator )	.08 thick		.12 thick
	1	gasket ( filter with oil separator )	307706		303039
9	1	spring	DA = 40		DA = 52
			304982		302144
10	1	oil separator	304544		310261
11	1	clogging indicator visual	O 301721		
12	1	clogging indicator electrical	E1, E2 or E5		see sheet-no. 1616
13	1	filter element breather	01BFE.70		01BFE.120
14	1	protection cap	305312		303048

### 4. Description:

Return-line filters in the TEFB series are suitable for a working pressure up to 145 PSI. Pressure peaks will be absorbed by a sufficient margin of safety. The TEFB-filters are directly mounted to the reservoir and connected to the return-line. No connection is needed for the build-in air filter. The air filter has a 10 µm throw-away element.

The filter element consists of a 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 is from outside to inside. Filters finer than 40 µm should use throw-away elements made of paper or Interpor fleece (glass fiber). Filter elements as fine as 5 µm<sub>(c)</sub> are available; finer filter elements on request.

Internormen Product Line filter can be used for petroleum-based fluids, HW emulsions, water glycols, most synthetic fluids and lubrication fluids. Consult factory for specific fluid applications.

Internormen Product Line filter elements are known as stable elements which have excellent filtration capabilities and a high dirt retaining capacity, therefore having a long service life. Due to its practical design, the return-line filter is easy to service.

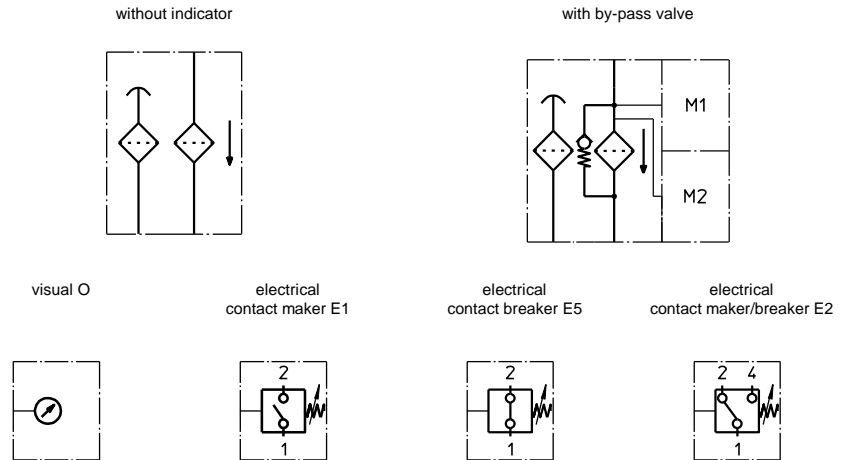
When changing the filter element a detachable connection between the filter head and the filter bowl prevents a flow back of dirty oil into the tank.

### 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:	145 PSI
opening pressure by-pass valve:	29 PSI
connection system:	thread connection
housing material standard:	filter head AL, filter cover / filter bowl glass fibre reinforced polyamide
housing material IS11, category M2:	filter head GG, filter cover steel, filter bowl carbon fibre reinforced polyamide
housing material IS11, category 2:	filter head AL, filter cover / filter bowl carbon fibre reinforced polyamide
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 '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