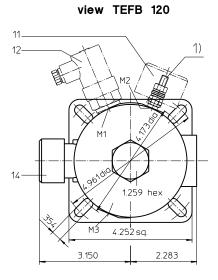
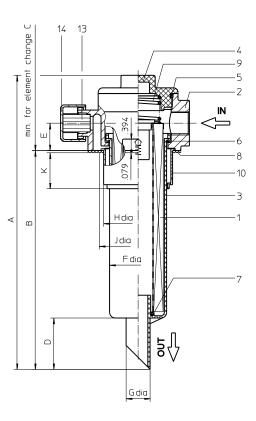
# Series TEFB 55-120 145 PSI



1) Connection for the potential equalization, only for application in the explosive area.

views TEFB 55/70



nensions: inches

ubject to change!

EDV 08/19



Dimensions: inches

Designs and performance values are subject to change!

# Return Line Filter Series TEFB 55-120 145 PSI

#### **Description:**

Return-line filter series TEFB 55-120 have 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  $\mu$ m disposable 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.

For cleaning the stainless steel mesh element or changing the filter element, remove the cover and take out the element. The mesh elements are not guaranteed to maintain 100% performance after cleaning.

Filters finer than 40  $\mu$ m use the disposable elements made of paper or microglass. Filter elements as fine as 5  $\mu$ m(c) are available; finer filter elements on request.

Eaton 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.

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

When changing the filter element, a detachable connection between the filter head and the filter bowl prevents dirty oil from flowing into the tank.

### 1. Type index:

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

TEFB = tank-mounted return-line-filter with breather filter 2 nominal size: 55, 70, 120 3 filter-material: 80G, 40G, 25G stainless steel wire mesh 25VG, 16VG, 10VG, 6VG, 3VG microglass 10P paper 4 filter element collapse rating: 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: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection: UG = thread connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = visual, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5	1 1 <b>serie</b> :	2 3 4 5 6 7 8 9 10 11 12 13 14
<ul> <li>nominal size: 55, 70, 120</li> <li>filter-material:</li> <li>80G, 40G, 25G stainless steel wire mesh 25VG, 16VG, 10VG, 6VG, 3VG microglass 10P paper</li> <li>filter element collapse rating:</li> <li>16 = Δp 232 PSI</li> <li>filter element design:</li> <li>E = without by-pass valve</li> <li>S = with by-pass valve Δp 29 PSI</li> <li>sealing material:</li> <li>P = Nitrile (NBR)</li> <li>V = Viton (FPM)</li> <li>filter element specification:</li> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31601</li> <li>process connection:</li> <li>UG = thread connection</li> <li>process connection size:</li> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>filter housing specification:</li> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31605</li> <li>ISI0 = for AFEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>flogging indicator at M1:</li> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E3 = prossure switch, see sheet-no. 1616</li> <li>E4 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E4 = ground connection</li> <li>PA = ground connection</li> <li>clogging indicator at M2:</li> <li>possible indicators see position 11 of the type index</li> <li>clogging indicator at M3:</li> <li>possible indicators see position 11 of the type index</li> <li>oil separator:</li> <li>- = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>		
<ul> <li><b>3</b> filter-material: 80G, 40G, 25G stainless steel wire mesh 25VG, 16VG, 10VG, 6VG, 3VG microglass 10P paper</li> <li><b>4</b> filter element collapse rating: 16 = Δp 232 PSI</li> <li><b>5</b> filter element design: E = without by-pass valve S = with by-pass valve Δp 29 PSI</li> <li><b>6</b> sealing material: P = Nitrile (NBR) V = Viton (FPM)</li> <li><b>7</b> filter element specification: - = standard IS06 = for HFC application, see sheet-no. 31601</li> <li><b>8</b> process connection: UG = thread connection</li> <li><b>9</b> process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120)</li> <li><b>10</b> filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li><b>11</b> 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 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure s</li></ul>		
80G, 40G, 25G stainless steel wire mesh         25VG, 16VG, 10VG, 6VG, 3VG microglass         10P paper         4         filter element collapse rating:         16       = Δp 232 PSI         5       filter element design:         E       = without by-pass valve Δp 29 PSI         6       sealing material:         P       = Nitrile (NBR)         V       = Viton (FPM)         7       filter element specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31601         8       process connection:         UG       = thread connection         9       process connection size:         3       = -8 SAE         3       = -8 SAE         4       = 12 SAE         10       filter housing specification:         -       = standard         IS006       for HFC application, see sheet-no. 31605         IS10       = for ATEX, see sheet-no. 68267 (TEFB 55/70)         11       clogging indicator at M1:         -       = without         0       = visual, see sheet-no. 1616         E1       = pressure switch, see sheet-no. 1616         E2		
25VG, 16VG, 10VG, 6VG, 3VG microglass 10P paper 4 filter element collapse rating: 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: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = visual, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = ground connection 12 clogging indicator at M2: possible indicators see position 11 of the type index 13 clogging indicator at M3: possible indicator see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)		
<ul> <li>filter element collapse rating:</li> <li>16 = Δp 232 PSI</li> <li>filter element design:</li> <li>E = without by-pass valve Δp 29 PSI</li> <li>6 sealing material:</li> <li>P = Nitrile (NBR)</li> <li>V = Viton (FPM)</li> <li>7 filter element specification:</li> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31601</li> <li>8 process connection</li> <li>UG = thread connection</li> <li>9 process connection size:</li> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> <li>10 filter housing specification:</li> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>11 clogging indicator at M1:</li> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = presure switch at M2:</li> <li>possible indicator at M2:</li> <li>possible indicator at M3:</li> <li>possible indicator see position 11 of the type index</li> <li>13 clogging indicator at M3:</li> <li>possible indicator see position 11 of the type index</li> <li>14 oil separator:</li> <li>- = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>		
16 = $\Delta p 232 PSI$ 5 filter element design: E = without by-pass valve $\Delta p 29 PSI$ 6 sealing material: P = Nitrile (NBR) V = Viton (FPM) 7 filter element specification: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection: UG = thread connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = visual, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = ground connection 12 clogging indicator at M2: possible indicators see position 11 of the type index 13 clogging indicator at M3: possible indicators see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)	10P pa	aper
<ul> <li>5 filter element design:</li> <li>E = without by-pass valve Δp 29 PSI</li> <li>6 sealing material:</li> <li>P = Nitrile (NBR)</li> <li>V = Viton (FPM)</li> <li>7 filter element specification: <ul> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31601</li> </ul> </li> <li>8 process connection:</li> <li>UG = thread connection</li> <li>9 process connection size:</li> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> </ul> <li>10 filter housing specification: <ul> <li>- = standard</li> <li>ISO6 = for HFC application, see sheet-no. 31605</li> <li>ISI0 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> </ul> </li> <li>11 clogging indicator at M1: <ul> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E4 = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>- = without</li> <li>- = without</li> <li>- = without</li> </ul> </li>		
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: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection: UG = thread connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = visual, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E6 = pressure switch, see sheet-no. 1616 E7 = pressure switch, see sheet-no. 1616 E8 = pressure switch, see sheet-no. 1616 E9 = pressure switch, see sheet-no. 1616 E9 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E1 = pressure see position 11 of the type index 13 clogging indicator at M3: possible indicators see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)		•
S = with by-pass valve $\Delta p$ 29 PSI 5 sealing material: P = Nitrile (NBR) V = Viton (FPM) 7 filter element specification: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection: UG = thread connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 5 = -16 SAE (TEFB 70) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = visual, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E6 = pressure switch, see sheet-no. 1616 E7 = pressure switch, see sheet-no. 1616 E8 = pressure switch, see sheet-no. 1616 E9 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure switch, see sheet-no. 1616 E3 = pressure switch, see sheet-no. 1616 E4 = pressure switch, see sheet-no. 1616 E5 = pressure switch, see sheet-no. 1616 E6 = pressure switch, see sheet-no. 1616 E7 = pressure switch, see sheet-no. 1616 E8 = pressure switch, see sheet-no. 1616 E9 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E1 = pressure switch, see sheet-no. 1616 E2 = pressure s		0
<ul> <li>6 sealing material:</li> <li>P = Nitrile (NBR)</li> <li>V = Viton (FPM)</li> <li>7 filter element specification: <ul> <li>- = standard</li> <li>IS06 = for HFC application, see sheet-no. 31601</li> </ul> </li> <li>8 process connection: <ul> <li>UG = thread connection</li> <li>9 process connection size:</li> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> </ul> </li> <li>10 filter housing specification: <ul> <li>- = standard</li> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for AFEX, see sheet-no. 68267 (TEFB 55/70)</li> </ul> </li> <li>11 clogging indicator at M1: <ul> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E4 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E6 = pressure switch, see sheet-no. 1616</li> <li>E7 = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul> </li> </ul>		
P       = Nitrile (NBR)         V       = Viton (FPM)         7       filter element specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31601         8       process connection:         UG       = thread connection         9       process connection size:         3       = -8 SAE (TEFB 55)         4       = -12 SAE (TEFB 70)         5       = -16 SAE (TEFB 120)         10       filter housing specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31605         IS10       = for AFEX, see sheet-no. 68267 (TEFB 55/70)         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       = ground connection         12       clogging indicator at M2:         possible indicators see position 11 of the type index         13       clogging indicator at M3:         possible indicators see position 11 of the type index <td></td> <td></td>		
<ul> <li>V = Viton (FPM)</li> <li>7 filter element specification: <ul> <li>- = standard</li> <li>IS06 = for HFC application, see sheet-no. 31601</li> </ul> </li> <li>8 process connection: <ul> <li>UG = thread connection</li> </ul> </li> <li>9 process connection size: <ul> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> </ul> </li> <li>10 filter housing specification: <ul> <li>- = standard</li> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> </ul> </li> <li>11 clogging indicator at M1: <ul> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E3 = pressure switch, see sheet-no. 1616</li> <li>E4 = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>- = without</li> <li>- = without</li> <li>- = without</li> </ul> </li> </ul>		0
<pre>7 filter element specification: - = standard IS06 = for HFC application, see sheet-no. 31601 8 process connection: UG = thread connection 9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120) 10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70) 11 clogging indicator at M1: - = without 0 = 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 = ground connection 12 clogging indicator at M2: possible indicators see position 11 of the type index 13 clogging indicator at M3: possible indicators see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)</pre>	-	
<ul> <li>= standard IS06 = for HFC application, see sheet-no. 31601</li> <li>process connection: UG = thread connection</li> <li>process connection size:</li> <li>3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120)</li> <li>filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>clogging indicator at M1:</li> <li>- = 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</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E3 = pressure switch, see sheet-no. 1616</li> <li>E4 = ground connection</li> <li>clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>dil separator: - = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>		
<ul> <li>8 process connection: UG = thread connection</li> <li>9 process connection size: 3 = -8 SAE (TEFB 55) 4 = -12 SAE (TEFB 70) 5 = -16 SAE (TEFB 120)</li> <li>10 filter housing specification: - = standard IS06 = for HFC application, see sheet-no. 31605 IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>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 = ground connection</li> <li>12 clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)</li> </ul>	-	•
UG       = thread connection         9       process connection size:         3       = -8 SAE       (TEFB 55)         4       = -12 SAE       (TEFB 70)         5       = -16 SAE       (TEFB 120)         10       filter housing specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31605         IS10       = for ATEX, see sheet-no. 68267 (TEFB 55/70)         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       = ground connection         12       clogging indicator at M2:         possible indicators see position 11 of the type index         13       clogging indicator at M3:         possible indicators see position 11 of the type index         14       oil separator:         -       = without         1       = without	IS06	= for HFC application, see sheet-no. 31601
<ul> <li>9 process connection size:</li> <li>3 = -8 SAE (TEFB 55)</li> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> <li>10 filter housing specification:</li> <li>- = standard</li> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>11 clogging indicator at M1:</li> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> <li>12 clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator:</li> <li>- = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>	8 proce	ess connection:
3       = -8 SAE       (TEFB 55)         4       = -12 SAE       (TEFB 70)         5       = -16 SAE       (TEFB 120)         10       filter housing specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31605         IS10       = for ATEX, see sheet-no. 68267         11       clogging indicator at M1:         -       = without         0       = 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       = ground connection         12       clogging indicator at M2:         possible indicators see position 11 of the type index         13       clogging indicator at M3:         possible indicators see position 11 of the type index         14       oil separator:         -       = without         1       = without	UG	= thread connection
<ul> <li>4 = -12 SAE (TEFB 70)</li> <li>5 = -16 SAE (TEFB 120)</li> <li>10 filter housing specification: <ul> <li>= standard</li> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> </ul> </li> <li>11 clogging indicator at M1: <ul> <li>= without</li> <li>= visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>= without</li> <li>= without</li> <li>= without</li> </ul> </li> </ul>	9 proce	ess connection size:
<ul> <li>5 = -16 SAE (TEFB 120)</li> <li>10 filter housing specification: <ul> <li>= standard</li> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> </ul> </li> <li>11 clogging indicator at M1: <ul> <li>= without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicator see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>= without</li> <li>= without</li> <li>= withoil separator (only at TEFB 55/70)</li> </ul> </li> </ul>	-	()
10       filter housing specification:         -       = standard         IS06       = for HFC application, see sheet-no. 31605         IS10       = for ATEX, see sheet-no. 68267 (TEFB 55/70)         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       = ground connection         12       clogging indicator at M2:         possible indicators see position 11 of the type index         13       clogging indicator at M3:         possible indicators see position 11 of the type index         14       oil separator:         -       = without         1       = with oil separator (only at TEFB 55/70)		- ( -)
<ul> <li>standard</li> <li>Sofe = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>clogging indicator at M1: <ul> <li>= without</li> <li>visual, see sheet-no. 1616</li> <li>pressure switch, see sheet-no. 1616</li> <li>pressible indicator at M2:</li> <li>possible indicator see position 11 of the type index</li> </ul> </li> <li>1 clogging indicator at M3:</li> <li>possible indicators see position 11 of the type index</li> <li>oil separator: <ul> <li>= without</li> <li>= without</li> <li>= with oil separator (only at TEFB 55/70)</li> </ul> </li> </ul>		
<ul> <li>IS06 = for HFC application, see sheet-no. 31605</li> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>11 clogging indicator at M1: <ul> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>= without</li> </ul> </li> </ul>	<u>-</u>	
<ul> <li>IS10 = for ATEX, see sheet-no. 68267 (TEFB 55/70)</li> <li>11 clogging indicator at M1: <ul> <li>- = without</li> <li>O = visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> </ul> </li> <li>12 clogging indicator at M2: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>13 clogging indicator at M3: <ul> <li>possible indicators see position 11 of the type index</li> </ul> </li> <li>14 oil separator: <ul> <li>- = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul> </li> </ul>	IS06	
<ul> <li>= without</li> <li>= visual, see sheet-no. 1616</li> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> <li>12 clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator: - = without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>	IS10	
0       = 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       = ground connection         12       clogging indicator at M2: possible indicators see position 11 of the type index         13       clogging indicator at M3: possible indicators see position 11 of the type index         14       oil separator: - = without 1 = with oil separator (only at TEFB 55/70)	11 clogg	jing indicator at M1:
<ul> <li>E1 = pressure switch, see sheet-no. 1616</li> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> <li>12 clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)</li> </ul>	-	
<ul> <li>E2 = pressure switch, see sheet-no. 1616</li> <li>E5 = pressure switch, see sheet-no. 1616</li> <li>PA = ground connection</li> <li>12 clogging indicator at M2: possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)</li> </ul>	-	
E5 = pressure switch, see sheet-no. 1616 PA = ground connection 12 clogging indicator at M2: possible indicators see position 11 of the type index 13 clogging indicator at M3: possible indicators see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)		
12       clogging indicator at M2:         possible indicators see position 11 of the type index         13       clogging indicator at M3:         possible indicators see position 11 of the type index         14       oil separator:         -       =         i       =         without       1         1       =         with oil separator (only at TEFB 55/70)		
<ul> <li>possible indicators see position 11 of the type index</li> <li>13 clogging indicator at M3: possible indicators see position 11 of the type index</li> <li>14 oil separator: <ul> <li>= without</li> <li>= with oil separator (only at TEFB 55/70)</li> </ul> </li> </ul>	PA	= ground connection
13       clogging indicator at M3:         possible indicators see position 11 of the type index         14       oil separator:         -       = without         1       = with oil separator (only at TEFB 55/70)		
possible indicators see position 11 of the type index 14 oil separator: - = without 1 = with oil separator (only at TEFB 55/70)	possi	ble indicators see position 11 of the type index
14     oil separator:       -     =       -     =       with oil separator (only at TEFB 55/70)		
<ul> <li>= without</li> <li>1 = with oil separator (only at TEFB 55/70)</li> </ul>		
1 = with oil separator (only at TEFB 55/70)	14 oil se	
	- 1	
	I	- with on separator (only at the $0.00/10$ )
		the indicator details and add them to the filter assembly model

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

01	E. 120.	10VG.	16.	S.	Ρ.	-
1	2	3	4	5	6	7
1	<b>series:</b> 01E. =	filter elem	nent a	ccor	ding	to company standard

- 2 **nominal size:** 70, 120
- 3 7 see type index-complete filter

#### **Technical data:**

operating temperature: 14°F to +212°F mineral oil, other media on request operating medium max. operating pressure: 145 PSI 29 PSI opening pressure by-pass valve: process connection: thread connection filter head AL, screw plug / filter bowl glass fibre reinforced polyamide housing material standard: housing material IS10, category 2 and 3: filter head AL, screw plug / 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 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  $\Delta p$  and the element  $\Delta p$  and is calculated as follows:

 $\Delta p$  assembly =  $\Delta p$  housing +  $\Delta p$  element  $\Delta p$  housing = (see  $\Delta p = f(Q)$  - 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

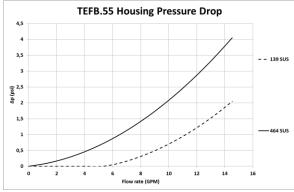
#### Material gradient coefficients (MSK) for filter elements

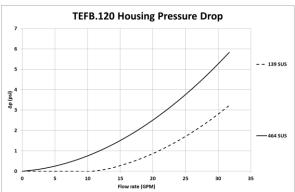
The material gradient coefficients in psi/gpm apply to mineral oil (HLP) with a density of 0.876 kg/dm<sup>3</sup> and a kinematic viscosity of 139 SUS (30 mm<sup>2</sup>/s). The pressure drop changes proportionally to the change in kinematic viscosity and density.

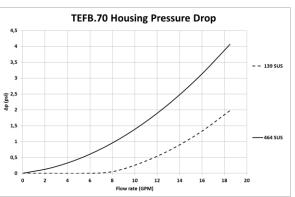
TEFB	VG				G			Р	
	3VG	6VG	10VG	16VG	25VG	25G	40G	80G	10P
55	3.535	2.454	1.571	1.368	0.935	0.1196	0.1117	0.0765	0.797
70	3.535	2.454	1.571	1.368	0.935	0.1196	0.1117	0.0765	0.797
120	3.162	2.195	1.405	1.224	0.836	0.1144	0.1068	0.0731	0.690

#### <u>∆p = f(Q) – characteristics according to ISO 3968</u>

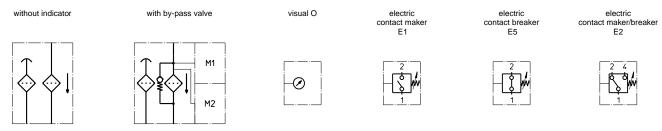
The pressure drop characteristics apply to mineral oil (HLP) with a density of 0.876 kg/dm<sup>3</sup>. The pressure drop changes proportionally to the density.







#### Symbols:



#### 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	NG S	55-70	NG 120303041			
4	1	screw plug	M60	) x 2	M82 x 2			
5	1	O-ring	305072	x 3 2 (NBR) 2 (FPM)	75 x 3 302215 (NBR) 304729 (FPM)			
6	1	O-ring	305239	< 2,5 9 (NBR) 1 (FPM)	68 x 4 303037 (NBR) 313046 (FPM)			
7	1	O-ring	304387	x 3 7 (NBR) 3 (FPM)	24 x 3 303038 (NBR) 304397 (FPM)			
8	1	gasket ( filter without oil separator )		thick 706	.12 thick 303039			
	1	gasket ( filter with oil separator )		thick 5786	-			
9	1	spring		= 40 9920	DA = 52 302144			
10	1	oil separator	304	544	-			
11	1	clogging indicator, visual		O 30172	1			
12	1	clogging indicator, electric		E1, E2 or E see sheet-no				
13	1	filter element breather	-	E.70 865	01BFE.120 301866			
14	1	protection cap	305	312	303048			

#### 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

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

© 2021 Eaton. All rights reserved. All trademarks and registered trademarks are the property of their respective owners. All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of such products. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Eaton as to the effects of such use or the results to be obtained. Eaton assumes no liability arising out of the use by others of such products. Nor is the information herein to be construed as absolutely complete, since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

