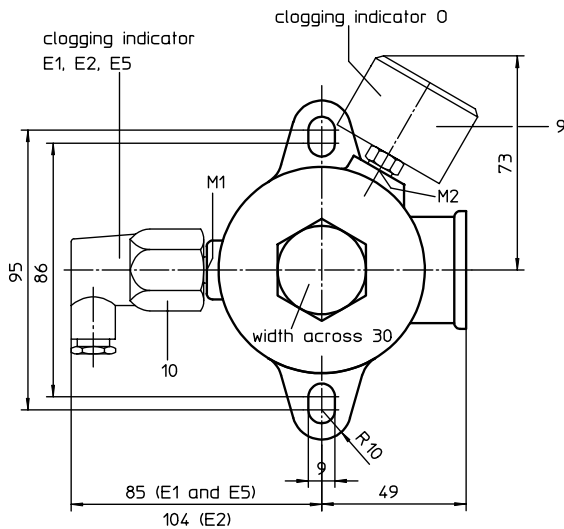
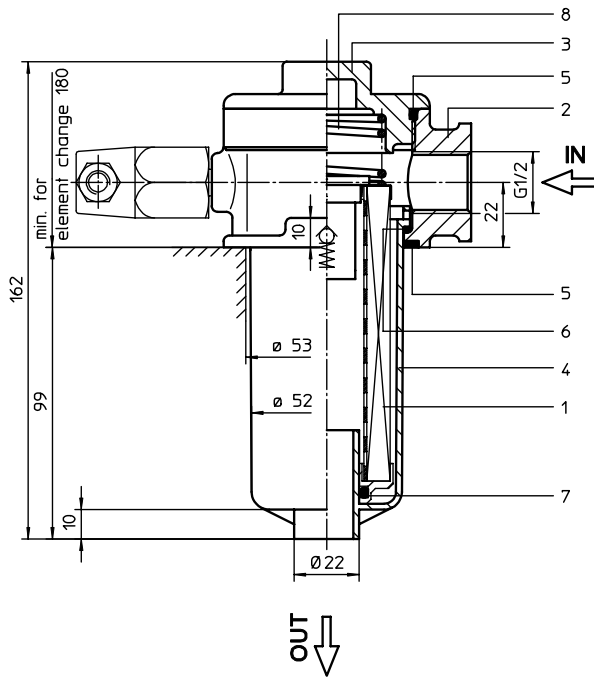


RETURN LINE FILTER

Series TEF 41 DN 16 PN 10

Sheet No.
1040 D



When equipped with one cllogging indicator use preferably connection M1.

1. Type index:

1.1. Complete filter: (ordering example)

TEF. 41. 10VG. 16. S. P. - . G. 3. - . E1. O (filter with by-pass valve)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|----|----|----|

TEF. 41. 10VG. 30. E. P. - . G. 3. - . E1. O (filter without by-pass valve)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|----|----|----|

- | | |
|----|---|
| 1 | series: TEF = tank-mounted return-line-filter |
| 2 | nominal size: 41 |
| 3 | filter-material and filter-finness: 80 G = 80 μm , 40 G = 40 μm , 25 G = 25 μm stainless steel wire mesh 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 fibre) 25 P = 25 μm , 10 P = 10 μm paper only with 01E.41 |
| 4 | resistance of pressure difference for filter element: 16 = 01E.41 for Δp 16 bar (standard with by-pass valve) 30 = 01E.60 for Δp 30 bar (standard without by-pass valve) |
| 5 | filter element design: E = without by-pass valve (01E.60) S = with by-pass valve (01E.41) Δp 2,0 bar |
| 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: G = thread connection according to DIN 3852, T2 |
| 9 | connection size: 3 = G $\frac{1}{2}$ |
| 10 | filter housing specification: (see catalog) - = standard IS06 = see sheet-no. 31605 |
| 11 | cllogging 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 |
| 12 | cllogging indicator at M2: possible indicators see position 11 of the type index |

1.2. Filter element: (ordering example)

01E. 41. 10VG. 16. S. P. -

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

(with by-pass valve)

01E. 60. 10VG. 30. E. P. -

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

(without by-pass valve)

- | | |
|---|--|
| 1 | series: 01E. = filter element according to INTERNORMEN factory specification |
| 2 | nominal size: 41, 60 |
| 3 | - 7 see type index-complete filter |

weight: 0,8 kg

EDV 08/03

Changes of measures and design are subject to alteration!

2. Spare parts:

| item | qty. | designation | dimension | article-no. | |
|------|------|--------------------------------|--------------|--------------------|--------------|
| 1 | 1 | filter element with by-pass | 01.E 41 | | |
| | 1 | filter element without by-pass | 01.E 60 | | |
| 2 | 1 | filter head | TEF 41 - 55 | 305458 | |
| 3 | 1 | filter cover | M 60 x 2 | 303621 | |
| 4 | 1 | filter bowl | TEF 41 | 306673 | |
| 5 | 2 | O-ring | 56 x 3 | 305072 (NBR) | 305322 (FPM) |
| 6 | 1 | O-ring | 50 x 2,5 | 305239 (NBR) | 305321 (FPM) |
| 7 | 1 | O-ring | 22 x 3,5 | 304341 (NBR) | 304392 (FPM) |
| 8 | 1 | spring | DA = 40 | 304982 | |
| 9 | 1 | clogging indicator visual | O | 301721 | |
| 10 | 1 | clogging indicator electrical | E1, E2 or E5 | see sheet-no. 1616 | |

3. Description:

Return-line filters in the TEF series are suitable for a working pressure up to 10 bar. Pressure peaks will be absorbed by a sufficient margin of safety.

The TEF-filters are directly mounted to the reservoir and connected to the return-line.

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 fibre). Filter elements as fine as 5 µm_(c) microns are available; finer filter elements on request.

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

INTERNORMEN-Filters 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.

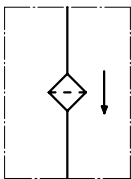
4. Technical data:

| | |
|---------------------------------|--|
| temperature range: | -10°C to +80°C (for a short time +100°C) |
| operating medium: | mineral oil, other media on request |
| max. operating pressure: | 10 bar |
| opening pressure by-pass valve: | 2,0 bar |
| connection system: | thread connection according to DIN 3852, T2 |
| housing material: | Al-cast, glass fiber reinforced polyamide |
| sealing material: | Nitrile (NBR) or Viton (FPM), other materials on request |
| installation position: | vertical |
| volume tank: | 0,2 l |

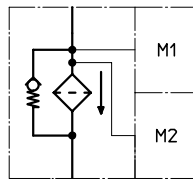
Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

5. Symbols:

without indicator



with by-pass valve



visual O



electrical contact maker
E1



electrical contact breaker
E5



electrical contact maker/breaker
E2



6. Pressure drop flow curves:

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

7. 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 |