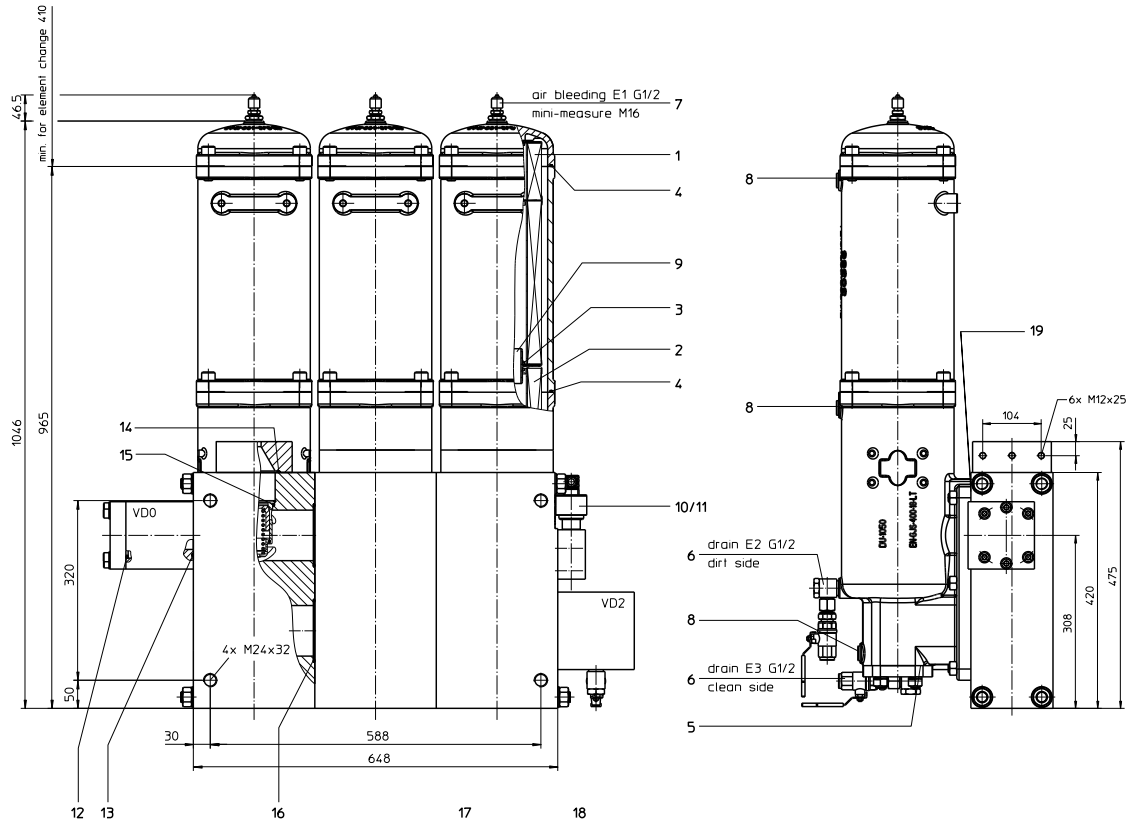
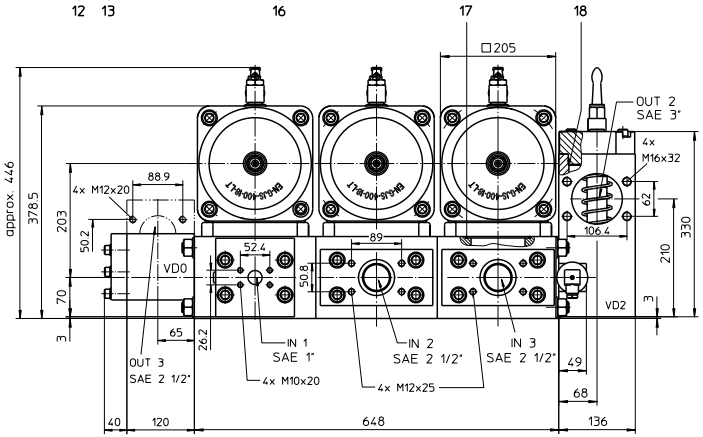
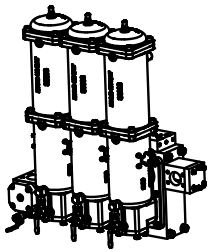
PRESSURE FILTER
Series TWF6000.65220 DN 25-80 PN 16

Sheet No. **65220-4**







1. Type index:

1.1. Complete filter: (ordering example)

TWF. 6000. 65220. V. 1. 2. FS. 5. 9. A. 9. S12. -. VS1

1	2	3	4	5	6	7	8	9	10	11	12	13	14

1 **series:**
TWF = TWIN-filter combination

2 **nominal size:** 6000

3 **execution:** according to sheet-no. 65220

4 **sealing material:**
V = Viton (FPM)
P = Nitrile (NBR)
HNBR = hydrated Nitril-Butadien-Rubber (HNBR); WS 20.357

5 **filter element:**
1 = stage filter element, see position 1.2

6 **filter element:**
2 = single filter element, see position 1.3

7 **connection:**
FS = SAE-flange connection 3000 PSI

8 **connection size „IN1“:**
5 = SAE 1“

9 **connection size „IN2/3 “:**
9 = SAE 2 ½“

10 **connection size „OUT2“:**
A = SAE 3“

11 **connection size „OUT3“:**
9 = SAE 2 ½“

12 **internal valve:**
S12 = with by-pass valve Δp 12 bar

13 **filter housing specification:**
- = standard

14 **clogging indicator:**
VS1 = electronical, see sheet-no. 43477

1.2. Stage filter element: (ordering example)

01NR. 1000. 32227. 10VG. 25G. 25. B. V. -. S1

1	2	3	4	5	6	7	8	9	10

1 **series:**
01NR = standard-return-line filter element according to DIN 24550, T4

2 **nominal size:** 1000

3 **execution:** according to sheet-no. 32227

4 **filter-material and filter-fineness primary stage PS:**
10 VG=10 µm$_{(c)}$, 6 VG=7 µm$_{(c)}$, 3 VG=5 µm$_{(c)}$ Interporfleece (glass fibre

5 **filter-material and filter-fineness secondary stage SS:**
80 G = 80 µm, 40 G = 40 µm, 25 G = 25 µm stainless steel wire mesh

6 **resistance of pressure difference for filter element:**
25 = Δp 25 bar

7 **filter element design:**
B = both sides open

8 **sealing material:**
V = Viton (FPM)
P = Nitrile (NBR)
HNBR = hydrated Nitril-Butadien-Rubber (HNBR); WS 20.357

9 **filter element specification:**
- = standard

10 **internal valve:**
S1 = with pressure difference valve Δp 3,5 bar

weight: approx. 360 kg

Changes of measures and design are subject to alteration!

EDV 07/13

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1.3. Single filter element: (ordering example)

01NR. 1000. 3VG. 10. B. V. -

1	2	3	4	5	6	7

1 **series:**
01NR = standard-return-line filter element according to DIN 24550, T4

2 **nominal size:** 1000

3 **filter-material and filter-fineness primary stage PS:**
10 VG=10 µm(c), 6 VG=7 µm(c), 3 VG=5 µm(c) Interporfleece (glass fibre)

4 **resistance of pressure difference for filter element:**
10 = Δp 10 bar

5 **filter element design:**
B = both sides open

6 **sealing material:**
V = Viton (FPM)
P = Nitrile (NBR)
HNBR = hydrated Nitril-Butadien-Rubber (HNBR); WS 20.357

7 **filter element specification:**
- = standard

2. Spare parts:

item	qty.	designation	dimension	article-no.		
1	3	stage filter element	01NR.1000.32227....			
2	3	single filter element	01NR.1000....			
3	12	O-ring	90 x 4	307031 (FPM)	306941 (NBR)	318410 (HNBR)
4	6	O-ring	185 x 4	306309 (FPM)	305593 (NBR)	321167 (HNBR)
5	3	O-ring	85 x 3,5	317033(FPM)	311309 (NBR)	321166 (HNBR)
6	4	evacuation cock	EE.3.W.ST	310534		
7	3	mini-measure connection	MA.3.ST	308630		
8	9	screw plug	G ½	304678		
9	3	clip coupling	21689-4	313233		
10	1	clogging sensor, electronical	VS1	see sheet-no. 43477		
11	2	O-ring	14 x 2	304722 (FPM)	304342 (NBR)	321179 (HNBR)
12	1	O-ring	56,75 x 3,53	306035 (FPM)	310264 (NBR)	321734 (HNBR)
13	2	O-ring	94 x 3,5	342883 (FPM)	324335 (NBR)	324308 (HNBR)
14	3	O-ring	85 x 3,5	317033(FPM)	311309 (NBR)	321166 (HNBR)
15	3	O-ring	62 x 4	311472 (FPM)	308045 (NBR)	324325 (HNBR)
16	4	O-ring	104,37 x 3,53	304390(FPM)	304339 (NBR)	342881 (HNBR)
17	6	O-ring	110,72 x 3,53	316356 (FPM)	316355 (NBR)	342882 (HNBR)
18	1	O-ring	90 x 4	307031 (FPM)	306941 (NBR)	318410 (HNBR)
19	2	O-ring	8 x 2	316530 (FPM)	310004 (NBR)	321168 (HNBR)

3. Description:

The TWIN-filter combination of the type TWF6000.65220 are suitable for a working pressure up to 16 bar.
The connection dimensions and outside dimensions of these elements are according to DIN 24550, T4.
The two level filter element is divided in a main and an auxiliary level with different filter fineness and different filter surface area. The pressure difference valve VD1 is located between the main level HS (fine filter) and the auxiliary level NS (Coarse filter).
The total fluid flow Q will be directed through the main level of the two-level element as long as the pressure difference on this filter element is greater than the opening pressure of the pressure difference valve VD1. If the pressure difference valve VD1 is opened the partial flow Q1will be filtered over the auxiliary level.
The breather connection E1 on the filter's lit can allow the offset of another partial flow Q3. This partial flow Q3 will only be filtered by the auxiliary level NS of the filter element and is even available if the VD1 is closed.
The filter elements consist of star like folded filtration material, which is placed around the supportive tubes from the outside and which is adhered to the end caps. The direction of flow is from the outside to the inside. Filter elements can only be operated in the displayed arrangement. In order to prevent reverse installation, the filter housing has a mechanical lock, which does not allow the filter lit to be screwed on the filter if installed in a wrong way.
Internormen Product Line filter elements are known as elements with a high intrinsic stability and an excellent filtration capability, a high dirt-retaining capacity and a long service life.
Internormen Product Line filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.
Approvals according to TÜV, and the major „Shipyard Classification Societies" D.N.V.; B.V.; G.L.; L.R.S.; R.I.N.A.; A.B.S. and others are possible.
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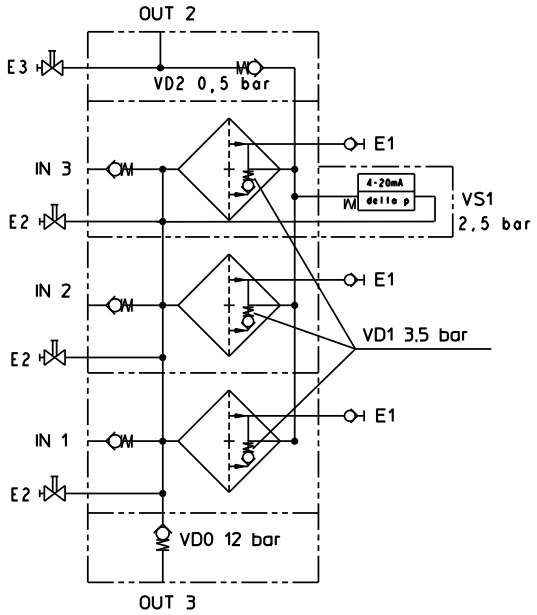
4. Technical data:

temperature range:	-20°C to +80°C (for a short time +100°C)
operating medium:	mineral oil, other media on request
max. operating pressure:	16 bar
test pressure:	23 bar
connection system:	SAE-flange 3000 PSI
housing material:	EN-GJS-400-18-LT
sealing material:	Viton (FPM), Nitrile (NBR) or hydrated Nitril-Butadien-Rubber (HNBR); WS 20.357
installation position:	vertical
measuring connection:	G ¼
evacuation-or bleeder connection:	G ½
volume tank:	3x 20,6 l

Classified und the Pressure Vessel 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. Symbol:



opening presseure of pressure difference valve: VD1 Δpö 3,5 bar
VD2 Δpö 0,5 bar
VD0 Δpö 12,0 bar

6. Pressure drop flow curves:

Precise flow rates see 'Interactive Product Specifier', 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