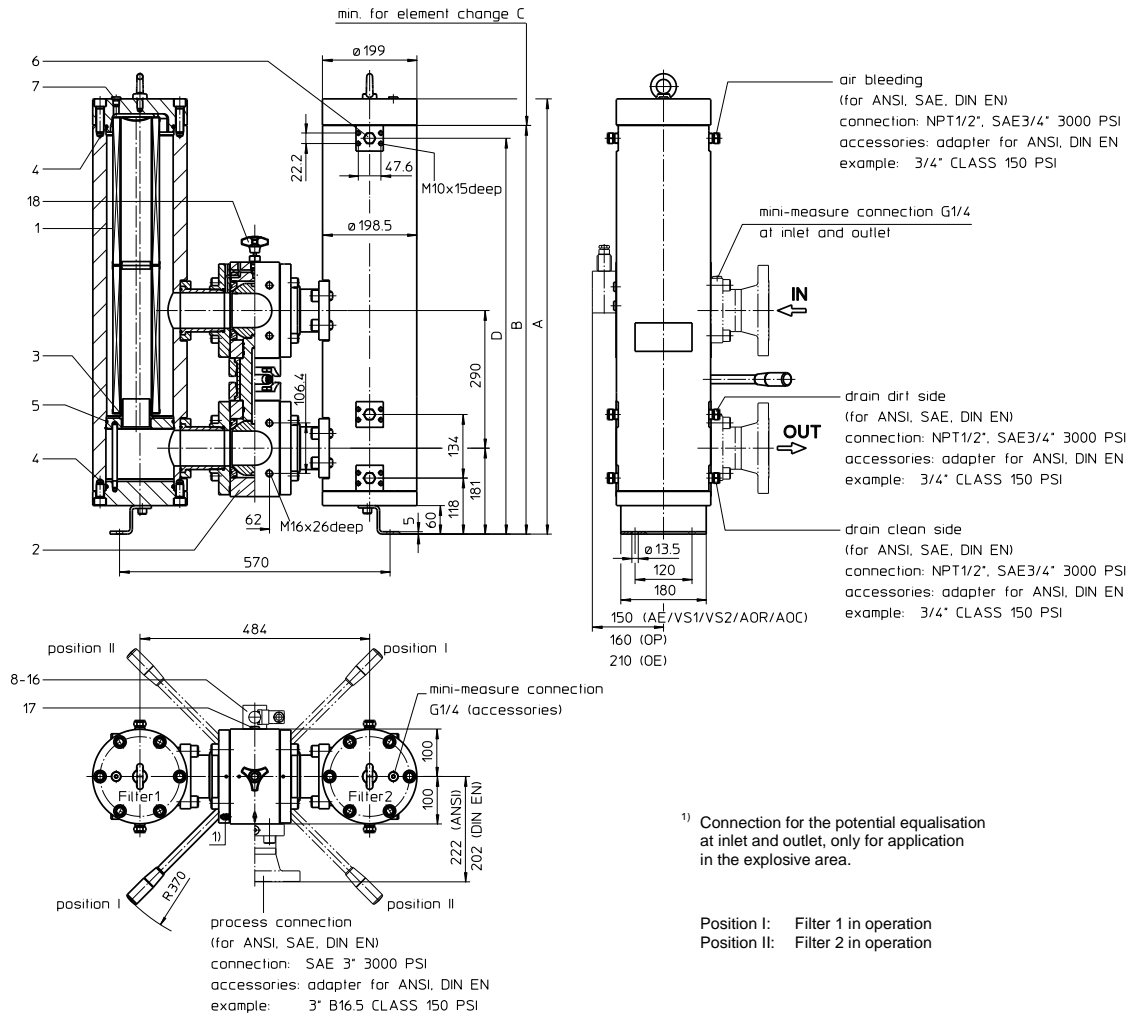


PRESSURE FILTER, change-over
Series DA 631-1001 NPS 3" CLASS 150 PSI

Sheet No.
2165 C



2. Dimensions:

type	connection	A	B	C	D	weight kg
DA 631	SAE 3"	687	631	410	604	approx. 290
DA 1001	SAE 3"	917	861	640	834	approx. 350

1. Type index:

1.1. Complete filter: (ordering example)

DA. 1001. 10VG. 30. E. P. -. FS. A. -. -. AE. AV. IS21. F. F

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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- 1 **series:**
 DA = pressure filter change-over, according to ASME-code
- 2 **nominal size:** 631, 1001
- 3 **filter-material and filter-fineness:**
 80 G = 80 µm, 40 G = 40 µm, 25 G = 25 µm, 10 G = 10 µm stainless steel wire mesh
 25 VG = 20 µm_(c), 16 VG = 15 µm_(c), 10 VG = 10 µm_(c), 6 VG = 7 µm_(c), 3 VG = 5 µm_(c) Interpor fleece (glass fibre)
 25 API = 20 µm, 10 API = 10 µm Interpor fleece (glass fibre) according to API
 10 P = 10 µm paper
- 4 **resistance of pressure difference for filter element:**
 30 = Δp 30 bar
- 5 **filter element design:**
 E = single-end open, S = with by-pass valve Δp 2,0 bar, S1 = with by-pass valve Δp 3,5 bar
- 6 **sealing material:**
 P = Nitrile (NBR), V = Viton (FPM)
- 7 **filter element specification:**
 - = standard, VA = stainless steel
- 8 **process connection:**
 FS = SAE-flange connection 3000 PSI
 FA11 = ANSI-flange connection CLASS 150 PSI, sealing surface R_z = 160 µm (not finer than 40 µm)
 FA12 = ANSI-flange connection CLASS 150 PSI, sealing surface R_z = 16 µm
 FD1 = flange connection DIN EN 1092-1, design B1
 FD2 = flange connection DIN EN 1092-1, design B2
- 9 **process connection size:**
 A = 3"
- 10 **filter housing specification:**
 - = standard
 IS12 = internal parts of change-over armature stainless steel, see sheet-no. 41028
- 11 **internal valve:**
 - = without
- 12 **clogging indicator or clogging sensor:**
 - = without, OP = visual, see sheet-no. 1628
 AOR = visual, see sheet-no. 1606, OE = visual-electrical, see sheet-no. 1628
 AOC = visual, see sheet-no. 1606, VS1 = electrical, see sheet-no. 1607
 AE = visual-electrical, see sheet-no. 1609, VS2 = electrical, see sheet-no. 1608
- 13 **shut-off valve:**
 - = without, AV = shut-off valve, see sheet-no. 1655
- 14 **specification pressure vessel:**
 - = standard (PED 97/23/EC)
 IS20 = ASME VIII Div.1 with ASME equivalent material, see sheet-no. 55217
 IS21 = ASME VIII Div.1 with U-stamp, see sheet-no. 43415
 IS23 = ASME VIII Div.1 without U-stamp, see sheet-no. 55218
- 15 **switch lever:**
 F = toward IN/OUT, B = opposite IN/OUT
- 16 **air bleeding/drain:**
 F = toward IN/OUT, B = opposite IN/OUT

1.2. Filter element: (ordering example)

01NL. 1000. 10VG. 30. E. P. -

1	2	3	4	5	6	7
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- 1 **series:**
 01NL = standard filter element according to DIN 24550, T3
- 2 **nominal size:** 630, 1000
- 3 - 7 see type index complete filter

Changes of measures and design are subject to alteration!

3. Accessories:

- SAE-counter flanges, see sheet-no. 1652
- adapter for connection acc. to EN1092-1, see sheet-no. 1657
- adapter for ANSI-connection B16.5 CLASS 150 PSI, see sheet-no. 1658
- measure- and bleeder-connections, see sheet-no. 1650
- drain- and bleeder connection, see sheet-no. 1659

4. Spare parts:

item	qty.	designation	dimension		article-no.	
			DA 631	DA 1001		
1	2	filter element	01NL.630	01NL.1000		
2	1	change over UKK	DN 80			
3	2	O-ring	60 x 3,5		304377 (NBR)	304398 (FPM)
4	4	O-ring	135 x 4,75		326348 (NBR)	326349 (FPM)
5	2	O-ring	136,12 x 3,53		320162 (NBR)	320163 (FPM)
6	12	screw plug	NPT ½		307766	
7	2	screw plug	G ¼		305003	
8	1	clogging indicator, visual	AOR or AOC		see sheet-no. 1606	
9	1	clogging indicator, visual-electrical	OP		see sheet-no. 1628	
10	1	clogging indicator, visual-electrical	OE		see sheet-no. 1628	
11	1	clogging indicator, visual-electrical	AE		see sheet-no. 1609	
12	1	clogging sensor, electronical	VS1		see sheet-no. 1607	
13	1	clogging sensor, electronical	VS2		see sheet-no. 1608	
14	1	O-ring	15 x 1,5		315357 (NBR)	315427 (FPM)
15	1	O-ring	22 x 2		304708 (NBR)	304721 (FPM)
16	2	O-ring	14 x 2		304342 (NBR)	304722 (FPM)
17	2	screw plug	G ¼		305003	
18	1	pressure balance valve	DN 10		305000	

item 17 execution only with clogging indicator or clogging sensor

5. Description:

Pressure filters, change-over series DA 631-1001 are suitable for operating pressure up to 40 bar. Pressure peaks can be absorbed with a sufficient margin of safety.

Change-over ball valve which, integrated in the middle of the housing, makes it possible to switch from the dirty filter-side to the clean filter-side without interrupting operation.

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 the inside.

These filters can be installed as suction filters.

For cleaning (see special leaflet 21070-4 and 34448-4) the mesh element respectively to change the glass fibre element remove the cover and take out the element.

Filter finer than 40 µm should use throw-away elements made of paper or Interpor fleece (glass fibre). Filter elements as fine as 5 µm_(α) are available; finer filter elements on request.

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

The inspection according to TÜV, according to ASME VIII Div.1 and the major „Shipyards Classification Societies“ D.N.V.; B.V.; G.L.; L.R.S.; R.I.N.A.; A.B.S. and others are possible. If inspection is required please indicate in your order.

6. Technical data:

temperature ranges

- calculation temperature (pressure vessel): - 10°C to +100°C
- medium temperature: - 10°C to +80°C
- ambient temperature: - 40°C to +60°C
- survival temperature: - 40°C to +100°C (short-time)

operating medium:

- mineral oil, other media on request
- 40 bar
- max. operating pressure housing: 1,43 x operating pressure = 57 bar
- test pressure acc. to PED 97/23/EC: 1,3 x operating pressure = 52 bar
- test pressure acc. to ASME VIII Div. 1: 1,5 x operating pressure = 60 bar

connection system:

- SAE-flange connection 3000 PSI
- steel
- sealing material: Nitrile (NBR) or Viton (FPM), other materials on request

installation position:

- vertical
- bleeder connection : NPT ½" and SAE ¼" 3000 PSI
- drain connection dirt side : NPT ½" and SAE ¼" 3000 PSI
- drain connection clean side : NPT ½" and SAE ¼" 3000 PSI

volume tank DA 631:

- 2x 8,3 l

DA 1001:

- 2x 11,8 l

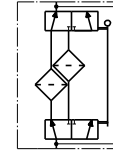
operating pressure adapter flanges: according to B16.5 CLASS 150 PSI / DIN EN 1092-1

Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.

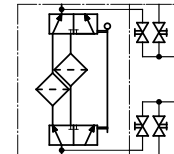
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4)

7. Symbols:

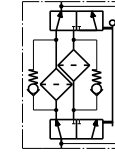
without indicator



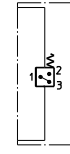
with shut-off valve



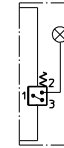
with by-pass valve



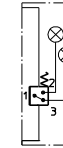
with electrical indicator
AE 30 and AE 40



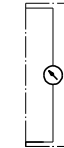
with visual-electrical indicator
AE 50 and AE 62



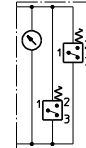
with visual-electrical indicator
AE 70 and AE 80



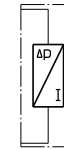
with visual indicator
AOR/AOC/OP



with visual-electrical indicator
OE



with electronical sensor
VS1



with electronical sensor
VS2



8. Pressure drop flow curves:

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

9. 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