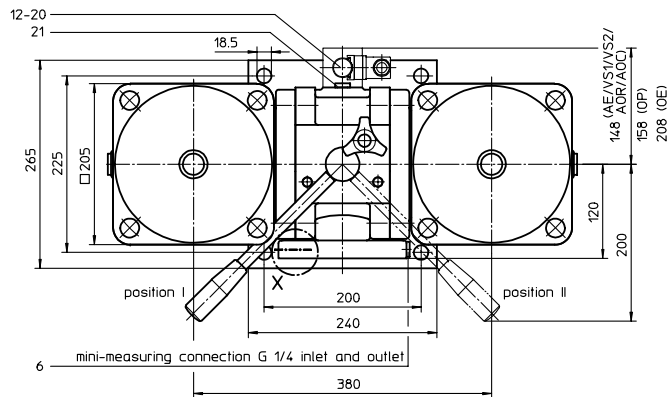
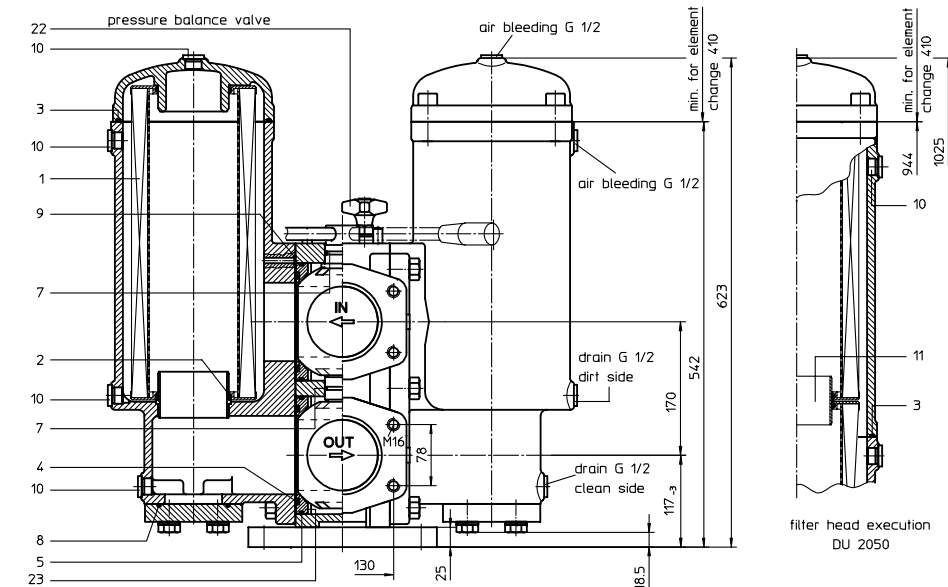
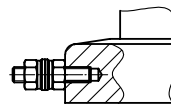


PRESSURE FILTER, change-over ball valve
Series DU 1050-2050 DN 80-100 PN 32

Sheet No.
2119 K



detail X



connection for the potential equalisation at outlet, only for application in the explosive area

Pos. I: left filter-side in operation
 Pos. II: right filter-side in operation

3. Dimensions:

type	connection	SAE-connection size	weight kg
DU 1050	DN 80 ¹⁾	SAE 4"	150
DU 1050	DN 100	SAE 4"	150
DU 2050	DN 80 ¹⁾	SAE 4"	200
DU 2050	DN 100	SAE 4"	200

¹⁾ by counter flange BFS.B.E.88,9x3,2.St.P.3000
 Instead of P (Nitrile) also V (Viton) can be chosen.

1. Type index:

1.1. Complete filter: (ordering example)

DU. 1050. 10VG. 10. B. P. -. FS. B. -. -. AE

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

- 1 **series:**
DU = pressure filter, change-over
- 2 **nominal size:** 1050, 2050
- 3 **filter-material and filter-fineness:**
 80 G = 80 µm, 40 G = 40 µm, 25 G = 25 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 P = 25 µm, 10 P = 10 µm paper
- 4 **resistance of pressure difference for filter element:**
10 = Δp 10 bar
- 5 **filter element design:**
B = both sides open
- 6 **sealing material:**
P = Nitrile (NBR)
V = Viton (FPM)
- 7 **filter element specification:** (see catalog)
- = standard
VA = stainless steel
IS06 = see sheet-no. 31601
IS07 = see sheet-no. 31602
- 8 **connection:**
FS = SAE-flange connection 3000 PSI
- 9 **connection size:**
B = 4"
- 10 **filter housing specification:** (see catalog)
- = standard
IS06 = see sheet-no. 31605
IS12 = see sheet-no. 41028
- 11 **internal valve:**
- = without
S = with by-pass valve Δp 2 bar
S1 = with by-pass valve Δp 3,5 bar
- 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

1.2. Filter element: (ordering example)

01NR. 1000. 10VG. 10. B. P. -

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 - 7 see type index complete filter

2. Accessories:

- measure-and bleeder-connection, see sheet-no. 1650
- evacuation- and bleeder-connection, see sheet-no. 1651
- counter flange, see sheet-no. 1652
- shut-off valve, see sheet-no. 1655

Changes of measures and design are subject to alteration!



Friedensstrasse 41, 68804 Altlusheim, Germany

phone +49 - (0)6205 - 2094-0 e-mail sales@internormen.com
 fax +49 - (0)6205 - 2094-40 url www.internormen.com



4. Spare parts:

item	designation	qty.	dimension and article-no.	qty.	dimension and article-no.
1	filter element	2	DU 1050 01NR. 1000	4	DU 2050 01NR. 1000
2	O-ring	4	90 x 4 306941 (NBR) 307031 (FPM)	8	90 x 4 306941 (NBR) 307031 (FPM)
3	O-ring	2	185 x 4 305593 (NBR) 306309 (FPM)	4	185 x 4 305593 (NBR) 306309 (FPM)
4	O-ring	4	114 x 6 314419 (NBR) 316531 (FPM)	4	114 x 6 314419 (NBR) 316531 (FPM)
5	O-ring	4	140 x 4 305145 (NBR) 305201 (FPM)	4	140 x 4 305145 (NBR) 305201 (FPM)
6	screw plug	2	G ¼ 305003	2	G ¼ 305003
7	O-ring	2	38 x 3 304340 (NBR) 317013 (FPM)	2	38 x 3 304340 (NBR) 317013 (FPM)
8	O-ring	2	85,32 x 3,53 305590 (NBR) 306308 (FPM)	2	85,32 x 3,53 305590 (NBR) 306308 (FPM)
9	O-ring	4	8 x 2 310004 (NBR) 316530 (FPM)	4	8 x 2 310004 (NBR) 316530 (FPM)
10	screw plug	8	G ½ 304678	10	G ½ 304678
11	slip coupling	-	-	2	∅90 313233
12	clogging indicator visual	1	AOR or AOC	see sheet-no. 1606	
13	clogging indicator visual	1	OP	see sheet-no. 1628	
14	clogging indicator visual-electrical	1	OE	see sheet-no. 1628	
15	clogging indicator visual-electrical	1	AE	see sheet-no. 1609	
16	clogging sensor electrical	1	VS1	see sheet-no. 1607	
17	clogging sensor electrical	1	VS2	see sheet-no. 1608	
18	O-ring	1	15 x 1,5	315357 (NBR) 315427 (FPM)	
19	O-ring	1	22 x 2	304708 (NBR) 304721 (FPM)	
20	O-ring	2	14 x 2	304342 (NBR) 304722 (FPM)	
21	screw plug	2	G ¼	305003	
22	pressure balance valve	1			
23	gasket	4	DN 90	312275	

item 21 execution only without clogging indicator or clogging sensor

5. Description:

Pressure filters, change-over series DU 1050-2050 are suitable for operating pressure up to 32 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 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.

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.

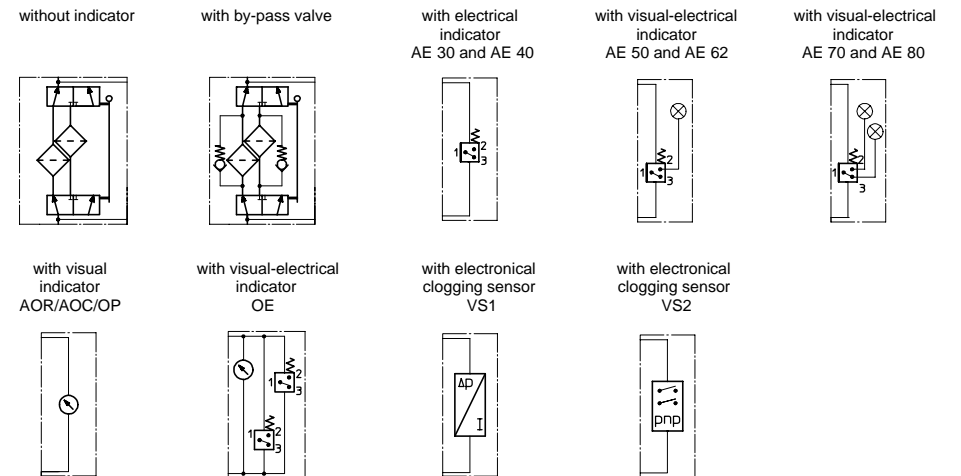
The internal valve is integrated in the filter cover. After reaching the opening pressure the by-pass valve causes that an unfiltered partial flow passes the filter.

6. 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:	32 bar
test pressure:	64 bar
connection system:	SAE-flange connection 3000 PSI
housing material:	EN-GJS-400-18-LT
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical
mini-measuring connections:	G ¼
evacuation-or bleeder connections:	G ½
volume tank DU 1050:	2x 13,7 l
DU 2050:	2x 23,9 l

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

7. Symbols:



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