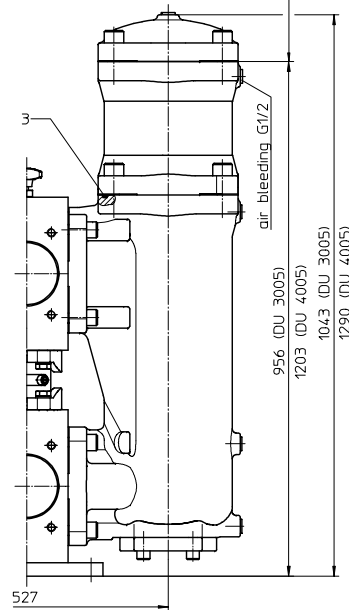


PRESSURE FILTER, change over ball valve
Series DU 2005-4005 DN 125 PN 32

Sheet No.
2153 A

execution
 DU 3005/DU 4005

min. for element change
 765 (DU 3005) and 1020 (DU 4005)



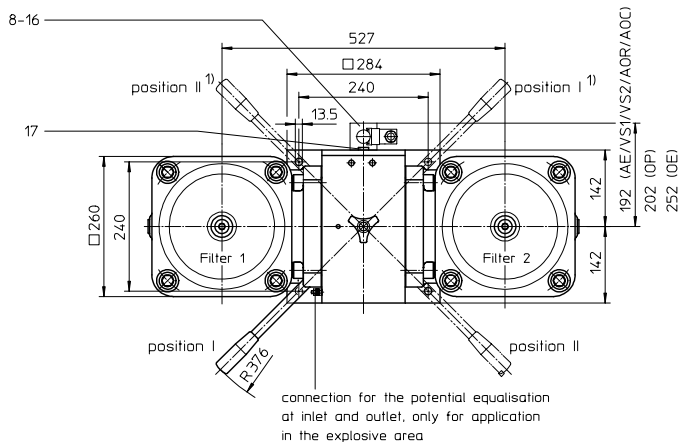
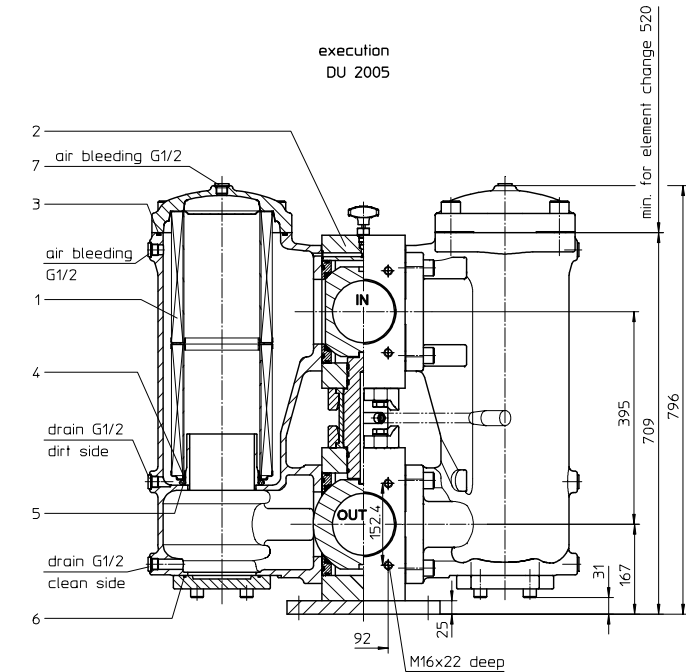
1) On request: Switch lever backside opposite to inlet and outlet.

Please specify on order !

Pos. I: filter 1 in operation
 Pos. II: filter 2 in operation

filter	weight kg
DU 2005	340
DU 3005	402
DU 4005	436

execution
 DU 2005



1. Type index:

1.1. Complete filter: (ordering example)

DU. 2005. 10VG. 10. E. P. -. FS. C. -. AE

1	2	3	4	5	6	7	8	9	10	11
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- 1 | **series:**
DU = pressure filter, change-over
- 2 | **nominal size:** 2005, 3005, 4005
- 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 = 10µm paper
- 4 | **resistance of pressure difference for filter element:**
10 = Δp 10 bar
- 5 | **filter element design:**
E = without by-pass valve
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:** (see catalog)
- = standard
VA = stainless steel
IS06 = see sheet-no. 31601
- 8 | **connection:**
FS = SAE-flange connection 3000 PSI
- 9 | **connection size:**
C = 5"
- 10 | **filter housing specification:** (see catalog)
- = standard
IS06 = see sheet-no. 31605
IS12 = see sheet-no. 41028
- 11 | **clogging indicator or clogging sensor:**
- = without
AOR = visual, see sheet-no. 1606
AOC = visual, see sheet-no. 1606
AE = visual-electrical, see sheet-no. 1609
OP = visual, see sheet-no. 1628
OE = visual-electrical, see sheet-no. 1628
VS1 = electronical, see sheet-no. 1607
VS2 = electronical, see sheet-no. 1608

1.2. Filter element: (ordering example)

01E. 2001. 10VG. 10. E. P. -

1	2	3	4	5	6	7
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- 1 | **series:**
01E. = filter element according to INTERNORMEN factory specification
- 2 | **nominal size:** 2001, 3001, 4001
- 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!

3. Spare parts:

item	designation	qty.	dimension and article-no. DU 2005	dimension and article-no. DU 3005	dimension and article-no. DU 4005
1	filter element	2	01E. 2001	01E. 3001	01E. 4001
2	change over	1	DN 125		
3	O-ring (DU 2005)	2	240 x 5 307592 (NBR)		
	O-ring (DU 3005/4005)	4	328793 (FPM)		
4	O-ring	2	135 x 10 306016 (NBR) 307045 (FPM)		
5	O-ring	2	125 x 10 304388 (NBR) 306006 (FPM)		
6	O-ring	2	136,12 x 3,53 320162 (NBR) 320163 (FPM)		
7	screw plug (DU 2005)	8	G ¼ 304678		
	screw plug (DU 3005/4005)	10			
8	clogging indicator visual	1	AOR or AOC	see seat-no. 1606	
9	clogging indicator visual-electrical	1	OE	see seat-no. 1628	
10	clogging indicator visual	1	OP	see seat-no. 1628	
11	clogging indicator visual-electrical	1	AE	see seat-no. 1609	
12	clogging sensor electronical	1	VS1	see seat-no. 1607	
13	clogging sensor electronical	1	VS2	see seat-no. 1608	
14	O-ring	1	15 x 1,5 315357 (NBR) 315427 (FPM)		
15	O-ring	1	22 x 2 304708 (NBR) 304721 (FPM)		
16	O-ring	2	14 x 2 304342 (NBR) 304722 (FPM)		
17	screw plug	2	G ¼ 305003		

item 17 execution only without clogging indicator or clogging sensor

4. Description:

Pressure filters, change-over series DU 2005-4005 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. These filters can be installed as suction filters.

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.

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.

5. 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

measuring connections:

G ¼

evacuation-or bleeder connections:

G ½

volume tank DU 2005:

2x 29 l

DU 3005:

2x 38 l

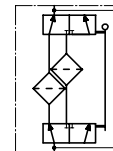
DU 4005:

2x 47 l

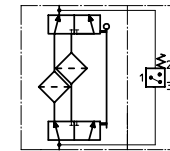
Classification according to the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2) -article 3, paragraph 3. Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

6. Symbols:

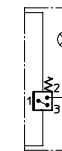
without indicator



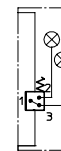
with electrical indicator
AE 30 and AE 40



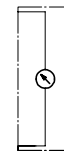
with visual-electrical indicator
AE 50 and AE 62



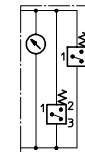
with visual-electrical indicator
AE 70 and AE 80



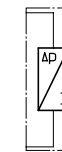
with visual indicator
AOR/AOC/OP



with visual-electrical indicator
OE



with electronical clogging sensor
VS1



with electronical clogging sensor
VS2



7. Pressure drop flow curves:

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

8. 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