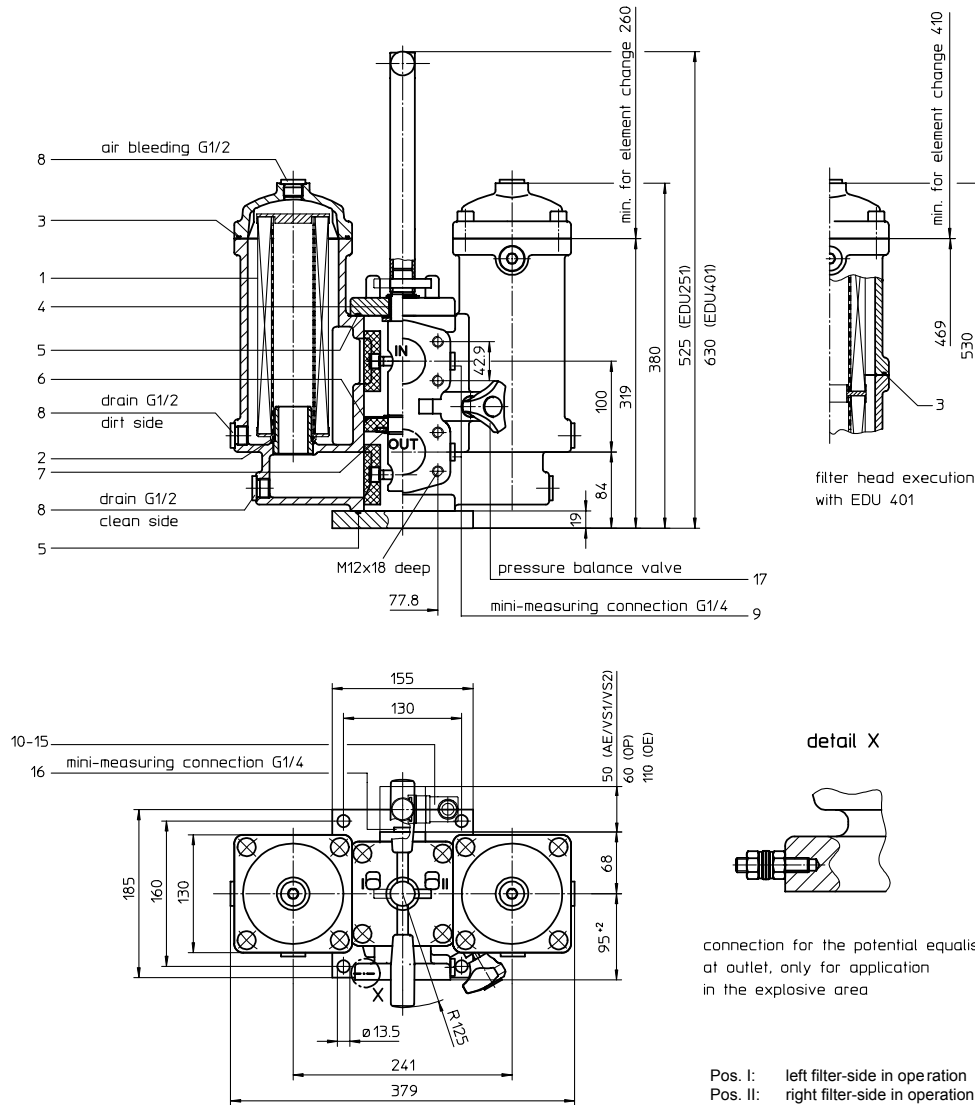


**STAINLESS STEEL-PRESSURE FILTER, change-over**  
**Series EDU 251-401 DN 50 PN 25**

Sheet No.  
**2124 H**



**1. Type index:**

**1.1. Complete filter: (ordering example)**

**EDU. 251. 10VG. 30. E. P. VA. FS. 8. VA. AE**

1	2	3	4	5	6	7	8	9	10	11
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- 1 series:  
EDU = stainless steel-pressure filter, change-over
- 2 nominal size: 251, 401
- 3 filter-material and filter-fineness:  
80 G = 80  $\mu\text{m}$ , 40 G = 40  $\mu\text{m}$ , 25 G = 25  $\mu\text{m}$  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)
- 4 resistance of pressure difference for filter element:  
30 =  $\Delta p$  30 bar
- 5 filter element design:  
E = single-end open  
S = with by-pass valve  $\Delta p$  2,0 bar  
S1 = with by-pass valve  $\Delta p$  3,5 bar
- 6 sealing material:  
P = Nitrile (NBR)  
V = Viton (FPM)
- 7 filter element specification: (see catalog)  
- = standard  
VA = stainless steel  
ISO6 = see sheet-no.31601
- 8 connection:  
FS = SAE-flange connection 3000 PSI
- 9 connection size:  
8 = 2"
- 10 filter housing specification:  
VA = stainless steel
- 11 clogging indicator or clogging sensor:  
- = without  
AE = visual-electrical, see sheet-no. 1609  
OP = visual, see sheet-no. 1628  
OE = visual-electrical, see sheet-no. 1628  
VS1 = electrical, see sheet-no. 1607  
VS2 = electrical, see sheet-no. 1608

**1.2. Filter element: (ordering example)**

**01NL. 250. 10VG. 30. E. P. VA**

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: 250, 400
- 3 - 7 see type index-complete filter

**2. Accessories:**

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

weight EDU 251: approx. 40 kg  
weight EDU 401: approx. 50 kg

Changes of measures and design are subject to alteration!

### 3. Spare parts:

item	designation	qty.	dimension EDU 251	qty.	dimension EDU 401	article-no.	
1	filter element	2	01NL. 250...VA	2	01NL. 400...VA		
2	O-ring	2		40 x 3		304389 (NBR)	304391 (FPM)
3	O-ring	2	115 x 3	4	115 x 3	303963 (NBR)	307762 (FPM)
4	O-ring	1		24 x 3		303038 (NBR)	304397 (FPM)
5	O-ring	2		95 x 3		305808 (NBR)	304828 (FPM)
6	O-ring	1		76 x 4		305599 (NBR)	310291 (FPM)
7	O-ring	1		32 x 2,5		306843 (NBR)	308268 (FPM)
8	screw plug	8	G ½	10	G ½	306966	
9	screw plug	2		G ¼		306968	
10	clogging indicator, visual	1		OP		see sheet-no. 1628	
11	clogging indicator, visual-electrical	1		OE		see sheet-no. 1628	
12	clogging indicator, visual-electrical	1		AE		see sheet-no. 1609	
13	clogging sensor, electronical	1		VS1		see sheet-no. 1607	
14	clogging sensor, electronical	1		VS2		see sheet-no. 1608	
15	O-ring	2		14 x 2		304342 (NBR)	304722 (FPM)
16	screw plug	2		G ¼		306968	
17	pressure balance valve	1					

item 16 execution only without clogging indicator or clogging sensor

### 4. Description:

Stainless steel-pressure filter of the series EDU 251-401 are suitable for a working pressure up to 25 bar.

The pressure peaks are absorbed by a sufficient margin of safety.

Rotary slide valve which is 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 consist 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.

Filter finer than 40 µm should use throw-away elements made of Interpor fleece (glass fibre).

Filter elements as fine as 5 µm<sub>(c)</sub> 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 „Shipyards 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:

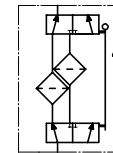
temperature range:	- 10°C to + 80°C (for a short time + 100°C)
operating medium:	mineral oil, other media on request
max. operating pressure:	25 bar
test pressure:	32,5 bar
connection system:	SAE-flange connection 3000 PSI
housing material:	DIN 17445 -1.4581 (318 C 17, ANC 4 C according to B.S.)
sealing 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 EDU 251:	2x 2,5 l
EDU 401:	2x 3,7 l

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

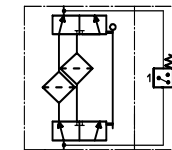
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

### 6. Symbols:

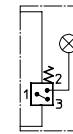
without indicator



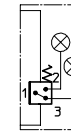
with electrical indicator  
AE 30 and AE 40



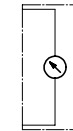
with visual-electrical indicator  
AE 50 and AE 62



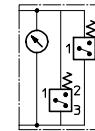
with visual-electrical indicator  
AE 70 and AE 80



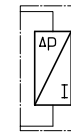
with visual indicator  
OP



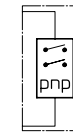
with visual-electrical indicator  
OE



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