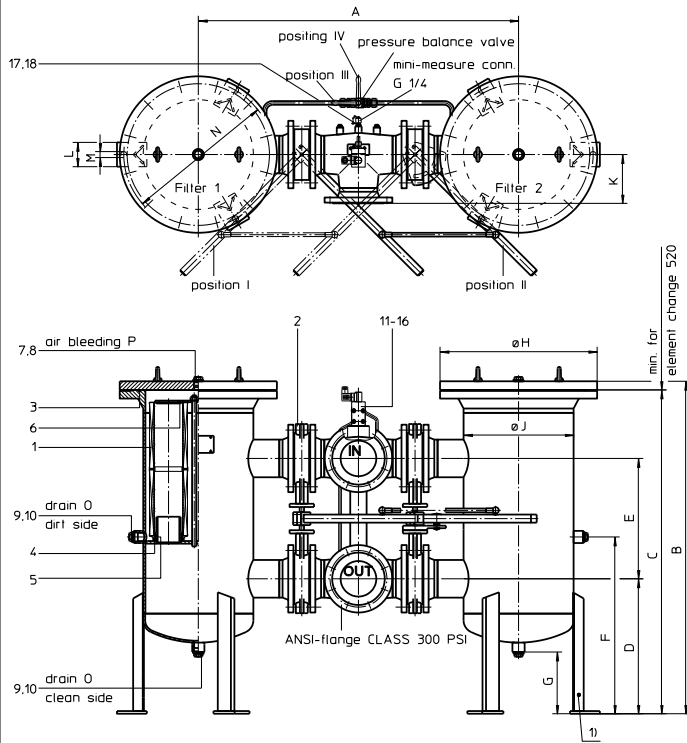


**PRESSURE FILTER, change-over**  
**Series DSF 1201-10001**

**232 PSI**

Sheet No.  
**2133 O**



Pos. I: filter 1 in operation  
 Pos II: filter 2 in operation  
 with pressure balance valve:  
 Pos III: valve open  
 Pos IV: valve closed

Connection standard as in drawing.  
 On request: inlet- on top and backside  
 outlet - bottom and backside

Please specify on order!

1) connection for the potential equalisation,  
 only for application in the explosive area

**3. Dimensions: inch**

type	conn. ANSI	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	weight lbs.	volume tank
DSF 1201	2"	31.33	40.75	39.96	15.55	12.99	19.29	7.20	13.38	8.62	5.35	2.76	.71	12.99	1	1/2	440	2x 6.5 Gal.
	2 1/2"	32.36				13.66					6.06					BSPP		
	3"	33.93				15.75					6.57							
	4"	35.98				16.57					7.59							
DSF 2001	2 1/2"	35.51	43.50	42.32	16.73	13.66	21.65	7.32	15.94	10.75	6.06	2.76	.71	14.96	1	1	616	2x 11.5 Gal.
	3"	37.08				15.75					6.57					BSPP		
	4"	38.74				16.57					7.59							
	5"	40.62				17.56					8.81							
DSF 2401	2 1/2"	37.48	43.90	42.72	16.73	13.66	21.26	7.20	18.11	12.76	6.06	2.76	.71	17.72	1	1	781	2x 16.5 Gal.
	3"	38.66				15.75					6.57					BSPP		
	4"	40.70				16.57					7.59							
	5"	42.59				17.56					8.81							
	6"	45.27				19.37					9.56							
DSF 3601	3"	42.99	48.62	47.24	19.69	15.75	25.79	9.37	22.83	15.98	6.57	3.54	.87	21.65	1	1	1276	2x 28.5 Gal.
	4"	45.03				16.57					7.59					BSPP		
	5"	46.53				17.56					8.81							
	6"	47.71				19.37					9.56							
	8"	51.18				24.41					11.45							
DSF 4001	2 1/2"	35.51	62.83	61.81	16.73	13.66	21.65	7.32	15.94	10.75	6.06	2.76	.71	14.96	1	1	748	2x 18.5 Gal.
	3"	37.08				15.75					6.57					BSPP		
	4"	38.74				16.57					7.59							
	5"	40.62				17.56					8.81							
DSF 4801/6001	4"	50.15	48.82	47.24	20.47	16.57	25.79	9.13	28.15	20.00	7.59	3.54	.87	25.59	1	1	1760	2x 45.0 Gal.
	5"	52.04				17.56					8.81					BSPP		
	6"	53.22				19.37					9.56							
	8"	56.69				24.41					11.45							
DSF 10001	5"	62.67	54.72	53.15	24.80	17.56	25.59	11.14	35.83	27.99	9.56	4.72	.87	35.43	1 1/2	1 1/2	2090	2x 98.5 Gal.
	6"	64.25				19.37					11.45					BSPP		
	8"	66.93				24.41					13.22							
	10"	70.87				26.77					14.45							

**1. Type index:**

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

**DSF. 3601. 10VG. 10. E. P. -. FA1. B. -. AE**

1	2	3	4	5	6	7	8	9	10	11
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- 1 **series:**  
DSF = duplex filter
- 2 **nominal size:** 1201, 2001, 2401, 3601, 4001, 4801, 6001, 10001
- 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<sub>(G)</sub>, 16 VG = 15 µm<sub>(G)</sub>, 10 VG = 10 µm<sub>(G)</sub>, 6 VG = 7 µm<sub>(G)</sub>, 3 VG = 5 µm<sub>(G)</sub> Interpor fleece (glass fiber)  
25 API = 20 µm, 10API = 10 µm Interpor fleece (glass fiber) according to API  
10 P = 10 µm paper
- 4 **resistance of pressure difference for filter element:**  
10 = Δp 145 PSI
- 5 **filter element design:**  
E = without by-pass valve; S = with by-pass valve Δp 29 PSI
- 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:**  
FA 1 = ANSI-flange connection Class 300 PSI sealing surface rough grind 1600-3600 µin;  
FA 2 = ANSI-flange connection Class 300 PSI sealing surface rough grind < 640 µin
- 9 **connection size:**

connection	filter nominal size							
8 = 2"	1201							
9 = 2 1/2"	1201	2001	2401		4001			
A = 3"	1201	2001	2401	3601	4001			
B = 4"	1201	2001	2401	3601	4001	4801	6001	
C = 5"		2001	2401	3601	4001	4801	6001	10001
D = 6"			2401	3601		4801	6001	10001
E = 8"						4801	6001	10001
F = 10"								10001

- 10 **filter housing specification: (see catalog)**  
- = standard  
IS06 = see sheet-no. 31605
- 11 **clogging indicator or clogging sensor:**  
- = without  
OP = visual, see sheet-no.1628  
AE = visual-electrical, see sheet-no.1609; VS1 = electronic, see sheet-no.1607  
OE = visual-electrical, see sheet-no 1628; VS2 = electronic, see sheet-no.1608

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

**01E. 1201. 10VG. 10. E. P. -**

1	2	3	4	5	6	7
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- 1 **series:**  
01E. = filter element according to company standard
- 2 **nominal size:** 1201, 2001, 4001
- 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 flanges , ANSI-flange 300 PSI
  - shut-off valve see sheet-no. 1655
  - lifting mechanism see sheet-no. 1661
- Changes of measures and design are subject to alteration!

## 4. Spare parts:

### 4.1. Depending on different series:

item	designation	qty.	dimension and article-no. DSF 1201	dimension and article-no. DSF 2001	qty.	dimension and article-no. DSF 2401	dimension and article-no. DSF 3601	qty.	dimension and article-no. DSF 4001	dimension and article-no. DSF 4801	qty.	dimension and article-no. DSF 6001	dimension and article-no. DSF 10001
1	filter element	2	01E.1201	01E.2001	4	01E.1201	01E.1201	2	01E.4001	01E.1201	6	01E.2001	01E.2001
2	stop flap <sup>1)</sup>	4	2" - 4" ANSI	2 1/2" - 5" ANSI	4	2 1/2" - 6" ANSI	3" - 6" ANSI	4	2 1/2" - 5" ANSI	4" - 8" ANSI	4	4" - 8" ANSI	5" - 10" ANSI
3	O-ring	2	225 x 5 308652 (NBR) 311473 (FPM)	275 x 5 307414 (NBR) 310288 (FPM)	2	330 x 5 303080 (NBR) 310273 (FPM)	429 x 6 308659 (NBR) 310273 (FPM)	2	275 x 5 307414 (NBR) 310288 (FPM)	516 x 6 301962 (NBR) 311474 (FPM)	2	301962 (NBR) 306006 (FPM)	722 x 8 308145 (NBR) 311805 (FPM)
4	O-ring	2	85 x 10 304386 (NBR) 304541 (FPM)	125 x 10 304388 (NBR) 306006 (FPM)	4	85 x 10 304386 (NBR) 304541 (FPM)	85 x 10 304386 (NBR) 304541 (FPM)	2	125 x 10 304388 (NBR) 306006 (FPM)	85 x 10 304386 (NBR) 304541 (FPM)	6	125 x 10 304388 (NBR) 306006 (FPM)	125 x 10 304388 (NBR) 306006 (FPM)
5	O-ring	2	93 x 5 307588 (NBR) 307589 (FPM)	135 x 5 306016 (NBR) 307045 (FPM)	4	93 x 5 307588 (NBR) 307589 (FPM)	93 x 5 307588 (NBR) 307589 (FPM)	2	135 x 5 306016 (NBR) 307045 (FPM)	93 x 5 307588 (NBR) 307589 (FPM)	6	135 x 5 306016 (NBR) 307045 (FPM)	135 x 5 306016 (NBR) 307045 (FPM)
6	spring	2	Da = 95 304414		2	pressure plate		2	Da = 95 304414		2	pressure plate	
7	screw plug	2	1/2 BSPP 309730	1 BSPP 309732	2	1 BSPP 309732		2	1 1/2 BSPP 318556		2	1 1/2 BSPP 318556	
8	gasket	2	A 22 x 27 305564	A 33 x 39 308257	2	A 33 x 39 308257		2	A 48 x 55 309764		2	A 48 x 55 309764	
9	screw plug	4	1 BSPP 309732		4	1 BSPP 309732		4	1 BSPP 309732		4	1 1/2 BSPP 318556	
10	gasket	4	A 33 x 39 308257		4	A 33 x 39 308257		4	A 48 x 55 309764		4	A 48 x 55 309764	

<sup>1)</sup> dimension of stop flap = connection size

### 4.2. Depending on the series:

item	qty.	designation	dimension	article-no.
11	1	clogging indicator, visual	OP	see sheet-no. 1628
12	1	clogging indicator, visual-electrical	OE	see sheet-no. 1628
13	1	clogging indicator, visual-electrical	AE	see sheet-no. 1609
14	1	clogging sensor, electronic	VS1	see sheet-no. 1607
15	1	clogging sensor, electronic	VS2	see sheet-no. 1608
16	2	O-ring	14 x 2	304342 (NBR)   304722 (FPM)
17	2	gasket	A 14 x 18	306330
18	2	screw plug	1/2 BSPP	309734

## 5. Description:

Duplex filters of the series DSF 1201-10001 are suitable for a working pressure up to 232 PSI.

Pressure peaks can be absorbed with a sufficient margin of safety.

Four mechanically connected change-over flaps enabling the change-over without service-interruption from the clean to the dirty filter-side. The filters can be installed as suction filter, pressure filter or return-line filter.

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 fiber). Filter elements as fine as 5 µm<sub>(c)</sub> are available; finer filter elements on request.

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 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.; P.R.S.;USS.R.S. and others are possible.

## 6. Technical data:

temperature range:	+14°F to +176°F (for a short time +212°F)
operating medium:	mineral oil, other media on request
max. operating pressure:	232 PSI
test pressure:	332 PSI
connection system:	ANSI-flange connection Class 300 PSI
housing material:	C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical
mini-measuring connection:	1/2 BSPP

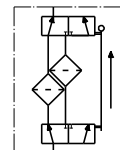
Classification according to the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2) -article 3, paragraph 3.

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

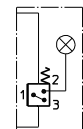
US 2133 0

## 7. Symbols:

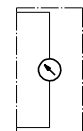
without indicator



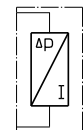
with visual - electrical indicator AE 50 and AE 62



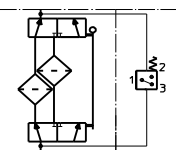
with visual indicator OP



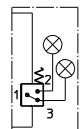
with electronic clogging sensor VS1



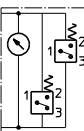
with electrical indicator AE 30 and AE 40



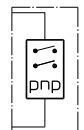
with visual - electrical indicator AE 70 and AE 80



with visual - electrical indicator OE



with electronic clogging sensor VS2



## 8. Pressure drop flow curves:

Precise flow rates see 'Interactive Product Specifier', 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