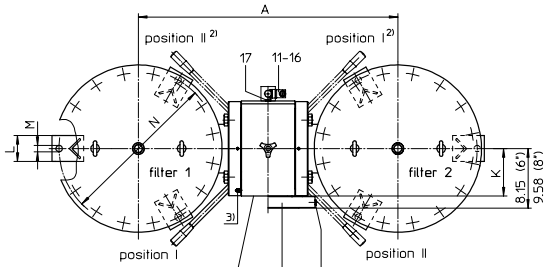
PRESSURE FILTER, change-over ball valve
Series DSF 1205-10005 232 PSI

Sheet No. **2134 G**



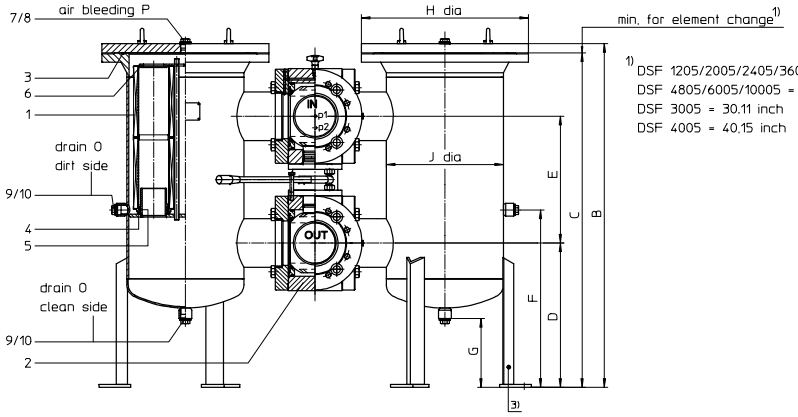
Position I: filter 1 in operation
Position II: filter 2 in operation

Switch lever standard in the front

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

Please specify on order !

3) connection for the potential equalisation at inlet and outlet resp. filter housing, only for application in the explosive area



1) DSF 1205/2005/2405/3605 = 20.47 inch
DSF 4805/6005/10005 = 20.47 inch
DSF 3005 = 30.11 inch
DSF 4005 = 40.15 inch

3. Dimensions: inch

type	ANSI	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	weight lbs.	volume tank
DSF 1205	2"	24.02	39.72	38.78	14.37	6.89	18.11	7.28	13.38	8.62	2.91	2.76	.71	12.99	1 BSPP	½ BSPP	440	2x 7 Gal
	2½"	22.04	39.72	38.78	14.37	10.63	18.11				3.54							2x 7 Gal
	3"	23.03	39.72	38.78	14.76	11.42	18.11				3.93							2x 7 Gal
	4"	24.41	40.31	39.37	15.35	14.37	18.70				5.00							2x 7 Gal
DSF 2005	2½"	24.80	39.80	38.78	14.96	10.63	18.11	7.28	15.94	10.75	3.54	2.76	.71	14.96	1 BSPP	1 BSPP	616	2x 10 Gal
	3"	25.20	39.80	38.78	14.96	11.42	18.11				3.93							2x 10 Gal
	4"	26.38	41.18	40.16	15.75	14.37	19.49				5.00							2x 11 Gal
	5"	28.74	42.76	41.73	16.53	15.55	21.06				5.59							2x 12 Gal
DSF 2405	2½"	26.77	41.46	40.35	15.35	10.63	18.90	7.28	18.11	12.76	3.54	2.76	.71	17.72	1 BSPP	1 BSPP	781	2x 15 Gal
	3"	27.56	41.46	40.35	15.75	11.42	18.90				3.93							2x 15 Gal
	4"	28.74	42.44	41.34	16.14	14.37	19.88				5.00							2x 16 Gal
	5"	30.31	43.82	42.72	16.73	15.55	21.26				5.59							2x 17 Gal
DSF 3005	2½"	24.80	39.80	38.77	14.96	10.63	18.11	7.28	15.94	10.75	3.54	2.76	.71	14.96	1 BSPP	1 BSPP	682	2x 14 Gal
	3"	25.20	39.80	38.77	14.96	11.42	18.11				3.93							2x 14 Gal
	4"	26.38	41.18	40.15	15.75	14.37	19.49				5.00							2x 14.5 Gal
	5"	28.74	42.75	41.73	16.53	15.55	21.06				5.59							2x 15 Gal
	6"	29.92	42.75	41.73	16.53	17.32	21.06	6.89			-							2x 15 Gal
DSF 3605	3"	30.71	45.35	44.10	18.90	11.42	22.63	9.25	22.83	15.98	3.93	3.54	.87	21.65	1 BSPP	1 BSPP	1276	2x 26 Gal
	4"	31.89	45.35	44.10	18.90	14.37	22.63				5.00							2x 26 Gal
	5"	34.25	46.93	45.67	19.69	15.55	24.21				5.59							2x 27 Gal
	6"	35.43	46.93	45.67	19.69	17.32	24.21				-							2x 27 Gal
DSF 4005	2½"	24.80	49.52	48.50	14.96	10.63	18.11	7.28	15.94	10.75	3.54	2.76	.71	14.96	1 BSPP	1 BSPP	748	2x 17 Gal
	3"	25.20	49.52	48.50	14.96	11.42	18.11				3.93							2x 17 Gal
	4"	26.38	50.90	49.88	15.75	14.37	19.49				5.00							2x 17.5 Gal
	5"	28.74	52.48	51.45	16.53	15.55	21.06				5.59							2x 18 Gal
DSF 4805 DSF 6005	4"	35.83	47.87	46.46	20.47	14.34	25.00	9.25	28.15	20.00	5.00	3.54	.87	25.59	1 BSPP	1 BSPP	1760	2x 45.5 Gal
	5"	35.83	47.87	46.46	20.47	15.55	25.00				5.59							2x 43.5 Gal
	6"	40.94	48.66	47.24	20.87	17.32	25.79				-							2x 45 Gal
	8"	42.91	54.17	52.76	22.05	20.47	31.30				-							2x 52 Gal
DSF 10005	5"	46.10	53.14	51.57	24.80	15.55	30.12	11.22	35.83	27.99	5.59	4.72	.87	35.43	1 ½ BSPP	1 ½ BSPP	2090	2x 94.5 Gal
	6"	49.21	53.14	51.57	24.80	17.32	30.12				-							2x 94.5 Gal
	8"	50.79	58.66	57.09	25.98	20.47	35.63				-							2x 108 Gal

EDV 04/09

1. Type index:

1.1. Complete filter: (ordering example)

DSF. 3605. 10VG. 10. E. P. -. FS. B. -. AE

1	2	3	4	5	6	7	8	9	10	11

1 **series:**
DSF = duplex filter

2 **nominal size:** 1205, 2005, 2405, 3005, 3605,4005, 4805, 6005, 10005

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 $\mu m_{(c)}$, 16 VG = 15 $\mu m_{(c)}$, 10 VG = 10 $\mu m_{(c)}$,
6 VG = 7 $\mu m_{(c)}$, 3 VG = 5 $\mu m_{(c)}$ Interpor fleece (glass fiber)
25 P = 25 µm, 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:**
FS = SAE-flange connection 3000 PSI, only for 2" - 5"
FA 1 = ANSI-flange connection 300 PSI sealing surface rough grind 1600-3600 µin, only for 6" - 8"
FA 2 = ANSI-flange connection 300 PSI sealing surface rough grind < 640 µin, only for 6" - 8"

9 **connection size:**

filter-nominal size	DSF 1205	DSF 2005	DSF2405	DSF 3005	DSF3605
connection size	8-9-A-B	9-A-B-C	9-A-B-C	9-A-B-C-D	A-B-C-D
filter-nominal size	DSF 4005	DSF4805	DSF6005	DSF10005	
connection size	9-A-B-C	B-C-D-E	B-C-D-E	C-D-E	

8 = 2" 9 = 2 ½" A = 3" B = 4" C = 5" D = 6" E = 8"

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
OE = visual-electrical, see sheet-no 1628
AE = visual-electrical, see sheet-no.1609
VS1 = electronical, see sheet-no.1607
VS2 = electronical, see sheet-no.1608

1.2. Filter element: (ordering example)

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

1	2	3	4	5	6	7

1 **series:**
01E. = filter element according to INTERNORMEN factory specification

2 **nominal size:** 1201, 2001, 3001, 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
- shut-off valve see sheet-no. 1655
- SAE-counter flanges see sheet-no. 1652
- adaptor for ANSI-flange 300 PSI (2"-5") see sheet-no. 1658
- lifting mechanism see sheet-no. 1661

Changes of measures and design are subject to alteration!

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4. Spare parts:

4.1. Depending on different series:

item	designation	qty.	dimension and article-no. DSF 1205	dimension and article-no. DSF 2005	qty.	dimension and article-no. DSF 2405	qty.	dimension and article-no. DSF 3005	qty.	dimension and article-no. DSF 3605	qty.	dimension and article-no. DSF 4005	qty.	dimension and article-no. DSF 4805	qty.	dimension and article-no. DSF 6005	qty.	dimension and article-no. DSF 10005
1	filter element	2	01E.1201	01E.2001	4	01E.1201	2	01E.3001	6	01E.1201	2	01E.4001	8	01E.1201	6	01E.2001	10	01E.2001
2	change over UKK	1	2"- 4" ANSI	2 ½ "- 5" ANSI	1	2 ½ "- 5" ANSI	1	2 ½ "- 6" ANSI	1	3"- 6" ANSI	1	2 ½ "- 5" ANSI	1	4"- 8" ANSI	1	4"- 8" ANSI	1	5"- 8" 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) 310275 (FPM)	2	275 x 5 307414 (NBR) 310288 (FPM)	2	429 x 6 308659 (NBR) 310273 (FPM)	2	275 x 5 307414 (NBR) 310288 (FPM)	2	516 x 6 301962 (NBR) 311474 (FPM)	2	516 x 6 301962 (NBR) 311474 (FPM)	2	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)	2	125 x 10 304388 (NBR) 306006 (FPM)	6	85 x 10 304386 (NBR) 304541 (FPM)	2	125 x 10 304388 (NBR) 306006 (FPM)	8	85 x 10 304386 (NBR) 304541 (FPM)	6	125 x 10 304388 (NBR) 306006 (FPM)	10	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)	2	135 x 5 306016 (NBR) 307045 (FPM)	6	93 x 5 307588 (NBR) 307589 (FPM)	2	135 x 5 306016 (NBR) 307045 (FPM)	8	93 x 5 307588 (NBR) 307589 (FPM)	6	135 x 5 306016 (NBR) 307045 (FPM)	10	135 x 5 306016 (NBR) 307045 (FPM)
6	spring	2	Da = 95 304414	Da = 95 304414	2	pressure plate	2	Da = 95 304414	2	pressure plate	2	Da = 95 304414	2	pressure plate	2	pressure plate	2	pressure plate
7	screw plug	2	⅛ BSPP 309730	1 BSPP 309732	2	1 BSPP 309732											2	1 ½ 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
9	screw plug	4	1 BSPP 309732	1 BSPP 309732	4	1 BSPP 309732											4	1 ½ BSPP 318556
10	gasket	4	A 33 x 39 308257	A 33 x 39 308257	4	A 33 x 39 308257											4	A 48 x 55 309764

4.2. Independing 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, electronical	VS1	see sheet-no. 1607	
15	1	clogging sensor, electronical	VS2	see sheet-no. 1608	
16	2	O-ring	14 x 2	304342 (NBR)	304722 (FPM)
17	2	screw plug	G ¼	305003	

item 17 execution only without clogging indicator or clogging sensor

5. Description:

Duplex filters of the series DSF 1205-10005 are suitable for a working pressure up to 232 PSI.
Pressure peaks can be absorbed with a sufficient margin of safety.
Change-over ball valve between the two filter housings makes it possible to switch from the dirty filter-side to the clean filter-side without interruting operation. 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.
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 Interpor fleece (glass fiber). Filter elements as fine as 5 $\mu m_{(c)}$ 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.; P.R.S.;USS.R.S. and others are possible.

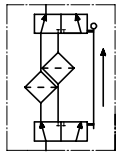
6. Technical data:

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:	SAE-flange connection 3000 PSI or ANSI-flange connection
housing material:	C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical
mini-measuring connection:	¼ BSPP

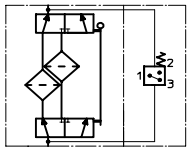
Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

7. Symbols:

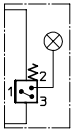
without indicator



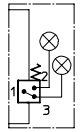
with electrical indicator AE 30 and AE 40



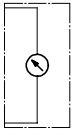
with visual - electrical indicator AE 50 and AE 62



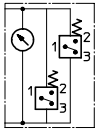
with visual - electrical indicator AE 70 and AE 80



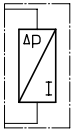
with visual indicator OP



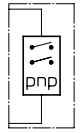
with visual - electrical indicator OE



with electronical clogging sensor VS1



with electronical clogging sensor VS2



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