

ultradepth[®] FF, MF, SMF

The depth filter for the removal of water and oil aerosols as well as solid particles from compressed air and gases with absolute retention efficiency.



Cross section of the ultradepth[®] depth filter

Product Description:

The ultradepth[®] depth filter employs the three dimensional micro fibre fleece ultrair[®] made out of binderfree glassfibre. A prefilter medium 1 µm is integrated and realises an effective two stage filtration.

Characteristics:

By utilising various filtration mechanisms such as retention by direct impact, sieve effect and diffusion effect, liquid aerosols and solid particles down to the size of 0.01 µm are being retained in the filter.

Applications:

The ultradepth[®] depth filter is for example being utilised in the following industries

- Chemical industry
- Petrochemical industry
- Pharmaceutical industry
- Plastic industry
- General machine fabrication
- Air conditioning technology
- Food industry
- Paint industry
- Beverage industry
- Process industry for instrumentation and control air

Technical alterations reserved (Date 1/99)

ultradepth® FF, MF, SMF

Feature:	Benefits:
Expanded inner and outer stainless steel support sleeves for the secure hold of the filter medium	No danger of corrosion – large openings ensure low differential pressure drop and high throughput
Binderfree depth filter medium made out of borosilicate glass fibres	Low differential pressure drop; high throughput
Removal of liquid aerosols and solid particles down to 0,01 µm	Validated retention efficiency, high level of security and safety
Large surface area, large void volume (> 94%)	High dirt holding capacity; guaranteed service life time

Validation:
Validation of high-efficiency filters by Technical University Dresden

Retention rate related to particles 0,01 µm:
FF = 99.999%
MF = 99.99998%
SMF = 99.99999%

Technical data

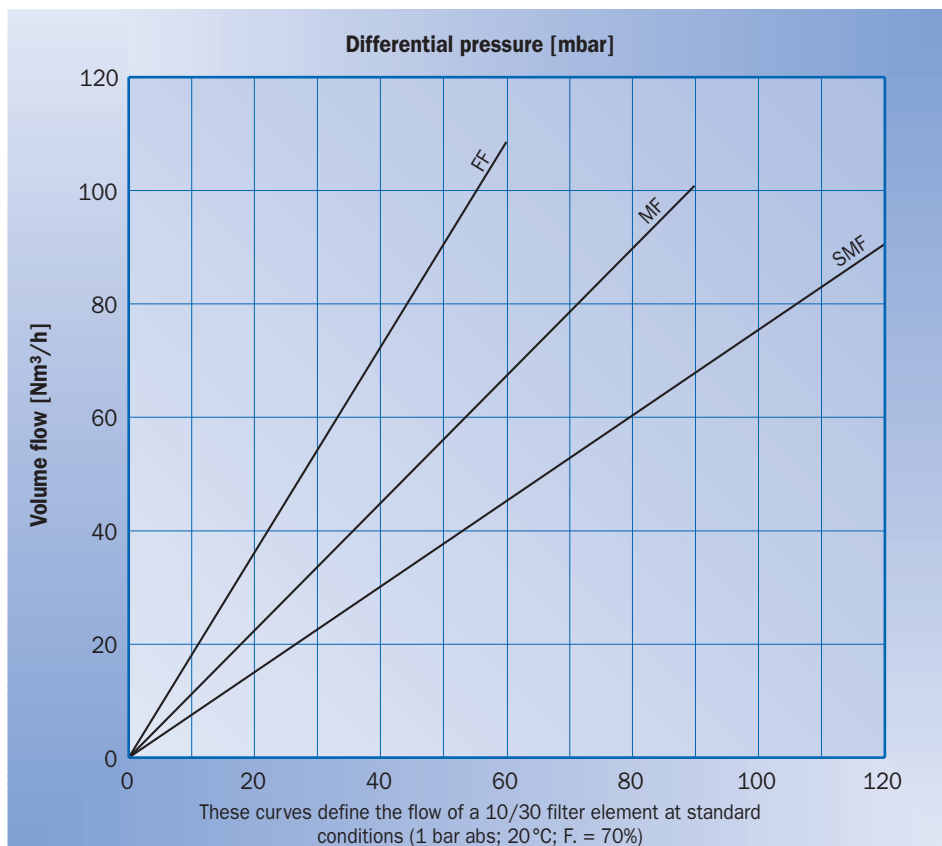
Materials:	
Outer foam sock	<ul style="list-style-type: none"> blew polyurethane foam sock up to 80°C HT/CR sock up to 120°C HT/NX-sock up to 180°C
Support sleeves – inner and outer	Stainless steel 1.4301/304
Pre- and after filter medium	Cerex®
Filter medium	Binderfree borosilicate
Bonding	Epoxy resin
End caps	Aluminium
2 O-Ring	Perbunan – siliconfree and free of parting compound (Standard)

Residual oil content at an inlet concentration of 3 mg/m³:
FF = 0.1 mg/m³
MF = 0.03 mg/m³
SMF = < 0.01 mg/m³

Max. differential pressure:
5 bar at 20°C, irrespective of system pressure

Initial differential pressure at nominal flow:
FF = 0.05 bar
MF = 0.08 bar
SMF = 0.12 bar

Performance of FF, MF, SMF elements – compressed air



Element type	Correction factor Filter surface KF
02/05	0.04
03/05	0.08
03/10	0.12
04/10	0.17
04/20	0.19
05/20	0.25
05/25	0.32
07/25	0.47
07/30	0.68
10/30	1.0
15/30	1.55
20/30	2.10
30/30	3.28
30/50	5.89

Technical alterations reserved (Date 1/99)

P-EG stainless steel housing

Stainless steel gas filter housing in industrial quality.

Product description:

P-EG filter housings have been developed for the purification of compressed air and other technical gases in industrial ranges of application. Optimized construction offers low differential pressure at high flow rates.

Numerous different sizes of housings with various connections make it possible to adopt the filter system to exactly the needed requirements. In this product series there are **18 different sizes** of housings for operating volume flows of 90 to 23,040 Nm³/h related to 7 bar(g) (50 to 13,640 scfm related to 102 psig) available.

The **ultrafilter** plug connection guarantees that the elements remain safely fixed at all times. Due to the modular design different element types can be installed into the housing. That means, even if the demands change, **ultrafilter** will adapt.

Stainless steel housing P-EG – industrial quality



Technical data

Materials:	
Filter housings:	stainless steel 1.4301 (304) or 1.4404 (316L)
Clamp:	stainless steel 1.4301 (304)
Plug:	stainless steel 1.4301 (304)
Housing gasket:	EPDM (other gaskets on request)

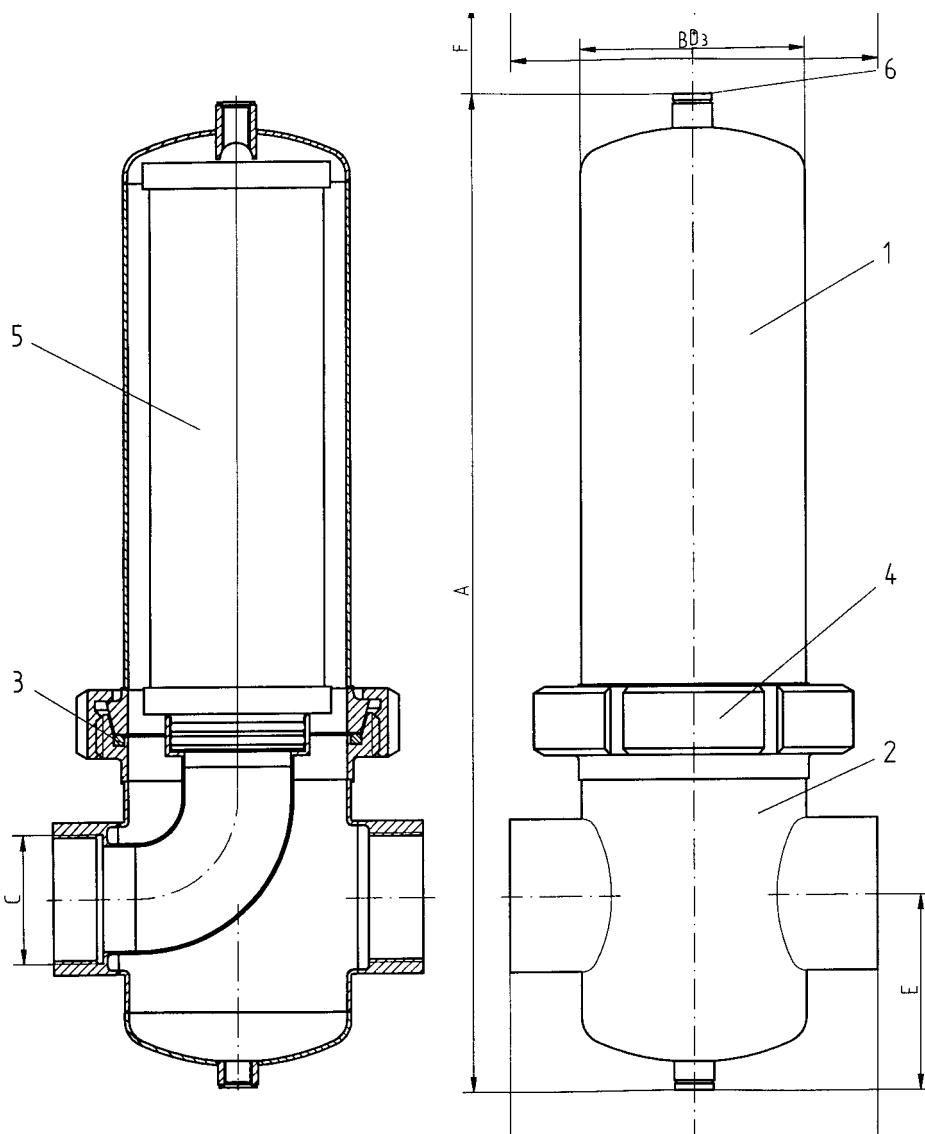
Maximum operating pressure:	
0006–0192	16 bar (230 psi)
0288	12 bar (175 psi)
0432–1920	10 bar (150 psi)

Maximum operating temperature:	
Depends on the gasket of the housing, up to 200 °C (400 °F)	

Surface finish:	
inner:	
0006–0288	etched and passivated R _a 1.6 (40 μinch)
0432–1920	etched and passivated R _a 1.6 (40 μinch)
outer:	
0006–0288	etched, passivated, and polished R _a 1.6 (40 μinch)
0432–1920	etched and passivated R _a 1.6 (40 μinch)

Connection types:	
NPT thread connection (standard for 0006–0288 single housing)	
DIN or ANSI flange (standard starting at 0432; optional up to 0192)	
Weld ends, BSP	
Other connections and bigger housings are available on request	

Technical alterations reserved (Date 1/99)



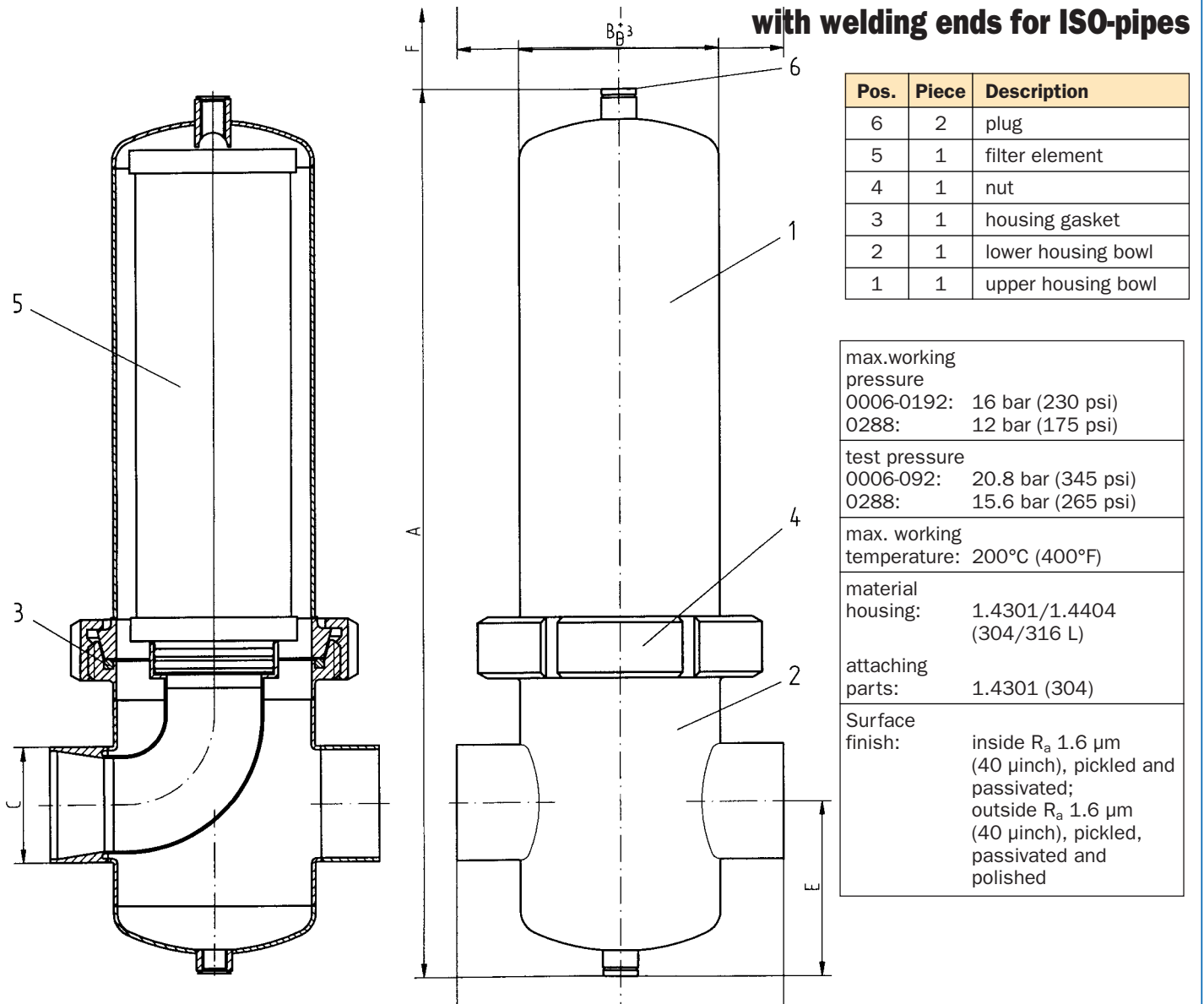
with thread connection

Pos.	Piece	Description
6	2	plug
5	1	filter element
4	1	nut
3	1	housing gasket
2	1	lower housing bowl
1	1	upper housing bowl

max. working pressure	
0006-0192:	16 bar (230 psi)
0288:	12 bar (175 psi)
test pressure	
0006-092:	20.8 bar (345 psi)
0288:	15.6 bar (265 psi)
max. working temperature:	200°C (400°F)
material housing:	1.4301/1.4404 (304/316 L)
attaching parts:	1.4301 (304)
Surface finish:	inside R_a 1.6 μ m (40 μ inch), pickled and passivated; outside R_a 1.6 μ m (40 μ inch), pickled, passivated and polished

Size	Volume l	Weight* kg	A mm	B mm	C	Ø D mm	E mm	F mm	Element
0006	0.55	1.7	215	108	R 1/4"	70	55	90	03/10
0009	0.65	1.9	243	108	R 3/8"	70	55	120	04/10
0012	0.65	1.9	243	108	R 1/2"	70	55	120	04/20
0018	0.75	2.0	266	125	R 3/4"	70	55	150	05/20
0027	1.0	2.6	293	125	R 1"	85	74	150	05/25
0036	1.25	3.0	344	140	R 1 1/4"	85	74	200	07/25
0048	2.3	4.3	386	170	R 1 1/2"	104	94	200	07/30
0072	3.3	4.8	460	170	R 2"	104	94	280	10/30
0108	4.3	5.3	587	170	R 2"	104	94	450	15/30
0144	8.0	9.0	732	216	R 2 1/2"	129	106	580	20/30
0192	11.1	10.8	987	216	R 3"	129	106	850	30/30
0288	16.5	16.2	1026	240	R 3"	154	119	850	30/50

* without filter element



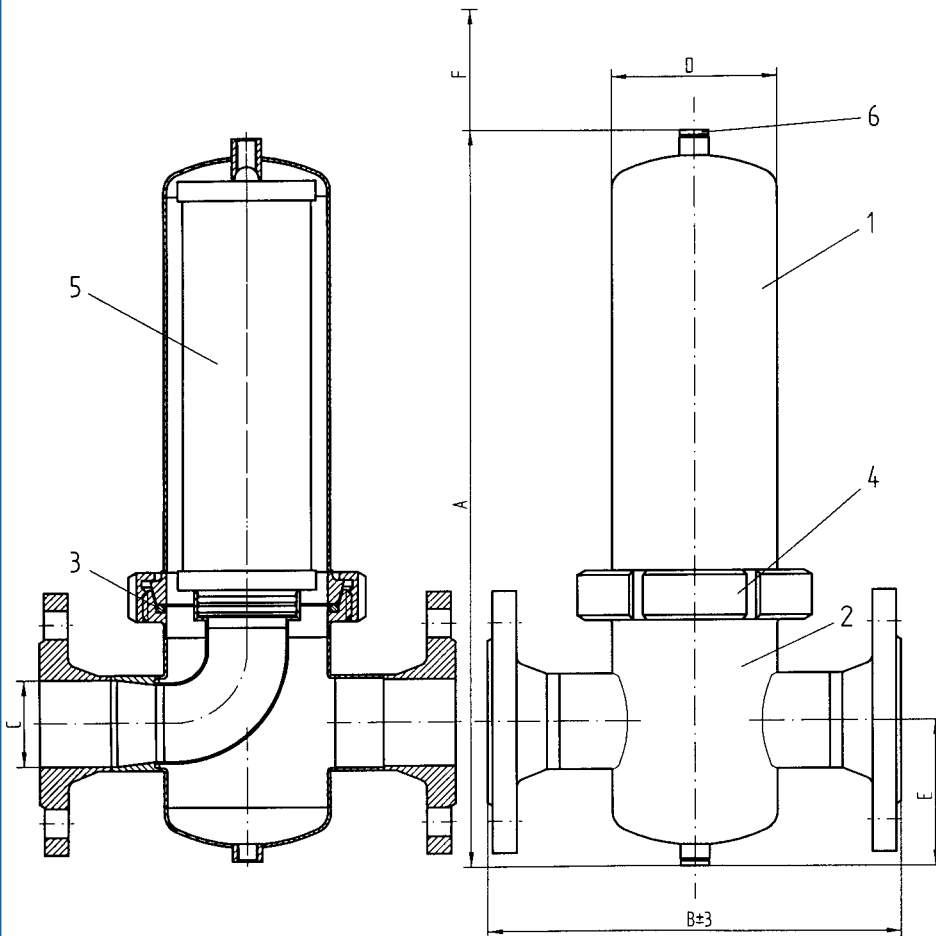
Pos.	Piece	Description
6	2	plug
5	1	filter element
4	1	nut
3	1	housing gasket
2	1	lower housing bowl
1	1	upper housing bowl

max. working pressure	
0006-0192:	16 bar (230 psi)
0288:	12 bar (175 psi)
test pressure	
0006-092:	20.8 bar (345 psi)
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max. working temperature:	200°C (400°F)
material housing:	1.4301/1.4404 (304/316 L)
attaching parts:	1.4301 (304)
Surface finish:	inside R _a 1.6 µm (40 µinch), pickled and passivated; outside R _a 1.6 µm (40 µinch), pickled, passivated and polished

Size	Volume l	Weight* kg	A mm	B mm	C	Ø D mm	E mm	F mm	Element
0006	0.55	1.7	215	108	17.2/DN 10	70	55	90	03/10
0009	0.65	1.9	243	108	17.2/DN 10	70	55	120	04/10
0012	0.65	1.9	243	108	21.3/DN 15	70	55	120	04/20
0018	0.75	2.0	266	125	26.9/DN 20	70	55	150	05/20
0027	1.0	2.6	293	135	33.7/DN 25	85	74	150	05/25
0036	1.25	3.0	344	140	42.4/DN 32	85	74	200	07/25
0048	2.3	4.3	386	170	48.3/DN 40	104	94	200	07/30
0072	3.3	4.8	460	170	60.3/DN 50	104	94	280	10/30
0108	4.3	5.3	587	170	60.3/DN 50	104	94	450	15/30
0144	8.0	9.0	732	200	76.1/DN 65	129	106	580	20/30
0192	11.1	10.8	987	200	88.9/DN 80	129	106	850	30/30
0288	16.5	16.2	1026	240	88.9/DN 80	154	119	850	30/50

* without filter element

with flange connection

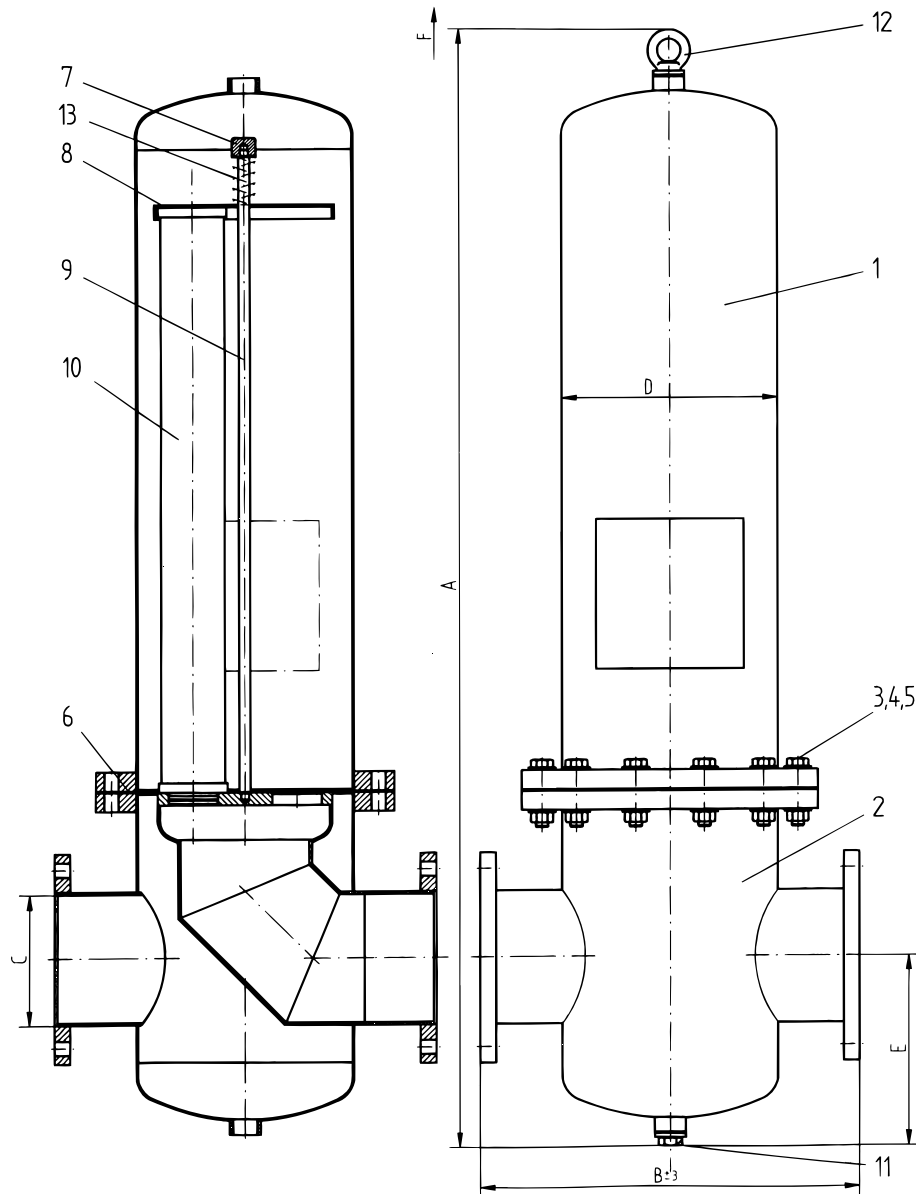


Pos.	Piece	Description
6	2	plug
5	1	filter element
4	1	nut
3	1	housing gasket
2	1	lower housing bowl
1	1	description

max. working pressure	
0006-0192:	16 bar (230 psi)
0288:	12 bar (175 psi)
test pressure	
0006-092:	20.8 bar (345 psi)
0288:	15.6 bar (265 psi)
max. working temperature:	200°C (400°F)
material housing:	1.4301/1.4404 (304/316 L)
attaching parts:	1.4301 (304)
Surface finish:	inside R_a 1.6 μ m (40 μ inch), pickled and passivated; outside R_a 1.6 μ m (40 μ inch), pickled, passivated and polished

Size	Volume l	Weight* kg	A mm	B mm	C DIN 2633	\varnothing D mm	E mm	F mm	Element
0006	0.55	2.7	215	180	DN 10	70	55	90	03/10
0009	0.65	2.9	243	180	DN 10	70	55	120	04/10
0012	0.65	3.4	243	180	DN 15	70	55	120	04/20
0018	0.75	4.0	266	202	DN 20	70	55	150	05/20
0027	1.0	4.8	293	212	DN 25	85	74	150	05/25
0036	1.25	6.4	344	220	DN 32	85	74	200	07/25
0048	2.3	8.0	386	245	DN 40	104	94	200	07/30
0072	3.3	10.0	460	260	DN 50	104	94	280	10/30
0108	4.3	10.5	587	260	DN 50	104	94	450	15/30
0144	8.0	15.0	732	290	DN 65	129	106	580	20/30
0192	11.1	18.2	987	300	DN 80	129	106	850	30/30
0288	16.5	23.6	1026	340	DN 80	154	119	850	30/50

* without filter element



with flange connection

Pos.	Piece	Description
13		spring
12		lifting eye bolts
11		plug
10		filter element
9		anchor bolt
8		bracket plate
7		bracket bolt
6		gasket
5		nut
4		washer
3		hexagon bolt
2		lower housing bowl
1		upper housing bowl

Max. working pressure:	10 bar (150 psi)
Test pressure:	13 bar (225 psi)
Max. working temperature:	200°C (400°F)
Material housing:	1.4301/1.4404 (304/316L)
attaching parts:	1.4301 (304)
Surface finish:	pickled and passivated

Size	Volume l	Weight* kg	A mm	B mm	C DIN 2576	Ø D mm	E mm	F mm	Element
0432	36	43	1090	410	DN 100	219.1	200	580	3x20/30
0576	45	44	1350	410	DN 100	219.1	200	850	3x30/30
0768	77	70	1410	480	DN 150	273	240	850	4x30/30
1152	110	80	1460	540	DN 150	323.9	250	850	6x30/30
1536	190	135	1600	660	DN 200	406.4	300	850	8x30/30
1920	190	135	1600	660	DN 200	406.4	300	850	10x30/30

* without filter element