



# DANGO & DIENENTHAL

Filtrertechnik GmbH

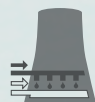
## Manual Filters



# The Manual Filters

## The New Definition of Purity for Your Medium

## Our Filter Systems Protect



Cooling Water



Plate Heat Exchangers



River Water



Spray Nozzles



Sea Water



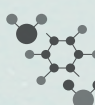
Piping Systems



Sinter and Scale Separation



Mechanical Seals



Emulsions



Pumps



Process Water



Mussel / Mussel Larvae Separation

Micro Filtration



Fig. 1

Pressure Equipment Directive (PED)	•	
American Society of Mechanical Engineers ASME		Δ
differential pressure gauging		Δ
differential pressure as 4 - 20 mA-signal		Δ
signal exchange with PLC	•	
outside coating	•	
inside coating		Δ
documentation	•	
certificates	•	Δ
functional test at manufacturer's works	•	
<hr/>		
included in the scope of delivery	•	
available at extra charge		Δ

DANGO & DIENENTHAL Filtertechnik GmbH has a broad product range regarding manual filters, such as different varieties of Single and Duplex Filters as well as Sludge Dewatering Devices. These filters distinguish themselves by the wide range of application for liquid or gaseous mediums, the robust construction as well as easy and fast cleaning.





Fig. 2 Single Filter in welded steel design

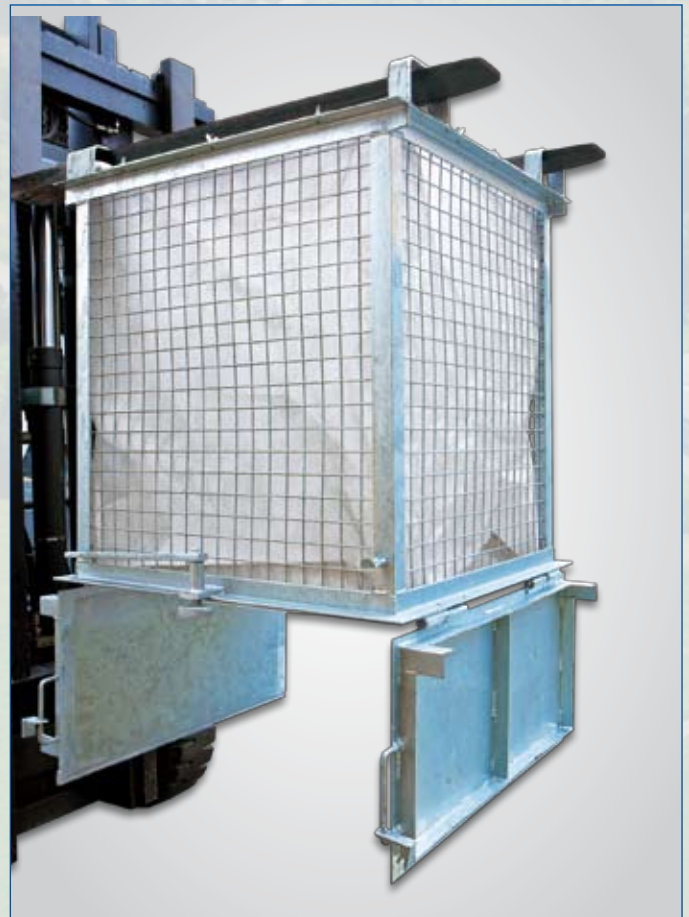


Fig. 3 Sludge Dewatering Device in galvanized design



Fig. 4 Duplex Filter in cast iron design



Fig. 5 Bag Filter in welded design



# Single Filter EF 15



Fig. 6

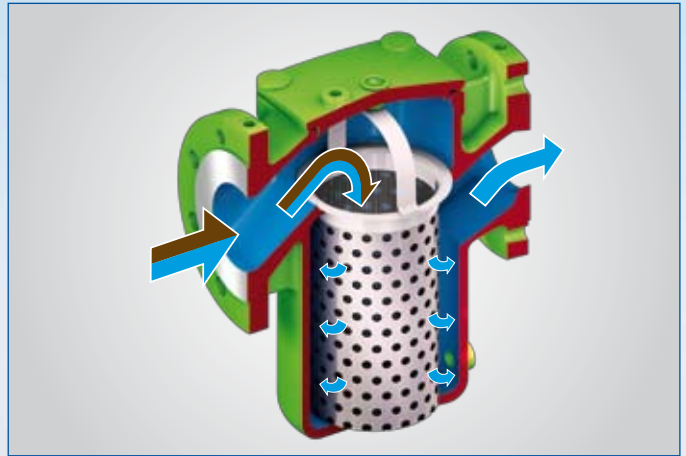
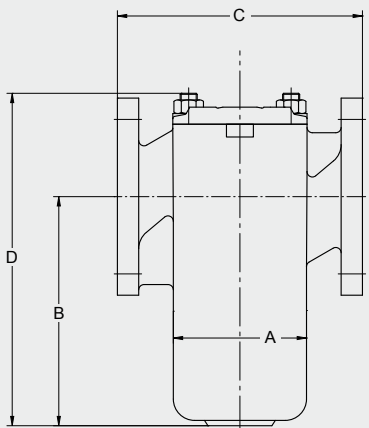
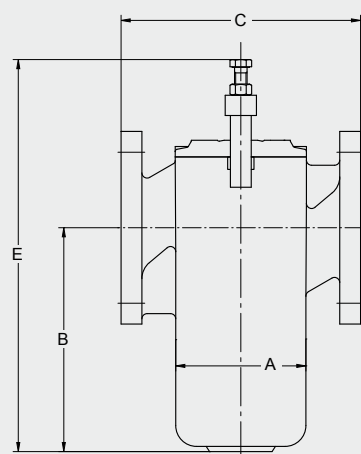


Fig. 7

flow rate	1 m³/h to 2,545 m³/h
filter fineness	10 to 5,000 µm
operating pressure	0 to 16 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 15 to DN 600
temperature	0 to 80 °C
manual cleaning	✓
material housing	cast iron
material filter element	stainless steel



cover plate with screwed fastening (SF)



cover plate with strap lock (SL)

DN	housing size	PN		A	B	C	D	E	flow rate	volume	filter area	weight empty
		SL	SF									
		bar	bar	mm	mm	mm	mm	mm	m³/h	l	cm²	kg
15	1	16	16	81	156	171	220	264	3	1	150	6
20	1	16	16	81	156	171	220	264	3	1	150	6
25	1	16	16	81	156	171	220	264	4.5	1	150	6
25	3	10	16	127	214	219	355	400	4.5	3.5	440	25
32	2	10	16	102	164	189	270	340	7	1.2	270	15
40	2	10	16	102	164	189	270	340	12	1.2	270	15
40	4	10	16	168	229	279	380	450	12	6.5	740	28
50	2	10	16	102	164	189	270	340	18	1.2	270	15
50	5	10	16	168	324	317	450	570	18	9	950	42
65	3	10	16	127	214	229	355	400	30	3.5	440	25
65	7	6	10	262	389	461	620	720	30	27	1980	75
80	4	10	16	168	229	279	380	450	45	6.5	740	28
80	7	6	10	262	389	461	620	720	45	27	1980	75
100	5	10	16	168	324	317	450	570	70	9	950	42
100	8	6	10	322	489	597	770	890	70	53	2950	140
125	6	6	10	222	324	379	540	590	110	15	1350	55
150	7	6	10	262	389	461	620	720	160	27	1980	75
200	8	6	10	322	489	597	770	890	280	53	2950	140
250	9	-	10	402	599	604	925	-	440	85	3590	195
300	10	-	6(*10)	472	619	719	1075	-	635	140	5610	300
400	11	-	6(*10)	790	1000	1246	1500	-	1130	600	16000	1400
500	11	-	6(*10)	790	1000	1246	1500	-	1770	600	16000	1400
600	11	-	6(*10)	790	1000	1246	1500	-	2544	600	16000	1400

in case of order technical dimensions may change

\* special design possible

The Single Filter EF 15 is widely applicable for liquid or gaseous mediums. It features high performance, low size ratio besides easy and fast cleaning. Inlet and outlet flanges are mounted superposed at same levels (inline). During cleaning the filtration has to be interrupted.



# Single Filter EF 30



Fig. 8

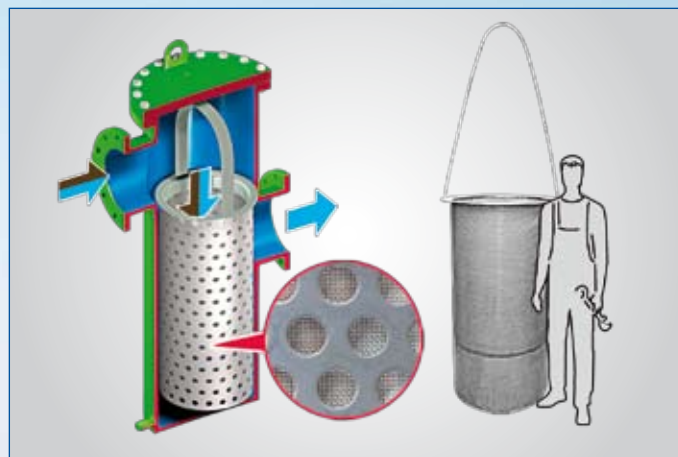
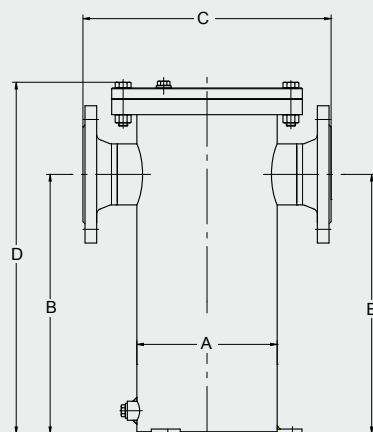
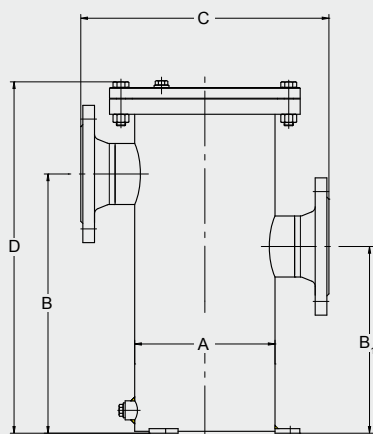


Fig. 9

flow rate	1.5 m³/h to 10,000 m³/h
filter fineness	10 to 5,000 µm
operating pressure	0 to 63 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 15 to DN 1,000
temperature	0 to 80 °C
manual cleaning	✓
material housing	steel, stainless steel, glass-fibre-reinforced plastic (GPR)
material filter element	stainless steel



DN	PN	A	B	B <sub>1</sub>	C	D	flow rate	volume	filter area	weight empty
mm	bar	mm	mm	mm	mm	mm	m³/h	l	cm²	kg
15	10	76	215	60	200	315	1.5	1	250	6
20	10	76	215	60	200	315	3	1	250	7
25	10	76	215	60	200	315	4.5	1	250	7
32	10	76	215	60	200	315	7	1	250	12
40	10	114	305	175	270	445	12	4	500	13
50	10	114	305	175	270	445	18	4	500	15
65	10	168	325	180	400	480	30	9	880	32
80	10	168	325	180	400	480	45	9	880	50
100	10	219	465	280	400	657	70	21	2000	53
125	10	219	465	280	400	657	110	22	2100	71
150	10	273	730	274	500	950	160	50	3580	96
200	10	356	750	455	570	1005	280	90	4250	175
250	10	406	925	500	700	1210	440	160	6870	266
300	10	508	1175	765	770	1525	610	285	11350	418
400	10	610	1430	970	870	2000	1130	530	15550	583
500	10	762	1635	1075	1100	2285	1765	910	22460	756
600	10	762	1550	800	1100	2500	2540	920	22460	897
700	10	1000	1400	650	1300	2600	3462	2500	30780	2500
1000	10	1400	2150	700	1800	3100	7000	4700	52770	4500

*in case of order technical dimensions may change*

The Single Filter EF 30 is widely applicable for liquid or gaseous mediums. It features high performance, low size ratio besides easy and fast cleaning. During cleaning the filtration has to be interrupted. Inlet and outlet flanges can be individually customized.



# Bag Filter EFBS

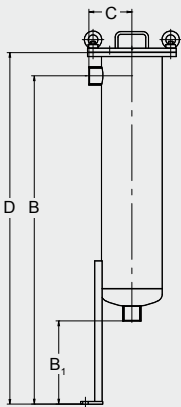


Fig. 10

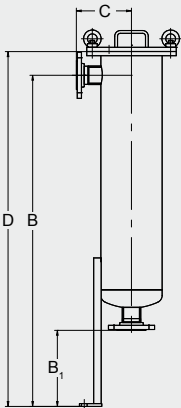


Fig. 11

flow rate	1 m³/h to 60 m³/h
filter fineness	1 to 5,000 µm
operating pressure	0 to 63 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 50 to DN 100
temperature	0 to 80 °C
manual cleaning	✓
material housing	steel, stainless steel
material filter element	stainless steel, polyester needle felt, nylon



with internal screw thread connection



with flange connection

DN	PN SF	B	B <sub>1</sub>	C	D	flow rate	volume	filter area	weight empty
mm	bar	mm	mm	mm	mm	m³/h	l	cm²	kg
50	10	1184	272	197	1300	30	27	5000	27
2"	10	1184	300	155	1300	30	27	5000	27
80	10	1200	300	225	1300	60	29	5000	29
100	10	1200	300	225	1300	60	31	5000	31
in case of order technical dimensions may change									

The Bag Filter EFBS is applied for operating conditions, which have to meet highest standards. The filter housing and the filter bags are specially adapted to the medium that needs to be filtered. A multitude of different filter materials, such as polypropylene, polyester, or nylon can be used. This filter features a fine filtration from 1 µm onwards and a large filtration area.

# Multi-Bag Filter EFBM

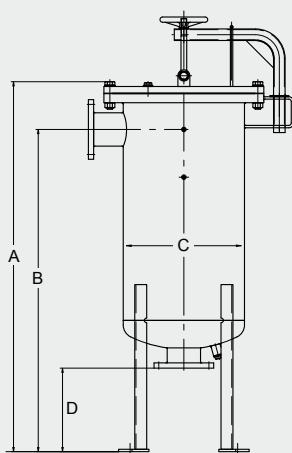


Fig. 12



Fig. 13

flow rate	60 m³/h to 460 m³/h
filter fineness	1 to 5,000 µm
operating pressure	0 to 10 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 125 to DN 250
temperature	0 to 80 °C
manual cleaning	✓
material housing	steel, stainless steel, glass-fibre-reinforced plastic (GPR)
material filter elements	stainless steel, polyester needle felt, nylon



Type	DN	PN	A	B	C	D	flow rate	volume	filter area	weight empty
	mm	bar	mm	mm	mm	mm	m³/h	l	cm²	kg
1	125	10	1530	1350	500	350	150	224	20000	240
2	150	10	1400	1110	800	410	250	442	30000	420
3	200	10	1550	1330	900	530	350	578	40000	440
4	250	10	1850	1530	1000	630	420	798	50000	630
5	250	10	1870	1550	1000	700	460	950	60000	680

*in case of order technical dimensions may change*

The Bag Filter EFBM is similar to the EFBS, but several filter bags are integrated in the filter housing. Because of the larger filtration area the operating time is increased and a higher throughput can be achieved.



# Duplex Filter DF 10



Fig. 14

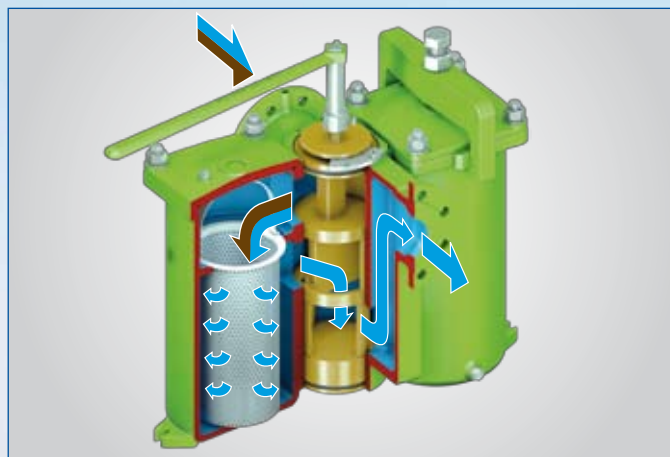
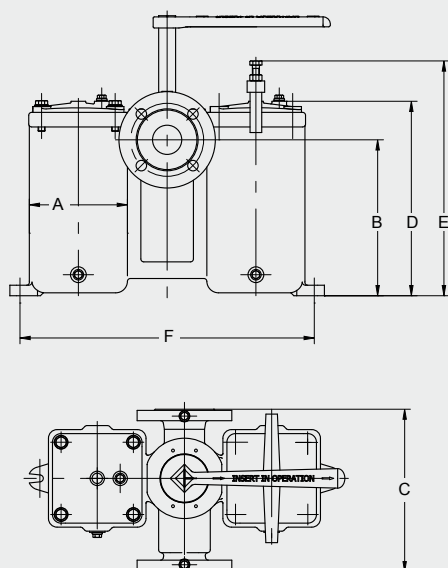


Fig. 15

flow rate	3 m³/h to 70 m³/h
filter fineness	10 to 5,000 µm
operating pressure	0 to 16 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 15 to DN 125
temperature	0 to 80 °C
manual cleaning	✓
material housing	cast iron
material filter elements	stainless steel



DN	PN		A	B	C	D	E	flow rate	volume	filter area	weight empty
	SL	SF									
mm	bar	bar	mm	mm	mm	mm	mm	m³/h	l	cm²	kg
15	16	16	102	185	175	242	400	3	1.2	270	21
20	16	16	102	185	175	242	400	3	1.2	270	22
25	16	16	102	185	175	242	400	4.5	1.2	270	22
32	16	16	127	225	225	298	460	7	3.5	440	38
40	16	16	127	225	225	298	460	12	3.5	440	38
50	10	16	127	225	305	328	490	18	6.5	740	69
65	10	16	168	267	305	328	490	30	6.5	740	70
80	10	16	168	267	390	478	720	45	15	1350	175
100	10	16	228	385	390	478	720	70	15	1350	175
125	10	16	228	385	390	478	720	70	15	1350	175

in case of order technical dimensions may change

The Duplex Filter DF 10 is widely applicable for liquid mediums. It features high performance, low size ratio besides easy and fast cleaning. During cleaning the filtration does not have to be interrupted. Therefore a continuous filter operation is ensured.



# Duplex Filter DF 40

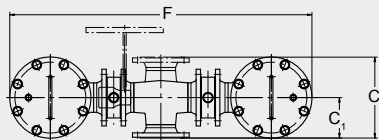
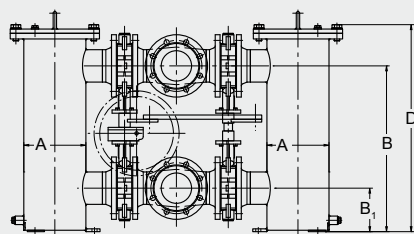


Fig. 16



Fig. 17

flow rate	45 m³/h to 1,766 m³/h
filter fineness	10 to 5,000 µm
operating pressure	0 to 16 bar
pressure loss with clean filter	0.1 to 0.2 bar
flange	DN 80 to DN 500
temperature	0 to 80 °C
manual cleaning	✓
material housing	steel, stainless steel, glass-fibre-reinforced plastic (GPR)
material filter elements	stainless steel



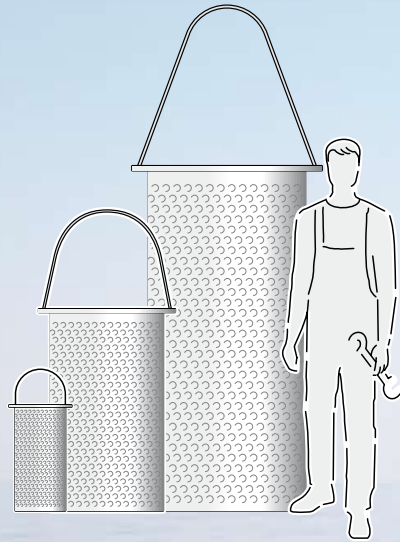
DN	PN	A	B	B <sub>1</sub>	C	C <sub>1</sub>	D	F	flow rate	volume	filter area	weight empty
mm	bar	mm	mm	mm	mm	mm	mm	mm	m³/h	l	cm²	kg
80	10/16	219	545	145	312	156	737	1129	45	26	2000	270
100	10/16	219	585	153	314	157	750	1173	71	26	2000	280
150	10/16	273	740	224	396	198	905	1383	159	52	3580	350
200	10/16	356	790	197	480	240	1010	1670	280	99	4300	410
250	10/16	406	950	261	572	286	1235	1958	440	155	6700	500
300	10/16	508	1175	436	664	332	1465	2215	636	283	11100	780
400	10/16	610	1430	514	780	390	2008	2874	1130	584	15600	1430
500	10/16	762	1609	485	782	391	2294	3266	1766	1002	22500	1980

*in case of order technical dimensions may change*

The Duplex Filter DF 10 is widely applicable for liquid mediums. It features high performance, low size ratio besides easy and fast cleaning. During cleaning the filtration does not have to be interrupted. Therefore a continuous filter operation is ensured. Inlet and outlet flanges can be individually customized.



## Filter Elements



**basket-type strainer -  
wire cloth coarse**

**basket-type strainer -  
wire cloth fine**

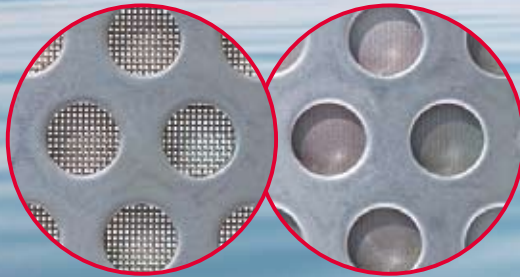


Fig. 18



Fig. 19

**filter bag**

**polyester  
needle felt 10 µm**

**nylon cloth  
200 µm**

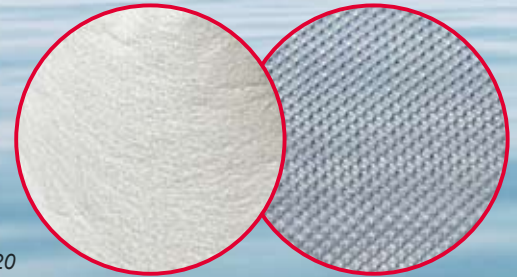


Fig. 20

## Differential Pressure Switch



Fig. 21

The differential pressure switch gives information on the filter element's current degree of pollution. When a pre-defined differential pressure between filter inlet and outlet is reached, a signal is emitted by an integrated switch contact on the differential pressure switch. This signal can be transmitted to an external switch room. The colour of the optical display changes when the pre-defined differential pressure is reached.

# SCHLAMMCON

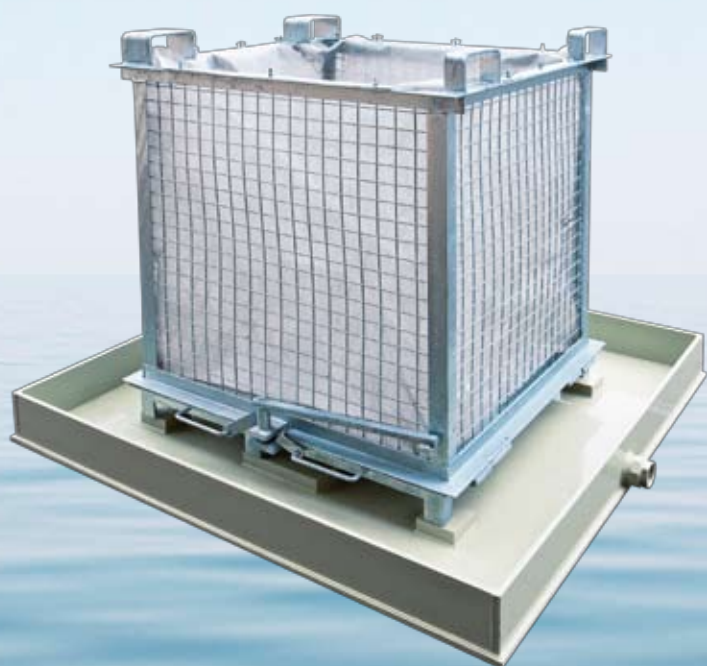


Fig. 22

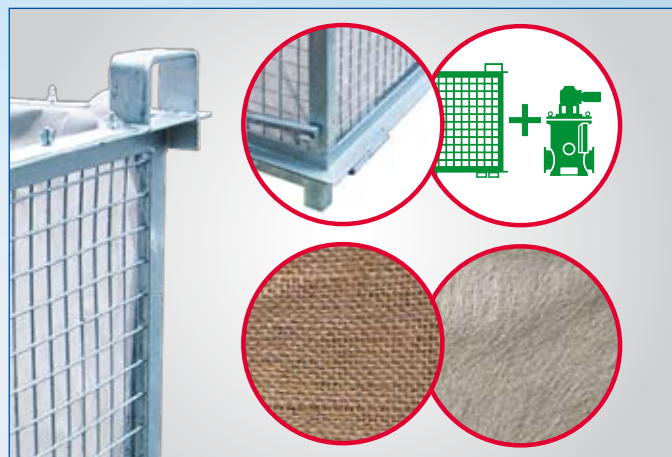
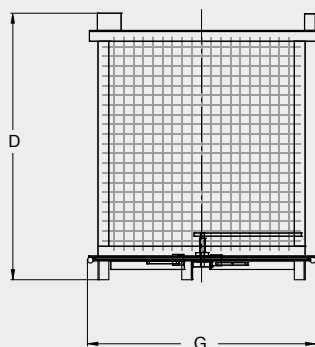
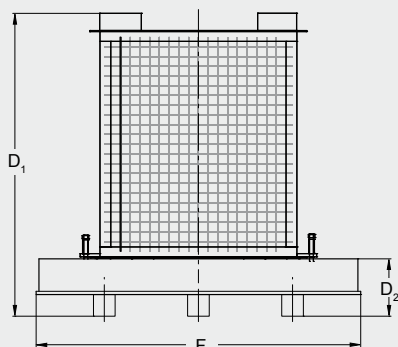


Fig. 23

box volume	1 m <sup>3</sup>
filter fineness	5 to 1,000 µm
temperature	0 to 80 °C
manual cleaning	✓
material housing	steel, stainless steel
material effluent-collector	polypropylene



SCHLAMMCON without effluent-collector

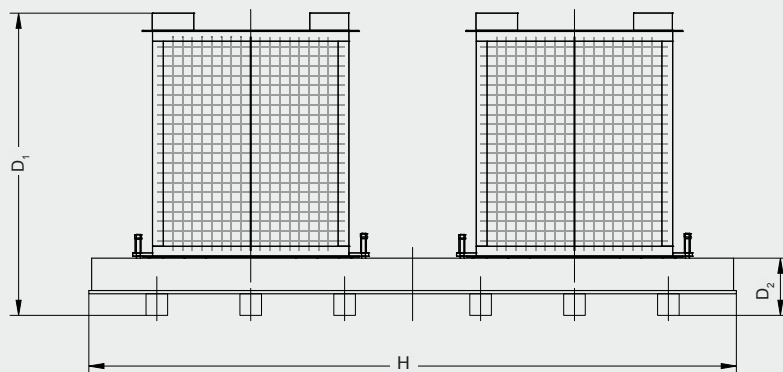


SCHLAMMCON with effluent-collector

D	D <sub>1</sub>	D <sub>2</sub>	F	G	H	volume	filter area	weight empty
mm	mm	mm	mm	mm	mm	l	cm <sup>2</sup>	kg
1235	1400	265	1500	1090	3000	1000	40000	150

special dimensions possible

The SCHLAMMCON is frequently applied in combination with automatic backwash filters or separators for treating the backwash water. This way the consumption of backwash water can be reduced. The dirt particles are retained in the box-type filter fleece. The cleaned water is collected in the effluent-collector and then if applicable pumped back into the system. Afterwards the content of the SCHLAMMCON can be professionally disposed of.



2 SCHLAMMCON with double-effluent-collector





## Process Diagram

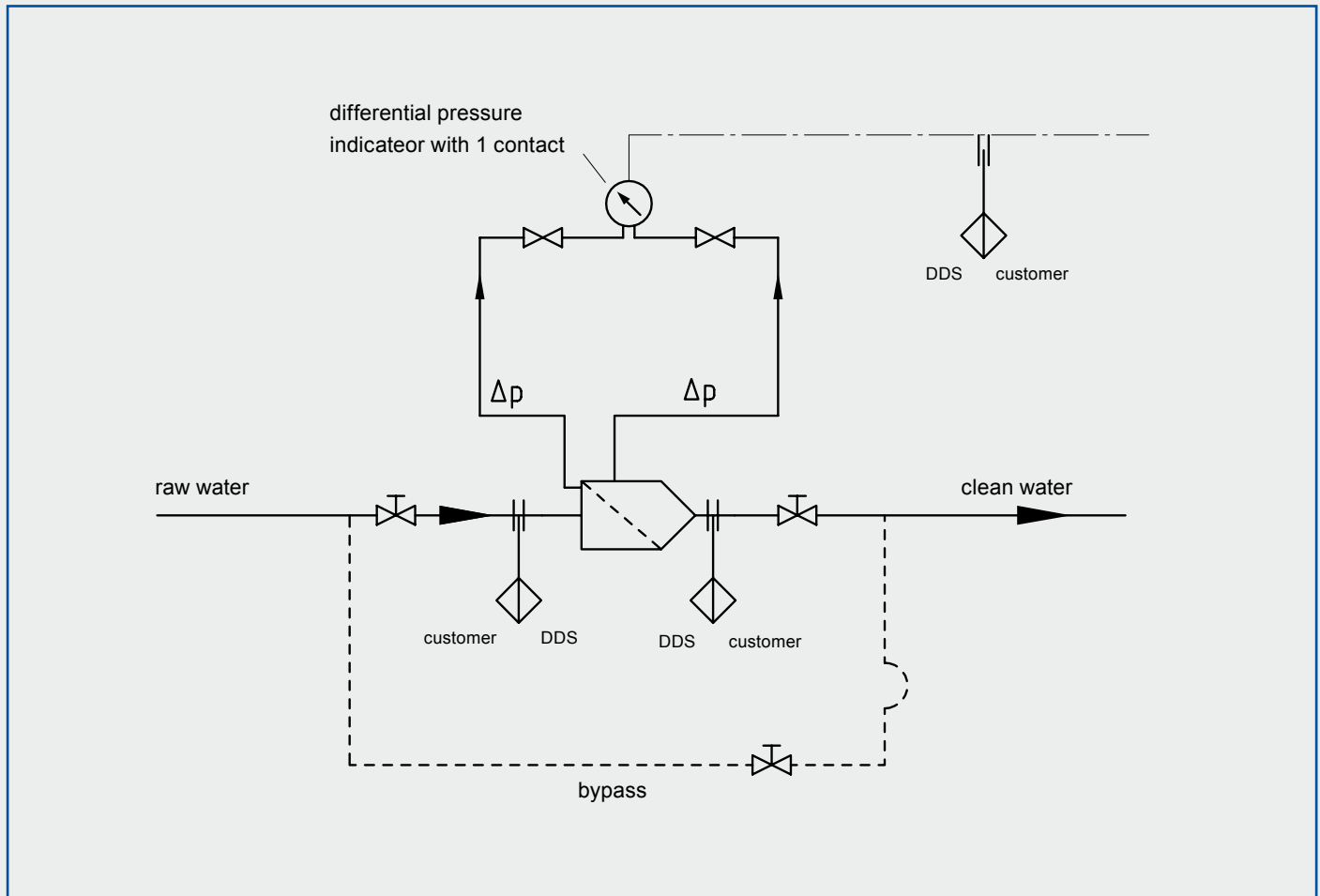


Fig. 24



Fig. 25

## Advantages

- low investment costs
- robust construction
- wide range of material
- reduction of disposal costs
- combination with automatic backwash filters and separators
- filter monitoring by differential pressure switch



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