

AUTOMATIC FILTER F450

Application

The self-cleaning Automatic Filter F450 (E) is pneumatically or electrically operated and used for the separation of solids in various different media like seawater, river water or process water. The Filter ensures reliable and continuous filtration in a variety of applications like cooling water cycles or water treatment plants. The filter can operate at very low pressures of only $\geq 0,7$ bar and is characterized by an unmatched low pressure loss, a compact design and near maintenance-free operation.

Due to the flexible combination of different design solutions and materials, the F450 can be easily adapted to the customer's specific requirements.

Function

The contaminated medium flows through the strainer from the inside to the outside. The cleaning cycle is initiated either by a timer or by reaching the defined differential pressure value. Then, the backflush valve opens and larger particles are flushed out. Subsequently the customized flushing disc moves into the strainer and creates a gap between the disc and strainer. The flow velocity increases locally around the disc within the gap between the flushing disc and the strainer (Bernoulli effect) and the remaining particles are removed and flushed out via the backflush valve.

The filtration continues uninterrupted during the entire cleaning cycle. The cleaning frequency depends on the fluid and the degree of contamination. The filter can be installed in a vertical and horizontal orientation.



Technical Data

In- / outlet:	DN65 – DN600
Operating medium:	Fluids
Volume flow:	max. 4400 m³/h
Design pressure:	6 bar, 10 bar
Design code and guidelines:	PED, EN13445, ASME VIII Div. 1, ASME X, ATEX

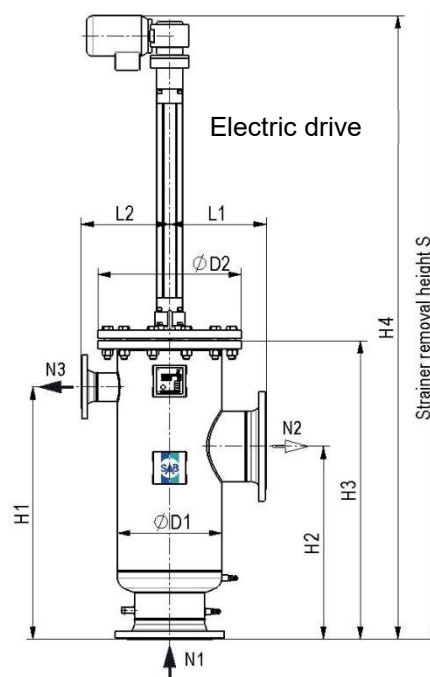
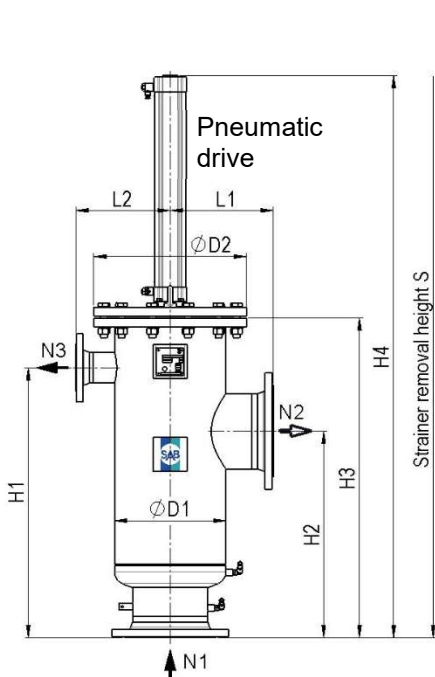
Components	Standard	Customized
Strainer:	Slot wedge wire, basket	Slot wedge wire 5S-profile
Grade of filtration:	$\geq 150 \mu\text{m}$ (slot wedge wire) $\geq 1 \text{ mm}$ (basket with perforated plate)	acc. customer's specification
Filter cover:	Cover with bolts and nuts	
Drainage and ventilation:	Screw (stainless steel)	acc. customer's specification
Connection:	Flange acc. DIN EN 1092-1/11/B1	acc. customer's specification (ANSI, JIS etc.)

Materials		
Housing and cover:	Stainless steel / carbon steel rubber-coated / GRP	acc. customer's specification
Cylinder rod:	Stainless steel	Super Duplex stainless steel
Cover gasket:	NBR	acc. customer's specification
Strainer:	1.4571, 1.4404 / 1.4571, Super Duplex	Titanium

Surface Treatment			
Housing inside:	GRP	Protective layer	acc. customer's specification
	Stainless steel	Primed and passivated	Glass bead blasted
	Carbon steel	Rubber-coated	acc. customer's specification
Housing outside:	GRP	Synthetic enamel RAL5018	acc. customer's specification
	Stainless steel	Primed and passivated	Glass bead blasted
	Carbon steel	Synthetic enamel RAL5018	acc. customer's specification

Further options and customer specific solutions are available upon request.

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Material	N1/2	N3	PN	ØD1	ØD2	H1	H2	H3	H4		L1	L2	S		Volume	Weight
									pneum.	electr.			pneum.	electr.		
									mm	mm			mm	mm		
Stainless steel / Carbon steel	65	25	10	114,3	220	390	300	480	878	1218	205	130	970	1280	4	48
	80	40	10	139,7	250	507	400	612	1073	1401	240	192	1170	1500	7,6	59
	100	40	10	168,3	285	475	355	578	1033	1344	170	226	1160	1500	11	69
	150	50	10	273	395	655	500	754	1318	1651	250	250	1440	1800	38	114
	200	80	10	323,9	445	785	600	929	1634	1940	300	275	1780	2070	68	160
	250	100	10	406,4	565	975	750	1154	2015	2260	350	325	2170	2450	140	238
	300	100	10	457	615	1150	900	1340	2313	2657	380	380	2460	2850	208	292
	400	150	10	610	780	1595	1365	1785	3078	3358	490	460	3260	3480	514	516
	500	150	10	800	1015	2200	1600	2459	4258	4642	700	550	4470	4900	1150	1068
600	200	10	1000	1230	2570	2070	2898	5236	5625	900	800	5500	5900	2100	1918	
GRP	65	25	10	141	250	510	385	665	1163	1503	190	180	1275	1575	5	40
	80	40	10	170	285	510	370	613	1097	1425	200	190	1200	1550	10	43
	100	40	10	220	340	506	380	656	1216	1527	220	220	1350	1650	18	64
	150	50	10	284	395	695	500	860	1554	1887	250	250	1700	2000	39	86
	200	80	10	340	445	790	600	1040	1766	2122	350	320	1900	2260	68	115
	250	100	10	430	505	1085	785	1400	2492	2738	400	350	2700	2900	165	160
	300	100	10	557	565	1360	960	1780	3146	3490	500	450	3300	3650	315	250
	400	150	6	640	670	1750	1270	2300	4086	4366	550	480	4250	4550	615	495
	500	150	6	840	780	2400	1880	3050	5319	5706	700	650	5600	6000	1370	950
600	200	6	1063	1015	2585	2000	3350	5922	6270	850	800	6150	6500	2650	1150	

The Automatic Filter shall be installed downstream of the pump on the pressure side.