AUTOMATIC FILTER F451

SINCE 1937
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Application

The self-cleaning Automatic Filter F451 is pneumatically 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 ≥ 0,7 bar and is characterized by an unmatched low pressure loss, a compact design and near maintenance-free operation.
Due to the standardized design and the use of cast housings the F451 sets a new benchmark when it comes to technical and economic efficiency.

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:	DN50 - DN300
Operating medium:	Fluids
Volume flow:	3,5 m³/h to max. 1300 m³/h
Design pressure:	10 bar
Design code and guidelines:	PED, EN13445, ASME VIII Div.1, ATEX

Components	**Standard**	**Customized**
Strainer:	Slot wedge wire, basket	acc. customer's specification
Grade of filtration:	≥ 100 µm (slot wedge wire) ≥ 1 mm (basket with perforated plate)	acc. customer's specification
Filter cover:	Cover with bolts and nuts (stainless steel)	
Ventilation:	Screw (stainless steel)	acc. customer's specification
Connection:	Flange acc. DIN EN 1092-1 / -2 Thread	acc. customer's specification (e.g. ASME B16.5)

Materials		
Housing:	Cast, stainless steel	Super austenitic stainless steel
Cover:	Stainless steel	Super austenitic stainless steel
Cylinder rod:	Stainless steel	Super Duplex stainless steel
Differential pressure switch:	Stainless steel	Monel
Strainer:	1.4571, Super Duplex stainless steel	acc. customer's specification

Surface Treatment			
Housing inside:	Cast	Powder coating RAL 5018	acc. customer's specification
	Stainless steel	Glass bead blasted	acc. customer's specification
Housing outside:	Cast	Powder coating 5018	acc. customer's specification
	Stainless steel	Glass bead blasted	acc. customer's specification

Further options and customer specific solutions are available upon request.

Pressure directive 2014/68/EU · AD 2000 HP-0-Certification · SCC**

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Technical changes reserved

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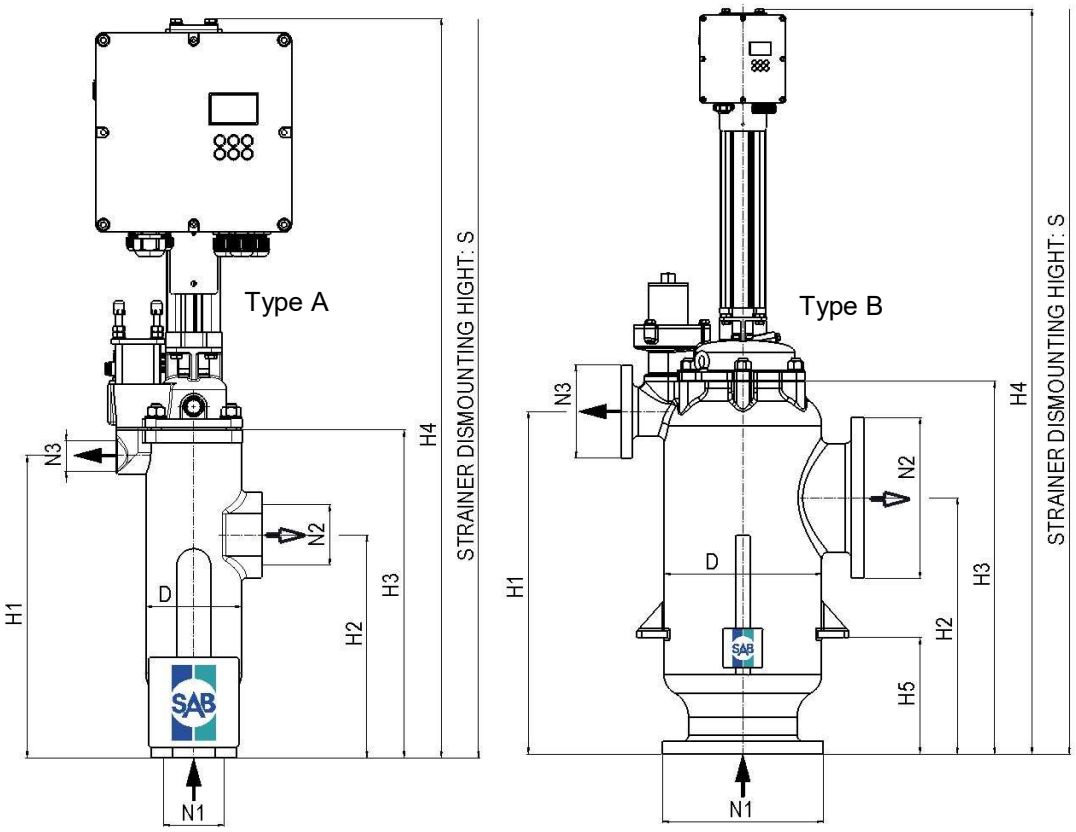

N1/2		N3		Strainer*		Type	D1	H1	H2	H3	H4	H5	L1	L2	S	Volume	Weight
DN	Inch	DN	Inch	DN	Inch		mm	mm	mm	mm	mm	mm	mm	mm	mm	ca. dm³	ca. kg
G 1¼ or G 2		G ¾		25	1	A**	90	285	210	309	697	-	64	72,5	750	1,5	11
				32	1¼												
				50	2												
50	2	20	¾	25	1	B	98	301	226	325	713	-	100	125	760	1,5	22
		20	¾	32	1¼												
		20	¾	50	2												
80	3	50	2	65	2½	B	140	339	281	381	797	-	130	135	850	4	33
		50	2	80	3												
150	6	50	2	100	4	B	214	535	415	585	1161	-	195	205	1260	17	73
		50	2	125	5												
200	8	80	3	150	6	B	338	735	550	800	1598	250	260	260	1700	60	150
		80	3	200	8												
300	12	100	4	250	10	B	510	1010	750	1100	2092	400	405	420	2200	193	346
		100	4	300	12												

* Standard grade of filtration:
Up to DN 200: 100µm, 300µm
From DN 250: 150µm, 300µm

** Type A only available in stainless steel

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

Technical changes reserved