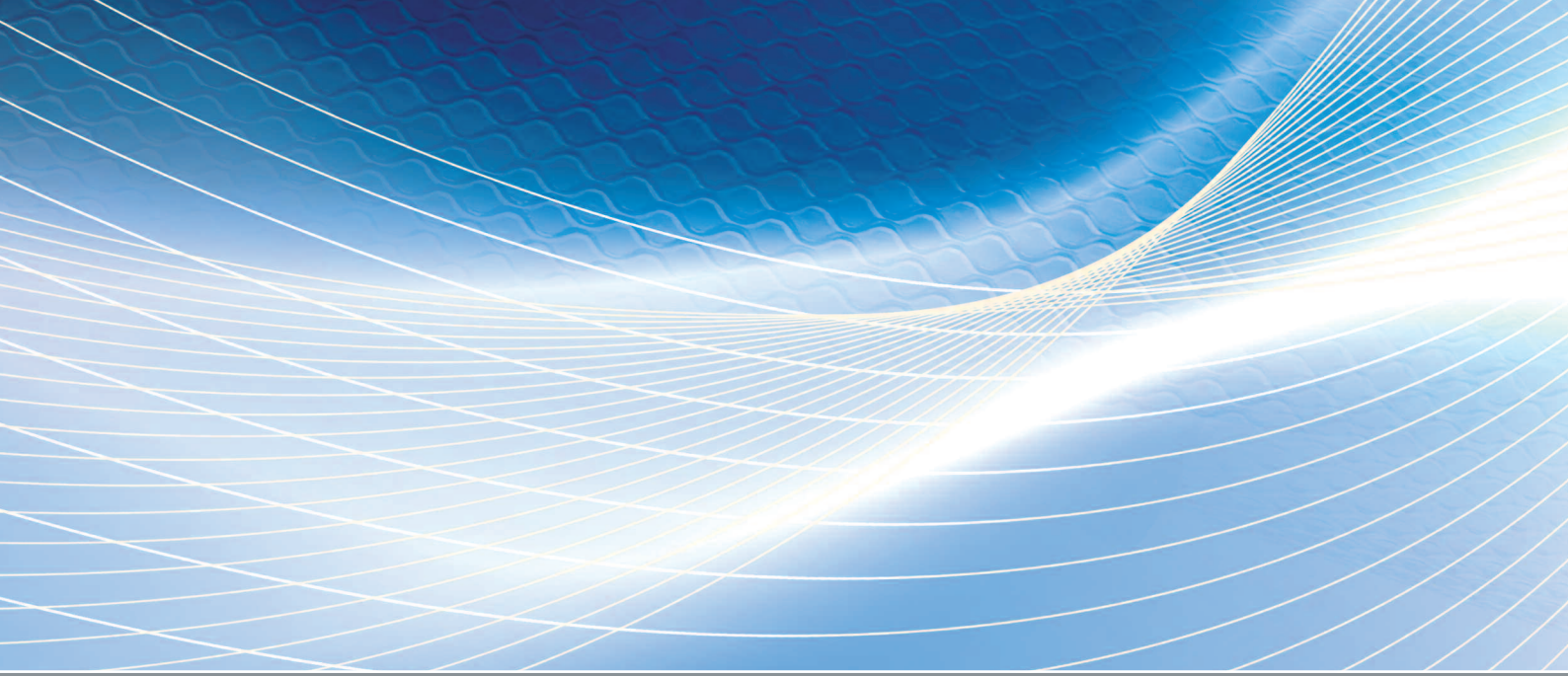


FSB Compressed air treatment





At the heart of the filter...

Filtration of particles and oil aerosols to supply workstations with high quality air:

- Pneumatic automation
- Pneumatic measurement, control and regulation
- Paint booths
- Laboratory air
- Breathing air, etc.

Complete range

for increasingly pure quality air from 40 to 2800 m³/h.

Efficient filtration

The filter elements are designed to filter pollutants efficiently from the air (water, oil, particles) with very little pressure drop.

We have several grades of filtration to suit your applications:

- **Micronic:** elimination of liquids (water and oil) and solid particles up to 1 µm for compressed air and gases.
- **Submicronic:** elimination of liquids (water and oil) and solid particles up to 0.01 µm for compressed air and gases.
- **Activated carbon:** elimination of oil vapour and aerosols

Easy maintenance

- All filter housings are made of 2 parts, regardless of the size of the filter, and the filter element can be replaced by a single person.
- The built-in tapered threaded centring rod makes it easy to assemble the filter element,
- The lack of corrosion on the aluminium cups makes them easy to remove.

Reduced operating costs

due to the quality of the filters and the long service life of the filter elements.

... the filter element

Excellent corrosion resistance

The choice of materials for both the filter housing and the filter element ensures excellent corrosion, chemical and thermal resistance and mechanical strength over time.

Rapid identification of filter elements

- Immediate identification of filtration grades by different coloured foam.
- All filter elements are identified (Stäubli + part number).



Technical data

Model	Type	Filtration grade (µm)	Mass concentration (mg/m ³)	Residual oil content ⁽¹⁾ (mg/m ³)	Pressure drop ⁽²⁾ (bar)	Recommended for:
FSB 01	Micronic	1	1	≤ 0.1	0.03	Tools, pneumatic transport, pneumatic controls, surface treatment, compressed air motors and pre- or post-filter for adsorption dryers.
FSB 02	Submicronic	0.01	0.1	≤ 0.01	0.09	Measurement and regulation systems, pneumatic transport, instrumentation for analysis and pre-filter for absorption dryers.
FSB 03	Submicronic Absolute	0.01	0.1	≤ 0.001	0.10	Measurement and regulation systems. This filter must be preceded by an FSB 02 filter.
FSB 05 ↙ FSB 02 + ↘ FSB 04	Submicronic	0.01	0.1	≤ 0.01	0.09	Breathing air applications, and also for process air, pharmaceutical industry, food industry, packaging, healthcare installations and heat treatment.
	Activated carbon	-	-	≤ 0.003	0.10	

⁽¹⁾ For 20 mg/m³ inlet at 1 bar abs. and 20 °C.

⁽²⁾ Pressure drop of the dry filtering element on its own.

Tightness

Nitrile seal between the bowl and top of the filter.

Maximum operating pressure

16 bar

Operating temperatures

+ 1 °C to + 60 °C

Construction

- **Filter element** consisting of a stainless steel mesh and 2 aluminium cups.
- **Filter media** consisting of 4 pleated layers for a larger exchange area:
 - 2 polypropylene layers – external and internal – surrounding 2 layers of borosilicate microfibre (one on top of the other) for grades FSB 01, 02 and 03,
 - An additional medium consisting of 32% activated carbon for grade FSB 04.
- **Aluminium filter housing** with a very smooth synthetic resin external coating and a perfect finish.
- **Interior of the bowls:** aluminium anti-corrosion treated.

Correction factor (f) of the nominal flow rate of filters according to the service pressure

based on a constant flow velocity and a temperature of 20 °C.

Pressure (bar)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
f =	0.25	0.38	0.50	0.63	0.75	0.88	1	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2	2.13

How to calculate the nominal flow rate of a filter at a given pressure

Example:

Min. pressure: 10 bar → f = 1.38

Filter model FSB 01.0020

→ nominal flow rate at 7 bar = 200 m³/h

Nominal flow rate at 10 bar = 200 x 1.38
= 276 m³/h

How to determine which model of filter is suitable for your application

Example:

Service pressure: 10 bar → f = 1.38

Required flow rate: 1300 m³/h

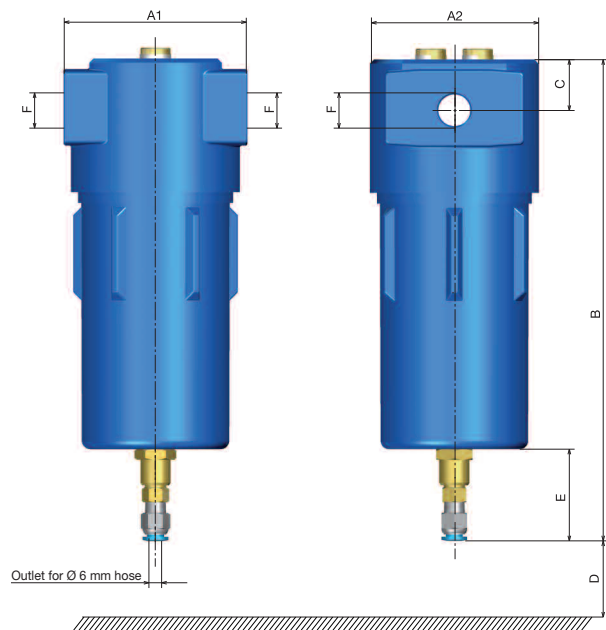
Filter size = flow rate/f

= 1300/1.38

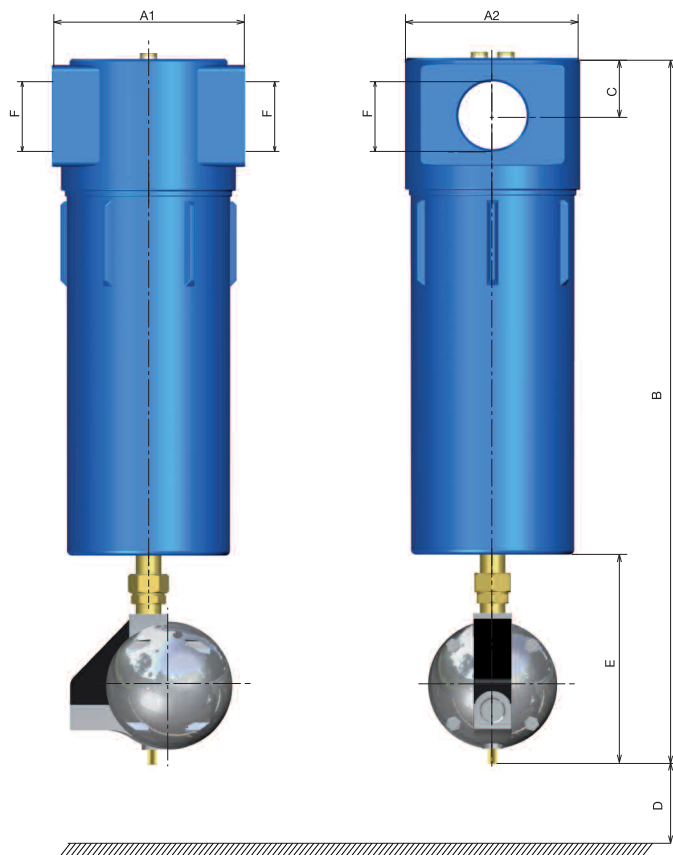
= 942 m³/h

Filter model FSB 01.0100

Part numbers, FSB 01 - FSB 02 - FSB 03 series



Models FSB xx.0004 to FSB xx.0080



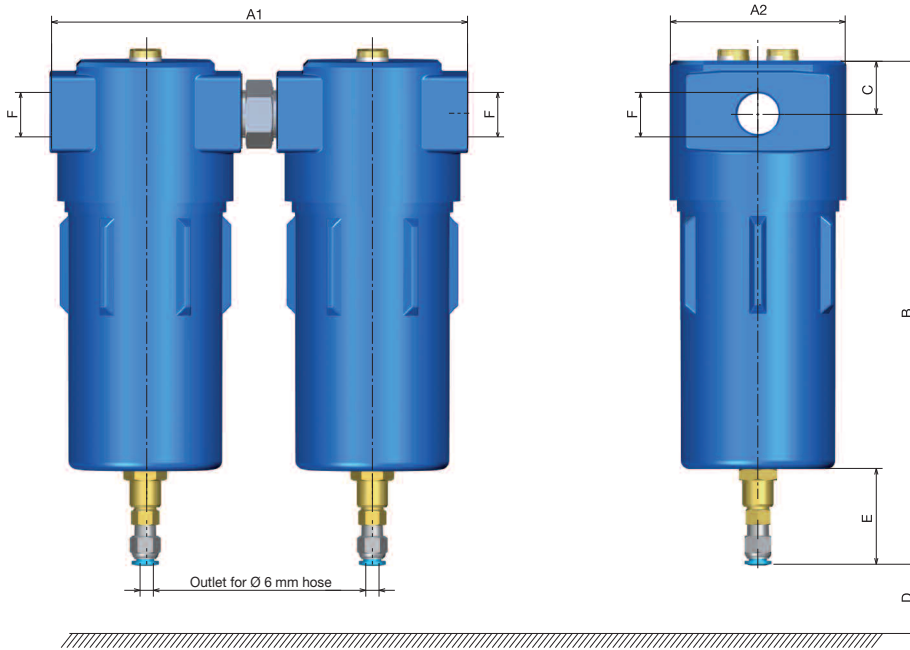
Models FSB xx.0100 to FSB xx.0280

All filters are fitted with an automatic float drain as standard.

Flow rate* (Nm ³ /h)	Fitting F	Dimensions (mm)						Weight (kg)	Part numbers of complete filters		
		A1	A2	B	C	D	E		FSB 01 series	FSB 02 series	FSB 03 series
40	G 1/4	86	79	196	24	100	45	0.8	FSB 01.0004	FSB 02.0004	FSB 03.0004
60	G 3/8	86	79	227	24	100	45	1.5	FSB 01.0006	FSB 02.0006	FSB 03.0006
80	G 1/2	86	79	227	24	100	45	1.5	FSB 01.0008	FSB 02.0008	FSB 03.0008
120	G 3/4	86	79	295	24	170	45	1.7	FSB 01.0012	FSB 02.0012	FSB 03.0012
200	G 1	129	122	324	42	140	45	4.3	FSB 01.0020	FSB 02.0020	FSB 03.0020
340	G 1 1/2	129	122	420	42	250	45	5	FSB 01.0034	FSB 02.0034	FSB 03.0034
510	G 1 1/2	129	122	520	42	340	45	5.5	FSB 01.0051	FSB 02.0051	FSB 03.0051
800	G 1 1/2	129	122	735	42	500	45	6.9	FSB 01.0080	FSB 02.0080	FSB 03.0080
1000	G 2	160	145	865	48	820	175	9.6	FSB 01.0100	FSB 02.0100	FSB 03.0100
1500	G 2 1/2	161	144	1105	56	1200	175	17.9	FSB 01.0150	FSB 02.0150	FSB 03.0150
2250	G 3	250	210	1161	73	1200	175	28	FSB 01.0220	FSB 02.0220	FSB 03.0220
2800	G 3	250	210	1421	74	1500	175	29.2	FSB 01.0280	FSB 02.0280	FSB 03.0280

* Flow rate at 7 bar and 20 °C

Part numbers, FSB 05 series








All filters are fitted with an automatic float drain as standard.

Flow rate* (Nm ³ /h)	Fitting F	Dimensions (mm)						Weight (kg)	Part numbers of complete filters FSB 05 series
		A1	A2	B	C	D	E		
40	G 1/4	180	79	196	24	100	45	1.6	FSB 05.0004
60	G 3/8	182	79	227	24	100	45	3	FSB 05.0006
80	G 1/2	194	79	227	24	100	45	3	FSB 05.0008
120	G 3/4	197	79	295	24	170	45	3.6	FSB 05.0012
200	G 1	289	122	324	42	140	45	9	FSB 05.0020
340	G 1 1/2	303	122	420	42	250	45	11	FSB 05.0034
510	G 1 1/2	303	122	520	42	340	45	12	FSB 05.0051
800	G 1 1/2	303	122	735	42	500	45	14.8	FSB 05.0080

* Flow rate at 7 bar and 20 °C

Replacement filter elements

FSB 01 series		FSB 02 series		FSB 03 series		FSB 05 series		
Model	Part numbers of filter elements	Model	Part numbers of filter elements	Model	Part numbers of filter elements	Model	Part numbers of filter elements	
								
							1st stage	2nd stage
FSB 01.0004	FSB 01.8004	FSB 02.0004	FSB 02.8004	FSB 03.0004	FSB 03.8004	FSB 05.0004	FSB 02.8004	FSB 04.8004
FSB 01.0006	FSB 01.8006	FSB 02.0006	FSB 02.8006	FSB 03.0006	FSB 03.8006	FSB 05.0006	FSB 02.8006	FSB 04.8006
FSB 01.0008	FSB 01.8008	FSB 02.0008	FSB 02.8008	FSB 03.0008	FSB 03.8008	FSB 05.0008	FSB 02.8008	FSB 04.8008
FSB 01.0012	FSB 01.8012	FSB 02.0012	FSB 02.8012	FSB 03.0012	FSB 03.8012	FSB 05.0012	FSB 02.8012	FSB 04.8012
FSB 01.0020	FSB 01.8020	FSB 02.0020	FSB 02.8020	FSB 03.0020	FSB 03.8020	FSB 05.0020	FSB 02.8020	FSB 04.8020
FSB 01.0034	FSB 01.8034	FSB 02.0034	FSB 02.8034	FSB 03.0034	FSB 03.8034	FSB 05.0034	FSB 02.8034	FSB 04.8034
FSB 01.0051	FSB 01.8051	FSB 02.0051	FSB 02.8051	FSB 03.0051	FSB 03.8051	FSB 05.0051	FSB 02.8051	FSB 04.8051
FSB 01.0080	FSB 01.8080	FSB 02.0080	FSB 02.8080	FSB 03.0080	FSB 03.8080	FSB 05.0080	FSB 02.8080	FSB 04.8080
FSB 01.0100	FSB 01.8100	FSB 02.0100	FSB 02.8100	FSB 03.0100	FSB 03.8100			
FSB 01.0150	FSB 01.8150	FSB 02.0150	FSB 02.8150	FSB 03.0150	FSB 03.8150			
FSB 01.0220	FSB 01.8220	FSB 02.0220	FSB 02.8220	FSB 03.0220	FSB 03.8220			
FSB 01.0280	FSB 01.8280	FSB 02.0280	FSB 02.8280	FSB 03.0280	FSB 03.8280			

Accessories

• Clogging indicators



with visual indicator
Part number: **FSB 01.9002**

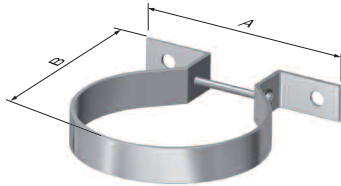


with manometer
Part number: **FSB 01.9000**



with electric contact:
feeds back information to a PLC,
Part number: **FSB 01.9001**

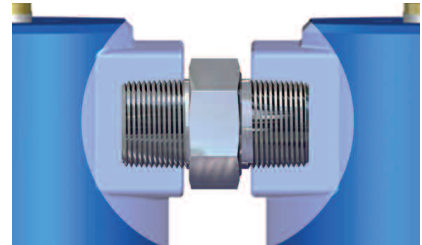
• Wall mounting brackets



Wall mounting kit comprising 1 wall bracket,
2 fixing screws, 2 nuts, 2 washers and 2 anchors.

Filter model	Bracket part numbers	Dimensions (mm)	
		A	B
FSB xx.0004 to FSB xx.0012	FSB 01.9008	93	120
FSB xx.0020 to FSB xx.0080	FSB 01.9009	143	156

• Assembly kit



Fitting	Part numbers
G 1/4	FSB 01.9011
G 3/8	FSB 01.9012
G 1/2	FSB 01.9013
G 3/4	FSB 01.9014
G 1	FSB 01.9015
G 1 1/2	FSB 01.9017

Material:

- G 1/4 to G 1: nickel-plated brass,
- G 1 1/2: stainless steel.

• Replacement float drains

Automatic float drains for filters
FSB 01, 02 and 03.



Filter models	Part numbers
FSB xx.0004 to FSB xx.0080	FSB 01.9003
FSB xx.0100 to FSB xx.0280	FSB 01.9004

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