



## Vacuum filters

**FESTO**



Data sheet

-  Temperature range  
0 ... +60°C
-  Operating pressure  
-0.95 ... +4 bar

Accessory for suction gripper ESG,  
mounting between suction cup holder  
and suction cup  
→ Internet: esg



**General technical data**

Classification of suction cup holders	Size 3	Size 4 For suction cup $\varnothing$ 20 mm	For suction cup $\varnothing$ 30/40/50 mm
Pneumatic connection	M4	M6	
Vacuum connection	M4	M6	
Mounting position	Any		
Type of mounting	With male thread via vacuum port		
Grade of filtration [ $\mu$ m]	10		
Flow rate <sup>1)</sup> [l/min]	100	260	270

1) At partial vacuum = -0.75 bar

**Operating and environmental conditions**

Operating pressure [bar]	-0.95 ... +4
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]
Ambient temperature [°C]	0 ... +60
Corrosion resistance class CRC <sup>1)</sup>	1

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

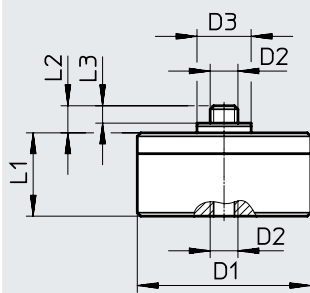
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

**Materials**

Housing	Aluminium, nickel-plated brass
Filter	PVF
Seals	NBR
Note on materials	RoHS-compliant Free of copper and PTFE

**Dimensions**



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**Ordering data**

Classification of suction cup holders	D1 $\varnothing$	D2	D3 $\varnothing$	L1	L2	L3	Weight [g]	Part no.	Type
Size 3	25	M4	7.8	10.5	4.5	3	9	<b>191202</b>	<b>ESF-3</b>
Size 4	25	M6	8.8	10.5	5.5	4	19	<b>191203</b>	<b>ESF-4A</b>
	40	M6	8.8	14	5.5	4	19	<b>191204</b>	<b>ESF-4B</b>

## Data sheet

-  Temperature range  
0 ... +40°C
-  Operating pressure  
-0.95 ... 0 bar

-  **Note**  
Only for use in open vacuum systems.



The vacuum filter is used to filter particles in the direction of suction. The vacuum filter is inserted as an in-line filter in the tubing line. On initial installation any flow direction can be chosen. After removal and refitting of the vacuum filter, the original flow direction must be maintained.

The fabric filter element is located in a transparent housing so that the degree of contamination of the filter cartridge can be determined. It is not possible to replace the filter.

General technical data			
Pneumatic connection	PK-3 with union nut	PK-4 with union nut	PK-6 with union nut
Nominal width [mm]	2	3	4.6
Mounting position	Any		
Type of mounting	In-line installation		
Grade of filtration [µm]	50		
Flow rate <sup>1)</sup> [l/min]	50.8	70	210
Ejector pulse suitability [bar]	≤8		

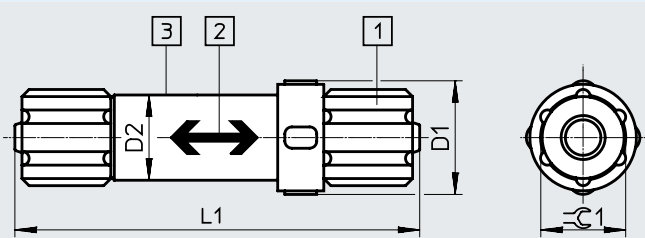
1) At partial vacuum = -0.75 bar

Operating and environmental conditions	
Operating pressure [bar]	-0.95 ... 0
Note on operating pressure	Only for use in open vacuum systems
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]
Ambient temperature [°C]	0 ... +40

Materials	
Housing	PA
Filter	Fabric, PA
Union nut	POM
Note on materials	RoHS-compliant

### Dimensions

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[1] Quick connector for plastic tubing


[2] Flow direction indicated with arrow

[3] Degree of contamination visible through the transparent housing

Ordering data								
Connection	For tubing O.D.	D1 ø	D2 ø	L1	≈ 1	Weight [g]	Part no.	Type
PK-3	4	16	12	50.8	8	4	535883	VAF-PK-3
PK-4	6	16	12	57	12	6	15889	VAF-PK-4
PK-6	8	24	19	64	14	10	160239	VAF-PK-6

## Data sheet

-  - Temperature range  
-5 ... +50°C
-  - Operating pressure  
-0.95 ... 0 bar

-  - **Note**  
Only for use in open vacuum systems.



The vacuum filter is used to filter particles in the direction of suction.  
The filter cartridge is located in a transparent bowl so that the degree of contamination of the filter cartridge can be determined. The filter cartridge can be replaced → page 6

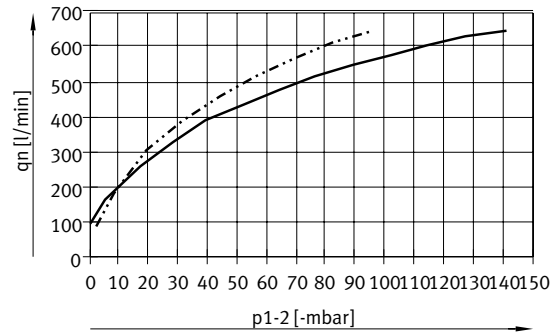
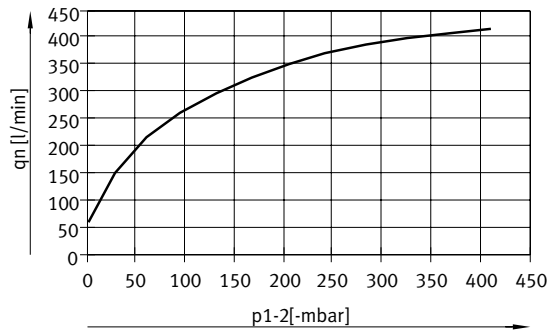
General technical data			
Pneumatic connection		G1/4	G3/8
Vacuum connection		G1/4	G3/8
Mounting position		Vertical	
Type of mounting		In-line installation	
		Via wall/surface bracket → page 6	
Grade of filtration	[µm]	80	
Ejector pulse suitability	[bar]	≤7	
Max. tightening torque	[Nm]	8.7	15.3
			20.5

Operating and environmental conditions	
Operating pressure	[bar] -0.95 ... 0
Note on operating pressure	Only for use in open vacuum systems
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]
Ambient temperature	[°C] -5 ... +50

Materials	
Housing	Reinforced PP
Bowl	PA
Filter	PE
Seals	NBR
Note on materials	RoHS-compliant
	Contains paint-wetting impairment substances

Data sheet

Standard flow rate  $q_n$  as a function of differential pressure  $\Delta_{p1-2}$

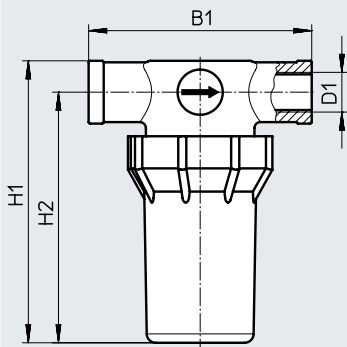


— VAF-DB-1/4

— VAF-DB-3/8  
 ..... VAF-DB-1/2

Dimensions

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Ordering data

Connection	B1	H1	H2	Weight [g]	Part no.	Type
D1						
1/4	75	94.5	84.5	71	547261	VAF-DB-1/4
3/8	90.5	125	113	156	553140	VAF-DB-3/8
1/2	90.5	129	115	162	553141	VAF-DB-1/2

## Accessories

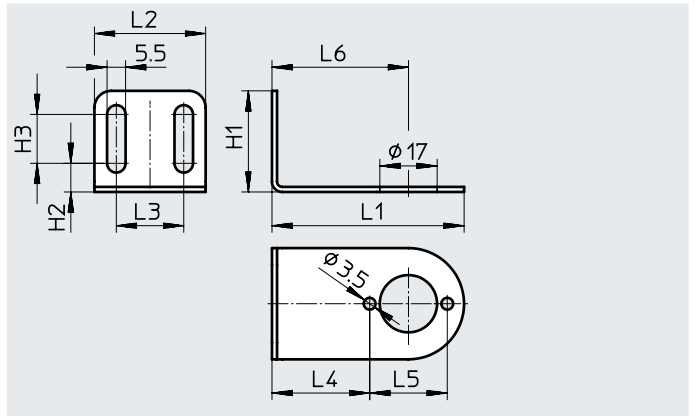
### Mounting bracket VAF-DB-HR

For vacuum filter VAF-DB

Type of mounting: threaded  
Max. tightening torque: 0.63 Nm

Material:  
High-alloy stainless steel

Note on materials:  
RoHS-compliant  
Contains paint-wetting impairment substances



Dimensions and ordering data											Part no.	Type
L1	L2	L3	L4	L5	L6	H1	H2	H3	CRC <sup>1)</sup>	Weight [g]		
57	33	20	29	23	40.5	30	8.5	14.5	2	27	553144	VAF-DB-HR-1/8-1/4
80	53	35	37	33	53.5	50	13.5	24.5	2	92	553145	VAF-DB-HR-3/8-1/2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

### Filter cartridge VAF-DB-P

For vacuum filter VAF-DB

Type of mounting: Plug-in

Material: PE

Note on materials:  
RoHS-compliant  
Contains paint-wetting impairment substances



Ordering data		Part no.	Type
For vacuum filters VAF-DB		553142	VAF-DB-P-1/8-1/4
		553143	VAF-DB-P-3/8-1/2