

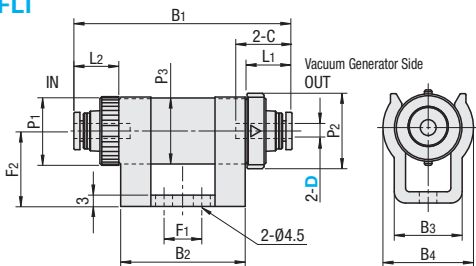
Vacuum Filters

Vacuum Filters / Elements for Replacement

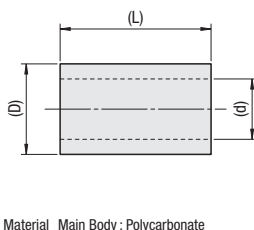


RoHS10

VFLT



VFLTE (Element for Replacement)



Material Main Body : Polycarbonate
Element : Polyvinyl Formal

Part Number	Type	D	B1	B2	B3	B4	L1	L2	P1	P2	P3	C	F1	F2	Filtration Area (cm ²)	Mass (g)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
VFLT	4	58	33	18	24	11.9	11.9	18.2	20	17.5	14.9	10	20	7.5	18			
	6	60				13	13				16				19			

Part Number	(D)	(d)	(L)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
VFLTE	12	8	20		

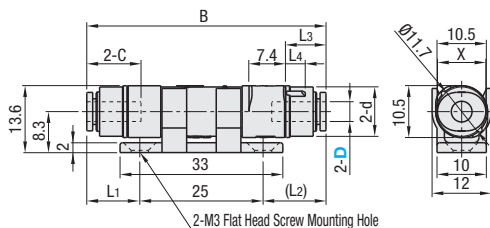
Applicable to both VFLT4 and VFLT6.

Vacuum Filters / Elements for Replacement - Small

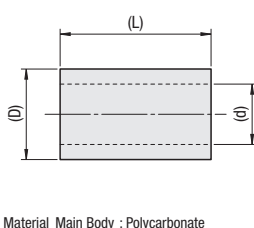


RoHS10

VFS



VFSE (Element for Replacement)



Material Main Body : Polycarbonate
Element : Polyvinyl Formal

Part Number	Type	D	B	C	L1	(L2)	L3	L4	d	X	Element Length	Filtration Area (cm ²)	Mass (g)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
VFS	4	48.5	11	10.8	12.7	8.2	4	10	9.8		15	2.8	5.1		
	6	53.4	11.6	13.2	15.2	10.6	4.5	10.5	11.8				6		

Part Number	(D)	(d)	(L)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
VFSE	6	4	15		

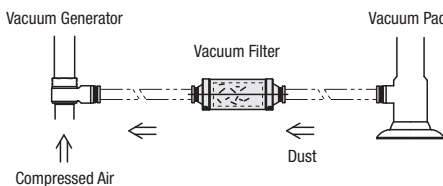


Ordering Example
Part Number
VFS4



Plumbing Example

Plumbing between Vacuum Generator and Vacuum Pad removes dusts entering from pad and protects Generator from failures.



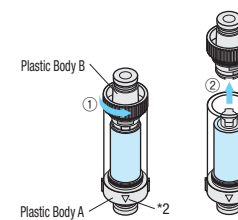
Specifications

Applicable Fluid	Air
Operating Temperature Range	0~60°C
Operating Pressure Range	-100~0kPa
Filtration Accuracy	10µm

Element Replacement

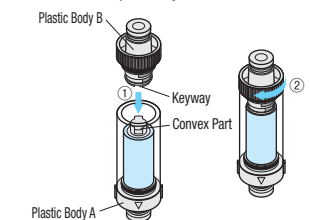
How to Remove

- Turn plastic body B 45° counterclockwise*.
 - Pull out plastic body B.
- * Do not turn the plastic body B beyond 45°. It may damage the plastic body.



How to Lock

- Press-fit plastic body B completely to plastic body A. Be sure that the lug of plastic body A aligns with the key slot in plastic body B.
 - Turn plastic body B 45° clockwise *1 to lock.
- *1. Do not turn the plastic body B beyond 45°. It may damage the plastic body.
- *2. When locking, be sure that the lug of plastic body A comes to the center of the hole in plastic body B.



*2. Be sure that the vacuum generator is installed in the same direction as pointed by the △ mark.
If installed reversely, the element inside will become dirty, making it impossible to know the proper time for maintenance.

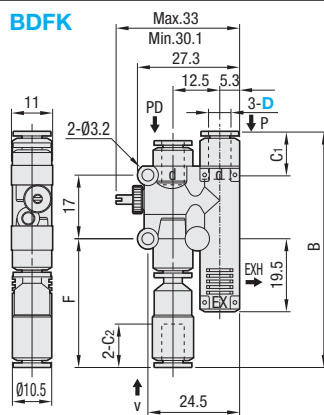
Vacuum Generators / Special Vacuum Filters / Fall Prevention Valves

With Vacuum Release Function

Vacuum Generators with Vacuum Release Function

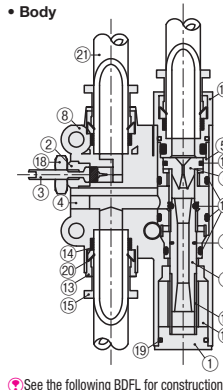


BDFK



Name of Parts / Material List

Body



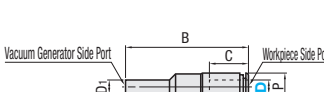
No.	Name of Parts	Material
1	End Plug	Brass, Electroless Nickel Plating
2	Upper Stopper	Brass, Electroless Nickel Plating
3	Release Needle	SUS303 Equivalent
4	Stopper 2	Brass, Electroless Nickel Plating
5	Sleeve	Brass, Electroless Nickel Plating
6	Nozzle Piston	Brass, Electroless Nickel Plating
7	Diffuser Spool	Brass, Electroless Nickel Plating
8	Resin Body	PBT Glass 15%
9	Spool Gasket	Nitrile Rubber (H-NBR)
10	Diffuser Spring	Stainless Steel
11	Silencer Element	Polyvinyl Formal (PVF)
12	Cartridge	-
13	Guide Ring	Brass, Electroless Nickel Plating
14	Elastic Sleeve	Nitrile Rubber (NBR)
15	Release Ring	Polyacetal (POM)
16	Y Gasket	Nitrile Rubber (NBR)
17	O-Rings	Nitrile Rubber (NBR)
18	Lock Nut	Aluminum Alloy
19	Spring Pin	Stainless Steel
20	Lock Pawl	Stainless Steel
21	Tubes	Urethane or Nylon

See the following BDFL for construction of filter.

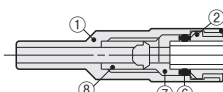
Special Vacuum Filters



BDFL



Vacuum Filter



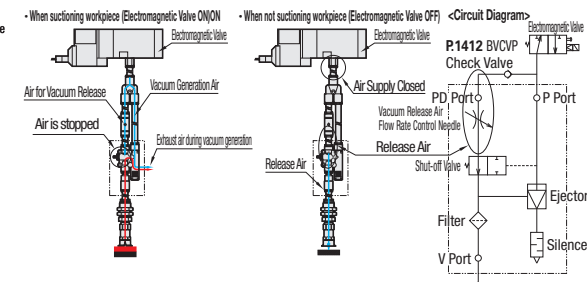
No.	Name of Parts	Material
1	Resin Body	Polypropylene (PP)
2	Lock Pawl	Stainless Steel
3	Guide Ring	Brass, Electroless Nickel Plating
4	Release Ring	Polyacetal (POM)
5	Tubes	Urethane or Nylon
6	Elastic Sleeve	Nitrile Rubber (NBR)
7	Element Presser	Polyacetal (POM)
8	Filter Element	Polyvinyl Formal (PVF)

Part Number	Type	D	Suction Flow Rate (l/min (ANR)) Selection	B	F	C1	C2	Nozzle Dia. (mm)	Pressure Rating (MPa)	Ultimate Vacuum (-kPa)	Flow Consumption (l/min (ANR))	Mass (g)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
BDFK	4	6	7	59.7	34.1	10.9	11	0.5	0.5	90	11.5	20.5		
			12.5	62.9	34.4	11.7	11.6	0.7		92	23	21.5		

Applicable Fluid	Air
Operating Pressure Range	0.3~0.7MPa
Operating Temperature Range	5~50°C
Lubrication	Not Required

Part Number	Type	Tube Outer Dia. D	Applicable Fitting Dia. D1	B	L	C	P	Mass (g)	Filtration Area (cm ²)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
BDFL	4	4	4	34.7	21.5	11.0	8.0	1.5	0.8		
	6	6	6	35.2	21.8	11.6	10.5	2.5	1.1		

Applicable Fluid	Air
Operating Pressure Range	-100~0kPa
Filtration Accuracy	10µm
Operating Temperature Range	0~60°C
Filtration Area	Joint Size 44: 0.8cm ² Joint Size 66: 1.1cm ²



Features

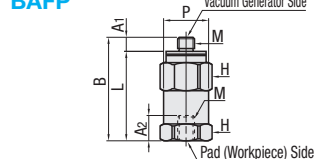
Vacuum release air is introduced to the suction line to reduce the vacuum release time to a value shorter than ever. As a result, the time for suctioning and moving workpiece is shortened and the activity efficiency is improved.
Flow rate of release air can be controlled by Release Air Flow Rate Control Needle.



Ordering Example
Part Number
BDFK4
BDFL4
Suction Flow Rate
7

Fall Prevention Valves

BAFP



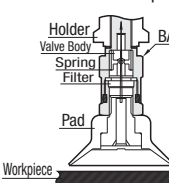
Name of Parts	M4	M6
Metal Body A	Stainless Steel	Brass, Electroless Nickel Plating
Metal Body B	Brass, Electroless Nickel Plating	Aluminum, Electroless Nickel Plating
Valve Body	Aluminum Alloy	
Stopper	Brass, Electroless Nickel Plating	
Spring	SUS304	
Filter	Polyvinyl Formal (PVF)	
O-Rings	Nitrile Rubber (NBR)	
Gasket	SUS304 + Nitrile Rubber (NBR)	

Part Number	Type	No.	Thread Size	M	A1	A2	B	L	P	Width Across Suction Flow Rate (l/min (ANR))	Valve Operation	Non-attached Vacuum Decline Level (kPa)	Effective Sectional Area (mm ²)	Mass (g)	Unit Price 1~9 pc(s).	Volume Discount Rate 10~20
BAFP	4	4	M4x0.7	3	4.5	19.9	16.9	10	10	5	2	1.63	0.09	7.9		
	6	6	M6x1.0	4	4.9	28.1	24.1	12	12	13	2	4.06	0.09	12.4		

Specifications	Air
Applicable Fluid	Positive Pressure: 0 ~ 0.7MPa Negative Pressure: 0 ~ -100kPa
Operating Pressure Range	-7kPa
Min. Operating Pressure	0~60°C
Operating Temperature Range	

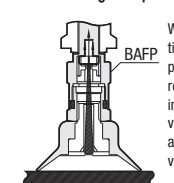
Description of Fall Prevention Valve

Fall Prevention Valve Operating Condition



When a workpiece is detached from the vacuum pad, airflow pushes up the valve and shuts the air passage. During operation, the valve sucks small amount of air through a small hole in the middle.

While Holding Workpiece



When a workpiece is tightly stuck to vacuum pad, the suction flow is reduced and the spring inside pushes down the valve. As the result, the air passage between the valve and body opens.



Ordering Example
Part Number
BAFP4