

# Vacuum Filters

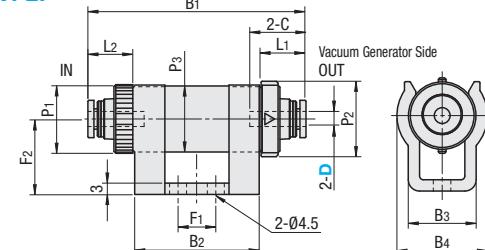
# Vacuum Generators / Special Vacuum Filters / Fall Prevention Valves

## With Vacuum Release Function

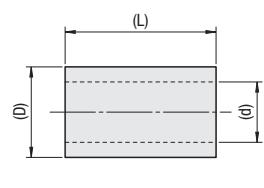
### Vacuum Filters / Elements for Replacement



**VFLT**



**VFLTE (Element for Replacement)**



M Material Main Body : Polycarbonate  
Element : Polyvinyl Formal

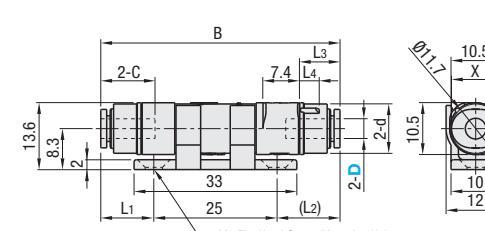
Part Number	Type	D	B1	B2	B3	B4	L1	L2	P1	P2	P3	C	F1	F2	Filtration Area (cm²)	Mass (g)	Unit Price	Volume Discount Rate
VFLT	4	58	33	18	24	11.9	11.9	18.2	20	17.5	14.9	10	20	7.5	18			
	6	60	33	18	24	13	13	13	13	20	16	10	20	7.5	19			

Applicable to both VFLT4 and VFLT6.

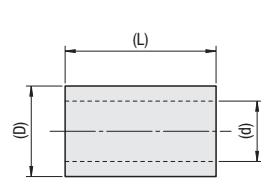
### Vacuum Filters / Elements for Replacement - Small



**VFS**



**VFSE (Element for Replacement)**



M Material Main Body : Polycarbonate  
Element : Polyvinyl Formal

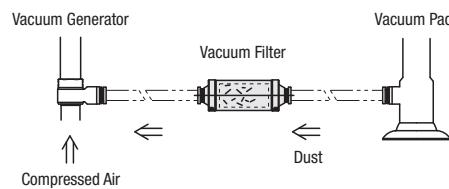
Part Number	Type	D	B	C	L1	(L2)	L3	L4	d	X	Element Length	Filtration Area (cm²)	Mass (g)	Unit Price	Volume Discount Rate
VFS	4	48.5	11	10.8	12.7	8.2	4	10	9.8	15	2.8	5.1			
	6	53.4	11.6	13.2	15.2	10.6	4.5	10.5	11.8			6			

Ordering Example Part Number **VFS4**

Example **ex**

### 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.

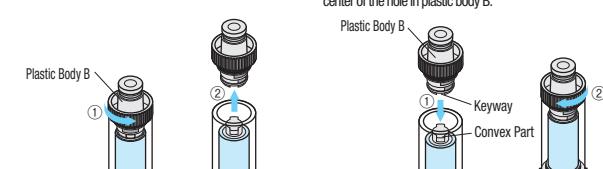
When locking, be sure that the lug of plastic body A comes to the center of the hole in plastic body B.

#### 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.

When locking, be sure that the lug of plastic body A comes to the center of the hole in plastic body B.

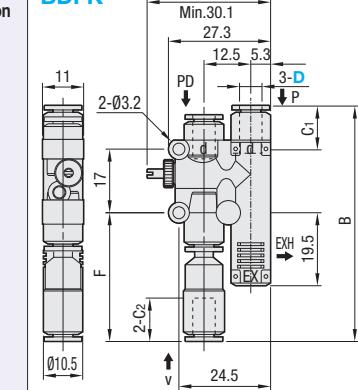


\*2. Be sure that the vacuum generator is installed in the same direction as pointed by the △ mark. If installed reversely, the element inside will become dirty, making it impossible to know the proper time for maintenance.

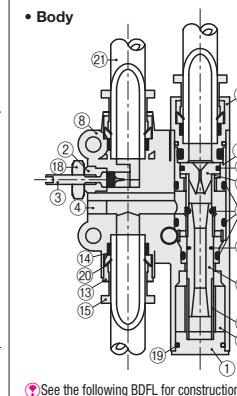
### Vacuum Generators with Vacuum Release Function



**BDFK**



### Name of Parts / Material List



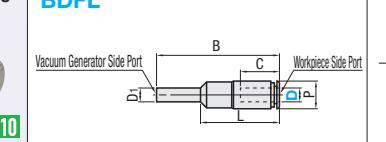
See the following BDFL for construction of filter.

No.	Name of Parts	Material
①	End Plug	Brass, Electroless Nickel Plating
②	Upper Stopper	Brass, Electroless Nickel Plating
③	Release Needle	EN 14305 Equiv.
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 Gasket	PBT Glass 15%
⑨	Spool Gasket	Nitrile Rubber (H-NBR)
⑩	Diffuser Spring	Stainless Steel
⑪	Silencer Element	Polyvinyl Formal (PVF)
⑫	Cartridge	Brass, Electroless Nickel Plating
⑬	Guide Ring	Nitrile Rubber (NBR)
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

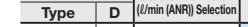
### Special Vacuum Filters



**BDFL**



### Vacuum Filter



Part Number	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	Volume Discount Rate
BDFK	4	7	34.1	10.9	11	0.5	0.5	90	11.5	20.5		
	6	12.5	34.4	11.7	11.6	0.7	92	23	21.5			

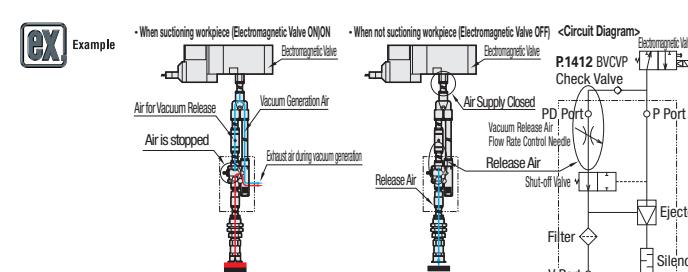
No.	Name of Parts	Material
①	Resin Body	Polypropylene (PP)
②	Lock Pawl	Stainless Steel
③	Guide Ring	Brass, Electroless Nickel Plating
④	Release Ring	Polyacetal (POM)
⑤	Tubes	Urethane or Nylon
⑥	Elastic Sleeve	Nitrile Rubber (NBR)
⑦	Element Presser	Polyacetal (POM)
⑧	Filter Element	Polyvinyl Formal (PVF)

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

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

Applicable Fluid	Air
Operating Pressure Range	-100~0kPa
Filtration Accuracy	Joint Size 44: 0.8cm²
Operating Temperature Range	Joint Size 66: 1.1cm²

**ex**



### Features

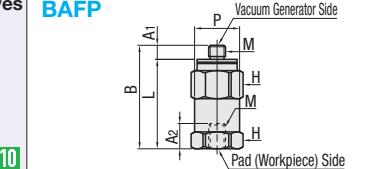
Vacuum release air is introduced to the suction line to reduce the vacuum release time to a value shorter than ever. As a result, the time for suctioning and moving workpiece is shortened and the activity efficiency is improved. Flow rate of release air can be controlled by Release Air Flow Rate Control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

Ordering Example Part Number **BDFK4** - **7**

### Fall Prevention Valves

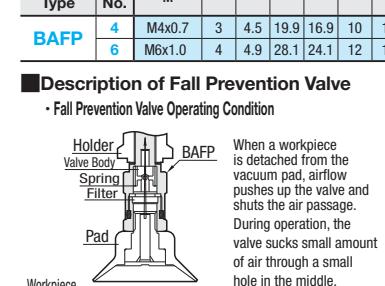


**BAFP**

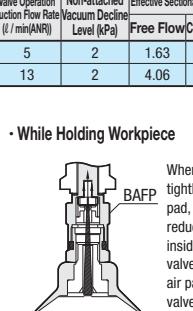


### Description of Fall Prevention Valve

#### Fall Prevention Valve Operating Condition



#### While Holding Workpiece



No.	Name of Parts	Material
M4	Stopper	Stainless Steel
M6	Valve Body	Brass, Electroless Nickel Plating
Valve Body	Stopper	Aluminum, Electroless Nickel Plating
Spring	Spring	EN 1.4301 Equiv.
Filter	Filter	Polyvinyl Formal (PVF)
O-Rings	O-Rings	Nitrile Rubber (NBR)
Gasket	Gasket	EN 1.4301 Equiv. + Nitrile Rubber (NBR)

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

Ordering Example Part Number **BAFP4**