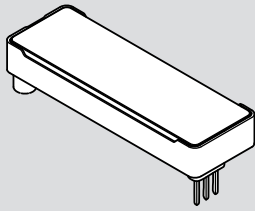


# VEMP-BS-3

Piezo valve



## FESTO

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Operating instructions

8154167  
2021-03c  
[8154169]



Translation of the original instructions

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## 1 Applicable documents

All available documents for the product → [www.festo.com/sp](http://www.festo.com/sp).

Document	Product	Table of contents
Operating instructions	Electronics module VAVE-P...- TP	-

Tab. 1: Applicable documents

## 2 Safety

### 2.1 Safety instructions

- Only use the product in original status without unauthorised modifications.
- Only use the product if it is in perfect technical condition.
- Before working on the product, switch off the power supply and secure it against being switched on again.
- Comply with the handling specifications for electrostatically sensitive devices.

### 2.2 Intended use

The piezo valve is intended for the control of gas flows proportionally to the applied voltage.

### 2.3 Training of qualified personnel

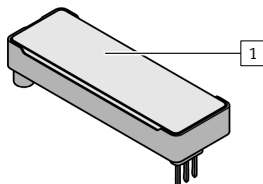
Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel have skills and experience in dealing with electropneumatic (open-loop) control technology.

## 3 Additional information

- Contact the regional Festo contact if you have technical problems → [www.festo.com](http://www.festo.com).
- Accessories → [www.festo.com/catalogue](http://www.festo.com/catalogue).

## 4 Product Range Overview

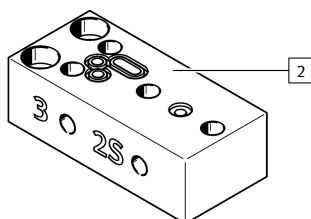
### 4.1 Scope of delivery



1 Piezo valve (1x)  
VEMP-BS-3...

Fig.1

### 4.2 Not in scope of delivery



2 Sub-base (1x)  
VABS-P12-S-M5-P3

Fig.2

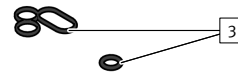


Fig.3

3 Assortment of seals (1x)  
VABD-P12-S-P30  
includes:  
- seal (30x)  
- O-ring (30x)



Fig.4

4 Screw kit (1x)  
VAME-P12-MK  
includes:  
- screw (120x)  
thread moulder

## 5 Transport and storage

- Store the product in a cool, dry environment protected from UV and corrosion. Keep storage times short.

## 6 Assembly

### 6.1 Positioning the piezo valve

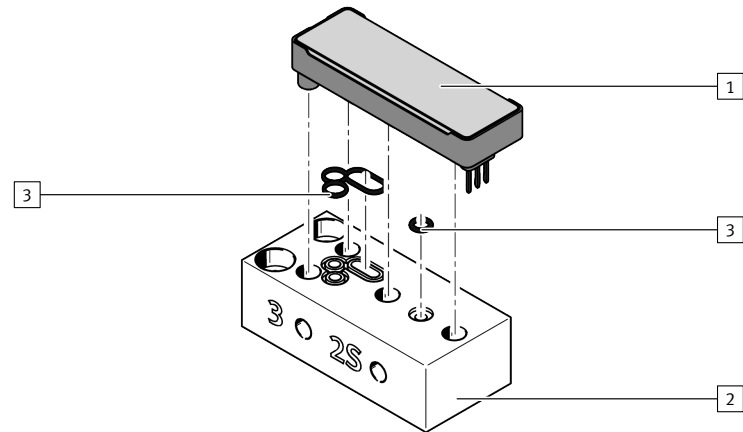


Fig.5

1 Piezo valve  
2 Sub-base  
3 Seal (assortment of seals)  
3 O-ring (assortment of seals)

1. Position the seal and O-ring in the depressions.
2. Position piezo valve on the sub-base.

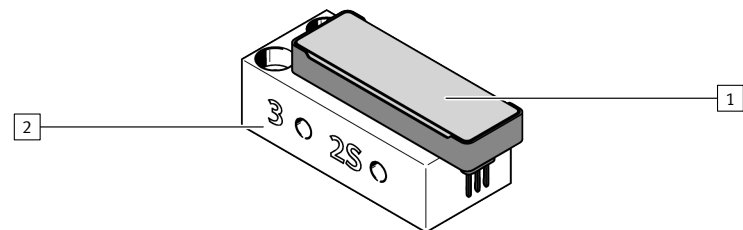


Fig.6

1 Piezo valve  
2 Sub-base

- The piezo valve lies flat on the sub-base.

### 6.2 Mounting the piezo valve

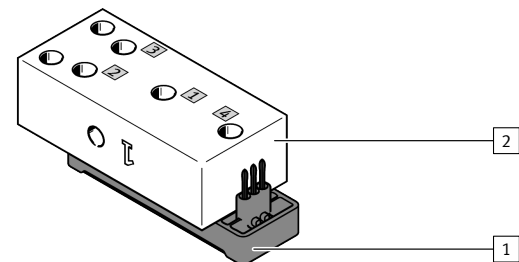


Fig.7

1 Piezo valve  
2 Sub-base

1. Turn the piezo valve with sub-base 180 °.
2. Observe sequence 1 to 4 of the screws that are to be screwed in.

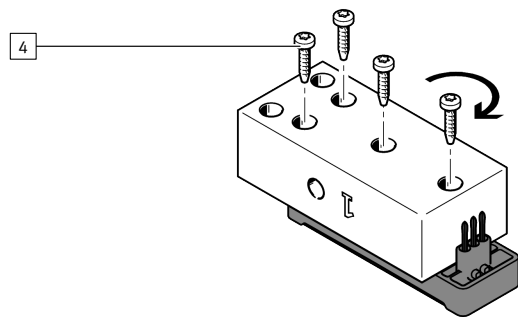


Fig.8

4 Screw (screw kit)

- Tighten screws. Tightening torque: 0.29 Nm ± 10 % at 500 rpm

**i**

In case of increased noise generation, a silencer can be mounted at the outputs.

**7 Installation**

**7.1 Pneumatic Installation**

VABS-P12-S-M5-P3		Connection		Function	
				3/3-way valve	2/2-way valve
1	2	1	Pressure port	–	
3	2S	2	Working port	Pressure port	
		3	Exhaust port	Exhaust port	
		2S	Sensor connection	Sensor connection	

Tab. 2: Pin allocation

**7.2 Electrical installation**

VEMP-BS-3		Pin		Function	
				3/3-way valve	2/2-way valve
3	2	1	GND	GND	
		2	Pressurisation (connection: 1 → 2)	GND	
		3	Exhaust (connection: 2 → 3)	Pressurisation (connection: 2 → 3)	

Tab. 3: Pin allocation

**i**

Optionally install the piezo valve on the electronics module VAVE-P...-TP

→ 1 Applicable documents.

**8 Technical data**

VEMP-BS-3	
Technical data, general	
Function	
VEMP-...-D5	3/3-way valve, normally closed
VEMP-...-D7	3/3-way valve, normally closed
VEMP-...-D19	3/3-way valve, normally closed
	2/2-way valve, normally closed
Mounting position	
any	
Degree of protection	
VEMP-BS-3	IP40
VABS-P12-S-M5-P3	IP30
Temperature range for 3/3-way valve function	
Environment	[°C] -20 ... +70
Storage	[°C] -20 ... +70
Medium	[°C] -20 ... +60
Temperature range for 2/2-way valve function	
Environment	[°C] 0 ... +50
Storage	[°C] -20 ... +70
Medium	[°C] 0 ... +50
Technical data, pneumatic	
Operating medium	
Medium	Compressed air in accordance with ISO 8573-1:2010 [5:3:1] Inert gas Oxygen (applications according to IEC 60601-1 only upon request)
Note	Lubricated operation not possible
Consistency of media	[µm] Grade of filtration ≤ 5

**VEMP-BS-3**

Operating pressure		
VEMP-...-D5	[bar]	0 ... 0.5
VEMP-...-D7	[bar]	0 ... 1.0
VEMP-...-D19	[bar]	0 ... 1.7
Technical data, electrical		
Operating voltage range		
VEMP-...-22T1	[V DC]	0 ... 250
VEMP-...-28T1	[V DC]	0 ... 310
Voltage fluctuations	[%]	± 10

Tab. 4: Technical data