Suitable for oxygen

Small, lightweight, quiet, no self-heating, extremely low power consumption and yet a high flow rate of up to 100 l/min – that sums up the piezo proportional valve VEAE. It is ideal for battery-operated, portable medical devices such as ventilators. Its compact design also makes it suitable for stationary applications such as in ophthalmology or for dental drills.

Safe and precise operation
The VEAE regulates gas flows, whether oxygen, air, nitrogen or inert gases, safely and precisely. And not just in medical technology, but also in applications in light assembly, the electronics and semiconductor industry, or the biotechnology/pharmaceutical industry. Since the piezo ceramics also maintain their current status in case of power failure, VEAE valves offer an extremely high level of process reliability.

High flow rate for medical ventilators
Whether a direct gas supply or a mixture of gases is required, the high flow rate of up to 100 l/min makes the VEAE ideal for portable or stationary ventilators for outpatient or hospital use.

Compact and well controlled
The compact proportional valve VEAE delivers optimal control of the air flow and thus the revolutions of compressed air drills used in dentistry or surgery, for example.

Highlights
- Power consumption < 0.1 mW
- No self-heating
- No operating noise
- Small and lightweight
- Safe thanks to its ability to maintain the current status in case of power failure
- Extremely long service life
- For use with gases, including oxygen
2/2-way proportional valve VEAE with piezo technology

This is how piezo technology works
Festo uses the piezoelectric characteristics of certain ceramics that mechanically deform when a voltage is applied.

Function of the bender actuator in piezo valves

No voltage  No flow rate

Medium voltage  Medium flow rate

High voltage  High flow rate

Variants and technical data

<table>
<thead>
<tr>
<th></th>
<th>VEAE-BB-6-12-D23-X4</th>
<th>VEAE-BB-6-17-D22-X4</th>
<th>VEAE-BB-6-17-D23-X4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Part no. 8078916</td>
<td>Part no. 8078917</td>
<td>Part no. 8078915</td>
</tr>
<tr>
<td>Nozzle [mm]</td>
<td>1.2</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Supply pressure [bar]</td>
<td>2 … 7</td>
<td>0 … 3</td>
<td>2 … 7</td>
</tr>
<tr>
<td>Flow rate 1 → 2 (typ.)</td>
<td>50 l/min at 6 bar, 280 V</td>
<td>50 l/min at 3 bar, 280 V</td>
<td>80 l/min at 6 bar, 280 V</td>
</tr>
<tr>
<td>Control voltage [V]</td>
<td>0 … 310</td>
<td>0 … 310</td>
<td>0 … 310</td>
</tr>
</tbody>
</table>

Materials for high media compatibility
Only materials that give the valve a high level of media compatibility for medical gases or process gases are used for the proportional valve VEAE. It is suitable for oxygen, nitrogen, carbon dioxide and inert gases, among others, with media quality to ISO 8573-1:2010 [6:3:4]. It is suitable for non-condensing air humidity up to 60%.
Sealing material: EPDM 55Sh

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