

Mass flow controller: Proportional flow control valve VEMD

FESTO

Dynamic and flexible



For air, oxygen and inert gases

Highlights

- A variety of flow ranges: 10, 20, 50, 100 and 200 l/min
- On-board analogue and digital interfaces
- Best-in-class price
- Best-in-class dynamic response
- Linear control response
- Sturdy and durable

In many applications, the flow of air or other gases must be controlled. Oxygen is becoming increasingly important, not just in the life sciences sector, but also in food and biotech. The gas must always be precisely dosed, whether it is used to control protective gases in production or for breathing air in medical devices. And meeting the high demands on reliability and performance is just as important as cost efficiency. The new VEMD does both: it offers high dynamic response and is very favourably priced.

Easy proportional control

The gas flow at the output of the mass flow controller can be easily adjusted and controlled in linear mode by a setpoint specification. Various analogue and digital interfaces are therefore available: 0 ... 10 V, 4 ... 20 mA, Ethernet/ModBus TCP and RS232/RS485 with ModBus RTU.

Dynamic and accurate

The integrated control loop with thermal sensor makes the VEMD dynamic and precise. It reacts very quickly to setpoint changes.

Flexible

More flow ranges: VEMD covers additional flow ranges from 0 ... 10 l/min to 0 ... 200 l/min. The actual flow rate value is also available to the higher-order controller, regardless of which interface you use.

Quiet

Thanks to the proportional valve technology, no pulse width modulated signal is needed to control the flow rates. This means the proportional flow control valve VEMD operates silently.

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Configuration examples

VEMD is available

- in the flow ranges 0 ... 10, 0 ... 20, 0 ... 50, 0 ... 100 and 0 ... 200 l/min
- with or without display
- with M5 or G1/4 thread for push-in fittings, or for an optional flange connection



Applications for flow regulators

For regulating the flow of inert gases such as air, nitrogen as well as oxygen

In medical devices

- Controlling air, nitrogen, oxygen or inert gases for ventilation, surgical equipment, or in the production of disposables

Biotechnology

- Dosing gases for cell cultures with air, oxygen or CO₂

Industrial production

- Dosing protective gases
- Metering air for cooling or temperature control

Food production

- Dosing protective gases such as nitrogen in food production, e.g. when mixing or stirring

General technical data

Function	Value
Mass flow controller (MFC)	Digital controller with integrated thermal flow sensor
Media	Air, nitrogen, oxygen, inert gases (not suitable for aggressive or explosive gases)
Flow ranges	0 ... 10, 0 ... 20, 0 ... 50, 0 ... 100, 0 ... 200 l/min (calibrated to air)
Supply voltage	12 ... 24 V DC
Interfaces for setpoint and current flow	0 ... 10 V, 1 ... 5 V, 4 ... 20 mA Ethernet with Modbus TCP RS232/RS485 with Modbus RTU