

**Expertise from a single source –
Media valves in factory automation**

FESTO



Take advantage of our know-how ... in fluid control too!

Your core field is factory automation. But in many automated manufacturing processes, fluids also need to be controlled. Why not take advantage of Festo's know-how and expertise?

Whether it's cooling or lubricating, cleaning and washing, sterilising or dosing: at Festo, factory automation and fluid control go hand in hand.

In our product range you will find automation solutions with media valves for your machines and systems.

Cooling and lubricating

For example, in the cooling system of industrial cooling installations and production machines

Media: gases, cooling water or cooling oils



Sterilising

For example, in sterilization in place (SIP) systems

Media: steam



Washing and cleaning

For example, for cleaning machines in the manufacturing process of semiconductors

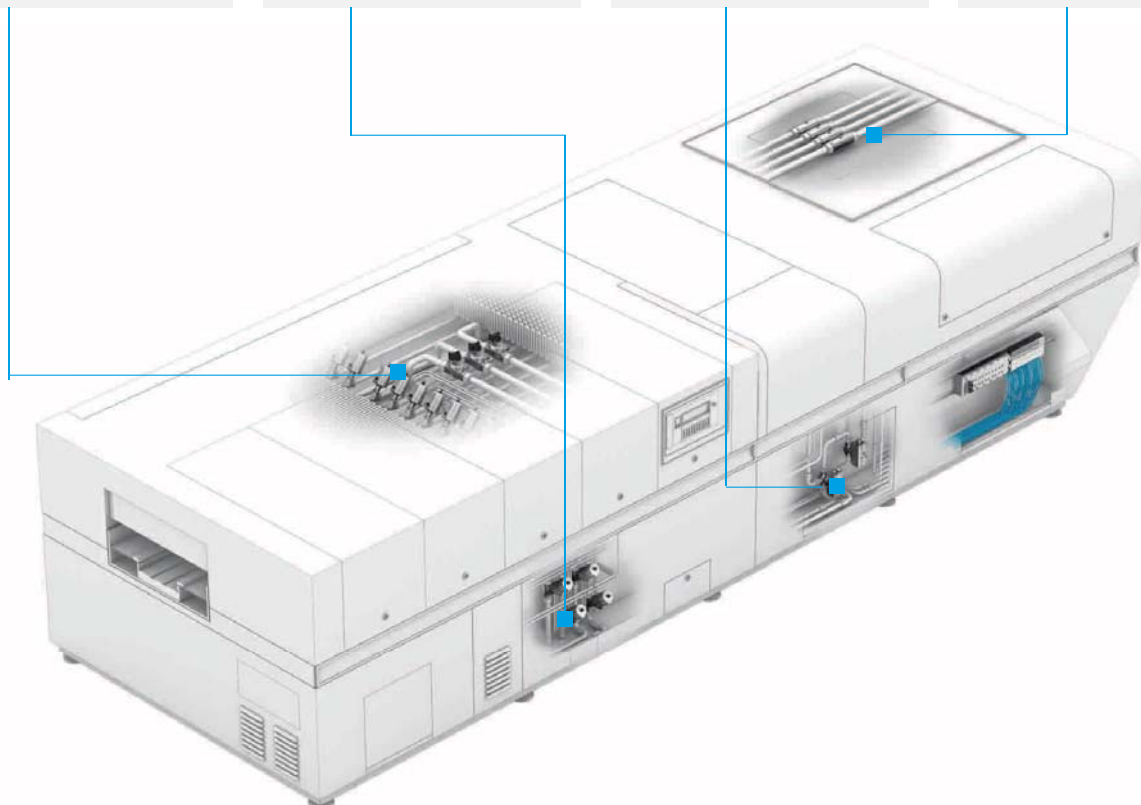
Media: cleaning fluids, gases and liquids



Dosing and mixing

For example, for filling machines for powders and granulates

Media: granulates, powders, gases and liquids



Plan your success strategically!

With media valves and automation technology from a single source

With media valves and automation technology from Festo, you

- Save time
- Streamline your processes
- Increase their quality
- Save money

In short, if you combine the two procurement channels, which are usually separate, you will greatly increase your competitiveness. And not only in your own country, because worldwide availability, our replacement service and our engineering service are central factors for successful operations globally.

Advantages in detail: Technology from a single source

- Our product range is optimally suited to supplementing the automation solutions in your machine with Integrated Automation, Mechatronic Motion Solutions, fluid technology and all peripherals, either individually or as ready-to-install solutions.
- Our engineering support and excellent know-how simplify engineering and design – and speed them up. This includes engineering tools with free CAD models and extensive advice.

Make your supply chain simpler, faster and more secure

- You create simple, secure and cost-saving procurement processes! One interface for ordering, one invoicing process, one logistics process etc.
- Benefit from the simple selection and ordering from a trusted source: for all moving and controlling components, from drives and peripherals to media valves.
- Work with one project number instead of many part numbers.
- Reliable and on time: enjoy the excellent quality of our worldwide supply chain.



What used to be problematic is now solved: process valves VZQA enable the exact and low-cost dosing of microspheres made of glass in the filling machine of the Italian machine builder CO.PACK for the first time. It accurately doses nail varnish and microspheres made of glass and closes the bottles with plastic caps.



“For us, it's a real advantage that fluid control and

automation technology come from a single source. The two fit together, are harmonised with each other – and make us faster. Not only in engineering, but also in procurement and delivery. This is much simpler than before.

Because our partner Festo knows what we are talking about and supports us with advice and assistance.”

Massimo Gandini,
Owner of CO.PACK s.r.l.

Application examples of process and media valves

Cooling and lubricating

Coolant and refrigerant in industrial cooling installations or production machines must do their duty reliably and supply the installations with gases, cooling water or cooling oils.



Preferred media valve:
VZWM

Other media and process valves:
VZXF, VZQA, VZBA.

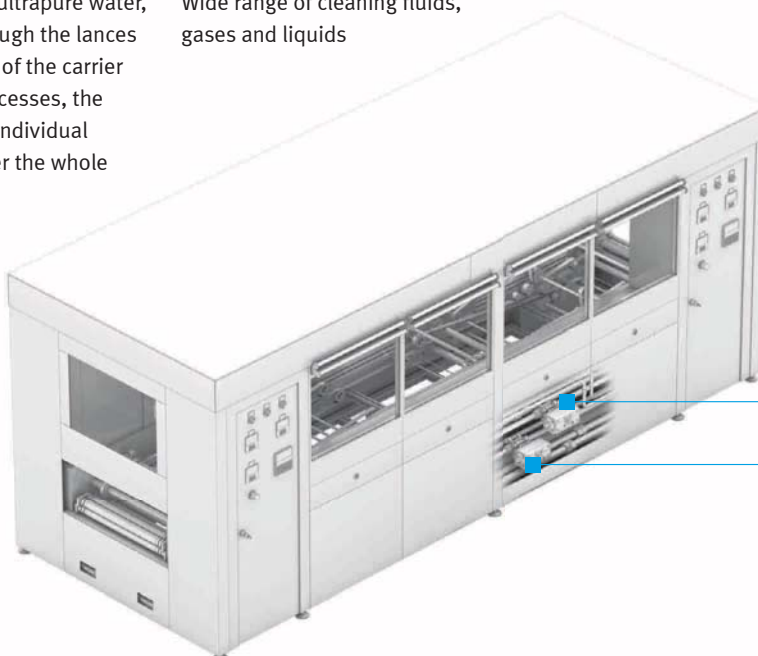


Washing and cleaning

In the manufacture of semiconductor devices, after the silicon wafers are diced they require thorough cleaning. The cleaning medium, usually process water or ultrapure water, is conducted through the lances into the channels of the carrier beam. In these recesses, the water cleans the individual wafers evenly over the whole surface.

For example, for cleaning machines in the manufacturing process of semiconductors

Media:
Wide range of cleaning fluids, gases and liquids



Preferred media valve:
2- or 3-way ball valve
drive unit VZBA

Other media and process valves:
VZXF, VZQA.



Application examples of process and media valves

Sterilising

Steam sterilisation is used in many different industries with special requirements. This means that the media valves used must meet demanding requirements. They must withstand high temperatures and high pressures and function reliably.

For example, in sterilisers

Media:
Steam



Preferred media valve:
Angle seat valve VZXF in stainless steel design

Other media and process valves:
VZBA

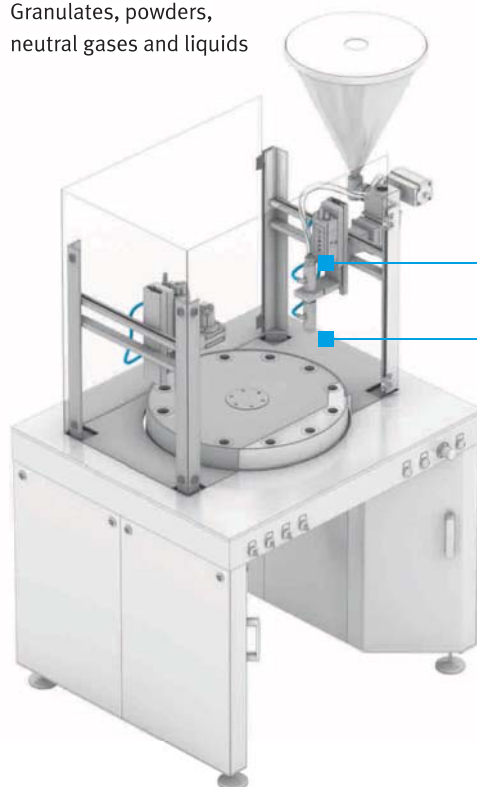


Dosing and mixing

For the control of material flows such as granulates, liquids containing solids, and highly viscous and abrasive media. Ideal, for example, for filling in relevant machines.

Media:
Granulates, powders,
neutral gases and liquids

For example, for filling machines for powders and granulates



Preferred media valve:
VZQA – no flow resistance,
no blockages.

Other media and process valves:
VZXF, VZBA



Overview of media and process valves from Festo

Pneumatic

Technical data



	VZQA	VZXF	VLX	VZPR	VZBA
Function	2/2-way valve, NO	2/2-way valve, NC	Poppet valve, NC	2-way ball valve actuator unit	2- or 3-way ball valve actuator unit
Sizes	DN15 (1/2")	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	1/4", 3/8", 1/2", 3/4", 1"	1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2"	2-way: 1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4" 3-way: 1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Design	Externally actuated	Poppet valve with spring return	Externally actuated	Ball valve actuator unit	Ball valve actuator unit
Mounting position	Any	Any	Any	Any	Any
Connecting thread	G thread and NPT thread	G thread and NPT thread	G thread	G thread	G thread
Valve housing material	Stainless steel (1.4435)	Cast stainless steel	Brass	Brass	Stainless steel
Drive material	–	• Red brass • Stainless steel	–	• Aluminium	• Aluminium
Seal material	• NBR • EPDM	• Brass • NBR (for the brass design) • PTFE (for the stainless steel design)	• NBR	• PTFE	• PTFE
Port for pilot medium	G 1/8"	G 1/8"	M5	G 1/8"	G 1/8"
Nominal pressure of process valve PN	–	10, 16	20	40 or 25	63
Pilot pressure (bar)	1 ... 6.5	4 ... 10	1 ... 10	1 ... 8	1 ... 8
Temperature of medium	–5 ... +60 °C	NBR: –10 ... +80 °C PTFE: –40 ... +200 °C	–10 ... +60 °C	According to pressure-temperature diagram	According to pressure-temperature diagram
Medium pressure	0 ... 4 bar	See PN	10	See PN	See PN
Viscosity (max.)	4,000 mm ² /s	600 mm ² /s	–	–	–
Flow rate	11,7 m ³ /h (max)	2,8 ... 57,5 m ³ /h	1,6 ... 11 m ³ /h	5,9-535 m ³ /h	107 ... 1414 m ³ /h (2-way) 5 ... 100 m ³ /h (3-way)

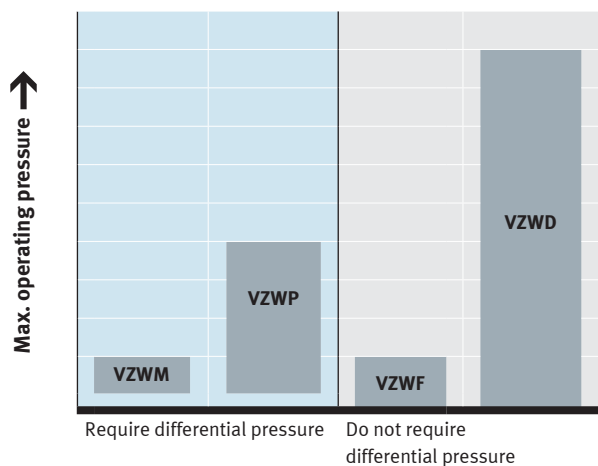
Overview of media and process valves from Festo

Electrical

Technical data



	VZWP	VZWM	VZWF	VZWD
Function	2/2-way valve, NC	2/2-way valves, NC	2/2-way valve, NC	2/2-way valve, NC
Design	Pilot-actuated piston poppet valve	Poppet valve, indirectly actuated with diaphragm control	Poppet valve with spring return	Poppet valve with spring return
Mounting position	Coil on top (preferred)	Any	Coil on top (preferred)	Coil on top (preferred)
Connecting thread	G thread and NPT thread	G thread and NPT thread	G thread and NPT thread	G thread and NPT thread
Valve housing material	Brass	Brass or stainless steel	Brass or stainless steel	Brass or stainless steel
Seal material	<ul style="list-style-type: none"> • NBR • Fluoro elastomer 	<ul style="list-style-type: none"> • NBR 	<ul style="list-style-type: none"> • NBR • Fluoro elastomer • EPDM 	<ul style="list-style-type: none"> • Fluoro elastomer
Connection sizes	1/4", 3/8", 1/2", 3/4", 1"	1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	1/8" or 1/4"
Nominal size DN	13/25 mm	13.5/27.5/40 mm	13.5/27.5/40/50 mm	1.0/1.5/2.0/2.5/3.0/4.0/5.0/6.0 mm
Operating pressure	0.5 ... 40 bar	0.5 ... 10 bar	0 ... 10 bar	0 ... 90 bar
Required differential pressure	0.5 bar	0.5 bar	0 bar	0 bar
Nominal operating voltage	24 V DC, 110 V AC, 230 V AC	24 V DC, 110 V AC, 230 V AC	24 V DC, 110 V AC, 230 V AC	24 V DC, 110 V AC, 230 V AC
Temperature of medium	-10 ... +80 °C	-10 ... +60 °C	-10 ... +80 °C	-10 ... +80 °C
Flow rate	1,5 ... 11,5 m³/h	1,6 ... 39 m³/h	1,8 ... 28 m³/h	0,06 ... 0,4 m³/h



VZWD

Directly actuated solenoid valve
0 ... 90 bar

VZWF

Force pilot operated solenoid valve
0 ... 10 bar

VZWP

Servo-controlled solenoid valve
0.5 ... 40 bar

VZWM

Indirectly actuated solenoid valve
0.5 ... 10 bar

Combine motion and fluid control: Fluid control and factory automation functionalities from a single source.

Cooling and lubricating, cleaning and washing, sterilising or dosing and mixing: with Festo as your partner, you are on the safe side worldwide. And you save travel, time and money.

Combine motion and fluid control – and benefit from the advantages of a partner that has mastered both fields.



Engineering support from the start

Your design processes remain as lean as possible as we support you with detailed advice and engineering support right from the start.



Integrated automation

Valves, valve terminals, proportional pneumatics, servopneumatics, electronic components, safety engineering plus integrated motion control: you benefit from the comprehensive function integration with simpler, faster and more reliable processes on the unique automation platform CPX.



Fluid control from Festo

Whether the media are gases, highly viscous fluids, pastes or granulates, you will find the right media and process valves for fluid engineering requirements from Festo.



Mechatronic Motion Solutions

The unique platform strategy with free combination of technologies: the only platform strategy of its kind in the world. It meets your requirements for linear and rotary motion with pneumatic and electrical actuation as individual components or in a system, and for mechanical gripping and vacuum.