Ball valve units KVZB

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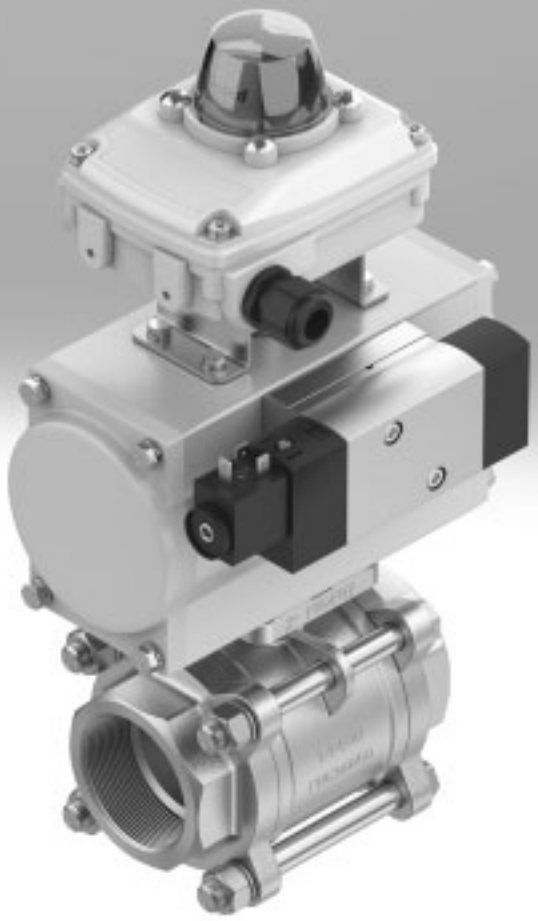

New

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Feature

At a glance

The new configurator provides the engineering department with support for processing the high volume of requests for customised ball valve units. It is now possible to find, select, size and order the right ball valve units without waiting times. Access to prices and delivery times is provided immediately after configuration. Configuration-compatible data sheets are also available, as well as 2D CAD data and 3D CAD models in many native and neutral formats. The complete units of course also come with certificates.

Innovative

- The new configurator provides support throughout the entire process, from searching for products to ordering
- Configuration, sizing, documentation, RFQ, ordering and delivery of the ball valve unit are combined in a single tool

Function

- Direct link to the Festo Online Shop
- User-friendly user interface
- Advice on solutions
- Specific 2D/3D CAD files are available for download after configuration
- Configuration-compatible bill of materials available for download
- Delivery date query possible

Possible variants

Ball valve with 2-way function

Ball valve with 3-way function with L-shaped hole or T-shaped hole

Connection type: flange

Connection type: thread

Connection type: clamp

Connection type: welded end

Hand lever

Quarter turn actuator

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Key features

Possible variants

Quarter turn actuator, pilot valve

Quarter turn actuator, sensor box

Quarter turn actuator, optoelectronic sensor box

Quarter turn actuator, optical position indicator

Quarter turn actuator, pilot valve, sensor box

Quarter turn actuator, pilot valve, optoelectronic sensor box

Quarter turn actuator, pilot valve, optical position indicator

Quarter turn actuator, positioner

Ordering data – Product options

Configurable product
This product and all its product options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ **www.festo.com/catalogue/...**

Part no.	Type code
8102172	**KVZB**

New

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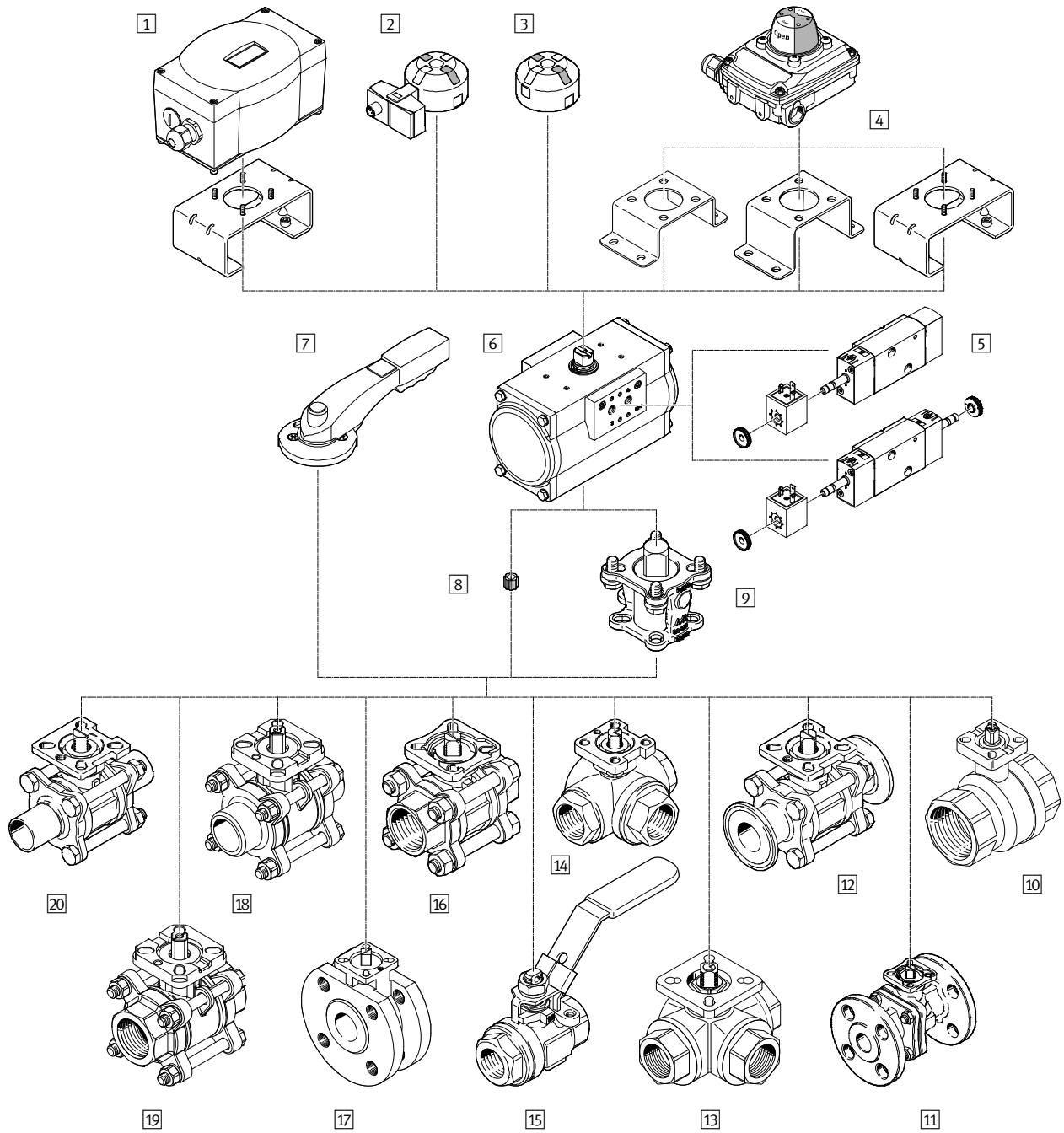
Peripherals overview using a sample configuration



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Peripherals overview using a sample configuration

System components			
		Brief description	**➔ Page/ Internet**
1	Positioners CMSX	Based on the PID control algorithm, for controlling the position of single-acting and double-acting pneumatic quarter turn actuators, with mechanical interface to VDI/VDE 3845	cmsx
2	Sensor boxes SRBG	For electrical position feedback and monitoring the position of process valves, mounted directly without other accessories on quarter turn actuators with connection pattern to VDI/VDE 3845, with M12 plug or clamping connection	srbg
3	Position indicators SASF	The compact solution, direct mounting means that they require minimal space, with four fixed actuating lugs at intervals of 90°	sasf
4	Sensor boxes SRBC	For electrical position feedback and monitoring the position of process valves, with mounting adapter, sturdy, corrosion-resistant design, clearly visible 3D position indicator allows rapid detection of the current position of the quarter turn actuator	srbc
5	Solenoid valves VSNC	Pilot valves with solenoid coils VACF for single-acting and double-acting quarter turn actuators with a connection pattern to VDI/VDE 3845, conversion from 3/2-way to 5/2-way valve simply by turning the seal	vsnc
6	Semi-rotary drives DFPD	In single-acting or double-acting version, features a rack and pinion combination with a constant torque characteristic across the entire swivel range, connection pattern to VDI/VDE 3845	dfpd
7	Hand lever VAOH	For manual actuation of ball valves, lockable	vaoh
8	Reducing sleeves DARQ-R-...	For square connection of ball valves	darq
9	Mounting kits DARQ-K-V-...	For connecting quarter turn actuators and ball valves	darq
Ball valves, 2-way			
10	VAPB	• Pipe thread to EN 10226-1 • Brass design	vapb
11	VZBF	• Flange to ANSI B16.5 class 150 • Stainless steel design	vzbf
12	VZBD	• Clamp ferrule to DIN 32676-B or ASME-BPE • Stainless steel design	vzbd
Ball valves, 3-way			
13	VZBA	• Pipe thread to EN 10226-1 • With L-shaped hole or T-shaped hole • Stainless steel design	vzba
14	VZBE	• Pipe thread to ASME B1.20.1 • With L-shaped hole or T-shaped hole • Stainless steel design	vzbe
Ball valves, 2-way			
15	VZBE	• Pipe thread to ASME B1.20.1 • Actuation via hand lever • Stainless steel design	vzbe
16	VZBE	• Pipe thread to ASME B1.20.1 • Stainless steel design	vzbe
17	VZBC	• Compact design with flange to DIN EN 1092-1 • Stainless steel design	vzbc
18	VZBA-...-WW	• Welding ends to EN 12627 • Stainless steel design	vzba
19	VZBA-...-GG	• Pipe thread to EN 10226-1 • Stainless steel design	vzba
20	VZBD	• Extended welding ends to ISO 1127 • Extended welding ends to ASME-BPE	vzbd

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System components

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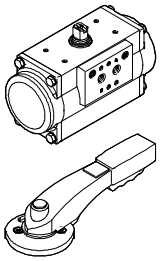
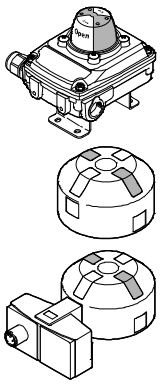
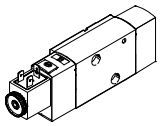
Ordering via the configurator

The configurator for ball valve units comprises a number of tried and tested components from Festo. The scope and specifications can be selected on the "System", "Valve & medium", "Application" and "Additional electrical specifications" pages.

System components	Description	Technical data
Actuation		
	• Automatic actuation via a pneumatic quarter turn actuator • Manual actuation possible using a hand lever	
EX certification		
	**II 2GD** • ATEX category for gas II 2G • Ex ignition protection type for gas c T6 ... T3 X • ATEX category for dust II 2D • Ex ignition protection type for dust c T80°C ... T200°C X • Explosion-proof temperature rating 0°C ≤ Ta ≤ +60°C	
Application		
	Controlled • The desired position of the process valve is specified via an analogue positioning signal, e.g. 4 ... 20 mA **Open/closed** • The process valve is moved into both end positions	
Position indicator		
	Shows the current end position of the process valve unit • Optically via a mechanical, inductive or magnetic sensor box, mounted using a mounting adapter • Optically via a position indicator, directly mounted on the quarter turn actuator • Optically/electrically via an inductive dual sensor with M12 connection or clamping connection, directly mounted on the quarter turn actuator	
Pilot valve		
	The pneumatic pilot valve is mounted using the NAMUR interface directly on the actuator.	

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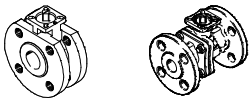
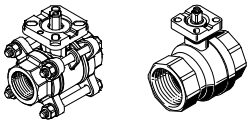
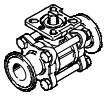
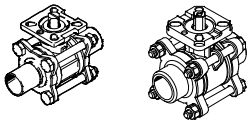
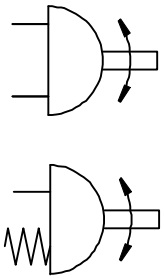
System components

System components	Description	Technical data
Connection type		
	**Flange** • DIN EN 1092-1 • ANSI B16.5 Class 150	
	**Threaded connection** • Pipe thread to EN 10226-1 • Pipe thread to ASME B1.20.1	
	**Terminal** • DIN 32676-B • ASME-BPE	
	**Welding end** • EN 12627 • Extended welding ends to ISO 1127 • Extended welding ends to ASME-BPE	
Mode of operation		
	**Double-acting** • The double-acting quarter turn actuator requires compressed air for every direction of movement. In this mode of operation, the torque for opening or closing the process valve is generated purely via the compressed air. In the event of a system crash caused by failure of the operating voltage supply, the process valve is moved into the normal position defined by the pilot valve. In the event of a system crash caused by failure of the compressed air supply, the position of the process valve cannot be determined in the case of a double-acting quarter turn actuator. **Single-acting** • In the single-acting quarter turn actuator, the incoming compressed air moves the piston in one direction. This generates the torque of the actuator. At the same time, the springs installed in the actuator are pretensioned. This spring force generates the torque in the opposite direction of rotation when the pressure chambers of the actuator are exhausted. In the event of a system crash (failure of the operating voltage supply or compressed air), the process valve is moved into the selected normal position.	
Safety function		
	Return to normal position • In the event of a system crash (failure of the operating voltage supply or compressed air), the process valve is moved into the selected normal position. The normal position is selected in the "Valve & medium" section. **Hold position** • In the event of a system crash (failure of the operating voltage supply or compressed air), the process valve is held in the current position.	
Operating pressure		
	The operating pressure available for actuating the quarter turn actuator.	• 2 ... 8 bar

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System components

System components	Description	Technical data
Safety factor		
	The specification of a safety factor is recommended when configuring a quarter turn actuator because this increases the torque reserve available. Pipeline medium / Safety factor Liquid / 1.2 Sticky/viscous / 1.6 Gaseous / 1.5	
Closing torque factor		
	Specification is optional • The torque required for actuating the process valve is at its greatest at the start of the movement (breakaway torque). The closing torque of the process valve may be smaller than the breakaway torque under certain conditions. If this difference is known, it can be taken into account by specifying a closing torque factor.	
High corrosion resistance		
	Higher corrosion resistance through epoxy coating of the pneumatic quarter turn actuator, the drive shaft is stainless steel.	
Sensor principle, position indicator		
	Via this selection, the measuring principle for the position indicator is selected. Inductive sensors operate without contact. The magnetic reed and changeover switch operate with contact.	• Floating contact, changeover switch • Inductive • Magnetic reed
Electrical output type, position indicator		
	By selecting the electrical output type, you determine the output type of the position indicator.	• 1-pin toggle switch • AS-Interface • NPN • PNP • 2-wire N/C contact • 2-wire N/O contact

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Data sheet

- Swivel angle 0 ... 90°
- Medium pressure 10 ... 63 bar
- Operating pressure 2 ... 8 bar
- Safety factor 0 ... 2

General technical data		
Product weight	[kg]	1 ... 120

Operating and environmental conditions	
Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant