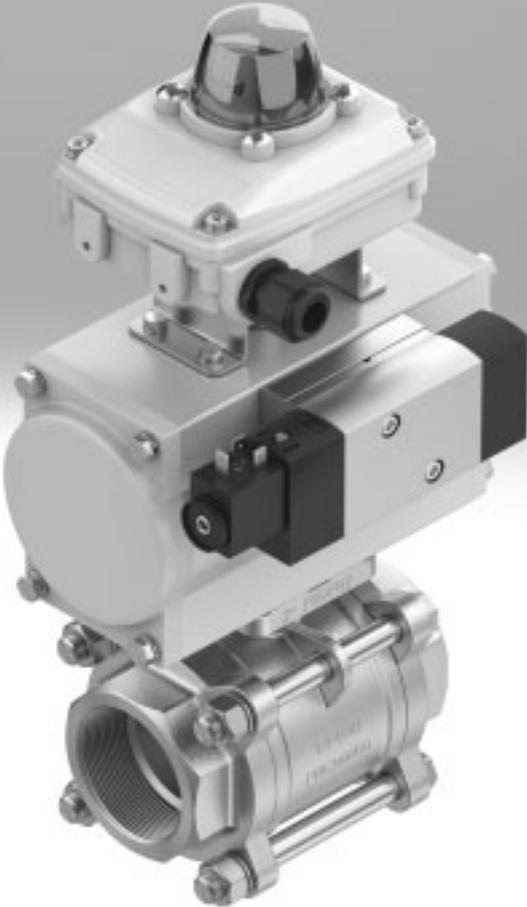


Ball valve units KVZB



Ball valve units KVZB

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



Connection type: flange



Connection type: clamp



Hand lever



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



Connection type: thread



Connection type: welded end



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



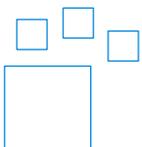
Quarter turn actuator, pilot valve, optical position indicator



Quarter turn actuator, positioner



Ordering data – Product options



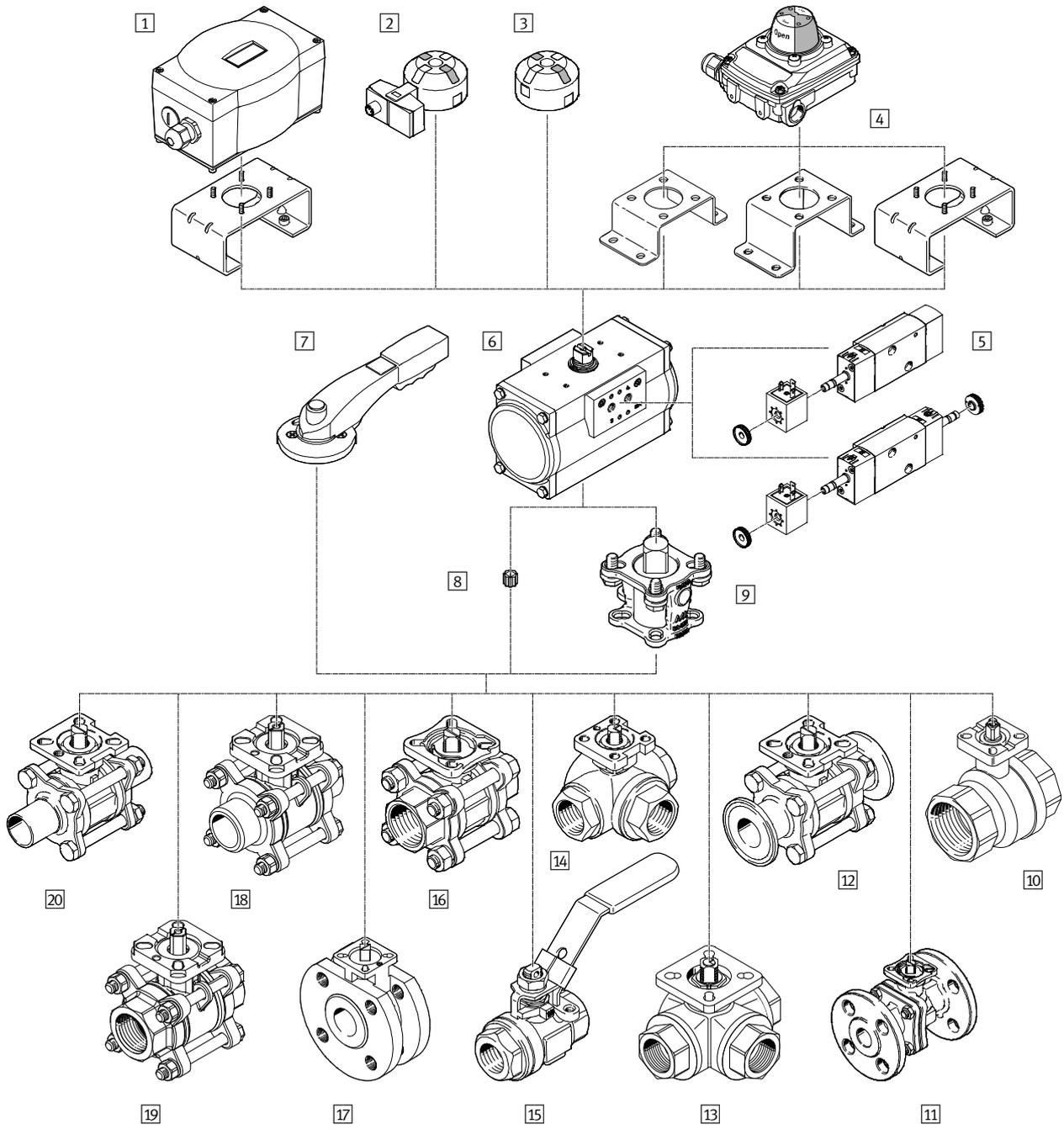
Configurable product
This product and all its product options can be ordered using the configurator.

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

Part no. Type code
8102172 KVZB

Ball valve units KVZB

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	cmsx	
2	Sensor boxes SRBG	srbg	
3	Position indicators SASF	sasf	
4	Sensor boxes SRBC	srbc	
5	Solenoid valves VSNC	vsnc	
6	Semi-rotary drives DFPD	dfpd	
7	Hand lever VAOH	vaoh	
8	Reducing sleeves DARQ-R...	darq	
9	Mounting kits DARQ-K-V...	darq	
Ball valves, 2-way			
10	VAPB	<ul style="list-style-type: none"> • Pipe thread to EN 10226-1 • Brass design 	vapb
11	VZBF	<ul style="list-style-type: none"> • Flange to ANSI B16.5 class 150 • Stainless steel design 	vzbf
12	VZBD	<ul style="list-style-type: none"> • Clamp ferrule to DIN 32676-B or ASME-BPE • Stainless steel design 	vzbd
Ball valves, 3-way			
13	VZBA	<ul style="list-style-type: none"> • Pipe thread to EN 10226-1 • With L-shaped hole or T-shaped hole • Stainless steel design 	vzba
14	VZBE	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Pipe thread to ASME B1.20.1 • Actuation via hand lever • Stainless steel design 	vzbe
16	VZBE	<ul style="list-style-type: none"> • Pipe thread to ASME B1.20.1 • Stainless steel design 	vzbe
17	VZBC	<ul style="list-style-type: none"> • Compact design with flange to DIN EN 1092-1 • Stainless steel design 	vzbc
18	VZBA-...-WW	<ul style="list-style-type: none"> • Welding ends to EN 12627 • Stainless steel design 	vzba
19	VZBA-...-GG	<ul style="list-style-type: none"> • Pipe thread to EN 10226-1 • Stainless steel design 	vzba
20	VZBD	<ul style="list-style-type: none"> • Extended welding ends to ISO 1127 • Extended welding ends to ASME-BPE 	vzbd

Ball valve units KVZB

System components

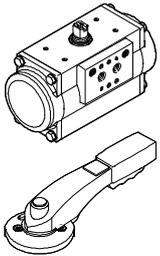
Ordering via the configurator

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
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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

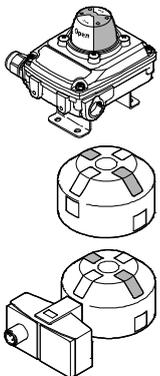
Controlled

- 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

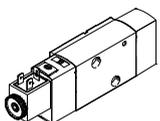
Position indicator



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

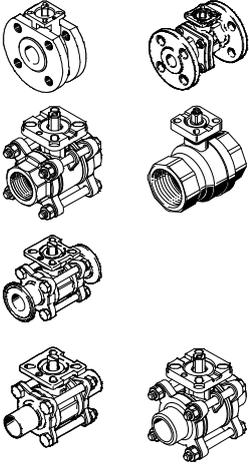
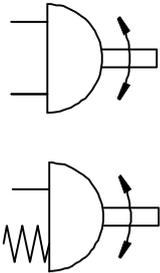
Pilot valve



The pneumatic pilot valve is mounted using the NAMUR interface directly on the actuator.

Ball valve units KVZB

System components

System components	Description	Technical data
Connection type		
	<p>Flange</p> <ul style="list-style-type: none"> DIN EN 1092-1 ANSI B16.5 Class 150 <p>Threaded connection</p> <ul style="list-style-type: none"> Pipe thread to EN 10226-1 Pipe thread to ASME B1.20.1 <p>Terminal</p> <ul style="list-style-type: none"> DIN 32676-B ASME-BPE <p>Welding end</p> <ul style="list-style-type: none"> EN 12627 Extended welding ends to ISO 1127 Extended welding ends to ASME-BPE 	
Mode of operation		
	<p>Double-acting</p> <ul style="list-style-type: none"> 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. <p>Single-acting</p> <ul style="list-style-type: none"> 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		
	<p>Return to normal position</p> <ul style="list-style-type: none"> 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. <p>Hold position</p> <ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 2 ... 8 bar

Ball valve units KVZB

System components

System components	Description	Technical data								
Safety factor	<p>The specification of a safety factor is recommended when configuring a quarter turn actuator because this increases the torque reserve available.</p> <table border="1"> <thead> <tr> <th>Pipeline medium</th> <th>Safety factor</th> </tr> </thead> <tbody> <tr> <td>Liquid</td> <td>1.2</td> </tr> <tr> <td>Sticky/viscous</td> <td>1.6</td> </tr> <tr> <td>Gaseous</td> <td>1.5</td> </tr> </tbody> </table>	Pipeline medium	Safety factor	Liquid	1.2	Sticky/viscous	1.6	Gaseous	1.5	
Pipeline medium	Safety factor									
Liquid	1.2									
Sticky/viscous	1.6									
Gaseous	1.5									
Closing torque factor	<p>Specification is optional</p> <ul style="list-style-type: none"> 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	<p>Higher corrosion resistance through epoxy coating of the pneumatic quarter turn actuator, the drive shaft is stainless steel.</p>									
Sensor principle, position indicator	<p>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.</p>	<ul style="list-style-type: none"> Floating contact, changeover switch Inductive Magnetic reed 								
Electrical output type, position indicator	<p>By selecting the electrical output type, you determine the output type of the position indicator.</p>	<ul style="list-style-type: none"> 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