

MZ20B



3 Point Floating Zone Actuator

MZ20B is an electro-mechanical actuator designed to provide floating increase/decrease control together with VZ*19* zone valves.

The Actuator is available in both 24V AC 50/60 Hz and also 230V 50/60 Hz.

Manual override is available on all versions.

SPECIFICATIONS

Power Consumption

- MZ20B-240.6W (0.7VA)
- MZ20B-2301W (5VA)

Supply voltage

- MZ20B-2421.6 to 26.4Vac (50/60 Hz)
- MZ20B-230207 to 253 Vac (50/60Hz)

Speed18s/mm (50 Hz) 15 s/mm (60 Hz)

Full stroke time, VZ*19* valves 100 sec (50Hz) /82 sec. (60Hz)

Controller recommend time out function.....120%of full stroke time

Temperature

- working.....-5 to 55°C
- storage.....-25 to 65 °C

Humidity.....Max 95% non condensing

Stem force.....200 N

Max stroke.....5,5 mm

Connection cable.....3 wires 1,5 m

Sound power level.....35 dBA

Protection class.....IP 43 (for vertical mounting)

.....IP41 (for horizontal mounting)

Suitable for valves.....see table on pg 3

Weight.....162 gr.

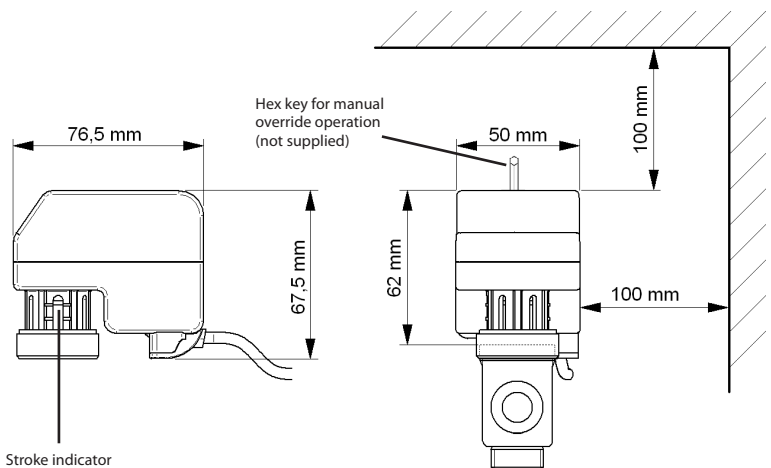
Product conforms, for CE marking, to the following directives:

- EMC 2004/108/CE according to the EN 61326-1 standard.
- LVD 2006/95/CE according to the EN 61010-1 standard for the products powered 230 V.

ORDERING TABLE

Part number	Description	Input voltage
845-5003-000	MZ20B-230	230 VAC 50/60 Hz
845-5001-000	MZ20B-24	24 VAC 50/60 Hz

DIMENSIONS mm



FUNCTION

The MZ20B is an electric-Bidirectional Actuator.

The actuator shaft that acts upon the valve stem is finely positioned through the gearbox from the synchronous electric motor.

A magnetic clutch limits the torque on the valve stem and protects the actuator from overload at the valve stroke limits.

The actuator is equipped with a removable socket mounted cable for 3 wire electrical connection.

Electrical connection is via a supplied 3 wire socketed cable, allowing the actuator to be electrically disconnected quickly and simply.


The Actuator requires no maintenance.

All MZ20B actuators have visible stroke indication through the yoke of the actuator. (can we provide a picture).

N.B : Due to the magnetic clutch, the actuator could be continuously powered up without damage but, for energy saving and increased life, it is recommended to use a controller equipped with a cut-off function (suggested timing 120% of stroke time).

All MZ20B models allow manual override by means of a Allen Hex socket key (3 mm).

The manual override must not be operated with power tools, e.g. an electric screwdriver.

 It is necessary to power off the actuator before starting the manual control.

MOUNTING

Prior to the actuator being mounted onto the valve, good practice should be followed regarding the valve installation.

The Valve adjustment cap, if present from system balancing and flushing will need to be removed from the valve prior to actuator connection.

The actuator assembly onto the valve is made by the M30 threaded ring nut. The actuator assembly must be made by hand, no tools are required, excessive tightening of the actuator from the use of tools could cause damage to the valve assembly.

The threaded ring nut allows for comfortable cable positioning at any 360° angle on the valve.

The actuator is able to operate in any mounting position but it is advisable not to install it upside down.

The protection degree declared (IP43) is granted only if the valve is mounted with the actuator upwards, IP41 is granted if the actuator is mounted vertically

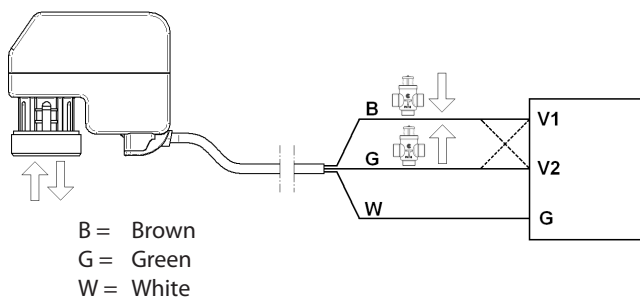
The actuator is able to operate in any mounting position, but it is advisable not to install it upside down.

Three-way valves should be preferably used as mixing valves.

In case they are mounted as diverting (i.e. an inlet and two outlets) the max differential pressure for normal operation must be reduced to one third of the specified value.

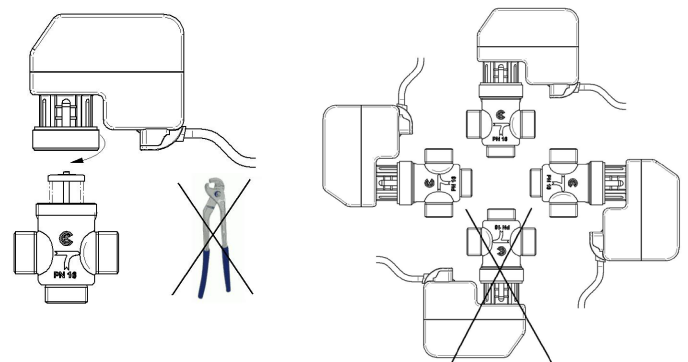
While mounting, respect the fluid directions indicated by the arrows on the valve body.

ELECTRICAL CONNECTIONS

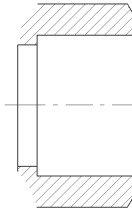


All VZ*19* Valves are stem up closed

MOUNTING



PART NUMBER ORDERING - EXTERNALLY THREADED VALVES



Two-way valves, VZ219E

Size	Connection	Kvs		External threads, Flat face sealing		Max. Close-off MZ20 actuator
		A-AB	B-AB	Part Number	Type Designation	
DN 15	G1/2A	0.25		VZ219E-15BP01	VZ219E-15BP 0.25E SU 00	350 kPa
		0.4		VZ219E-15BP02	VZ219E-15BP 0.4E SU 00	
		0.6		VZ219E-15BP03	VZ219E-15BP 0.6E SU 00	
		1		VZ219E-15BP04	VZ219E-15BP 1.0E SU 00	
		1.6		VZ219E-15BP05	VZ219E-15BP 1.6E SU 00	
		2		VZ219E-15BP06	VZ219E-15BP 2.0E SU 00	
DN20	G3/4A	2.5		VZ219E-20BP07	VZ219E-20BP 2.5E SU 00	250 kPa
		4		VZ219E-20BP08	VZ219E-20BP 4.0E SU 00	150 kPa
		6		VZ219E-20BP09	VZ219E-20BP 6.0E SU 00	

Three-way valves, VZ319E

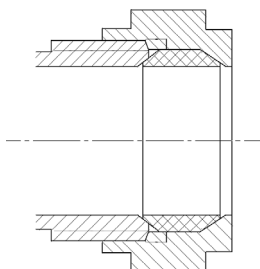
Size	Connection	Kvs		External threads, Flat face sealing		Max. Close-off MZ20 actuator
		A-AB	B-AB	Part Number	Type Designation	
DN 15	G1/2A	0.25	0.25	VZ319E-15BP01	VZ319E-15BP 0.25E SU 00	350 kPa
		0.4	0.25	VZ319E-15BP02	VZ319E-15BP 0.4E SU 00	
		0.6	0.4	VZ319E-15BP03	VZ319E-15BP 0.6E SU 00	
		1	0.6	VZ319E-15BP04	VZ319E-15BP 1.0E SU 00	
		1.6	1	VZ319E-15BP05	VZ319E-15BP 1.6E SU 00	
		2	1.6	VZ319E-15BP06	VZ319E-15BP 2.0E SU 00	
DN20	G3/4A	2.5	1.6	VZ319E-20BP07	VZ319E-20BP 2.5E SU 00	250 kPa
		4	2.5	VZ319E-20BP08	VZ319E-20BP 4.0E SU 00	100 kPa A-AB 40 kPa B-AB
		6	4	VZ319E-20BP09	VZ319E-20BP 6.0E SU 00	

Three-way valves with integral by-pass (4 ports), VZ419E

Size	Connection	Kvs		External threads, Flat face sealing		Max. Close-off MZ20 actuator
		A-AB	B-AB	Part Number	Type Designation	
DN 15	G1/2A	0.25	0.25	VZ419E-15BP01	VZ419E-15BP 0.25E SU 00	350 kPa
		0.4	0.25	VZ419E-15BP02	VZ419E-15BP 0.4E SU 00	
		0.6	0.4	VZ419E-15BP03	VZ419E-15BP 0.6E SU 00	
		1	0.6	VZ419E-15BP04	VZ419E-15BP 1.0E SU 00	
		1.6	1	VZ419E-15BP05	VZ419E-15BP 1.6E SU 00	
		2	1.6	VZ419E-15BP06	VZ419E-15BP 2.0E SU 00	
DN20	G3/4A	2,5	1.6	VZ419E-20BP07	VZ419E-20BP 2.5E SU 00	250 kPa
		4	2.5	VZ419E-20BP08	VZ419E-20BP 4.0E SU 00	
		6	4	VZ419E-20BP09	VZ419E-20BP 6.0E SU 00	

Close-off = Max differential pressure allowed across the valve seat for reliable operation.

PART NUMBER ORDERING



Two-way valves VZ219C

Size	End Connection	Kvs			Single Pack - with nuts olives and adj. Caps		5 Multipacks - no nuts olives and adj. Caps		Max. Close-off
		A-AB	B-AB	Part Number	Type Designation	Part number	Type Designation		
DN 15	15 mm O/D	0.25		VZ219C-15BP01	VZ219C-15BP 0.25E SU 00	VZ219C-15BP51	VZ219C-15BP 0.25E SU M5	350 kPa	
		0.4		VZ219C-15BP02	VZ219C-15BP 0.4E SU 00	VZ219C-15BP52	VZ219C-15BP 0.4E SU M5		
		0.6		VZ219C-15BP03	VZ219C-15BP 0.6E SU 00	VZ219C-15BP53	VZ219C-15BP 0.6E SU M5		
		1		VZ219C-15BP04	VZ219C-15BP 1.0E SU 00	VZ219C-15BP54	VZ219C-15BP 1.0E SU M5		
		1.6		VZ219C-15BP05	VZ219C-15BP 1.6E SU 00	VZ219C-15BP55	VZ219C-15BP 1.6E SU M5		
		2		VZ219C-15BP06	VZ219C-15BP 2.0E SU 00	VZ219C-15BP56	VZ219C-15BP 2.0E SU M5		
DN20	22 mm O/D	2.5		VZ219C-20BP07	VZ219C-20BP 2.5E SU 00	VZ219C-20BP57	VZ219C-20BP 2.5E SU M5	250 kPa	

Three-way valves, VZ319C

Size	End Connection	Kvs		Single Pack - with nuts olives and adj. Caps		5 Multipacks - no nuts olives and adj. Caps		Max. Close-off
		A-AB	B-AB	Part Number	Type Designation	Part number	Type Designation	
DN 15	15 mm O/D	0.25	0.25	VZ319C-15BP01	VZ319C-15BP 0.25E SU 00	VZ319C-15BP51	VZ319C-15BP 0.25E SU M5	350 kPa
		0.4	0.25	VZ319C-15BP02	VZ319C-15BP 0.4E SU 00	VZ319C-15BP52	VZ319C-15BP 0.4E SU M5	
		0.6	0.4	VZ319C-15BP03	VZ319C-15BP 0.6E SU 00	VZ319C-15BP53	VZ319C-15BP 0.6E SU M5	
		1	0.6	VZ319C-15BP04	VZ319C-15BP 1.0E SU 00	VZ319C-15BP54	VZ319C-15BP 1.0E SU M5	
		1.6	1	VZ319C-15BP05	VZ319C-15BP 1.6E SU 00	VZ319C-15BP55	VZ319C-15BP 1.6E SU M5	
		2	1.6	VZ319C-15BP06	VZ319C-15BP 2.0E SU 00	VZ319C-15BP56	VZ319C-15BP 2.0E SU M5	
DN20	22 mm O/D	2.5	1.6	VZ319C-20BP07	VZ319C-20BP 2.5E SU 00	VZ319C-20BP57	VZ319C-20BP 2.5E SU M5	250 kPa

Three-way valves with integral by-pass (4 ports), VZ419C

Size	End Connection	Kvs		Single Pack - with nuts olives and adj. Caps		5 Multipacks - no nuts olives and adj. Caps		Max. Close-off
		A-AB	B-AB	Part Number	Type Designation	Part Number	Type Designation	
DN 15	15 mm O/D	0.25	0.25	VZ419C-15BP01	VZ419C-15BP 0.25E SU 00	VZ419C-15BP51	VZ419C-15BP 0.25E SU M5	350 kPa
		0.4	0.25	VZ419C-15BP02	VZ419C-15BP 0.4E SU 00	VZ419C-15BP52	VZ419C-15BP 0.4E SU M5	
		0.6	0.4	VZ419C-15BP03	VZ419C-15BP 0.6E SU 00	VZ419C-15BP53	VZ419C-15BP 0.6E SU M5	
		1	0.6	VZ419C-15BP04	VZ419C-15BP 1.0E SU 00	VZ419C-15BP54	VZ419C-15BP 1.0E SU M5	
		1.6	1	VZ419C-15BP05	VZ419C-15BP 1.6E SU 00	VZ419C-15BP55	VZ419C-15BP 1.6E SU M5	
		2	1.6	VZ419C-15BP06	VZ419C-15BP 2.0E SU 00	VZ419C-15BP56	VZ419C-15BP 2.0E SUM5	
DN20	22 mm O/D	2.5	1.6	VZ419C-20BP07	VZ419C-20BP 2.5E SU 00	VZ419C-20BP57	VZ419C-20BP 2.5E SU M5	250 kPa

Close-off = Max differential pressure allowed across the valve seat for reliable operation.