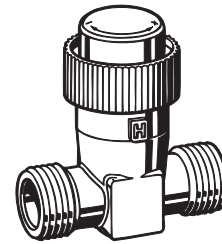


# VZ22, VZ32, VZ42

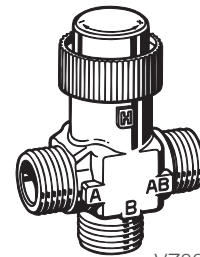
## Long Stroke Zone Valves, PN 16

### Product Description

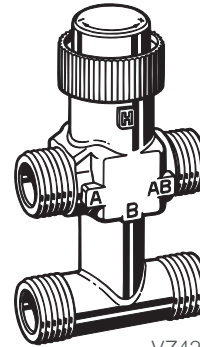
The VZ22, VZ32 and VZ42 are long stroke (6.5mm) EQ% modulating zone valves in 2-way, 3-Way and 3-way with bypass (4 port), capable of high system pressures used for the control of hot and/or chilled water for fan coil units, small reheaters/recoolers in electric/electronic temperature control systems. The valves are driven from either the family of MZ95 thermal actuators or the MZ18 family of geared actuators.



VZ22



VZ32



VZ42

### Specifications

Valve types	
Two-way valve	VZ22
Three-way valve	VZ32
Three-way with bypass	VZ42
Nominal pressure rating	
	PN16
Flow characteristics	
	Equal percentage port A-AB Linear for bypass B-AB
Rangeability	
Two-way valve	50:1
Three-way valve	50:1 for controlled port
Leakage rate	
	< 0.02% of kv
End connection	
	G..A External Thread
Suitable medium	
	Water according to VDI 2035 max. 50% glycol 2...120 °C
General Construction Materials	
Valve body	
DN15	yellow bras
DN20	red brass
Stem	
	Stainless steel
Plug	
	Brass
Function	
Two-way valve	stem up to open port A to B
Three-way valve	stem up to close port A to AB
Stroke	
	6.5 mm

## Flow Capacities and Close Off Pressure Ratings

### Two-way valves, VZ22

Valve			Close-Off Pressure with Actuators	
DN	k <sub>vs</sub>	Part no.	MZ18A, MZ18B, MZ18L; 180 N	MZ95; 95 N
			kPa	kPa
15	0.16	721 0702-000	1600	600
	0.25	721 0706 000		
	0.40	721 0710 000		
	0.63	721 0714 000		
	1.00	721 0718 000	1200	180
	1.6	721 0722 000		
20	2.5	721 0726 000	400	50*
	4.0	721 0730 000		

\*Up to 1000 kPa (145 psi) system pressure.

### Three-way valves, VZ32

Valve				Close-Off Pressure with Actuators	
DN	A-AB	B-AB	Part no.	MZ18A, MZ18B, MZ18L; 180 N	MZ95; 95 N
k <sub>vs</sub>			kPa		
15	0.25	0.16	731 0706 000	800	500
	0.40	0.25	731 0710 000		
	0.63	0.40	731 0714 000		
	1.00	0.63	731 0718 000	250	150
	1.6	1.00	731 0722 000		
20	2.5	1.6	731 0726 000	240	-
	4.0	2.5	731 0730 000		
	2.5	1.6	731 0727 000	100	50
	4.0	2.5	731 0731 000		

### Two-way valves with bypass, VZ42

Valve				Close-Off Pressure with Actuators	
DN	A-AB	B-AB	Part no.	MZ18A, MZ18B, MZ18L; 180 N	MZ10T; 96 N
k <sub>vs</sub>			kPa		
15	0.25	0.16	741 0706 000	800	500
	0.40	0.25	741 0710 000		
	0.63	0.40	741 0714 000		
	1.00	0.63	741 0718 000	250	150
	1.6	1.00	741 0722 000		
20	2.5	1.6	741 0726 000	240	-
	4.0	2.5	741 0730 000		

## Function

A built-in return spring in the two-way valve produces an opening force.

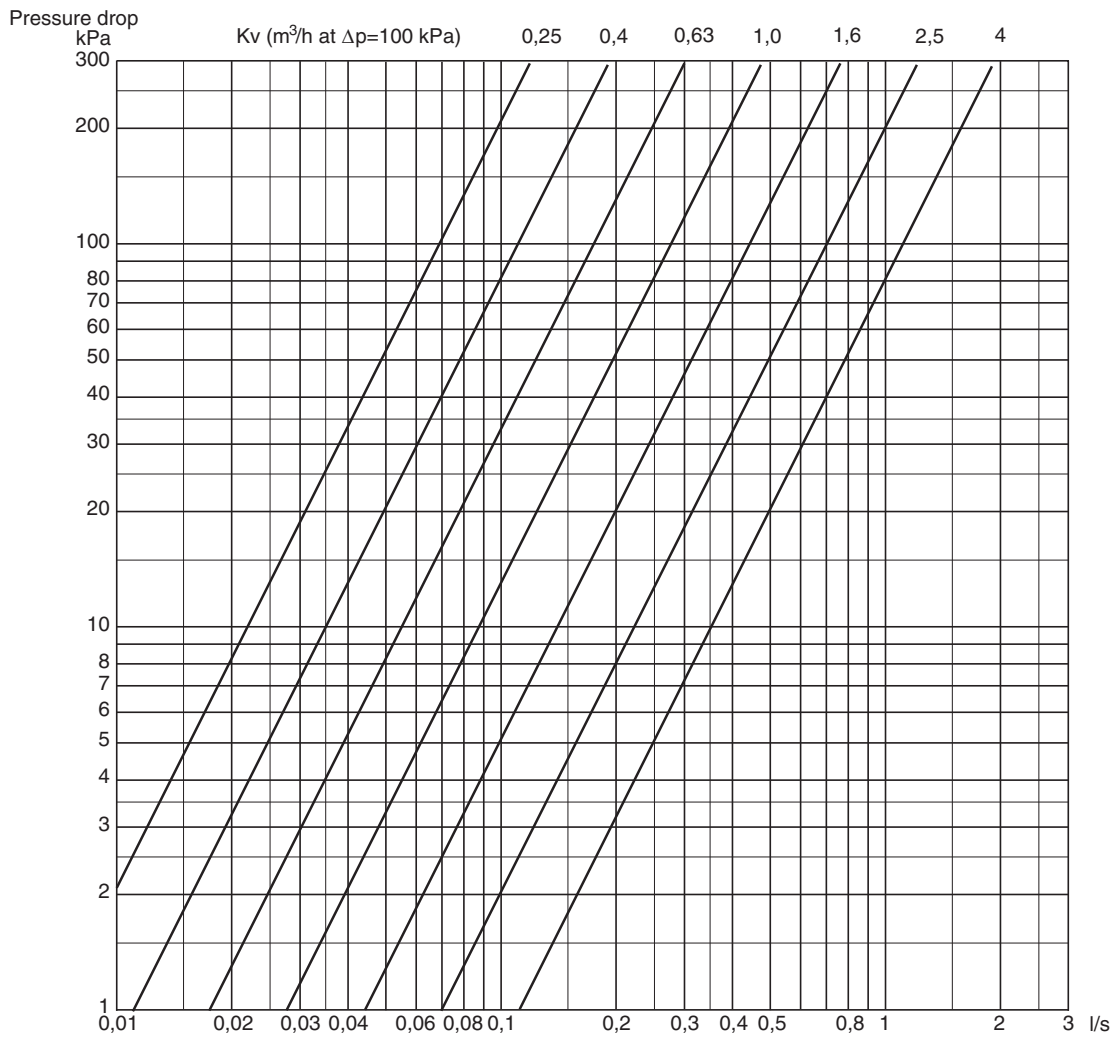
In the three-way valve and the three-way valve with bypass, the spring produces a closing force on the A to AB ports.

The valves are supplied with a screwed-on adjustment cap for manual operation and for protection of the stem.

Soft seat provides low leakage rate and high rangeability

Valve inserts changeable without draining by using special tools.

## Pressure Drop Chart



## Mounting

When installing the valve care must be taken that the flow direction is correct (see Typical Operation). The valve must not be mounted with the stem pointing downward.

The adjustment cap must be removed from the valve only when the actuator is fitted. The valve should be installed as stress-free as possible with a tightening torque of 25 to 30 Nm.

All types of valves should preferably be mounted in the return flow. If the  $\Delta p$ -values exceed 60 kPa, attention should be paid to the development of noise.

### Two-way valves

Direction of flow always from port A to port B.

### Three-way valves

The valves are preferably to be used as mixing valves, this means:

Port AB: Total flow outlet

Port A: Controlled flow inlet

Port B: Bypass inlet

### Three-way valves with integral bypass

These valves simplify the installation, depending on the layout of the pipework, as the bypass pipe is an integral part of the valve. The information given above for normal three-way valves is also valid for this type of three-way valve.

## Dimensions mm

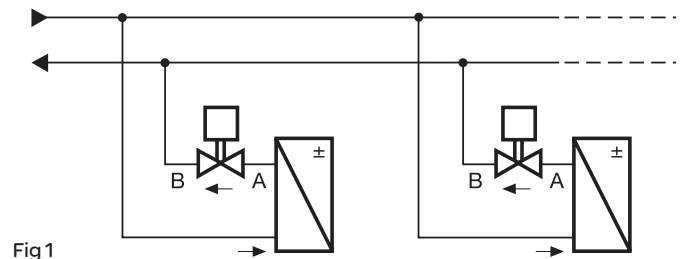


Fig 1

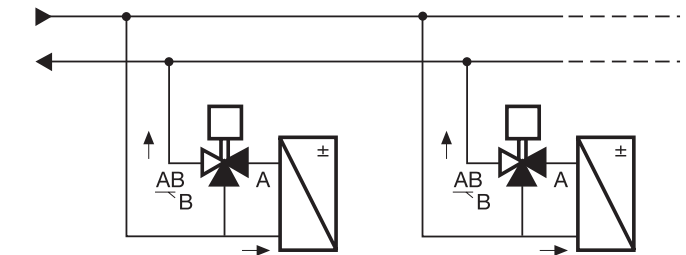


Fig 2

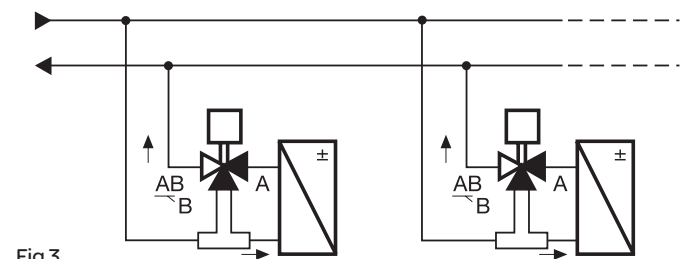
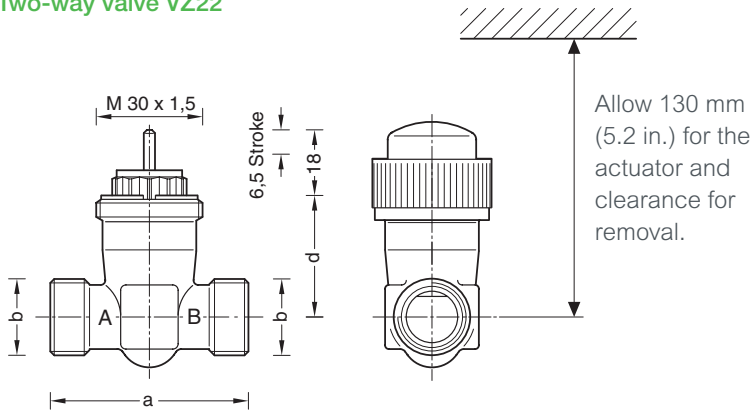


Fig 3

### Dimensions mm (in)

#### Two-way valve VZ22



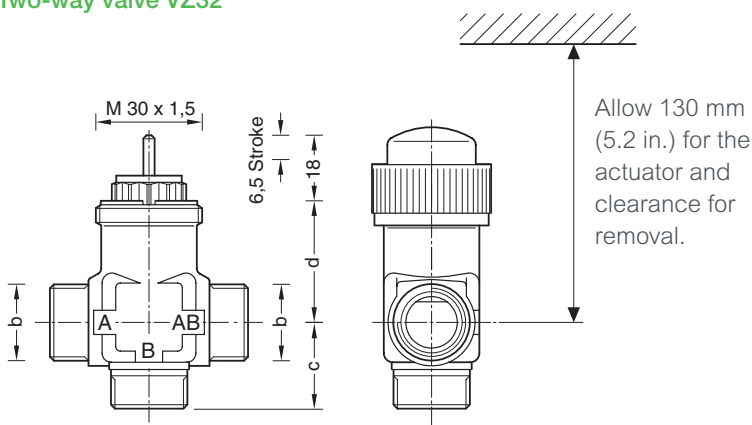
#### VZ22

	a	b		d
DN15	56	G ½ A		34
DN20	66	G ¾ A		33

#### VZ32

	a	b	c	d
DN15	56	G ½ A	24.5	34
DN20	66	G ¾ A	33	33

#### Two-way valve VZ32



#### VZ42

	a	b	c	d
DN15	56	G ½ A	40	34
DN20	66	G ¾ A	40	33

#### Three-way valve with integral bypass VZ42

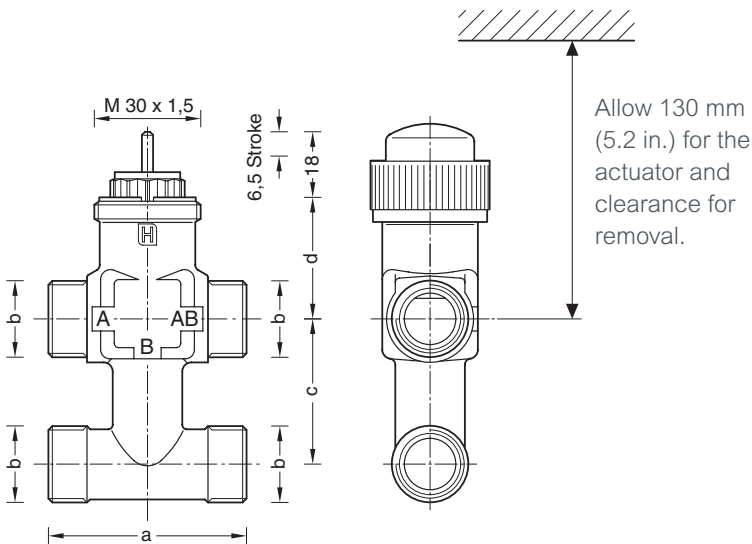
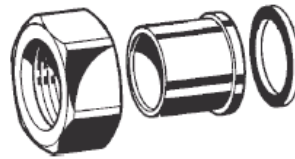


Fig 4

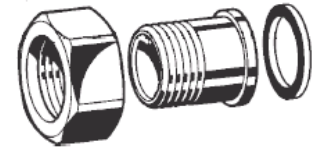
## Accessories

For valves VZ22 two connection sets are necessary, for valves VZ32 three and for valves VZ42 four connection sets.

Each set consists of 1 union nut, 1 solder bush (soldering) or tailpiece (external thread), and 1 gasket.

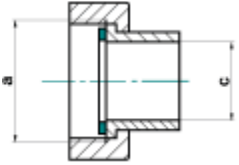
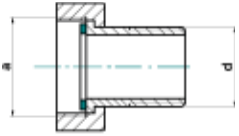
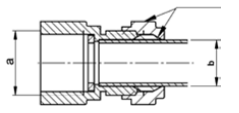


Soldering connection set



Exterior thread connection set

## Connections Sets

	Connection type	Pipe size	DN	a	c (mm)	d	e	Part Number	Pack quantity
	Flat Face External thread to Solder* <sup>1</sup>	15mm 12mm	15 20	G 1/2 G 3/4	12 15	-- --	-- --	911 2076 000 911 2077 000	1 1
	External Thread	R 3/8" R 1/2"	15 20	G 1/2 G 3/4	-- --	R 3/8 R 1/2	-- --	911 2078 010 911 2079 010	10 10
	Flat face external thread to compression* <sup>2</sup>	15 mm 22 mm	15 20	G 1/2 G 3/4	-- --	-- --	15 22	911 2080 000 911 2081 000	1 1

\*One fitting required per valve port.

<sup>1</sup> Note: The valve must not be over heated: solder the pipes to the connection bush before connecting the valve

<sup>2</sup> Olive and nut included.