

The VZ series consists of valves made of brass, with threaded connections. They are available as two-way valves (VZ 21), three-way valves (VZ31), and three-way valves with built-in by-pass (four port, VZ41).

Adequate sealing on A-AB and B-AB ensures low leakage.  
A built-in spring closes A-AB.

### APPLICATIONS

The VZ valves are mainly intended for controlling hot and/or cold water for small reheaters and coolers in temperature control systems. They are used with or without the MZ20B actuator.

The valves are suitable for water with a maximum glycol content of 50%.

For use in other applications, please consult your nearest TAC representative.

### TECHNICAL DATA

Part number ..... see table  
 Type ..... see table  
 Flow characteristic:  
 A-AB ..... EQ  
 B-AB ..... LIN  
 Rangeability ..... >50:1  
 Leakage ..... negligible  
 ΔPmax:  
 G 1/2 valves ..... 350 kPa  
 G 3/4 valves ..... 250 kPa  
 Material:  
 Body ..... OT 58 brass  
 Plug ..... RILSAN, coated IXEF  
 Stem ..... CrNi steel  
 Packing ..... double O ring in BUNA N  
 Pressure rating ..... PN16  
 Threaded connections ..... see table  
 Suitable medium ..... water with max 50% glycol  
 Fluid temperature ..... 5 °C–95 °C  
 Max fluid speed ..... 3 m/s

Name	Part no.	∅	a	b	d	h	w	Kv (Kv)*
<b>Two-way valves</b>								
VZ21-G1/2-0,25	721-0506-000	G 1/2	124	66	–	85	42	0,25
VZ21-G1/2-0,4	721-0510-000	G 1/2	124	66	–	85	42	0,4
VZ21-G1/2-0,6	721-0514-000	G 1/2	124	66	–	85	42	0,6
VZ21-G1/2-1	721-0518-000	G 1/2	124	66	–	85	42	1
VZ21-G1/2-1,6	721-0522-000	G 1/2	124	66	–	85	42	1,6
VZ21-G1/2-2,5	721-0525-000	G 1/2	124	66	–	85	42	2,5
VZ21-G3/4-2,5	721-0526-000	G 3/4	131	77	–	88	46	2,5
VZ21-G3/4-4	721-0530-000	G 3/4	131	77	–	88	46	4
<b>Three-way valves</b>								
VZ31-G1/2-0,25	731-0506-000	G 1/2	142	66	–	85	42	0,25 (0,25)
VZ31-G1/2-0,4	731-0510-000	G 1/2	142	66	–	85	42	0,4 (0,25)
VZ31-G1/2-0,6	731-0514-000	G 1/2	142	66	–	85	42	0,6 (0,4)
VZ31-G1/2-1	731-0518-000	G 1/2	142	66	–	85	42	1 (0,6)
VZ31-G1/2-1,6	731-0522-000	G 1/2	142	66	–	85	42	1,6 (1)
VZ31-G1/2-2,5	731-0525-000	G 1/2	142	66	–	85	42	2,5 (1,6)
VZ31-G3/4-4	731-0530-000	G 3/4	147	77	–	88	46	4 (2,5)
<b>Three-way with built-in by-pass (4-port)</b>								
VZ41-G1/2-0,25	731-0606-000	G 1/2	141	66	38	85	42	0,25 (0,25)
VZ41-G1/2-0,4	731-0610-000	G 1/2	141	66	38	85	42	0,4 (0,25)
VZ41-G1/2-0,6	731-0614-000	G 1/2	141	66	38	85	42	0,6 (0,4)
VZ41-G1/2-1	731-0618-000	G 1/2	141	66	38	85	42	1 (0,6)
VZ41-G1/2-1,6	731-0622-000	G 1/2	141	66	38	85	42	1,6 (1)
VZ41-G1/2-2,5	731-0625-000	G 1/2	141	66	38	85	42	2,5 (1,6)
VZ41-G3/4-2,5	731-0626-000	G 3/4	220	77	65	88	46	2,5 (1,6)
VZ41-G3/4-4	731-0630-000	G 3/4	220	77	65	88	46	4 (2,5)

\*The Kv value within brackets is that of B-AB.

## INSTALLATION

Be sure that the pipes are clean, that they are perfectly coaxial with the valve body, and not apt to vibrate before installing the valve.

**Do not** mount the valve with the stem pointing downwards! See figure 1 for typical operations.

The three-way valve must be installed as a mixing valve. The valves should be mounted in the return flow. If no actuator is present, the valve can be positioned by means of the protective plastic cap, see figure 2.

### Mounting of the actuator

Remove the plastic cap. Make sure that the actuator's stem is in its inward position (factory setting). Fasten the actuator to the valve body by tightening the coupling ring M30x1,5 on the valve bonnet, see figure 3.

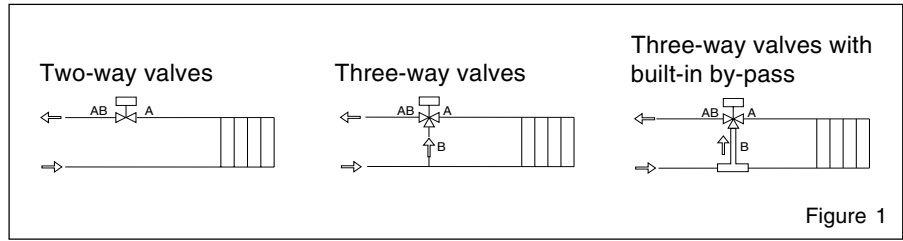


Figure 1

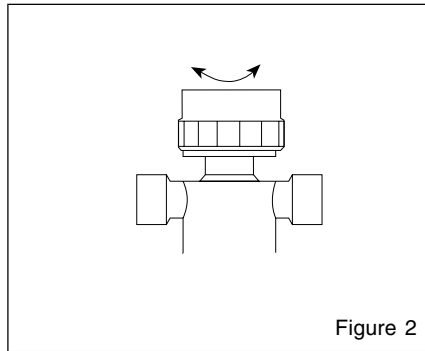


Figure 2

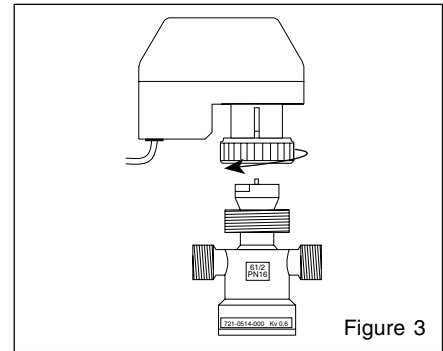
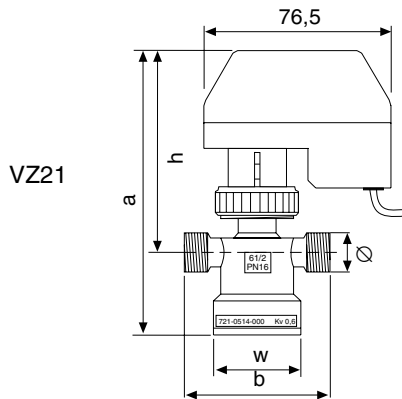
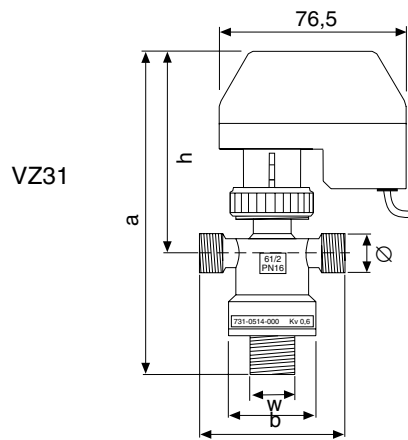


Figure 3

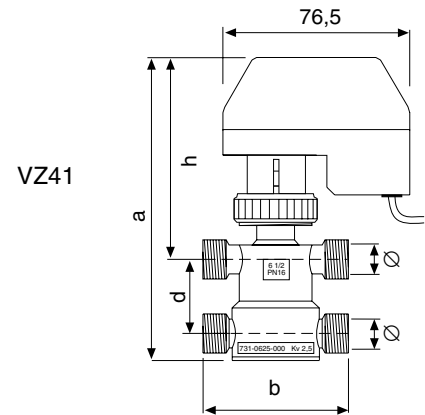
## DIMENSIONS AND WEIGHTS



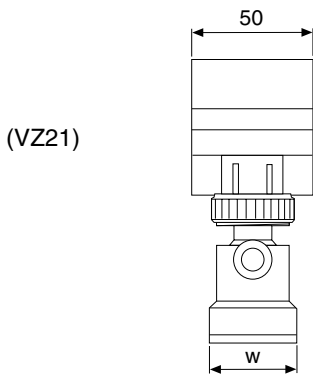
VZ21



VZ31

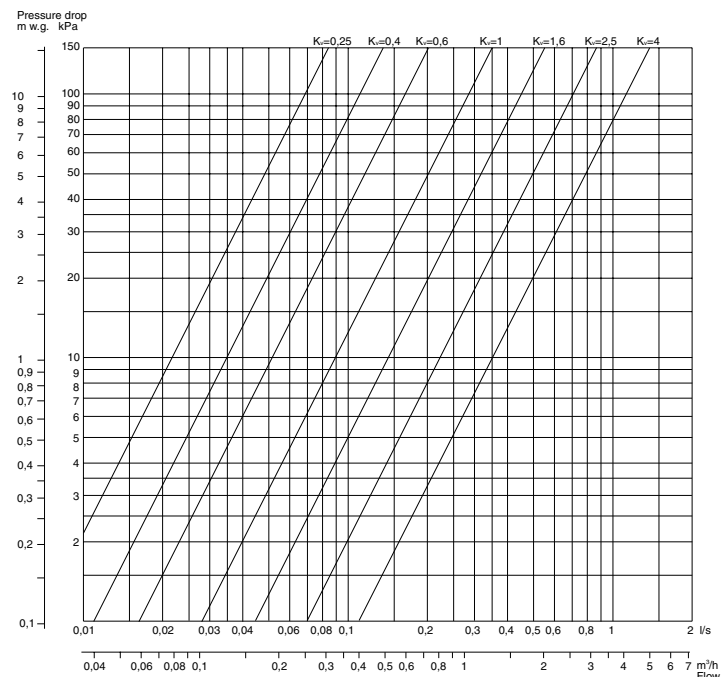


VZ41



(VZ21)

## PRESSURE DROP CHART



Refer to the table on the previous page for numerical measurement values.

### Valve weights (without the actuator)

VZ21-G1/2- .....	0,40 kg
VZ21-G3/4- .....	0,50 kg
VZ31-G1/2- .....	0,45 kg
VZ31-G3/4- .....	0,55 kg
VZ41-G1/2- .....	0,50 kg
VZ41-G3/4- .....	0,70 kg