



VZ2

VZ3

VZ4

Technical Data

Operating pressure	1600kPa
Stroke	2.5mm
Max. fluid speed	3m/s
Allowed fluids	Water, water+glycol (30% max.)
Temperature	+5 to +95°C
Leakage	0 (tight close-off on direct and angle way)

Application and use

The VZ2, VZ3 and VZ4 valves are employed for the control of chilled and heated water in heating and air-conditioning plants. The valves are motorized by AZD and AZP electro-thermal actuators.

The valves have extremely reduced dimensions to enable easy mounting on terminal unit coils.

Special applications

Thermal insulation for cool water applications is available on request.

Moreover, it is possible to order a kit for fan coil installation, which can be customized according to the various vendors' requirements.

Installation and Mounting

Before mounting, make sure pipes are clean, free from weld slag, perfectly aligned with the valve body and not subjected to vibrations.

The declared protection degree (IP44) is granted if the valve is mounted with the actuator upwards.

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

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.

Valves coupled with unpowered AZD actuator are normally closed. If coupled with unpowered AZP the actuators are normally open.

Features

- Brass valve body
- Fortron plug with EPDM double OR
- Stainless steel stem
- Stem packing with EPDM double OR
- All valves are normally closed, i.e. the action of the valve spring makes the plug move to the upper seat, even with disassembled actuator.
- Reliable
- Silent operation
- Threaded neck for fitting of actuator
- Connection between actuator and valve with threaded male M30x1.5

Ordering Codes

Two-way seat valves, direct way

	kvs	Connections
VZ2 025	0.25	1/2"
VZ2 040	0.4	1/2"
VZ2 060	0.6 k	1/2"
VZ2 100	1	1/2"
VZ2 160	1.6	1/2"
VZ2 250	2.5	3/4"

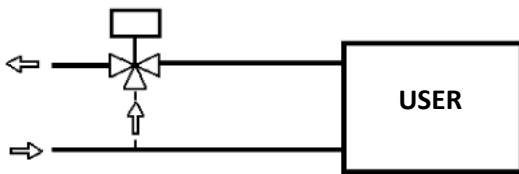
Three-way seat valves, direct/angle way

	kvs	Connections
VZ3 025	0.25/0.25	1/2"
VZ3 040	0.4/0.4	1/2"
VZ3 060	0.6/0.6	1/2"
VZ3 100	1.0/0.6	1/2"
VZ3 160	1.6/1.0	1/2"
VZ3250	2.5/1.6	3/4"

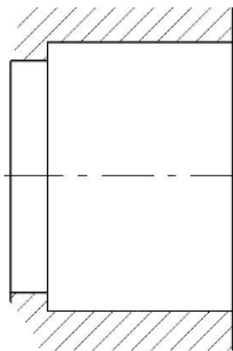
Three (Four port)-way seat valves, direct/angle way

	kvs	Connections
VZ4 025	0.25/0.25	1/2"
VZ4 040	0.4/0.4	1/2"
VZ4 060	0.6/0.6	1/2"
VZ4 100	1.0/0.6	1/2"
VZ4 160	1.6/1	1/2"
VZ4 250	2.5/1.6	3/4"

APPLICATION DIAGRAMS for valves mounted as mixing



Manual Override



Flat tight

Valve models	Kvs direct way m ³ /h	Kvs angle way m ³ /h	Close-off bar	Connections
Two-way valves				
VZ2 025	0.25		2.5	G1/2"
VZ2 040	0.4			
VZ2 060	0.6			
VZ2 100	1			
VZ2 160	1.6			
VZ2 250	2.5		1.5	G3/4"
Three-way valves				
VZ3 025	0.25	0.25	2.5	G1/2"
VZ3 040	0.4	0.4		
VZ3 060	0.6	0.6		
VZ3 100	1	0.6		
VZ3 160	1.6	1		
VZ3 250	2.5	1.6	1.5	G3/4"
Three-way valves with built-in by-pass (4 ports)				
VZ4 025	0.25	0.25	2.5	G1/2"
VZ4 040	0.4	0.4		
VZ4 060	0.6	0.6		
VZ4 100	1	0.6		
VZ4 160	1.6	1		
VZ4 250	2.5	1.6	1.5	G3/4"

Operation

VZ2, VZ3 and VZ4 are valves with tight close-off on both direct and angle way.

A soft tight between seat and plug ensures high performance; the action of the spring located on the valve, ensures tight close-off in compliance with the values above, even with disassembled actuator.

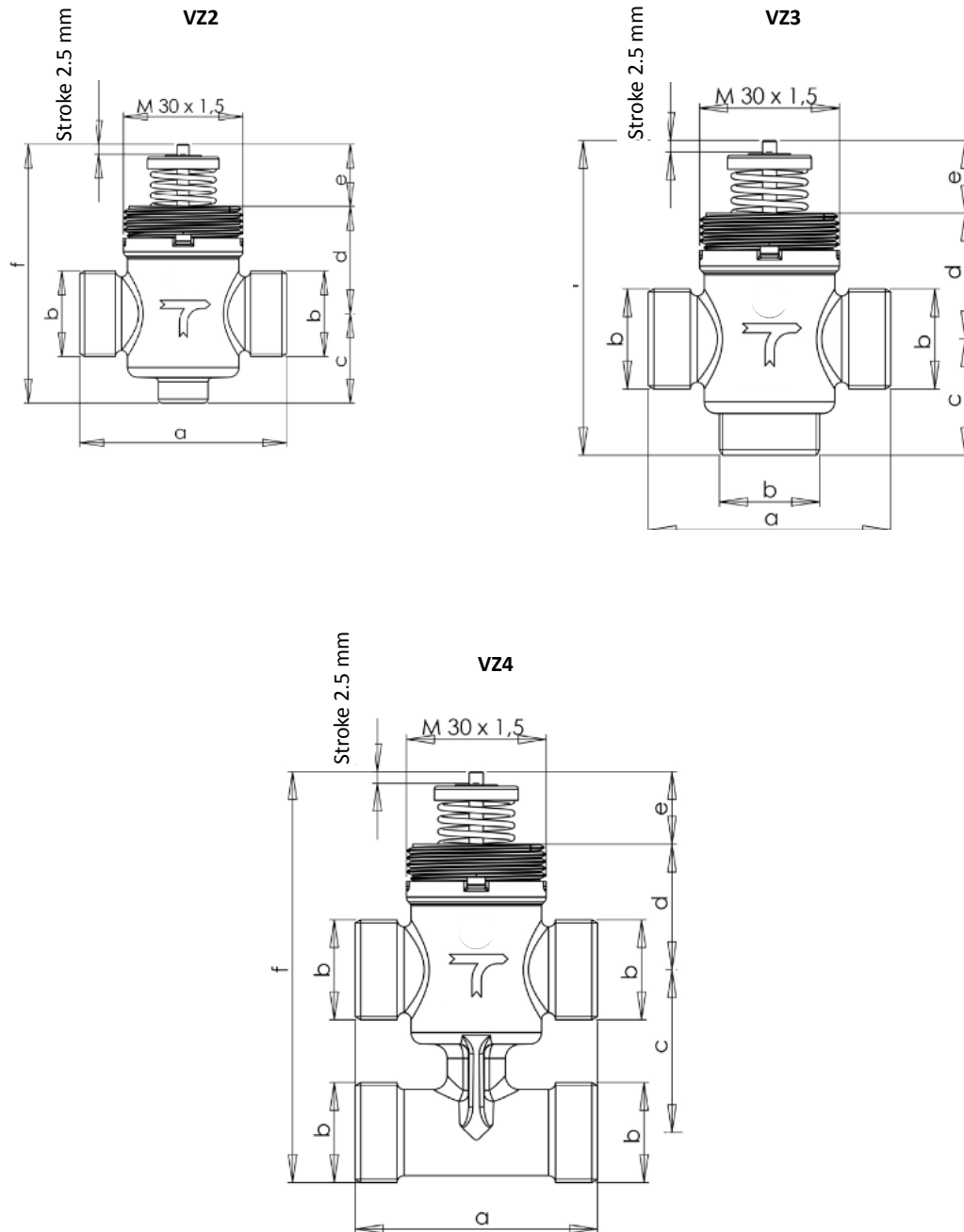
The plug operation is carried out by the electrothermic actuator which applies a 90N thrust.

The valve/actuator assembly is easy.

The valves can be motorized by

- 24Vac/dc AZD with control signal on/off or pwm.
- 230Vac actuator AZD with control signal on/off.
- 24Vac actuator AZP with control signal 0-10Vdc

Dimensions





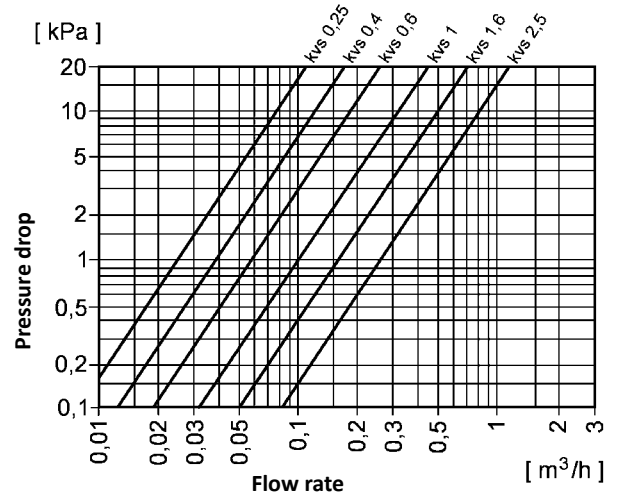
Zone valves for terminal units

VZ2
VZ3
VZ4

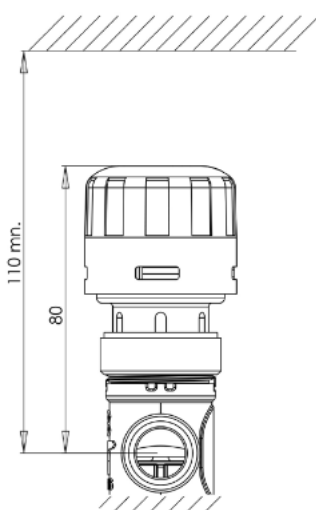
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Valve	a	b	c	d	e	f
VZ2 025 - VX2 040	52	G1/2"A	22.5	27	15.6	65
VZ2 060 - VZ2 100						
VZ2 160						
VZ2 250	56	G3/4"A	23.6	25.8		
Valve	a	b	c	d	e	f
VZ3 025 - VZ3 040	52	G1/2"A	25	27	15.6	65
VZ3 060 - VZ3 100						
VZ3 160						
VZ3 250	56	G3/4"A	34	25.8		75.4
Valve	a	b	c	d	e	f
VZ4 025 - VZ4 040	52	G1/2"	35	27	15.6	88.4
VZ4 060 - VZ4 100						
VZ4 160						
VZ4 - 250	56	G3/4"	40	25.8		

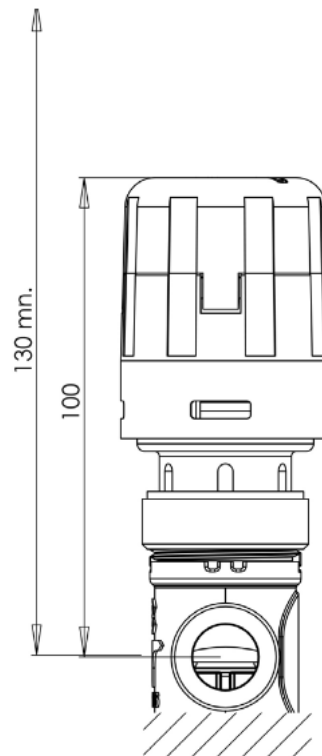
PRESSURE DROP DIAGRAM



AZD 904 with valve



AZD 1404 with valve



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