



ZTV/ZTR

Zone valves, 2-way and 3-way
DN15...DN25

The valves in the ZTV/ZTR series are used for control of hot and cold water in climate, heating and ventilation systems.

- For water and refrigerants (max. 30 % glycol)
- Media temperature 1...110°C
- Pressure class PN16

- Rangeability better than 50:1
- Differential pressure up to 350 kPa
- No leakage when the valve is closed.

The control valves in the ZTV/ZTR series are available in 2- and 3-way versions. Body in brass, spindle in stainless steel. Plug in brass and O-ring in EPDM.

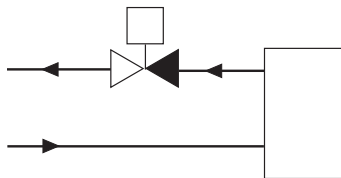
The valves have equal percentage flow characteristics.

Function

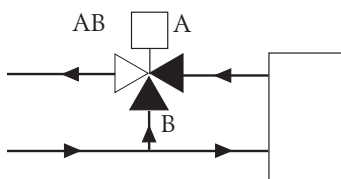
The 2-way valve is closed when the spindle is placed in the highest position and completely open in the lowest position.

The 3-way valve is closed between port A and AB (the ports placed opposite of each other) when the spindle is in the highest position. While in this position, the valve is open between the lowest port B and the joint outgoing port AB.

When the spindle is in its lowest position, the 3-way valve is completely open between port A and AB and thereby closed between the lowest port B and the joint port AB.



2-way valve



3-way valve

Sizes

The valves are available with Kvs values from 0.25 (DN15) to 7.0 (DN25).

Installation

The valve should be mounted with the spindle in a vertical position or 90° to the right or left. It must not be mounted with the spindle downwards.

At high media temperature, the valve should be mounted with the spindle at the side to reduce heating of the valve actuator.

To make sure that the plug is leak proofed, mount the 2-way valve so that the arrow on the body is directed downstream.

The 3-way valve is of mixing type and should therefore be mounted in the mixing point, according to the flow direction marks on the valve.

Typical applications

The valves are used for control of hot and cold water in heating, ventilation and indoor climate systems. They can also control refrigerants in for example liquid connected recovery systems.

Valve actuators

The valves are intended to be used together with actuator RVAZ4-24A (0...10 V) or RVAZ4-24 (3-point).

Models

2-way valves	Connection	Kvs	Max. diff. pressure	3-way valves	Connection	Kvs	Max. diff. pressure
ZTV15-0,25	DN15	0.25	350 kPa	ZTR15-0,25	DN15	0.25	350 kPa
ZTV15-0,4	DN15	0.4	350 kPa	ZTR15-0,4	DN15	0.4	350 kPa
ZTV15-0,6	DN15	0.6	350 kPa	ZTR15-0,6	DN15	0.6	350 kPa
ZTV15-1,0	DN15	1.0	350 kPa	ZTR15-1,0	DN15	1.0	350 kPa
ZTV15-1,6	DN15	1.6	350 kPa	ZTR15-1,6	DN15	1.6	350 kPa
ZTV20-2,0	DN20	2.0	250 kPa	ZTR20-2,0	DN20	2.0	250 kPa
ZTV20-2,5	DN20	2.5	250 kPa	ZTR20-2,5	DN20	2.5	250kPa
ZTV20-4,0	DN20	4.0	150 kPa	ZTR20-4,0	DN20	4.0	100 kPa
ZTV20-6,0	DN20	6.0	150 kPa	ZTR20-6,0	DN20	6.0	100 kPa
ZTV25-7,0	DN25	7.0	70 kPa	ZTR25-7,0	DN25	7.0	70 kPa

Technical data

Pressure class	PN16 (1.6 MPa)
Connection	External thread, see table below
Flow characteristics	Equal percentage
Rangeability	50:1
Stroke	5.5 mm
Leakage	0% in closed position
Media	Hot or cold water. Also refrigerants (max. 30 % glycol).
Media temperature	1...110°C*
Material	
Body	Brass
Spindle	Stainless steel
Seat	Brass
O-ring	EPDM

* The valve has a max. temperature of 140°C, the RVAZ4 actuators have a max. temperature of 110°C.

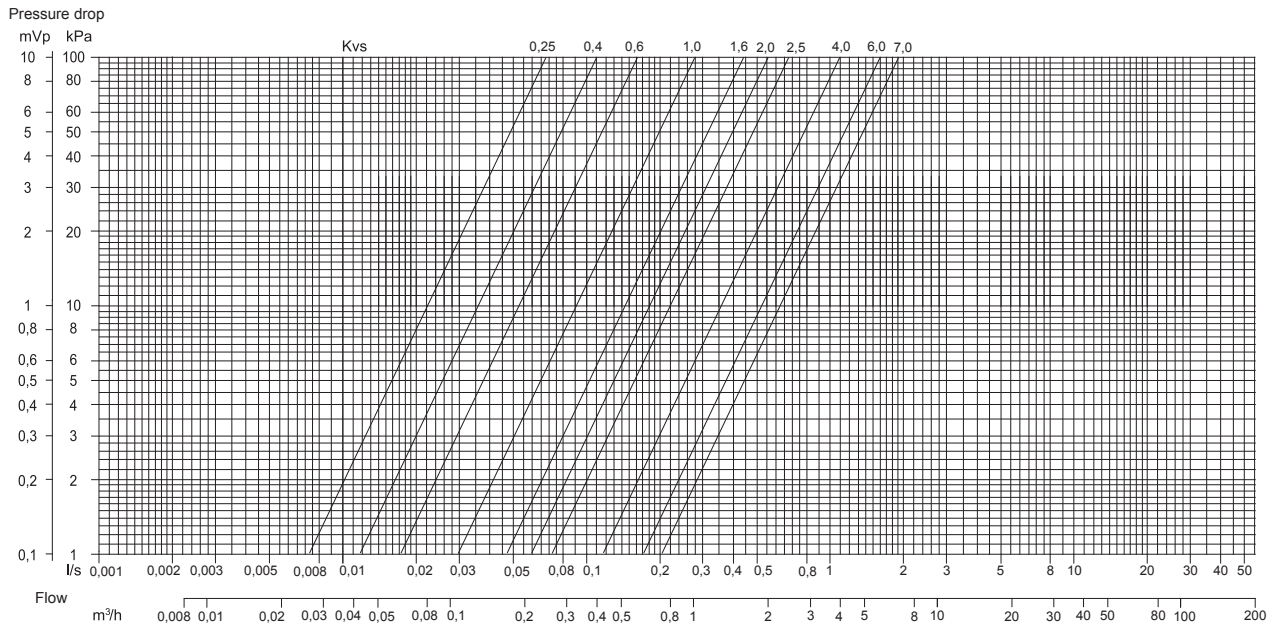
Suitable actuators

Model	Control signal	Supply
RVAZ4-24	3-point	24 V AC
RVAZ4-24A	0...10 V	24 V AC
RVAZ4-230	3-point	230 V AC

Suitable connections

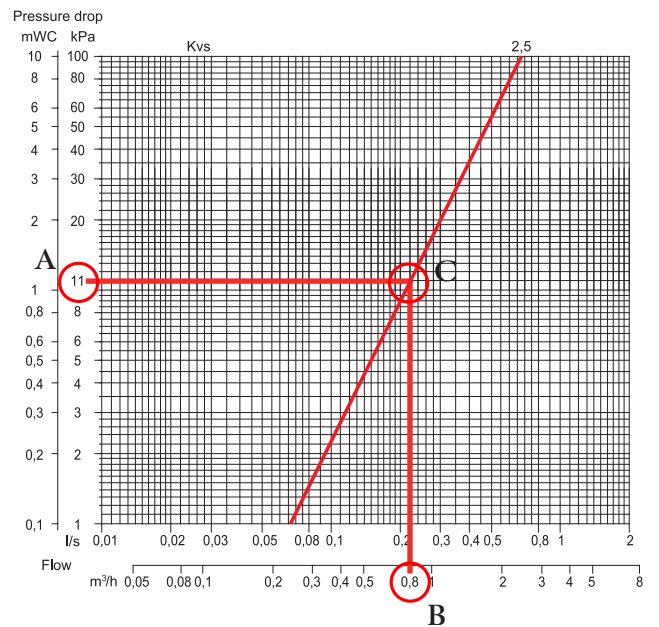
Article number	Name	Material	Valve	Threads, valve	Pipe
1885136	Nut and olive	Chromed brass	DN15	½"	K12
1886274	Nut and olive	Chromed brass	DN20 (kvs 2.0 and 2.5)	¾"	K15
1884709	Nut and olive	Chromed brass	DN20 (kvs 4.0)	¾"	K18
1886282	Nut and olive	Chromed brass	DN25	1"	K22

Pressure drop diagram



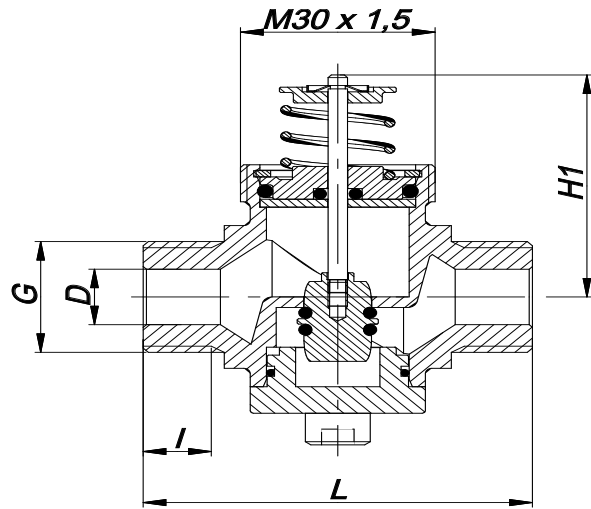
Example: calculation of kv value

If the pressure drop is 11 kPa (A) and the flow is 0.8 m³/h (B), the kv value is 2.5 (C). See the markings in the picture to the right.



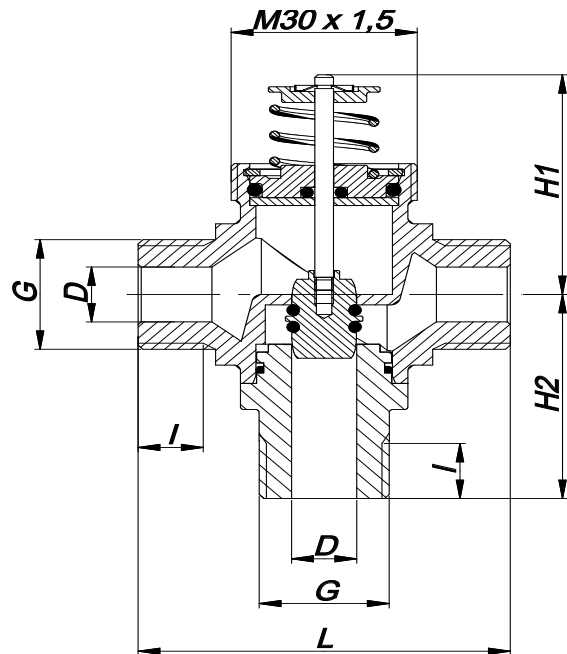
Dimensions

2-way valves	Connections	G	D(Ø)	l	L	H1
ZTV15-0,25	DN15	1/2"	12	9	60	42
ZTV15-0,4	DN15	1/2"	12	9	60	42
ZTV15-0,6	DN15	1/2"	12	9	60	42
ZTV15-1,0	DN15	1/2"	12	9	60	42
ZTV15-1,6	DN15	1/2"	12	9	60	42
ZTV20-2,0	DN20	3/4"	15	12,5	60	42
ZTV20-2,5	DN20	3/4"	15	12,5	60	42
ZTV20-4,0	DN20	3/4"	18	12,5	60	42
ZTV20-6,0	DN20	3/4"	18	12,5	60	42
ZTV25-7,0	DN25	1"	22	14	82	47



Measurements in mm.

3-way valves	Connections	G	D(Ø)	l	L	H1	H2
ZTR15-0,25	DN15	1/2"	12	9	60	42	40
ZTR15-0,4	DN15	1/2"	12	9	60	42	40
ZTR15-0,6	DN15	1/2"	12	9	60	42	40
ZTR15-1,0	DN15	1/2"	12	9	60	42	40
ZTR15-1,6	DN15	1/2"	12	9	60	42	40
ZTR20-2,0	DN20	3/4"	15	12,5	60	42	50
ZTR20-2,5	DN20	3/4"	15	12,5	60	42	50
ZTR20-4,0	DN20	3/4"	18	12,5	60	42	50
ZTR20-6,0	DN20	3/4"	18	12,5	60	42	50
ZTR25-7,0	DN25	1"	22	14	82	47	44



Measurements in mm.

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