0%

BTV

Internally threaded 2-way control valve

The valves are designed for control of hot, cold or glycol-mixed water in heating and ventilation systems. They are pressure balanced (from DN20-50, not DN15 since not needed) and can therefore handle high differential pressure with low force. The valves are intended to be used together with Regin's RVAN5 actuators. They should not be used in systems that require DZR (Dezincification Resistant) material.

- ✓ Size DN15…50
- ✓ Kvs value 0.6…39
- ✓ Media temperature -5…+140°C
- ✓ Pressure rating PN16
- ✓ No leakage
- ✓ Pressure balanced

Function

The valve is closed when the stem is in its lowest position and completely open in the highest position.

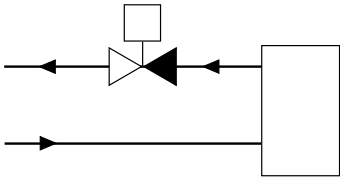
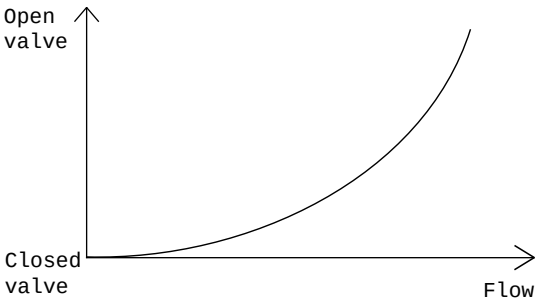


Fig. 1 2-way valve

The valve is pressure balanced and can therefore handle high differential pressure with low actuating force. This means that an actuator with low force can be used.

Flow characteristics

The flow type is equal percentage according to the figure below.



Installation

- ✓ Before installation of the control valve, ensure that the pipe is clean. Make sure that pipe scale, metal chips, welding slag and other foreign materials are removed.

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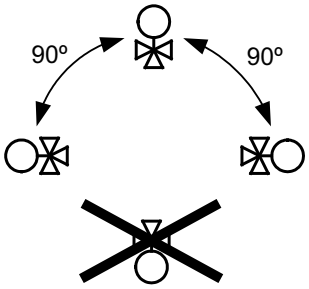
REGIN THE CHALLENGER

- ✓ For maximum efficiency and minimum wear, install the valve in a vertical position with the stem pointing upward. If the valve is mounted with the actuator on the side, more wear is caused to the valve stuffing box. The valve should never be mounted at an angle of more than 90°.



- ✓ Install the valve according to the fluid direction arrow shown on the valve.
- ✓ Make sure there is ample space above the valve to facilitate easy removal of the valve actuator.
- ✓ Fit a strainer/filter upstream of the valve to prolong the equipment's life span.
- ✓ A water quality according to VDI 2035 is recommended.

Technical data

Application	Heating systems, cooling systems, ventilation systems
Pressure rating	PN16
Connection	BSP internally threaded according to ISO 228/1
Flow characteristics	Equal percentage
Max. leakage	0.0 % of the kvs value (PTFE gasket, carbon-filled 25 %, no leakage)
Max. diff. pressure	1600 kPa
Media	Hot water, cold water, glycol-mixed water (max. 50 % glycol)
Media temperature	-5…+140 °C
Rangeability	100:1
Stroke	20 mm

Material

Body	Brass CW614N
Seat	Brass CW614N
Plug	Stainless steel 1.4301
Stem	Stainless steel 1.4305
Seat packing	PTFE with 25 % carbon
O-rings	EPDM

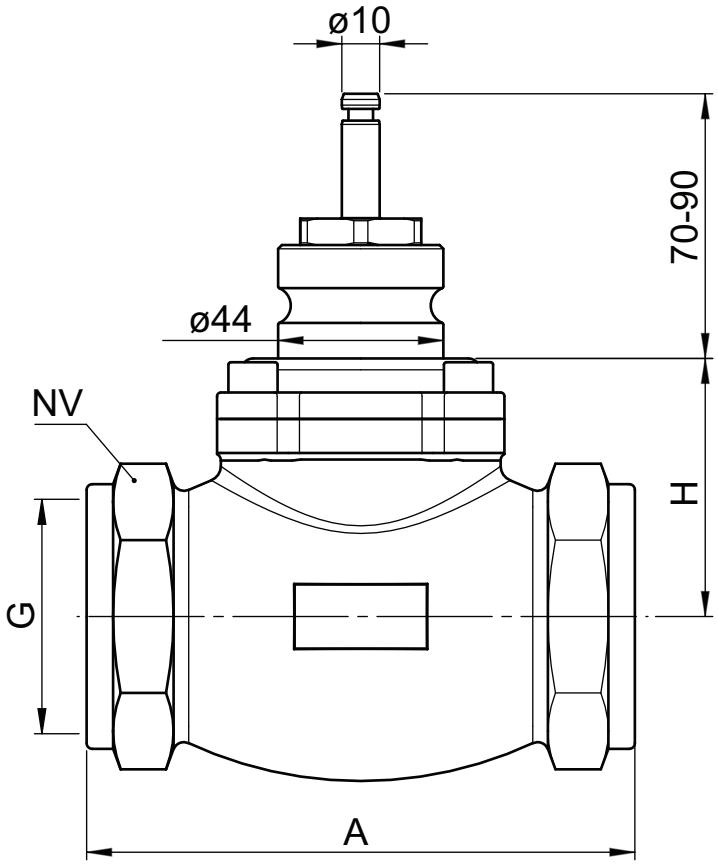
Models

Article	Nominal diamter	Connection	Kvs
BTV15-0,6	DN15	G½	0.6
BTV15-1,0	DN15	G½	1.0
BTV15-1,6	DN15	G½	1.6
BTV15-2,5	DN15	G½	2.5
BTV15-4,0	DN15	G¾	4.0
BTV20-1,6	DN20	G¾	1.6
BTV20-2,7	DN20	G¾	2.7
BTV20-3,9	DN20	G¾	3.9
BTV20-6,3	DN20	G¾	6.3
BTV25-6,3	DN25	G1	6.3
BTV25-10	DN25	G1	10
BTV32-10	DN32	G1¼	10
BTV32-16	DN32	G1¼	16
BTV40-10	DN40	G1½	10
BTV40-16	DN40	G1½	16
BTV40-27	DN40	G1½	27
BTV50-27	DN50	G2	27
BTV50-39	DN50	G2	39

Accessories

Article	Description
S02420001	Spare parts kit, O-ring kit for BTV valves from DN15 to DN25 (until 2018-12)
S6321457301	Spare parts kit, packing box, for BTV valves from DN32 to DN50 (until 2018-12)
S2921354201	Spare parts kit, packing box (from 2019-01)
STEMHEATER	Valve stem heater

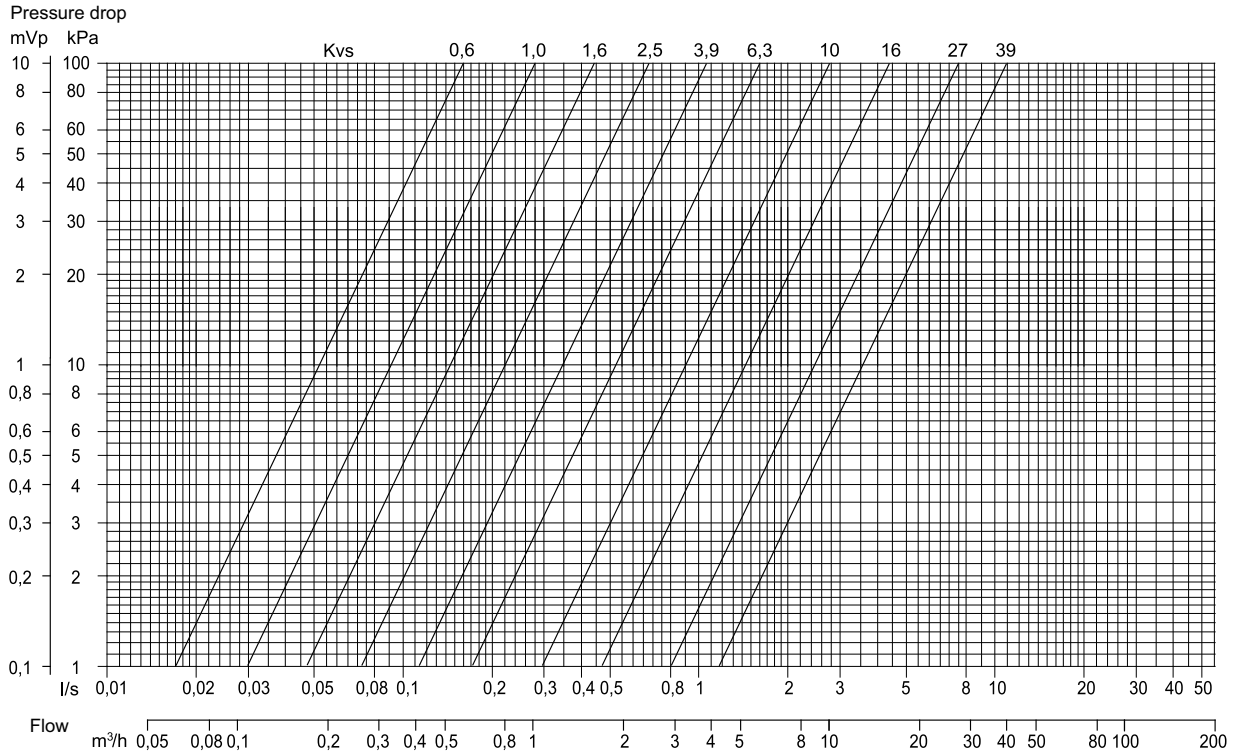
Dimensions



DN	A	H	G	NV	Stroke
15	70	46	G½	30	20
20	75	48	G¾	36	20
25	90	52	G1	42	20
32	105	55	G1¼	52	20
40	120	67	G1½	58	20
50	145	70	G2	70	20

[mm], unless otherwise specified

Pressure drop diagram



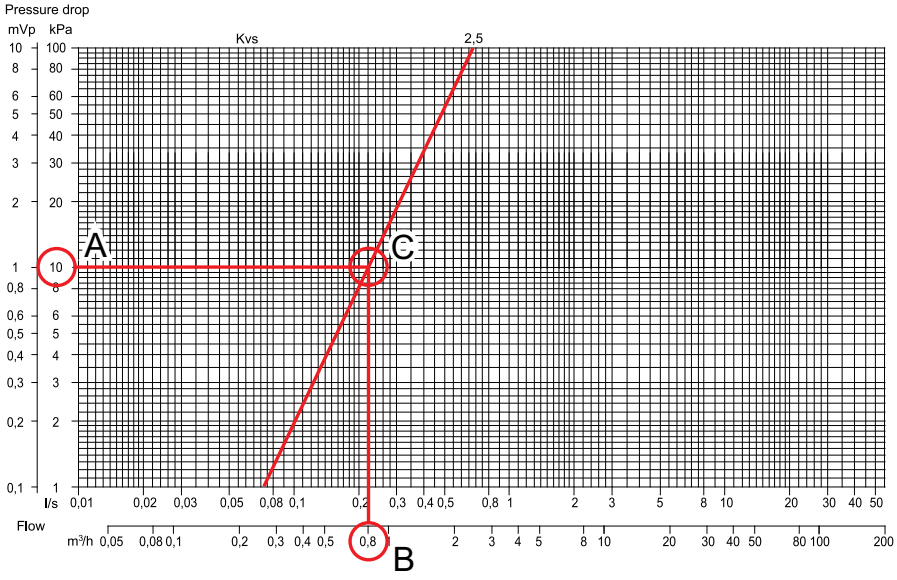


Fig. 2 Example, calculation of kv value: If the pressure drop is 10 kPa (A) and the flow is 0.8 m³/h (B), the kv value is 2.5 (C). See the markings in the picture above.

Documentation

All documentation can be downloaded from www.regincontrols.com.