revision
11 2014

CTV

2-way zone valve, DN10...DN20

CTV is a range of zone valves for control in after-treatment systems. The valve can control water flow to cooling as well as heating batteries and is intended to be used together with the RTA(O)M thermal actuators.

- **Differential pressure up to 150 kPa**
- **Compact design**
- **Size DN10 up to DN20**
- **Kvs value adjustable between 0.12...1.9**

The CTV valve range is intended to be used in conjunction with the RTA(O)M thermal actuators for temperature control in heating and cooling systems, such as radiators, convectors, chilled ceilings etc.

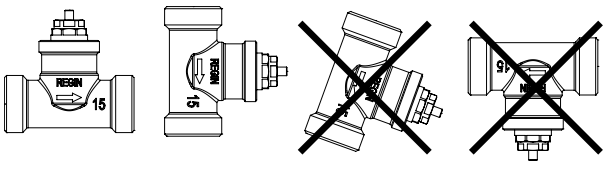
The valves are supplied with a grey plastic cap which can be used to open/close the valve manually during system installation. Turning the plastic cap clockwise to its end position closes the valve.

Actuator

The RTA(O)M actuator is mounted on the valve with the adapter (VA54) which is supplied with the actuator.

Installation

CTV is to be mounted according to the flow direction arrow on the valve. It is to be installed with the spindle upwards or at an angle of max. 90° to the vertical. See the picture below.



Setting of kvs value

The CTV range has a reference marking in the upper valve body. The kvs value is set using the grey plastic cap supplied with the valve. See page 3.

Material

The valves have body in chromed brass and bonnet in brass.

Models

Model	Connection	Kvs (adjustable)
CTV10	DN10	0.12...1.14
CTV15-1,9	DN15	0.17...1.9
CTV20	DN20	0.15...1.55

Technical data

Pressure class	PN10
Fluid temperature	2...90°C
Max. differential pressure	150 kPa
Stroke	3.5 mm
Leakage	0 % when the valve is closed
Connection, actuator	M28 x 1.5

Material

Body	Chromed brass
Bonnet	Brass
O-ring	EPDM
Seat	NBR

Suitable valve actuators

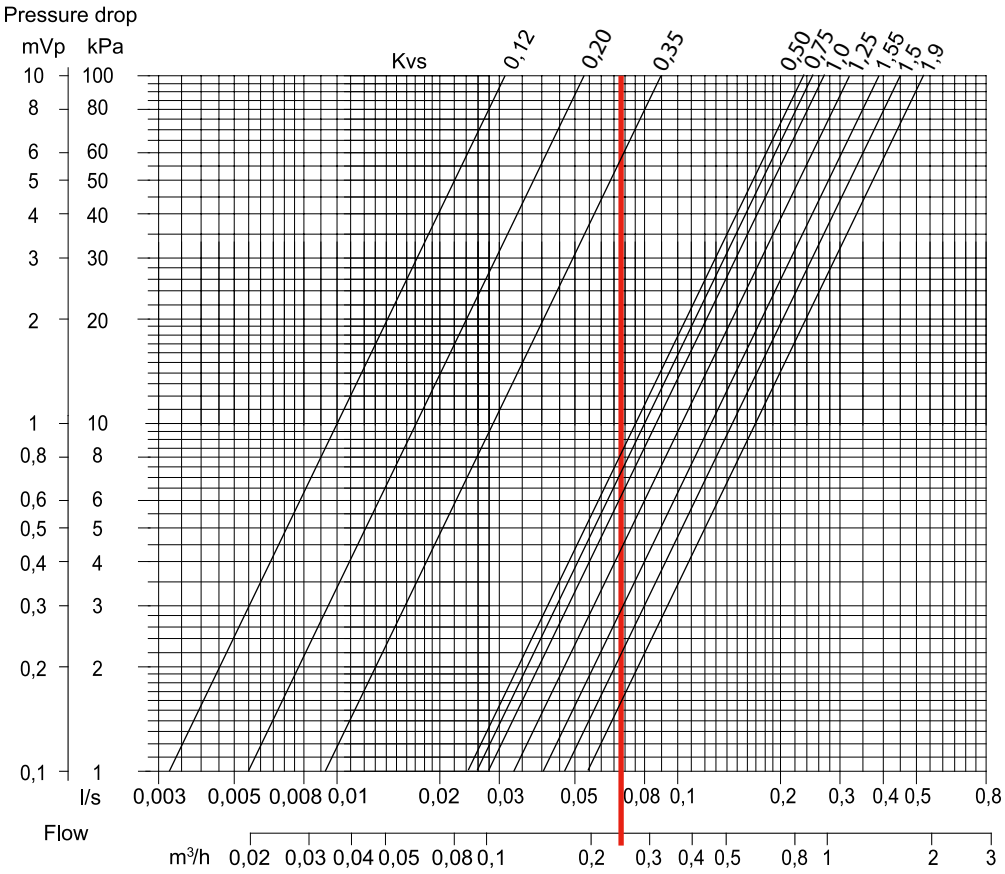
Valve actuator	Supply voltage	Control signal
RTAM100-24	24 V AC/DC	On/off, NC
RTAOM100-24	24 V AC/DC	On/off, NO
RTAM100-24A	24 V AC	0...10 V DC, NC
RTAOM100-24A	24 V AC	0...10 V DC, NO
RTAM100-230	230 V AC	On/off, NC
RTAOM100-230	230 V AC	On/off, NO

The valve is normally open. When using a NC actuator the valve is closed when no voltage is applied. Using a NO actuator will give the opposite result.

Suitable connections

Article number	Name	Material	Valve	Threads, valve	Pipe
1885136	Nut and olive	Chromed brass	CTV10	½"	K12
1886274	Nut and olive	Chromed brass	CTV15-1,9	¾"	K15
1884709	Nut and olive	Chromed brass	CTV15-1,9	¾"	K18
1886282	Nut and olive	Chromed brass	CTV20	1"	K22

Pressure drop diagram



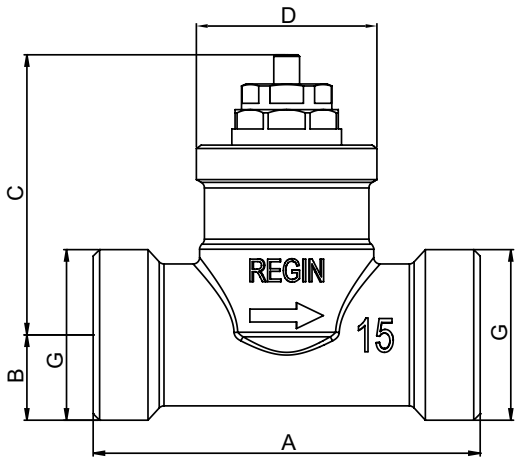
The valves have adjustable kvs value (kvs = the flow in m^3/h at a pressure drop of 100 kPa).

To draw a curve for other settings than the pre-drawn values:
Draw a vertical line through the flow. The starting point of the angled line is where the vertical line intersects the top of the chart (at 100 kPa). The angled line should be parallel to the pre-drawn lines.
In the example above, the kvs value = 0.25.

Adjustable kvs value
The kvs value is set by turning the grey plastic cap until the desired number on the cap is aligned with the reference marking in the valve (see the picture below). Depending on the number selected on the plastic cap, different kvs values are set according to the table below.

	Cap number							
Model	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
CTV10	0.12	0.22	0.34	0.55	0.7	0.9	1.07	1.14
CTV15-1,9	0.17	0.35	0.50	0.75	1.0	1.25	1.65	1.9
CTV20	0.15	0.35	0.55	0.74	0.9	1.1	1.36	1.55

Dimensions



Model	A	B	C	D	G
CTV10	54	10.5	45	M28 x 1.5	G 1/2"
CTV15-1,9	60	13	45	M28 x 1.5	G 3/4"
CTV20	68	16.5	45	M28 x 1.5	G 1"

Measuments in mm unless otherwise specified.

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