Aquastrom K

Thermal cold water circulation valves

For hydronic balancing of cold water circulation pipes. The Aquastrom K circulation valves are thermally controlled and available with internal thread. Above the set temperature, the valve opens and automatically increases the cold water volume flow. The valve has a fixed residual volume flow and allows the volume flow to be shut off.

The valve body is made of silicon bronze. For integration into the building management system, a drain valve with thermometer or a temperature sensor can be retrofitted. EPP insulation shells in accordance with the German Building Energy Act GEG and building material class B2 according to DIN 4102 are included in the scope of delivery.

The Aquastrom K valves control the hydronic balancing and temperature-controlled regulation of volume flows in cold water circulation pipes.

Features

- Hydronic balancing of cold water circulation pipes
- Automatic thermal volume flow control
- Drain valve with thermometer or temperature sensor for integration into the building management system retrofittable

Technical Data

Nominal size	DN 15
Variants	With internal thread according to EN 10226 Setting range 6…18 °C (factory setting 8 °C) Setting range 12…24 °C (factory setting 20 °C)
Operating temperature	0…90 °C
Max. operating pressure	16 bar
Medium	Potable water according to DVGW W551 and W553
Body material	Silicon bronze
O-rings material	EPDM
Insulation shells material	EPP in accordance with the German Building Energy Act GEG, building material class B2 according to DIN 4102
Residual volume flow	kv = 0.05

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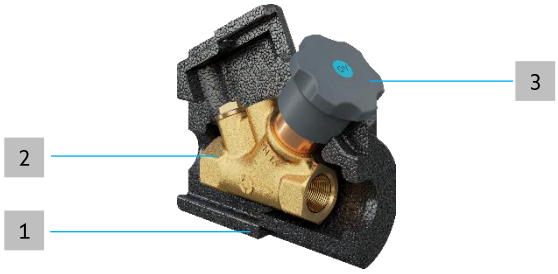
Product Details

Design

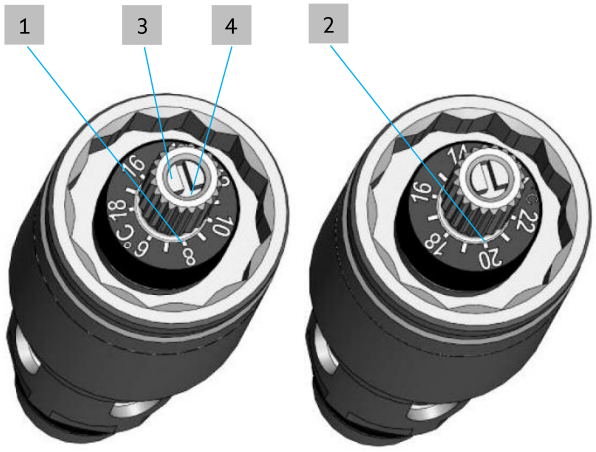


1	Insulation shell
2	Body
3	Handwheel

Functions

The Aquastrom K circulation valve ensures hydronic balancing in a potable water circulation system. Above an adjustable temperature between a minimum of 6 °C and a maximum of 18 °C (item no. 4207904) or a minimum of 12 °C and a maximum of 24 °C (item no. 4208004), the valve opens and allows increased cold water circulation in the relevant section of the pipeline until the temperature set on the valve is reached again. Below this temperature, the valves throttles to a residual volume flow with kv = 0.05. This ensures that the downstream pipelines are also supplied with flow thanks to the restored hydronic balance. In addition, the valve can be used to shut off the pipeline for inspection and repair purposes.

Setting the temperature setpoint



Item no. 4207904 Item no. 4208004

After pulling of the handwheel, the control insert is exposed. The internal spindle (pos. 3) can be used with a flat screwdriver to set the temperature setpoint at which the valve is to open. The factory setting is 8 °C (item no. 4207904) (pos. 1) or 20 °C (item no. 4208004) (pos. 2). To adjust the temperature setpoint, set the flattened side of the spindle (pos. 4) to the desired temperature value. Minimum 6 °C (item no. 4207904) or minimum 12 °C (item no. 4208004). Turn anticlockwise to increase the temperature setpoint and clockwise to decrease the temperature setpoint.

Please ensure that the calibration range is not exceeded. To check the calibration, turn the temperature setpoint to 18 °C (item no. 4207904) or 24 °C (item no. 4208004) using the flattened side of the spindle (pos. 4). In the correct calibration range, the inner adjustment spindle must be at the same height as the outer toothed spindle at this temperature setting. If this is not the case, incorrect temperature values will be reached during operation. If, at the settings 18 °C (item no. 4207904) or 24 °C (item no. 4208004), the two spindles are not at the same height, the inner spindle must be turned one full turn.

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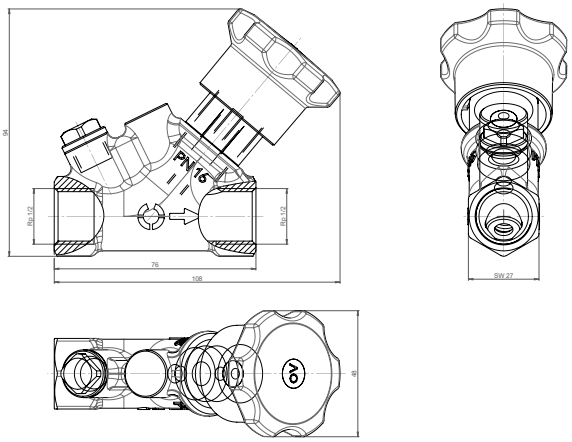
Notes:

- Install the valve only in the flow direction (observe the arrow on the body).
- If necessary, glue the insulation shell included in the scope of delivery with silicone to prevent condensation and damage to the masonry.
- Open any shut-off valves fully when restarting to ensure proper control function.

The pipe routing must be selected so that air pockets are avoided. Otherwise, bacterial zones can form, particularly in the pipes in the circulation return, due to the low flow velocity. All pipes must be thoroughly flushed before the system is commissioned.

In the case of highly calcareous potable water, the use of a water treatment system is recommended to prevent damage to pipes and associated malfunctions of the valves due to calcification. The country-specific requirements must be taken into account.

Dimensions



Nominal size	DN 15
Length 1 [mm]	76
Length 2 [mm]	108
Width [mm]	48
Height [mm]	94
SW	27

Selection

Item Numbers

Aquastrom K with internal thread

	Nominal size	Connection	Setting range	Item no.
	DN 15	Rp ½	6...18 °C	4207904
	DN 15	Rp ½	12...24 °C	4208004

Accessories and Spare Parts

Selected accessories and spare parts for the Aquastrom K valves. For a complete overview, see product catalogue.

Description	Item no.
Drain valve for hose connection DN 8, G ¼ external thread	4205593
Dial thermometer	4205591
Sensor LW TQ sensor element PT 1000 for remote monitoring of the pipeline temperature	4205592
Aquastrom P water sampling valve DN 8, G ¼ external thread	4209102
Drain valve DN 8, G ¼ external thread	4209602
Drain ball valve DN 8, G ¼ external thread	4200191
Insulation shell DN 15	1069610
Valve insert, adjustable between 6 and 18 °C	4205990
Valve insert, adjustable between 12 and 24 °C	4205992

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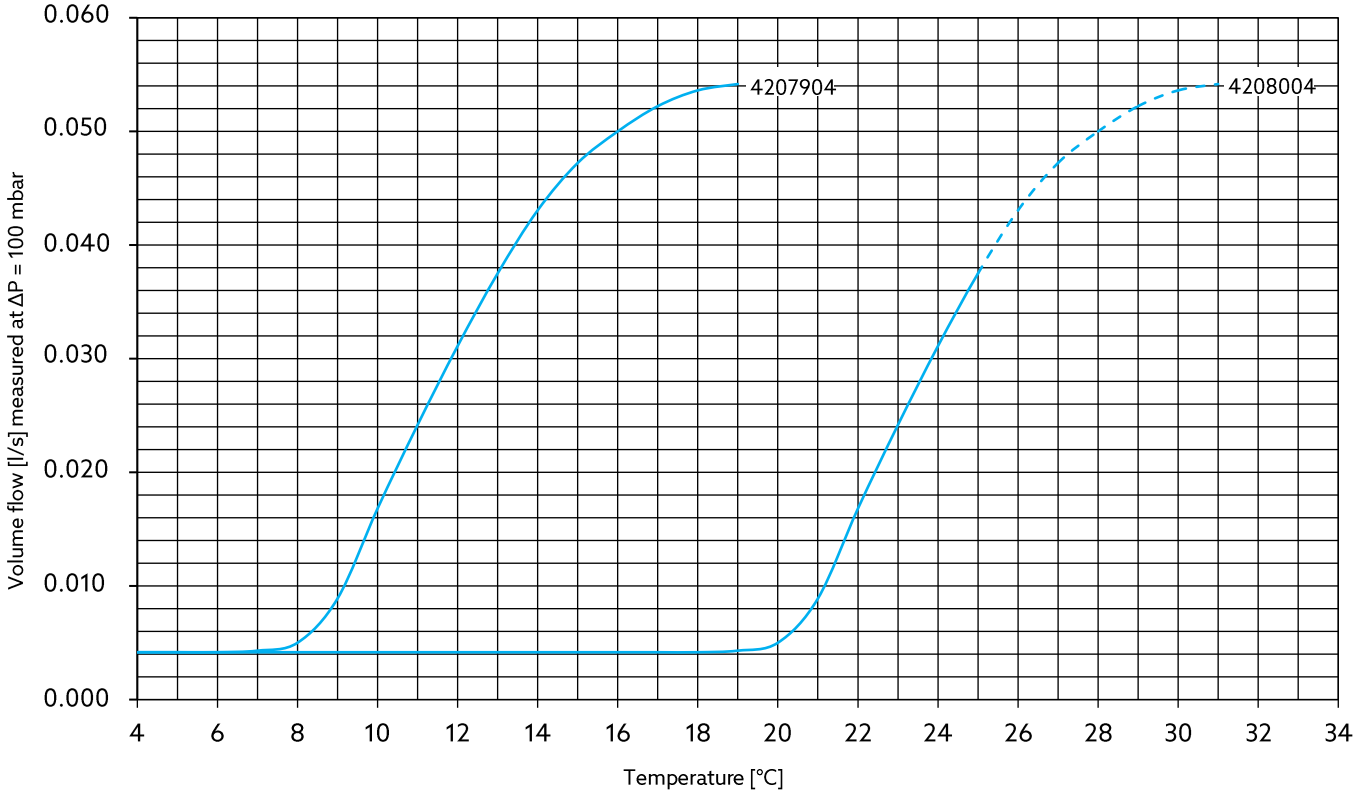
Design Chart

Control characteristic Aquastrom K



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