Aquastrom

Efficient potable water circulation control.

oventrop

Potable water – our most important food

Potable water is our most important food and is subject to particularly strict requirements and controls. This means that every consumer can be sure of potable water of the highest quality when it enters the building.

This is where the operator's responsibility for the hygiene of the potable water system in the building begins. Because even behind the water meter, there are dangers from pathogens that find optimal living conditions in stagnant water, old or oversized storage tanks and poorly insulated pipe networks and can endanger people's health.

AFTER THE HANDOVER, THE OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS!

The Potables Water Ordinance places particular emphasis on prevention. When planning and constructing the system, it is therefore necessary to take constructive measures to ensure that the settlement and reproduction of micro-organisms is not favoured. Planners and contractors must prove that the work has been carried out in accordance with the recognised rules of technology and are liable for it. The legal regulations, guidelines and standards must be adhered to.

PLANNING

When planning and constructing potable water systems, it is important to ensure that

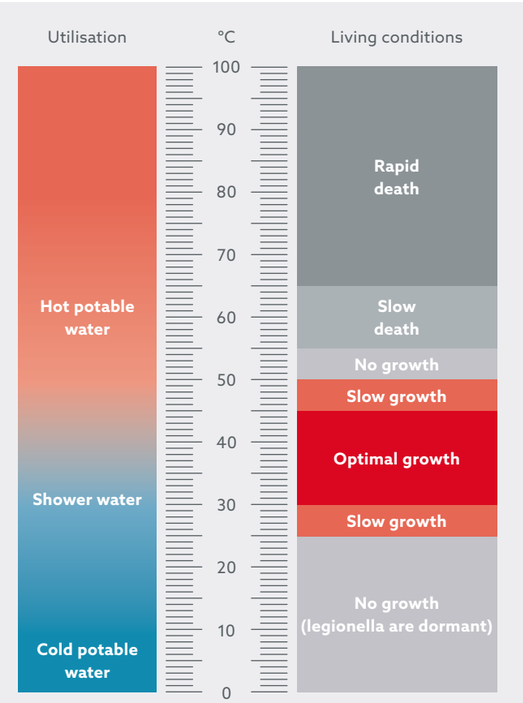
- there is sufficient water flow in all system sections
- the water content is as low as possible and that the water exchange takes place as frequently as possible
- the hot water temperature at the draw-off points does not fall below 57°C, that it does not fall below 55°C at the end of the circulation pipe and that it does not exceed 25°C in adjacent cold water pipes (pipe insulation, water exchange!)

HAZARD POTENTIAL IN POTABLE WATER SYSTEMS

Algae, bacteria and fungus, together with iron and lime deposits, form a film on the inside of pipes as well as in appliances and storage cylinders. Pathogens, including the dangerous legionella bacteria, can multiply in the protection of this biofilm.

Stagnant water or water with an insufficient flow rate promotes the formation of these biofilms. Micro-organisms can develop particularly well at temperatures of around 30–45 °C (some even at lower temperatures). Excessive heat loss in the system due to low flow rates or inadequate pipe insulation, pipe sections with no flow, temperature stratification in hot water storage cylinders or cold water heated by neighbouring hot water pipes – all these things can promote the growth of germs.

LEGIONELLA GROWTH IN POTABLE WATER



Safe – now and in the future: Our potable water valves made of lead-free silicon bronze

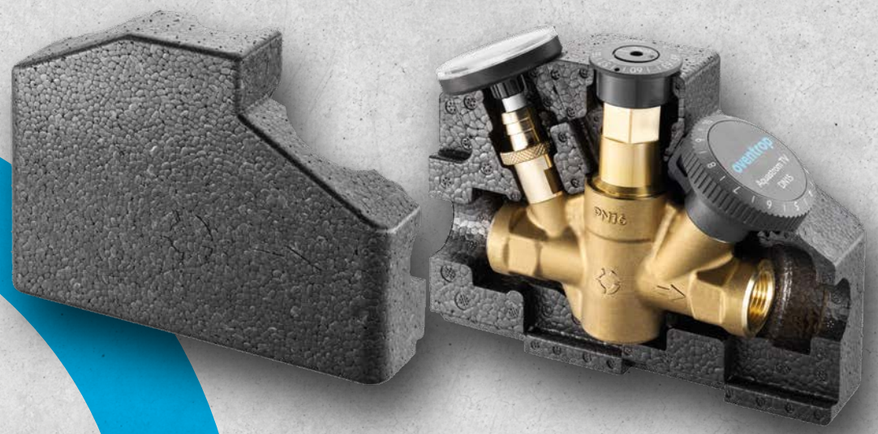
Our current Aquastrom potable water valves are made of lead-free silicon bronze and thus meet the current European and German guidelines for potable water.

The silicon bronze material that we have been using for years in the potable water-carrying components of our station technology is included in both the German UBA (Federal Environment Agency) whitelist and the current European ECHA (European Chemicals Agency) whitelist, and is therefore future-proof.

ADVANTAGES OF SILICONE BRONZE

+ ***High-quality*** material
+ ***Ideal*** for use in potable water installations, as current and future stricter requirements for lead limits are met
+ ***Corrosion-resistant*** and ***insensitive*** to stress corrosion cracking
+ ***No additional information obligations*** required

Aquastrom T
Thermal circulation valves



With our **Aquastrom T** circulation valves, you can automatically control the hydronic balancing and temperature-controlled regulation of the volume flows in potable water circulation pipes. You can block and seal the temperature setpoint. Depending on the version, the flow can also be blocked.

Our **Aquastrom T** circulation valves are thermally or electronically controlled, depending on the version. Below the temperature you have set, the valve opens and automatically increases the hot water flow rate.

Our **Aquastrom T** valves have a fixed residual volume flow, automatically detect thermal disinfection and thus enable you – depending on the version – to limit and shut off the maximum volume flow via an integrated regulating unit with reproducible presetting.

Our current **Aquastrom T** circulation valves are made of future-proof silicon bronze and are available with internal or external threads. Depending on the version, they are also equipped with a drain valve with a hose connection and a thermometer. To integrate the **Aquastrom T** valves into the building technology, you can retrofit a temperature sensor.
EPP insulation shells according to the German Building Energy Act GEG and building material class B2 according to DIN 4102 are included in the scope of delivery or available as an accessory.

YOUR BENEFITS

+ Automatic thermal ***volume flow control***
+ Automatic ***support*** of thermal disinfection
+ ***Limitation*** of the maximum volume flow
+ Temperature setpoint ***blockable and lead-sealable***
+ Flow ***blockable***
+ ***Insulation shells included*** or retrofittable as an accessory
+ Temperature sensor ***retrofittable*** for integration into the building technology
+ ***Suitable for hydronic balancing*** in circulation pipes according to DVGW Code of Practice W551/W553

Aquastrom TV		Nominal size	Connection	kvs	Item no.
1	with internal threads	DN 15	Rp ½	1.24	4202504
		DN 20	Rp ¾	2.21	4202506
2	with internal threads, without accessories	DN 15	Rp ½	1.24	4102604
		DN 20	Rp ¾	2.21	4202606
3	with external threads, flat sealing	DN 15	G ¾	1.24	4102704
		DN 20	G 1	2.21	4202706
4	with external threads, flat sealing, without accessories	DN 15	G ¾	1.24	4102804
		DN 20	G 1	2.21	4202806
Aquastrom T					
5	with internal threads	DN 15	Rp ½	1.24	4202904

1 **Aquastrom TV** with internal threads

2 **Aquastrom TV** with internal threads, without accessories

3 **Aquastrom TV** with external threads, flat sealing

4 **Aquastrom TV** with external threads, flat sealing, without accessories

5 **Aquastrom T** with internal threads

Aquastrom TD
Electronic circulation valves

Efficient potable water circulation with **Aquastrom TD** and the **DynaTemp CW-BS** control unit

The **Aquastrom TD** electronic circulation valves are part of our **DynaTemp system** solution, which you can use to ensure the hygiene of potable water systems in large buildings such as hospitals, retirement homes or multi-family dwellings. Reliably and simply – because our **DynaTemp CW-BS system** ensures that the potable water circulation temperature in the system is always sufficiently high (57 °C according to DVGW). In addition, our system can support thermal disinfection.

You can integrate the perfectly coordinated system into an existing building automation system via BACnet IP, for example for monitoring and visualisation tasks or to trigger warnings.

Find out more about our **DynaTemp** system solution at dynatemp.oventrop.com

Aquastrom TD	Nominal size	Connection	kvs	Item no.
with internal threads	DN 15	Rp ½	1.24	4205004
	DN 20	Rp ¾	2,21.	4205006
with external threads, flat sealing	DN 15	G ¾	1.24	4205104
	DN 20	G 1	2.21	4205106

Aquastrom K
Thermal circulation valves

Our **Aquastrom K** circulation valves allow you to control the hydronic balancing and temperature-controlled regulation of volume flows in cold water circulation pipes.

Our **Aquastrom K** valves are thermally controlled. Above the temperature you have set, they open the valve and automatically increase the cold water volume flow. The valve has a fixed residual volume flow, thus allowing you to shut off the volume flow. You can block and lead-seal the temperature setpoint.

Our current **Aquastrom K** circulation valves are made of future-proof silicon bronze and are available with internal or external threads.

To integrate the **Aquastrom K** valves into the building technology, you can retrofit a temperature sensor or a drain valve with a thermometer. EPP insulation shells according to German Building Energy Act GEG and building material class B2 according to DIN 4102 are included in the scope of delivery.

YOUR BENEFITS

+ Automatic ***thermal volume flow control***
+ Temperature setpoint ***blockable and lead-sealable***
+ Flow ***blockable***
+ ***Drain valve with thermometer or temperature sensor*** retrofittable for integration into the building technology
+ Suitable for ***hydronic balancing*** in cold water circulation

COLD WATER CIRCULATION – AN IMPORTANT PART OF POTABLE WATER HYGIENE

The circulation of cold potable water is important for the hygiene of potable water installations. Circulation prevents stagnation and the water heats up less, so that the required temperature for cold water of a maximum of 25°C can be maintained under certain circumstances by this measure alone. Other measures such as cooling or flushing of pipes can be applied as needed.

Cold potable water does not usually heat up in the cellar pipe and only slightly in the storey pipe, because the ambient temperatures here are below the required 25°C (cellar 15 °C, storey 21 °C). Cold water, on the other hand, heats up in the technical centre (temperatures up to 30 °C) and in risers, where heating, hot water and circulation are often installed alongside the cold water pipe (temperatures above 30 °C).

Even with standard-compliant insulation, stagnant cold water heats up within a few hours. With a cold water circulation system, heating of partial areas is prevented. The heating energy is distributed over the entire system volume. Each time potable water is drawn off, new cold water enters the system, which has a positive effect on the entire potable water installation. In addition, the water in cellar pipes releases heat again.

If consumption is low, the cold circulating water may also be cooled. If the system is not used for longer periods (more than three days according to VDI 6023), flushing processes are carried out. Depending on the system conditions, adequate hygiene is ensured by a combination of two or three measures: circulation, cooling and flushing.

Aquastrom K	Nominal size	Connection	Control range	Item no,
with internal threads	DN 15	Rp ½	6 – 18 °C	4207904
with internal threads	DN 15	Rp ½	12 – 24 °C	4208004

Aquastrom C
Static circulation valves

Our static circulation valves **Aquastrom C** are installed in potable water circulation pipes. They enable the hydronic balancing of the pipelines with each other. You can block the flow of the valves.

With our **Aquastrom C** circulation valves, you can reliably limit and shut off the maximum volume flow. The presetting of the integrated regulating unit is reproducible. Our **Aquastrom C** circulation valves are available with internal and external threads.

YOUR BENEFITS

- + ***Reliable limitation and shutoff*** of the maximum volume flow
- + Flow ***blockable***
- + ***Insulation shells included*** or retrofittable as an accessory
- + Temperature sensor ***retrofittable*** for integration into the building technology
- + ***Suitable for hydronic balancing*** in circulation pipes according to DVGW Code of Practice W551/W553

Our current **Aquastrom C** valves are made of future-proof silicon bronze. Depending on the version, they are equipped with a drain valve with a hose connection and a thermometer.

To integrate the **Aquastrom C** valves into the building technology, you can retrofit a temperature sensor. EPP insulation shells according to the German Building Energy Act GEG and building material class B2 according to DIN 4102 are included in the scope of delivery or available as an accessory.

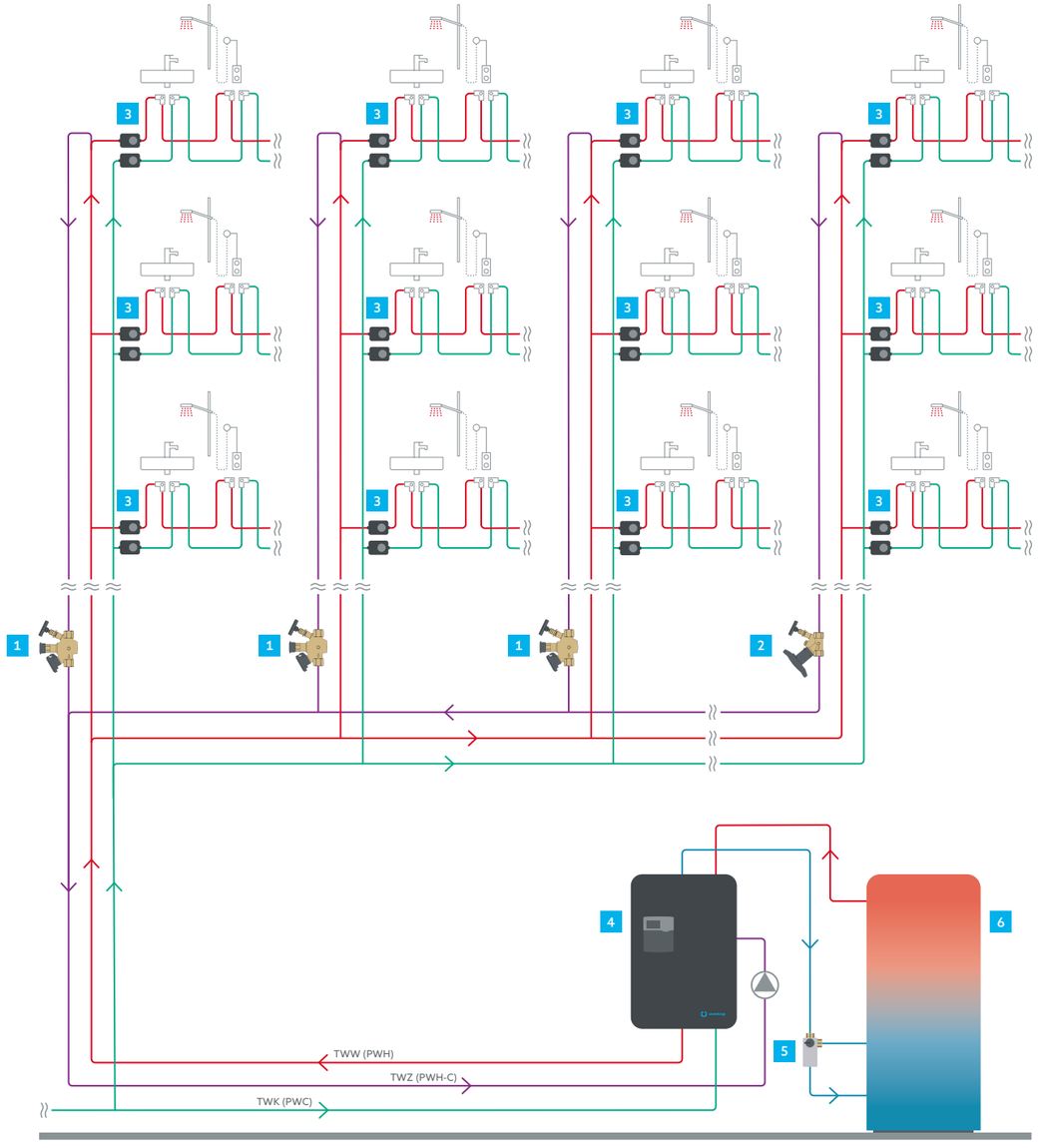
Aquastrom C	Nominal size	Connection		Item no..
1 with internal threads	DN 15	Rp ½		4204104
	DN 20	Rp ¾		4204106
	DN 25	Rp 1		4204108
	DN 32	Rp 1 ¼		4204110
2 with internal threads, without accessories	DN 15	Rp ½		4204152
	DN 20	Rp ¾		4204154
	DN 25	Rp 1		4204156
	DN 32	Rp 1 ¼		4204158
3 with external threads, flat sealing	DN 15	G ¾		4204204
	DN 20	G 1		4204206
	DN 25	G 1 ¼		4204208
	DN 32	G 1 ½		4204210

1 **Aquastrom C** with internal threads

2 **Aquastrom C** with internal threads, without accessories

3 **Aquastrom C** with external threads, flat sealing

System illustration
Potable water installation



1 **Aquastrom T**
Thermal circulation valve

2 **Aquastrom C**
Static circulation valve

3 Water meter

4 **Regumaq X-80**
Fresh water station

5 Return stratification valve

6 Buffer storage cylinder

Potable water technology
Other modular products

Find out more about Aquastrom at:
aquastrom.oventrop.com

Optibal TW
Potable water ball valve

Regudrain
Hygiene flushing station

Regudis W-HTE
Dwelling station

Aquastrom P
Water sampling valve

Regumaq X-45
Fresh water station

Regumaq X-80
Fresh water station

Design and document
with OVplan.

HYDRONIC BALANCING?
QUICKLY DONE WITH OVPLAN

You want to design systems with our **Aquastrom** valves?
It's easy with our **OVplan** planning software.
Download now free of charge at ovplan.oventrop.com

+49 2962 82100
plan@oventrop.com

Download now free of charge

9999511_EN_2024_12
Subject to technical changes

Room climate

Hydraulics

Stations

Potable water

Oil

Smart Home,
Smart Building

Oventrop is the partner for efficient heating, cooling and clean potable water. The modular systems and services offer pioneering solutions which all HVAC experts use to work with – easily and flexibly – from planning to installation, from industry to trade. As a family business, Oventrop accompanies all its partners over many years – competently and personally.

oventrop
Wir regeln das. Seit 1851.

Oventrop GmbH & Co. KG · Paul-Oventrop-Str. 1 · 59939 Olsberg, Germany
Phone +49 2962 820 · Fax +49 2962 82400 · mail@oventrop.com · www.oventrop.com