

Tender specification:

Oventrop circulation pump group “Regucirc M” for potable water circulation systems with bivalent storage cylinder in detached and semi-detached houses. With thermostatic mixing valve (35 °C - 65 °C) with fail-safe function, energy-saving high-efficiency pump (complies with the energy efficiency class rating A for heating circulation pumps), non-return check valves and isolating ball valves with integrated thermometers for potable water temperature control.

Application:

The circulation station is installed between the bivalent hot water storage cylinder and the circulation system. Overheating of the potable water system and possible scalding are avoided by setting the required temperature at the thermostatic mixing valve. Back-flow of the circulation water during hot water consumption is prevented by the integrated non-return check valves.

Technical data:

Size: DN 20 – G 1 x G 1
 Fluid: Potable water, PN 10
 max. 90 °C

Thermostatic mixing valve:

Control range: 35 °C – 65 °C

Max. pressure difference: 2.5 bar

Flow rate: $T_{mix} = 50\text{ °C}$, $P_{stat} = 3\text{ bar}$
 $k_V = 2.3$

High-efficiency pump:

Supply voltage: 1 x 230 VAC +6 %/-10 %,
 50 Hz, PE

Power consumption: 5-22 W

Noise: Sound pressure level < 43dB(A)

Materials: Bronze, vanadium, EPDM,
 polyphenylene oxide (in contact with the fluid)

Installation position: Vertical, easily accessible

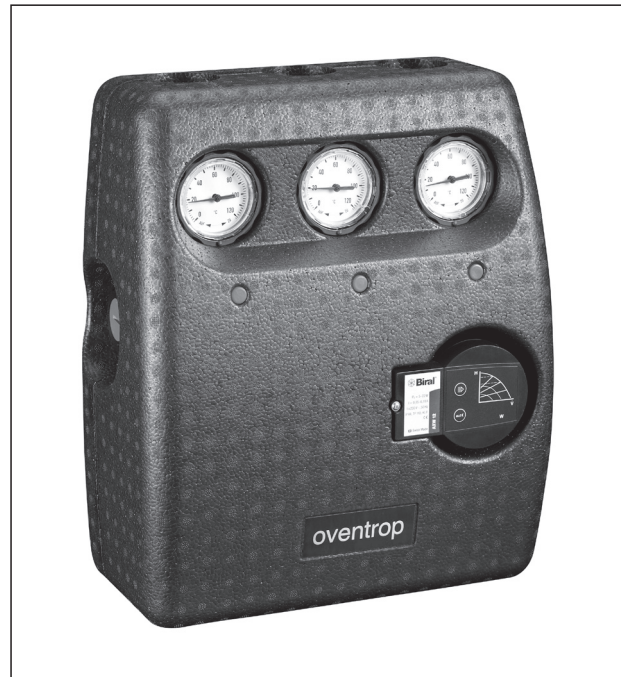
Max. ambient temperature: 30 °C

Connection: Flat sealing male thread according to
 DIN ISO 228

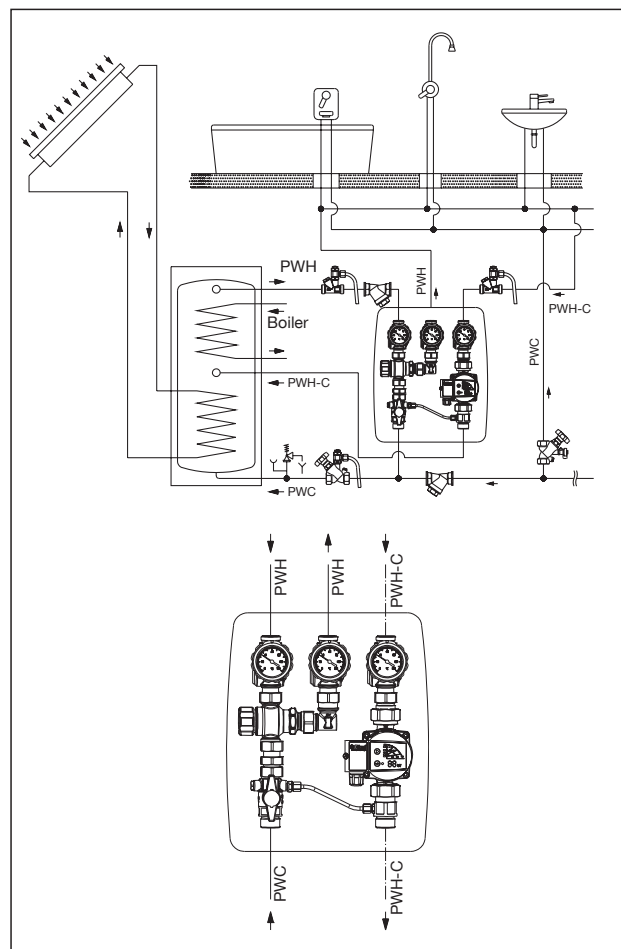
Item no.: 4206780

Function:

The circulation station “Regucirc M” serves the operation and temperature control of a potable water circulation system. Temperature control is carried out by a high quality thermostatic mixing valve made of bronze. The station is equipped with an energy-saving high-efficiency pump Biral AXW 12 which can be operated on different characteristic lines according to the customer’s requirements. According to the demands, the high-efficiency pump is automatically adjusted to the optimum output together with a small return-flow channel. If a high quantity of hot water is withdrawn, then the circulation volume flow is fed via the bivalent storage cylinder and the pump is adjusted to full throttle. A hot water supply to all parts of the system is thus guaranteed. If no hot water is drawn off the circulation system, the plant is warmed up to the temperature set at the thermostatic mixing valve. Then the thermostatic mixing valve closes the hot water and opens the cold water supply. The circulation volume flow delivered by the high-efficiency pump can now pass via the bypass capillaries. The power consumption of the high-efficiency pump is reduced due to the high hydronic pipe resistance of the capillaries.



“Regucirc M”



System illustration

If the cold water supply is interrupted, the hot water supply is automatically shut off by the thermostatic mixing valve with integrated fail-safe function and any risk of scalding is avoided. The riser temperatures can be checked at any time with the help of the thermometers integrated in the isolating ball valves.

The potable water temperatures must be monitored! Excess temperature may lead to leakages in the pipework caused by mechanical tensions or to breakdown especially where plastic pipes are used.

In order to avoid damage to the pipework, pumps and valves caused by calcification, the fitting of water treatment equipment is recommended if the water is very calciferous. Especially in hot water systems, this may lead to malfunctions or breakdown of the valves. The national guidelines must be observed!

An electronic temperature registration of the individual risers for integration into a centralised building control system is possible with the PT 1000 temperature sensors (item no. 1369093). In order to avoid malfunctions caused by impurities, the installation of a strainer (item no. 1120006) in the hot and cold water supply of the mixing valve is recommended.

Maintenance advice:

Replacement of the pump:

The circulation pump group is easily accessible for the replacement of the pump after removal of the front insulation.

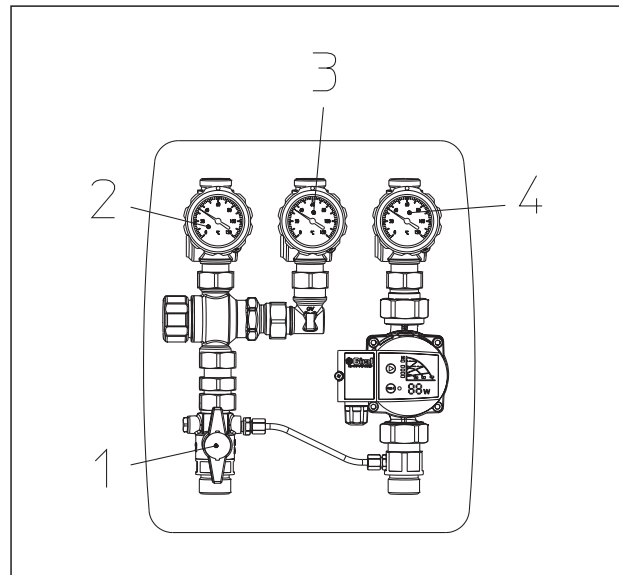
WARNING! 230VAC ~ voltage!

The electrical connection/disconnection of the pump must only be carried out by a qualified electrician!

Close the ball valve at the entry of the circulation return pipe (pos. 4). After loosening the collar nuts at the pump flanges, the pump can be removed and replaced.

Circulating water which may flow back when replacing the pump is prevented from escaping by the check valve installed at the outlet port of the pump group. The seals must always be replaced by temperature-resistant new ones when replacing the pump.

Check the external tightness of the circulation station after having opened the ball valve and fit the external insulation. The settings of the new pump are detailed in the enclosed operating instructions.



Replacement of the thermostatic mixing valve:
The thermostatic mixing valve can be replaced without the necessity to drain the circulation system or the potable water storage cylinder. The ball valves pos.1 to 4 just need to be closed.

The thermostatic mixing valve can be removed after having loosened the collar nuts. The seals must always be replaced by new temperature-resistant ones when replacing the thermostatic mixing valve. All ball valves must be fully opened after replacement of the thermostatic mixing valve.

**Please ensure the correct connection of the cold and hot water supply when installing the new thermostatic valve!
The hot water connection of the thermostatic mixing valve has to point upwards to the thermometer ball valve!**

Check the external tightness of the circulation station and mount the front insulation.

Spare parts/accessories:

Spare pump Biral AXW 12
G 1¼ x 120 mm, 230V-50Hz
Item no.: 4206790

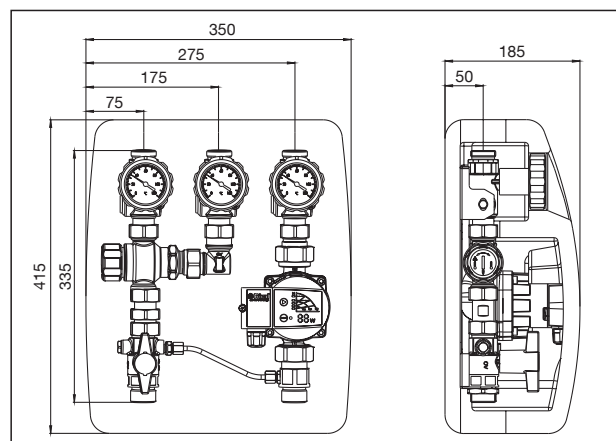
Spare thermostatic mixing valve
G 1 x G 1 x G 1, DN 20, 35 °C – 65 °C
Item no.: 1300306

Spare insulation shell
Item no.: 4206797

Temperature sensor PT 1000
Item no.: 1369093

Bronze strainer
Item no.: 1120006

Spare thermometer
Item no.: 1351690



Dimensions

Subject to technical modifications without notice.

Product range 12
ti 273-EN/10/MW
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