oventrop

Regumat S

Operating instructions EN

Regumat S
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1. General information

The original operating instructions are written in German.

The operating instructions in other languages have been translated from German.

1.1 Validity of the instructions

These instructions are valid for the Regumat S station for unmixed heating circuits.

1.2 Scope of delivery

- Regumat S
- Thermal insulation
- Fastening material (screws, dowels)
- Seal set (4-fold
- Union nut (2-fold)
- Seal set (2-fold)
- Operating instructions

1.3 Contact

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GERMANY
www.oventrop.com

Technical customer service
Phone: +49 (0) 29 62 82-234

1.4 Symbols used

	Highlights important information and further additions.
▶	Action required
•	List
1 2	Fixed order. Steps 1 to X.
▷	Result of action

2. Safety-related information

2.1 Intended use

Operational safety is only guaranteed if the product is used as intended.

The Regumat S heating circuit station enables connection to an unmixed heating circuit.

The product is completed by the installation of a suitable pump.

Any further and/or different use is considered unintended use.

Claims of any kind against the manufacturer and/or his authorised representatives for damage resulting from unintended use cannot be recognised.

Intended use also includes correct compliance with these instructions.

2.2 Warnings

Each warning contains the following elements:

Warning symbol **SIGNAL WORD**

Type and source of danger!
Possible consequences if the danger occurs or the warning is ignored.

! Ways to avoid the danger.

Signal words define the severity of the danger posed by a situation.

⚠ WARNING

Indicates a possible danger with moderate risk. If the situation is not avoided, death or serious bodily injuries may result.

⚠ CAUTION

Indicates a possible danger with lower risk. If the situation is not avoided, minor and reversible bodily injuries will result.

NOTICE

Indicates a situation that can potentially result in damage to property if not avoided.

2.3 Safety instructions

We have developed this product in accordance with current safety requirements.

Observe the following instructions for safe use.

2.3.1 Danger to life due to electric current

- ! Make sure that the product can be disconnected from the power supply at any time.
- ! Do not operate the product if there is visible damage.

During work on the product

- ! Disconnect all components from the power supply at all poles and secure them against being switched on again.
- ! Check that no voltage is present.

2.3.2 Danger due to insufficient personnel qualification

Work on this product may only be carried out by suitably qualified specialist tradespeople.

Due to their professional training and experience as well as knowledge of the relevant legal regulations, qualified specialist tradespeople are able to carry out work on the described product in a professional manner.

Operator

The operator must be instructed in the operation by specialist tradespeople.

2.3.3 Risk of injury from pressurised components

- ! Adhere to the permissible operating pressures during operation.

2.3.4 Risk of scalding due to unintentionally escaping hot media

- ! Only carry out work when the system is depressurised.
- ! Allow the product to cool down before working on it.
- ! Check that the product is not leaking after work is complete.
- ! Wear safety goggles.

2.3.5 Risk of burns on hot components and surfaces.

- ! Allow the product to cool down before working on it.
- ! Wear suitable protective clothing to avoid unprotected contact with hot fittings and system components.

2.3.6 Risk of injury due to the weight of the product

- ! Always wear safety shoes during mounting.

2.3.7 Risk of injury from improper work

Stored energy, angular components, points and corners can cause injuries.

- ! Ensure there is sufficient space before starting work.
- ! Handle open or sharp-edged components with care.
- ! Keep the working area tidy and clean to avoid sources of accidents.

2.3.8 Damage to property due to unsuitable location

- ! Do not install the product in rooms prone to frost.
- ! Do not install the product in wet or damp environments.
- ! Do not install the product in rooms with corrosion-enhancing ambient air.
- ! Ensure that the product is not exposed to strong sources of electromagnetic radiation.

2.3.9 Availability of the operating instructions

Every person who works with this product must have read and apply these operating instructions and all applicable instructions.

The instructions must be available at the place of use of the product.

- ! Pass on these instructions and all applicable instructions to the operator.

3. Technical description

3.1 Design

3.1.1 Design of the station

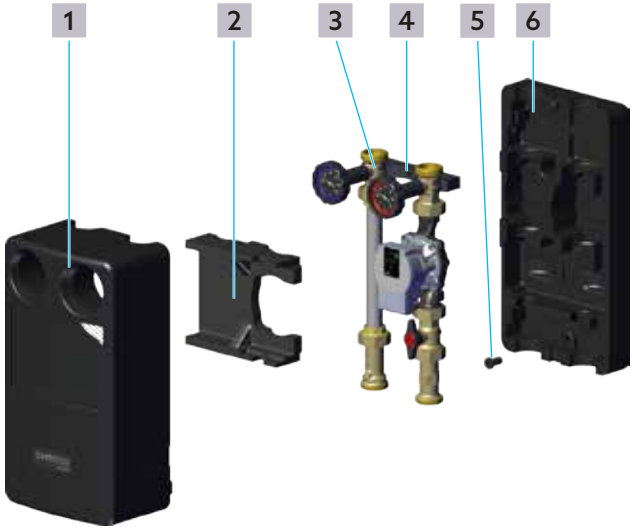

Fig. 1: Design of the station

1 Upper shell

2 Insertion block

3 Product assembly

4 Wall bracket

5 Spacer for wall mounting

6 Lower shell

3.1.2 Design of the product assembly

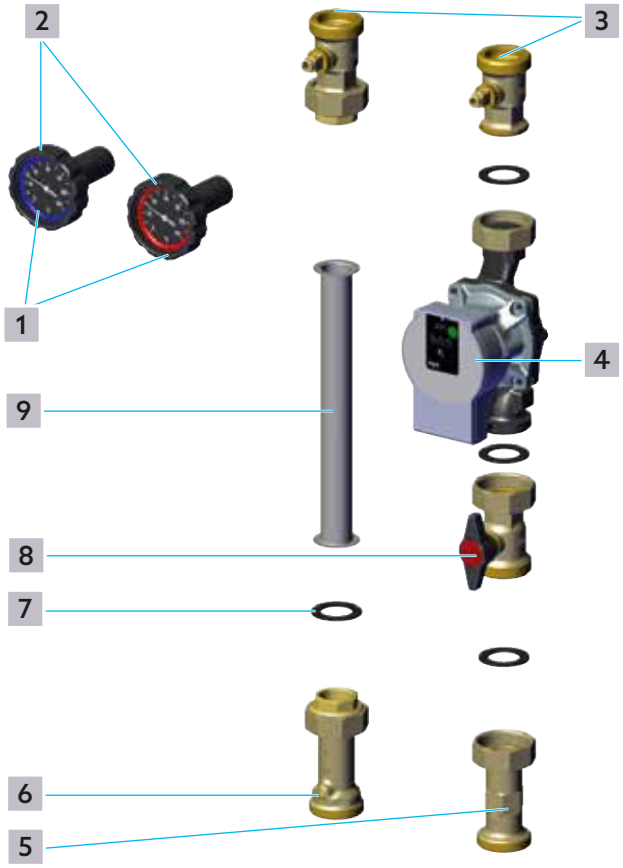

Fig. 2: Design of the product assembly

1 Thermometer, flow and return temperature display

2 Rotary handle for shutoff ball valve

3 Shutoff ball valve

4 High-efficiency pump (depending on version)

5 Spacer (depending on version)

6 Housing with check valve

7 Sealing ring

8 Pump ball valve with handle (depending on version)

9 Flanged pipe

3.2 Functional description

The heating circuit station is optionally available with or without a pump.

In the version without a pump, the individual components are delivered loosely screwed together.

The connections are to be retightened after the pump has been installed.

The supply is arranged on the right-hand side at the factory for the nominal sizes DN 20, DN 25 and DN 32, and on the left-hand side for the nominal sizes DN 40 and DN 50. However, the supply and the return pipe can be swapped on site (see section 6.2 on page 10).

The Regumat S enables the heating circuit to be shut off.

It consists of a shutoff device with thermometers integrated in the handles. The check valve in the return pipe prevents incorrect circulation.

3.2.1 Check valve

The Regumat S is equipped with a check valve so that when closed, the medium can only flow in the flow direction. The valve is not tight-closing. The check valve can be opened for commissioning and maintenance work (see Fig. 4 on page 6).

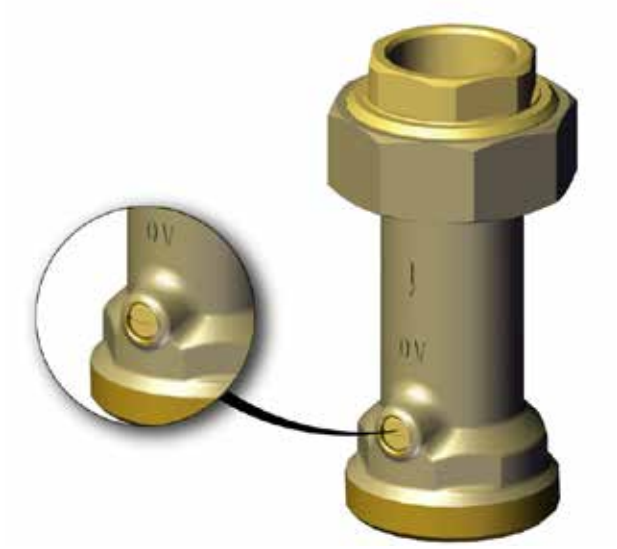

Fig. 3: Check valve closed (operating position)

Fig. 4: Check valve open (filling, maintenance)

3.3 Technical data

3.3.1 Parameters

General information	
Nominal size	DN 20 DN 25 DN 32 DN 40 DN 50
Medium	Non-hazardous, non-aggressive liquids (e.g. water or suitable water-glycol mixtures according to VDI 2035 / ÖNORM 5195).
Max. operating pressure (Ps)	10 bar
Max. Operating temperature for standard pumps	110 °C
Max. Operating temperature for high-efficiency pumps with standard thermal insulation	85 °C
Max. Operating temperature for high-efficiency pumps with universal thermal insulation	95 °C
Opening pressure f	20 mbar
kvs value	7.4

Connections

	Nominal size (DN)				
	20	25	32	40	50
Heating circuit	G 1 external thread, flat sealing	G 1 ½ external thread, flat sealing	G 2 external thread, flat sealing	G 2 internal thread	G 2 internal thread
Heat generator	G 1 external thread, flat sealing	G 1 ½ external thread, flat sealing	G 2 external thread, flat sealing	G 2 external thread, flat sealing	G 2 external thread, flat sealing

Materials

Fittings	Brass
Seals	EPDM
Flanged pipe	Stainless steel / copper
Thermal insulation	EPP (expanded polypropylene)
Rotary handles	PA 6.6

Dimensions

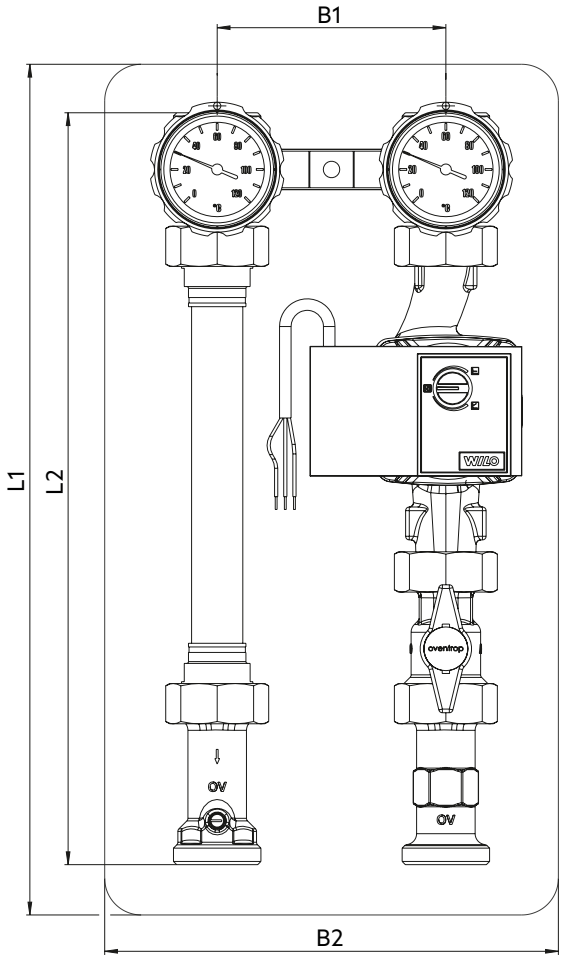

Fig. 5: Dimensions Regumat S

Nominal size	L1	L2	B1	B2
S-130 DN20	360	315	100	230
S-130 DN25	364	311	125	248
S-180 DN25	465	411	125	248
S-180 WMZ DN25	513	460	125	248
S-180 compact design DN25	393	339	125	248
S-180 DN32	530	445	125	350
S-180 plus DN32	626	540.5	125	428
S-220 DN40	850	797	180	428
S-280 DN50	850	797	180	428

4. Accessories and spare parts

You will find the current accessories and spare part list on our website.

5. Transport and storage

Parameters	Value
Temperature range	0 °C to +40 °C
Relative air humidity	Max. 95%
Particles	Store in a dry and dust-protected place
Mechanical influences	Protected from mechanical shock
Weather influences	Do not store outdoors
	Protect from sunlight
Chemical influences	Do not store together with aggressive media

6. Mounting

Before mounting the station, make sure:

- that pipes have been laid to the installation site and have been flushed and checked for leaks.
- that earthing cables have been laid to the installation site.
- that the station always remains freely accessible after mounting.

6.1 Wall mounting and piping

Depending on the design of the system, it may be necessary to swap the supply and return pipe.

▶ Follow the instructions for swapping the supply and return pipe in section 6.2 on page 10.

CAUTION

Risk of scalding due to hot media!
If the system was in operation, there is a risk of scalding due to unintentional escape of hot water or water vapour.

- ! Only carry out work when the system is depressurised.
- ! Allow the system to cool down before working on it.
- ! Check that the product is not leaking after work is complete.
- ! Wear safety goggles.

CAUTION

Risk of burns on hot components!
Touching hot components can cause burns.

- ! Allow the system to cool down.
- ! Wear safety gloves.

CAUTION

Risk of injury due to the heavy weight of the station!
The station is heavy. Falling down can cause injuries.

- ! Always wear safety shoes during mounting.

▶ Make sure that the system section is depressurised.

Mounting steps

Always mount the station upright, never inclined or lying down.

1. Remove the upper shell (position 1 in Fig. 1 on page 5).
2. Pull off the insertion block (position 2 in Fig. 1 on page 5).
3. Remove the product assembly (position 3 in Fig. 1 on page 5) from the lower shell (position 6 in Fig. 1 on page 5).
4. Hold the lower shell plumb against the wall to use it as a drilling template.

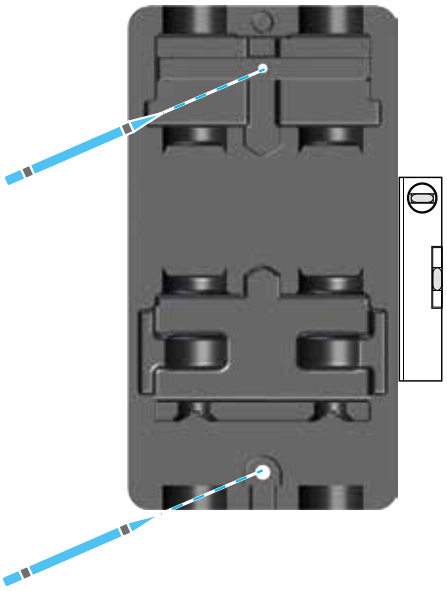

Fig. 6: Lower shell as drilling template

5. Mark two holes.
6. Drill two holes.
7. Insert the dowels supplied.
8. Hold the lower shell against the wall.

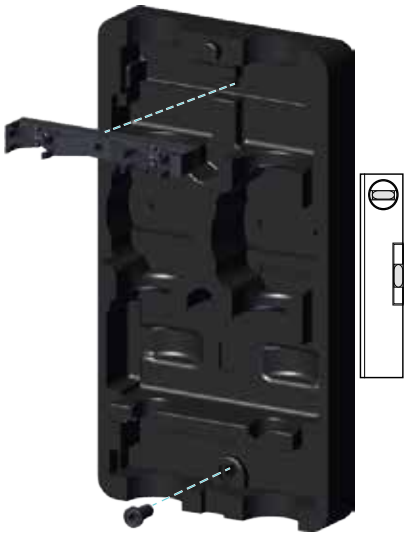

Fig. 7: Screwing on the lower shell

9. Insert the supplied spacer for wall mounting (position 5 in Fig. 1 on page 5) into the lower drill hole in the lower shell.
10. Attach the lower shell and the wall bracket to the wall using the hexagonal screws supplied.
11. Tighten the screws.
12. Optional: Mount the pump you have chosen to the product assembly.

- Mounting material for integrating the pump is included in the scope of delivery.
- The components are delivered loosely screwed together. Retighten all screw connections of the product assembly.
- Observe the torques specified in the technical data for the union nuts.
- Follow the operating instructions of the pump you are using.

13. Insert the product assembly into the lower shell. The product assembly must lock into the wall bracket.
14. Insert the insertion block.

▷ The station is prepared for piping and further connections.

15 Carry out piping of the station.

- All connections are designed with external threads and are flat sealing.
- Observe the torques specified in the technical data for the union nuts.
- Use the seals included in the scope of delivery.

NOTICE

Malfunction of the heating circuit station due to piping under tension!
If the piping is under tension, this can lead to malfunctions.

! Always connect the pipes to the Regumat free of tension.

Fig. 8: Piping DN 20, DN 25, DN 32

Fig. 9: Piping DN 40, DN 50

1 Heating circuit return
2 Heating circuit supply
3 Primary supply
4 Primary return

16 Place the upper shell on the Regumat.

6.2 Optional: Swapping the supply and return pipe

When delivered, the supply pipe is either on the right-hand or left-hand side.

Depending on the design of the heating system, it may be necessary to swap the supply and return pipe.

1 Loosen the connections.

2 Swap the supply and return pipe.

3 Screw the connections tight.

6.3 Protective equipotential bonding/Earthing

WARNING

Danger to life due to electric current !
There is a danger to life if live components are touched.

- ! Disconnect the product from the power supply at all poles.
- ! Check that no voltage is present.
- ! Secure the product against being switched on again.
- ! Only install the product in dry indoor areas.

Protective equipotential bonding establishes a connection with good electrical conductivity between conductive bodies of electrical equipment and the main equipotential bonding bar (main earthing bar) of the building. (According to DIN VDE 0100, bodies are touchable conductive parts which, in contrast to the "active parts" of the equipment, can only be live as a result of a fault.)

This measure serves to protect against electric shock and is standardised in IEC 60364-4-41:2005 and DIN VDE 0100-410:2007-06.

The technical design for equipotential bonding is standardised in IEC 60364-5-54:2011 and DIN VDE 0100-540:2012-06.

▶ Use a copper equipotential bonding conductor with a cross-section of at least 6 mm².

Since the circulation pump cannot be considered electrically conductive, it is necessary to connect the piping upstream and downstream of the pump to the equipotential bonding bar. This can be done outside and inside the station.

1 Fit suitable earthing clamps to the station piping.

Earthing clamps are available as accessories (see section 4 on page 8).

2 Connect the earthing clamps to a suitable equipotential bonding bar in the building using a copper equipotential bonding conductor with a cross-section of at least 6 mm²

6.4 Connecting the pump

- The pump is controlled by your system.
- Follow the operating instructions enclosed with your pump.

▶ Connect the pump to the heating circuit control of your system.

7. Commissioning

7.1 Filling and venting the station

CAUTION

Risk of scalding due to hot media!
If the system was in operation, there is a risk of scalding due to unintentional escape of hot water or water vapour.

- ! Allow the system to cool down.
- ! Wear safety goggles.

CAUTION

Risk of burns on hot components!
Touching hot components can cause burns.

- ! Wear safety gloves.

NOTICE

Risk of damage due to pressure surge!
The abrupt filling of the station can lead to damage, e.g. to the sealing points.

- ! Always open and close ball valves slowly.

▶ Open the pump ball valve (position 8 in Fig. 2 on page 5).

▶ Open the shutoff ball valves (Position 3 in Fig. 2 on page 5).

▶ Open the check valve (see Fig. 4 on page 6).

▶ Fill the system.

▶ Vent the system.

▶ Close the check valve.

▶ Check all connections to the outside to the pipework and inside the station for moisture. If necessary, retighten screw connections.

8. Maintenance

CAUTION

Risk of scalding due to hot media!
If the system was in operation, there is a risk of scalding due to unintentional escape of hot water or water vapour.

- ! Allow the system to cool down.
- ! Wear safety goggles.

CAUTION

Risk of burns on hot components!
Touching hot components can cause burns.

- ! Wear safety gloves.

NOTICE

Risk of damage due to pressure surge!
The abrupt filling of the station can lead to damage, e.g. to the sealing points.

- ! Always open and close ball valves slowly.

The German Building Energy Act stipulates that components that have a significant influence on the efficiency of heating, cooling, ventilation and hot water supply systems and equipment must be regularly serviced and maintained by the operator.

The following maintenance steps must be carried out regularly on Regumat heating circuit stations at the beginning of each heating period:

8.1.1 Leakage check (visual inspection)

- ▶ Check all connections to the outside to the pipework and inside the station for moisture. If necessary, retighten screw connections or replace defective seals.

8.1.2 Operating the shutoff ball valves

NOTICE

Risk of damage due to pressure surge!
The abrupt injection of water into the station can lead to damage, e.g. to the sensors or sealing points.

- ! Always open and close ball valves slowly.

- ▶ Operate the shutoff ball valves in the course of maintenance.
- ▷ This loosens deposits and keeps the fittings operable.

8.1.3 Electronic components and plug connections

- ▶ Check the cable plug connections of all electrical components for firm seating and integrity.

9. Notes for the operator

- ▶ Have the specialist tradespeople instruct you in the safe and intended use of the station and the necessary maintenance work!
- ▶ Carry out a visual inspection at least once a month. Pay attention to whether moisture is escaping. If water is leaking, inform the responsible specialist tradespeople.
- ▶ Check the trouble-free operation of the station at least once a month.

10. Dismantling and disposal

When the product reaches the end of its service life or has an irreparable defect, it must be dismantled and disposed of in an environmentally friendly manner or the components must be recycled.

10.1 Disconnecting the station from the power supply

WARNING

Danger to life due to electric current !
There is a danger to life if live components are touched.

- ! Disconnect the product from the power supply at all poles.
- ! Check that no voltage is present.
- ! Secure the product against being switched on again.
- ! Only install the product in dry indoor areas.

- ▶ Disconnect the station permanently from the power supply.
- ▷ The station is de-energised and can be dismantled.

10.2 Dismantling the station

CAUTION

Risk of injury from pressurised components!
Media escaping under pressure can cause injuries.

- ! Only carry out work when the system is depressurised.
- ! Wear safety goggles.

CAUTION

Risk of burns on hot components!
Touching hot components can cause burns.

- ! Allow the system to cool down.
- ! Wear safety gloves.

- ▶ Dismantle the station.

10.3 Disposal

NOTICE

Risk of environmental pollution!
Incorrect disposal can lead to environmental damage.

- ! Dispose of packaging materials in an environmentally friendly manner.
- ! If possible, recycle the components.
- ! Dispose of non-recyclable components according to local regulations.

Directive 2012/19/EU WEEE:

- The "crossed-out wheeled bin" symbolises that you are legally obliged to dispose of old appliances separately from unsorted municipal waste. Incorrect disposal can lead to environmental damage.
- Remove used batteries and accumulators not enclosed in the old appliance as well as lamps from the old appliance without destroying them and dispose of them separately.
- You can hand in your old appliance free of charge within the framework of possibilities provided by the public waste disposal authorities.
- Distributors with a sales area for electrical and electronic equipment of at least 400 square meters are obliged to take back your old appliance free of charge when you buy a similar new appliance (1:1 take-back). You can also return all old appliances to distributors free of charge if the external dimensions do not exceed 25 centimetres and the return is limited to three old appliances per type of appliance.
- Delete your personal data stored on the old device to be disposed of, if any, on your own responsibility.

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oventrop
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