

Regumaq X-80 Potable water circulation set

Operating instructions

EN



Regumaq X-80 Potable water circulation set

Contents

	Page
1. General information	3
1.1 Validity of the instruction	3
1.2 Scope of delivery	3
1.3 Contact	3
1.4 Symbols used	3
2. Safety-related information	3
2.1 Intended use	3
2.2 Warnings	3
2.3 Safety instructions	4
2.3.1 Danger due to insufficient personnel qualification	4
2.3.2 Risk of scalding due to unintentionally escaping hot media	4
2.3.3 Risk of burns on hot components and surfaces	4
2.3.4 Risk of injury due to the weight of the product	4
2.3.5 Risk of injury from improper work	4
2.3.6 Damage to property due to unsuitable location	4
2.3.7 Availability of the operating instructions	4
3. Technical description	5
3.1 Design	5
3.2 Functional description	5
3.3 System examples	5
3.3.1 Pump and ball valve in close proximity to the fresh water station	5
3.3.2 Alternative placement of the high-efficiency pump and ball valve	6
3.4 Technical data	6
3.5 Dimensions of the pipe elbow	6
4. Transport and storage	7
5. Installation	7
5.1 Required tools	7
5.2 Mounting of the pipe elbow	7
5.3 Mounting of the high-efficiency pump and ball valve	7
5.3.1 Installation according to system example	7
5.3.2 Installation of the pump in a different position	7
5.3.3 Mounting of the ball valve	7
5.4 Electrical connection of the high-efficiency pump	8
6. Commissioning	8
6.1 Configuration of the circulation function	8
6.2 Filling of the circulation pipe	8
7. Maintenance	9
8. Troubleshooting	9
9. Disposal	9

Regumaq X-80 Potable water circulation set

General information

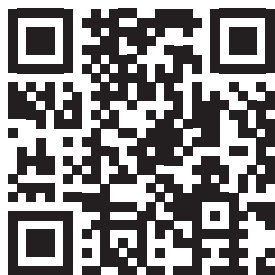
1. General information

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

Applicable documents

Consult the following supplementary instructions:

- Regumaq X-80



www.oventrop.com/qr/1381580

- The instructions for the high-efficiency pump you have selected

1.1 Validity of the instruction

These instructions are valid for the potable water circulation set for extending the Regumaq X-80 fresh water station.

1.2 Scope of delivery

- Potable water circulation set
- Sealing rings
- Safety and installation advice

1.3 Contact

OVENTROP GmbH & Co. KG
Paul-Oventrop-Straße 1
59939 Olsberg
GERMANY
www.oventrop.com

Technical service

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

1.4 Symbols used

	Highlights important information and further additions.
	Action required
	List
	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 Regumaq X-80 potable water circulation set is used to connect circulation pipes for the supply of hot potable water to the Oventrop Regumaq X-80 fresh water stations.

Any use beyond and/or different from this 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.

Regumaq X-80 Potable water circulation set

Safety-related information

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 due to insufficient personnel qualification

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.

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

Operator

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

2.3.2 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.

2.3.3 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 plant components.

2.3.4 Risk of injury due to the weight of the product

- ! Always wear safety shoes during installation.

2.3.5 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.

2.3.6 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.

2.3.7 Availability of the operating instructions

Every person who works with this product must have read and apply this manual 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.

Regumaq X-80 Potable water circulation set

Technical description

3. Technical description

3.1 Design

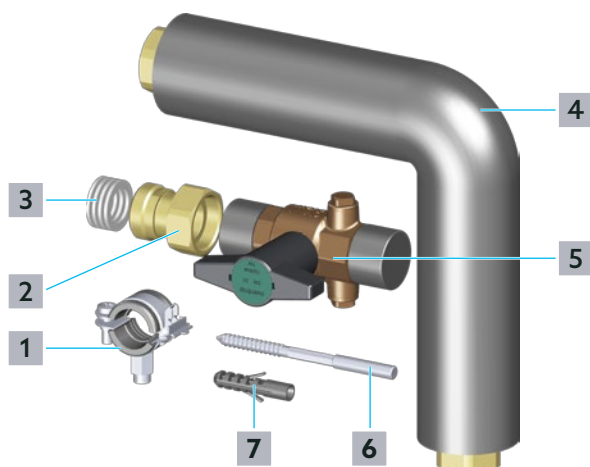


Fig. 1: Design

- 1 Pipe clamp
- 2 Check valve
- 3 Sealing rings
- 4 Pipe elbow with insulation
- 5 Ball valve
- 6 Hanger bolt
- 7 Dowel

3.2 Functional description

Without circulation installation, one pipe for hot potable water is led from the fresh water station to the draw-off points. Hot water is available at the draw-off points when the cold water in the pipe has drained off.

The use of circulation systems avoids this delay.

The Oventrop circulation set adds a circulation function to the Regumaq X-80 fresh water station. One pipe leads from the fresh water station to the draw-off point and a parallel pipe leads back.

The high-efficiency pump (available separately) moves the hot potable water in the circulation circuit. This means that hot water of the desired temperature is always available at the draw-off points.

3.3 System examples

3.3.1 Pump and ball valve in close proximity to the fresh water station

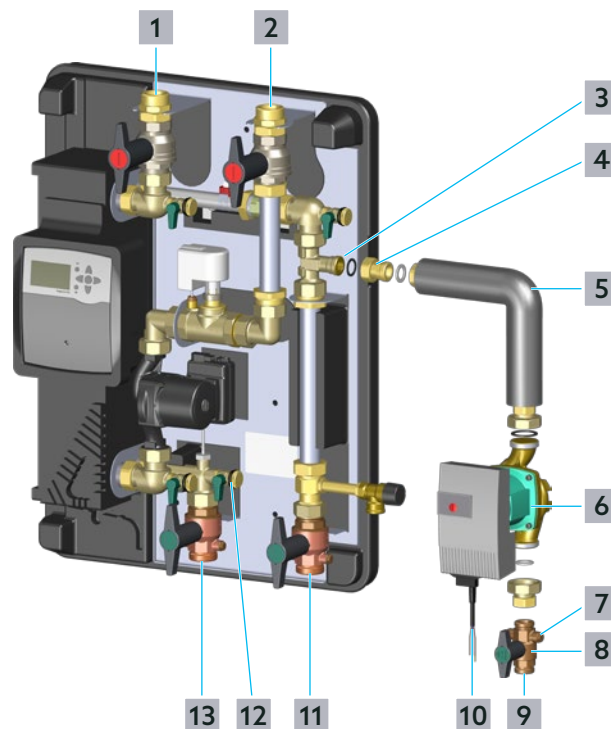


Fig. 2: System example

- 1 Storage cylinder circuit return
- 2 Storage cylinder circuit supply
- 3 Connection for circulation set
- 4 Check valve
- 5 Pipe elbow with insulation
- 6 Regumaq X-80 potable water circulation set
- 7 Lateral connection for ball valve
- 8 Ball valve
- 9 Hot potable water circulation return
- 10 Electrical connection for high-efficiency pump
- 11 Cold potable water supply
- 12 Fill and drain ball valve for hot potable water
- 13 Hot potable water return

Regumaq X-80 Potable water circulation set

Technical description

3.3.2 Alternative placement of the high-efficiency pump and ball valve

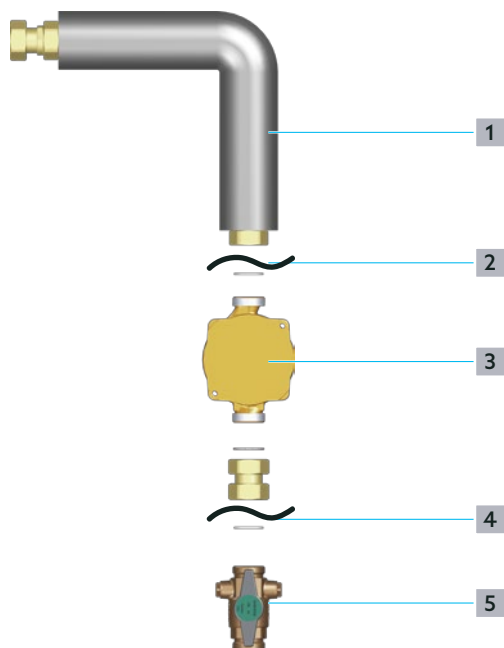


Fig. 3: Alternative constellation 1

- 1 Pipe elbow with insulation
- 2 Piping
- 3 High-efficiency pump
- 4 Piping
- 5 Ball valve

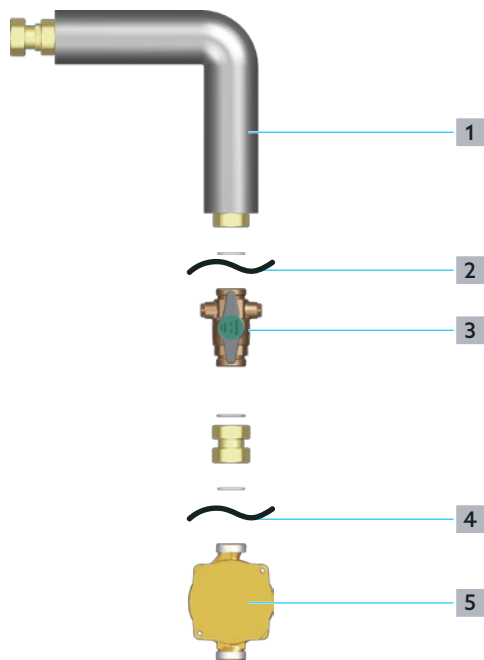


Fig. 4: Alternative constellation 2

- 1 Pipe elbow with insulation

- 2 Piping
- 3 High-efficiency pump
- 4 Piping
- 5 Ball valve

3.4 Technical data

General information	
Operating pressure (p_s)	Max. 10 bar
Operating temperature (t_s)	Max. 95 °C
Connections	
Circulation	G 1 external thread, flat sealing
Potable water circuit	
Fluid	Potable water
Material	
Pipe group	Brass / dezincification resistant brass
Check valve	Plastic
Ball valve	Brass
Seals	Fibre material, EPDM
Thermal insulation	Expanded polypropylene
Torques	
Union nuts G 1	25 Nm

3.5 Dimensions of the pipe elbow

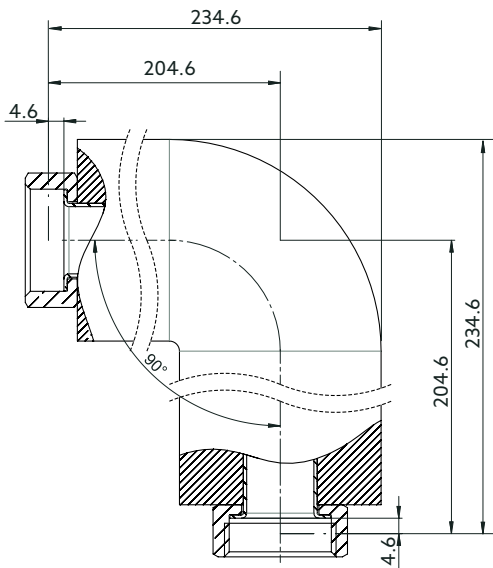


Fig. 5: Dimensions of the pipe elbow

Regumaq X-80 Potable water circulation set

Transport and storage

4. Transport and storage

Temperature range	0 °C to +40 °C
Relative air humidity	Max. 95 % non-condensing
Particles	Store in a dry and dust-protected place
Mechanical influences	Protected from mechanical shock
Radiation	Protected from UV rays and direct sunlight
Chemical influences	Do not store together with solvents, chemicals, acids, fuels or similar substances

5. Installation



Please also consult the operating instructions for your fresh water station and the instructions for the high-efficiency pump you have selected!

5.1 Required tools

- 37 mm spanner

5.2 Mounting of the pipe elbow

CAUTION

Risk of scalding due to hot media

If the station has been in operation, there is a risk of scalding due to unintentional escape of hot water or water steam.

- ! 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 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.



Observe the torques specified in the technical data.

- 1 Disconnect the controller from the power supply at all poles.
- 2 Slowly close the shutoff ball valve in the cold potable water supply (position **11** in Fig. 2 on page 5).

- 3 Slowly close the shutoff ball valve in the hot potable water return (position **13** in Fig. 2 on page 5).
- 4 Unscrew the cap of the fill and drain ball valve for hot potable water (position **12** in Fig. 2 on page 5) and connect a drain hose.
- 5 Drain the potable water circuit of the fresh water station.
- 6 Unscrew the cap from the connection for the circulation set (position **3** in Fig. 2 on page 5).
- 7 Mount the check valve (position **4** in Fig. 2 on page 5) with the associated sealing ring to the station.
- 8 Mount the pipe elbow (position **5** in Fig. 2 on page 5) with the associated sealing ring onto the check valve.
- 9 Fix the pipe elbow with the pipe clamp (positions **1, 6** and **7** in Fig. 1 on page 5) included in the scope of delivery.

5.3 Mounting of the high-efficiency pump and ball valve



You can install the high-efficiency pump (accessory) and the ball valve (position **8** in Fig. 2 on page 5) as required between the last draw-off point and the fresh water station in the "hot potable water circulation return".

5.3.1 Installation according to system example

- ▶ If you want to set up your system according to the system example in Fig. 2 on page 5, screw the high-efficiency pump you have selected to the pipe elbow. Observe the instructions in the documents enclosed with the pump.

5.3.2 Installation of the pump in a different position

- ▶ Mount an appropriate pipe connection between the pipe elbow and the high-efficiency pump.

5.3.3 Mounting of the ball valve

- ▶ Mount the ball valve (position **8** in Fig. 2 on page 5) at any position between the last draw-off point and the pipe elbow.

Regumaq X-80 Potable water circulation set

Commissioning

5.4 Electrical connection of the high-efficiency pump



For details on connecting the high-efficiency pump, consult the instructions for the product you have selected.



The power supply may only be established by a qualified electrician.

WARNING

Death or serious bodily injury due to electric shock!

Since the fresh water station is supplied with voltage via an earthing contact plug, N and L can be interchanged by the position of the plug in the socket. It is therefore not ensured that the power supply for the high-efficiency pump from the controller always has the same polarity. In particular, it is possible that voltage (L) is applied to the neutral conductor (N) marked in blue.

- ! Establish a fixed cable connection between the high-efficiency pump and the controller!

NOTICE

Overload and damage to the controller!

If a high-efficiency pump is connected to the controller whose rated current exceeds the controller's load limit (1 A) during operation, the controller may be damaged. (Example: Wilo-Stratos PARA Z 25/1-12 RK 180)

- ! Use the Oventrop installation relay (item no. 1152089) between the controller and the high-efficiency pump.

6. Commissioning

6.1 Configuration of the circulation function

- Configure the circulation function according to the specifications in the operating instructions for your fresh water station.

6.2 Filling of the circulation pipe

- 1 Open the ball valve (position **8** in Fig. 2 on page 5).
 - 2 Proceed as described in the instructions for filling the potable water circuit in the operating instructions for your fresh water station.
 - 3 Check all components and screw connections for leaks.
 - 4 Tighten any screw connections that are too loose.
 - 5 Establish the power supply of the fresh water station.
 - 6 Close the fresh water station with the upper shell.
- The fresh water station is ready for operation.

7. Maintenance

Functional check of the check valve

- 

The check valve prevents the potable water from flowing back against the direction of circulation.
- 

According to DIN EN 806, the backflow preventer must be tested for function once a year.

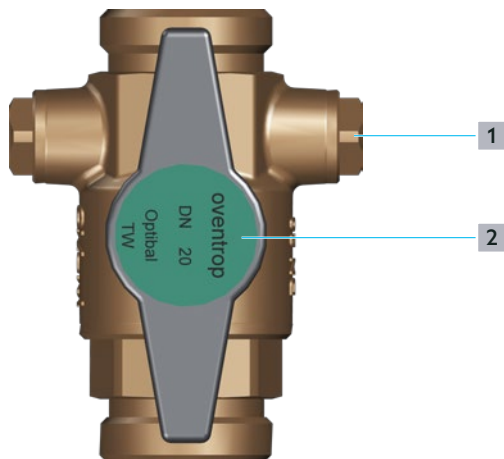


Fig. 6: Ball valve

- 1

Lateral connection of the ball valve
- 2

Rotary handle
- 1

Close the ball valve by turning the rotary handle (position 2 in Fig. 6 on page 9) by 90°.
- 2

Open the lateral connection of the ball valve (position 1 in Fig. 6 on page 9).
- 3

Check whether more medium escapes from the lateral connection of the ball valve than in the riser between the fresh water station and the ball valve.
- 4

If only a little medium escapes, the check valve (position 4 in Fig. 2 on page 5) is intact.
- 5

If medium escapes continuously and possibly under increased pressure, the check valve no longer closes correctly.
- 6

If the function of the check valve is disturbed, it must be cleaned and replaced if necessary. For the procedure, follow the instructions in par. 5 on page 7.
- 7

If the check valve is intact, close the lateral connection of the ball valve (position 1 in Fig. 6 on page 9).
- 8

Open the ball valve slowly by turning the rotary handle (position 2 in Fig. 6 on page 9) by 90°.
- ▶ The functional check of the check valve is complete.

8. Troubleshooting

MALFUNCTION	CAUSE	REMEDY
The high-efficiency pump does not run.	The power supply is interrupted.	Check the power supply.
	The high-efficiency pump has been switched off by the controller.	Check the settings of the controller.
The high-efficiency pump makes noise.	The high-efficiency pump runs dry.	Check the shutoff valves. The shutoff valves must be open.
	There is air in the high-efficiency pump.	Vent the circulation pipe.
The medium is not heated.	The check valve is defective.	Replace the check valve.

9. 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.

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.



oventrop

Wir regeln das. Seit 1851.

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