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General information

Thermostatic radiator valves control the room temperature by modifying the flow of hot water through the radiator. Often, there is only a minimum requirement for heat (especially in transition periods) and so the thermostats only open the valves a small amount. Consequently flow noises could occur due to high differential pressures. To prevent these noises, measures should be taken to influence the differential pressure; for example by using adjustable circulation pumps, manually adjustable bypass pipes, differential pressure regulators or differential pressure relief valves.

It is recommended to adjust the temperature of the supply pipe to the outside temperature, preferably by using a weather guided temperature controller.

For further information see technical data sheets “Thermostats” and “Thermostatic radiator valves”.

Valve installation

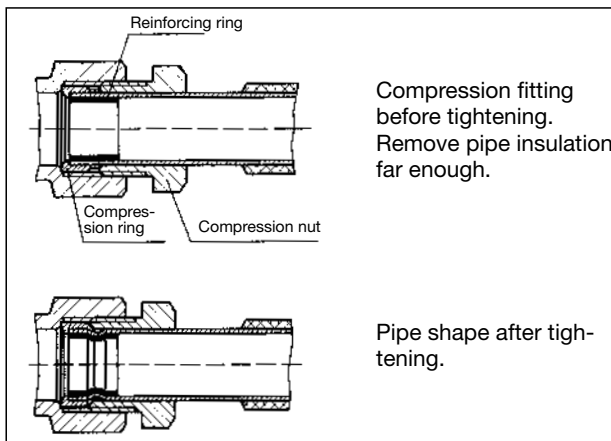
The radiator valve should be installed so that the thermostat is in a horizontal position and a good circulation of air is guaranteed. If this is not possible, a thermostat with remote sensor or with remote control should be used. It is most important that capillaries are not kinked or flattened.

The radiator valve is installed in the supply pipe to the radiator, with the flow in the direction of the arrow.

When using compression fittings, the thread of the fitting and the compression ring are slightly oiled at works. Do not use any additional lubricant! Do not allow the oil or lubricant to come into contact with the EPDM valve disc. EPDM is not oil resistant.

When using the compression fittings for thermostatic valves with female threaded connection (only possible for sizes DN 10, DN 15 and DN 20), the “Ofix” compression fittings are to be used in order to guarantee a perfect sealing function between the pipework and the thermostatic valve.

It is important that the pipes are cut to the correct length at a right angle to the centre line. The ends of the pipe must be free of burrs and undamaged.



When using thin walled and very soft pipes, reinforcing sleeves have to be used. The reinforcing sleeve supports the pipe and provides the strength to enable the necessary compression. Reinforcing sleeves cannot be used on pipe with welded seams. The recommendations of the pipe manufacturers have to be observed in any case. If necessary, a practical “test” has to be carried out.

The special fittings “Cofit S” may be used for the Oventrop composition pipe “Copipe”. The installation instructions supplied with the fittings must be observed.

All radiators and pipework must be flushed thoroughly to prevent any problems caused by welding beads and dirt.

When converting old heating systems, it is recommended that a plastic strainer should be fitted at the inlet port of all radiator valves.

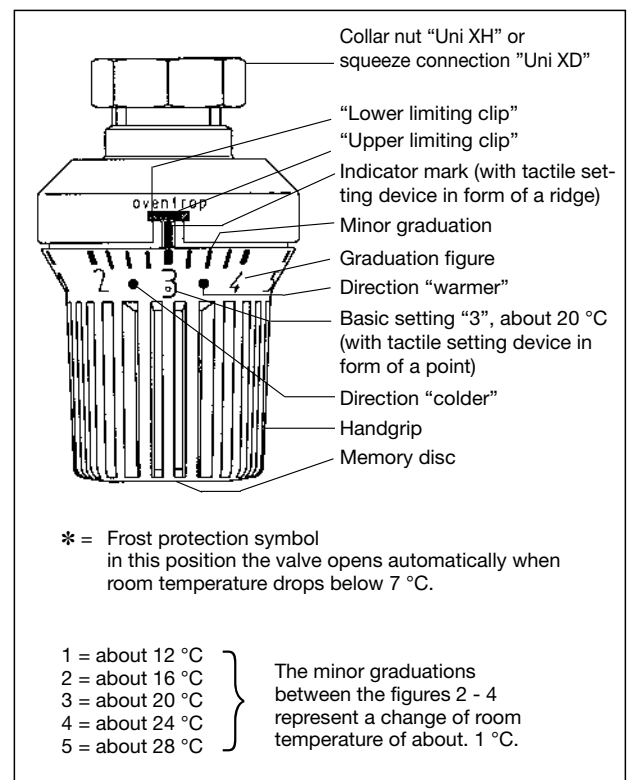
Do not fit the thermostat until all building work has been completed. During construction period, the valve can be operated with the screwed cap. The screwed cap is not to be used for permanent shut-off of the valve against system pressure (e.g. while radiator is removed). In this case protect the valve outlet with a metal cap.

Thermostat installation

To ensure an easy installation, the handgrip must be opened to the maximum position (figure “5”). In this position, the collar nut (“Uni XH”) or the squeeze connection (“Uni XD”) of the thermostat may be easily fitted to the valve body.

Turn the thermostat so that the indicator mark is facing up. Hold in this position and tighten collar nut without using excessive force.

Figures and symbols on the thermostat



Temperature setting

Setting of your required temperature

Turn the handgrip of the thermostat until the corresponding graduation figure or a graduation line is in line with the indicator mark. The control ranges from graduation figure "0" past the frost protection symbol "*" to graduation figure "5".

The minor graduations between the figures "2" and "4" correspond to a room temperature modification of 1°C.

	Examples:
5 — about 28°C	Swimming pool (for reasons of energy saving, the control range between "4" and "5" should be avoided)
4 — about 24°C	Bathroom
3 — about 20°C	Living room, dining room Basic setting Children's room
2 — about 16°C	Entrance hall, hallway Hobby room, bedroom
1 — about 12°C	Cellar
* — about 7°C	Frost protection
0 —	Isolation of the radiator

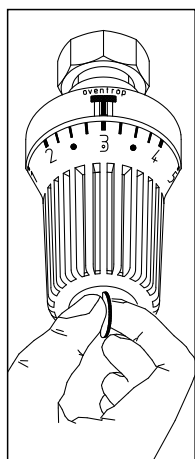
The indicated temperatures can only be achieved if the complete heating system has been designed correctly.

Temperature setback

The room temperature should be set back during the night or a longer absence in order to save energy. The thermostat has to be set to a lower value, e.g. from figure "3" to figure "2". The temperature should also be set back if rooms are not occupied for several hours.

Marking of a setting

The Oventrop thermostat features a memo disk which allows restoring the set temperature after having turned the handgrip.



Turn the memo disk with the help of a coin or similar until the required temperature points to the notch on the memo disk.

The notch, temperature setting and indicator mark should be in line.

Having turned the handgrip, the set temperature can be restored as follows:

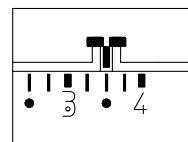
Turn the handgrip until the notch on the memo disk and the indicator mark are in line again.

Limiting the control range

The thermostat is equipped with two limiting clips for individually setting your comfort temperature. The thermostat can be limited on any graduation line, graduation figure or the frost protection symbol.

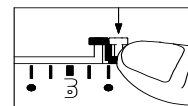
Example: The control range shall be limited between about 16°C (figure "2") and about 22°C (figure "3" plus 2 graduation lines).

To limit the upper temperature range, turn the thermostat until the required max. room temperature, e.g. figure "3" plus 2 graduation lines (about 22°C) points to the indicator mark - illustr. 1. Now pull the right limiting clip out of the parking position and push into the limiting position - illustr. 2 (twist thermostat slightly if required).



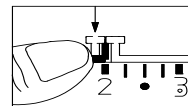
illustr. 1

To limit the lower temperature range, turn the thermostat until the required min. temperature, e.g. figure "2" (about 16°C) is in line with the indicator mark. Now pull the left limiting clip out of the parking position and push into the limiting position - illustr. 3.



illustr. 2

The thermostat is now limited to the chosen temperature range.

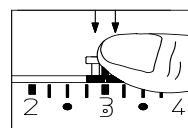


illustr. 3

The limitation can be cancelled by turning the handgrip to the corresponding temperature (opposite the indicator mark). The limiting clips are pulled back into the parking position.

Locking the temperature setting

If a setting shall be locked, e.g. "3" (about 20°C), to avoid tampering, this can be done by pulling both limiting clips (left and right clip) out of the parking position into the limiting position at the same time - illustr. 4.



illustr. 4

The locking can be cancelled at any time by pulling both limiting clips and placing back into the parking position. The thermostat can be locked on any graduation line, any graduation figure and the frost protection symbol.

Airing of the rooms

As the air is quickly used during the heating periods, the rooms should be ventilated by opening the windows widely for a short time.

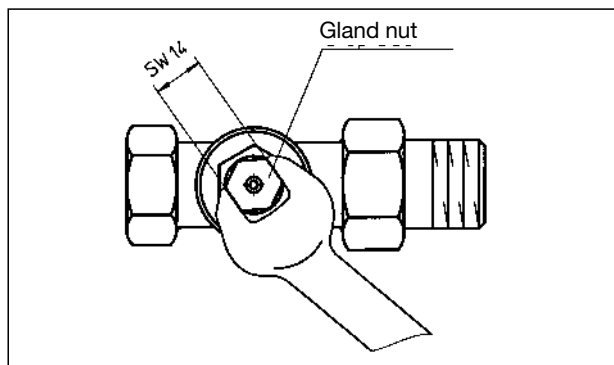
Before airing, turn the thermostat to the frost protection symbol "*". Once airing has been completed, turn the thermostat to the initial position. When using the limitation: Turn to the left until stop.

Cleaning

The thermostat must only be cleaned with mild detergents mixed with warm water. Scouring agents, solvents and aggressive detergents may damage the surface of the thermostat. The thermostat must not be cleaned in a dishwasher.

Replacement of the gland nut

Remove thermostat from the valve. Unscrew the gland nut with a 14 mm key. Water will not escape as the valve is provided with an additional seal. Screw on new gland nut (item no. 1017501) and tighten with the key. Replace the thermostat.



Note:

Not for valves "A (as from 2013), AV9, ADV9, CV9, RFV9, E, AQ, RFQ, EQ and RF (as from 2014)".

Disposal

To protect the sensor liquid from escaping, the thermostat must not be destroyed when disposed of. The thermostat contains hazardous waste! Dismounted/defective thermostats can be returned to the manufacturer Oventrop. They will be disposed of professionally.

Check list for faults

The desired room temperature is not reached or maintained

1. The flow temperature is set too low.
2. The circulation pump is not switched on.
3. The circulation pump or the flow temperature is controlled by a separate electric room thermostat.
4. The pump output is set too low.
5. The flow direction of the pump is reversed.
6. The heating pipe is throttled back or shut off.
7. With gravity fed heating systems, a circulation pump must be installed subsequently if necessary. Gravity systems are very sensitive to the presence of air in the system.
8. The radiator is covered by curtains, panelling etc. Use a thermostat with remote sensor.
9. Temperature at the thermostat differs widely from the ambient temperature due to poor siting. Use a thermostat with remote sensor.
10. The remote sensor is badly sited. The best height is about 1 m above the floor level.
11. The radiator selected is too small for the size of the room.
12. If the required temperature is only reached at a higher setting of the thermostat, recalibrate the thermostat (if desired).

The thermostatic radiator valve does not function

13. The thermostat is not screwed tightly onto the valve.
14. The capillary of the remote sensor or the remote control was kinked or flattened. Use a new thermostat and install carefully.
15. If a strainer is used, has it become blocked? Remove valve, flush pipe thoroughly, clean strainer and re-install.
16. Air is reducing circulation in the radiator. Vent the radiator.
17. Air is interfering with circulation in the heating system. Fit an automatic airvent in a suitable position.
18. The valve seat was distorted, e.g. as a result of improper assembly in vice. Fit a new valve.
19. The thermostat was readjusted due to unauthorised tampering. Recalibrate thermostat.

The valve cannot be shut off

20. In most cases this is due to dirt particles on the valve disc, e.g. welding beads or rust particles. These particles can often be removed by repeatedly working the valve stem. To do this, the thermostat must be removed first.

The valve insert must be replaced if the valve disc was damaged. The valve insert can be replaced without draining the system with the help of the "Demo-Bloc" tool specially developed for this purpose. If this is not successful, the valve insert must be removed after having drained the system and the residue has to be removed from the valve or the valve has to be replaced.

21. The frost protection responds. The crystal symbol * corresponds to a room temperature of about 7 °C. The valve will therefore open as soon as the temperature drops below this level, e.g. when ventilating the room.
22. The thermostat is defective and must be replaced. First test whether this is due to dirt or unauthorised tampering of the calibration. Screw on a new thermostat and send the old one back to the supplier for replacement. If still under guarantee, it will be repaired or replaced free of charge.

The valve leaks

23. The gland nut is loose. Tighten it.
24. The O-ring seal of the gland nut is damaged. Replace the gland nut. The system does not have to be drained to do this (see above).
25. The valve insert is loose. Tighten. If necessary, use a new insert (compare point 20).

The valve rattles

26. Supply and return pipe are reversed.

Flow noises occur

27. Can the pump head (differential pressure) be reduced?

Please contact the manufacturer in case of further questions.



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