Cetetherm MAXI
Operating instructions

General information

Cetetherm MAXI is a district heating substation designed to connect buildings to district heating networks.

The standard version of MAXI is used for primary connection (indirect connection) to the district heating or local heating network. Other variants of connections to different heat sources exists.

See the flowchart in the delivery documentation for detailed information about the equipment and how to connect it.

See the identification plate for technical data.

Operation

The main component is one or more Alfa Laval heat exchangers which separate the high temperature and high pressure district heating water from the secondary heating and hot water systems of the building.

These heat exchangers have peripheral equipment such as a control centre, control valves, pumps and valves, which together form a working district heating substation.

The heat exchangers have a high heat transfer capacity in order to make efficient use of the temperature of the district heating water. This results in economical heating.

MAXI has been developed with well-planned pipework and with all components easily accessible for inspection and servicing.

After installation and adjustment, MAXI operates completely automatically. Normally the temperature of the heating circuit is regulated in relation to the outside temperature, and the hot water temperature is regulated to provide the required constant temperature.

In hard water areas, if the water temperature goes too high, users should be aware of this and immediately have any faults put right,

- Otherwise the risk of lime scale deposits in the heat exchanger may increase.

Before cleaning the heat exchangers with any liquid, check that the liquid is not aggressively corrosive to any of the materials that it comes into contact with.

-Before returning the substation to use, flush the heat exchanger out so that all traces of the cleaning liquid are removed.

Safety equipment and inspection

- Every three months: check the safety valve and the pressure in the heating system.

– Daily inspection: check for leaks from pipes or components.

– Weekly: check that temperature regulation works without “hunting”. Temperature hunting wears valves, actuators and heat exchangers.

For instructions on preventing hunting, see the troubleshooting chart on the next page.

Note: During and after hot water draw-off, condensation may appear on cold water pipes.

To check the operation of the safety valve, turn its wheel/knob until water escapes from the waste pipe of the valve, then close the wheel/knob quickly.

To fill the heating system manually, open the filling valve. Be sure to close the valve when the correct pressure is reached. (This depends on the type of system and the building.)

Make sure that supplied or after- mounted safety equipment for temperature limitation works properly, is set correctly and have the right effect. This to avoid over temperatured water to reach building and persons.

Automatic filling/pressure-keeping should be checked to ensure that the correct pressure is maintained.

Hot service water contains a large amount of dissolved oxygen. Using this water to fill secondary heating circuits may lead to corrosion in the system. This type of system should be filled as infrequently as possible.

If a fault develops, contact a skilled service technician. For information about suitable service companies, contact the heating supplier.

Only authorised personnel may work on the system.

See important warnings on the next page.

Troubleshooting chart

Symptom	Cause	Action
Hot water not hot enough	Control valve not correctly set	Adjust
	Control valve or temperature regulator not working	Call a service technician
	District heating filter clogged	Call a service technician
Hot water too hot	Control valve set too high or not working	Adjust or call a service technician
Heating system temperature too high or too low	Automatic heating control may need adjusting	The internal heating curve of the control centre can be adjusted. See separate instructions
No heat from the heating system	Circulation pump not running	Check that the power is on and that the fuses are OK.
	Not enough water in the system	Top up the system
	Air pockets in the heat exchanger or in the heating circuit	Bleed off the air at the expansion vessel and in the heating circuit (the radiators)
Annoying noises in the radiator system	Pump capacity too high	Reduce the pump capacity by choosing a lower output setting on the pump, if available
Temperature “hunting” of hot water or heating, clicking noises in the heating system	Hot water or heating settings not correct	Adjust control parameters or call a service technician
	Heating or hot water flow too low	Increase the speed of the pump by choosing a higher output setting (if available) or adjust by opening the balancing valve
Heating system often needs topping up	The expansion vessel cannot handle the changes in volume.	Call service technician to check the volume take-up and pressure priming of the expansion vessel, or possible leakage
	Leakage	
Heating and hot water temperatures both too low	District heating filter clogged	Contact a service technician
	District heating water temperature too low	Contact the district heating supplier

See also the installation instructions.

Warning!

Parts of the MAXI may get very hot and should not be touched. Accessible hot surfaces and pipes must be insulated at the time of installation.
Children must not be left unattended in the area of the district heating substation.

The temperature and pressure of the district heating water are very high. Only a specialist appointed by the heating supplier may work on pipes or replace components.

Very hot water may escape when you open safety valves, drain cocks, filters and air bleed valves. Take care.

If the district heating centre is not operated properly, the high pressures and temperatures it contains may cause severe injury, as well as damaging the building.

To maintain the CE-marking status of the product, any replacement components fitted must be identical to those replaced.

Make sure that supplied or after- mounted safety equipment for temperature limitation works properly, is set correctly and have the right effect, to avoid over-temperatured water to reach and be a danger to building and persons.