



### General information

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

The standard version of MAXI Cooling is used for primary connection (indirect connection) to a district cooling network. Other variants of connections to different 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 heat exchangers which separate the high pressure district cooling water from the secondary 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 cooling substation.

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

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

After installation and adjustment, MAXI Cooling operates completely automatically. Normally the temperature of the secondary circuit is regulated towards a fix value. It can also be in relation to the outside temperature.

OBServe that the secondary setpoint should never be so close to the district cooling so that

control valves open 100% (Except if conditions are exactly like in design specs).

Scheduling of different setpoints can be efficient, if also surrounding equipment have the same settings and scheduling, like bypasses, ventilation circuits etc.

The goal is good indoor climate and comfort in a building. The District cooling substation + the complete secondary side equipment design, setting and function need to work together to achieve this.

### Cleaning of unit:

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

-Before returning the substation to use, flush the out all traces of the cleaning.

### Safety equipment and inspection

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

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

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

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

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 secondary 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 works properly, is set correctly and have the right effect.

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

Cold water contains a large amount of dissolved oxygen. Using this water to fill

secondary 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 your energy supplier.

Only authorised personnel may work on the system.

**See important warnings:.**

## Troubleshooting chart

Symptom	Cause	Action
Secondary system temperature too high or too low	Automatic control may need adjusting	The control centre can be adjusted. See separate instructions
Not enough cold coming from the 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 secondary circuit	Bleed off the air in high points in the secondary system
Annoying noise in the secondary system	Pump capacity too high	Reduce the pump capacity by choosing a lower output setting on the pump, if available
Temperature "hunting" of secondary system	Settings not correct	Adjust control parameters or call a service technician
	Secondary side flow too low	Increase the speed of the pump by choosing a higher output setting (if available) or adjust by opening a balancing valve
Secondary 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	
Secondary side temperature too high	District cooling filter clogged	Contact a service technician
	District cooling water temperature too high	Contact the district energy supplier

See also the installation instructions.

### Warning!



Children must not be left unattended in the area of the district cooling substation.



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



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 works properly, is set correctly and have the right effect, to avoid wrong-tempered water to reach the building.