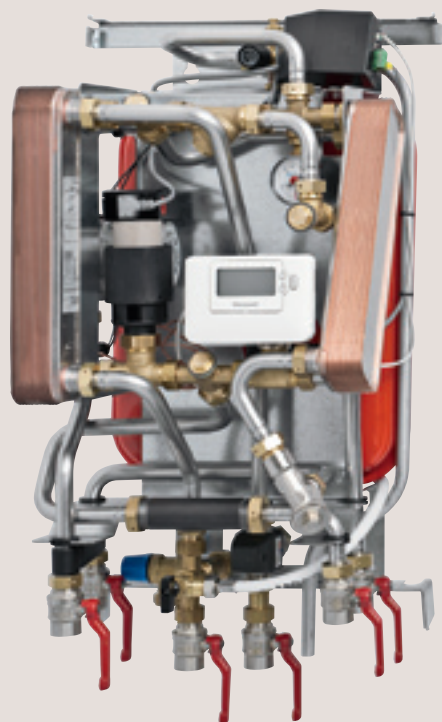




Cetetherm Mini City

Heating & domestic hot water substation for apartments and single family houses



The Cetetherm Mini City heating substation is ready for installation to meet the complete central heating and hot water requirements. It is suitable for apartments and single-family houses that are connected to a heating network. Alfa Laval has many years of experience in district heating technology, which is put to expert use in the Cetetherm Mini City, resulting in its practical function and ease of use. All components are easily accessible for inspection and future servicing when required.

High comfort

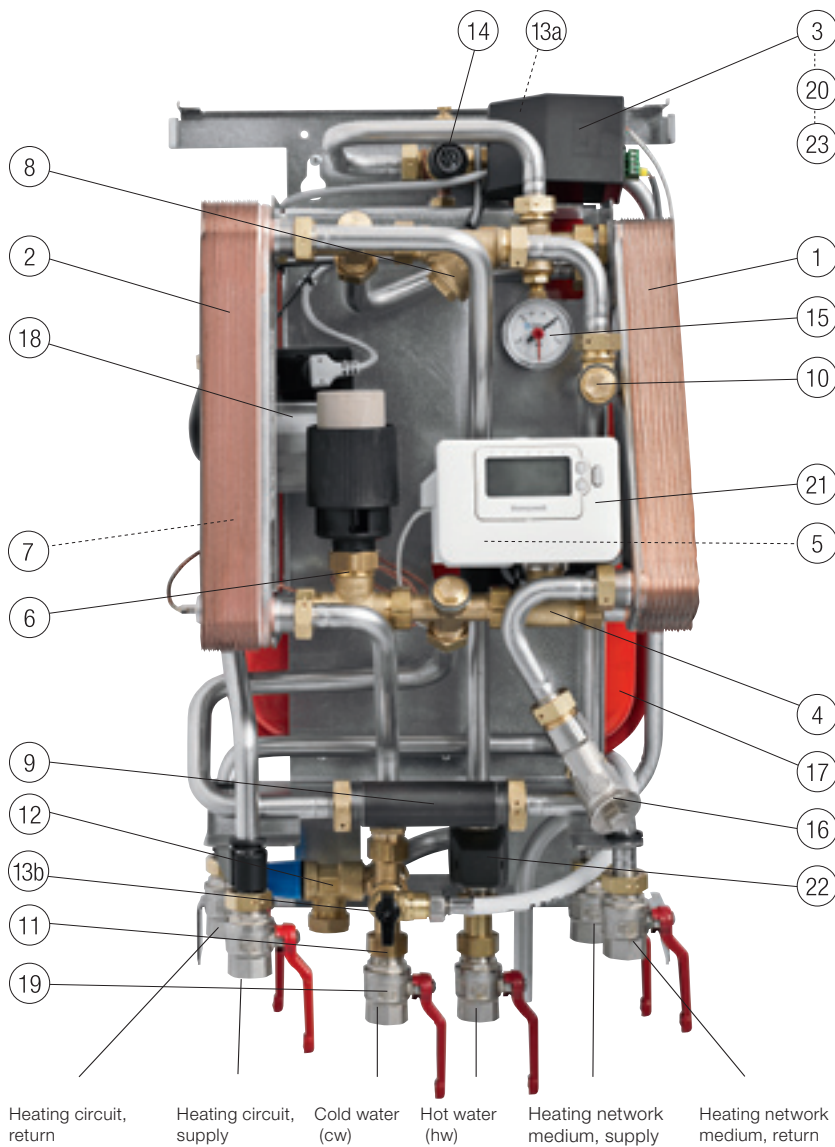
The Cetetherm Mini City has a fully automatic individual temperature setting for central heating and hot water. Heat is automatically regulated, depending on the temperature desired inside the dwelling. Domestic hot water is heated separately in a high-capacity heat exchanger; thus ensuring that the hot water is always as fresh as the incoming cold water mains supply.

Simple installation

Compact dimensions, light weight, well arranged plumbing and factory-complete internal wiring all make installation very simple. Moreover, the plumbing can be connected from the top or bottom depending on the layout on-site. A pre-programmed control unit and a power cable already fitted with a plug make things even simpler to allow immediate start-up.

Long-term security

The Cetetherm Mini City represents the most modern technology, and provides the answer to stringent requirements for long-term performance. The heat exchanger plates and all piping are manufactured in acid-resistant stainless steel. All components are closely matched and carefully tested for function in accordance with Alfa Laval's quality assurance system ISO 9001:2000. The Cetetherm Mini City is CE and P marked.



Components

1. Heat exchanger for heating
2. Heat exchanger and temp controller for hot water
3. Controller
4. Control valve for heating circuit
5. Actuator for heating circuit
6. Control valve for hot water
7. Temperature sensor, heat supply
8. Filter for heating network medium
9. Energy meter or adapter for energy meter
10. Temperature sensor connection, heating network medium supply
11. Check valve for cold water
12. Safety valve for domestic hot water
13. Valve to top up the heating circuit and hose with possibility to disconnect
14. Safety valve for heating circuit
15. Pressure gauge for heating circuit
16. Filter for heating circuit
17. Expansion vessel, heating circuit, 8 litre
18. Circulation pump for heating circuit
19. Shutoff valves
20. Outdoor temperature sensor (option)
21. Room thermostat/Control panel
22. Mix valve with connection to cold water (option)
23. Flowswitch (option)

Brass parts are hardened against dezincification. All connectors, DN20, internal threaded.

Heating network – a good source of heat

A heating network is an efficient technology that meets the need for central heating and hot water in a simple, convenient and secure way.

Operation

The incoming hot medium from the heating network is at very high pressure and temperature. Only the heat is used; the heating network medium does not mix with the water in the dwelling's heating and hot water system.

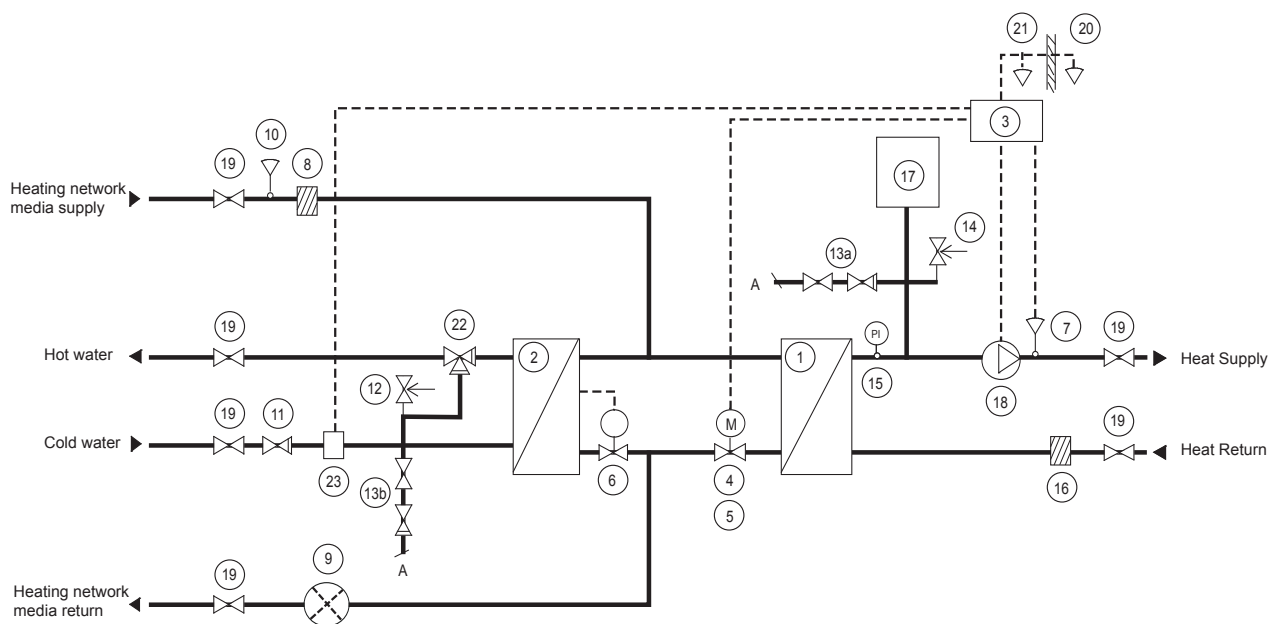
Heat exchangers are used to transfer heat from the heating network medium to the water in the dwelling's central heating and hot water system. Heat is transferred through a package of thin acid-resistant, stainless steel plates, which keep the heating network medium completely separate from the dwelling's own system.

Cetetherm Mini City has automatic temperature control for central heating and hot water. The heating circuit is adjusted in relation to the room temperature via a thermostatic control. When no heating flow is required, the heating circuit circulation pump stops automatically, but is run occasionally to prevent seizing up due to standing still for a long time.

A self-sensing temperature regulator controls the hot water temperature. This measures the temperature of the hot water in the heat exchanger and automatically adjusts the outgoing flow. This patented, in-house Alfa Laval design gives a constant hot water temperature irrespective of volume and pressure flow.

The energy supplier registers energy consumption. Measurement is done by recording the flow of heating network medium through the system, and by measuring the temperature difference between the medium's supply and return flow.

Diagrammatic flow chart for Cetetherm Mini City



For underfloor heating systems

Underfloor heating systems normally require a high-capacity circulation pump, preferably electronically controlled. An underfloor water flow greater than 0,25 l/s may require a special underfloor heating accessory. If combined with radiator circuits, the underfloor heating circuit must be separately controlled. The instructions of the underfloor heating supplier must also be checked.

An easily manageable, economical and durable source of heat

The Cetetherm Mini City uses the heating net work medium for heating the domestic hot water (providing an uninterrupted supply) as well as the water in the central heating system.

The Cetetherm Mini City is a wall-mounted unit and is very compact. Wherever the unit is located, it is quiet and discreet, requires no attendance or maintenance and has a very long operational life. In the event of requiring servicing or component exchange at some future date, all parts are easily accessible and individually replaceable.

Operating data

	Heating network	Heating circuit	Hot water circuit
Design pressure, MPa	1,6	0,6	1,0
Design temperature, °C	120	100	100
Relief valve opening pressure, MPa	–	0,25	0,9
Volume, l	0,2/0,5	0,2	0,5

Performance at available primary differential pressure 50-600 kPa

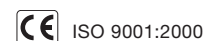
Designed temperature programme (°C)	Capacity (kW)	Primary flow (l/s)	Actual return temp. (°C)	Secondary flow (l/s)
Hot water circuit				
80-25/10-60	42	0,17	22	0,2
80-25/10-55	56	0,23	22	0,3
65-25/10-50	50	0,29	24	0,3
Heating circuit				
80-63/60-70	12	0,17	63	0,29
85-47/45-60	12	0,08	47	0,19
80-63/60-70	5	0,07	63	0,12
85-47/45-60	5	0,03	47	0,08

Other information

- Electrical data: 230 V, single phase, 30 W
- Dimensions: 422 mm wide x 330 mm deep x 721 mm high
- Dimensions: Substation 413 mm wide x 316 mm deep x 707 mm high
- Weight: 26 kg, casing 2 kg.
- Transport particulars: Total weight 32 kg, 0,2 m³.

Connections

Heating network supply	G 3/4
Heating network return	G 3/4
Heating supply	G 3/4
Heating return	G 3/4
Cold water	G 3/4
Hot Water	G 3/4



Cetetherm Mini City Options

Heating & domestic hot water substation for apartments and single family houses



Underfloor heating thermostat



Differential pressure control with mounting kit



Expansion vessel, domestic hot water



Domestic hot water limiter, safety thermostat



Outdoor temperature sensor



Tap water priority (not in combination with outdoor temperature sensor)



Adapter kit for 110 mm 3/4" flow meter



Thermometer kit

Shutoff valve with pressure point
Cold water distribution pipe and flow meter
Installation kit for upward connection, primary
Installation kit for upward connection, tap water
Installation kit for upward connection, heating

ECF00117EN 0804

Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details
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on our website at www.alfalaval.com