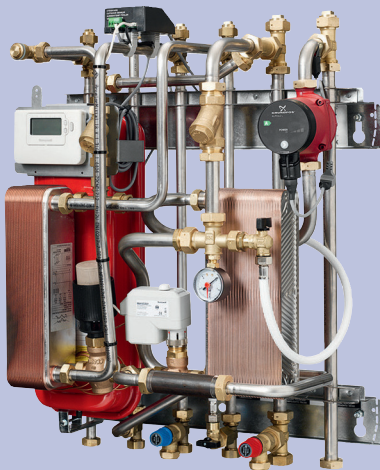




Mini XL

District heating substation for single and multi-family houses (1-8 dwellings)



The Mini XL district heating substation is ready for installation to meet the complete central heating and hot water requirements. It is suitable for single-family houses and multi-family buildings (1-8 dwellings) 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 Mini XL, resulting in its practical function and ease of use. All components are easily accessible for inspection and future servicing when required.

High comfort

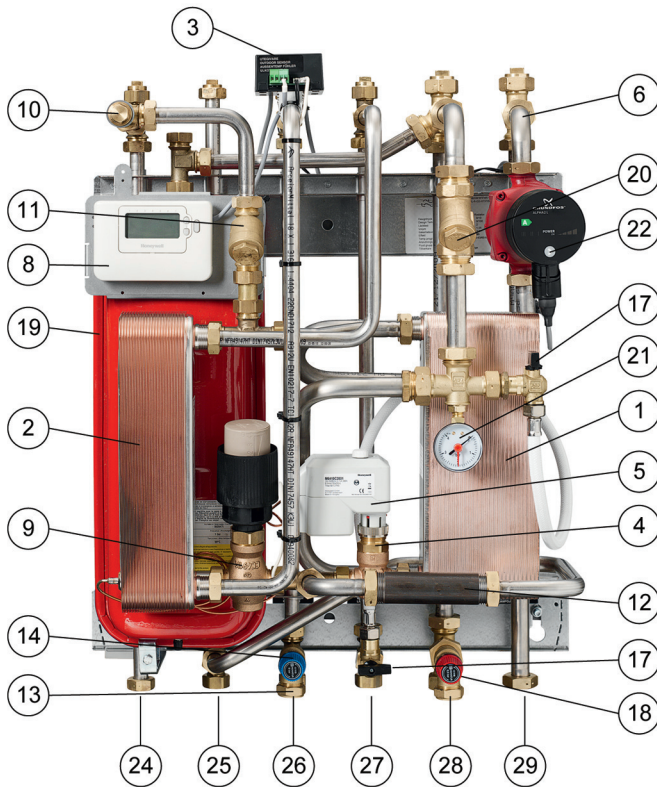
The Mini XL has a fully automatic individual temperature setting for central heating and hot water. Heat is automatically regulated, depending on outdoor temperature and/or the desired temperature inside the building. Domestic hot water is heated completely separately in a high-capacity heat exchanger;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

Simple installation

Compact dimensions, lightweight, well-planned pipe runs and factory-installed interior electrical routing all make installation very simple. In addition, the pipes can be connected up or down depending on the layout of the building. The preprogrammed control device and plug connection make life even simpler in that the system can be activated immediately.

Long-term security

The Mini XL represents the most modern technology, and provides the answer to stringent demands 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 9001:2008. The Mini XL is CE marked to certify that the substation conforms to international safety regulations.



Components

1. Heat exchanger for heating
2. Heat exchanger and temperature controller for hot water
3. Connection box for electric power and sensors, heating circuit
4. Control valve for heating circuit
5. Actuator, heating circuit
6. Supply temperature sensor, heating circuit
7. Outdoor temperature sensor
8. Room thermostat/control panel
9. Control valve for hot water
10. Temperature sensor connection, district heating supply
11. Filter for district heating supply
12. Adapter for energy meter
13. Non-return valve for cold water
14. Safety valve, domestic hot water
15. Safety valve, heating circuit
16. Safety temperature limiter, domestic hot water (option)
17. Valve to top up the heating circuit
18. Safety valve, heating circuit
19. Expansion vessel, heating circuit, 12 litres
20. Filter for heating circuit
21. Pressure gauge, heating circuit
22. Circulation pump, heating circuit
23. Shut-off valves (6 pcs)
24. District heating media, supply
25. District heating media, return
26. Cold water (cw)
27. Hot water (hw)
28. Heating circuit, return
29. Heating circuit, supply

Brass components are dezincification resistant quality. Connections for district heating and tap water DN20, internal threading. Connections for heating DN25, internal threading. The pipes can be connected up and/or down. Shut-off valves are included and come with the delivery.

District heating – an excellent heating method

District heating is an efficient technology that meets the need for central heating and hot water in a simple, convenient and secure way. The expansion of district heating to its current level has reduced the emission of greenhouse gases from heating by about 20%. The economics of district heating are very competitive compared with other forms of heating.

Operation

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

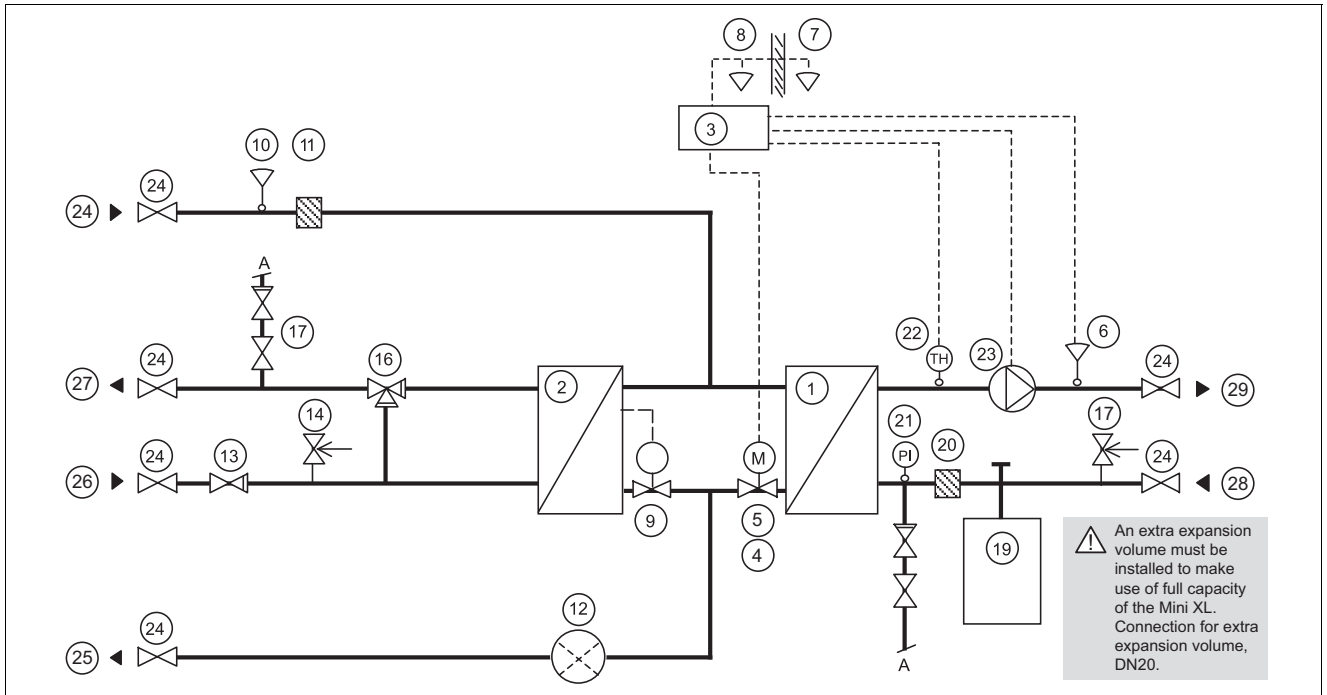
Heat exchangers are used to transfer heat from the district heating medium to the water in the dwelling's central heating and hot water system. Heat is transferred through a package of thin acid-resistant, stainless steel plates, which keep the district heating medium completely separate from the dwelling's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

Mini XL has automatic temperature control for central heating and hot water. The heating circuit is adjusted in relation to the outdoor temperature and the required indoor temperature via a thermostatic control, outdoor sensor and/or indoor sensor. When no heating flow is required, the heating circulation pump stops automatically, but is run occasionally to prevent seizing up due to standing still for a long time. H737 has an easy-touse interface and built-in energy-saving functions.

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 district heating utility company registers use of energy. Measurement is done by recording the flow of the district heating medium through the system, and by measuring the temperature difference between the medium's supply and return flow.

Diagrammatic flow chart for Mini XL



An easily manageable, economical and durable source of heat

The Mini XL uses the hot district heating medium for heating the domestic hot water (providing an uninterrupted supply) as well as the water in the central heating system. The Mini XL is a wall-hung unit and is very compact. Substations may generate sounds during operation caused by pumps, regulator

systems, flow, etc. The unit is discreet and to minimise the transmission of operational sounds, we recommend installing it on well-insulated walls or on walls of concrete. The Mini XL requires no attendance or maintenance and has a very long operational life. In the event of requiring service or component exchange at a later date, all parts are easily accessible and individually replaceable.

Operating data

	District heating medium	Heating circuit	Hot water circuit
Design pressure, MPa	1.6	0.6	1.0
Design temperature, °C	120	100	100
Opening pressure, safety valve, MPa	-	0.25	0.9
Volume, l	1.0/0.62	1.05	0.64

Performance at available primary differential pressure 100-600 kPa

Designed temperature programme (°C)	Capacity (kW)	Primary flow (l/s)	Actual return temp. (°C)	Secondary flow (l/s)
Hot water circuit				
80-22/10-55	113	0.47	22	0.60
70-25/10-58	70	0.37	25	0.35
65-22/10-50	75	0.45	22	0.42
Heating circuit				
115-65/60-80	67	0.30	63	0.80
100-63/60-80	41	0.26	63	0.49
100-43/40-60	67	0.28	43	0.80

Other information

Electrical data: 230 V, single phase, 100 W

Dimensions (cover): 577 mm width x 458 mm depth, 700 mm height

Weight: 33 kg, casing 5 kg

Transport particulars: Total weight 42 kg, 0.23 m³

Connections

Connections	Screws
District heating media supply	G ¾"
District heating media return	G ¾"
Heating circuit supply	G1"
Heating circuit return	G1"
Cold water	G ¾"
Hot water	G ¾"

How to contact Alfa Laval

Up-to-date AlfaLaval contact details for all countries are always available on our website on www.alfalaval.com