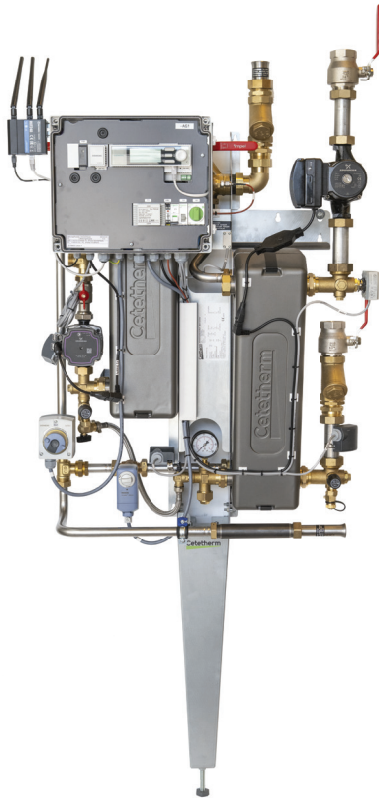




## Cetetherm Mini Select



### Standardized flexible district heating substation

Cetetherm Mini Select is a modern, complete district heating substation for maximum comfort and energy efficiency.

Standard solution are a modern control system and energy efficient pumps placed on supply line.

Cetetherm own controller Optimizer, is selectable.

Always stable, hygienic, and sufficient access to hot water.

Modularized and compact design.

Mini Select is a wall hung substation for heating and hotwater.

Each heat exchanger in Mini Select are dimensioned and tested according to the SS-EN 1148 standard, and according to current requirements in F101.

### APPLICATIONS

Mini Select heating unit fits many requirements, from multifamily houses to factories, and for both new installations and replacing old. Mini Select is designed from type of building and needs, temperatures and capacities in the heated building.

Mini Selects many modularized functions such as meter sections, controllers and other options can be chosen and added to fit the most needs.

Mini Select has one heat exchanger for heating and one for tap water  
Heating capacity is approx 20-110 kW depending on operating mode.

### CHARACTERISTICS

All components are standard stock components, which provides fast delivery time.

Mini Select is compact, flexible and parallel connected. It can be connected to all types of pipes in buildings and district heating network.

Mini Select is wall mounted with a wall rail, and a floor support.

### CONSTRUCTION

Our program WebSelct is used to calculate and configurate a Mini Select. Chosen basic functions together with engineering data and operating data are important information for the calculation.

### COMPONENTS.

All components and sizes are made after input as temperatures, effects, pressure, and other needs. Cetetherm uses only well-known brands and components of highest quality in Mini Select. All pipes has been designed by Cetetherm to ensure quality and function.

Mini Select is equipped with electronic controlled pumps to be able to optimise the energy use.

Mini Select can have control units and pump controllers of different brands and complexity.

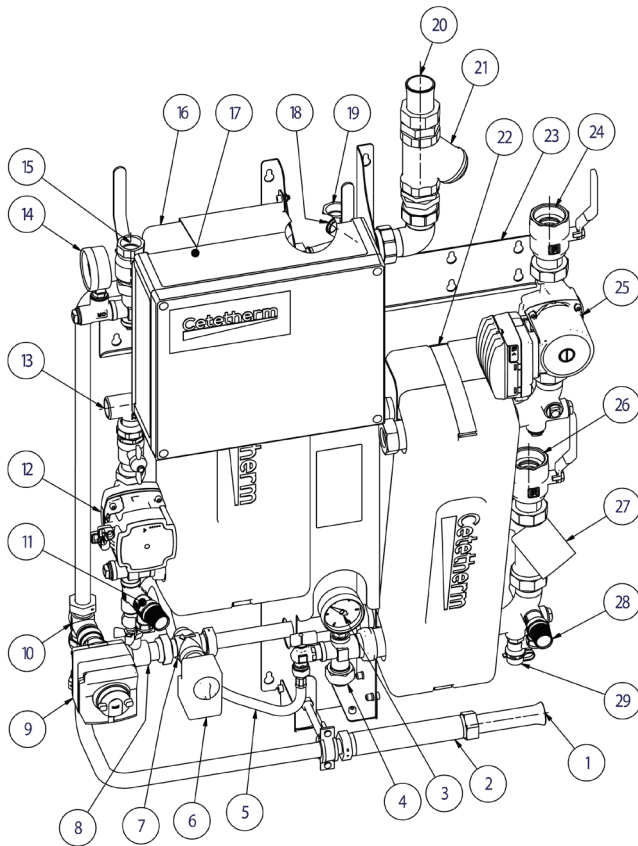
Cetetherm recommends a control unit, with the possibility of communication and optimization at distance, to guarantee the best possible energy use.

### HEAT EXCHANGERS

To ensure the best energy efficiency and controllability, two-step connected brazed heat exchangers are always used for tap water.

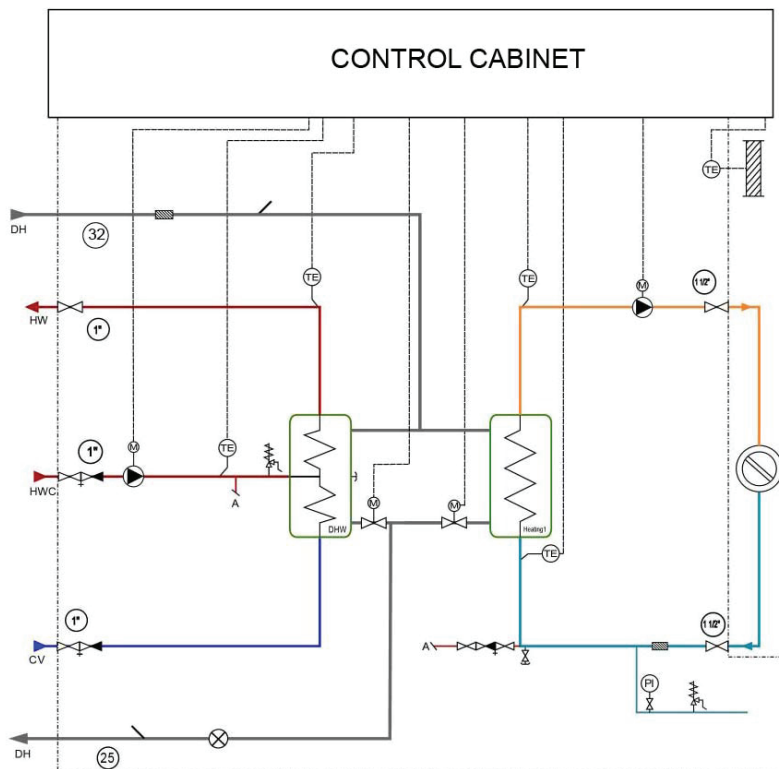
We use thread connections for easy dismounting and service. The heat exchangers are isolated with environmentally friendly polyurethane foam with ABS-surface.

Example of a Mini Select.



- 1 Primary return
- 2 Adapter for energy meter, 1"x130 mm or 1"x190
- 3 Pressure gauge for heating circuit
- 4 Connection, expansion vessel
- 5 Topping up
- 6 Actuator, heating circuit
- 7 Control valve, heating circuit
- 8 Summer shut off valve \*
- 9 Actuator, primary
- 10 Control valve for domestic hot water
- 11 Safety valve for domestic hot water
- 12 Circulation pump DHWC
- 13 DHWC
- 14 Pressure gauge, CW
- 15 CW
- 16 Heat exchanger for domestic hot water
- 17 Control cabinet
- 18 DH inlet temperature pocket
- 19 DHW
- 20 Primary supply
- 21 Filter, primary in
- 22 Heat exchanger for heating
- 23 Wall rail
- 24 Heating circuit, supply
- 25 Circulation pump heating
- 26 Heating circuit, return
- 27 Filter, heating circuit
- 28 Safety valve for heating circuit
- 29 Draining valve, heating supply
- \* Certain markets

Example of a flowchart to Mini Select



## OPERATING DATA

	Primary side	DHW	Heating
Design pressure tryck PS, bar	16	10	10
Design temperature TS, °C	120	90	90
Opening pressure, safety valve, bar		10	3-6

## PERFORMANCE AT AVAILABLE PRIMARY DIFFERENTIAL PRESSURE 150-800 KPA

Designed temperature programme (°C)	Capacity (kW)	Primary flow (l/s)	Actual return temp. (°C)	Secondary flow (l/s)
<b>Heating circuit</b>				
100-63/60-80	112	0,72	63	1,34
100-48/45-55	86	0,38	45,4	2,06
90-47/45-65	89	0,49	46,1	1,07
90-33/30-60	130	0,54	32,7	1,04
<b>Hot water circuit</b>				
65-22/10-55	166	0,9	20,9	0,88
60-22/10-55	119	0,74	21,4	0,63

These are typical operating data, others are available on request. The configuration and layout will affect the measure and height of the Mini Selcet. Typical measure i with 750-850 mm , top edge of control panel approx 1650 mm from the floor.

Max & min width (mm)	Max & min depth (mm)	Max & min height (mm)
725	315	1760
865	430	1760

## SECONDARY CONNECTIONS

	Wall modell
Heating, supply	G 1 1/2"
Heating, return	G 1 1/2"
Cold water	G 1"
Hot water	G 1"
DHWC	G 1"

## TEST AND CERTIFICATIONS

Mini Select is certified according to Pressure Equipment Directive, PED.

Every heat exchanger in Mini Select are dimensioned and tested according to the SS-EN 1148 standard, and according to current requirements in F101.

All circuits are leak tested. Electrical function and safety tests are performed on wired components.

Cetetherm are certified according to SO 9001, ISO 14001 and ISO 45001.

## PRIMARY CONNECTIONS

District heating, supply	DN25
District heating, return	DN25

## BENEFITS

- Modularized and compact design.
- Floor hung with wall rail and floor support
- Open layout with a design that gives good overview over its different components and circuits. This makes service and maintenance easier.
- Prefabricated optimized system with all components tested makes the installation and start up easy, and better performance over many years of service.
- Easy to transport to installation room due to its compact design.