



## Cetetherm Midi Compact



### District heating substation for multi-family houses (10-50 dwellings)

The Cetetherm Midi Compact is a complete, ready-to-install district heating substation for heating and hot water. Midi Compact is available in four sizes. The sizes offered are 80, 100, 160 and 200 kW heating, with matching hot water output.

Cetetherm has years of experience in district heating technology and has developed Midi Compact with well-planned pipe-work and with all components easily accessible for inspection and future servicing.

### COMFORT

Midi Compact has fully-automatic temperature control for heating and hot water. The outside temperature is used to control heating. The hot water temperature is set and maintained at the desired temperature. The unit has been designed with a two-step connection in order to have the best control performance and to optimize cooling on the primary return for best long term life cycle cost and performance.

### SIMPLE INSTALLATION

Installation is easy due to well planned pipe-work and pre-wiring. A pre-programmed controller with plug connection, which makes it easy to start the substation without delay. With its small size and light weight, the Midi Compact is easy to carry in, mount and maintain in both new and renovated buildings.

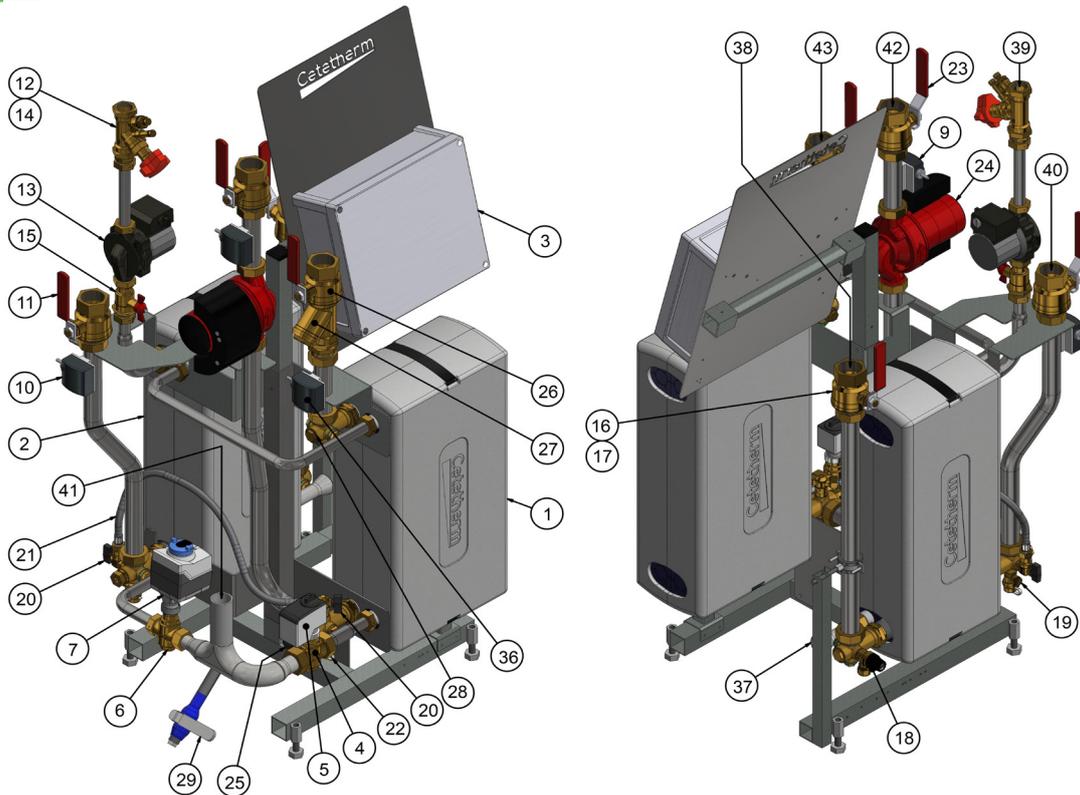
### LONG-TERM SECURITY

The Midi Compact 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 to function in accordance with quality assurance system ISO 9001:2008.

Midi Compact is CE-marked to certify that the substation conforms to international safety regulations. To maintain the validity of the CE marking, only identical replacement parts may be used.

### FEATURES AND BENEFITS

- Complete installation package - tap water and space heating available in four sizes.
- Optimized price/performance. Cetetherm world class technology heat exchangers.
- Optimized parameter settings on the control loops and 2-step for lowest return temperature and best control performance.
- Short delivery time, shipment from warehouse - easy to install, just plug-and-play.
- Extremely small footprint, optimized compact design and low weight with good accessibility for service and maintenance.
- Best performance for longterm use - stainless steel piping.
- Reduces the use of energy - individual measuring of energy available.

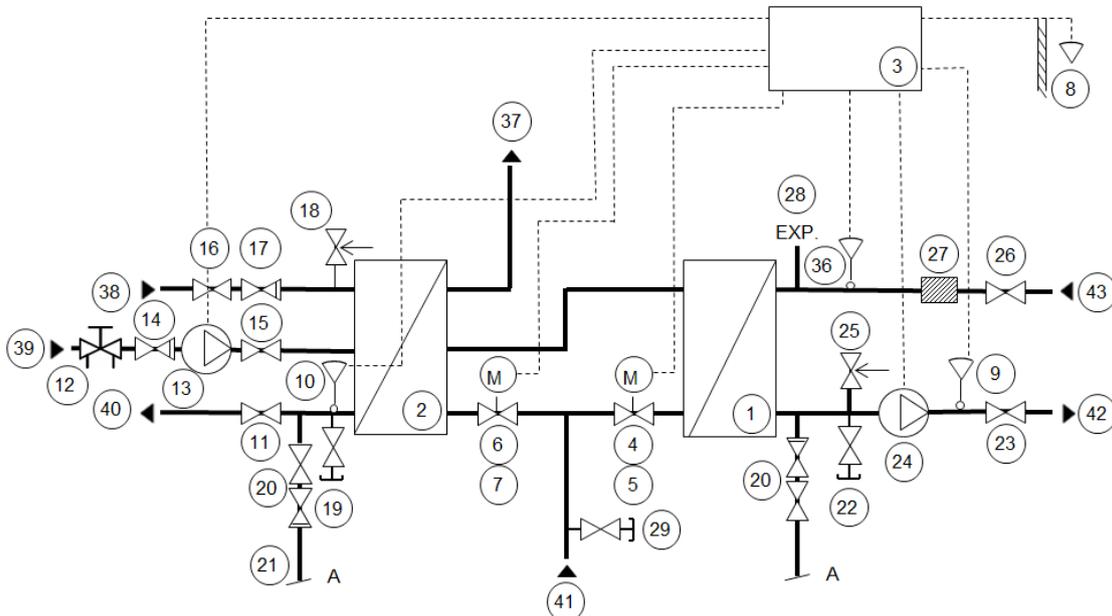


## COMPONENTS

1. Heat exchanger, heating
2. Heat exchanger, DHW
3. Control center \*
4. Control valve, heating
5. Actuator, heating \*
6. Control valve, DHW
7. Actuator, DHW \*
8. Temperature sensor, outdoor \*
9. Temperature sensor, heating supply \*
10. Temperature sensor, DHW supply \*
11. Shut-off valve, DHW
12. Balancing valve, DHWC
13. Pump, DHWC
14. Non return valve, DHWC
15. Shut-off valve, DHWC
16. Shut-off valve, CW
17. Non return valve, CW
18. Safety valve, CW
19. Draining valve, DHW supply
20. Topping up

21. Hose
22. Draining valve, heat supply
23. Shut-off valve, heat supply
24. Pump heating
25. Safety valve, heating
26. Shut-off valve, heating return
27. Strainer, heat return
28. Connection expansion vessel
29. Draining valve, DH supply
36. Temp.sensor heating return
37. DH Return
38. CW
39. DHWC
40. DHW
41. DH supply
42. Heat Supply
43. Heat Return
- \* Option

Connections for district heating are welded connections in DN32, for tap water circulation it is internal threaded connection in G 1" and for DHW & heating side internal threaded connections G 1½".



## OPERATING DATA

	Primary side	Heating	DHW
Design pressure, PS	16 bar	6 bar	10 bar
Design temperature TS, °C	120	100	100
Relief pressure safety valve	-	3 bar	9 bar
Volume, heat exchanger, L	2.1-5.2 / 1.85-2.88	2.1-5.2	1.75-3.2

## PERFORMANCE AT AVAILABLE PRIMARY DIFFERENTIAL PRESSURE 100-600 KPA

Type	Designed temperature programme (°C)	Capacity (kW)	Primary flow (l/s)	Actual return temp. (°C)	Secondary flow (l/s)
<b>Heating circuit</b>					
Midi Compact 80	100-63/60-80	82	0.55	63	1.00
	100-43/40-60	123	0.53	42.5	1.49
Midi Compact 100	100-63/60-80	105	0.71	63	1.28
	100-43/40-60	150	0.65	42.4	1.81
Midi Compact 160	100-63/60-80	162	1.09	63	1.97
	100-43/40-60	163	0.71	41.4	1.97
Midi Compact 200	100-63/60-80	209	1.41	62.9	2.55
	100-43/40-60	210	0.92	41.5	2.54
<b>Hot water circuit</b>					
Midi Compact 80	65-22/10-55	111	0.63	22	0.59
	70-25/10-55	126	0.69	19.9	0.67
Midi Compact 100	65-22/10-55	111	0.63	22	0.59
	70-25/10-55	126	0.64	19.9	0.67
Midi Compact 160	65-22/10-55	139	0.79	22	0.74
	70-25/10-55	156	0.85	19.8	0.83
Midi Compact 200	65-22/10-55	183	1.04	22	0.97
	70-25/10-55	198	1.08	19.5	1.05

## WELDED CONNECTIONS

District heating supply	DN32
District heating return	DN32

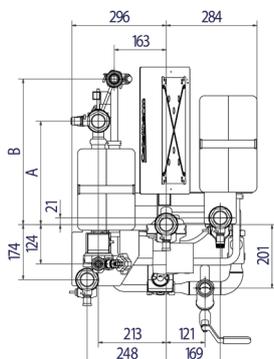
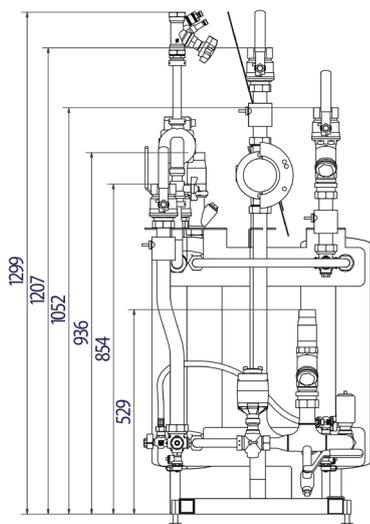
## THREADED CONNECTIONS

Heating supply	G 1½"	DN40
Heating return	G 1½"	DN40
Cold water	G 1½"	DN40
Hot water	G 1½"	DN40
Hot water circulation	G 1"	DN25
Expansion vessel	G ¾"	DN20

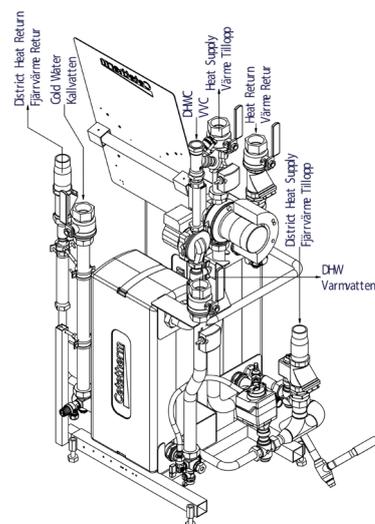
## OTHER INFORMATION

Electrical data: 230 V 50Hz, single phase, 290-315 W
Sound level: <70 dB(A), 1.6 meters above the floor and 1 meter from the sound source
Dimensions: 800 mm width x 600 mm depth, 1300 mm height
Weight: 80-110 kg

## MIDI COMPACT COMPLETED WITH DIFFERENT PRIMARY HEAT METER SECTIONS



Length Table		
Type	A	B
80/100	223	398
160	242	417
200	270	445

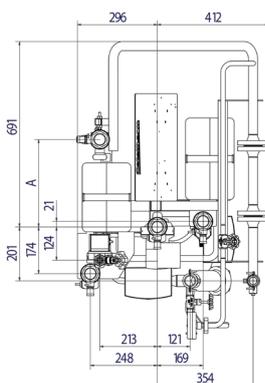
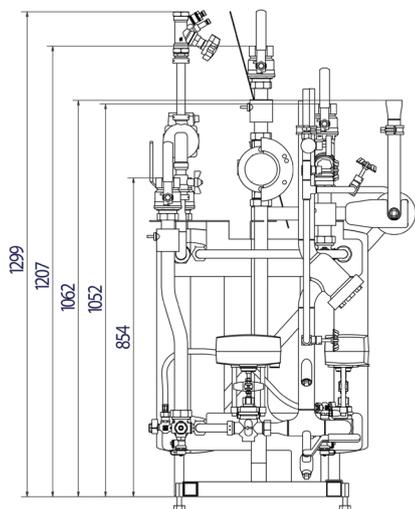


### Integrated threaded vertical meter section

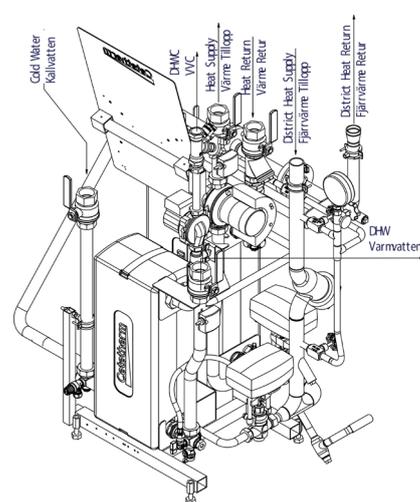
- Prefabricated place for heat meter integrated in the substation.
- Completed for measuring of heat metering.
- Vertical meter section with 5X before and 3X measure pipe DN after meter.
- Pressure norm PN16.
- Connection size welded DN32.

### Consisting of:

- Filter with drain-off valve.
- Pocket for temperature sensor in DN15.
- Meter section for heat metering, threaded dummy DN25 L=190 mm.
- Drain-off valve in primary circuit.



Length Table	
Type	A
80/100	223
160	242
200	270



### Integrated threaded horizontal meter section

- Prefabricated place for heat meter integrated in the substation.
- Completed for measuring of heat metering.
- Horizontal meter section with 10X before and 5X measure pipe DN after meter.
- Pressure norm PN16.
- Connection size welded DN32.

### Consisting of:

- Filter with drain-off valve.
- 3 points metering, over filter and before heat meter.
- Pocket for temperature sensor in DN15.
- Meter section for heat metering, flanged dummy DN25 L=260 mm.
- Drain-off valve in primary circuit.