



Midi Compact

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

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.

Alfa Laval 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

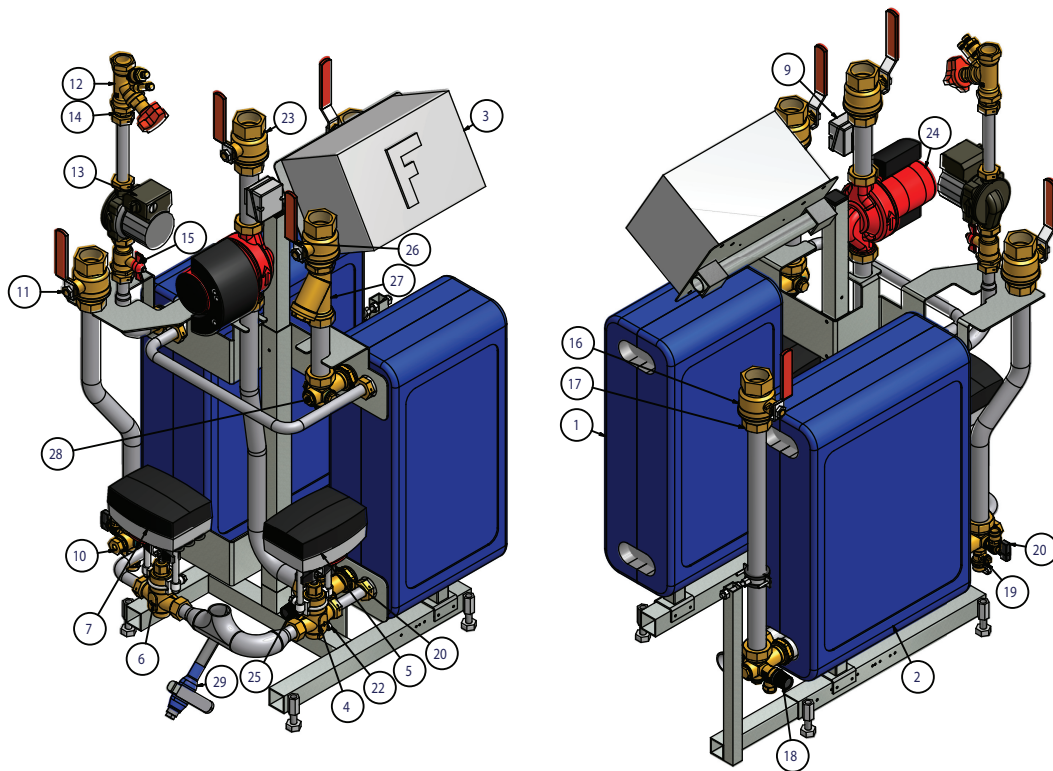
The Midi Compact represents the most modern technology, and provides the answer to stringent demands for long-term performance. The heat exchanger plates and all piping are manufactured in acid-resistant stainless steel. All components are closely matched and carefully tested for function in accordance with Alfa Laval's 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, Alfa Laval 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.

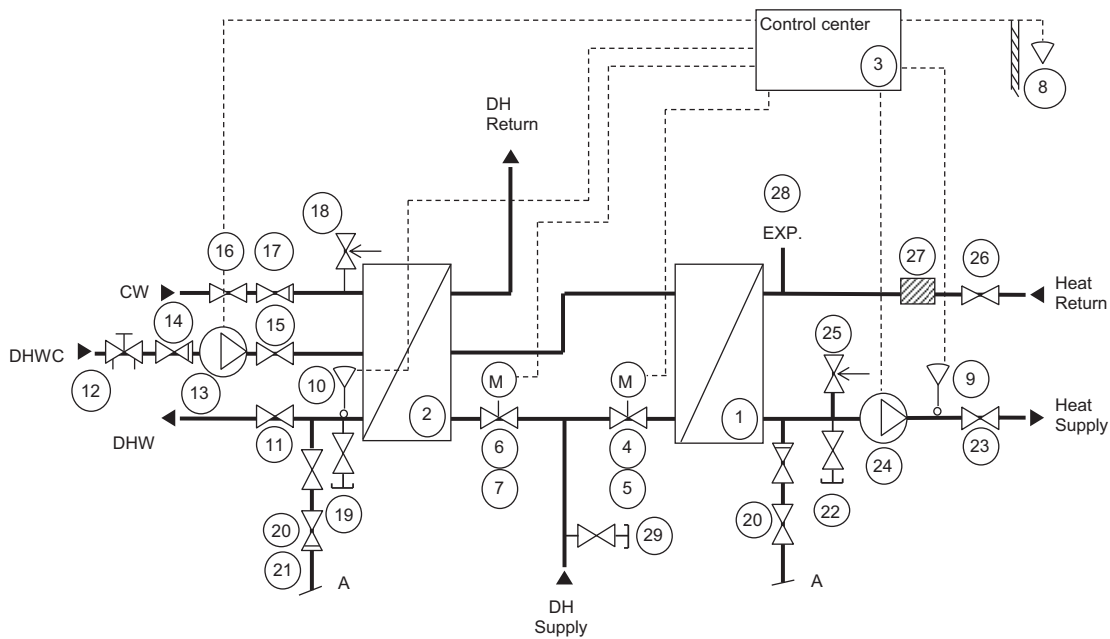




Connections for district heating are welded connections in DN32, for tap water circulation it is internal threaded connection in G 1" and for DHW & heating side internal threaded connections G 1½".

Components

- | | | |
|---|--------------------------------|------------------------------------|
| 1. Heat exchanger, heating | 11. Shut-off valve, DHW | 21. Hose |
| 2. Heat exchanger, DHW | 12. Balancing valve, DHWC | 22. Draining valve, heat supply |
| 3. Control center * | 13. Pump, DHWC | 23. Shut-off valve, heat supply |
| 4. Control valve, heating | 14. Non return valve, DHWC | 24. Pump heating |
| 5. Actuator, heating * | 15. Shut-off valve, DHWC | 25. Safety valve, heating |
| 6. Control valve, DHW | 16. Shut-off valve, CW | 26. Shut-off valve, heating return |
| 7. Actuator, DHW * | 17. Non return valve, CW | 27. Strainer, heat return |
| 8. Temperature sensor, outdoor * | 18. Safety valve, CW | 28. Connection expansion vessel |
| 9. Temperature sensor, heating supply * | 19. Draining valve, DHW supply | 29. Draining valve, DH supply |
| 10. Temperature sensor, DHW supply * | 20. Topping up | * Option |



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	Temperature programme (°C)	Capacity (kW)	Primary flow (°C)	Actual return temperature (°C)	Secondary flow (l/s)
Heating circuit					
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
Hot water circuit					
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
Alfa Laval reserves the right to change specifications without prior notification.

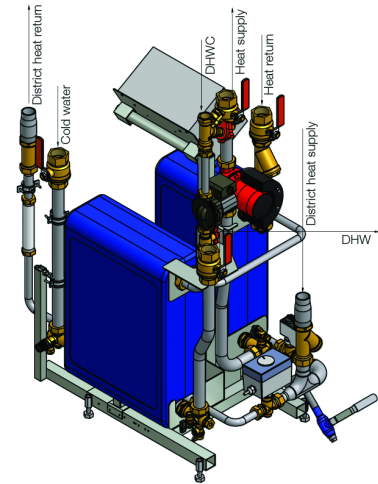
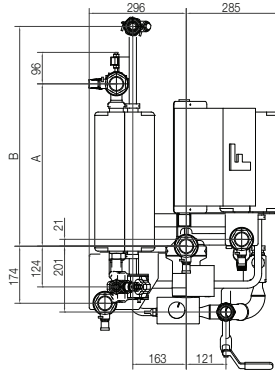
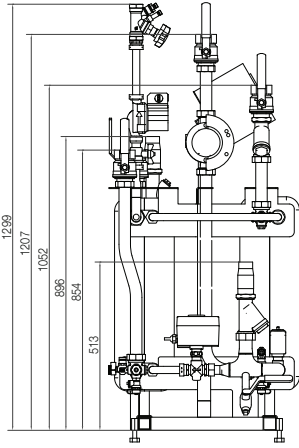
Midi Compact completed with different primary heat meter sections

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.

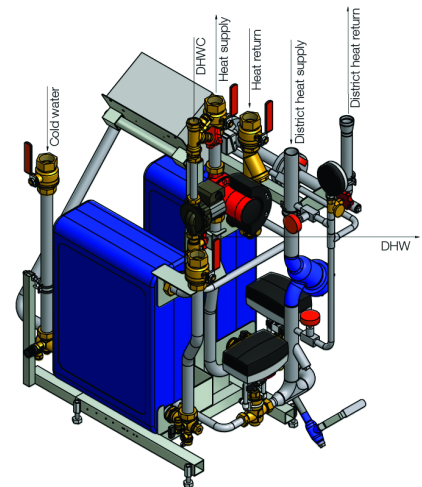
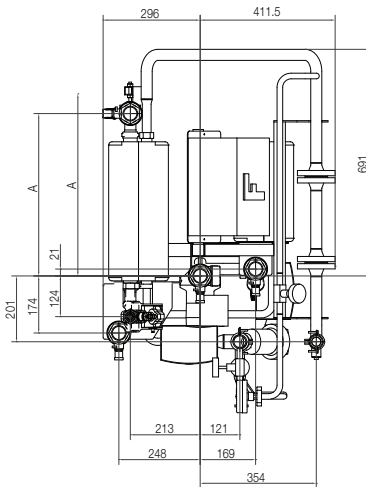
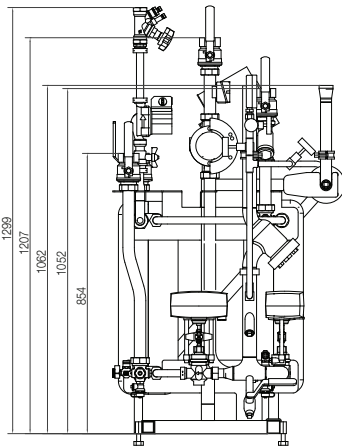


Integrated flanged horizontal meter section

- 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.



How to contact Alfa Laval

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