

Thermia Mega



Mega

Maximum performance and best all-round economy

Thermia Mega is a commercial heat pump designed as a beacon of best all-round economy. The result is a heat pump with an inverter-controlled compressor, a total output of up to 88 kW and the highest SPF on the market. You can connect 16 Mega^{XL} units together to achieve a total heating effect of up to 1408 kW.

Our inverter technology makes Mega an extremely flexible and versatile product, which can be installed and used in all types of property, whatever the conditions. Each solution can be tailored to meet your full heating, cooling and hot water needs.

The inverter technology, which continuously adjusts the heat pump's output to current demand, means that the heat pump can supply 100 per cent of your energy requirements. This in turn means that you will avoid having to pay for any expensive auxiliary heating. Thanks to the inverter control, you can also operate installations with different heating and hot water demands without the need for additional volume tanks. This will lower installation costs and reduce the space needed for the system. Hot gas exchangers as standard make hot water production extra cost-effective.

Our main aim when developing Mega was to create a powerful control system. Monitoring and control can be performed directly on the heat pump's newly designed colour touchscreen, as well as via a web interface, an upstream control system or via mobile.



A+++ energy class when the heat pump is part of an integrated system

A++ energy class when the heat pump is the sole heat generator

Energy class according to Eco-design Directive 811/2013

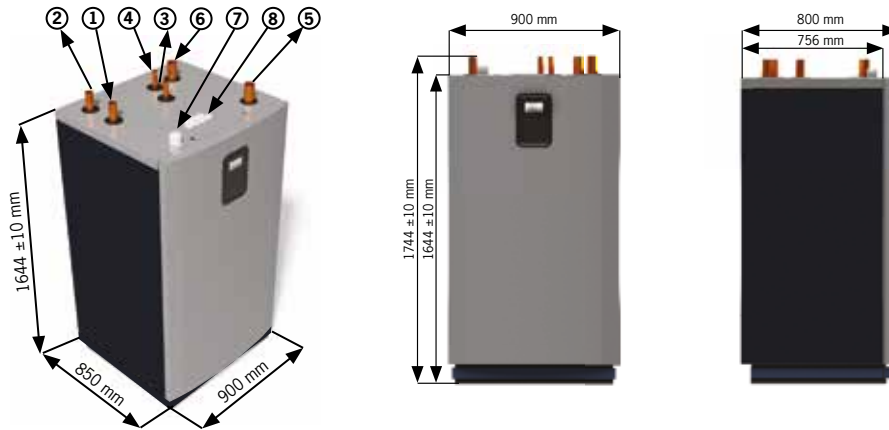


Technical data Mega

Connections

- 1 Heat return (return line)
- 2 Heat supply (supply line)
- 3 Hot gas exchanger (supply line)
- 4 Hot gas exchanger (return line)
- 5 Coolant out (from heat pump)
- 6 Coolant in (to heat pump)
- 7 Lead-ins for incoming supply
- 8 Lead-in for communication cables and sensor

↑ = Flow direction



Mega			Mega ^M	Mega ^L	Mega ^{XL}
Refrigerant	Type		R410A	R410A	R410A
	Amount	kg	4,1	5,7	8,7
	Test pressure (low/high pressure)	MPa	3,0/4,3	3,0/4,3	3,0/4,3
	Design pressure	MPa	4,3	4,3	4,3
Compressor	Type		Scroll	Scroll	Scroll
	Oil		POE	POE	POE
Electrical data 3-N	Mains power supply	Volt	400	400	400
	Rated power, compressor	kW	17,5	22,2	32,5
	Rated power, circulation pumps	kW	0,7	1	1
	Fuse ¹⁴	A	40	50	63
Performance	COP ¹		4,49	4,50	4,71
	Heat factor ¹	kW	26,73	35,6	52,0
	Incoming power ¹	kW	5,95	7,71	11,0
	SCOP (Seasonal Coefficient of Performance)		5,32 ¹¹	5,1 ²	5,3 ³
	Power range ⁴		11 - 44	14 - 59	21 - 88
Energy class - system ¹²	Floor heating (35°C), Radiator (55°C)		A+++	A+++	A+++
Energy class - product ¹³	Floor heating (35°C), Radiator (55°C)		A++	A++	A++
Nominal flow ^{5,15}	Cooling circuit	l/s	1,90	2,31	3,34
	Heating circuit	l/s	0,67	0,83	1,29
External available pressure ^{6,15}	Cooling circuit	kPa	84,0	111,6	77
	Heating circuit	kPa	75,7	116	99
Internal pressure drop	Condenser	kPa	10,9	2,9	9,0
	Evaporator	kPa	25,0	28,4	40,0
Max system pressure	Brine	bar	6	6	6
	Heat transfer fluid	bar	6	6	6
Max/min temperature ⁷	Cooling circuit	°C	20/-10	20/-10	20/-10
	Heating circuit	°C	65 ⁸ /20	65 ⁸ /20	65 ⁸ /20
Max/min refrigerant circuit	Low pressure	MPa	0,23	0,23	0,21
	High pressure	MPa	4,3	4,3	4,3
Sound power level ^{4,9}		dB (A)	41 - 56	54 - 61	55 - 63
Anti-freeze	Ethanol + water solution -17°C ± 2 ¹⁰				
Weight		kg	390	430	550

1) B0/W35, according to EN14511 incl. circ. pump at a compressor speed of 3600 rpm.
 2) B0/W35, according to EN14825, Cold climate, Pdesign 55 kW.
 3) B0/W35, according to EN14825, Cold climate, Pdesign 73 kW.
 4) Compressor speed 1500–6000 rpm.
 5) Nominal flow heat circuit Δ10K, cooling circuit Δ3K at 3600 rpm.
 6) At nominal flow.
 7) Please note that it is not possible to combine all brine temperatures with heat transfer fluid temperatures.
 8) Minimum incoming brine temperature 5°C.

9) According to EN12102 and EN ISO 3741.
 10) Always check local rules and regulations before using antifreeze.
 11) B0/W35, according to EN14825, Cold climate, Pdesign 45 kW.
 12) When the heat pump is part of an integrated system. According to Eco-design Directive 811/2013
 13) When the heat pump is the sole heat generator and the built-in controller is not included. According to Eco-design Directive 811/2013.
 14) The fuse size can be adjusted according to the heat pumps power output. Read more in technical literature "Technical description – Mega", chapter "Estimated current for XL, L and M".
 15) Flow and pressure drop for other operating modes. Read more in technical literature "Technical description – Mega", chapter "Estimated flow and pressure".