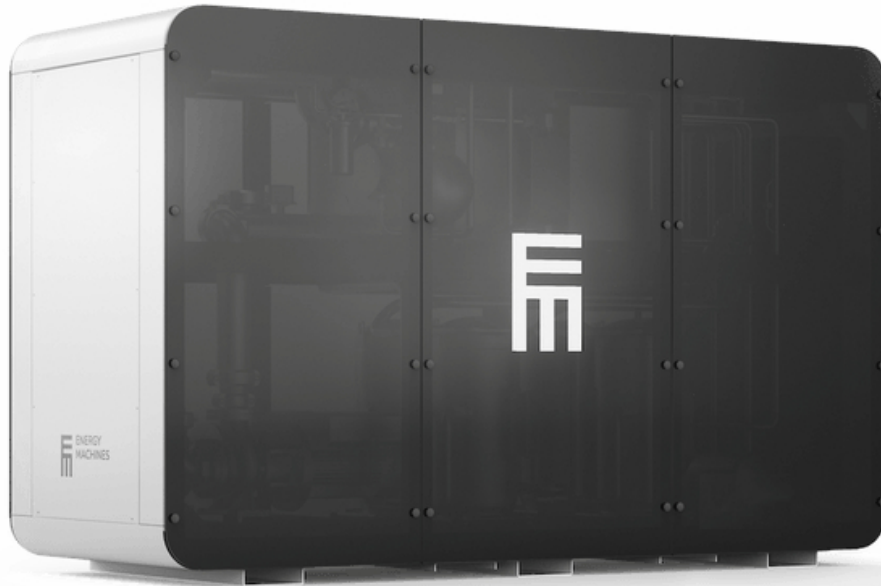


EMHP Datasheet

EMHP-44-34-2-4 (R1234ze)

EMHP-44-34-2-7 (R515B)



This Energy Machines™ EMHP model contains two refrigerant circuits with a semi-hermetic reciprocating compressor in each. Together with optional frequency inverters, the EMHP model has the capability of providing either high turndown or extra capacity when required. The two refrigerant circuits are completely independent, ensuring the stability of the heating supply.

The EMHP model is specifically designed for heating and cooling purposes. It can handle large pressure drops on the chilled water side using the machine's internal chilled water pump. With integrated control valves and circulation pumps, the EMHP model comes as a complete heat pump and cooling system in one unit.

Performance

Heating			Cooling		
Circuit	C1	C2	Circuit	C1	C2
Heating power (HP)	53 kW	41 kW	Heating power (HP)	89 kW	74 kW
Total HP	94 kW		Total HP	163 kW	
Cooling power (CP)	36 kW	28 kW	Cooling power (CP)	71 kW	58 kW
Total CP	64 kW		Total CP	129 kW	
COP	3.15	3.14	COP	3.77	3.78
HP = Heating power, CP = Cooling power, COP = Coefficient of performance					

Design parameters

Heating		Cooling	
Heated fluid (in/out)	47°C / 53°C	Heated fluid (in/out)	37°C / 43°C
Chilled fluid (in/out)	1°C / -3°C	Chilled fluid (in/out)	14°C / 9°C
Heated fluid: water, Chilled fluid: ethanol 26%			

Pressure drop at rated flow

Heating			Cooling		
Circuit	C1	C2	Circuit	C1	C2
Heated fluid	1.77 kPa / 2.1 l/s	1.57 kPa / 1.65 l/s	Heated fluid	4.91 kPa / 3.58 l/s	4.67 kPa / 2.94 l/s
Chilled fluid	6.59 kPa / 2.2 l/s	6.55 kPa / 1.73 l/s	Chilled fluid	12.1 kPa / 3.46 l/s	12.9 kPa / 2.84 l/s

Available pressure at rated flow

Heating			Cooling		
Circuit	C1	C2	Circuit	C1	C2
Heated fluid	115 kPa / 2.1 l/s	123 kPa / 1.65 l/s	Heated fluid	87 kPa / 3.58 l/s	98 kPa / 2.94 l/s
Chilled fluid	109 kPa / 2.2 l/s	116 kPa / 1.73 l/s	Chilled fluid	82 kPa / 3.46 l/s	92 kPa / 2.84 l/s

Electricity

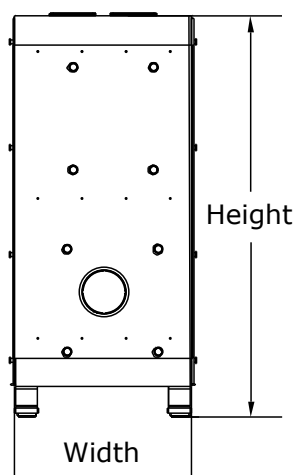
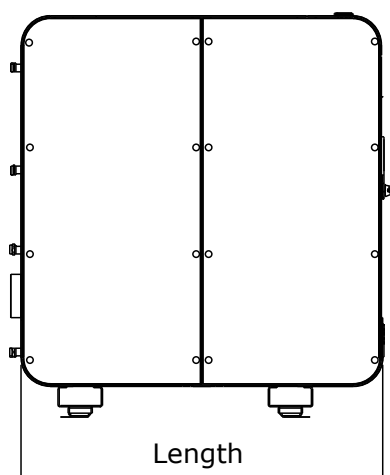
Rated power supply	400 VAC / 50 Hz / 3-phase
Rated power input	68 kW
Rated current	121 A
Rated start current	210 A
Fuse	160 A

Refrigerant

Options	R1234ze	R515B
GWP value	7	293
Charge (C1+C2)	8 kg + 7 kg	

Dimensions

Length / Width / Height	1950 mm / 850 mm / 1840 mm
Weight (dry/commissioned)	1350 kg / 1500 kg

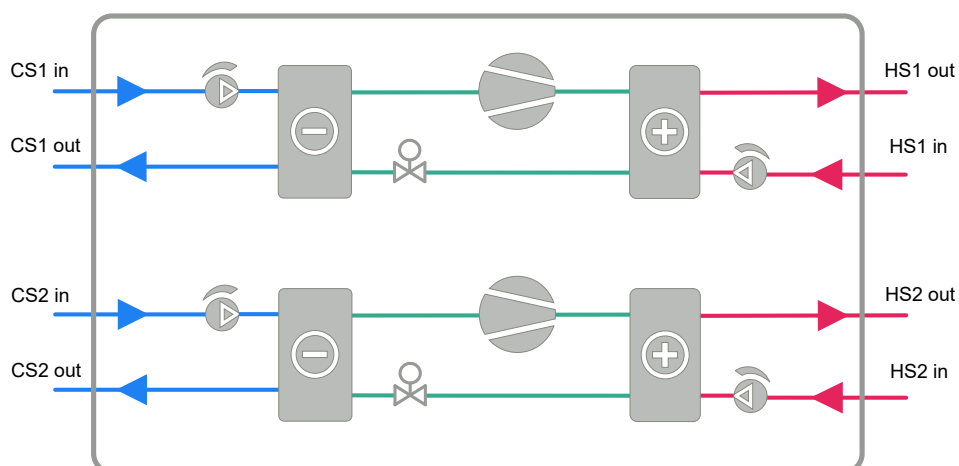


Ventilated enclosure

Minimum airflow: 28.6 l/s	Pressure difference shall be ≥ 20 Pa
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Note: The ventilation fan is not provided with the machine. The pressure difference refers to the difference between the inside and outside of the ventilated enclosure.

Flow diagram



Energy Machines has a policy of continuous product and data improvement and reserves the right to change designs and specifications without notice. While Energy Machines strives for accuracy, we do not guarantee the completeness or correctness of the information.

