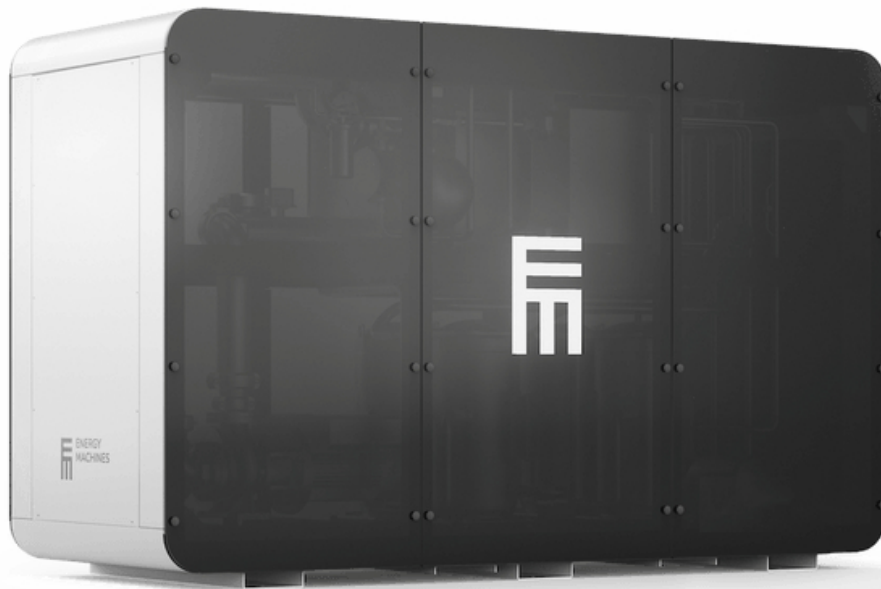


EMA Datasheet

EMA-4387-2-4-SC (R1234ze)

EMA-4387-2-7-SC (R515B)



This EMA Energy Machines™ model contains two circuits with a twin compressor in each. It includes a subcooling system enabling the efficient recovery of heat energy between the condenser and expansion valve. This results in higher performance due to a greater energy uptake in the machine's evaporator process.

The EMA is designed to 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 EMA comes as a completely reversible heat pump in one unit.

Performance

Heating		Cooling	
HP without subcooler	290 kW	HP without subcooler	449 kW
HP with subcooler	387 kW	HP with subcooler	569 kW
CP without subcooler	191 kW	CP without subcooler	364 kW
CP with subcooler	289 kW	CP with subcooler	484 kW
Electricity 4 compressors	100.3 kW	Electricity 4 compressors	86.8 kW
COP	3.86	COP	4.19
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)	15°C / 10°C
Subcooler (in/out)	7°C / 39°C	Subcooler (in/out)	7°C / 30°C
Chilled fluid = water, Heated fluid = water			

Pressure drop at rated flow

Heating		Cooling	
Heated fluid	10 kPa / 11.6 l/s	Heated fluid	23 kPa / 17.9 l/s
Chilled fluid	32 kPa / 17 l/s	Chilled fluid	48 kPa / 22.7 l/s
Subcooler	0.4 kPa / 0.73 l/s	Subcooler	0.4 kPa / 1.27 l/s

Available pressure at rated flow

Heating		Cooling	
Heated fluid	178 kPa / 11.6 l/s	Heated fluid	120 kPa / 17.9 l/s
Chilled fluid	120 kPa / 17 l/s	Chilled fluid	45 kPa / 22.7 l/s
Subcooler	61 kPa / 0.73 l/s	Subcooler	45 kPa / 1.27 l/s

Refrigerant

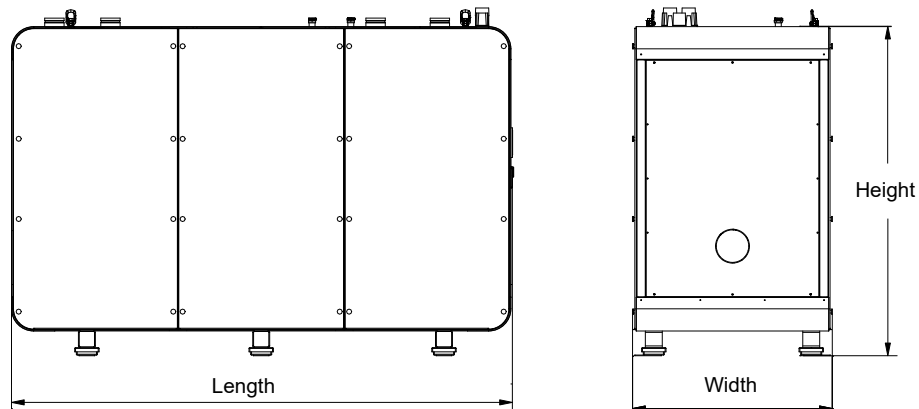
Options	R1234ze	R515B
GWP value	1.37	288
Charge (C1+C2)	24 + 24 kg	

Electricity

Rated power supply	400 VAC / 50 Hz / 3-phase
Rated power input	151.4 kW
Rated current	241.2 A
Rated start current	342.6 A
Fuse	250 A

Dimensions

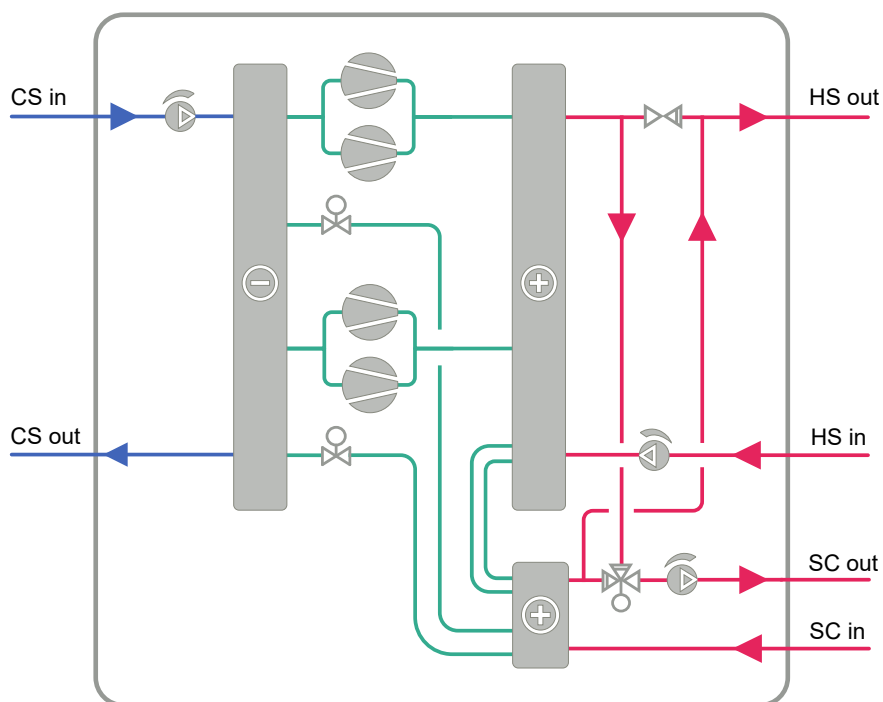
Length / Width / Height	2950 mm / 1170 mm / 2000 mm
Weight (dry/commissioned)	2500 kg / 2800 kg



Ventilated enclosure

Minimum airflow: 85 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.



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.

