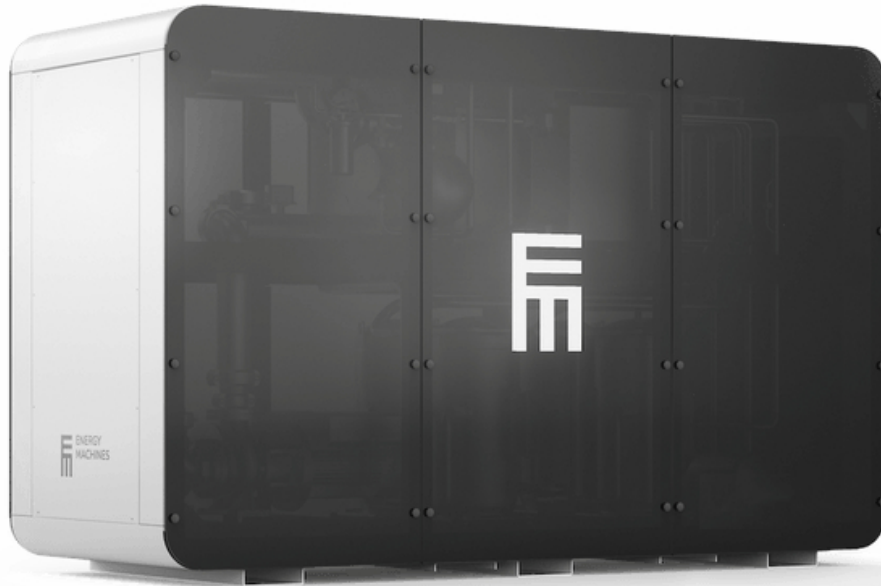


EMA Datasheet

EMA-4295-2-4-SC (R1234ze)

EMA-4295-2-7-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	230 kW	HP without subcooler	354 kW
HP with subcooler	306 kW	HP with subcooler	449 kW
CP without subcooler	151 kW	CP without subcooler	288 kW
CP with subcooler	227 kW	CP with subcooler	383 kW
Electricity 4 compressors	81.1 kW	Electricity 4 compressors	69 kW
COP	3.77	COP	4.18
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	9 kPa / 9.2 l/s	Heated fluid	22 kPa / 14.1 l/s
Chilled fluid	31 kPa / 13.4 l/s	Chilled fluid	45 kPa / 18 l/s
Subcooler	0.4 kPa / 0.57 l/s	Subcooler	0.4 kPa / 1.01 l/s

Available pressure at rated flow

Heating		Cooling	
Heated fluid	189 kPa / 9.2 l/s	Heated fluid	152 kPa / 14.1 l/s
Chilled fluid	148 kPa / 13.4 l/s	Chilled fluid	99 kPa / 18 l/s
Subcooler	65 kPa / 0.57 l/s	Subcooler	53 kPa / 1.01 l/s

Refrigerant

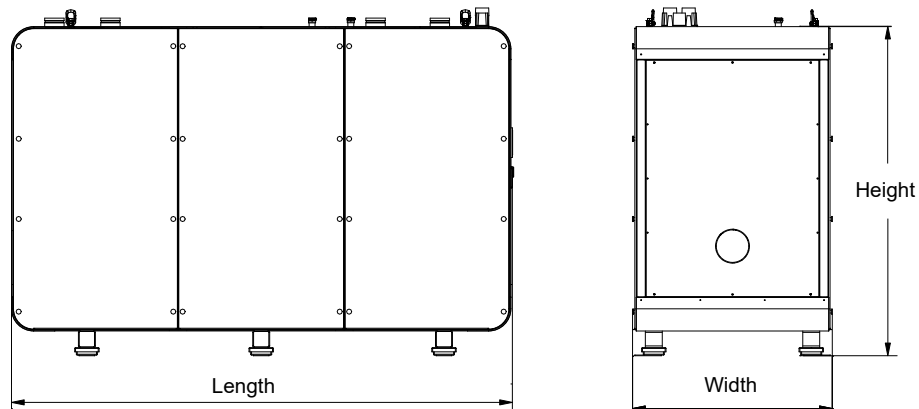
Options	R1234ze	R515B
GWP value	1.37	288
Charge (C1+C2)	22 + 22 kg	

Electricity

Rated power supply	400 VAC / 50 Hz / 3-phase
Rated power input	116.5 kW
Rated current	195.3 A
Rated start current	262.3 A
Fuse	250 A

Dimensions

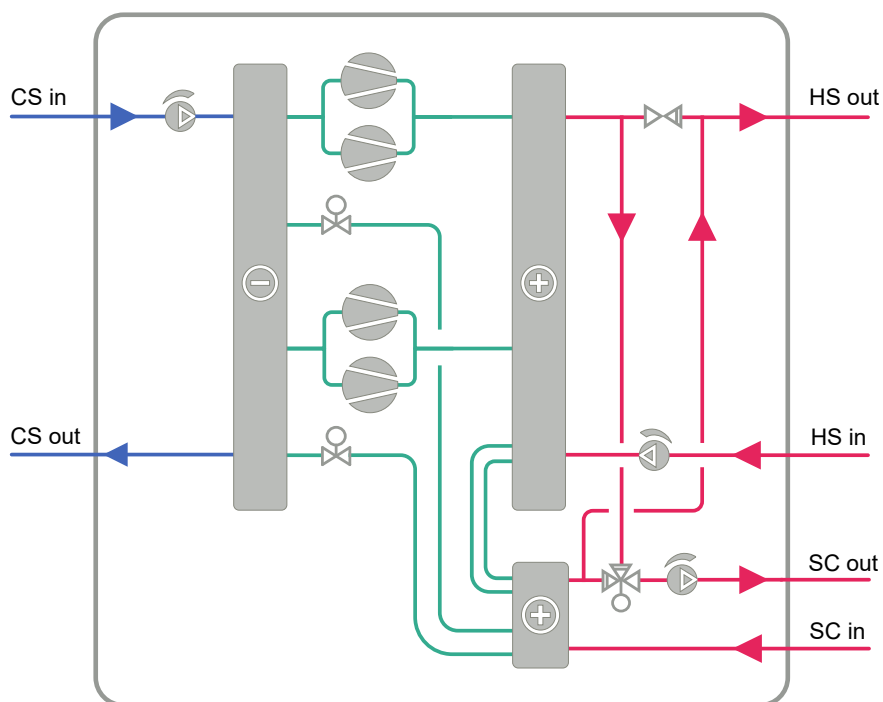
Length / Width / Height	2950 mm / 1170 mm / 2000 mm
Weight (dry/commissioned)	2300 kg / 2600 kg



Ventilated enclosure

Minimum airflow: 80 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.

