

## Heat Pump Datasheet

<b>Models:</b>	EMB-2480-1-4	EMB-2480-1-7
<b>Refrigerants:</b>	R-1234ze	R-515B
<b>Certification:</b>	CE	CE
<b>Safety class:</b>	A2L	A1

The Energy Machines™ EMB models are designed for space heating, warm tap water production, and comfort cooling. They contain either one or two refrigerant circuits with two compressors in each.

The EMB models operate with either one or two heat source circuits containing brine. These circuits have an integrated circulation pump and switch between the production of hot tap water and the production of heat.

The EMB comes as a completely reversible heat pump in one unit.



## Characteristics

Model characteristics	
Energy source	Ground, water, or waste heat
Compressor type	Scroll
Capacity control	2-Stepped
Features	Internal pumps

## Performance

Heating mode		Cooling mode	
Heating capacity (kW)	175	Heating capacity (kW)	272
Cooling capacity (kW)	114	Cooling capacity (kW)	220
Elec. comp. total (kW)	61	Elec. comp. total (kW)	52.3
COP	2.87	COP	4.21

COP = Coefficient of performance

## Design temperatures

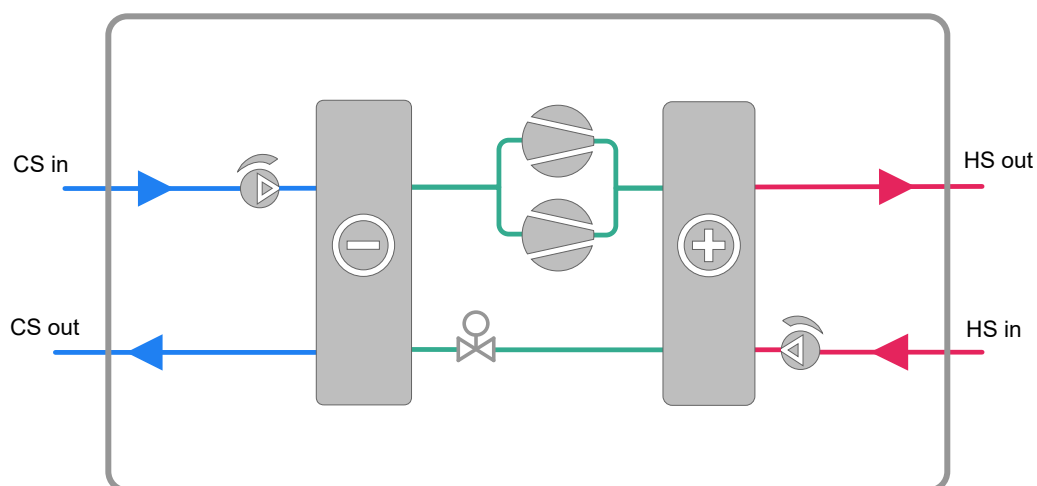
Heating mode		Cooling mode	
Heated fluid (in/out)	47°C / 53°C	Heated fluid (in/out)	37°C / 43°C
Chilled fluid (in/out)	1°C / -3°C	Chilled fluid (in/out)	15°C / 10°C

Heated fluid: Water, Chilled fluid: Ethanol 26%

## Flow and pressure

Heating mode			Cooling mode		
	Heated fluid	Chilled fluid		Heated fluid	Chilled fluid
Flow (l/s)	7.3	5.8	Flow (l/s)	10.9	10.8
Pressure drop (kPa)	5	12	Pressure drop (kPa)	12	25
Available pressure (kPa)	106	110	Available pressure (kPa)	62	74

## Flow diagram

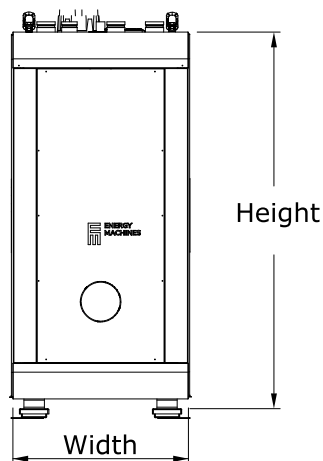
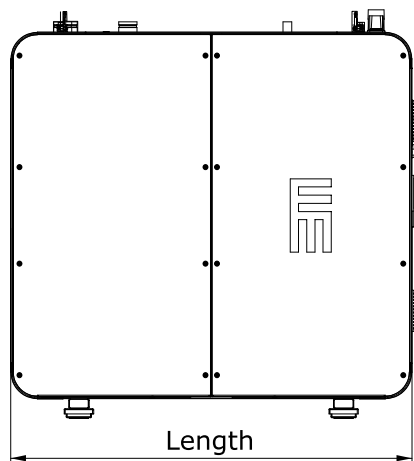


### Specifications

Refrigerant		
Type	R-1234ze	R-515B
GWP	1.37	293
Charge (kg)	15	

Ventilated enclosure*	
Minimum airflow (l/s)	54
Pressure difference (Pa) shall be ≥	20

\*Ventilation fan is not provided. Pressure difference is between enclosure interior and exterior. Applies only to units with A2L refrigerants.



Electricity	
Power supply voltage (VAC)	400
Power supply frequency (Hz)	50
Power supply phase (ϕ)	3
Rated power input (kW)	96
Rated current (A)	165
Rated start current (A)	279
Fuse (A)	200

Dimensions**	
Length (mm)	1970
Width (mm)	860
Height (mm)	1845
Dry weight (kg)	1500
Commissioned weight (kg)	1750
**See dimensional drawings for clearance requirements	

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