

## Heat Pump Datasheet

Models:	EMB-4387-2-4	EMB-4387-2-7
Refrigerants:	R-1234ze	R-515B
Certification:	CE	CE
Safety class:	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	4-Stepped
Features	Internal pumps

## Performance

Heating mode		Cooling mode	
Heating capacity (kW)	289	Heating capacity (kW)	449
Cooling capacity (kW)	188	Cooling capacity (kW)	364
Elec. comp. total (kW)	102.5	Elec. comp. total (kW)	86.8
COP	2.84	COP	4.19

COP = Coefficient of performance

## Design temperatures

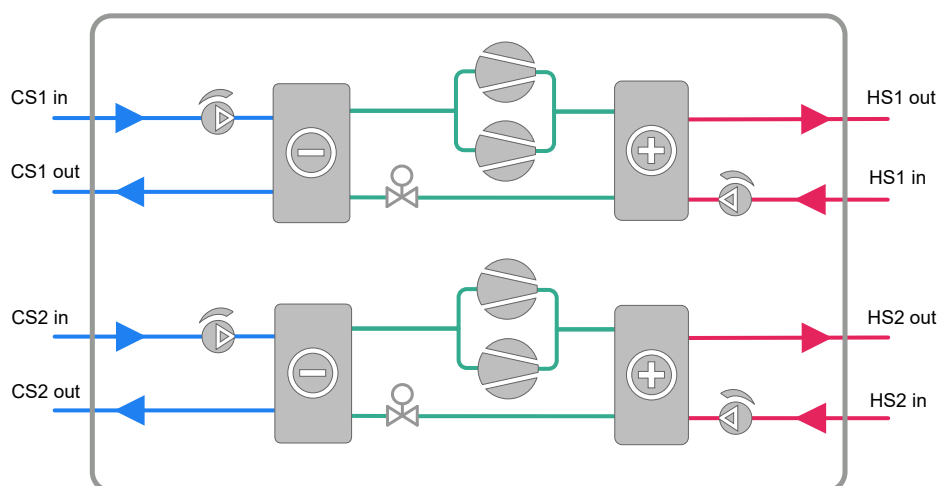
Heating mode		Cooling mode	
Heated fluid (in/out)	47°C / 53°C	Heated fluid (in/out)	37°C / 43°C
Chilled fluid (in/out)	1°C / -3°C	Chilled fluid (in/out)	15°C / 10°C

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)	12	11.5	Flow (l/s)	17.9	17.8
Pressure drop (kPa)	5	12	Pressure drop (kPa)	11	24
Available pressure (kPa)	115	102	Available pressure (kPa)	84	56

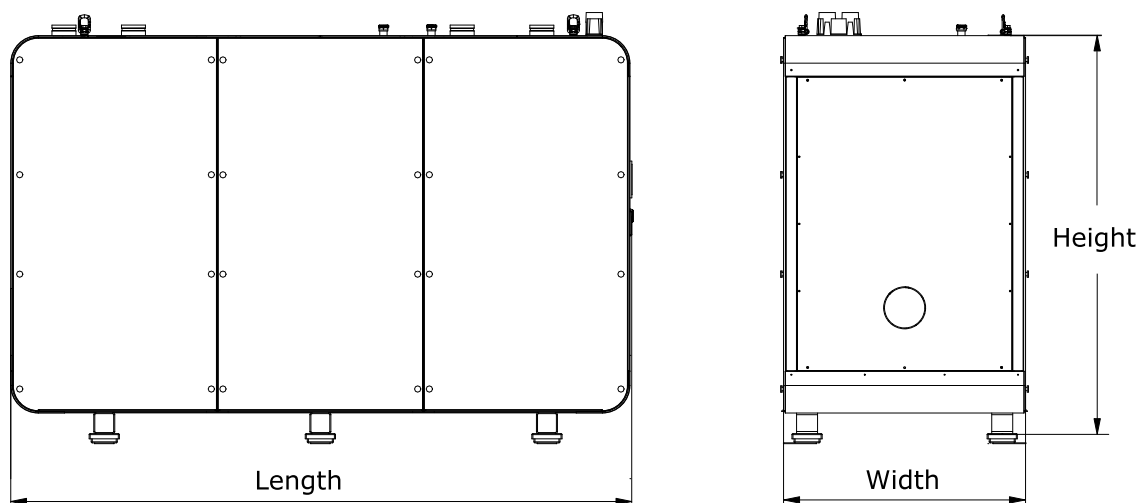
## Flow diagram



## Specifications

Refrigerant			Ventilated enclosure*	
Type	R-1234ze	R-515B	Minimum airflow [Qmin] (l/s)	50
GWP	1.37	293	Pressure difference (Pa) shall be ≥	20
Charge (kg)	14+14			

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



Electricity		Dimensions**	
Power supply voltage (VAC)	400	Length (mm)	2950
Power supply frequency (Hz)	50	Width (mm)	1140
Power supply phase (ϕ)	3	Height (mm)	1845
Rated power input (kW)	157	Dry weight (kg)	2300
Rated current (A)	277	Commissioned weight (kg)	2700
Rated start current (A)	392		
Fuse (A)	315		

\*\*See dimensional drawings for clearance requirements

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