

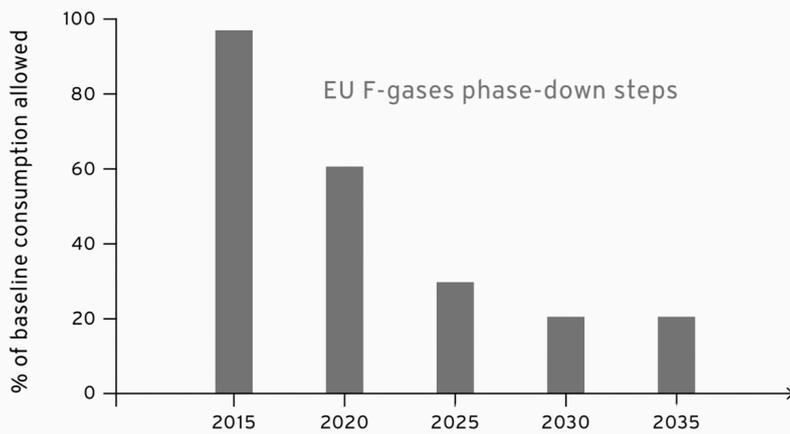


The Leader In Custom HVAC & Energy Saving



**R290**  
DOMESTIC ALL IN ONE  
OUTDOOR

# "GLOBAL PLEDGE FOR A GREENER FUTURE"



## EU's Decarbonization Goal by Using Natural Refrigerant

 The new F-gas Regulation (PE-CONS 60/23) enters into force on 11<sup>th</sup> of March, will prohibit the use of GPW greater than 150 in new heat pumps from January 1, 2027

## Mammoth Outdoor R290 Product Line-up

Floor Standing Type



190 L



270 L

# TECHNOLOGY ADVANTAGE

## A. High Efficiency Micro Channel Heat Exchanger



**Enhance Heat Transfer Efficiency by 30%**

It's with larger surface area, which facilitates more efficient heat exchange between the refrigerant and the air or water, and with less refrigerant charge.



**Durability and Corrosion Resistance With 1500 hrs. Salt Spray Test**

Adopting materials that are more resistant to corrosion (1500 hrs. Salt spray test) than those used in traditional heat exchangers. This enhances their longevity and reliability, especially in environments with high humidity or corrosive elements.



**Compact and Lightweight Design**

It makes the DHW heat pump easier to install and requires less space, which is particularly beneficial in residential installation scenarios.



**Quick Thermal Response**

It can adjust its temperature quickly, allowing the heat pump to respond rapidly to changes in hot water demand.



## B. High Efficiency System Composition



**EXV**

Delivers precise & optimized control of refrigerant flow. Enhance the efficiency in different weather conditions.



**Dedicated DHW Heat Pump Compressor**

GMCC compressor dedicated for R290 DHW heat pump.



**DC Fan Motor**

Engineered for maximum airflow with minimal energy consumption, Low noise level.



**Bigger Evaporator**

Enhance the efficiency, leading to faster heating, lower energy consumption, and improved performance in different environmental conditions

## C. Thermal Efficient Tank

**High Insulation Properties:**

The 50 mm thick polyurethane foam offers superior insulation, significantly reducing heat loss.

**EF-gas Free:**

The polyurethane foam insulation is free from fluorinated gases (F-gases) during and postproduction.

**Energy Efficiency and Cost Savings:**

Ensures minimal energy is required to maintain water temperature.

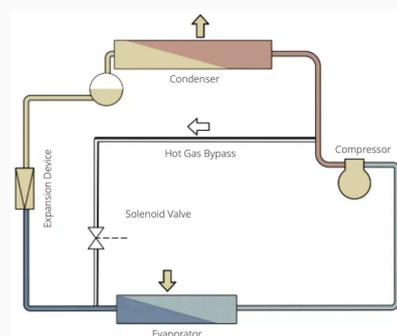


## D. Intelligent Defrost

**Hot Gas Bypass for fast Defrost**

- Direct use superheated vapor to warm the evaporator coil
- Higher efficiency and more energy saving
- Defrost without removing heat from the tank

With Mammoth innovated intelligent defrost logic, the defrost cycle can be finished in 240 s\*, Ensures maximum efficiency and minimum temperature drop.



# COMFORT ADVANTAGE

## A. 4 Temp. Sensors to Ensure Precise Temperature Control

- 1 Tank middle temperature sensor**
  - Ensures water is evenly heated by checking for temperature gradients.
  - Provides assurance of consistent hot water during simultaneous usage.
- 2 Coil temperature sensor**
  - Prevents overheating and maximize efficiency.
  - Enhances longevity of the system.
- 3 Suction pipe temperature sensor**
  - Adjusts the refrigerant flow to enhance efficiency and precise control
- 4 Ambient temperature sensor**
  - Ensures the system operates optimally across different climates and seasons



## B. Reliable Protection

### Safety Enhanced E-Components



Sealed Relay



Electronic Sealant on PCB



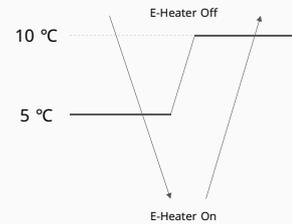
Ceramic Fuse

### High Pressure Protections



Protect the refrigerant system from excessive pressures to ensure safe operation. High-Pressure Protection range: 2.0 – 3.0 MPa

### Anti-Freeze Protection



Based on Tank Bottom Temperature

## C. Smart Home Features – Plug & Play

Powered by Smart Life

### One Button Connection



Thanks to Integrated Bluetooth chip

### Control Panel



Target and current Tank Temp. at a glance

### Weekly Schedule



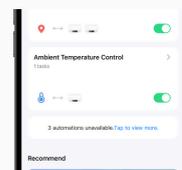
Customize to Lifestyle, Lower carbon emissions

### Geo Location Automation



Leaving home, turn off  
Arriving home, turn on t

### Local Temp. Based Automation

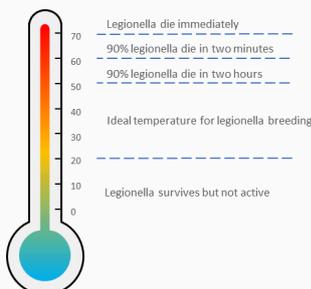


### Supports 60+ Languages

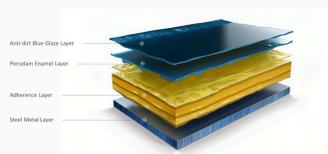


## D. Other Features

### Anti -Legionella Function



### Enamel Coating



### Redesigned Interface for Easy Control



# TECHNICAL SPECIFICATIONS

Enamel model		MA29-DC-190LT	MA29-DC-280LT
Power supply		220V ~ 240V/50/60Hz/1Phase	
Water tank volume		190L	270L
Electric heating element		1.6KW	1.6KW
Heating capacity	*Standard mode (Heat pump only)	2.8kW	2.8kW
Rated input power		0.51kW	0.51kW
COP		5.41	5.46
Recharge rate per hour		58L/h	58L/h
Heating Time(h)		3.3	4.7
Sound level		49dB(A)	49dB(A)
Heating capacity	E-Heater mode (Electric heater only)	1.6kW	1.6kW
Rated input power		1.6kW	1.6kW
COP		/	/
Recharge rate per hour		/	/
Max current (under booster mode)		12A	12A
Refrigerant		R290 (350g)	R290 (350g)
Compressor		Highly / DC Inverter / Rotary	
Fan motor		DC Inverter	
Fan type		Axial	
Expansion valve		EEV	
Defrost		Bypass	
Inner tank		Enamel / 2.0mm tank wall	Enamel / 2.5mm tank wall
Inner tank design		Concave	
Tank insulation		Polyurethane / 45mm	Polyurethane / 50mm
Tank protection		3 x Magnesium Anode	
Heat exchanger		Microchannel	
Outer casing		Galvanized painted sheet / White	
TPR valve		AVG / 850kPa	
Max.water temperature (without using backup heater)		70°C	
Max. water temperature		75°C	
Temperature setting range		10-75°C	
Working range with element		-20°C~43°C	
Working range without element		-7°C~43°C	
IP class		IPX4	
Electric shock proof		I	
Unpacked dimension		φ560x1820mm	φ640x1952mm
Packed dimension (outdoor unit)		670*670*1956mm	640*640*2072mm
Net weight (outdoor unit)		95kg	135kg
Gross weight (outdoor unit)		104kg	145kg
*Above test results are given based on the test condition ambient 20°C/15°C, Water from 15°C~55°C.			