Company Vision & Brand Commitment

Differ Power is committed to reshaping the future of energy through differentiated technology. By integrating hardware, software, multi-scenario applications, and a smart digital ecosystem, we aim to become a leading provider of distributed energy systems, creating lasting value through advanced technology and reliable delivery.

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www.differpower.com

Disclaimer

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Differ Power

Differ Power
develops integrated solar-storage heat pump systems for energy-independent homes

Power Home. Just Differ.



Differ Power: Redefining Integration

Close your eyes and imagine your future home.

Cozy

Space heating: No worry about insufficient warmth.
Hot water: Never run short for baths.
Cooling: Enjoy free cooling in summer.
Pool heating: An inflatable pool may be all children need for a wonderful vacation.

Energy Independence

Household electricity: Solar energy stored in a home battery system.
Zero fuel: Excess PV power charges electric vehicles.



Why Is True Integration Hard to Achieve?

Multi-Protocol Compatibility
Home energy devices often use different communication protocols, making stable system-wide coordination extremely difficult.

Cross-Category System Coordination
Solar, storage, HVAC, EV charging, and backup power operate with completely different control logics and response priorities.

Software & Hardware Co-Development
Most systems integrate products after development, rather than designing hardware and software together from the beginning.

It sounds easy, yet extremely challenging to put into practice.

Hardware Integration:

All essential components in one cabinet

Heat pumps inherently require alternating current (AC) to be converted to direct current (DC) for operation. Why not drive heat pumps directly with photovoltaic (PV) power? The surplus PV electricity can be stored in batteries or fed into the power grid.

Control Integration:

One brain for the entire energy system

Heat pumps account for over 70% of the total energy consumption in a household. Heat and electricity need to be coordinated so that EMS can guide when to store heat, when to charge, and ensure seamless operation even in the event of power outages or network disconnections. Excess electricity can then be traded.

Energy Integration:

One energy flow across the entire home

Solar PV, battery storage, heating, hot water, EV charging, and backup power operate as a single coordinated system, ensuring every kilowatt-hour is used where it creates the greatest value.

Service Integration:

One team, One app. One responsibility

One brand is responsible for the training of heat pumps, batteries and control systems, as well as fault diagnosis and after-sales maintenance services. By reducing the number of SKUs to the minimum, not only for household use but also for partners, operational costs can be significantly lowered.

Differ by name.
Innovative by nature.

From Decarbonization to Home Energy Independence.

Traditional	VS	**Differ D1**
Fragmented & Dependent		Integrated & Independent
Grid-dependent operation		Solar and storage direct drive delivers 10%+ more usable energy
Multiple devices + external gateway		9-in-1 OneBox with built-in connectivity
System shutdown		Seamless power transition for continuous heat pump operation
Fragmented support		One-stop support, app-based diagnosis

R290

Natural R290 Refrigerant
Low-GWP natural refrigerant designed for a lower environmental impact.

A+++ Energy Efficiency Class
Premium energy performance for maximum system efficiency.

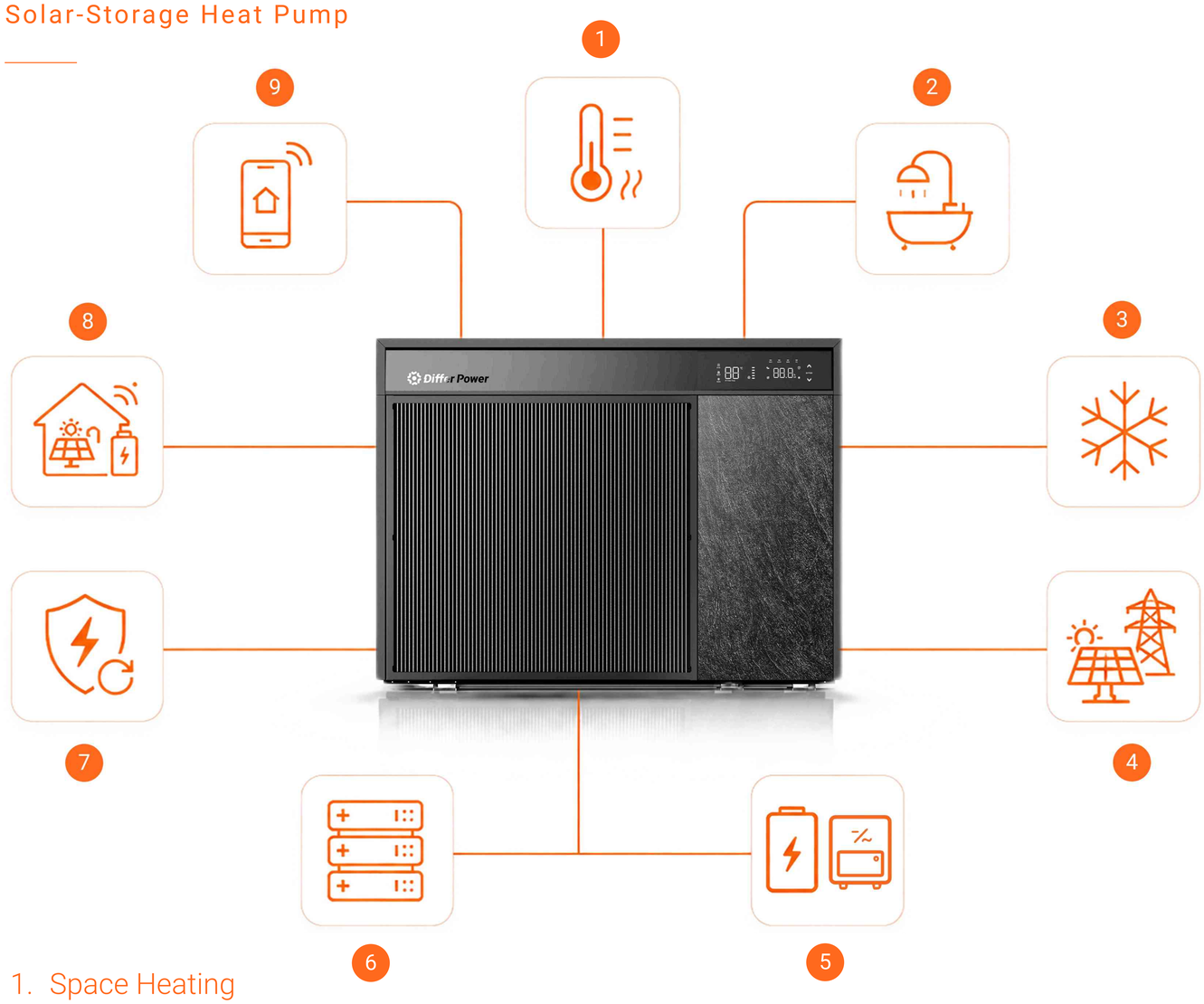
Up to 96% PV Self-Consumption
Maximizing on-site solar utilization and reducing grid dependency.

Reliable Heating at -25°C
Stable heating performance even in extreme cold conditions.



D1 9-in-1 OneBox

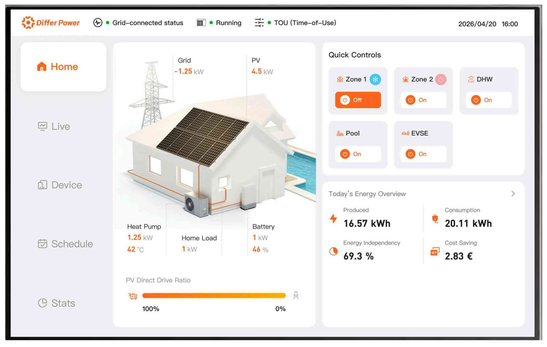
A World-First 9-in-1 Solar-Storage Heat Pump



1. Space Heating
2. Domestic Hot Water
3. Cooling
4. PV Inverter
5. Energy Storage PCS
6. Battery Management
7. 0 ms Seamless Backup Power (EPS)
8. Home Energy Management System (HEMS)
9. Built-in HEMS Gateway & All-in-One App



DifferHome APP



DifferHub
10”Home Energy Controller

Your Heat Pump Now Makes Money

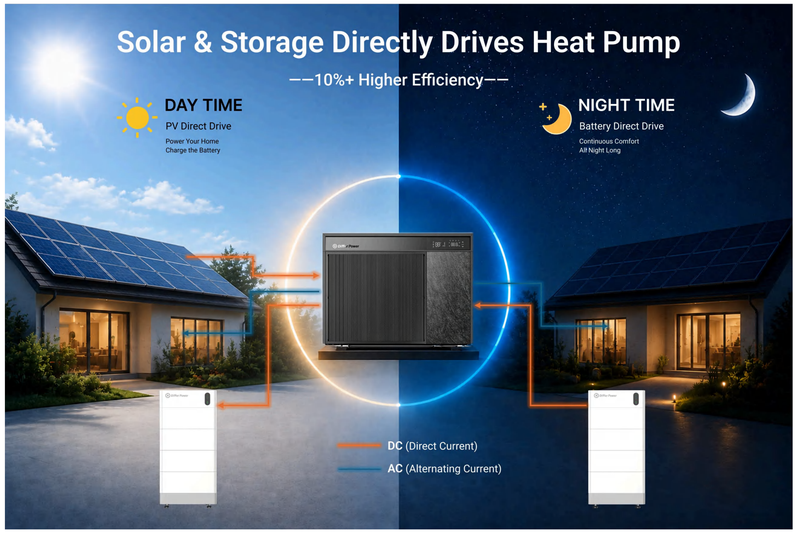
From Energy Consumer to Energy Producer.

Dual DC Drive

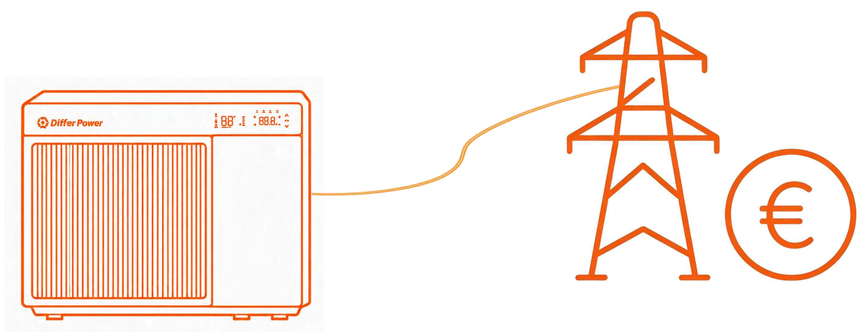
PV DC-Direct-Drive
Solar DC power drives the heat pump directly, reducing inverter conversion losses and improving efficiency by 5%+.

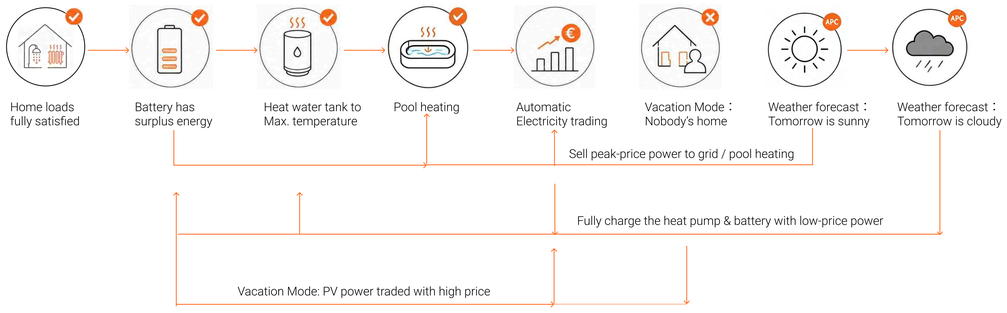
Battery DC-Direct-Drive
Battery DC power feeds the heat pump directly, avoiding two additional conversion steps and improving efficiency by 5%+.

10%+ Higher Efficiency
Over 10% higher efficiency through integrated DC bus architecture.



APC(AI Predictive Control) For Smart Energy Management





AI-Powered Trading Decisions
Simple “peak-valley” arbitrage and VPP trading are no longer enough—grid interactions have evolved into a complex game. The innovation of AI lies in its ability to integrate real-time electricity prices, updated every 15 minutes, with weather forecasts.

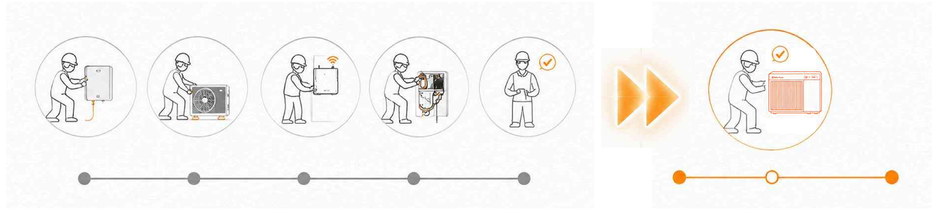
Predictive Profit Optimization
Enabling it to make trade-offs like: “Selling electricity now yields higher profits, but it may deplete stored heat, so cloudy weather tomorrow could force you to buy electricity at a higher cost.” After each decision, it also tells you exactly how much you saved.

Less Equipment More Savings

Integrated for efficiency and savings.

9-in-1 OneBox

50% Faster Installation
Integrated design reduces installation and commissioning time by up to 50%.





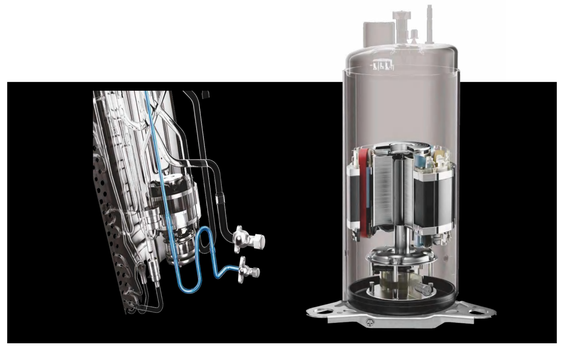




Reduce installers' learning costs
No extra gateway and free communication wiring help reduce overall hardware and installation costs.

DifferTrack™ Intelligent PV Tracking

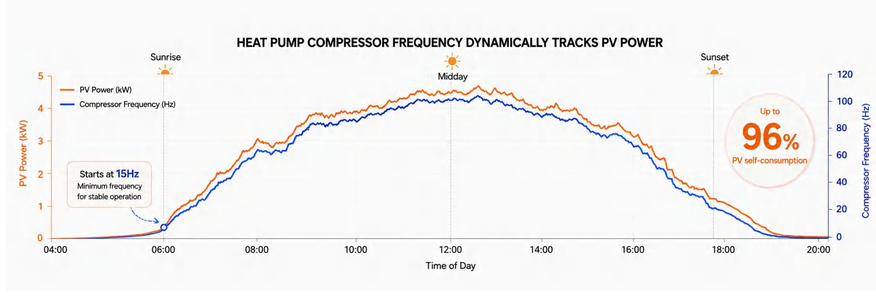
Twin Rotary Compressor – Powering DifferTrack™ dynamic tracking
Wide frequency range for precise PV following.Fast response to maximize self-consumption.Stable from 15Hz to high frequency.Quicker response, broader adjustment than conventional compressors.



DifferTrack:
Heat pump matches PV power precisely
Dynamic heat pump solar power tracking tech. improves solar self-consumption by over 60% compared with SG Ready.

VS

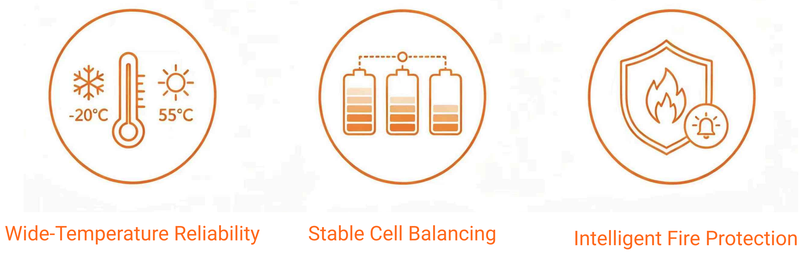
SG Ready



Power
Without Interruption

Seamless backup switching with safe and sustainable energy.





Wide-Temperature Reliability

Stable Cell Balancing

Intelligent Fire Protection

Safer Energy Storage



Seamless Backup Power

Supports Seamless Switchover
Automatically switches to backup power during a grid outage, keeping the heat pump running, lights stable, and refrigerators powered.

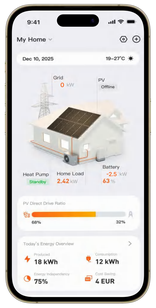
9,000 VA Peak Off-Grid Power
Supports high-power startup loads such as heat pumps and water pumps for up to 10 seconds, without manual load shedding.

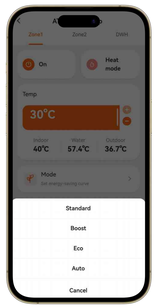
30 Minutes More Backup Power for heat pump by DC-driven
Delivers longer emergency runtime during outages.



DifferHome APP

Full home energy management at your fingertips.





Smart Operating Mode Switching

Intelligently switch heat pump modes via the app to automatically optimize energy use in different scenarios, achieving a balance between comfort and efficiency.

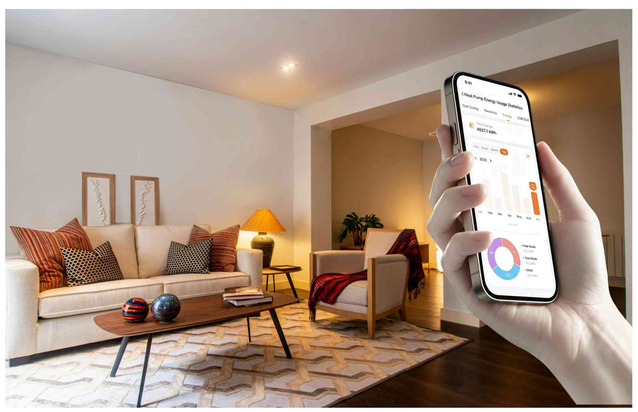


Solar Self-Consumption Optimization

Proportion of heat pump operation powered directly by solar PV, minimizing energy conversion losses and maximizing on-site solar self-consumption.

Maximize Energy Efficiency

Provides daily, monthly, yearly, and total historical energy consumption analytics, helping users optimize energy usage.



For Homeowners

For Installers

Remote Commissioning

Configure and adjust system settings remotely without repeated on-site visits.

Faster Fault Diagnosis

Real-time device status and operating data help identify issues more quickly.

Unified System Management

Manage heat pump, battery, PV, and energy modes from one integrated platform.



Scenario

Powered for real life.

1 Stay Cozy

Feel comfortable in every season.

2 Elevated Living

Pool heating expansion for a better lifestyle.

3 Keep Life Moving

Stay powered through every journey.



Energy Designed for Living

Marble textures and waterfall-inspired lines
transform energy technology into part of the home.

Innovation goes beyond performance
Differ believes innovation is not only about improving performance, but also about redefining the relationship between products and living spaces.

Energy equipment as part of living space
We aim to transform home energy systems from industrial-looking equipment into a natural part of modern residential environments.

Marble-inspired customizable finishes
Inspired by natural marble textures, we introduce customizable front panel finishes tailored to different projects and order requirements.







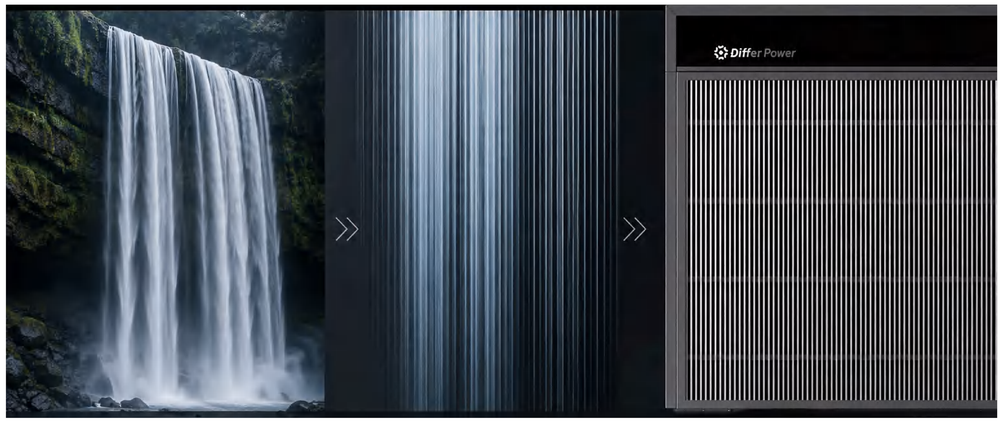
Marble-Inspired Front Panel

Waterfall Grille Visual Noise Reduction Design

Waterfall-Inspired Design
Traditional outdoor energy equipment can feel heavy and mechanical. Differ's waterfall-inspired grille adds rhythm, balance, and visual softness.

Structured Visual Simplicity
Layered vertical lines reduce visual complexity and create a calmer, more architectural look.

Architectural Integration
Inspired by flowing water and architectural facades, the grille design blends naturally into residential environments rather than standing apart.

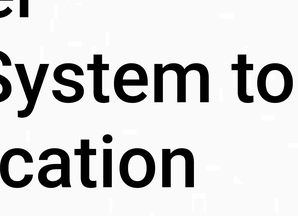


Differ Power —
From One System to Every Application

Continuous innovation, growing together with our partners.



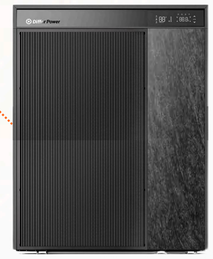
D1 9-in-1 Solar
Storage Heat Pump
Single-Phase



D1 9-in-1 Solar Storage
Heat Pump
Three-Phase



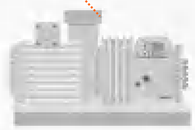
D2 PVT Dual-Source Solar
Storage Heat Pump



D2 Light Commercial
Solar Storage Heat Pump
Dual-Fan | Three-Phase



V Series Industrial Solar
Storage Heat Pump



High-Temperature
Heat Pump

Specifications

Model		DualDriveX-HP-V12-S06	DualDriveX-HP-V14-S06	DualDriveX-HP-V16-S06
Heating A7/W35	Heating Capacity [kW]	12.14	14.02	16.04
	Rated Input Power [kW]	2.52	2.99	3.51
	COP	4.82	4.69	4.57
Heating A7/W55	Heating Capacity [kW]	12.16	14.28	15.84
	Rated Input Power [kW]	3.93	4.76	5.26
	COP	3.09	3.00	3.01
Cooling A35/W7	Cooling Capacity [kW]	5.35	7.02	8.97
	Rated Input Power [kW]	2.56	3.46	4.95
	COP	2.09	2.03	1.81
SCOP	Leaving Water Temp. 35°C	5.11	5.08	5.06
	Leaving Water Temp. 55°C	3.96	3.99	3.99
Energy Efficiency Class	Leaving Water Temp. 35°C	A+++	A+++	A+++
	Leaving Water Temp. 55°C	A+++	A+++	A+++
Noise	ErP Sound Power Level [dB(A)]	57	57	58
Sound Pressure (1m)	Heating A7/W35 [dB(A)]	45	46	49
	Cooling A35/W18 [dB(A)]	43	44	45
PV Input				
Max. PV Array Power [Wp]		12000		
Max. PV Input Power [W]		9000 (4500 / 4500)		
Max. Input Voltage [V]		550		
Start-up Voltage [V]		80		
Rated Input Voltage [V]		380		
MPPT Operating Voltage Range [V]		90 ~ 550		
Max. Input Current [A]		16 / 16		
Max. Short Circuit Current [A]		20 / 20		
Number of MPPTs		2		
Strings per MPPT		1		
Battery Supported				
Battery Type		Lithium Battery		
Battery Voltage Range [V]		80~460		
Max. Charge / Discharge Current [A]		30		
AC Input & Output (Grid)				
Max. Input Power [VA]		12000		
Max. Input Current [A]		54		
Rated Output Power [W]		6000		
Max. Apparent Output Power [VA]		6600		
Rated Voltage [V]		220 / 230 /240		
Rated Grid Frequency [Hz]		50 / 60		
Power Factor		1		
THD@Rated Power [%]		<3		

Notes:
1. Data above based on test reference standard EN14511; EN14825; EN 12102; EN50564; (EU)No:811
2. Actual performance may vary depending on system design, installation, and ambient conditions.
3. All specifications are subject to change without prior notice due to product optimization.
4. Product data updates continuously. Any data change will not be informed exclusively. DifferPower reserves the rights of final interpretation of product technical data and copyrights.

Backup Output (with Battery)				
Max. Apparent Output Power [VA]		6000		
Peak Apparent Output Power [VA]		9000 (10s)		
Max. Output Current [A]		27.3		
Rated Output Voltage [V]		220 / 230 / 240		
Rated Output Frequency [Hz]		50 / 60		
Voltage THD (Linear Load) [%]		<2 (at Rated Power)		
Efficiency				
Max. Efficiency [%]		97.5		
Euro Efficiency [%]		97		
General Specifications				
Compressor	Type	Twin-Rotary DC Inverter		
Outdoor Fan	Motor Type	Brushless DC Motor		
	Quantity	1		
Water-side Plate Heat Exchanger	Water Flow Rate [m³/h]	2.09	2.42	2.75
	Water Pressure Drop [kPa]	30		
Built-in Circulation Pump	Head [m]	9		
Built-in Expansion Tank	Capacity [L]	3		
Built-in Inverter	Cooling Method	Outdoor Fan Assisted Air Cooling		
Refrigerant	Type	R290		
	Factory Charge [kg]	1		
Dimension Guide				
Net Dimensions (W × H × D) [mm]		1300 × 990 × 575(including feet)		
Net Weight [kg]		193		
Standby Power Consumption [W]		<25		
Communication Method	Cloud	WiFi / LAN		
	Battery	CAN		
Energy Meter		CT / Meter		
User Interface		Built-in LCD Screen / Wired Controller		
Water Connection		G 1 1/4"		
Operating Range	Cooling [°C]	5 ~ 45		
	Heating [°C]	-25 ~ 45		
	Domestic Hot Water [°C]	-25 ~ 45		
Water Temperature Range	Cooling [°C]	5 ~ 25		
	Heating [°C]	20 ~ 75		
	Domestic Hot Water [°C]	20 ~ 75		
Protection & Compliance				
Anti-Islanding Protection		Integrated		
PV Input Reverse Polarity Protection		Integrated		
Insulation Resistance Detection		Integrated		
Residual Current Monitoring		Integrated		
Output Over Current Protection		Integrated		
Output Short Circuit Protection		Integrated		
Over Voltage Protection		II (DC), III (AC)		
Surge Protection		DC: Optional / AC: Type II		
Battery Reverse Polarity Protection		Integrated		
AFCI Protection		Integrated		
Safety Standards		IEC/EN 62109-1, IEC/EN 62109-2		
EMC Standards		EN 61000-6-1, EN 61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-2, EN 61000-3-3		
Grid Standards		VDE-AR-N 4105, G99, CEI 0-21, EN50549		