



HEAT PUMP WATER HEATER





NEW 2024

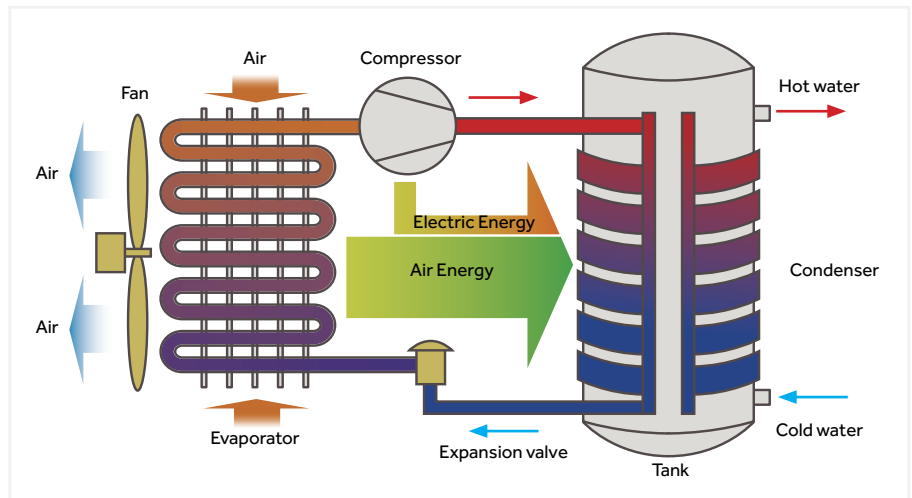
WHAT IS AN HEAT PUMP WATER HEATER?

Our range of Heat Pump Water Heaters provides a direct solution to your hot water necessities. It combines the renewable energy of an aerothermal source with a storage capacity of 80-300 L, allowing adaptations to a wide range of applications ranging from small homes to light commercial scenarios. This system will provide domestic hot water at a fraction of the cost of older technologies, the installation = only involves water piping, therefore it is suitable for renewing previous hot water installations easily and conveniently. Furthermore in 2024 we introduced the new R290 Heat Pump Water Heater range which is both greener and more efficient.

HOW IT WORKS?

To understand the concept of heat pumps, imagine a refrigerator working in reverse. While a refrigerator removes heat from an enclosed box and expels that heat to the surrounding air, a HPWH takes the heat from surrounding air and transfers it to water in an enclosed tank.

A refrigerant changes state, through compression and expansion cycles, absorbing the heat in the air at low temperature and transferring it to domestic water at a higher temperature.



CONDENSER DESIGN



MICRO-CHANNEL CONDENSER

The micro-channel condenser has larger contact surface for better heat transfer performance and less refrigerant consumption.



BOTTOM COIL

An extra coil fitted to the bottom of the tank increases the heat exchange area to deliver more hot water and contributes to better efficiency.

CONDENSER MICRO-CHANNEL VS COIL PIPE



Multiple channel design

Every piece of a micro-channel condenser has 18 micro-channels, which compared to the single-channel coil pipes offer much more contact surface.



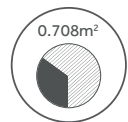
Titanium - aluminum alloy for better corrosion & heat resistances

Micro-channel: 1500 hours salt spray test
Coil pipe: 200 hours salt spray test



Reduces the pressure drop which improves compress efficiency by 6%

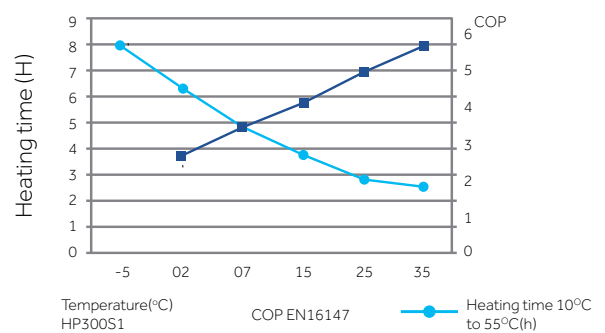
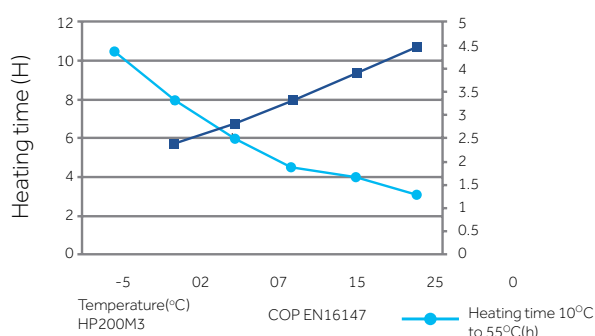
Micro-channel: pressure drop 0.03Mpa
Coil pipe: pressure drop 0.15Mpa



Larger contact surface improves heat transfer efficiency by 30%

Micro-channel: contact surface 0.708m²
Coil pipe: contact surface 0.236m²

PERFORMANCE CURVE



HPWH MODEL LINEUP

SERIES	MONOBLOC				SPLIT
	 M8 NEW	 M7 NEW	 M5	 M3	 S1
80L	•	-	•	-	-
110L	•	-	•	-	-
150L	•	-	•	-	-
200L	-	•	-	•	•
200L With Solar	-	•	-	-	-
250L	-	•	-	•	-
250L With Solar	-	•	-	•	-
300L	-	-	-	-	•

SERIES	MONOBLOC				SPLIT
Product Code	NEW M8 HP80M8-9 HP110M8-9 HP150M8-9	NEW M7 HP200M7-F9 HP200M7C-F9 HP250M7-F9 HP250M7C-F9	M5 HP80M5 HP110M5 HP150M5	M3 HP200M3 HP250M3 HP250M3C	S1 HP200S1 HP300S1
Description	Monobloc type heat pumps are packaged equipment, which includes all hydraulic components. It consists of only one outdoor unit. The advantage of the monobloc system is easy installation and no additional refrigerant piping requirement.				Split type heat pumps consist of one outdoor unit and one indoor unit. The heat exchange between the refrigerant and water is finished in the heat exchanger of indoor unit.
SG ready	●	●	-	-	●
Solar connection	-	● (200C & 250C)	-	● (250C)	-
Exhaust	●	●	●	●	-
hOn WiFi	●	●	-	-	-
Refrigerant	R290	R290	R134A	R134A	R134A
Max. water temperature	65°C	65°C	65°C	65°C	65°C
Energy rating	A+	A+	A+	A+	A+
Mute Mode	36dB(A)	36dB(A)	41dB(A)	41dB(A)	50dB(A)
COP @14°C	3,39	3,50	3,58	3,56	3,80
Micro channel condenser	●	●	●	●	●
Inverter	-	●	-	-	-
DC motor	●	●	-	-	-
Electr. Heater	1,200W	1,500W	1,500W	1,500W	2,150W
Smart defrost	●	●	●	●	●
Tank material	Enamel	Enamel	Enamel	Enamel	Enamel
Display	●	●	●	●	●
Modes	Auto, Eco, Boost, Vac	Auto, Eco, Boost, Vac	Auto, Eco, Boost, Vac	Auto, Eco, Boost, Vac	Auto, Eco, Eco+, Boost, Vac
Sterilisation	75°C	75°C	75°C	75°C	75°C

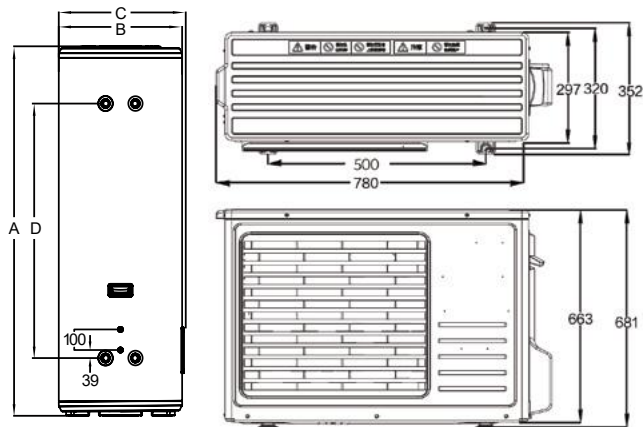
R134A HPWH



S1 HP R134A



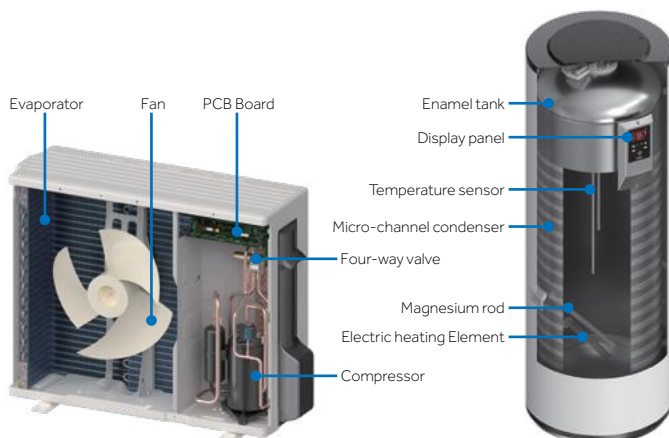
HP200S1 - HP300S1



Model	A	B	C	F
HP200S1	1765	512	522	1270
HP300S1	1765	600	610	1242

Unit:mm

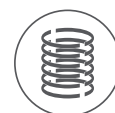
S1 HP TECHNICAL PARAMETERS



FEATURES

- Micro channel and bottom coil heat exchanger with bigger contact surface to heat the water by whole tank. The thermal efficiency will increase dramatically
- Powerful compressors contribute to shorter heating up time
- Under Eco mode, water is heated by heat pump exclusively to maximize efficiency and economy
- Monitors the operating temperature through multi-touch sensors and performs intelligent defrost on demand to prevents invalid operation. It is more effective and energy-saving than scheduled defrost

Model		HP200S1	HP300S1
Model (tank unit)		TS200HE-S1	TS300HE-S1
Model (external unit)		UE1.0-S1	UE1.5-S1
Tank volume	L	195	293
Rated voltage/ frequency	V/Hz	230V/50Hz	230V/50Hz
Tank rated pressure	bar	8.5	8.5
Corrosion protection		Magnesium anode	Magnesium anode
Water proof grade		IPX4	IPX4
Assembled System			
Electric backup power	W	2150	2150
Average input - heat pump only	W	665	850
Maximum input- heat pump only	W	1000	1350
Maximum power input	W	3150	3500
Default temperature setting	°C	55	55
Temperature setting range with heater	°C	35-75	35-75
Temperature setting range heat pump only	°C	35-65	35-65
Refrigerant type / Weight	kg	R134a/1.3	R134a/1.5
Noise power	dB(A)	64	64
Working temperature - heat pump only	°C	-7-45	-7-45
Working temperature - system	°C	-7-45	-7-45
Performance			
Type of extraction		Exterior	Exterior
COP@7 °C (EN16147)		3.09	3.2
COP@14 °C (EN16147)		3.54	3.8
Heating up time (h) (@7°C)		4h03	4h49
Heating up time (h) (@14°C)		3h32	3h49
Tapping cycle (EN16147)		L	XL
Standby power input/ Pes(W) (@7°C)		28	29
Maximum volume of usable hot water V40 (EN16147)	L	245.1	382.6
Water heating energy efficiency class	(ERP)	A+	A+
Dimensions and connections			
Water outlet connection		G3/4" F	G3/4" F
Water inlet & Drain connection		G3/4" F	G3/4" F
Safety valve connection		G3/4" F	G3/4" F
Product Dimensions Tank unit/external unit	WxHxD (mm)	1765/899 × 352/681 × 544/512	1795/899 × 352/681 × 632/600
Packing dimensions Tank unit/external unit	WxHxD (mm)	1927/960 × 425/735 × 676/636	1958/960 × 425/735 × 737/696
Gross weight (kg)		89/44	112/48
Net weight (kg)		77/41	98/44
Load qty. 40HQ		60	51



Micro-Channel Condenser



Fast heating



ECO



Smart Defrost



S1 INSTALLATION



S1 SERIES INSTALLATION REFRIGERANT TUBE

Step 1

Shape the pipes according to the path

Step 2

Remove the threaded brass flare nuts^(A) on the tank unit and store them (check that no impurities are left)

Step 3

Cut pipe to the fixed length, with a pipe cutter, Avoiding any deformation

Step 4

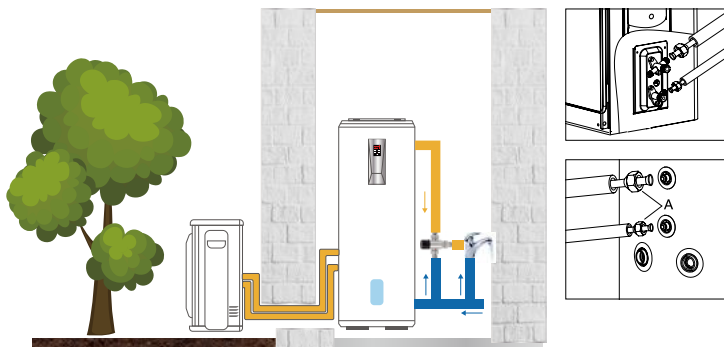
Remove burrs with pipe reamer avoiding to get impurities inside (keep down the tube)

Step 5

Insert the threaded brass flare nuts^(A) on the pipes in the correct direction

Step 6

Insert the tube into the flaring tool and make the flange at the end of the connecting pipe, as indicated in the table.



Installation Specification

Tube*	Specification	Thickness	Tightening Torque [Nm]
Coolant Inlet Pipe	6.35mm (1/4")	0.8mm	15-20
Coolant Outlet Hose	9.5mm (3/8")	0.8mm	29-34

(*Tube Not Supplied)

CONTROL PANELS

MONOBLOC

5" LED display with simple and user friendly touch control allows access to the 4 working modes

AUTO MODE

The Heat pump will work in priority with the electric heater as a backup.

ECO MODE

The Heat pump uses off-peak electricity to minimise the expenses.

BOOST MODE

The Heat pump and electric heater starts up at same time to deliver hot water as fast as possible.

HOLIDAY MODE

The unit stays in stand by mode during the vacation and then restarts in auto mode to prepare enough hot water just one day before the user returns from vacation.

HP200M3
HP250M3
HP250M3C



SPLIT

5" LED display with simple and user-friendly touch control allows access to the 5 working modes

AUTO MODE

The Heat pump will work in priority with the electric heater as a backup.

ECO MODE

The Heat pump works 24 hours however the electric heater only works during off peak condition.

ECO MODE+

Both the Heat pump and electric heater only work under off peak conditions.

HOLIDAY MODE

The unit stays in standby mode during the vacation and then restarts in auto mode to prepare enough hot water just one day before the user returns from vacation.

BOOST MODE

The Heat pump and electric heater work at same time to deliver rapid hot water.

HP200S1
HP300S1

