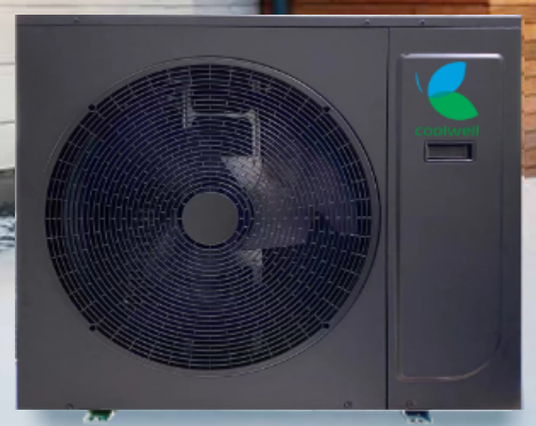
coolwell



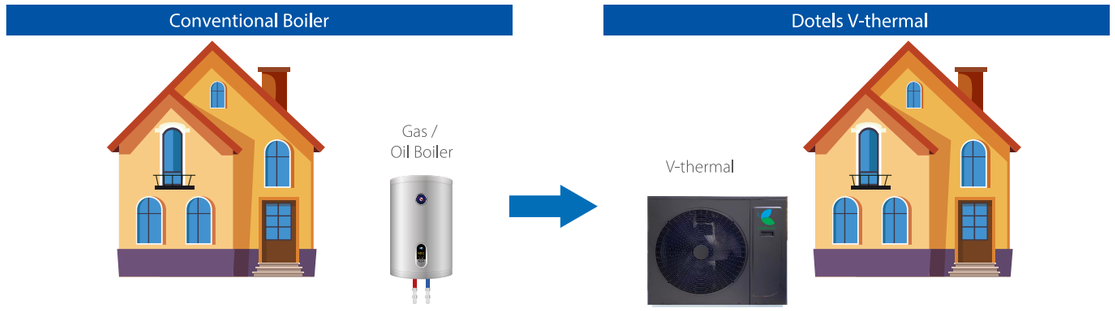
– 2022 –

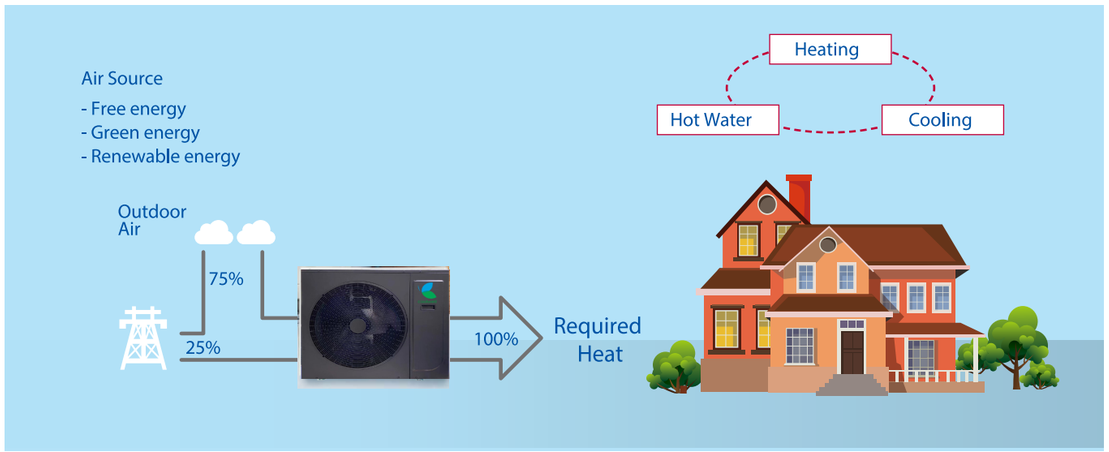
HEAT PUMP TECHNOLOGY

What Is A Heat Pump System?

Modern Technology to Replace Conventional Boilers

Historically, conventional heating systems have used either oil or gas or have been direct electric heaters. In such conventional heating systems, environmental aspects such as fossil fuel use and environmental pollution have been overlooked. In recent years, interest in these environmentally friendly devices has been increasing and in order to meet these market demands, Dotels has further developed their heat pump technology to produce the most efficient, environmentally friendly products in the industry.





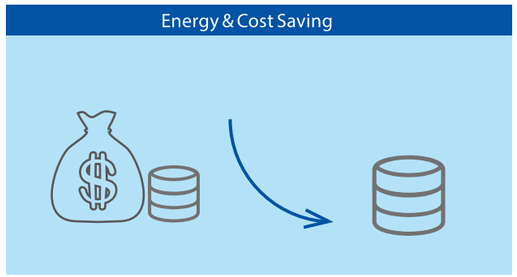
Why Choose An Air To Water Heat Pump?

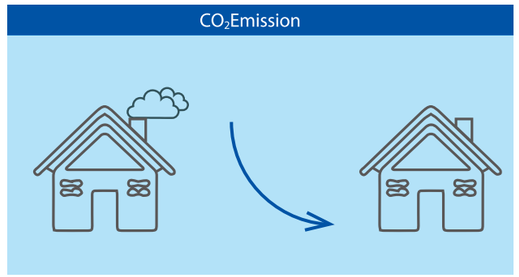
Air to water heat pump is renewable.

Air to water heat pump only uses less energy than furnaces, gas / electric water heater. The heat pump product absorbs energy from the surrounding air of the outdoor unit and transfers the energy into the refrigerant of the unit. The heat energy is upgraded using a refrigerant cycle and this renewable heat energy is transferred in the water by heat-exchanger.

Air to water heat pump has great financial benefits.

Air to water heat pump will most likely save a lot of money on your annual fuel bills due to the unit' s high COP (Coefficient of performance).When the unit can achieve COP between 3-4,meaning the unit can produce 3kW to 4kW of heat for every 1kW power consummed.





Air to water heat pump is more reliable.

Air to water heat pump	Gas water heater	Electric water heater	Boiler
Safe to operate	Risk of fire and explosion	Risk of electric shocks	Risk of fire and explosion
Easy for installation	Lifespan of several years	Expensive to install	Lifespan of several years
Cheap to operate	Expensive to operate	Expensive to operate	Expensive to operate

Air to water heat pump is help to decrease your carbon footprint.

Compared with gas water heater and boiler, because heat pump water heater does not directly use combustion to generate heat, the unit don' t cause as much pollution and have a smaller carbon footpring. Air to water heat pump only need a small amount of electricity to run the compressor and fan motor.
Comparison of the power needed to heat 1 ton water from 15˚C to 55˚C under the same conditions:

	Air to water HP	Gas water heater	Electric water heater	Boiler
Energy resource	Air & electricity	Gas	Electricity	Diesel oil
Calorific value	860kcal/kW·h	24,000kcal/m^3	860kcal/kW·h	10,200kcal/kg
Average efficiency	4.6	0.8	0.95	0.7
Consumption	10kW·h	2.08m^3	48.9kW·h	5.6kg

R32 Monobloc

- Operation range down to -25˚C
- Maximum LWT reach 65˚C
- Single point maximum COP 5.01
- Energy efficiency level:A+++

R32 monobloc

Solutions for House Heating/Cooling and domestic hot water in one system.
R32 monobloc is an integrated system which provides house heating/cooling as well as domestic hot water,offering a complete and convenient solution which can replace the needs for traditional gas or oil boilers, or work together with them.

Monobloc							
Model(kw)	4kw	6KW	8KW	10KW	12KW	14KW	16KW
220~240-1ph	√	√	√	√	√	√	√
380~415-3ph					√	√	√

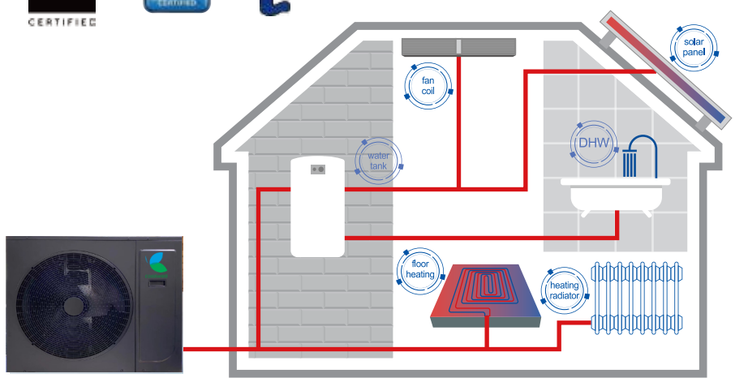
Excellent Performance & Efficiency

R32 refrigerant · Solar thermal · ERP A+++@35˚C · LWT 65˚C · @A7W35 for 10kW

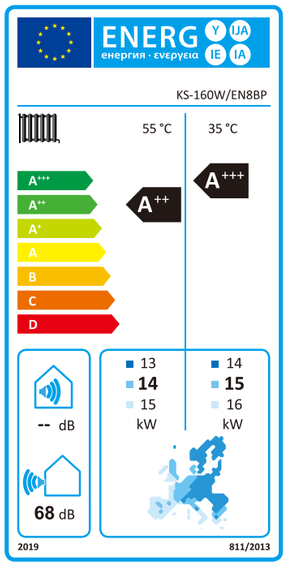
User Convenience

Intuitive interface · WIFI · 2 zones control · gas boiler · DHW · Low noise mode · 3kW back up heater as standard · Auto mode

Certificates



Energy Label



* 35˚C A+++
* 55˚C A++

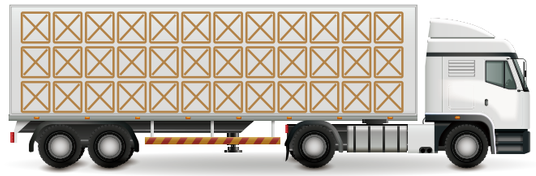
Eco-Conscious with R32 Refrigerant

- R32 efficiently works even in small volume compared to existing R410A refrigerant, which decreases the potential hazard of global warming. Furthermore, R32 refrigerant is easy to recycle
- Lower GWP and carbon emission(GWP:Global Warming Potential) reduce up to 75% of CO^2 eg comparng with R410 A

Structure innovation

- Single fan compact structure design for 4~16kW models with lower noise,and more loading quantity
- Three cabinets design which can ensure more compact and cost control
- Three layer loading can put 135 pcs for 4-6-8kw model in a 40HQ container.

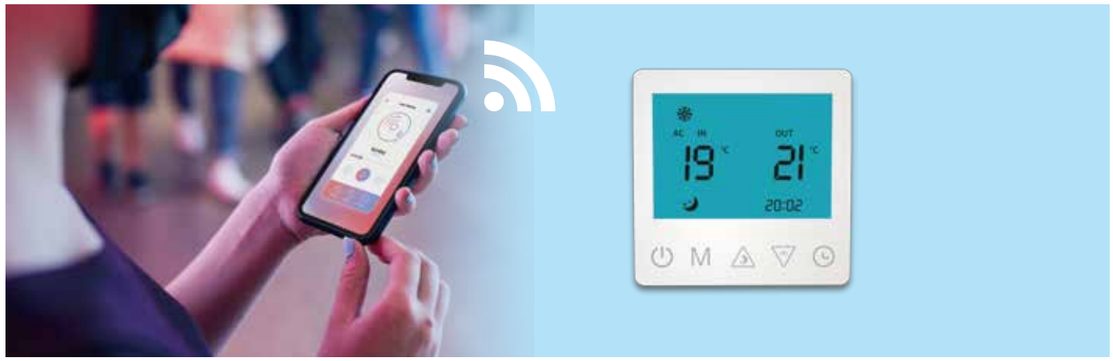
Single Fan Structure
Greatly Reduces Noise



Loading 3 Layers

Electric Back up Heater and Leading brand components

Multi-function wired controller and APP control



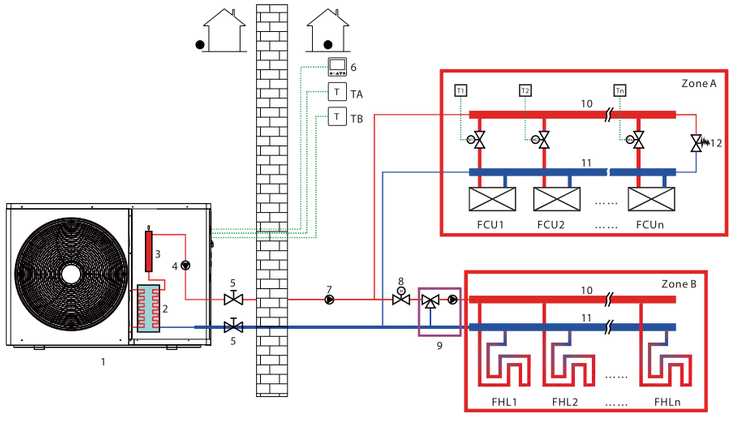
- Icon languages
- Modbus protocol and network flexibility
- Built-in wifi module supports APP control
- Check the running state of heat pump, zone switch, operation mode and temperature

Extremely silent

- Two level of silent mode provides more comfort
- Silent mode minimum sound power level 55dB

Two zones control

For different indoor terminal units, the design leaving water temperature is different. The two zones control function is used to ensure different indoor terminal units working at its design temp. to enhance the comfort and save energy.



Specifications

Specification--monobloc									
Model name			4kW	6kW	8kW	10kW	12kW	14kW	16kW
Power supply		V/Ph/H	220-240 / 1 / 50						
Heating[1]	Capacity	kW	3.96	6.01	7.93	10.21	12.06	14.47	15.91
	Rated input	kW	0.75	1.17	1.76	2.04	2.57	2.99	3.42
	COP		5.25	5.13	4.50	5.01	4.7	4.84	4.65
Heating[2]	Capacity	kW	4.18	6.04	8.30	10.20	12.10	14.50	15.9
	Rated input	kW	1.11	1.63	2.61	2.79	3.36	3.89	4.63
	COP		3.77	3.70	3.18	3.65	3.6	3.72	3.43
Heating[3]	Capacity	kW	4.41	6.09	7.70	9.60	12.30	13.80	15.80
	Rated input	kW	1.46	2.13	2.98	3.22	4.44	4.42	6.12
	COP		2.84	2.86	2.58	2.98	2.77	3.12	2.58
Cooling[4]	Capacity	kW	3.98	6.18	8.16	10.01	11.85	14.14	15.72
	Rated input	kW	0.77	1.26	1.75	2.42	2.72	3.10	4.03
	EER		5.19	4.91	4.65	4.14	4.36	4.56	3.90
Cooling[5]	Capacity	kW	4.29	6.27	7.58	8.78	11.58	14.30	15.98
	Rated input	kW	1.32	1.99	2.55	2.97	4.14	5.11	6.12
	EER		3.24	3.14	2.97	2.96	2.80	2.80	2.61
Seasonal space heating energy efficiency class	LWT at 35°C		A+++	A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55°C		A++	A++	A++	A++	A++	A++	A++
SCOP	LWT at 35°C		4.96	5.05	4.62	4.86	4.65	4.56	4.65
	LWT at 55°C		3.47	3.52	3.32	3.51	3.37	3.45	3.57
SEER	LWT at 7°C		5.15	5.27	5.17	4.66	5.02	4.76	4.63
	LWT at 18°C		8.56	8.77	8.31	8.23	8.15	6.72	6.51
MOP(Maximum overcurrent protection)		A	18	18	21	25	25	30	30
MCA(minimum circuit amps)		A	12	14	16	1 9	23	26	27
Water pressure drop		kPa	25	25	39	37	36	38	38
Refrigerant system pressure (Max. / Min.)			4.5MPa /1.5MPa						
Refrigerant	Type		R32	R32	R32	R32	R32	R32	R32
	Charged	kg	1.03	1.03	1.3	1.5	1.75	2.1	2.1
GWP value			675	675	675	675	675	675	675
Equivalent CO_2		Ton	0.695	0.695	0.878	1.013	1.181	1.417	1.417
Compressor	Type		Twin rotary DC inverter						
	Brand		Mitsubishi						
	Model		SVB172FNPMC	SVB172FNPMC	SVB220FLGMC-L	SVB220FLGMC-L	MVB33FBBMC	MVB42FCBMC-L	MVB42FCBMC-L
	Quantity		1	1	1	1	1	1	1
	Capacity	kW	5.54 (@60rps)	5.54 (@60rps)	7.10 (@60rps)	7.10 (@60rps)	11.37 (@60rps)	14.38 (@60rps)	14.38 (@60rps)
	Input	kW	1.73 (@60rps)	1.73 (@60rps)	2.23 (@60rps)	2.23 (@60rps)	3.57 (@60rps)	4.4 (@60rps)	4.4 (@60rps)
	Current	A	5.1 (@60rps)	5.1 (@60rps)	6.6 (@60rps)	6.6 (@60rps)	11 (@60rps)	13 (@60rps)	13 (@60rps)
	Oil type / charged		FW68S / 600ml	FW68S / 600ml	FW68S /460ml	FW68S / 460ml	FW68S / 1100ml	FW68S / 1250ml	FW68S / 1250ml
Outdoor fan	Motor type		Brushless DC motor						
	Number of fans		1	1	1	1	1	1	1
Air side heat exchanger	Material		Hydrophilic aluminum & Inner groove copper tube						
	Rows		1.5	1.5	2	2.5	2.5	3	3
	Tube size	mm	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7
Fan motor	Fan type		3 blade						
	Motor type		BLDC						
	Motor model		EHTSO3BLQ	EHTSO3BLQ	EHTSO3BLQ	EHTSO3BLQ	EHTSO3BLQ	EHTSO1DLQ	EHTSO1DLQ
	Motor Brand		Panasonic						
	Quantity		1	1	1	1	1	1	1
	Speed	rpm	850	850	850	850	850	825	825
Throttle type			Electronic expansion valve						
Water side heat-exchanger			Plate heat exchanger						
Sound power level[6]		dB	56	58	59	60	64	65	68
Controller (Standard: LCD)			GR-LC07						
Anti-UV cover			NO						
Water resistance			IPX4						
Water pipe connection	Inlet	mm	Φ33	Φ33	Φ33	Φ33	Φ33	Φ33	Φ33
	Outlet	mm	Φ33	Φ33	Φ33	Φ33	Φ33	Φ33	Φ33
Net/Gross weight	Net/Gross	kg	76/81	78/93	80/93.5	93/103	97/117	117/136	117/136
Dimension (LxWxH)	Net	mm	1125×370×680	1125×370×680	1125×370×680	1135×370×803	1135×370×803	1203×481×860	1203×481×860
	Packing	mm	1200×425×865	1200×425×865	1200×425×865	1260×488×982	1260×488×982	1305×495×1040	1305×495×1040
	Loading quantity (20GP/40GP)	sets	42/135	42/135	42/135	40/84	40/84	38/82	38/82
Operating temperature	Cooling	°C	-5 to 43						
	Heating	°C	-25 to 35						
	DHW	°C	-25 to 43						

Note:
1. Outdoor air temperature 7°C DB ,85% R.H ; EWT 30°C,LWT 35°C
2. Outdoor air temperature 7°C DB ,85% R.H ; EWT 40°C,LWT 45°C
3. Outdoor air temperature 7°C DB ,85% R.H ; EWT 47°C,LWT 55°C
4. Outdoor air temperature 35°C DB ,85% R.H ; EWT 23°C,LWT 18°C
5. Outdoor air temperature 35°C DB ,85% R.H ; EWT 12°C,LWT 7°C
6. Test standard:EN12102-1

R32 SPLIT

- Operation range down to -25˚C
- Maximum LWT reach 65˚C
- Energy efficiency level:A+++

R32 Split

R32 Split is comprising a separate indoor and outdoor unit, which are connected by refrigerant piping. Hydronic components such as plate heat exchanger, expansion tank and water pump are located within the indoor unit, making the unit capable of with standing freezing outside ambient temperatures.

Split type							
Model(kw)	4kw	6KW	8KW	10KW	12KW	14KW	16KW
220~240-1ph	√	√	√	√	√	√	√
380~415-3ph					√	√	√

R32 Split integrated water tank

R32 Split IWT is a domestic hot water supply, space heating and cooling solution that conveniently combines an 200L indoor hot water tank with a separate outdoor unit. R32 Split IWT is the perfect space-saving solution for residential applications because hydronic components like the Domestic Hot Water (DHW) and buffer tanks, which are typically installed separately, are fully integrated. Dotels IWT will be launched in later 2022.

Split IWT						
Model(kw)	6KW	8KW	10KW	12KW	14KW	16KW
220~240-1ph (with 200L tank)	Developing					

Specifications

Model name			4kW	6kW	8kW	10kW	12kW	14kW	16kW
Power supply		V/Ph/H	220-240 / 1 / 50						
Heating[1]	Capacity	kW	4.0	6.0	7.9	9.7	12.1	14.3	16.2
	Rated input	kW	0.83	1.23	1.75	2.10	2.68	3.10	3.67
	COP		4.82	4.89	4.52	4.61	4.52	4.61	4.41
Heating[2]	Capacity	kW	4.1	6.1	8.3	9.8	11.6	14.5	16.2
	Rated input	kW	1.15	1.70	2.41	2.83	3.66	3.89	4.48
	COP		3.56	3.58	3.45	3.48	3.17	3.72	3.62
Heating[3]	Capacity	kW	4.1	6.2	8.0	9.9	11.7	13.8	16.2
	Rated input	kW	1.46	2.18	2.96	3.58	4.30	4.42	5.59
	COP		2.81	2.84	2.70	2.77	2.72	3.12	2.90
Cooling[4]	Capacity	kW	4.2	6.2	8.1	10.3	12.1	13.5	14.9
	Rated input	kW	0.87	1.29	1.76	2.25	2.99	3.75	4.38
	EER		4.82	4.81	4.59	4.58	4.04	3.65	3.41
Cooling[5]	Capacity	kW	4.0	6.0	7.7	9.6	10.9	12.7	14.0
	Rated input	kW	1.41	2.04	2.77	3.26	4.09	4.98	5.71
	EER		2.83	2.94	2.78	2.94	2.66	2.55	2.45
Seasonal space heating energy efficiency class	LWT at 35℃		A+++	A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55℃		A++	A++	A++	A++	A++	A++	A++
SCOP	LWT at 35℃		4.88	4.90	4.61	4.82	4.70	4.56	4.55
	LWT at 55℃		3.35	3.36	3.30	3.26	3.39	3.45	3.36
SEER	LWT at 7℃		5.19	5.28	5.17	4.66	5.02	4.76	4.63
	LWT at 18℃		8.28	8.39	8.31	8.23	8.15	8.25	8.21
MOP(Maximum overcurrent protection)		A	18	18	21	25	25	30	30
MCA(minimum circuit amps)		A	12	14	16	19	23	26	27
Water pressure drop		kPa	25	25	39	37	36	38	38
Refrigerant system pressure (Max. / Min.)			1.5MPa / 4.15MPa						
Refrigerant	Type		R32	R32	R32	R32	R32	R32	R32
	Charged	kg	1.40	1.40	1.50	1.60	1.75	1.84	1.84
GWP value			675	675	675	675	675	675	675
Equivalent CO_2		Ton	0.945	0.945	1.013	1.080	1.181	1.242	1.242
Compressor	Type		Twin rotary DC inverter						
	Brand		Mitsubishi						
	Model		SVB172FNPMC	SVB172FNPMC	SVB220FAGMC-L	SVB220FAGMC-L	MVB33FBPMC	MVB42FCBMC-L	MVB42FCBMC-L
	Quantity		1	1	1	1	1	1	1
	Capacity	kW	5.54 (@60rps)	5.54 (@60rps)	7.10 (@60rps)	7.10 (@60rps)	11.37 (@60rps)	14.38 (@60rps)	14.38 (@60rps)
	Input	kW	1.73 (@60rps)	1.73 (@60rps)	2.23 (@60rps)	2.23 (@60rps)	3.57 (@60rps)	4.4 (@60rps)	4.4 (@60rps)
	Current	A	5.1 (@60rps)	5.1 (@60rps)	6.6 (@60rps)	6.6 (@60rps)	11 (@60rps)	13 (@60rps)	13 (@60rps)
	Oil type / charged		FW68S / 600ml	FW68S / 600ml	FW68S /460ml	FW68S / 460ml	FW68S / 1100ml	FW68S / 1250ml	FW68S / 1250ml
Outdoor fan	Motor type		Brushless DC motor						
	Number of fans		1	1	1	1	1	1	1
Air side heat exchanger	Material		Hydrophilic aluminum & inner groove copper tube						
	Rows		2	2	2	2.5	2.5	3	3
	Tube size	mm	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7
Fan motor	Fan type		3 blade						
	Motor type		BLDC						
	Motor model		EHTSO3BLQ	EHTSO3BLQ	EHTSO3BLQ	EHTSO3CLQ	EHTSO3CLQ	EHTSOIDLQ	EHTSOIDLQ
	Motor Brand		Panasonic						
	Quantity		1	1	1	1	1	1	1
	Speed	rpm	850	850	850	850	850	825	825
Throttle type			Electronic expansion valve						
Water side heat-exchanger			Plate heat exchanger						
Piping connections	Type		Flare	Flare	Flare	Flare	Flare	Flare	Flare
	Liquid Dia.(OD)	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas Dia.(OD)	mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	Min.pipe length	m	2	2	2	2	2	2	2
	Max.pipe length	m	30	30	30	30	30	30	30
Isntallation height difference	Outdoor unit above	m	20	20	20	20	20	20	20
	Outdoor unit below	m	20	20	20	20	20	20	20
Sound power level[6]	OUTDOOR	dB	42	42	42	42	42	42	42
	INDOOR	dB	56	58	59	60	64	65	68
Controller (Standard: LCD)			GR-LC07(NO WiFi) or GR-LC07-1(WiFi)or GR-LC10						
Anti-UV cover			NO						
Water resistance			IPX4						
Net/Gross weight	INDOOR-Net/Gross	kg	36/41	37/42	38/43	39/44	40/45	41/46	41/46
	OUTDOOR-Net/Gross	kg	57/62	58/63	60/65	63/70	65/72	93/108	93/108
Dimension (L×W×H)	OUTDOOR-Net	mm	920×365×710	920×365×710	920×365×710	920×365×710	920×365×710	920×365×710	920×365×710
	OUTDOOR-Packing	mm	1025×465×760	1025×465×760	1025×465×760	1025×465×760	1025×465×760	1025×465×760	1025×465×760
	INDOOR-Net	mm	909×465×273	909×465×273	909×465×273	909×465×273	909×465×273	909×465×273	909×465×273
	INDOOR-Packing	mm	960×525×345	960×525×345	960×525×345	960×525×345	960×525×345	960×525×345	960×525×345
Operating temperature	Cooling	C	-5 to 43						
	Heating	C	-25 to 35						
	DHW	C	-25 to 43						

Note:
1、Outdoor air temperature 7℃ DB ,85% R.H ; EWT 30℃,LWT 35℃
2、Outdoor air temperature 7℃ DB ,85% R.H ; EWT 40℃,LWT 45℃
3、Outdoor air temperature 7℃ DB ,85% R.H ; EWT 47℃,LWT 55℃
4、Outdoor air temperature 35℃ DB ,85% R.H ; EWT 23℃,LWT 18℃
5、Outdoor air temperature 35℃ DB ,85% R.H ; EWT 12℃,LWT 7℃
6、Test standard:EN12102-1

SANITARY HOT WATER HEAT PUMP (All in one)

OVER
70%
Energy Saving

Sanitary Hot Water Heat Pump (All in one)

Flexible Installation Location

Laundry room

Garage

Storage room

Bath room

Refrigerant	80L	100L	120L	200L	250L	300L	500L
R134a	√	√	√	√	√	√	√
R290	√	√	√				

Stainless steel	80L	100L	120L	200L	250L	300L	500L
304	√	√	√	√	√	√	√
316L	√	√	√	√	√	√	√
Duplex 2205	√	√	√	√	√	√	√

- ErP energy class: A/A+Ambient temperature: -5°C to 43°C
- Setting temperature: 10°C to 70°C
- Certified with CE-LVD,CEEMC,CB, ErP A/A+,EN16147 Standard, Rohs, ETL, EnergyStar, CCC.
- Flexible Stainless Steel tank(SS304/316/2205),
- Water storage from 100L to 500L for 2 to 8 people

Wall-mounted series

sanitary hot water heat pump will simultaneously cool down the room and provide hot water to cover all your daily needs. The units are the most energy efficient and cost effective way of water heating. Considering the expensive and increasing sea freight,our new 80L and 100L heat pump has a perfect packing dimensions which can be loaded 152 pieces in 40HQ.

Specification–wall-mounted series				
TECHNICAL DATA		AXHW-11/80L	AXHW-10a/100L	AXHW-11/120L
Heating capacity	kW	1.1	1.03	1.1
Power input	W	263	253	263
COP	W/W	4.18	4.06	4.18
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
Max Current	A	1.75 +6.8 (e-heater)	1.7 +6.8 (e-heater)	1.75 +6.8 (e-heater)
Max leaving water temperature	℃	70	60	70
Max. water temperature	℃	70	70	70
Rated water yield	L/H	23.6	22	23.6
Working temperature range	℃	-10~43	-5~43	-10~43
Max. discharge pressure	bar	28	22	28
Min. suction pressure	bar	8	6	8
Compressor (Brand/Type/Model)		GMCC/Rotary/RDSK57V11EZR	GMCC/Rotary/RJSN68V2TZRA1	GMCC/Rotary/RDSK57V11EZR
Refrigerant type		R290	R134a	R290
Fan motor (Type/W/RPM)		Asynchronous motor/40/900	Asynchronous motor/40/900	Asynchronous motor/40/900
Air flow	m^3/h	250	250	250
Duct diameter	mm	177	177	177
Max allowed pressure of tank	bar	10	10	10
Inside body material of tank		SUS 304/316L	SUS 304/316L	SUS 304/316L
Inner tank thickness(mm)		1.0MM	1.0MM	1.0MM
Insulation material		Polyurethane	Polyurethane	Polyurethane
Thickness of the tank insulation (mm)		45	45	45
Outside tank material		galvanized steel	galvanized steel	galvanized steel
Outside tank thickness(mm)		0.5	0.5	0.5
Coating thickness of the tank cover (mm)		0.05	0.05	0.05
Water tank Colour		white, silver	white, silver	white, silver
Hot water outlet	inch	G 3/4	G 3/4	G 3/4
Solar heat source inlet/outlet	inch	G 3/4	G 3/4	G 3/4
Cold water inlet	inch	G 3/4	G 3/4	G 3/4
Size of water drain	inch	G 3/4	G 3/4	G 3/4
Condensed water outlet	inch	G 1/2	G 1/2	G 1/2
Material of heat pump coil		Alumium(external coil)	Alumium(external coil)	Alumium(external coil)
Size of heat pump coil (Diameter*Thickness*Length)	mm	φ9.52*0.91*18000	φ9.52*0.91*28000	φ9.52*0.91*18000
Unit protection Indoor unit (IP xx)		IPX1	IPX1	IPX1
Timer function included yes/no		Y	Y	Y
Water tank Volume	L	80	100	120
Net Dimensions	mm	φ510x1078	φ510x1167	φ510x1328
Packing Dimensions	mm	565x565x1185	565x565x1275	565x565x1435
Net Weight	Kg	52	56	60
Gross Weight	Kg	57	60	65
Noise level	dB(A)	44	44	44
Included features:		Sanitary water heating auxiliary electrical heater-(SUS310S)1.6kw Salgnomia Electronic expansion valve electrical Titanium anode	Sanitary water heating auxiliary electrical heater-(SUS310S)1.6kw Salgnomia Electronic expansion valve electrical Titanium anode	Sanitary water heating auxiliary electrical heater-(SUS310S)1.6kw Salgnomia Electronic expansion valve electrical Titanium anode
Loading quantity of 20GP		38	38	38
Loading quantity of 40GP		76	76	76
Loading quantity of 40HQ		152	152	76

NOTES:
Capacities and power inputs based on the following conditions:
- Heating: Ambient temperature 20°C/15°C, Water temperature from 15°C to 55°C.



High efficiency, friendly environment

- ErP certificated, energy class A.
- High efficient compressor, well-known brand.
- Condenser coil with D shape tube, ensure high efficient ratio of heat exchange.
- R134a, lower GWP, and environmentally friendly.

High reliable

- Adopt EXV control technology to achieve accuracy refrigerant control.
- Multi-protections include: over heat protection of refrigerant, high and low pressure switch, temperature on/off protection.
- Automatic anti-legionella per week, more reliable and health.

Utilization of solar energy, more green

- Compatible with solar panels, solar PV and other heat source, like boilers. (Customized)

Easy installation, conveneint operation

- All-in-one design, only plumber installations and plugging in.
- User-friendly screen controller with LED display.
- Operating status and error codes can be clearly displayed on controller screen.

Wide range

- Full storage of tank size: 100L to 500L.
- Wide operation ambient temperature range: -5°C - 43°C.
- Setting temperature range of hot water is from 10°C to 70°C, and default is 50°C.

Flexible air duct connections

- 60Pa static pressure enable the air duct total length up to 8m.

Energy and cost saving

	HPWH	Gas water heater	Elec. water heater
Energy resource	Air& electric	Natural gas	Electric
Calorific value (Q1)	860kcal/kW·h	9,500kcal/m^3	860kcal/kW·h
Average efficiency (f)	4.0	0.8	0.95
Consumption (C)	11.63kW·h	5.26m^3	48.96kW·h
Electric/LPG price (P)	RMB0.6/kW·h	RMB2.6/m^3	RMB0.6/kW·h
Total cost (Ct)	RMB6.98	RMB13.68	RMB29.38

When 1m3 water is heated from 15°C to 55°C:
The formula of consumption (C): C = 40,000kCal ÷ Q1 ÷ f.
The formula of total cost (Ct): Ct = C × P

75%

Max. ratio of energy saving cost than traditional.

1kW.h

Only 1kW.h of electricity, enjoy the spa at home.

Specification - R134a Sanitary Hot Water Heat Pump						
TECHNICAL DATA		AXHW-20a/150L	AXHW-20a/200L	AXHW-20a/250L	AXHW-20a/300L	AXHW-40a/500L
Heating capacity	kW	2.02	2.02	2.02	2.02	3.8
Power input	W	486	486	486	486	945
COP	W/W	4.16	4.16	4.16	4.16	4.02
Power supply	V/Ph/Hz	220-240/1/50				
Max Current	A	3.2 +6.8 (e-heater)				6.2 +6.8 (e-heater)
Max leaving water temperature	℃	60				
Max. water temperature	℃	70				
Rated water yield	L/H	45				82
Working temperature range	℃	-5~43				
Max. discharge pressure	bar	22				
Min. suction pressure	bar	6				
Compressor (Brand/Type/Model)		GMCC/Rotary/PJ125G1C-4DZDE				GMCC/Rotary/PJ250M2C-4FT
Refrigerant type		R134a				
Fan motor (Type/W/RPM)		Asynchronous motor/80/1280				Asynchronous motor/194/1300
Air flow	m^3/h	450				900
Duct diameter	mm	177 (Fit flexible 180/200mm duct)				
Max allowed pressure of tank	bar	10				
Inside body material of tank		SUS 304/316L				
Inner tank thickness(mm)		1.5mm				
Insulation material		Polyurethane				
Thickness of the tank insulation (mm)		45				
Outside tank material		galvanized steel				
Outside tank thickness(mm)		0.5				
Coating thickness of the tank cover (mm)		0.05				
Water tank Colour		white, silver or according to customer's requirement				
Hot water outlet	inch	G 3/4				
Solar heat source inlet/outlet	inch	G 3/4				
Cold water inlet	inch	G 3/4				
Size of water drain	inch	G 3/4				
Condensed water outlet	inch	G 1/2				
Material of heat pump coil		Alumium(external coil)				
Size of heat pump coil (Diameter*Thickness*Length)	mm	φ9.52*0.91*55000				φ9.52*0.91*80000
Unit protection Indoor unit (IP xx)		IPX1				
Timer function included yes/no		Y				
Water tank Volume	L	150	200	250	300	500
Net Dimensions	mm	φ560x1500	φ560x1750	φ640x1765	φ640x1845	φ700x2230
Packing Dimensions	mm	615x615x1620	615x615x1870	695x695x1895	695x695x1975	750x750x2355
Net Weight	Kg	86	90	94	97	115
Gross Weight	Kg	90	94	98	101	120
Noise level	dB(A)	46	46	46	46	48
Included features:		Sanitary water heating				
		auxiliary electrical heater-(SUS310S) 1.6kw				
		Salgnomia Electronic expansion valve				
		extra solar heat exchanger SUS304/316L ~ 1m2				
		electrical Titanium anode				
Loading quantity of 20GP		40	40	24	24	/
Loading quantity of 40GP		80	80	51	51	/
Loading quantity of 40HQ		80	80	51	51	48

NOTES:
Capacities and power inputs based on the following conditions:
- Heating: Ambient temperature 20°C/15°C, Water temperature from 15°C to 55°C.

Environmental Refrigerant

R290

coolwell launched R290 ATW heat pump in 2022 to reduce carbon emission to the environment. R290 refrigerant is recognized as a refrigerant which contributes to the reduction of carbon emnission and help achieve the global goal of carbon neutrality.

Micro Channel heat exchanger

- GWP20 which is 65 times lower comparing with R134a
- Micro channel plate exchanger which improve the efficiency of condenser heat transfer capacity effectively and increase COP

Duplex2205

- With Douplex 2205 which has the most advantage of corrosion resistance,it is consider as the most ideal stainless steel tank

Top Part

Panel A
AXHW-20a

Panel B
AXHW-20b

High efficiency, friendly environment

- High efficient compressor, well-known brand.
- EXV control technology, refrigerant control more accuracy.
- R134a, lower GWP, and environmentally friendly.

Combined flexibility with water tank

- Combined flexibility with water tank
- For Model 9a and 20a, refrigerant pipes can be connected with lokring technology between water tank and top part.
For Model 20b, stop valves as standard.
- Multi-protections include: high pressure switch, low pressure switch. Temperature on/off sensors and electric backup heater terminals are reserved in PCB.
- Automatic anti-legionella per week, more reliable and health.

Conveneint operation

- Large LED screen, user-friendly controller.
- Operating status and error codes can be clearly displayed on controller screen.

Wide range

- Suggesting storage of tank size is covered from 80L to 300L.
- Wide operation ambient temperature range: -5°C - 43°C.
- Setting temperature range of hot water is from 10°C to 70°C, and default is 50°C.

Flexible air duct connections

- 60Pa static pressure enable the air duct total length up to 8m.
(Only avaiable for Model AXHW-20a/b)

Specifications

Specification--top part					
Model			AXHW-9a	AXHW-20a	AXHW-20b
Power supply			220-240V~,50Hz, 1Ph	220-240V~,50Hz, 1Ph	220-240V~,50Hz, 1Ph
Suggesting tank volume		L	80-100	200-300	200-300
Heating capacity (Heat pump only)#		kW	1.00	2.00	2.00
Air flow		m3/h	250	450	450
Compressor			Rotary	Rotary	Rotary
Refrigerant	Type		R134a	R134a	R134a
	Factory charged	kg	Null	Null	0.92
	Control		EXV	EXV	EXV
Casing			Without casing	Plastic	Plastic
Duct diameter of air inlet /outlet		mm	Null	177	177
Refrigerant pipe between tank and top part		mm	Φ9.52	Φ9.52	Φ9.52, stop valves
Dimension	Unit (ΦD×H)	mm	Φ464×365	Φ520×425	Φ550×410
	Packing (L×W×H)	mm	540×488×405	695×695×530	695×695×553
Net weight		kg	18	25	25
Gross weight		kg	28	29	29
Loading (40GP / 20GP)		Pcs	368 / 176	204 / 96	204 / 96

Notes:
#: Test condition-ambient temperature is 20°C DB/12°C WB,water temperarure is from 15°C to 55°C.
The specification may be changed for product improvement, please refer to the nameplate of product.