



1	Outdoor unit	10.1	TBH: Back-up heater for the domestic hot water tank (field supply)
2	User interface	10.2	Coil 1: heat pump heat exchanger
3	3-way valve (field supply)	10.3	Coil 2: solar system heat exchanger
4	Buffer tank (field supply)	11	Filter (additional equipment)
4.1	Automatic air relief valve	12	Check valve (field supply)
4.2	Drain valve	13	Shut-off valve (field supply)
5	External circulation pump (field supply)	14	Filling valve (field supply)
6	Solar pump (field supply)	15	Drain valve (field supply)
6.1	Solar collector temperature sensor (field supply)	16	Pipe supplying water from the mains (field supply)
6.2	Solar collectors (field supply)	17	Hot water tap (field supply)
7	DHW pump (field supply)	18	Distributor/collector (field supply)
8	DHW tank temperature sensor (additional equipment)	19	Bypass valve (field supply)
9	Expansion vessel (field supply)	FHL11	Floor heating (field supply)
10	DHW tank (field supply)	AHS	Auxiliary heat source (field supply)

Note: This diagram illustrates the general principle of circuit operation. It should not be considered as a design.

# **SPECIFICATION**

Input power	ock type)				
Heating: Dry/Wet bulb: 7/6°C; Water inlet/outlet:30/35°C     Heating capacity	PS-H2P				
Heating capacity	//50Hz 1N				
Input power kW 0.60- Cooling: Dry/Wet bulb:35/24°C; Water inlet/outlet:12/7°C Cooling capacity kW 1.3-1 Input power kW 0.60- Hot water heating: Air 20°C, Water 15°CTo 55°C Cooling capacity kW 3.90- Input power kW 0.80- Seasonal Heating Energy LWT at 35°C A+ Efficiency Rating LWT at 55°C A+ Max. Hot Water Temperature °C 75.6  Operating ambient temp °C -25- Max. Power KW 3.0 Water flow m³/h 1.3.4 Water flow m³/h 1.3.4 Water flow m³/h 1.3.4 Water side pressure loss kPa 55 Permiaable rafrigerant suction pressure  Permiaable rafrigerant discharge pressure  Mpa 3.0  Equivalent CO2 Ton 0.000  Fan motor Quantity 1.0  Noise (Sound pressure level ) dB(A) 43.6  Water pipe Onlett mm 42  Water pipe Connection Outlet mm 42  Unit dimensions mm 1160×45:	Heating: Dry/Wet bulb: 7/6°C; Water inlet/outlet:30/35°C				
Cooling: Dry/Wet bulb:35/24°C; Water inlet/outlet:12/7°C           Cooling capacity         kW         1.3-1           Input power         kW         0.60-           Hot water heating: Air 20°C, Water 15°CTo 55°C         Cooling capacity         kW         3.90-           Input power         kW         0.80-         Seasonal Heating Energy         LWT at 35°C         A+           Efficiency Rating         LWT at 55°C         A+         A+           Max. Hot Water Temperature         °C         75.6           Operating ambient temp         °C         -25-           Max. Power         KW         3.0           Max. Power         KW         3.0           Max. Current         A         13.4           Water flow         m³/h         1.3           Water side pressure loss         kPa         55           Permiaable rafrigerant suction pressure         Mpa         3.0           Permiaable rafrigerant discharge pressure         Mpa         3.0           Refrigerant         Mpa         3.0           GWP value         3.0         3.0           Equivalent CO2         Ton         0.00           Fan motor         Quantity         1.0           Noise (Sound	3.50-8.70				
Cooling capacity	-2.20				
Input power					
Hot water heating: Air 20°C, Water 15°CTo 55°C	5.80				
Cooling capacity	-2.50				
Input power					
Seasonal Heating Energy	10.70				
Efficiency Rating         LWT at 55°C         A+           Max. Hot Water Temperature         °C         75.0           Operating ambient temp         °C         -25.7           Max. Power         KW         3.0           Max. Power         KW         3.0           Max. Current         A         13.4           Water flow         m³/h         1.3           Water side pressure loss         kPa         ≤5           Permiaable rafrigerant suction pressure         Mpa         0.8           Permiaable rafrigerant discharge pressure         Mpa         3.0           Compressor         Type         Full DC in public limits in publ	-2.50				
Max. Hot Water Temperature         °C         75.6           Operating ambient temp         °C         -25.7           Max. Power         KW         3.0           Max. Current         A         13.4           Water flow         m³/h         1.3           Water side pressure loss         kPa         ≤5           Permiaable rafrigerant suction pressure         Mpa         0.8           Compressor         Type         Full DC in the proper success of t	++				
Operating ambient temp         °C         -25-           Max. Power         KW         3.0           Max. Current         A         13.4           Water flow         m³/h         1.3           Water flow         m³/h         1.3           Water side pressure loss         kPa         ≤5           Permiaable rafrigerant suction pressure         Mpa         0.8           Permiaable rafrigerant discharge pressure         Mpa         3.0           Compressor         Type         Full DC i           Quantity         1         1           Refrigerant         Type         R2'           Quantity         1         0.5           GWP value         3.0         3.0           Equivalent CO2         Ton         0.00           Fan motor         Type         DC Bru           Quantity         1.0         0.00           Fan motor         Quantity         1.0           Noise (Sound pressure level)         dB(A)         43.0           Noise (Sound power level)         dB(A)         56.0           Waterproof level         IP         Anti electric shock protection category         Class           Water pipe connection         Outle	++				
Max. Power         KW         3.0           Max. Current         A         13.4           Water flow         m³/h         1.3           Water side pressure loss         kPa         ≤5           Permiaable rafrigerant suction pressure         Mpa         0.8           Permiaable rafrigerant discharge pressure         Mpa         3.0           Compressor         Type         Full DC in the proper of the property	00				
Max. Current         A         13.6           Water flow         m³/h         1.3           Water side pressure loss         kPa         45           Permiaable rafrigerant suction pressure         Mpa         0.8           Permiaable rafrigerant discharge pressure         Mpa         3.0           Compressor         Type         Full DC in properties           Quantity         1           Refrigerant         Type         R2           Quantity         kg         0.5           GWP value         3.0         3.0           Equivalent CO2         Ton         0.00           Fan motor         Type         DC Bruentity           Noise (Sound pressure level)         dB(A)         43.6           Noise (Sound power level)         dB(A)         56.6           Waterproof level         IPX           Anti electric shock protection category         Class           Water pipe connection         Inlet mm         42           Unit dimensions         mm         1160×4:	~43				
Water flow     m³/h     1.3       Water side pressure loss     kPa     ≤5       Permiaable rafrigerant suction pressure     Mpa     0.8       Permiaable rafrigerant discharge pressure     Mpa     3.0       Compressor     Type     Full DC in the property of the property o	00				
Water side pressure loss       kPa       ≤5         Permiaable rafrigerant suction pressure       Mpa       0.8         Permiaable rafrigerant discharge pressure       Mpa       3.0         Compressor       Type       Full DC in the property of the property	60				
Permiaable rafrigerant suction pressure  Permiaable rafrigerant discharge pressure  Mpa  3.0  Compressor  Type Quantity Type Quantity Refrigerant  GWP value  Equivalent CO2 Ton Type Quantity Type DC Bru Quantity Noise (Sound pressure level) Anti electric shock protection category  Water pipe Connection Unit dimensions  Mpa  0.8  Mpa 0.8  Anpa 0.8  Apa  Black Apa  Apa  Black Apa  Apa  Black Apa	38				
suction pressure  Permiaable rafrigerant discharge pressure  Type Quantity Type Refrigerant Quantity Refrigerant  GWP value  Equivalent CO2 Ton Quantity Type Pan motor Quantity Type Quantity Type Quantity Type Quantity Type Quantity DC Bru Quantity Noise (Sound pressure level ) Anti electric shock protection category  Water pipe Connection Unit dimensions  Mpa  3.0  Full DC is  Refrigerant Type Quantity Rose Refrigerant Age Quantity Rose Class Cl	50				
Type	30				
Compressor   Quantity   1   1	00				
Compressor         Quantity         1           Refrigerant         Type         Quantity         R2'           GWP value         3.0           Equivalent CO2         Ton         0.00°           Fan motor         Type         DC Bru           Quantity         1.0           Noise (Sound pressure level )         dB(A)         43.0           Noise (Sound power level )         dB(A)         56.0           Waterproof level         Ipp           Anti electric shock protection category         Class           Water pipe connection         Inlet         mm         42           Unit dimensions         mm         1160×43	inverter				
Type					
Quantity   Kg   0.5   GWP value	90				
Equivalent CO2         Ton         0.00°           Fan motor         Type         DC Bru           Quantity         1.0           Noise (Sound pressure level)         dB(A)         43.0           Noise (Sound power level)         dB(A)         56.0           Waterproof level         Ip>           Anti electric shock protection category         Class           Water pipe connection         Inlet         mm         42           Unit dimensions         mm         1160×43	50				
Type	00				
Fan motor   Quantity   1.0	150				
Quantity   1.0	ushless				
Noise (Sound power level )         dB(A)         56.0           Waterproof level         IPX           Anti electric shock protection category         Class           Water pipe connection         Inlet mm         ф2           Outlet mm         ф2           Unit dimensions         mm         1160×43	00				
Noise (Sound power level )         dB(A)         56.0           Waterproof level         IPX           Anti electric shock protection category         Class           Water pipe connection         Inlet mm         ф2           Unit dimensions         mm         1160×43	00				
Anti electric shock protection category         Class           Water pipe connection         Inlet mm         \$2           Unit dimensions         mm         \$2           Unit dimensions         mm         \$160×40					
Protection category           Water pipe connection         Inlet         mm         ф2           Unit dimensions         mm         1160×40	X4				
Connection Outlet mm • • • • • • • • • • • • • • • • • •	ss I				
connection Outlet mm	25				
Unit dimensions mm 1160×43					
Pacakge dimensions mm 1275*45	30×775				
	1275*455*1060				
	85 /90				
Loading Qty.(20GP/40GP) Pcs 44/					



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KÖNNEN K-thermal + Series Dc Inverter Air to Water Heat Pump Monoblock Type



Zhejiang CEN New Energy Stock Co., Ltd., founded in 2001, is located in the beautiful coastal city of Haiyan, near to the north bank of Hangzhou Bay Cross Sea Bridge. It covers an area of 1.6 hectares and has a construction area of over 30,000 square meters. It is a strong energy enterprise with comprehensive strength that integrates technology research and development, production and manufacturing, market sales, and after-sales service.

On August 30, 2017, the completion of the shareholding system reform was officially listed in the national small and medium-sized enterprise share transfer system, commonly referred to as KONNEN stock, with stock code (871885).

## **CERTIFICATIONS & PATENTS**

In each of its operation service, KONNEN's top priority is to ensure the reliability and quality of its products and meet the technical & professional certifications of overseas markets.

As an international brand, KONNEN holds several intenational certifications, including CE, ErP and so on.

Meanwhile KONNEN has acquired more than 50 national patents in the field of heat pump apolications and heat pump technologies in China.Patent number:1843823,2590991,4062762,4064364 etc.





Quality Management System for Quality Assurance Certificate No.:12822Q21168R1M



Occupation Health Safety Management System Certificate No.: 12822S20190R2M



Environmental Management System Certificate No.:12822E20209R1M



Laboratory issued by GMPI Certificate No.: RZ-ZL-2017171















### **FULL DC INVERTER AIR TO WATER HEAT PUMP**

The R290 Hybrid Heat Pump has a speed stepless variable frequency silent compressor and DC brushless fan motor , less attenuation in low temperature technology etc.. Ensure the units operating well with wide range between -25 ~ 43 degree condition.







3 FUNCTIONS, 5 MODES \* Single Hot Water \* Single Heating \* Single Cooling \* Hot Water + Cooling \* Hot Water + Heating



The R290 Hybrid Heat Pump has a speed stepless variable frequency silent compressor and DC brushless fan motor , less attenuation in low temperature technology etc.. Ensure the units operating well with wide range between -25 ~ 43 degree condition.



Stable running at -25°C ambient temperature.



The max outlet water temperature can be up to 75  $^{\circ}\text{C}.$ 



Inverter heat pump Vs. Non-Inverter heat pump



KONNEN endeavors to provide users with an easy and smart control experience.



Wifi function for our heat pumps, control your heat pump from our special designed App.



Intelligent defrosting



Low noise



Heating energy efficiency level A+++ at water temperature 35 deg C. Heating energy efficiency level A++ at water temperature 55 deg C.



#### HIGHLY FULL DC INVERTER COMPRESSOR

Realizing speed stepless adjustment, lower noise but higher efficiency, running more stable.

( heating /cooling+hot water )



#### DC BRUSHLESS FAN MOTOR

Intelligent control, according to the ambient temperature of the motor to relize the turns with speed stepless adjustment, aluminum material of shell, improving heating dissipation and waterproof performance, long and durable service life.



Use **SWEP** high-quality plate heat exchanger to provide higher efficiency and more suitable for the use of anti-icing fluid.

**R290 FULL DC INVERTER HYBRID HEAT PUMP** 



High precision electronic expansion valve: use **Electronic expansion valve** for controlling, reach 500 steps adjustment, adjust super heat degrees accurately, achieve high efficiency operation system.



SHIMGE PUMP BUILT-IN DC INVERTER PUMP