

Why Choose Water to Water Heat Pump?

Save money for you

Our ground source heat pump makes heating your house and domestic hot water much cheaper. It saves your 60% heating cost compared with the traditional heating elements like electrical heater, gas/fuel boiler, wood-fired boiler. The reason for this is that a ground source heat pump uses the free energy from natures.

Although the heat pump can not pay you back in the first month, you will notice the benefits soon since the heating bill is dramatically lower than before. The high efficiency of Suoher heat pump makes you get back the investment faster. In fact, it saves money for you as soon as you finish the installation and cycle it on.

Much lower CO₂ emissions

By absorbing free & green energy stored in the ground, surface soil or lake to heat your house and domestic hot water, it makes much lower Co₂ emissions than any traditional heating system such as gas boiler, wood-fired boiler.

Wherever you live, you can install a water to water heat pump and enjoy efficient, safe, problem-free, heating and hot water at a fraction of the alternative cost and a fraction of the environmental impacts.

为什么要选择地源热泵

经济实惠

地源热泵以较低的成本为您提供房屋供暖和生活热水。它可以为您节约高达60%的供暖成本，因为它能够利用地下水、土壤和湖水中储藏的免费绿色能源作为热源。尽管精确的数字还要取决于其它的因素，比如居住地点的气候，房子的大小和保温以及你是否需要制冷功能等。索禾地源热泵的能效的确能够让您快速的从投资中收到效益。随着能源价格的不断增长，你绝对不会后悔你的决定。实际上，从你开始使用我们的热泵的那一刻起，它就已经开始为您的投资进行回报了。

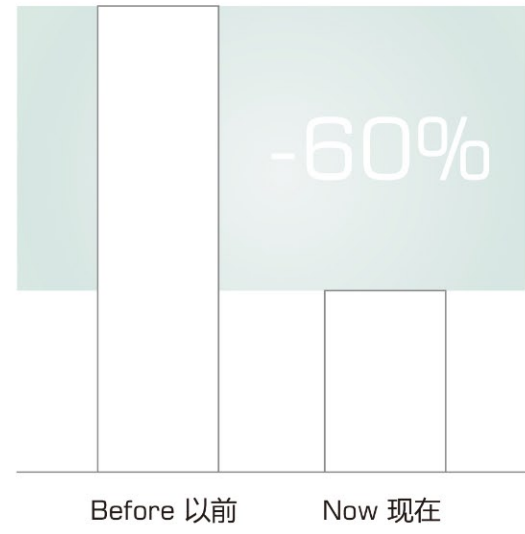
环保

与其它传统的燃油加热系统相比，地源热泵只要稍微利用来自地下水、土壤或者湖水中的绿色能源，就可以加热房屋和生活热水，释放出更少的二氧化碳。

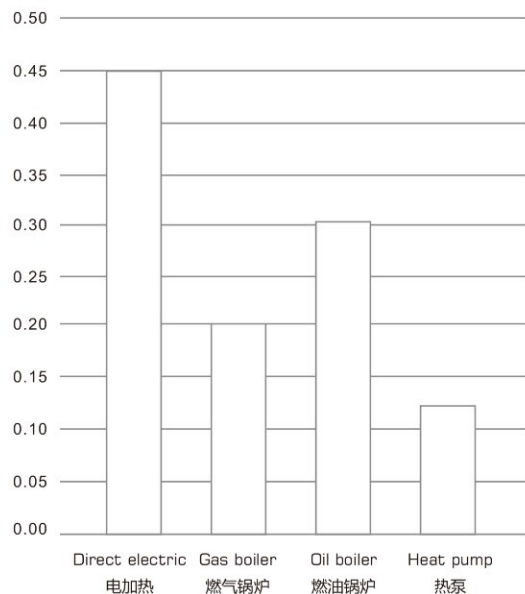
不管居住在哪里，您都可以安装一台地源热泵，享受它给您带来的高效、安全、简单、舒适的居家新理念。

试想一下：

如果在中国将近100万套新房子都装上热泵，那么到2026年，每年可以减少超过3 600 000吨的二氧化碳排放。每年每台家用汽车的二氧化碳排放量为3~4吨，这就相当于减少了近100万辆燃油车所排放的二氧化碳。



能源消耗
Energy Consumption



二氧化碳排放量
CO₂ Emissions for Various Heating System

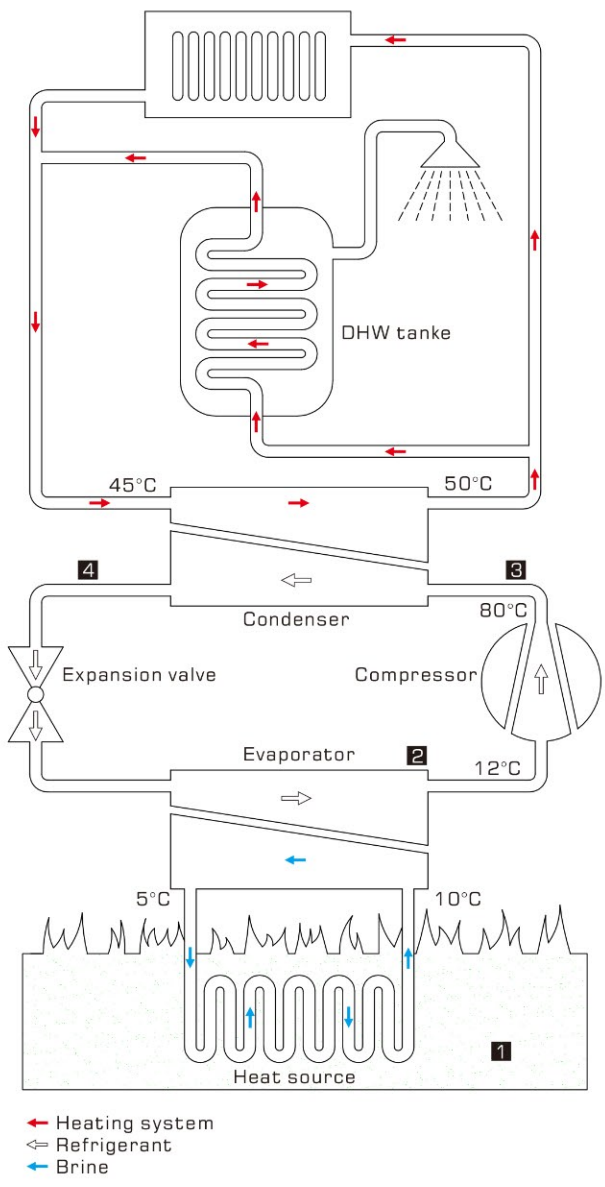
How do ground source heat pump works?

地源热泵怎么工作?

The earth absorbs and stores heat from the sun year after year so that it can provide us with a constant source of naturally renewed energy. Just a few distance under the ground, there is a constant average temperature of 4°C to 12°C. This stored energy is ideal heat source for your daily domestic heating demand.

The ground source heat pump collects heat from the solar energy stored underground, rock, ground water, lake, etc. The heat is transferred from ground to heat pump by the secondary refrigerant which consists of water and an environmentally-friendly anti-freeze solution. It circulates through the closed loop, collecting heat from the ground and transferring to the heat pump.

The refrigerant circulates in the heat pump, absorbing the heat from the ground stored in the secondary refrigerant and converts it into high grade heat to be released to your house by under-floor heater or radiator and into your domestic hot water tank.



1. The solar energy stored in the rock at the bottom of the lake or ground water can be brought up by a collector which is a house filled with mixture liquid of water and antifreeze. The liquid circulates in the hose collects the stored solar energy and is warmed up.

1. 储存在岩层、湖底和地下水中的太阳能通过集热器中水和防冻剂的混合液体被收集起来，这些液体在房屋的管路中循环，吸收了储存的太阳能而使其被加热。

2. When the liquid go through the evaporator of heat pump, it seems another closed refrigerant system. The refrigerant can absorb the solar energy in the liquid and turn into gas at very low temperature.

2. 当载冷剂（水和防冻剂的混合液体）通过热泵的蒸发器的时侯，将吸收的太阳能传给热泵系统里的制冷剂，制冷剂吸收热量以后在很低的温度下蒸发为气体。

3. The gas refrigerant is compressed and turn into very hot and high pressure, then the heat is transferred to the water-based heating system in the house by a condenser.

3. 制冷剂气体通过压缩机的压缩做功，变成高温高压的气体，然后通过冷凝器将热量传递给用来为房屋供暖的水。

4. Then, the refrigerant reverts to low pressure liquid and ready to collect new solar energy.

4. 然后，制冷剂就会回到低压的液体状态为下一次吸收热能做好准备。

Four kinds of ground source energy

“Ground source” covers four different heat sources such as rock, surface soil, ground water and lake.
Suohr installer will offer advice about which is the most suitable for your home.

四种地源热能

地源热能通常包括四种类型：岩层、地表土壤、地下水和湖泊。

如何选择最适合你家住宅类型的地热源取决于几个因素，包括房屋能源需求，现有的供暖系统以及房屋所处的地形条件等。

通过任意四种地源热能，热泵将地下储存的热量聚集起来加热热水，通过地板加热或暖气片来为你的放我供暖和提供日常的生活热水需求。

Rock

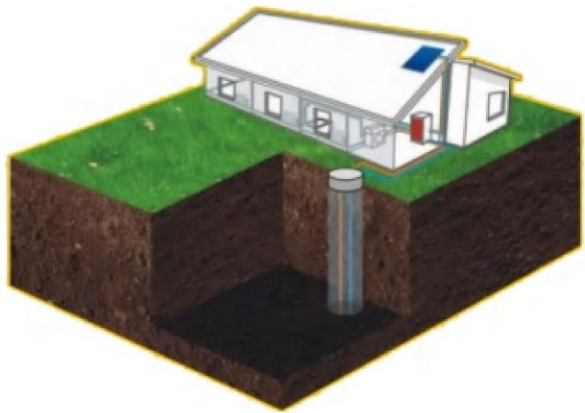
There is a heat source with almost constant temperature in the lower subsoil. It is an idea heat source that can be used for heating your house and domestic hot water all year around. The heat pump collects stored heat from a collector in a hole drilled into the rock. The hole can be from 90~200 meters depth depending on the heating capacity of heat pump selected and local regulations.

This type of system require little space since the ground probe can be even drilled in the smallest gardens. So it can be used for all kinds of buildings, large or small, public or private.

岩层

在地表的浅层土壤下存在一个常年恒温的热源，热泵全年都可以利用这个热源来为你供暖。热泵通过一个安装在深入到岩层深处的钻井中的收集器来收集热量。井的深度根据你所选用的热泵和当地政府相关的建筑规定从90米到200米不等。

这种类型的系统可以适用所有的建筑类型，大型或小型的，公共的或私人的。它占用的空间很少，你甚至可以在最小的花园里的空地上打井。



Ground water

Ground water is also an ideal heat source for heat pump since it has a constant temperature between 4°C and 12°C all year around. Normally, the heat pump collects stored energy from the ground water in one well and return the ground water in another.

地下水

地下水也是地源热泵的理想热源之一，因为它全年保持在4摄氏度到12摄氏度之间。热泵通常从一个井中吸取储存在地下水中的热量，然后通过另一口井将地下水回灌。



Three functions in one heat pump

Heating, cooling, domestic hot water with one heat pump.
All these functions are possible by your Suohr ground source heat pump.

Heating takes place via radiators or underfloor heating system; cooling takes place via fan coils or underfloor system.

三重功能

供暖、制冷和生活热水

拥有了索禾地源热泵，以上三个功能都可以实现。

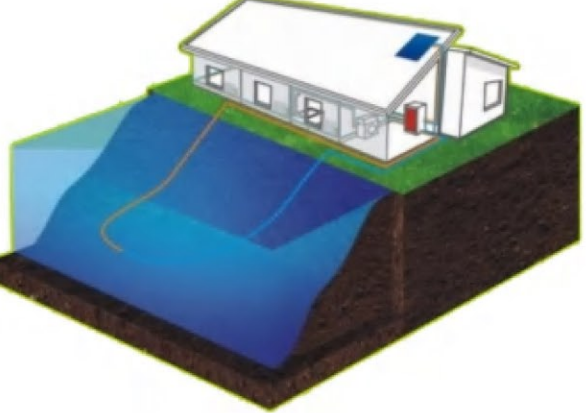
通过暖气片和地板加热来进行供暖；制冷通过风机盘管或地板管道系统来实现。

Lake

Heat stored in the lake water can be also be used as heat source for heat pump if your home is built near to the lake. The heat is extracted by a collector anchored to the bottom of the lake.

湖泊

如果你的住宅位于湖泊或其它水源附近，你可以直接将收集器（装有循环水和防冻剂混合溶液的塑料软管）放到湖底来收集湖水的热量。



Surface Soil

The solar energy is stored in the surface soil in the summer time. It is directly absorbed by soil from the sun or the heat from the rain and air. The heat pump collects this stored energy by a buried collector which is a house filled with anti-freeze. It is buried at depth of 80~100cm with length between 250 and 400 meters depending on the size of heat pump selected.

地表土壤

夏季时太阳能热量储存在土壤中，土壤或是直接通过太阳的辐射而吸收热量，或是有些热量储存在表层土壤中的雨水和空气中。热泵通过埋藏在土壤中的收集器（装有循环水和防冻剂混合溶液的塑料软管）收集这些热量。收集器埋在80~100米深的地表，长度根据你所选的热泵型号从250米到400米不等。

这是一种节省开支的热泵系统。从水量丰富的土壤中获得最大收益。



K SERIES
K系列

Heating
房屋采暖

Energy saving
节能

Easy to use
易于操作

Low cost
低成本

- Low cost
- Reliable performance
- High efficiency tube in shell heat exchanger
- Built-in water flow switch
- Only heating
- 成本低廉
- 性能可靠
- 高效罐换热器
- 内置水流开关
- 单热型



Specifications 参数

Model 型号	SHWW	6K	9K	11K
Power supply 电源规格	V/Ph/Hz	220/1/50	220/1/50	220/1/50
Heating capacity 制热量	KW	6.2	8.1	10.2
Heating power input 制热输入功率	KW	1.37	1.82	2.3
COP		4.53	4.45	4.43
Max. water temp. 最高水温	℃	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	1.1	1.2	1.8
Water flow (ground source) 水流量（地源侧）	m3/h	0.9	1.0	1.6
Net weight 净重	kg	49	53	57
Noise 噪音	dB(A)	40	40	40
Connection pipe 水口规格	inch	3/4"	3/4"	3/4"
Net dimension 净尺寸	mm	605*240*500	605*240*500	605*240*500
Refrigerant 制冷剂		R410a/ R32	R410a/ R32	R410a/ R32
Working mode 工作模式		Only heating 单热	Only heating 单热	Only heating 单热

Model 型号	SHWW	13K	17K	20K
Power supply 电源规格	V/Ph/Hz	380/3/50	380/3/50	380/3/50
Heating capacity 制热量	KW	13	17	20
Heating power input 制热输入功率	KW	2.88	3.75	4.5
COP		4.51	4.53	4.44
Max. water temp. 最高水温	℃	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	2.2	2.9	3.4
Water flow (ground source) 水流量（地源侧）	m3/h	1.9	2.6	3.0
Net weight 净重	kg	66	71	79
Noise 噪音	dB(A)	41	42	42
Connection pipe 水口规格	inch	1"		
Net dimension 净尺寸	mm	910*330*530	910*330*530	910*330*530
Refrigerant 制冷剂		R410a/ R32	R410a/ R32	R410a/ R32
Working mode 工作模式		Only heating 单热	Only heating 单热	Only heating 单热

Test condition:
Water inlet/outlet temperature: 30/35℃
Ground source inlet/outlet temp.: 15/10℃

测试条件:
使用侧进/出水温度: 30/35℃
地源侧进/出水温度: 15/10℃

Specifications 参数

Model 型号	SHWW	7E	9E	11E
Power supply 电源规格	V/Ph/Hz	220/1/50	220/1/50	220/1/50
Heating capacity 制热量	kW	7.1	8.7	10.8
Heating power input 制热输入功率	kW	1.54	1.89	2.34
COP		4.61	4.60	4.62
Cooling capacity 制冷量	kW	5.90	7.20	8.50
Cooling power input 制冷输入功率	kW	1.93	2.39	2.82
EER		3.06	3.01	3.01
Max. water temp. 最高水温	℃	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	1.2	1.5	1.9
Water flow (ground source) 水流量（地源侧）	m3/h	0.9	1.3	1.6
Net weight 净重	kg	42	48	55
Noise 噪音	dB(A)	40	40	40
Connection pipe 水口规格	inch	1"	1"	1"
Net dimension 净尺寸	mm	520*350*610	520*350*610	520*350*610
Refrigerant 制冷剂		R410a	R410a	R410a
Working mode 工作模式		Heating & cooling 制热、制冷	Heating & cooling 制热、制冷	Heating & cooling 制热、制冷
Compressor 压缩机		GMCC 美芝	GMCC 美芝	GMCC 美芝
Condenser 冷凝器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
Evaporator 蒸发器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
4-way valve 四通阀		Yes 有	Yes 有	Yes 有
Expansion valve 节流装置		Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀
High pressure switch 高压开关	MPa	4.2-3.6	4.2-3.6	4.2-3.6
Low pressure switch 低压开关	MPa	0.05-0.15	0.05-0.15	0.05-0.15
Circulation pump 循环水泵		No 无	No 无	No 无
Water flow switch 水流开关		No 无	No 无	No 无

Test condition:
Heating mode: Water inlet/outlet temperature: 30/35℃
Ground source inlet/outlet temp.: 15/10℃
Cooling mode: Water inlet/outlet temperature: 12/7℃
Ground source inlet/outlet temp.: 30/35℃

测试条件:
制热模式: 使用侧进/出水温度: 30/35℃
地源侧进/出水温度: 15/10℃
制冷模式: 使用侧进/出水温度: 12/7℃
地源侧进/出水温度: 30/35℃

E SERIES
E系列



Heating
房屋采暖



Cooling
制冷



Energy saving
节能



Low cost
低成本

Structure compact
结构紧凑

Reliable performance
性能可靠

Easy to operate
操作简单

Plate heat exchanger
板式换热器

Heating & Cooling
冷暖型



X SERIES
X系列



Energy saving
节能



Heating
房屋采暖



Cooling
制冷



Domestic hot water
生活热水

- Powerful functions
- Excellent performance
- Plate heat exchanger
- Built-in water flow switch
- Heating, cooling, domestic hot water
- 功能强大
- 性能优异
- 板式换热器
- 内置水流开关
- 制热、制冷、生活热水



Specifications 参数

Model 型号	SHWW	6X	10X	13X	17X
Power supply 电源规格	V/Ph/Hz	220/1/50	220/1/50	220/1/50	380/3/50
Heating capacity 制热量	KW	6.2	9.8	13.2	16.8
Heating power input 制热输入功率	KW	1.39	2.18	2.85	3.72
COP		4.46	4.50	4.63	4.52
Cooling capacity 制冷量	KW	4.9	7.8	10.2	12.9
Cooling power input 制冷输入功率	KW	1.53	2.41	3.16	4.02
EER		3.20	3.24	3.23	3.21
Max. water temp. 最高水温	°C	60	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	1.1	1.7	2.3	2.9
Water flow (ground source) 水流量（地源侧）	m3/h	0.8	1.3	1.8	2.2
Net weight 净重	kg	66	72	98	104
Noise 噪音	dB(A)	40	40	41	41
Connection pipe 水口规格	inch	1"	1"	1"	1"
Net dimension 净尺寸	mm	540*555*740	540*555*740	570*610*800	570*610*801
Refrigerant 制冷剂		R410a/ R32	R410a/ R32	R410a/ R32	R410a/ R32
Working mode 工作模式		Heating & cooling 制热+制冷	Heating & cooling 制热+制冷	Heating & cooling 制热+制冷	Heating & cooling 制热+制冷

Model 型号	SHWW	20X	23X	34X	41X
Power supply 电源规格	V/Ph/Hz	380/3/50	380/3/50	380/3/50	380/3/50
Heating capacity 制热量	KW	20.1	22.9	33.8	40.8
Heating power input 制热输入功率	KW	4.41	5.08	7.56	9.15
COP		4.56	4.51	4.47	4.46
Cooling capacity 制冷量	KW	15.50	17.60	25.40	31.60
Cooling power input 制冷输入功率	KW	4.80	5.48	7.94	9.98
EER		3.23	3.21	3.20	3.17
Max. water temp. 最高水温	°C	60	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	3.5	3.9	5.8	7.0
Water flow (ground source) 水流量（地源侧）	m3/h	2.7	3.0	4.4	5.4
Net weight 净重	kg	109	118	172	191
Noise 噪音	dB(A)	42	42	43	43
Connection pipe 水口规格	inch	1"	1"	1.2"	1.2"
Net dimension 净尺寸	mm	570*610*800	570*610*801	850*610*800	850*610*800
Refrigerant 制冷剂		R410a/ R32	R410a/ R32	R410a/ R32	R410a/ R32
Working mode 工作模式		Heating & cooling 制热+制冷	Heating & cooling 制热+制冷	Heating & cooling 制热+制冷	Heating & cooling 制热+制冷

Test condition:
Heating mode: Water inlet/outlet temperature: 30/35°C
Ground source inlet/outlet temp.: 15/10°C
Cooling mode: Water inlet/outlet temperature: 12/7°C
Ground source inlet/outlet temp.: 30/35°C

测试条件:
制热模式: 使用侧进/出水温度: 30/35°C
地源侧进/出水温度: 15/10°C
制冷模式: 使用侧进/出水温度: 12/7°C
地源侧进/出水温度: 30/35°C

Specifications 参数

Model 型号	SHWW	48G	68G	80G
Power supply 电源规格	V/Ph/Hz	380/3/50	380/3/50	380/3/50
Heating capacity 制热量	kW	48	68	80
Heating power input 制热输入功率	kW	11.2	15.9	18.8
COP		4.29	4.28	4.26
Cooling capacity 制冷量	kW	36.00	52.00	62.00
Cooling power input 制冷输入功率	kW	11.50	16.50	19.80
EER		3.13	3.15	3.13
Max. water temp. 最高水温	℃	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	8.3	11.7	13.8
Water flow (ground source) 水流量（地源侧）	m3/h	6.2	8.9	10.7
Net weight 净重	kg	288	302	320
Noise 噪音	dB(A)	55	55	55
Connection pipe 水口规格	inch	2"	2"	2"
Net dimension 净尺寸	mm	708*1110*750	708*1110*750	708*1110*750
Refrigerant 制冷剂		R410a	R410a	R410a
Working mode 工作模式		Heating\cooling\hot water 制热、制冷、热水	Heating\cooling\hot water 制热、制冷、热水	Heating\cooling\hot water 制热、制冷、热水
Compressor 压缩机		Copeland 谷轮	Copeland 谷轮	Copeland 谷轮
Condenser 冷凝器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
Evaporator 蒸发器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
4-way valve 四通阀		Yes 有	Yes 有	Yes 有
Expansion valve 节流装置		Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀
High pressure switch 高压开关	MPa	4.2-3.6	4.2-3.6	4.2-3.6
Low pressure switch 低压开关	MPa	0.05-0.15	0.05-0.15	0.05-0.15
Circulation pump 循环水泵		No 无	No 无	No 无
Water flow switch 水流开关		Yes 有	Yes 有	Yes 有

Test condition:

Heating mode: Water inlet/outlet temperature: 30/35℃
Ground source inlet/outlet temp.: 15/10℃
Cooling mode: Water inlet/outlet temperature: 12/7℃
Ground source inlet/outlet temp.: 30/35℃

测试条件:

制热模式: 使用侧进/出水温度: 30/35℃
地源侧进/出水温度: 15/10℃
制冷模式: 使用侧进/出水温度: 12/7℃
地源侧进/出水温度: 30/35℃

G SERIES
G系列



- Strong performance
- 性能强劲
- Reliable operation
- 运行可靠
- Easy to install and use
- 安装使用简单
- Save space
- 节省空间
- Running without seasonal restrictions
- 运行不受季节限制



P SERIES
P系列



Energy saving
节能



Heating
房屋采暖



Cooling
制冷



Strong power
能力强劲

Powerful performance

High efficiency scroll compressor

Shell and tube heat exchanger

Without seasonal restrictions

Modular installation

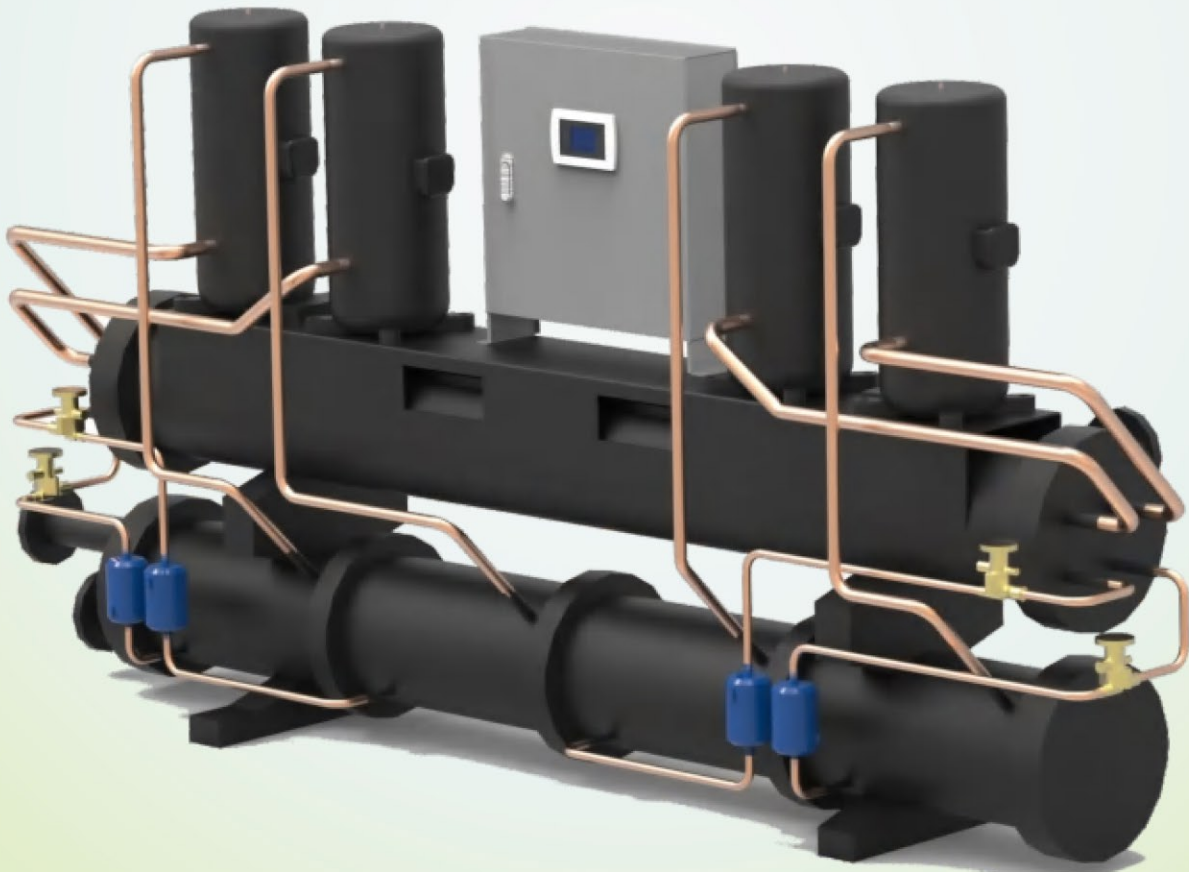
性能强劲

高效涡旋压缩机

壳管式换热器

不受季节约束

可模块化安装



Specifications 参数

Model 型号	SHWW	90P	120P	150P	180P
Power supply 电源规格	V/Ph/Hz	380/3/50	380/3/50	380/3/50	380/3/50
Heating capacity 制热量	kW	90	120	150	180
Heating power input 制热输入功率	kW	21.4	28.6	35.6	42.8
COP		4.21	4.20	4.21	4.21
Cooling capacity 制冷量	kW	70.00	94.00	120.00	150.00
Cooling power input 制冷输入功率	kW	21.90	29.40	37.40	46.80
EER		3.20	3.20	3.21	3.21
Max. water temp. 最高水温	°C	60	60	60	60
Water flow (using side) 水流量 (使用侧)	m3/h	15.5	20.6	25.8	31.0
Water flow (ground source) 水流量 (地源侧)	m3/h	12.0	16.2	20.6	25.8
Net weight 净重	kg	360	410	450	520
Noise 噪音	dB(A)	55	55	55	55
Connection pipe 水口规格	inch	2.5"	3"	3"	3"
Net dimension 净尺寸	mm	1760*920*1480	2200*920*1480	2200*920*1480	2400*960*1520
Refrigerant 制冷剂		R410a	R410a	R410a	R410a
Working mode 工作模式		Heating and cooling 制热、制冷	Heating and cooling 制热、制冷	Heating and cooling 制热、制冷	Heating and cooling 制热、制冷
Compressor 压缩机		Copeland 谷轮	Copeland 谷轮	Copeland 谷轮	Copeland 谷轮
Condenser 冷凝器		Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器
Evaporator 蒸发器		Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器	Shell and tube heat exchanger 壳管式换热器
4-way valve 四通阀		No 无	No 无	No 无	No 无
Expansion valve 节流装置		Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀
High pressure switch 高压开关	MPa	4.2-3.6	4.2-3.6	4.2-3.6	4.2-3.6
Low pressure switch 低压开关	MPa	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Circulation pump 循环水泵		No 无	No 无	No 无	No 无
Water flow switch 水流开关		Yes 有	Yes 有	Yes 有	Yes 有

Test condition:

Heating mode: Water inlet/outlet temperature: 30/35°C
Ground source inlet/outlet temp.: 15/10°C

Cooling mode: Water inlet/outlet temperature: 12/7°C
Ground source inlet/outlet temp.: 30/35°C

测试条件:

制热模式: 使用侧进/出水温度: 30/35°C
地源侧进/出水温度: 15/10°C

制冷模式: 使用侧进/出水温度: 12/7°C
地源侧进/出水温度: 30/35°C

DC SERIES (DC inverter)

DC 系列（直流变频）



Energy saving
节能



Heating & cooling
房屋采暖+制冷



Domestic hot water
生活热水



Wifi control
WIFI控制

Energy saving and high efficiency

节能高效

Variable capacity

可变能力

Low noise

低噪音

Multiple protections for safe operation

多重保护安全运行

Intelligent control, built-in WiFi

智能控制，内置WIFI



Specifications 参数

Model 型号	SHWW	6DC	9DC	12DC	15DC	18DC
Power supply 电源规格	V/Ph/Hz	220/1/50	220/1/50	220/1/50	380/3/50	380/3/50
Heating capacity 制热量	kW	6	9.1	12.2	15.4	17.9
Heating power input 制热输入功率	kW	1.28	1.94	2.62	3.32	3.86
COP		4.69	4.69	4.66	4.64	4.64
Cooling capacity 制冷量	kW	4.70	7.20	9.60	12.10	14.20
Cooling power input 制冷输入功率	kW	1.34	2.05	2.78	3.51	4.12
EER		3.51	3.51	3.45	3.45	3.45
Max. water temp. 最高水温	℃	60	60	60	60	60
Water flow (using side) 水流量（使用侧）	m3/h	1.0	1.6	2.1	2.6	3.1
Water flow (ground source) 水流量（地源侧）	m3/h	0.8	1.2	1.7	2.1	2.4
Net weight 净重	kg	62	70	79	86	91
Noise 噪音	dB(A)	40	40	41	42	42
Connection pipe 水口规格	inch	1"	1"	1"	1"	1"
Net dimension 净尺寸	mm	585*600*770	585*600*770	585*600*770	585*600*770	585*600*770
Refrigerant 制冷剂		R32	R32	R32	R32	R32
Working mode 工作模式		Heating\cooling\ hot water 制热、制冷、热水	Heating\cooling\ hot water 制热、制冷、热水	Heating\cooling\ hot water 制热、制冷、热水	Heating\cooling\ hot water 制热、制冷、热水	Heating\cooling\ hot water 制热、制冷、热水
Compressor 压缩机		Mitsubishi 三菱	Mitsubishi 三菱	Mitsubishi 三菱	Mitsubishi 三菱	Mitsubishi 三菱
Condenser 冷凝器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
Evaporator 蒸发器		Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器	Plate heat exchanger 板式换热器
4-way valve 四通阀		Yes 有	Yes 有	Yes 有	Yes 有	Yes 有
Expansion valve 节流装置		Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀	Electronic expansion valve 电子膨胀阀
High pressure switch 高压开关	MPa	4.2-3.6	4.2-3.6	4.2-3.6	4.2-3.6	4.2-3.6
Low pressure switch 低压开关	MPa	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Circulation pump 循环水泵		Yes 有	Yes 有	Yes 有	Yes 有	Yes 有
Water flow switch 水流开关		Yes 有	Yes 有	Yes 有	Yes 有	Yes 有

Test condition:

Heating mode: Water inlet/outlet temperature: 30/35℃
Ground source inlet/outlet temp.: 15/10℃
Cooling mode: Water inlet/outlet temperature: 12/7℃
Ground source inlet/outlet temp.: 30/35℃

测试条件:

制热模式: 使用侧进/出水温度: 30/35℃
地源侧进/出水温度: 15/10℃
制冷模式: 使用侧进/出水温度: 12/7℃
地源侧进/出水温度: 30/35℃