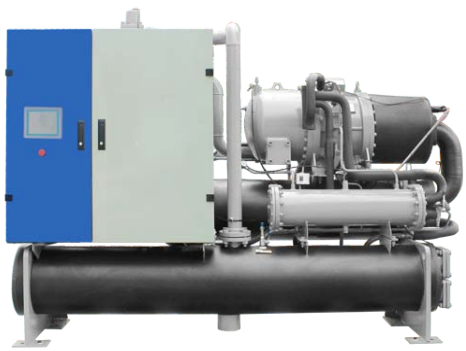
Water Source Heat Pump

Nomenclature

ES	G	W	F	121	S	O	H	S
1	2	3	4	5	6	7	8	9

1	ES	ESACIR
2	G	Compressor type G:Screw type(Semi-hermetic Screw Type)
3	W	Product series W:Water cooled series
4	F	F:Flooded type P:Falling film type/Spray type Dry type: omitted
5	121	Product seris NO:(USRT/KW/HP)
6	S	Compressor quantity S:Single type D:Double type
7	O	Frame type C: Cabinet type O: Open type
8	HV	Function H: Heat pump HV: Heat pump with recovery
9	M	Refrigerant M: R134a S:R22

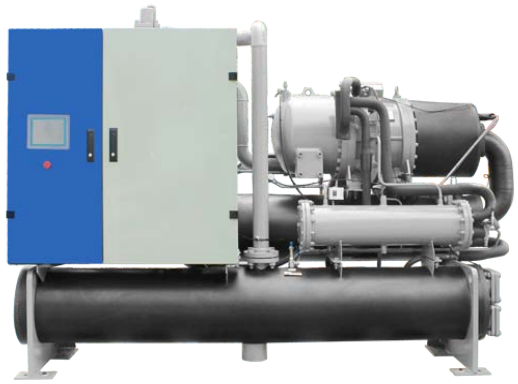
Product Photos



Water Source Heat Pump

Application Scope

Eurostars water source heat pump(with heat recovery)with widely capacity, chilled water temperature range 5 ℃ ~20 ℃ , it supplies cooling, heating and hot water, hot water maximum temp. can reach 50℃. Water source heat pump is widely used in the hotel, supermarket and commercial office building, etc.



Unit Features

High Efficiency

-Utilizing advanced high efficient 5:6 screw compressor, equipping with high efficient condenser and evaporator and imported expansion valve to realize high EER .

-Heat recover is optional,client can choose partial heat recovery or total heat recovery, maximum hot water can reach 70℃.

-Improve efficiency about 5% during heat recovery.

Reliability Operation

-Multi-protection device to keep units safety operation.

-Single compressor with 4 stages capacity control, double compressors with 8 stages capacity control, to ensure the best performance.

-All chiller units has passed national standard safety system test before leaving factory, to accord with national standard.

Intellectualized Control System

-Adopt SCM micro computer control,can operate via centralized manage system (PLC controller is optional);clients also can choose remote controller which can also indicate chiller running condition.

-Micro computer touch control system, simply operation interface, indicating maintenace information in time. Optional for remote service if needed.

-Chiller unit control system can connect with customer central control system to know about the unit's operation condition.

Easy and Simply Installation and Maintenance

-Refrigerant and refrigeration oil are charged well before leaving factory, just connecting with inlet/outlet water pipe and power on to start running it.

- Controller interface indicating fault information directly in order to know and maintain it in time.

Special Design Is Optional

-Optional for refrigerant R22 ,R134a according to customer's need;

-Optional for different kinds of power supply,such as 380/400/415V-3PH-50HZ,230/440/460V-3PH-60HZ;

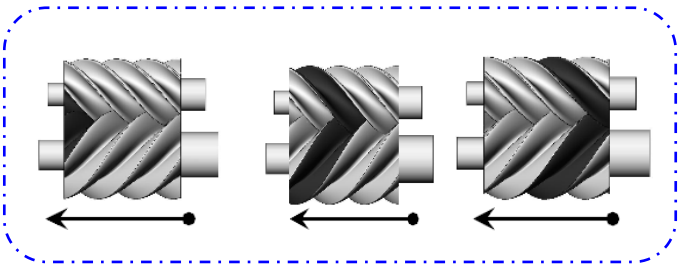
-Customized unit is optional,such anti-corrosion,salt water heat exchanger,etc.

Water Source Heat Pump

Main Components

High Efficiency Screw Type Compressor

RC2 series screw compressors feature simple and robust construction by elimination of some components such as pistons, piston rings, valve plates, oil pumps which are found in reciprocating compressors. Without these components,screw compressors run with low noise level, minimized vibration, high reliability and durability. RC2 series screw compressors are of two-shaft rotary displacement design with the latest and advanced 5:6 patented screw rotors. Screw rotors are precisely installed with roller bearings, i.e. radial bearings at both suction and discharge ends as well as angular contact ball bearings i.e. axial bearings at discharge end. A three-phase, two-pole squirrel-cage induction motor drives the compressor. The motor rotor is located on the shaft of the male screw rotor. Cooling of the motor is achieved with suction refrigerant vapor.



Multinational patents of high-efficiency screw rotors

The new 5:6 high efficiency screw rotor profile is patented in Taiwan, UK, US, and China. This new large-volume, high-efficiency rotor profile is designed especially for modern refrigerant characteristics. High-efficiency screw rotors are accomplished by using precision CNC machining centers, rotor milling machines, rotor grinding machines. Strict ISO 9001 process controlling and the application of precise inspection equipments, such as ZEISS 3D coordinate measuring machines, ensure high-efficiency, high-quality, low-noise and low vibration RC2 series screw compressors.

High efficiency motor

Premium grade low-loss core steel with special motor cooling slot and refrigerant guide vane
which pilot the cold suction refrigerant gas through the motor provides the highest operating efficiency possible no matter how strict operating conditions are.

Long life bearings and high reliability

The screw compressors utilize a combination of 10 axial and radial bearings and α axial balance piston to ensure longer bearing life and higher compressor reliability.

Double-walled rotor housing

Double casing structure with high strength inner ribs has been designed to minimize noise and ensure rigidity. The rotor housing is made of high-strength gray cast iron FC25 that is extremely stable, therefore no expansion will occur even at high-pressure condition. These casings are machined by computer aided machining centers and inspected by precision measuring machines to enhance reliability.

Direct flange-on oil separator

A vessel made of ductile material FC 500 specially designed to withstand high pressure and provide the highest efficiency of oil separation. Simple oil management, three-staged oil separator(models above RC2-1020), low-pressure-drop demister to ensure the minimum refrigerant dilution in the oil and maintain high oil viscosity.

Precise capacity control

The slide valve for capacity control is located in the compressor chamber. The slide valve is actuated by injection of pressurized oil into the cylinder from the oil sump as well as bypass of oil through solenoid valves in each oil lines with pressure differential.

Perceptive protection modules

RC2 series screw compressors are equipped with PTC thermistors and motor protection module which could monitor discharge and motor coil temperatures as well as phase sequence and phase loss. Accessories also include oil level switch to monitor the level of oil, pressure differential switch, and pressure relief valve for optional application.

Water Source Heat Pump

Adaptable with additional cooling

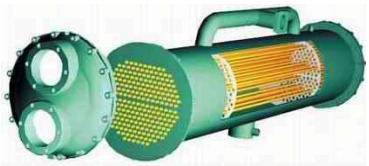
Liquid injection connection port located at the motor casing and in the
compression chamber, oil cooler connection port, and middle pressure economizer connection port for customer's
desired application.

RC2 series compressors not only continue RC series compressors ' characteristics of high efficiency & reliability design mentioned above, but are also designed with the following newly added advantages to meet customers' needs more adequately:

1. Design the fittest high-efficiency motor for respective refrigerant, operation condition and electrical power.
2. Dual capacity control of steps or continuous create more accurate and reliable mechanism (Option)
3. Part load effective economizer application.

High Efficiency Source Side Heat Exchanger

-Shell and tube type source side heat exchanger with inner grooved copper tubes optimizes efficient heat exchange between the chiller and cooling tower.

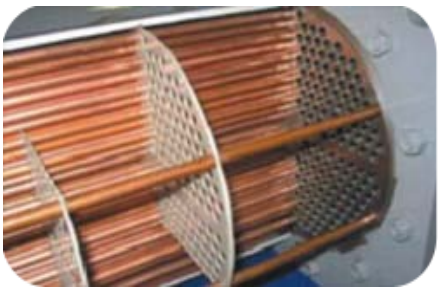


Throttling Device

Adopt superior quality famous exterior balanced thermal expansion valve, which is high reliability and adjustability, can realize precise refrigerant and temperature control to ensure operating in precise and reliable status.

High Efficiency Water Side Heat Exchanger

-Dry type shell and tube water side heat exchanger with inner grooved cooper tubes optimizes the cooling and heating efficiency. Self-cleaning, high intensity,anti-shaking design and heat insulation covering material ensure shell and tube evaporator unstained, reliable, quiet,highly efficient.



Intellectualized Controller

Adopt micro computer touch screen control,can operate via centralized manage system;whole system can realize remote operation. The system can monitor the water temperature,capacity status while running.The water temperature can be controlled according to the water outlet temperature.Trouble shooting code may display on the touch screen automatically when the system is abnormal.

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Water Source Heat Pump

Model ESGW		031SOHS	041SOHS	055SOHS	067SOHS	075SOHS	089SOHS	101SOHS	108SOHS	121SOHS	141SOHS
Rated Cooling Capacity	Cooling Capacity (KW)	108	147	193	256	281	331	383	415	456	543
	Cooling Capacity (USRT)	30.7	41.8	54.9	72.8	79.9	94.1	108.9	118.0	129.7	154.4
	Input Power (KW)	20.1	26.3	33.1	44.1	48.1	54.1	62.6	68.3	76.0	88.3
Rated Heating Capacity	Heating Capacity (KW)	130	176	228	304	333	388	449	487	537	635
	Heating Capacity (USRT)	37.0	50.1	64.8	86.5	94.7	110.4	127.7	138.5	152.7	180.6
	Input Power (KW)	27.0	35.5	44.6	59.6	64.9	73.1	84.6	92.2	102.6	119.1
Refrigerant		R22									
Compressor Type/Qty		Semi-hermetic Screw Type /1									
Power Supply		3ϕ-380/400/415V-50HZ									
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.									
Number of Refrigeration Circuit		1									
Capacity Control (%)		0,66,100			0,50,75,100						
Refrigerant Charge (Kg)		17	24	30	40	44	52	59	65	71	86
Chilled Water	Temp of inlet/outlet water	12℃/7℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	2"	2-1/2"	3"	3"	3"	3"	4"	4"	4"	4"
	Water Flow (m^3/h)	18.6	25.3	33.2	44.0	48.3	56.9	65.9	71.4	78.4	93.4
	Pressure drop (kPa)	20	25	29	32	41	50	55	60	58	39
Underground water	Temp of inlet/outlet water	18℃/29℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	2"	2-1/2"	3"	3"	3"	3"	4"	4"	4"	5"
	Water Flow (m^3/h)	10.2	13.8	17.8	23.8	26.0	30.3	35.1	38.1	42.0	49.6
	Pressure drop (kPa)	37	43	41	48	48	47	45	46	46	47
Running Noise dB(A)		73.1	73.7	74.8	75.0	75.0	79.6	80.4	81.5	83.1	84.2
Total weight (Kg)		880	910	1080	1220	1390	1510	1620	1720	1830	2140
Running Weight (Kg)		970	1010	1220	1380	1530	1670	1780	1870	2020	2400
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.									

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃，
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Water Source Heat Pump

Model ESGW		162SOHS	175SOHS	183SOHS	208SOHS	230SOHS	234SOHS	278SOHS	297SOHS	392SOHS	443SOHS
Rated Cooling Capacity	Cooling Capacity (KW)	628	680	706	822	903	964	1087	1332	1570	1794
	Cooling Capacity (USRT)	178.6	193.4	200.8	233.8	256.8	274.2	309.2	378.8	446.5	510.2
	Input Power (KW)	101.0	108.7	112.1	129.2	143.4	152.2	171.2	208.8	244.7	276.8
Rated Heating Capacity	Heating Capacity (KW)	733	793	822	955	1051	1121	1263	1546	1819	2075
	Heating Capacity (USRT)	208.5	225.5	233.8	271.6	298.9	318.8	359.2	439.7	517.3	590.2
	Input Power (KW)	136.2	146.7	151.3	174.4	193.4	205.4	231.1	281.8	330.2	373.5
Refrigerant		R22									
Compressor Type/Qty		Semi-hermetic Screw Type /1									
Power Supply		3ϕ-380/400/415V-50HZ									
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.									
Number of Refrigeration Circuit		1									
Capacity Control (%)		0,50,75,100									
Refrigerant Charge (Kg)		97	105	109	127	141	150	168	207	243	277
Chilled Water	Temp of inlet/outlet water	12℃/7℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	5"	5"	5"	5"	5"	5"	5"	8"	8"	8"
	Water Flow (m^3/h)	108.0	117.0	121.4	141.4	155.3	165.8	187.0	229.1	270.0	308.6
	Pressure drop (kPa)	43	57	72	36	53	63	65	67	69	72
Underground water	Temp of inlet/outlet water	18℃/29℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	5"	5"	5"	5"	5"	5"	6"	6"	8"	8"
	Water Flow (m^3/h)	57.3	62.0	64.3	74.7	82.2	87.6	98.7	120.9	142.2	162.2
	Pressure drop (kPa)	46	47	53	59	61	62	65	67	76	81
Running Noise dB(A)		86.3	86.6	86.9	87.1	87.3	87.6	88.4	90.3	90.8	91.2
Total weight (Kg)		2270	2460	2540	2680	2900	3060	3310	3740	3980	4300
Running Weight (Kg)		2520	2720	2920	3060	3380	3600	3830	4260	4520	4840
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.									

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Water Source Heat Pump

Model ESGW		062DOHS	134DOHS	150DOHS	202DOHS	304DOHS	324DOHS	350DOHS	366DOHS
Rated Cooling Capacity	Cooling Capacity (KW)	216	512	562	766	1147	1256	1360	1412
	Cooling Capacity (USRT)	61.4	145.6	159.8	217.9	326.2	357.2	386.8	401.6
	Input Power (KW)	40.1	88.2	96.1	125.2	186.4	202.0	217.4	224.2
Rated Heating Capacity	Heating Capacity (KW)	260	608	666	897	1342	1466	1585	1644
	Heating Capacity (USRT)	73.9	172.9	189.4	255.1	381.7	417.0	450.8	467.6
	Input Power (KW)	54.0	119.1	129.8	169.1	251.6	272.5	293.4	302.7
Refrigerant		R22							
Compressor Type/Qty		Semi-hermetic Screw Type /2							
Power Supply		3ϕ-380/400/415V-50HZ							
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.							
Number of Refrigeration Circuit		2							
Capacity Control (%)		0,25,37.5,50,62.5,75,87.5,100							
Refrigerant Charge (Kg)		34	80	87	118	179	194	209	219
Chilled Water	Temp of inlet/outlet water	12℃/7℃							
	Water Side Max Pressure (MPa)	1							
	Dia.of Pipe (inch)	3"	5"	5"	5"	6"	6"	8"	8"
	Water Flow (m^3/h)	37.2	88.1	96.7	131.8	197.3	216.0	233.9	242.9
	Pressure drop (kPa)	29	39	49	40	43	48	47	51
Under Ground Water	Temp of inlet/outlet water	18℃/29℃							
	Water Side Max Pressure (MPa)	1							
	Dia.of Pipe (inch)	3"	4"	5"	5"	4"×2	5"×2	5"×2	5"×2
	Water Flow (m^3/h)	20.3	47.5	52.1	70.1	104.9	114.6	123.9	128.5
	Pressure drop (kPa)	41	43	44	45	46	47	50	53
Running Noise dB(A)		76.1	82.0	82.2	83.4	88.2	89.3	89.6	89.9
Total weight (Kg)		1410	2260	2540	2930	3740	3950	4320	4810
Running Weight (Kg)		1790	2970	3330	3920	4830	5140	5540	5750
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.							

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Water Source Heat Pump

Model ESGW		416DOHS	460DOHS	468DOHS	556DOHS	594DOHS	784DOHS	886DOHS
Rated Cooling Capacity	Cooling Capacity (KW)	1645	1806	1928	2174	2664	3139	3587
	Cooling Capacity (USRT)	467.9	513.7	548.4	618.3	757.7	892.8	1020.2
	Input Power (KW)	258.4	286.7	304.4	342.4	417.6	489.4	553.7
Rated Heating Capacity	Heating Capacity (KW)	1910	2102	2241	2525	3092	3639	4149
	Heating Capacity (USRT)	543.2	597.8	637.4	718.1	879.4	1035.0	1180.0
	Input Power (KW)	348.8	386.8	410.8	462.1	563.5	660.4	747.1
Refrigerant		R22						
Compressor Type/Qty		Semi-hermetic Screw Type /2						
Power Supply		3ϕ-380/400/415V-50HZ						
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.						
Number of Refrigeration Circuit		2						
Capacity Control (%)		0,25,37.5,50,62.5,75,87.5,100						
Refrigerant Charge (Kg)		255	281	300	336	414	486	550
Chilled Water	Temp of inlet/outlet water	12℃/7℃						
	Water Side Max Pressure (MPa)	1						
	Dia.of Pipe (inch)	8"	8"	8"	8"	8"	10"	10"
	Water Flow (m^3/h)	282.9	310.6	331.6	373.9	458.2	539.9	617.0
	Pressure drop (kPa)	55	71	69	66	64	71	76
Underground Water	Temp of inlet/outlet water	18℃/29℃						
	Water Side Max Pressure (MPa)	1						
	Dia.of Pipe (inch)	5"×2	5"×2	5"×2	6"×2	6"×2	8"×2	8"×2
	Water Flow (m^3/h)	149.3	164.3	175.2	197.4	241.7	284.5	324.4
	Pressure drop (kPa)	59	61	67	74	76	80	85
Running Noise dB(A)		90.1	90.3	90.6	91.4	93.3	93.8	94.2
Total weight (Kg)		5270	5680	5890	6110	7380	8010	8550
Running Weight (Kg)		5970	6190	6500	6810	8420	9180	9720
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.						

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Eurostars

Water Source Heat Pump with Heat Recovery

Model ESGW		031SOHVS	041SOHVS	055SOHVS	067SOHVS	075SOHVS	089SOHVS	101SOHVS	108SOHVS	121SOHVS	141SOHVS
Rated Cooling Capacity	Cooling Capacity (KW)	108	147	193	256	281	331	383	415	456	543
	Cooling Capacity (USRT)	30.7	41.8	54.9	72.8	79.9	94.1	108.9	118.0	129.7	154.4
	Input Power (KW)	20.1	26.3	33.1	44.1	48.1	54.1	62.6	68.3	76.0	88.3
Rated Heating Capacity	Heating Capacity (KW)	130	176	228	304	333	388	449	487	537	635
	Heating Capacity (USRT)	37.0	50.1	64.8	86.5	94.7	110.4	127.7	138.5	152.7	180.6
	Input Power (KW)	27.0	35.5	44.6	59.6	64.9	73.1	84.6	92.2	102.6	119.1
Refrigerant		R22									
Compressor Type/Qty		Semi-hermetic Screw Type /1									
Power Supply		3ϕ-380/400/415V-50HZ									
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.									
Number of Refrigeration Circuit		1									
Capacity Control (%)		0,66,100			0,50,75,100						
Refrigerant Charge (Kg)		17	24	30	40	44	52	59	65	71	86
Chilled Water	Temp of inlet/outlet water	12℃/7℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	2"	2-1/2"	3"	3"	3"	3"	4"	4"	4"	4"
	Water Flow (m^3/h)	18.6	25.3	33.2	44.0	48.3	56.9	65.9	71.4	78.4	93.4
	Pressure drop (kPa)	20	25	29	32	41	50	55	60	58	39
Underground water	Temp of inlet/outlet water	18℃/29℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	2"	2-1/2"	3"	3"	3"	3"	4"	4"	4"	5"
	Water Flow (m^3/h)	10.2	13.8	17.9	23.7	26	30.3	35.1	38	42	49.7
	Pressure drop (kPa)	37	43	41	48	48	47	45	46	46	47
Heat Recovery Parameters											
Heat Reclaimed Volume (KW)		32.4	44.1	57.9	76.8	84.3	99.3	114.9	124.5	136.8	162.9
Heat Recovery unit	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	1"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2"	2"
	Water Flow (m^3/h)	5.6	7.6	10.0	13.2	14.5	17.1	19.8	21.4	23.5	28.0
	Pressure drop (kPa)	21	24	23	28	28	27	26	26	26	26
Total weight (Kg)		930	950	1130	1260	1430	1560	1690	1820	1900	2210
Running Weight (Kg)		1020	1050	1270	1420	1580	1710	1850	1940	2090	2470
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.									

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Eurostars

Water Source Heat Pump with Heat Recovery

Model ESGW		162SOHVS	175SOHVS	183SOHVS	208SOHVS	230SOHVS	234SOHVS	278SOHVS	297SOHVS	392SOHVS	443SOHVS
Rated Cooling Capacity	Cooling Capacity (KW)	628	680	706	822	903	964	1087	1332	1570	1794
	Cooling Capacity (USRT)	178.6	193.4	200.8	233.8	256.8	274.2	309.2	378.8	446.5	510.2
	Input Power (KW)	101.0	108.7	112.1	129.2	143.4	152.2	171.2	208.8	244.7	276.8
Rated Heating Capacity	Heating Capacity (KW)	733	793	822	955	1051	1121	1263	1546	1819	2075
	Heating Capacity (USRT)	208.5	225.5	233.8	271.6	298.9	318.8	359.2	439.7	517.3	590.2
	Input Power (KW)	136.2	146.7	151.3	174.4	193.4	205.4	231.1	281.8	330.2	373.5
Refrigerant		R22									
Compressor Type/Qty		Semi-hermetic Screw Type /1									
Power Supply		3ϕ-380/400/415V-50HZ									
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.									
Number of Refrigeration Circuit		1									
Capacity Control (%)		0,50,75,100									
Refrigerant Charge (Kg)		97	105	109	127	141	150	168	207	243	277
Chilled Water	Temp of inlet/outlet water	12℃/7℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	5"	5"	5"	5"	5"	5"	5"	8"	8"	8"
	Water Flow (m^3/h)	108.0	117.0	121.4	141.4	155.3	165.8	187.0	229.1	270.0	308.6
	Pressure drop (kPa)	43	57	72	36	53	63	65	67	69	72
Underground water	Temp of inlet/outlet water	18℃/29℃									
	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	5"	5"	5"	5"	5"	5"	6"	6"	8"	8"
	Water Flow (m^3/h)	57.3	61.9	64.2	74.6	82.2	87.6	98.7	120.8	142.2	162.2
	Pressure drop (kPa)	46	47	53	59	61	62	65	67	76	81
Heat Recovery Parameters											
Heat Reclaimed Volume (KW)		188.4	204	211.8	246.6	270.9	289.2	326.1	399.6	471	538.2
Heat Recovery unit	Water Side Max Pressure (MPa)	1									
	Dia.of Pipe (inch)	2-1/2"	2-1/2"	2-1/2"	3"	3"	3"	3"	4"	4"	4"
	Water Flow (m^3/h)	32.4	35.1	36.4	42.4	46.6	49.7	56.1	68.7	81.0	92.6
	Pressure drop (kPa)	27	26	26	27	28	31	33	34	35	35
Total weight (Kg)		2360	2550	2630	2770	2990	3150	3400	4240	4570	4920
Running Weight (Kg)		2610	2810	3010	3150	3470	3690	3920	4790	5130	5490
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.									

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

3.The Min chilled water temp. is 5℃ when cooling,the Max hot water temp. is 50℃ when heating;

4. Specifications are subject to change without notice for further improvement.

Water Source Heat Pump with Heat Recovery

Model ESGW		062DOHVS	134DOHVS	150DOHVS	202DOHVS	304DOHVS	324DOHVS	350DOHVS	366DOHVS
Rated Cooling Capacity	Cooling Capacity (KW)	216	512	562	766	1147	1256	1360	1412
	Cooling Capacity (USRT)	61.4	145.6	159.8	217.9	326.2	357.2	386.8	401.6
	Input Power (KW)	40.1	88.2	96.1	125.2	186.4	202.0	217.4	224.2
Rated Heating Capacity	Heating Capacity (KW)	260	608	666	897	1342	1466	1585	1644
	Heating Capacity (USRT)	73.9	172.9	189.4	255.1	381.7	417.0	450.8	467.6
	Input Power (KW)	54.0	119.1	129.8	169.1	251.6	272.5	293.4	302.7
Refrigerant		R22							
Compressor Type/Qty		Semi-hermetic Screw Type /2							
Power Supply		3ϕ-380/400/415V-50HZ							
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.							
Number of Refrigeration Circuit		2							
Capacity Control (%)		0,25,37.5,50,62.5,75,87.5,100							
Refrigerant Charge (Kg)		34	80	87	118	179	194	209	219
Chilled Water	Temp of inlet/outlet water	12℃/7℃							
	Water Side Max Pressure (MPa)	1							
	Dia.of Pipe (inch)	3"	5"	5"	5"	6"	6"	8"	8"
	Water Flow (m^3/h)	37.2	88.1	96.7	131.8	197.3	216.0	233.9	242.9
	Pressure drop (kPa)	29	39	49	40	43	48	47	51
Under Ground Water	Temp of inlet/outlet water	18℃/29℃							
	Water Side Max Pressure (MPa)	1							
	Dia.of Pipe (inch)	3"	4"	5"	5"	4"×2	5"×2	5"×2	5"×2
	Water Flow (m^3/h)	20.4	47.5	52	70.1	104.9	114.6	123.9	128.5
	Pressure drop (kPa)	41	43	44	45	46	47	50	53
Heat Recovery Parameters									
Heat Reclaimed Volume (KW)		64.8	153.6	168.6	229.8	344.1	376.8	408.0	423.6
Heat Recovery unit	Water Side Max Pressure (MPa)	1							
	Dia.of Pipe (inch)	2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	3"	3"
	Water Flow (m^3/h)	11.1	26.4	29.0	39.5	59.2	64.8	70.2	72.9
	Pressure drop (kPa)	23	26	26	29	34	35	38	39
Total weight (Kg)		1550	2510	2810	3330	3910	4470	4910	5360
Running Weight (Kg)		1950	3240	3580	4280	4970	5660	5920	6160
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.							

Note:

1.Rated Cooling Capacity Based on:Underground water in/outlet temp 18℃/29℃,
Chilled water in/outlet temp. 12°C/7°C,fouling factor;0.088㎡.°C/KW

2.Rated heating capacity based on:Underground water inlet temp. 15°C,
hot water inlet temp. 40°C,outlet temp. was given based on the chilled water flow when cooling;

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Water Source Heat Pump with Heat Recovery

Model ESGW		416DOHVS	460DOHVS	468DOHVS	556DOHVS	594DOHVS	784DOHVS	886DOHVS
Rated Cooling Capacity	Cooling Capacity (KW)	1645	1806	1928	2174	2664	3139	3587
	Cooling Capacity (USRT)	467.9	513.7	548.4	618.3	757.7	892.8	1020.2
	Input Power (KW)	258.4	286.7	304.4	342.4	417.6	489.4	553.7
Rated Heating Capacity	Heating Capacity (KW)	1910	2102	2241	2525	3092	3639	4149.00
	Heating Capacity (USRT)	543.2	597.8	637.4	718.1	879.4	1,035.0	1180.0
	Input Power (KW)	348.8	386.8	410.8	462.1	563.5	660.4	747.1
Refrigerant		R22						
Compressor Type/Qty		Semi-hermetic Screw Type /2						
Power Supply		3ϕ-380/400/415V-50HZ						
Safety Protection		Phase reversion protection, Phase lack protection, Overload current protection, Discharge air temp. protection, Low & High pressure protection, Low temp. protection, Reserved water flow protection interface.						
Number of Refrigeration Circuit		2						
Capacity Control (%)		0,25,37.5,50,62.5,75,87.5,100						
Refrigerant Charge (Kg)		255	281	300	336	414	486	550
Chilled Water	Temp of inlet/outlet water	12℃/7℃						
	Water Side Max Pressure (MPa)	1						
	Dia.of Pipe (inch)	8"	8"	8"	8"	8"	10"	10"
	Water Flow (m^3/h)	282.9	310.6	331.6	373.9	458.2	539.9	616.964
	Pressure drop (kPa)	55	71	69	66	64	71	76
Underground Water	Temp of inlet/outlet water	18℃/29℃						
	Water Side Max Pressure (MPa)	1						
	Dia.of Pipe (inch)	5"×2	5"×2	5"×2	6"×2	6"×2	8"×2	8"×2
	Water Flow (m^3/h)	149.3	164.3	175.2	197.4	241.7	284.4	324.30
	Pressure drop (kPa)	59	61	67	74	76	80	85

Heat Recovery Parameters

Heat Reclaimed Volume (KW)		493.5	541.8	578.4	652.2	799.2	941.7	1076.1
Heat Recovery unit	Water Side Max Pressure (MPa)	1						
	Dia.of Pipe (inch)	4"	4"	4"	4"	5"	5"	5"
	Water Flow (m^3/h)	84.9	93.2	99.5	112.2	137.5	162.0	185.1
	Pressure drop (kPa)	42	42	43	43	43	43	43
Total weight (Kg)		5820	6290	6620	6840	7610	8440	8980.00
Running Weight (Kg)		6470	6790	7220	7440	8660	9520	10080
Dimension L×W×H		Detailed dimensions are according to the actual finished product sizes.						

Note:

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