Swimming Pool Chiller & Heat Pump

The Most Energy Efficient Solution to Heating and Cooling your pools

BLUEWAY

Enjoy Comfortable life!

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About Blueway

The name of **BLUEWAY** was founded in Australia in 1993. It has earned a worldwide reputation in the field of liquid heating and cooling systems (chillers & heat pumps) through about 20 years experience in this industry. In 2007, Blueway established its subsidiary manufacturer in Shunde, Foshan of China, utilizing the manufacturing advantages here and supply chillers and heat pumps worldwide.

Product Range

Blueway is capable of manufacturing and supplying even the largest liquid heating and cooling requirement for applications as diverse as:

- **Domestic and commercial hot and chilled water for homes and buildings**
- **Industrial water heating and cooling**
- **Commercial and industrial dehumidification and air handling systems**
- **Other specialist requirements**

Blueway produces Air/Water Heat Pumps including Swimming Pool Chiller & Heat Pumps, Indoor Swimming Pool Environment Control Systems (Dehumidifying, Cooling, Heating & Air Purifying), Multi Function Heat Pumps (House Heating, Cooling & Domestic Hot water), DC Inverter Heat Pumps, EVI Heat Pumps for low ambient temperatures, Hot Water Heat Pumps, Ground Source Heat pumps, Water Cooled Packaged Air Conditioners, etc. All its products are produced and tested in accordance with strict international quality control systems and standards, thus are able to adapt different weather conditions globally.




R&D Capacity

1) R&D Team

Blueway has a very strong R&D capacity and most of its technical staffs are of refrigeration or mechanic engineering background, some of them have 10-15 years experience in Air Conditioning and Heat Pump industry. Its technical director is a certified engineer by the Association of Energy Engineers of the United States

2) Advanced Laboratory

Blueway's Chiller and Heat Pump laboratory is equipped with highly advanced and sophisticated systems and instruments and is able to simulate harsh weather conditions down to -20°C and up to 60°C, thus can guarantee the reliability of its products operating at extremely harsh weather conditions. Its laboratory has been calibrated by General Machinery & Electrical Products Inspection Institute (GMPI).

Prestigious References

Blueway has exported its heat pump products to Australia, Europe, Middle East, South Africa and South America and have obtained worldwide recognition. In China market, Blueway's Indoor Pool Environment Control Heat Pump Systems have been applied and installed in many prestigious 5 star hotel projects and famous natatoriums, like Inter Continental Hotel & Resorts in Shenzhen, Sheraton Hotel in Taizhou and Shandong, Kempinski Hotel in Huizhou, the Natatorium of Shenzhen Universiade 2011 etc.

Blueway will continue its endeavor and commitment to serve its worldwide partners by offering innovative and highly efficient products and solutions.

Biforyo Hotel

Inter Continental Hotel

Jinji Lake Tourism Resorts

Kempinski Hotel

Sheraton Hotel

the Natatorium of Shenzhen Universiade

JUST IMAGINE WHAT A PLEASANT SWIM SHOULD BE

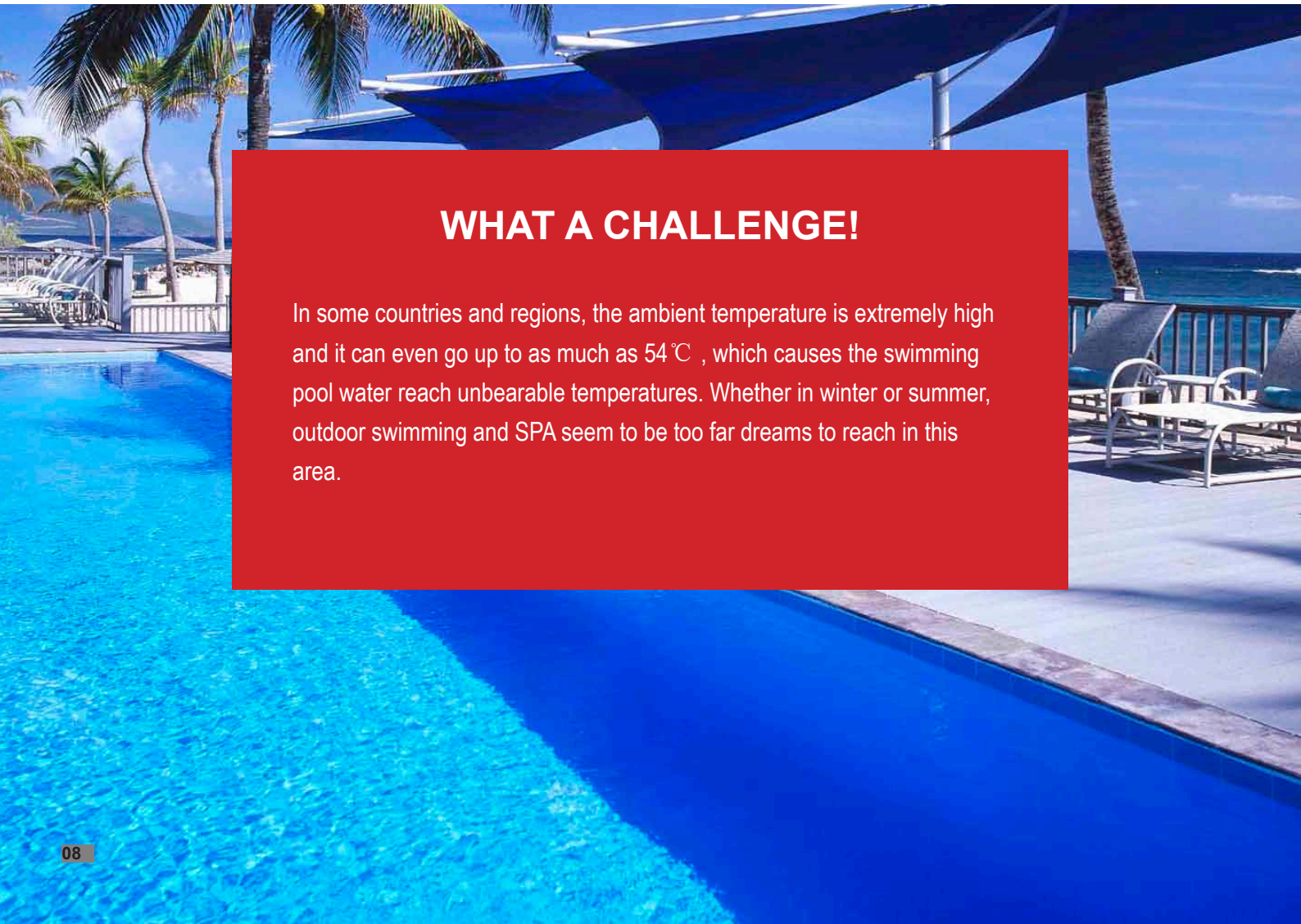
For a swim to be refreshing and animating, the pool water must be the right temperature for the swimmer, regardless of the influence of seasonal weather, extremely hot or cold. Reliable swimming pool temperature control is a key feature to enjoyable swimming.

SUMMER COOLING

During summer, swimming pools are subjected to massive solar gain. Coupled with high ambient humidity which prevents pools from cooling through evaporation, swimming pool water will become uncomfortably hot unless dynamically cooled.

WINTER HEATING

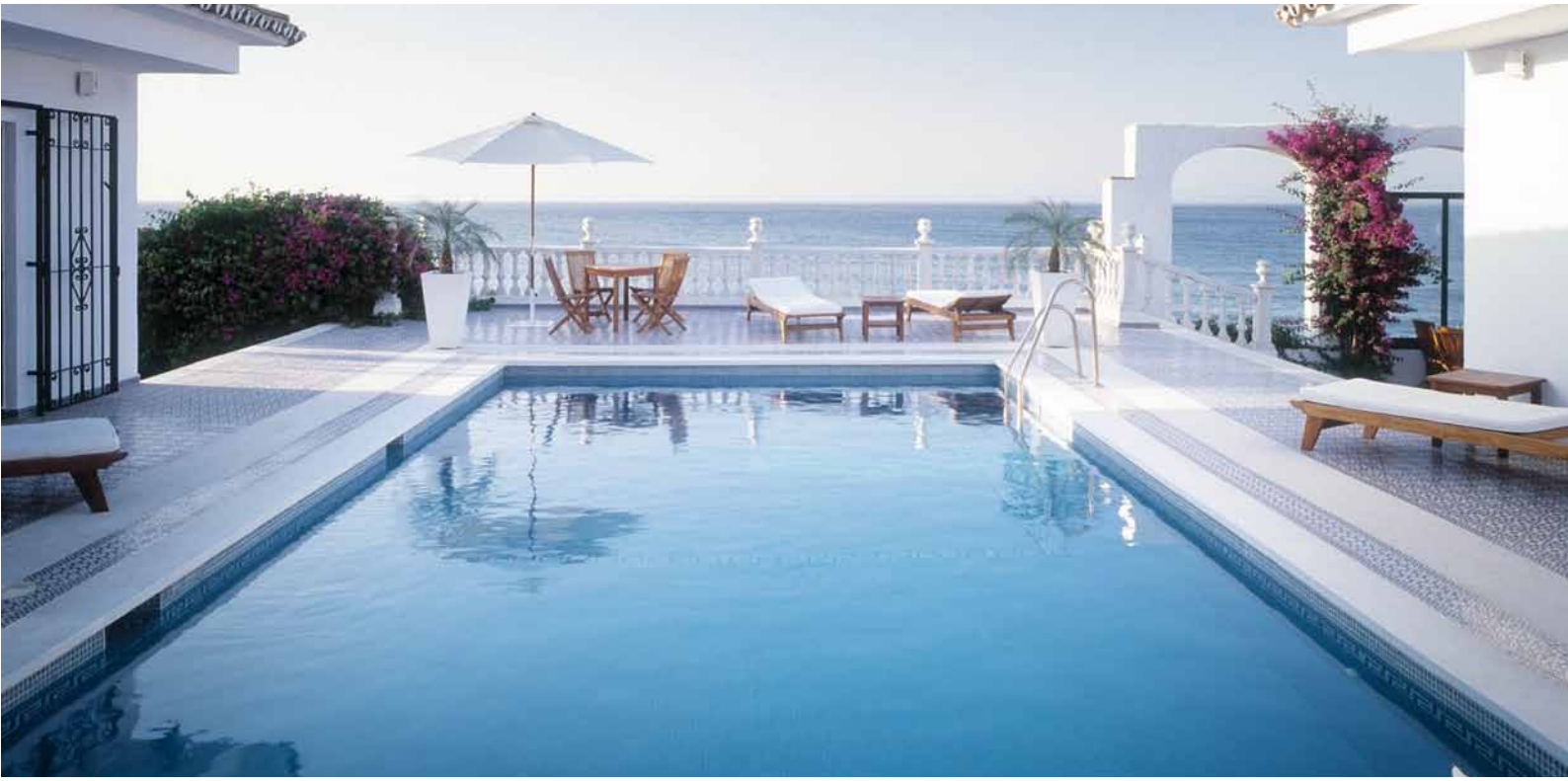
During winter, swimming pools continually evaporate water and radiate heat. The combination of these factors causes heat loss which must be replaced through a heater if comfortable water temperatures are to be maintained.



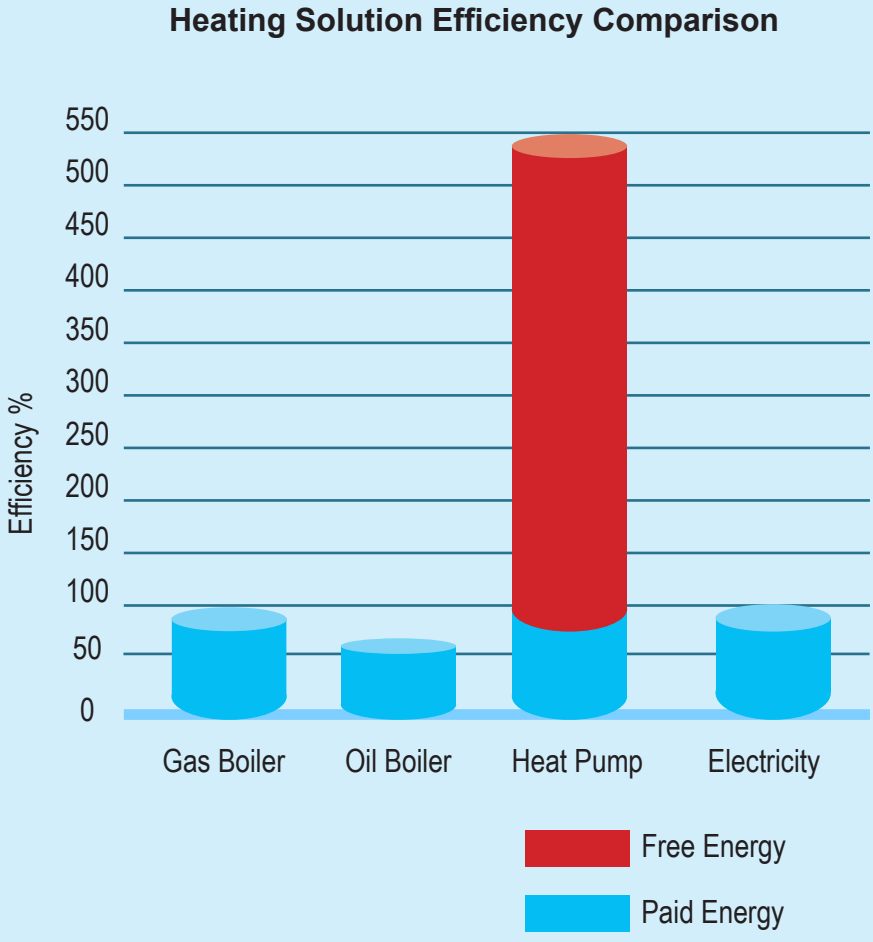
WHAT A CHALLENGE!

In some countries and regions, the ambient temperature is extremely high and it can even go up to as much as 54℃ , which causes the swimming pool water reach unbearable temperatures. Whether in winter or summer, outdoor swimming and SPA seem to be too far dreams to reach in this area.

IS THERE A SOLUTION ?



Heat pumps are proven technology and widely accepted in the world as the most economic and effective method of heating and cooling your swimming pool. Unlike electric heaters and boilers that can only provide pool heating, **Blueway Swimming Pool Chiller & Heat Pumps (SPCHs)** will automatically either heat or cool your pool without the need for additional equipments. As an added bonus, a Blueway SPCH unit will produce up to five times the energy it consumes, dramatically reducing the energy consumption of your swimming pool.

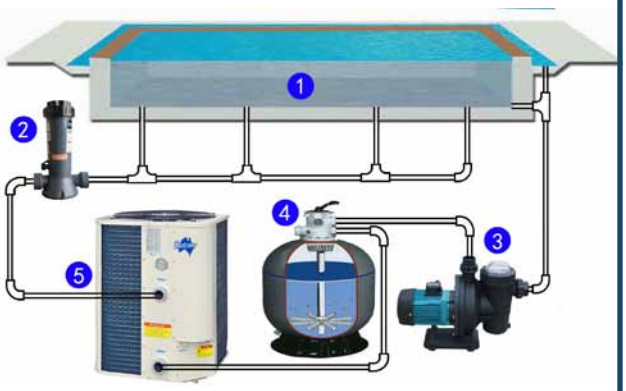


BLUEWAY
SWIMMING POOL CHILLER & HEAT PUMPS (SPCHs)

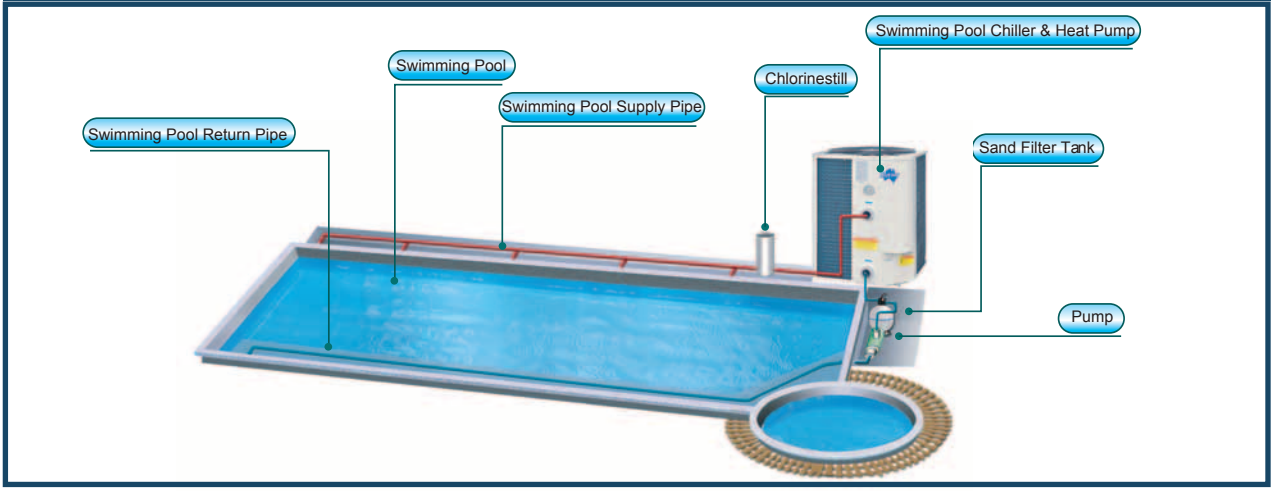
BLUEWAY SPCHs are specially designed and engineered for water temperature control of swimming pool and spa in the hot summer and cold winter.

The units work as chillers in summer and heat pumps in other seasons, offering the most energy efficient pool & spa chilling and heating. Compared to gas, oil, or electric heaters, operation cost of swimming pool water chiller & heat pumps is up to 60%~80% less, saving your expenses in energy costs each year.

Connection



Application



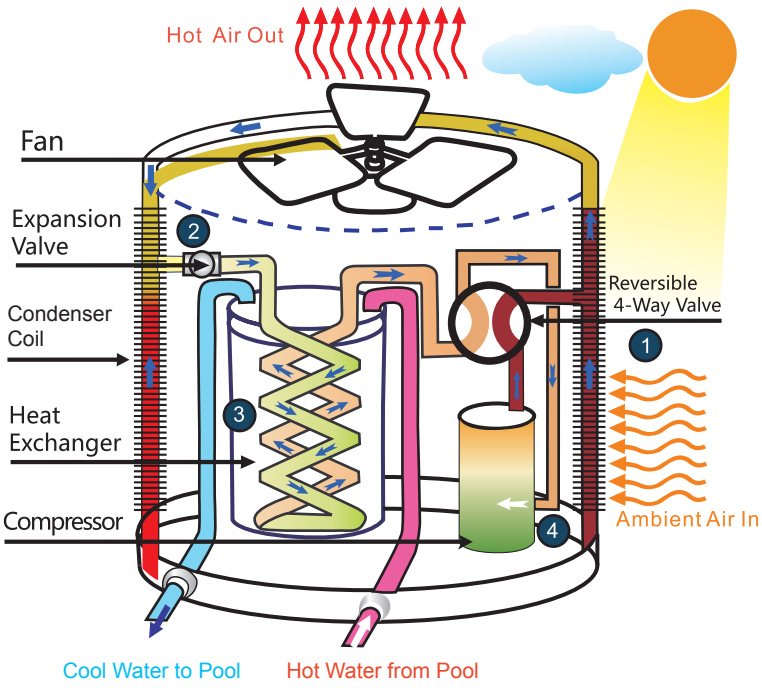
Blueway SPCH units are not only highly efficient, but also easy and safe to operate, providing the maximum comfort the whole year through.

WHETHER HOT OR COLD WHEATHER, OUTDOOR SWIMMING AND SPA ARE NO LONGER UNREACHABLE DREAMS!

---ENJOY COMFORTABLE SWIMMING AND SPA WITH BLUEWAY SPCHs, REGARDLESS AMBIENT TEMPERATURE AND LOCATION

HOW DOES A SPCH UNIT WORK?

AS A CHILLER



1 STAGE ONE
The temperature of the hot gaseous refrigerant discharged from the compressor is much higher than the outside ambient air temperature. When the outside air passes across the condenser coil, the gaseous refrigerant transfers its heat to the air and condenses into liquid.

2 STAGE TWO
The liquid refrigerant passes through the expansion valve, reducing its pressure and temperature.

3 STAGE THREE
The low temperature refrigerant passes to the heat exchanger evaporator, where the actual heat transfer takes place: the refrigerant absorbs heat from the water pumped into the heat exchanger and evaporates, whereby the water temperature is reduced.

4 STAGE FOUR
The gas refrigerant is then sucked to the compressor and compressed, increasing its pressure and temperature, ready to start the whole cycle once again.

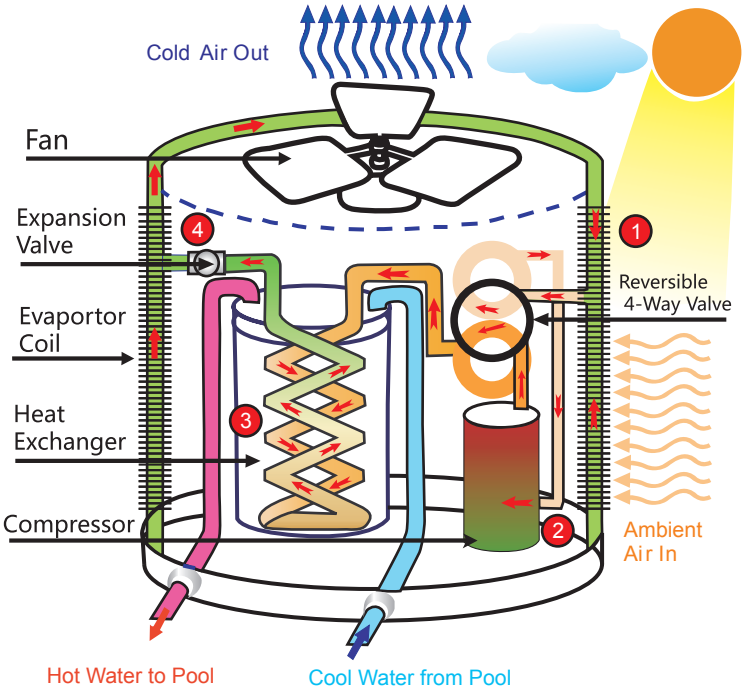
AS A HEAT PUMP

1 STAGE ONE
The heat transfer medium (the refrigerant) is colder than the outside air. As the outside air passes across the evaporator coil, the liquid refrigerant absorbs heat from the air and evaporates.

2 STAGE TWO
The gaseous refrigerant then passes to the compressor and is compressed. When compressed, the pressure is increased and the temperature of the vapor rises, effectively concentrating the heat.

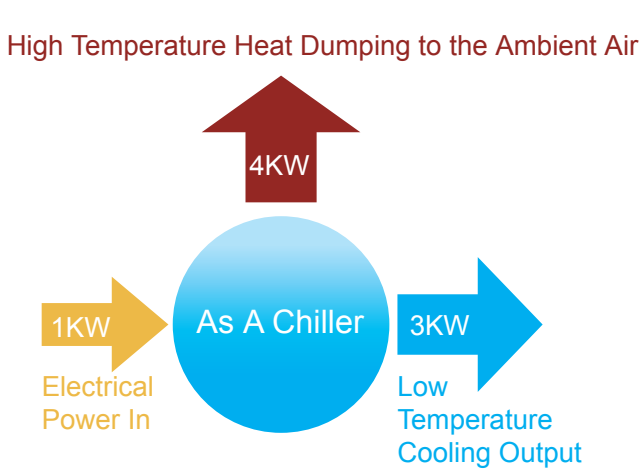
3 STAGE THREE
The hot gaseous refrigerant passes to the heat exchanger condenser, where the actual heat transfer takes place: the intensely hot gaseous refrigerant transfers its heat to the water pumped into the heat exchanger and condenses back into a liquid.

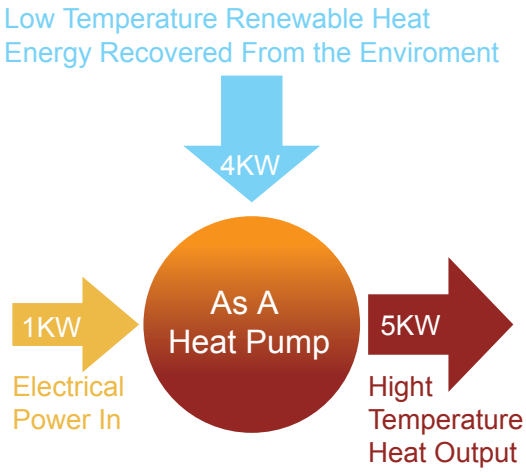
4 STAGE FOUR
The liquid refrigerant then passes through an expansion valve, reducing its pressure and temperature, ready to start the whole cycle once again.



WHY DO BLUEWAY SWIMMING POOL CHILLER & HEAT PUMS SAVE ENERGY?

A **Blueway Swimming Pool Chiller & Heat Pump** consumes much less electric power than a traditional electric heater. The electric power it consumes is only to operate the compressor, fan and water pump. For every 1kW electricity it consumes, the unit will generate up to 5kW heating capacity, which means 4kW capacity are totally free.





RELIABLE QUALITY OF KEY COMPONENTS

High Efficiency Marine-Grade Titanium Heat Exchanger

Titanium has gained world recognition in just about every industry for its unbreakable corrosion resistance. Blueway Swimming Pool Chillers & Heat Pumps incorporate Titanium Tube–in-Shell heat exchangers that are not only highly efficient, but also super corrosion resistant against harsh pool water chemicals, thus giving the following advantages:

- High efficiency and super corrosion resistant
- High working pressure

Due to its perfect structure design, the PVC shell can withstand high working pressure up to 1.2 Mpa (normal working pressure for a pool heat pump does not exceed 0.6Mpa), and the bursting pressure upto 2.3Mpa.

- Reliability and long lasting life span.

Over 130,000 times alternating pressure test (0- 8 bar) to the titanium pipe coil indicates that it can be used for over 15 years. The max. working pressure for titanium pipe coil is up to 52 bar.

- Low maintenance

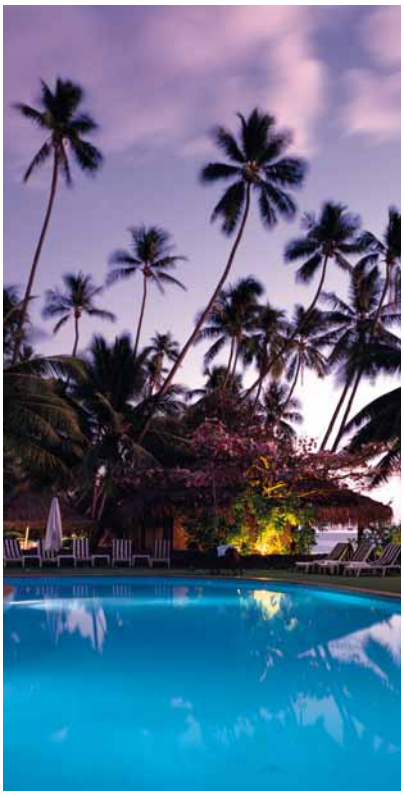
High Efficiency Rotary or Scroll Compressor

Blueway SPCH units use high efficiency rotary or scroll compressors which are widely used in air conditioners and their reliable performance has been proven due to many years of operation in the global market.

- Famous brand rotary compressor for domestic range
- Copeland,Danfoss, Hitachi or other famous brand scroll compressor for commercial range

Evaporator / Condenser Coil

The evaporator coil/Condenser Coil used is of fin and tube type. The fins are hydrophilic treated aluminum fins to resist corrosion, and the copper tubes are inner-grooved type, which increases the heat transfer in the refrigerant side.



RELIABLE QUALITY OF KEY COMPONENTS

Intelligent Control

The units are supplied with micro processor based digital controller with LCD display. The controller is programmed to provide a maximum protection to the heat pump system and accurate temperature control. The control panel is completely factory wired with all accessories and terminals included.

Expansion Device

1) Electric Expansion Valve (EEV) is used for Domestic Range

2) Alco (Emerson) or Danfoss thermal expansion valve (TEV) is used for Commercial Range

Features & Highlights

- ▲ **Wide Capacity Range:** 1.5-7 ton (Residential), 10-50 ton (Commercial)
- ▲ Using heat energy from ambient air and reproduces more heat energy, saving 60%~80% energy compared to traditional heaters.
- ▲ Providing heating in winter and chilling in summer for spa and swimming pool in domestic and commercial applications.
- ▲ No potential danger of any inflammable, gas poisoning, explosion, fire, electrical shock which are associated with other heating systems.
- ▲ A digital controller is incorporated to maintain the desired water temperature.
- ▲ Long-life and corrosion resistant composite cabinet stands up to severe climates and pool chemicals.
- ▲ Famous brand rotary or scroll compressor ensures outstanding performance, ultra energy efficiency, durability and quiet operation.
- ▲ Titanium tube-in-shell heat exchanger resists harsh pool chemicals and corrosion
- ▲ Self-diagnostic control panel monitors and troubleshoots heat pump operations to ensure safe and reliable operation.
- ▲ Intelligent digital controller with friendly user interface and blue LED back light.
- ▲ Separate isolated electrical compartment prevents internal corrosion and extends heat pump life.
- ▲ The heat pump can operate at ambient air temperature of -10℃ -54℃

Residential Range:

Commercial Range:

Technical Specifications

SWIMMING POOL CHILLER & HEAT PUMP
Residential Side Dischrage, 50Hz

	Model			SPCH-1.0S	SPCH1.5S	SPCH2.0S	SPCH2.5S	SPCH3.0S	SPCH4.0S	SPCH5.0S	SPCH6.0S
Heating performance data	Nominal heating capacity		KW/hour	5.1	7	9.2	12	14	19	25	31
	Power Supply		V/Hz/Ph	220-240/50/1						380-415/50/3	
	Heating (1): A24/19°C W26/28°C	Heating capacity	W/hour	5100	7000	9200	12000	14000	19000	25000	31000
			BTU/hour	17401	23884	31390	40944	47768	64828	85300	105772
		Power consumption	Watts	927	1250	1643	2182	2545	3519	4630	5741
		COP	W/W	5.5	5.6	5.6	5.5	5.5	5.4	5.4	5.4
		Current	A	4.2	5.7	7.5	9.9	11.6	16.0	8.3	10.3
	Heating (2): A15/12°C W26/28°C	Heating capacity	W/hour	4335	5950	7820	10200	11900	16150	21250	26350
			BTU/hour	14791	20301	26682	34802	40603	55104	72505	89906
		Power consumption	Watts	932	1311	1700	2267	2644	3511	4722	5856
		COP	W/W	4.65	4.5	4.6	4.5	4.5	4.6	4.5	4.5
		Current	A	4.2	6.0	7.7	10.3	12.0	16.0	8.4	10.5
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	W/hour	3300	4800	6500	8100	9650	12850	16500	19500
			BTU/hour	11259.6	16377.6	22178	27637.2	32925.8	43844.2	56298	66534
		Power consumption	Watts	868	1200	1711	2160	2539	3473	4521	5417
		EER	W/W	3.8	4	3.8	3.75	3.8	3.7	3.65	3.6
		Current	A	3.9	5.5	7.8	9.8	11.5	15.8	8.1	9.7
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	BTU/Hr	2805	4080	5525	6885	8202.5	10922.5	14025	16575
		Power consumption	Watts	923	1275	1817	2295	2698	3690	4803	5755
		EER	W/W	3.04	3.2	3.04	3	3.04	2.96	2.92	2.88
		Current	A	4.2	5.8	8.3	10.4	12.3	16.8	8.6	10.3
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Rotary					Scroll		
		Qty	Nos.	1							
		Refrigerant	-	R410A							
	Heat exchanger (water side)	Type	-	Titanium tube in PVC shell							
		Qty	Nos.	1							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Side							
		Airflow	m³/h	1800	2000	2500	2500	2500	3300	5500	5500
		Dia x Qty	mm x Nos.	320*1	400*1	420*1	420*1	420*1	440*1	520*1	520*2
		Material	-	plastic							
	Motor	Output Power	Watts	25	25	40	40	50	90	90	180
		RPM	-	850	850	850	850	850	810	810	810
		Qty	Nos.	1	1	1	1	1	1	2	2
	Coil	Type		Fin-tube							
		Tube dia	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
		Row	-	1	1	2	2	2	2	2	2
General data	Rated water flow rate		m³/h	2.2	3.0	4.0	5.2	6.0	8.2	10.7	13.3
	Water pressure drop		KPa	10	12	12	15	15	16	16	16
	Noise level	-	dB(A)	48	48	50	50	50	53	55	55
	Water Connection	Inlet	Inch	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''
		Outlet	Inch	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''	1-1/2''
	Dimmension:	Net	mm	930*350*550			1010*370*614	1115*470*700	1115*470*945		1115*470*1250
		Shipping	mm	1350*395*585			1085*390*722	1205*525*725	1205*525*975		1205*525*1280
	Weight	Net	Kg	34	52	55	70	91	106	111	115
		Shipping	Kg	39	60	63	78	97	114	120	125
	Loading Qty	20'/40'/40'HQ	Set(s)	102/210/210	102/210/210	102/210/210	96/198/198	57/93/93	38/62/62	38/62/62	19/31/62

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

Blueway reserves that rights to modify the above specifications without notice.Please contact us for updated inforamtion.

SWIMMING POOL CHILLER & HEAT PUMP
Residential Side Discharge, 60Hz

Technical Specifications

	Model			SPCH-1.0Sa	SPCH1.5Sa	SPCH2.0Sa	SPCH2.5Sa	SPCH3.0Sa	SPCH4.0Sa	SPCH5.0Sa	SPCH6.0Sa
Heating performance data	**Nominal heating capacity**		**KW/hour**	**5.8**	**8.05**	**10.6**	**13.8**	**16.1**	**22**	**28.75**	**35.6**
	Power Supply		V/Hz/Ph	220-240/60/1						220/60/3 380-415V/60/3	
	Heating (1): A24/19°C W26/28°C	Heating capacity	W/hour BTU/hour	5800 19790	8050 27467	10600 36167	13800 47086	16100 54933	22000 75064	28750 98095	35650 121638
		Power consumption	Watts	1055	1438	1893	2509	2927	4074	5324	6602
		COP	W/W	5.5	5.6	5.6	5.5	5.5	5.4	5.4	5.4
		Current	A	4.8	6.5	8.6	11.4	13.3	18.5	9.5	11.8
	Heating (2): A15/12°C W26/28°C	Heating capacity	W/hour BTU/hour	4930 16821	6842.5 23347	9010 30742	11730 40023	13685 46693	18700 63804	24437.5 83381	30303 103392
		Power consumption	Watts	1060	1507	1959	2607	3041	4065	5431	6734
		COP	W/W	4.65	4.5	4.6	4.5	4.5	4.6	4.5	4.5
		Current	A	4.8	6.9	8.9	11.8	13.8	18.5	9.7	12.0
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	W/hour BTU/hour	3700 12624.4	5550 18936.6	7360 25112.32	9200 31390.4	11000 37532	14700 50156.4	18400 62780.8	22000 75064
		Power consumption	Watts	974	1388	1937	2453	2895	3973	5041	6111
		EER	W/W	3.8	4	3.8	3.75	3.8	3.7	3.65	3.6
		Current	A	4.4	6.3	8.8	11.2	13.2	18.1	9.0	10.9
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	BTU/Hr	3145	4717.5	6256	7820	9350	12495	15640	18700
		Power consumption	Watts	1035	1474	2058	2607	3076	4221	5356	6493
		EER	W/W	3.04	3.2	3.04	3	3.04	2.96	2.92	2.88
		Current	A	4.7	6.7	9.4	11.8	14.0	19.2	9.6	11.6
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Rotary					Scroll		
		Qty	Nos.	1							
		Refrigerant	-	R410A							
	Heat exchanger (water side)	Type	-	Titanium tube in PVC shell							
		Qty	Nos.	1							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Side							
		Airflow	m³/h	1800	2000	2500	2500	2500	3300	5500	5500
		Dia x Qty	mm x Nos.	320*1	400*1	420*1	420*1	420*1	440*1	520*1	520*2
		Material	-	plastic							
	Motor	Output Power	Watts	25	25	40	40	50	90	90	180
		RPM	-	850	850	850	850	850	810	810	810
		Qty	Nos.	1	1	1	1	1	1	2	2
	Coil	Type		Fin-tube							
		Tube dia	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
		Row	-	1	1	2	2	2	2	2	2
General data	Rated water flow rate		m³/h	2.5	3.5	4.6	5.9	6.9	9.5	12.4	15.3
	Water pressure drop		KPa	10	12	12	15	15	16	16	16
	Noise level	-	dB(A)	48	48	50	50	50	53	55	55
	Water Connection	Inlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
		Outlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
	Dimmension:	Net	mm	930*350*550			1010*370*614	1115*470*700	1115*470*945		1115*470*1250
		Shipping	mm	1350*395*585			1085*390*722	1205*525*725	1205*525*975		1205*525*1280
	Weight	Net	Kg	34	52	55	70	91	106	111	115
		Shipping	Kg	39	60	63	78	97	114	120	125
	Loading Qty	20'/40'/40'HQ	Set(s)	102/210/210	102/210/210	102/210/210	96/198/198	57/93/93	38/62/62	38/62/62	19/31/62

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

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Technical Specifications

SWIMMING POOL CHILLER & HEAT PUMP
Residential Verticle Dischrage, 50Hz

	Model			SPCH-1.0V	SPCH1.5V	SPCH2.0V	SPCH2.5V	SPCH3.0V	SPCH4.0V	SPCH5.0V	SPCH6.0V
	Nominal heating capacity		**KW/hour**	**5.1**	**7**	**9.2**	**12**	**14**	**19**	**25**	**31**
	Power Supply		V/Hz/Ph	220-240/50/1						380-415/50/3	
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	W/hour	5100	7000	9200	12000	14000	19000	25000	31000
			BTU/hour	17401	23884	31390	40944	47768	64828	85300	105772
		Power consumption	Watts	927	1250	1643	2182	2545	3519	4630	5741
		COP	W/W	5.5	5.6	5.6	5.5	5.5	5.4	5.4	5.4
		Current	A	4.2	5.7	7.5	9.9	11.6	16.0	8.3	10.3
	Heating (2): A15/12°C W26/28°C	Heating capacity	W/hour	4335	5950	7820	10200	11900	16150	21250	26350
			BTU/hour	14791	20301	26682	34802	40603	55104	72505	89906
		Power consumption	Watts	932	1311	1700	2267	2644	3511	4722	5856
		COP	W/W	4.65	4.5	4.6	4.5	4.5	4.6	4.5	4.5
		Current	A	4.2	6.0	7.7	10.3	12.0	16.0	8.4	10.5
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	W/hour	3300	4800	6500	8100	10500	12850	16500	19500
			BTU/hour	11260	16378	22178	27637	35826	43844	56298	66534
		Power consumption	Watts	868	1200	1711	2160	2763	3473	4521	5417
		EER	W/W	3.8	4	3.8	3.75	3.8	3.7	3.65	3.6
		Current	A	3.9	5.5	7.8	9.8	12.6	15.8	8.1	9.7
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	BTU/Hr	2805	4080	5525	6885	8925	10922.5	14025	16575
		Power consumption	Watts	923	1275	1817	2295	2936	3690	4803	5755
		EER	W/W	3.04	3.2	3.04	3	3.04	2.96	2.92	2.88
		Current	A	4.2	5.8	8.3	10.4	13.3	16.8	8.6	10.3
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Rotary					Scroll		
		Qty	Nos.	1							
		Refrigerant	-	R410A							
	Heat exchanger (water side)	Type	-	Titanium tube in PVC shell							
		Qty	Nos.	1							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Verticle							
		Airflow	m³/h	1800	2000	2500	2500	2500	3300	5500	5500
		Dia x Qty	mm x Nos.	400*1	400*1	420*1	420*1	420*1	440*1	520*1	520*2
		Material	-	plastic							
	Motor	Output Power	Watts	25	25	40	40	50	90	90	180
		RPM	-	850	850	850	850	850	810	810	810
		Qty	Nos.	1	1	1	1	1	1	1	1
	Coil	Type		Fin-tube							
		Tube dia	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
		Row	-	1	1	2	2	2	2	2	2
	Rated water flow rate		m³/h	2.2	3.0	4.0	5.2	6.0	8.2	10.7	13.3
	Water pressure drop		KPa	10	12	12	15	15	16	16	16
General data	Noise level	-	dB(A)	48	48	50	50	50	53	55	55
	Water Connection	Inlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
		Outlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
	Dimmension:	Net	mm	570x500x640		695x690x640		695x689x740			745x694x950
		Shipping	mm	615x550x705		765x745x705		765x745x800			790x740x990
	Weight	Net	Kg	45	52	55	70	85	106	107	127
		Shipping	Kg	50	60	60	75	93	114	117	137
	Loading Qty	20'/40'/40'HQ	Set(s)	108/228/228	108/228/228	63/144/144	63/144/144	42/96/144	42/96/144	42/96/144	42/90/90

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

Blueway reserves that rights to modify the above specifications without notice.Please contact us for updated inforamtion.

SWIMMING POOL CHILLER & HEAT PUMP
Residential Verticle Dischrage, 60Hz

Technical Specifications

	Model			SPCH-1.0V	SPCH1.5V	SPCH2.0V	SPCH2.5V	SPCH3.0V	SPCH4.0V	SPCH5.0V	SPCH6.0V
Heating performance data	**Nominal heating capacity**		**KW/hour**	**5.8**	**8.05**	**10.6**	**13.8**	**16.1**	**22**	**28.75**	**35.6**
	Power Supply		V/Hz/Ph	220-240/60/1						220/60/3 380-415V/60/3	
	Heating (1): A24/19°C W26/28°C	Heating capacity	W/hour BTU/hour	5800 19790	8050 27467	10600 36167	13800 47086	16100 54933	22000 75064	28750 98095	35600 121467
		Power consumption	Watts	1055	1438	1893	2509	2927	4074	5324	6593
		COP	W/W	5.5	5.6	5.6	5.5	5.5	5.4	5.4	5.4
		Current	A	4.8	6.5	8.6	11.4	13.3	18.5	9.5	11.8
	Heating (2): A15/12°C W26/28°C	Heating capacity	W/hour BTU/hour	4930 16821	6842.5 23347	9010 30742	11730 40023	13685 46693	18700 63804	24437.5 83381	30260 103247
		Power consumption	Watts	1060	1507	1959	2607	3041	4065	5431	6724
		COP	W/W	4.65	4.5	4.6	4.5	4.5	4.6	4.5	4.5
		Current	A	4.8	6.9	8.9	11.8	13.8	18.5	9.7	12.0
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	W/hour BTU/hour	3700 12624	5550 18937	7360 25112	9200 31390	11000 37532	14700 50156	18400 62781	22000 75064
		Power consumption	Watts	974	1388	1937	2453	2895	3973	5041	6111
		EER	W/W	3.8	4	3.8	3.75	3.8	3.7	3.65	3.6
		Current	A	4.4	6.3	8.8	11.2	13.2	18.1	9.0	10.9
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	BTU/Hr	3145	4717.5	6256	7820	9350	12495	15640	18700
		Power consumption	Watts	1035	1474	2058	2607	3076	4221	5356	6493
		EER	W/W	3.04	3.2	3.04	3	3.04	2.96	2.92	2.88
		Current	A	4.7	6.7	9.4	11.8	14.0	19.2	9.6	11.6
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Rotary					Scroll		
		Qty	Nos.	1							
		Refrigerant	-	R410A							
	Heat exchanger (water side)	Type	-	Titanium tube in PVC shell							
		Qty	Nos.	1							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Verticle							
		Airflow	m³/h	1800	2000	2500	2500	2500	3300	5500	5500
		Dia x Qty	mm x Nos.	400*1	400*1	420*1	420*1	420*1	440*1	520*1	520*2
		Material	-	plastic							
	Motor	Output Power	Watts	25	25	40	40	50	90	90	180
		RPM	-	850	850	850	850	850	810	810	810
		Qty	Nos.	1	1	1	1	1	1	1	1
	Coil	Type		Fin-tube							
		Tube dia	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
		Row	-	1	1	2	2	2	2	2	2
General data	Rated water flow rate		m³/h	2.5	3.5	4.6	5.9	6.9	9.5	12.4	15.3
	Water pressure drop		KPa	10	12	12	15	15	16	16	16
	Noise level	-	dB(A)	48	48	50	50	50	53	55	55
	Water Connection	Inlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
		Outlet	Inch	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
	Dimmension:	Net	mm	570x500x640		695x690x640		695x689x740			745x694x950
		Shipping	mm	615x550x705		765x745x705		765x745x800			790x740x990
	Weight	Net	Kg	45	52	55	70	85	106	107	127
		Shipping	Kg	50	60	60	75	93	114	117	137
	Loading Qty	20'/40'/40'HQ	Set(s)	108/228/228	108/228/228	63/144/144	63/144/144	42/96/144	42/96/144	42/96/144	42/90/90

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

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Technical Specifications

SWIMMING POOL CHILLER & HEAT PUMP
Commercial Range, 50Hz

	Model			SPCH10	SPCH12	SPCH15	SPCH20	SPCH25	SPCH30	SPCH40	SPCH50
	Nominal heating capacity		**KW/hour**	**45**	**55**	**65**	**90**	**120**	**145**	**190**	**220**
	Power Supply		V/Hz/Ph	380-415/50/3							
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	KW/hour	45	55	65	90	120	145	190	220
			BTU/hour	153540	187660	221780	307080	409440	494740	648280	750640
		Power consumption	KW/hour	8	10	12	17	22	26	35	40
		COP	W/W	5.6	5.6	5.5	5.4	5.5	5.6	5.4	5.5
		Current	A	14.4	17.6	21.1	29.8	39.0	46.3	62.9	71.5
	Heating (2): A15/12°C W26/28°C	Heating capacity	KW/hour	38	47	55	77	102	123	162	187
			BTU/hour	130509	159511	188513	261018	348024	420529	551038	638044
		Power consumption	KW	8	9	11	16	21	25	34	39
		COP	W/W	4.9	4.9	4.8	4.8	4.8	4.9	4.8	4.8
		Current	A	13.9	17.0	20.4	28.8	37.7	44.7	60.7	69.1
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	KW/hour	35	42	53	70	88	105	140	175
			BTU/hour	119420	143304	179130	238840	298550	358260	477680	597100
		Power consumption	Watts	9	11	13	19	23	28	37	46
		EER	W/W	3.9	3.8	4	3.75	3.8	3.7	3.8	3.8
		Current	A	16.0	19.8	23.5	33.4	41.2	50.7	65.9	82.3
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	KW/hour	29.8	35.7	44.6	59.5	74.4	89.3	119.0	148.8
			BTU/Hr	101507	121808	152261	203014	253768	304521	406028	507535
		Power consumption	KW	9	11	14	19	24	27	37	46
		EER	W/W	3.20	3.20	3.11	3.20	3.15	3.30	3.20	3.20
		Current	A	16.6	19.9	25.6	33.2	42.2	48.3	66.5	83
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Scroll							
		Qty	Nos.	2	1	3	2	2	3	4	4
		Refrigerant	-	R410A / R407C / R417A							
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Vertical							
		Airflow	m³/h	13000	13000	20000	26000	32000	39000	60000	60000
		Dia x Qty	mm x Nos.	600×2	600×2	710×2	710×2	850×2	900×2	710×4	850×4
		Material	-	Alluminum alloy							
	Motor	Output Power	Watts	850*2	850*2	900*2	900*2	1100*2	1500*2	1100*4	1100*4
		RPM	-	950	950	950	950	950	950	950	950
		Qty	Nos.	2	2	2	2	2	2	4	4
	Coil	Type		Fine-tube							
		Tube dia	mm	9.52							
		Row	-	2	2	2	3	3	3	4	4
	Rated water flow rate		m³/h	19	24	28	39	52	62	82	95
	Water pressure drop		KPa	18	18	18	18	25	30	30	30
General data	Noise level	-	dB(A)	56	56	56	56	62	62	65	65
	Water Connection	Inlet	Inch	2+1/2"	2+1/2"	2+1/2"	2+1/2"	2+1/2"	(2+1/2")*2	(2+1/2")*2	(2+1/2")*2
		Outlet	Inch	2+1/2"	2+1/2"	2+1/2"	2+1/2"	2+1/2"	(2+1/2")*2	(2+1/2")*2	(2+1/2")*2
	Dimmension :	Net	mm	1420*760*1040		1420*760*1250	1700*1100*1820	2000*1100*2020	2300*1100*2020	2600*1100*1960	
		Shipping	mm	1480*820*1170		1480*820*1380	1760*1160*1950	2060*1160*2150	2360*1160*2150	2600*1160*2090	
	Weight	Net	Kg	380	385	500	570	600	1140	1180	1200
		Shipping	Kg	410	415	535	600	635	1180	1230	1250
	Loading Qty	20'/40'/40'HQ	Set(s)	14/28/28	14/28/28	7/14/14	2006-12-12	2005-10-10	4/8/8	4/8/8	4/8/8

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

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SWIMMING POOL CHILLER & HEAT PUMP
Commercial Range, 60Hz

Technical Specifications

	Model			SPCH10	SPCH12	SPCH15	SPCH20	SPCH25	SPCH30	SPCH40	SPCH50
	Nominal heating capacity		**KW/hour**	**52**	**65**	**75**	**105**	**135**	**165**	**220**	**250**
	Power Supply		V/Hz/Ph	380-415/60/3							
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	KW/hour	52	65	75	105	135	165	220	250
			BTU/hour	177424	221780	255900	358260	460620	562980	750640	853000
		Power consumption	KW/hour	9	12	14	19	25	29	41	45
		COP	W/W	5.6	5.6	5.5	5.4	5.5	5.6	5.4	5.5
		Current	A	16.6	20.7	24.4	34.8	43.9	52.7	72.8	81.3
	Heating (2): A15/12°C W26/28°C	Heating capacity	KW/hour	44	55	64	89	115	140	187	213
			BTU/hour	150810.4	188513	217515	304521	391527	478533	638044	725050
		Power consumption	KW	9	11	13	19	24	28	39	44
		COP	W/W	4.9	4.9	4.8	4.8	4.8	4.9	4.8	4.8
		Current	A	16.0	20.0	23.5	33.6	42.4	50.9	70.3	78.5
Cooling performance data	Cooling (1): A35/24°C W30/28°C	Cooling capacity	KW/hour	40	48	61	80	100	120	160	200
			BTU/hour	136480	163776	208132	272960	341200	409440	545920	682400
		Power consumption	Watts	10	13	15	21	26	32	42	53
		EER	W/W	3.9	3.8	4	3.75	3.8	3.7	3.8	3.8
		Current	A	18.3	22.6	27.3	38.1	47.0	58.0	75.3	94.1
	Cooling (2): A46/24°C W30/28°C	Cooling capacity	KW/hour	39.0	47.0	60.0	78.0	98.0	117.0	156.0	195.0
			BTU/Hr	133068	160364	204720	266136	334376	399204	532272	665340
		Power consumption	KW	12	15	19	24	31	35	49	61
		EER	W/W	3.20	3.20	3.11	3.20	3.15	3.30	3.20	3.20
		Current	A	21.8	26.3	34.5	43.6	55.6	63.4	87.1	109
Key components	Controller	-	-	Micro processor based digital controller with LCD display							
	Compressor	Type		Scroll							
		Qty	Nos.	2	1	3	2	2	3	4	4
		Refrigerant	-	R410A / R407C / R417A							
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell							
		Construction Material	-	Tube: tatanium; Shell: PVC							
		Max. working pressure	Bar	1.2							
	Fan	Fan direction	-	Vertical							
		Airflow	m³/h	13000	13000	20000	26000	32000	39000	60000	60000
		Dia x Qty	mm x Nos.	600×2	600×2	710×2	710×2	850×2	900×2	710×4	850×4
		Material	-	Alluminum alloy							
	Motor	Output Power	Watts	850*2	850*2	900*2	900*2	1100*2	1500*2	1100*4	1100*4
		RPM	-	950	950	950	950	950	950	950	950
		Qty	Nos.	2	2	2	2	2	2	4	4
	Coil	Type		Fine-tube							
		Tube dia	mm	9.52							
		Row	-	2	2	2	3	3	3	4	4
	Rated water flow rate		m³/h	22	28	32	45	58	71	95	107
	Water pressure drop		KPa	18	18	18	18	25	30	30	30
General data	Noise level	-	dB(A)	56	56	56	56	62	62	65	65
	Water Connection	Inlet	Inch	2+1/2"	2+1/2"	2+1/2"	2+1/2"	2+1/2"	(2+1/2")*2	(2+1/2")*2	(2+1/2")*2
		Outlet	Inch	2+1/2"	2+1/2"	2+1/2"	2+1/2"	2+1/2"	(2+1/2")*2	(2+1/2")*2	(2+1/2")*2
	Dimmension :	Net	mm	1420*760*1040		1420*760*1250	1700*1100*1820	2000*1100*2020	2300*1100*2020	2600*1100*1960	
		Shipping	mm	1480*820*1170		1480*820*1380	1760*1160*1950	2060*1160*2150	2360*1160*2150	2600*1160*2090	
	Weight	Net	Kg	380	385	500	570	600	1140	1180	1200
		Shipping	Kg	410	415	535	600	635	1180	1230	1250
	Loading Qty	20'/40'/40'HQ	Set(s)	14/28/28	14/28/28	7/14/14	2006-12-12	2005-10-10	4/8/8	4/8/8	4/8/8

Notes:

1. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
2. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;
3. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W30/28°C ;
4. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W30/28°C ;

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Indoor Pool Environment Control System

One System Delivers Everything You Need!

Indoor Pool Environment Control System

Model			BHP	15	20	25	30	40	50	60	80	100	120	160
Power Suplly			V/P/Hz	380-415/3/50 or 208-2303/60										
Output	Cooling		kW/h	25	33	41	51	65	82	97	131	163	192	241
	Heating		kW/h	30	39	47	60	78	106	128	170	214	243	280
Dehumidification capacity			Kg/h	17	22	26	33	43	51	62	84	102	122	160
Application pool surface			m^2	68	88	104	132	172	204	248	336	408	488	640
Rated Airflow			m^3 @300Pa	4000	5000	6000	7500	9000	11000	13000	16600	21000	25000	32000
Blower	Qty		Nos.	2	2	2	2	2	2	2	2	2	2	2
	Type		-	Centrifugal										
	Static pressure		Pa	100-500	100-500	100-500	100-500	100-850	100-850	100-850	100-850	100-850	100-850	100-850
	Power input		KW	1.5	1.5	2.2	2.2	3.5	4	5.5	6	7	7.5	11
Compressor	Qty		Nos.	1	1	1	2	2	2	2	2 or 4	2 or 4	2 or 4	2 or 4
	Type			Scroll										
	Power input		KW	5.5	7	8.5	5.4	7	8.5	11	7 or 13	8.5 or	11 or 22	13 or 25
Water Heat Exchanger Condenser	Type		-	Titanium Tube in PVC Shell										
	Rated working		Mpa	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
	Max.water		℃	40	40	40	40	40	40	40	40	40	40	40
	Rated water		m^3	4.7	6.1	7.2	9.4	12.2	14.5	18.8	24.6	30.6	37.5	48
	Water		mm	32	32	38	50	50	63	63	75	75	90	100
Air Cooled Condenser	Qty		Nos.	1	1	1	1	1	1	1	2	2	2	2
	Rated capacity		KW	30	39	47	60	78	96	118	150	184	223	278
	Rated airflow		m^3	10000	12000	15000	20000	24000	30000	40000	48000	60000	80000	90000
	Nos. of fan		Nos.	1	1	1	2	2	2	2	4	4	4	4
	Fan motor		KW	0.82	0.82	1.65	0.82	0.82	0.82	0.82	0.82	0.82	1.1	1.1
Dimension	Outdoor condenser	W	mm	706	1450	1450	1450	1800	1850	2110	1800	1850	2110	2500
		D	mm	686	705	705	705	705	1000	1100	1000	1000	1100	1200
		H	mm	940	1065	1065	1065	1065	1320	1350	1320	1320	1350	1350
	Indoor main unit	W	mm	3600	3800	3600	3800	4200	4600	4900	5400	5800	6600	7000
		D	mm	1370	1520	1570	1670	1670	1930	2160	2200	2200	2150	2200
		H	mm	1160	1160	1260	1360	1450	1520	1690	1840	2150	2200	2500
Indoor Main Unit Weight			Kg	500	800	900	1200	1500	1650	1850	2200	2500	2700	3300

Notes:

1. The above ratings are based AHRI standard 910-2011 (Performance Rating of Indoor Pool Dehumidifiers):Outdoor ambient DB 35 ℃, Pool water temp. 27℃, Chiller water temp. 7℃;
2. The design and specifications are subject to change without notice.

Indoor Pool

Environment Control System

Blueway Indoor Pool Environment Control Systems provide effective control of damaging moisture common within indoor pool facilities. They maintain a delicate balance of humidity control and manage air and water temperatures for maximum comfort at the lowest cost. This series uses heat pump technology to dehumidify the space and recycle the waste energy to heat both the air and pool water. They are available in many sizes and a variety of configurations for large indoor pools found in hotels, schools, natatoriums, aquatic centers and water parks.

Built for the Corrosive Pool Environment

Blueway dehumidifiers have many special design features to minimize maintenance and extend the life of the unit. All critical components are located out of the corrosive air stream, and coils are constructed from all copper and coated aluminum fins for long life. Blueway uses full-size air/water condensers for maximum pool and air heating or cooling. It utilizes a sophisticated PLC (Programmable Logic Controller) that offers highly efficient control strategies for more efficient intelligent pool operation. All units are constructed of heavy-gauge steel with side and roof panels galvanized and epoxy powder coated to resist corrosion. Panel insulation provides additional energy efficiency along with sound control for indoor and outdoor installations.

Recycled Energy Lessens the Need for Fossil Fuel Heating

Indoor pools demand large quantities of heat to maintain space and water comfort conditions. Rather than relying on fossil fuel as the primary heat source, Blueway units utilize waste heat generated during dehumidification to heat the space and pool water. Blueway units return much more energy than they use with average recorded savings ranging from 40% to 60% over conventional outside air dilution systems. For every kilowatt of electrical power used to operate a Blueway system, five kilowatts of heat are delivered to the natatorium air and water.

High Efficiency and Environmentally Friendly

All models use environmentally-friendly R417A or R410A refrigerant and deliver excellent performance characteristics. Staged compressor cycling ensures minimum compressor operation for any given load for greater efficiency, and also maintains a high quality environment. The systems can be configured to return condensate back to the pool, saving the equivalent of the entire pool's volume over one year. For improved air quality, plasma filters can be added.

Rugged Features delivers Unrivaled Performance

- Scroll compressor, efficient and quiet operation
- Coated evaporator and reheat condenser coils, long life
- Titanium Tube-in–Shell water heat exchanger
- Powder coated cabinet, corrosion resistant
- PLC controller with user friendly interface
- Remote monitoring by phone or internet
- Self diagnosis

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