Tropical (T3)
Swimming Pool Chiller & Heat Pump

Engineered for the Hash Weather Conditions in the Gulf

BLUEWAY

Enjoy Comfortable life!

INDEX

JUST IMAGINE WHAT A PLEASANT SWIM SHOULD BE

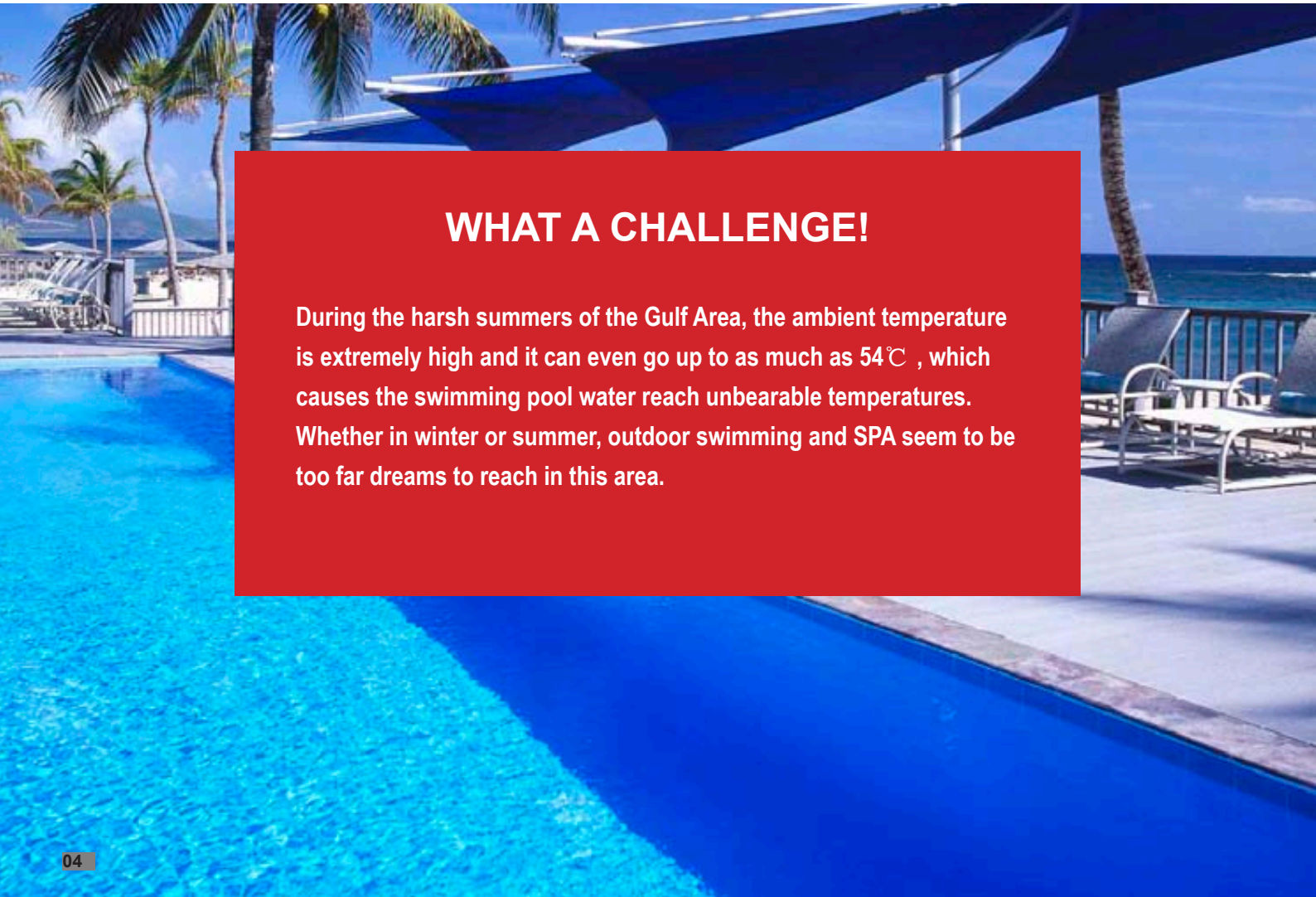
For a swim to be refreshing and animating, the pool water must be the right temperature for the swimmer, regardless of the influence of seasonal weather, extremely hot or cold. Reliable swimming pool temperature control is a key feature to enjoyable swimming.

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.

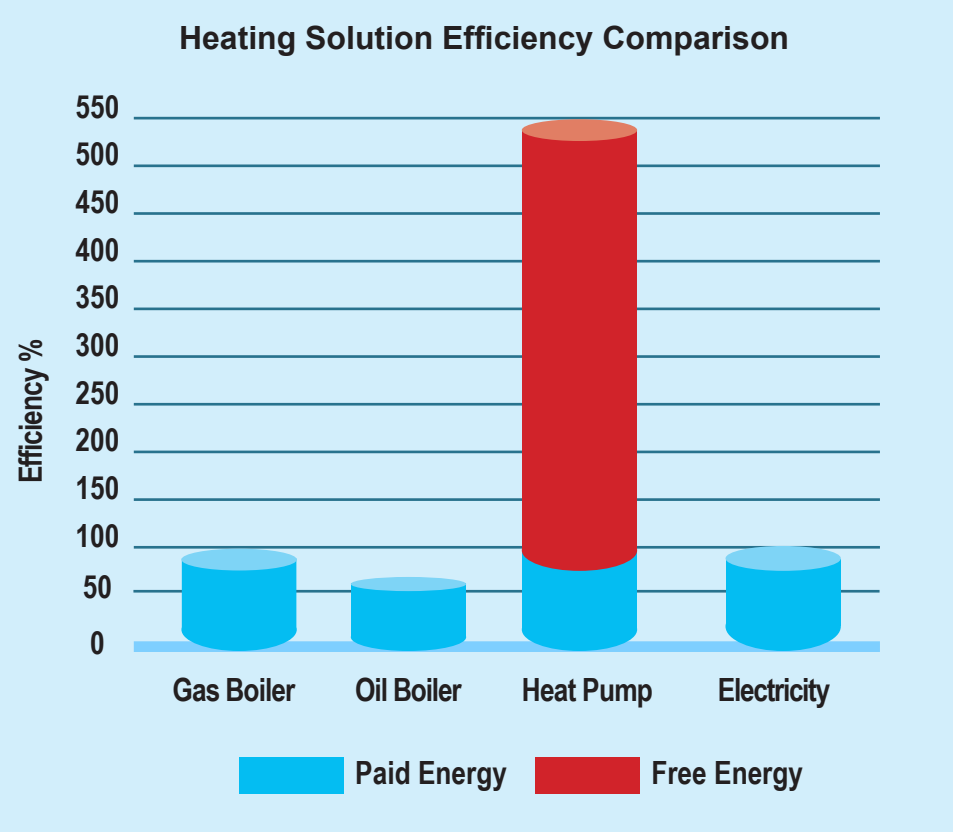


WHAT A CHALLENGE!

During the harsh summers of the Gulf Area, 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 of the Gulf Area. Thanks to their tropical designs of the systems, the units are able to withstand the hash summer weather conditions and can operate at ambient temperature as high as 54℃ without compressor tripping or failure.

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.

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

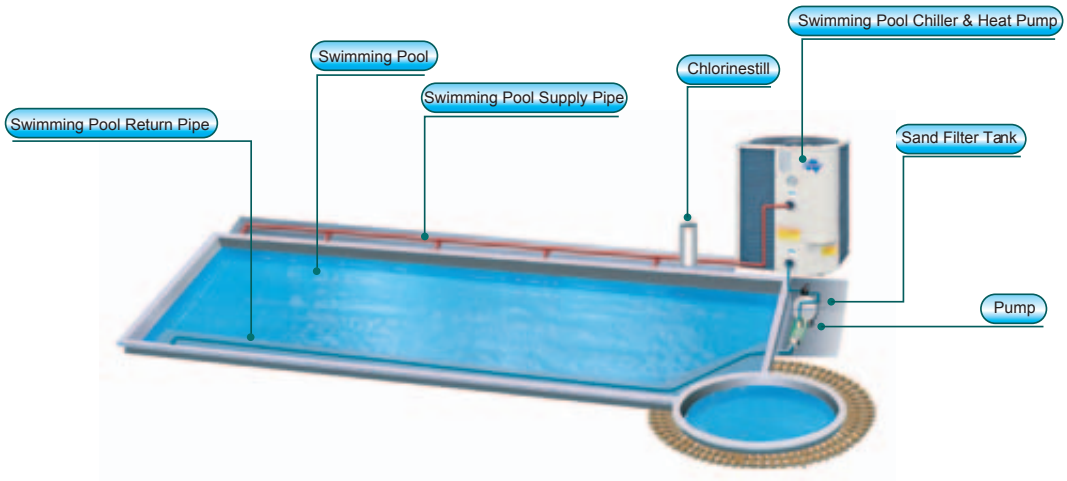
WHETHER HOT OR COLD WHEATHER, OUTDOOR SWIMMING AND SPA ARE NO LONGER UNREACHABLE DREAMS!

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

Connection

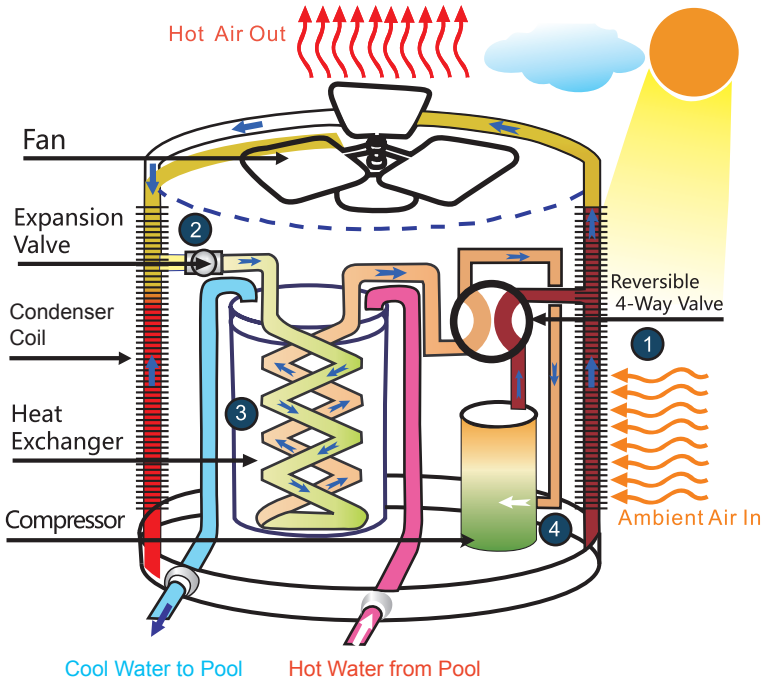
1. Swimming Pool
2. Chlorinator
3. Pump
4. Sand Filter
5. Swimming Pool Chiller & Heat Pump

Application



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.

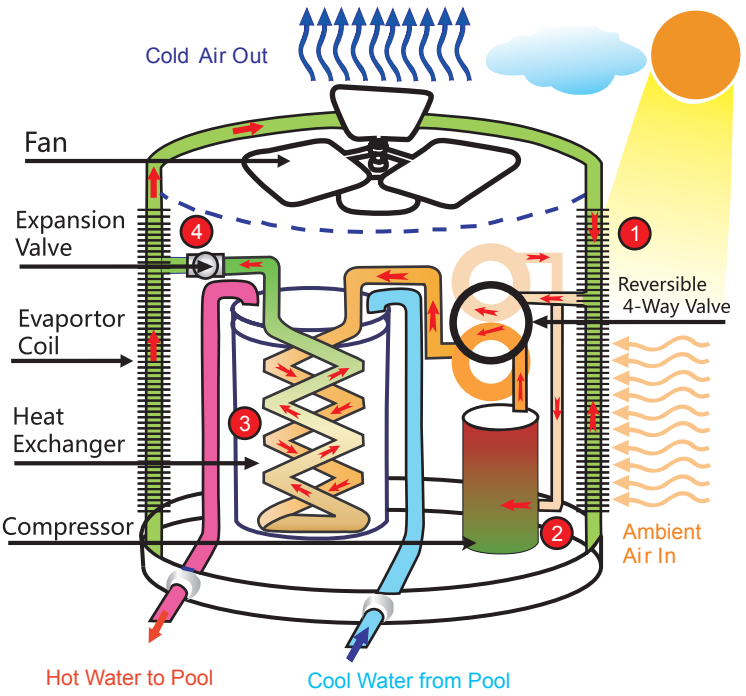
AS A HEAT PUMP

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.

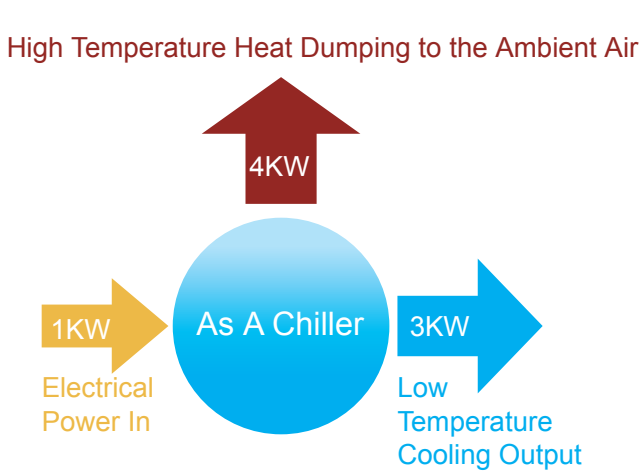
3 STAGE THREE
The hot gaseous refrigerant passes to the heat exchanger condenser, where the actual heat transfer takes place: the intensely hot gaseous refrigerant transfers its heat to the water pumped into the heat exchanger and condenses back into a liquid.

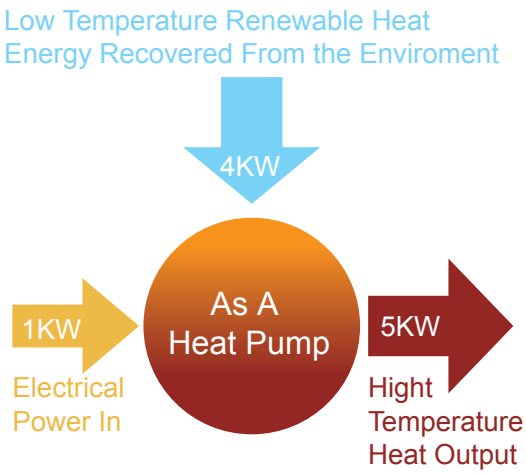
4 STAGE FOUR
The liquid refrigerant then passes through an expansion valve, reducing its pressure and temperature, ready to start the whole cycle once again.



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 Tropical (T3) Compressor

To withstand the harsh summer weather conditions in the Gulf Area, SPCH units use high efficiency tropical Scroll or Rotary Compressors which are widely used in air conditioners and its tropical resistance capacity has been tested and proven due to over 10 years operation in Gulf market. It has following advantages:

- Tropical for high ambient conditions

No tripping or failure at high ambient temperature up to 54℃

- High efficiency and energy saving

It's more efficient than reciprocating compressors

- Quiet operation due to less moving parts

Its operation is much quieter than reciprocating compressor

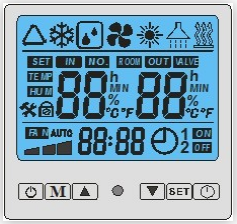
Condenser Coils

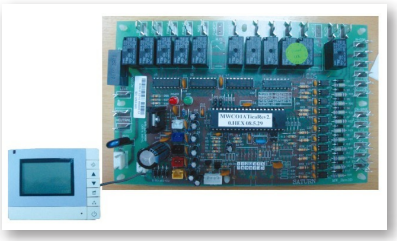
Condenser coil used in the system is of fin and tube type. The condensers are properly designed for the ambient conditions through special design software's. The fins in the condenser are of corrugated aluminum fins with larger heat transfer surface than smooth fins. The fins are treated with blue hydrophilic coating to resist corrosion and also avoid the forming of "water bridge" on the fins that jams the fins and reduce heat transfer efficiency. The copper tubes are of inner-grooved type, which enlarges the heat transfer surface.

RELIABLE QUALITY OF KEY COMPONENTS

Intelligent Control

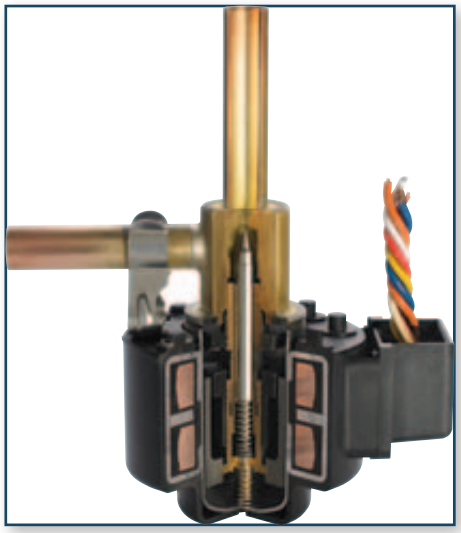
Blueway SPCH units are supplied with Micro processor based digital controller with LCD display. The control panel is completely factory wired with all accessories and terminals included.





Electronic Expansion Valve (EEV)

(EEV) is used in every Blueway SPCH unit to adjust the refrigerant flow automatically, which enables the unit to always stay at optimized working conditions with fast cooling and heating, precise temperature control and low energy consumption. This valve is reversible and can control the flow under either cooling or heating condition.



It is mainly composed of valve body and coil. The pulses applied to the coil drive the current to control the step motor inside the valve which can synchronize the turning of valve pin to open or close the valve. The flow will change automatically.

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.
- Tropical 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 Range, 50Hz

	Model			SPCH1.5	SPCH2.0	SPCH2.5	SPCH3.0	SPCH4.0	SPCH5.0	SPCH7.0
Cooling performance data	**Nominal cooling capacity**		**Ton/hour**	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**7**
	Power Supply		V/Hz/Ph	220-240/50/1			380-415/50/3			
	Cooling (1): A35/24°C W32/30°C	Cooling capacity	BTU/hour	18000	23950	29500	36000	48000	60000	84000
			W/hour	5275	7019	8646	10551	14068	17585	24619
		Power consumption	Watts	1871	2498	3110	3879	5042	6280	8920
		EER	W/W	2.82	2.81	2.78	2.72	2.79	2.8	2.76
		Current	A	8.1	10.9	13.5	6.9	9.0	11.2	16.0
	Cooling (2): A46/24°C W32/30°C	Cooling capacity	BTU/Hr	15300	20358	25075	30600	40800	51000	71400
		Power consumption	Watts	2187	2954	3712	4720	6228	7909	10956
		EER	W/W	2.05	2.02	1.98	1.90	1.92	1.89	1.91
		Current	A	9.5	12.8	16.1	8.4	11.1	14.2	19.6
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	BTU/hourr	28800	38320	44250	54000	69600	87000	121800
		Power consumption	Watts	1688	2292	2647	3297	4163	5312	7437
		COP	W/W	5.0	4.9	4.9	4.8	4.9	4.8	4.8
		Current	A	7.7	10.4	12.0	5.9	7.4	9.5	13.3
	Heating (2): A15/12°C W26/28°C	Heating capacity	BTU/hour	22464	29890	34515	42120	54288	67860	95004
		Power consumption	Watts	1496	2032	2346	2923	3690	4708	6592
		COP	W/W	4.4	4.3	4.3	4.2	4.3	4.2	4.2
		Current	A	6.8	9.2	10.7	5.2	6.6	8.4	11.8
Key components	Controller	-	-	Micro processor based digital controller with LCD display						
	Compressor	Type		Rotary			Scroll			
		Qty	Nos.	1						
		Refrigerant	-	R417A						
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell						
		Qty	Nos.	1						
		Construction Material	-	Tube: tatanium; Shell: PVC						
		Max. working pressure	Bar	1.2						
	Condenser fan	Fan direction	-	Side		Vertical				
		Airflow	CFM	1353	1941	2353	2353	3529	4706	4706
		Dia x Qty	mm x Nos.	420*1	460*1	556*1	556*1	556*1	600*1	600*1
		Material	-	plastic						
	Condenser motor	Output Power	Watts	60	60	200	200	200	250	300
		RPM	-	850	850	850	850	900	900	900
		Qty	Nos.	1	1	1	1	1	1	1
	Condenser coil	Type		Fin-tube						
		Tube dia	mm	9.52						
		Row	-	2	2	1	1	1.7	2	2
		FPI	-	14	14	16	16	16	14	14
		Total face area	m2	18.14	21.77	27.92	32.54	55.31	69.79	69.79
	Rated water flow rate		GPM(US)	15.9	21.2	24.5	29.8	38.5	48.1	67.3
	Water pressure drop		Bar	40	40	50	50	50	55	55
General data	Noise level	-	dB(A)	52	52	52	55	55	55	55
	Water Connection	Inlet	Inch	1+1/2''		2''		2+1/2''		
		Outlet	Inch	1+1/2''		2''		2+1/2''		
	Dimmension :	Net	mm	1050*460*700		720*720*860		720*720*960		
		Shipping	mm	1120*530*770		750*750*900		750*750*1020		
	Weight	Net	Kg	65	66	70	70	71	85	88
		Shipping	Kg	75	76	80	80	81	95	98
	Loading Qty	20'/40'/40'HQ	Set(s)	66/132/132	66/132/132	42/96/96	42/96/96	42/96/96	42/96/96	42/96/96

Notes:

1. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
2. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
3. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
4. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;

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

SWIMMING POOL CHILLER & HEAT PUMP
Residential Range, 60Hz

Technical Specifications

	Model			SPCH1.5	SPCH2.0	SPCH2.5	SPCH3.0	SPCH4.0	SPCH5.0	SPCH7.0
	Nominal cooling capacity		**Ton/hour**	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**7**
	Power Supply		V/Hz/Ph	208-230/60/1						208-230/60/3
Cooling performance data	Cooling (1): A35/24°C W32/30°C	Cooling capacity	BTU/hour	18950	24000	29500	36000	48000	60000	84000
			W/hour	5554	7034	8646	10551	14068	17585	24619
		Power consumption	Watts	1969	2503	3110	3879	5042	6280	8920
		EER	W/W	2.82	2.81	2.78	2.72	2.79	2.8	2.76
		Current	A	8.56	10.88	13.52	6.94	9.02	11.24	15.96
	Cooling (2): A46/24°C W32/30°C	Cooling capacity	BTU/Hr	16108	20400	25075	30600	40800	51000	71400
		Power consumption	Watts	2303	2960	3712	4720	6228	7909	10956
		EER	W/W	2.05	2.02	1.98	1.90	1.92	1.89	1.91
		Current	A	10.01	12.87	16.14	8.45	11.15	14.15	19.61
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	BTU/hourr	30320	38400	44250	54000	69600	87000	121800
		Power consumption	Watts	1814	2297	2702	3297	4163	5312	7437
		COP	W/W	4.9	4.9	4.8	4.8	4.9	4.8	4.8
		Current	A	8.2	10.4	12.3	15.0	18.9	24.1	13.3
	Heating (2): A15/12°C W26/28°C	Heating capacity	BTU/hour	23649.6	29952	34515	42120	54288	67860	95004
		Power consumption	Watts	1607	2036	2395	2923	3690	4708	6592
		COP	W/W	4.3	4.3	4.2	4.2	4.3	4.2	4.2
		Current	A	7.3	9.3	10.9	13.3	16.8	21.4	11.8
Key components	Controller	-	-	Micro processor based digital controller with LCD display						
	Compressor	Type		Rotary			Scroll			
		Qty	Nos.	1						
		Refrigerant	-	R417A						
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell						
		Qty	Nos.	1						
		Construction Material	-	Tube: tatanium; Shell: PVC						
		Max. working pressure	Bar	1.2						
	Condenser fan	Fan direction	-	Side		Vertical				
		Airflow	CFM	1353	1941	2353	2353	3529	4706	4706
		Dia x Qty	mm x Nos.	420*1	460*1	556*1	556*1	556*1	600*1	600*1
		Material	-	plastic						
	Condenser motor	Output Power	Watts	60	60	200	200	200	250	300
		RPM	-	900	900	900	900	950	950	950
		Qty	Nos.	1						
	Condenser coil	Type		Fin-tube						
		Tube dia	mm	9.52						
		Row	-	2	2	1	1	1.7	2	2
		FPI	-	14	14	16	16	16	14	14
		Total face area	m2	18.14	21.77	27.92	32.54	55.31	69.79	69.79
	Rated water flow rate		GPM(US)	16.8	21.2	24.5	29.8	38.5	48.1	67.3
	Water pressure drop		Bar	40	40	50	50	50	55	55
General data	Noise level	-	dB(A)	52	52	52	55	55	55	55
	Water Connection	Inlet	Inch	1+1/2"	1+1/2"	2"	2"	2"	2+1/2"	2+1/2"
		Outlet	Inch	1+1/2"	1+1/2"	2"	2"	2"	2+1/2"	2+1/2"
	Dimmension:	Net	mm	1050*460*700		720*720*860			720*720*960	
		Shipping	mm	1120*530*770		750*750*900			750*750*1020	
	Weight	Net	Kg	65	66	70	70	71	85	88
		Shipping	Kg	75	76	80	80	81	95	98
	Loading Qty	20'/40'/40'HQ	Set(s)	66/132/132	66/132/132	42/96/96	42/96/96	42/96/96	42/96/96	42/96/96

Notes:

1. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W32/30°C ;

2. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W32/30°C ;

3. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;

4. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;

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Technical Specifications

SWIMMING POOL CHILLER & HEAT PUMP
Commercial Range, 50Hz

	Model			SPCH10	SPCH12	SPCH15	SPCH20	SPCH25	SPCH30	SPCH35	SPCH40	SPCH50
	Nominal cooling capacity		Ton/hour	10	12	15	20	25	30	35	40	50
	Power Supply		V/Hz/Ph	380-415/50/3								
Cooling performance data	Cooling (1): A35/24°C W32/30°C	Cooling capacity	BTU/hour	120000	144000	180000	240000	300000	360000	420000	480000	600000
			kW/hour	35	42	53	70	88	106	123	141	176
		Power consumption	Watts	13475	16108	20369	26543	33559	40425	46451	53490	67896
		EER	W/W	2.61	2.62	2.59	2.65	2.62	2.61	2.65	2.63	2.59
		Current	A	24.1	28.8	36.5	47.5	60.1	72.3	83.1	95.7	121.5
	Cooling (2): A46/24°C W32/30°C	Cooling capacity	BTU/Hr	102000	122400	153000	204000	255000	306000	357000	408000	510000
		Power consumption	Watts	14873	17083	21874	27939	37746	42105	50792	55878	73632
		EER	W/W	2.01	2.10	2.05	2.14	1.98	2.13	2.06	2.14	2.03
		Current	A	27	31	39	50	68	75	91	100	132
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	BTU/hourr	156000	187200	234000	312000	390000	468000	546000	624000	780000
		Power consumption	Watts	9525	11197	14592	19050	24848	29184	34788	40641	49697
		COP	W/W	4.8	4.9	4.7	4.8	4.6	4.7	4.6	4.5	4.6
		Current	A	17.0	20.0	26.1	34.1	44.4	52.2	62.2	72.6	88.8
	Heating (2): A15/12°C W26/28°C	Heating capacity	BTU/hour	121680	146016	182520	243360	304200	365040	425880	486720	608400
		Power consumption	Watts	8443	9925	12934	16886	22025	25867	30835	36023	44049
		COP	W/W	4.2	4.3	4.1	4.2	4.0	4.1	4.0	4.0	4.0
		Current	A	15.1	17.7	23.1	30.2	39.4	46.2	55.1	64.4	78.7
Key components	Controller	-	-	Micro processor based digital controller with LCD display								
	Compressor	Type		Scroll								
		Qty	Nos.	2					4			
		Refrigerant	-	R417A								
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell								
		Construction Material	-	Tube: tatanium; Shell: PVC								
		Max. working pressure	Bar	1.2								
	Condenser fan	Fan direction	-	Vertical								
		Airflow	CFM	8275	9930	12413	16551	20688	24826	28964	33101	41376
		Dia x Qty	mm x Nos.	600×2	600×2	710×2	710×2	850×2	710×4	710×4	710×4	850×4
	Condenser motor	Material	-	Alluminum alloy								
		Output Power	Watts	800*2	800*2	900*2	900*2	1100*4	900*4	900*4	900*4	1100*4
		RPM	-	900	950	900	1000	900	900	950	1000	900
		Qty	Nos.	2	2	2	2	2	4	4	4	4
	Condenser coil	Type		Fine-tube								
		Tube dia	mm	9.52								
		Row	-	3	3	3	3	3	3	3	3	3
		FPI	-	16	16	16	16	16	16	16	16	16
		Total face area	m2	128.26	128.26	455.80	227.90	227.90	455.80	455.80	455.80	455.80
	Rated water flow rate		GPM(US)	5173	6207	7759	10346	12932	15518	18105	20691	25864
	Water pressure drop		Bar	50	50	50	50	50	50	50	50	50
General data	Noise level	-	dB(A)	60	60	65	65	65	65	70	70	70
	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	(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	(2+1/2")*2
	Dimmension:	Net	mm	1160*900*2090					1160*1900*2090			
		Shipping	mm	1220*960*2190					1220*1960*2190			
	Weight	Net	Kg	570	570	570	570	600	1140	1140	1140	1200
		Shipping	Kg	600	600	600	600	635	1180	1185	1185	1250
	Loading Qty	20'/40'/40'HQ	Set(s)	8/21/21	8/21/21	8/21/21	8/21/21	8/21/21	4/9/9	4/9/9	4/9/9	4/9/9

Notes:

1. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
2. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
3. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
4. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;

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SWIMMING POOL CHILLER & HEAT PUMP
Commercial Range, 60Hz

Technical Specifications

	Model			SPCH10	SPCH12	SPCH15	SPCH20	SPCH25	SPCH30	SPCH35	SPCH40	SPCH50
Cooling performance data	Nominal cooling capacity		Ton/hour	10	12	15	20	25	30	35	40	50
	Power Supply		V/Hz/Ph	208-230/60/3								
	Cooling (1): A35/24°C W32/30°C	Cooling capacity	BTU/hour	120000	144000	180000	240000	300000	360000	420000	480000	600000
			kW/hour	35	42	53	70	88	106	123	141	176
		Power consumption	Watts	13475	16108	20369	26543	33559	40425	46451	53490	67896
		EER	W/W	2.61	2.62	2.59	2.65	2.62	2.61	2.65	2.63	2.59
		Current	A	24.11	28.83	36.45	47.50	60.06	72.34	83.13	95.73	121.50
	Cooling (2): A46/24°C W32/30°C	Cooling capacity	BTU/Hr	102000	122400	153000	204000	255000	306000	357000	408000	510000
		Power consumption	Watts	14873	17083	21874	27939	37746	42105	50792	55878	73632
		EER	W/W	2.01	2.10	2.05	2.14	1.98	2.13	2.06	2.14	2.03
		Current	A	27	31	39	50	68	75	91	100	132
Heating performance data	Heating (1): A24/19°C W26/28°C	Heating capacity	BTU/hourr	156000	187200	234000	312000	390000	468000	546000	624000	780000
		Power consumption	Watts	9331	11430	14592	19050	24848	29184	34788	40641	50801
		COP	W/W	4.9	4.8	4.7	4.8	4.6	4.7	4.6	4.5	4.5
		Current	A	16.7	20.4	26.1	34.1	44.4	52.2	62.2	72.6	90.8
	Heating (2): A15/12°C W26/28°C	Heating capacity	BTU/hour	121680	146016	182520	243360	304200	365040	425880	486720	608400
		Power consumption	Watts	8270	10131	12934	16886	22025	25867	30835	36023	45028
		COP	W/W	4.3	4.2	4.1	4.2	4.0	4.1	4.0	4.0	4.0
		Current	A	14.8	18.1	23.1	30.2	39.4	46.2	55.1	64.4	80.5
Key components	Controller	-	-	Micro processor based digital controller with LCD display								
	Compressor	Type		Scroll								
		Qty	Nos.	2	2	2	2	2	4	4	4	4
		Refrigerant	-	R417A								
	Heat exchanger (water side)	Type	-	Titanium tube-in-shell								
		Construction Material	-	Tube: tatanium; Shell: PVC								
		Max. working pressure	Bar	1.2								
	Condenser fan	Fan direction	-	Vertical								
		Airflow	CFM	8275	9930	12413	16551	20688	24826	28964	33101	41376
		Dia x Qty	mm x Nos.	600×2	600×2	710×2	710×2	850×2	710×4	710×4	710×4	850×4
		Material	-	Alluminum alloy								
	Condenser motor	Output Power	Watts	800*2	800*2	900*2	900*2	1100*4	900*4	900*4	900*4	1100*4
		RPM	-	900	950	900	1000	900	900	950	1000	900
		Qty	Nos.	2	2	2	2	2	4	4	4	4
	Condenser coil	Type		Fine-tube								
		Tube dia	mm	9.52								
		Row	-	3	3	3	3	3	3	3	3	3
		FPI	-	16	16	16	16	16	16	16	16	16
		Total face area	m2	128.26	128.26	455.80	227.90	227.90	455.80	455.80	455.80	455.80
	Rated water flow rate		GPM(US)	5173	6207	7759	10346	12932	15518	18105	20691	25864
	Water pressure drop		Bar	50	50	50	50	50	50	50	50	50
General data	Noise level	-	dB(A)	60	60	65	65	65	65	70	70	70
	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	(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	(2+1/2")*2
	Dimension:	Net	mm	1160*900*2090					1160*1900*2090			
		Shipping	mm	1220*960*2190					1220*1960*2190			
	Weight	Net	Kg	570	570	570	570	600	1140	1140	1140	1200
		Shipping	Kg	600	600	600	600	635	1180	1185	1185	1250
	Loading Qty	20'/40'/40'HQ	Set(s)	8/21/21	8/21/21	8/21/21	8/21/21	8/21/21	4/9/9	4/9/9	4/9/9	4/9/9

Notes:

1. Conditions of "Cooling (1)": Ambient air temperature DB/WB: 35°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
2. Conditions of "Cooling (2)": Ambient air temperature DB/WB: 46°C/24°C, Inlet/Outlet water temperature:W32/30°C ;
3. Conditions of "Heating (1)": Ambient air temperature DB/WB: 24°C/19°C, Inlet/Outlet water temperature:W26/28°C ;
4. Conditions of "Heating (2)": Ambient air temperature DB/WB: 15°C/12°C, Inlet/Outlet water temperature:W26/28°C ;

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Indoor Pool Environment Control System

One System Delivers Everything You Need!

- Dehumidification
- Air Heating
- Pool Water Heating
- Air Conditioning
- Ventilation

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

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.

BLUEWAY PORTABLE DEHUMIDIFIER

FEARTURES:

- Compact & elegant design;
- Strong airflow and quiet operation;
- Digital control panel displaying RH value;
- RH control range: 30% - 90%;
- 24 hours timer;
- Piston compressor, tropical for high ambient conditions;
- Eco friendly R417A /R134A refrigerant, no depletion to ozone layer;
- Auto defrost;
- Built-in handle (optional);
- Casters with brake;
- Big wheels for option;
- Compressor overheat protection

Portable Dehumidifier

Model			RDH-138-A	PDH-138-A
Power supply		V/Hz/Ph	220-240/50/1 or 208-230/60/1	220-240/50/1 or 208-230/60/1
Moisture removal/Day	26.7°c , R.H.60%	L/Day	91	91
	30°c , R.H.80%	L/Day	130	130
Air delivery (Hi/Mi/Lo)		m3/h	600	600
Power input formotor		W	80	80
Noise level (Hi/Mi/Lo)		dB(A)	45	45
Refrigerant type		-	R417A / R134A	R417A / R134A
Dehumidifying capacity		kg/h	6	6
Application area		m2	150	150
Power consumption	26.7°c , R.H.60%	W	810	810
	30°c , R.H.80%	W	850	850
Design pressure	Hi/Lo	Mpa	2.4/0.7	2.4/0.7
Working range		℃	5-43	5-46
Control	Mechanical / Electronic	-	OPTION	OPTION
Compressor	Type		Rotary	Piston
	Capacity	W	5600	5568
	Input	W	1750	1930
	Rated current	A	8	9
Size W x D x H	Net	mm	480*400*940	480*400*940
	Packing	mm	530*460*980	530*460*980
Weight	Net	Kg	68	68
	Packing	Kg	65	65
Loading	20'/40'/40'HC	Kg	110/220/220	110/220/220

FOSHAN BLUEWAY ELECTRIC APPLIANCES CO.,LTD.

ADD: 2-9# Zhanye Rd,Honggang Industrial Area,Shunde District,Foshan Guangdong

Tel: +86 757 22629989 / 22629286

Fax: +86 757 26154598

Email: info@heatpumpworld.com

Website: www.blueway.hk www.heatpumpworld.com