TEMPERATURE CONTROL 14/17

AIR TO WATER HEATING / COOLING PUMP ECO

The EPH series heat pump is designed to provide dependable heating and cooling performance tailored for everyday pool applications. Built with a focus on durability, energy efficiency, and ease of use, this series offers a practical solution for residential and commercial projects seeking a straightforward and effective heating system. Engineered with proven technology and manufactured under stringent quality standards, this unit delivers consistent operation and user-friendly performance while maintaining compliance with industry safety norms.

Key Features & Benefits:

- Designed with sturdy materials for dependable long-term operation.
- Provides steady heating and cooling suitable for year-round pool comfort.
- Low-noise fan and compressor design ensure minimal disturbance.
- Intuitive digital display with straightforward settings for hassle-free operation and user-friendly controls.
- Optimized design supports reliable operation across varied climates.
- Simplified component layout allows quick servicing and upkeep.
- Developed with proven components to support safe, consistent operation for assured dependability.

Technical Highlights:

- Designed for Extreme Conditions – Engineered to operate reliably under T3 ambient conditions, withstanding temperatures up to 53 °C.
- High-Quality Compressors – Incorporates GMCC and Sanyo compressors, developed with Japanese engineering expertise to ensure consistent performance and energy-efficient operation.
- Advanced User Interface – Equipped with a feather-touch display, supporting remote installation up to 30 m for real-time monitoring and control.
- Flexible Control Modes – Supports Manual and Automatic operation modes for precise heating and cooling of pool water.
- Comprehensive Safety Systems – Integrated protections include phase loss, phase reversal, low/high pressure, insufficient water flow, and multiple thermal sensors, ensuring robust operation and safeguarding the unit from potential damage.
- BMS Compatibility – Optional integration for Building Management Systems via RS485 with MODBUS protocol is available on request.

TEMPERATURE CONTROL

How does the 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 capillary tube, reducing its pressure and temperature.

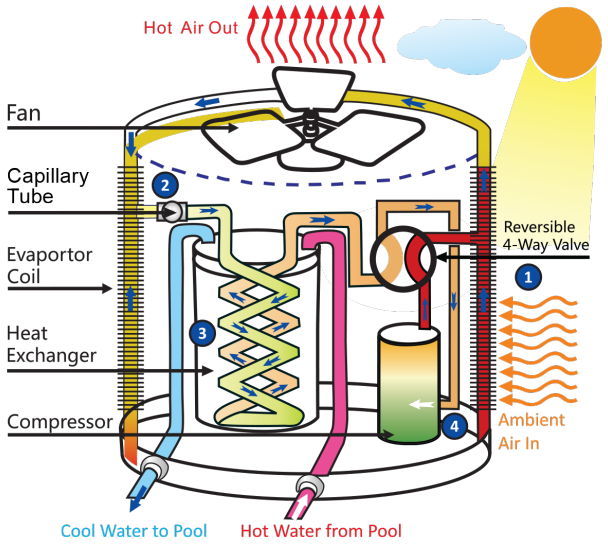
3- STAGE THREE

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.

CAPILLARY TUBE



...AS A HEAT PUMP

1- STAGE ONE

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

2- STAGE TWO

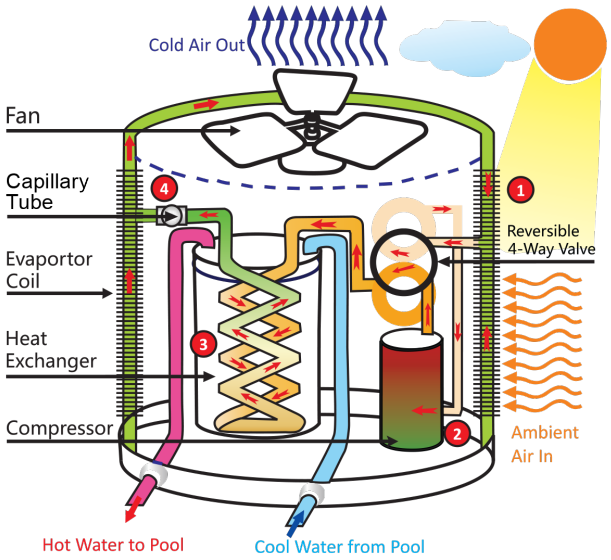
The hot gaseous refrigerant passes to the heat exchanger condenser, where the actual heat transfer takes place: the intensely hot gaseous refrigerant transfers its heat to the water pumped into the heat exchanger and condenses back into a liquid.

3- STAGE THREE

The liquid refrigerant then passes through an capillary tube, reducing its pressure and temperature. The heat transfer medium (the refrigerant) is colder than the outside air.

4- STAGE FOUR

As the outside air passes across the evaporator coil, the liquid refrigerant absorbs heat from the air and evaporates, ready to start the whole cycle once again.



TEMPERATURE CONTROL

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			EPH-02640-R410A	EPH-02650-R410A	EPH-02660-R410A	EPH-02670-R410A
Refrigerant			R410A	R410A	R410A	R410A
Power supply		V/PH/Hz	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	15	19	22	26
		BTU/h	51182.13	64830.698	75067.124	88715.692
	Power input	kW	4.8	4.3	4.8	5.9
	COP	W/W	3.2	4.5	4.5	4.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	13	16	18	22
		BTU/h	44357.846	54594.272	61418.556	75067.124
	Power input	kW	4.7	4.2	4.67	5.8
	COP	W/W	2.72	3.81	3.85	3.79
YL-C01-Cooling: A35/W32°C	Cooling capacity	kW	10.8	13.5	15.2	18.6
		BTU/h	36851.1336	46063.917	51864.5584	63465.8412
	Power input	kW	4.3	5.3	6.3	7.3
	EER	W/W	2.6	2.6	2.4	2.6
YL-C02-Cooling: A43/W32	Cooling capacity	kW	8.4	10.6	11.9	14.5
		BTU/h	28661.9928	36168.7052	40604.4898	49476.059
	Power input	kW	4.7	5.8	6.9	8.0
	EER	W/W	1.8	1.8	1.7	1.8
MAX.POWER INPUT		kW	6	6.6	8	11
MAX.CURRENT		A	11	12	19	20
OPERATING	Heating water temp range	°C	15-40	15~40	15~40	15~40
	Cooling water temp range	°C	12 ~ 30	12~30	12~30	12~30
	Ambient temp range	°C	-15 ~ 53	-15 ~ 53	-15 ~ 53	-15~53
KEY	Compressor type		Scroll*1	Scroll*1	Scroll*1	Scroll*1
	Controller		micro processor based digital controller with LCD touch screen display			
	Sound power level 10(m)	dB(A)	41	41	41	42
HEATING EXCHANGER	Type		Spiral titanium tube in PVC			
	Water flow	m^3/h	2.4-7.5	4.9	5.8	7.1
	Water pressure drop (max)	KPa	12	12	12	12
	Water connecton	mm	BSP threaded / 1-1/2"	BSP threaded / 1-1/2"	BSP threaded / 1-1/2"	BSP threaded / 1-1/2"
FAN	Fan Position		Verticle	Verticle	Verticle	Verticle
	Air Flow	m3/h	5500	5500	5500	6500
	Material		Galvanized sheet	Galvanized sheet	Galvanized sheet	Galvanized sheet
DIMENSIONS (L x W x H)	Net	mm	746/686/941	746/686/941	746/686/941	810/810/1079
	Shipping	mm	775/745/1100	775/745/1100	775/745/1100	860/860/1235
WEIGHT	-	kg	90/92	97/111	99/113	140/159

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			EPH-02680-R410A	EPH-02712-R410A	EPH-02713-R410A	EPH-02715-R410A	EPH-02720-R410A
Refrigerant			R410A	R410A	R410A	R410A	R410A
Power supply		V/PH/Hz	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	32	41	50	75	99
		BTU/h	109188.544	139897.822	170607.1	255910.65	337802.058
	Power input	kW	6.9	8.9	10.6	15.8	21.9
	COP	W/W	4.6	4.6	4.8	4.7	4.5
YL-H02-Heating: A15/W26°C	Heating capacity	kW	27	34	42	63	82
		BTU/h	92127.834	116012.828	143309.964	214964.946	279795.644
	Power input	kW	6.8	8.7	10.4	15.5	21.5
	COP	W/W	3.93	3.95	4.04	4.04	3.83
YL-C01-Cooling: A35/W32°C	Cooling capacity	kW	22.6	29.1	35.5	52.9	69.7
		BTU/h	77114.4092	99293.3322	121131.041	180502.3118	237826.2974
	Power input	kW	8.4	11.3	14.4	20.0	26.6
	EER	W/W	2.7	2.6	2.5	2.6	2.6
YL-C02-Cooling: A43/W32	Cooling capacity	kW	17.6	22.7	27.7	41.3	54.4
		BTU/h	60053.6992	77455.6234	94516.3334	140921.4646	185620.5248
	Power input	kW	9.7	12.4	15.8	22.0	29.3
	EER	W/W	1.8	1.8	1.8	1.9	1.9
MAX.POWER INPUT		kW	11	13	14	26	36
MAX.CURRENT		A	21	23	24	47	65
OPERATING	Heating water temp range	°C	15~40	15~40	15~40	15~40	15~40
	Cooling water temp range	°C	12~30	12~30	12~30	12~30	12~30
	Ambient temp range	°C	-15~53	-15~53	-15~53	-15~53	-15~53
KEY	Compressor type		Scroll*1	Scroll*2	Scroll*2	Scroll*3	Scroll*4
	Controller		micro processor based digital controller with LCD touch screen display				
	Noise	dB(A)	45	45	45	46	54
HEATING EXCHANGER	Type		Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow	m^3/h	8.2	10.6	13.0	19.3	25.4
	Water pressure drop (max)	KPa	13	11	13	20	25
	Water connecton	mm	BSP threaded / 2"	BSP threaded / 2"	BSP threaded / 2"	flange/ 4"	flange/ 4"
FAN	Fan Position		Verticle	Verticle	Verticle	Verticle	Verticle
	Air Flow	m3/h	7500	11000	11000	16000	25000
	Material		Plastic	Plastic	Plastic	Plastic	Plastic
DIMENSIONS (L x W x H)	Net	mm	860x860x1280	1453x708x1084	1453x708x1284	2145x762x1306	2018x1056x2078
	Shipping	mm	920x920x1425	1510x775x1225	1510x775x1425	2230x810x1445	2080x1136x2122
WEIGHT	-	kg	152/175	230/256	285/310	397/434	582/625

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			EPH-02730-R410A	EPH-02740-R410A	EPH-02750-R410A	EPH-02760-R410A	EPH-02770-R410A
Refrigerant			R410A	R410A	R410A	R410A	R410A
Power supply		V/PH/Hz	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50	380~415/3/50
YL-H01-Heating: A24/W26°C	Heating capacity	kW	124	146	165	192	229
		BTU/h	423105.608	498172.732	563003.42	655131.264	781380.517
	Power input	kW	27.0	31.6	36.7	42.8	49.0
	COP	W/W	4.6	4.6	4.5	4.5	4.7
YL-H02-Heating: A15/W26°C	Heating capacity	kW	103	122	138	160	191
		BTU/h	351450.626	416281.324	470875.596	545942.72	651719.122
	Power input	kW	26.5	31	36	42	48
	COP	W/W	3.89	3.94	3.82	3.81	3.98
YL-C01-Cooling: A35/W32°C	Cooling capacity	kW	87.0	103.1	116.2	135.2	161.4
		BTU/h	296856.354	351791.8402	396490.9004	461321.5984	550719.7188
	Power input	kW	32.6	36.6	43.9	54.5	64.4
	EER	W/W	2.7	2.8	2.6	2.5	2.5
YL-C02-Cooling: A43/W32	Cooling capacity	kW	68.0	80.5	90.8	105.6	126.1
		BTU/h	232025.656	274677.431	309822.4936	360322.1952	430271.1062
	Power input	kW	36.2	40.3	48.3	60.0	70.8
	EER	W/W	1.9	2.0	1.9	1.8	1.8
MAX.POWER INPUT		kW	45	52	61	71	81
MAX.CURRENT		A	80	93	109	127	145
OPERATING	Heating water temp range	°C	15~40	15~40	15~40	15~40	15~40
	Cooling water temp range	°C	12~30	12~30	12~30	12~30	12~30
	Ambient temp range	°C	-15~53	-15~53	-15~53	-15~53	-15~53
KEY	Compressor type		Scroll*4	Scroll*4	Scroll*2	Scroll*2	Scroll*2
	Controller		micro processor based digital controller with LCD touch screen display				
	Noise	dB(A)	54	57	58	58	65
HEATING EXCHANGER	Type		Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC	Titanium /PVC
	Water flow	m^3/h	31.8	37.6	41.9	48.7	58.1
	Water pressure drop (max)	KPa	25	26	28	28	28
	Water connecton	mm	flange/ 4"	flange/ 4"	flange/ 4"	flange/ 4"	flange/ 4"
FAN	Fan Position		Verticle	Verticle	Verticle	Verticle	Verticle
	Air Flow	m3/h	25000	48000	48000	50000	52000
	Material		Plastic	Plastic	Plastic	Plastic	Plastic
DIMENSIONS (L x W x H)	Net	mm	2018/1056/2078	2239/1185/2267	2239/1185/2267	2239/1185/2267	2320/1240/2340
	Shipping	mm	2080/1136/2122	2300/1265/2340	2300/1265/2340	2300/1265/2340	2407/1325/2530
WEIGHT	-	kg	588/631	854/920	854/920	866/932	922/998

Your global partner since 1974. Trusted for superior quality and exceptional innovations.

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