Swimming Pool Heat Pump

Extend Your Swim Season in Comfort

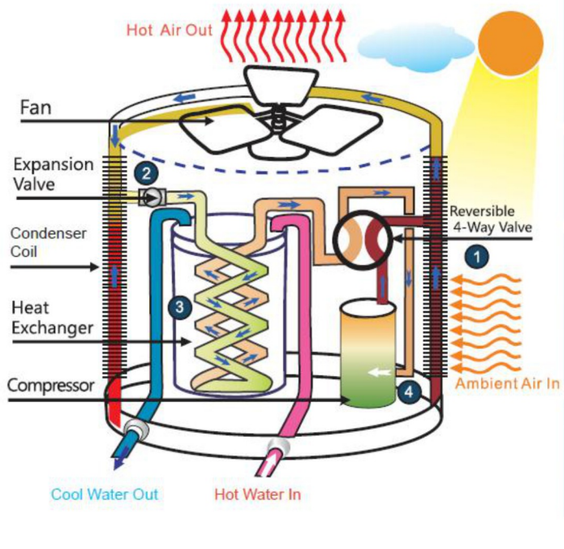


Corrosion resistant

Titanium Tube Heat Exchanger

Schematic diagram

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.

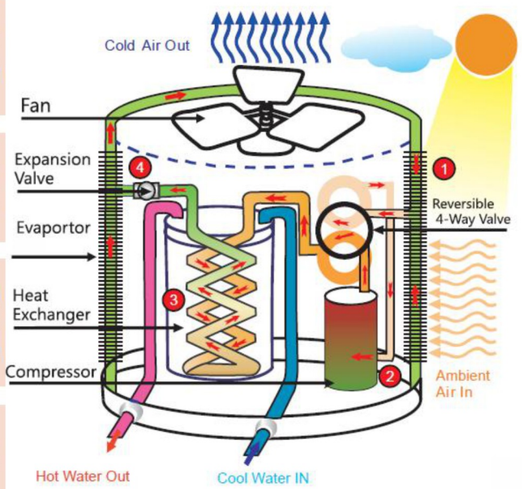
AS A HEAT PUMP

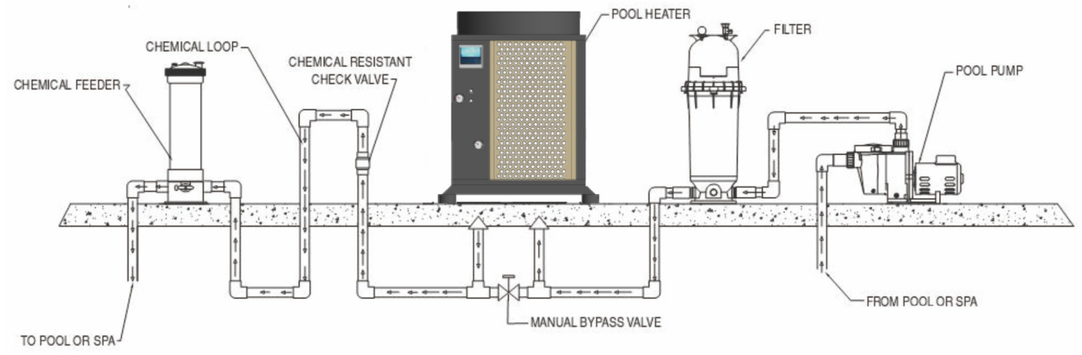
1 STAGE ONE
The heat transfer medium (the refrigerant) is colder than the outside air. As the outside air passes across the evaporator coil, the liquid refrigerant absorbs heat from the air and evaporates.

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.





Characteristic

1.Available in a wide range of sizes and models to suit most pools and budgets.
2.Titanium heat exchanger with 50mm standard coupling connections for easy installation.
3.All use the ozone friendly refrigerant and are all designed to be the most energy efficient in their class.
4. Smart control program constant the desired temperature at any time of the day.
5. The uniquely designed fan ensures super quiet operation.
6. Heating or cooling the pool inversable by four way valve.
7.Safety Flow Switch if pool pump fails.







Swim All Year Long



Product Parameter

Horizontal Discharge Series:50Hz

Model		KF70-XTi-M	KF140-XTi-M	KF70-XTi-A	KF140-XTi-A	ARG-03STi-H
Air /Water 24˚C /26˚C	Output Power (KW)	4.5	7.8	4.5	7.8	15.11
	Input Power(KW)	0.9	1.56	0.9	1.56	2.66
	COP	5.0	5.0	5.0	5.0	5.66
	Current	4.1	7.1	4.1	7.1	12.64
Air /Water 15˚C /26˚C	Output Power (KW)	3.7	6.4	3.7	6.4	12.46
	Input Power(KW)	0.86	1.49	0.86	1.49	2.68
	COP	4.3	4.3	4.3	4.3	4.65
	Current	3.9	6.8	3.9	6.8	12.4
Air /Water 7˚C /26˚C	Output Power (KW)	3.2	5.5	3.2	5.5	10.45
	Input Power(KW)	0.84	1.44	0.84	1.44	2.67
	COP	3.8	3.8	3.8	3.8	3.92
	Current	3.8	6.5	3.8	6.5	12.3
Electric Power		220~240V/1PH/ 50Hz		220~240V/1PH/ 50Hz		
Compressor		HITACHI/ Rotary		HITACHI/ Rotary		Panasonic/Scroll
Heat Exchanger		Titanium Tube in PVC Shell		Titanium Tube in PVC Shell		
Refrigerant		R410A		R410A		
Defrost		NO		Included		
Remote		NO / Mechanical Control		5m Signal wires /Intelligerant Control		
Cabinet		Galvanized steel sheet coated		Galvanized steel sheet coated		
Nozzles Size (mm)		Exterior 50mm/ Interior 40mm		Exterior 50mm/ Interior 40mm		
Fan Power Input (w)		60	80	60	80	160
Fan Power Output(w)		18	25	18	28	90
Fan (RPM)		870	870	870	870	850
Noice dB(A)		46	47	46	47	55
Water Flow Rate(m^3/h)		3.5	5	3.5	5	9
Product Dimension(mm)		750×325×470	930×360×550	750×325×470	930×360×550	1100×410×880mm
Packing Dimension(mm)		855×330×530	1060×380×600	855×330×530	1060×380×600	1120×410×995mm
Net/ Gross Weight(kgs)		37/40	49/54	37/40	50/55	90/95

Product Parameter

Vertical Discharge Series:50Hz

Model		ARG-02STi	ARG-03STi	ARG-04STi	ARG-05STi	ARG-07STi	ARG-10STi	ARG-13STi	ARG-15STi-V	ARG-20STi	ARG-25STi
Air /Water 24˚C /26˚C	Output Power (KW)	8.94	15.11	18	21	33	40	52	70	90	105
	Input Power(KW)	1.52	2.66	3.21	3.82	6.2	7.5	9.8	13.2	17	20
	COP	5.88	5.66	5.6	5.5	5.3	5.3	5.3	5.3	5.3	5.3
	Current	7.27	12.73	15.36	7.23	11.74	14.20	18.56	25	32.20	37.88
Air /Water 15˚C /26˚C	Output Power (KW)	8.13	12.89	15.95	18.65	29	31	40	56	81	95
	Input Power(KW)	1.32	2.58	3.13	3.73	5.8	6.2	8.1	11.2	16.9	19.8
	COP	5.34	5.0	5.09	5.0	5.0	5.0	5.0	5.0	4.8	4.8
	Current	6.32	12.34	14.98	7.06	10.98	11.74	15.34	20	32.01	37.50
Air /Water 7˚C /26˚C	Output Power (KW)	5.68	10.45	13.17	16	22.7	26	33	21.21	70	81
	Input Power(KW)	1.52	2.67	3.1	3.72	5.27	6	7.8	9.8	16.3	18.8
	COP	3.9	3.92	4.25	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Current	7.27	12.78	14.83	7.05	9.98	11.36	14.77	18.56	30.87	35.61
Electric Power		220~240V/1PH/50Hz			380V~415V/3PH/50Hz						
Compressor		Panasonic Rotary	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll	Panasonic Scroll
Heat Exchanger		Titanium Tube in PVC Shell			Titanium Tube in PVC Shell						
Refrigerant		R410A			R410A						
Defrost		Included			Included						
Remote		5meter Signal Wire			5meter Signal Wire						
Cabinet		Galvanized steel sheet and sprayed baking paint			Galvanized steel sheet and sprayed baking paint						
Water Connection Port(mm)		Exterior 50mm/ Interior 40mm					Exterior 60mm/ Interior 50mm			Exterior 70mm/ Interior 60mm	
Water Outlet Temperature		10~45°C			10~45°C						
Factory Default Outlet Temperature		35°C			35°C						
Fan Power Input (w)		90	200	400	400	400	400×2	400×2	410×2	850	850
Fan Power Output(w)		50	90	250	250	250	250×2	250×2	200×2	550	550
Fan (RPM)		750	850	850	850	850	850	850	930	940	940
Noice dB(A)		51	49	49	58	58	58	58	58	65	65
Water Flow Rate(m^3/h)		6~8	8~10	10~12	12~15	12~15	20~25	25~30	35	40~50	50~60
Water Pressure Drop (Kpa)		14	14	14	15	15	16	18	20	30	35
Product Dimension(mm)		570×500×600	710×710×780	810×810×1050	810×810×1050	810×810×1050	1580×910×1180	1580×910×1380	1750×1050×1900	2000×1100×2300	2000×1100×2100
Packing Dimension(mm)		630×575×770	840×840×1030	890×890×1250	890×890×1250	890×890×1550	1650×980×1340	1650×980×1540	1900×1160×2110	2200×1300×2500	2200×1300×2350
Net/ Gross Weight(kgs)		51/57	100/115	120/140	135/160	160/190	270/300	320/350	460/500	560/620	700/760

Vertical Discharge Series:60Hz

Model		ARG-03STi	ARG-04STi	ARG-05STi	ARG-10STi	ARG-05STi	ARG-10STi	ARG-13STi	ARG-20STi	ARG-25STi
Air /Water 24˚C /26˚C	Output Power (KW)	16	19	24	48	23.5	45	56	90	110
	Input Power(KW)	2.91	3.25	4.36	9.06	4.27	8.49	10.57	17.92	20.75
	COP	5.50	5.6	5.5	5.3	5.5	5.3	5.3	5.3	5.3
	Current	15.87	17.73	16.53	34.31	9.71	19.30	24.01	40.74	47.17
Air /Water 15˚C /26˚C	Output Power (KW)	13.00	17.20	19.70	39.40	18.65	33	42	83	97
	Input Power(KW)	2.60	3.37	3.94	7.88	3.30	6.60	8.40	17.29	20.21
	COP	5.0	5.10	5.0	5.0	5.0	5.0	5.0	4.8	4.8
	Current	14.18	18.40	14.92	29.85	7.50	15.00	19.09	39.30	45.93
Air /Water 7˚C /26˚C	Output Power (KW)	10.45	13.17	16.80	26	14	28	35	72.00	85
	Input Power(KW)	2.46	3.1	3.91	6.05	3.26	6.51	8.14	16.74	19.00
	COP	4.25	4.25	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Current	13.41	16.90	14.80	22.90	7.40	14.80	18.50	38.05	43.18
Electric Power		220V/1PH/60Hz		220V/3PH/60Hz		380V/3PH/60Hz				
Compressor		Panasonic Scroll		Panasonic Scroll		Panasonic Scroll				
Heat Exchanger		Titanium Tube in PVC Shell		Titanium Tube in PVC Shell		Titanium Tube in PVC Shell				
Refrigerant		R410A		R410A		R410A				
Defrost		Included		Included		Included				
Remote		5meter Signal Wire		5meter Signal Wire		5meter Signal Wire				
Cabinet		Galvanized steel sheet coated		Galvanized steel sheet coated		Galvanized steel sheet coated				
Water Connection Port(mm)		Exterior 50mm/ Interior 40mm					Exterior 60mm/ Interior 50mm		Exterior 70mm/ Interior 60mm	
Fan Power Input (w)		200	400	400	400	400	400×2	400×2	850	850
Fan Power Output(w)		90	250	250	250	250	250×2	250×2	550	550
Fan (RPM)		850	850	850	850	850	850	850	940	940
Noice dB(A)		49	49	58	58	58	58	58	65	65
Water Flow Rate(m^3/h)		8~10	10~12	12~15	20~25	12~15	20~25	25~30	40~50	50~60
Water Pressure Drop (Kpa)		14	14	15	16	15	16	18	30	35
Product Dimension(mm)		710×710×850	810×810×1050	810×810×1050	1580×910×1180	810×810×1050	1580×910×1180	1580×910×1380	2000×1100×2100	2000×1100×2100
Packing Dimension(mm)		840×840×1030	890×890×1250	890×890×1250	1650×980×1340	890×890×1250	1650×980×1340	1650×980×1540	2200×1300×2350	2200×1300×2350
Net/ Gross Weight(kgs)		100/115	120/140	135/160	270/300	135/160	270/300	320/350	560/620	700/760