

## Unique Technology Strong points

### Top Main Unique

#### A. Updated Japanese Inverter Technology

1. At air temp of 20 °C, COP is > 6.2, at air temp of 15 °C, COP is > 4.5;.
2. It makes efficiency 15~30% higher than any other competitors.
3. The superior efficiency of Fairland Heat Pumps saves 80% running costs of a conventional Electric Pool Heater.

#### B. Powerful & Reliable Guarantee.

5 years for Titanium heat exchanger, 3 years for the whole unit.

#### C. Titanium Heat Exchanger of Unique Design.

1. Pressure-tested, original & unique design guarantees highest heat exchanging efficiency.
2. First Class Titanium Heat Exchanger totally guarantees Anti-Rusting.

### More detail unique:

#### ➤ Commercial Control System Adopted.

More accurate than domestic control system & guarantees more stability and reliability.

#### ➤ Water flow switch of special design.

Automatic stop in low water pressure, double Self-Security, it protects the whole system.

#### ➤ Water flow direction of special design

For the titanium water tank, Inlet is below and Outlet is above, which make higher efficiency in heating because the hot water is lighter and will go up. (The competitors design the water flow direction according to water chiller, it's opposite and make lower efficiency.)

#### ➤ Compressor Capacitor of special design.

We set the temperature of capacitor up to 130 °C for more reliable and stable performance, which specially comes from our Tropical Technology. (Normal capacitors setting temp is 70~90 °C)

#### ➤ Automatic Restart adopted.

#### ➤ Intelligent defrosting design.

#### ➤ Mechanical or Electronic control for optional.

#### ➤ Quiet running noise lowest to 45 decibel.

Titanium Heat Exchanger  
Cut View



## Technical Specifications

### 1. Horizontal Series

Model	PH10	PH15	PH20	PH30	PH45	PH60	PH60s	PH75s
Heating Capacity (KW)	4.5	6	9	12	16	23	23	30
C.O.P.	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2
Advised Pool Volume m <sup>3</sup> with insulated pool cover)	0-20	20-30	30-40	40-60	50-80	80-110	80-110	100-150
Advised Water flux m <sup>3</sup> /h	≥2	≥4	≥4	≥5	≥6.5	≥10	≥10	≥10
Rated power/ Max power Kw	0.70/1.1	0.98/1.4	1.4/1.8	1.8/2.4	2.4/3.1	3.7/5.6	3.7/5.6	4.5/6.3
Power Supply	220-240V/ 1Ph /50Hz						380V/3Ph/50Hz	
Rated current / Max current A	3.3/4.8	4.6/6.4	6.4/8.2	8.2/11.0	10.9/14.1	17.5/26.5	5.6/8.5	6.8/9.5
Heating Exchanger	Titanium in PVC (Patent Design)							
Compressor	Rotary	Rotary	Rotary	Rotary	Rotary	Scroll	Scroll	Scroll
Fan Direction	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Vertical
Noise (dB(A))	≤48	≤48	≤48	≤48	≤50	≤56	≤56	≤58
Water pipe in-out spec inch	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Net Dimension - LxWxH (mm)	800x285x550	940x285x550	940x285x550	1000x300x630	1000x380x730	1110x425x930	1110x425x930	1200x425x930
Packing Dimension - LxWxH (mm)	880x360x620	1020x360x620	1020x360x620	1080x360x700	1080x440x800	1200x500x1000	1200x500x1000	1280x500x1000
Net weight / Gross weight Kg	40/45	45/50	52/57	65/70	85/93	102/110	102/110	123/133
Qty Per 20'ft / 40'ft (sets)	108/312	90/228	90/228	90/180	90/180	42/92	42/92	40/90



(Horizontal Series)



(Vertical Series)

## 2. Vertical Series

Model	PH20v	PH30v	PH45v	PH60v	PH60vs	PH75vs	PH180vs
Heating Capacity (KW)	9	12	16	23	23	30	60
C.O.P.	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2	≥6.2
Advised Pool Volume (m <sup>3</sup> ) with insulated pool cover)	30-40	40-60	50-80	80-110	80-110	100-150	200-250
Advised Water flux m <sup>3</sup> /h	≥4	≥5	≥6.5	≥10	≥10	≥10	≥15
Rated power/Max power Kw	1.4/1.8	1.8/2.4	2.4/3.1	3.7/5.6	3.7/5.6	4.5/6.3	9.0/12.6
Power Supply	220-240V/1Ph/50 Hz				380V/3Ph/50Hz		
Rated current / Max current A	6.4/8.2	8.2/11.0	10.9/14.1	17.5/26.5	5.6/8.5	6.8/9.5	13.7/19
Heating Exchanger	Titanium in PVC (Patent Design)						
Compressor	Rotary	Rotary	Rotary	Scroll	Scroll	Scroll	Scroll
Fan Direction	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Noise (dB(A))	≤48	≤48	≤50	≤56	≤56	≤58	≤60
Water pipe in-out spec inch	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Net Dimension - LxWxH (mm)	530x500x630	700x650x630	700x650x730	700x650x730	700x650x730	700x680x950	1500x750x1050
Packing Dimension - LxWxH (mm)	600x530x700	750x730x700	750x730x800	750x730x800	750x730x800	780x740x1000	1600x850x1200
Net weight/Gross weight Kg	55/60	70/75	85/93	105/115	105/115	125/135	248/280
Qty Per 20'ft / 40HQ (sets)	96/228	63/135	42/90	42/90	42/90	36/84	6/12