



PAC Heat Pump Series
Heatpump Water Heater
Performance / Compact



ENERGY FRIENDLY
COMFORT



www.pac.co.th/heatpump

HEATRALIZED⁺
HIGH TEMP HEAT PUMP **by PAC**

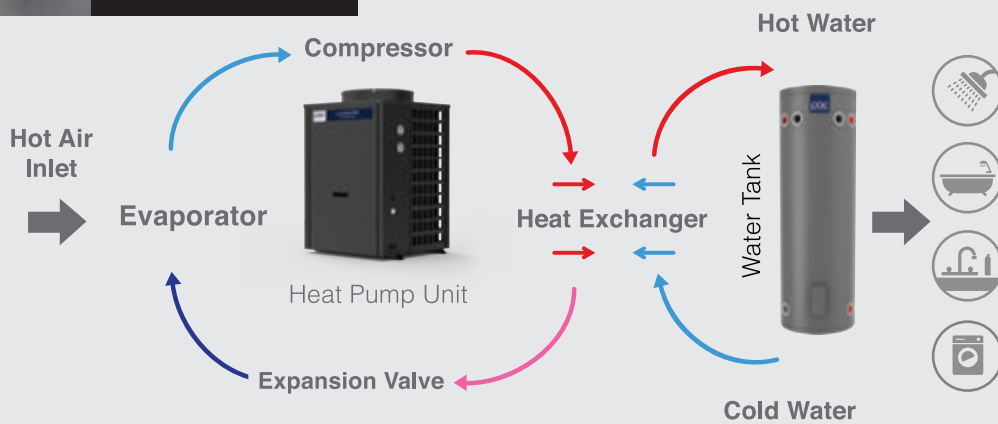
PAC Heat Pump Water Heater



PAC Heatralized Performance / Compact

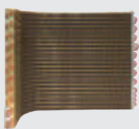
PAC Heatralized Performance / Compact are Heat pump water heater designed for produce hot water with high flow rate. Heat pump utilize the heat in the air and refrigerant vapor compression technology enables to intensify this heat, which is used to produce hot water, results in energy savings and use 4 times less electricity than conventional electric water heaters.

PAC Heat Pump Water Heater Working principle



The PAC Heat Pump Water Heater absorbs heat from the air through the evaporator coil. This causes the refrigerant to change from a liquid to a vapor, which is then sent to the compressor. The compressor compresses the refrigerant, increasing its pressure and temperature. The high-temperature refrigerant is then sent to the heat exchanger to exchange heat with the water system, providing hot water with a maximum temperature of 60-65 degrees Celsius. The refrigerant, having exchanged heat with the water, returns to a liquid state with lower temperature and pressure when passing through the expansion valve. It then exchanges heat with the surrounding air, releasing cool air without consuming electricity in the installation area.

Product Features



- Golden Fin-Tube Evaporator**
- High heat exchange efficiency
 - Hydrophilic and strong anti-corrosion
 - Electrophoresis is optional for areas near sea



- Touch Type Intelligent Controller**
- Humanized interface for adjust parameter and error code.



- Scroll Compressor**
- Copeland or Panasonic world famous brand
 - Strong anti-liquid shock ability, stable and durable
 - Refrigerant R410A optional R417A, R407C or R134A



- High Efficiency Tube In Shell Heat Exchanger**
- Inner cooper tube, outer steel shell
 - Whole tube without welding bug and run stable
 - Smooth water flow and no easy to scale
 - Compact size for whole machine design



- Electronic Expansion Valve**
- Much more accurate and intelligent than thermal type
 - Long life and few after-sales problem



- Fan Motor and Fan Blade**
- Axial fan motor, large air volume with extreme low noise
 - Fan blade with glass fiber, toughness, strong, durable

PAC Heatralized Performance series

Air to Water Heat pump for high temperature hot water application which has high hot water recovery rate, resist all operating environments even in corrosion environment such as on the Island, beside beach. High efficiency for continuous long time operating with superior standards. PAC Heatralized Performance series is designed for sanitary hot water of bathroom, kitchen etc. or offering centralized heating (radiator/floor heating) in houses, or commercial building, for example, hotel, school, hospital, hair salon, etc.



Special Properties

1. U Shape Evaporator coils that increasing heating surface area for high heat transfer efficiency.
2. Evaporator coils surface with electrophoretic coating process for the best corrosion preventing cause from sea vapor or high humidity. (optional)
3. Casing and structure made from stainless steel resists all operating environments. (optional)
4. Gas-Liquid Separator (Accumulator) prevents liquid return to compressor.
5. Digital control panel is easy to using. Able to install separately from the Heat pump unit.
6. Minimum ambient working temperature -10 °C.
7. Modbus communication is ready to connect for automation system.
8. All Heat pump units has tested performance from laboratory and approved by TÜV SÜD follow EN 14511 Standard.
9. Maximum hot water working temperature 60 °C (R410a) and 65 °C (R134A) .
10. Automatic malfunctions alarm system.



HOT WATER
AVAILABLE 24/7



ACCURATE
TEMP CONTROL



HOT WATER
RELIABILITY



LOW LIFECYCLE
COSTS



LOW AMBIENT
PERFORMANCE



INTELLIGENT
CONTROL



HIGH EFFICIENCY
DESIGN



SAFE OPERATION
DESIGN

PAC Heatralized Compact series

PAC Heatralized Compact series is a Heat pump water heater for the production of high temperature hot water. Durable , small, can replace the original water heat tank to save energy. Quick payback easy to install and easy to use.

PAC Heatralized compact series suitable for hotel, resort requires hot water to separate each room, villa , bungalow which demand a lot of water (bathroom with bathtub), small hotels that want to use centralized hot water for up to 20 rooms, factory , hospital suitable for replacing or pre-heating to reduce the existing of hot water tank.



Special Properties

1. Axial Fan which has low power consumption, low running noise, long usage life, high air volume flow rate.
2. Built in circulating pump.
3. Casing made from painted steel, rustproof paint.
4. Gas-Liquid Separator (Accumulator) prevents liquid return to compressor.
5. Digital control panel is easy to using. Able to install separately from the Heat pump unit.
6. Minimum ambient working temperature -10 °C.
7. All Heat pump units has tested performance from laboratory and approved by TÜV SÜD follow EN 14511 Standard.
8. Working by Refrigerant R410a which friendly with atmosphere.
9. Maximum hot water working temperature 60 °C.
10. Automatic malfunctions alarm system.

PAC Heatralized Compact

Specification		Compact Series						
Model		PTR-CP040LY/CGP	PTR-CP056LY/CGP	PTR-CP080LY/CGP	PTR-CP120LY/CGP	PTR-CP155LR/CGP	PTR-CP210LR/CGP	PTR-CP25LR/CGP
Heating capacity	kW	4	5.6	8	12	15.5	21	25
Heat Recovery Rate @ temp. rise 30c	LPH	115	161	230	345	445	603	718
Rated power input	kW	0.85	1.19	1.7	2.55	3.3	4.45	5.2
COP		4.7						4.8
Power supply	V/Ph/Hz	220/1/50				380/3/50		
Max. current	Amp.	7	9.5	13	19	8.6	11	12.5
Refrigerant		R410A				Scroll		
Compressor	Type	Rotary				Scroll		
	Type	Tube in Shell						
Heat exchanger	Material	Copper						
		EEV						
Refrigerant control valve		Coated gold finned						
Evaporator		Coated steel						
Fan	Qty	1						2
	Direction	Horizontal						
Circulating pump		Included						
Casing material		Coated steel						
Required hot water flow rate	M ³ /h	1.2		1.4	2	2.6	3.6	4.3
Water connection	Inch	3/4"				1"		
Max water temp	Celsius	60						
Operation temp range		-10 - 43						
Noise	dB(A)	≤48				≤50	≤52	
Net weight	Kg	52	58	61	80	122	137	180
Net Size (W/D/H)	mm.	750 x 280 x 510		1,010 x 320 x 610	940 x 380 x 795	1,120 x 430 x 960	1,005 x 455 x 1,230	1,305 x 430 x 1,400

Heating capacity testing condition : ambient temp 35°C/60% Rh water temp (in/out) 30°C/60°C



: Energy Efficiency Label No.5

PAC Heat Pump References

References

- Centra by Centara Government & Convention Chaeng Watthana
- Kamol Cosmetic Hospital
- Suwan Golf & Country Club
- Villa PaSon Khaokho
- Centara Karon Resort Phuket
- Centara Grand Beach Resort Phuket
- Centara Grand Beach Resort & Villas Phuket
- Centara Villas Phuket
- Centara Grand Beach Resort & Villas Krabi
- Centara Hotel Hat Yai
- Banyan Tree Phuket
- Amatara Wellness Resort Phuket
- Anchanlina Hotel - Phuket
- Bang Niang Beach
- Hilton Phuket Arcadia Resort & Spa
- Hyatt Regency Phuket Resort
- The Oceanic Sportel, Phuket
- C and N Hotel
- R-MAR Resort and Spa Patong Phuket
- Sugar Marina Resort - Art Karon Beach
- Windham Grand Phuket Kalim Bay
- Ramada Resort by Wyndham Khaolak
- Pullman Phuket Panwa Beach Resort
- The Waterfront Suites Phuket by Centara
- Aleenta Resort & Spa Phuket
- Ibis Styles Phuket City
- Moonlight Exotic Bay Resort, Koh Lanta
- Outrigger Khao Lak Beach Resort

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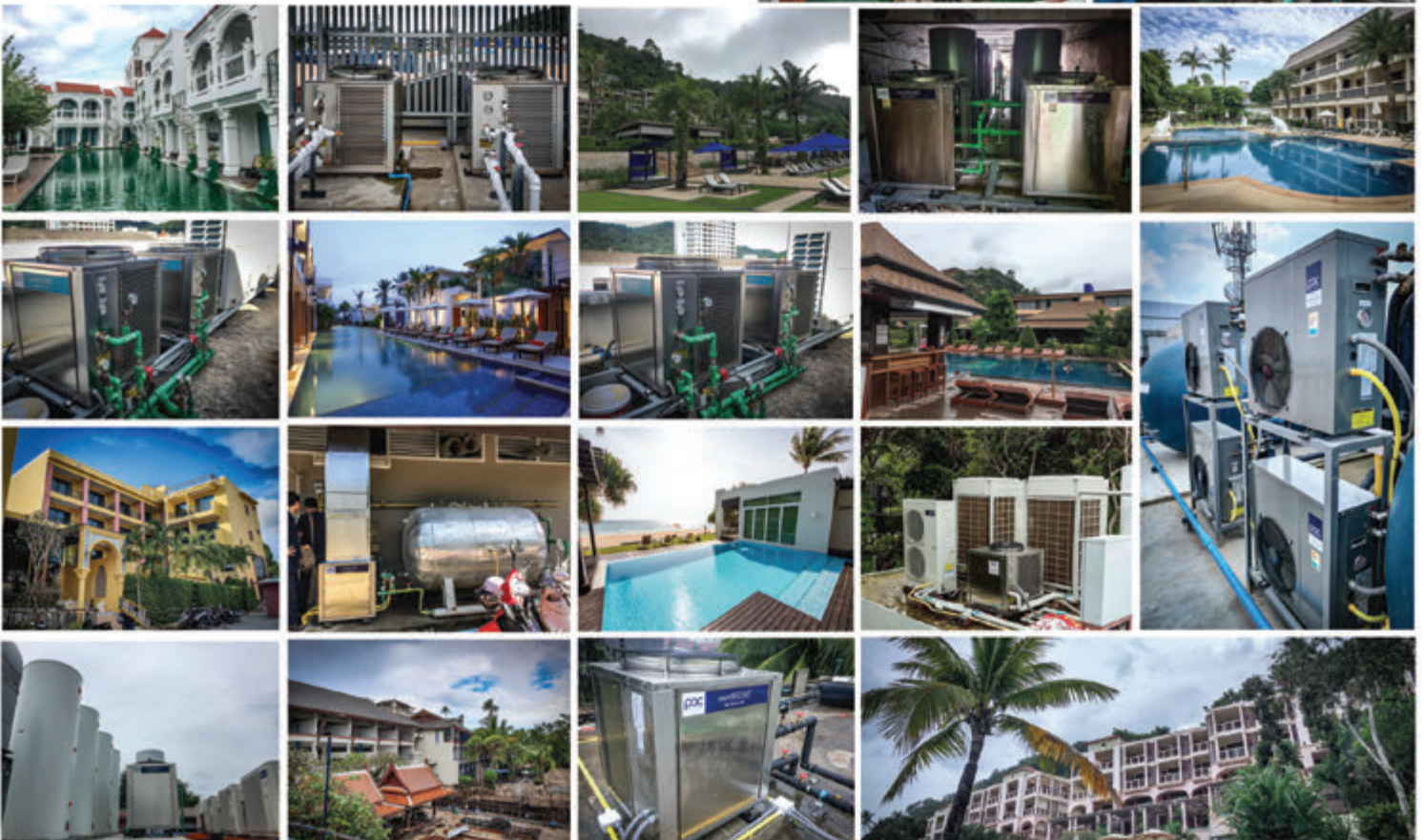


Performance Series



Compact Series

- Melia Koh Samui
- Aonang Princeville Villa Resort & Spa
- Cosy, Ao Nang, Krabi
- Aonang Cliff Beach Resort, Krabi
- Avani Ao Nang Cliff Krabi Resort
- Sole Mio Condominium, Phuket
- LLAYAN GREEN PARK, Phuket
- Anantara Phuket Villas, Mai Khao Beach
- Sofitel Luang Prabang
- Hilton Pattaya
- Pullman King Power Bangkok
- The Grand Thara Bangkok
- R.X. MANUFACTURING COMPANY LIMITED
- Beat Active - Indoor Sports Complex
- Kensington English Garden Resort | Pak Chong
- Tiang Studio
- United States Embassy
- Chomdaw and Resort, Sawangdaendin, Sakon Nakhon
- Dinso Resort and Villa, Koh Chang
- NH Collection Chiang Mai Ping River Hotel
- Star Over Sea By Deep Night, Sammuk, Chonburi



PAC Heat Pump Specification

PAC Heatralized Performance (R410A)

Specification		Performance Series (R410A)									
Model		PTU-CP020LR/CG	PTU-CP027LR/CG	PTU-CP030LR/CG	PTU-CP035LR/CG	PTU-CP047LR/CG	PTU-CP053LR/CG	PTU-CP072LR/CG	PTU-CP085LR/CG		
Heating capacity	kW	20	27	30	35	47	53	72	85		
Heat Recovery Rate @ temp. rise 30c	LPH	575	776	862	1006	1351	1523	2069	2443		
Rated power input	kW	3.8	5.1	5.8	6.8	9.1	10	13.8	18		
COP		5.2	5.2	5.1	5.1	5.1	5.3	5.2	4.72		
Power supply	V/Ph/Hz	380/3/50									
Max. current	Amp.	10	13	15	21	25	28.5	37.5	49		
Refrigerant		R410A									
Compressor	Type	Scroll									
Heat exchanger	Type	Tube in Shell									
	Material	Copper									
Refriferant control valve		EEV									
Evaporator		Coated gold finned									
Fan	Qty	1				2					
	Direction	Vertical									
Circulating pump		Not included									
Casing material		Coated steel									
Required hot water flow rate	M ³ /h	3.2	4	5	6	8	9	12	16		
Water connection	Inch	G 1"				G 1 1/2"					
Max water temp	Celsius	60									
Operation temp range		-10 - 43									
Noise	dB(A)	≤58			≤60		≤62		≤64		
Net weight	Kg	120	140	165	220	270	295	495	622		
Net Size (W/D/H)	mm.	750x750x1,080			810x810x1,270		1,500x690x1,090		1,500x690x1,370	1,510x910x1,560	1,690x1100x1,690

Heating capacity testing condition : ambient temp 35°C/60% Rh water temp (in/out) 30°C/60°C



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PAC Heatralized Performance (R134A)

Specification		Performance Series (R134A)										
Model		PTU-CP014BR/CG	PTU-CP020BR/CG	PTU-CP025BR/CG	PTU-CP034BR/CG	PTU-CP052BR/CG	PTU-CP067BR/CG	PTU-CP074BR/CG	PTU-CP102BR/CG			
Heating capacity	kW	14.5	20	25	34	52	67	74	102			
Heat Recovery Rate @ temp. rise 30c	LPH	417	575	718	977	1494	1925	2126	2931			
Rated power input	kW	3.6	5	6.2	8.4	13.1	16.8	18.6	24.5			
COP	V/Ph/Hz	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
Power supply	Amp.	380/3/50										
Max. current		9.5	13.2	16.3	22.1	34.5	44.2	48.9	66			
Refrigerant	Type	R134A										
Compressor		Scroll										
Heat exchanger	Type	Coaxial Tube in Shell										
	Material	Copper										
Refriferant control valve		EEV										
Evaporator		Coated gold finned										
Fan	Qty	1				2						
	Direction	Vertical										
Circulating pump		Not included										
Casing material		Coated steel										
Required hot water flow rate	M ³ /h	2.5	5.7	7.2	9.7	14.9	19.2	21.2	28.1			
Water connection	Inch	1"		G 1 1/2"			G 2"	G 2 1/2"	G 2 1/2"			
Max water temp	Celsius	65										
Operation temp range		-10 - 43										
Noise	dB(A)	≤58			≤60		≤62	≤64	≤65	≤65		
Net weight	Kg	120	165	220	270	495	622	755	893			
Net Size (W/D/H)	mm.	750 x 750 x 1,080			810 x 810 x 1,270		1,500 x 690 x 1,090		1,510 x 910 x 1,560	1,700 x 1,100 x 1,675	2,000 x 1,100 x 1,870	2,000 x 1,130 x 1,950

Heating capacity testing condition : ambient temp 35°C/60% Rh water temp (in/out) 30°C/60°C



: Energy Efficiency Label No.5



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