



World Class Heat pumps proudly Made in India



Characteristics:

- 1) Adopts Tube in Shell / Tube In Tube heat exchanger and with inbuilt Circulating Pump inside.
- 2) Efficient Rotary compressor; Safe, Reliably, Stable running & durable.
- 3) Efficient Saginomya four-way valve; It is very efficient in defrosting in low ambient temp
- 4) Saginomya / SANHUA /EMERSON Electronic Expansion Valve (EEV) or Thermostatic expansion valve
- 5) Tube in tube heat exchanger inside with higher heat exchange efficiency than tube in shell heat exchanger used by others, with higher reliability & longer lifetime.
- 6) Green & Environment-friendly Refrigerant : R134A
- 7) Full consideration for noise control; Compressor rubber feet specially selected to reduce vibration.
- 8) Unique super energy saving controlling system can save extra 10% energy than other units in market.
- 9) Reliable Design and Strict Quality Control; All products 100% are tested and run at the factory to assure proper operation of all components and safety switches.

ROTARY COMPRESSOR



**TOSHIBA
PANASONIC
HITACHI
MITSUBISHI**

4 WAY REVERSING VALVE



**SAGINOMIYA
Danfoss**

LARGE AIR FLOW FAN



INTELLIGENT CONTROLLER



ELEC EXPANSION VALVE



**Danfoss
SAGINOMIYA
EMERSON**

REFRIGERANT



R410A R134A



HYDROPHILIC EVAPORATOR



SHELL IN TUBE



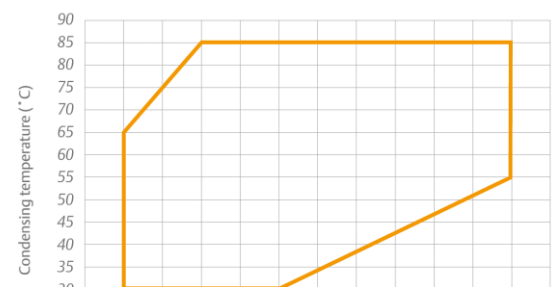
Copeland ZW Scroll: Dedicated Scroll for Commercial Industrial High temperature Heating requirements

Water heating is characterized by long operating hours at both high load and high compression ratios. Demand for hot water is at its highest when ambients are low and when conventional heat pump capacity falls off.

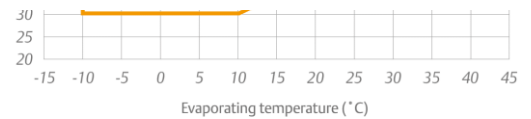
ZW**KA compressors are designed for reliable operation for heavier duty applications where the ambient temperature does not fall below 0°C; with significantly enhanced heating capacity, higher efficiency, and minimal requirement to reduce water outlet temperatures.

Criteria	Traditional AC Scroll	ZW Series Heat Pump Specific Compressor
Heating Capacity	Standard	15-20% Higher than Standard
COP	Standard	15-20% More than standard

R134a



Standard	10-20% more than standard	
Highest Water Temperature	55°C	60°C (Heating Optimized Valve Designed For High Compression Ratios)
Hot Water Reliability	Standard	Stronger & Robust Scroll Design, High Power Motor To Operate At Low Ambient & Higher Condensing Temperature Vs AC Compressors



MAIN FUNCTIONS OF HEAT PUMPS

Heat pump protection	High pressure protection	When water flow is too small or water temp. too high ,will prevent compressor to be damaged
	Low pressure protection	When refrigerant leaked , prevent compressor work without pressure.
	Compressor over current protection	Prevent compressor to work when current over max value
	Phase protection	Wrong phase/ absent phase protection (for 380V)
	Anti-freezing protection	Prevent water pipes and water tank freezing
Project function	Water level indication	Indicate high/low water level
	constant water temp. replenishing	Replenishing water temp. can be set, make water tank temp. constant
	Timing water temp. replenishing	Can set heat pump replenish cold water at certain time
	Timing hot water supply	Can supply hot water at certain time
	Cycle water(return water) setting	Can set cycle water temp.
	Timing start/stop heat pump	Can set 2 group of start/stop timing
	Manual switch	Seperated start/stop signal can be connected with solr system(for choice

Technical Specification

Model No		VCHT-015BC	
Heating capacity	kW	13	
Heating capacity	Btu/h	44358	
Rated heated water output Heating: Ambient temp. (DB/WB): 20°C/15°C, water temp. (input/output): 15°C/75°C	L/h	186	
Rated heated water output Heating: Ambient temp. (DB/WB): 30°C/25°C, water temp. (input/output): 30°C/75°C.	L/h	243	
Rated outlet water temp. 1	°C	75	
Max outlet water temp.	°C	80	
Power	V/Ph/Hz	380 ~ 415V/3N~/50Hz	
Rated input power	kW	4.1	
Rated input current	A	7.4	
Compressor	Compressor type		Scroll*1
	Compressor brand		Emerson Copeland Scroll
	Throttle type		Electronic expansion valve (EEV)
Fan	type		Low noise high efficiency axial type
	direction		Vertical
	Qty		1
	input power	W	250
	speed	RPM	880
Evaporator	fin type		Hydrophilic aluminium
	tube type		Innergroove tube
Heat Exchanger	Type		High efficiency tube in tube heat exchanger
	Qty		1
Controller type			Next Gen Intelligent PCB controller LCD type
Ambient Temperature	°C	(5°C ~43°C)	
Refrigerant			R134A
Protection			Under / Over voltage protection, Under /Over current protection, Open phase, Phase reversal, Phase imbalance, Compressor high discharge temperature protection, Compressor high discharge pressure protection, Compressor overload, Anti-Freeze protection.
Noise in 1 meter	dB(A)	58	
Water pipe size	(mm)	R1(DN25)	
Water flow volume	m3/h	4	

Cabinet		Galvanized powder coatedsteel(Stainless steel)
Unit Size	mm	855/775/1095
N.W	kg	176



Complete water Heating Solutions

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Domestic water heat pumps
Commercial Water Heat Pumps
Next Gen Thermodynamics Heat Pumps
Swimming pool heat pump