



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, Reliables, 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 Thernostatic expnasion 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



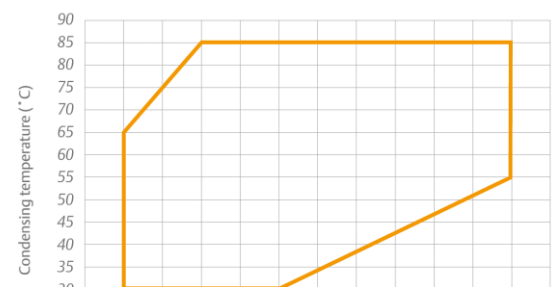
Copeland ZW Scroll: Dedicated Scroll for Commercial Industrial High temperature Heating requirements

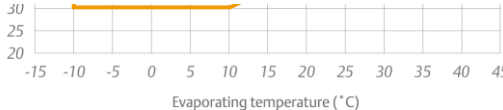
Water heating is characterized by long operating hours at both high load and high compression ratios. Demand for hot water is at its highest when ambients are low and when conventional heat pump capacity falls off.

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℃	60℃ (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-020BC	
Heating capacity		kW	18	
Heating capacity		Btu/h	61419	
Rated heated water output Heating: Ambient temp. (DB/WB): 20℃/15℃, water temp. (input/output): 15℃/75℃		L/h	258	
Rated heated water output Heating: Ambient temp. (DB/WB): 30℃/25℃, water temp. (input/output): 30℃/75℃.		L/h	340	
Rated outlet water temp. 1		℃	75	
Max outlet water temp.		℃	80	
Power		V/Ph/Hz	380 ~ 415V/3N~/50Hz	
Rated input power		kW	5.8	
Rated input current		A	10.4	
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		℃	(5℃ ~43℃)	
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)	60	
Water pipe size		(mm)	R1(DN25)	
Water flow volume		m3/h	5	

Cabinet		Galvanized powder coatedsteel(Stainless steel)
Unit Size	mm	855/775/1095
N.W	kg	220



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