

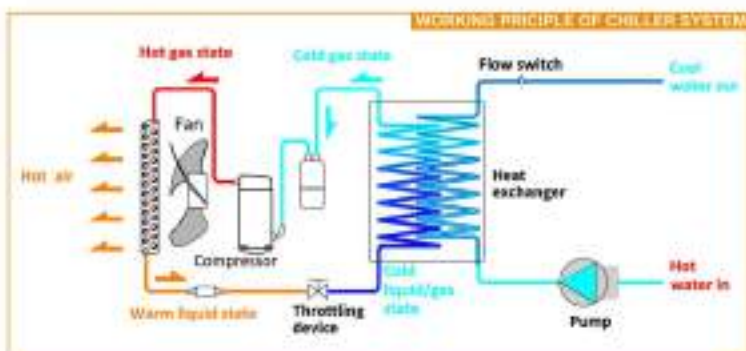


# Air Cooled Water Chiller

## An Ideal Solutions to Chilled Water Applications

**Air Cooled Water Chiller** is specially designed for the need of chilled water in tropical regions of the Gulf area, where the ambient temperature in summer can even go up to as high as 53°C, causing the rooftop tank water reaches unbearable temperature. The unit works as a chiller in summer, which chills the rooftop tank water to a comfortable temperature ideal for cooled water applications, such as shower, bath, washing, laundry, cooking, drinking and cleaning etc. It adopts a CFC free, eco-friendly refrigerant, which is highly efficient and has no depletion to ozone layer.

The system consists of a refrigerant circuit and water circuit. The refrigerant circuit is composed of a compressor, a condenser coil, heat exchanger and a throttling device. And the water circuit is composed of a water pump, the same water heat exchanger.



## Key Components

### Condenser Coils

The evaporator or condenser coil used is of fin and tube type. The fins are hydrophilic treated aluminum fins to resist corrosion, and the copper tubes are inner-grooved type, which increases the heat transfer in the refrigerant side.



### Intelligent Control



The units are supplied with micro processor based digital controller with LCD display. The controller is programmed to provide a maximum protection to the heat pump system and accurate temperature control. The control panel is completely factory wired with all accessories and terminals included.

### Fan Blade & Water Pump

Water chillers adopt aluminum fan blade in tropical regions. Built-in circulation water pump is optional.



### High Efficiency Compressor



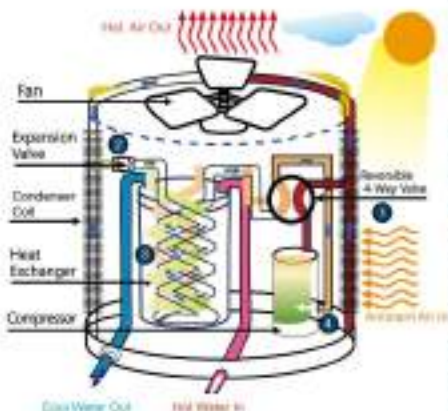
- With tropical resistance capacity
- High efficiency and energy saving
- Quiet operation due to less moving parts





## How does Water Chiller System work?

### 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.

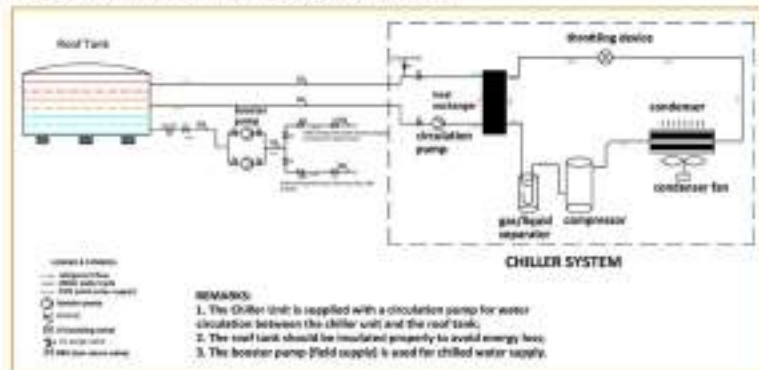
## Features & Highlights

- Tropical for max. working ambient temp. of 53°C
- High efficiency compressor is tropical for high ambient conditions
- Eco friendly CFC free refrigerant R410a
- Intelligent wired controller with LCD user interface
- Heat exchanger with high thermal efficiency, high working temperature and low maintenance
- Guaranteed water safety, no potential risk of contamination to potable water
- Adjustable water temp. setting: 15-35°C
- Compatible with all types of existing tanks
- Be installed in the garden or roof
- Full safety protection incorporated to the system
  - high pressure and low-pressure protection
  - compressor overload and high discharge temperature protection
  - phase failure protection
  - water flow protection
  - anti-freezing protection
- Heavy gauge galvanized steel cabinet with epoxy powder painting, for long lasting outdoor life span
- Built-in water pump is optional
- Energy saving, saves 2/3 running cost than conventional electric heaters
- Easy operation: operates like a simple domestic appliances.

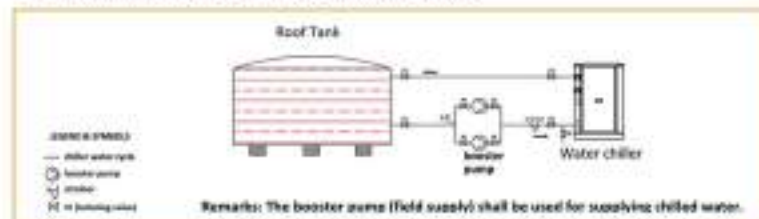


## Application Diagrams

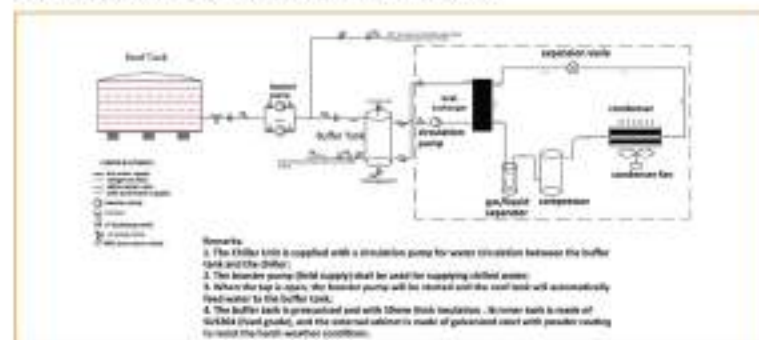
### Installation without Buffer Tank (Domestic Type)



### Installation without Buffer Tank (Commercial Type)



### Installation with Buffer Tank (Single Cooling System)





## Domestic Air Cooled Water Chiller (50Hz)

## Technical Specifications

MODEL		RCCT-2SD	RCCT-3SD	RCCT-4SD	RCCT-5SD	RCCT-7SD	RCCT-8SD
Nominal cooling capacity		kW	1.5	2	3	4	5
Power supply		V/Hz/Ph	230/50/3Ø1			380/4/5Ø3Ø1	
Cooling (1) 35/24°C W33/25°C	Cooling capacity	kW	2313	2640	4120	5402	5875
	Power consumption	W	810	895	1220	1600	1660
	EER	-	2.86	2.95	3.37	3.38	3.54
Cooling (2) 40/24°C W33/25°C	Cooling capacity	kW	1781	2427	3020	4600	4854
	Power consumption	W	620	720	790	1420	1500
	EER	-	2.87	3.37	3.82	3.24	3.24
Ambient temp. range		°C	30-53				
Outlet water temp. range		°C	15-25				
Flow water flow rate		m³/h	0.9	1.2	1.8	2.4	3
Control		-	Micro processor based digital wire controller with LCD display				
Fan		-	Aluminum				
External cabinet		-	Galvanized steel with powder coating				
Compressor	Type	-	Rotary			Scroll	
	Oil	Yes	Yes				
	Refrigerant	-	R410a				
Water heat exchanger		-	S/S tube-in-tube or titanium tube in PVC shell				
Water pump (optional)		-	W/No/On/Off				
Water connection		Inlet/Outlet	1"	1"	1"	1"	1.5"
Noise level		(dB(A))	58	57	60	62	63
Net dimension (WxDH)		mm	800/520/550	850/520/550	1200/520/550	1200/520/550	1200/520/550
Net weight		kg	55	60	67	108	120

## Notes:

1. Conditions of "Cooling (1)": Ambient air temperature (DBWB): 35/24°C, Inlet/Outlet water temperature: W33/25°C;  
 2. Conditions of "Cooling (2)": Ambient air temperature (DBWB): 40/24°C, Inlet/Outlet water temperature: W33/25°C;  
 manufacturer reserves the rights to modify the above specifications without notice for product improvement.  
 Please contact us for updated information.



## Commercial Air Cooled Water Chiller (50Hz)

## Technical Specifications

MODEL		RCCT-80C	RCCT-100C	RCCT-120C	RCCT-200C
Nominal cooling capacity		kcal/h	8	10	12
Power Supply		V/Hz/Ph	380-4/5/3Ø1		
Cooling (1) 35/24°C W33/25°C	Cooling capacity	kcal/h	13148	13208	18108
	Power consumption	W	3180	3000	4000
	EER	-	3.82	3.92	3.89
Cooling (2) 40/24°C W33/25°C	Cooling capacity	kcal/h	9526	11400	14676
	Power consumption	W	1900	1200	1510
	EER	-	2.8	2.92	2.85
Ambient temp. range		°C	30-51		
Outlet water temp. range		°C	16-25		
Rated water flow rate		m³/h	8	9	7.4
Control		-	Micro processor based digital wire controller with LCD display		
Fan		-	Aluminum		
External cabinet		-	Galvanized steel with powder coating		
Compressor	Type	-	Scroll		
	Oil	Yes	No		
	Refrigerant	-	R410a		
Water heat exchanger		-	Brazed plate heat exchanger		
Water pump (optional)		-	W/No/On/Off		
Water connection		Inlet/Outlet	1.12"	1.12"	1.12"
Noise level		(dB(A))	60	60	67
Net dimension (WxDH)		mm	1432/742/1084	1432/742/1084	1432/742/1084
Net weight		kg	200	200	220

## Notes:

1. Conditions of "Cooling (1)": Ambient air temperature (DBWB): 35/24°C, Inlet/Outlet water temperature: W33/25°C;  
 2. Conditions of "Cooling (2)": Ambient air temperature (DBWB): 40/24°C, Inlet/Outlet water temperature: W33/25°C;  
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