



Commercial Air Conditioners



Tropical

# Rooftop Package

R410A 50Hz

20 , 25 , 30 RT



# General Features

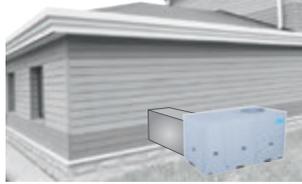
## Convenient for unit selection

### Wide cooling capacity range >>

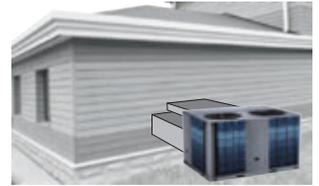
- ❖ Wide cooling capacity range, from 36000Btu/h to 360000Btu/h.

### Design flexibility >>

- ❖ Compact design.
- ❖ Flanges of air flow inlet and outlet as standard.
- ❖ It is suitable for installation in rooftop and ground.



ClimaMaster series



ClimaCreator series

## Outstanding reliability

### Durable construction >>

- ❖ Pre-painted exterior cabinet panels pass 1000 hours Salt Spray Test for durability.
- ❖ Weather-resistant construction with capped steams and sloped top panels.
- ❖ G90 galvanized heavy gauge plate conforming to ASTM-A-653.



## Customized anti-corrosion treatment >>

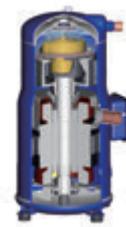
❖ The rooftop package air conditioners with special anti-corrosion treatment are suitable for seaside areas or the areas exposed to acidic substances.



- ❖ Special anti-corrosion treatment of heat exchanger provides 5 to 6 times greater resistance against acid rain and salt corrosion.
- ❖ All PCB parts in the unit are coated with double-side moisture proof paint. The outer side of electric box metal cover is spray-painted.
- ❖ All screws are anti-rust.
- ❖ Casings of the unit and motors are anti-rust.

## Reliable scroll compressor >>

- ❖ Famous brand compressor: Copeland, Hitachi, Danfoss, etc. More reliable.
- ❖ No complex internal suction and discharge valves for quieter operation and higher reliability.
- ❖ Compact, light-weight design, and fewer moving parts design.



## Multi-protection design >>

- ❖ Multi-measurement to ensure units operate normally and reliably:  
System current protection, High/low pressure switch protection, Temperature sensor on/off protection, etc.
- ❖ Three-phase protector can be customized.



HP/LP switch



Temperature sensor

## Easy to installation

### Convenient for wires connection >>

- ❖ Removable access door on the electric box. It is easy to move the cover of the electric box.
- ❖ Only connect the wires of power supply, and no need to connect any signal wires.



### Easily connect the drainage pipe >>

- ❖ Reserved external drainage port, quickly and accurately connect the rubber drainage pipe.



# Easy to maintenance

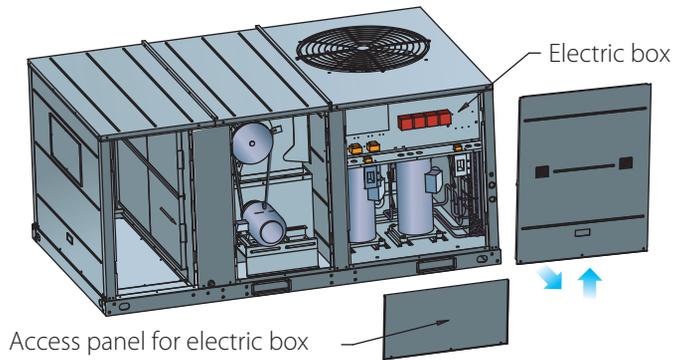
## External pressure gauge ports >>



- ❖ The unit provides external pressure gauge ports for convenient and fast checking system pressure without removing the panel.

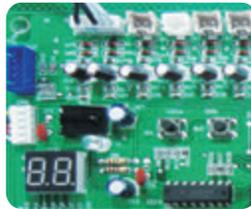
## Easy access doors design >>

- ❖ Removable the access doors on the filter, fan motor, and electric box sections.
- ❖ Provide convenient access to system components for maintenance and service.

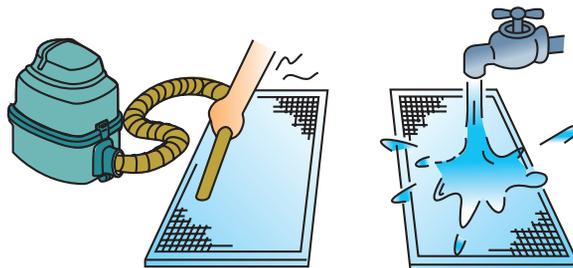


## System self-diagnostic >>

- ❖ Press the 'Check' button, the LED display in PCB board of the unit will display the normal checking code.
- ❖ If the unit is in running with abnormal operation, the LED display will show the error code.



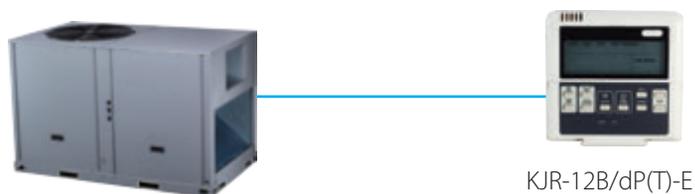
## Washable filter >>



# Flexible choice of accessories

## Controllers >>

- ❖ Wired controller as standard.
- ❖ Besides standard wired controller, others can be chosen too.



- ❖ Other brand thermostat can be matched as optional solution.



- ❖ Centralized control function can be achieved through the centralized controller as optional. MD-NIM01 should be connected between rooftop package units and centralized controller.



## Multi-accessories >>

| Description                | ClimaCreator series  |                      | ClimaMaster series   |                      |
|----------------------------|----------------------|----------------------|----------------------|----------------------|
|                            | Standard accessories | Optional accessories | Standard accessories | Optional accessories |
| Filter                     |                      | √                    | √                    |                      |
| Outlet drainage            | √                    |                      | √                    |                      |
| Snap ring                  | √                    |                      | √                    |                      |
| Drainage pipe              | √                    |                      | √                    |                      |
| Anti-corrosion fin         |                      | √                    |                      | √                    |
| EHK (Electric Heater Kits) |                      | √                    |                      | √                    |
| Network interface module   |                      | √                    |                      | √                    |
| Three-phase protector      |                      | √                    |                      | √                    |

# Mechanical specification

## **General**

The units are convertible airflow. All units are factory assembled, internally wired, fully charged refrigerant and 100% run tested to check cooling and heating operation, fan and blower rotation, and control sequence before leaving the factory. Wiring internal to the unit is colored and numbered for simplified identification. The unit is provided with an integral weather resistant control panel.

## **Casing**

Unit casing is constructed of Zinc coated, heavy gauge, galvanized steel. Exterior surfaces are cleaned, G90 galvanized heavy gauge plate conforming to ASTM A 653, followed by baked on electrostatic polyester dry powder coat paint on all external panels, completely weatherized for outdoor installation and properly reinforced and brazed. Salt Spray Test for steel sheet under 1000 hours, specially treated can be up to 2000 hours and even more. Cabinet construction allows for all maintenance. Service panels are removed easily and reinstalled by removing bolts. All panels and top covers indoor side of the unit are insulated with 16mm, foam-faced, closed-cell insulation. The unit has provisions for forklift and crane lifting, with forklift capabilities on four sides of the unit.

## **Compressors**

All units have direct-drive, hermetic, scroll type compressors with centrifugal type oil pump. Motor is suction gas-cooled and has a voltage utilization range of plus or minus 10 percent of unit nameplate voltage.

Internal overloads are provided with the scroll compressors.

Compressors used in Rooftop Package unit are hermetically sealed reciprocating type. They are equipped with a crankcase heater as standard.

The compressors, incorporating a built-in muffler, are mounted on spring within a heavy gauge steel housing to give a low noise level.

The unit contains the best compressor technology available to achieve the highest possible performance. Dual compressors are outstanding for humidity control, light load cooling conditions and system back-up applications.

## **Controls**

The unit is completely factory-wired with necessary controls and terminal block for power wiring. The unit provides an external location for mounting a fused disconnect device.

Microprocessor controls provide for all 24V control functions. The precision control makes all heating, cooling, or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures.

The control maintains accurate temperature control, minimizes drift from set point, and provides better building comfort. A centralized micro-processor provides a higher level of machine protection.

## **Coils**

Internally finned, copper tubes mechanically bonded to a configured hydrophilic aluminum fin is standard. Coils are leak tested under 3100KPa (450 psig) at the factory to ensure the pressure integrity.

## **Electronic thermostats**

General information: A dedicated electronic thermostat is supplied with unit controls as standard. It controls one or two stage cooling applications. The thermostat normally displays room temperature and mode of operation. It also allows to select continuous fan operation, or has the fan on intermittent operation with the equipment. Finally, it displays the status of unit, thus providing maximum information for the user.

# Specifications

Tropical (T3) application, 380-415V 3Ph~ 50Hz

17.5RT & 20RT



25RT & 30RT



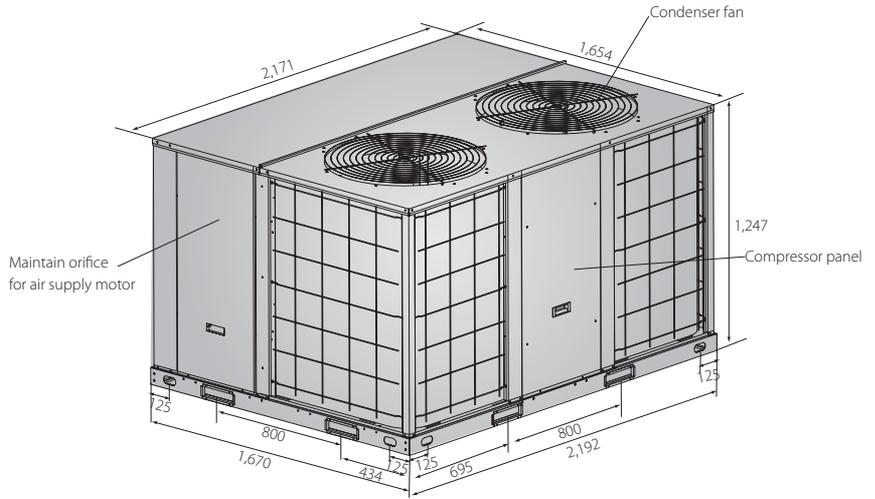
| Nominal ton*             |                   |         | 20                    | 25                    | 30                    |
|--------------------------|-------------------|---------|-----------------------|-----------------------|-----------------------|
| Model                    |                   |         | AZRP-20RCT3           | AZRP-25RCT3           | AZRP-30RCT3           |
| Cooling                  | Capacity (1)      | Btu/h   | 240,000               | 300,000               | 360,000               |
|                          |                   | kW      | 70.0                  | 87.0                  | 105.0                 |
|                          | Input (1)         | kW      | 22.6                  | 28.0                  | 34.3                  |
|                          | EER (1)           | Btu/h.W | 10.6                  | 10.7                  | 10.5                  |
|                          | Capacity (2)      | Btu/h   | 199,200               | 251,700               | 336,300               |
|                          |                   | kW      | 58.4                  | 73.8                  | 98.6                  |
|                          | Input (2)         | kW      | 25.1                  | 32.0                  | 41.8                  |
|                          | EER (2)           | Btu/h.W | 7.9                   | 7.9                   | 8.0                   |
| Air flow                 | Indoor side       | CFM     | 8,800                 | 10,000                | 12,000                |
| External static pressure |                   | Pa      | Default: 120; 0 - 375 | Default: 110; 0 - 350 | Default: 270; 0 - 400 |
| Max. power input         |                   | kW      | 33.0                  | 40.5                  | 49.5                  |
| Max. current             |                   | A       | 66.9                  | 77.4                  | 94.1                  |
| Compressor               | Type / Quantity   |         | Scroll / 2            | Scroll / 2            | Scroll / 2            |
|                          | Brand             |         | Copeland              | Danfoss               | Danfoss               |
| Indoor fan               | Type / Drive type |         | Centrifugal / Belt    | Centrifugal / Belt    | Centrifugal / Belt    |
| Outdoor fan              | Type / Drive type |         | Axial / Direct        | Axial / Direct        | Axial / Direct        |
| Wired controller         |                   |         | KJR-12B/dP(T)-E       | KJR-12B/dP(T)-E       | KJR-12B/dP(T)-E       |
| Centralized controller   |                   |         | Yes                   | Yes                   | Yes                   |
| Sound pressure level     |                   | dB(A)   | 75.3                  | 76.8                  | 77.9                  |
| Ambient temperature      |                   |         | 10°C - 52°C           | 10°C - 52°C           | 10°C - 52°C           |
| Dimension                | Net (WxHxD)       | mm      | 1,670x1,247x2,192     | 2,320x1,245x2,220     | 2,320x1,245x2,220     |
|                          | Packing (WxHxD)   | mm      | 1,695x1,284x2,212     | 2,330x1,275x2,230     | 2,330x1,275x2,230     |
| Weight                   | Net / Gross       |         | kg                    | 670/700               | 895/925               |
|                          |                   |         |                       |                       | 910/940               |

Notes:

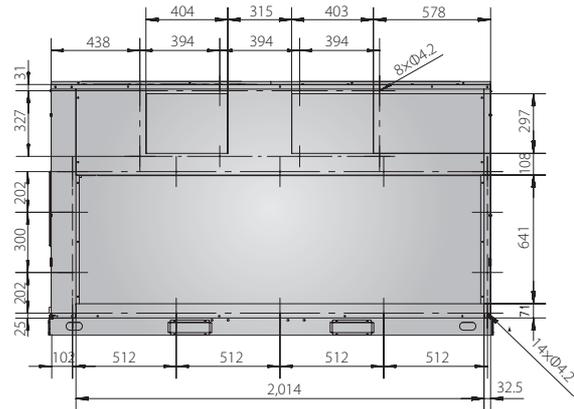
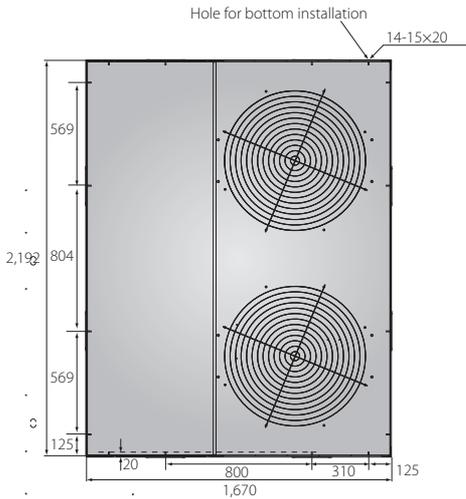
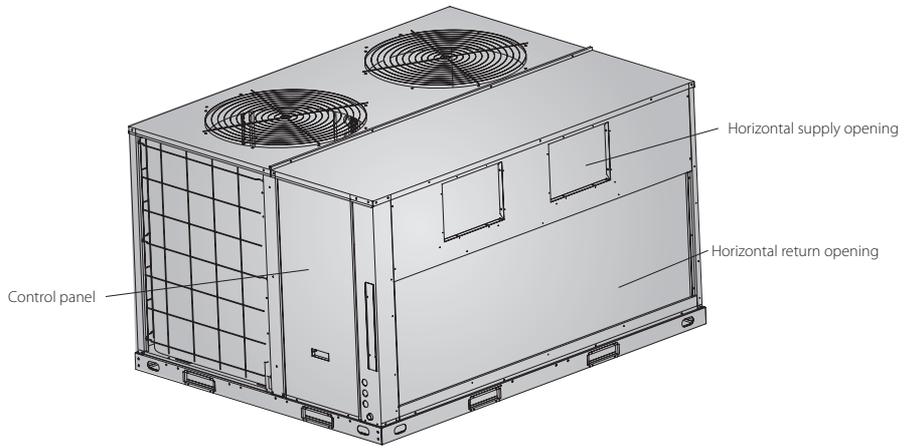
- Cooling capacity test condition (1): Outdoor ambient temperature: 35°C, indoor temperature 26.7°C DB / 19.4°C WB;  
Cooling capacity test condition (2): Outdoor ambient temperature: 46.1°C, indoor temperature 26.7°C DB / 19.4°C WB;
- Units are suitable for operation to  $\pm 20\%$  of nominal CFM;
- Sound values are measured in a semi-anechoic room, at a position 1 meter in front of the unit and  $(1 \text{ meter} + \text{Height of unit})/2$  above the floor.
- Specifications are subject to change without prior notice for product improvement.
- \* Nominal ton only for reference.
- Cooling or heating capacity as per specifications.

# Dimensions

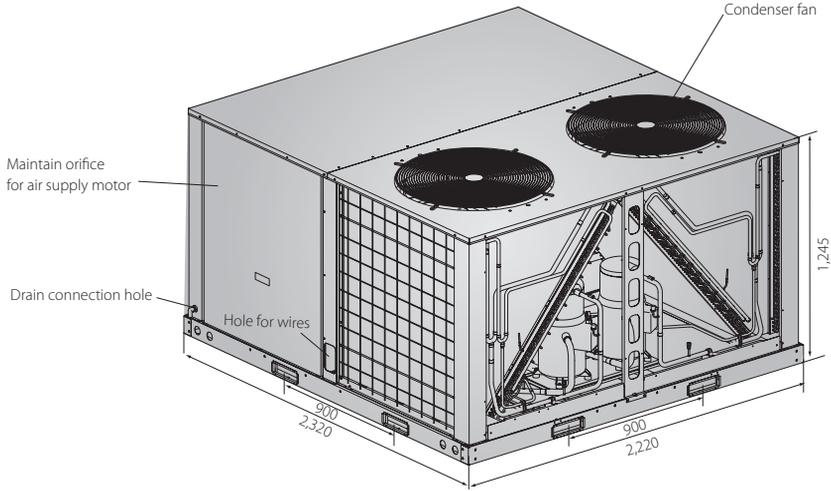
## AZRP-20RCT3



## 20RT Model



# AZRP-25RCT3 & AZRP-30RCT3



## 25RT&30RT Models

