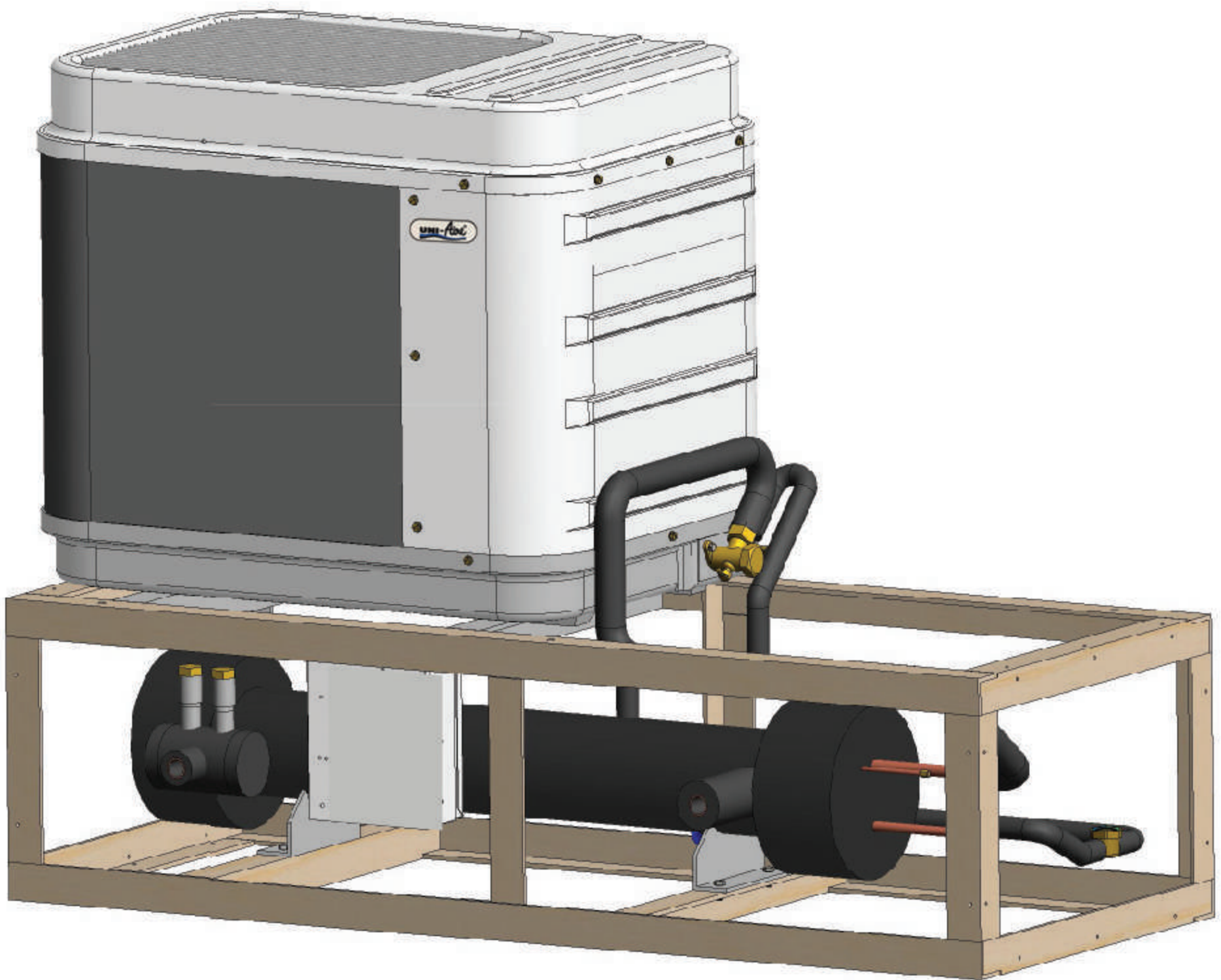


MODEL AKQ-CHB

PACKAGED AIR COOLED CHILLER

2.0 - 4.4 TR

7.0 - 15.5 KW



UNI - Aire[®]
Air Conditioning Experts

| Digital temperature controller (Carel IR33)



- Flat

The surface of the controllers is perfectly flat and thin, allowing easy cleaning and ensuring the highest level of hygiene



- Intuitive

New, more intuitive user interface. The main functions are highlighted, such as set point display and auxiliary output activation.



- Touch

The keypad is touch sensitive for a more attractive and appealing look. This allows the possibility to create custom user interfaces based on different applications.



(Option)

- Integration with monitoring and supervisory systems

Modbus® and Carel protocol, with automatic recognition, available as standard on the entire ir33 + range of controllers.

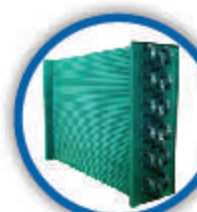
RS485 card, Etc.

**** Install additional equipment, contact the manufacturer.**

| Fiberglass casing

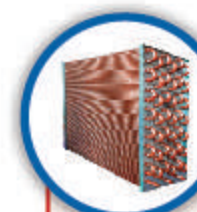


Fiberglass casing



Green guard coated on Condenser coils

Corrosion prevention caused by ocean vapor and chemicals which extends coil life span.



Copper fin condenser coil (Made to order)

Fin made from copper, extends life span of condenser coil. Suitable for seaside area and high acidic factory environment.

***Please consult Uni-Aire's sale engineer for usage and availability**

| Scroll compressor

- The refrigerant compression characteristics have low friction, resulting in good performance and energy saving.
- low vibration results in quiet operation.



| Fan (Propeller fan)



Plastic material. (25,000-36,000 BTU/Hr)

- Light weight, energy saving



Aluminium material. (40,000-60,000 BTU/Hr)

- Does not deform after prolonged use.
- Large air volume

| Shell and Tube vaporator



- Shell and tube heat exchanger type
- High efficiency in performance
- Low pressure drop and compact design
- Aluminium star rods fitted in copper tubing. Create turbulence refrigerant flow and cause higher heat transfer efficiency.

Condenser coil

- Plate fin coil type
- The coil is tested for leakage at 600 psi.



- Inner groove copper tube
Help improve energy efficiency and reduce size of the condenser coil.

- Aluminium louver fin

Louvered fins increase the heat-transfer capacity by creating air turbulence which reduces the boundary layer on the fin's surface



Refrigeration part



Thermostatic expansion valve

Controls the amount of refrigerant entering the evaporator. By installing this thermostatic expansion valve on the inlet pipe before the refrigerant enters the evaporator.



Sight glass

Characterize the state and humidity of the refrigerant.



Filter drier

Filters out dirt and absorbs moisture. If the machine does not work properly or has acid build-up, the filter drier will also absorb the acid by the filter drier's inner filling.



Service valve

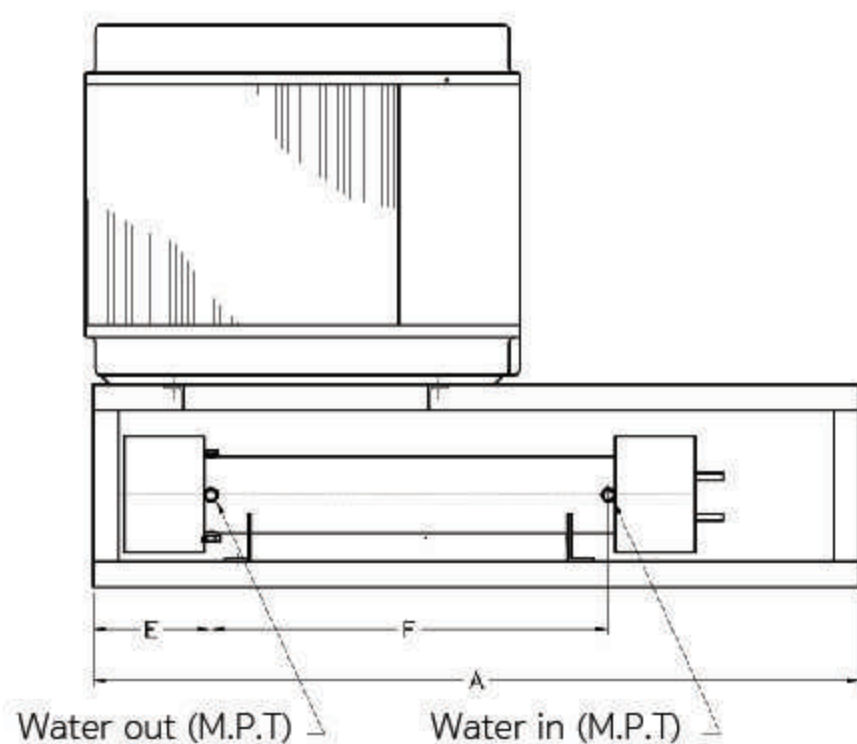
Diagnose problems in the cooling system

Electrical parts

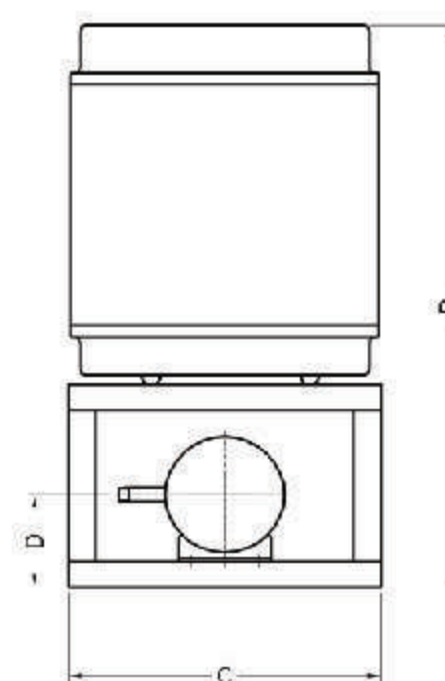
- Magnetic contactor and overload for motor compressor
- Hi-Low pressure switch (Auto reset) (Except Model : AKQ-CHB-25AX)
- Freezestat water temperature sensing system to avoid any damage to the compressor and evaporator

Dimensional drawings

Packaged air cooled chiller



Front view



Side view

| Model | DIMENSION | | | | | | WATER IN/OUT (Inch) |
|---------------|-----------|---------|---------|---------|---------|---------|---------------------|
| | A (mm.) | B (mm.) | C (mm.) | D (mm.) | E (mm.) | F (mm.) | |
| AKQ-CHB-25AX | | | | | | | |
| AKQ-CHB-303AX | 1,475 | 1,110 | 600 | 183 | 227 | 764 | 3/4 |
| AKQ-CHB-363AX | | | | | | | |
| AKQ-CHB-403AX | | | | | | | |
| AKQ-CHB-503AX | 1,742 | 1,212 | 600 | 196 | 227 | 1,069 | 1 |
| AKQ-CHB-603AX | | | | | | | |

PHYSICAL DATA

| Model | AKQ-CHB | 25AX | 303AX | 403AX | 503AX | 603AX | |
|---------------------------|-----------------------------|--|---|-------|-------|-------|-------|
| Nominal Cooling capacity* | (MBH) | 24.8 | 27.2 | 33.5 | 46.6 | 53.1 | |
| Power Consumption | Watt | 2,690 | 2,883 | 3,543 | 5,010 | 5,740 | |
| Compressor | Type | Hermatic "Scroll" | | | | | |
| | HP | 2.7 | 3 | 3.7 | 5.1 | 6 | |
| | Qty./Unit | 1 | | | | | |
| Condenser Coil | Type/Material | Aluminium Louver Fin with Inner Groove Copper Tube | | | | | |
| | Face Area (Sq..Ft.) | 9.07 | | 10.89 | | | |
| | Rows...Fins/in | 1.5/16 | | 2/16 | | | |
| | Tube Size (in) | 3/8" | | | | | |
| Condenser Fan & Motor | Fan | Type | Propeller Fan : Vertical Discharge : Direct Drive | | | | |
| | | Diameter (in) | 18" | | | | |
| | Motor | RPM | 900 | | 1,200 | | |
| | | Qty./Unit | 1 | | | | |
| Refrigerant | Type | R410a | | | | | |
| | Charge | Holding | | | | | |
| Water Chiller | Chiller Water Flow Rate | GPM | 4.96 | 5.44 | 6.7 | 9.32 | 10.62 |
| | Chiller Water Temp. In/Out | °F | 55/45 | | | | |
| | Chiller Water Pressure Drop | Ft.WG | 1.8 | 1.22 | 1.23 | 2.47 | 3.32 |
| | Water Connection In/Out | in | 3/ 4 | | 1 | | |
| | No. Of Circuits | | 1 | | | | |
| Weight Operation | Kgs. | 149 | 160 | 190 | 208 | 217 | |

*Nominal Cooling Capacity Based on 38° F Sution Temp. and 95°F Ambient Temp
 Fouling Factor 0.0005 Ft².h.F/Btu in Chiller
 MBH = 1,000 Btu/h
 For SI. Unit, Cooling Capacity (kW) = $\frac{MBH \times 1000}{3412}$

ELECTRICAL DATA

| Model | AKQ-CHB | 25AX | 303AX | 403AX | 503AX | 603AX |
|-------------------|--------------------|----------|-------|----------|-------|-------|
| Compressor (Each) | Qty./Unit | 1 | | | | |
| | V/Ph/Hz | 220/1/50 | | 380/3/50 | | |
| | Power Input (Watt) | 2,580 | 2,690 | 3,350 | 4,570 | 5,300 |
| | RLA. (Amp.) | 12.76 | 5.06 | 5.89 | 7.98 | 9.19 |
| | LRA (Amp.) | 82 | 55 | | 64 | 75 |
| Fan Motor (Each) | Qty./Unit | 1 | | | | |
| | V/Ph/Hz | 220/1/50 | | | | |
| | Power Input (Watt) | 110 | 193 | | 440 | |
| | RLA. (Amp.) | 0.5 | 0.89 | | 2.13 | |

Note
 RLA = Rated Load Amp.
 LRA = Loked Rotor Amp.

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