



## **ACCB INDOOR AIR COOLED CONDENSER**

### **AIR-COOLED CONDENSER 2-12 TON CAPACITY**

The Outdoor Vertical Air Cooled Condensing Unit (ACCB) Unit shall consist of Painted and Weatherized Cabinet Panels, Condenser Coil (AL Fin; CU Tube), High Efficiency Scroll Compressors, Control Panel, Direct Drive Plug Fan w/EC Motor Assembly and Low Ambient Control.

The indoor vertical mount air cooled condenser system shall be COMPU-AIRE self-contained factory assembled unit with

REAR RETURN, REAR SUPPLY air discharge. The system shall have a total heat rejection capacity as shown in the technical data sheet. Units shall be ETL listed as a package.

FRAME: The frame shall be constructed of 1.5 square inch, 14 gauge, heavy duty, heliarc welded tubular steel braced for rigidity supporting compressors and other mechanical components and fittings. The frame shall be primed and painted black for corrosion protection.

CABINET: All exterior panels shall be constructed of 18 gauge reinforced furniture grade steel. Decorative exposed external front and side panels shall be painted. The main front control panel door and the side access doors shall have captive 1/4 turn fasteners.

REAR CONDENSER AIR RETURN & REAR CONDENSER AIR DISCHARGE: Condenser air return shall enter from the bottom front and be discharged from the top front. Condenser air return section and condenser air discharge section shall have duct connections. Unit shall be installed and mounted on the inside of an exterior wall. Installation shall be by others.

FAN SECTION: Backward inclined direct drive plenum fan, single inlet, single width, centrifugal wheel with an electronic commutated external rotor motor, shall have static and dynamic balance of the complete assembly. Complete assembly will be located in the unit for easy access.

EC MOTOR: Electronic commuted motors (EC motors) are DC motors with shunt characteristics. Contrary to the conventional DC motors with mechanical commutation, no wear and tear elements such as collectors and carbon brushes are required. They are substituted by maintenance-free electronic circuitry in the EC controller. EC motors are characterized by their high efficiency and optimal open-/closed-loop control. An electronic reversal of the motors direction of rotation is possible.

ROTOR: A rotor with permanent magnets replaces the short circuit armature. An external electronic commutating unit, the so-called EC-Controller provides for the electronic commutation. The EC-Controller provides the windings with electrical current so that, the motor rotates continuously and quietly.

SPEED CONTROL: Method of fan speed control shall be attained by analog signal from 0 to 10 volts DC. The speed control offers continuously variable control.

CONDENSER COIL: The coil shall be "SLAB" frame dual circuited design and have face area as listed in the technical data sheet.

Coil shall have individual circuits for each compressor. The prime surface shall be seamless copper tubes with aluminum fins. Return bends shall be made of seamless copper tube. Coils shall be tested at 350 psig. Coils are rated in accordance with ARI Standard #420.

FINS: Shall be aluminum plate type, die formed fin design to provide optimum strength and turbulence for maximum peak performance without objectionable high pressure drop.

REFRIGERATION SYSTEM: Each refrigeration system shall be provided with:

Filter Dryer

Manual Reset High Pressure Switch

Auto Reset Low Pressure Switch

Charging Ports

Solenoid Valve

Liquid Receiver

Suction Accumulator

HOT GAS BYPASS: Hot gas bypass valve is provided on each refrigerant circuit. Unit are provided with factory piped Hot Gas Solenoid Valve (Air cooled units only) and Externally Equalized, direct acting Discharge Bypass Valve to provide capacity control and maintain the evaporator coil temperature under low load conditions. Used when a constant compressor function is desirable, allowing for compressor cycling and temperature fluctuations to minimize.

CONTROLS: No controls provided Components shall be wired to factory mount terminal block. Low voltage control shall be provided by others from indoor evaporator unit Connection and programming to indoor section shall be by others.

POWER PANEL: Power panel shall have complete branch circuit protection for each electrical component thereby providing flexibility to isolate any one component without disturbing the unit operation. It also contains:

Fuse-block with Fuses

Contactors

Ground connection

Low voltage terminal block.

Power Block

FAN CYCLING CONTROL: Condenser fan shall be provided with belt drive motor with a Pressure Switch to cycle (ON/OFF) the fan during low ambient condition. The Fan Cycling Control shall be effective down to 50°F.

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