COMPU-AIRE INC.
Specialized Environmental Air Conditioning Systems

HORIZONTAL DISCHARGE

AIR-COOLED CONDENSER
2-60 TON CAPACITY

AIR COOLED CONDENSER: The Air Cooled Condenser shall consist of Casing, Condenser Coil, and Direct-Drive Propeller Fan(s) driven by individual Fan Motor(s), Fan Guard and Mounting Legs. All fan motors shall be factory wired to a common electrical control box. The Air Cooled Condenser shall be arranged for Horizontal Air Flow. The Condenser shall be of Single System Circuiting.

CASING: The condenser casing is fabricated from galvanized steel sheets divided in individual fan sections by full width baffles. Each fan section shall be separated by full width baffles to prevent bypass air Structural support members, including coil support frame, motor and drive support, are galvanized steel for strength and corrosion resistance. Galvanized steel legs are provided for mounting unit for vertical discharge and having rigging holes for hoisting the unit into position. Note: Vibration isolators of the rubber and shear or spring type are to be provided and installed by others. Mounting legs are retracted for shipping purposes, and must be lowered in position for unit installation. The unit's electrical panel is inside an integral weatherproof section of the casing

CONDENSER COIL: Coils are constructed of copper tubes in staggered tube pattern. Tubes expanded into continuous, corrugated aluminum fins. The fins have full-depth fin collars completely covering the copper tubes, which are connected to heavy wall Type "L" headers. Inlet coil connector tubes pass through relieved holes in the tube sheet for maximum resistance to piping strain and vibration. The hot-gas and liquid-lines are spun shut at the factory and include a factory installed Schrader valve. . Headers and connections shall be copper and shall be factory split to provide an independent condenser circuit for each compressor. Coils are factory leak-tested at a minimum 300 psig, dehydrated, then filled and sealed with a nitrogen holding charge for shipment. The coil shall also be designed for counter flow application for high heat transfer efficiency

PROPELLER FAN: The direct drive fan blades shall be aluminum, and shall be protected by a heavy gauge, steel wire, zinc plated, epoxy coated fan guard. Each fan section shall be separated by full width baffles to prevent bypass air.

FAN MOTOR: The condenser's fan motor is a continuous air over design. The condenser motors shall have permanently lubricated sealed ball bearings, with inherent overload protection. Equipped with rain shield and die formed, galvanized steel supports are used for rigid mounting of the motor.

ELECTRICAL CONTROLS: Electrical controls, overload protection devices and service connection terminals are factory wired inside the integral electrical panel section of the casing. The electrical panel, incorporating all the fan actuators, terminal boards and Ambient T-stat(s) required to provide head pressure regulation

LOW AMBIENT–FAN SPEED CONTROL: Air cooled condenser shall be provided with a VARI-SPEED PACKAGE FOR LOW AMBIENT DOWN TO -20°F: Consisting of factory supplied and field mounted and wired weatherproof control panel complete with fan cycling controls (multiple fan units) and one solid state pressure control. The field installed capillary sensors sense the highest head pressure of either operating compressor and control the variable speed fan on the air cooled condenser to properly maintain the head pressure. A single phase variable speed motor will be factory installed on the #1 fan of the condenser. The speed controller modulates air delivery in direct response to head pressure and maintain minimum head pressure required.