

ICA - Integrated Air Cooled Chillers



Cooling Technology's Air Cooled Chiller features an integral tank and pump. In addition the ICA houses a reciprocating or screw compressor paired with a stainless steel brazed plate evaporator and an integral MDPE reservoir with a non-ferrous pump. Our ICA line of chillers are available in 15 to 140 ton capacities.

SUPERIOR BY DESIGN

Our use of the highest quality components and a robust design assures a dependable, long lasting trouble free machine and a clean corrosion free environment. All components are bolted to a heavy gauge steel frame. The frame design incorporates lifting eyes for ease of lifting the chiller to high elevations.

COMPRESSOR

At the heart of the ICA chiller is a robust compressor either of reciprocating or screw style. ICA 15-40 (reciprocating style), ICA 50-140 (screw style).

BRAZED PLATE EVAPORATOR

Our ICA series has a stainless steel brazed plate evaporator. Each plate in the evaporator contains flow directors on the top and bottom of the surface and in porthole areas. Every other plate has a reverse pattern so the pattern ridges contact one another on adjacent plates and are brazed together to form a compact pressure-resistant heat exchanger.

The brazing process creates two channel systems allowing two media to flow in counter directions completely separate of each other. All material performs heat transfer and contributes to large surface areas per volume (as well as add to the component's sturdiness).

What does this mean to your operation? This channel design gives rise to vigorous turbulence ensuring *maximum heat transfer*. No other heat exchanger design has as efficient heat transfer properties. Should a comparison be necessary with shell & tube units, the brazed plate heat exchanger coefficients are *three times* as efficient.

HOST OF SAFETIES

A full range of safeties (with indicating warning lights) is standard: high refrigerant pressure relief valve, automatic low refrigerant pressure cut-off, manual high refrigerant pressure cut-off, low oil pressure cut-off, freeze protection, multiple stage thermostat and fault indicating pilot lights.

ELECTRICALS

All electrical components are mounted in a NEMA rated electrical panel that is professionally wired and numbered to correspond with the electrical schematic. Our attention to

detail extends to our choosing to use long life, LED indicator lights. The ICA-R chiller is fully wired, charged with refrigerant at the factory and tested under simulated load conditions before shipment to your job site.

AIR COOLED CONDENSER

Each model ICA includes a condenser that rests above the other chiller components. Inside, the condenser has multiple fans with vertical air discharge, the unit has a galvanized steel frame and casing, heavy gauge galvanized steel legs and base rail. The end panels, center support and partitions have collared tube holes to increase tube life. Its coil has 18 gauge galvanized steel casing and 0.8 inch aluminum plate-type tube sheets. Coils are of seamless copper tubing on a staggered pattern. Aluminum fins mechanically expand into copper tubes.

The ICA condenser is integrated with the chiller and a normal system will not need any additional refrigerant. All the customer will need to do is open the shut-off valves to release the refrigerant into the piping.

TANK AND PUMP

The internal tank in this chiller is insulated and made of medium density polyethylene (MDPE). The tank includes a sight glass, drain, and make up port. The non-ferrous centrifugal pump is located beside the tank and is of a closed-coupled design. The pump is selected to run at 3500 rpm.

Y-STRAINER

For additional ease of maintenance, CTI places an inline Y-strainer with removable stainless steel screen in the evaporator's supply line to protect it from solids. Refrigerant filter drier cores are also replaceable. Pipes are made with non-ferrous, non-corrosive materials.

AVAILABLE OPTIONS

CTI offers several options for our ICA line of chillers. An automatic water make-up valve can be added to maintain the liquid level or a side stream filter to promote a clean running system. We offer several alarms which can be added to the chiller as well: low water level alarm, high temperature and low temperature alarms. We can also design these chillers to be weather resistance for outdoor locations.