ECS – Evaporative Condensed Screw Chiller

Cooling Technology's Evaporative Cooled Screw Chillers are designed for outdoor locations.
The ECS line features integrated a dual circuits with screw compressors and
shell and tube evaporators.
Our ECS line of chillers is available in 100 to 300+ 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

The ECS uses a screw compressor and an evaporative-cooled condenser with fan control to maintain head pressures. To prevent compressor cycling our ECS chillers come with infinite capacity control to 25% part load.

EVAPORATOR

The ECS series uses a shell and tube evaporator optimized for higher-capacity design conditions.

EVAPORATIVE COOLED CONDENSER

Each model ECS includes an evaporative cooled condenser The condenser is a hybrid of a water-cooled and air-cooled unit. Air is blown across the coils as water is sprinkled on them. As the water evaporates off the coils it removes heat from the refrigerant that is flowing through them. This method of cooling allows for lower condensing temperatures there fore raising the efficiency of the chiller.

ADVANTAGES

Evaporative cooled chillers offer extremely quiet operation. This is achieved through the dynamically balanced centrifugal blowers and a compressor that is internally balanced for low vibration. The compressor's double walled ribbed motor housing suppresses what little noise exists while the chiller housing is designed to further suppress the noise.

Cooling Technology's evaporative condensed chillers consume 40-60% less energy than air cooled chillers, and have Energy Efficiency Ratios (EER) that are the best available on the market. We achieve this by selecting the most efficient components into a design that operates at very low condensing temperatures. The result is a short payback period and electrical savings for many years.

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.

CTI's rugged MCS Microprocessor Controller keeps the chiller running at its most energy-efficient level. A "control zone" – based on leaving fluid temperature – reduces compressor cycling and improves unit part load efficiency. It is the most user-friendly controller available and, with it's extremely fast Windows based system, provides full protection, monitoring and control via RS-232 or RS-484 port. Other features of the controller include status & dynamic graphing mode, automatic history storage for all points and battery backed up ram & clock (see chiller microprocessor controller specifications for details).

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

AVAILABLE OPTIONS

CTI offers several options for our ECS line of chillers.
The chillers are designed to be coupled with the CTI pump/tank stations. See tank and pump specifications for more information on pump/tank configurations. In addition to the pump and tank, 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.