



## **cATWB Closed Circuit Cooler**

Furnish and install as shown on the plans an EVAPCO Model \_\_\_\_\_ induced draft counterflow closed circuit cooler. Each unit shall be CTI Certified and have the capacity to cool \_\_\_\_\_ GPM of \_\_\_\_\_ from \_\_\_\_\_ °F to \_\_\_\_\_ °F with a \_\_\_\_\_ °F entering wet bulb temperature.

### **Basin and Casing**

The basin and casing shall be constructed of G-235 hot-dip galvanized steel for long life and durability. Standard basin accessories shall include overflow, drain, type 304 stainless steel strainers, and brass make-up valve with plastic float.

### **Belt Drive Models**

#### **Fan Motor**

\_\_\_\_\_ horsepower totally enclosed fan cooled motors with 1.15 service factor shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase. Motor(s) shall be mounted on an adjustable base which is accessible from the outside of the unit for service. A swing away protective cover shall shield the motor and sheave from the weather.

#### **Drive**

The fan drive shall be multigroove, solid back V-belt type with taper lock sheaves designed for 1.5 service factor of the motor nameplate horsepower. The belt material shall be neoprene reinforced with polyester cord and specifically designed for evaporative cooler service. Fan sheave shall be aluminum alloy construction. The fans and the fan sheaves shall be mounted on the shaft with a specially coated bushing to provide maximum corrosion protection. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance.

### **Axial Propeller Fans**

Fans shall be heavy duty axial propeller type statically balanced. The fans shall be constructed of aluminum alloy blades, installed in a closely fitted cowl with venturi air inlet. Fan screens shall be galvanized steel mesh and frame, bolted to the fan cowl.



## **Fan Shaft Bearings**

Fan shaft bearings shall be heavy duty self-aligning ball type with grease fittings extended to the outside of the unit. Materials shall be stainless steel balls with chrome steel races and zinc plated housing for corrosion resistance. Bearings shall be designed for a minimum L-10 life of 75,000 hours.

## **Water Recirculation Pump**

The pump(s) shall be a close-coupled, centrifugal type with mechanical seal, installed vertically at the factory to allow free drainage on shut down. \_\_\_\_\_ horsepower totally enclosed motor(s) shall be furnished suitable for outdoor service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase.

## **Heat Transfer Coil**

Cooling coil(s) shall be all prime surface steel, encased in a steel framework and hot-dip galvanized after fabrication as a complete assembly. The tubes shall be arranged in a self-spacing, staggered pattern in the direction of airflow for maximum heat transfer efficiency and minimum pressure drop, without the use of additional spacers between the coil tubes. The coil(s) shall be pneumatically tested at 400 psig, under water.

## **Water Distribution System**

The spray header shall be constructed of schedule 40 polyvinyl chloride pipe for corrosion resistance. All spray branches shall be removable and include a threaded end plug for cleaning. The water shall be distributed over the entire coil surface by heavy-duty molded nylon ZM spray nozzles with large 1-5/16" diameter openings and internal sludge ring to eliminate clogging. Nozzles shall be threaded into the spray header to provide easy removal for maintenance.

## **Eliminators**

The eliminators shall be constructed entirely of inert polyvinylchloride (PVC) in easily handled sections. The eliminator design shall incorporate three changes in air direction to assure complete removal of all entrained moisture from the discharge air stream. Maximum drift rate shall be less than 0.001% of the circulating water rate.

## **Louvers**

The air inlet louvers are constructed from UV inhibited polyvinyl chloride (PVC) and incorporate a framed interlocking design that allows for easy removal of louvers for access to the entire basin area for maintenance. The louvers have a minimum of two changes in air direction



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and are of a non-planar design to prevent splashout, block direct sunlight and debris from entering the basin. (Patent Pending)

### **Finish**

All basin and casing materials shall be constructed of G-235 heavy gauge mill hot-dip galvanized steel. During fabrication, all panel edges shall be coated with a 95% pure zinc-rich compound for superior protection against corrosion.