



## BALTIMORE AIRCOIL COMPANY

**Quantity: (1) Model XES3E-8518-05J COOLING TOWER**

**Certified Capacity: SIZED TO MATCH THE EXISTING UNITS ORIGINAL DESIGN PERFORMANCE DUTY**

Fan Motor(s): One (1) 7.5 HP fan motor(s): Totally Enclosed, Air Over (TEAO),  
1 Speed/1 Winding - Premium Efficiency (Inverter Duty), suitable for 460 volt, 3 phase,  
60 hertz electrical service and Space Heater.  
Drives are based on 0 inches ESP.

NOTE: Inverter Duty fan motors, furnished in accordance with NEMA Standard Mg.1 -- Part 31, are required for applications using variable frequency drives for fan motor control.

### Equipment Summary

- Induced Draft, Crossflow Cooling Tower
- Quality Assurance - ISO 9001 Certified
- CTI Certified Thermal Performance
- Steel Panels and Structural Elements are Constructed of Heavy Gauge Galvanized Steel
- Standard Fan Driven by BALTIDRIVE® Power Train
- Galvanized Steel Fan Guard
- Fiberglass Reinforced Polyester (FRP) Casing Panels
- FRP Air Inlet Louvers
- PVC Fill & Drift Eliminators
- Structure Designed in accordance with the IBC and ASCE/SEI 7
- (2) 6" Top Inlet Connections
- The (1) 8" Bottom Outlet Pump Suction Connection will be supplied with Side Outlet Depressed Sump Box
- Mechanical Float Valve Assembly
- Mechanical Vibration Cutout Switch
- Extended Bearing Lubrication Lines
- Hot Water Basin Weir Dams
- Galvanized Steel Air Intake Screens
- Aluminum Ladder Located on the End Front Right of the Unit
- Perimeter Handrails
- Safety Cage is Provided for each Ladder to the Fan Deck
- Internal Walkway

### Starter/Disconnect Panel complete with:

- i. NEMA 3R weatherproof enclosure.
- ii. Single point power connection through non-fused rotary through the door disconnect switch.
- iii. Individual component fusing.
- iv. IEC rated starters and contactors for:
  - a. 7.5 HP 1 Speed/1Winding, Inverter Duty Fan Motor.
- v. Hand-off- auto switches.
- vi. Pilot lights.
- vii. Fused control transformer sized for all operating devices.
- viii. Provision for vibration cut out switch.

- ix. Terminal strip for all field wiring.
- x. Electrical: Power 460/3/60, control 120/1/60

#### **Equipment Details - All Information is Per Unit**

##### **Unit Type:**

This unit will be a factory fabricated, induced draft, crossflow cooling tower with vertical discharge.

##### **Quality Assurance:**

Each unit will be manufactured under closely-controlled conditions using standardized parts to ensure each unit is built precisely to the same high-quality design and construction standards. The design, manufacture, and business processes of Baltimore Aircoil Company are ISO 9001:2008 certified.

##### **CTI Certification:**

The thermal performance of this BAC unit has been certified through performance tests conducted by the Cooling Technology Institute in accordance with their standard STD-201. Such certification by an independent third party assures engineers and users that the published thermal capacities accurately reflect the actual unit performance. CTI certification eliminates the additional costs of on-site, individual unit testing, oversizing the equipment or operating cost penalties from deficient equipment.

##### **Materials of Construction:**

Standard materials of construction are G235 (Z700 metric) galvanized steel. This is the heaviest galvanizing commonly available in the industry, and is the accepted standard for normal evaporative cooling applications. This standard corrosion protection system will provide reliable protection and long life for most industrial cooling, air conditioning and refrigeration applications.

##### **Fan & Drive System:**

The unit features the exclusive BALTIDRIVE® Power Train fan drive system with over a decade of proven performance in tens of thousands of installations world wide. Backed by an extensive five year drive warranty that even includes the motor, the BALTIDRIVE® Powertrain fan drive system utilizes special corrosion resistant materials of construction and state-of-the-art-technology to ensure long, trouble-free life, ease of maintenance and reliable year round performance for all fan drive components. The five-year warranty provided on all BAC evaporative cooling equipment is the most comprehensive fan motor and mechanical equipment warranty available in the industry. Included in the five-year warranty are the mechanical equipment support, fan(s), fan shaft(s), bearings, sheaves, and fan motor(s).

##### **Fan Guard(s):**

The fan guard mounted on the top of the cylinder is all welded construction of heavy gauge, hot-dip galvanized steel. The fan guard is shipped loose for field installation.

##### **Casing Panels:**

Casing panels are constructed of corrosion resistant, UV protected Fiberglass Reinforced Polyester (FRP).

##### **Inlet Louvers:**

The FRP air inlet louvers are spaced to reduce air resistance while preventing water splash-out.

##### **Fill:**

The patented BAC fill and eliminators used in the unit have been engineered to provide a maximum air/water contact and low air pressure drop to ensure efficient heat transfer with minimum fan power requirements. The fill is impervious to rot, decay, fungus or biological attack and has a flame spread rating of 5 per ASTM Standard E-84-77a. The eliminators have three changes in air direction to effectively strip entrained moisture from the leaving airstream.

**Equipment Structure:**

The structure of this product has been designed and analyzed in accordance with the wind and seismic load requirements of the 2006 IBC, 2009 IBC, 2012 IBC, 2015 IBC, ASCE/SEI 7-05, and ASCE/SEI 7-10. For more information and specific wind and seismic load capacity ratings, please see the Certificate of Wind and Seismic Load Capacity.

**Water Inlet(s):**

The unit will be provided with two (2) 150# (68 kg) stud circle hot water inlet connections (per cell).

**Water Outlet(s):**

The side outlet depressed sump box is available for field installation below the base of the tower to facilitate jobsite piping. The outlet connection is designed to mate with 150 lb. flanges. Please see the submittal package for the connection size.

**Basin Water Level Control:**

Basin water level control assemblies will consist of large-diameter polystyrene-filled floats, adjustable linkages, and corrosion resistant make-up valves.

**Vibration Cutout Switch:**

A mechanical vibration switch mounted in a NEMA 4 enclosure, can be furnished on the fan support framework. The switch trips when subjected to excessive mechanical equipment vibration. The single switch can be used to directly terminate fan motor operation or be used to signal an alarm.

**Extended Lubrication Lines:**

To simplify maintenance of the drive bearing, extended lubrication lines ending in standard grease fittings are provided. The grease fittings are located on the inside of the access door. The extended lubrication lines allow evaporative cooling equipment operators to lubricate the drive bearings from the outside of the unit.

**Hot Water Basin Weirs:**

The unit is supplied with a hot water basin dam in each hot water basin to accommodate water flow rates of 50% of the design flow. The weir dams provide a even water distribution over the fill at below design water flow rate conditions.

**Air Intake Option:**

Hot-dip galvanized steel wire mesh screens are available factory-installed over the air inlet louvers to prevent debris from entering the unit.

**External Ladder to Top of Unit:**

The Aluminum Ladder is Located on the End Front Right of the Unit

**Safety Railings:**

Perimeter handrails are included to access the top of the unit and the water distribution system.

**Safety Cage(s) for Ladder(s):**

Safety Cage shall be provided for each ladder to the fan deck.

**Internal Access Option:**

A galvanized steel walkway in the plenum facilitates access to the fan drive components and basin strainer screens.