Mr. GoodTower®

evapco

Replacement Parts

For AT Series Cooling Towers, Closed Circuit Coolers, and Evaporative Condensers

FREE Unit Inspection!
See Inside for More Details.

AT Cooling Tower
(Belt Drive - 3.6m Wide Unit)

Any Part, Any Manufacturer, Any Time!

Induced Draft Products

1 FAN SCREENS

The fan screens are galvanized steel mesh.

Numbers in Dotted Circles Indicate Part Location Inside Unit.

Rep

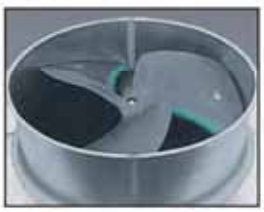
FANS:

2A AXIAL PROPELLER FAN

The axial propeller type fans are constructed of an aluminum alloy and statically balanced. The fan is installed in a closely fitted galvanized steel cowl with venturi air inlet. The fans utilize a unique soft-connect blade-to-hub design that is compatible with variable speed drives. Since the blades are not rigidly connected to the fan hub, no vertical vibration forces are transmitted to the unit structure.

2B SUPER LOW SOUND FAN

The revolutionary technology of the Super Low Sound Fan is one-piece molded, heavy duty fiberglass reinforced polyester hub and blade construction utilizing a forward swept blade design. The Super Low Sound Fan is capable of reducing the unit sound pressure levels 9 dB(A) to 15 dB(A) depending on specific unit selection and measurement location.



3 DRIFT ELIMINATORS

The eliminators are constructed entirely of Polyvinyl Chloride (PVC) in easily handled sections. The design incorporates three changes in air direction and limits the water carry-over to a minimum of 0.001% of the circulating water rate. This reduces water and chemical loss. The light weight PVC eliminators are easily removed for access to the water distribution system.

ACCESS DOORS:

5 SMALL BELT DRIVE UNIT

G-235 hot-dip galvanized steel circular access door(s) are in the upper casing for easy access to the fan motor and water distribution system.

6 BIG BELT DRIVE UNIT

G-235 hot-dip galvanized steel rectangular access door(s) are in the upper casing for easy access to the fan drive and water distribution system.

4A WATER DISTRIBUTION SYSTEM

The water distribution system is made of schedule 40 PVC pipe and heavy-duty ABS plastic spray nozzles for corrosion protection in this key area. The nozzles have a 33.3mm diameter opening and are practically impossible to clog. They also have an anti-sludge ring extending into the headers to prevent sediment from building up in the diffuser opening. In addition, the spray branches have threaded end caps to allow easy debris removal. Most of coil products utilize EVAPCO's Zero Maintenance ZM II spray nozzle.

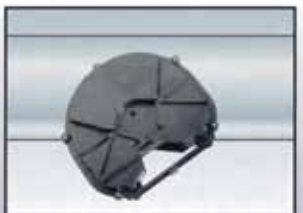
ZM II® NOZZLE

7 COIL

The patented elliptical coil is all prime surface steel, encased in steel framework with the entire assembly hot-dip galvanized after fabrication. It is designed with sloping tubes for liquid drainage and tested to 2.69MPa air under water. The elliptical design results in maximum heat transfer efficiency and minimum pressure drop. Coils are available in copper or stainless steel for corrosive or industrial applications.

4B WATER DISTRIBUTION SYSTEM

The cooling towers utilize EvapJet nozzle to ensure that every square inch of heat transfer surface receives complete and even water coverage, resulting in maximum thermal performance. EvapJet has unique oscillating spray water design, and no moving parts for less maintenance. Large orifice nozzles prevent clogging and are threaded for easy removal and positive positioning.



EvapJet™ Nozzle

lacement Parts Identifi

Induced Draft Products

Factory Authorized Parts and Quick Shipment!

AT Series Closed Circuit Cooler / Evaporative Condensers

AT Cooling Towe

(8) WATER RECIRCULATION PUMP

Closed circuit coolers and evaporative condensers are supplied with a close-coupled centrifugal pump with a mechanical seal installed to drain on shut down. The totally enclosed, fan cooled (T.E.F.C.) motor is provided with a protective canopy as standard.

(9) MAKE-UP FLOAT VALVE ASSEMBLY

This assembly contains a brass float valve with an adjustable plastic float. The supply of makeup water entering the unit is easily regulated by adjusting wing nuts on the threaded float rod.

(10) PAN STRAINER

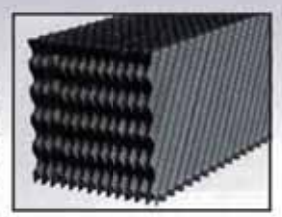
The type 304 stainless steel strainer is constructed with large removable perforated screens to reduce the need for frequent servicing.

(11) LOUVERS

WST inlet louvers keep water in and sunlight out of induced draft products. Compare to other louvers, algae growth of WST inlet louvers is minimized by blocking all sunlight. WST louvers are located on all 4 sides the unit, thus providing easy pan access from 360 degrees. The light weight louvers are constructed from PVC and anti-corrosion. EVAPCO offers the option of G235 hot-dip galvanized steel or stainless steel frames.

cation

(12) FILL



The patented EVAPAK fill design is specially designed to induce highly turbulent mixing of the air and water for superior heat transfer. The fill is constructed of PVC, will not rot or decay. Because of the unique way in which the crossfluted sheets are bonded together, and the bottom support of the fill section, the structural integrity of the fill is greatly enhanced, making the fill usable as a working platform. The fill has excellent fire resistant qualities, and has a flame spread rating of 5 per ASTM-E84-81a.

er

ADDITIONAL ACCESSORIES:

ELECTRIC WATER LEVEL CONTROL

The optional electric water level control system provides accurate control of the pan water level and does *not* require field adjustment. The control is mounted external to the unit in a vertical standpipe. The system includes a slow closing solenoid valve and an in-line Y-strainer.

ELECTRIC BASIN HEATERS

Electric heaters are sized to maintain a +40° F (4.5°C) pan water temperature with the fans off. They are furnished with thermostat and low water protection devices to cycle the heater on and off while preventing them from energizing unless they are completely submerged. All components are enclosed in rugged, weather proof enclosures for outdoor use. Contactor, transformer or disconnects are not included in the package.

SMART SHIELD™ Solid Chemical Water Treatment System

EVAPCO Smart shield is factory mounted and wired on EVAPCO Closed Circuit Coolers and Evaporative Condensers. Solid Chemistry provides reduced packaging, shipping and handling assuring a lower carbon footprint. Solid products eliminate the potential for liquid spills making them easier and safer to apply.

WORKING PLATFORM & LADDER WITH DAVIT

This option provides a convenient platform to perform work, allowing easy servicing of the fan motor and water distribution system. The heavy duty galvanized steel platform is self-supporting which eliminates the need for any external support. A less expensive alternative to field erected catwalks, the working platform option uses a straight ladder as standard. The working platform and ladder meet all applicable OSHA requirements. The davit option eliminates crane rentals and facilitates the removal of motors and gear drives. The davit is mounted on the side of the unit.

FAN MOTORS:

Fan motor is specially designed for evaporated requires, ball bearing type electric motors with 1.0 service factor are standard.

(13) WIDTH OF EACH CELL LESS THAN 2.6M

Totally enclosed, fan cooled (T.E.F.C.), ball bearing type electric motors are suitable for outdoor service. The motor is mounted externally on the unit with an adjustable motor base for ease of service. A hinged protective cover shields the motor and sheave from the weather. See front cover for picture.

(14) WIDTH OF EACH CELL LARGER THAN 2.6M

Totally enclosed, air over (T.E.A.O.), ball bearing type electric motors are standard. The motor is mounted on an adjustable base allowing the motor to swing to the outside of the unit for easy servicing.

FAN SHAFT & BEARINGS:

(15) FAN SHAFTS

All belt driven units have a solid shaft of ground and polished steel. The exposed surface is coated with a rust preventative. Also available in 304SST.

(16) FAN SHAFT BEARINGS

All belt driven units have heavy-duty self-aligning ball type bearings with grease fittings extended to the outside of the unit. Bearings are designed for an L-10 life of 75,000 to 135,000 hours, making them the heaviest duty pillow block bearings available for cooling tower duty.

FAN DRIVE:

(17) BELT DRIVE (Standard)

The fan belt is a multi-groove, solid back, reinforced neoprene V-belt type with taper lock sheaves designed for 150% of the motor nameplate horsepower. The fan sheave is constructed of an aluminum alloy. The fans & fan sheaves are mounted on the shaft with a special cadmium plated bushing for maximum corrosion protection. Belt adjustment is easily accomplished from the exterior of the unit.

To ensure your equipment's optimum performance and trouble-free operation, EVAPCO offers a **FREE Unit Inspection**. Regardless of the equipment manufacturer, EVAPCO's Mr. GoodTower® Service Center will perform a **FREE Unit Inspection**. This Inspection combined with regular service & maintenance will ensure your equipment's peak efficiency and long service life.

Call your local EVAPCO Mr. GoodTower® Service Center to schedule your **FREE Unit Inspection** today!

Maintenance Checklist

PROCEDURE

- ☐ Clean pan strainer – **monthly or as needed**
- ☐ Clean and flush pan*– **quarterly or as needed**
- ☐ Check bleed-off valve to make sure it is operative – **monthly**
- ☐ Lubricate pump and pump motor according to manufacturer's instructions
- ☐ Check operating level in pan and adjust float valve if necessary – **monthly**
- ☐ Check water distribution system and spray pattern – **monthly**
- ☐ Check drift eliminators – **quarterly**
- ☐ Check the fan blades for cracks, missing balancing weights and vibrations – **quarterly**
- ☐ Lubricate fan shaft bearings** – **every 1,000 hours or every three months**
- ☐ Lubricate fan motor bearings – **see manufacturer's instructions, typically for non-sealed bearings every 2-3 years**
- ☐ Check belt tension and adjust – **monthly**
- ☐ Sliding motor base – inspect and grease, **annually or as needed**
- ☐ Check fan screens, inlet louvers and fans. Remove any dirt or debris – **monthly**
- ☐ Inspect and clean protective finish – **annually**
  Galvanized: scrape and coat with ZRC
  Stainless: clean and polish with a stainless steel cleaner
- ☐ Check water quality for biological contamination. Clean unit as needed and contact a water treatment company for recommended water treatment program* – **regularly**

DURING IDLE PERIODS

- ☐ Two or more Days: Energize motor space heaters or run motors for **10 minutes twice daily**
- ☐ Few Weeks: Run gear reducer for 5 minutes - **weekly**
- ☐ Several Weeks: Completely fill gear reducer with oil. Drain to normal level prior to running.
- ☐ One Month or longer: Rotate motor shaft/fan 10 turns - **bi-weekly**
- ☐ One Month or longer: Megger test motor windings - **semi-annually**

OPTIONAL ACCESSORIES

- ☐ Gear Reducer: Check oil level with unit stopped – **24 hours after start-up & monthly**
- ☐ Gear Reducer/Piping: Do visual inspection for oil leaks and auditory inspection for unusual noises and vibrations – **monthly**
- ☐ Gear Reducer: Replace oil – **semi-annually**
- ☐ Oil Pump: Do visual inspection for leaks and proper wiring – **monthly**
- ☐ Gear Reducer/Coupling: Check alignment of the system – **24 hours after start-up & monthly**
- ☐ Coupling/Shaft: Inspect flex elements and hardware for tightness, proper torque & crack/deterioration – **monthly**
- ☐ Heater Controller: Inspect controller and clean between probe ends – **quarterly**
- ☐ Heater: Inspect junction box for loose wiring and moisture – **one month after start-up and semi-annually**
- ☐ Heater: Inspect elements for scale build-up – **quarterly**
- ☐ Electronic Water Level Controller: Inspect junction box for loose wiring and moisture – **semi-annually**
- ☐ Electronic Water Level Controller: Clean probe ends of scale build-up – **quarterly**
- ☐ Electronic Water Level Controller: Clean inside the standpipe – **annually**
- ☐ Solenoid Make-up Valve: Inspect and clean valve of debris – **as needed**
- ☐ Vibration Switch (mechanical): Inspect enclosure for loose wiring and moisture – **one month after start-up and monthly**
- ☐ Vibration Switch: Adjust the sensitivity – **during start-up and annually**
- ☐ Sump Sweeper Piping: Inspect and clean piping of debris – **semi-annually**
- ☐ Water Level Indicator: Inspect and clean – **annually**

* Evaporative equipment must be cleaned on a regular basis to prevent the growth of bacteria including Legionella Pneumophila.
** See maintenance manual for start-up instructions and lubrication recommendations.

WORLDWIDE MANUFACTURING FACILITIES

EVAPCO, Inc. — World Headquarters & Research / Development Center

P.O. Box 1300 • Westminster, MD 21158 USA
410-756-2600 p • marketing@evapco.com • evapco.com

North America

EVAPCO, Inc.
World Headquarters
P.O. Box 1300
Westminster, MD 21158 USA
410-756-2600 p | 410-756-6450 f
marketing@evapco.com

EVAPCO East
5151 Allendale Lane
Taneytown, MD 21787 USA
410-756-2600 p | 410-756-6450 f
marketing@evapco.com

EVAPCO East
Key Building
Taneytown, MD USA
410-756-2600 p
marketing@evapco.com

EVAPCO Midwest
Greenup, IL USA
217-923-3431 p
evapcomw@evapcomw.com

EVAPCO West
Madera, CA USA
559-673-2207 p
contact@evapcowest.com

EVAPCO Iowa
Lake View, IA USA
712-657-3223 p

EVAPCO Iowa
Sales & Engineering
Medford, MN USA
507-446-8005 p
evapcomn@evapcomn.com

EVAPCO Newton
Newton, IL USA
618-783-3433 p
evapcomw@evapcomw.com

EVAPCOLD
Greenup, IL USA
217-923-3431 p
evapcomw@evapcomw.com

EVAPCO-BLCT Dry Cooling, Inc.
1011 US Highway 22 West
Bridgewater, NJ 08807 USA
Phone: 1-908-379-2665
E-mail: info@evapco-blct.com

EVAPCO-BLCT Dry Cooling, Inc.
7991 Shaffer Parkway
Littleton, CO 80127 USA
Phone: 1-908-379-2665
E-mail: info@evapco-blct.com
Spare Parts Phone: 908-895-3236
Spare Parts e-mail: spares@evapco-blct.com

EVAPCO Power México S. de R.L. de C.V.
Calle Iglesia No. 2, Torre E
Tizapan San Ângel, Del. Álvaro Obregón
Ciudad de México, D.F. México 01090
Phone: +52 (55) 8421-9260
e-mail: info@evapco-blct.com

Refrigeration Valves & Systems Corporation
A wholly owned subsidiary of EVAPCO, Inc.
Bryan, TX USA
979-778-0095 p
rvs@rvscorp.com

EvapTech, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
Lenexa, KS USA
913-322-5165 p
marketing@evaptech.com

Tower Components, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
Ramseur, NC USA
336-824-2102 p
mail@towercomponentsinc.com

EVAPCO Alcoil, Inc.
A wholly owned subsidiary of EVAPCO, Inc.
York, PA USA
717-347-7500 p
info@alcoil.net

Europe

EVAPCO Europe BVBA
European Headquarters
Heersterveldweg 19
Industrieterrein Oost
3700 Tongeren, Belgium
(32) 12-395029 p | (32) 12-238527 f
evapco.europe@evapco.be

EVAPCO Europe, S.r.l.
Milan, Italy
(39) 02-939-9041 p
evapcoeurope@evapco.it

EVAPCO Europe, S.r.l.
Sondrio, Italy

EVAPCO Europe GmbH
Meerbusch, Germany
(49) 2159-6956 18 p
info@evapco.de

EVAPCO Air Solutions
A wholly owned subsidiary of EVAPCO, Inc.
Aabybro, Denmark
(45) 9824 4999 p
info@evapco.dk

EVAPCO Air Solutions GmbH
Garbsen, Germany
(49) 5137 93875-0 p
info@evapcoas.de

Evap Egypt Engineering Industries Co.
A licensed manufacturer of EVAPCO, Inc.
Nasr City, Cairo, Egypt
2 02 24022866 / 2 02 24044997 p
primacool@link.net / shady@primacool.net

EVAPCO S.A. (Pty.) Ltd.
A licensed manufacturer of EVAPCO, Inc.
Isando 1600, Republic of South Africa
(27) 11-392-6630 p
evapco@evapco.co.za

Asia/Pacific

EVAPCO Asia/Pacific Headquarters
1159 Luoning Road
Baoshan Industrial Zone
Shanghai 200949, P.R. China
(86) 21-6687-7786 p | (86) 21-6687-7008 f
marketing@evapcochina.com

EVAPCO (Shanghai) Refrigeration Equipment Co., Ltd.
1159 Luoning Road, Shanghai, P.R. China
(86) 21-6687-7786 p
marketing@evapcochina.com

EVAPCO (Beijing) Refrigeration Equipment Co., Ltd.
No. 66 the 4th Block, Yanqi Economic Development Zone, Huairou District,
Beijing 101407, P.R. China
(86) 10-6166-7238 p
marketing@evapcochina.com

EVAPCO Australia (Pty.) Ltd.
Riverstone NSW 2765, Australia
(61) 2 9627-3322 p
sales@evapco.com.au

EVAPCO Composites Sdn. Bhd
Rawang, Selangor, Malaysia
(60-3) 6092-2209 p

EvapTech Asia Pacific Sdn. Bhd
A wholly owned subsidiary of EvapTech, Inc.
Puchong, Selangor, Malaysia
(60-3) 8070-7255 p
marketing-ap@evaptech.com

South America

EVAPCO Brasil
Equipamentos Industriais Ltda.
Al. Vênus, 151 – CEP: 13347-659
Indaiatuba –Sâu Paulo – Brasil
(55+11) 5681 2000 p
vendas@evapco.com.br

Fan Technology Resource
Cruz das Almas – Indaiatuba
Sâu Paulo, Brasil 13308-200
55 (11) 4025-1670
fantr@fantr.com

Visit us at **www.evapcoasia.com**

Committed to making life easier, more reliable and more sustainable for people everywhere