





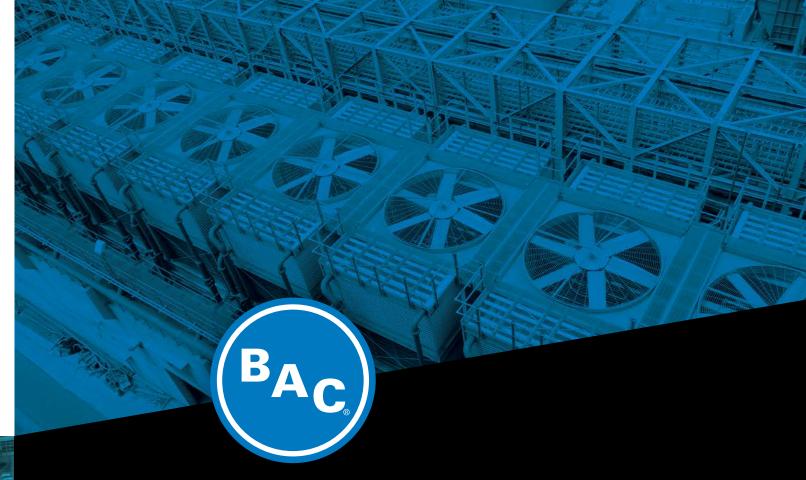






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# INDUSTRIAL COOLING

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Baltimore Aircoil Company is the global leader in factoryassembled evaporative cooling equipment. Our expertise, experience, and proven installations in industrial settings make BAC the optimal choice for the most challenging applications and environments. Whether it is process fluid cooling or gas condensing in the production of the world's chemicals, fuels, metals, and electric power, BAC's equipment provides the highest reliability and helps your operations minimize planned and unplanned downtime, thereby maximizing your output and process yield. BAC's modular designs are also quicker to install and service compared to field erected solutions, so you can get back to focusing on optimizing your processes.



### INDUSTRIES WE SERVE

FOOD AND BEVERAGE PETRO CHEMICAL

MANUFACTURING PHARMACEUTICAL

METALS POWER

MINING PULP AND PAPER

OIL AND GAS WATER / WASTE WATER

INDUSTRIAL COOLING NEEDS

**Process Fluid Cooling** 

**OPEN COOLING TOWERS** 

**CLOSED CIRCUIT COOLING TOWERS** 

**HYBRID COOLING** 

**Gas Condensing** 

**EVAPORATIVE CONDENSERS** 

**HYBRID COOLING** 

1

## WHY BAC?



## EXCLUSIVE FEATURES



## Modular Design

No matter the scale of your project, BAC's modular cooling units can be combined to provide the capacity you need with better reliability, too. With many smaller cells, if one needs maintenance, the others bear the load so you stay running at full power. And because they are factory-assembled and ready to go, installation and lead time are much faster than field erected solutions.



## **Proven Reliability**

Your number one priority is to keep your business running. BAC evaporative cooling equipment has proven records of highest year-round reliability and innovations to ensure optimal performance. The modular design of our products is inherently redundant, minimizing the risk of unplanned downtime. ENDURADRIVE $^{\text{TM}}$  Fan System boasts the highest reliability of any transmission system in the industry.



## Longer Lifespan

BAC's innovation and engineering have created materials that provide superior corrosion resistance and durability in the harshest environments, often exceeding the performance of even stainless steel. For the highest level of reliability, be sure to specify the TriArmor® Corrosion Protection System and  $EVERTOUGH^{TM}$  Construction on your units.



## Low Maintenance

BAC evaporative cooling systems are designed with not only reliability, but ease of use in mind. From simple turnkey installation to fast access to internal mechanisms, BAC keeps maintenance brief and downtime to a minimum. Our factory-assembled platforms and ladders make it easy to inspect equipment, and innovations like our ENDURADRIVE $^{\text{TM}}$  Fan System require virtually no maintenance.





Direct-drive fan system that provides the highest reliability, 10% energy savings, 90% maintenance savings, and an industry-leading 7-year motor warranty

The highest level of corrosion protection for all vulnerable components with an extended 5-year warranty



Extreme efficiency models reduce energy costs by up to 50%



Patent-pending system that enhances heat transfer by up to 30%, lowering energy and installation costs



Patent pending technology maximizes thermal performance in demanding dirty water applications





- 1 G-235 Heavy Galvanized Steel Basin
- 2 Thermosetting Hybrid Polymer Coating 3 Impermeable Polyurethane Barrier
- aver corrosion protection for the cold water

Enhanced three-layer corrosion protection for the cold water basin with an extended 5-year warranty

2 QUESTIONS? CALL 410.799.6200 OR VISIT WWW.BALTIMOREAIRCOIL.COM

## GLOBAL INSTALLATION CASE STUDIES





## 1 **Power Generation**Turbine Inlet Cooling System

BAC has worked with many gas turbine power plants to reliably handle rising year-round peak demand. A compact footprint and meeting the specified design constraints, coupled together with a turbine inlet cooling system, have allowed these plants to increase capacity by 10%.

## 2 Chemical Production

Process Heat Rejection

This major chemical manufacturer replaced open cooling towers with a Closed Circuit Cooling System to improve process efficiency, reduce exit temperatures, fouling, and process downtime, thus increasing plant revenue.

## 3 **Steel Production**Blast Furnace Cooling

This Closed Circuit Cooling System serves the blast furnace cooling needs at a major Asian steel manufacturer. Improved reliability and quick, modular site assembly were determining factors in going with BAC.

## 4 Pharmaceuticals

Process Refrigeration

Pharmaceutical manufacturers need year-round reliability for critical processes. This Closed Circuit Cooling System condenses ammonia. The rooftop installation was enabled by BAC's modular construction and corrosion resistant materials.

## **5 Large Printing Press**

Closed Loop Cooling

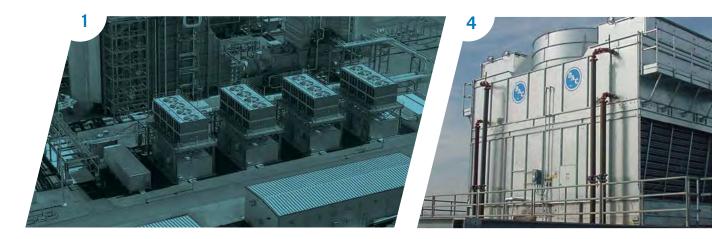
This printing press facility specified a Closed Circuit Cooling System to protect the chiller and air-handling coils from fouling. The BAC system reduced maintenance and downtime, while meeting strict air quality standards.

## 6 Manufacturing

Fouling Reduction

This Canadian auto parts supplier suffered from fouling of their Open Cooling Tower System by dust from a nearby cement plant. Now chillers run contaminant-free with a BAC Closed Circuit Cooling System.

## Worldwide, Customers Benefit from BAC's Innovation, Performance, and Modular Design









4 QUESTIONS? CALL 410.799.6200 OR VISIT WWW.BALTIMOREAIRCOIL.COM

## OPEN COOLING TOWER SYSTEMS

BAC offers the most complete line of factory assembled open cooling towers in the industry, providing process fluid cooling solutions for applications in numerous industrial settings. With over 50 features, options, and materials of construction for any operating environment, BAC has the proven cooling tower configuration that provides the highest levels of reliability for your application. Our high capacity modular cooling towers will save on installation time and costs, and reduce maintenance requirements.

## TYPICAL INDUSTRIES

- **Automotive**
- **food and Beverage**
- **Manufacturing**
- **Metals**
- **Mining**
- Petro Chemical
- **Pharmaceutical**
- **Plastics**
- **Power**
- Pulp and Paper





#### Series 5000

- Patent pending ENDURAFLOW™ Heat Transfer System for demanding dirty water applications
- · Highest reliability with ENDURADRIVE™ Fan System
- Easiest to inspect and maintain
- Crossflow // Axial Fan // Induced Draft



#### Series V

- High static applications
- Easy to maintain with motor on base level
- Counterflow // Centrifugal Fan // **Forced Draft**

## The Most Complete Line of Factory-Assembled Open Cooling Towers





#### Series 3000

- Highest reliability with ENDURADRIVE™ Fan System
- Extreme Efficiency (XE) models reduce energy usage by up to 50%
- Largest single cell cooling capacity
- True basinless design
- Ideal for replacing field erected
- Crossflow // Axial Fan // Induced Draft





#### Series 1500

- Fits in enclosures with single sided air intake
- Multiple fan and motor models available
- · Easiest to maintain
- Crossflow // Axial Fan // Induced Draft









- Compact footprint Flexible configurations
- Single lift design lowers installation cost
- Counterflow // Axial Fan // Induced Draft

THE BAC EDGE

- > Largest single cell cooling capacity among factory-assembled cooling towers
- > Cut installation time nearly in half with modular construction
- > Increase reliability and life of cooling towers with the most durable materials of construction
- > Wide range of options, including concrete basin design provides application flexibility







[ Metals, Power, Petro Chemical ]



BAC's closed circuit cooling towers use a closed coil loop to isolate process fluids thereby minimizing contamination. This high efficiency evaporative cooling solution is optimal for industries and applications concerned with fluid purity, fouling, and protection of downstream equipment. Thousands of global customers benefit from the operational reliability, application flexibility, and low maintenance costs of BAC's closed circuit systems.

### TYPICAL INDUSTRIES

- Automotive
- Food and Beverage
- Induction Furnace
- Machine Cooling
- Manufacturing
- Metals
- Mining
- Oil and Gas
- **Petro Chemical**
- Pharmaceutical
- Plastics
- Power





#### FXV3

- Largest single cell cooling capacity
- Highest reliability with the ENDURADRIVE™ Fan System
- Uniquely designed for easiest maintenance and inspection
- Advanced Coil Technology design maintains efficiency by minimizing fouling on tubes
- Crossflow // Axial Fan //
  Induced Draft



#### **HXV** Hybrid Tower

- Year-round water savings
- Plume Reduction
- Dry mode allows for year-round operation
- Combined wet/dry modes
- Crossflow // Axial Fan //
  Induced Draft

## Significantly Reduces Process Fouling, Ensuring Constant Performance and the Highest Reliability



### FXV

- Advanced Coil Technology design maintains efficiency by minimizing fouling on tubes
- Easiest to maintain
- Lower energy usage with high efficiency design
- Crossflow // Axial Fan // Induced Draft



### PFi

- Winter operation reliability
- OptiCoil™ Heat Transfer System yields highest rejection per unit
- OptiSpray<sup>™</sup> Technology Water
   Distribution System reduces
   operating costs by up to 50%
- Counterflow // Axial Fan // Induced Draft



#### **Series V**

- High static applications
- Motor at base level for easy access
- Low sound centrifugal fans for sound sensitive applications
- Counterflow // Centrifugal Fan // Forced Draft
- > Maintain cooling capacity with technologies that reduce scaling on coil surfaces
- > Cuts installation time nearly in half with modular construction
- > Increase reliability and life of cooling towers with the most durable materials of construction
- > Reduce operating costs with high energy efficiency product lines





## **EVAPORATIVE CONDENSER** SYSTEMS

BAC's wide range of evaporative condenser system product lines is a great fit for most gas condensing applications. With high cooling capacities and several unique materials of construction, BAC's evaporative condenser systems will withstand the most demanding environments, with applications ranging from Ammonia, HCFC, HFC, Hydrocarbons, Propylene, Propane, Ethane, Butane, and Mixed Gas cooling.

## TYPICAL INDUSTRIES

- **\*** Food and Beverage
- Mining
- Oil and Gas
- **Petro Chemical**



## The Reliability You Need for Maximum Performance



- Largest cooling capacity
- Extreme Efficiency (XE) models available
- Highest reliability with the ENDURADRIVE™ Fan System
- Easiest to maintain
- Crossflow // Axial Fan // **Induced Draft**



#### **Series V**

- High static applications
- Motor at base level for easy access
- · Low sound centrifugal fans for sound sensitive applications
- Counterflow // Centrifugal Fan // **Forced Draft**



#### **CXVB**

- Minimize scaling on coil and maintain cooling capacity with Advanced Coil Technology design
- Lowest refrigerant charge per ton
- · Low installation costs with fewer piping connections
- Crossflow // Axial Fan // **Induced Draft**



#### **PCC**

- High, dry operation switch point for winter operation reliability
- OptiSpray<sup>™</sup> Technology Water Distribution System reduces operating costs by up to 50%
- Compact footprint
- Crossflow // Axial Fan // **Induced Draft**



- · Lowest installation costs with Interlok™ System
- Easiest to maintain with unrestricted access to parts
- Reliable design with largest installed base
- Counterflow // Axial Fan // Forced Draft



- > Industry's most complete product portfolio to meet most application needs
- > Cuts installation time nearly in half with modular construction
- > Increase reliability and life of evaporative condensers with the most durable materials of construction
- > Lowest cost of ownership with easy maintenance features and high energy efficiency models







## UPGRADES, REPAIR & LIFETIME SUPPORT

Stay efficient and minimize downtime with BAC Authorized Replacement Parts. In addition to custom designed solutions and lifetime product support, BAC offers upgrades to make sure you maintain ever-changing certification requirements.

- Retrofit kits that optimize performance and keep you current with evolving industry requirements.
- Lifetime part support with a full line of parts to increase product lifespan and minimize downtime.
- We stand behind our products with a dedicated support team, ready to provide custom engineered solutions to keep your system operating at full capacity.



**Upgrade Your System** for Maximum Performance

FILL **FAN AND BUSHING** 

PLATFORMS AND WALKWAYS

**SPRAY DISTRIBUTION** 

REDUNDANCY AND CAPACITY

DRIFT ELIMINATORS

LARGE ORIFICE

**SHEAVE AND BUSHING** 

REPLACEMENT COILS

**VELOCITY RECOVERY STACKS** 

**DRIVE SYSTEM UPGRADE** 

**DAVIT SYSTEMS** 



**Easily Repair Your Unit** for Minimal Downtime

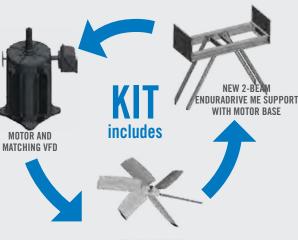
BAC OFFERS A FULL RANGE OF BAC PARTS FOR ALL **EVAPORATIVE COOLING MANUFACTURERS' EQUIPMENT.** 

🍟 **Highest** Operating Reliability





- **RETROFIT KIT**
- ✓ The only variable speed direct drive solution for modular cooling towers
- ✓ 10% energy savings, 90% lower maintenance costs, and 100% reliability on the transmission system
- ✓ No gear, coupling, or shaft alignment issues that cause downtime



FAN AND BUSHING