

# Materials of Construction

Determining the appropriate material of construction for a project depends on several factors, including water quality, climate and environmental conditions, availability of time and manpower for maintenance, unit lifetime requirements, code compliance, and budget. BAC provides the widest variety of material of construction options in the industry and has the ability to provide a solution to meet all conditions and budgets.

| Materials of Construction                         | Closed Circuit Cooling Towers |      |     |                  | Cooling Towers |             |     |             |                 | Hybrid & Adiabatic |        |     |                | Evaporative Condensers |         |      |      |     |     |           |
|---|-------------------------------|------|-----|------------------|----------------|-------------|-----|-------------|-----------------|--------------------|--------|-----|----------------|------------------------|---------|------|------|-----|-----|-----------|
|   | FXV                           | FXV3 | PFI | VF1 \ VFL        | Series 3000    | Series 1500 | PT2 | Series 5000 | VT0 \ VT1 \ VTL | FXT                | Nexus® | HXV | Trillium (TSD) | Trillium (TRF)         | Vertex™ | CXVT | CXVB | PCC | VCA | VC1 \ VCL |
| G-235 Galvanized Steel                            | •                             | •    | •   | •                | •              | •           | •   | •           | •               | •                  |        | •   |                |                        | •       | •    | •    | •   | •   | •         |
| TriArmor® Corrosion Protection System             | •                             | •    | •   | • <sup>[1]</sup> | •              | •           | •   | •           |                 |                    |        | •   |                |                        | •       | •    | •    | •   | •   |           |
| EVERTOUGH™ Construction                           | •                             | •    | •   |                  | •              |             | •   | •           |                 |                    |        | •   |                |                        | •       | •    | •    | •   | •   |           |
| Baltibond® Hybrid Coating                         | •                             | •    | •   | •                | •              | •           | •   | •           | •               | •                  | •      | •   | •              | •                      | •       | •    | •    | •   | •   | •         |
| Welded Stainless Steel Basin                      | •                             | •    | •   |                  | •              | •           | •   | •           |                 |                    |        | •   |                |                        | •       | •    | •    | •   | •   |           |
| Water Contact Stainless Steel Basin               |                               |      |     | •                |                |             |     |             | •               | •                  |        |     |                |                        |         |      |      |     | •   | •         |
| Stainless Steel Hot Water Basin                   |                               |      |     |                  | •              | •           |     | •           |                 |                    |        |     |                |                        |         |      |      |     |     |           |
| Water Contact Stainless Steel Unit                |                               |      |     | •                |                |             |     |             | •               |                    |        |     |                |                        |         |      |      |     | •   | •         |
| All Stainless Steel Construction                  | •                             | •    | •   | •                |                | •           | •   |             | •               |                    | •      | •   |                |                        | •       | •    | •    | •   | •   | •         |
| JE Premier Series® Construction                   |                               |      |     |                  | •              |             |     | •           |                 |                    |        |     |                |                        |         |      |      |     |     |           |
| Basinless Unit Construction                       |                               |      |     |                  | •              |             |     | •           |                 |                    |        |     |                |                        |         | •    |      |     |     |           |
| Fiberglass Reinforced Polymer (FRP) Casing Panels |                               | •    |     |                  | •              |             |     |             |                 |                    |        |     |                |                        |         | •    |      |     |     |           |
| Steel Casing Panels and Louvers                   |                               | •    |     |                  | •              |             |     | •           |                 |                    |        |     |                |                        |         | •    |      |     |     |           |

Standard



**NOTE:**

1. TriArmor® Corrosion Protection System only available on VF1-1012, 1018, 1024, 1036 models.

## G-235 Galvanized Steel

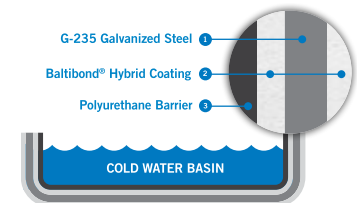
- G-235 mill galvanized steel is universally recognized for its strength and durability
- **3000, FXV3, CXVT** Only: galvanized steel units have fiberglass reinforced polymer (FRP) casing panels and louvers as standard



Vertex™ Evaporative Condenser

## TriArmor® Corrosion Protection System

- The ultimate in corrosion and leak protection for the cold water basin at the best value
- For over 20 years, thousands of units with the TriArmor® System have withstood the harshest environments, proving its durability and reliability
- Backed by a 10-year warranty against leaks and corrosion
- The basin consists of 3 layers of protection:
  - 1. G-235 Galvanized Steel:** Universally recognized for its strength and durability.
  - 2. Baltibond® Hybrid Coating:** This polymerized coating is baked onto the galvanized steel creating a durable barrier. It has been tested to withstand 6,000 hours in a 5% salt spray without blistering, chipping, or losing adhesion.
  - 3. Polyurethane Barrier:** Factory-applied, corrosion-resistant, impermeable coating creates a seamless cold water basin, preventing leaks. To ensure longevity, microscopic chains of rubber-like resin molecules permanently bond tightly with one another and the Baltibond® Hybrid Coating.
- Other components within the basin, such as the strainer and submerged structural supports, are constructed of stainless steel



## EVERTOUGH™ Construction

EVERTOUGH™ Construction combines the most corrosion-resistant materials to provide the best value in corrosion protection for most water chemistries. EVERTOUGH™ Construction is backed by a 5-year equipment warranty. Specifically, the following materials are used:

- The cold water basin is constructed with the TriArmor® Corrosion Protection System and is leak tested at the factory and warranted against leaks and corrosion for 10-years
- Designated steel components above the basin are constructed of heavy-gauge G-235 mill galvanized steel and further protected with Baltibond® Hybrid Coating
- **3000, FXV3, CXVT Only:** Fiberglass reinforced polymer (FRP) casing panels and louvers are corrosion and UV resistant, ensuring long life
- **3000 and 5000 Only:** Pultruded fiberglass reinforced polymer hot water basins
- **PT2, FXV, FXV3, PFi, HXV, Vertex™, CXVT, CXVB, PCC, VCA Only:** The distribution system is corrosion resistant Schedule 40 PVC
- Other components within the basin, such as the strainer and submerged structural supports, are constructed of stainless steel
- If applicable, the galvanized steel coils are covered by a 1-year warranty; stainless coils are also available as an upgrade



FXV Closed Circuit Cooling Towers



Series 3000 Cooling Towers

## Baltibond® Hybrid Coating

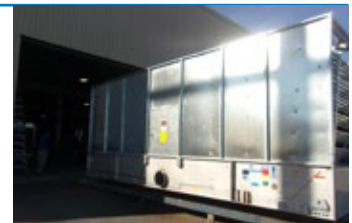
- This thermosetting hybrid polymer coating is baked onto the galvanized steel creating a durable barrier
- Tested to withstand 6,000 hours in a 5% salt spray without blistering, chipping, or losing adhesion
- Baltibond® Hybrid Coating is used on select components of the unit



FXV Cooling Towers

## Welded Stainless Steel Basin

- Seams between panels inside the cold water basin are welded, providing an advantage over bolted stainless steel cold water basins for minimizing susceptibility to leaks at basin seams
- All steel panels and structural members of the cold water basin are constructed from stainless steel
- The basin is leak tested at the factory and welded seams are provided with a 5-year, leakproof warranty
- Stainless steel in Type 304 or Type 316 is available



Series 3000 Cooling Tower



Basin Seams are Welded

## Water Contact Stainless Steel Basin

- The cold water basin components below the overflow level are constructed of stainless steel
- All principal components in the casing section (minus the coil if applicable) will be constructed of galvanized steel or Baltibond® Hybrid Coating
- Type 304 or Type 316 stainless steel is available



VTL Cooling Tower

## Stainless Steel Hot Water Basin

- The hot water basin(s) and basin cover(s) are constructed of stainless steel
- Type 304 or Type 316 stainless steel is available

## Water Contact Stainless Steel Unit

- The basin and water-contacted components below the overflow level in the basin are constructed of stainless steel
- All principal steel components in the casing section will be constructed of galvanized steel as standard or Baltibond® Hybrid Coating
- Type 304 or Type 316 stainless steel is available



Series V

## All Stainless Steel Construction

- All unit structural elements and the cold water basin and hot water basin (if applicable) are constructed of stainless steel
- Type 304 or Type 316 stainless steel is available
- Seams between panels inside the cold water basin are welded, minimizing susceptibility to basin leaks<sup>(1)</sup>
- The basin is leak tested at the factory and welded seams are provided with a 5-year leak-proof warranty\*
- **FXV3 and CXVT Only:** Casing panels and air intake louvers are constructed of corrosion and UV resistant fiberglass reinforced polymer (FRP)



PT2 Cooling Tower



### NOTE:

1. For Series V products, all stainless steel construction is available, however the basin is bolted and there is a 1-year warranty from equipment startup.

## JE Premier Series® Construction

- All unit structural elements and the hot and cold water basins are constructed of stainless steel
- Seams between panels inside the cold water basin are welded, providing an extreme advantage over bolted cold water basins for minimizing susceptibility to leaks at basin seams
- The basin is leak tested at the factory and welded seams are provided with a 5-year leak-proof warranty
- For the series 3000, casing panels and air intake louvers are constructed of corrosion and UV resistant fiberglass reinforced polymer (FRP), stainless steel panels are available as an option
- Each cooling tower provided with the JE PREMIER SERIES® Construction is backed by a comprehensive Louver-to-Louver<sup>SM</sup> 5-year warranty, which covers ALL components from the fan to the cold water basin, from louver to louver, including the motor



Series 3000 Cooling Tower

## Basinless Unit Construction

- Enables units to be directly installed on new or existing cold water basins
- Reduces maintenance costs by eliminating the integral basin from traditional units
- Simplifies piping and pumping requirements of multi-cell installations, eliminates concern for basin corrosion, and provides a cost-effective solution for many field erected replacement projects



Series 3000 Cooling Tower

## Fiberglass Reinforced Polymer (FRP) Casing Panels

- Used with BAC's durable frame construction, FRP casing panels offer a more durable corrosion resistant unit
- FRP casing panels are a key component due to their corrosion resistant properties



CXVT Evaporative Condensers

## Steel Casing Panels and Louvers

- Steel casing panels and louvers are available in G-235 mill galvanized steel, Baltibond® Hybrid Coating, and stainless steel



Series 3000 Cooling Tower