

HYGIENIC AIR HANDLING UNITS

CPA *Critical Process Air Systems™*



THE IDEAL SOLUTION

For Precise Control of Temperature, Humidity,
Airborne Contaminants & Room Pressurization



IARW International Association of
Refrigerated Warehouses

Member of
iiar
International Institute of
Ammonia Refrigeration
www.iiar.org



Get to Know EVAPCO

- The global innovator in heat transfer solutions
- Serving the commercial HVAC, industrial refrigeration, power generation, and industrial processing markets
- Founded in 1976
- Employee-owned
- 25 manufacturing facilities in 10 countries
- More than 200 sales offices in 51 countries

Find your EVAPCO representative now at evapco.com.

EVAPCO is more than a name.

It's a pledge to make everyday life easier, more comfortable, more reliable, and more sustainable for people everywhere. How do we fulfill on that promise? It's simple.

We never stop innovating.

At EVAPCO, we don't just talk about innovation. It's ingrained in our workflow. Guided by our annually developed R&D plans, we set out every day to find groundbreaking solutions that transform the way the world works for the better. It's why we have more than 25 patents worldwide in the last 10 years alone.

We craft exceptionally built solutions.

As an employee-owned company, we are loyal. We demand excellence of one another. And we take pride in our work. Together, we make up one of the most experienced teams of engineers and craftsmen in the industry. This translates into solutions that are always exceptionally built. No one will deliver higher quality for you.

We guarantee performance.

Every EVAPCO solution is put through rigorous research and testing to deliver maximum efficiency and reliability. But we don't stop there. We also lead the industry in independent, third-party performance certifications. These certifications guarantee our performance metrics—so that you can plan your projects with complete peace of mind.

We protect the environment.

Innovation and environmental sustainability go hand-in-hand at EVAPCO. From sound reduction to water conservation to chemical elimination, we are constantly developing new technologies that deliver the ultimate operating advantages for our clients—and protect the planet for every generation that comes after us.

We are EVAPCO—the team you can count on for life.

CPA Systems – The Ideal Solution

Superior Hygiene and Performance Through Innovative Design

EVAPCO CAPABILITIES

- Unmatched standard unit sizes to cover a wide variety of applications, ranging from as little as 1,000 CFM to over 140,000 CFM
- Custom configurations with a wide range of accessories to meet the most demanding applications
- Custom unit sizes available to meet site layout requirements or existing structural steel

Superior Cleanliness

- Industry leading sanitary enclosure design that minimizes fastener heads on the interior walls and ceiling
- The “100% free flow” drain pan eliminates stagnant water
- Optional 304 stainless steel interior enclosure panel construction
- For optional Ultra Hygienic CPA design package, see Page 6



Stainless Steel Tube, Aluminum Fin Evaporator Coil

Standard Construction Features

- G235 galvanized steel exterior
- Double-wall, wash-down construction with all casing fasteners internal to the unit casing
- G235 galvanized steel interior liner completely sealed water-tight with food grade sealant to allow for interior cleaning and sanitizing
- Multiple insulation types and thickness available to match the application
- EVAPCO stainless steel tube, aluminum fin ,industrial evaporator coils manufactured per ASME/ANSI B31.5 and factory charged with nitrogen

Evaporator Design Features & Benefits

- Heavy wall tube manufactured by EVAPCO resulting in consistent tube quality and availability
- 5/8" or 1.05" diameter stainless steel tubing featuring CROSSCOOL™ Internal Tube Enhancement
- Various fin spacings for maximum performance and superior hygiene
- Coil meets B31.5 Refrigerant Piping Code requirements

CPA SYSTEM™ INNOVATIVE DESIGN • SUPERIOR PERFORMANCE

The CPA System is engineered to deliver conditioned, purified air to critical food preparation, production and packaging areas in your facility. The CPA System includes patented technology to provide maximum thermal efficiencies, air purification/filtration to meet stringent air quality standards, and control packages to monitor and actuate the functions of the critical process unit.

COOLING COILS

- Cooling coil performance rated in accordance with AHRI Standard 420
- Standard stainless steel tube/aluminum fin construction, with options for epoxy-coated aluminum fin or stainless steel fins to meet the requirements of every application
- Cooling coils are designed and built by EVAPCO
- Cooling coils meet the requirements of B31.5

DAMPERS

- Galvanized steel construction or optional stainless steel or aluminum
- Direct-drive, low-leakage
- Standard modulating NEMA 4 actuators with position feedback

UNIT BASE

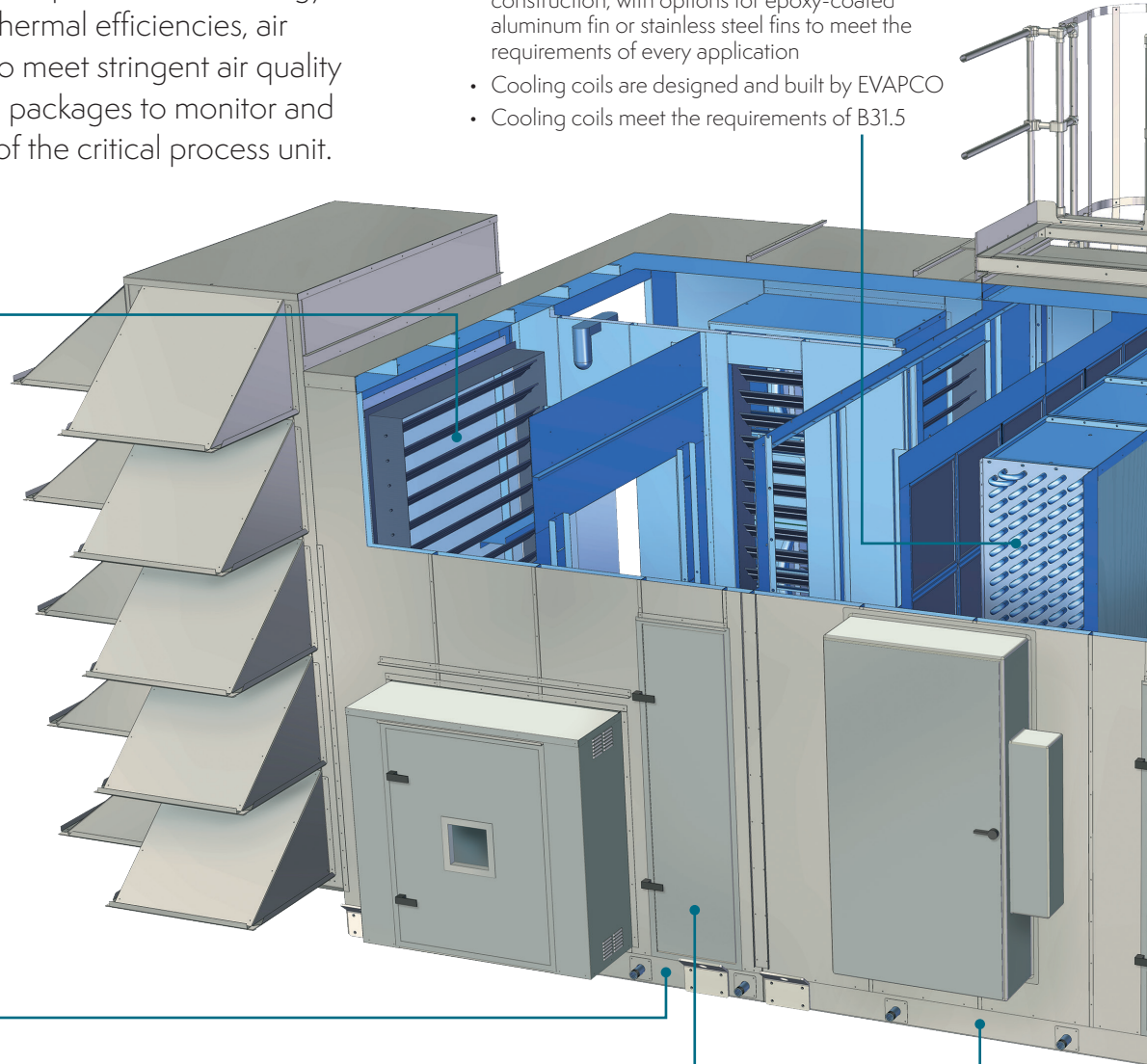
- Fully-welded G235 galvanized steel or optional 304 stainless steel
- Pour-foam insulation with standard G235 galvanized steel base material to enclose the insulation

UNIT ACCESS

- Doors are standard in all unit sections and between all components, including the cooling and reheat coils, for easier maintenance, service & inspection
- Doors include stainless steel hinges, polycarbonate latches and are operable from both the interior and exterior of the unit

DRAIN PANS

- Unit includes G235 galvanized steel drain pans (optional 304 stainless steel) in all unit sections and 304 stainless drain pans under the cooling coil
- All drain pans are fully-welded, double-sloped and included a recessed drain to allow for complete drainage and NO standing water



HEATING

- Various options available including direct fired gas/propane, indirect fired gas/propane, steam, glycol/water, refrigerant hot gas and electric

FAN SELECTIONS

- Low-sound, high efficiency plenum fan design
- TEFC, premium efficient, VFD-ready motors with sealed bearings and grounding rings for direct-drive applications
- Optional fan-array designs
- Optional EC-type fan/motor

FILTERS

- 304 stainless steel Sani-Clean pre-filter & final filter frames

CONTROLS

- Complete, custom-built, project specific control systems to meet the requirements of each customer
- NEMA 4 control panel(s) with air conditioning and heating to maintain optimum panel conditions to prolong the life of the internal components
- Allen Bradley Compact Logix PLC system with Allen Bradley Panel View on the face of the unit control panel
- Allen Bradley Power Flex VFD's for each individual motor

UNIT CASING

- G235 galvanized steel or optional 304 stainless steel exterior for superior corrosion resistance
- Double-wall, wash-down construction with all casing fasteners internal to the unit casing
- G235 galvanized steel or optional 304 stainless steel interior liner completely sealed water-tight with food grade sealant to allow for interior cleaning and sanitizing
- Multiple insulation types and thickness available to match the application

Ultra-Hygienic CPA

Superior Cleanliness

EVAPCO's Ultra-Hygienic CPA is designed to meet the needs of today's most demanding food processing companies where hygiene and cleanability is of the utmost importance.

The casing walls of the Ultra CPA are manufactured with heavy gauge double wall construction for long equipment life. Casing walls are foamed in place with close-cell insulation resulting in a single piece, unitary construction with no through metal design.

The interior walls are designed to be flush with the edge of the drain pan to eliminate flat surfaces between the base of the interior walls and the top of the drain pan. The interior walls are designed to eliminate all exposed fasteners, even where the closures meet the wall. Typically, interior components of the air handler are supported and mounted in a manner which does not provide complete accessibility for cleaning.

Uniquely designed coil support system that makes cleaning under the coil both easy and efficient. There are no longer "open" structural steel supports under the coil which obstruct the cleaning and inspection process. The new "closed" coil support system eliminates "hidden" areas, while providing full visibility and access to the coil supports and surrounding areas for maximum cleaning efficiency.



Ultra-CPA System – Cleaning Under the Coil is Easy and Efficient

Direct drive aluminum blowers are used in lieu of belt driven blower. This blower design eliminates belts and the associated cleaning, maintenance and dust issues.

The use of Variable Frequency Drives will result in efficient fan operation, precision balancing of the system and maximum energy savings. In addition, The a "closed" structural support system completely eliminates the traditional support and framing around and under the blower, making cleaning and inspection simple and efficient.



Direct Drive Blower

The unit incorporates fully welded and pitched stainless steel drain pan systems. The welds are smooth and non-porous. The drain connections are fully recessed to facilitate complete drainage in all sections.



Fully Welded Drain Pan

Heating and cooling coils are maintained in clean and contaminant free condition with the optional exclusive EVAPCO Sanitizing System (ESS). The ESS uses the latest high output UVC emitter technology to effectively eradicate mold and other contaminants right at the source. Properly installed and maintained ESS UVC lights will eliminate the need for coil sanitizing or cleaning. However, should coil cleaning be required, it can be safely performed without removing the UVC lights which are 100% watertight.



ESS UVC Light System

Desiccant Dehumidification

With the integration of a desiccant dehumidifier, the Evapco CPA can last meet the requirements of nearly any humidity and condensation control application.

Evapco offers complete flexibility in design, capacity and features to fulfill the most demanding applications. Every CPA is constructed with a comprehensive choice of quality components integrated together to create a state of the art, custom air handling unit backed by the industry's most experienced critical process product design and system application engineers.

Our desiccant wheel offers the most advanced design features including:

- Seals rated for the life of the unit, rather than maintenance intensive Silicone/Teflon Seals
- Maintenance free sealed, non-greasing, heavy duty bearings in place of light-duty cast supports
- Heavy-duty corrosion resistant nickel plated drive chain contacts the entire perimeter of the desiccant wheel sprocket, compared to a lighter duty timing belt drive with partial contact
- High capacity systems for a variety of application specific requirements
- Integrated desiccant system built into the CPA and protected from the elements; not a separate add-on module external to the frame or unit footprint
- Natural gas, steam, or electric reactivation options
- Optional integrated face/bypass dampers for precise humidity control
- Complete, project specific PLC controls for stand alone or networked applications



Desiccant Wheel



WORLDWIDE MANUFACTURING FACILITIES



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