

PENTHOUSE EVAPORATORS

SSTP-E

FACTORY SOLUTION FOR COLD STORAGE APPLICATIONS



IARW International Association of Refrigerated Warehouses

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iilar
International Institute of Ammonia Refrigeration
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AHRI
Air-Conditioning, Heating, and Refrigeration Institute



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
- 22 manufacturing facilities in 10 countries
- More than 170 sales offices in 42 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 28 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 to our clients—and protect the planet for every generation that comes after us.

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

SSTP-E

Factory Assembled Penthouse Evaporators

Applications

There are numerous engineering specifications and details to consider when designing or retrofitting a cold storage space. The size and shape of the room, storage capacity, materials of construction, and the size and type of refrigeration evaporators are just a few of the major design decisions. When selecting the evaporators, the following are a few of the things that should be included on your checklist:

- Maximize storage space within the building envelope.
- Eliminate possible damage to evaporators, piping and valves by material handling equipment and/or forklifts.
- Provide easier and safer working conditions for maintenance personnel servicing the evaporators, valves and piping.
- Minimize or eliminate possible product damage due to refrigerant leaks.
- Optimize air distribution and temperature control while minimizing the number of evaporators.

Design Innovations

EVAPCO's innovative SSTP-E penthouse evaporators for freezers and coolers, will meet or exceed all these checklist items. Ceiling hung evaporators, with their associated valves and piping, can consume as much as 96 inches of valuable refrigerated storage space across the entire ceiling of a cold storage area. EVAPCO'S SSTP-E penthouse design maximizes your cold storage capacity since the only component in the refrigerated space is the low profile horizontal airflow discharge plenum. The use of SSTP-E penthouse evaporators can allow the system designer to lower the building height, resulting in capital cost savings, or product storage capacity can be increased within the same building envelope. To put this in perspective, this could result in over 300,000 cubic feet of **additional storage space** in a typical 40,000 sq. ft. cold storage facility.

With SSTP-E penthouse evaporators, the refrigeration valves, piping, coils, fans, motors and electrical service are on the roof, making it impossible to damage these items with forklifts or material handling equipment. No more valve leaks in the refrigerated space.



Innovative Technology

Penthouse Advantages

- EVAPCO SSTP-E units do NOT require a roof curb. Units can be set directly on the roof.
- SSTP-E units can be supplied with an **insulated bottom** for mounting the unit off the roof on structural steel, as well as situations when there is an interstitial space between the roof and refrigerated area.
- EVAPCO SSTP-E units are available with a base pitched to match the building roof, from the factory!
- Standard one-piece enclosure eliminates air leaks and infiltration.

- EVAPCO SSTP-E units come STANDARD with aluminum safety grating over the return air opening and the fans.



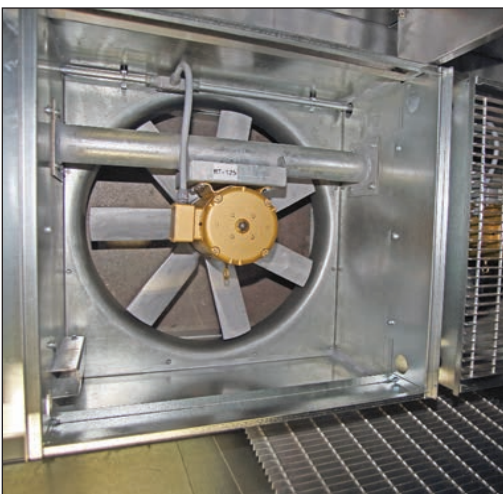
- Full size access doors on each side of the unit eliminate the potential “enclosed space” issues experienced by competitors small, crawl through, access doors.



Advanced Design Features

Penthouse Advantages

- Penthouse units with available multi-directional discharge plenums require less space inside the building. Don't pay for refrigerated space just to house ceiling hung evaporators! Reduce your building height OR use the extra space to store more product! Discharge plenums also allow improved airflow and room coverage that ceiling hung units just can't match!
- The EVAPCO SSTP-E penthouse design provides a safer working environment. All controls, refrigeration valves, coils, fans and motors are located outside the room working environment, ELIMINATING the risk of damage from forklifts and other material handling equipment!
- With the refrigerant piping and valve train located on the roof, leaks are vented directly to the atmosphere rather than the refrigerated space, ELIMINATING the threat to workers or product.
- Roof mounting the unit also guarantees that when maintenance crews need to service the piece of equipment they never have to interrupt work in the building. Maintenance access is also significantly improved with man-sized access doors provided in the penthouse enclosure. All evaporator controls, piping, fans and motors are easily accessible without the use of extended lift equipment or ladders.
- Expect faster, more efficient defrost cycles since the units are outside of the refrigerated space.
- Faster lead times and shorter project schedules versus field-built penthouses.
- Fan and motor assemblies are designed to be removed in one piece and do not require working "blind" through a welded frame and fan blade to reach the inaccessible fan bushing. No more "fishing" the blade through the welded fan frame.
- EVAPCO's SSTP-E evaporators include specially designed motor lift arms and full size walk-in service doors making servicing interior components easier than any other penthouse in the industry!



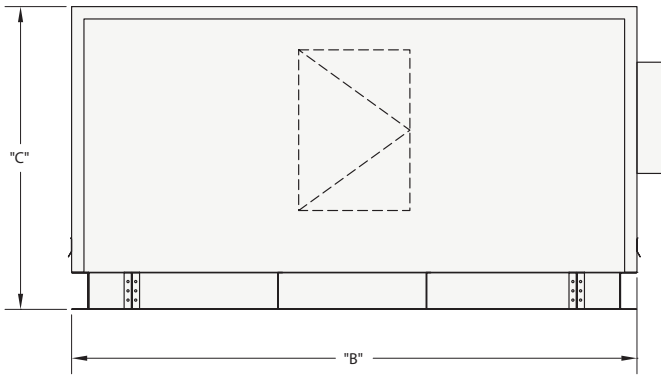
Easily Accessible Fan and Motor Assembly



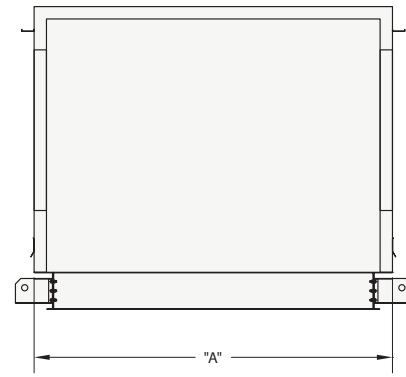
Specially Designed Motor Lift Arm

SSTP-E

Engineering Data



ELEVATION VIEW



END VIEW

EVAPCO Model	"A" (in.)	"B" (in.)	"C" (in.)	Nominal Cooler Capacity	Nominal Freezer Capacity
SSTPHE1-22	116	114	88	16.0 TR	11.0 TR
SSTPHE2-32	116	143	88	23.0 TR	17.0 TR
SSTPHE2-45	116	181	88	32.0 TR	23.5 TR
SSTPHE3-60	122	191	98	43.0 TR	31.5 TR
SSTPHE4-80	122	239	98	58.0 TR	42.5 TR
SSTPHE5-93	122	287	96	67.5 TR	49.0 TR
SSTPHE5-110	128	287	104	80.0 TR	57.5 TR
SSTPHE5-127	136	287	113	92.0 TR	66.5 TR
SSTPHE6-144	136	335	110	103.5 TR	73.5 TR
SSTPHE6-156	136	335	116	112.0 TR	80.0 TR

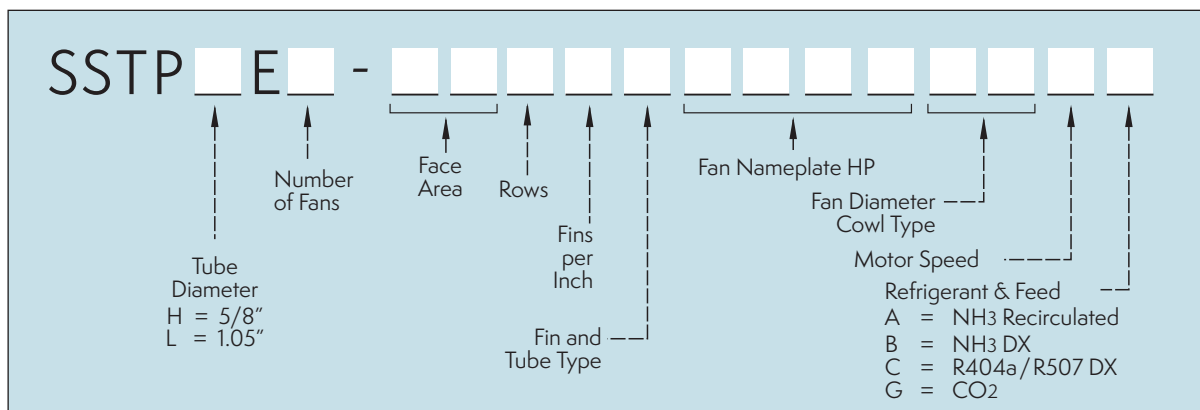
Coils are 5/8" stainless steel tube with enhanced aluminum fin, recirculated NH3 @ 1.2:1

Cooler Ratings - 600 FPM face velocity, 19°F SST, 15°F TD, dry rating, 12 row / 4.3 FPI

Freezer Ratings - 700 FPM face velocity, -10°F SST, 10°F TD, dry rating, 12 row / 3.3 FPI

Nomenclature

The model number of SSTP-E Series Evaporators includes information about the product design and capacity. This Manual includes performance and technical data for SSTP-E Evaporators which are constructed with Stainless Steel tubes and Aluminum Fins as standard.



Optional Features for Every Application

- Control/Electrical Options:
 - Standard motor control package includes a NEMA 4 panel, IEC motor starter(s) and a fused disconnect.
 - Optional arc-flash rated disconnect upstream of the main panel.
 - Optional Allen Bradley PLC system designed and provided by EVAPCO.
 - Optional factory-mounted VFD's with panel cooling. Combined with an EVAPCO PLC system users can expect greatly reduced energy costs!



- Other options include:
 - Stainless steel interior and/or exterior
 - Reheat coils
 - Factory-mounted NH3 detector
 - LED interior service lights and service receptacle
 - Galvanized or stainless steel discharge plenum
 - Epoxy coated fins
 - Insulated bottom panel
 - Pitched unit base

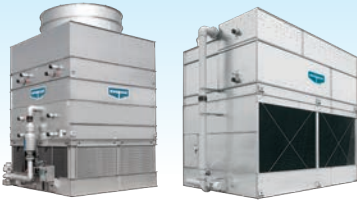


- Defrost options include:
 - Hot gas
 - Electric
 - Water
 - Air
- Flexibility – units can be customized to accommodate a variety of applications including the following:
 - Meeting existing footprints
 - Alternate supply and return air locations (end, side, etc.)
 - Two evaporators in one enclosure
 - High external static applications



EVAPCO—Your One Source for Quality Refrigeration System Components.

Evaporative Condensers



Induced Draft Models



Forced Draft Models

Critical Process Air Systems



Custom Recirculators & Vessels



Cooling Towers & Closed Circuit Coolers



Induced Draft Models



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