

# INDUSTRIAL AIR COOLED CONDENSERS

# eco-Air™

Environmentally Conscious Dry, Adiabatic, or Spray Assist Operation



FEATURING



for LIFE



GLOBAL COLD CHAIN  
ALLIANCE®

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**iiar**  
International Institute of  
Ammonia Refrigeration  
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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
- 25 engineering & manufacturing facilities in 10 countries
- More than 200 sales offices worldwide

## Learn More Now

Visit [evapco.com](http://evapco.com) to download product catalogs, view complete product specifications, and more.

## 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 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 to find groundbreaking solutions that transform the way the world works for the better. It's why we have more than 78 active patents.

### **We craft exceptionally built solutions.**

As an employee-owned company, we take pride in our work. We are proud to be one of the most experienced teams of engineers and craftsmen in the industry. This translates into solutions that are always exceptionally built. EVAPCO has an unwavering commitment to provide "best in class" heat transfer solutions and services.

### **We guarantee performance.**

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

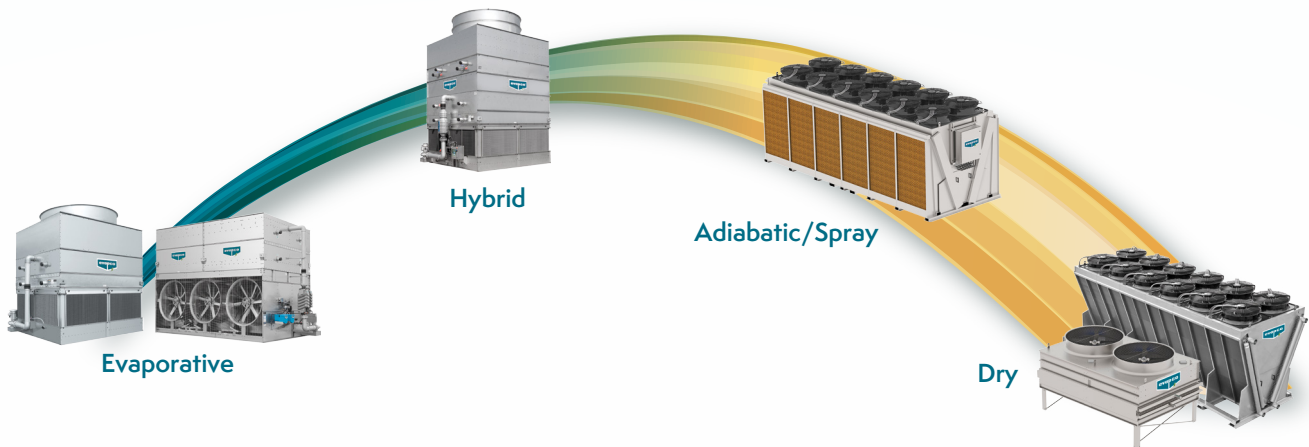
### **We protect the environment.**

Innovation and environmental sustainability go hand-in-hand at EVAPCO. Our industrial heat transfer equipment not only conserves natural resources and helps reduce noise pollution, but also features recycled steel content in construction. EVAPCO's stainless steel units are constructed of panels that contain up to 75% of recycled content, and our galvanized units contain over 80%. From sound reduction to water conservation to chemical elimination, we are continuously developing new technologies that deliver the ultimate operating advantages to our clients—while protecting the planet for every generation to come.



# Full Spectrum Global Solutions

EVAPCO offers the full spectrum of condenser solutions from fully evaporative to fully dry.



When water is limited, unavailable, or its use for cooling is undesirable, the eco-Air™ Series from EVAPCO is an ideal solution to meet cooling demands.

The eco-Air Series air cooled condensers offer unparalleled flexibility in a wide range of capacities, footprints, motor types and control options.



EC Motor Option



NEMA Motor Option

EC & NEMA Motor Options Available on  
Flat (EAFCD), V Coil Dry (EAVCD),  
V Coil Adiabatic (EAVCA), V Coil Spray (EAVCS)



# eco-Air Series Design & Construction Features

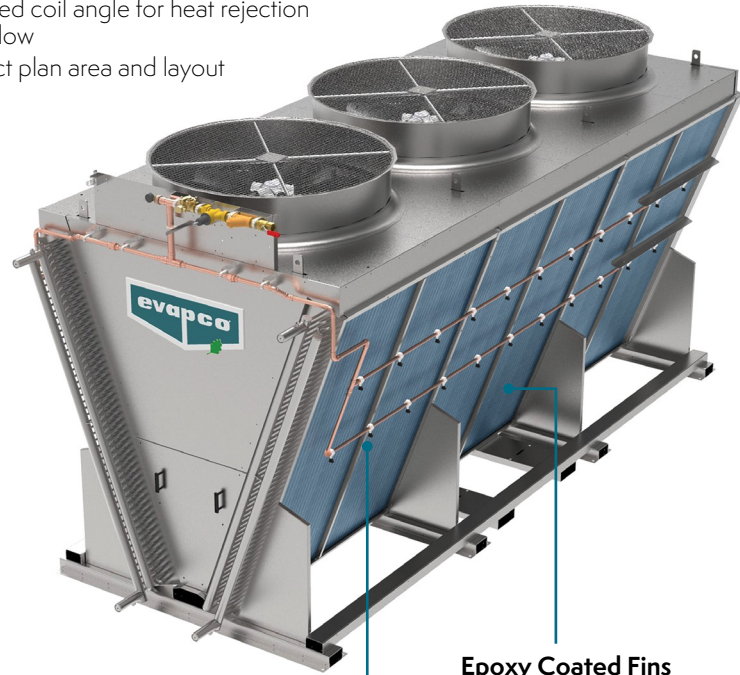
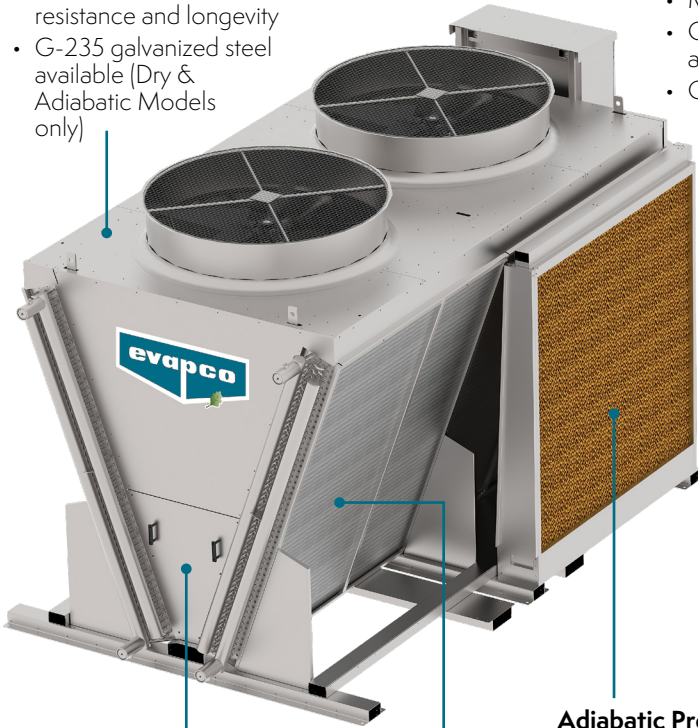
The eco-Air Series of air cooled condensers represents EVAPCO's newest advancement in thermal heat transfer research and development. Available in fully dry, adiabatic and spray designs, the eco-Air Series maximizes heat rejection with minimal to no water use. The eco-Air Series is another chapter in EVAPCO's ongoing commitment to quality, environmentally friendly products.

## Structure and Casing

- Type 304L Stainless Steel as standard for increased corrosion resistance and longevity
- G-235 galvanized steel available (Dry & Adiabatic Models only)

## V Coil Models

- Maximum surface area per footprint
- Optimized coil angle for heat rejection and air flow
- Compact plan area and layout



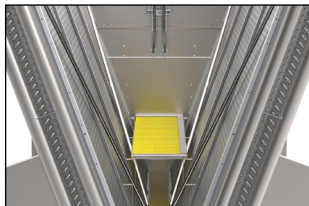
### Inspection Panel (V Coil Models)

- Easily removable for interior inspection and access to coils and fan motors



### Heat Exchanger Coils

- Type 304L Stainless Steel tubes with aluminum fins
- Multiple fin spacings and tube configurations
- Upgraded fin thickness available



### Adiabatic Pre-Cooling System (Optional)

- Wetted pads can be utilized to pre-cool entering air, resulting in greater energy savings, and increased capacity, with minimal water use
- Great for high dry bulb climates and high temperature applications
- Once through design
- No water treatment required
- No cold water basin or pump
- No drift
- V coil models only

### Internal Step Deck (Optional-V Coil Models)

- Platform and grab rail for access to elevated fan section components (7' 9.75" wide V Coil Models only)

### Spray Assist System (Optional)

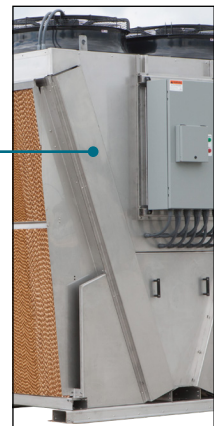
- Peak ambient and load cooling solution
- Tangential-flow hollow cone nozzles
- Self-draining copper piping

### Epoxy Coated Fins

- Standard on Spray Models
- Optional on Dry & Adiabatic Models
- Increased corrosion resistance
- No impact on unit capacity

### Coil Return Bend Covers

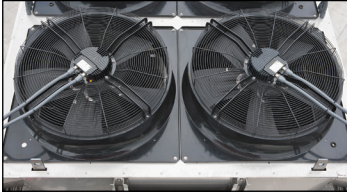
- Protects the coil return bends during handling and operation





# eco-Air Series Design & Construction Features

## Advanced Motor Technology – Electronically Commutated (EC) or NEMA fan motor designs



### EC

- High Efficiency
- Zero Maintenance
- Integral Speed Control
- Inherently Low Sound

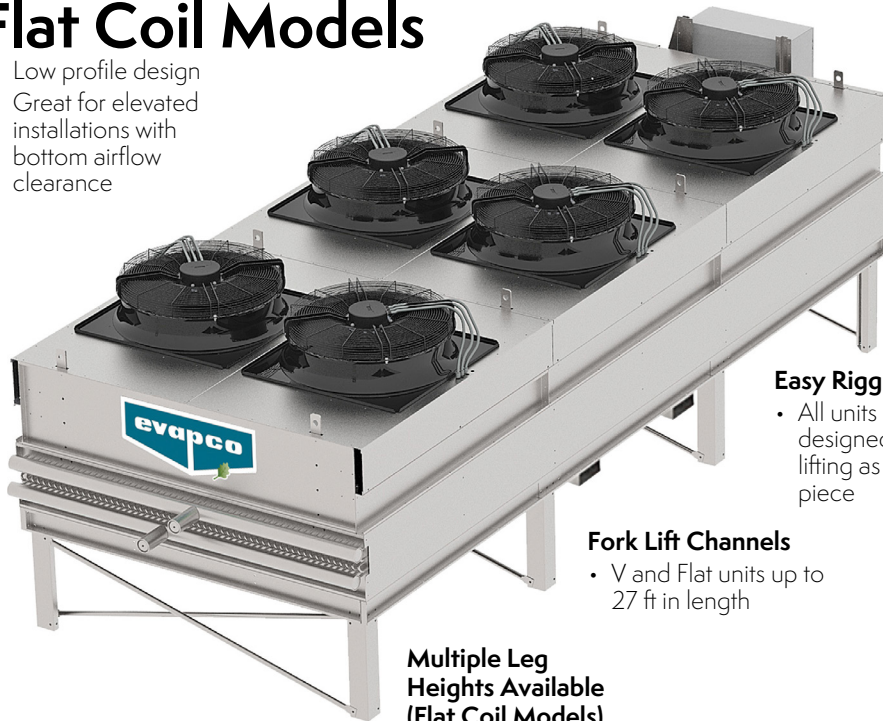


### NEMA

- Premium efficient direct drive
- Zero maintenance permanently sealed bearings
- VFD ready
- Severe Duty

## Flat Coil Models

- Low profile design
- Great for elevated installations with bottom airflow clearance



### Easy Rigging

- All units are designed for lifting as once piece

### Fork Lift Channels

- V and Flat units up to 27 ft in length

### Multiple Leg Heights Available (Flat Coil Models)

### Coils Pressurized with Nitrogen

- Limits internal corrosion potential during transport and storage



### IBC Compliant Design

- All standard models meet IBC requirements
- Upgraded designs available for high seismic and wind load areas
- Shake table verified for 1.5 Importance Factor installations

### Warranty

- 2 years complete unit
- 2 years adiabatic pads (if equipped)
- 2 years spray system (if equipped)
- 1 year EVAPCO Controller and other electrical components (if equipped)



### Common Terminal Box

- All motors factory wired
- Saves time in the field
- UL Recognized



### Factory Mounted & Wired Controls

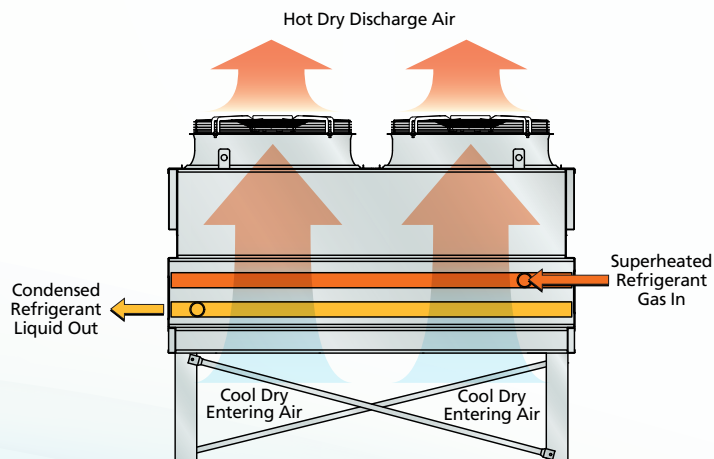
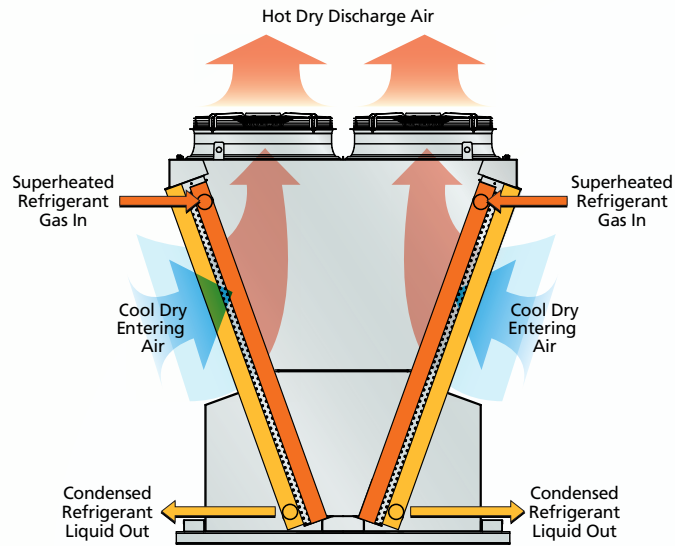
- EVAPCO PLC Panel (EC Motors)
- EVAPCO PLC/VFD Panel (NEMA Motors)
- Single point power connection
- UL & cUL Listed
- UL Type 4 enclosure



# Dry Principle of Operation

## eco-Air Series V Coil (EAVCD) & Flat Coil (EAFCD) Air Cooled Condenser

Superheated refrigerant vapor enters the inlet header connections. Heat from the refrigerant dissipates through the coil tubes and out to the fins. Ambient air is drawn over the coil surface by the fans located at the top of the unit. Heat from the refrigerant transfers to the air which is then discharged to the atmosphere. Condensed refrigerant exits the unit through the outlet connections.

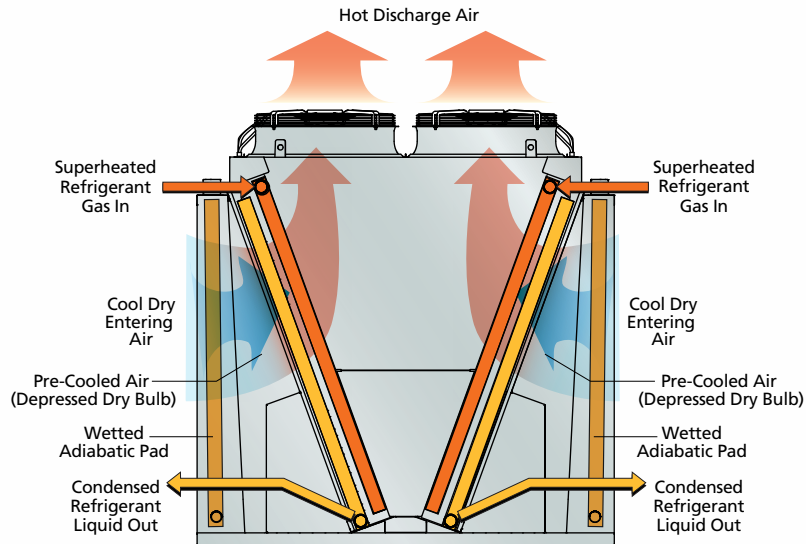




# Adiabatic Principle of Operation

## eco-Air Series V Coil (EAVCA) Adiabatic Condenser

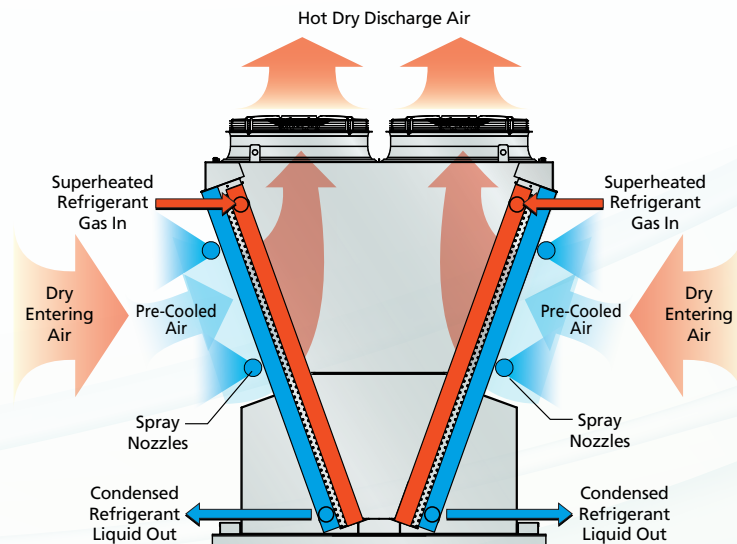
Superheated refrigerant vapor enters the inlet header connections. Heat from the refrigerant dissipates through the coil tubes surface and out to the fins. The adiabatic air pre-cooling system involves fully wetting a fibrous pad located on the air-on side of the coil. Ambient air is drawn through the adiabatic pre-cooling pads by the fans located on top of the unit. The air saturates as it passes through the adiabatic pad, decreasing the dry bulb temperature to within a few degrees of the wet bulb temperature. This new air temperature is referred to as the depressed dry bulb. The pre-cooled air is then drawn through the tube and fin surface, providing a substantial increase in heat rejection capability. Heat from the process fluid transfers to the air which is then discharged to the atmosphere. Condensed refrigerant exits the unit through the outlet connections.



## eco-Air Series V Coil (EAVCS) Spray Condenser

Superheated refrigerant vapor enters the inlet header connections. Heat from the refrigerant dissipates through the coils and out to the fins. The unit operates completely dry and modulates fan speed as necessary based on refrigerant condensing pressure and ambient conditions. When the unit can no longer maintain refrigerant condensing pressure set point in dry mode, the spray assist system is activated. The spray system nozzles spray water away from the coil, cooling the entering air and increasing the heat rejection capability of the unit. The heat from the refrigerant transfers to the air which is then discharged to the atmosphere. Condensed refrigerant exits the unit through the outlet connections.

**Spray System Disclaimer:** Although the nozzles spray water away from the coil, the coil and structure will get wet when water is in use. Due to this, the water chemistry guidelines provided in the Installation and Operation Manual should be strictly followed along with the recommended cleaning and maintenance instructions. Evapco also recommends designing the system for a maximum of 200 hours of spray operation per year to help limit the possibility for scale build-up and corrosion.



# Advanced Coil Technology

EVAPCO has long been the industry innovator in heat exchanger coil technology starting in the early 1990's with the introduction of Thermal-Pak® coils which revolutionized the refrigeration industry. Soon after, EVAPCO became the benchmark in industrial evaporator design, standardizing on stainless steel tubes and aluminum fins. The eco-Air Series coil design builds upon this past success. The coil tube diameter, geometry, and circuiting have been optimized through thousands of hours of theoretical modeling and laboratory testing. The result is optimal heat transfer efficiency with low airside pressure drop and low motor horsepower per ton.

## Coil Design

Through the use of computational fluid dynamics (CFD) modeling software, finite element heat transfer analysis, and proprietary coil performance calculation methods, EVAPCO engineers have identified significant design elements to improve the finned coil performance. The extensive computer modeling has been refined and verified through coil performance evaluation in EVAPCO's state of the art research laboratories.

## Superior Stainless Steel Technology

eco-Air Series air cooled condensers are constructed with high-grade Type 304L stainless steel tubing and aluminum fins as standard. The stainless steel tubing meets the requirements of ASME B31.5 refrigerant piping code. The tubing is roll formed and continuously welded, annealed, and tested using an eddy current device.

The round tubing is fit into the aluminum fin plate and hydraulically expanded. This procedure provides more consistent contact between the tube and the fin plate than mechanical expansion. The entire coil is then pressure tested to 110% of design working pressure. Lastly, the coil is dried, evacuated, and charged with low-pressure nitrogen prior to shipment.

EVAPCO's stainless steel tubes are available in 5/8-inch OD. Coils are built in 6, 8, 10 or 12 FPI as standard using a full-collar aluminum fin. Multiple fin thicknesses are available to accommodate a range of industrial applications.

For applications where corrosion of the aluminum fin is a concern, EVAPCO offers pre-coated epoxy fin stock.





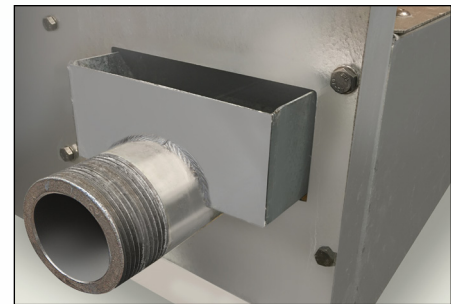
# Benefits of eco-Air Series

## Reduced Maintenance

Scaling, corrosion, and water born bacteria concerns are minimized or eliminated with dry and adiabatic cooling equipment. The eco-Air Series reduces the maintenance traditionally associated with fully evaporative systems.

The eco-Air Series adiabatic and spray condensers are designed as a once through system, meaning no pump and no basin to hold water, reducing the time required for maintenance. Additionally, on adiabatic units, the adiabatic pads filter the air before reaching the coil, limiting the exposure of dirt and debris to the tube and fin heat transfer surface.

Both NEMA and EC motor options require zero routine maintenance. There are no bearings to grease, belts to adjust, or fans to pitch and balance.



Adiabatic Pad Drip Pan

## Reduced or Eliminated Water Consumption

Compared to traditional evaporative systems, the eco-Air Series will either eliminate or dramatically reduce water consumption. Adiabatic and spray models only use water when the ambient conditions and load require it. Reducing water consumption also reduces the ongoing expenses related with the cooling equipment such as purchasing, treating, and disposing of water.



Zero Maintenance Motors

When the eco-Air Series adiabatic models are used in conjunction with the EVAPCO controls package, water conservation is maximized based on proprietary PLC logic.

## Factory Mounted and Wired Controls

The motors on the eco-Air Series are pre-wired at the factory to UL standards, reducing costs associated with field wiring. As standard, all units are wired to a common terminal box. Adding the EVAPCO controls package allows for both single point power supply and complete capacity control.

## Installation Made Easy

All units are designed for lifting and staging in one piece.

Fork lift channels come standard on all eco-Air Series units up to 27 feet in length. On longer units, reference the eco-Air Series IO&M for lifting requirements from the fan deck lifting lugs.



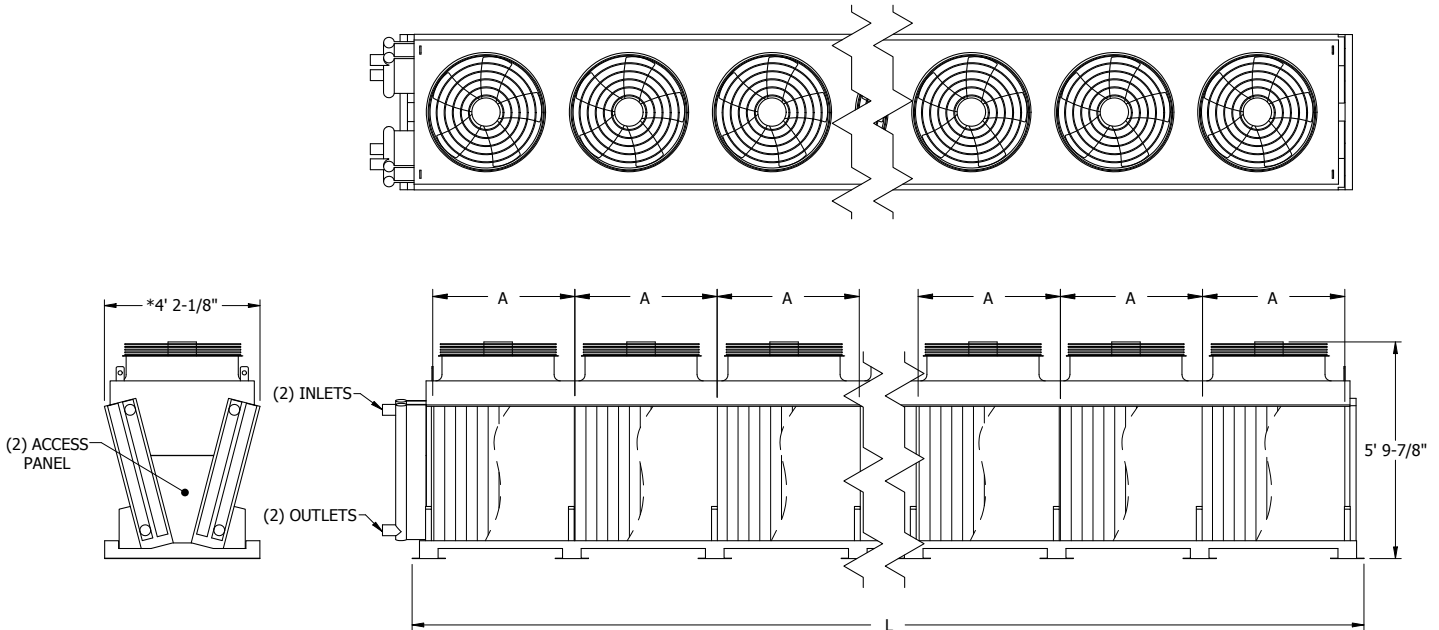
Factory Wired Fan Motors



Factory Mounted Control Panel

# V Coil Configuration - EC Motor

## Engineering Data



## Single Fan, 4' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAVCD-91S1M	1	173 - 302	4' 10-3/8" - 5' 3-3/8"	4.3	3.2	16 - 28	1090 - 1610
EAVCD-91S2M	2	350 - 606	8' 8-3/8" - 9' 6-5/8"	8.6	6.4	25 - 46	1760 - 2770
EAVCD-91S3M	3	528 - 912	12' 6-1/2" - 13' 9-3/4"	12.9	9.6	33 - 64	2510 - 4030
EAVCD-91S4M	4	705 - 1219	16' 4-1/2" - 18' 0"	17.2	12.8	41 - 82	3290 - 5330
EAVCD-91S5M	5	883 - 1526	20' 2-5/8" - 22' 4-1/8"	21.4	16.0	49 - 99	4090 - 6620
EAVCD-91S6M	6	1060 - 1833	24' 5/8" - 26' 7-3/8"	25.7	19.2	57 - 117	4830 - 7870
EAVCD-91S7M	7	1234 - 2140	27' 10-3/4" - 30' 10-1/2"	30	22.4	65 - 135	5590 - 9130
EAVCD-91S8M	8	1408 - 2445	31' 8-3/4" - 35' 1-3/4"	34.3	25.6	73 - 153	6340 - 10400
EAVCD-91S9M	9	1579 - 2750	35' 6-7/8" - 39' 4-7/8"	38.6	28.8	81 - 171	7110 - 11630
EAVCD-91S0M	10	1664 - 3052	39' 4-7/8"	42.9	32.0	89 - 171	7880 - 11950

### Notes:

\* Adiabatic width: 5' 10-1/8"

A: Two incremental fin lengths available: 3' 10-1/16" or 4' 3-3/16"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

<sup>†</sup> Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

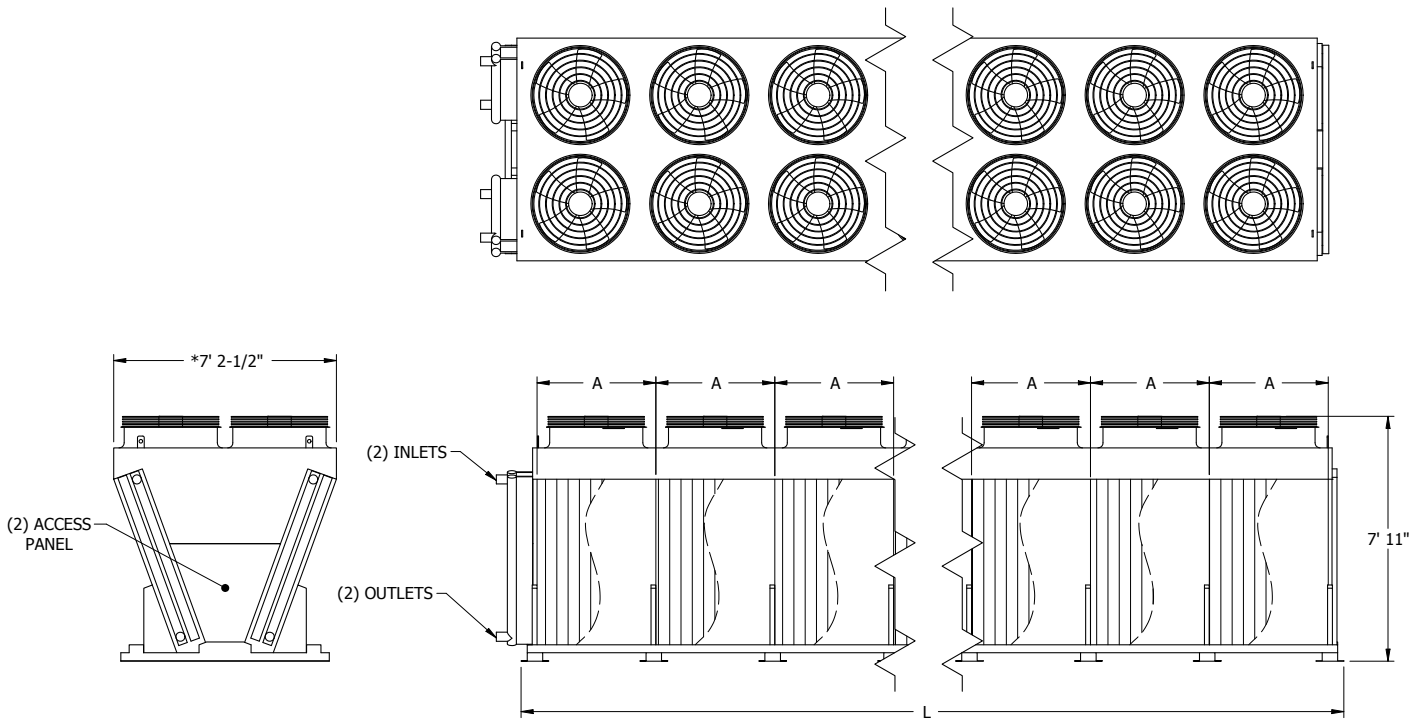
**Adiabatic Capacity:** The adiabatic cooling effect and resulting depressed dry bulb entering the coil depends on the ambient dry bulb and associated relative humidity. Consult your sales representative, EVAPCO marketing, or Spectrum™ selection software for more information.

**Spray Capacity:** The cooling effect resulting from operating the spray system depends on the ambient dry bulb and associated relative humidity entering the coil. Consult your sales representative, EVAPCO marketing or Spectrum™ selection software for more information.



# V Coil Configuration - EC Motor

## Engineering Data



## Twin Fan, 7' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH <sub>3</sub> Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAVCD-9102P	2	304 - 523	4' 10-3/8" - 5' 3-3/8"	8.6	6.4	25 - 43	1750 - 2550
EAVCD-9104P	4	613 - 1053	8' 8-3/8" - 9' 6-5/8"	17.2	12.8	37 - 70	2810 - 4350
EAVCD-9106P	6	925 - 1586	12' 6-1/2" - 13' 9-3/4"	25.7	19.2	50 - 98	4010 - 6340
EAVCD-9108P	8	1237 - 2120	16' 4-1/2" - 18' 0"	34.3	25.6	62 - 125	5250 - 8360
EAVCD-9110P	10	1547 - 2654	20' 2-5/8" - 22' 4-1/8"	42.9	32.0	75 - 153	6490 - 10380
EAVCD-9112P	12	1855 - 3189	24' 5/8" - 26' 7-3/8"	51.5	38.4	87 - 180	7690 - 12350
EAVCD-9114P	14	2161 - 3722	27' 10-3/4" - 30' 10-1/2"	60.1	44.8	99 - 208	8910 - 14340
EAVCD-9116P	16	2462 - 4254	31' 8-3/4" - 35' 1-3/4"	68.6	51.2	112 - 235	10110 - 16330
EAVCD-9118P	18	2756 - 4780	35' 6-7/8" - 39' 4-7/8"	77.2	57.6	124 - 263	11330 - 18290
EAVCD-9120P	20	2886 - 5303	39' 4-7/8"	85.8	64.0	136 - 263	12560 - 18840

### Notes:

\* Adiabatic width: 8' 9-5/8"

A: Two incremental fin lengths available: 3' 10-1/16" or 4' 3-3/16"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

† Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

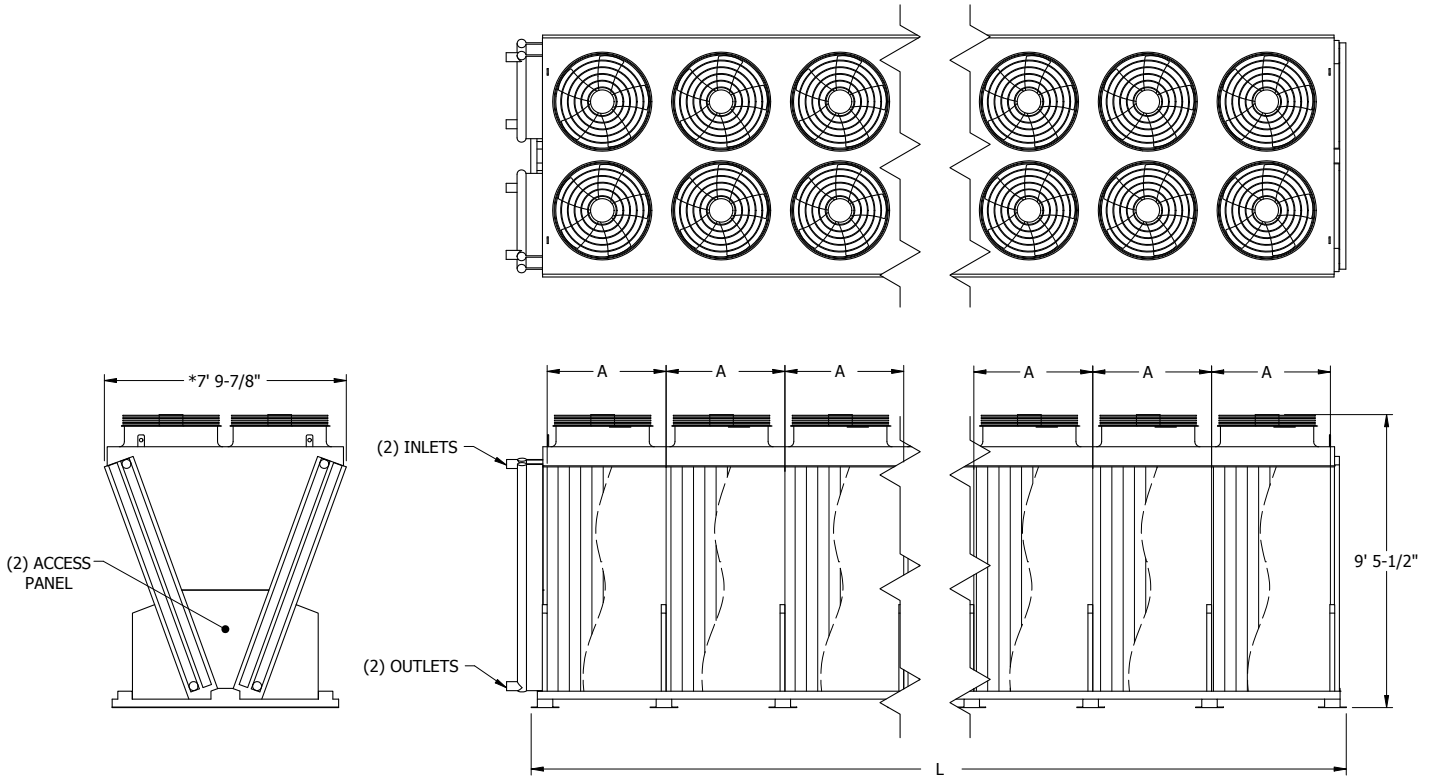
Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

**Adiabatic Capacity:** The adiabatic cooling effect and resulting depressed dry bulb entering the coil depends on the ambient dry bulb and associated relative humidity. Consult your sales representative, EVAPCO marketing, or Spectrum™ selection software for more information.

**Spray Capacity:** The cooling effect resulting from operating the spray system depends on the ambient dry bulb and associated relative humidity entering the coil. Consult your sales representative, EVAPCO marketing or Spectrum™ selection software for more information.

# V Coil Configuration - EC Motor

## Engineering Data



## Twin Fan, 8' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH <sub>3</sub> Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAVCD-9102Z	2	354 - 614	4' 10-3/8" - 5' 3-3/8"	8.6	6.4	34 - 58	1930 - 2980
EAVCD-9104Z	4	713 - 1234	8' 8-3/8" - 9' 6-5/8"	17.2	12.8	50 - 95	3060 - 5110
EAVCD-9106Z	6	1075 - 1857	12' 6-1/2" - 13' 9-3/4"	25.7	19.2	67 - 132	4350 - 7420
EAVCD-9108Z	8	1436 - 2482	16' 4-1/2" - 18' 0"	34.3	25.6	84 - 169	5670 - 9780
EAVCD-9110Z	10	1797 - 3108	20' 2-5/8" - 22' 4-1/8"	42.9	32.0	101 - 206	7000 - 12130
EAVCD-9112Z	12	2157 - 3733	24' 5/8" - 26' 7-3/8"	51.5	38.4	117 - 243	8280 - 14430
EAVCD-9114Z	14	2514 - 4357	27' 10-3/4" - 30' 10-1/2"	60.1	44.8	134 - 280	9580 - 16750
EAVCD-9116Z	16	2867 - 4980	31' 8-3/4" - 35' 1-3/4"	68.6	51.2	151 - 318	10870 - 19070
EAVCD-9118Z	18	3215 - 5600	35' 6-7/8" - 39' 4-7/8"	77.2	57.6	167 - 355	12180 - 21360
EAVCD-9120Z	20	3393 - 6215	39' 4-7/8"	85.8	64.0	184 - 355	13480 - 21930

### Notes:

\* Adiabatic width: 9' 7/8"

A: Two incremental fin lengths available: 3' 10-1/16" or 4' 3-3/16"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

† Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

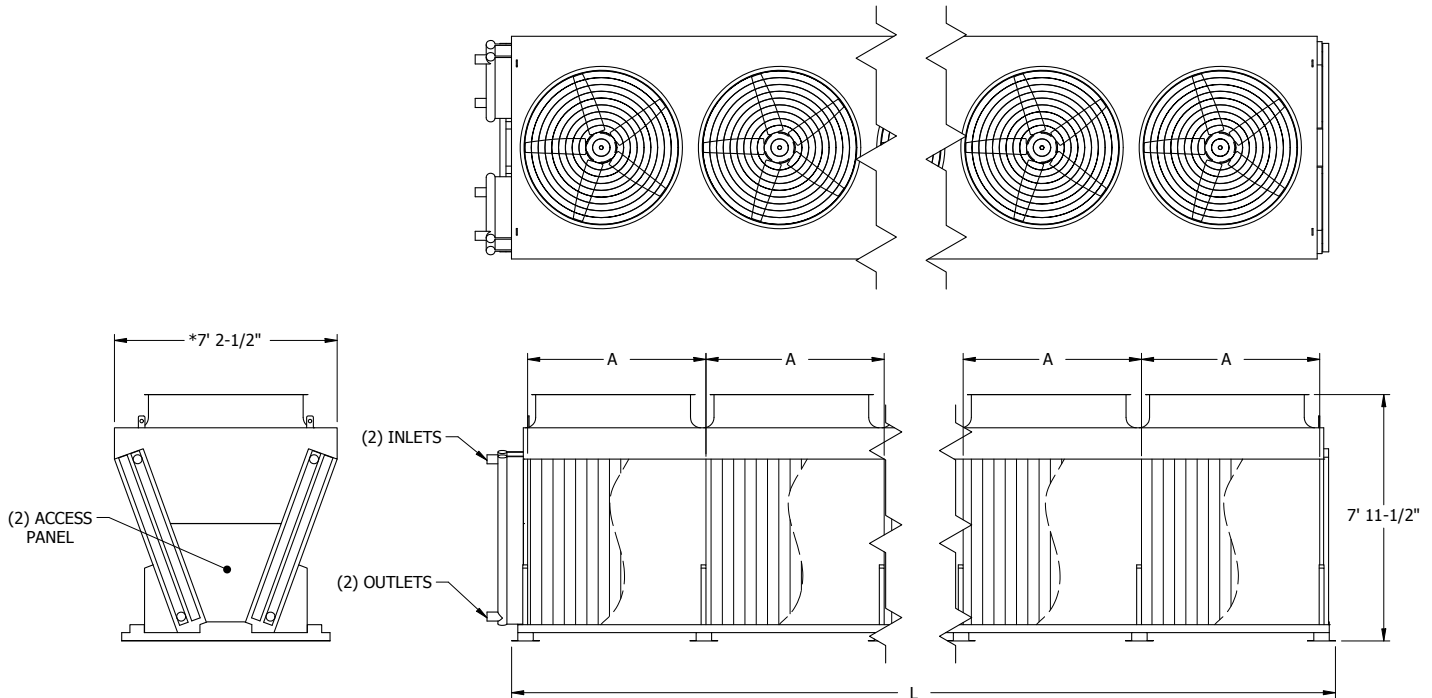
**Adiabatic Capacity:** The adiabatic cooling effect and resulting depressed dry bulb entering the coil depends on the ambient dry bulb and associated relative humidity. Consult your sales representative, EVAPCO marketing, or Spectrum™ selection software for more information.

**Spray Capacity:** The cooling effect resulting from operating the spray system depends on the ambient dry bulb and associated relative humidity entering the coil. Consult your sales representative, EVAPCO marketing or Spectrum™ selection software for more information.



# V Coil Configuration - NEMA Motor

## Engineering Data



## Single Fan, 7' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAVCD-15S1P	1	333 - 801	6' 9-3/8" - 8' 8-3/8"	5 - 10	3.7 - 7.5	31 - 65	2310 - 4030
EAVCD-15S2P	2	663 - 1598	12' 6-1/2" - 16' 4-1/2"	10 - 20	7.4 - 15	50 - 114	3990 - 7380
EAVCD-15S3P	3	992 - 2397	18' 3-1/2" - 24' 5/8"	15 - 30	11.1 - 22.5	68 - 164	5740 - 10790
EAVCD-15S4P	4	1318 - 3186	24' 5/8" - 31' 8-3/4"	20 - 40	14.8 - 30	87 - 213	7390 - 14100
EAVCD-15S5P	5	1636 - 3987	29' 9-3/4" - 39' 4-7/8"	25 - 50	18.5 - 37.5	106 - 263	9110 - 17480
EAVCD-15S6P	6	1965 - 4367	35' 6-7/8" - 39' 4-7/8"	30 - 60	22.2 - 45	124 - 263	10810 - 18190

### Notes:

\* Adiabatic width: 8' 9-5/8"

A: Three incremental fin lengths available: 5' 9-1/16", 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

<sup>†</sup> Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

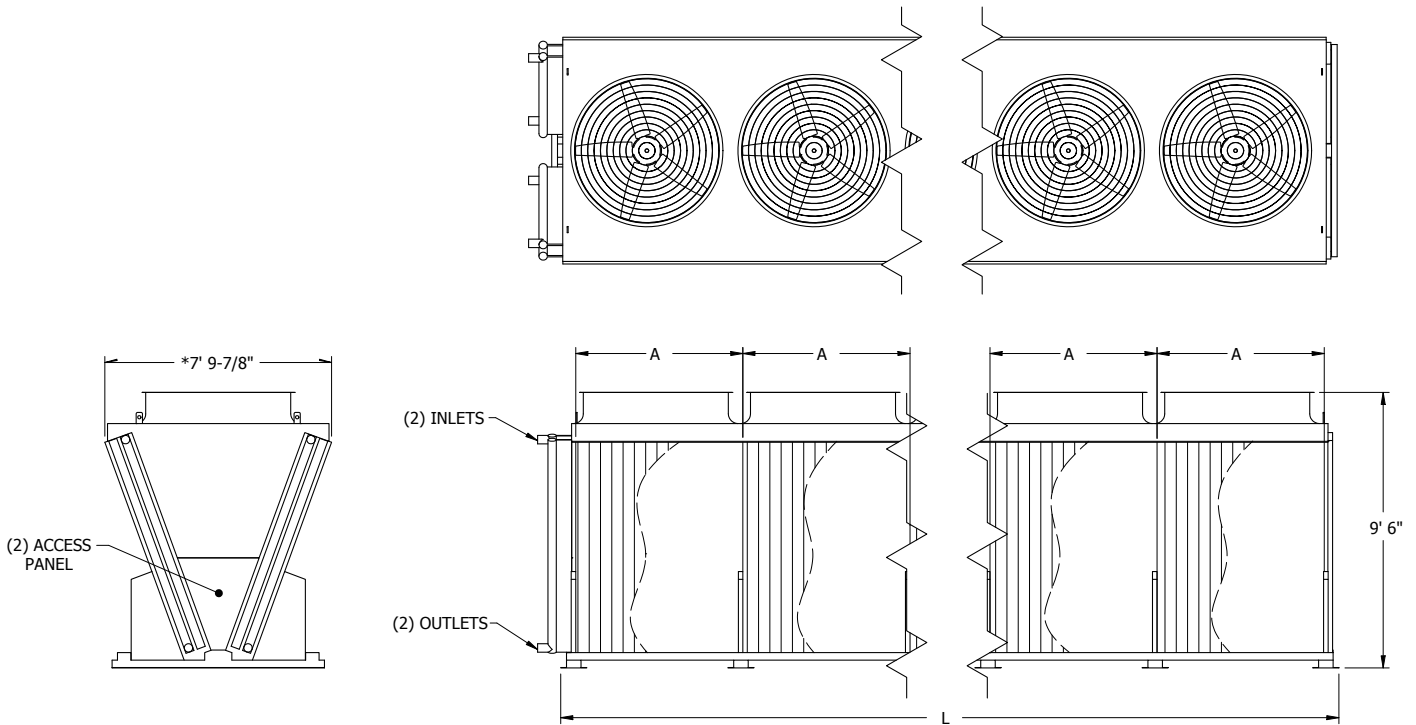
Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

**Adiabatic Capacity:** The adiabatic cooling effect and resulting depressed dry bulb entering the coil depends on the ambient dry bulb and associated relative humidity. Consult your sales representative, EVAPCO marketing, or Spectrum™ selection software for more information.

**Spray Capacity:** The cooling effect resulting from operating the spray system depends on the ambient dry bulb and associated relative humidity entering the coil. Consult your sales representative, EVAPCO marketing or Spectrum™ selection software for more information.

# V Coil Configuration - NEMA Motor

## Engineering Data



## Single Fan, 8' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAVCD-15S1Z	1	382 - 894	6' 9-3/8" - 8' 8-3/8"	5 - 10	3.7 - 7.5	42 - 87	2520 - 4720
EAVCD-15S2Z	2	738 - 1789	12' 6-1/2" - 16' 4-1/2"	10 - 20	7.4 - 15	67 - 154	4330 - 8640
EAVCD-15S3Z	3	1133 - 2684	18' 3-1/2" - 24' 5/8"	15 - 30	11.1 - 22.5	92 - 221	6190 - 12630
EAVCD-15S4Z	4	1520 - 3578	24' 5/8" - 31' 8-3/4"	20 - 40	14.8 - 30	117 - 288	7960 - 16520
EAVCD-15S5Z	5	1870 - 4473	29' 9-3/4" - 39' 4-7/8"	25 - 50	18.5 - 37.5	142 - 355	9800 - 20480
EAVCD-15S6Z	6	2246 - 5045	35' 6-7/8" - 39' 4-7/8"	30 - 60	22.2 - 45	167 - 355	11620 - 21220

### Notes:

\* Adiabatic width: 9' 7/8"

A: Three incremental fin lengths available: 5' 9-1/16", 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

<sup>†</sup> Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

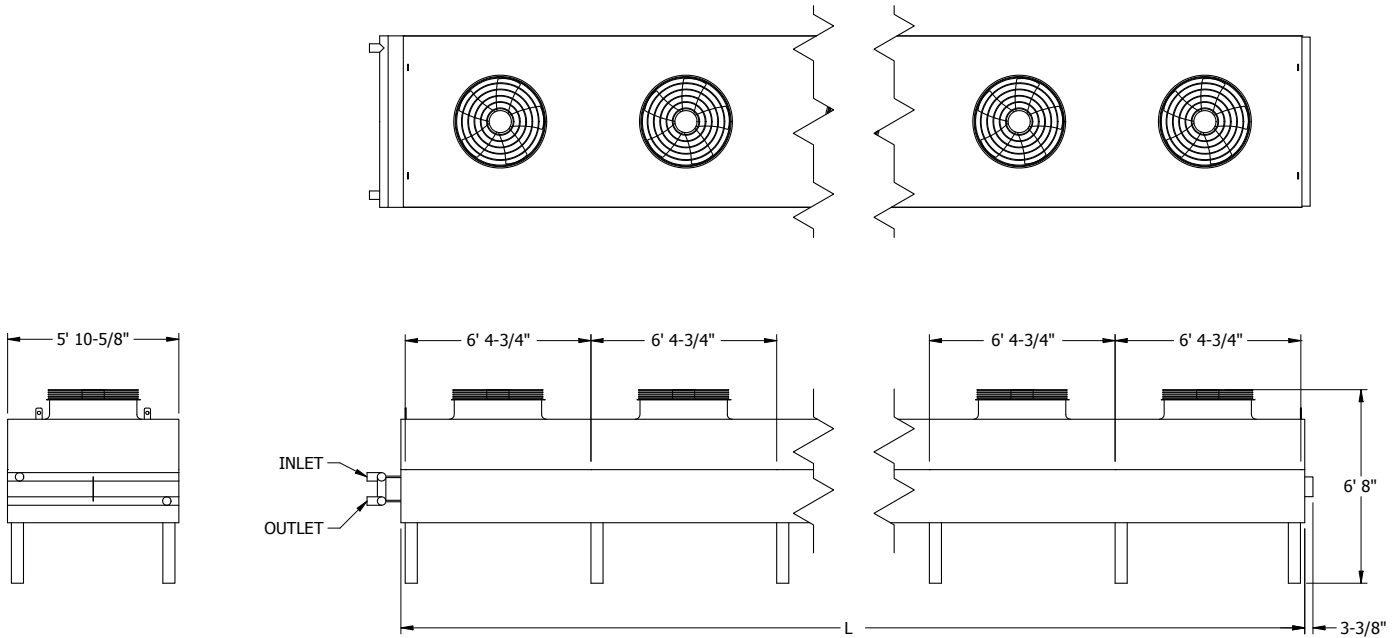
**Adiabatic Capacity:** The adiabatic cooling effect and resulting depressed dry bulb entering the coil depends on the ambient dry bulb and associated relative humidity. Consult your sales representative, EVAPCO marketing, or Spectrum™ selection software for more information.

**Spray Capacity:** The cooling effect resulting from operating the spray system depends on the ambient dry bulb and associated relative humidity entering the coil. Consult your sales representative, EVAPCO marketing or Spectrum™ selection software for more information.



# Flat Coil Configuration - EC Motor

## Engineering Data



### Single Fan, 6' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAFCD-91S1W	1	187 - 337	6' 8-1/4"	4.3	3.2	17 - 28	1190 - 1730
EAFCD-91S2W	2	376 - 677	13' 0"	8.6	6.4	27 - 49	2030 - 3080
EAFCD-91S3W	3	565 - 1018	19' 5-3/4"	12.9	9.6	38 - 70	3030 - 4610
EAFCD-91S4W	4	754 - 1359	25' 10-1/2"	17.2	12.8	48 - 90	3780 - 5870
EAFCD-91S5W	5	942 - 1700	32' 3-1/4"	21.4	16.0	58 - 111	4700 - 7310
EAFCD-91S6W	6	1125 - 2038	38' 8"	25.7	19.2	68 - 132	5540 - 8670

#### Notes:

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

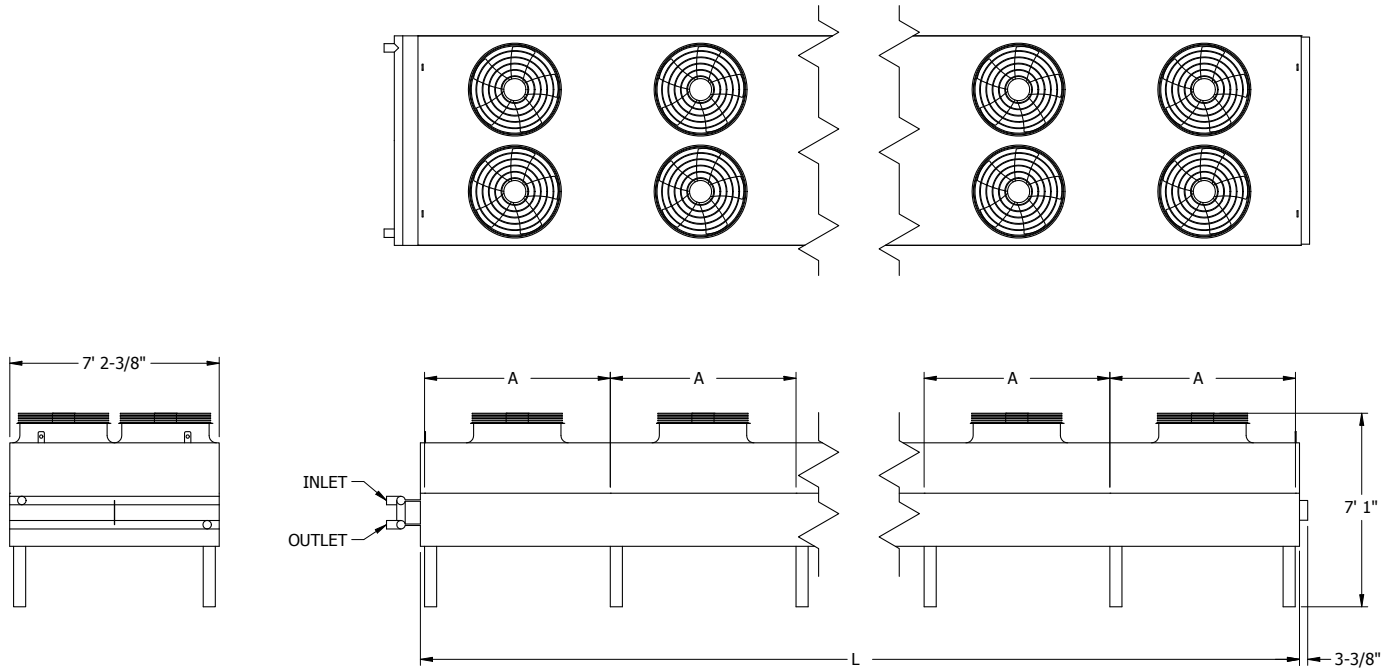
<sup>†</sup> Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

# Flat Coil Configuration - EC Motor

## Engineering Data



## Twin Fan, 7' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAFCD-9102P	2	319 - 526	6' 8-1/4" - 7' 11-1/2"	8.6	6.4	20 - 39	1450 - 2350
EAFCD-9104P	4	643 - 1058	13' 0" - 15' 7-5/8"	17.2	12.8	33 - 69	2520 - 4370
EAFCD-9106P	6	967 - 1592	19' 5-3/4" - 23' 3-3/4"	25.7	19.2	45 - 98	3750 - 6400
EAFCD-9108P	8	1285 - 2127	25' 10-1/2" - 30' 11-7/8"	34.3	25.6	57 - 128	4730 - 8430
EAFCD-9110P	10	1596 - 2657	32' 3-1/4" - 38' 8"	42.9	32.0	70 - 158	5880 - 10450
EAFCD-9112P	12	1731 - 3182	38' 8"	51.5	38.4	82 - 158	6940 - 10690

### Notes:

A: Two incremental fin lengths available: 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

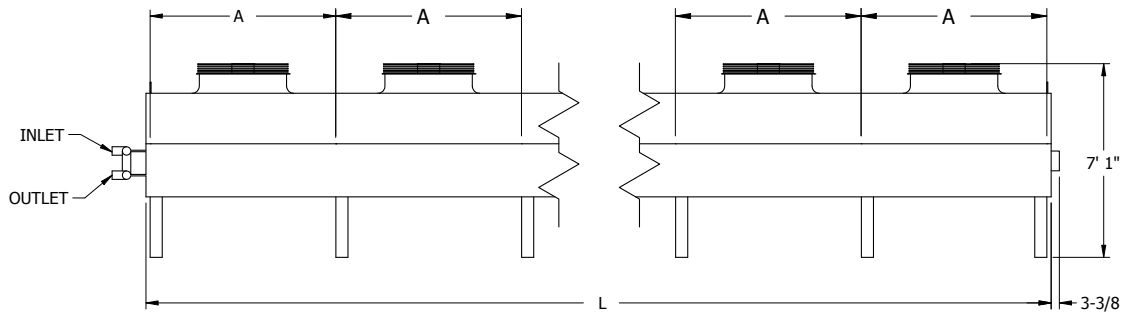
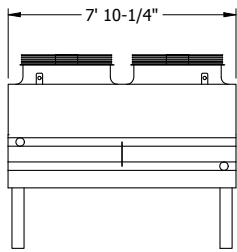
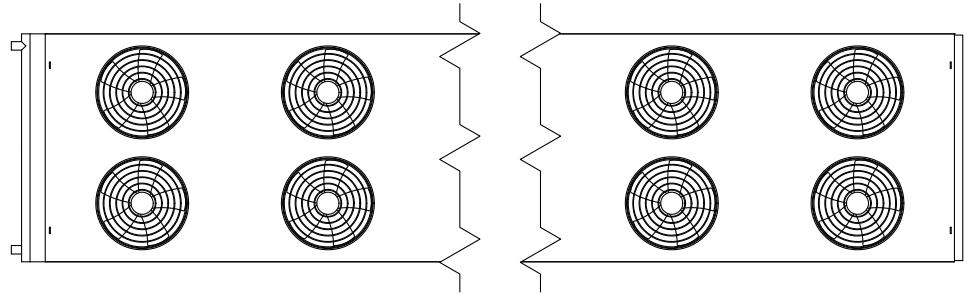
† Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

# Flat Coil Configuration - EC Motor

## Engineering Data



## Twin Fan, 8' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAFCO-9102Z	2	339 - 561	6' 8-1/4" - 7' 11-1/2"	8.6	6.4	23 - 44	1540 - 2540
EAFCO-9104Z	4	683 - 1130	13' 0" - 15' 7-5/8"	17.2	12.8	37 - 77	2660 - 4730
EAFCO-9106Z	6	1026 - 1701	19' 5-3/4" - 23' 3-3/4"	25.7	19.2	51 - 111	3970 - 6920
EAFCO-9108Z	8	1365 - 2272	25' 10-1/2" - 30' 11-7/8"	34.3	25.6	64 - 144	5000 - 9120
EAFCO-9110Z	10	1696 - 2838	32' 3-1/4" - 38' 8"	42.9	32.0	78 - 178	6210 - 11310
EAFCO-9112Z	12	1850 - 3400	38' 8"	51.5	38.4	92 - 178	7340 - 11560

### Notes:

A: Two incremental fin lengths available: 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

<sup>†</sup> Nominal Air Cooled Capacity Range shown at 20°F TD.

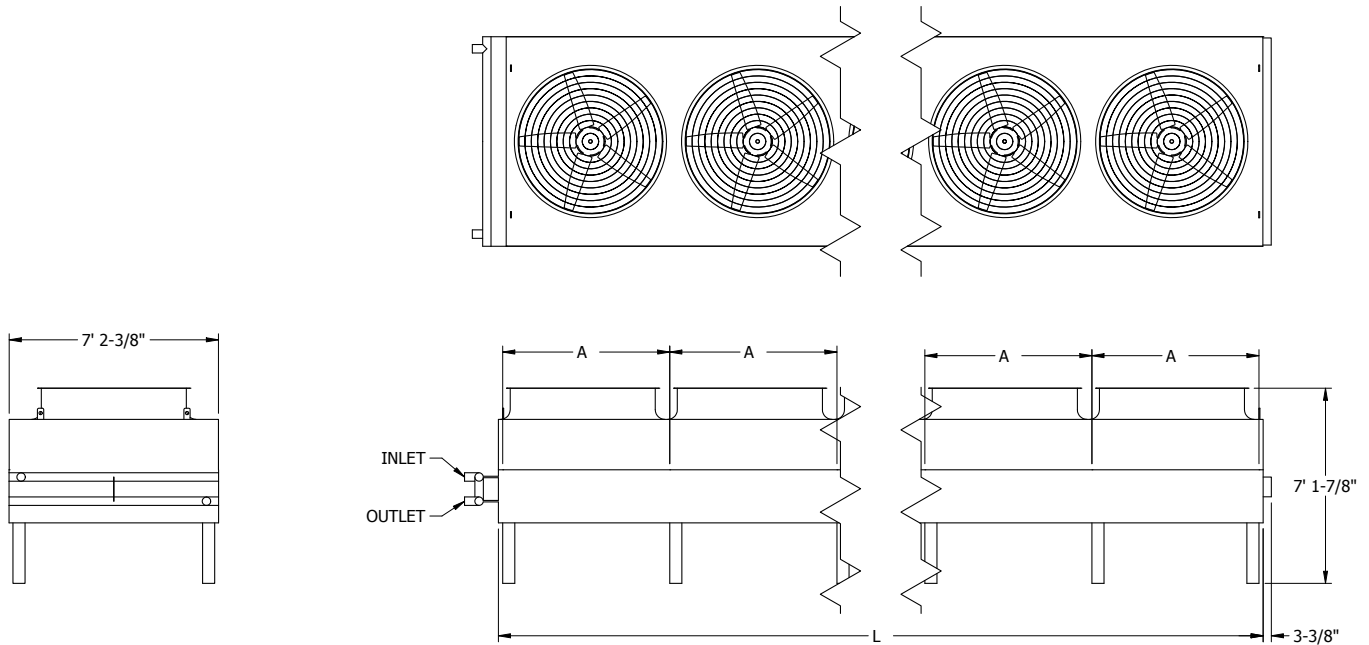
Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.



# Flat Coil Configuration - NEMA Motor

## Engineering Data



## Single Fan, 7' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAFCD-15S1P	1	246 - 596	6' 1/2" - 7' 11-1/2"	5 - 10	3.7 - 7.5	19 - 39	1620 - 2670
EAFCD-15S2P	2	488 - 1193	11' 9-5/8" - 15' 7-5/8"	10 - 20	7.4 - 15	30 - 69	2850 - 5020
EAFCD-15S3P	3	735 - 1789	17' 6-3/4" - 23' 3-3/4"	15 - 30	11.1 - 22.5	41 - 98	4250 - 7360
EAFCD-15S4P	4	973 - 2377	23' 3-3/4" - 30' 11-7/8"	20 - 40	14.8 - 30	52 - 128	5390 - 9710
EAFCD-15S5P	5	1218 - 2974	29' 7/8" - 38' 8"	25 - 50	18.5 - 37.5	64 - 158	6710 - 12060
EAFCD-15S6P	6	1424 - 3136	34' 9" - 38' 8"	30 - 60	22.2 - 45	75 - 158	7930 - 12550

### Notes:

A: Three incremental fin lengths available: 5' 9-1/16", 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

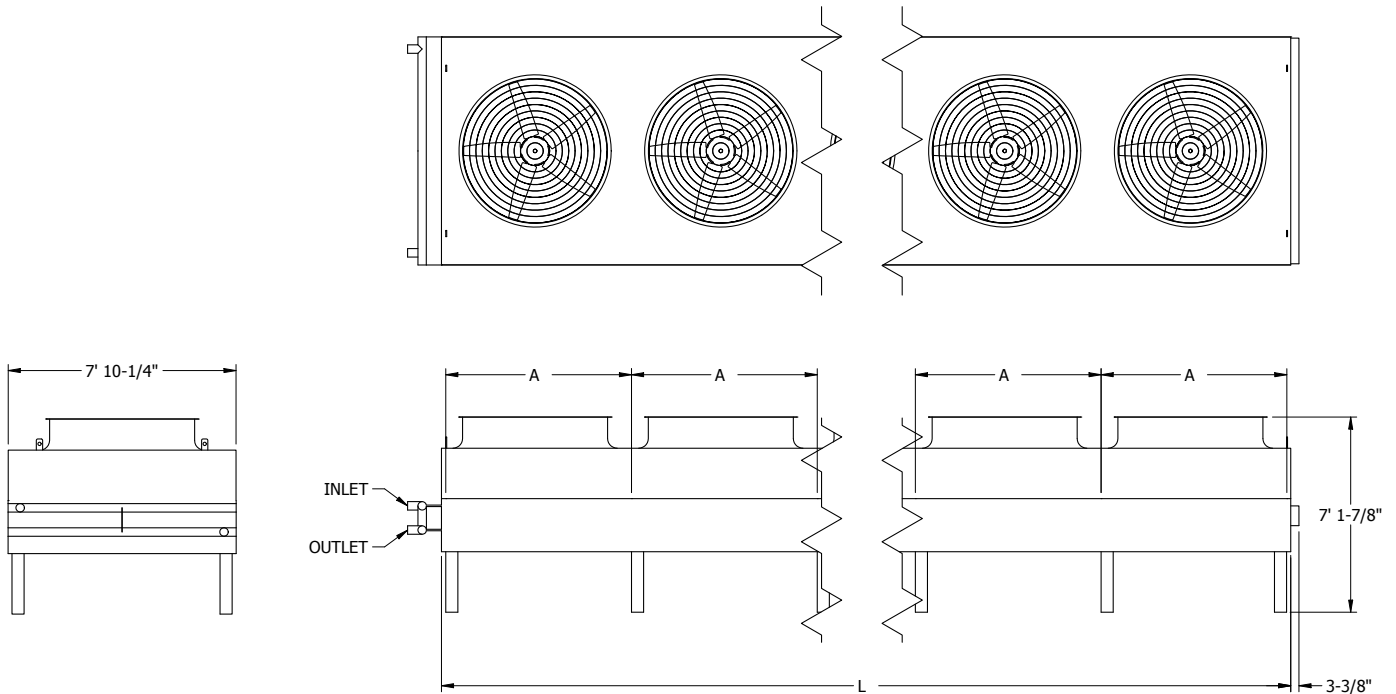
† Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

# Flat Coil Configuration - NEMA Motor

## Engineering Data



## Single Fan, 8' Wide Models

Model Name	# Fans	Nominal Capacity Range (MBH) <sup>†</sup>	Unit Length Range (L)	Total Fan Power		NH3 Charge (lbs.)	Operating Weight (lbs.)
				HP	kW		
EAFCO-15S1Z	1	264 - 643	6' 1/2" - 7' 11-1/2"	5 - 10	3.7 - 7.5	21 - 44	1700 - 2860
EAFCO-15S2Z	2	525 - 1284	11' 9-5/8" - 15' 7-5/8"	10 - 20	7.4 - 15	34 - 77	2990 - 5370
EAFCO-15S3Z	3	792 - 1932	17' 6-3/4" - 23' 3-3/4"	15 - 30	11.1 - 22.5	46 - 111	4450 - 7890
EAFCO-15S4Z	4	1038 - 2567	23' 3-3/4" - 30' 11-7/8"	20 - 40	14.8 - 30	59 - 144	5650 - 10400
EAFCO-15S5Z	5	1300 - 3211	29' 7/8" - 38' 8"	25 - 50	18.5 - 37.5	71 - 178	7020 - 12920
EAFCO-15S6Z	6	1535 - 3412	34' 9" - 38' 8"	30 - 60	22.2 - 45	84 - 178	8310 - 13420

### Notes:

A: Three incremental fin lengths available: 5' 9-1/16", 6' 4-3/4" or 7' 8-1/8"

Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.

† Nominal Air Cooled Capacity Range shown at 20°F TD.

Min Capacity: 3 Row, 6 FPI, Shortest Incremental Fin Length, 0.01" fin thickness.

Max Capacity: 6 Row, 12 FPI, Longest Incremental Fin Length, 0.01" fin thickness.

# Wiring and Control Options

Factory wiring and control options are available for all eco-Air Series air cooled condensers. All wiring follows UL recognized standards. Many eco-Air Series configurations allow for single point power and factory mounted components. Please consult your sales representative or EVAPCO Marketing for job specific details.

**Common Terminal Box** (standard) - All motors wired to a common terminal box located on the end panel opposite refrigerant connections. Factory wiring and design complies with UL Recognized Standards.



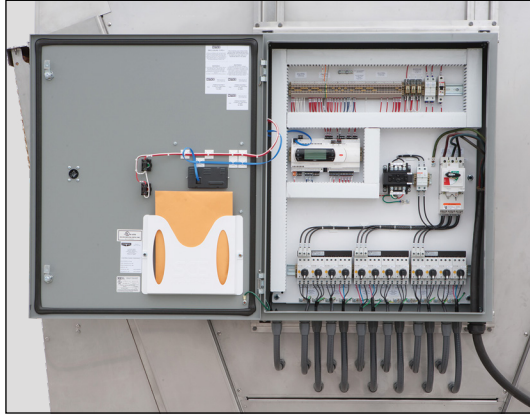
**Individual Motor Disconnect Switches** (optional) - Mounted at each fan motor to give the user the ability to isolate individual motor power feeds.





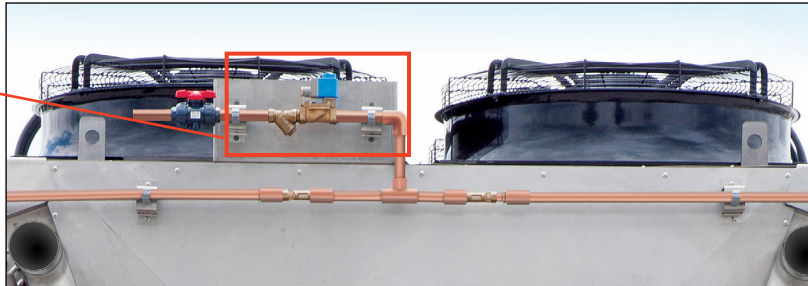
# Wiring and Control Options

**EVAPCO Control Package** – Operating sequence and fan speed control based on real time heat loads and ambient conditions.



- EVAPCO PLC Controller
- Supervisory control system integration
- Fan speed control
  - EC Motor Option: Modbus control of EC fan
  - NEMA Motor Option: Packaged VFD fan speed control with bypass switch
- UL Listed
- NEMA 3R Rated
- Thermal overload and short circuit protection of each motor
- Operate and fault indicator lights on outside of panel
- Refrigerant Pressure Sensor (shipped loose)
- Ambient Temperature Sensor
- Rain/Sun Protection Hood (optional)
- Solenoid control of adiabatic-precooling and spray systems (if equipped)

Solenoid Control of Adiabatic Pre-cooling & Spray Systems (if equipped)



Water supply solenoid valve arrangement

The EVAPCO Control Package is factory mounted and wired when configuration and shipping limitations allow.



## UL (cUL) Compliance

All Components are UL Recognized

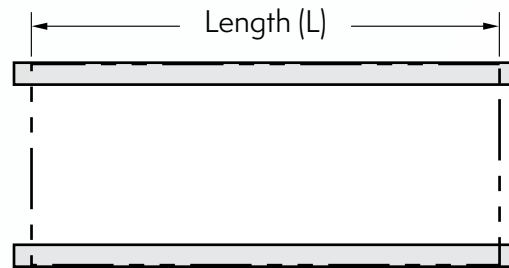
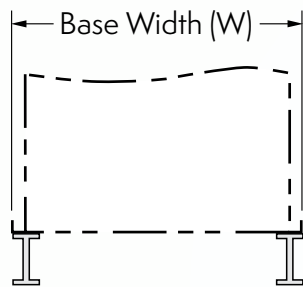


The entire unit is UL Listed when provided with factory mounted and wired EVAPCO Control Package.



# Structural Steel Support

eco-Air Series Supporting Steel Dimensions		
V Models	Dry & Spray Unit Base Width (W)	Adiabatic Unit Base Width (W)
4' Wide	4' 2"	5' 10"
7' Wide	7' 2-1/2"	8' 9-1/2"
8' Wide	7' 3-3/4"	9' 3/4"
F Models	Base Width (W)	-
6' Wide	5' 7-5/16"	-
7' Wide	6' 11-1/8"	-
8' Wide	7' 7"	-



Length as shown on "unit length range (L)" in catalog table

1. These are suggested arrangements for preliminary layout purposes. Consult your EVAPCO representative for factory certified steel support drawings.
2. The recommended support for the eco-Air Series condensers is structural I-beams running the entire length of the unit. Mounting holes, 3/4" in diameter are provided for bolting to the structural steel.
3. Beams should be sized in accordance with accepted structural practices. Maximum deflection of beam under unit to be 1/360 of the unit length, not to exceed 1/2".
5. Beams should be level before setting the unit in place. Do not level the unit by shimming between it and the I-beams.
6. Support beams and Anchor bolts are to be furnished by others.
7. Dimensions, weights and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.

# EVAPCO Technical Support Services

## EVAPCO Representatives

Your EVAPCO representative is the local expert you can count on to help you with all your industrial refrigeration needs—from getting quotes, to answering questions, to helping you manage your projects and orders. Find your local representative, by visiting [evapco.com](http://evapco.com) now.

## SPECTRUM™ by EVAPCO

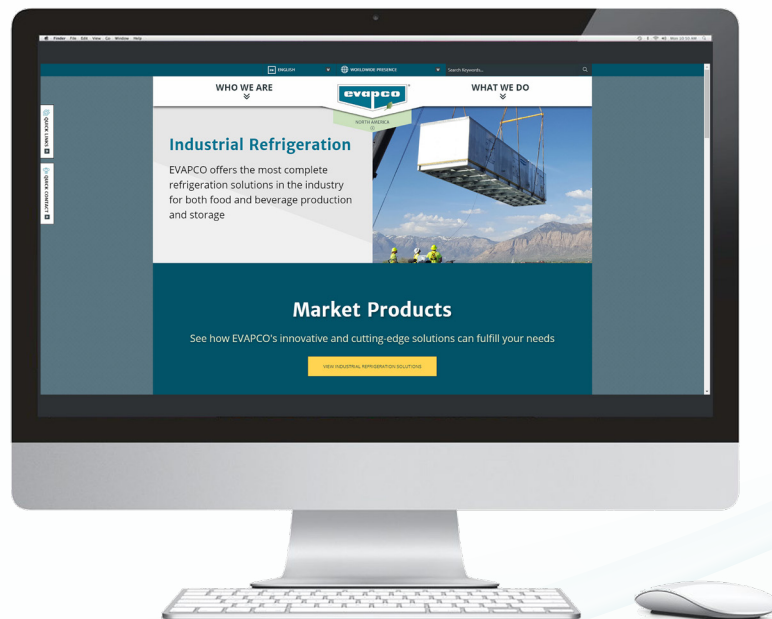
SPECTRUM™ is a new industry leading computer selection program that makes it easy for you to find and optimize the right EVAPCO solutions for every project. Evaluate thermal performance, layout, and energy requirements across units; analyze optional equipment features; and generate complete specifications and unit drawings—all within a friendly and intuitive format. Contact your EVAPCO representative to access SPECTRUM™ now.



## evapco.com

Bookmark [evapco.com](http://evapco.com) for the latest and most complete product information. The website contains a multitude of information and resources including:

- Unit certified drawings
- Steel support drawings
- Scaled isometric views in CAD
- 3-D models in Revit
- Product catalogs
- Rigging instructions
- Operation and maintenance instructions
- White papers
- Videos
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**EVAPCO, Inc. — World Headquarters & Research / Development Center**

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

**North America**

**EVAPCO, Inc.  
World Headquarters**

Westminister, MD 21158 USA  
410-756-2600 p | 410-756-6450 f  
marketing@evapco.com

**EVAPCO East**

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 Manufacturing**

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

**EVAPCO Dry Cooling, Inc.**

Bridgewater, NJ USA  
908-379-2665 p  
info@evapcodc.com

**EVAPCO Dry Cooling, Inc.**

Littleton, CO USA  
908-379-2665 p  
info@evapcodc.com  
Spare Parts: 908-895-3236  
Spare Parts: spares@evapcodc.com

**EVAPCO Power México S. de R.L. de C.V.**

Mexico City, Mexico  
+52 (55) 8421-9260 p  
info@evapcodc.com  
Refrigeration Vessels &

**Refrigeration Vessels &  
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.  
Edwardsville, 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**

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  
evapcoeuropa@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 Middle East DMCC**

Dubai, United Arab Emirates  
+971 4 448 7242 p  
info@evapco.ae

**EVAPCO S.A. (Pty.) Ltd.**

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

**Asia/Pacific**

**EVAPCO Asia Pacific Headquarters**

Shanghai 200949, P.R. China  
(86) 21-6687-7786 p  
(86) 21-6687-7008 f  
marketing@evapcochina.com

**EVAPCO (Shanghai) Refrigeration Equipment Co., Ltd.**

Baoshan Industrial Zone Shanghai, P.R. China  
(86) 21-6687-7786 p  
marketing@evapcochina.com

**EVAPCO (Beijing) Refrigeration Equipment Co., Ltd.**

Huairou District Beijing, P.R. China  
010-6166-7238 p  
evapcobj@evapcochina.com

**EVAPCO Air Cooling Systems (Jiaxing) Company, Ltd.**

Xiuzhou district, Jiaxing, Zhejiang, P.R. China  
info@evapcoacs.cn

**EVAPCO Australia (Pty.) Ltd.**

Riverstone, Australia  
(61) 2 9627-3322 p  
sales@evapco.com.au

**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.  
São Paulo – Brazil  
(55+11) 5681-2000 p  
vendas@evapco.com.br

**Fan TR Technology Resources**

São Paulo, Brasil  
55 (11) 4025-1670 p  
fantr@fantr.com