

COOLING TOWERS

AT Atlas

Modular Advanced Technology (AT) Series

Large, Energy Efficient, Modular, Counterflow Cooling Towers



[†] Mark owned by the Cooling Technology Institute

About EVAPCO



EVAPCO for LIFE

EVAPCO is more than a name. We are the global innovator in heat transfer solutions for the commercial HVAC, industrial refrigeration, power and industrial process markets. We pledge to make everyday life easier, more comfortable, more reliable and more sustainable for people everywhere.

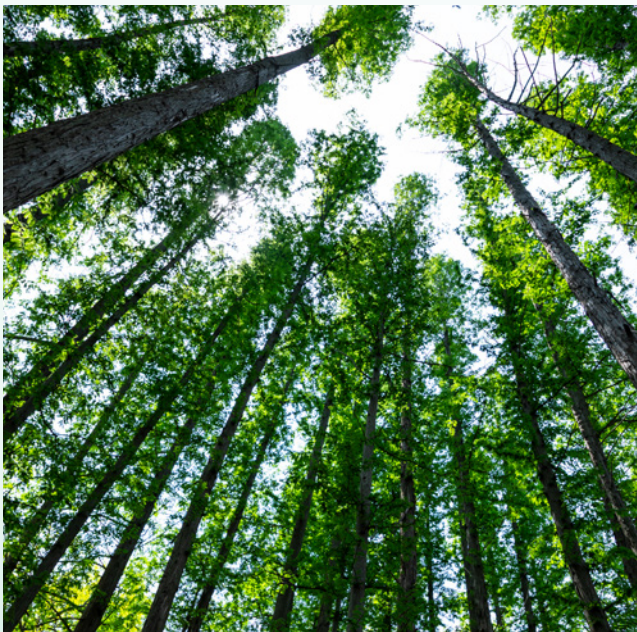
OUR COMMITMENT

We never stop innovating. We set out to find groundbreaking solutions that transform the way the world works for the better. It's why we have more than 50 active U.S. patents and nearly 200 foreign counterparts. We also guarantee performance and put every solution through rigorous research and testing to ensure maximum efficiency and reliability.



PROTECTING 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. Our 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 developing new technologies that deliver ultimate operating advantages to our clients while protecting the planet for every generation to come.



Atlas Applications



DATA CENTERS



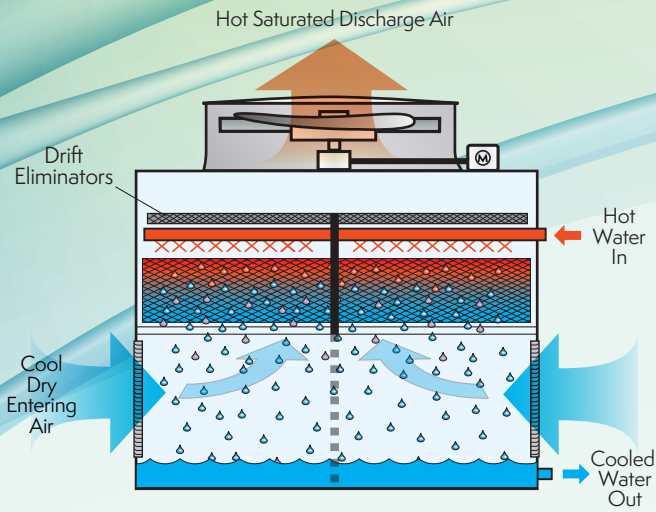
INDUSTRIAL PROCESS



CENTRAL PLANTS

To ensure 100% **reliability** for the high demands of critical cooling applications, the Atlas is highly engineered with quality components and manufactured to exacting standards. The **durable** materials of construction ensure the **longevity** expected of EVAPCO products. The cooling towers are designed in large modules for ease of installation and to reduce required field assembly labor. As the most energy efficient modular cooling tower on the market, the Atlas is unmatched in CTI Certified capacity per cell!

The AT Atlas



PRINCIPLE OF OPERATION

This cutaway graphic of the AT Atlas illustrates the basic functionality of our modular, induced draft, counterflow cooling tower. Hot water from the heat source is pumped to the water distribution system at the top of the tower. The water is distributed over the wet deck fill by means of our EvapJet™ nozzles. Simultaneously, air is drawn in through the air inlet louvers at the base of the tower on all four sides and travels upward through the wet deck fill opposite the water flow. The cooled water drains to the basin at the bottom of the tower and is returned to the heat source.

FACTORY ASSEMBLED LEAD TIMES

- The Atlas arrives to site preassembled in modules and installs in a fraction of the time of field erected solutions.
- Reduced overall piping and electrical connections compared to projects with traditional factory assembled cooling towers.
- Site installation supervision available from factory-trained technicians.

FIELD-ERECTED CAPABILITIES

Up to **60%** more
cooling capacity
per cell*



Up to **40%** less
fan power
per ton of cooling*

*When compared to other factory-assembled single cell towers.

ROBUST DESIGN & MATERIALS

Built with industrial-grade materials and engineered to withstand the demands of HVAC and industrial applications:

- Heavy-gauge steel structure, galvanized or stainless steel
- Energy-efficient PVC heat exchange fill media
- Standard motor outside airstream

*The EVAPCO Performance
Guarantee ECC-CTI Certified*



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Features & Benefits

HIGH-EFFICIENCY DRIFT ELIMINATORS



- EVAPCO's extremely efficient drift eliminator system removes entrained water droplets from the air stream, limiting the drift rate down to 0.0005% of the recirculating water rate.
- Constructed of inert PVC, which effectively eliminates corrosion of these vital components. They are assembled in sections to facilitate easy removal for inspection of the water distribution system.

EVAPAK® FILL

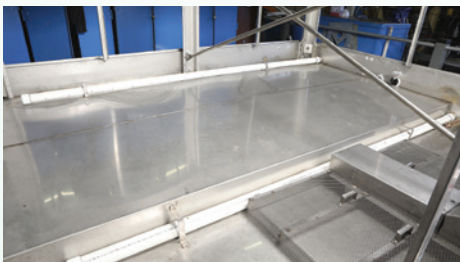
- EVAPAK® fill is specially designed to induce a highly turbulent mix of air and water for superior heat transfer. Special drainage tips allow high water loadings without excessive pressure drops.
- The bottom support of the fill section, combined with the unique way in which EVAPAK's cross-fluted sheets are bonded together, greatly enhances the fill's structural integrity, making it usable as a working platform for internal access to the fan and drive system.
- Low fouling fill available for alternate water qualities. Contact an EVAPCO representative for more information.

WATER & SIGHT TIGHT (WST) AIR INLET LOUVERS

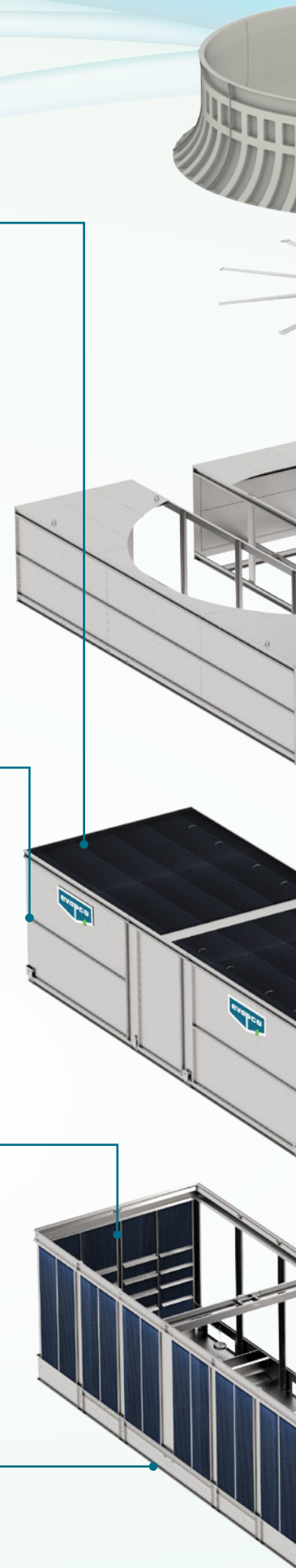
- Easily removable for access
- Framed in same material as tower basin
- Improved design to keep sunlight out—preventing biological growth
- Keeps water in while keeping dirt and debris out

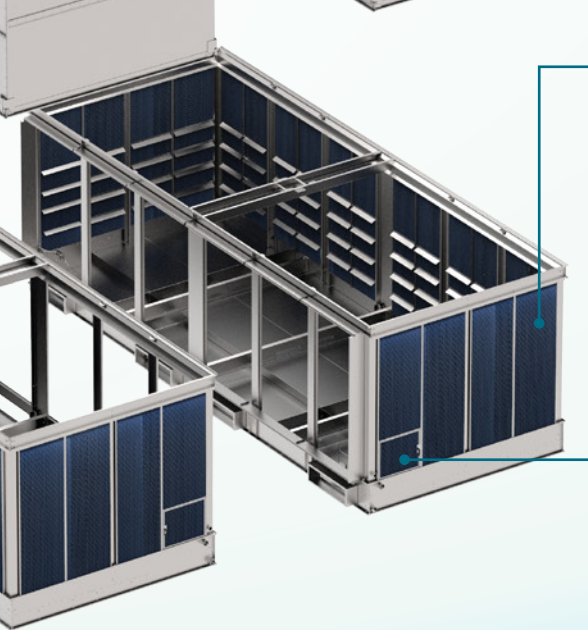
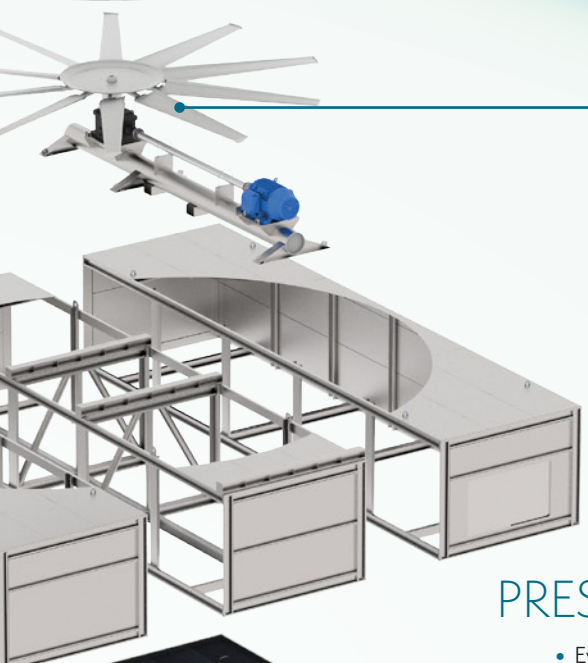
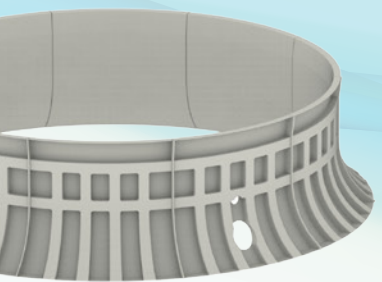


CLEAN PAN SLOPED BASIN DESIGN



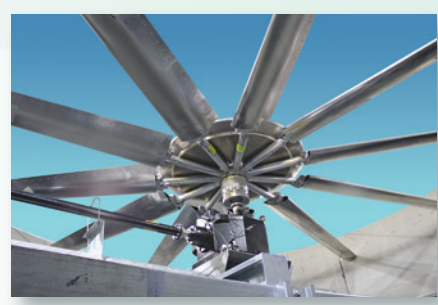
- Designed to completely drain the cold water basin
- Helps prevent buildup of sediment and biological film
- Eliminates standing water after draindown





MECHANICAL EQUIPMENT

EVAPCO provides fans, gearboxes, driveshafts and motors from a select group of equipment suppliers specializing in cooling tower products. These relationships ensure a high quality product that can withstand the harsh cooling tower environment while also producing the airflow required for peak thermal performance.



PRESSURIZED WATER DISTRIBUTION SYSTEM

- Evapjet™ nozzles provide thermal performance gain
- Non-corrosive PVC construction
- Large orifice nozzles prevent clogging and are threaded for easy removal and positive positioning
- Each nozzle provides a large uniform spray pattern

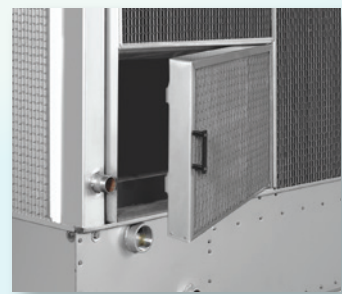


ACCESS

- Removable louvers offer 360 degree basin access for easy inspection and maintenance

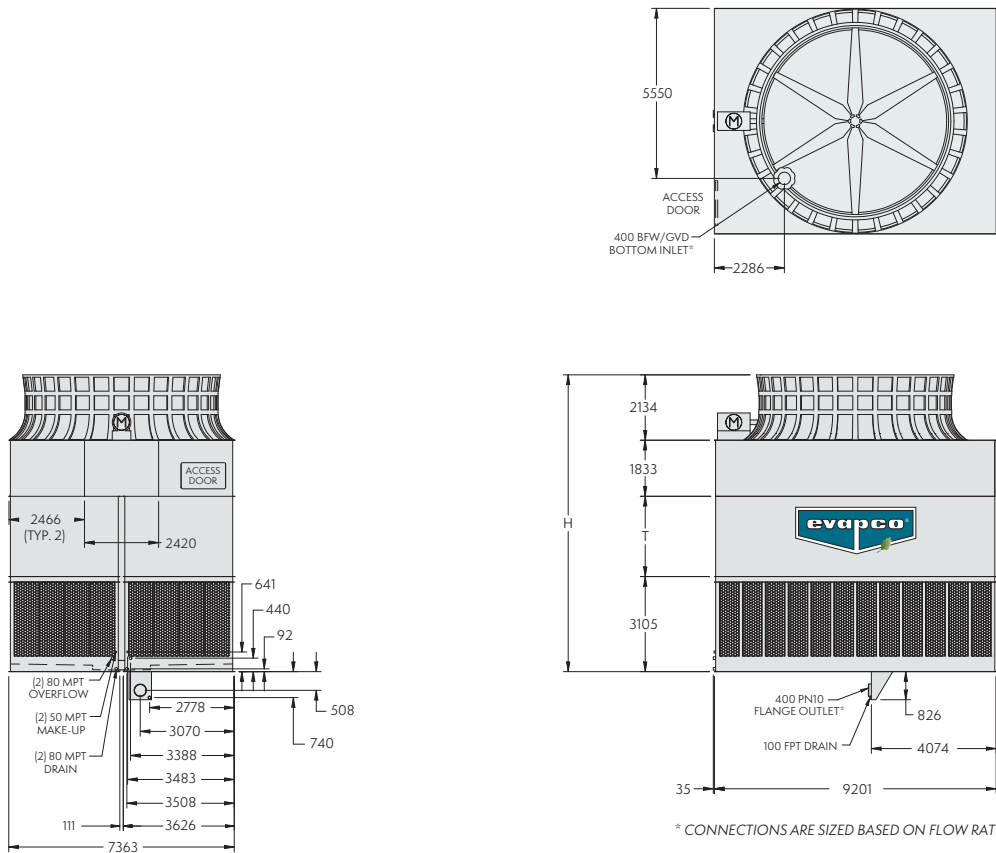
LOUVER ACCESS DOOR

- Hinged access panel with quick release mechanism
- Allows easy access to perform routine maintenance and inspection of the makeup assembly, strainer, screen and basin



Engineering Data & Dimensions

AT 124-4N30-EV to 124-5T30- EV

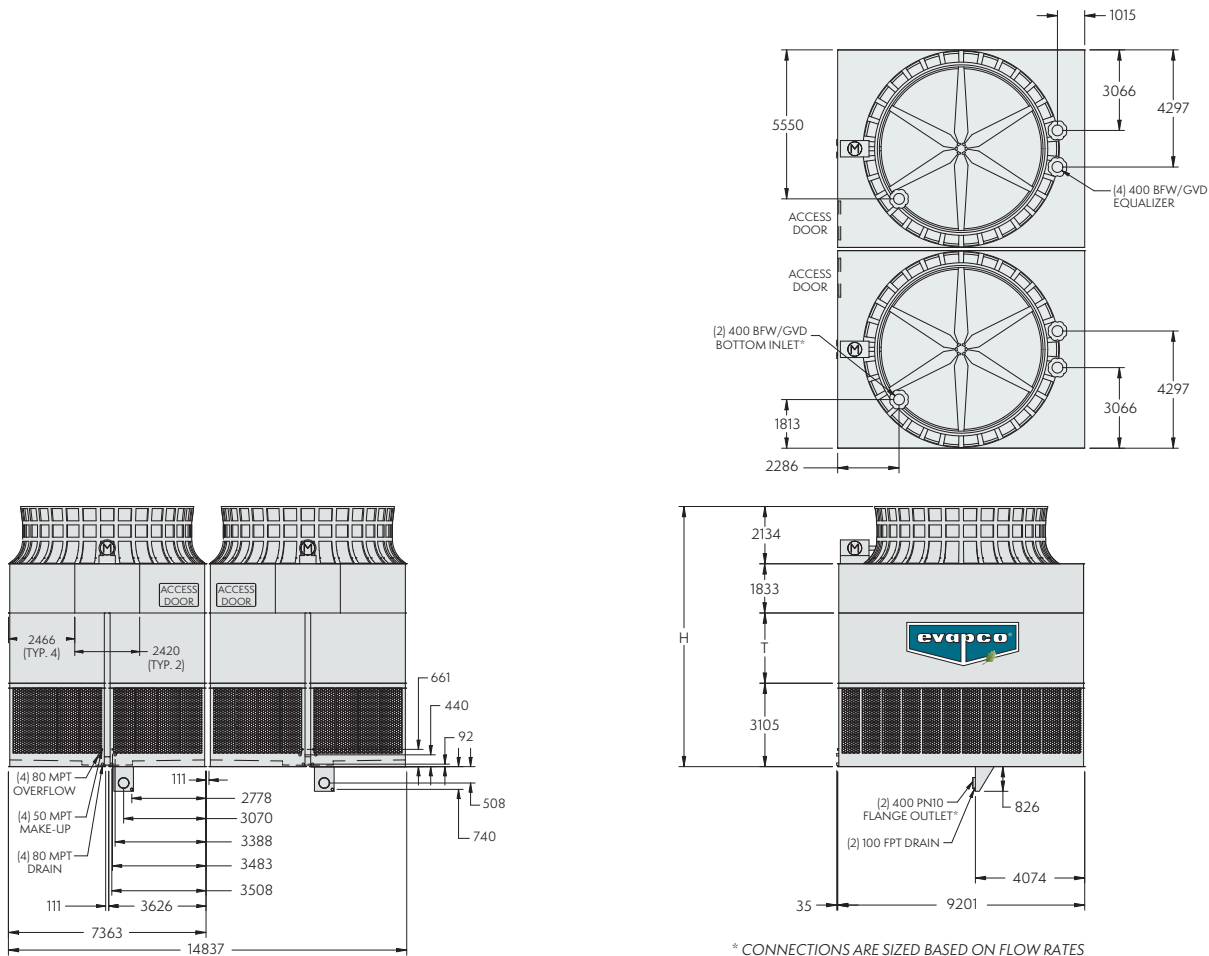


Model No.	Nominal Capacity (kW)	Fan Motor (kW)	Air Flow (m ³ /s)	Weights (kg)		
				Operating	Heaviest Section	Shipping
AT 124-4N30-EV	6,522	30	145	42,540	5,590	30,505
AT 124-4O30-EV	6,931	37	155	42,690	5,590	30,660
AT 124-4P30-EV	7,529	45	165	42,830	5,590	30,795
AT 124-4Q30-EV	7,990	55	180	42,805	5,590	30,770
AT 124-4R30-EV	8,966	75	195	42,925	5,590	30,890
AT 124-4S30-EV	9,625	90	210	43,335	5,590	31,300
AT 124-4T30-EV	10,263	110	220	43,590	5,590	31,555
AT 124-5N30-EV	6,705	30	144	43,335	5,985	31,300
AT 124-5O30-EV	7,118	37	155	43,490	5,985	31,455
AT 124-5P30-EV	7,703	45	164	43,625	5,985	31,595
AT 124-5Q30-EV	8,160	55	176	43,605	5,985	31,570
AT 124-5R30-EV	9,224	75	192	43,720	5,985	31,690
AT 124-5S30-EV	9,778	90	206	44,135	5,985	32,100
AT 124-5T30-EV	10,389	110	219	44,390	5,985	32,355

- NOTES:**
- (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.
 - (2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.
 - (3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.
 - (4) Nominal capacity is based on 35° C entering water temperature, 29,4° C leaving water temperature and 25,6° C wet-bulb temperature.

Engineering Data & Dimensions

AT 248-4N30-EV to 248-5T30-EV



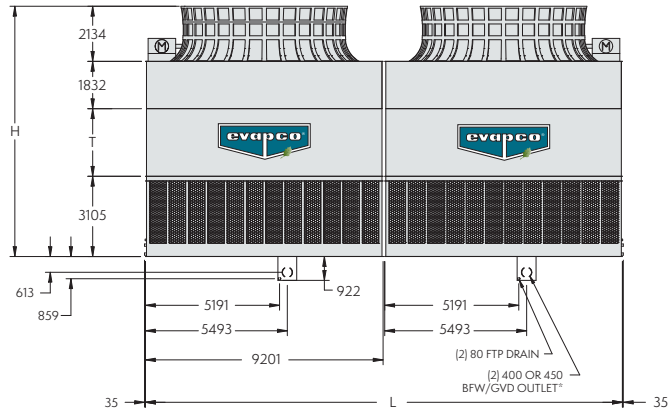
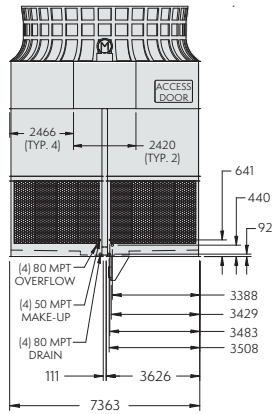
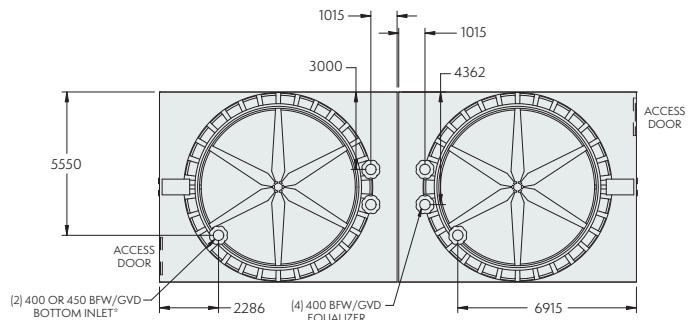
* CONNECTIONS ARE SIZED BASED ON FLOW RATES

Model No,	Nominal Capacity (kW)	Fan Motor (kW)	Air Flow (m ³ /s)	Weights (kg)		
				Operating	Heaviest Section	Shipping
AT 248-4N30-EV	12,623	(2) 30	285	85,075	5,590	61,010
AT 248-4O30-EV	13,414	(2) 37	305	85,385	5,590	61,315
AT 248-4P30-EV	14,583	(2) 45	325	85,655	5,590	61,590
AT 248-4Q30-EV	15,475	(2) 55	350	85,610	5,590	61,545
AT 248-4R30-EV	17,396	(2) 75	380	85,845	5,590	61,780
AT 248-4S30-EV	18,684	(2) 90	410	86,670	5,590	62,605
AT 248-4T30-EV	19,919	(2) 110	435	87,180	5,590	63,115
AT 248-5N30-EV	12,983	(2) 30	281	86,670	5,985	62,605
AT 248-5O30-EV	13,783	(2) 37	302	86,980	5,985	62,915
AT 248-5P30-EV	14,939	(2) 45	320	87,255	5,985	63,185
AT 248-5Q30-EV	15,823	(2) 55	344	87,210	5,985	63,140
AT 248-5R30-EV	17,911	(2) 75	376	87,445	5,985	63,375
AT 248-5S30-EV	18,997	(2) 90	403	88,270	5,985	64,200
AT 248-5T30-EV	20,202	(2) 110	427	88,775	5,985	64,710

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 - (4) Nominal capacity is based on 35° C entering water temperature, 29,4° C leaving water temperature and 25,6° C wet-bulb temperature.

Engineering Data & Dimensions

AT 224-4N60-EV to AT 224-5T60- EV



Model No.	Nominal Capacity (kW)	Fan Motor (kW)	Air Flow (m ³ /s)	Weights (kg)		
				Operating	Heaviest Section	Shipping
AT 224-4N60-EV	12,623	(2) 30	285	85,075	5,590	61,010
AT 224-4O60-EV	13,414	(2) 37	305	85,385	5,590	61,315
AT 224-4P60-EV	14,583	(2) 45	325	85,655	5,590	61,590
AT 224-4Q60-EV	15,475	(2) 55	350	85,610	5,590	61,545
AT 224-4R60-EV	17,396	(2) 75	380	85,845	5,590	61,780
AT 224-4S60-EV	18,684	(2) 90	410	86,670	5,590	62,605
AT 224-4T60-EV	19,919	(2) 110	435	87,180	5,590	63,115
AT 224-5N60-EV	12,983	(2) 30	281	86,670	5,985	62,605
AT 224-5O60-EV	13,783	(2) 37	302	86,980	5,985	62,915
AT 224-5P60-EV	14,939	(2) 45	320	87,255	5,985	63,185
AT 224-5Q60-EV	15,823	(2) 55	344	87,210	5,985	63,140
AT 224-5R60-EV	17,911	(2) 75	376	87,445	5,985	63,375
AT 224-5S60-EV	18,997	(2) 90	403	88,270	5,985	64,200
AT 224-5T60-EV	20,202	(2) 110	427	88,775	5,985	64,710

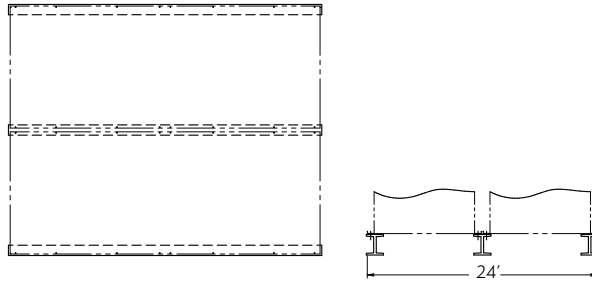
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Structural Steel Support

Suggested I-Beam Arrangement

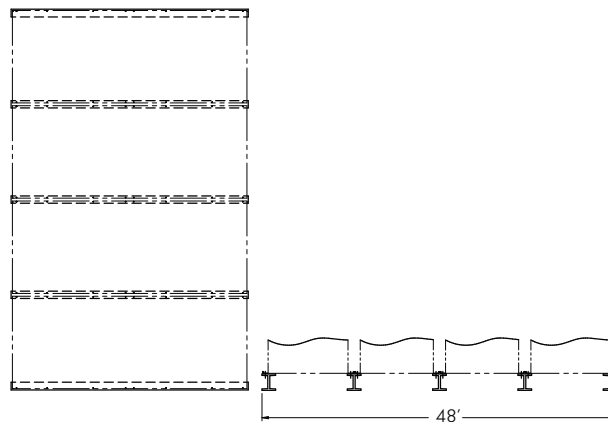
ONE CELL

24' x 30'



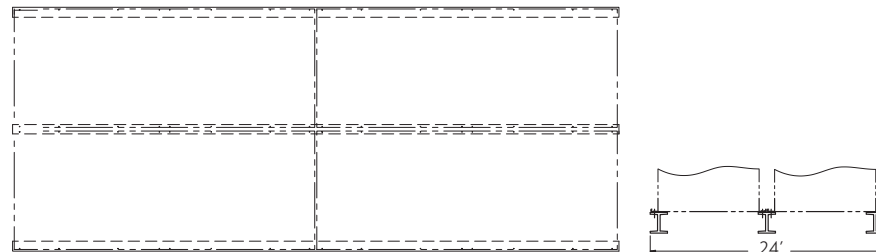
TWO CELL

48' x 30'



TWO CELL

24' x 60'



- NOTES:**
- (1) 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 $1/2"$ [13 mm]
 - (2) Deflection may be calculated by using 55% of the operating weight as a uniform load on each beam. See certified print for operating weight.
 - (3) Support beams and anchor hardware are to be furnished by others. Anchor hardware to be ASTM A325 $5/8"$ [16 mm] bolt or equivalent.
 - (4) Beams must be located under the full length of the pan section.
 - (5) Support beams surface must be flush and level at top surface. Do not level the unit by placing shims between the unit mounting flange and the supporting beam.
 - (6) The factory recommended steel support configuration is shown. Consult the factory for alternate support configurations.
 - (7) Unit should be positioned on steel such that the anchoring hardware fully penetrates the beam's flange and clears the beam's web.
 - (8) For all multiple cell units, the operating weight of each cell is found by dividing total operating weight by the number of cells.
 - (9) The center beam should have a minimum width of $12"$ [305 mm].
 - (10) Dimensions listed as follows: English ft-in. [Metric mm].



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- EVAPCO Manufacturing Facilities

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