



eco-ATC-A

The NEW Family of Evaporative Condensers



Environmentally Conscious Operation Featuring
Water & Energy Conserving Technology

375 till 11753 kW nominal capacity

ENVIRONMENTAL SOLUTIONS... CREATING A BETTER WORLD!

CERTIFIED EN ISO 9001



IARW International Association of
Refrigerated Warehouses



eurammøn
refrigerants delivered by mother nature



eco-ATC-A



Since its founding in 1976, EVAPCO, Inc. has become a world-wide leader in supplying quality cooling equipment for thousands of customers in both the commercial and industrial markets.

EVAPCO's success has been the result of a continual commitment to product improvement, quality workmanship and a dedication to providing unparalleled service.



Our emphasis on research and development has led to many product innovations – a hallmark of EVAPCO through the years.

The ongoing R & D Program enables EVAPCO to provide the most advanced products in the industry – technology for the future, available today.

EVAPCO products are manufactured on five continents around the world and distributed through hundreds of factory authorized sales representatives.

Design and Construction Features

The eco-ATC-A line of evaporative condensers represents EVAPCO's newest advancement in thermal heat transfer research and development. Utilizing the **Ellipti-fin™** heat transfer coil, the eco-ATC-A offers improved heat transfer during wet operation and offers significant water savings due to extended periods of dry operation.

The eco-ATC-A is another chapter in EVAPCO's on-going commitment to quality, environmentally friendly products.

Easy to Service Motor Mount Design

- All normal maintenance can be performed quickly from outside the unit



- Designed for easy belt adjustment
- Extended lube lines for easy bearing lubrication
- If required, motor may swing out for easy removal

Water Saver Drift Eliminators

- New patented design reduces drift rate to < 0.001%
- Saves water and reduces water treatment cost
- Greater structural integrity vs. old style blade-type
- Recessed into casing for greater protection
- Drift rate certifications with Eurovent OM-14-2009



PVC Spray Distribution Header with ZM II™ Nozzles

- Large orifice nozzles prevent clogging (no moving parts)
- Nozzles are threaded into header at proper orientation
- Fixed position nozzles require zero maintenance
- Guaranteed for life

Totally Enclosed Pump Motors

- Help assure long, trouble-free operation

Stainless Steel Strainers

- Resists corrosion better than other materials



Z-725 Heavy Mill Hot-Dip Galvanized Steel Construction

(Stainless steel available as affordable option)



Advanced Design Smooth Flow Fans

- Totally Enclosed Fan Motors assures long life
- Power-Band Belts for Better Lateral Rigidity
- Advanced Design Aluminum Fan Blades
- Non-corroding Cast Aluminum Sheaves
- Heavy-Duty Fan Shaft Bearings with L-10 life of 75,000 - 135,000 hrs
- All Other Components Corrosion Resistant Materials

Low Sound Options available Refer to page 15



Super Low Sound Fan (optional)

- Extremely wide sloped fan blades for sound sensitive applications
- One piece molded heavy duty construction
- 9-15 dB(A) sound reduction

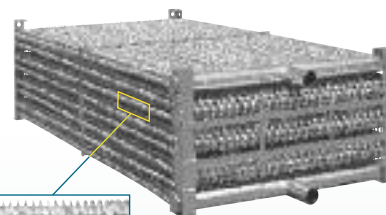
Ellipti-fin® Heat Transfer Technology

Features EVAPCO's exclusive CROSScool™

Features EVAPCO's exclusive **CROSScool™** tube enhancement for greater internal heat transfer.

- Thermal Pak® coil with extended surface.
 - Water savings through extended periods of dry operation.
 - High heat transfer efficiency.
 - Low refrigerant charge.
- Patent Pending

NEW



IBC Compliant Design Refer to page 21



Louver Access Door

- Hinged access panel with quick release mechanism
- Allows easy access to perform routine maintenance and inspection of the make-up assembly, strainer screen and basin
- Available on larger models



Easy Field Assembly

- A new field assembly seam design which ensures easier assembly and reduced potential for field seam leaks
- Self-guided channels guide the fan casing section into position improving the quality of the field seam
- Eliminates up to 66% of fasteners (Patent Pending)



"Clean Pan" Basin Design

- Access from all four sides
- Large open area simplifies maintenance
- Basin may be inspected with pumps running
- Sloped basin design prevents sediment buildup, biological film and standing water
- Optional: full stainless steel welded basin

WST Air Inlet Louvers (Water and Sight Tight)

- Easily removable for access
 - Patented design to keep sunlight out-preventing biological growth
 - Keeps water in while keeping dirt and debris out
- U.S. Patent No. 7927196



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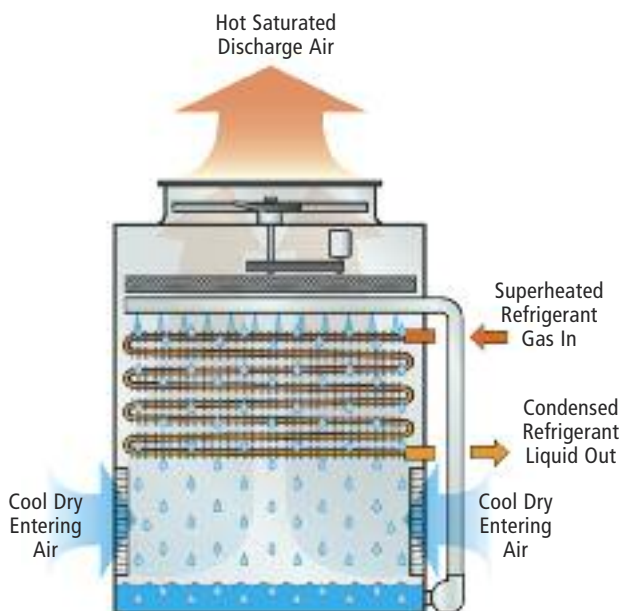
DESIGN FEATURES

Proven Performance and Design Flexibility

Principle of Operation

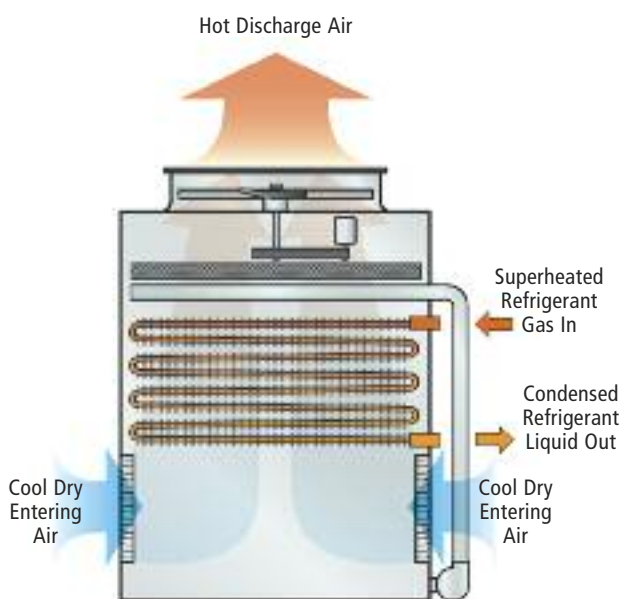
Evaporative Mode

The refrigerant gas is discharged from the compressor into the inlet connection of the eco-ATC-A condenser. Water from the condenser's sump is circulated over the condenser coil, while ambient air is simultaneously drawn into the unit. As the ambient air moves up through the coil section, a portion of the spray water is evaporated into the air stream. The evaporative process cools the spray water, which in turn cools the tubes containing the refrigerant gas. The cool tube walls cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the coil to the high pressure liquid receiver for return to the system. The hot, saturated air is drawn through the drift eliminators, where any entrained water droplets are removed. The condenser's fan then discharges this air stream out of the top of the unit at a high velocity, where it can dissipate harmlessly into the atmosphere. The water which was not evaporated falls into the sump and is recirculated by the spray pump to the water distribution system above the condensing coil section.



Dry Mode

The refrigerant gas is discharged from the compressor into the inlet connection of the eco-ATC-A condenser. Ambient air is drawn into the unit and moves over the heat transfer coil. The air is warmed while the tubes containing the refrigerant gas are cooled. The cool tube walls cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the coil to the high pressure liquid receiver for return to the system. The hot discharge air is drawn through the drift eliminators and the fan then discharges the air stream out of the top of the unit where it can dissipate harmlessly into the atmosphere.



DESIGN FEATURES

Proven Performance and Design Flexibility

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Water and Energy Saving with eco-ATC-A Technology

Low Fan Motor kW

The eco-ATC-A features the new EVAPCO **Ellipti-fin™** coil, which utilizes elliptical spiral fin coil technology. This technology allows a 10% to 30% increase in thermal performance depending on the coil configuration, when operating in the wet or evaporative mode. This will result in significant energy savings throughout the year.

Reduced Plan Area

Due to the increased thermal performance, new eco-ATC-A also minimizes the footprint required for a given capacity thereby reducing the space required for an evaporative condenser. A smaller footprint means less steel and lower installation costs.

Significant Water Savings

The **Ellipti-fin™** coil technology enables the eco-ATC-A to be operated in a 100% Dry Mode at a significantly higher switchover temperature than that of a typical bare tube coil evaporative condenser. This leads to a significant increase in the number of hours per year the condenser can operate in dry mode (spray pumps off), thus increasing your water savings.

This combination of features allows the eco-ATC-A to be operated with both energy and water efficiency in mind, making it the ideal choice for many installations.

Consider a meat processing plant application near Köln (Germany), where the unit is required to reject a constant heat load of 3000 kW of refrigeration at a 35°C condensing temperature and a summer design wet bulb temperature of 21°C. The process operates 24 hours a day 7 days a week. The eco-ATC-A evaporative condenser and an ATC-E evaporative condenser are compared as follows:

EVAPCO Model	ATC-XC775E	eco-ATC-779A	Difference*(%)
Plan Area (m²)	22,2	19,8	-10%
Fan Motor (kW tot)	30	22	-28%
Pump Motor (kW tot)	8	5,5	

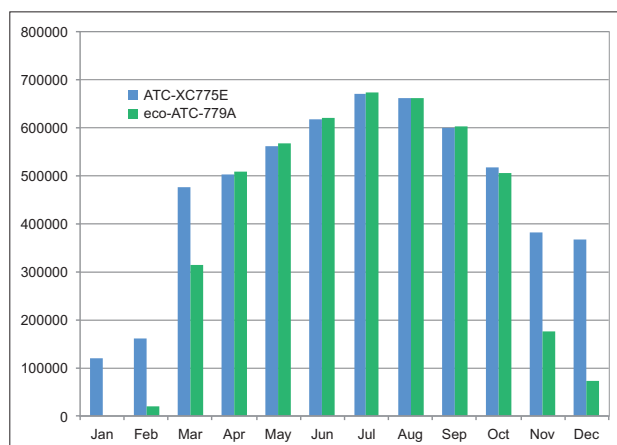
* eco-ATC-A compared to ATC

Model Comparison

In the previous example, the eco-ATC-A model requires lower fan motor horsepower and smaller plan area than the equivalent ATC-E. The potential for reduced kW during wet operation is only one of the eco-ATC-A benefits. The enhanced performance of the eco-ATC-A can be illustrated by the following diagrams.

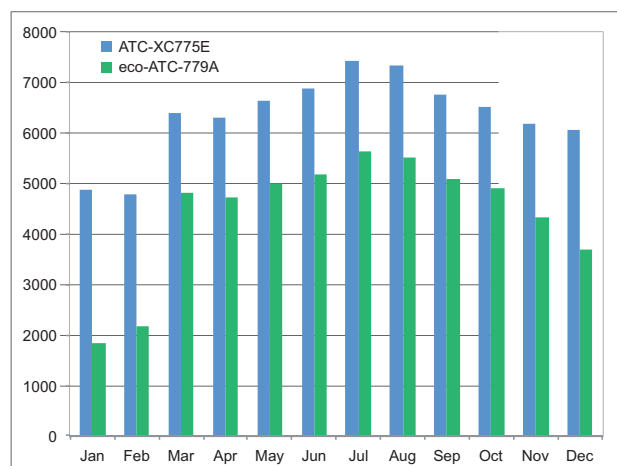
Assuming a load profile requiring full 70% heat rejection requirement for a full time operation of the refrigeration system yields the following comparison between the eco-ATC-A and the ATC.

In the following diagram it is possible to appreciate the lower water consumption of eco-ATC-A compared to ATC: during the cold season the water consumption of eco-ATC-A is no present or extremely low.



ATC vs eco-ATC-A
Annual water use

In the next diagram, it is possible to see that the energy consumption is lower during all the year thanks to the high thermal performance of the EVAPCO **Ellipti-fin™** coil.



ATC vs eco-ATC-A
Annual energy use

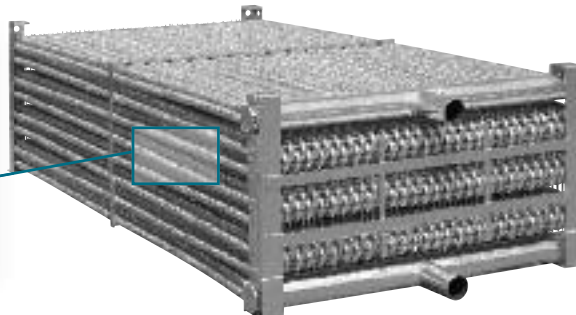
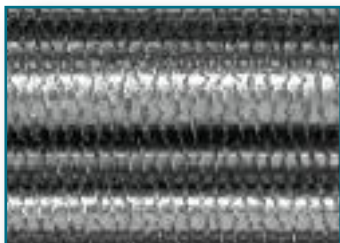
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DESIGN FEATURES

Ellipti-fin™ Heat Transfer Coil

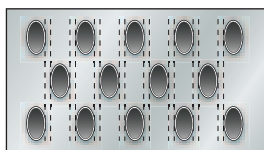
NEW

- Elliptical Tubes with Spiral Wound Fins
- Improved Dry and Wet Operation
- All Rows Finned

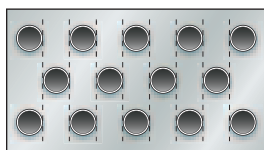


Evolution of Heat Transfer Technology

EVAPCO has a long standing commitment to heat transfer research and development. This commitment has resulted in a number of advancements in heat transfer coil design. Up until the mid-1980's, evaporative condensers were manufactured with tightly packed round tube coils. Through thousands of hours of testing and research, EVAPCO developed the Thermal-Pak® coil.



Thermal-Pak® Coil by EVAPCO

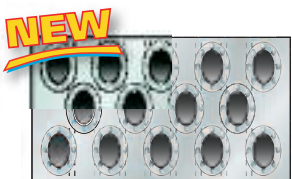


Round Tube Coil by Others

The Thermal-Pak® coil was patented in 1987 and changed the thinking of system design engineers by changing the shape of the coil tubes. The elliptical tube design maximized the effective tube surface area while lowering airside pressure drop and allowing for higher water loading. The combination of the elliptical shape tube in the Thermal-Pak® orientation increased heat transfer efficiency and resulted in one of the highest capacities per plan area of evaporative condensers available today.



Thermal-Pak® Coil II by EVAPCO



Ellipti-fin™ Finned Elliptical Tube by EVAPCO

Throughout the late 1980's and into the 1990's EVAPCO was continuously looking for ways to improve heat transfer efficiency. This research resulted in the development of the Thermal-Pak® II heat transfer coil. The Thermal-Pak® II coil utilized the same elliptical shape tube introduced in the original Thermal-Pak® coil, but changed the orientation of the tubes to improve the tubes air to water interface for increased heat transfer efficiency.

The development of the Thermal-Pak® II coil resulted in a reduction in refrigerant charge as well as a reduction in operating weight through reduced coil volume while maintaining the same thermal performance as the original Thermal-Pak® coil design.

Research and development is an on-going process at EVAPCO. Through the success of the Thermal-Pak® II coil, EVAPCO saw the potential for new coil configurations and the need for new manufacturing technology to improve processes and efficiency. During this same time, it became evident that a need exists for more environmentally conscious evaporative cooling products.

EVAPCO used the experience gained through the development of the Thermal-Pak® and Thermal-Pak® II heat transfer coils and combined with new manufacturing procedures to develop the **Ellipti-fin™** heat transfer coil. The **Ellipti-fin™** coil utilizes elliptical shape tube with extended surface fins for maximum heat transfer efficiency. **The extended surface increases the heat transfer efficiency in the evaporative or wet mode as well as the dry mode of operation.**

The **Ellipti-fin™** coil incorporates features of both the Thermal Pak and Thermal Pak II coils as the tubes are oriented vertically yet spaced so as not to increase the airside pressure drop. As such, eco-ATC-A condensers are not subject to the performance penalties normally associated with round tube extended surface coils.

Ellipti-fin™ coils are manufactured from high quality internally enhanced **CROSSCOOL™** carbon steel tubing following the most stringent quality control procedures. Each circuit is inspected to assure the material quality and then tested before being assembled into a coil. Finally, the assembled coil is tested in accordance with the "Pressure Equipment Directive" (PED) 97/23/EC. To protect the coil against corrosion, it is placed in a heavy-duty steel frame and the entire assembly is dipped in molten zinc (hot dip galvanized) at a temperature of approximately 430°C.

EVAPCO'S new **Ellipti-fin™** condensing coils are designed for maximum heat transfer efficiency. This unique coil design utilizes counterflow heat transfer. The rows of the finned elliptical tubes are positioned vertically in the direction of airflow to enhance turbulence, which increases heat transfer while minimizing airside pressure drop. The design features of EVAPCO's **Ellipti-fin™** condensing coils ensure the end user will receive maximized evaporative heat transfer efficiency wet or dry. These characteristics and other engineering advancements of the **Ellipti-fin™** have been proven in EVAPCO'S world-class research and development laboratory.

DESIGN FEATURES

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EVAPCOAT Corrosion Protection System

EVAPCO, long known for using premium materials of construction, has developed the ultimate system for corrosion protection in galvanized steel construction – the EVAPCOAT Corrosion Protection System. Marrying corrosion free materials with heavy gauge mill hot-dip galvanized steel construction to provide the longest life product with the best value.

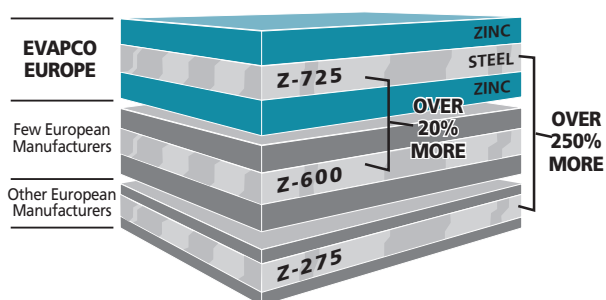
The Evapcoat Corrosion Protection System consist of:

- **Z-725 Mill Hot-Dip Galvanized Steel Construction**

Mill hot-dip galvanized steel has been successfully used for over 25 years for the protection of evaporative condensers against corrosion. There are various grades of mill galvanized steel each with differing amounts of zinc protection. EVAPCO has been a leader in the industry in developing heavier galvanizing, and was the first to standardize on Z-600 mill hot-dip galvanized steel. Now, EVAPCO is, once again, increasing the level of corrosion protection by being the first and only manufacturer in Europe to use Z-725 mill hot-dip galvanized steel.

Z-725 designation means there is a minimum of 725 g of zinc per m² of surface area present on the steel. Z-725 is the heaviest level of galvanizing available for manufacturing evaporative condensers and has over 2.5 times more zinc protection than competitive designs using Z-275 steel. With Z-725 mill hot-dip galvanized steel construction, EVAPCO provides galvanized steel panels with corrosion protection that approaches the level of the hot-dip galvanized heat exchanger coils.

During fabrication, all panel edges are coated with a 95% pure zinc-rich compound for extended corrosion resistance.



- **Type 304 Stainless Steel Strainers**

Subjected to excessive wear and corrosion, the sump strainer is critical to the successful operation of the condenser. EVAPCO uses only stainless steel for this very important component.

- **PVC Air Inlet Louvers**

The innovative design uses corrosion free materials while effectively eliminating splash out and reducing the potential for algae formation inside the condenser.

- **PVC Drift Eliminators**

The final elements in the upper part of the condenser are moisture eliminators which strip the entrained water droplets from the leaving air stream.

EVAPCO eliminators are constructed entirely of inert, corrosion-free PVC. This PVC material has been specially treated to resist damaging ultraviolet light. The eliminators are assembled in easily handled sections to facilitate removal thereby exposing the upper portion of the unit and water distribution system for periodic inspection.

- **PVC Water Distribution System, ZM II™ Spray Nozzle**

The fixed position ZM II™ Spray Nozzles are mounted in corrosion-free PVC water distribution pipes. Together, these elements combine to provide unequalled coil coverage, scale prevention and make the industries best performing non-corrosive, maintenance-free water distribution system.

- **Totally Enclosed Motors**

EVAPCO uses totally enclosed motors for all fan and pump motors as standard. These superior motors help to assure longer equipment life without motor failures, which result in costly downtime.

- **Alternate Materials of Construction**

EVAPCO induced draft condensers have a modular design which allows for specific areas to be enhanced for increased corrosion protection. For particularly corrosive environments, EVAPCO condensers are available with Stainless Steel construction for the basin and/or casing.

- **Stainless Steel Basin - Welded Execution**

The basin area of a condenser is often subjected to high concentrations of impurities and silt. In addition to the EVAPCOAT Corrosion Protection System, EVAPCO offers optional welded stainless steel construction for superior corrosion resistance. This option provides Type 304 or Type 316 stainless steel for the entire basin section - including the support columns and air inlet louver frames.

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DESIGN FEATURES

Belt Drive Units – 2.3 m and 2.4 m Wide Models

eco-ATC-122A to eco-ATC-M906A

The fan motor and drive assembly on these units are designed to allow easy servicing of the motor and adjustment of the belt tension from the exterior of the unit. The T.E.F.C. fan motor is mounted on the outside of these models.

A large hinged access door with a "quick release" latch provide access to the fan section for maintenance.



External Motor Mount (with optional ladder)

Belt Drive Units – 3 m and 3.6 m Wide Models

eco-ATC-300A to eco-ATC-3846A

Designed as the ideal replacement condenser, these models provide both cost effective and energy efficient alternatives to obsolete centrifugal fan designs. The 3 m wide plan areas are also well suited for new installations and provide more layout flexibility. The unique belt drive design features are detailed below.



Motor Base Assembly

The fan motor and drive assembly is designed to allow easy servicing of the motor and adjustment of the belt tension from the exterior of the unit. The T.E.A.O. fan motor is located inside the fan casing on a rugged heavy duty motor base. The innovative motor base also features a unique locking mechanism for a positive adjustment.



Motor Access

The motor base is designed to swing out through a very large 1.3 m² access opening. This allows for easy servicing of the motor.

Power- Band Drive Belt: The Power-Band is a solid-back, multigroove belt system that has high lateral rigidity. The belt is constructed of neoprene with polyester cords. The drive belt is designed for 150 percent of the motor nameplate kW for long life and durability.

Fan Shaft Bearings: The fan shaft bearings in ATC units are specially selected for long, trouble-free life. They are rated for an L-10 life of 75,000 to 135,000 hours and are the heaviest pillow block bearings available.

Aluminum Alloy Pulleys: Fan pulleys are constructed of corrosion free aluminum for long life. The aluminum also helps belts last longer.

DESIGN FEATURES

ECO-ATC-A

Water Management High Efficient Water Saver Drift Eliminators

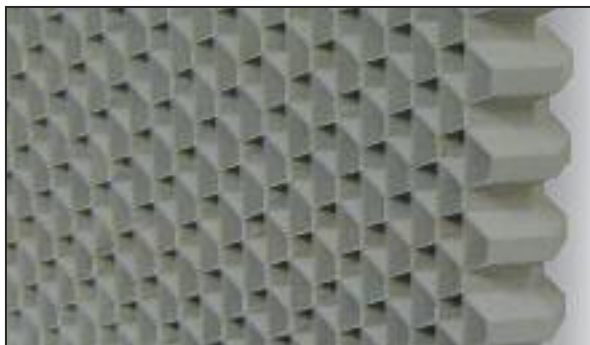
An extremely efficient drift eliminator system is standard on EVAPCO condensers. The patented system removes entrained water droplets from the air stream to limit the drift rate to less than 0.001% of the recirculating water rate. With a low drift rate, EVAPCO condensers save valuable water and water treatment chemicals. The drift eliminators are constructed of an inert polyvinyl chloride (PVC) plastic material which effectively eliminates corrosion of these vital components. They are assembled in sections to facilitate easy removal for inspection of the water distribution system.



Superior WST Air Inlet Louver and Screen Design

EVAPCO's patented WST Inlet Louvers keep water in and sunlight out of the basins of induced draft products. The unique non-planar design is made from light-weight PVC sections which easily fit together and have no loose hardware, enabling easy basin access.

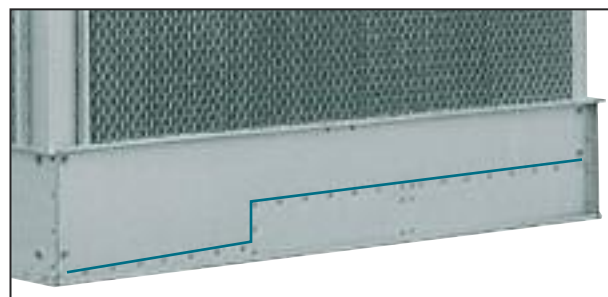
Developed with computational fluid dynamics (CFD) software, the louver's air channels are optimized to maintain fluid dynamic and thermodynamic efficiency and block all line-of-sight paths into the basin eliminating splash-out; even when the fans are off. Additionally, algae growth is minimized by blocking all sunlight.



The combination of easy basin access, no splash-out and minimized algae growth saves the end user money on maintenance hours, water consumption and water treatment costs.

"Clean Pan" Basin Design

EVAPCO condensers features a completely sloped basin from the upper to lower pan section. This "Clean Pan" design allows the water to be completely drained from the basin. The water will drain from the upper section to the depressed lower basin section where the dirt and debris can be easily flushed out through the drain. This design helps prevent buildup of sedimentary deposits, biological films and minimizes standing water.



Sloped Basin

ZM II™ Spray Nozzle Water Distribution System

Even and constant water distribution is paramount for reliable, scale-free evaporative cooling. EVAPCO's Zero Maintenance ZM II™ Spray Nozzle, mounted in a PVC distribution pipe remains clog-free under the toughest conditions to deliver approximately 4 l/s to every square meter of coil plan area.

The heavy-duty ABS ZM II™ Spray nozzles have a 33 mm diameter opening and a 38 mm splash plate clearance, enabling EVAPCO to use 75% fewer nozzles.



ZM II™ Nozzle

eco-ATC-A

OPTIONAL EQUIPMENT

Two Speed Motors

Two speed fan motors can provide an excellent means of capacity control. In periods of lightened loads or reduced wet bulb temperatures, the fans can operate at low speed, which will provide about 60% of full speed capacity, yet consume only about 15% of the power compared with high speed. In addition to the energy savings, the sound levels of the units will be greatly reduced at low speed.

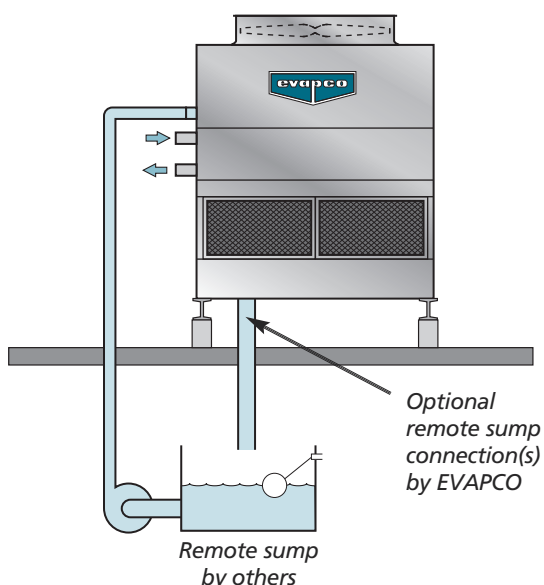
Inverter Duty Motors

Inverter Duty motors are available for condenser applications which utilize variable frequency drive systems for capacity control. Inverter Duty motors offer totally enclosed premium efficiency construction which is designed for variable frequency drive applications.

Note: Other special motor configurations are available to meet specific proper requirements. Contact your local EVAPCO sales representative for application assistance and motor availability.

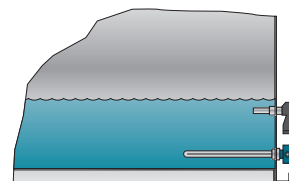
Remote Sump Configuration

For units operating in areas where temperatures may be very low, or where low temperatures may occur during periods when the unit is not operating, a sump located inside the building is the preferred means of ensuring that the basin water will not freeze. For these applications, the condenser will be supplied without the spray pump, suction strainers and all associated piping, but with an oversize bottom outlet.



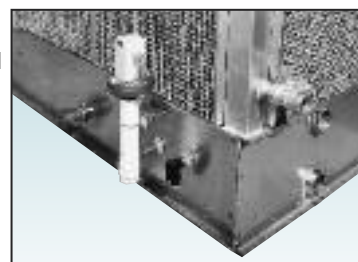
Basin Heater Package

If a remote sump configuration is not practical, electric basin heater packages are available to help prevent freeze-up of the basin water. The packages include electric heater elements and a combination with thermostat and low water cut-off. (Consult EVAPCO for heater size and application)



Electric Water Level Control

Evaporative condensers may be ordered with an electric water level control in lieu of the standard mechanical float and make-up assembly. This package provides accurate control of water levels and does not require field adjustment.



Multiple Circuit Coils

Condensers may be supplied with multiple circuit coils to match various system requirements such as split systems.

Self Supporting Service Platforms

Condensers are available with self-supporting service platforms that include access ladders which are designed for easy field installation. This option offers significant savings in comparison to field constructed, externally supported catwalks. The EVAPCO service platform option will be installed in front of the fan access doors.

Motor Davit

In the event that a fan and/or fan motor should need to be replaced, a motor davit is available from which a chain fall can be mounted to easily lower the motor/fan to the ground.



eco-ATC-A Condenser with Optional Service Platform and Motor Davit

APPLICATION

ECO-ATC-A

Design

Evapco units are of heavy-duty construction and designed for long trouble-free operation. Proper equipment selection, installation and maintenance is, however, necessary to ensure full unit performance. Some of the major considerations in the application of a cooler are presented below. For additional information, please contact the factory.

Air Circulation

It is important that proper air circulation be provided. The best location is on an unobstructed roof top or on ground level away from walls and other barriers. Those condensers located in wells, enclosures or adjacent to high walls must be properly located to avoid the problems associated with recirculation.

Recirculation raises the wet bulb temperature of the entering air causing the water temperature to rise above the design. For these cases, the discharge of the fan should be located at a height even with the adjacent wall, thereby reducing the chance of recirculation. For additional information, see the Evapco Equipment Layout Manual.

Good engineering practice dictates that the condenser discharge air not be directed or located close to or in the vicinity of building air intakes.

Recirculating Water System

The surest way to protect the recirculating water system from freezing is with a remote sump. The remote sump should be located inside the building and below the unit. When a remote sump arrangement is selected, the spray pump is provided by others and installed at the remote sump. All water in the condenser basin should drain to the remote sump when the spray pump cycles off.

Other freeze protection methods are available when a remote sump is not feasible. Electric pan heaters can be used to keep the pan water from freezing when the unit cycles off. Water lines to and from the unit, spray pump and related piping should be heat traced and insulated up to the overflow level in order to protect from freezing. The unit should not be operated dry (fans on, pump off) unless the basin is completely drained and the unit has been designed for dry operation. Consult the factory when dry operation is a requirement.

Maintaining the Recirculated Water System

The heat rejection in a condenser is accomplished by the evaporation of a portion of the recirculated spray water. As this water evaporates, it leaves behind all of its mineral content and impurities. Therefore, it is important to bleed-off an amount of water equal to that which is evaporated to prevent the build-up of these impurities. If this is not done, the mineral or the acidic nature of the water will continue to increase. This will ultimately result in heavy scaling or a corrosive condition.

Bleed-off

Each unit supplied with a pump mounted on the side is furnished with a clear bleed line for visual inspection and a valve which, when fully open, will bleed-off the proper amount of water. If the make-up water supplying to the unit is relatively free of impurities, it may be possible to cut back the bleed, but the unit must be checked frequently to make sure scale is not forming. Make-up water pressure should be maintained between 140 and 340 kPa.

Water Treatment

In some cases the make-up water will be so high in mineral content that a normal bleed-off will not prevent scaling. In this case, water treatment will be required and a reputable water treatment company familiar with the local water conditions should be consulted.

Units constructed of galvanized steel operating with circulating water having a pH of 8.3 or higher will require periodic passivation of the galvanized steel to prevent the formation of "white rust".

Any chemical water treatment used must be compatible with the galvanized construction of the unit. If acid is used for treatment, it should be accurately metered and the concentration properly controlled. The pH of the water should be maintained between 7 and 8.8. Batch chemical feeding is not recommended because it does not afford the proper degree of control. If acid cleaning is required, extreme caution must be exercised and only inhibited acids recommended for use with galvanized construction should be used.

Control of Biological Contamination

Water quality should be checked regularly for biological contamination. If biological contamination is detected, a more aggressive water treatment and mechanical cleaning program is required. The water treatment program should be performed in accordance with local legislation and in conjunction with a qualified water treatment company. It is important that all internal surfaces be kept clean of accumulated dirt or sludge. In addition, the drift eliminators should be kept in good operating condition to minimize water from exiting the condenser unit in the discharge air. To minimize the risk of biological contamination, at initial start up or after an extended shut down, it is recommended that the condenser be properly treated. Clean all debris such as leaves and dirt from the unit. Completely fill the basin to the overflow level with fresh water. Initiate a biocide water treatment or shock treatment program prior to operating the unit. It is preferable that all such procedures be conducted or supervised by a water treatment specialist.

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APPLICATION

Piping

Evaporative condensers are used in refrigeration systems as an efficient means of heat rejection. Their installation and specifically the installation of the piping to and from the evaporative condenser has a direct effect on their operation and the overall energy efficiency of the refrigeration system. In this manual, we will explore the principles of piping evaporative condensers, beginning with single condensers and exploring multiple condenser installations as well as thermosiphon and sub-cooling piping systems.

Background

Evaporative condensers came into common use for nearly all refrigeration systems because of their operating advantages over the combination of cooling towers and condensers. They, of course, have also replaced the old "once through" water cooled condensing systems which are obsolete today because of the restrictions on the unlimited use of water coupled with its high cost.

Although, shell and tube condensing systems performed the same job of condensing the hot discharge gas into a saturated liquid as evaporative condensers; a small difference in the operating characteristics, namely pressure drop, requires some modification in the refrigerant piping hookup to and from the evaporative condenser. These changes are particularly important when dealing with multiple unit installations. In order to understand why the piping hookup is important, let's first take a brief look at the basic design differences of the two types of condensers to see why there is a difference in the pressure drop characteristics.

TYPICAL SHELL AND TUBE WATER COOLED CONDENSER

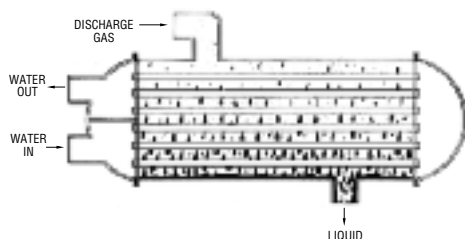


Figure 1

The shell type refrigerant condensers allow the refrigerant to flow around and condense on the outside of the water tubes. (See Figure 1) The refrigerant flow is almost entirely unimpeded resulting in a very low or nearly zero pressure drop through the condenser.

TYPICAL EVAPORATIVE CONDENSER COIL

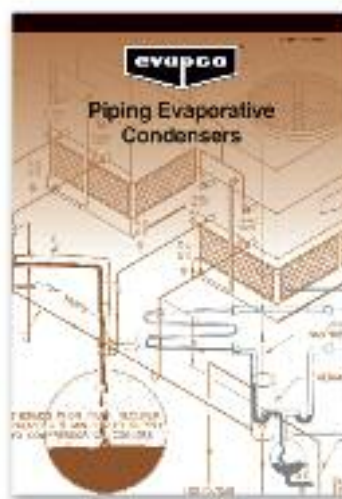


Figure 2

Contrasting, most evaporative condensers (See Figure 2) utilize some type of serpentine coil design where the hot refrigerant gas enters the top of the coil traveling back and forth through several rows as it is cooled and changed from a hot superheated gas to a saturated liquid. This longer travel path generally produces a small pressure drop which, though insignificant to the overall operation of the refrigeration system, does require proper attention be given to the condenser piping. Most of this attention needs to be focused on the liquid drain line from the outlet of the evaporative condenser to the high pressure receiver. The reason for this is described in the "Piping Brochure".

Piping Brochure

For additional information refer to EVAPCO Bulletin 131-E "Piping Evaporative Condensers" or consult your nearest Representative.



Other Useful Manuals available on EVAPCO Web-site



APPLICATION

eco-ATC-A

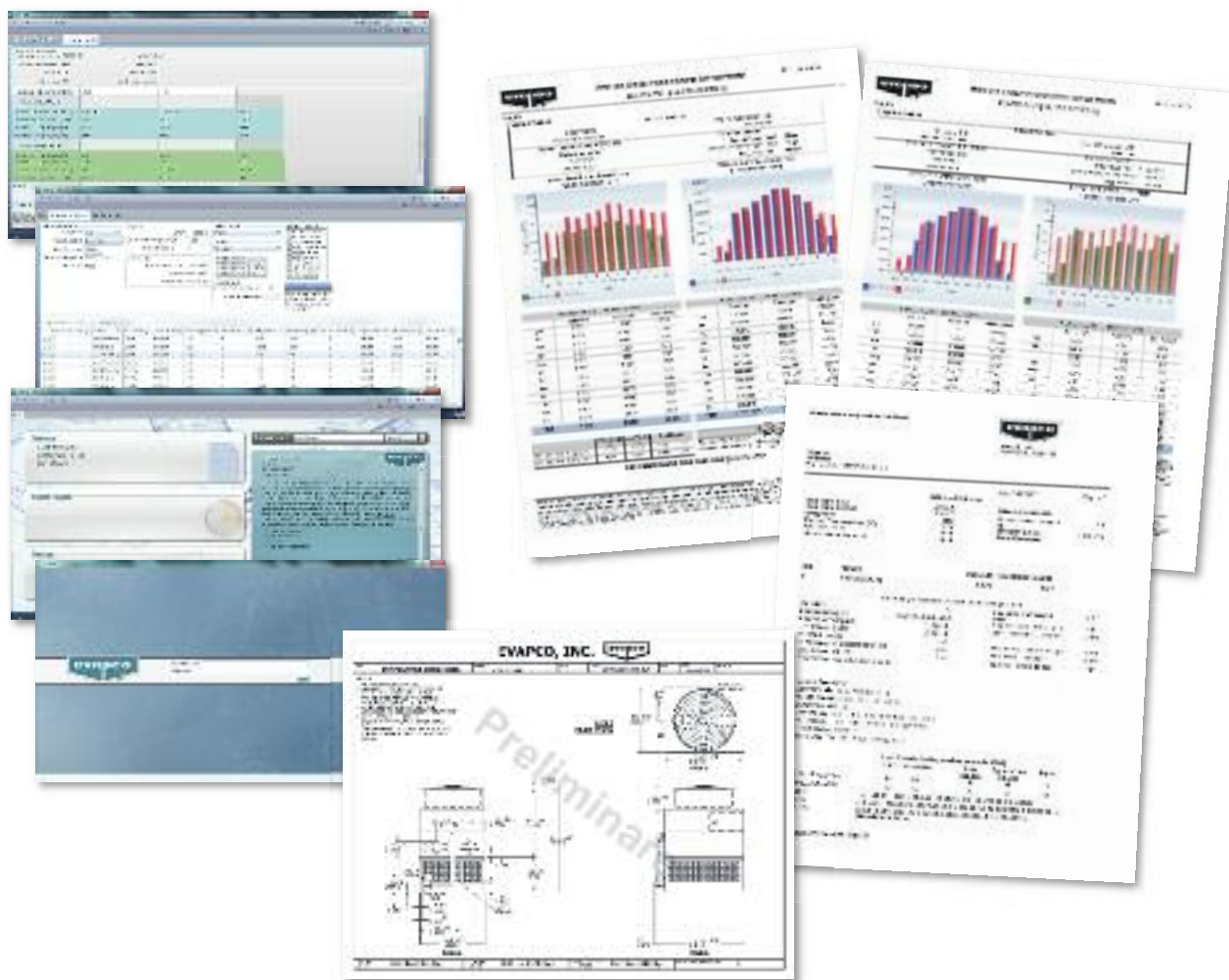
Technical Support Services

EVAPCO's evapSelect™ Equipment Selection Program

EvapSelect™ is a Web based computer selection program which allows the design engineer to choose EVAPCO models and optimize unit selections. The program allows the engineer to evaluate the equipment's thermal performance, space, energy requirements and water consumption. Once the model is selected and optional equipment features are inserted, the engineer may output a complete specification **AND** a unit drawing from this program.

The software is designed to provide the user with maximum flexibility in analyzing the various selection parameters while in a friendly and familiar Windows format.

The EvapSelect™ software is available to all consulting engineering offices and design-build contractors. The programs are distributed through the local EVAPCO sales representative or the EVAPCO offices.

**EVAPCO's Website**

Log on to EVAPCO's new and improved website <http://www.evapco.eu> for expanded product information. Product literature, Rigging and Maintenance Instructions are all accessible online from your computer.

The EvapSelect™ Equipment Selection Software program may be accessed using Microsoft Internet Explorer after contacting your local EVAPCO sales representative. Users may make Requests for Quotation through the website or by e-mailing EVAPCO at this address:

evapco.europe@evapco.eu

With the EvapSelect™ program, equipment selections, written specifications, unit drawing files and EVAPCO on-line information are readily available from the comfort of your own office!

eco-ATC-A

Notes:



The eco-ATC-A Evaporative Condenser is now available with three (3) equipment options to reduce the overall sound generated from the side or top of the eco-ATC-A Evaporative Condenser.

Each option provides various levels of sound reduction and can be used in combination to provide the lowest sound level.

Ultra Quiet Evaporative Condensers



**Ultra Quiet operation
for induced draft
counterflow
Evaporative Condensers**

eco-ATC-A

ADVANCED TECHNOLOGY LOW SOUND SOLUTIONS

Super Low Sound Solution for Sound Sensitive Applications



Family of Super Low Sound Fans

The Super Low Sound Fan

Reduced Sound Levels versus Model eco-ATC-A Standard Fan

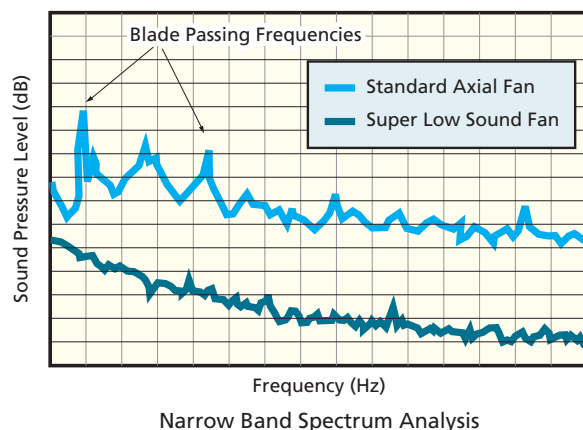
EVAPCO's Super Low Sound Fan on the **eco-ATC-A** Evaporative Condensers utilizes an extremely wide chord blade design applied for sound sensitive applications where the lowest sound levels are desired. The fan is one piece molded heavy duty FRP construction utilizing a forward swept blade design. The Super Low Sound Fan reduces sound levels 9 to 15 dB(A) compared to the Model eco-ATC-A standard fan.

Improved Sound Quality versus Model eco-ATC-A Standard Fan

The SUPER Low Sound Fan on the **eco-ATC-A** Condenser reduces sound levels 9-15 dB(A) and eliminates audible blade passing frequencies indicative of straight bladed axial type fans.

Refer to the Narrow Band Spectrum graph which shows how straight bladed axial fans produce blade passing frequencies – the same phenomena that produce the signature pulsating helicopter noise.

The blade passing frequencies are audible spikes in sound pressure levels, but are not apparent in the octave band sound spectrum.



*The Super Low Sound Fan on the **eco-ATC-A** Evaporative Condensers reduces sound levels and betters the sound quality!*

NOTE: These low sound options may impact the overall installed dimensions of the eco-ATC-A Evaporative Condenser selected.

ADVANCED TECHNOLOGY LOW SOUND SOLUTIONS

eco-ATC-A

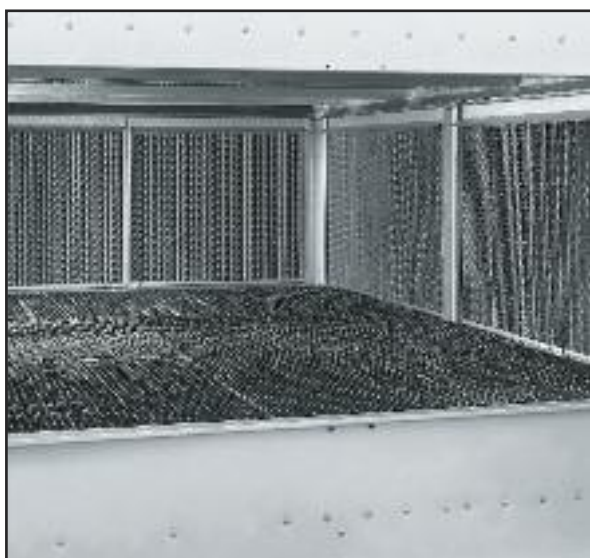
Additional Solutions for Sound Sensitive Applications



Low Sound Fan 4 – 7 dB(A) Reduction!

The Low Sound Fan offered by EVAPCO is a wide chord blade design for sound sensitive applications where low sound levels are desired. The Low Sound Fan shall utilize a unique soft-connect blade-to-hub design that is compatible with Variable Speed Drives.

The Low Sound Fan is capable of reducing the unit sound pressure levels 4 dB(A) to 7 dB(A), depending upon specific unit selection and measurement location. The fans are high efficiency axial propeller type and are available on 2.4 m wide and larger eco-ATC-A Evaporative Condensers.



Water Silencer

Reduces Water Noise in the Cold Water Basin up to 7 dB(A)!

The water silencer option is available for all induced draft models and is located in the falling water area of the cold water basin. The water silencer will reduce the high frequency noise associated with the falling water and is capable of reducing overall sound levels **4 dB(A) to 7 dB(A)** measured at 1.5 m from the side or end of the unit. The water silencers reduce overall sound levels **9 dB(A) to 12 dB(A)** (depending on water loading and louver height) measured 1.5 m from the side or end of the unit when water is circulated with fans off.

The water silencers are constructed of lightweight PVC sections and can be easily removed for access to the basin area. *The water silencer will have no impact on unit thermal performance.*

The Water Silencer is available on ALL eco-ATC-A Evaporative Condensers.

Consult EVAPCO's **EvapSelect™** selection software for unit sound levels. If a detailed analysis or full octave band data sheet is required for your application, please consult your EVAPCO Sales Representative.

eco-ATC-A

SOUND BASIC

Background in Sound Basics

Sound

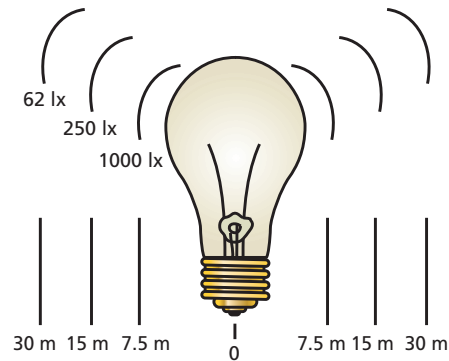
Sound is the alteration in pressure, stress, particle displacement and particle velocity, which is propagated in an elastic material. Audible sound is the sensation produced at the ear by very small pressure fluctuations in the air.

Sound Pressure

Sound pressure is the *intensity* of sound. Sound pressure, L_p in decibels is the ratio of measured pressure, P in the air to a reference sound pressure, $P_0 = 2 \times 10^{-5}$ Pascal following the following formula:

$$L_p \text{ (dB)} = 10 \log_{10} (\Delta P^2 / \Delta P_0^2)$$

The most important point to understand about sound pressure level is that **sound pressure level is what is actually being measured when sound data is recorded.** Microphones that measure sound are pressure sensitive devices that are calibrated to convert the sound pressure waves into decibels.



"SOUND PRESSURE"

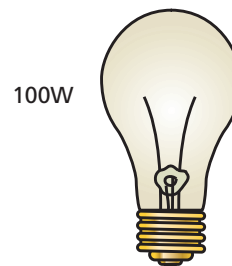
Similar to the intensity coming from a light bulb which gets dimmer as one gets further and further away, sound pressure decreases in decibels as your ear gets further from the sound source.

Sound Power

Sound Power is the *energy* of sound. Sound power, L_w in decibels is the ratio of the calculated sound power, W to a reference power, $W_0 = 1$ picowatt, according to the following formula:

$$L_w \text{ (dB)} = 10 \log_{10} (W / W_0)$$

The most important point to remember about **sound power level is that sound power level is not a measured value, but is calculated based on the measured sound pressure.**



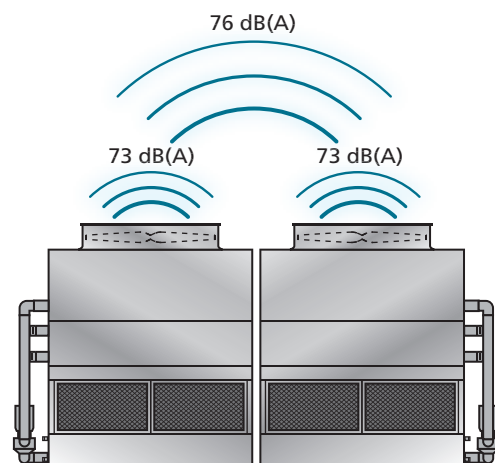
"SOUND POWER"

Similar to the wattage of a light bulb that does not change the farther one is away from the light bulb, sound power does not vary with distance.

Adding Multiple Sound Sources

Since the decibel is a logarithmic function, the numbers are not added linearly. Therefore, two 73 dB sound sources added together do not equal 146 dB. The resultant sound would actually be 76 dB. The following table shows how to add decibels from two sound sources.

Difference in dB Level	Add to the higher dB Level
0 to 1	3
2 to 3	2
4 to 8	1
9 or greater	0

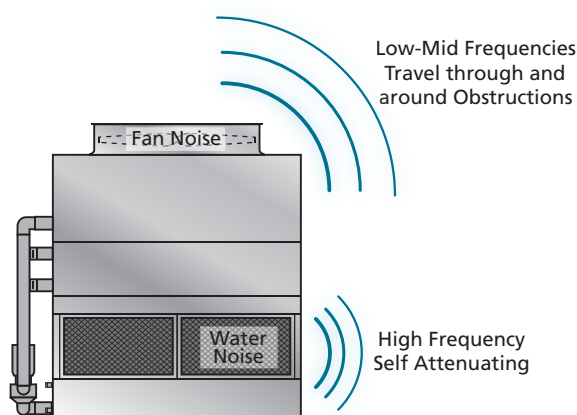


SOUND BASIC

eco-ATC-A

Sound Science and Evaporative Condensers

Sound Frequency



Fan Noise

- Low / Mid frequencies that travel long distances, through walls, and around obstructions.
- Very difficult to attenuate. Reduce fan noise by using Low Sound Fans.
- Dominates what is measured and heard at the Closed Circuit Cooler and at the sound sensitive location.

Water Noise

- High frequencies that attenuate naturally with distance. Attenuated easily by walls, trees or other obstructions.
- Totally masked and drowned out by fan noise at a short distance away from the Condenser.

Sound Pressure – The A-Weighted Scale

The A-weighted scale, dB(A) is a means to translate what a sound meter microphone measures to how the human ear perceives the sound.

dB(A) Formula and Conversions:

$$\text{dB(A)} = 10 \log_{10} \sum_{f=63}^{f=8000} 10^{((\text{dB} + C_f) / 10)}$$

where: C_f = correction factor per band
 dB = measured sound pressure
 let: $Z_f = (\text{dB} + C_f) / 10$

Band	Center Freq. (Hz)	Frequency Range (Hz)	Sample Data (dB)	C_f (dB)	Z_f
1	63	44-88	68	-26.2	4.18
2	125	89-175	76	-16.1	5.99
3	250	176-350	77	-8.6	6.84
4	500	351-700	73	-3.2	6.98
5	1000	701-1400	70	0	7.00
6	2000	1401-2800	68	+1.2	6.92
7	4000	2801-5600	71	+1.0	7.20
8	8000	5601-11200	73	-1.1	7.19

Typical Sound Pressure Levels of Well Known Noises:

Jet Airplane, 45 meters away	140 dB(A)
Painful	130 dB(A)
Very Uncomfortable	120 dB(A)
Circular Saw	110 dB(A)
Nightclub	100 dB(A)
Semi Truck	90 dB(A)
Sidewalk of a Busy Road	80 dB(A)
Household Vacuum, 1 meter away	70 dB(A)
Normal Conversation	60 dB(A)
Inside Average Home	50 dB(A)
Quiet Library	40 dB(A)
Bedroom at Night	30 dB(A)

Notable Facts about Sound:

- +/- 1 dB(A) is inaudible to the human ear
- Decreasing a noise source by 10 dB(A) sounds half as loud to the human ear

Example calculation of the dB(A) formula using the Sample Data above.

$$\begin{aligned} \text{dB(A)} &= 10 \log_{10} \sum 10^{(Z_1)} + 10^{(Z_2)} + 10^{(Z_3)} + 10^{(Z_4)} + 10^{(Z_5)} + 10^{(Z_6)} + 10^{(Z_7)} + 10^{(Z_8)} \\ &= 10 \log_{10} (67114245.2) = 78.3 \text{ dB(A)} \end{aligned}$$

eco-ATC-A

SPECIFYING SOUND

Sound Verifications

Specify sound pressure in dB(A) measured 1,5 m above the fan discharge during full speed operation.

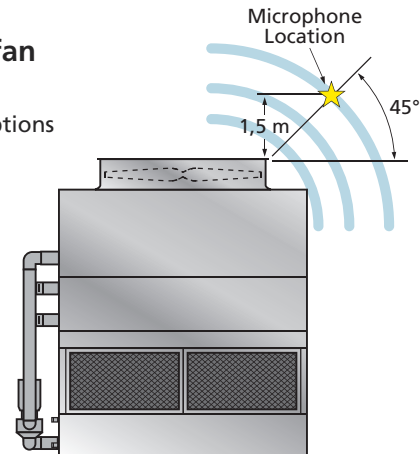
- All manufacturers can meet a performance specification with Low Sound Options
- Fan noise is what matters. 1,5 m above the fan is where it matters.

Measurement Location

Per Cooling Technology Institute Standard ATC-128

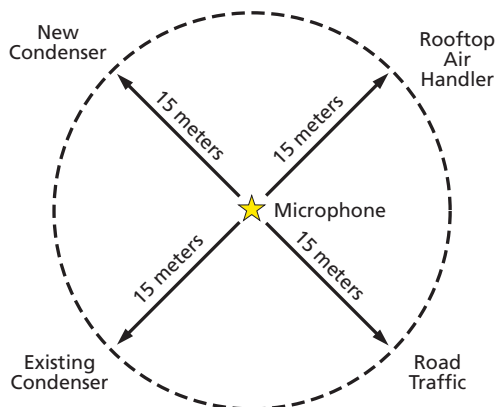
Sound Microphone location 1,5 m above the Condenser fan cowl edge at a 45° angle.

This position assures accurate sound measurements by eliminating a source of uncertainty by taking the microphone out of the high velocity fan discharge air.



Easy Verification

At 1,5 m from the Condenser, a sound meter records only closed circuit cooler noise. Interested parties can easily verify the actual noise coming from the closed circuit cooler against the specified sound data with good certainty.



If sound were specified at 15 meters or some greater distance from the sound sensitive location, there is increased uncertainty in the measured data due to other possible sound sources within the 15 meters radius of the sound microphone.

Sound Quality

Sound coming from the top of the Condenser is comprised of low- and mid-frequency fan noise. Low- and mid-frequency fan "rumble" is very difficult to attenuate. Fan rumble travels through everything and around everything and what is audible at any sound sensitive location.

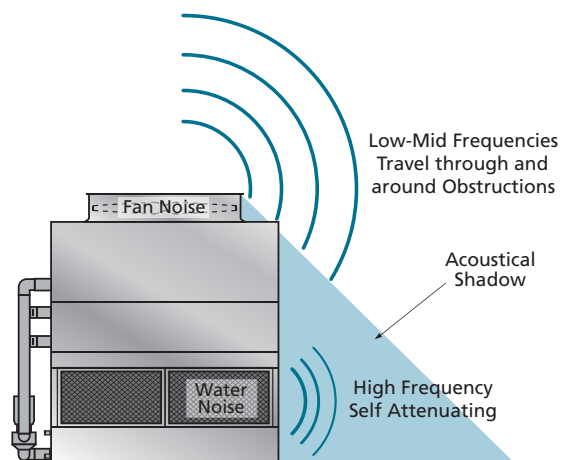
Sound coming from the sides of the condenser is comprised of high frequency water noise, is much less objectionable than fan noise and attenuates naturally with distance.

Acoustical Shadow*

"Subjective reactions to the overall noise generated by Condensers indicate that as one walks away from a tower intake, a point is reached where the water noise is masked by the fan noise. The point coincides with the point at which one emerges from the acoustical shadow of the Condenser structure, which shields intake water noise from discharge fan noise."

*Seelbach & Oran, "What To Do About Cooling Tower Noise", Industrial Acoustics Company.

Sound measured at the side of a Condenser is inside the acoustical shadow of the noise emitted from the top. Outside the acoustical shadow, the low- and mid-frequency fan noise completely masks the high frequency water noise.



Specify fan noise because it matters! Specify fan noise where it matters!

eco-ATC-A

We Stand Tall Through it All!

Wind, Rain, Earthquake and Hurricane

The International Building Code (IBC) is a comprehensive set of regulations addressing the structural design and installation requirements for building systems – including HVAC and industrial refrigeration equipment.

With the advent of the IBC, EVAPCO is proud to introduce the new and improved line of eco-ATC-A Evaporative Condensers with IBC 2012 compliance standard.

***EVAPCO Evaporative Condensers...
designed to withstand seismic
or wind load forces.***

eco-ATC-A

IBC COMPLIANCE

In its continuing commitment to be the leaders in evaporative cooling equipment design and services, EVAPCO eco-ATC-A Evaporative Condensers are now **Independently Certified** to withstand Seismic and Wind Loads in accordance with IBC 2012.

What is IBC?

International Building Code

The International Building Code (IBC) is a comprehensive set of regulations addressing both the structural design and the installation requirements for building systems – including HVAC and industrial refrigeration equipment. Compared to previous building codes that considered only the building structure and component anchorage, the requirements contained within the IBC address anchorage, structural integrity, and the operational capability of a component following either a seismic or wind load event. **Simply stated, the IBC code provisions require that evaporative cooling equipment, and all other components permanently installed on a structure, must be designed to meet the same seismic or wind load forces as the building to which they are attached.**

How Does IBC 2012 Apply to Evaporative Condensers?

Based on site design factors, calculations are made to determine the equivalent seismic “g force” and wind load (kilo-Newton per square meter, kN/m²) on the unit. The condenser must be designed to withstand the greater of either the seismic or wind load.

The New eco-ATC-A is offered with a choice of TWO structural design packages:

- **Standard Structural Design** – For projects with ≤1.0g seismic or 6,94 kN/m² wind loads
- **Upgraded Structural Design** – Required for projects with >1.0 g seismic or 6,94 kN/m² wind loads

All locations with design criteria resulting in a seismic design force of up to 1.0g or a wind load of 6,94 kN/m² or below will be provided with the standard eco-ATC-A structural design. An upgraded structural design is available for installations with design criteria resulting in “g forces” greater than 1.0g. The highest “g force” location in North America is 5.12g. The highest wind load shown on the maps is 273 km/h, which is approximately equal to 6,94 kN/m² velocity pressure. **Therefore, the upgraded structural design package option for the New eco-ATC-A is designed for 5.12 g and 6,94 kN/m² making it applicable to most building locations all over the World.**

Design Implementation

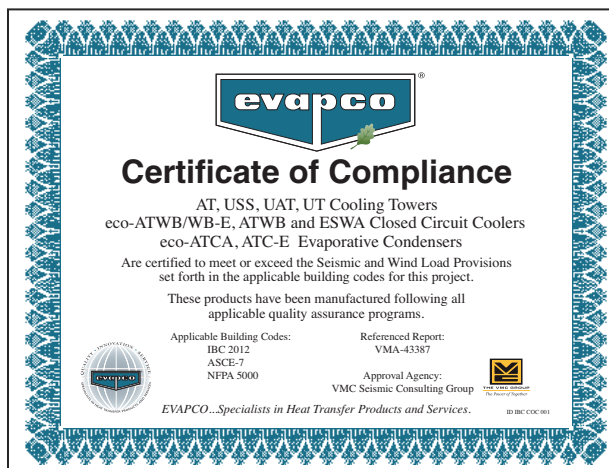
EVAPCO applies the seismic design and wind load information provided for the project to determine the equipment design necessary to meet IBC requirements. This process ensures that the mechanical equipment and its components are compliant per the provisions of the IBC as given in the plans and specifications for the project.

Independent Certification

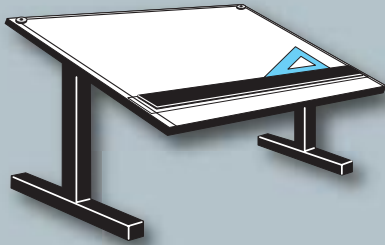
Although the IBC references and is based on the structural building code ASCE 7, many chapters and paragraphs of ASCE 7 are superseded by the IBC, independent certification and methods of analysis are such paragraphs. Per the most recent edition of the code, the EVAPCO compliance process included an exhaustive analysis by an independent approval agency. As required by the International Building Code, EVAPCO supplies a certificate of compliance as part of its submittal documents. The certificate of compliance demonstrates that the equipment has been independently tested and analyzed in accordance with the IBC seismic and wind load requirements. Evapco has worked closely with the independent approval agency, The VMC Group, to complete the independent equipment testing and analysis.

If the seismic “g force” or wind load psf requirements for the project site are known, EVAPCO’s online equipment selection software, **EvapSelect™**, will allow you to choose the required structural design package – either standard construction or upgraded construction.

For further questions regarding IBC compliance, please contact your local EVAPCO Representative.



eco-ATC-A



Engineering Data & Dimensions

Engineering & Data Dimensions Notes:

* The family models refer to the plan area dimensions (Width (ft) x Length (ft)).

- (1) Heaviest section is the fan-coil section. Weight shown are for 1g seismic design
- (2) Refrigerant charge is shown for R-717. Multiply by 1.93 for R22, 1.98 for R134A and 1.7 for R404A, R410A and R507A.
- (3) Liters shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (300 mm would normally be sufficient)
- (4) When a remote sump arrangement is selected, the spray pump(s), suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump
- (5) Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions

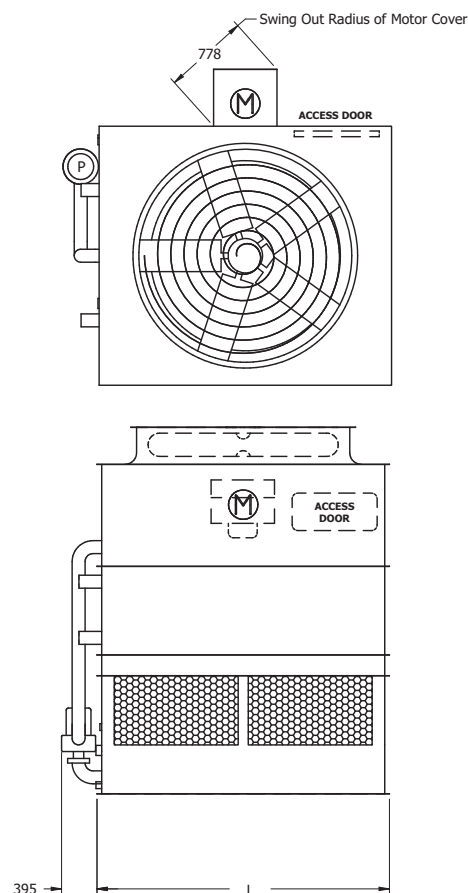
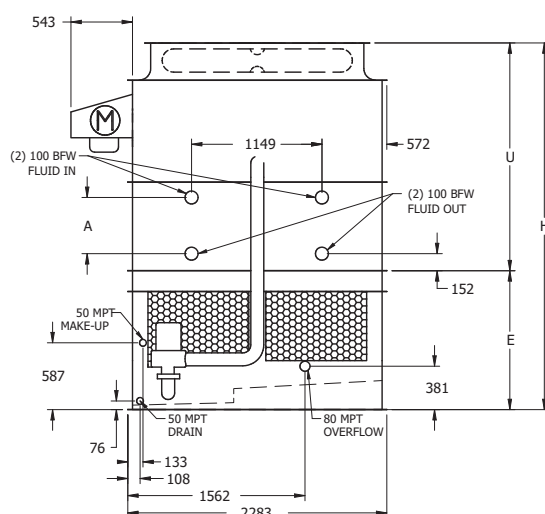
eco-ATC-A Heater Sizes (kW)			
eco-ATC-A *	-18 °C	-29 °C	-40 °C
8.5' x 7.5'	(1) 6	(1) 8	(1) 12
8' x 9'	(1) 6	(1) 9	(2) 6
8' x 10.5'	(1) 7	(2) 5	(2) 8
8' x 12'	(2) 4	(2) 6	(2) 8
8' x 14'	(2) 5	(2) 7	(2) 9
8' x 18'	(2) 6	(2) 9	(4) 6
8' x 21'	(2) 7	(4) 5	(4) 8
8' x 24'	(4) 4	(4) 6	(4) 8
8' x 28'	(4) 5	(4) 7	(4) 9
8' x 36'	(4) 6	(4) 9	(8) 6
8' x 42'	(4) 7	(8) 5	(8) 8
16' x 10.5'	(2) 7	(4) 5	(4) 8
16' x 12'	(4) 4	(4) 6	(4) 8
16' x 14'	(4) 5	(4) 7	(4) 9
10' x 12'	(2) 5	(2) 8	(2) 10
10' x 18'	(2) 7	(2) 12	(2) 15
10' x 24'	(4) 5	(4) 8	(4) 10
10' x 36'	(4) 7	(4) 12	(4) 15
12' x 12'	(2) 6	(2) 9	(2) 12
12' x 14'	(2) 7	(2) 10	(2) 15
12' x 18'	(2) 9	(2) 15	(2) 18
12' x 20'	(2) 10	(2) 15	(3) 15
12' x 24'	(4) 6	(4) 9	(4) 12
12' x 28'	(4) 7	(4) 10	(4) 15
12' x 36'	(4) 9	(4) 15	(4) 18
12' x 40'	(4) 10	(4) 15	(6) 15
24' x 12'	(4) 6	(4) 9	(4) 12
24' x 14'	(4) 7	(4) 10	(4) 15
24' x 18'	(4) 9	(4) 15	(4) 18
24' x 20'	(4) 10	(4) 15	(4) 20
24' x 24'	(4) 12	(4) 18	(6) 15
24' x 28'	(4) 15	(4) 20	(6) 18
24' x 36'	(4) 18	(6) 18	(8) 18
24' x 40'	(4) 20	(6) 20	(8) 20

*The family models refer to the plan area dimensions (Width (ft) x Length (ft)).

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 8.5' x 7.5'



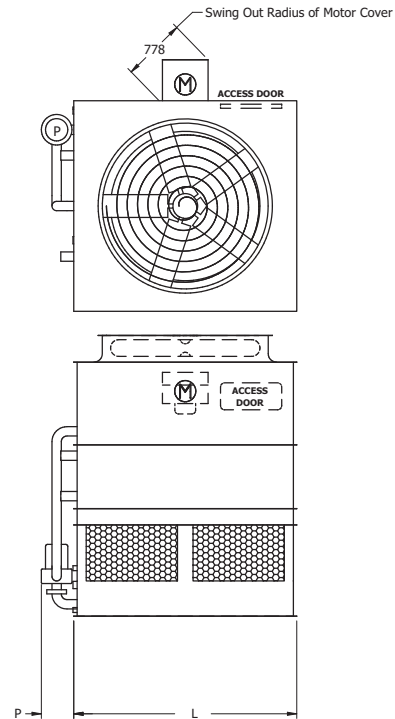
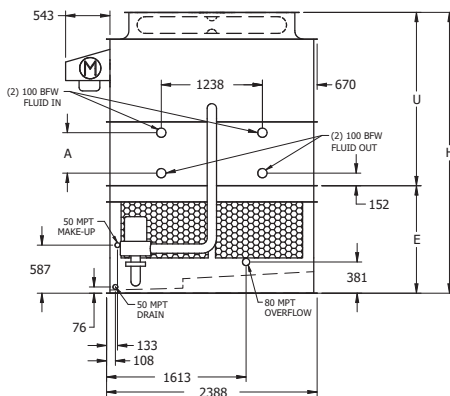
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-122A-1g	2,2	12,5	3.055	4.150	2.465	44	377	1,5	835	200	3.650	3042	1816	1226	305	2578
eco-ATC-138A-1g	4	14,8	3.060	4.155	2.470	44	377	1,5	835	200	3.655	3042	1816	1226	305	2578
eco-ATC-152A-1g	5,5	16,9	3.085	4.180	2.495	44	377	1,5	835	200	3.680	3042	1816	1226	305	2578
eco-ATC-162A-1g	7,5	18,6	3.090	4.180	2.500	44	377	1,5	835	200	3.685	3042	1816	1226	305	2578
eco-ATC-168A-1g	4	14,4	3.620	4.750	3.030	64	542	1,5	835	200	4.250	3232	2007	1226	495	2578
eco-ATC-186A-1g	5,5	16,5	3.640	4.770	3.055	64	542	1,5	835	200	4.275	3232	2007	1226	495	2578
eco-ATC-198A-1g	7,5	18,1	3.645	4.775	3.055	64	542	1,5	835	200	4.275	3232	2007	1226	495	2578
eco-ATC-191A-1g	4	14,0	4.225	5.400	3.640	83	707	1,5	835	200	4.900	3423	2197	1226	686	2578
eco-ATC-210A-1g	5,5	16,0	4.250	5.420	3.660	83	707	1,5	835	200	4.920	3423	2197	1226	686	2578
eco-ATC-223A-1g	7,5	17,6	4.255	5.425	3.665	83	707	1,5	835	200	4.925	3423	2197	1226	686	2578
eco-ATC-180A-1g	2,2	11,5	4.870	6.080	4.280	103	872	1,5	835	200	5.580	3613	2388	1226	876	2578
eco-ATC-203A-1g	4	13,6	4.875	6.085	4.285	103	872	1,5	835	200	5.585	3613	2388	1226	876	2578
eco-ATC-238A-1g	7,5	17,0	4.905	6.110	4.315	103	872	1,5	835	200	5.610	3613	2388	1226	876	2578
eco-ATC-257A-1g	11	19,1	4.960	6.170	4.375	103	872	1,5	835	200	5.670	3613	2388	1226	876	2578
eco-ATC-229A-1g	5,5	15,1	5.540	6.780	4.950	122	1038	1,5	835	200	6.280	3804	2578	1226	1067	2578
eco-ATC-243A-1g	7,5	16,5	5.545	6.785	4.955	122	1038	1,5	835	200	6.285	3804	2578	1226	1067	2578
eco-ATC-263A-1g	11	18,5	5.600	6.845	5.010	122	1038	1,5	835	200	6.345	3804	2578	1226	1067	2578

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 2.4'Mx9' & 2.4'Mx10.5'



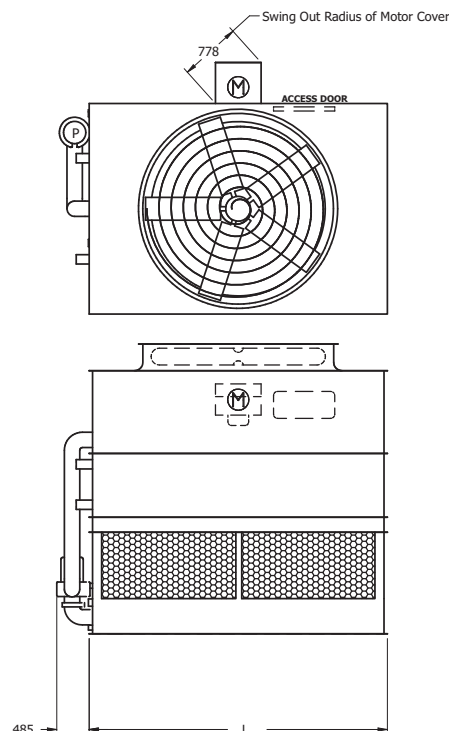
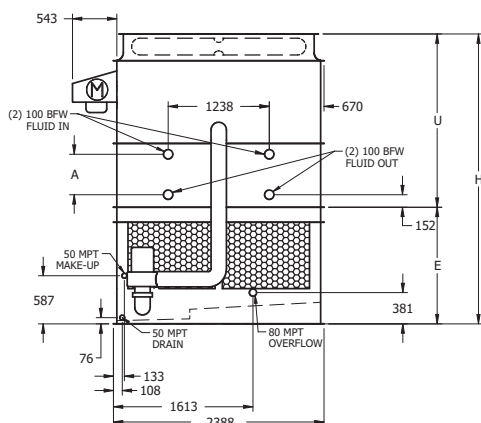
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M150A-1g	4	15,7	3.415	4.615	2.780	47	401	1,5	910	200	4.055	3248	1930	1318	305	2731
eco-ATC-M166A-1g	5,5	17,9	3.440	4.635	2.805	47	401	1,5	910	200	4.080	3248	1930	1318	305	2731
eco-ATC-M177A-1g	7,5	19,7	3.445	4.640	2.810	47	401	1,5	910	200	4.080	3248	1930	1318	305	2731
eco-ATC-M192A-1g	11	22,6	3.500	4.700	2.865	47	401	1,5	910	200	4.140	3248	1930	1318	305	2731
eco-ATC-M183A-1g	4	15,4	4.060	5.300	3.425	68	576	1,5	910	200	4.740	3439	2121	1318	495	2731
eco-ATC-M202A-1g	5,5	17,7	4.080	5.320	3.445	68	576	1,5	910	200	4.765	3439	2121	1318	495	2731
eco-ATC-M216A-1g	7,5	19,4	4.085	5.325	3.450	68	576	1,5	910	200	4.765	3439	2121	1318	495	2731
eco-ATC-M235A-1g	11	22,3	4.145	5.385	3.510	68	576	1,5	910	200	4.825	3439	2121	1318	495	2731
eco-ATC-M207A-1g	4	15,0	4.735	6.015	4.100	88	751	1,5	910	200	5.455	3629	2311	1318	686	2731
eco-ATC-M228A-1g	5,5	17,2	4.760	6.035	4.125	88	751	1,5	910	200	5.480	3629	2311	1318	686	2731
eco-ATC-M244A-1g	7,5	18,9	4.765	6.040	4.130	88	751	1,5	910	200	5.485	3629	2311	1318	686	2731
eco-ATC-M265A-1g	11	21,7	4.820	6.100	4.185	88	751	1,5	910	200	5.545	3629	2311	1318	686	2731
eco-ATC-M221A-1g	4	14,6	5.455	6.775	4.820	109	926	1,5	910	200	6.220	3820	2502	1318	876	2731
eco-ATC-M261A-1g	7,5	18,4	5.485	6.805	4.850	109	926	1,5	910	200	6.245	3820	2502	1318	876	2731
eco-ATC-M283A-1g	11	21,0	5.545	6.865	4.910	109	926	1,5	910	200	6.305	3820	2502	1318	876	2731
eco-ATC-M225A-1g	4	14,1	6.170	7.525	5.535	130	1102	1,5	910	200	6.965	4010	2692	1318	1067	2731
eco-ATC-M248A-1g	5,5	16,1	6.190	7.550	5.555	130	1102	1,5	910	200	6.990	4010	2692	1318	1067	2731
eco-ATC-M266A-1g	7,5	17,7	6.195	7.550	5.560	130	1102	1,5	910	200	6.995	4010	2692	1318	1067	2731
eco-ATC-M289A-1g	11	20,3	6.255	7.610	5.620	130	1102	1,5	910	200	7.055	4010	2692	1318	1067	2731
eco-ATC-M304A-1g	15	22,3	6.280	7.640	5.645	130	1102	1,5	910	200	7.080	4010	2692	1318	1067	2731
eco-ATC-M193A-1g	5,5	20,1	3.900	5.315	3.175	54	461	2,2	1060	250	4.660	3248	1930	1318	305	3188
eco-ATC-M205A-1g	7,5	22,1	3.910	5.325	3.185	54	461	2,2	1060	250	4.665	3248	1930	1318	305	3188
eco-ATC-M222A-1g	11	25,0	3.965	5.380	3.240	54	461	2,2	1060	250	4.720	3248	1930	1318	305	3188
eco-ATC-M236A-1g	5,5	19,7	4.710	6.175	3.985	78	666	2,2	1060	250	5.515	3439	2121	1318	495	3188
eco-ATC-M251A-1g	7,5	21,6	4.715	6.180	3.990	78	666	2,2	1060	250	5.525	3439	2121	1318	495	3188
eco-ATC-M273A-1g	11	24,8	4.770	6.235	4.045	78	666	2,2	1060	250	5.580	3439	2121	1318	495	3188
eco-ATC-M267A-1g	5,5	19,1	5.495	7.005	4.765	102	871	2,2	1060	250	6.345	3629	2311	1318	686	3188
eco-ATC-M284A-1g	7,5	21,0	5.500	7.015	4.775	102	871	2,2	1060	250	6.355	3629	2311	1318	686	3188
eco-ATC-M308A-1g	11	23,6	5.555	7.065	4.830	102	871	2,2	1060	250	6.410	3629	2311	1318	686	3188
eco-ATC-M301A-1g	7,5	20,3	6.350	7.905	5.625	127	1077	2,2	1060	250	7.250	3820	2502	1318	876	3188
eco-ATC-M328A-1g	11	22,9	6.405	7.960	5.680	127	1077	2,2	1060	250	7.305	3820	2502	1318	876	3188
eco-ATC-M346A-1g	15	24,9	6.430	7.990	5.705	127	1077	2,2	1060	250	7.330	3820	2502	1318	876	3188
eco-ATC-M288A-1g	5,5	17,7	7.165	8.770	6.440	151	1282	2,2	1060	250	8.110	4010	2692	1318	1067	3188
eco-ATC-M334A-1g	11	22,2	7.230	8.830	6.505	151	1282	2,2	1060	250	8.175	4010	2692	1318	1067	3188
eco-ATC-M352A-1g	15	24,1	7.255	8.860	6.530	151	1282	2,2	1060	250	8.200	4010	2692	1318	1067	3188
eco-ATC-M366A-1g	18,5	26,0	7.270	8.870	6.545	151	1282	2,2	1060	250	8.215	4010	2692	1318	1067	3188

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 2.4'Mx12' & 2.4'Mx14'



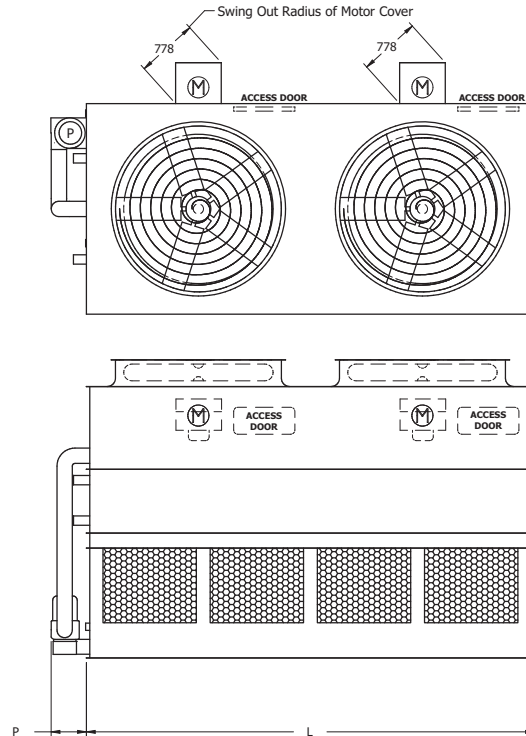
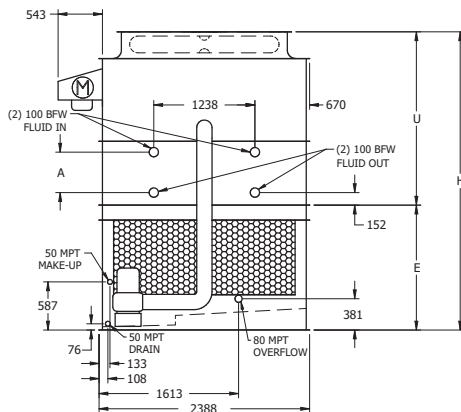
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M210A-1g	5,5	21,6	4.260	5.915	3.455	61	521	2,2	1210	250	5.175	3248	1930	1318	305	3651
eco-ATC-M226A-1g	7,5	23,8	4.270	5.925	3.465	61	521	2,2	1210	250	5.185	3248	1930	1318	305	3651
eco-ATC-M245A-1g	11	27,2	4.325	5.980	3.520	61	521	2,2	1210	250	5.240	3248	1930	1318	305	3651
eco-ATC-M260A-1g	15	30,0	4.350	6.005	3.545	61	521	2,2	1210	250	5.265	3248	1930	1318	305	3651
eco-ATC-M256A-1g	5,5	21,3	5.115	6.825	4.315	89	756	2,2	1210	250	6.085	3439	2121	1318	495	3651
eco-ATC-M274A-1g	7,5	23,5	5.125	6.835	4.325	89	756	2,2	1210	250	6.095	3439	2121	1318	495	3651
eco-ATC-M299A-1g	11	26,9	5.180	6.890	4.375	89	756	2,2	1210	250	6.150	3439	2121	1318	495	3651
eco-ATC-M318A-1g	15	29,2	5.205	6.915	4.405	89	756	2,2	1210	250	6.180	3439	2121	1318	495	3651
eco-ATC-M290A-1g	5,5	20,8	6.035	7.800	5.235	117	991	2,2	1210	250	7.060	3629	2311	1318	686	3651
eco-ATC-M310A-1g	7,5	22,9	6.045	7.810	5.245	117	991	2,2	1210	250	7.070	3629	2311	1318	686	3651
eco-ATC-M338A-1g	11	26,1	6.100	7.865	5.300	117	991	2,2	1210	250	7.125	3629	2311	1318	686	3651
eco-ATC-M359A-1g	15	28,4	6.130	7.895	5.325	117	991	2,2	1210	250	7.155	3629	2311	1318	686	3651
eco-ATC-M329A-1g	7,5	22,2	6.965	8.780	6.160	144	1227	2,2	1210	250	8.040	3820	2502	1318	876	3651
eco-ATC-M360A-1g	11	25,2	7.015	8.835	6.215	144	1227	2,2	1210	250	8.095	3820	2502	1318	876	3651
eco-ATC-M381A-1g	15	27,5	7.045	8.865	6.240	144	1227	2,2	1210	250	8.125	3820	2502	1318	876	3651
eco-ATC-M397A-1g	18,5	29,2	7.060	8.875	6.255	144	1227	2,2	1210	250	8.135	3820	2502	1318	876	3651
eco-ATC-M335A-1g	7,5	21,6	7.915	9.785	7.110	172	1462	2,2	1210	250	9.045	4010	2692	1318	1067	3651
eco-ATC-M365A-1g	11	24,5	7.970	9.840	7.165	172	1462	2,2	1210	250	9.100	4010	2692	1318	1067	3651
eco-ATC-M388A-1g	15	26,7	7.995	9.865	7.195	172	1462	2,2	1210	250	9.125	4010	2692	1318	1067	3651
eco-ATC-M405A-1g	18,5	28,3	8.010	9.880	7.210	172	1462	2,2	1210	250	9.140	4010	2692	1318	1067	3651
eco-ATC-M252A-1g	7,5	26,7	4.780	6.710	3.855	71	601	4	1365	250	5.830	3359	1930	1429	305	4261
eco-ATC-M275A-1g	11	30,5	4.835	6.765	3.910	71	601	4	1365	250	5.885	3359	1930	1429	305	4261
eco-ATC-M292A-1g	15	33,4	4.865	6.790	3.935	71	601	4	1365	250	5.910	3359	1930	1429	305	4261
eco-ATC-M307A-1g	7,5	26,2	5.840	7.835	4.915	103	876	4	1365	250	6.955	3550	2121	1429	495	4261
eco-ATC-M336A-1g	11	30,0	5.895	7.890	4.970	103	876	4	1365	250	7.010	3550	2121	1429	495	4261
eco-ATC-M357A-1g	15	32,5	5.925	7.915	5.000	103	876	4	1365	250	7.035	3550	2121	1429	495	4261
eco-ATC-M347A-1g	7,5	25,4	6.910	8.965	5.985	135	1152	4	1365	250	8.085	3740	2311	1429	686	4261
eco-ATC-M377A-1g	11	29,1	6.965	9.015	6.035	135	1152	4	1365	250	8.135	3740	2311	1429	686	4261
eco-ATC-M402A-1g	15	31,6	6.990	9.045	6.065	135	1152	4	1365	250	8.165	3740	2311	1429	686	4261
eco-ATC-M415A-1g	18,5	28,2	7.005	9.060	6.080	135	1152	4	1365	250	8.180	3740	2311	1429	686	4261
eco-ATC-M368A-1g	7,5	24,6	7.970	10.090	7.045	168	1427	4	1365	250	9.210	3931	2502	1429	876	4261
eco-ATC-M423A-1g	15	27,4	8.050	10.170	7.125	168	1427	4	1365	250	9.290	3931	2502	1429	876	4261
eco-ATC-M444A-1g	18,5	30,7	8.065	10.185	7.140	168	1427	4	1365	250	9.305	3931	2502	1429	876	4261
eco-ATC-M374A-1g	7,5	23,9	9.075	11.255	8.150	200	1702	4	1365	250	10.375	4121	2692	1429	1067	4261
eco-ATC-M407A-1g	11	29,7	9.130	11.310	8.205	200	1702	4	1365	250	10.430	4121	2692	1429	1067	4261
eco-ATC-M433A-1g	15	32,7	9.160	11.335	8.235	200	1702	4	1365	250	10.455	4121	2692	1429	1067	4261
eco-ATC-M451A-1g	18,5	31,6	9.170	11.350	8.245	200	1702	4	1365	250	10.470	4121	2692	1429	1067	4261
eco-ATC-M461A-1g	22	33,3	9.195	11.370	8.270	200	1702	4	1365	250	10.490	4121	2692	1429	1067	4261

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 2.4'Mx18' & 2.4'Mx21'



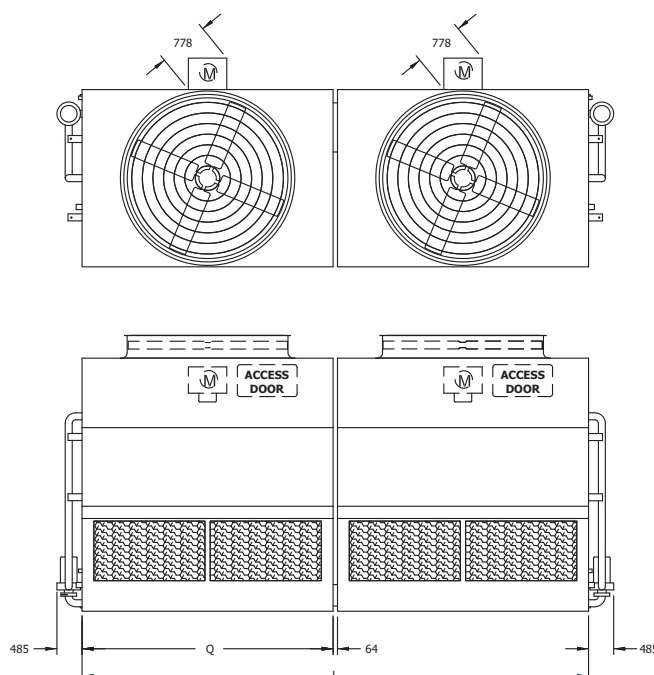
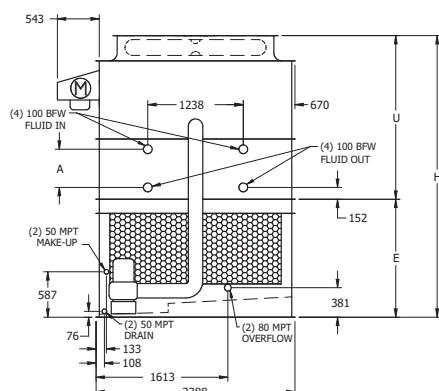
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M315A-1g	(2) 4	31,3	6.455	8.960	5.215	90	761	4	1815	300	7.855	3461	1930	1530	305	5486
eco-ATC-M348A-1g	(2) 5.5	35,8	6.500	9.005	5.260	90	761	4	1815	300	7.900	3461	1930	1530	305	5486
eco-ATC-M372A-1g	(2) 7.5	39,4	6.515	9.015	5.275	90	761	4	1815	300	7.915	3461	1930	1530	305	5486
eco-ATC-M403A-1g	(2) 11	44,9	6.625	9.130	5.390	90	761	4	1815	300	8.030	3461	1930	1530	305	5486
eco-ATC-M386A-1g	(2) 4	31,0	7.740	10.325	6.500	131	1117	4	1815	300	9.220	3651	2121	1530	495	5486
eco-ATC-M424A-1g	(2) 5.5	35,4	7.785	10.370	6.545	131	1117	4	1815	300	9.265	3651	2121	1530	495	5486
eco-ATC-M454A-1g	(2) 7.5	38,9	7.795	10.385	6.560	131	1117	4	1815	300	9.280	3651	2121	1530	495	5486
eco-ATC-M491A-1g	(2) 11	43,6	7.910	10.495	6.670	131	1117	4	1815	300	9.395	3651	2121	1530	495	5486
eco-ATC-M434A-1g	(2) 4	30,0	9.125	11.795	7.890	173	1472	4	1815	300	10.690	3842	2311	1530	686	5486
eco-ATC-M479A-1g	(2) 5.5	34,4	9.170	11.840	7.935	173	1472	4	1815	300	10.735	3842	2311	1530	686	5486
eco-ATC-M512A-1g	(2) 7.5	37,8	9.185	11.850	7.945	173	1472	4	1815	300	10.750	3842	2311	1530	686	5486
eco-ATC-M555A-1g	(2) 11	33,3	9.300	11.965	8.060	173	1472	4	1815	300	10.865	3842	2311	1530	686	5486
eco-ATC-M458A-1g	(2) 4	29,1	10.485	13.235	9.250	215	1827	4	1815	300	12.135	4032	2502	1530	876	5486
eco-ATC-M505A-1g	(2) 5.5	32,3	10.530	13.280	9.295	215	1827	4	1815	300	12.180	4032	2502	1530	876	5486
eco-ATC-M541A-1g	(2) 7.5	42,3	10.545	13.295	9.310	215	1827	4	1815	300	12.195	4032	2502	1530	876	5486
eco-ATC-M586A-1g	(2) 11	36,7	10.660	13.410	9.420	215	1827	4	1815	300	12.305	4032	2502	1530	876	5486
eco-ATC-M467A-1g	(2) 4	28,2	11.925	14.750	10.685	257	2183	4	1815	300	13.650	4223	2692	1530	1067	5486
eco-ATC-M596A-1g	(2) 11	39,8	12.095	14.925	10.860	257	2183	4	1815	300	13.820	4223	2692	1530	1067	5486
eco-ATC-M628A-1g	(2) 15	43,1	12.150	14.980	10.915	257	2183	4	1815	300	13.875	4223	2692	1530	1067	5486
eco-ATC-M426A-1g	(2) 5.5	41,8	7.265	10.235	5.905	104	881	5,5	2120	300	8.945	3461	1930	1530	305	6401
eco-ATC-M465A-1g	(2) 7.5	47,3	7.280	10.245	5.920	104	881	5,5	2120	300	8.960	3461	1930	1530	305	6401
eco-ATC-M521A-1g	(2) 5.5	44,5	8.850	11.910	7.490	152	1297	5,5	2120	300	10.625	3651	2121	1530	495	6401
eco-ATC-M567A-1g	(2) 7.5	48,9	8.865	11.925	7.500	152	1297	5,5	2120	300	10.635	3651	2121	1530	495	6401
eco-ATC-M587A-1g	(2) 5.5	42,0	10.465	13.620	9.105	201	1712	5,5	2120	300	12.335	3842	2311	1530	686	6401
eco-ATC-M640A-1g	(2) 7.5	47,5	10.480	13.635	9.115	201	1712	5,5	2120	300	12.345	3842	2311	1530	686	6401
eco-ATC-M680A-1g	(2) 7.5	46,1	12.060	15.310	10.700	250	2128	5,5	2120	300	14.020	4032	2502	1530	876	6401
eco-ATC-M713A-1g	(2) 15	49,9	12.230	15.475	10.870	250	2128	5,5	2120	300	14.190	4032	2502	1530	876	6401
eco-ATC-M629A-1g	(2) 5.5	39,5	13.700	17.040	12.340	299	2543	5,5	2120	300	15.755	4223	2692	1530	1067	6401
eco-ATC-M693A-1g	(2) 7.5	44,6	13.710	17.055	12.350	299	2543	5,5	2120	300	15.765	4223	2692	1530	1067	6401
eco-ATC-M724A-1g	(2) 15	48,4	13.880	17.225	12.520	299	2543	5,5	2120	300	15.935	4223	2692	1530	1067	6401
eco-ATC-M752A-1g	(2) 18.5	52,1	13.905	17.250	12.545	299	2543	5,5	2120	300	15.960	4223	2692	1530	1067	6401

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 2.4'Mx24' & 2.4'Mx28'



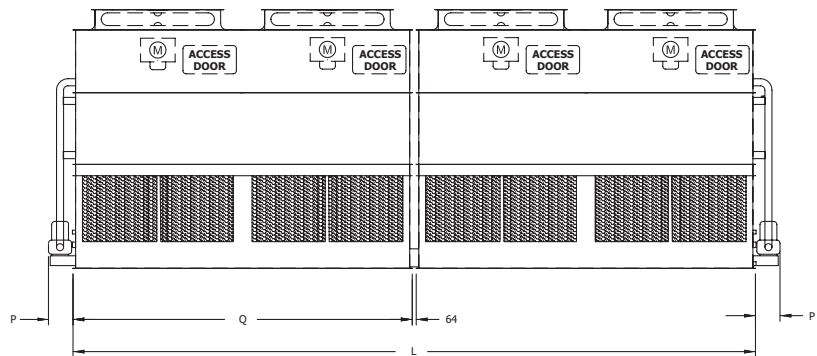
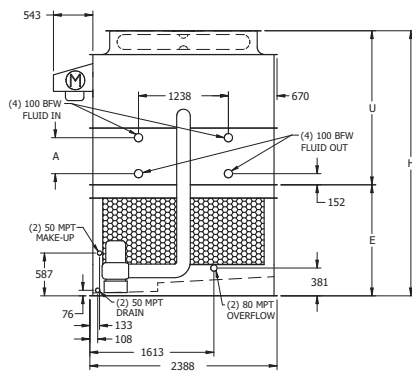
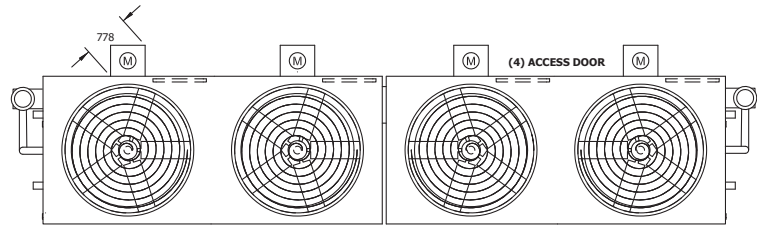
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M420A-1g	(2) 5.5	43.4	8.520	11.830	3.455	123	1042	(2) 2.2	2425	(2) 250	10.350	3461	1930	1530	305	7366
eco-ATC-M449A-1g	(2) 7.5	47.7	8.535	11.850	3.465	123	1042	(2) 2.2	2425	(2) 250	10.370	3461	1930	1530	305	7366
eco-ATC-M494A-1g	(2) 11	54.4	8.645	11.955	3.520	123	1042	(2) 2.2	2425	(2) 250	10.480	3461	1930	1530	305	7366
eco-ATC-M518A-1g	(2) 15	59.9	8.700	12.010	3.545	123	1042	(2) 2.2	2425	(2) 250	10.530	3461	1930	1530	305	7366
eco-ATC-M511A-1g	(2) 5.5	42.0	10.235	13.655	4.315	178	1512	(2) 2.2	2425	(2) 250	12.175	3651	2121	1530	495	7366
eco-ATC-M548A-1g	(2) 7.5	46.2	10.250	13.670	4.325	178	1512	(2) 2.2	2425	(2) 250	12.195	3651	2121	1530	495	7366
eco-ATC-M600A-1g	(2) 11	52.9	10.360	13.780	4.375	178	1512	(2) 2.2	2425	(2) 250	12.300	3651	2121	1530	495	7366
eco-ATC-M634A-1g	(2) 15	58.2	10.415	13.835	4.405	178	1512	(2) 2.2	2425	(2) 250	12.355	3651	2121	1530	495	7366
eco-ATC-M577A-1g	(2) 5.5	41.7	12.075	15.605	5.235	233	1983	(2) 2.2	2425	(2) 250	14.125	3842	2311	1530	686	7366
eco-ATC-M618A-1g	(2) 7.5	45.9	12.095	15.620	5.245	233	1983	(2) 2.2	2425	(2) 250	14.145	3842	2311	1530	686	7366
eco-ATC-M679A-1g	(2) 11	52.2	12.200	15.730	5.300	233	1983	(2) 2.2	2425	(2) 250	14.250	3842	2311	1530	686	7366
eco-ATC-M716A-1g	(2) 15	56.6	12.255	15.785	5.325	233	1983	(2) 2.2	2425	(2) 250	14.305	3842	2311	1530	686	7366
eco-ATC-M656A-1g	(2) 7.5	44.5	13.925	17.565	6.160	288	2453	(2) 2.2	2425	(2) 250	16.085	4032	2502	1530	876	7366
eco-ATC-M762A-1g	(2) 15	54.9	14.090	17.725	6.240	288	2453	(2) 2.2	2425	(2) 250	16.250	4032	2502	1530	876	7366
eco-ATC-M794A-1g	(2) 18.5	58.4	14.115	17.755	6.255	288	2453	(2) 2.2	2425	(2) 250	16.275	4032	2502	1530	876	7366
eco-ATC-M669A-1g	(2) 7.5	43.1	15.830	19.570	7.110	344	2924	(2) 2.2	2425	(2) 250	18.090	4223	2692	1530	1067	7366
eco-ATC-M733A-1g	(2) 11	49.1	15.940	19.675	7.165	344	2924	(2) 2.2	2425	(2) 250	18.200	4223	2692	1530	1067	7366
eco-ATC-M776A-1g	(2) 15	53.2	15.995	19.730	7.195	344	2924	(2) 2.2	2425	(2) 250	18.255	4223	2692	1530	1067	7366
eco-ATC-M809A-1g	(2) 18.5	56.6	16.020	19.760	7.210	344	2924	(2) 2.2	2425	(2) 250	18.280	4223	2692	1530	1067	7366
eco-ATC-M504A-1g	(2) 7.5	53.3	9.560	13.415	3.855	141	1202	(2) 4	2725	(2) 250	11.655	3613	1930	1683	305	8585
eco-ATC-M550A-1g	(2) 11	61.1	9.670	13.525	3.910	141	1202	(2) 4	2725	(2) 250	11.765	3613	1930	1683	305	8585
eco-ATC-M583A-1g	(2) 15	66.8	9.725	13.580	3.935	141	1202	(2) 4	2725	(2) 250	11.820	3613	1930	1683	305	8585
eco-ATC-M616A-1g	(2) 7.5	52.4	11.685	15.665	4.915	206	1753	(2) 4	2725	(2) 250	13.905	3804	2121	1683	495	8585
eco-ATC-M670A-1g	(2) 11	60.0	11.795	15.775	4.970	206	1753	(2) 4	2725	(2) 250	14.015	3804	2121	1683	495	8585
eco-ATC-M711A-1g	(2) 15	65.0	11.850	15.830	5.000	206	1753	(2) 4	2725	(2) 250	14.070	3804	2121	1683	495	8585
eco-ATC-M692A-1g	(2) 7.5	50.8	13.815	17.925	5.985	271	2303	(2) 4	2725	(2) 250	16.165	3994	2311	1683	686	8585
eco-ATC-M757A-1g	(2) 11	58.2	13.925	18.035	6.035	271	2303	(2) 4	2725	(2) 250	16.275	3994	2311	1683	686	8585
eco-ATC-M803A-1g	(2) 15	63.2	13.980	18.090	6.065	271	2303	(2) 4	2725	(2) 250	16.330	3994	2311	1683	686	8585
eco-ATC-M833A-1g	(2) 18.5	67.3	14.005	18.115	6.080	271	2303	(2) 4	2725	(2) 250	16.355	3994	2311	1683	686	8585
eco-ATC-M735A-1g	(2) 7.5	49.4	15.940	20.175	7.045	336	2854	(2) 4	2725	(2) 250	18.415	4185	2502	1683	876	8585
eco-ATC-M850A-1g	(2) 15	61.4	16.105	20.340	7.125	336	2854	(2) 4	2725	(2) 250	18.580	4185	2502	1683	876	8585
eco-ATC-M886A-1g	(2) 18.5	65.3	16.130	20.365	7.140	336	2854	(2) 4	2725	(2) 250	18.605	4185	2502	1683	876	8585
eco-ATC-M818A-1g	(2) 11	54.8	18.260	22.615	8.205	400	3405	(2) 4	2725	(2) 250	20.855	4375	2692	1683	1067	8585
eco-ATC-M867A-1g	(2) 15	59.5	18.315	22.670	8.235	400	3405	(2) 4	2725	(2) 250	20.910	4375	2692	1683	1067	8585
eco-ATC-M904A-1g	(2) 18.5	63.2	18.345	22.700	8.245	400	3405	(2) 4	2725	(2) 250	20.940	4375	2692	1683	1067	8585
eco-ATC-M935A-1g	(2) 22	66.6	18.390	22.745	8.270	400	3405	(2) 4	2725	(2) 250	20.985	4375	2692	1683	1067	8585

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 2.4'Mx36' & 2.4'Mx42'



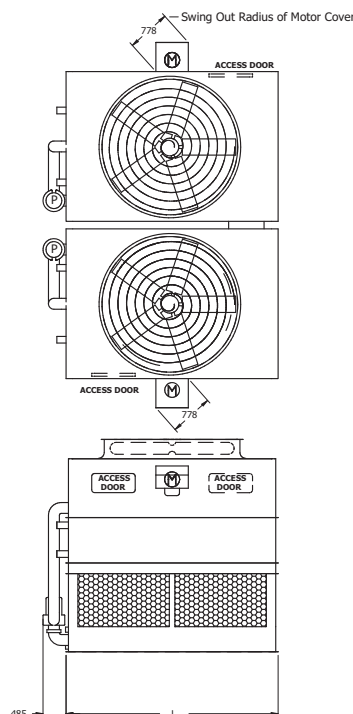
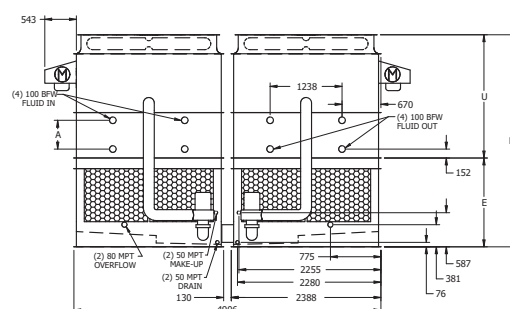
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M626A-1g	(4) 4	62.5	12.910	17.915	5.215	179	1522	(2) 4	3635	(2) 300	15.710	3613	1930	1683	305	11036
eco-ATC-M696A-1g	(4) 5.5	71.6	13.000	18.010	5.260	179	1522	(2) 4	3635	(2) 300	15.805	3613	1930	1683	305	11036
eco-ATC-M743A-1g	(4) 7.5	78.7	13.025	18.035	5.275	179	1522	(2) 4	3635	(2) 300	15.830	3613	1930	1683	305	11036
eco-ATC-M808A-1g	(4) 11	89.8	13.255	18.260	5.390	179	1522	(2) 4	3635	(2) 300	16.055	3613	1930	1683	305	11036
eco-ATC-M769A-1g	(4) 4	61.8	15.475	20.650	6.500	263	2233	(2) 4	3635	(2) 300	18.445	3804	2121	1683	495	11036
eco-ATC-M847A-1g	(4) 5.5	70.7	15.565	20.740	6.545	263	2233	(2) 4	3635	(2) 300	18.535	3804	2121	1683	495	11036
eco-ATC-M907A-1g	(4) 7.5	77.7	15.595	20.765	6.560	263	2233	(2) 4	3635	(2) 300	18.560	3804	2121	1683	495	11036
eco-ATC-M982A-1g	(4) 11	87.2	15.820	20.990	6.670	263	2233	(2) 4	3635	(2) 300	18.790	3804	2121	1683	495	11036
eco-ATC-M869A-1g	(4) 4	60.0	18.255	23.585	7.890	346	2944	(2) 4	3635	(2) 300	21.380	3994	2311	1683	686	11036
eco-ATC-M957A-1g	(4) 5.5	68.7	18.345	23.680	7.935	346	2944	(2) 4	3635	(2) 300	21.475	3994	2311	1683	686	11036
eco-ATC-M1024A-1g	(4) 7.5	75.5	18.370	23.705	7.945	346	2944	(2) 4	3635	(2) 300	21.500	3994	2311	1683	686	11036
eco-ATC-M1109A-1g	(4) 11	84.6	18.595	23.930	8.060	346	2944	(2) 4	3635	(2) 300	21.725	3994	2311	1683	686	11036
eco-ATC-M917A-1g	(4) 4	58.2	20.975	26.470	9.250	430	3655	(2) 4	3635	(2) 300	24.265	4185	2502	1683	876	11036
eco-ATC-M1082A-1g	(4) 7.5	73.4	21.090	26.590	9.310	430	3655	(2) 4	3635	(2) 300	24.385	4185	2502	1683	876	11036
eco-ATC-M1172A-1g	(4) 11	82.1	21.320	26.815	9.420	430	3655	(2) 4	3635	(2) 300	24.610	4185	2502	1683	876	11036
eco-ATC-M1194A-1g	(4) 11	79.5	24.195	29.845	10.860	513	4366	(2) 4	3635	(2) 300	27.640	4375	2692	1683	1067	11036
eco-ATC-M1257A-1g	(4) 15	86.2	24.305	29.955	10.915	513	4366	(2) 4	3635	(2) 300	27.750	4375	2692	1683	1067	11036
eco-ATC-M802A-1g	(4) 5.5	76.0	14.535	20.465	5.905	207	1763	(2) 5.5	4240	(2) 300	17.890	3613	1930	1683	305	12865
eco-ATC-M852A-1g	(4) 7.5	83.6	14.560	20.495	5.920	207	1763	(2) 5.5	4240	(2) 300	17.915	3613	1930	1683	305	12865
eco-ATC-M930A-1g	(4) 11	100.4	14.785	20.720	6.035	207	1763	(2) 5.5	4240	(2) 300	18.145	3613	1930	1683	305	12865
eco-ATC-M976A-1g	(4) 5.5	78.6	17.700	23.825	7.490	305	2594	(2) 5.5	4240	(2) 300	21.245	3804	2121	1683	495	12865
eco-ATC-M1040A-1g	(4) 7.5	86.6	17.725	23.850	7.500	305	2594	(2) 5.5	4240	(2) 300	21.275	3804	2121	1683	495	12865
eco-ATC-M1134A-1g	(4) 11	97.6	17.955	24.075	7.615	305	2594	(2) 5.5	4240	(2) 300	21.500	3804	2121	1683	495	12865
eco-ATC-M1102A-1g	(4) 5.5	76.3	20.930	27.245	9.105	403	3425	(2) 5.5	4240	(2) 300	24.665	3994	2311	1683	686	12865
eco-ATC-M1174A-1g	(4) 7.5	84.0	20.955	27.270	9.115	403	3425	(2) 5.5	4240	(2) 300	24.695	3994	2311	1683	686	12865
eco-ATC-M1281A-1g	(4) 11	95.0	21.185	27.495	9.230	403	3425	(2) 5.5	4240	(2) 300	24.920	3994	2311	1683	686	12865
eco-ATC-M1238A-1g	(4) 7.5	81.5	24.120	30.615	10.700	500	4256	(2) 5.5	4240	(2) 300	28.040	4185	2502	1683	876	12865
eco-ATC-M1350A-1g	(4) 11	92.2	24.350	30.845	10.815	500	4256	(2) 5.5	4240	(2) 300	28.270	4185	2502	1683	876	12865
eco-ATC-M1425A-1g	(4) 15	99.9	24.460	30.955	10.870	500	4256	(2) 5.5	4240	(2) 300	28.375	4185	2502	1683	876	12865
eco-ATC-M1256A-1g	(4) 7.5	79.0	27.425	34.110	12.350	598	5086	(2) 5.5	4240	(2) 300	31.535	4375	2692	1683	1067	12865
eco-ATC-M1372A-1g	(4) 11	89.2	27.650	34.335	12.465	598	5086	(2) 5.5	4240	(2) 300	31.760	4375	2692	1683	1067	12865
eco-ATC-M1447A-1g	(4) 15	96.7	27.760	34.445	12.520	598	5086	(2) 5.5	4240	(2) 300	31.870	4375	2692	1683	1067	12865
eco-ATC-M1506A-1g	(4) 18.5	104.3	27.815	34.500	12.545	598	5086	(2) 5.5	4240	(2) 300	31.925	4375	2692	1683	1067	12865

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 4.8'Mx10.5' & 4.8'Mx12'



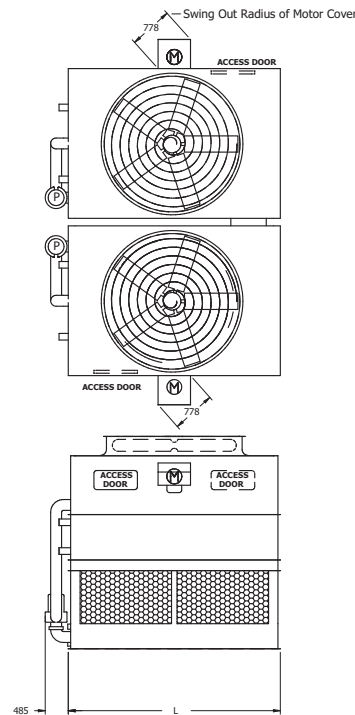
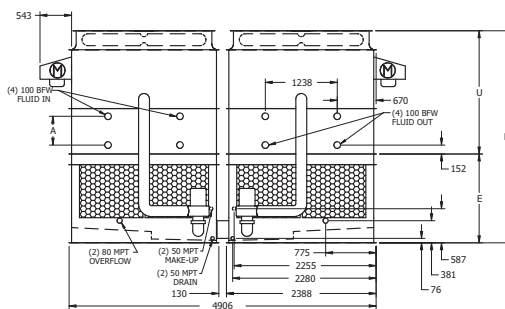
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M382A-1g	(2) 5.5	39.6	7.800	10.630	3.175	108	922	(2) 2.2	2120	(2) 250	9.315	3461	1930	1530	305	3188
eco-ATC-M409A-1g	(2) 7.5	43.6	7.820	10.650	3.185	108	922	(2) 2.2	2120	(2) 250	9.335	3461	1930	1530	305	3188
eco-ATC-M445A-1g	(2) 11	49.3	7.930	10.760	3.240	108	922	(2) 2.2	2120	(2) 250	9.445	3461	1930	1530	305	3188
eco-ATC-M472A-1g	(2) 15	54.4	7.985	10.815	3.265	108	922	(2) 2.2	2120	(2) 250	9.500	3461	1930	1530	305	3188
eco-ATC-M466A-1g	(2) 5.5	39.2	9.415	12.345	3.985	157	1332	(2) 2.2	2120	(2) 250	11.030	3651	2121	1530	495	3188
eco-ATC-M497A-1g	(2) 7.5	43.1	9.435	12.365	3.990	157	1332	(2) 2.2	2120	(2) 250	11.050	3651	2121	1530	495	3188
eco-ATC-M542A-1g	(2) 11	48.7	9.545	12.475	4.045	157	1332	(2) 2.2	2120	(2) 250	11.160	3651	2121	1530	495	3188
eco-ATC-M574A-1g	(2) 15	54.4	9.600	12.530	4.075	157	1332	(2) 2.2	2120	(2) 250	11.215	3651	2121	1530	495	3188
eco-ATC-M526A-1g	(2) 5.5	38.0	10.985	14.005	4.765	205	1743	(2) 2.2	2120	(2) 250	12.690	3842	2311	1530	686	3188
eco-ATC-M560A-1g	(2) 7.5	41.9	11.005	14.025	4.775	205	1743	(2) 2.2	2120	(2) 250	12.710	3842	2311	1530	686	3188
eco-ATC-M613A-1g	(2) 11	47.3	11.115	14.135	4.830	205	1743	(2) 2.2	2120	(2) 250	12.820	3842	2311	1530	686	3188
eco-ATC-M648A-1g	(2) 15	51.3	11.165	14.190	4.860	205	1743	(2) 2.2	2120	(2) 250	12.875	3842	2311	1530	686	3188
eco-ATC-M595A-1g	(2) 7.5	40.6	12.700	15.810	5.625	253	2153	(2) 2.2	2120	(2) 250	14.495	4032	2502	1530	876	3188
eco-ATC-M687A-1g	(2) 15	49.8	12.865	15.975	5.705	253	2153	(2) 2.2	2120	(2) 250	14.660	4032	2502	1530	876	3188
eco-ATC-M785A-1g	(2) 18.5	55.1	12.890	16.005	5.720	253	2153	(2) 2.2	2120	(2) 250	14.685	4032	2502	1530	876	3188
eco-ATC-M569A-1g	(2) 5.5	35.3	14.335	17.535	6.440	301	2564	(2) 2.2	2120	(2) 250	16.220	4223	2692	1530	1067	3188
eco-ATC-M665A-1g	(2) 11	44.5	14.460	17.665	6.505	301	2564	(2) 2.2	2120	(2) 250	16.345	4223	2692	1530	1067	3188
eco-ATC-M701A-1g	(2) 15	48.2	14.515	17.715	6.530	301	2564	(2) 2.2	2120	(2) 250	16.400	4223	2692	1530	1067	3188
eco-ATC-M800A-1g	(2) 18.5	51.9	14.540	17.745	6.545	301	2564	(2) 2.2	2120	(2) 250	16.430	4223	2692	1530	1067	3188
eco-ATC-M416A-1g	(2) 5.5	43.4	8.520	11.830	3.455	123	1042	(2) 2.2	2425	(2) 250	10.350	3461	1930	1530	305	3651
eco-ATC-M447A-1g	(2) 7.5	47.7	8.535	11.850	3.465	123	1042	(2) 2.2	2425	(2) 250	10.370	3461	1930	1530	305	3651
eco-ATC-M492A-1g	(2) 11	54.4	8.645	11.955	3.520	123	1042	(2) 2.2	2425	(2) 250	10.480	3461	1930	1530	305	3651
eco-ATC-M517A-1g	(2) 15	59.9	8.700	12.010	3.545	123	1042	(2) 2.2	2425	(2) 250	10.530	3461	1930	1530	305	3651
eco-ATC-M509A-1g	(2) 5.5	42.0	10.235	13.655	4.315	178	1512	(2) 2.2	2425	(2) 250	12.175	3651	2121	1530	495	3651
eco-ATC-M546A-1g	(2) 7.5	46.2	10.250	13.670	4.325	178	1512	(2) 2.2	2425	(2) 250	12.195	3651	2121	1530	495	3651
eco-ATC-M597A-1g	(2) 11	52.9	10.360	13.780	4.375	178	1512	(2) 2.2	2425	(2) 250	12.300	3651	2121	1530	495	3651
eco-ATC-M631A-1g	(2) 15	58.2	10.415	13.835	4.405	178	1512	(2) 2.2	2425	(2) 250	12.355	3651	2121	1530	495	3651
eco-ATC-M575A-1g	(2) 5.5	41.7	12.075	15.605	5.235	233	1983	(2) 2.2	2425	(2) 250	14.125	3842	2311	1530	686	3651
eco-ATC-M615A-1g	(2) 7.5	45.9	12.095	15.620	5.245	233	1983	(2) 2.2	2425	(2) 250	14.145	3842	2311	1530	686	3651
eco-ATC-M676A-1g	(2) 11	52.2	12.200	15.730	5.300	233	1983	(2) 2.2	2425	(2) 250	14.250	3842	2311	1530	686	3651
eco-ATC-M712A-1g	(2) 15	56.6	12.255	15.785	5.325	233	1983	(2) 2.2	2425	(2) 250	14.305	3842	2311	1530	686	3651
eco-ATC-M604A-1g	(2) 5.5	40.4	13.905	17.545	6.150	288	2453	(2) 2.2	2425	(2) 250	16.065	4032	2502	1530	876	3651
eco-ATC-M654A-1g	(2) 7.5	44.5	13.925	17.565	6.160	288	2453	(2) 2.2	2425	(2) 250	16.085	4032	2502	1530	876	3651
eco-ATC-M718A-1g	(2) 11	50.6	14.035	17.670	6.215	288	2453	(2) 2.2	2425	(2) 250	16.195	4032	2502	1530	876	3651
eco-ATC-M758A-1g	(2) 15	54.9	14.090	17.725	6.240	288	2453	(2) 2.2	2425	(2) 250	16.250	4032	2502	1530	876	3651
eco-ATC-M790A-1g	(2) 18.5	58.4	14.115	17.755	6.255	288	2453	(2) 2.2	2425	(2) 250	16.275	4032	2502	1530	876	3651
eco-ATC-M666A-1g	(2) 7.5	43.1	15.830	19.570	7.110	344	2924	(2) 2.2	2425	(2) 250	18.090	4223	2692	1530	1067	3651
eco-ATC-M730A-1g	(2) 11	49.1	15.940	19.675	7.165	344	2924	(2) 2.2	2425	(2) 250	18.200	4223	2692	1530	1067	3651
eco-ATC-M773A-1g	(2) 15	50.2	15.995	19.730	7.195	344	2924	(2) 2.2	2425	(2) 250	18.255	4223	2692	1530	1067	3651
eco-ATC-M807A-1g	(2) 18.5	56.6	16.020	19.760	7.210	344	2924	(2) 2.2	2425	(2) 250	18.280	4223	2692	1530	1067	3651

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 4.8'Mx14'



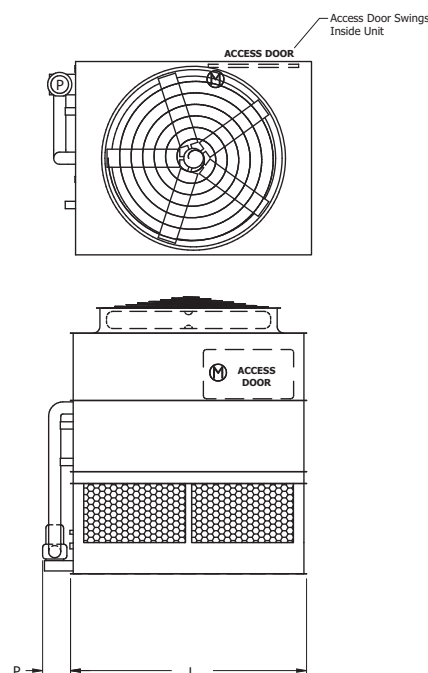
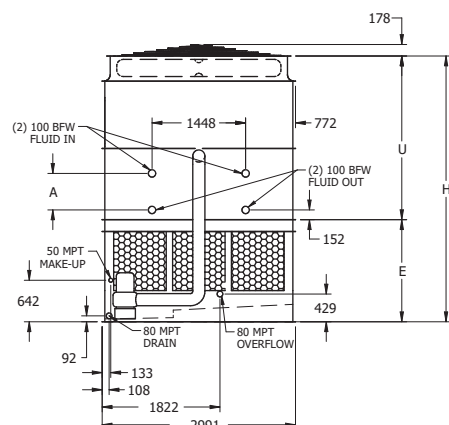
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-M499A-1g	(2) 7.5	53.0	9.560	13.415	3.855	141	1202	(2) 4	2725	(2) 250	11.655	3613	1930	1683	305	4261
eco-ATC-M545A-1g	(2) 11	60.7	9.670	13.525	3.910	141	1202	(2) 4	2725	(2) 250	11.765	3613	1930	1683	305	4261
eco-ATC-M581A-1g	(2) 15	66.8	9.725	13.580	3.935	141	1202	(2) 4	2725	(2) 250	11.820	3613	1930	1683	305	4261
eco-ATC-M612A-1g	(2) 7.5	51.6	11.685	15.665	4.915	206	1753	(2) 4	2725	(2) 250	13.905	3804	2121	1683	495	4261
eco-ATC-M664A-1g	(2) 11	59.0	11.795	15.775	4.970	206	1753	(2) 4	2725	(2) 250	14.015	3804	2121	1683	495	4261
eco-ATC-M707A-1g	(2) 15	65.0	11.850	15.830	5.000	206	1753	(2) 4	2725	(2) 250	14.070	3804	2121	1683	495	4261
eco-ATC-M705A-1g	(2) 7.5	50.1	13.815	17.925	5.985	271	2303	(2) 4	2725	(2) 250	16.165	3994	2311	1683	686	4261
eco-ATC-M768A-1g	(2) 11	57.4	13.925	18.035	6.035	271	2303	(2) 4	2725	(2) 250	16.275	3994	2311	1683	686	4261
eco-ATC-M801A-1g	(2) 15	63.2	13.980	18.090	6.065	271	2303	(2) 4	2725	(2) 250	16.330	3994	2311	1683	686	4261
eco-ATC-M834A-1g	(2) 18.5	67.3	14.005	18.115	6.080	271	2303	(2) 4	2725	(2) 250	16.355	3994	2311	1683	686	4261
eco-ATC-M814A-1g	(2) 11	55.8	16.050	20.285	7.100	336	2854	(2) 4	2725	(2) 250	18.525	4185	2502	1683	876	4261
eco-ATC-M846A-1g	(2) 15	61.4	16.105	20.340	7.125	336	2854	(2) 4	2725	(2) 250	18.580	4185	2502	1683	876	4261
eco-ATC-M882A-1g	(2) 18.5	65.3	16.130	20.365	7.140	336	2854	(2) 4	2725	(2) 250	18.605	4185	2502	1683	876	4261
eco-ATC-M829A-1g	(2) 11	54.0	18.260	22.615	8.205	400	3405	(2) 4	2725	(2) 250	20.855	4375	2692	1683	1067	4261
eco-ATC-M862A-1g	(2) 15	59.5	18.315	22.670	8.235	400	3405	(2) 4	2725	(2) 250	20.910	4375	2692	1683	1067	4261
eco-ATC-M900A-1g	(2) 18.5	63.2	18.345	22.700	8.245	400	3405	(2) 4	2725	(2) 250	20.940	4375	2692	1683	1067	4261
eco-ATC-M931A-1g	(2) 22	67.1	18.390	22.745	8.270	400	3405	(2) 4	2725	(2) 250	20.985	4375	2692	1683	1067	4261

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 3'Mx12' & 3'Mx18'



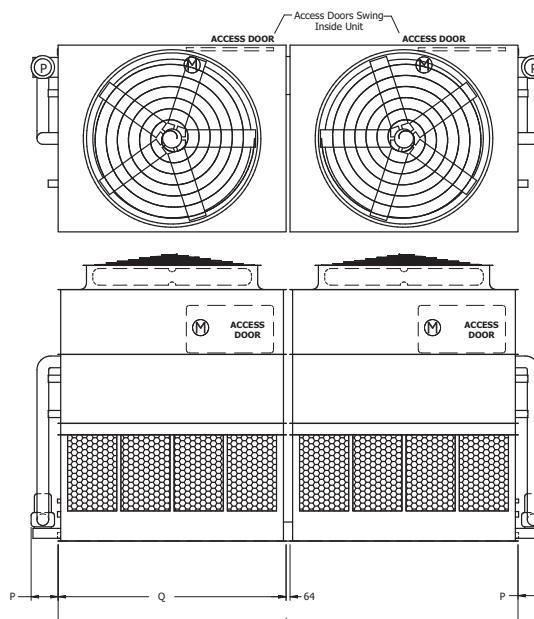
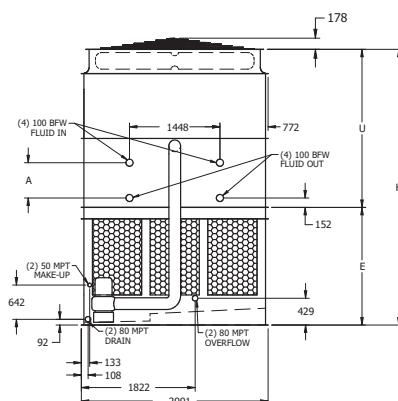
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-300A-1g	5,5	24,2	5.535	8.130	4.375	78	660	4	1590	300	6.510	3896	2315	1581	349	3651
eco-ATC-322A-1g	7,5	26,6	5.540	8.135	4.380	78	660	4	1590	300	6.515	3896	2315	1581	349	3651
eco-ATC-353A-1g	11	30,4	5.595	8.190	4.440	78	660	4	1590	300	6.575	3896	2315	1581	349	3651
eco-ATC-373A-1g	15	33,5	5.625	8.220	4.470	78	660	4	1590	300	6.600	3896	2315	1581	349	3651
eco-ATC-389A-1g	18,5	36,1	5.640	8.235	4.480	78	660	4	1590	300	6.615	3896	2315	1581	349	3651
eco-ATC-398A-1g	11	30,0	6.675	9.340	5.520	113	959	4	1590	300	7.720	4112	2530	1581	565	3651
eco-ATC-419A-1g	15	33,0	6.705	9.365	5.545	113	959	4	1590	300	7.745	4112	2530	1581	565	3651
eco-ATC-436A-1g	18,5	35,6	6.720	9.380	5.560	113	959	4	1590	300	7.760	4112	2530	1581	565	3651
eco-ATC-442A-1g	15	32,5	7.880	10.610	6.720	148	1258	4	1590	300	8.990	4328	2746	1581	781	3651
eco-ATC-459A-1g	18,5	35,0	7.895	10.625	6.735	148	1258	4	1590	300	9.005	4328	2746	1581	781	3651
eco-ATC-425A-1g	11	29,1	8.975	11.775	7.820	183	1557	4	1590	300	10.155	4543	2962	1581	997	3651
eco-ATC-452A-1g	15	32,0	9.005	11.800	7.845	183	1557	4	1590	300	10.185	4543	2962	1581	997	3651
eco-ATC-469A-1g	18,5	34,5	9.015	11.815	7.860	183	1557	4	1590	300	10.195	4543	2962	1581	997	3651
eco-ATC-487A-1g	22	36,7	9.040	11.840	7.885	183	1557	4	1590	300	10.220	4543	2962	1581	997	3651
eco-ATC-501A-1g	22	36,2	10.235	13.100	9.075	218	1855	4	1590	300	11.480	4759	3178	1581	1213	3651
eco-ATC-391A-1g	5,5	32,4	7.845	11.760	6.185	113	965	5,5	2385	300	9.380	3896	2315	1581	349	5486
eco-ATC-493A-1g	15	44,9	7.935	11.850	6.280	113	965	5,5	2385	300	9.470	3896	2315	1581	349	5486
eco-ATC-520A-1g	18,5	48,3	7.945	11.865	6.290	113	965	5,5	2385	300	9.485	3896	2315	1581	349	5486
eco-ATC-540A-1g	22	51,3	7.970	11.890	6.315	113	965	5,5	2385	300	9.505	3896	2315	1581	349	5486
eco-ATC-439A-1g	5,5	31,9	9.485	13.505	7.830	167	1417	5,5	2385	300	11.120	4112	2530	1581	565	5486
eco-ATC-553A-1g	15	44,2	9.575	13.595	7.920	167	1417	5,5	2385	300	11.215	4112	2530	1581	565	5486
eco-ATC-584A-1g	18,5	47,6	9.590	13.610	7.935	167	1417	5,5	2385	300	11.225	4112	2530	1581	565	5486
eco-ATC-606A-1g	22	50,6	9.610	13.630	7.955	167	1417	5,5	2385	300	11.250	4112	2530	1581	565	5486
eco-ATC-455A-1g	5,5	31,4	11.240	15.365	9.585	220	1868	5,5	2385	300	12.980	4328	2746	1581	781	5486
eco-ATC-578A-1g	15	43,6	11.330	15.455	9.675	220	1868	5,5	2385	300	13.075	4328	2746	1581	781	5486
eco-ATC-630A-1g	22	49,9	11.365	15.490	9.710	220	1868	5,5	2385	300	13.110	4328	2746	1581	781	5486
eco-ATC-667A-1g	30	54,9	11.440	15.565	9.785	220	1868	5,5	2385	300	13.180	4328	2746	1581	781	5486
eco-ATC-468A-1g	5,5	31,0	12.950	17.175	11.295	273	2320	5,5	2385	300	14.790	4543	2962	1581	997	5486
eco-ATC-498A-1g	7,5	34,1	12.955	17.180	11.300	273	2320	5,5	2385	300	14.795	4543	2962	1581	997	5486
eco-ATC-611A-1g	18,5	46,3	13.055	17.275	11.400	273	2320	5,5	2385	300	14.895	4543	2962	1581	997	5486
eco-ATC-482A-1g	5,5	30,5	14.735	19.055	13.075	326	2771	5,5	2385	300	16.675	4759	3178	1581	1213	5486
eco-ATC-599A-1g	15	42,3	14.825	19.145	13.170	326	2771	5,5	2385	300	16.765	4759	3178	1581	1213	5486
eco-ATC-655A-1g	22	48,4	14.860	19.180	13.205	326	2771	5,5	2385	300	16.800	4759	3178	1581	1213	5486
eco-ATC-694A-1g	30	53,3	14.930	19.255	13.275	326	2771	5,5	2385	300	16.875	4759	3178	1581	1213	5486

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 3'Mx24' & 3'Mx36'



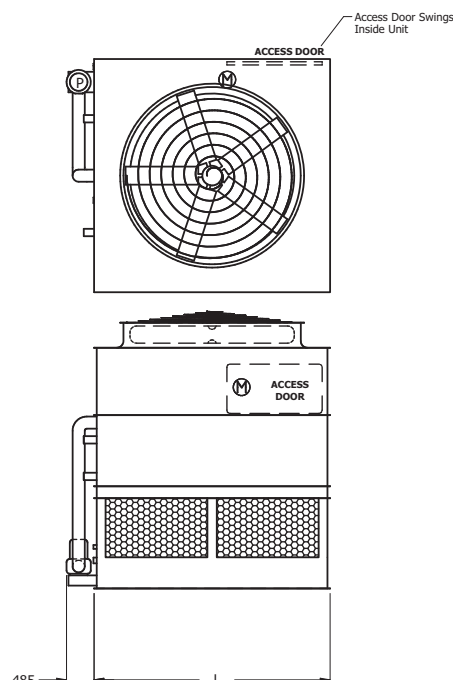
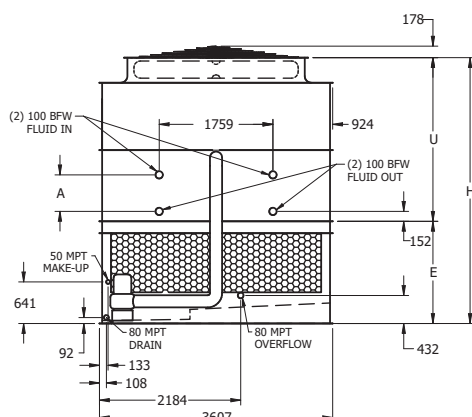
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-642A-1g	(2) 7.5	53.2	11.075	16.265	4.380	155	1320	(2) 4	3180	(2) 300	13.025	4201	2315	1886	349	7366
eco-ATC-706A-1g	(2) 11	60.9	11.195	16.385	4.440	155	1320	(2) 4	3180	(2) 300	13.145	4201	2315	1886	349	7366
eco-ATC-747A-1g	(2) 15	67.0	11.250	16.440	4.470	155	1320	(2) 4	3180	(2) 300	13.200	4201	2315	1886	349	7366
eco-ATC-777A-1g	(2) 18.5	72.2	11.275	16.465	4.480	155	1320	(2) 4	3180	(2) 300	13.225	4201	2315	1886	349	7366
eco-ATC-675A-1g	(2) 5.5	47.6	13.225	18.550	5.455	225	1918	(2) 4	3180	(2) 300	15.315	4416	2530	1886	565	7366
eco-ATC-722A-1g	(2) 7.5	52.4	13.235	18.560	5.460	225	1918	(2) 4	3180	(2) 300	15.320	4416	2530	1886	565	7366
eco-ATC-792A-1g	(2) 11	60.0	13.355	18.680	5.520	225	1918	(2) 4	3180	(2) 300	15.440	4416	2530	1886	565	7366
eco-ATC-839A-1g	(2) 15	66.0	13.410	18.735	5.545	225	1918	(2) 4	3180	(2) 300	15.495	4416	2530	1886	565	7366
eco-ATC-873A-1g	(2) 18.5	71.1	13.435	18.760	5.560	225	1918	(2) 4	3180	(2) 300	15.520	4416	2530	1886	565	7366
eco-ATC-759A-1g	(2) 7.5	51.6	15.585	21.045	6.635	296	2515	(2) 4	3180	(2) 300	17.810	4632	2746	1886	781	7366
eco-ATC-885A-1g	(2) 15	65.0	15.760	21.220	6.720	296	2515	(2) 4	3180	(2) 300	17.980	4632	2746	1886	781	7366
eco-ATC-918A-1g	(2) 18.5	70.1	15.785	21.245	6.735	296	2515	(2) 4	3180	(2) 300	18.010	4632	2746	1886	781	7366
eco-ATC-734A-1g	(2) 5.5	46.2	17.825	23.425	7.755	366	3113	(2) 4	3180	(2) 300	20.185	4848	2962	1886	997	7366
eco-ATC-781A-1g	(2) 7.5	50.9	17.835	23.435	7.760	366	3113	(2) 4	3180	(2) 300	20.195	4848	2962	1886	997	7366
eco-ATC-851A-1g	(2) 11	58.2	17.955	23.550	7.820	366	3113	(2) 4	3180	(2) 300	20.310	4848	2962	1886	997	7366
eco-ATC-901A-1g	(2) 15	64.1	18.010	23.605	7.845	366	3113	(2) 4	3180	(2) 300	20.365	4848	2962	1886	997	7366
eco-ATC-941A-1g	(2) 18.5	69.0	18.035	23.630	7.860	366	3113	(2) 4	3180	(2) 300	20.395	4848	2962	1886	997	7366
eco-ATC-973A-1g	(2) 22	73.4	18.080	23.680	7.885	366	3113	(2) 4	3180	(2) 300	20.440	4848	2962	1886	997	7366
eco-ATC-803A-1g	(2) 7.5	50.1	20.220	25.955	8.955	436	3711	(2) 4	3180	(2) 300	22.715	5064	3178	1886	1213	7366
eco-ATC-928A-1g	(2) 15	63.1	20.395	26.125	9.040	436	3711	(2) 4	3180	(2) 300	22.890	5064	3178	1886	1213	7366
eco-ATC-969A-1g	(2) 18.5	68.0	20.420	26.155	9.055	436	3711	(2) 4	3180	(2) 300	22.915	5064	3178	1886	1213	7366
eco-ATC-1002A-1g	(2) 22	72.3	20.465	26.200	9.075	436	3711	(2) 4	3180	(2) 300	22.960	5064	3178	1886	1213	7366
eco-ATC-919A-1g	(2) 11	81.6	15.810	23.650	6.250	227	1930	(2) 5.5	4770	(2) 300	18.890	4201	2315	1886	349	11036
eco-ATC-986A-1g	(2) 15	89.8	15.865	23.705	6.280	227	1930	(2) 5.5	4770	(2) 300	18.940	4201	2315	1886	349	11036
eco-ATC-1041A-1g	(2) 18.5	96.7	15.895	23.730	6.290	227	1930	(2) 5.5	4770	(2) 300	18.970	4201	2315	1886	349	11036
eco-ATC-1081A-1g	(2) 22	102.7	15.940	23.775	6.315	227	1930	(2) 5.5	4770	(2) 300	19.015	4201	2315	1886	349	11036
eco-ATC-879A-1g	(2) 5.5	63.8	18.970	27.005	7.830	333	2833	(2) 5.5	4770	(2) 300	22.245	4416	2530	1886	565	11036
eco-ATC-1032A-1g	(2) 11	80.3	19.095	27.135	7.895	333	2833	(2) 5.5	4770	(2) 300	22.370	4416	2530	1886	565	11036
eco-ATC-1108A-1g	(2) 15	88.4	19.150	27.190	7.920	333	2833	(2) 5.5	4770	(2) 300	22.425	4416	2530	1886	565	11036
eco-ATC-1168A-1g	(2) 18.5	95.2	19.180	27.215	7.935	333	2833	(2) 5.5	4770	(2) 300	22.455	4416	2530	1886	565	11036
eco-ATC-1212A-1g	(2) 22	101.2	19.225	27.260	7.955	333	2833	(2) 5.5	4770	(2) 300	22.500	4416	2530	1886	565	11036
eco-ATC-975A-1g	(2) 7.5	69.1	22.490	30.735	9.590	439	3736	(2) 5.5	4770	(2) 300	25.975	4632	2746	1886	781	11036
eco-ATC-1153A-1g	(2) 15	87.1	22.660	30.910	9.675	439	3736	(2) 5.5	4770	(2) 300	26.145	4632	2746	1886	781	11036
eco-ATC-1258A-1g	(2) 22	99.7	22.735	30.980	9.710	439	3736	(2) 5.5	4770	(2) 300	26.220	4632	2746	1886	781	11036
eco-ATC-1334A-1g	(2) 30	109.8	22.880	31.125	9.785	439	3736	(2) 5.5	4770	(2) 300	26.365	4632	2746	1886	781	11036
eco-ATC-995A-1g	(2) 7.5	68.1	25.910	34.355	11.300	545	4639	(2) 5.5	4770	(2) 300	29.590	4848	2962	1886	997	11036
eco-ATC-1085A-1g	(2) 11	78.0	26.025	34.475	11.360	545	4639	(2) 5.5	4770	(2) 300	29.710	4848	2962	1886	997	11036
eco-ATC-1272A-1g	(2) 22	98.3	26.155	34.600	11.420	545	4639	(2) 5.5	4770	(2) 300	29.835	4848	2962	1886	997	11036
eco-ATC-1348A-1g	(2) 30	108.2	26.300	34.745	11.495	545	4639	(2) 5.5	4770	(2) 300	29.980	4848	2962	1886	997	11036
eco-ATC-964A-1g	(2) 5.5	61.0	29.465	38.110	13.075	652	5542	(2) 5.5	4770	(2) 300	33.350	5064	3178	1886	1213	11036
eco-ATC-1025A-1g	(2) 7.5	67.1	29.475	38.120	13.080	652	5542	(2) 5.5	4770	(2) 300	33.355	5064	3178	1886	1213	11036
eco-ATC-1118A-1g	(2) 11	76.8	29.590	38.240	13.140	652	5542	(2) 5.5	4770	(2) 300	33.475	5064	3178	1886	1213	11036
eco-ATC-1198A-1g	(2) 15	84.6	29.645	38.290	13.170	652	5542	(2) 5.5	4770	(2) 300	33.530	5064	3178	1886	1213	11036
eco-ATC-1310A-1g	(2) 22	96.8	29.720	38.365	13.205	652	5542	(2) 5.5	4770	(2) 300	33.600	5064	3178	1886	1213	11036
eco-ATC-1388A-1g	(2) 30	106.6	29.865	38.510	13.275	652	5542	(2) 5.5	4770	(2) 300	33.745	5064	3178	1886	1213	11036

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 12'x12' & 12'x14'



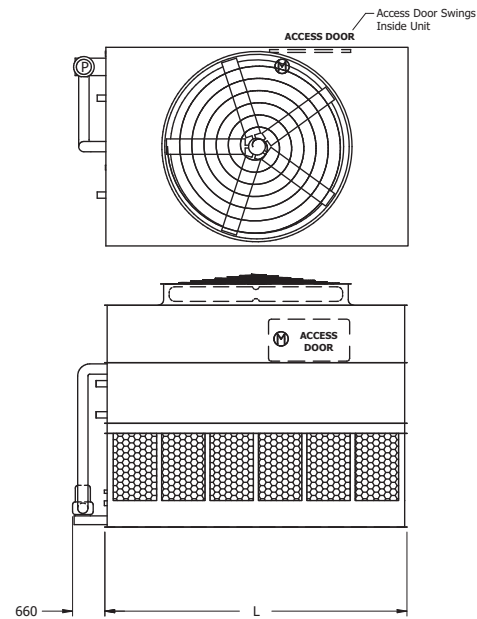
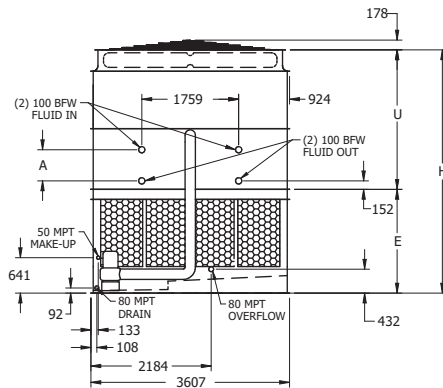
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-325A-1g	7,5	32,0	6.240	9.160	5.010	95	811	4	1855	300	7.365	3896	2315	1581	349	3651
eco-ATC-355A-1g	11	36,6	6.300	9.215	5.070	95	811	4	1855	300	7.425	3896	2315	1581	349	3651
eco-ATC-378A-1g	15	40,3	6.330	9.245	5.100	95	811	4	1855	300	7.455	3896	2315	1581	349	3651
eco-ATC-393A-1g	18,5	43,3	6.340	9.260	5.110	95	811	4	1855	300	7.465	3896	2315	1581	349	3651
eco-ATC-399A-1g	7,5	31,3	7.630	10.630	6.400	139	1179	4	1855	300	8.835	4112	2530	1581	565	3651
eco-ATC-435A-1g	11	35,9	7.690	10.685	6.460	139	1179	4	1855	300	8.895	4112	2530	1581	565	3651
eco-ATC-463A-1g	15	39,5	7.715	10.715	6.485	139	1179	4	1855	300	8.920	4112	2530	1581	565	3651
eco-ATC-481A-1g	18,5	42,1	7.730	10.725	6.500	139	1179	4	1855	300	8.935	4112	2530	1581	565	3651
eco-ATC-448A-1g	7,5	30,4	9.075	12.160	7.845	182	1548	4	1855	300	10.370	4328	2746	1581	781	3651
eco-ATC-490A-1g	11	34,8	9.135	12.220	7.905	182	1548	4	1855	300	10.430	4328	2746	1581	781	3651
eco-ATC-522A-1g	15	38,3	9.165	12.245	7.935	182	1548	4	1855	300	10.455	4328	2746	1581	781	3651
eco-ATC-543A-1g	18,5	40,9	9.175	12.260	7.945	182	1548	4	1855	300	10.470	4328	2746	1581	781	3651
eco-ATC-558A-1g	22	43,0	9.200	12.285	7.970	182	1548	4	1855	300	10.490	4328	2746	1581	781	3651
eco-ATC-475A-1g	7,5	29,5	10.450	13.615	9.220	225	1917	4	1855	300	11.825	4543	2962	1581	997	3651
eco-ATC-573A-1g	18,5	39,6	10.550	13.715	9.320	225	1917	4	1855	300	11.925	4543	2962	1581	997	3651
eco-ATC-593A-1g	22	41,8	10.575	13.740	9.345	225	1917	4	1855	300	11.950	4543	2962	1581	997	3651
eco-ATC-531A-1g	11	32,8	11.965	15.215	10.735	269	2286	4	1855	300	13.420	4759	3178	1581	1213	3651
eco-ATC-565A-1g	15	36,1	11.995	15.240	10.765	269	2286	4	1855	300	13.450	4759	3178	1581	1213	3651
eco-ATC-588A-1g	18,5	38,4	12.005	15.255	10.775	269	2286	4	1855	300	13.465	4759	3178	1581	1213	3651
eco-ATC-605A-1g	22	40,4	12.030	15.275	10.800	269	2286	4	1855	300	13.485	4759	3178	1581	1213	3651
eco-ATC-632A-1g	30	43,8	12.100	15.350	10.875	269	2286	4	1855	300	13.560	4759	3178	1581	1213	3651
eco-ATC-408A-1g	15	44,6	7.105	10.535	5.715	110	936	4	2160	300	8.465	4048	2315	1734	349	4261
eco-ATC-427A-1g	18,5	48,0	7.115	10.550	5.730	110	936	4	2160	300	8.480	4048	2315	1734	349	4261
eco-ATC-440A-1g	22	51,0	7.140	10.575	5.750	110	936	4	2160	300	8.500	4048	2315	1734	349	4261
eco-ATC-471A-1g	11	39,8	8.735	12.270	7.350	161	1368	4	2160	300	10.195	4264	2530	1734	565	4261
eco-ATC-500A-1g	15	43,8	8.765	12.295	7.375	161	1368	4	2160	300	10.225	4264	2530	1734	565	4261
eco-ATC-539A-1g	22	49,6	8.800	12.335	7.410	161	1368	4	2160	300	10.260	4264	2530	1734	565	4261
eco-ATC-533A-1g	11	38,6	10.425	14.050	9.035	212	1799	4	2160	300	11.980	4480	2746	1734	781	4261
eco-ATC-566A-1g	15	42,5	10.450	14.080	9.065	212	1799	4	2160	300	12.005	4480	2746	1734	781	4261
eco-ATC-591A-1g	18,5	45,7	10.465	14.095	9.075	212	1799	4	2160	300	12.020	4480	2746	1734	781	4261
eco-ATC-609A-1g	22	48,1	10.485	14.115	9.100	212	1799	4	2160	300	12.045	4480	2746	1734	781	4261
eco-ATC-627A-1g	18,5	44,4	12.045	15.775	10.660	262	2231	4	2160	300	13.705	4696	2962	1734	997	4261
eco-ATC-644A-1g	22	46,7	12.070	15.800	10.680	262	2231	4	2160	300	13.725	4696	2962	1734	997	4261
eco-ATC-672A-1g	30	50,6	12.145	15.870	10.755	262	2231	4	2160	300	13.800	4696	2962	1734	997	4261
eco-ATC-610A-1g	15	39,9	13.865	17.690	12.480	313	2662	4	2160	300	15.615	4912	3178	1734	1213	4261
eco-ATC-637A-1g	18,5	43,0	13.880	17.705	12.490	313	2662	4	2160	300	15.630	4912	3178	1734	1213	4261
eco-ATC-657A-1g	22	45,2	13.905	17.725	12.515	313	2662	4	2160	300	15.655	4912	3178	1734	1213	4261
eco-ATC-685A-1g	30	49,0	13.975	17.800	12.585	313	2662	4	2160	300	15.725	4912	3178	1734	1213	4261

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 12'x18' & 12'x20'

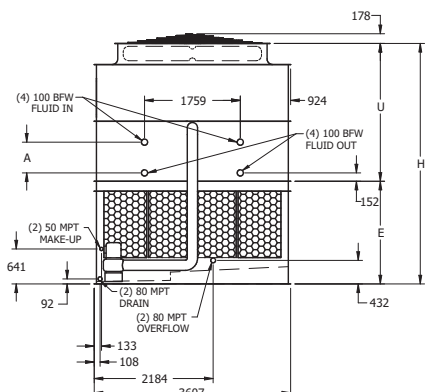


Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-432A-1g	7,5	43,7	8.860	13.255	7.080	140	1187	5,5	2725	300	10.590	4201	2315	1886	349	5486
eco-ATC-510A-1g	15	55,0	8.945	13.340	7.165	140	1187	5,5	2725	300	10.680	4201	2315	1886	349	5486
eco-ATC-562A-1g	22	63,0	8.980	13.375	7.205	140	1187	5,5	2725	300	10.715	4201	2315	1886	349	5486
eco-ATC-530A-1g	7,5	42,4	10.935	15.455	9.160	205	1744	5,5	2725	300	12.790	4416	2530	1886	565	5486
eco-ATC-625A-1g	15	53,5	11.020	15.540	9.245	205	1744	5,5	2725	300	12.875	4416	2530	1886	565	5486
eco-ATC-659A-1g	18,5	57,6	11.035	15.555	9.260	205	1744	5,5	2725	300	12.890	4416	2530	1886	565	5486
eco-ATC-688A-1g	22	61,2	11.060	15.575	9.280	205	1744	5,5	2725	300	12.915	4416	2530	1886	565	5486
eco-ATC-579A-1g	7,5	41,2	13.095	17.740	11.315	271	2302	5,5	2725	300	15.075	4632	2746	1886	781	5486
eco-ATC-700A-1g	15	51,9	13.180	17.825	11.405	271	2302	5,5	2725	300	15.165	4632	2746	1886	781	5486
eco-ATC-744A-1g	18,5	55,9	13.195	17.840	11.415	271	2302	5,5	2725	300	15.175	4632	2746	1886	781	5486
eco-ATC-779A-1g	22	59,5	13.220	17.860	11.440	271	2302	5,5	2725	300	15.200	4632	2746	1886	781	5486
eco-ATC-633A-1g	7,5	39,9	15.180	19.955	13.405	336	2859	5,5	2725	300	17.290	4848	2962	1886	997	5486
eco-ATC-785A-1g	18,5	54,2	15.280	20.055	13.505	336	2859	5,5	2725	300	17.390	4848	2962	1886	997	5486
eco-ATC-821A-1g	22	57,6	15.305	20.075	13.525	336	2859	5,5	2725	300	17.415	4848	2962	1886	997	5486
eco-ATC-869A-1g	30	62,6	15.375	20.150	13.600	336	2859	5,5	2725	300	17.485	4848	2962	1886	997	5486
eco-ATC-708A-1g	11	44,4	17.350	22.250	15.570	402	3416	5,5	2725	300	19.585	5064	3178	1886	1213	5486
eco-ATC-757A-1g	15	48,8	17.375	22.275	15.600	402	3416	5,5	2725	300	19.615	5064	3178	1886	1213	5486
eco-ATC-799A-1g	18,5	52,6	17.390	22.290	15.615	402	3416	5,5	2725	300	19.625	5064	3178	1886	1213	5486
eco-ATC-835A-1g	22	55,9	17.415	22.310	15.635	402	3416	5,5	2725	300	19.650	5064	3178	1886	1213	5486
eco-ATC-884A-1g	30	60,6	17.485	22.385	15.710	402	3416	5,5	2725	300	19.720	5064	3178	1886	1213	5486
eco-ATC-923A-1g	37	64,5	17.490	22.390	15.710	402	3416	5,5	2725	300	19.725	5064	3178	1886	1213	5486
eco-ATC-585A-1g	22	67,0	9.855	14.785	7.810	154	1313	7,5	3030	350	11.750	4201	2315	1886	349	6096
eco-ATC-623A-1g	30	73,8	9.930	14.860	7.885	154	1313	7,5	3030	350	11.820	4201	2315	1886	349	6096
eco-ATC-717A-1g	22	65,7	12.210	17.280	10.165	227	1933	7,5	3030	350	14.245	4416	2530	1886	565	6096
eco-ATC-761A-1g	30	71,7	12.285	17.355	10.240	227	1933	7,5	3030	350	14.315	4416	2530	1886	565	6096
eco-ATC-780A-1g	18,5	60,0	14.565	19.775	12.520	300	2553	7,5	3030	350	16.740	4632	2746	1886	781	6096
eco-ATC-811A-1g	22	63,8	14.590	19.800	12.540	300	2553	7,5	3030	350	16.760	4632	2746	1886	781	6096
eco-ATC-863A-1g	30	69,7	14.660	19.870	12.615	300	2553	7,5	3030	350	16.835	4632	2746	1886	781	6096
eco-ATC-825A-1g	18,5	58,2	16.885	22.235	14.840	373	3173	7,5	3030	350	19.195	4848	2962	1886	997	6096
eco-ATC-858A-1g	22	61,9	16.910	22.260	14.865	373	3173	7,5	3030	350	19.220	4848	2962	1886	997	6096
eco-ATC-913A-1g	30	67,6	16.980	22.330	14.935	373	3173	7,5	3030	350	19.290	4848	2962	1886	997	6096
eco-ATC-953A-1g	37	71,9	16.985	22.335	14.940	373	3173	7,5	3030	350	19.295	4848	2962	1886	997	6096
eco-ATC-838A-1g	18,5	56,4	19.450	24.940	17.405	446	3792	7,5	3030	350	21.900	5064	3178	1886	1213	6096
eco-ATC-968A-1g	37	69,7	19.550	25.040	17.505	446	3792	7,5	3030	350	22.000	5064	3178	1886	1213	6096
eco-ATC-1001A-1g	45	73,3	19.640	25.130	17.595	446	3792	7,5	3030	350	22.090	5064	3178	1886	1213	6096

Please refer to the notes at page 24

eco-ATC-A

The technical drawings illustrate the 485 Series Unit. The top view shows a square unit with two circular access doors, each labeled "ACCESS DOOR" and "M". A note indicates "Access Doors Swing Inside Unit". The bottom view shows the unit's profile, featuring a top section with a filter, a middle section with a "ACCESS DOOR" and "M", and a bottom section with a honeycomb filter. Dimensions are provided: 485 for the overall height, 64 for the filter section height, and Q for the distance between the filter sections.



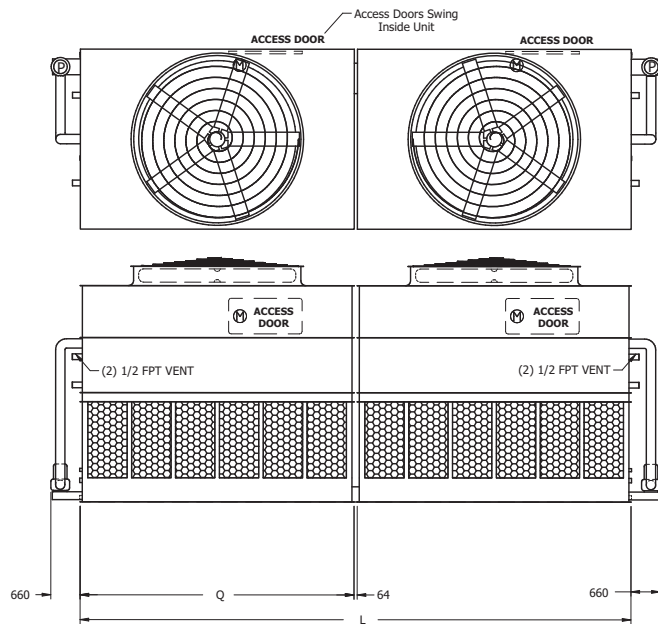
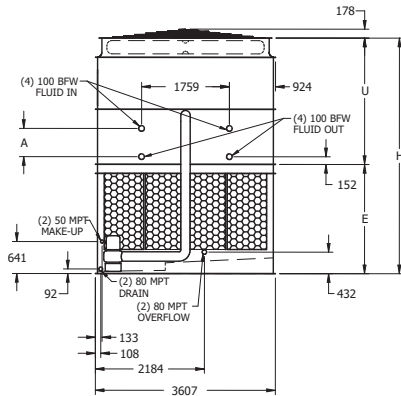
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (kg) (2)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-650A-1g	(2) 7.5	63,9	12.485	18.315	5.010	191	1621	(2) 4	3710	(2) 300	14.735	4201	2315	1886	349	7366
eco-ATC-709A-1g	(2) 11	73,1	12.600	18.435	5.070	191	1621	(2) 4	3710	(2) 300	14.850	4201	2315	1886	349	7366
eco-ATC-753A-1g	(2) 15	80,5	12.655	18.490	5.100	191	1621	(2) 4	3710	(2) 300	14.905	4201	2315	1886	349	7366
eco-ATC-795A-1g	(2) 7.5	62,7	15.260	21.255	6.400	277	2359	(2) 4	3710	(2) 300	17.670	4416	2530	1886	565	7366
eco-ATC-870A-1g	(2) 11	71,7	15.375	21.375	6.460	277	2359	(2) 4	3710	(2) 300	17.790	4416	2530	1886	565	7366
eco-ATC-925A-1g	(2) 15	79,0	15.430	21.430	6.485	277	2359	(2) 4	3710	(2) 300	17.845	4416	2530	1886	565	7366
eco-ATC-962A-1g	(2) 18.5	84,2	15.460	21.455	6.500	277	2359	(2) 4	3710	(2) 300	17.870	4416	2530	1886	565	7366
eco-ATC-894A-1g	(2) 7.5	60,9	18.155	24.320	7.845	364	3096	(2) 4	3710	(2) 300	20.740	4632	2746	1886	781	7366
eco-ATC-979A-1g	(2) 11	69,7	18.270	24.440	7.905	364	3096	(2) 4	3710	(2) 300	20.855	4632	2746	1886	781	7366
eco-ATC-1042A-1g	(2) 15	76,7	18.325	24.495	7.935	364	3096	(2) 4	3710	(2) 300	20.910	4632	2746	1886	781	7366
eco-ATC-1083A-1g	(2) 18.5	81,7	18.350	24.520	7.945	364	3096	(2) 4	3710	(2) 300	20.940	4632	2746	1886	781	7366
eco-ATC-1115A-1g	(2) 22	86,0	18.400	24.565	7.970	364	3096	(2) 4	3710	(2) 300	20.985	4632	2746	1886	781	7366
eco-ATC-950A-1g	(2) 7.5	59,1	20.900	27.235	9.220	451	3834	(2) 4	3710	(2) 300	23.650	4848	2962	1886	997	7366
eco-ATC-1106A-1g	(2) 15	74,5	21.075	27.405	9.310	451	3834	(2) 4	3710	(2) 300	23.825	4848	2962	1886	997	7366
eco-ATC-970A-1g	(2) 7.5	57,3	23.815	30.310	10.680	538	4572	(2) 4	3710	(2) 300	26.725	5064	3178	1886	1213	7366
eco-ATC-1061A-1g	(2) 11	65,6	23.930	30.425	10.735	538	4572	(2) 4	3710	(2) 300	26.845	5064	3178	1886	1213	7366
eco-ATC-1210A-1g	(2) 22	80,9	24.060	30.555	10.800	538	4572	(2) 4	3710	(2) 300	26.970	5064	3178	1886	1213	7366
eco-ATC-1263A-1g	(2) 30	87,6	24.205	30.700	10.875	538	4572	(2) 4	3710	(2) 300	27.115	5064	3178	1886	1213	7366
eco-ATC-770A-1g	(2) 11	80,9	14.150	21.020	5.690	220	1872	(2) 4	4315	(2) 300	16.875	4505	2315	2191	349	8585
eco-ATC-815A-1g	(2) 15	89,1	14.205	21.075	5.715	220	1872	(2) 4	4315	(2) 300	16.930	4505	2315	2191	349	8585
eco-ATC-853A-1g	(2) 18.5	95,9	14.235	21.100	5.730	220	1872	(2) 4	4315	(2) 300	16.955	4505	2315	2191	349	8585
eco-ATC-881A-1g	(2) 22	102,0	14.280	21.145	5.750	220	1872	(2) 4	4315	(2) 300	17.000	4505	2315	2191	349	8585
eco-ATC-942A-1g	(2) 11	79,6	17.470	24.540	7.350	322	2736	(2) 4	4315	(2) 300	20.395	4721	2530	2191	565	8585
eco-ATC-998A-1g	(2) 15	87,5	17.525	24.595	7.375	322	2736	(2) 4	4315	(2) 300	20.450	4721	2530	2191	565	8585
eco-ATC-1045A-1g	(2) 18.5	94,1	17.555	24.620	7.390	322	2736	(2) 4	4315	(2) 300	20.475	4721	2530	2191	565	8585
eco-ATC-1077A-1g	(2) 22	99,1	17.600	24.665	7.410	322	2736	(2) 4	4315	(2) 300	20.520	4721	2530	2191	565	8585
eco-ATC-1064A-1g	(2) 11	77,2	20.845	28.105	9.035	423	3599	(2) 4	4315	(2) 300	23.960	4937	2746	2191	781	8585
eco-ATC-1129A-1g	(2) 15	85,0	20.900	28.160	9.065	423	3599	(2) 4	4315	(2) 300	24.015	4937	2746	2191	781	8585
eco-ATC-1216A-1g	(2) 22	96,2	20.975	28.230	9.100	423	3599	(2) 4	4315	(2) 300	24.085	4937	2746	2191	781	8585
eco-ATC-1127A-1g	(2) 11	74,9	24.015	31.470	10.620	525	4462	(2) 4	4315	(2) 300	27.325	5153	2962	2191	997	8585
eco-ATC-1195A-1g	(2) 15	82,4	24.070	31.525	10.645	525	4462	(2) 4	4315	(2) 300	27.380	5153	2962	2191	997	8585
eco-ATC-1288A-1g	(2) 22	93,3	24.140	31.595	10.680	525	4462	(2) 4	4315	(2) 300	27.450	5153	2962	2191	997	8585
eco-ATC-1344A-1g	(2) 30	101,2	24.285	31.740	10.755	525	4462	(2) 4	4315	(2) 300	27.595	5153	2962	2191	997	8585
eco-ATC-1149A-1g	(2) 11	72,6	27.680	35.325	12.450	626	5325	(2) 4	4315	(2) 300	31.180	5369	3178	2191	1213	8585
eco-ATC-1218A-1g	(2) 15	79,9	27.735	35.380	12.480	626	5325	(2) 4	4315	(2) 300	31.235	5369	3178	2191	1213	8585
eco-ATC-1274A-1g	(2) 18.5	85,9	27.760	35.405	12.490	626	5325	(2) 4	4315	(2) 300	31.260	5369	3178	2191	1213	8585
eco-ATC-1312A-1g	(2) 22	90,4	27.805	35.455	12.515	626	5325	(2) 4	4315	(2) 300	31.305	5369	3178	2191	1213	8585
eco-ATC-1369A-1g	(2) 30	98,0	27.950	35.600	12.585	626	5325	(2) 4	4315	(2) 300	31.450	5369	3178	2191	1213	8585

ENGINEERING

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 12'x36' & 12'x40'



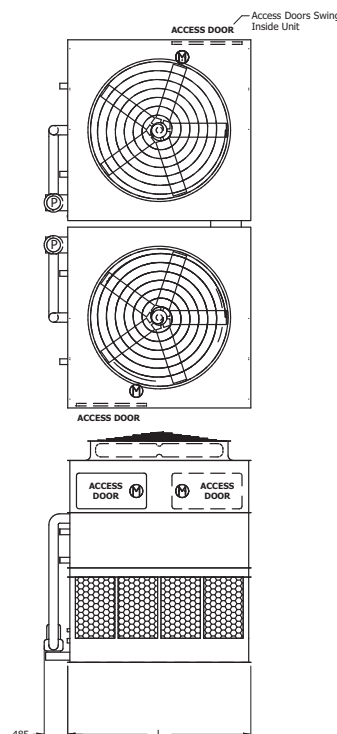
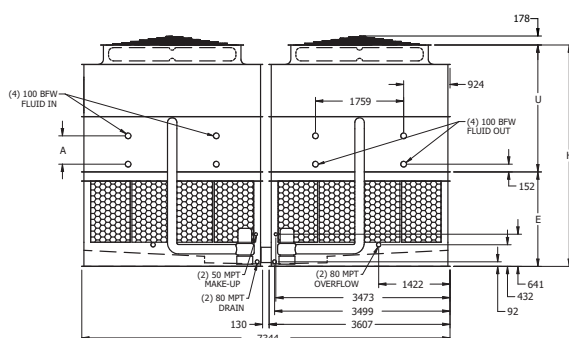
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	4Remote Pump (5)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-1020A-1g	(2) 15	110.0	17.890	26.680	7.165	279	2375	(2) 5.5	5450	(2) 300	21.355	4505	2315	2191	349	11036
eco-ATC-1076A-1g	(2) 18.5	118.5	17.915	26.710	7.180	279	2375	(2) 5.5	5450	(2) 300	21.380	4505	2315	2191	349	11036
eco-ATC-1125A-1g	(2) 22	126.0	17.960	26.755	7.205	279	2375	(2) 5.5	5450	(2) 300	21.430	4505	2315	2191	349	11036
eco-ATC-1249A-1g	(2) 15	107.0	22.045	31.080	9.245	410	3489	(2) 5.5	5450	(2) 300	25.755	4721	2530	2191	565	11036
eco-ATC-1317A-1g	(2) 18.5	115.2	22.070	31.105	9.260	410	3489	(2) 5.5	5450	(2) 300	25.780	4721	2530	2191	565	11036
eco-ATC-1376A-1g	(2) 22	122.5	22.115	31.155	9.280	410	3489	(2) 5.5	5450	(2) 300	25.830	4721	2530	2191	565	11036
eco-ATC-1294A-1g	(2) 11	94.4	26.310	35.600	11.375	541	4603	(2) 5.5	5450	(2) 300	30.275	4937	2746	2191	781	11036
eco-ATC-1400A-1g	(2) 15	103.9	26.365	35.650	11.405	541	4603	(2) 5.5	5450	(2) 300	30.325	4937	2746	2191	781	11036
eco-ATC-1488A-1g	(2) 18.5	111.7	26.390	35.680	11.415	541	4603	(2) 5.5	5450	(2) 300	30.355	4937	2746	2191	781	11036
eco-ATC-1554A-1g	(2) 22	118.9	26.435	35.725	11.440	541	4603	(2) 5.5	5450	(2) 300	30.400	4937	2746	2191	781	11036
eco-ATC-1570A-1g	(2) 18.5	108.5	30.565	40.105	13.505	672	5717	(2) 5.5	5450	(2) 300	34.780	5153	2962	2191	997	11036
eco-ATC-1641A-1g	(2) 22	115.2	30.610	40.150	13.525	672	5717	(2) 5.5	5450	(2) 300	34.825	5153	2962	2191	997	11036
eco-ATC-1738A-1g	(2) 30	125.1	30.755	40.295	13.600	672	5717	(2) 5.5	5450	(2) 300	34.970	5153	2962	2191	997	11036
eco-ATC-1416A-1g	(2) 11	88.7	34.700	44.495	15.570	803	6832	(2) 5.5	5450	(2) 300	39.170	5369	3178	2191	1213	11036
eco-ATC-1514A-1g	(2) 15	97.6	34.755	44.550	15.600	803	6832	(2) 5.5	5450	(2) 300	39.225	5369	3178	2191	1213	11036
eco-ATC-1598A-1g	(2) 18.5	105.1	34.780	44.580	15.615	803	6832	(2) 5.5	5450	(2) 300	39.255	5369	3178	2191	1213	11036
eco-ATC-1669A-1g	(2) 22	111.7	34.825	44.625	15.635	803	6832	(2) 5.5	5450	(2) 300	39.300	5369	3178	2191	1213	11036
eco-ATC-1770A-1g	(2) 30	121.2	34.970	44.770	15.710	803	6832	(2) 5.5	5450	(2) 300	39.445	5369	3178	2191	1213	11036
eco-ATC-1847A-1g	(2) 37	129.0	34.980	44.780	15.710	803	6832	(2) 5.5	5450	(2) 300	39.455	5369	3178	2191	1213	11036
eco-ATC-1120A-1g	(2) 18.5	126.2	19.670	29.530	7.790	309	2626	(2) 7.5	6055	(2) 350	23.450	4505	2315	2191	349	12256
eco-ATC-1165A-1g	(2) 22	134.0	19.715	29.575	7.810	309	2626	(2) 7.5	6055	(2) 350	23.495	4505	2315	2191	349	12256
eco-ATC-1239A-1g	(2) 30	147.5	19.860	29.720	7.885	309	2626	(2) 7.5	6055	(2) 350	23.640	4505	2315	2191	349	12256
eco-ATC-1371A-1g	(2) 18.5	123.7	24.375	34.520	10.140	455	3865	(2) 7.5	6055	(2) 350	28.440	4721	2530	2191	565	12256
eco-ATC-1426A-1g	(2) 22	131.5	24.420	34.565	10.165	455	3865	(2) 7.5	6055	(2) 350	28.485	4721	2530	2191	565	12256
eco-ATC-1517A-1g	(2) 30	143.4	24.565	34.710	10.240	455	3865	(2) 7.5	6055	(2) 350	28.630	4721	2530	2191	565	12256
eco-ATC-1553A-1g	(2) 18.5	120.1	29.130	39.555	12.520	600	5105	(2) 7.5	6055	(2) 350	33.475	4937	2746	2191	781	12256
eco-ATC-1615A-1g	(2) 22	127.6	29.175	39.600	12.540	600	5105	(2) 7.5	6055	(2) 350	33.520	4937	2746	2191	781	12256
eco-ATC-1718A-1g	(2) 30	139.3	29.320	39.745	12.615	600	5105	(2) 7.5	6055	(2) 350	33.665	4937	2746	2191	781	12256
eco-ATC-1846A-1g	(2) 18.5	116.4	33.775	44.470	14.840	746	6345	(2) 7.5	6055	(2) 350	38.390	5153	2962	2191	997	12256
eco-ATC-1817A-1g	(2) 30	135.2	33.965	44.660	14.935	746	6345	(2) 7.5	6055	(2) 350	38.585	5153	2962	2191	997	12256
eco-ATC-1897A-1g	(2) 37	143.8	33.975	44.670	14.940	746	6345	(2) 7.5	6055	(2) 350	38.590	5153	2962	2191	997	12256
eco-ATC-1735A-1g	(2) 22	119.8	38.945	49.920	17.425	892	7585	(2) 7.5	6055	(2) 350	43.845	5369	3178	2191	1213	12256
eco-ATC-1846A-1g	(2) 30	130.8	39.090	50.070	17.500	892	7585	(2) 7.5	6055	(2) 350	43.990	5369	3178	2191	1213	12256
eco-ATC-1927A-1g	(2) 37	139.3	39.100	50.075	17.505	892	7585	(2) 7.5	6055	(2) 350	44.000	5369	3178	2191	1213	12256
eco-ATC-1993A-1g	(2) 45	146.6	39.280	50.260	17.595	892	7585	(2) 7.5	6055	(2) 350	44.180	5369	3178	2191	1213	12256

Please refer to the notes at page 24

ENGINEERING DATA & DIMENSIONS

eco-ATC-A

eco-ATC-A Models*: 24'x12' & 24'x14'



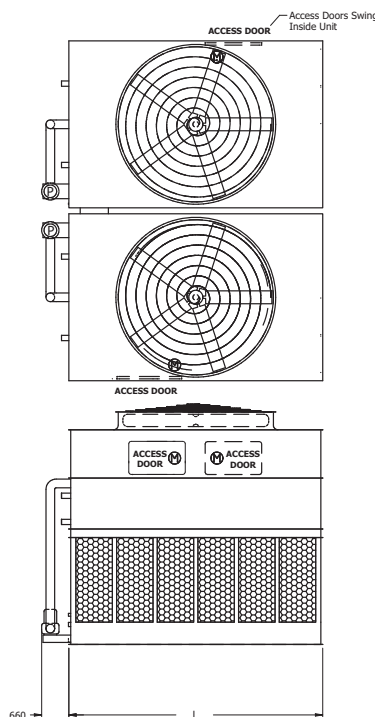
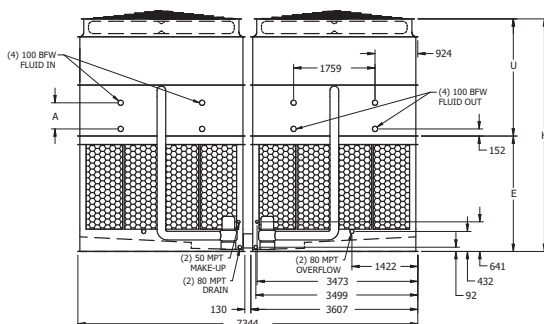
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-710A-1g	(2) 11	73.1	12.600	18.435	5.070	191	1621	(2) 4	3710	(2) 300	14.850	4201	2315	1886	349	3651
eco-ATC-787A-1g	(2) 18.5	86.7	12.680	18.515	5.110	191	1621	(2) 4	3710	(2) 300	14.930	4201	2315	1886	349	3651
eco-ATC-796A-1g	(2) 7.5	62.7	15.260	21.255	6.400	277	2359	(2) 4	3710	(2) 300	17.670	4416	2530	1886	565	3651
eco-ATC-871A-1g	(2) 11	71.7	15.375	21.375	6.460	277	2359	(2) 4	3710	(2) 300	17.790	4416	2530	1886	565	3651
eco-ATC-926A-1g	(2) 15	79.0	15.430	21.430	6.485	277	2359	(2) 4	3710	(2) 300	17.845	4416	2530	1886	565	3651
eco-ATC-963A-1g	(2) 18.5	84.2	15.460	21.455	6.500	277	2359	(2) 4	3710	(2) 300	17.870	4416	2530	1886	565	3651
eco-ATC-980A-1g	(2) 11	69.7	18.270	24.440	7.905	364	3096	(2) 4	3710	(2) 300	20.855	4632	2746	1886	781	3651
eco-ATC-1043A-1g	(2) 15	76.7	18.325	24.495	7.935	364	3096	(2) 4	3710	(2) 300	20.910	4632	2746	1886	781	3651
eco-ATC-1084A-1g	(2) 18.5	81.7	18.350	24.520	7.945	364	3096	(2) 4	3710	(2) 300	20.940	4632	2746	1886	781	3651
eco-ATC-1116A-1g	(2) 22	86.0	18.400	24.565	7.970	364	3096	(2) 4	3710	(2) 300	20.985	4632	2746	1886	781	3651
eco-ATC-951A-1g	(2) 7.5	59.1	20.900	27.235	9.220	451	3834	(2) 4	3710	(2) 300	23.650	4848	2962	1886	997	3651
eco-ATC-1039A-1g	(2) 11	67.6	21.020	27.350	9.280	451	3834	(2) 4	3710	(2) 300	23.770	4848	2962	1886	997	3651
eco-ATC-1152A-1g	(2) 18.5	79.3	21.100	27.435	9.320	451	3834	(2) 4	3710	(2) 300	23.850	4848	2962	1886	997	3651
eco-ATC-1186A-1g	(2) 22	83.5	21.145	27.480	9.345	451	3834	(2) 4	3710	(2) 300	23.895	4848	2962	1886	997	3651
eco-ATC-971A-1g	(2) 7.5	57.3	23.815	30.310	10.680	538	4572	(2) 4	3710	(2) 300	26.725	5064	3178	1886	1213	3651
eco-ATC-1062A-1g	(2) 11	65.6	23.930	30.425	10.735	538	4572	(2) 4	3710	(2) 300	26.845	5064	3178	1886	1213	3651
eco-ATC-1132A-1g	(2) 15	72.2	23.985	30.480	10.765	538	4572	(2) 4	3710	(2) 300	26.900	5064	3178	1886	1213	3651
eco-ATC-1176A-1g	(2) 18.5	76.8	24.015	30.510	10.775	538	4572	(2) 4	3710	(2) 300	26.925	5064	3178	1886	1213	3651
eco-ATC-1211A-1g	(2) 22	80.9	24.060	30.555	10.800	538	4572	(2) 4	3710	(2) 300	26.970	5064	3178	1886	1213	3651
eco-ATC-1264A-1g	(2) 30	87.6	24.205	30.700	10.875	538	4572	(2) 4	3710	(2) 300	27.115	5064	3178	1886	1213	3651
eco-ATC-816A-1g	(2) 15	89.1	14.205	21.075	5.715	220	1872	(2) 4	4315	(2) 300	16.930	4505	2315	2191	349	4261
eco-ATC-854A-1g	(2) 18.5	95.9	14.235	21.100	5.730	220	1872	(2) 4	4315	(2) 300	16.955	4505	2315	2191	349	4261
eco-ATC-880A-1g	(2) 22	102.0	14.280	21.145	5.750	220	1872	(2) 4	4315	(2) 300	17.000	4505	2315	2191	349	4261
eco-ATC-943A-1g	(2) 11	79.6	17.470	24.540	7.350	322	2736	(2) 4	4315	(2) 300	20.395	4721	2530	2191	565	4261
eco-ATC-999A-1g	(2) 15	87.5	17.525	24.595	7.375	322	2736	(2) 4	4315	(2) 300	20.450	4721	2530	2191	565	4261
eco-ATC-1046A-1g	(2) 18.5	94.1	17.555	24.620	7.390	322	2736	(2) 4	4315	(2) 300	20.475	4721	2530	2191	565	4261
eco-ATC-1078A-1g	(2) 22	99.1	17.600	24.665	7.410	322	2736	(2) 4	4315	(2) 300	20.520	4721	2530	2191	565	4261
eco-ATC-1130A-1g	(2) 15	85.0	20.900	28.160	9.065	423	3599	(2) 4	4315	(2) 300	24.015	4937	2746	2191	781	4261
eco-ATC-1217A-1g	(2) 22	96.2	20.975	28.230	9.100	423	3599	(2) 4	4315	(2) 300	24.085	4937	2746	2191	781	4261
eco-ATC-1196A-1g	(2) 15	82.4	24.070	31.525	10.645	525	4462	(2) 4	4315	(2) 300	27.380	5153	2962	2191	997	4261
eco-ATC-1251A-1g	(2) 18.5	88.7	24.095	31.550	10.660	525	4462	(2) 4	4315	(2) 300	27.405	5153	2962	2191	997	4261
eco-ATC-1289A-1g	(2) 22	93.3	24.140	31.595	10.680	525	4462	(2) 4	4315	(2) 300	27.450	5153	2962	2191	997	4261
eco-ATC-1345A-1g	(2) 30	101.2	24.285	31.740	10.755	525	4462	(2) 4	4315	(2) 300	27.595	5153	2962	2191	997	4261
eco-ATC-1219A-1g	(2) 15	79.9	27.735	35.380	12.480	626	5325	(2) 4	4315	(2) 300	31.235	5369	3178	2191	1213	4261
eco-ATC-1275A-1g	(2) 18.5	85.9	27.760	35.405	12.490	626	5325	(2) 4	4315	(2) 300	31.260	5369	3178	2191	1213	4261
eco-ATC-1370A-1g	(2) 30	98.0	27.950	35.600	12.585	626	5325	(2) 4	4315	(2) 300	31.450	5369	3178	2191	1213	4261

Please refer to the notes at page 24

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 24'x18' & 24'x20'

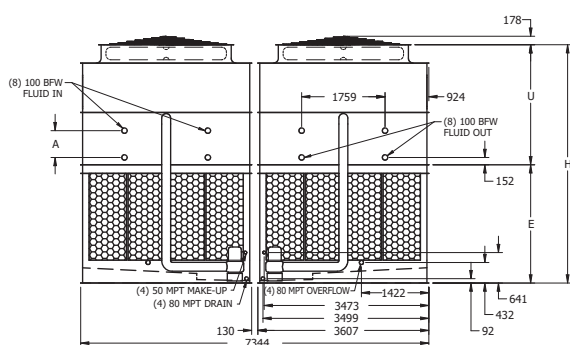


Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-1021A-1g	(2) 15	110,0	17.890	26.680	7.165	279	2375	(2) 5.5	5450	(2) 300	21.355	4810	2315	2496	349	5486
eco-ATC-1079A-1g	(2) 18.5	118,5	17.915	26.710	7.180	279	2375	(2) 5.5	5450	(2) 300	21.380	4810	2315	2496	349	5486
eco-ATC-1126A-1g	(2) 22	126,0	17.960	26.755	7.205	279	2375	(2) 5.5	5450	(2) 300	21.430	4810	2315	2496	349	5486
eco-ATC-1250A-1g	(2) 15	107,0	22.045	31.080	9.245	410	3489	(2) 5.5	5450	(2) 300	25.755	5026	2530	2496	565	5486
eco-ATC-1377A-1g	(2) 22	122,5	22.115	31.155	9.280	410	3489	(2) 5.5	5450	(2) 300	25.830	5026	2530	2496	565	5486
eco-ATC-1295A-1g	(2) 11	94,4	26.310	35.600	11.375	541	4603	(2) 5.5	5450	(2) 300	30.275	5242	2746	2496	781	5486
eco-ATC-1401A-1g	(2) 15	103,9	26.365	35.650	11.405	541	4603	(2) 5.5	5450	(2) 300	30.325	5242	2746	2496	781	5486
eco-ATC-1555A-1g	(2) 22	118,9	26.435	35.725	11.440	541	4603	(2) 5.5	5450	(2) 300	30.400	5242	2746	2496	781	5486
eco-ATC-1391A-1g	(2) 11	91,5	30.480	40.025	13.465	672	5717	(2) 5.5	5450	(2) 300	34.700	5458	2962	2496	997	5486
eco-ATC-1491A-1g	(2) 15	100,7	30.535	40.080	13.490	672	5717	(2) 5.5	5450	(2) 300	34.755	5458	2962	2496	997	5486
eco-ATC-1571A-1g	(2) 18.5	108,5	30.565	40.105	13.505	672	5717	(2) 5.5	5450	(2) 300	34.780	5458	2962	2496	997	5486
eco-ATC-1643A-1g	(2) 22	115,2	30.610	40.150	13.525	672	5717	(2) 5.5	5450	(2) 300	34.825	5458	2962	2496	997	5486
eco-ATC-1739A-1g	(2) 30	125,1	30.755	40.295	13.600	672	5717	(2) 5.5	5450	(2) 300	34.970	5458	2962	2496	997	5486
eco-ATC-1415A-1g	(2) 11	88,7	34.700	44.495	15.570	803	6832	(2) 5.5	5450	(2) 300	39.170	5674	3178	2496	1213	5486
eco-ATC-1515A-1g	(2) 15	97,6	34.755	44.550	15.600	803	6832	(2) 5.5	5450	(2) 300	39.225	5674	3178	2496	1213	5486
eco-ATC-1670A-1g	(2) 22	111,7	34.825	44.625	15.635	803	6832	(2) 5.5	5450	(2) 300	39.300	5674	3178	2496	1213	5486
eco-ATC-1769A-1g	(2) 30	121,2	34.970	44.770	15.710	803	6832	(2) 5.5	5450	(2) 300	39.445	5674	3178	2496	1213	5486
eco-ATC-1848A-1g	(2) 37	129,0	34.980	44.780	15.710	803	6832	(2) 5.5	5450	(2) 300	39.455	5674	3178	2496	1213	5486
eco-ATC-1159A-1g	(2) 22	133,4	19.715	29.575	7.810	309	2626	(2) 7.5	6055	(2) 350	23.495	4810	2315	2496	349	6096
eco-ATC-1233A-1g	(2) 30	146,8	19.860	29.720	7.885	309	2626	(2) 7.5	6055	(2) 350	23.640	4810	2315	2496	349	6096
eco-ATC-1364A-1g	(2) 18.5	123,1	24.375	34.520	10.140	455	3865	(2) 7.5	6055	(2) 350	28.440	5026	2530	2496	565	6096
eco-ATC-1419A-1g	(2) 22	130,8	24.420	34.565	10.165	455	3865	(2) 7.5	6055	(2) 350	28.485	5026	2530	2496	565	6096
eco-ATC-1510A-1g	(2) 30	142,7	24.565	34.710	10.240	455	3865	(2) 7.5	6055	(2) 350	28.630	5026	2530	2496	565	6096
eco-ATC-1607A-1g	(2) 22	127,0	29.175	39.600	12.540	600	5105	(2) 7.5	6055	(2) 350	33.520	5242	2746	2496	781	6096
eco-ATC-1709A-1g	(2) 30	138,6	29.320	39.745	12.615	600	5105	(2) 7.5	6055	(2) 350	33.665	5242	2746	2496	781	6096
eco-ATC-1671A-1g	(2) 22	123,1	33.820	44.515	14.865	746	6345	(2) 7.5	6055	(2) 350	38.435	5458	2962	2496	997	6096
eco-ATC-1888A-1g	(2) 37	143,1	33.975	44.670	14.940	746	6345	(2) 7.5	6055	(2) 350	38.590	5458	2962	2496	997	6096
eco-ATC-1726A-1g	(2) 22	119,2	38.945	49.920	17.425	892	7585	(2) 7.5	6055	(2) 350	43.845	5674	3178	2496	1213	6096
eco-ATC-1837A-1g	(2) 30	130,2	39.090	50.070	17.500	892	7585	(2) 7.5	6055	(2) 350	43.990	5674	3178	2496	1213	6096
eco-ATC-1917A-1g	(2) 37	138,6	39.100	50.075	17.505	892	7585	(2) 7.5	6055	(2) 350	44.000	5674	3178	2496	1213	6096
eco-ATC-1983A-1g	(2) 45	145,9	39.280	50.260	17.595	892	7585	(2) 7.5	6055	(2) 350	44.180	5674	3178	2496	1213	6096

Please refer to the notes at page 24

eco-ATC-A

Diagram of the front panel of the 48-inch wide unit. The upper section features four circular access doors arranged in a 2x2 grid. Each door has a circular grille with a central handle. Labels 'ACCESS DOOR' are placed above and below each door. A note at the top center states 'Access Doors Swing Inside Unit'. The lower section consists of a large rectangular area filled with a honeycomb filter pattern. The unit is shown with side handles and mounting brackets.



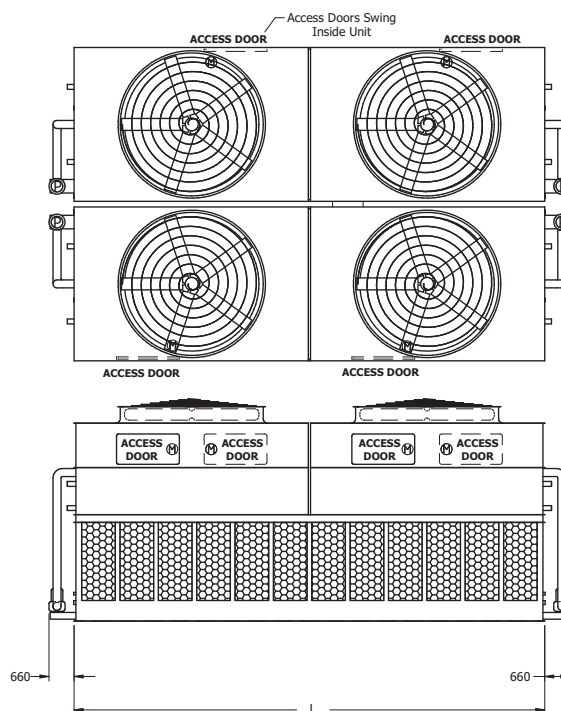
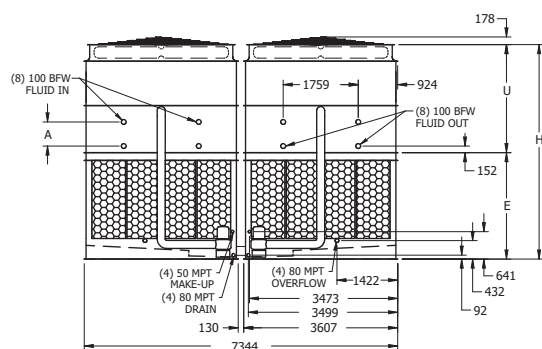
Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-1293A-1g	(4) 7.5	127,8	25.120	36.795	5.010	381	3243	(4) 4	7420	(4) 300	29.510	4810	2315	2496	349	7366
eco-ATC-1413A-1g	(4) 11	146,2	25.355	37.030	5.070	381	3243	(4) 4	7420	(4) 300	29.745	4810	2315	2496	349	7366
eco-ATC-1565A-1g	(4) 18.5	173,3	25.520	37.195	5.110	381	3243	(4) 4	7420	(4) 300	29.910	4810	2315	2496	349	7366
eco-ATC-1730A-1g	(4) 11	143,5	30.910	42.910	6.460	555	4718	(4) 4	7420	(4) 300	35.625	5026	2530	2496	565	7366
eco-ATC-1843A-1g	(4) 15	158,0	31.015	43.020	6.485	555	4718	(4) 4	7420	(4) 300	35.735	5026	2530	2496	565	7366
eco-ATC-1916A-1g	(4) 18.5	168,4	31.070	43.075	6.500	555	4718	(4) 4	7420	(4) 300	35.790	5026	2530	2496	565	7366
eco-ATC-1782A-1g	(4) 7.5	121,7	36.460	48.805	7.845	728	6193	(4) 4	7420	(4) 300	41.520	5242	2746	2496	781	7366
eco-ATC-1948A-1g	(4) 11	139,4	36.695	49.040	7.905	728	6193	(4) 4	7420	(4) 300	41.760	5242	2746	2496	781	7366
eco-ATC-2157A-1g	(4) 18.5	163,5	36.860	49.205	7.945	728	6193	(4) 4	7420	(4) 300	41.920	5242	2746	2496	781	7366
eco-ATC-2222A-1g	(4) 22	172,0	36.950	49.295	7.970	728	6193	(4) 4	7420	(4) 300	42.010	5242	2746	2496	781	7366
eco-ATC-1493A-1g	(4) 7.5	118,1	41.955	54.630	9.220	902	7668	(4) 4	7420	(4) 300	47.345	5458	2962	2496	997	7366
eco-ATC-2068A-1g	(4) 11	135,3	42.195	54.865	9.280	902	7668	(4) 4	7420	(4) 300	47.580	5458	2962	2496	997	7366
eco-ATC-2291A-1g	(4) 18.5	158,6	42.355	55.030	9.320	902	7668	(4) 4	7420	(4) 300	47.745	5458	2962	2496	997	7366
eco-ATC-2359A-1g	(4) 22	167,1	42.445	55.120	9.345	902	7668	(4) 4	7420	(4) 300	47.835	5458	2962	2496	997	7366
eco-ATC-1933A-1g	(4) 7.5	114,5	47.780	60.780	10.680	1.075	9143	(4) 4	7420	(4) 300	53.495	5674	3178	2496	1213	7366
eco-ATC-2112A-1g	(4) 11	131,1	48.015	61.015	10.735	1.075	9143	(4) 4	7420	(4) 300	53.735	5674	3178	2496	1213	7366
eco-ATC-2410A-1g	(4) 22	161,8	48.270	61.270	10.800	1.075	9143	(4) 4	7420	(4) 300	53.985	5674	3178	2496	1213	7366
eco-ATC-2515A-1g	(4) 30	175,3	48.560	61.560	10.875	1.075	9143	(4) 4	7420	(4) 300	54.275	5674	3178	2496	1213	7366
eco-ATC-1493A-1g	(4) 11	159,4	28.395	42.195	5.690	440	3745	(4) 4	8630	(4) 300	33.775	4810	2315	2496	349	8585
eco-ATC-1583A-1g	(4) 15	175,5	28.505	42.300	5.715	440	3745	(4) 4	8630	(4) 300	33.885	4810	2315	2496	349	8585
eco-ATC-1657A-1g	(4) 18.5	189,0	28.560	42.355	5.730	440	3745	(4) 4	8630	(4) 300	33.940	4810	2315	2496	349	8585
eco-ATC-1707A-1g	(4) 22	200,9	28.650	42.445	5.750	440	3745	(4) 4	8630	(4) 300	34.030	4810	2315	2496	349	8585
eco-ATC-1828A-1g	(4) 11	156,7	35.035	49.235	7.350	643	5471	(4) 4	8630	(4) 300	40.815	5026	2530	2496	565	8585
eco-ATC-1939A-1g	(4) 15	172,5	35.145	49.340	7.375	643	5471	(4) 4	8630	(4) 300	40.925	5026	2530	2496	565	8585
eco-ATC-2029A-1g	(4) 18.5	185,4	35.200	49.395	7.390	643	5471	(4) 4	8630	(4) 300	40.980	5026	2530	2496	565	8585
eco-ATC-2090A-1g	(4) 22	195,2	35.290	49.485	7.410	643	5471	(4) 4	8630	(4) 300	41.070	5026	2530	2496	565	8585
eco-ATC-2191A-1g	(4) 15	167,4	41.895	56.470	9.065	846	7197	(4) 4	8630	(4) 300	48.055	5242	2746	2496	781	8585
eco-ATC-2292A-1g	(4) 18.5	180,0	41.950	56.525	9.075	846	7197	(4) 4	8630	(4) 300	48.110	5242	2746	2496	781	8585
eco-ATC-2361A-1g	(4) 22	189,5	42.040	56.615	9.100	846	7197	(4) 4	8630	(4) 300	48.200	5242	2746	2496	781	8585
eco-ATC-2427A-1g	(4) 18.5	174,7	48.280	63.260	10.660	1.049	8924	(4) 4	8630	(4) 300	54.840	5458	2962	2496	997	8585
eco-ATC-2500A-1g	(4) 22	183,8	48.370	63.350	10.680	1.049	8924	(4) 4	8630	(4) 300	54.930	5458	2962	2496	997	8585
eco-ATC-2609A-1g	(4) 30	199,3	48.660	63.640	10.755	1.049	8924	(4) 4	8630	(4) 300	55.220	5458	2962	2496	997	8585
eco-ATC-2473A-1g	(4) 18.5	169,3	55.610	70.970	12.490	1.252	10650	(4) 4	8630	(4) 300	62.550	5674	3178	2496	1213	8585
eco-ATC-2548A-1g	(4) 22	178,2	55.700	71.060	12.515	1.252	10650	(4) 4	8630	(4) 300	62.640	5674	3178	2496	1213	8585
eco-ATC-2659A-1g	(4) 30	193,0	55.990	71.350	12.585	1.252	10650	(4) 4	8630	(4) 300	62.930	5674	3178	2496	1213	8585

ENGINEERING

eco-ATC-A

ENGINEERING DATA & DIMENSIONS

eco-ATC-A Models*: 24'x36' & 24'x40'



Model No.	Fans		Weights (kg) (1)			Refrigerant Operating Charge (2) (kg)	Coil Volume (l)	Spray Pump (kW)	Remote Pump (4)			Dimensions (mm) (5)				
	kW	m³/s	Shipping	Operating	Heaviest Section				Liters Req'd (3)	Conn. Size (DN)	Operating Weight	Height H	Upper U	Lower E	Coil A	Length L
eco-ATC-2182A-1g	(4) 22	248.1	35.980	53.650	7.205	558	4749	(4) 5.5	10900	(4) 300	42.865	4810	2315	2496	349	11036
eco-ATC-2423A-1g	(4) 15	210.7	44.145	62.305	9.245	820	6978	(4) 5.5	10900	(4) 300	51.520	5026	2530	2496	565	11036
eco-ATC-2557A-1g	(4) 18.5	227.0	44.200	62.360	9.260	820	6978	(4) 5.5	10900	(4) 300	51.575	5026	2530	2496	565	11036
eco-ATC-2671A-1g	(4) 22	241.2	44.290	62.450	9.280	820	6978	(4) 5.5	10900	(4) 300	51.665	5026	2530	2496	565	11036
eco-ATC-2510A-1g	(4) 11	186.0	52.670	71.340	11.375	1.082	9206	(4) 5.5	10900	(4) 300	60.555	5242	2746	2496	781	11036
eco-ATC-2717A-1g	(4) 15	204.7	52.780	71.450	11.405	1.082	9206	(4) 5.5	10900	(4) 300	60.665	5242	2746	2496	781	11036
eco-ATC-2888A-1g	(4) 18.5	220.1	52.835	71.505	11.415	1.082	9206	(4) 5.5	10900	(4) 300	60.720	5242	2746	2496	781	11036
eco-ATC-3018A-1g	(4) 22	234.3	52.925	71.595	11.440	1.082	9206	(4) 5.5	10900	(4) 300	60.810	5242	2746	2496	781	11036
eco-ATC-2696A-1g	(4) 11	180.2	61.015	80.195	13.465	1.345	11435	(4) 5.5	10900	(4) 300	69.410	5458	2962	2496	997	11036
eco-ATC-3185A-1g	(4) 22	227.0	61.270	80.450	13.525	1.345	11435	(4) 5.5	10900	(4) 300	69.665	5458	2962	2496	997	11036
eco-ATC-3374A-1g	(4) 30	246.5	61.560	80.740	13.600	1.345	11435	(4) 5.5	10900	(4) 300	69.955	5458	2962	2496	997	11036
eco-ATC-2747A-1g	(4) 11	174.7	69.455	89.140	15.570	1.607	13663	(4) 5.5	10900	(4) 300	78.355	5674	3178	2496	1213	11036
eco-ATC-2939A-1g	(4) 15	192.3	69.565	89.250	15.600	1.607	13663	(4) 5.5	10900	(4) 300	78.460	5674	3178	2496	1213	11036
eco-ATC-3239A-1g	(4) 22	220.1	69.710	89.395	15.635	1.607	13663	(4) 5.5	10900	(4) 300	78.610	5674	3178	2496	1213	11036
eco-ATC-3431A-1g	(4) 30	238.8	70.000	89.685	15.710	1.607	13663	(4) 5.5	10900	(4) 300	78.900	5674	3178	2496	1213	11036
eco-ATC-3583A-1g	(4) 37	254.2	70.015	89.700	15.710	1.607	13663	(4) 5.5	10900	(4) 300	78.915	5674	3178	2496	1213	11036
eco-ATC-2247A-1g	(4) 22	262.7	39.470	59.275	7.810	617	5251	(4) 7.5	12115	(4) 350	46.985	4810	2315	2496	349	12256
eco-ATC-2391A-1g	(4) 30	289.2	39.760	59.565	7.885	617	5251	(4) 7.5	12115	(4) 350	47.275	4810	2315	2496	349	12256
eco-ATC-2752A-1g	(4) 22	257.7	48.890	69.255	10.165	909	7731	(4) 7.5	12115	(4) 350	56.960	5026	2530	2496	565	12256
eco-ATC-2928A-1g	(4) 30	281.0	49.180	69.545	10.240	909	7731	(4) 7.5	12115	(4) 350	57.250	5026	2530	2496	565	12256
eco-ATC-3116A-1g	(4) 22	250.1	58.395	79.325	12.540	1.201	10210	(4) 7.5	12115	(4) 350	67.030	5242	2746	2496	781	12256
eco-ATC-3315A-1g	(4) 30	273.0	58.685	79.615	12.615	1.201	10210	(4) 7.5	12115	(4) 350	67.320	5242	2746	2496	781	12256
eco-ATC-3169A-1g	(4) 18.5	228.1	67.595	89.065	14.840	1.492	12690	(4) 7.5	12115	(4) 350	76.775	5458	2962	2496	997	12256
eco-ATC-3296A-1g	(4) 22	242.4	67.685	89.160	14.865	1.492	12690	(4) 7.5	12115	(4) 350	76.865	5458	2962	2496	997	12256
eco-ATC-3507A-1g	(4) 30	264.9	67.975	89.450	14.935	1.492	12690	(4) 7.5	12115	(4) 350	77.155	5458	2962	2496	997	12256
eco-ATC-3661A-1g	(4) 37	281.9	67.995	89.465	14.940	1.492	12690	(4) 7.5	12115	(4) 350	77.175	5458	2962	2496	997	12256
eco-ATC-3348A-1g	(4) 22	234.8	77.935	99.970	17.425	1.784	15170	(4) 7.5	12115	(4) 350	87.680	5674	3178	2496	1213	12256
eco-ATC-3562A-1g	(4) 30	256.4	78.225	100.260	17.500	1.784	15170	(4) 7.5	12115	(4) 350	87.970	5674	3178	2496	1213	12256
eco-ATC-3719A-1g	(4) 37	273.0	78.245	100.280	17.505	1.784	15170	(4) 7.5	12115	(4) 350	87.990	5674	3178	2496	1213	12256
eco-ATC-3846A-1g	(4) 45	287.4	78.610	100.645	17.595	1.784	15170	(4) 7.5	12115	(4) 350	88.350	5674	3178	2496	1213	12256

Please refer to the notes at page 24

eco-ATC-A

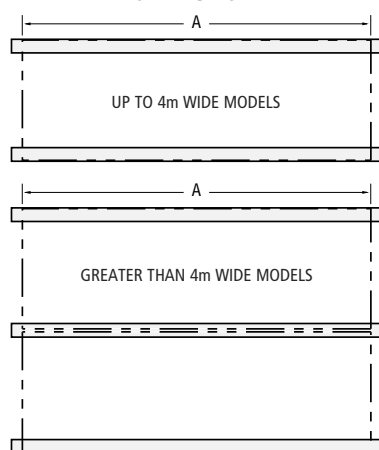
RECOMMENDED STEEL SUPPORT

The recommended support for EVAPCO Evaporative Condensers is structural "I" beams located under the outer flanges and running the entire length of the unit. The unit should be elevated to allow access underneath the unit and to the roof below.

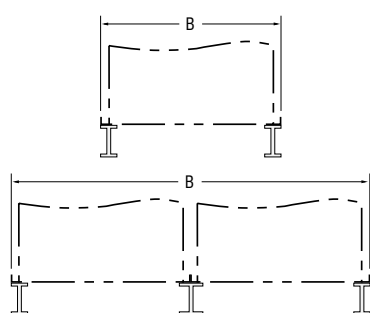
Mounting holes 19 mm in diameter are located in the bottom flanges of the pan section to provide for bolting to the structural steel. (Refer to certified drawings from the factory for bolt hole locations.)

Beams should be level before setting the unit in place. Do not level the unit by shimming between the unit and the structural steel. Dimensions weights and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.

Plan Views



End Elevations



SUPPORTING STEEL DIMENSIONS

eco-ATC-A*	A	B
8.5' x 7.5'	2578	2283
8' x 9'	2731	2388
8' x 10.5'	3188	2388
8' x 12'	3651	2388
8' x 14'	4261	2388
8' x 18'	5486	2388
8' x 21'	6401	2388
8' x 24'	7366	2388
8' x 28'	8586	2388
8' x 36'	11036	2388
8' x 42'	12866	2388
	A	B
16' x 10.5'	3188	4906
16' x 12'	3651	4906
16' x 14'	4261	4906
	A	B
10' x 12'	3651	2991
10' x 18'	5486	2991
10' x 24'	7366	2991
10' x 36'	11036	2991
	A	B
12' x 12'	3651	3607
12' x 14'	4261	3607
12' x 18'	5486	3607
12' x 20'	6096	3607
12' x 24'	7366	3607
12' x 28'	8585	3607
12' x 36'	11036	3607
12' x 40'	12256	3607
	A	B
24' x 12'	3651	7344
24' x 14'	4261	7344
24' x 18'	5486	7344
24' x 20'	6096	7344
24' x 24'	7366	7344
24' x 28'	8585	7344
24' x 36'	11036	7344
24' x 40'	12256	7344

* The family models refer to the plan area dimensions [Width (ft) x Length (ft)].

eco-ATC-A

SPECIFICATIONS

FACTORY FABRICATED INDUCED DRAFT eco-ATC-A EVAPORATIVE CONDENSER

General

Furnish and install factory assembled evaporative condenser of induced draft counterflow design with a horizontal multiple side air entry and a vertical air discharge. The unit shall be completely factory assembled and conform to the specifications and schedules.

The condenser shall reject _____ kW of heat with _____ as refrigerant and _____ °C condensation temperature at a wet bulb temperature of _____ °C.

The total fan power should not exceed _____ kW.
The total pump power should not exceed _____ kW.

The total overall unit dimensions should not exceed the following:

Length: _____ mm Width: _____ mm Height: _____ mm

The maximum operating weight should not exceed _____ kg.

The unit will be delivered in two parts: the bottom basin - louver section and the heat transfer - fan section. The unit (top and bottom section) shall be joined together with elastic sealer and bolted together with corrosion resistant fasteners.

Approved manufacturer Evapco – model eco-ATC-A _____

Thermal Performance – Performance Warranty

The unit shall be capable of performing the thermal duties as shown in the schedule and on drawings and its design thermal rating shall be guaranteed by the manufacturer.

Applicable Standards

CTI ATC 128 Test Code for Measurement of Sound from Water Cooling Towers

Submittals

- The manufacturer shall submit a five year history of the proposed type of evaporative condenser with a minimum of 10 installations for similar sized equipment.
- Shop drawings: submit shop drawings indicating dimensions, weight loadings and required clearances.
- Product data: submit manufacturers technical product data, original selection printouts and clearance requirements.
- Complete noise data sheet for the selected evaporative condenser(s).
- Maintenance data for the evaporative condenser(s) and accessories.
- The manufacturer shall provide factory test run certificates of the fans and fan motor.

Product Delivery – Storage and Handling

- The contractor shall make the provisions for proper storage at site before installation and handle the product per the instructions of the manufacturer.
- Once installed provide the necessary measures to keep units clean and protected from any dust and mechanical damage.

Quality Assurance

- The manufacturer shall have a quality assurance system in place which is certified by an accredited registrar and complying with the requirements of ISO 9001. This is to guarantee a consistent level of product and service quality.
- Manufacturers without ISO 9001 certification are not acceptable.

Warranty

- The products will be warranted for a period of minimum two years from the date of shipment.

PRODUCT

Construction – Corrosion Resistance

- The structure and all steel elements of the pan and casing shall be constructed of Z 725 hot dip galvanized steel for long life and durability. Alternatives with lower zinc layer thickness and external paint or coating are not accepted as equal.
- The strainer shall be made of stainless steel type 304.
- During fabrication all panel edges shall be coated with a 95 % pure zinc compound.
- Casing materials shall be of non flammable construction only.

OPTIONAL EXECUTION – BASIN IN AISI 304

Construction – Corrosion Resistance

- The structure and all steel elements of the Basin and Louver section up to the water level shall be made of stainless steel AISI 304. Cold water basin will be a welded stainless steel construction.
- Alternatives with hot dip galvanized steel and epoxy coatings in lieu of the stainless steel AISI 304 are not considered to be equal and are not accepted.
- All other steel components of the casing shall be constructed of Z 725 hot dip galvanized steel for long life and durability. Alternatives with lower zinc layer thickness and external paint or coating or FRP materials are not accepted as equal.
- The strainer shall be made of stainless steel AISI 304.
- During fabrication all galvanized steel panel edges shall be coated with a 95 % pure zinc compound.
- Casing materials shall be of non flammable construction only.

OPTIONAL EXECUTION – COMPLETE UNIT IN

STAINLESS STEEL AISI 304 (except heat exchange coil(s))

Construction – Corrosion Resistance

- The structure and all steel elements shall be made of AISI 304. Cold water basin will be a welded stainless steel construction.
- Alternatives with hot dip galvanized steel and epoxy coatings in lieu of the AISI 304 are not considered to be equal and are not accepted.
- The strainer shall be made of stainless steel AISI 304.
- Casing materials shall be of non flammable construction only.

Evaporative Condenser Basin

- Standard basin accessories include: overflow, drain, strainer and brass make up valve with plastic float ball.
- The strainer shall be made of AISI 304.
- The entire pan area shall incorporate a sloped and stepped basin design to prevent sediment built up, biological film and standing water.
- Upper and lower basin bottoms shall be sloped to provide drainage of the complete basin section.
- The basin can be inspected while the unit is in operation with the fan(s) and pump(s) running.

Air Inlet Louvers

- The air inlet louvers shall be constructed of UV inhibited polyvinyl chloride (PVC), mounted in easily removable frames for easy access to the basin.
- The louvers shall be at four sides to provide easy access to the basin interior.
- The louvers shall have a minimum of two changes in air direction to prevent splash out and block direct sunlight from entering the basin.
- The louvers will have a 19 mm opening to prevent debris from entering the basin.

Casing Section

Heat Transfer Coil

- The evaporative condenser shall use internally enhanced heat exchange coils of an elliptical tube design with extended surface spiral fins to increase the heat transfer efficiency, to

SPECIFICATIONS

ECO-ATC-A

obtain lower air flow resistance and allow higher water loadings around the tubes. Each row of the heat exchanger coil shall be provided spiral fins to increase the evaporative and dry thermal performance of the unit.

- b) The heat transfer coil(s) shall be made of all prime surface, encased in a steel framework and hot dip galvanized after fabrication as a complete assembly.
- c) The tubes shall be arranged in a self spacing, staggered pattern in the direction of air flow for maximum heat transfer efficiency and minimum pressure drop.
- d) The heat exchange coils shall be air pressure tested under water.
- e) The design and manufacturing process shall be approved and in accordance with the "Pressure Equipment Directive" – PED 97 / 23 EC.
- f) The manufacturer shall be responsible for the manufacturing and performance testing of the entire heat transfer coil. This is to assure single source responsibility.
- g) The casing shall totally encase the complete coil section to protect the complete coil from direct atmospheric contact.

Water Distribution

- a) The water distribution system shall be completely enclosed and protected from sunlight exposure, environmental elements and debris. Water distribution systems with direct exposure to the environment are not allowed.
- b) The spray header and branches shall be constructed of Schedule 40, Polyvinyl Chloride (PVC) pipe for corrosion resistance.
- c) The water shall be distributed over the coil by precision molded ZM II™ spray nozzles with large minimum orifice openings and integral sludge ring to eliminate clogging.
- d) The nozzles shall be threaded into the water distribution piping to assure positive positioning and easy removal for maintenance. Snap in or strapped on nozzles are not accepted.

Water Circulation Pump

- a) The pump(s) shall be a close coupled, centrifugal type with mechanical seal, installed vertically at the factory to allow free drainage on shut down.
- b) A ____ kW totally enclosed motor(s) suitable for outdoor service shall be furnished.
- c) The motor shall be suitable for the following power supply: ____volts, ____hertz and ____ phase and ____ kW.

Drift Eliminators

- a) The drift eliminators shall be constructed of entirely inert polyvinyl (PVC) that has been specially treated to resist ultra violet light.
- b) Assembled in easily handled sections, the eliminator blades shall be spaced on 25 mm centers and shall incorporate three changes in air direction to assure efficient removal of entrained moisture from the discharge air stream.
- c) The maximum drift rate shall not exceed 0,001 % of the circulating water rate.
- d) The drift eliminators shall be Eurovent OM-14-2009 certified.

Access Door

- a) A large hinged access door shall provide access to the fan section for maintenance.

Mechanical Equipment

Axial Propeller Fan(s) (Standard)

- a) Fan shall be heavy duty wide chord axial propeller type, statically balanced and constructed of extruded aluminum alloy blades.
- b) Fans shall be installed in a closely fitted cowl with venturi air inlet for maximum fan efficiency.
- c) The fans shall utilize a soft connect blade to hub design, compatible with variable speed drives, to avoid transmission of vertical forces to the unit structure.
- d) Each fan blade shall be individually adjustable.

- e) The fan cowl shall be covered with a heavy gauge hot dip galvanized steel wire fan guard.
- f) The fan – drive system (fan – drive – motor) shall be factory mounted, adjusted and undergo a trial run in the factory before shipment.

Axial Propeller Fan(s) - Low Sound Fan (Alternative)

- a) Fan shall be heavy duty wide chord axial propeller type, statically balanced and constructed of extruded aluminum alloy blades.
- b) Fans shall be installed in a closely fitted cowl with venturi air inlet for maximum fan efficiency.
- c) The fans shall utilize a soft connect blade to hub design, compatible with variable speed drives, to avoid transmission of vertical forces to the unit structure.
- d) Each fan blade shall be individually adjustable.
- e) The fan cowl shall be covered with a heavy gauge hot dip galvanized steel wire fan guard.
- f) The fan – drive system (fan – drive – motor) shall be factory mounted, adjusted and undergo a trial run in the factory before shipment.

Axial Propeller Fan(s) - Super Low Sound Fan (Alternative)

- a) Fan shall be extremely wide chord axial, one piece heavy duty propeller type, statically balanced and made of FRP.
- b) Fans will be installed in a closely fitted cowl with venturi air inlet for maximum fan efficiency.
- c) The fan cowl shall be covered with a heavy gauge hot dip galvanized steel wire fan guard.
- d) The fan – drive system (fan – drive – motor) shall be factory mounted, adjusted and undergo a trial run in the factory before shipment.
- e) The fans are high efficiency and operate with no loss of thermal performance

Bearings and Drive

- a) The fan shaft (s) shall be supported by heavy duty, self aligning ball type bearings with cast iron housings.
- b) The bearings shall be rated for an L-10 life of 75000 hours.
- c) The fan drive sheaves shall be aluminum alloy.
- d) The belt shall be a multigroove belt system, constructed of neoprene with polyester cords and designed for 150% of the motor nameplate horsepower.
- e) The grease fittings shall be extended to a location just inside the access door.

Motor (2.3 and 2.4 meter wide Models)

- a) The fan motor shall be Totally Enclosed Fan Cooled (TEFC), squirrel cage, ball bearing type motor.
- b) The motor shall be specially designed for cooling tower use with moisture protection on the winding, shaft and bearings.
- c) The motor shall be minimum IP 55 degree of protection, Class F insulation, Service Factor 1 and selected for the appropriate cooling tower duty and the correct ambient temperature but minimum 40°C.
- d) Motors bearings shall be double sealed non-relubricable or external grease nipples shall be provided.
- e) The motor shall be mounted on an adjustable heavy duty steel motor base.
- f) A hinged protective cover shall shield the motor and sheave from the weather.
- g) The motor power supply shall be ____ volts, ____ hertz and ____ phase.

Motor (3.0 and 3.6 meter wide Models)

- a) The fan motor shall be Totally Enclosed Air Over (TEAO), squirrel cage, ball bearing type motor.
- b) The motor shall be specially designed for cooling tower use with moisture protection on the windings, shaft and bearings.
- c) The motor shall be minimum IP 55 degree of protection, Class F insulation, Service Factor 1 and selected for the appropriate cooling tower duty and the correct ambient temperature but minimum 40°C.
- d) Motor bearings shall be double sealed non-relubricable or external grease nipples shall be provided.

eco-ATC-A

SPECIFICATIONS

- e) The motor shall be mounted on an adjustable heavy duty steel motor base.
- f) The motor base shall be able to swing to the outside of the unit for repair or removal.
- g) The motor power supply shall be ____ volts, ____ hertz and ____ phase.

Sound Levels

Sound Level

The maximum sound pressure levels (dB) measured 1.5 m 45° from the top of the evaporative condenser operating at full fan speed shall not exceed the sound levels detailed below.

Location	63	125	250	500	1000	2000	4000	8000	dB(A)
	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	
Fan discharge									
Air inlet / end									

ACCESSORIES (Optional)

Electric Heaters

- a) The evaporative condenser cold water basin shall be provided with an electric heater package to prevent freezing of the water in the cold water basin, when the pump is shut down.
- b) The electric heater package includes: electric heater element(s), thermostat and low water level cutoff.
- c) The heaters shall be selected to maintain 4 °C basin water temperature at ____ °C ambient
- d) The heater(s) shall be ____ V / ____ phase / ____ Hz electric power supply.

Three Probe Electric Water Level Control Package

- a) The evaporative condenser manufacturer shall provide an electric water level control package instead of the mechanical float valve arrangement.
- b) The package consist of the following elements :
 - Multiple heavy duty stainless steel 316 static sensors mounted in a stilling chamber outside the unit. Electrodes or sensors mounted inside the unit are not accepted as their operation will be disturbed by the moving water in the basin.
 - An ABS, IP 56 case contains all the contactors for the different level probes and will provide an output signal of a relay for automatic filling and one relay for alarm level.
 - The power supply to the control package is 24 Vac / 230 Vac - ____ Hz .
 - A weather protected solenoid valve (PN16) for the water make up ready for piping to a water supply with pressure between 140 kPa and 340 kPa.

Vibration Switch

- a) A vibration limit switch shall be installed on the mechanical equipment support and wired into the control panel. The purpose of this switch is to interrupt power to the motor in the event of excessive vibration.
- b) The switch shall be adjustable for sensitivity and shall require manual reset.

Service Platform

- a) The evaporative condenser shall be supplied with an external service platform.
- b) The external service platform will be self supporting and include access ladders and safety cage to the platform.
- c) The external service platform will be installed in front of the fan access doors.
- d) The platform shall meet OSHA - CE requirements.

Motor Davit

- a) The evaporative condenser shall be supplied with a motor davit to facilitate the removal of fan motor(s) and fan(s).
- b) The davit and braket are constructed of aluminum and are mounted on the side of the unit.

- c) The fan motor davit ships loose with the unit and is installed in the field.

Water Silencer

- a) The water silencers are located in the falling water area of the cold water basin.
- b) The water silencers will reduce the overall sound levels 4 dB (A) to 7 dB (A) measured at 1.5 m from the side or end of the unit, when the fans are running, and 9 dB (A) to 12 dB (A) when fans are off.
- c) The water silencers are constructed of lightweight PVC sections and can be easily removed for access to the basin area.
- d) The water silencers will have no impact on the unit's thermal performance.

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Notes:



Evapco Products are Manufactured Worldwide



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