



® for LIFE

eco-Hybrid Coolers

The NEW Family of Closed Circuit Coolers



NEW!

ARID-fin Pak™

eco-ATWB-H

Sage®

CONTROL SYSTEM



Environmentally Conscious Operation Hybrid
Providing Maximum Water Savings & Higher Dry Switchover Temperatures

† Mark owned by the Cooling Technology Institute





Since its founding in 1976, EVAPCO, Incorporated has become an industry leader in the engineering and manufacturing of quality heat transfer products around the world. EVAPCO's mission is to provide first class service and quality products for the following markets:

- Industrial Refrigeration
- Commercial HVAC
- Industrial Process
- Power

EVAPCO's powerful combination of financial strength and technical expertise has established the company as a recognized manufacturer of market-leading products on a worldwide basis. EVAPCO is also recognized for the superior technology of their environmentally friendly product innovations in sound reduction and water management.

EVAPCO is an employee owned company with a strong emphasis on research & development and modern manufacturing plants. EVAPCO has earned a reputation for technological innovation and superior product quality by featuring products that are designed to offer these operating advantages:

- Higher System Efficiency
- Environmentally Friendly
- Lower Annual Operating Costs
- Reliable, Simple Operation and Maintenance

With an ongoing commitment to Research & Development programs, EVAPCO provides 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 **NEW** eco-ATWB-H Hybrid line of closed circuit coolers was designed with the purpose of providing maximum water savings, higher dry bulb switch over temperatures, while achieving plume abatement or elimination by utilizing evaporative (latent) and dry (sensible) modes of cooling, simultaneously!

The eco-ATWB-H is provided with EVAPCO's new **ARID-fin Pak™** dry coil. Utilizing copper tubes and aluminum magnesium fins, the **ARID-fin Pak™** maximizes the total surface area available for sensible heat transfer, which results in maximum water savings and higher dry bulb switchover temperatures. Since it is located in the discharge airstream, the **ARID-fin Pak™** heats the saturated discharge air, abating or eliminating the plume. Since a significant portion of the heat load is dissipated through the dry cooling coil, the eco-ATWB-H saves water whenever it is in operation!

The eco-ATWB-H is the ideal solution for: Maximized Water Savings, Highest Dry Bulb Switchovers, Plume Reduction or Plume Abatement. This new closed circuit cooler product line is designed with IBC Compliant construction.

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
- Made from corrosion resistant PVC for long life (US Patent: 6,315,804)

PVC Spray Distribution Header with ZM II™ Nozzles



- Large orifice nozzles prevent clogging (no moving parts)
- Threaded nozzles eliminate troublesome grommets
- Fixed position nozzles require zero maintenance
- Threaded end caps for ease of cleaning
- Guaranteed for life

"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

Sage² Control System

Water and Energy Conservation Control System

The eco-Hybrid closed circuit cooler is provided with the EVAPCO Sage² Control System. This system operates the unit in a manner which will maximize water or energy savings. Control is accomplished by operating each cell of the eco-Hybrid in the **Evaporative Mode** or **Dry Mode** based on water or energy savings priority.

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

CTI Certified
Refer to
page 16

IBC Compliant Design
Refer to page 15



CTI
CERTIFIED

Low Sound Options available Refer to page 11



Super Low Sound Fan (optional)

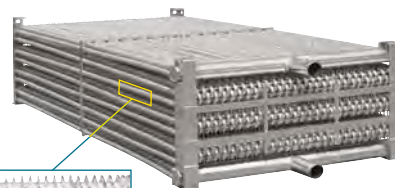
- Extremely wide sloped fan blades for sound sensitive applications
- One piece molded heavy duty construction
- 9-15 dB(A) sound reduction

Ellipti-fin®

Featuring Elliptical Spiral Fin Coil Technology

Introducing the Most Efficient Closed Circuit Cooler Coil in the HVAC industry! The **Ellipti-fin®** provides:

- All coil rows feature patent pending finned Thermal-Pak elliptical tube design
- Lower airflow resistance than typical finned round tubes
- Increased Evaporative and Dry Cooling efficiency



ARID-fin Pak™

- Maximizes Water Efficiency
- Higher Dry Switchover Temperatures
- Plume Elimination in Dry Mode
- Plume Abatement in Evaporative Mode
- Increases Evaporative and Dry Cooling Efficiency



Louver Access Door

- Hinged access panel with quick release mechanism
- Allows easy access to perform routine maintenance and inspection of the makeup assembly, strainer screen and basin
- Louver access door is standard on models with 1.5m and 1.8m tall louver



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)



NEW & Improved!

Stainless Steel Strainers

- Resists corrosion better than other materials

Totally Enclosed Pump Motors

- Help assure long, trouble-free operation

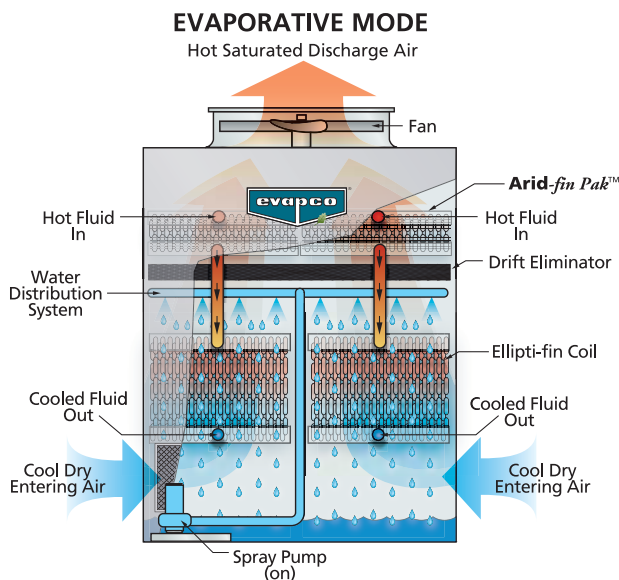
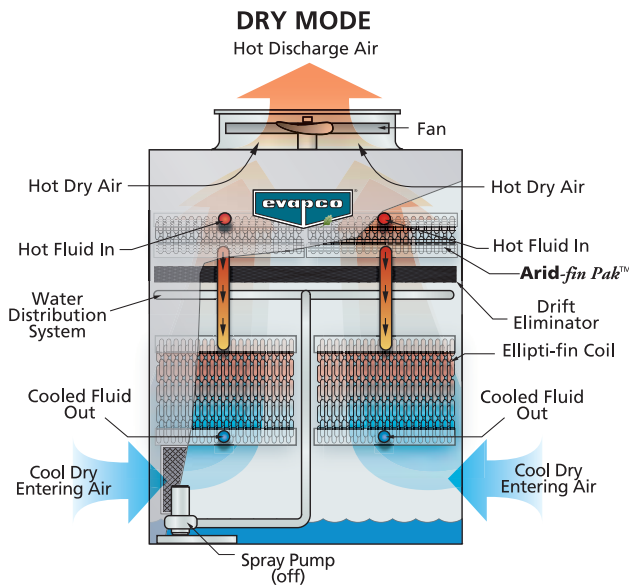
WST II Air Inlet Louvers (Water and Sight Tight)

- Easily removable for access
- Improved design to keep sunlight out-preventing biological growth
- Keeps water in while keeping dirt and debris out (Patent Pending)



eco-ATWB-H

PRINCIPLE OF OPERATION



Dry Mode (Sensible Heat Transfer)

In the dry mode, the process fluid enters the **ARID-fin Pak™** coil through the top coil connections. The fan motor is energized, while the spray pump is de-energized. The axial fan draws air upward through the louvers and across the coils. As the air passes over the **ARID-fin Pak™** coil, a portion of the load is dissipated to the atmosphere through the tube walls and fins using sensible heat transfer. The warm process fluid exits the **ARID-fin Pak™** coil, then enters the **Ellipti-fin®** coil through the factory installed piping. The remaining load is dissipated through the tube and extended surface fins of the **Ellipti-fin®** coil utilizing sensible heat transfer. The unit will remain in the dry mode of operation until the temperature set point can no longer be met. In this mode, **NO** water is used and plume is eliminated.

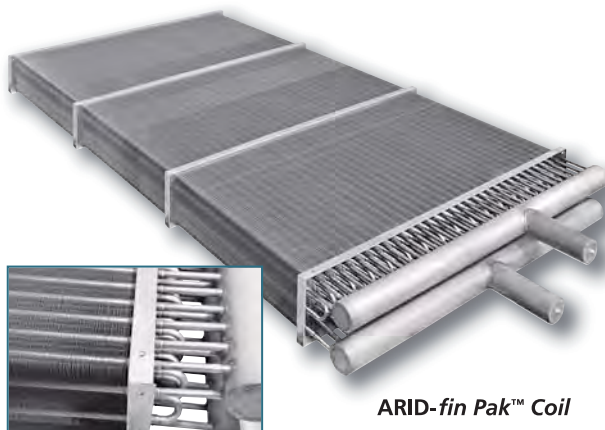
Evaporative mode (Latent and Sensible Heat Transfer)

Once the temperature set point can no longer be met, the unit will switch to the Evaporative mode. This mode of operation in the eco-Hybrid utilizes evaporative and dry cooling simultaneously.

First, the process fluid enters the **ARID-fin Pak™** coil through the top coil connections. The fan and pump motors are energized. A portion of the heat load is transferred through the tube walls and fins to the air passing over the **ARID-fin Pak™** coil. No water is evaporated during this process. The warm process fluid exits the **ARID-fin Pak™** coil, then enters the **Ellipti-fin®** coil through the factory installed piping. The spray system cascades water over the tubes of the **Ellipti-fin®** coil while heat is absorbed by the water. Air is drawn upward and over the coils by the axial fan. A small amount of the recirculating water is evaporated due to latent heat transfer through the tube and fin walls of the **Ellipti-fin®** coil. In this mode, water usage is reduced and plume is abated as the saturated discharge air is heated as it passes over the **ARID-fin Pak™** coil.

DESIGN BENEFITS

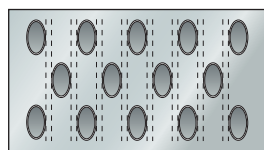
eco-ATWB-H



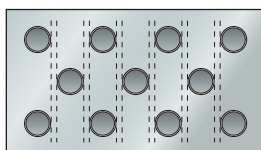
ARID-fin Pak™ Coil

ARID-fin Pak™ Dry Cooling Coil

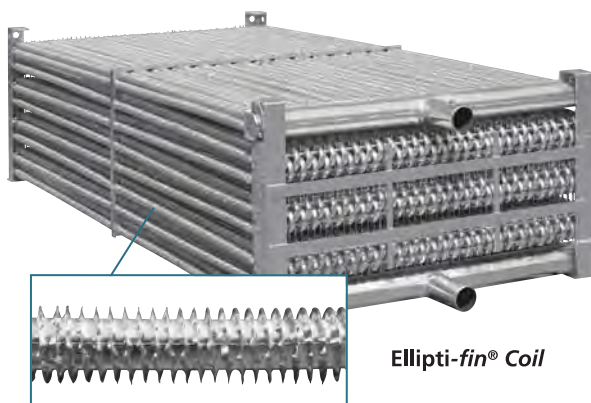
The new eco-ATWB-H Closed Circuit Cooler utilizes the **ARID-fin Pak™** Dry Cooling Coil. Installed in the air discharge of the cooler the **ARID-fin Pak™** dry cooling coil is piped in series with the evaporative cooling coil. The **ARID-fin Pak™** dry cooling coil is constructed of copper tubes and tubular copper header with carbon steel coil connections for easy field piping. The fins have fully drawn collars to maintain consistent fin spacing and continuous surface contact over the entire tube to maximize heat transfer. The fins are constructed of Aluminum/Manganese alloy for superior corrosion resistance.



Thermal-Pak® Coil by EVAPCO



Round Tube Coil by Others



Ellipti-fin® Coil

Ellipti-fin® Cooling Coil

The new eco-ATWB-H Closed Circuit Cooler utilizes EVAPCO's **Ellipti-fin®** coil design which assures even greater operating efficiency. The elliptical tube design allows for closer tube spacing, resulting in greater surface area per unit plan area than round-tube coil designs. In addition, the revolutionary **Ellipti-fin®** design utilizes elliptical spiral fin coil technology which has an inherent air side pressure drop lower than finned round tube designs. This permits greater water loading, making the new **Ellipti-fin®** coil the most effective design available.

The coils are manufactured from high quality steel tubing following the most stringent quality control procedures. Each circuit is inspected to ensure the material quality and then tested before being assembled into a coil. Finally, the assembled coil is pneumatically tested at 2.69 kPa under water to ensure it is leak free.

To protect the coil against corrosion, it is placed in a heavy steel frame and then the entire assembly is dipped in molten zinc (hot-dip galvanized) at a temperature of approximately 427°C.

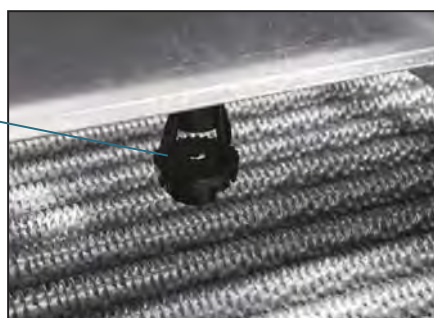
Maintenance Free ZMII® Spray Nozzle Water Distribution System

EVAPCO'S Zero Maintenance ZMII® Spray Nozzle remains clog-free while providing even and constant water distribution for reliable, scale-free evaporative cooling under all operating conditions.

The heavy duty nylon ZMII® Spray nozzles have a 32mm diameter opening and a 32mm splash plate clearance. Furthermore, the fixed position ZMII® nozzles are mounted in corrosion-free PVC water distribution pipes that have threaded end caps. Together, these elements combine to provide unequalled coil coverage and scale prevention, making it the industry's best performing non-corrosive, maintenance-free water distribution system.



ZMII® Nozzle



eco-ATWB-H MAINTENANCE ADVANTAGES



Patent #: 6,315,804

Efficient Drift Eliminators

The eco-ATWB-H is equipped with an efficient drift eliminator system that effectively reduces entrained water droplets from the air discharge to less than 0.001% of the spray water flow rate.

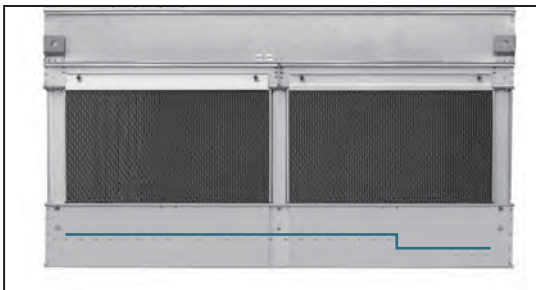
The eliminators are constructed of non-corrosive PVC with a multi-pass design for maximum drift reduction. They are assembled in modular sections for easy removal and access to the water distribution system.

In addition to reducing drift, the eliminators also function as effective debris screens which protect the spray system from sunlight and debris.



Easy Access

The cold water basin is easily accessible from ground level. The basin is provided with removable framed louvers which are designed to protect the basin water from direct exposure to sunlight and debris. The louvers are light-weight and easy to remove. With the louvers removed, a service mechanic has complete access to the basin floor, float assembly and pump strainer. A louver access door is also provided for quick and easy inspection of the basin.



Clean Pan

The basin of the closed circuit cooler is sloped toward the depressed area where the drain is located. With the "Clean Pan" design, it is easy for a service mechanic to flush the pan without getting wet feet. Other Fluid cooler designs may necessitate getting inside the unit for complete cleaning.



Stainless Steel Strainers

The EVAPCO standard for many years, the stainless steel strainer is one component that is subject to excessive wear and corrosion. With stainless steel construction this component will last the life of the unit.

MAINTENANCE ADVANTAGES

eco-ATWB-H

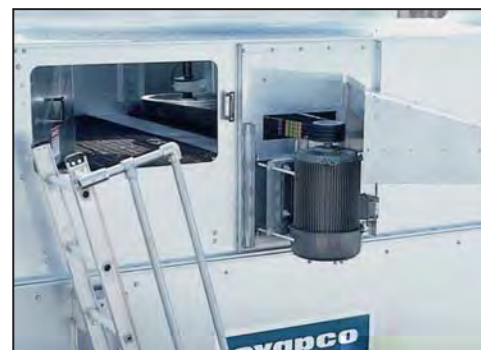
Easy Maintenance Drive System

The EVAPCO POWER-BAND drive system utilized on the eco-ATWB-H Closed Circuit Cooler is the easiest belt drive system to maintain in the industry. Unlike other designs, there is no need to enter the cold water basin to climb up the plenum for access to motors, bearings or belts. All routine and periodic maintenance on the drive system can be safely performed from the exterior of the unit. The most significant benefits and features of EVAPCO's drive system are detailed below.

Models with Motors Mounted Externally

2.5m and 5.2m Wide Models

The fan motor and drive assembly are designed for easy service and adjustment from the unit's exterior. The Totally Enclosed, Fan Cooled (TEFC) fan motor is mounted external to the unit with a protective cover which swings aside for maintenance. A large access door adjacent to the fan motor swings open enabling easy access to the fan drive system. The belt tension can be checked and adjusted easily from the outside of the unit. The fan shaft bearings also have their lubrication lines extended to the access door for added convenience. Note, these motors are shipped loose for field installment. Contact your Evapco sales representative for factory mounting options.



Models with Swing-Out Motors

3m, 3.6m, 6.1m and 7.3m Wide Models

The fan motor is Totally Enclosed, Air Over (TEAO) and specifically designed for evaporative cooling applications. The motor is mounted inside of the unit on an adjustable base that enables the motor to swing outside the unit for easy access. The belt tension is easily checked and adjusted from outside the access door. Evapco provides a special tool for belt adjustment which also functions as a locking mechanism for the motor base adjustment. Lubrication lines for the fan shaft bearings are also extended to the access door for added convenience.



Internal motor...



...with swing-out base

Internally mounted fan motor can swing outside the unit for easy access.

With all periodic and routine maintenance for the drive system performed from the side of the unit, EVAPCO drive systems are the most serviceable in the industry.

Sloped access ladders, working platforms and motor davits are available as options to make maintenance even easier. See page 10, Optional Equipment, for details.

eco-ATWB-H DRIVE SYSTEM

POWER-BAND Drive System Design

The eco-ATWB-H Closed Circuit Cooler features the highly successful POWER-BAND Belt Drive System. The POWER-BAND Drive System has performed consistently with trouble-free operation in the most severe conditions of closed circuit cooler applications. The reliability of the drive system is backed-up by a Five (5) Year complete drive system warranty.



POWER-BAND Belt



TEFC Fan Motor



TEAO Fan Motor

POWER-BAND Drive System Includes:

- Solid back POWER-BAND drive belt
- Totally Enclosed Fan Motors
- Aluminum sheaves
- Fan shaft bearings with minimum 75,000 hrs. L-10 life
- 5 year drive system warranty

POWER-BAND Belt Drive

The POWER-BAND drive is a solid-backed multigroove belt designed for closed circuit cooler service. The drive belt is sized for 150 percent of the motor nameplate horsepower and constructed of neoprene with polyester chords. Band belts are field-proven with over 20 years of field operation.

Drive System Sheaves

Drive system sheaves are constructed of an aluminum alloy for corrosion resistance in the humid closed circuit cooler environment.

Fan Shaft Bearings

The fan shaft bearings are specially selected to provide long life, minimizing costly downtime. They are rated for an L-10 life of 75,000 to 135,000 hours, making them the heaviest duty pillow block bearings in the industry.

Fan Motors

All EVAPCO closed circuit coolers utilize totally enclosed fan motors (T.E.F.C. or T.E.A.O.) designed specifically for evaporative cooling applications. The fan motors which are compatible with variable frequency drive (VFD) systems, come **standard** on all eco-ATWB-H models.

Alternative fan motor options are available as follows:

- Two speed single winding
- Two speed two winding
- Explosion proof

Five Year Drive Warranty

EVAPCO provides a standard 5 year motor and drive warranty on all POWER-BAND drive systems. This warranty provides end users with complete protection against fan motor or drive component failure. The comprehensive warranty includes the fan, fan motor, fan shaft, belts, sheaves, and fan bearings.



DESIGN FEATURES

eco-ATWB-H

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.

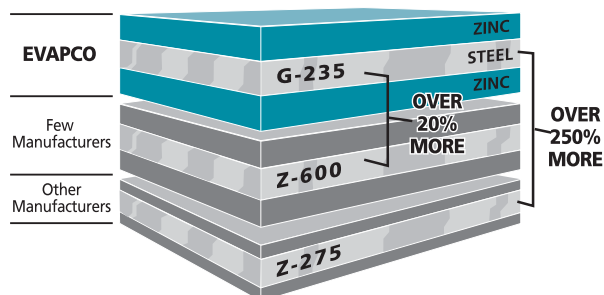
The Evapcoat Corrosion Protection System consist of:

- **G-235 Mill Hot-Dip Galvanized Steel Construction**

Mill hot-dip galvanized steel has been successfully used for many years for the protection of evaporative coolers 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 G-235 mill hot-dip galvanized steel. G-235 designation means there is a minimum of 2.35 ounces of zinc per square foot (approximately 725 gram of zinc per square meter) of surface area present on the steel.

G-235 is the heaviest level of galvanizing available for manufacturing evaporative coolers and has over 2.5 times more zinc protection than competitive designs using Z-275 steel. With G-235 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 cooler. 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 cooler.

- **PVC Drift Eliminators**

The final elements in the upper part of the cooler 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 that have threaded end caps. 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 coolers have a modular design which allows for specific areas to be enhanced for increased corrosion protection. For particularly corrosive environments, EVAPCO coolers are available with Stainless Steel construction for the basin, casing and/or coil.

- **Stainless Steel Basin**

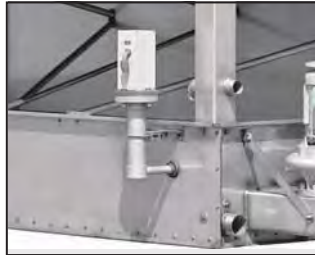
The basin area of a cooler is often subjected to high concentrations of impurities and silt. In addition to the EVAPCOAT Corrosion Protection System, EVAPCO offers optional stainless steel construction for superior corrosion resistance. This option provides Type 304 or Type 316 stainless steel for the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

NOTE: Closed Circuit Coolers should ONLY be used on sealed, pressurized systems. Continual aeration of the water in an open system can cause corrosion inside the tubes of the cooler leading to premature failure.

eco-Hybrid OPTIONAL EQUIPMENT

Electric Water Level Control

Closed circuit coolers 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.



Stainless Steel Basin

EVAPCO coolers have a modular design which allows specific areas to be enhanced for increased corrosion protection. The basin area of the cooler experiences turbulent mixing of air and water, in addition to silt build-up. In conjunction with the EVAPCO Corrosion Protection System, EVAPCO offers an optional Stainless Steel Basin. This option provides Type 304 or 316 stainless steel for the entire basin area including the support columns of the cooler and the louver frames.



Sloped Maintenance Ladders

The EVAPCO designed maintenance ladder features a sloped "ships type" ladder which provides visual inspection of the water distribution system and drive components. All standard drive system maintenance can be performed from the ladder. A handrail is attached to the sloped ladder for safe and easy ascent and descent. There is no need for safety cages with this design. The ladder will ship loose and must be field mounted. The design is OSHA compliant.



Working Platform & Ladder with Davit

Eco-Hybrid closed circuit coolers are available with a self-supported external working platform and ladder. Two separate platforms will allow easy access to the motor and drive system, water distribution system as well as the **ARID-fin Pak™** coil. The working platforms are constructed of the heavy duty galvanized steel. The OSHA compliant working platform option uses a straight ladder as standard and ships in sections for easy installation.



The optional davit eliminates crane rentals and facilitates the removal of motors and fans. The davit is constructed of aluminum for ease of use. When the davit is ordered, the galvanized steel bracket is mounted on the side of the unit. The Davit ships loose and is installed in the field.



OPTIONAL EQUIPMENT

eco-Hybrid

Solutions for Sound Sensitive Applications

NOTE: These low sound options may impact the overall installed dimensions of the eco-ATWB-H Closed Circuit Cooler selected.

Super Low Sound Fan

9–15 dB(A) Reduction!



The Super Low Sound Fan offered by EVAPCO uses an extremely wide chord blade design for very sound sensitive applications where the lowest sound levels are required. The fan is one-piece molded heavy duty

FRP construction utilizing a forward swept blade design. The Super Low Sound Fan is capable of reducing the unit sound pressure levels **9 dB(A) to 15 dB(A)**, depending on specific unit selection and measurement location. The fans are high efficiency axial propeller type.

Low Sound Fan

4–7 dB(A) Reduction!

The Low Sound Fan offered by EVAPCO uses a wide chord blade design for sound sensitive applications where low sound levels are desired.



Low Sound Fan construction uses aluminum blades and a steel fan hub. The Low Sound Fan is capable of reducing the unit sound pressure levels **4 dB(A) to 7dB(A)**, depending on specific

unit selection and measurement location. The fans are high efficiency axial propeller type.

Fan Discharge Sound Attenuation

Up to 10 dB(A) Reduction!

The eco-ATWB-H Fan Discharge Attenuator offered by EVAPCO is an additional option available to further reduce the sound level of the unit. The attenuator can be used with the standard eco-Hybrid fan or in combination with the Low Sound Fan option.

The discharge attenuator is a factory-assembled straight-sided discharge hood designed to reduce overall discharge sound levels at full fan speed **5 dB(A) to 10 dB(A)**, depending on specific unit selection and



measurement location. It is constructed of G-235 galvanized steel as standard (options available for Type 304 stainless steel) and includes insulated walls and a low pressure drop baffling system that is acoustically lined with high density fiberglass. The discharge attenuator is self-supported by the unit and is shipped loose for field mounting. A heavy-gauge, hot-dip galvanized steel fan guard covers the discharge attenuator to prevent debris from entering the attenuator.

The discharge attenuator has minimal impact on unit thermal performance (0%-2% derate depending on specific unit selection).

Water Silencer

Up to 7 dB(A) Reduction!

The water silencer option is available for all eco-Hybrid models and is located in the falling water area of the cold



water basin. The water silencer reduces 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 1.5m 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 1.5m 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.

Consult EVAPCO's **Advanced Technology Low Sound Solutions** Bulletin No. 650-US for detailed product and specification information.

Offset Sound Attenuation Walls

Offset Sound Attenuation Walls are EVAPCO's newest attenuation option for even greater levels of sound reduction when used in combination with the Super Low Sound Fan and Water Silencer options. The addition of Offset Sound Attenuation Walls will reduce the 15m free field sound level



by an additional **3 dB(A)**. The walls are constructed of G-235 galvanized steel (stainless steel construction also available) lined with acoustical padding on the inside of the walls. This option requires external support by others.

eco-Hybrid SAGE® SYSTEM

EVAPCO's Sage® ... Water and Energy



The eco-Hybrid closed circuit cooler is provided with the EVAPCO Sage²® Control System. This system operates the unit in a manner which will maximize water or energy savings. Control is accomplished by operating each cell of the eco-Hybrid in the **Evaporative Mode** or **Dry Mode** based on **water** or **energy savings priority**.

The Sage²® control system contains a Programmable Logic Controller (PLC) with adaptive logic, which allows the operator to select either a priority for maximizing water or energy efficiency. Real time load and weather data are measured and recorded by the PLC and sensors. This data is then analyzed and used to switch the unit between the various modes of operation in order to maximize water or energy savings. If the panel is set to operate in the **water savings priority**, the Sage Panel will vary the unit between the Dry and Evaporative modes of operation, limiting the time spent in the evaporative mode to maximize water savings. If the panel is set to operate in the **energy savings priority**, the Sage Panel will switch the unit between the Dry & Wet modes of operation, controlling the fan speed and pump operation in an effort to maximize energy savings.

Panel Hardware and Features

- MODBUS 485 Port
- UL Approval
- Programmable Logic Control
- Variable Frequency Drive(s)
- Recirculating Pump Motor Starter(s)
- Fluid Inlet/Outlet Temperature Sensors with High and Low Alarm Set Points
- Basin Temperature Sensor(s)
- Ambient Dry Bulb Sensor
- Main Disconnect Circuit Breaker
- Main Hand/Off/Auto Switch (HOA)
- DC Power Supply for the PLC and Instruments
- Control Power Transformer
- Heater Contactor with Overload Protection and Temperature Set Points with Fusing
- 5-Probe Electronic Water Level Control Package
- High/Low Water Level Alarm Contacts
- Fan Motor: Space Heater Control(s)
- Relays for all PLC Digital Outputs
- Terminal Blocks for each PLC input/output
- Ethernet Connection between VFD(s), PLC and Operator Interface



Control Features

- Manual Operation of Pumps and Fans
- Ability to Enable or Disable Make-Up Valve
- Power Failure Recovery Timer
- Ability to Perform Bump Test
- Visual Status Display of All Unit Components and Accessories
- Contacts and Counter To Record Water Usage
- Contacts and Analog Signal for (Customer Supplied) Conductivity Meter
- Backup with User Settings and Factory Settings
- Pump Run Time Recorder
- Fan Motor Run Time Recorder

SAGE® SYSTEM **eco-Hybrid**

Conservation Control System

HMI Panel Display

All Sage²® Control Panels are provided with a 10" touch screen operator interface with a color display. This allows for easy viewing and control at the panel.



Easy-to-use Touch Screen Navigation

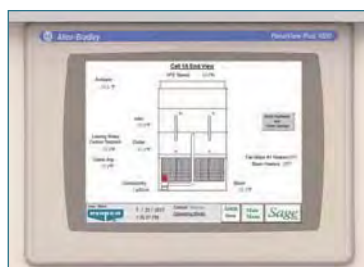
The panel boasts an easy to navigate menu which will allow the user to control each cell independently from other units and gather useful run time information at the unit.



Alarm Setpoints Screen



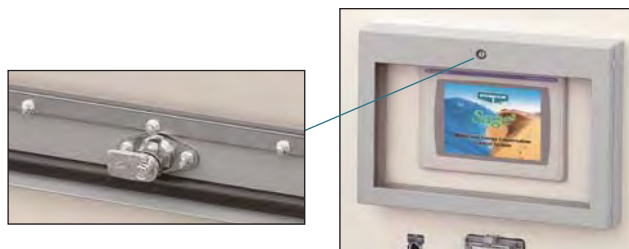
Plan View Screen



End View Screen

Window Enclosure

The display screen is encased by a window enclosure. This enclosure protects the HMI display from the elements.



Electric Water Level Control Package

When a Sage Panel is provided, a 5-probe Electronic Water Level Controller is standard. In addition to controlling the make-up valve, this controller contains two probes that can be utilized as High/Low water alarms. This controller will also be used as a safety device, shutting off the pump and heaters if the water level becomes too low.

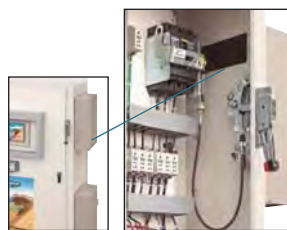
Temperature Sensors (Field Installed)

Four separate temperature data points are monitored with this package.

- Inlet Temperature Sensor: 0°C – 100°C range
- Outlet Temperature Sensor: 0°C – 100°C range
- Dry Bulb Temperature Sensor: -34.4°C – 54.4°C range
- Basin Temperature Sensor: 0°C – 100°C range

Enclosure Temperature Control

The panel enclosure includes an intake and an exhaust ventilation fan or air conditioner dependant on project location. When the enclosure temperature rises to a predetermined set point, the exhaust fans are activated. The enclosure also contains a heater. The heater eliminates the drastic temperature changes which could create condensation inside of the enclosure.



Fan



Heater

***Optional Communication Protocol May Be Available.
Please Contact Your Local Sales Representative.**

SMART SHIELD® Solid Chemical Water Treatment System

The eco-ATWB-H is available with EVAPCO's **Factory Mounted** water treatment systems. EVAPCO offers a solid chemical solution for water treatment to maintain your heat transfer efficiency and extend the life of the equipment. Each system has been specifically designed for your cooler.

EVAPCO's Water Systems offer eco-ATWB-H owners a single-source of responsibility for equipment, water treatment, and service. Smart Shield® is manufactured and warranted by EVAPCO.

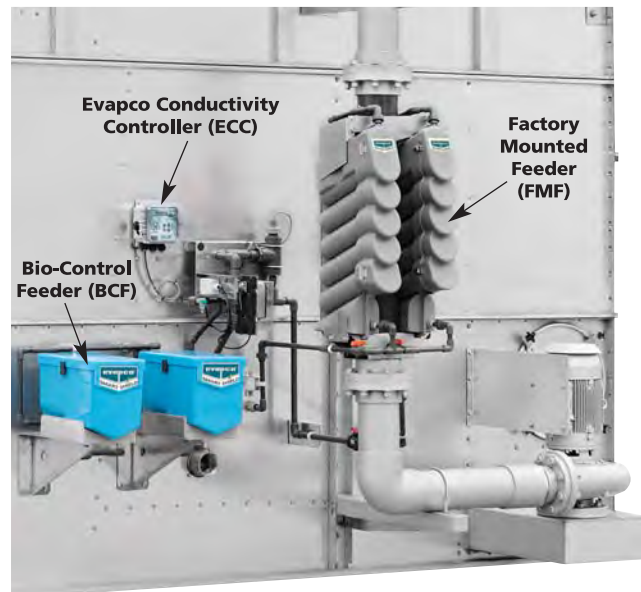
Benefits of adding an EVAPCO water treatment system include:

- **SAVES MONEY** by simplifying commission:
 - Single power connection is the only field installation requirement
- **Factory Mounting** your water treatment system ensures that it is installed to factory specifications.
- **Patented self-draining piping** eliminates the need for line insulation and heat tracing above the overflow level..
- **A Factory Authorized Service Partner** provides the first year of water system service and monitoring, to ensure proper operation and ongoing success.
- **Conductivity control package** maximizes water efficiency and features:
 - Low maintenance non-fouling torodial probe
 - USB port for downloadable 60 day audit trail of system operation
 - Motorized blowdown valve that provides the most reliable bleed control with power open / spring return operation.



EVAPCO's **Smart Shield**® system utilizes proven solid chemistry delivered via our revolutionary feed system. Patented controlled release scale and corrosion inhibitor is fed whenever your spray water pump is energized, keeping your system protected anytime the spray water pump is operating. **Smart Shield**® is a complete water treatment package that:

- Utilizes 'Bag in Bag' no touch chemical replenishments, making reloads easier and safer.
- Creates reduced packaging, shipping and handling providing a reduced carbon footprint compared to liquid chemicals.
- Eliminates the hazards associated with liquid chemicals, potential for liquid spills and the need for expensive feed pumps making it the easiest and safest chemical water treatment system available today.



IBC COMPLIANCE

eco-ATWB-H

In its continuing commitment to be the leaders in evaporative cooling equipment design and services, EVAPCO eco-ATWB-H Hybrid Closed Circuit Coolers are now **Independently Certified** to withstand Seismic and Wind Loads in accordance with IBC.

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 Apply to Closed Circuit Coolers?

Based on site design factors, calculations are made to determine the equivalent seismic “g force” and wind load on the unit. The closed circuit cooler must be designed to withstand the greater of either the seismic or wind load.

The New eco-ATWB-H is offered with a choice of TWO structural design packages:

- **Standard Structural Design** – For projects with $\leq 1.0g$ seismic or 6.94 kPa wind loads
- **Upgraded Structural Design** – Required for projects with $> 1.0g$ seismic or 6.94 kPa max 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 kPa or below will be provided with the standard eco-ATWB-H 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 is approximately equal to 6.94 kPa velocity pressure. **Therefore, the upgraded structural design package option for the new eco-ATWB-H is designed for 5.12 g and 6.94 kPa.**

Design Implementation

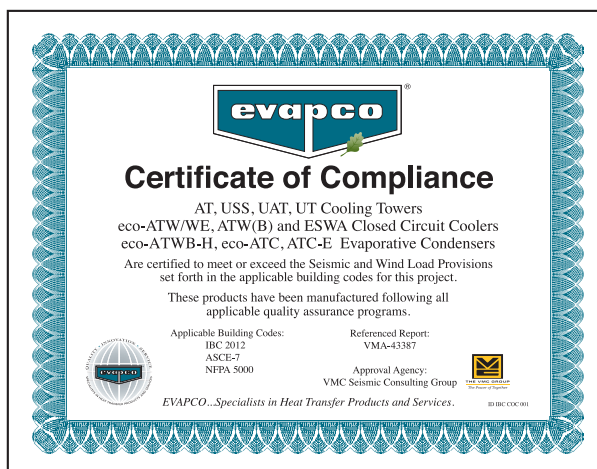
EVAPCO applies the seismic design and wind load information provided for the project to determine the equipment design necessary to meet IBC requirements. This process ensures that the mechanical equipment and its components are compliant per the provisions of the IBC as given in the plans and specifications 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 kPa(KN/m²) 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-ATWB-H CTI CERTIFICATION

In its continuing commitment to be the leaders in evaporative cooling equipment design and services, EVAPCO eco-ATWB-H Hybrid Closed Circuit Coolers are now **Independently Certified** by **CTI**, to perform thermally in accordance with the published data.

What is CTI?

Cooling Technology Institute

The Cooling Technology Institute is an organization headquartered in the United States with over 400 member companies from around the globe. CTI membership is composed of manufacturers, suppliers, owner operators, and test agencies from over 40 countries. In 2012 CTI certified more than 10000 Evaporative Heat Transfer Systems (EHTS) from 76 product line of 37 participants.

CTI's Mission and Objectives

This can be best explained by the CTI's published Mission statement and Objectives revised in December 2003 and published on their website www.cti.org.

CTI Mission Statement

To advocate and promote the use of environmentally responsible Evaporative Heat Transfer Systems (EHTS) for the benefit of the public by encouraging:

- Education
- Research
- Standards Development and Verification
- Government Relations
- Technical Information Exchange

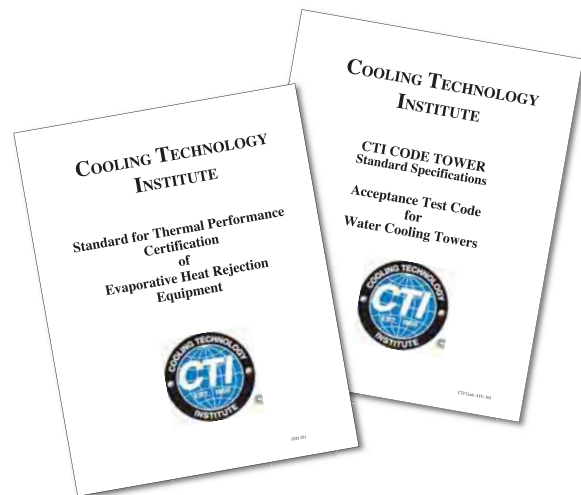
Benefits to the End User

CTI defines an independent testing certification program that is specifiable, enforceable and available to all equipment manufacturer's.

- Ensures customers receive full value for their equipment purchase
- Ensures energy consumption does not exceed expectations
- Ensures all manufacturers compete on a "level playing field"
- Designers routinely specify certified products to reduce their risk and liability

Additionally CTI certification is the first step for the Green Building Concept:

- LEED - Leadership in Energy and Environmental Design
- Green Rating System



Thermal Performance Guarantee

In addition to the CTI Certification, EVAPCO unequivocally guarantees the Thermal Performance of ALL EVAPCO Equipment. Every unit order is confirmed with a submittal package that includes an EVAPCO Thermal Performance Guarantee Certificate.



eco-ATWB-H

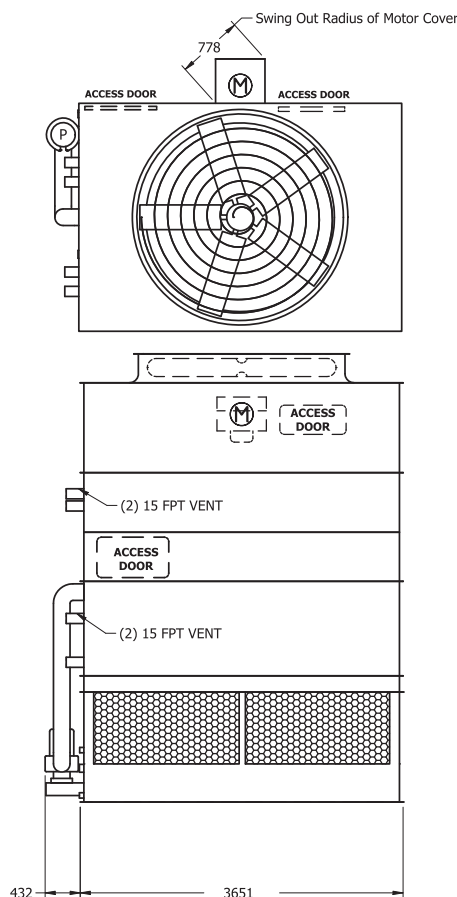
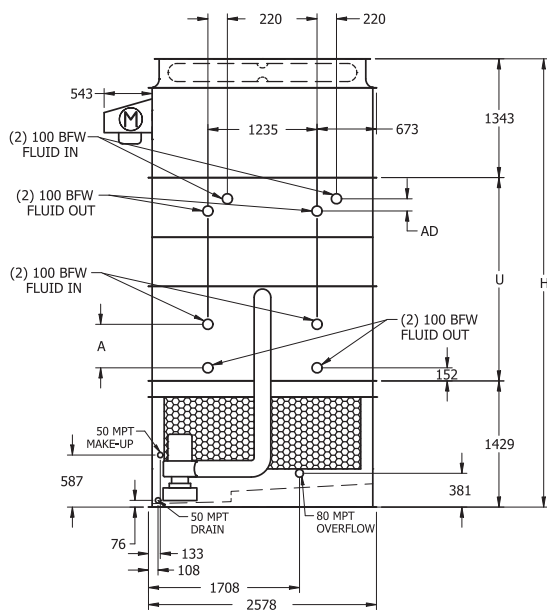
THERMAL PERFORMANCE ENGINEERING DATA & DIMENSIONS



eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 9-1112 to 9-4L12



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 9x12 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 9-1112	3,440	1,550	5,265	7.5	25	4	35.9	310	1250	250	4460	4721	3651	1,943	140
eco-ATWB-H 9-1J12	3,495	1,550	5,325	11	28.6	4	35.9	310	1250	250	4520	4721	3651	1,943	140
eco-ATWB-H 9-1K12	3,525	1,550	5,350	15	31	4	35.9	310	1250	250	4545	4721	3651	1,943	140
eco-ATWB-H 9-1L12	3,540	1,550	5,365	18.5	33	4	35.9	310	1250	250	4560	4721	3651	1,943	140
eco-ATWB-H 9-2I12	4,470	2,585	6,555	7.5	24.3	4	35.9	564	1250	250	5745	4886	3651	2,108	305
eco-ATWB-H 9-2J12	4,530	2,585	6,615	11	27.8	4	35.9	564	1250	250	5805	4886	3651	2,108	305
eco-ATWB-H 9-2K12	4,560	2,585	6,640	15	30.1	4	35.9	564	1250	250	5835	4886	3651	2,108	305
eco-ATWB-H 9-2L12	4,570	2,585	6,655	18.5	32.1	4	35.9	564	1250	250	5845	4886	3651	2,108	305
eco-ATWB-H 9-3I12	5,495	3,605	7,830	7.5	23.6	4	35.9	818	1250	250	7020	5077	3651	2,299	495
eco-ATWB-H 9-3J12	5,550	3,605	7,890	11	27	4	35.9	818	1250	250	7080	5077	3651	2,299	495
eco-ATWB-H 9-3K12	5,580	3,605	7,915	15	29.3	4	35.9	818	1250	250	7110	5077	3651	2,299	495
eco-ATWB-H 9-3L12	5,595	3,605	7,930	18.5	31.2	4	35.9	818	1250	250	7120	5077	3651	2,299	495
eco-ATWB-H 9-4I12	6,485	4,600	9,075	7.5	23	4	35.9	1071	1250	250	8270	5267	3651	2,489	686
eco-ATWB-H 9-4J12	6,545	4,600	9,135	11	26.2	4	35.9	1071	1250	250	8330	5267	3651	2,489	686
eco-ATWB-H 9-4K12	6,575	4,600	9,165	15	28.4	4	35.9	1071	1250	250	8355	5267	3651	2,489	686
eco-ATWB-H 9-4L12	6,585	4,600	9,175	18.5	30.3	4	35.9	1071	1250	250	8370	5267	3651	2,489	686

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

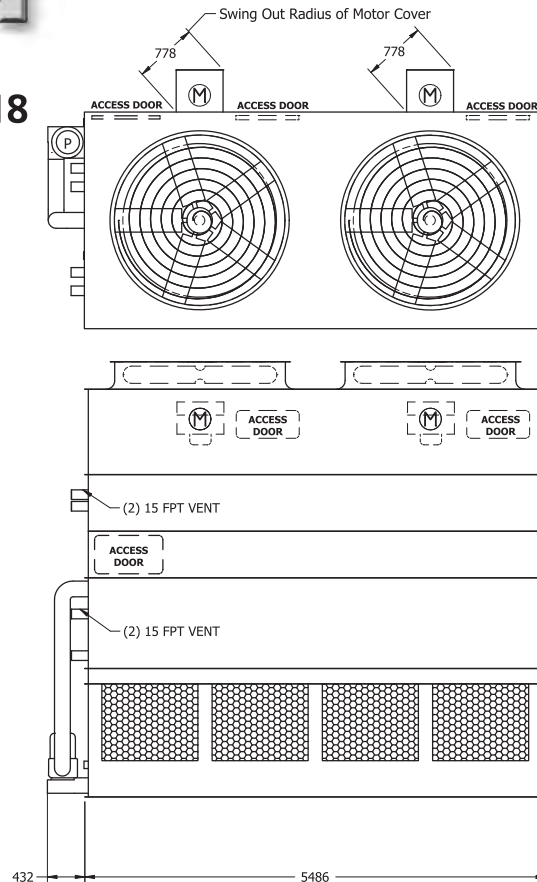
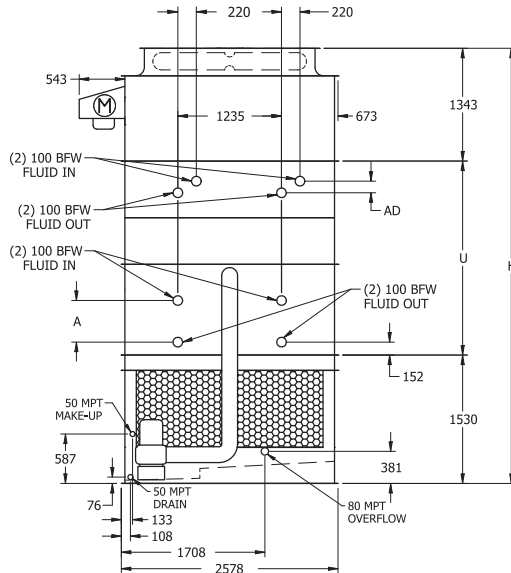
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	57	990	1045	140
4	117	1260	1380	140
6	174	1535	1710	175
8	231	1805	2040	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 9-1H18 to 9-4K18



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 9x18 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 9-1H18	5,305	2,245	8,060	(2) 5.5	37.6	4	50.4	439	1930	300	6905	4823	5486	1,943	140
eco-ATWB-H 9-1I18	5,320	2,245	8,075	(2) 7.5	41.4	4	50.4	439	1930	300	6915	4823	5486	1,943	140
eco-ATWB-H 9-1J18	5,435	2,245	8,185	(2) 11	46.6	4	50.4	439	1930	300	7030	4823	5486	1,943	140
eco-ATWB-H 9-1K18	5,490	2,245	8,240	(2) 15	50.5	4	50.4	439	1930	300	7085	4823	5486	1,943	140
eco-ATWB-H 9-2H18	6,830	3,770	9,970	(2) 5.5	36.6	4	50.4	821	1930	300	8815	4988	5486	2,108	305
eco-ATWB-H 9-2I18	6,845	3,770	9,985	(2) 7.5	40.2	4	50.4	821	1930	300	8825	4988	5486	2,108	305
eco-ATWB-H 9-2J18	6,960	3,770	10,095	(2) 11	45.3	4	50.4	821	1930	300	8940	4988	5486	2,108	305
eco-ATWB-H 9-2K18	7,015	3,770	10,150	(2) 15	49.1	4	50.4	821	1930	300	8995	4988	5486	2,108	305
eco-ATWB-H 9-3H18	8,345	5,285	11,865	(2) 5.5	35.5	4	50.4	1208	1930	300	10710	5178	5486	2,299	495
eco-ATWB-H 9-3I18	8,360	5,285	11,880	(2) 7.5	39.1	4	50.4	1208	1930	300	10725	5178	5486	2,299	495
eco-ATWB-H 9-3J18	8,475	5,285	11,995	(2) 11	44	4	50.4	1208	1930	300	10835	5178	5486	2,299	495
eco-ATWB-H 9-3K18	8,530	5,285	12,045	(2) 15	47.7	4	50.4	1208	1930	300	10890	5178	5486	2,299	495
eco-ATWB-H 9-4H18	9,845	6,780	13,750	(2) 5.5	34.5	4	50.4	1590	1930	300	12590	5369	5486	2,489	686
eco-ATWB-H 9-4I18	9,855	6,780	13,760	(2) 7.5	38	4	50.4	1590	1930	300	12605	5369	5486	2,489	686
eco-ATWB-H 9-4J18	9,970	6,780	13,875	(2) 11	42.7	4	50.4	1590	1930	300	12720	5369	5486	2,489	686
eco-ATWB-H 9-4K18	10,025	6,780	13,930	(2) 15	46.3	4	50.4	1590	1930	300	12775	5369	5486	2,489	686

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

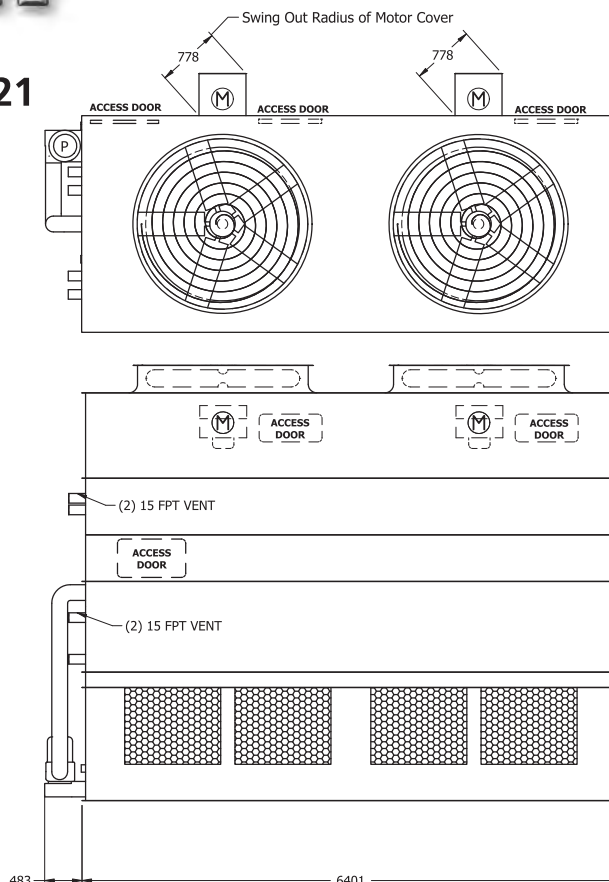
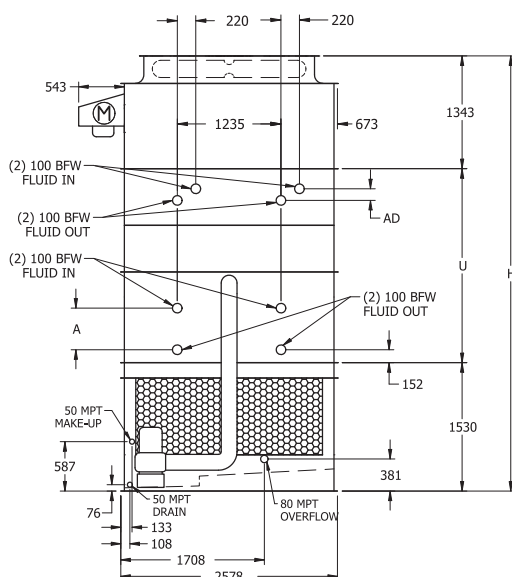
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	91	1310	1400	140
4	174	1725	1900	140
6	265	2140	2405	175
8	352	2555	2905	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 9-1H21 to 9-4K21



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 9x21 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 9-1H21	5,965	2,565	9,225	(2) 5.5	41.7	5.5	66.2	503	2235	300	7880	4823	6401	1,943	140
eco-ATWB-H 9-1I21	5,980	2,565	9,240	(2) 7.5	45.9	5.5	66.2	503	2235	300	7895	4823	6401	1,943	140
eco-ATWB-H 9-1J21	6,090	2,565	9,355	(2) 11	52	5.5	66.2	503	2235	300	8005	4823	6401	1,943	140
eco-ATWB-H 9-1K21	6,145	2,565	9,405	(2) 15	56.4	5.5	66.2	503	2235	300	8060	4823	6401	1,943	140
eco-ATWB-H 9-2H21	7,845	4,450	11,560	(2) 5.5	40.5	5.5	66.2	954	2235	300	10210	4988	6401	2,108	305
eco-ATWB-H 9-2I21	7,860	4,450	11,570	(2) 7.5	44.6	5.5	66.2	954	2235	300	10225	4988	6401	2,108	305
eco-ATWB-H 9-2J21	7,975	4,450	11,685	(2) 11	50.6	5.5	66.2	954	2235	300	10335	4988	6401	2,108	305
eco-ATWB-H 9-2K21	8,030	4,450	11,740	(2) 15	54.8	5.5	66.2	954	2235	300	10390	4988	6401	2,108	305
eco-ATWB-H 9-3H21	9,510	6,115	13,670	(2) 5.5	39.4	5.5	66.2	1401	2235	300	12325	5178	6401	2,299	495
eco-ATWB-H 9-3I21	9,525	6,115	13,685	(2) 7.5	43.3	5.5	66.2	1401	2235	300	12340	5178	6401	2,299	495
eco-ATWB-H 9-3J21	9,640	6,115	13,800	(2) 11	49.2	5.5	66.2	1401	2235	300	12450	5178	6401	2,299	495
eco-ATWB-H 9-3K21	9,695	6,115	13,855	(2) 15	53.3	5.5	66.2	1401	2235	300	12505	5178	6401	2,299	495
eco-ATWB-H 9-4H21	11,260	7,860	15,865	(2) 5.5	38.2	5.5	66.2	1851	2235	300	14520	5369	6401	2,489	686
eco-ATWB-H 9-4I21	11,270	7,860	15,880	(2) 7.5	42.1	5.5	66.2	1851	2235	300	14535	5369	6401	2,489	686
eco-ATWB-H 9-4J21	11,385	7,860	15,995	(2) 11	47.7	5.5	66.2	1851	2235	300	14645	5369	6401	2,489	686
eco-ATWB-H 9-4K21	11,440	7,860	16,050	(2) 15	51.7	5.5	66.2	1851	2235	300	14700	5369	6401	2,489	686

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

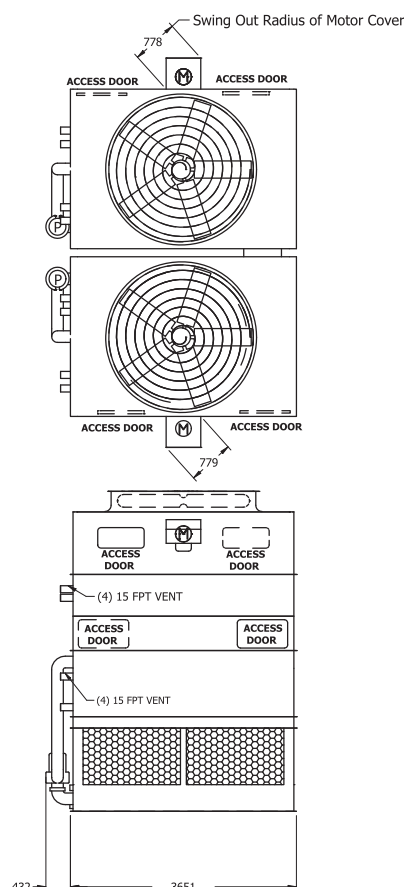
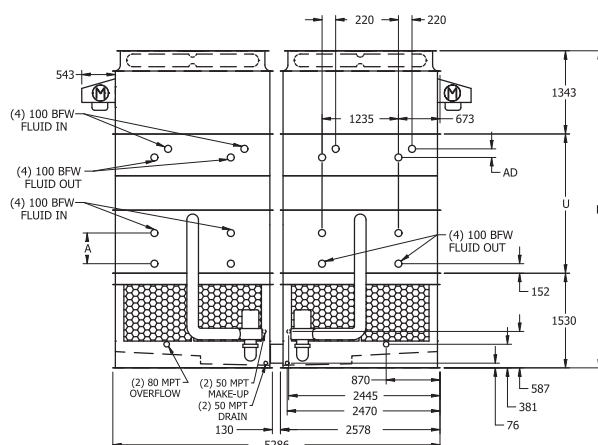
* Liters shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	102	1480	1580	140
4	208	1960	2170	140
6	310	2445	2760	175
8	413	2935	3350	241

eco-ATWB-H Models 17-1I12 to 17-4L12



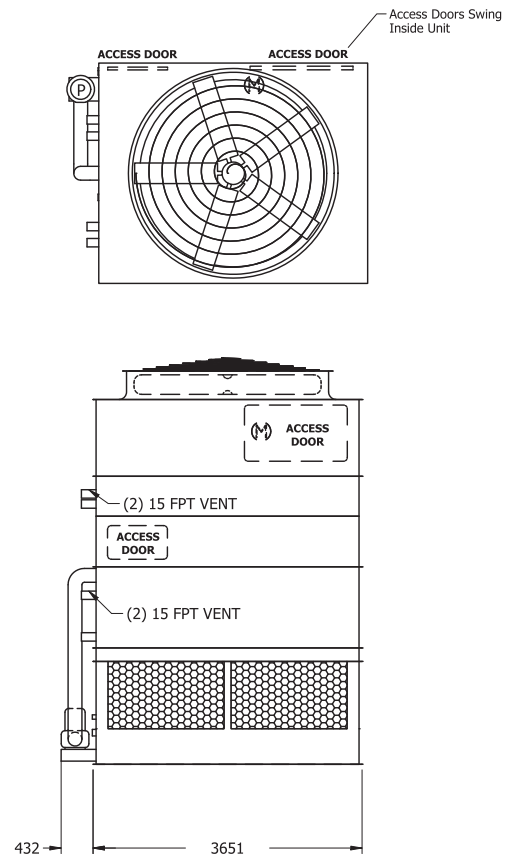
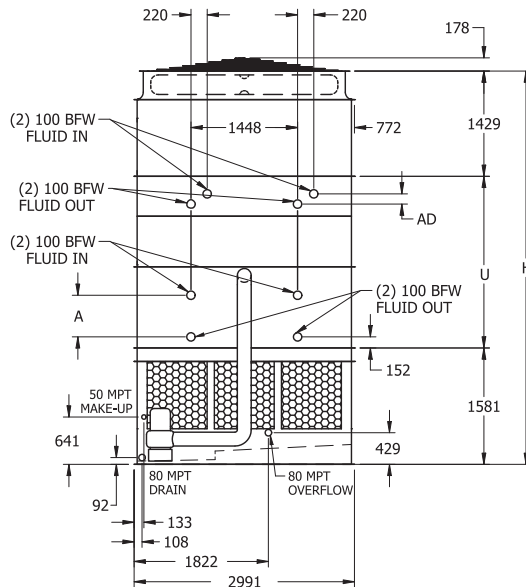
eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 17-1112	6,820	1,525	10,480	(2) 7.5	50.1	(2) 4	71.8	617	2500	(2) 250	8865	4823	3651	1,943	140
eco-ATWB-H 17-1J12	6,940	1,525	10,595	(2) 11	57.2	(2) 4	71.8	617	2500	(2) 250	8980	4823	3651	1,943	140
eco-ATWB-H 17-1K12	6,995	1,525	10,650	(2) 15	62	(2) 4	71.8	617	2500	(2) 250	9035	4823	3651	1,943	140
eco-ATWB-H 17-1L12	7,020	1,525	10,680	(2) 18.5	66	(2) 4	71.8	617	2500	(2) 250	9065	4823	3651	1,943	140
eco-ATWB-H 17-2112	8,920	2,570	13,080	(2) 7.5	48.7	(2) 4	71.8	1124	2500	(2) 250	11465	4988	3651	2,108	305
eco-ATWB-H 17-2J12	9,035	2,570	13,200	(2) 11	55.6	(2) 4	71.8	1124	2500	(2) 250	11585	4988	3651	2,108	305
eco-ATWB-H 17-2K12	9,090	2,570	13,255	(2) 15	60.3	(2) 4	71.8	1124	2500	(2) 250	11640	4988	3651	2,108	305
eco-ATWB-H 17-2L12	9,115	2,570	13,280	(2) 18.5	64.2	(2) 4	71.8	1124	2500	(2) 250	11665	4988	3651	2,108	305
eco-ATWB-H 17-3112	10,985	3,605	15,660	(2) 7.5	47.3	(2) 4	71.8	1635	2500	(2) 250	14045	5178	3651	2,299	495
eco-ATWB-H 17-3J12	11,105	3,605	15,775	(2) 11	54	(2) 4	71.8	1635	2500	(2) 250	14160	5178	3651	2,299	495
eco-ATWB-H 17-3K12	11,160	3,605	15,830	(2) 15	58.6	(2) 4	71.8	1635	2500	(2) 250	14215	5178	3651	2,299	495
eco-ATWB-H 17-3L12	11,185	3,605	15,860	(2) 18.5	62.3	(2) 4	71.8	1635	2500	(2) 250	14245	5178	3651	2,299	495
eco-ATWB-H 17-4112	12,975	4,600	18,155	(2) 7.5	45.9	(2) 4	71.8	2143	2500	(2) 250	16540	5369	3651	2,489	686
eco-ATWB-H 17-4J12	13,090	4,600	18,270	(2) 11	52.5	(2) 4	71.8	2143	2500	(2) 250	16655	5369	3651	2,489	686
eco-ATWB-H 17-4K12	13,145	4,600	18,325	(2) 15	56.9	(2) 4	71.8	2143	2500	(2) 250	16710	5369	3651	2,489	686
eco-ATWB-H 17-4L12	13,170	4,600	18,350	(2) 18.5	60.5	(2) 4	71.8	2143	2500	(2) 250	16740	5369	3651	2,489	686

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	114	(2) 990	2090	140
4	239	(2) 1260	2760	140
6	352	(2) 1535	3420	175
8	466	(2) 1805	4080	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 10-1I12 to 10-4M12



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 10x12 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 10-1I12	4,485	2,225	7,030	7.5	27.7	4	43.2	360	1590	300	5410	4918	3651	1,905	140
eco-ATWB-H 10-1J12	4,545	2,225	7,090	11	31.7	4	43.2	360	1590	300	5470	4918	3651	1,905	140
eco-ATWB-H 10-1K12	4,570	2,225	7,115	15	34.6	4	43.2	360	1590	300	5500	4918	3651	1,905	140
eco-ATWB-H 10-1L12	4,585	2,225	7,130	18.5	36.8	4	43.2	360	1590	300	5510	4918	3651	1,905	140
eco-ATWB-H 10-1M12	4,610	2,225	7,155	22	38.7	4	43.2	360	1590	300	5535	4918	3651	1,905	140
eco-ATWB-H 10-2I12	5,765	3,505	8,610	7.5	26.9	4	43.2	659	1590	300	6990	5128	3651	2,115	349
eco-ATWB-H 10-2J12	5,825	3,505	8,670	11	30.8	4	43.2	659	1590	300	7050	5128	3651	2,115	349
eco-ATWB-H 10-2K12	5,850	3,505	8,695	15	33.6	4	43.2	659	1590	300	7075	5128	3651	2,115	349
eco-ATWB-H 10-2L12	5,865	3,505	8,710	18.5	35.8	4	43.2	659	1590	300	7090	5128	3651	2,115	349
eco-ATWB-H 10-2M12	5,890	3,505	8,730	22	37.7	4	43.2	659	1590	300	7110	5128	3651	2,115	349
eco-ATWB-H 10-3I12	6,880	4,620	10,020	7.5	26.2	4	43.2	958	1590	300	8400	5344	3651	2,330	565
eco-ATWB-H 10-3J12	6,940	4,620	10,080	11	30	4	43.2	958	1590	300	8460	5344	3651	2,330	565
eco-ATWB-H 10-3K12	6,965	4,620	10,105	15	32.7	4	43.2	958	1590	300	8485	5344	3651	2,330	565
eco-ATWB-H 10-3L12	6,980	4,620	10,120	18.5	34.8	4	43.2	958	1590	300	8500	5344	3651	2,330	565
eco-ATWB-H 10-3M12	7,005	4,620	10,140	22	36.6	4	43.2	958	1590	300	8525	5344	3651	2,330	565
eco-ATWB-H 10-4I12	8,060	5,800	11,500	7.5	25.4	4	43.2	1257	1590	300	9880	5559	3651	2,546	781
eco-ATWB-H 10-4J12	8,120	5,800	11,560	11	29.1	4	43.2	1257	1590	300	9940	5559	3651	2,546	781
eco-ATWB-H 10-4K12	8,145	5,800	11,585	15	31.7	4	43.2	1257	1590	300	9965	5559	3651	2,546	781
eco-ATWB-H 10-4L12	8,160	5,800	11,600	18.5	33.8	4	43.2	1257	1590	300	9980	5559	3651	2,546	781
eco-ATWB-H 10-4M12	8,185	5,800	11,620	22	35.5	4	43.2	1257	1590	300	10000	5559	3651	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**™ section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

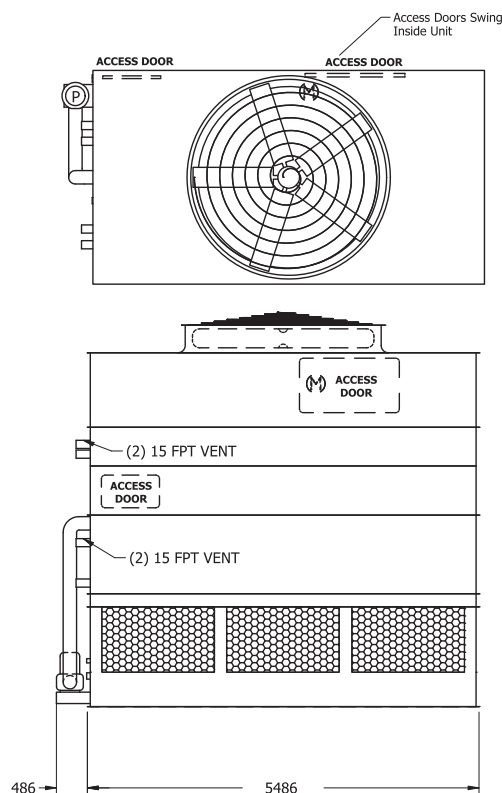
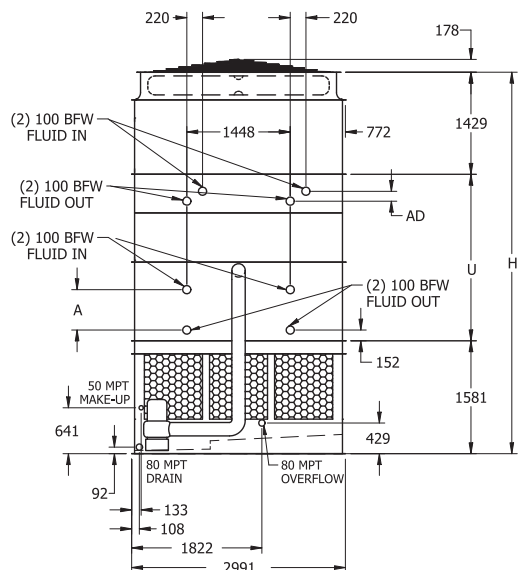
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	68	1100	1170	140
4	136	1425	1560	140
6	208	1750	1960	175
8	276	2075	2350	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 10-1I18 to 10-4N18



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 10x18 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 10-1I18	6,270	3,200	10,090	7.5	36.4	5.5	64.9	515	2385	300	7710	4918	5486	1,905	140
eco-ATWB-H 10-1J18	6,330	3,200	10,150	11	41.6	5.5	64.9	515	2385	300	7770	4918	5486	1,905	140
eco-ATWB-H 10-1K18	6,355	3,200	10,180	15	45.8	5.5	64.9	515	2385	300	7795	4918	5486	1,905	140
eco-ATWB-H 10-1L18	6,370	3,200	10,190	18.5	49.4	5.5	64.9	515	2385	300	7810	4918	5486	1,905	140
eco-ATWB-H 10-1M18	6,390	3,200	10,215	22	52	5.5	64.9	515	2385	300	7835	4918	5486	1,905	140
eco-ATWB-H 10-1N18	6,465	3,200	10,285	30	56.4	5.5	64.9	515	2385	300	7905	4918	5486	1,905	140
eco-ATWB-H 10-2I18	8,185	5,120	12,465	7.5	35.4	5.5	64.9	965	2385	300	10085	5128	5486	2,115	349
eco-ATWB-H 10-2J18	8,245	5,120	12,525	11	40.5	5.5	64.9	965	2385	300	10140	5128	5486	2,115	349
eco-ATWB-H 10-2K18	8,275	5,120	12,550	15	44.6	5.5	64.9	965	2385	300	10170	5128	5486	2,115	349
eco-ATWB-H 10-2L18	8,285	5,120	12,565	18.5	48	5.5	64.9	965	2385	300	10185	5128	5486	2,115	349
eco-ATWB-H 10-2M18	8,310	5,120	12,585	22	50.6	5.5	64.9	965	2385	300	10205	5128	5486	2,115	349
eco-ATWB-H 10-2N18	8,380	5,120	12,660	30	54.8	5.5	64.9	965	2385	300	10280	5128	5486	2,115	349
eco-ATWB-H 10-3I18	9,875	6,810	14,600	7.5	34.4	5.5	64.9	1416	2385	300	12220	5344	5486	2,330	565
eco-ATWB-H 10-3J18	9,935	6,810	14,660	11	39.3	5.5	64.9	1416	2385	300	12280	5344	5486	2,330	565
eco-ATWB-H 10-3K18	9,960	6,810	14,685	15	43.3	5.5	64.9	1416	2385	300	12305	5344	5486	2,330	565
eco-ATWB-H 10-3L18	9,975	6,810	14,700	18.5	46.6	5.5	64.9	1416	2385	300	12320	5344	5486	2,330	565
eco-ATWB-H 10-3M18	9,995	6,810	14,725	22	49.1	5.5	64.9	1416	2385	300	12340	5344	5486	2,330	565
eco-ATWB-H 10-3N18	10,070	6,810	14,795	30	53.3	5.5	64.9	1416	2385	300	12415	5344	5486	2,330	565
eco-ATWB-H 10-4I18	11,630	8,565	16,810	7.5	33.4	5.5	64.9	1870	2385	300	14430	5559	5486	2,546	781
eco-ATWB-H 10-4J18	11,690	8,565	16,870	11	38.2	5.5	64.9	1870	2385	300	14490	5559	5486	2,546	781
eco-ATWB-H 10-4K18	11,715	8,565	16,895	15	42	5.5	64.9	1870	2385	300	14515	5559	5486	2,546	781
eco-ATWB-H 10-4L18	11,730	8,565	16,910	18.5	45.3	5.5	64.9	1870	2385	300	14530	5559	5486	2,546	781
eco-ATWB-H 10-4M18	11,755	8,565	16,935	22	47.7	5.5	64.9	1870	2385	300	14550	5559	5486	2,546	781
eco-ATWB-H 10-4N18	11,825	8,565	17,005	30	51.7	5.5	64.9	1870	2385	300	14625	5559	5486	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**™ section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

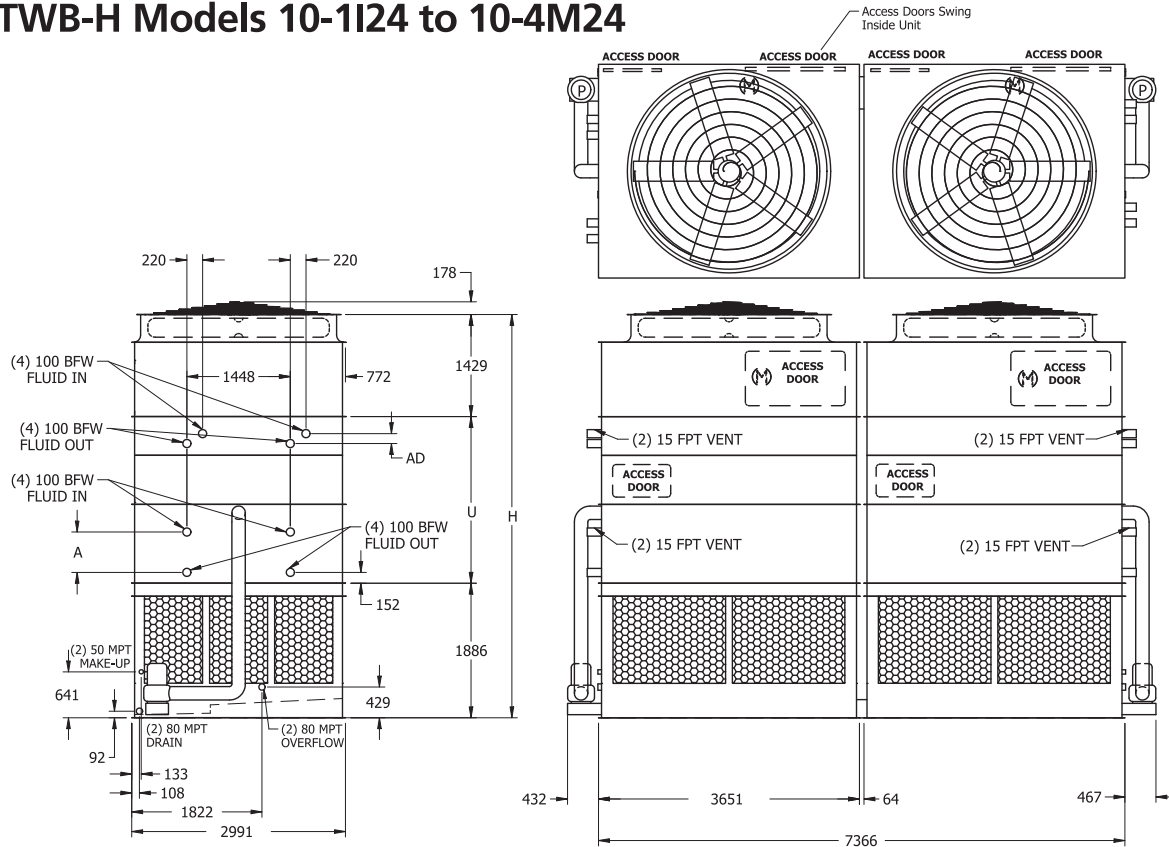
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	102	1460	1565	140
4	208	1950	2160	140
6	310	2440	2755	175
8	420	2930	3350	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 10-1I24 to 10-4M24



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 10x24 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 10-1I24	8,890	2,185	13,980	(2) 7.5	55.4	(2) 4	86.3	719	3180	(2) 300	10740	5223	7366	1,905	140
eco-ATWB-H 10-1J24	9,010	2,185	14,100	(2) 11	63.4	(2) 4	86.3	719	3180	(2) 300	10860	5223	7366	1,905	140
eco-ATWB-H 10-1K24	9,065	2,185	14,150	(2) 15	69.2	(2) 4	86.3	719	3180	(2) 300	10915	5223	7366	1,905	140
eco-ATWB-H 10-1L24	9,090	2,185	14,180	(2) 18.5	73.6	(2) 4	86.3	719	3180	(2) 300	10940	5223	7366	1,905	140
eco-ATWB-H 10-1M24	9,135	2,185	14,225	(2) 22	77.5	(2) 4	86.3	719	3180	(2) 300	10985	5223	7366	1,905	140
eco-ATWB-H 10-2I24	11,495	3,490	17,180	(2) 7.5	53.9	(2) 4	86.3	1317	3180	(2) 300	13945	5432	7366	2,115	349
eco-ATWB-H 10-2J24	11,610	3,490	17,300	(2) 11	61.7	(2) 4	86.3	1317	3180	(2) 300	14060	5432	7366	2,115	349
eco-ATWB-H 10-2K24	11,665	3,490	17,355	(2) 15	67.2	(2) 4	86.3	1317	3180	(2) 300	14115	5432	7366	2,115	349
eco-ATWB-H 10-2L24	11,695	3,490	17,380	(2) 18.5	71.6	(2) 4	86.3	1317	3180	(2) 300	14145	5432	7366	2,115	349
eco-ATWB-H 10-2M24	11,740	3,490	17,425	(2) 22	75.3	(2) 4	86.3	1317	3180	(2) 300	14190	5432	7366	2,115	349
eco-ATWB-H 10-3I24	13,760	4,620	20,040	(2) 7.5	52.3	(2) 4	86.3	1915	3180	(2) 300	16800	5648	7366	2,330	565
eco-ATWB-H 10-3J24	13,880	4,620	20,160	(2) 11	59.9	(2) 4	86.3	1915	3180	(2) 300	16920	5648	7366	2,330	565
eco-ATWB-H 10-3K24	13,935	4,620	20,210	(2) 15	65.3	(2) 4	86.3	1915	3180	(2) 300	16975	5648	7366	2,330	565
eco-ATWB-H 10-3L24	13,960	4,620	20,240	(2) 18.5	69.6	(2) 4	86.3	1915	3180	(2) 300	17000	5648	7366	2,330	565
eco-ATWB-H 10-3M24	14,005	4,620	20,285	(2) 22	73.2	(2) 4	86.3	1915	3180	(2) 300	17045	5648	7366	2,330	565
eco-ATWB-H 10-4I24	16,120	5,800	22,995	(2) 7.5	50.8	(2) 4	86.3	2514	3180	(2) 300	19760	5864	7366	2,546	781
eco-ATWB-H 10-4J24	16,240	5,800	23,115	(2) 11	58.2	(2) 4	86.3	2514	3180	(2) 300	19875	5864	7366	2,546	781
eco-ATWB-H 10-4K24	16,295	5,800	23,170	(2) 15	63.4	(2) 4	86.3	2514	3180	(2) 300	19930	5864	7366	2,546	781
eco-ATWB-H 10-4L24	16,320	5,800	23,195	(2) 18.5	67.5	(2) 4	86.3	2514	3180	(2) 300	19960	5864	7366	2,546	781
eco-ATWB-H 10-4M24	16,365	5,800	23,240	(2) 22	71.1	(2) 4	86.3	2514	3180	(2) 300	20005	5864	7366	2,546	781

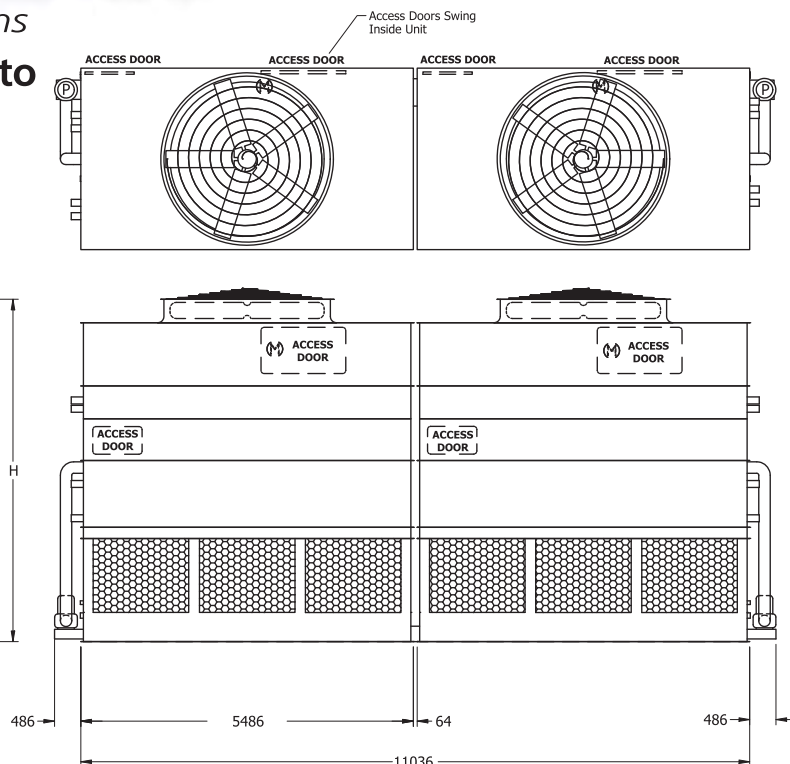
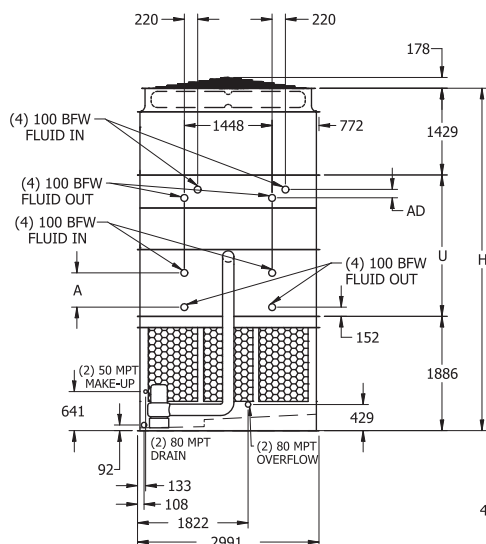
- † Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.
- †† Heaviest section is the **ARID-fin Pak**™ section and **Ellipti-fin**® coil sections shipped mounted together.
- * Liters shown 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 (300mm would normally be sufficient).
- △ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.
- ▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	136	(2) 1100	2340	140
4	273	(2) 1425	3125	140
6	420	(2) 1750	3915	175
8	556	(2) 2075	4705	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 10-1I36 to 10-4N36



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 10x36 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 10-1I36	12,430	3,150	20,075	(2) 7.5	72.7	(2) 5.5	129.8	1026	4770	(2) 300	15315	5223	11036	1,905	140
eco-ATWB-H 10-1J36	12,545	3,150	20,195	(2) 11	83.3	(2) 5.5	129.8	1026	4770	(2) 300	15430	5223	11036	1,905	140
eco-ATWB-H 10-1K36	12,600	3,150	20,250	(2) 15	91.7	(2) 5.5	129.8	1026	4770	(2) 300	15485	5223	11036	1,905	140
eco-ATWB-H 10-1L36	12,630	3,150	20,275	(2) 18.5	98.7	(2) 5.5	129.8	1026	4770	(2) 300	15515	5223	11036	1,905	140
eco-ATWB-H 10-1M36	12,675	3,150	20,320	(2) 22	104	(2) 5.5	129.8	1026	4770	(2) 300	15560	5223	11036	1,905	140
eco-ATWB-H 10-1N36	12,820	3,150	20,465	(2) 30	112.7	(2) 5.5	129.8	1026	4770	(2) 300	15705	5223	11036	1,905	140
eco-ATWB-H 10-2I36	16,310	5,090	24,865	(2) 7.5	70.7	(2) 5.5	129.8	1931	4770	(2) 300	20105	5432	11036	2,115	349
eco-ATWB-H 10-2J36	16,430	5,090	24,985	(2) 11	81	(2) 5.5	129.8	1931	4770	(2) 300	20220	5432	11036	2,115	349
eco-ATWB-H 10-2K36	16,485	5,090	25,040	(2) 15	89.1	(2) 5.5	129.8	1931	4770	(2) 300	20275	5432	11036	2,115	349
eco-ATWB-H 10-2L36	16,510	5,090	25,065	(2) 18.5	96	(2) 5.5	129.8	1931	4770	(2) 300	20305	5432	11036	2,115	349
eco-ATWB-H 10-2M36	16,555	5,090	25,110	(2) 22	101.1	(2) 5.5	129.8	1931	4770	(2) 300	20350	5432	11036	2,115	349
eco-ATWB-H 10-2N36	16,700	5,090	25,255	(2) 30	109.6	(2) 5.5	129.8	1931	4770	(2) 300	20495	5432	11036	2,115	349
eco-ATWB-H 10-3I36	19,750	6,810	29,200	(2) 7.5	68.7	(2) 5.5	129.8	2831	4770	(2) 300	24440	5648	11036	2,330	565
eco-ATWB-H 10-3J36	19,865	6,810	29,320	(2) 11	78.7	(2) 5.5	129.8	2831	4770	(2) 300	24555	5648	11036	2,330	565
eco-ATWB-H 10-3K36	19,920	6,810	29,375	(2) 15	86.6	(2) 5.5	129.8	2831	4770	(2) 300	24610	5648	11036	2,330	565
eco-ATWB-H 10-3L36	19,950	6,810	29,400	(2) 18.5	93.3	(2) 5.5	129.8	2831	4770	(2) 300	24640	5648	11036	2,330	565
eco-ATWB-H 10-3M36	19,995	6,810	29,445	(2) 22	98.3	(2) 5.5	129.8	2831	4770	(2) 300	24685	5648	11036	2,330	565
eco-ATWB-H 10-3N36	20,140	6,810	29,590	(2) 30	106.5	(2) 5.5	129.8	2831	4770	(2) 300	24830	5648	11036	2,330	565
eco-ATWB-H 10-4I36	23,260	8,565	33,620	(2) 7.5	66.7	(2) 5.5	129.8	3736	4770	(2) 300	28860	5864	11036	2,546	781
eco-ATWB-H 10-4J36	23,380	8,565	33,740	(2) 11	76.4	(2) 5.5	129.8	3736	4770	(2) 300	28975	5864	11036	2,546	781
eco-ATWB-H 10-4K36	23,435	8,565	33,795	(2) 15	84.1	(2) 5.5	129.8	3736	4770	(2) 300	29030	5864	11036	2,546	781
eco-ATWB-H 10-4L36	23,460	8,565	33,820	(2) 18.5	90.6	(2) 5.5	129.8	3736	4770	(2) 300	29055	5864	11036	2,546	781
eco-ATWB-H 10-4M36	23,505	8,565	33,865	(2) 22	95.4	(2) 5.5	129.8	3736	4770	(2) 300	29100	5864	11036	2,546	781
eco-ATWB-H 10-4N36	23,650	8,565	34,010	(2) 30	103.4	(2) 5.5	129.8	3736	4770	(2) 300	29250	5864	11036	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**™ section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

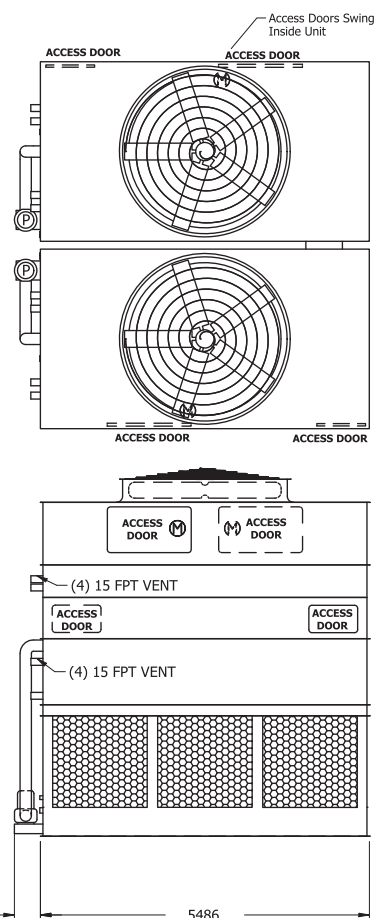
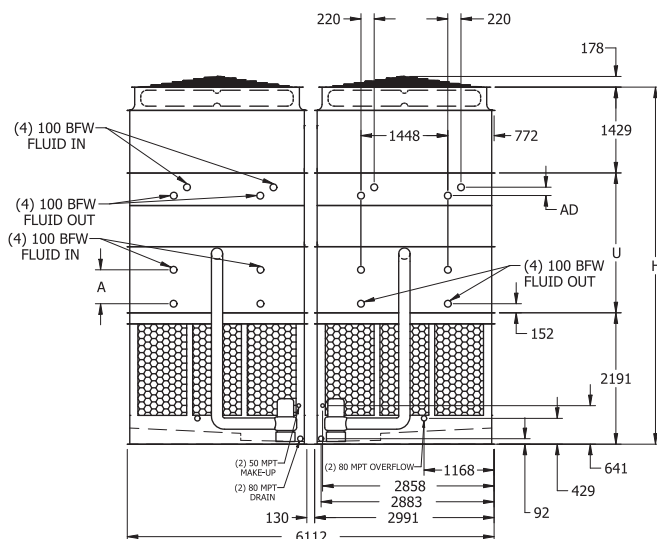
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	204	(2) 1460	3130	140
4	420	(2) 1950	4325	140
6	625	(2) 2440	5505	175
8	836	(2) 2930	6700	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 10-1I36 to 10-4N36



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 20x18 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 20-1I18	12,500	3,175	20,150	(2) 7.5	72.7	(2) 5.5	129.8	1026	4770	(2) 300	15385	5528	5486	1,905	140
eco-ATWB-H 20-1J18	12,620	3,175	20,265	(2) 11	83.3	(2) 5.5	129.8	1026	4770	(2) 300	15505	5528	5486	1,905	140
eco-ATWB-H 20-1K18	12,675	3,175	20,320	(2) 15	91.7	(2) 5.5	129.8	1026	4770	(2) 300	15560	5528	5486	1,905	140
eco-ATWB-H 20-1L18	12,700	3,175	20,350	(2) 18.5	98.7	(2) 5.5	129.8	1026	4770	(2) 300	15585	5528	5486	1,905	140
eco-ATWB-H 20-1M18	12,745	3,175	20,395	(2) 22	104	(2) 5.5	129.8	1026	4770	(2) 300	15630	5528	5486	1,905	140
eco-ATWB-H 20-1N18	12,890	3,175	20,540	(2) 30	112.7	(2) 5.5	129.8	1026	4770	(2) 300	15775	5528	5486	1,905	140
eco-ATWB-H 20-2I18	16,355	5,105	24,910	(2) 7.5	70.7	(2) 5.5	129.8	1931	4770	(2) 300	20150	5737	5486	2,115	349
eco-ATWB-H 20-2J18	16,475	5,105	25,030	(2) 11	81	(2) 5.5	129.8	1931	4770	(2) 300	20265	5737	5486	2,115	349
eco-ATWB-H 20-2K18	16,530	5,105	25,085	(2) 15	89.1	(2) 5.5	129.8	1931	4770	(2) 300	20320	5737	5486	2,115	349
eco-ATWB-H 20-2L18	16,555	5,105	25,110	(2) 18.5	96	(2) 5.5	129.8	1931	4770	(2) 300	20350	5737	5486	2,115	349
eco-ATWB-H 20-2M18	16,600	5,105	25,155	(2) 22	101.1	(2) 5.5	129.8	1931	4770	(2) 300	20395	5737	5486	2,115	349
eco-ATWB-H 20-2N18	16,745	5,105	25,300	(2) 30	109.6	(2) 5.5	129.8	1931	4770	(2) 300	20540	5737	5486	2,115	349
eco-ATWB-H 20-3I18	19,770	6,810	29,220	(2) 7.5	68.7	(2) 5.5	129.8	2831	4770	(2) 300	24460	5953	5486	2,330	565
eco-ATWB-H 20-3J18	19,885	6,810	29,340	(2) 11	78.7	(2) 5.5	129.8	2831	4770	(2) 300	24575	5953	5486	2,330	565
eco-ATWB-H 20-3K18	19,940	6,810	29,395	(2) 15	86.6	(2) 5.5	129.8	2831	4770	(2) 300	24630	5953	5486	2,330	565
eco-ATWB-H 20-3L18	19,965	6,810	29,420	(2) 18.5	93.3	(2) 5.5	129.8	2831	4770	(2) 300	24655	5953	5486	2,330	565
eco-ATWB-H 20-3M18	20,010	6,810	29,465	(2) 22	98.3	(2) 5.5	129.8	2831	4770	(2) 300	24705	5953	5486	2,330	565
eco-ATWB-H 20-3N18	20,160	6,810	29,610	(2) 30	106.5	(2) 5.5	129.8	2831	4770	(2) 300	24850	5953	5486	2,330	565
eco-ATWB-H 20-4I18	23,280	8,565	33,640	(2) 7.5	66.7	(2) 5.5	129.8	3736	4770	(2) 300	28875	6169	5486	2,546	781
eco-ATWB-H 20-4J18	23,395	8,565	33,755	(2) 11	76.4	(2) 5.5	129.8	3736	4770	(2) 300	28995	6169	5486	2,546	781
eco-ATWB-H 20-4K18	23,450	8,565	33,810	(2) 15	84.1	(2) 5.5	129.8	3736	4770	(2) 300	29050	6169	5486	2,546	781
eco-ATWB-H 20-4L18	23,480	8,565	33,840	(2) 18.5	90.6	(2) 5.5	129.8	3736	4770	(2) 300	29075	6169	5486	2,546	781
eco-ATWB-H 20-4M18	23,525	8,565	33,885	(2) 22	95.4	(2) 5.5	129.8	3736	4770	(2) 300	29120	6169	5486	2,546	781
eco-ATWB-H 20-4N18	23,670	8,565	34,030	(2) 30	103.4	(2) 5.5	129.8	3736	4770	(2) 300	29265	6169	5486	2,546	781

† Model Numbers end in “-Z” for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

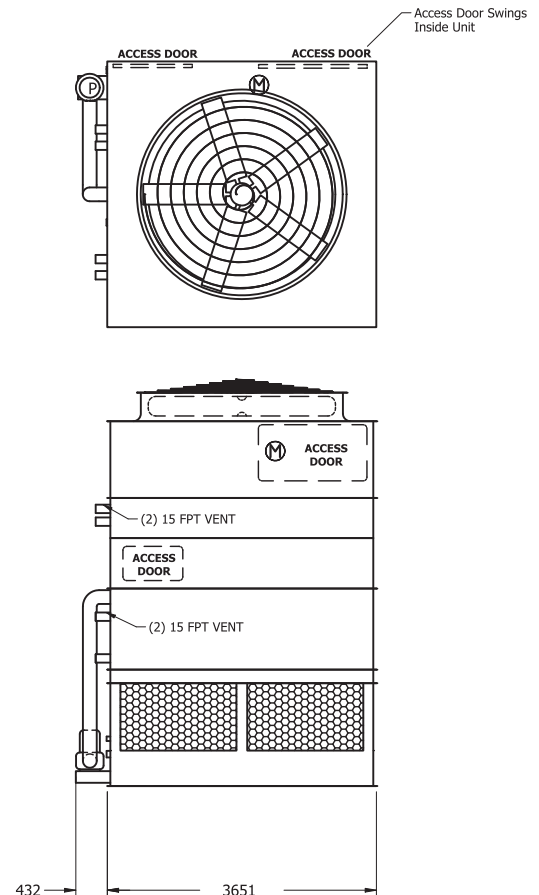
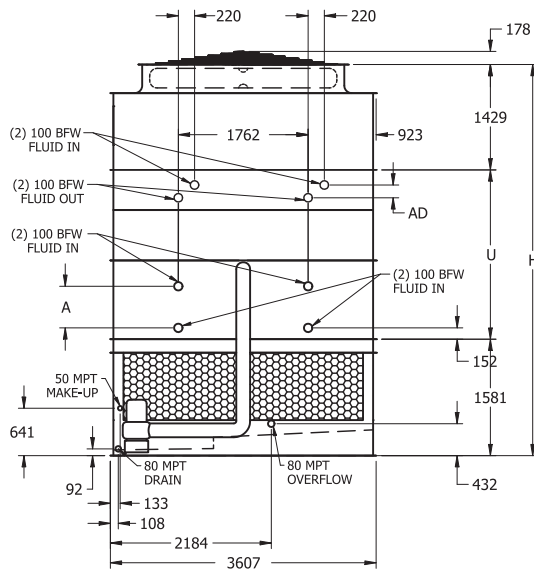
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	204	(2) 1460	3130	140
4	420	(2) 1950	4325	140
6	625	(2) 2440	5505	175
8	836	(2) 2930	6700	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1J12 to 12-4N12



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 12x12 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1J12	4,960	2,450	7,940	11	36.1	4	50.4	443	1855	300	6150	4918	3651	1,905	140
eco-ATWB-H 12-1K12	4,990	2,450	7,970	15	39.7	4	50.4	443	1855	300	6180	4918	3651	1,905	140
eco-ATWB-H 12-1L12	5,005	2,450	7,985	18.5	42.3	4	50.4	443	1855	300	6190	4918	3651	1,905	140
eco-ATWB-H 12-1M12	5,025	2,450	8,005	22	44.5	4	50.4	443	1855	300	6215	4918	3651	1,905	140
eco-ATWB-H 12-2J12	6,455	3,940	9,800	11	35.1	4	50.4	810	1855	300	8010	5128	3651	2,115	349
eco-ATWB-H 12-2K12	6,480	3,940	9,830	15	38.6	4	50.4	810	1855	300	8040	5128	3651	2,115	349
eco-ATWB-H 12-2L12	6,495	3,940	9,845	18.5	41.1	4	50.4	810	1855	300	8050	5128	3651	2,115	349
eco-ATWB-H 12-2M12	6,520	3,940	9,865	22	43.3	4	50.4	810	1855	300	8075	5128	3651	2,115	349
eco-ATWB-H 12-3J12	7,885	5,370	11,600	11	34.1	4	50.4	1181	1855	300	9805	5344	3651	2,330	565
eco-ATWB-H 12-3K12	7,910	5,370	11,625	15	37.5	4	50.4	1181	1855	300	9835	5344	3651	2,330	565
eco-ATWB-H 12-3L12	7,925	5,370	11,640	18.5	40	4	50.4	1181	1855	300	9845	5344	3651	2,330	565
eco-ATWB-H 12-3M12	7,945	5,370	11,660	22	42.1	4	50.4	1181	1855	300	9870	5344	3651	2,330	565
eco-ATWB-H 12-4J12	9,330	6,815	13,415	11	33.1	4	50.4	1548	1855	300	11625	5559	3651	2,546	781
eco-ATWB-H 12-4K12	9,360	6,815	13,445	15	36.4	4	50.4	1548	1855	300	11655	5559	3651	2,546	781
eco-ATWB-H 12-4L12	9,370	6,815	13,460	18.5	38.8	4	50.4	1548	1855	300	11665	5559	3651	2,546	781
eco-ATWB-H 12-4M12	9,395	6,815	13,480	22	40.8	4	50.4	1548	1855	300	11690	5559	3651	2,546	781
eco-ATWB-H 12-4N12	9,465	6,815	13,555	30	44.3	4	50.4	1548	1855	300	11760	5559	3651	2,546	781

† Model Numbers end in "Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak™** section and **Ellipti-fin®** coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

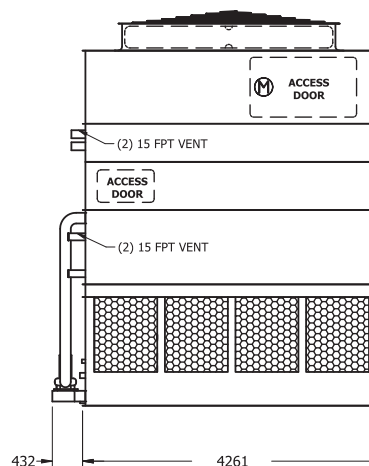
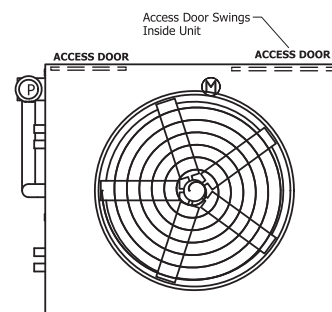
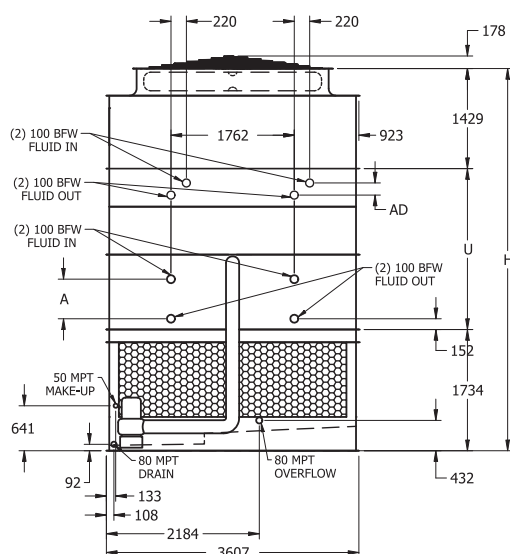
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	83	1280	1365	140
4	170	1680	1845	140
6	254	2075	2325	175
8	341	2470	2810	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1K14 to 12-4N14



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 12x14 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1K14	5,585	2,780	9,085	15	44	4	56.7	507	2160	300	7015	5070	4261	1,905	140
eco-ATWB-H 12-1L14	5,595	2,780	9,100	18.5	47.3	4	56.7	507	2160	300	7025	5070	4261	1,905	140
eco-ATWB-H 12-1M14	5,620	2,780	9,120	22	49.7	4	56.7	507	2160	300	7050	5070	4261	1,905	140
eco-ATWB-H 12-1N14	5,695	2,780	9,195	30	53.9	4	56.7	507	2160	300	7120	5070	4261	1,905	140
eco-ATWB-H 12-2K14	7,290	4,485	11,220	15	42.8	4	56.7	939	2160	300	9150	5280	4261	2,115	349
eco-ATWB-H 12-2L14	7,305	4,485	11,235	18.5	46	4	56.7	939	2160	300	9165	5280	4261	2,115	349
eco-ATWB-H 12-2M14	7,325	4,485	11,260	22	48.4	4	56.7	939	2160	300	9185	5280	4261	2,115	349
eco-ATWB-H 12-2N14	7,400	4,485	11,330	30	52.4	4	56.7	939	2160	300	9260	5280	4261	2,115	349
eco-ATWB-H 12-3K14	8,990	6,185	13,355	15	41.6	4	56.7	1370	2160	300	11280	5496	4261	2,330	565
eco-ATWB-H 12-3L14	9,005	6,185	13,365	18.5	44.7	4	56.7	1370	2160	300	11295	5496	4261	2,330	565
eco-ATWB-H 12-3M14	9,025	6,185	13,390	22	47	4	56.7	1370	2160	300	11315	5496	4261	2,330	565
eco-ATWB-H 12-3N14	9,100	6,185	13,465	30	51	4	56.7	1370	2160	300	11390	5496	4261	2,330	565
eco-ATWB-H 12-4K14	10,680	7,875	15,470	15	40.4	4	56.7	1802	2160	300	13400	5712	4261	2,546	781
eco-ATWB-H 12-4L14	10,690	7,875	15,485	18.5	43.4	4	56.7	1802	2160	300	13415	5712	4261	2,546	781
eco-ATWB-H 12-4M14	10,715	7,875	15,510	22	45.6	4	56.7	1802	2160	300	13435	5712	4261	2,546	781
eco-ATWB-H 12-4N14	10,785	7,875	15,580	30	49.5	4	56.7	1802	2160	300	13510	5712	4261	2,546	781

† Model Numbers end in “-Z” for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

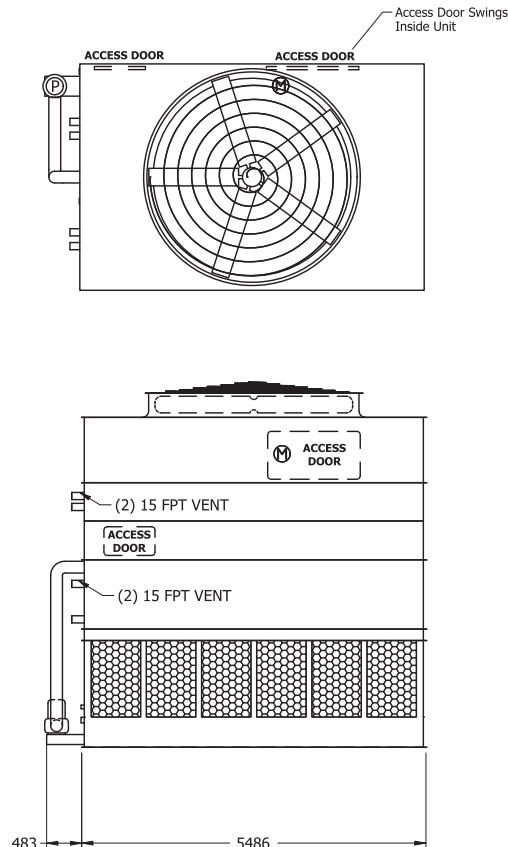
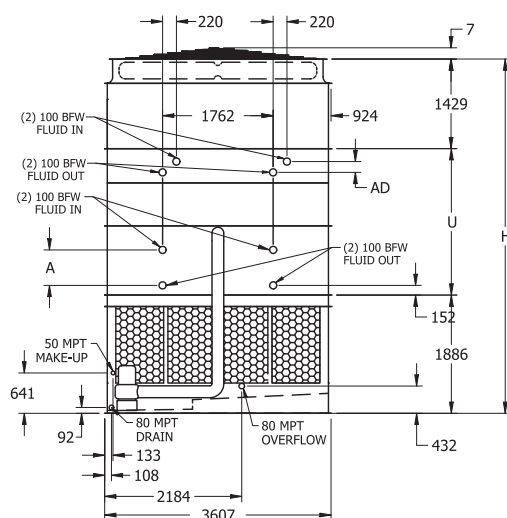
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	102	1415	1520	140
4	197	1880	2080	140
6	299	2350	2650	175
8	397	2810	3205	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1K18 to 12-4O18



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 12x18 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1K18	6,965	3,520	11,380	15	53.7	5.5	75.6	632	2725	300	8720	5223	5486	1,905	140
eco-ATWB-H 12-1L18	6,975	3,520	11,395	18.5	57.9	5.5	75.6	632	2725	300	8730	5223	5486	1,905	140
eco-ATWB-H 12-1M18	7,000	3,520	11,415	22	61.5	5.5	75.6	632	2725	300	8755	5223	5486	1,905	140
eco-ATWB-H 12-1N18	7,070	3,520	11,490	30	66.8	5.5	75.6	632	2725	300	8825	5223	5486	1,905	140
eco-ATWB-H 12-2K18	9,235	5,790	14,210	15	52.3	5.5	75.6	1189	2725	300	11550	5432	5486	2,115	349
eco-ATWB-H 12-2L18	9,250	5,790	14,225	18.5	56.3	5.5	75.6	1189	2725	300	11560	5432	5486	2,115	349
eco-ATWB-H 12-2M18	9,270	5,790	14,245	22	59.8	5.5	75.6	1189	2725	300	11585	5432	5486	2,115	349
eco-ATWB-H 12-2N18	9,345	5,790	14,320	30	64.9	5.5	75.6	1189	2725	300	11655	5432	5486	2,115	349
eco-ATWB-H 12-3K18	11,360	7,920	16,895	15	50.8	5.5	75.6	1745	2725	300	14235	5648	5486	2,330	565
eco-ATWB-H 12-3L18	11,375	7,920	16,910	18.5	54.7	5.5	75.6	1745	2725	300	14245	5648	5486	2,330	565
eco-ATWB-H 12-3M18	11,400	7,920	16,935	22	58.1	5.5	75.6	1745	2725	300	14270	5648	5486	2,330	565
eco-ATWB-H 12-3N18	11,470	7,920	17,005	30	63.1	5.5	75.6	1745	2725	300	14345	5648	5486	2,330	565
eco-ATWB-H 12-4K18	13,515	10,075	19,610	15	49.3	5.5	75.6	2302	2725	300	16945	5864	5486	2,546	781
eco-ATWB-H 12-4L18	13,530	10,075	19,620	18.5	53.1	5.5	75.6	2302	2725	300	16960	5864	5486	2,546	781
eco-ATWB-H 12-4M18	13,555	10,075	19,645	22	56.4	5.5	75.6	2302	2725	300	16980	5864	5486	2,546	781
eco-ATWB-H 12-4N18	13,625	10,075	19,720	30	61.3	5.5	75.6	2302	2725	300	17055	5864	5486	2,546	781
eco-ATWB-H 12-4O18	13,630	10,075	19,720	37	65.2	5.5	75.6	2302	2725	300	17060	5864	5486	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the ARID-fin Pak™ section and Ellipti-fin® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

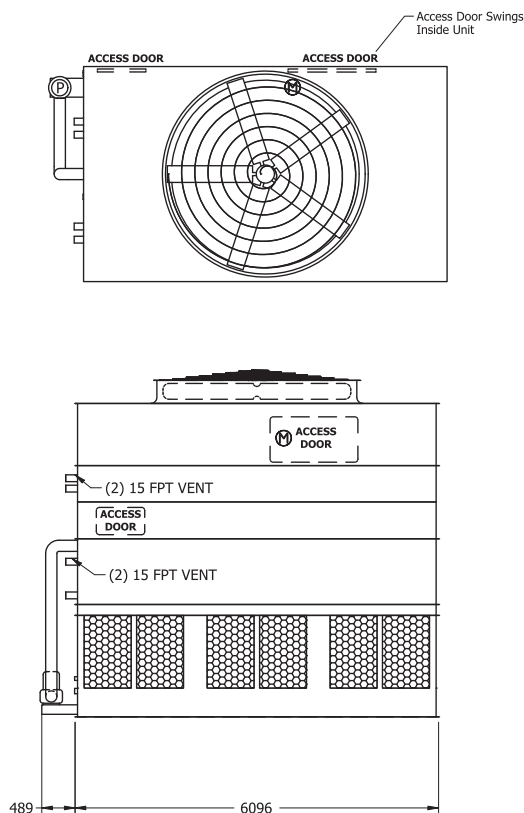
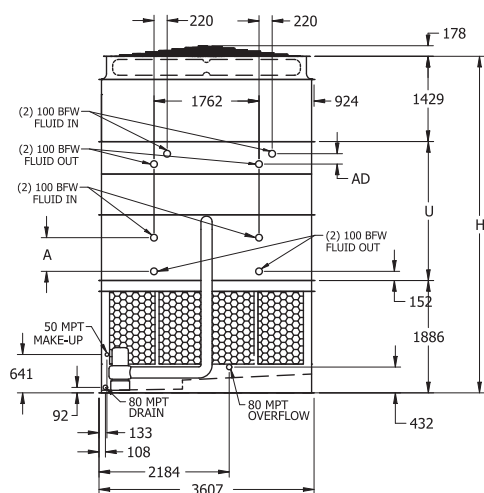
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	129	1690	1820	140
4	254	2290	2545	140
6	386	2895	3280	175
8	515	3500	4015	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1L20 to 12-4O20



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 56 l/s on eco-ATWB-H 12x20 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1L20	7,655	3,850	12,630	18.5	62.1	7.5	88.2	693	3030	350	9590	5223	6096	1,905	140
eco-ATWB-H 12-1M20	7,680	3,850	12,650	22	66	7.5	88.2	693	3030	350	9610	5223	6096	1,905	140
eco-ATWB-H 12-1N20	7,750	3,850	12,725	30	72	7.5	88.2	693	3030	350	9685	5223	6096	1,905	140
eco-ATWB-H 12-1O20	7,755	3,850	12,730	37	76.7	7.5	88.2	693	3030	350	9690	5223	6096	1,905	140
eco-ATWB-H 12-2L20	10,140	6,330	15,730	18.5	60.4	7.5	88.2	1314	3030	350	12690	5432	6096	2,115	349
eco-ATWB-H 12-2M20	10,160	6,330	15,755	22	64.2	7.5	88.2	1314	3030	350	12715	5432	6096	2,115	349
eco-ATWB-H 12-2N20	10,235	6,330	15,825	30	70	7.5	88.2	1314	3030	350	12785	5432	6096	2,115	349
eco-ATWB-H 12-2O20	10,240	6,330	15,830	37	74.6	7.5	88.2	1314	3030	350	12790	5432	6096	2,115	349
eco-ATWB-H 12-3L20	12,540	8,735	18,750	18.5	58.7	7.5	88.2	1934	3030	350	15710	5648	6096	2,330	565
eco-ATWB-H 12-3M20	12,565	8,735	18,775	22	62.4	7.5	88.2	1934	3030	350	15735	5648	6096	2,330	565
eco-ATWB-H 12-3N20	12,635	8,735	18,845	30	68.1	7.5	88.2	1934	3030	350	15810	5648	6096	2,330	565
eco-ATWB-H 12-3O20	12,640	8,735	18,850	37	72.5	7.5	88.2	1934	3030	350	15810	5648	6096	2,330	565
eco-ATWB-H 12-4L20	14,920	11,115	21,750	18.5	57	7.5	88.2	2555	3030	350	18710	5864	6096	2,546	781
eco-ATWB-H 12-4M20	14,940	11,115	21,770	22	60.5	7.5	88.2	2555	3030	350	18735	5864	6096	2,546	781
eco-ATWB-H 12-4N20	15,015	11,115	21,845	30	66.1	7.5	88.2	2555	3030	350	18805	5864	6096	2,546	781
eco-ATWB-H 12-4O20	15,020	11,115	21,850	37	70.3	7.5	88.2	2555	3030	350	18810	5864	6096	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

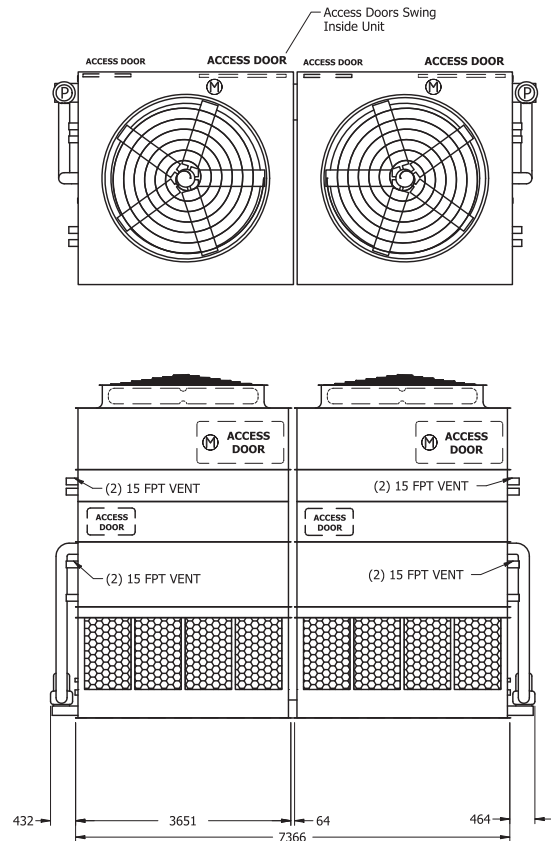
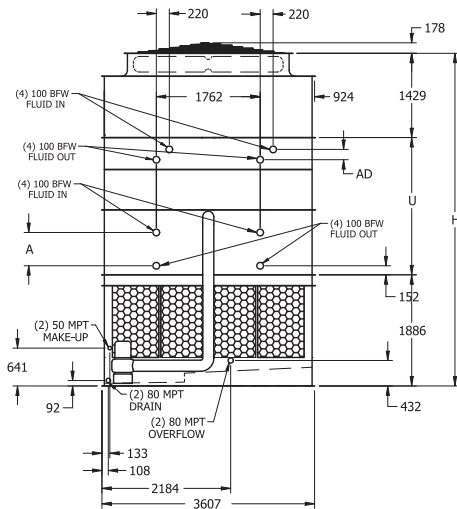
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	140	1830	1970	140
4	288	2500	2785	140
6	431	3170	3600	175
8	572	3840	4410	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1J24 to 12-4N24



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 12x24 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn- Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1J24	9,850	2,415	15,810	(2) 11	72.1	(2) 4	100.8	886	3710	(2) 300	12230	5223	7366	1,905	140
eco-ATWB-H 12-1K24	9,905	2,415	15,865	(2) 15	79.4	(2) 4	100.8	886	3710	(2) 300	12285	5223	7366	1,905	140
eco-ATWB-H 12-1L24	9,935	2,415	15,895	(2) 18.5	84.6	(2) 4	100.8	886	3710	(2) 300	12310	5223	7366	1,905	140
eco-ATWB-H 12-1M24	9,980	2,415	15,940	(2) 22	89	(2) 4	100.8	886	3710	(2) 300	12355	5223	7366	1,905	140
eco-ATWB-H 12-2J24	12,875	3,925	19,570	(2) 11	70.1	(2) 4	100.8	1620	3710	(2) 300	15985	5432	7366	2,115	349
eco-ATWB-H 12-2K24	12,925	3,925	19,620	(2) 15	77.2	(2) 4	100.8	1620	3710	(2) 300	16040	5432	7366	2,115	349
eco-ATWB-H 12-2L24	12,955	3,925	19,650	(2) 18.5	82.3	(2) 4	100.8	1620	3710	(2) 300	16065	5432	7366	2,115	349
eco-ATWB-H 12-2M24	13,000	3,925	19,695	(2) 22	86.6	(2) 4	100.8	1620	3710	(2) 300	16110	5432	7366	2,115	349
eco-ATWB-H 12-3J24	15,765	5,370	23,195	(2) 11	68.2	(2) 4	100.8	2358	3710	(2) 300	19615	5648	7366	2,330	565
eco-ATWB-H 12-3K24	15,820	5,370	23,250	(2) 15	75	(2) 4	100.8	2358	3710	(2) 300	19670	5648	7366	2,330	565
eco-ATWB-H 12-3L24	15,850	5,370	23,280	(2) 18.5	79.9	(2) 4	100.8	2358	3710	(2) 300	19695	5648	7366	2,330	565
eco-ATWB-H 12-3M24	15,895	5,370	23,325	(2) 22	84.1	(2) 4	100.8	2358	3710	(2) 300	19740	5648	7366	2,330	565
eco-ATWB-H 12-4K24	18,715	6,815	26,890	(2) 15	72.8	(2) 4	100.8	3096	3710	(2) 300	23305	5864	7366	2,546	781
eco-ATWB-H 12-4L24	18,740	6,815	26,915	(2) 18.5	77.6	(2) 4	100.8	3096	3710	(2) 300	23335	5864	7366	2,546	781
eco-ATWB-H 12-4M24	18,790	6,815	26,960	(2) 22	81.7	(2) 4	100.8	3096	3710	(2) 300	23380	5864	7366	2,546	781
eco-ATWB-H 12-4N24	18,935	6,815	27,105	(2) 30	88.5	(2) 4	100.8	3096	3710	(2) 300	23525	5864	7366	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

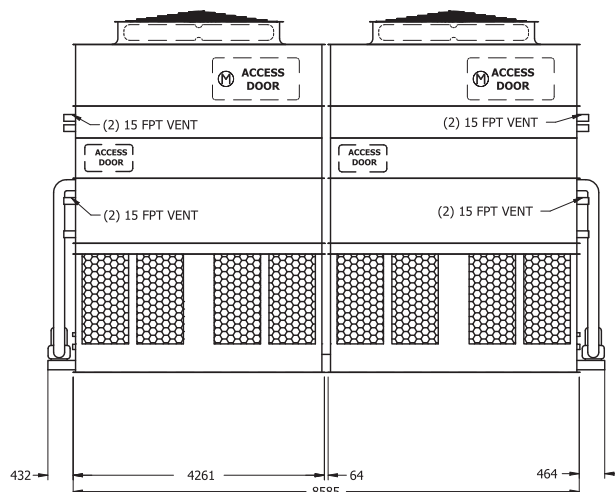
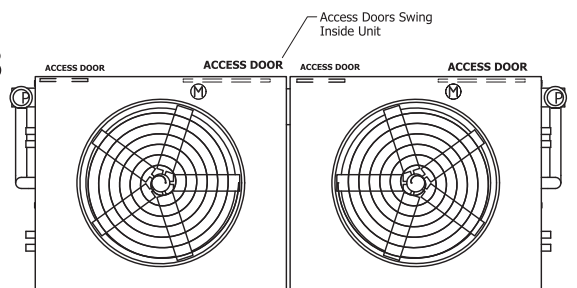
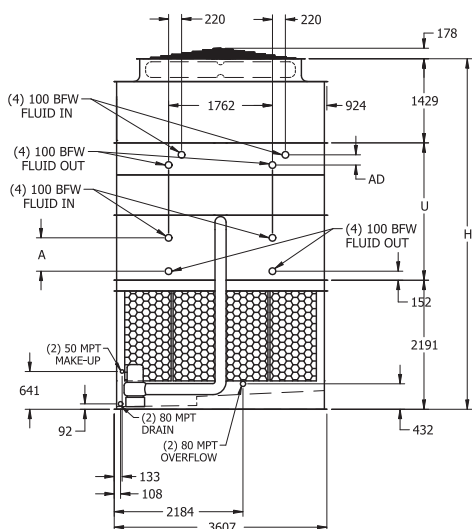
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	170	(2) 1280	2725	140
4	341	(2) 1680	3690	140
6	511	(2) 2075	4655	175
8	681	(2) 2470	5615	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1K28 to 12-4N28



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 12x28 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1K28	11,075	2,735	18,080	(2) 15	88	(2) 4	113.4	1011	4315	(2) 300	13935	5528	8585	1,905	140
eco-ATWB-H 12-1L28	11,105	2,735	18,105	(2) 18.5	94.5	(2) 4	113.4	1011	4315	(2) 300	13960	5528	8585	1,905	140
eco-ATWB-H 12-1M28	11,150	2,735	18,155	(2) 22	99.5	(2) 4	113.4	1011	4315	(2) 300	14005	5528	8585	1,905	140
eco-ATWB-H 12-1N28	11,295	2,735	18,300	(2) 30	107.8	(2) 4	113.4	1011	4315	(2) 300	14150	5528	8585	1,905	140
eco-ATWB-H 12-2K28	14,525	4,460	22,390	(2) 15	85.6	(2) 4	113.4	1874	4315	(2) 300	18245	5737	8585	2,115	349
eco-ATWB-H 12-2L28	14,550	4,460	22,415	(2) 18.5	91.9	(2) 4	113.4	1874	4315	(2) 300	18270	5737	8585	2,115	349
eco-ATWB-H 12-2M28	14,595	4,460	22,460	(2) 22	96.8	(2) 4	113.4	1874	4315	(2) 300	18315	5737	8585	2,115	349
eco-ATWB-H 12-2N28	14,740	4,460	22,605	(2) 30	104.9	(2) 4	113.4	1874	4315	(2) 300	18460	5737	8585	2,115	349
eco-ATWB-H 12-3K28	17,980	6,185	26,705	(2) 15	83.1	(2) 4	113.4	2737	4315	(2) 300	22560	5953	8585	2,330	565
eco-ATWB-H 12-3L28	18,010	6,185	26,735	(2) 18.5	89.3	(2) 4	113.4	2737	4315	(2) 300	22590	5953	8585	2,330	565
eco-ATWB-H 12-3M28	18,055	6,185	26,780	(2) 22	94	(2) 4	113.4	2737	4315	(2) 300	22635	5953	8585	2,330	565
eco-ATWB-H 12-3N28	18,200	6,185	26,925	(2) 30	101.9	(2) 4	113.4	2737	4315	(2) 300	22780	5953	8585	2,330	565
eco-ATWB-H 12-4K28	21,355	7,875	30,945	(2) 15	80.7	(2) 4	113.4	3600	4315	(2) 300	26800	6169	8585	2,546	781
eco-ATWB-H 12-4L28	21,380	7,875	30,970	(2) 18.5	86.7	(2) 4	113.4	3600	4315	(2) 300	26825	6169	8585	2,546	781
eco-ATWB-H 12-4M28	21,430	7,875	31,015	(2) 22	91.3	(2) 4	113.4	3600	4315	(2) 300	26870	6169	8585	2,546	781
eco-ATWB-H 12-4N28	21,575	7,875	31,160	(2) 30	98.9	(2) 4	113.4	3600	4315	(2) 300	27015	6169	8585	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

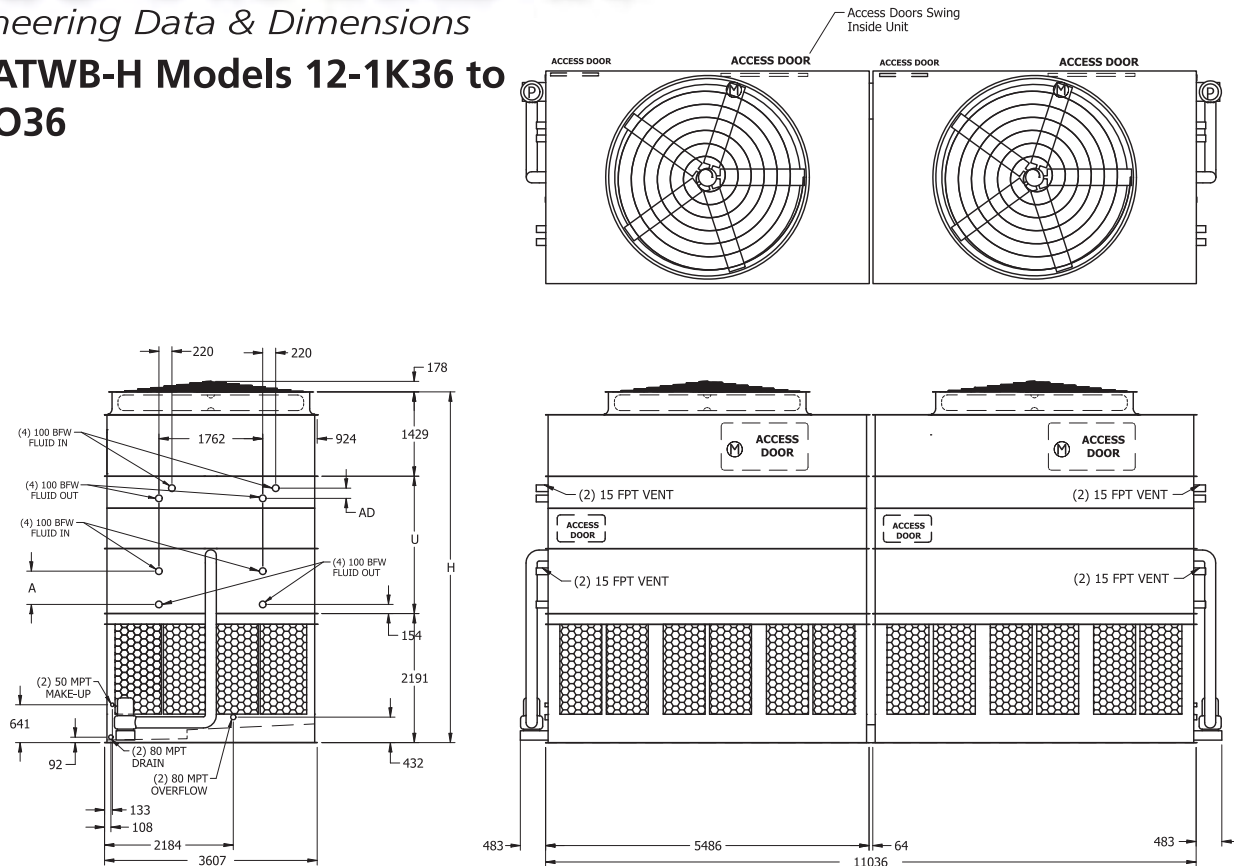
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	204	(2) 1415	3035	140
4	397	(2) 1880	4160	140
6	602	(2) 2350	5300	175
8	791	(2) 2810	6415	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1K36 to 12-4O36



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.

Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 12x36 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1K36	13,815	3,465	22,650	(2) 15	107.5	(2) 5.5	151.2	1261	5450	(2) 300	17325	5528	11036	1,905	140
eco-ATWB-H 12-1L36	13,845	3,465	22,680	(2) 18.5	115.8	(2) 5.5	151.2	1261	5450	(2) 300	17355	5528	11036	1,905	140
eco-ATWB-H 12-1M36	13,890	3,465	22,725	(2) 22	123	(2) 5.5	151.2	1261	5450	(2) 300	17400	5528	11036	1,905	140
eco-ATWB-H 12-1N36	14,035	3,465	22,870	(2) 30	133.5	(2) 5.5	151.2	1261	5450	(2) 300	17545	5528	11036	1,905	140
eco-ATWB-H 12-2K36	18,405	5,760	28,360	(2) 15	104.5	(2) 5.5	151.2	2373	5450	(2) 300	23035	5737	11036	2,115	349
eco-ATWB-H 12-2L36	18,435	5,760	28,385	(2) 18.5	112.6	(2) 5.5	151.2	2373	5450	(2) 300	23060	5737	11036	2,115	349
eco-ATWB-H 12-2M36	18,480	5,760	28,430	(2) 22	119.6	(2) 5.5	151.2	2373	5450	(2) 300	23105	5737	11036	2,115	349
eco-ATWB-H 12-2N36	18,625	5,760	28,575	(2) 30	129.8	(2) 5.5	151.2	2373	5450	(2) 300	23250	5737	11036	2,115	349
eco-ATWB-H 12-3K36	22,725	7,920	33,795	(2) 15	101.6	(2) 5.5	151.2	3490	5450	(2) 300	28465	5953	11036	2,330	565
eco-ATWB-H 12-3L36	22,750	7,920	33,820	(2) 18.5	109.4	(2) 5.5	151.2	3490	5450	(2) 300	28495	5953	11036	2,330	565
eco-ATWB-H 12-3M36	22,800	7,920	33,865	(2) 22	116.3	(2) 5.5	151.2	3490	5450	(2) 300	28540	5953	11036	2,330	565
eco-ATWB-H 12-3N36	22,945	7,920	34,010	(2) 30	126.2	(2) 5.5	151.2	3490	5450	(2) 300	28685	5953	11036	2,330	565
eco-ATWB-H 12-4K36	27,035	10,075	39,220	(2) 15	98.6	(2) 5.5	151.2	4603	5450	(2) 300	33890	6169	11036	2,546	781
eco-ATWB-H 12-4L36	27,060	10,075	39,245	(2) 18.5	106.2	(2) 5.5	151.2	4603	5450	(2) 300	33920	6169	11036	2,546	781
eco-ATWB-H 12-4M36	27,105	10,075	39,290	(2) 22	112.9	(2) 5.5	151.2	4603	5450	(2) 300	33965	6169	11036	2,546	781
eco-ATWB-H 12-4N36	27,250	10,075	39,435	(2) 30	122.5	(2) 5.5	151.2	4603	5450	(2) 300	34110	6169	11036	2,546	781
eco-ATWB-H 12-4O36	27,260	10,075	39,445	(2) 37	130.4	(2) 5.5	151.2	4603	5450	(2) 300	34120	6169	11036	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak™** section and **Ellipti-fin®** coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

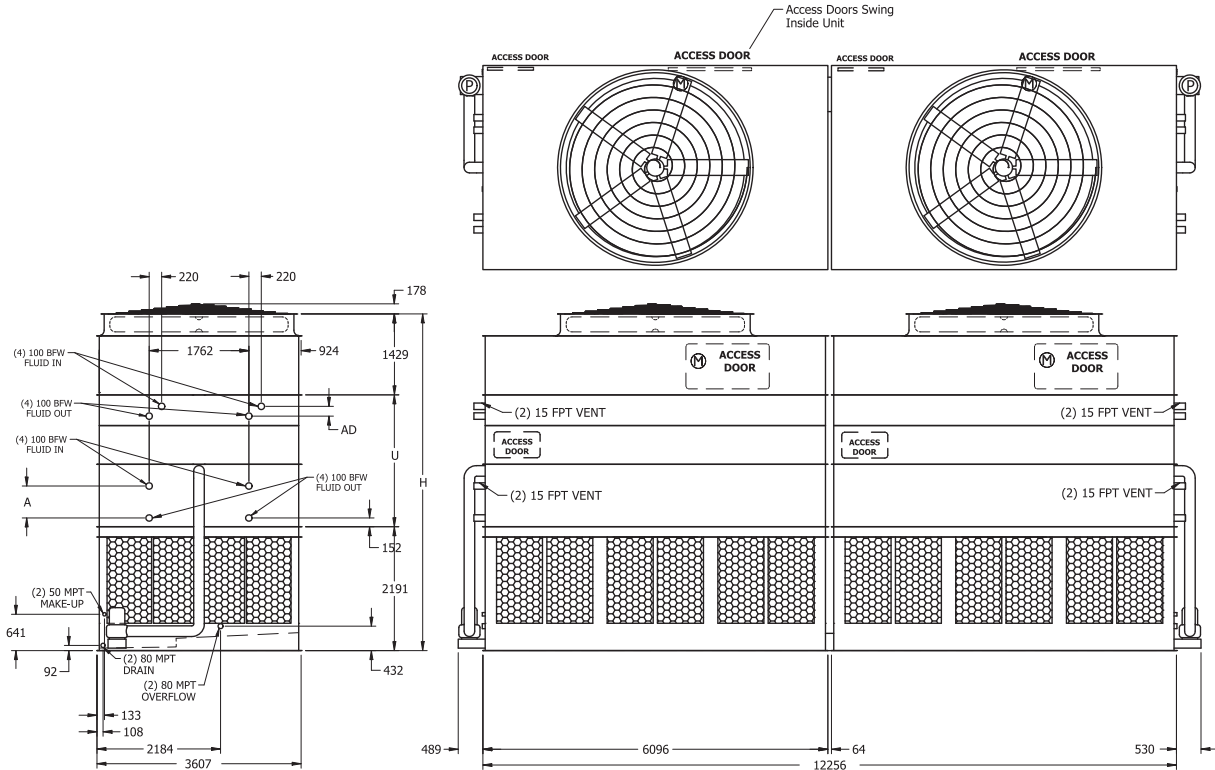
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	261	(2) 1690	3640	140
4	511	(2) 2290	5095	140
6	768	(2) 2895	6555	175
8	1030	(2) 3500	8030	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 12-1L40 to 12-4O40



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 12x40 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 12-1L40	15,185	3,785	25,130	(2) 18.5	124.2	(2) 7.5	176.4	1385	6055	(2) 350	19050	5528	12256	1,905	140
eco-ATWB-H 12-1M40	15,230	3,785	25,175	(2) 22	132	(2) 7.5	176.4	1385	6055	(2) 350	19095	5528	12256	1,905	140
eco-ATWB-H 12-1N40	15,375	3,785	25,320	(2) 30	144.1	(2) 7.5	176.4	1385	6055	(2) 350	19240	5528	12256	1,905	140
eco-ATWB-H 12-1O40	15,385	3,785	25,330	(2) 37	153.3	(2) 7.5	176.4	1385	6055	(2) 350	19250	5528	12256	1,905	140
eco-ATWB-H 12-2L40	20,210	6,300	31,400	(2) 18.5	120.8	(2) 7.5	176.4	2627	6055	(2) 350	25320	5737	12256	2,115	349
eco-ATWB-H 12-2M40	20,255	6,300	31,445	(2) 22	128.4	(2) 7.5	176.4	2627	6055	(2) 350	25365	5737	12256	2,115	349
eco-ATWB-H 12-2N40	20,405	6,300	31,590	(2) 30	140.1	(2) 7.5	176.4	2627	6055	(2) 350	25510	5737	12256	2,115	349
eco-ATWB-H 12-2O40	20,410	6,300	31,595	(2) 37	149.1	(2) 7.5	176.4	2627	6055	(2) 350	25520	5737	12256	2,115	349
eco-ATWB-H 12-3L40	25,085	8,735	37,505	(2) 18.5	117.4	(2) 7.5	176.4	3865	6055	(2) 350	31425	5953	12256	2,330	565
eco-ATWB-H 12-3M40	25,130	8,735	37,550	(2) 22	124.7	(2) 7.5	176.4	3865	6055	(2) 350	31470	5953	12256	2,330	565
eco-ATWB-H 12-3N40	25,275	8,735	37,695	(2) 30	136.1	(2) 7.5	176.4	3865	6055	(2) 350	31615	5953	12256	2,330	565
eco-ATWB-H 12-3O40	25,285	8,735	37,705	(2) 37	144.9	(2) 7.5	176.4	3865	6055	(2) 350	31625	5953	12256	2,330	565
eco-ATWB-H 12-4L40	29,835	11,115	43,500	(2) 18.5	113.9	(2) 7.5	176.4	5107	6055	(2) 350	37420	6169	12256	2,546	781
eco-ATWB-H 12-4M40	29,885	11,115	43,545	(2) 22	121.1	(2) 7.5	176.4	5107	6055	(2) 350	37465	6169	12256	2,546	781
eco-ATWB-H 12-4N40	30,030	11,115	43,690	(2) 30	132.2	(2) 7.5	176.4	5107	6055	(2) 350	37610	6169	12256	2,546	781
eco-ATWB-H 12-4O40	30,035	11,115	43,700	(2) 37	140.7	(2) 7.5	176.4	5107	6055	(2) 350	37620	6169	12256	2,546	781

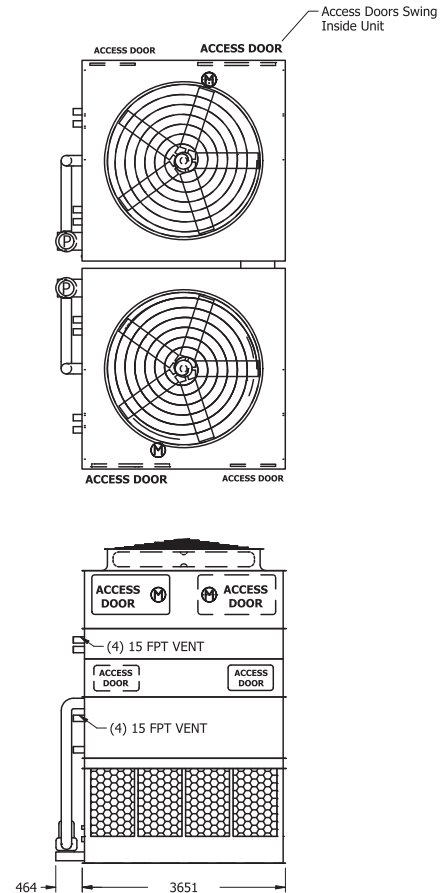
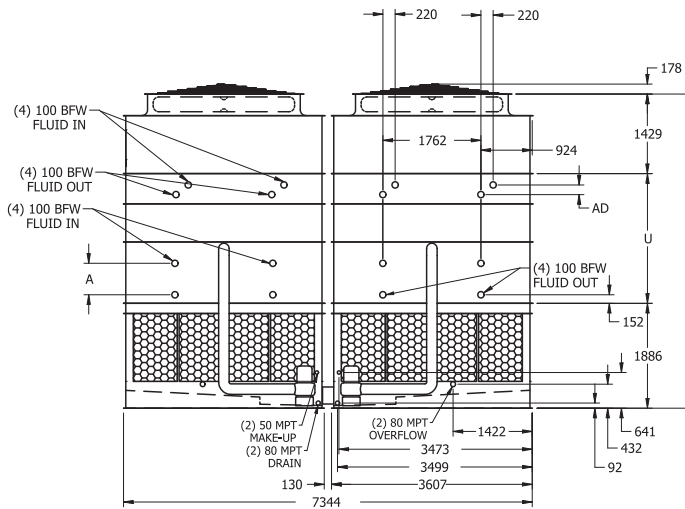
- † Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.
 †† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.
 * Liters shown 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 (300mm would normally be sufficient).
 △ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.
 ▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	284	(2) 1830	3940	140
4	579	(2) 2500	5575	140
6	860	(2) 3170	7200	175
8	1143	(2) 3840	8820	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 24-1J12 to 24-4N12



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 24x12 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 24-1J12	9,850	2,415	15,810	(2) 11	72.1	(2) 4	100.8	886	3710	(2) 300	12230	5223	3651	1,905	140
eco-ATWB-H 24-1K12	9,905	2,415	15,865	(2) 15	79.4	(2) 4	100.8	886	3710	(2) 300	12285	5223	3651	1,905	140
eco-ATWB-H 24-1L12	9,935	2,415	15,895	(2) 18.5	84.6	(2) 4	100.8	886	3710	(2) 300	12310	5223	3651	1,905	140
eco-ATWB-H 24-1M12	9,980	2,415	15,940	(2) 22	89	(2) 4	100.8	886	3710	(2) 300	12355	5223	3651	1,905	140
eco-ATWB-H 24-2J12	12,875	3,925	19,570	(2) 11	70.1	(2) 4	100.8	1620	3710	(2) 300	15985	5432	3651	2,115	349
eco-ATWB-H 24-2K12	12,925	3,925	19,620	(2) 15	77.2	(2) 4	100.8	1620	3710	(2) 300	16040	5432	3651	2,115	349
eco-ATWB-H 24-2L12	12,955	3,925	19,650	(2) 18.5	82.3	(2) 4	100.8	1620	3710	(2) 300	16065	5432	3651	2,115	349
eco-ATWB-H 24-2M12	13,000	3,925	19,695	(2) 22	86.6	(2) 4	100.8	1620	3710	(2) 300	16110	5432	3651	2,115	349
eco-ATWB-H 24-3J12	15,765	5,370	23,195	(2) 11	68.2	(2) 4	100.8	2358	3710	(2) 300	19615	5648	3651	2,330	565
eco-ATWB-H 24-3K12	15,820	5,370	23,250	(2) 15	75	(2) 4	100.8	2358	3710	(2) 300	19670	5648	3651	2,330	565
eco-ATWB-H 24-3L12	15,850	5,370	23,280	(2) 18.5	79.9	(2) 4	100.8	2358	3710	(2) 300	19695	5648	3651	2,330	565
eco-ATWB-H 24-3M12	15,895	5,370	23,325	(2) 22	84.1	(2) 4	100.8	2358	3710	(2) 300	19740	5648	3651	2,330	565
eco-ATWB-H 24-4K12	18,715	6,815	26,890	(2) 15	72.8	(2) 4	100.8	3096	3710	(2) 300	23305	5864	3651	2,546	781
eco-ATWB-H 24-4L12	18,740	6,815	26,915	(2) 18.5	77.6	(2) 4	100.8	3096	3710	(2) 300	23335	5864	3651	2,546	781
eco-ATWB-H 24-4M12	18,790	6,815	26,960	(2) 22	81.7	(2) 4	100.8	3096	3710	(2) 300	23380	5864	3651	2,546	781
eco-ATWB-H 24-4N12	18,935	6,815	27,105	(2) 30	88.5	(2) 4	100.8	3096	3710	(2) 300	23525	5864	3651	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

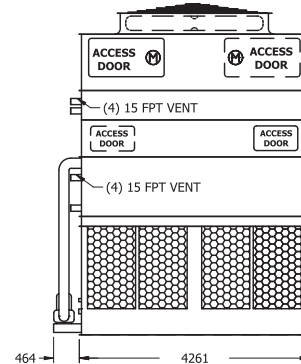
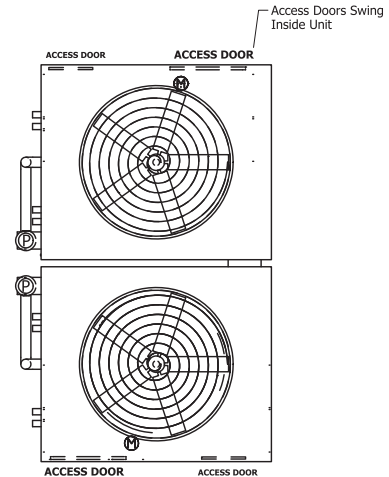
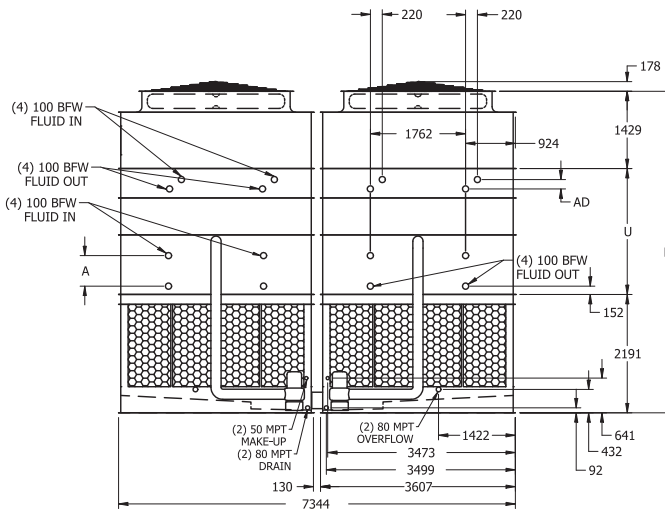
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	170	(2) 1280	2725	140
4	341	(2) 1680	3690	140
6	511	(2) 2075	4655	175
8	681	(2) 2470	5615	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 24-1K14 to 24-4N14



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 24x14 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm)▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 24-1K14	11,095	2,745	18,100	(2) 15	88	(2) 4	113.4	1011	4315	(2) 300	13950	5528	4261	1,905	140
eco-ATWB-H 24-1L14	11,120	2,745	18,125	(2) 18.5	94.5	(2) 4	113.4	1011	4315	(2) 300	13980	5528	4261	1,905	140
eco-ATWB-H 24-1M14	11,165	2,745	18,170	(2) 22	99.5	(2) 4	113.4	1011	4315	(2) 300	14025	5528	4261	1,905	140
eco-ATWB-H 24-1N14	11,315	2,745	18,315	(2) 30	107.8	(2) 4	113.4	1011	4315	(2) 300	14170	5528	4261	1,905	140
eco-ATWB-H 24-2K14	14,535	4,465	22,400	(2) 15	85.6	(2) 4	113.4	1874	4315	(2) 300	18255	5737	4261	2,115	349
eco-ATWB-H 24-2L14	14,560	4,465	22,425	(2) 18.5	91.9	(2) 4	113.4	1874	4315	(2) 300	18280	5737	4261	2,115	349
eco-ATWB-H 24-2M14	14,605	4,465	22,470	(2) 22	96.8	(2) 4	113.4	1874	4315	(2) 300	18325	5737	4261	2,115	349
eco-ATWB-H 24-2N14	14,750	4,465	22,615	(2) 30	104.9	(2) 4	113.4	1874	4315	(2) 300	18470	5737	4261	2,115	349
eco-ATWB-H 24-3K14	17,980	6,185	26,705	(2) 15	83.1	(2) 4	113.4	2737	4315	(2) 300	22560	5953	4261	2,330	565
eco-ATWB-H 24-3L14	18,010	6,185	26,735	(2) 18.5	89.3	(2) 4	113.4	2737	4315	(2) 300	22590	5953	4261	2,330	565
eco-ATWB-H 24-3M14	18,055	6,185	26,780	(2) 22	94	(2) 4	113.4	2737	4315	(2) 300	22635	5953	4261	2,330	565
eco-ATWB-H 24-3N14	18,200	6,185	26,925	(2) 30	101.9	(2) 4	113.4	2737	4315	(2) 300	22780	5953	4261	2,330	565
eco-ATWB-H 24-4K14	21,355	7,875	30,945	(2) 15	80.7	(2) 4	113.4	3600	4315	(2) 300	26800	6169	4261	2,546	781
eco-ATWB-H 24-4L14	21,380	7,875	30,970	(2) 18.5	86.7	(2) 4	113.4	3600	4315	(2) 300	26825	6169	4261	2,546	781
eco-ATWB-H 24-4M14	21,430	7,875	31,015	(2) 22	91.3	(2) 4	113.4	3600	4315	(2) 300	26870	6169	4261	2,546	781
eco-ATWB-H 24-4N14	21,575	7,875	31,160	(2) 30	98.9	(2) 4	113.4	3600	4315	(2) 300	27015	6169	4261	2,546	781

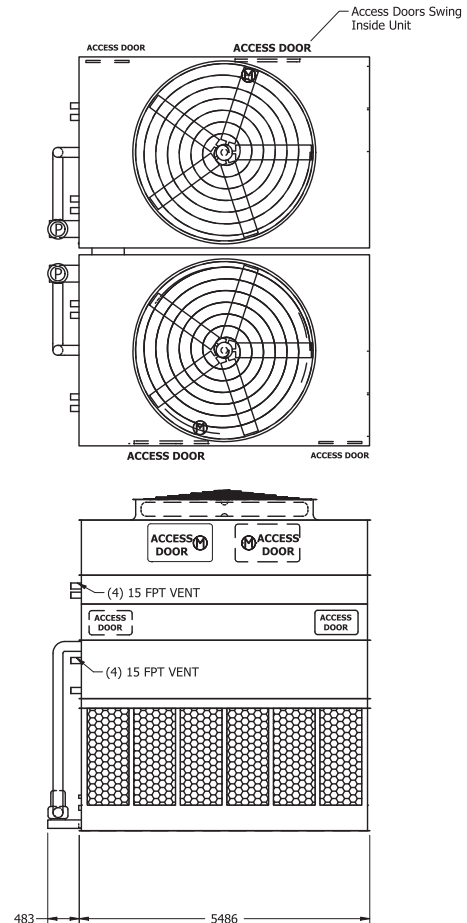
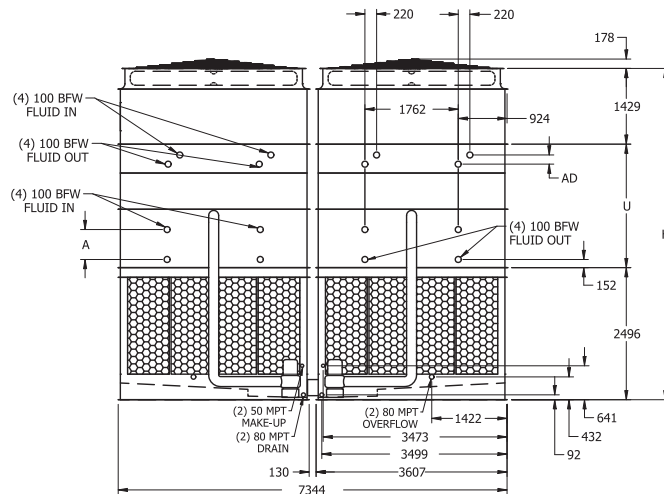
- † Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.
 †† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.
 * Liters shown 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 (300mm would normally be sufficient).
 △ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.
 ▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	204	(2) 1415	3035	140
4	397	(2) 1880	4160	140
6	602	(2) 2350	5295	175
8	791	(2) 2810	6415	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 24-1K18 to 24-4O18



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 24x18 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 24-1K18	13,855	3,485	22,690	(2) 15	107.5	(2) 5.5	151.2	1261	5450	(2) 300	17365	5832	5486	1,905	140
eco-ATWB-H 24-1L18	13,880	3,485	22,715	(2) 18.5	115.8	(2) 5.5	151.2	1261	5450	(2) 300	17390	5832	5486	1,905	140
eco-ATWB-H 24-1M18	13,925	3,485	22,760	(2) 22	123	(2) 5.5	151.2	1261	5450	(2) 300	17435	5832	5486	1,905	140
eco-ATWB-H 24-1N18	14,070	3,485	22,905	(2) 30	133.5	(2) 5.5	151.2	1261	5450	(2) 300	17580	5832	5486	1,905	140
eco-ATWB-H 24-2K18	18,435	5,775	28,385	(2) 15	104.5	(2) 5.5	151.2	2373	5450	(2) 300	23060	6042	5486	2,115	349
eco-ATWB-H 24-2L18	18,460	5,775	28,415	(2) 18.5	112.6	(2) 5.5	151.2	2373	5450	(2) 300	23090	6042	5486	2,115	349
eco-ATWB-H 24-2M18	18,505	5,775	28,460	(2) 22	119.6	(2) 5.5	151.2	2373	5450	(2) 300	23135	6042	5486	2,115	349
eco-ATWB-H 24-2N18	18,650	5,775	28,605	(2) 30	129.8	(2) 5.5	151.2	2373	5450	(2) 300	23280	6042	5486	2,115	349
eco-ATWB-H 24-3K18	22,725	7,920	33,795	(2) 15	101.6	(2) 5.5	151.2	3490	5450	(2) 300	28465	6258	5486	2,330	565
eco-ATWB-H 24-3L18	22,750	7,920	33,820	(2) 18.5	109.4	(2) 5.5	151.2	3490	5450	(2) 300	28495	6258	5486	2,330	565
eco-ATWB-H 24-3M18	22,800	7,920	33,865	(2) 22	116.3	(2) 5.5	151.2	3490	5450	(2) 300	28540	6258	5486	2,330	565
eco-ATWB-H 24-3N18	22,945	7,920	34,010	(2) 30	126.2	(2) 5.5	151.2	3490	5450	(2) 300	28685	6258	5486	2,330	565
eco-ATWB-H 24-4K18	27,035	10,075	39,220	(2) 15	98.6	(2) 5.5	151.2	4603	5450	(2) 300	33890	6474	5486	2,546	781
eco-ATWB-H 24-4L18	27,060	10,075	39,245	(2) 18.5	106.2	(2) 5.5	151.2	4603	5450	(2) 300	33920	6474	5486	2,546	781
eco-ATWB-H 24-4M18	27,105	10,075	39,290	(2) 22	112.9	(2) 5.5	151.2	4603	5450	(2) 300	33965	6474	5486	2,546	781
eco-ATWB-H 24-4N18	27,250	10,075	39,435	(2) 30	122.5	(2) 5.5	151.2	4603	5450	(2) 300	34110	6474	5486	2,546	781
eco-ATWB-H 24-4O18	27,260	10,075	39,445	(2) 37	130.4	(2) 5.5	151.2	4603	5450	(2) 300	34120	6474	5486	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the ARID-fin Pak™ section and Ellipti-fin® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

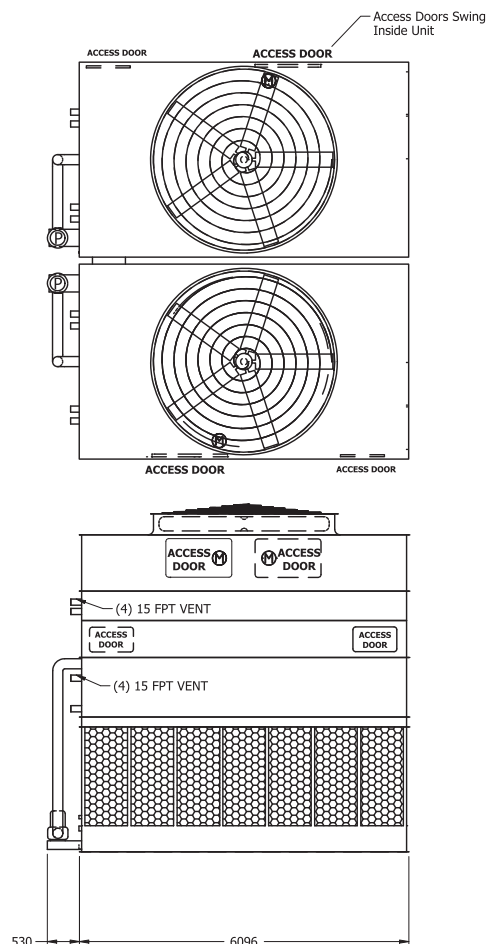
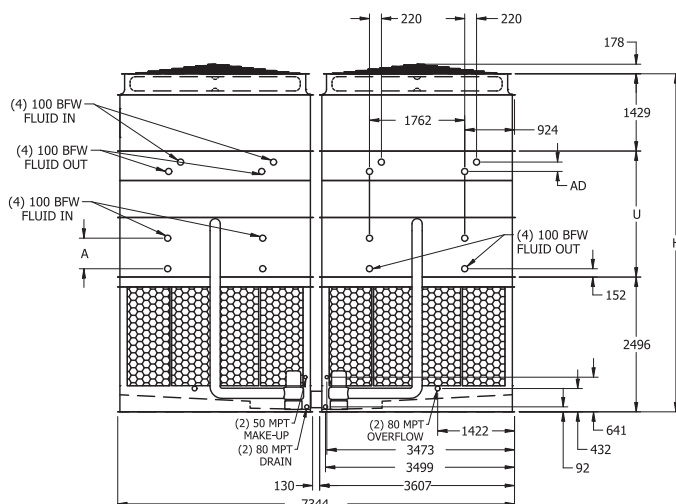
▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	261	(2) 1690	3640	140
4	511	(2) 2290	5095	140
6	768	(2) 2895	6555	175
8	1030	(2) 3500	8030	241

eco-ATWB-H

Engineering Data & Dimensions

eco-ATWB-H Models 24-1L20 to 24-4O20



Note: The below table lists base unit dimensions and weights. See the table at the bottom Right of the Page for dry coil section dimensions and weight adds.
Note: The number of coil connections doubles when the flow rate exceeds 112 l/s on eco-ATWB-H 24x20 models. This required option is referred to as the High Flow coil configuration.

eco-ATWB-H Model Number†	Weights (kg)			Fans		Spray Pump		Wet Coil Volume (Liters)	Remote Sump△			Dimensions (mm) ▲			
	Shipping	Heaviest Section††	Operating	kW	m³/s	kW	l/s		Liters Req'd*	Conn. Size (mm)	Operating Weight (kg)	Height H	Length L	Upper U	Coil A
eco-ATWB-H 24-1L20	15,240	3,815	25,185	(2) 18.5	124.2	(2) 7.5	176.4	1385	6055	(2) 350	19105	5832	6096	1,905	140
eco-ATWB-H 24-1M20	15,285	3,815	25,230	(2) 22	132	(2) 7.5	176.4	1385	6055	(2) 350	19150	5832	6096	1,905	140
eco-ATWB-H 24-1N20	15,430	3,815	25,375	(2) 30	144.1	(2) 7.5	176.4	1385	6055	(2) 350	19295	5832	6096	1,905	140
eco-ATWB-H 24-1O20	15,440	3,815	25,385	(2) 37	153.3	(2) 7.5	176.4	1385	6055	(2) 350	19305	5832	6096	1,905	140
eco-ATWB-H 24-2L20	20,240	6,315	31,425	(2) 18.5	120.8	(2) 7.5	176.4	2627	6055	(2) 350	25345	6042	6096	2,115	349
eco-ATWB-H 24-2M20	20,285	6,315	31,470	(2) 22	128.4	(2) 7.5	176.4	2627	6055	(2) 350	25390	6042	6096	2,115	349
eco-ATWB-H 24-2N20	20,430	6,315	31,615	(2) 30	140.1	(2) 7.5	176.4	2627	6055	(2) 350	25535	6042	6096	2,115	349
eco-ATWB-H 24-2O20	20,440	6,315	31,625	(2) 37	149.1	(2) 7.5	176.4	2627	6055	(2) 350	25545	6042	6096	2,115	349
eco-ATWB-H 24-3L20	25,085	8,735	37,505	(2) 18.5	117.4	(2) 7.5	176.4	3865	6055	(2) 350	31425	6258	6096	2,330	565
eco-ATWB-H 24-3M20	25,130	8,735	37,550	(2) 22	124.7	(2) 7.5	176.4	3865	6055	(2) 350	31470	6258	6096	2,330	565
eco-ATWB-H 24-3N20	25,275	8,735	37,695	(2) 30	136.1	(2) 7.5	176.4	3865	6055	(2) 350	31615	6258	6096	2,330	565
eco-ATWB-H 24-3O20	25,285	8,735	37,705	(2) 37	144.9	(2) 7.5	176.4	3865	6055	(2) 350	31625	6258	6096	2,330	565
eco-ATWB-H 24-4L20	29,835	11,115	43,500	(2) 18.5	113.9	(2) 7.5	176.4	5107	6055	(2) 350	37420	6474	6096	2,546	781
eco-ATWB-H 24-4M20	29,885	11,115	43,545	(2) 22	121.1	(2) 7.5	176.4	5107	6055	(2) 350	37465	6474	6096	2,546	781
eco-ATWB-H 24-4N20	30,030	11,115	43,690	(2) 30	132.2	(2) 7.5	176.4	5107	6055	(2) 350	37610	6474	6096	2,546	781
eco-ATWB-H 24-4O20	30,035	11,115	43,700	(2) 37	140.7	(2) 7.5	176.4	5107	6055	(2) 350	37620	6474	6096	2,546	781

† Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.

†† Heaviest section is the **ARID-fin Pak**® section and **Ellipti-fin**® coil sections shipped mounted together.

* 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 (300mm would normally be sufficient).

△ When a remote sump arrangement is selected, the spray pump, suction strainer and associated piping are omitted; the unit is provided with an oversized outlet to facilitate drainage to the remote sump.

▲ Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints for dimensions, quantity of coil connections, and piping configuration. Coil connections are 100mm bevel for weld (BFW), also available as options. Other connection types such as grooved for mechanical coupling or flanged are also available as options.

Dry Coil Section Adds				
ARID Fin-Pak Coil Rows	Coil Volume (liters)	Shipping Weight (kg)	Operating Weight (kg)	Coil AD (mm)
2	284	(2) 1830	3940	140
4	579	(2) 2500	5575	140
6	859	(2) 3170	7200	175
8	1143	(2) 3840	8820	241

STEEL SUPPORT

eco-Hybrid

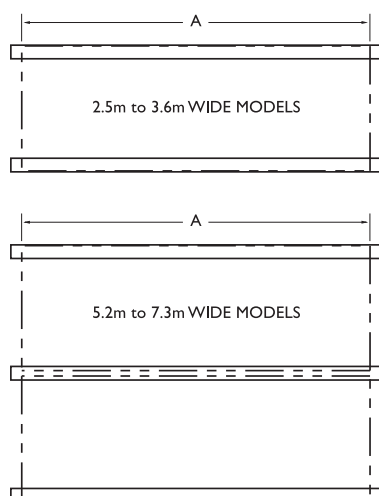
Recommended Steel Support

The recommended support for EVAPCO Closed Circuit Coolers 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, 19mm 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.)

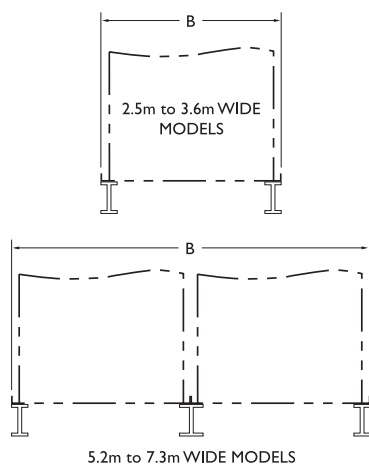
Beams should be level before setting the unit in place. Do not level the unit by shimming between the unit and the structural steel. Dimensions, weights, and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.

NOTE: Consult IBC for required steel support layout and structural design.

Plan Views



End Elevations



eco-ATWB-H SUPPORTING STEEL DIMENSIONS

2.5m Wide Models	A	B
eco-ATWB-H 9x9	2731	2578
eco-ATWB-H 9x12	3651	2578
eco-ATWB-H 9x14	4261	2578
eco-ATWB-H 9x18	5486	2578
eco-ATWB-H 9x21	6401	2578
3m Wide Models	A	B
eco-ATWB-H 10x12	3651	2991
eco-ATWB-H 10x18	5486	2991
eco-ATWB-H 10x24	7366	2991
eco-ATWB-H 10x36	11036	2991
3.6m Wide Models	A	B
eco-ATWB-H 12x12	3651	3607
eco-ATWB-H 12x14	4261	3607
eco-ATWB-H 12x18	5486	3607
eco-ATWB-H 12x20	6096	3607
eco-ATWB-H 12x24	7366	3607
eco-ATWB-H 12x28	8585	3607
eco-ATWB-H 12x36	11036	3607
eco-ATWB-H 12x40	12256	3607
5.2m Wide Models	A	B
eco-ATWB-H 17x12	3651	5286
eco-ATWB-H 17x14	4261	5286
6.1m Wide Models	A	B
eco-ATWB-H 17x12	3651	6112
eco-ATWB-H 17x14	5486	6112
7.3m Wide Models	A	B
eco-ATWB-H 24x12	3651	7344
eco-ATWB-H 24x14	4261	7344
eco-ATWB-H 24x18	5486	7344
eco-ATWB-H 24x20	6096	7344

eco-Hybrid APPLICATIONS

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, 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 closed circuit coolers 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 closed circuit cooler discharge air not be directed or located close to or in the vicinity of building air intakes.

Piping

Cooler piping should be designed and installed in accordance with generally accepted engineering practices. The piping layout should be symmetrical on multiple unit systems, and sized for a reasonably low water velocity and pressure drop.

The standard closed circuit cooler is recommended only on a closed, pressurized system. The piping system should include an expansion tank to allow for fluid expansion and purging air from the system.

Note: Closed Circuit Coolers should never be used on an open type system. An open type system with a cooler may result in premature coil failure.

The piping system should be designed to permit complete drainage of the heat exchanger coil. This will require a vacuum breaker or air vent to be installed at the high point and a drain valve installed at the low point of the piping system. Both must be adequately sized.

All piping should be securely anchored by properly designed hangers and supports. No external loads should be placed upon the cooler connections, nor should any of the pipe supports be anchored to the cooler framework.

Recirculating Water Quality

Proper water treatment is an essential part of the maintenance required for evaporative cooling equipment. A well designed and consistently implemented water treatment program will help to ensure efficient system operation while maximizing the equipment's service life. A qualified water treatment company should design a site specific water treatment protocol based on equipment (including all metallurgies in the cooling system), location, makeup water quality, and usage.

Bleed off

Evaporative cooling equipment requires a bleed or blowdown line, located on the discharge side of the recirculating pump, to remove concentrated (cycled up) water from the system. EVAPCO recommends an automated conductivity controller to maximize

the water efficiency of your system. Based on recommendations from your water treatment company, the conductivity controller should open and close a motorized ball or solenoid valve to maintain the conductivity of the recirculating water. If a manual valve is used to control the rate of bleed it should be set to maintain the conductivity of the recirculating water during periods of peak load at the maximum level recommended by your water treatment company.

Water Treatment

The water treatment program prescribed for the given conditions must be compatible with the unit's materials of construction, including any galvanized components. The initial commissioning and passivation period is a critical time for maximizing the service life of galvanized equipment. Evapco recommends that the site specific water treatment protocol includes a passivation procedure which details water chemistry, any necessary chemical addition, and visual inspections during the first six (6) to twelve (12) weeks of operation. During this passivation period, recirculating water pH should be maintained above 7.0 and below 8.0 at all times. Batch feeding of chemicals is not recommended.

Control of Biological Contaminants

Evaporative cooling equipment should be inspected regularly to ensure good microbiological control. Inspections should include both monitoring of microbial populations via culturing techniques and visual inspections for evidence of biofouling.

Poor microbiological control can result in loss of heat transfer efficiency, increase corrosion potential, and increase the risk of pathogens such as those that cause Legionnaires' disease. Your site specific water treatment protocol should include procedures for routine operation, startup after a shut-down period, and system lay-up, if applicable. If excessive microbiological contamination is detected, a more aggressive mechanical cleaning and/or water treatment program should be undertaken.

Freeze Protection

If the units are installed in a cold climate and operated year-round, freeze protection must be provided for the heat exchanger coil in the unit as well as for the recirculating water system.

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 closed circuit cooler 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 or steam or hot water coils 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.

APPLICATIONS

eco-Hybrid

Heat Exchanger Coil

The simplest and most foolproof method of protecting the heat exchanger coil from freeze-up is to use a glycol solution. If this is not possible, an auxiliary heat load must be maintained on the coil at all times so that the water temperature does not drop below 50°F when the cooler is shut down. Also, a minimum recommended flow rate per unit must be maintained.

Minimum Flows	Standard Flow LPS	Series Flow LPS
2.5m Wide Models		
eco-ATWB-H 9x9 to 9x21	10.1	5.1
3m Wide Models		
eco-ATWB-H 10x12 to 10x18	11.9	6.0
eco-ATWB-H 10x24 to 10x36	23.8	11.9
3.6m Wide Models		
eco-ATWB-H 12x12 to 12x20	14.7	7.4
eco-ATWB-H 12x24 to 12x40	29.3	14.7
5.2m Wide Models		
eco-ATWB-H 17x12 to 17x14	20.2	10.1
6.1m Wide Models		
eco-ATWB-H 20x12 to 20x18	23.8	11.9
7.3m Wide Models		
eco-ATWB-H 24x12 to 24x20	29.3	14.7

Discharge Hoods with Positive Closure Dampers

When a closed circuit cooler is used in a water-to-air heat pump system or in certain process cooling applications, a method of reducing the heat loss during idle periods of wintertime operation may be required. For these cases, an optional discharge hood with positive closure dampers and damper actuator is available.

The discharge hood with dampers is designed to minimize the heat loss from convective airflow through an idle cooler. Further reductions in heat loss may be obtained with the addition of insulation to the hood and casing, minimizing conductive heat losses. Insulation may be factory installed on the hood and casing or field installed by an insulation contractor.

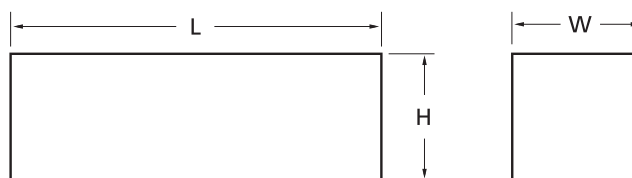
The discharge hood and dampers are constructed of hot-dip galvanized steel. Hoods are equipped with access panels to facilitate maintenance of the eliminators and water distribution system. The dampers, damper actuator and linkage are all factory assembled. Actuator controls and wiring are field supplied by others. Damper actuators require 120 volt power supply.

The system control sequence should allow for dampers to be fully open before the fans are running and closed when the fans are off; the damper actuator must be interlocked with the temperature control system for this purpose.

Discharge Hood Dimensions

Model	L	H*	W	Weight	Number of Hoods
eco-ATWB-H 9x9	2727	406	2578	445	1
eco-ATWB-H 9x12	3188	406	2578	515	1
eco-ATWB-H 9x14					
eco-ATWB-H 9x18	2731	406	2578	890	2
eco-ATWB-H 9x21	3188	406	2578	1035	2
eco-ATWB-H 17x12	3188	406	2578	960	2
eco-ATWB-H 17x14					
eco-ATWB-H 10x12	3648	356	3105	785	1
eco-ATWB-H 10x18					
eco-ATWB-H 10x24	3648	356	3105	1570	2
eco-ATWB-H 10x36					
eco-ATWB-H 20x12					
eco-ATWB-H 20x18					
eco-ATWB-H 12x12	3651	356	3607	815	1
eco-ATWB-H 12x14					
eco-ATWB-H 12x18					
eco-ATWB-H 12x20					
eco-ATWB-H 12x24	3651	356	3607	1635	2
eco-ATWB-H 12x28					
eco-ATWB-H 12x36					
eco-ATWB-H 12x40					
eco-ATWB-H 24x12	3651	356	3607	1635	2
eco-ATWB-H 24x14					
eco-ATWB-H 24x18					
eco-ATWB-H 24x20					

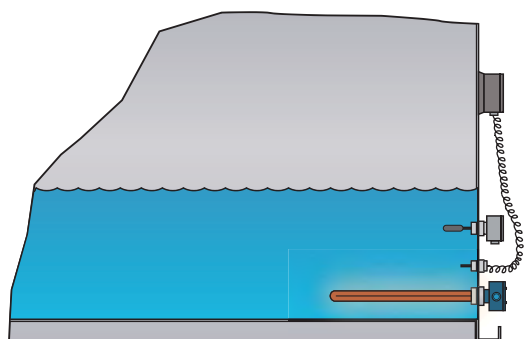
*Overall unit height will be height of the base unit plus the H dimension.



eco-Hybrid APPLICATIONS

Electric Basin Heaters

Electric immersion heaters are available factory-installed in the basin of the cooler. Standard Heaters are sized to maintain a 4.5°C pan water temperature with the fans and pumps off and an ambient air temperature of -18°C. The heater option includes a thermostat and low-water protection device to control the heater and to prevent it from energizing unless they are completely submerged. All components are in weather proof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.



eco-ATWB-H Heater Sizes *

Unit No.	-18°C kW	-29°C kW	-40°C kW
eco-ATWB-H 9x9	7	10	15
eco-ATWB-H 9x12	(2) 4	(2) 7	(2) 9
eco-ATWB-H 9x14	(2) 5	(2) 7	(2) 10
eco-ATWB-H 9x18	(2) 6	(2) 9	(2) 12
eco-ATWB-H 9x21	(2) 7	(2) 12	(2) 15
eco-ATWB-H 17x12	(4) 4	(4) 7	(4) 9
eco-ATWB-H 17x14	(4) 5	(4) 7	(4) 10
eco-ATWB-H 10x12	(2) 5	(2) 8	(2) 10
eco-ATWB-H 10x18	(2) 7	(2) 12	(2) 15
eco-ATWB-H 10x24	(4) 5	(4) 8	(4) 10
eco-ATWB-H 10x36	(4) 7	(4) 12	(4) 15
eco-ATWB-H 20x12	(4) 5	(4) 8	(4) 10
eco-ATWB-H 20x18	(4) 7	(4) 12	(4) 15
eco-ATWB-H 12x12	(2) 6	(2) 9	(2) 12
eco-ATWB-H 12x14	(2) 7	(2) 10	(2) 15
eco-ATWB-H 12x18	(2) 9	(2) 15	(2) 18
eco-ATWB-H 12x20	(2) 10	(2) 15	(3) 15
eco-ATWB-H 12x24	(4) 6	(4) 9	(4) 12
eco-ATWB-H 12x28	(4) 7	(4) 10	(4) 15
eco-ATWB-H 12x36	(4) 9	(4) 15	(4) 18
eco-ATWB-H 12x40	(4) 10	(4) 15	(6) 15
eco-ATWB-H 24x12	(4) 6	(4) 9	(4) 12
eco-ATWB-H 24x14	(4) 7	(4) 10	(4) 15
eco-ATWB-H 24x18	(4) 9	(4) 15	(4) 18
eco-ATWB-H 24x20	(4) 10	(4) 15	(4) 20

*Electric heater selection based on ambient air temperature shown.

SPECIFICATIONS

eco-ATWB-H

FACTORY FABRICATED INDUCED DRAFT eco-ATWB-H CLOSED CIRCUIT COOLER

General

Furnish and install factory assembled closed circuit cooler 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 closed circuit cooler shall be **CTI certified** and have the capacity to cool ____ l/s water / glycol from ____ °C to ____ °C with a ____ °C entering wet bulb temperature and a dry bulb switchover temperature of ____ °C.

Optional: (If dry operating conditions are different than the wet operating conditions)

Each unit shall also cool ____ l/s of ____ from ____ °C to ____ °C with a ____ °C entering dry bulb temperature.

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 three parts: the bottom basin - louver section, the coil section and the fan section.
The unit sections shall be joined together with elastic sealer and bolted together with corrosion resistant fasteners.

Approved manufacturer **Evapco** – model **eco-ATWB-H** ____

Thermal Performance – Performance Warranty

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

Applicable Standards

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

Submittals

- 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 closed circuit cooler(s).
- Maintenance data for the closed circuit cooler(s).
- 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 one (1) year from start-up, not to exceed eighteen (18) months from the date of shipment.

PRODUCT

Construction – Corrosion Resistance

- The structure and all steel elements of the pan and casing shall be constructed of G-235 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 304 Stainless Steel (OR 316 SST)

Construction – Corrosion Resistance

- The structure and all steel elements of the Basin and Louver section up to the water level shall be made of 304/316 SST.
- Alternatives with hot dip galvanized steel and epoxy coatings in lieu of the 304/316 SST are not considered to be equal and are not accepted.
- All other steel components of the casing shall be constructed of G-235 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 304 SST.
- 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 304

STAINLESS STEEL [except heat exchange coils(s)] (OR 316 SST)

Construction – Corrosion Resistance

- The structure and all steel elements shall be made of 304/316 SST.
- Alternatives with hot dip galvanized steel and epoxy coatings in lieu of the 304/316 SST are not considered to be equal and are not accepted.
- The strainer shall be made of 304 SST.
- Casing materials shall be of non flammable construction only.

Construction – Seismic and wind load resistance

- The structural design must withstand 1g seismic or 6.94 kPa
- Closed Circuit Coolers must be independently certified according to IBC

Basin Section

Closed Circuit Cooler Basin

- Standard basin accessories include: overflow, drain, strainer and brass make up valve with plastic float ball.
- The strainer shall be made of 304 SST.
- 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.

eco-ATWB-H

SPECIFICATIONS

Water Circulation Pump(s)

- 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.

Electric Heaters

- a) The closed circuit cooler cold water basin shall be provided with an electric heater package to prevent freezing of the water in the cold water basin, while 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.

Five Probe Electric Water Level Control Package

- a) The closed circuit cooler 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 35 kPa and 700 kPa.

Heat Transfer Coil Section

Evaporative Coil (Wet Coil)

- a) The closed circuit cooler shall use heat exchange coils of an elliptical tube design to obtain lower air flow resistance and allow higher water loadings around the tubes. Each row of the heat exchanger coil shall be provided with elliptical 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 tested to 2.69MPa air pressure under water.
- e) Coil shall meet strength requirements of ASME/ANSI B31.5.
- 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.
- h) The pressure drop of the process fluid through the coil shall not exceed ____kPa.

Sensible Heat Transfer Coil (Dry Coil)

- a) The sensible heat transfer coil is installed in the air discharge of the closed circuit cooler and will be piped in series with the wet coil.
- b) The sensible heat transfer coil shall be constructed of copper tubes and tubular copper headers with carbon steel coil connections for easy field piping.
- c) To maximize heat transfer, tubes shall be arranged in a staggered design and be equipped with fins.
- d) The fins should have fully drawn collars to maintain con-

sistent fin spacing and continuous surface contact over the entire tube.

- e) The fins should be made of Aluminum Magnesium of at least 0.7% to have good corrosion resistance and the distance between the fins should be 2.5 mm to avoid clogging.
- f) The coils should be placed in a heavy-duty galvanized G-235 frame. The frame should have full collars to support the coil correctly and avoid damaging the tubes.
- g) The dry coil shall be pneumatically tested under water at 1.6MPa.

Fan Section

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) All spray branches shall have threaded end caps and are easily removable for cleaning purposes.
- d) The water shall be distributed over the coil by precision molded spray nozzles with large minimum orifice openings and integral sludge ring to eliminate clogging.
- e) 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.

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 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.

Access Door

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

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.

SPECIFICATIONS

eco-ATWB-H

- 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 and lubrication fittings for maintenance.
- b) The bearings shall be rated for an L-10 life of 75000 to 135000 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 (2.5 and 5.2 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 1.0 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, 3.6, 6.1 and 7.3 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 1.0 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.
- 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.

Control panel

The unit(s) shall be provided with a control panel which operates by measuring and analyzing water inlet and outlet temperature simultaneous with ambient dry bulb monitoring in order to minimize the evaporative cooling mode of operation and to

save system water. The control panel can also be programmed to operate with a water savings or energy savings priority.

The system will include:

- A MODBUS 485* Port for the Building Automation System
- Programmable Logic Control
- Fluid Inlet Temperature Sensor(s)
- Fluid Outlet Temperature Sensor(s)
- Basin Temperature Sensor(s)
- Ambient Dry Bulb Sensor(s)
- Variable frequency drive(s) For Fan Motor(s)
- Recirculating Pump Motor Starter(s).
- Main Disconnect
- Manual Bypass
- DC power supply for the PLC and instrumentation.
- Heater Package Controls w/Contactor with Overload Protection
- Control Power Transformer
- Electronic Water Level Control Package
- Preprogrammed software to ensure optimized water and energy savings priority
- Ethernet Connection between VFD's, PMC and Operator Interface
- Relays for all PLC Digital Outputs
- Fan Motor: Space Heater Control
- Manual Operation of Pump(s) and Fan(s)
- Visual Status Display of All Components.

Sound Levels

Sound Level

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

Center Freq.	63	125	250	500	1000	2000	4000	8000
	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz
dB(A)								

ACCESSORIES (Optional)

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.

Vertical Access Ladders

- a) A vertical ladder with safety cage which provide easy access to the water distribution system and drive components shall be provided with the closed circuit cooler(s).
- b) The ladder will be completed with a safety cage for safety purposes.
- c) Ladder safety cage shall meet OSHA 29 CFR 1910.27 requirements.

Service Platforms

- a) The closed circuit cooler shall be supplied with a double external service platform.
- b) The external service platforms will be self supporting and include access ladders to the platforms.
- c) The external service platforms will be installed in front of the access doors.
- d) The platform shall meet OSHA 29 CFR 1910.27 requirements.

Motor Davit

- a) The closed circuit cooler shall be supplied with a motor davit to facilitate the removal of fan motor(s) and fan(s).
- b) The davit is constructed of aluminum, the bracket is constructed of galvanized steel and is mounted on the side of the unit.
- c) The fan motor davit ships loose with the unit and is installed in the field.

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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.

APPLICATIONS

eco-Hybrid

NOTES





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