



LSWA-H/LRW-H

Hybrid Closed Circuit Coolers



LSWA-H



LRW-H

Featuring EVAPCO's **NEW** ARID *Fin-Pak* Dry Cooling Coil

Low Sound, Forced Draft Closed Circuit Coolers Featuring Water Saving and Plume Reduction Hybrid technology

ENVIRONMENTAL SOLUTIONS... CREATING A BETTER WORLD!

CERTIFIED EN ISO 9001





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

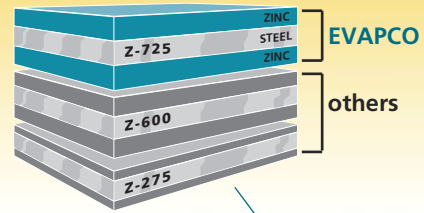
With an ongoing commitment to Research & Development programs, EVAPCO provides the most advanced products in the industry – **Technology for the Future, Available Today!**



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

Z-725 Heavy Mill-Dip Galvanized Steel Construction

(Stainless steel available as an affordable option)



Drift Eliminators Located in Casing

- Drift eliminators integrate with coil casing section for easy mounting of ductwork, discharge hood and attenuation.

LSWA-H



Easy Field Assembly

- Ensures easy assembly and fewer fasteners.
- Incorporates selfguiding channels to guide the coil casing section into position improving the quality of the field seam.

Exclusive Thermal-Pak® Coil

- Providing Maximum Efficiency

Totally Enclosed Pump Motors

- Helps assure long, trouble-free operation



Small footprint



Clean Pan Design

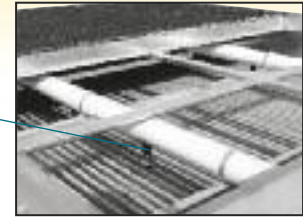
- Sloped design allows water to drain completely from cold water basin.
- Easier Removal of dirt and debris.

The LSWA-H and LRW-H units are a result of EVAPCO's extensive experience in forced draft centrifugal fan designs. Both models are designed for easy maintenance and long, trouble free operation. The LSWA-H are optimized for smaller footprint for a given capacity, while LRW-H units are optimized for reduced height. All features shown are available on all models.



ARID Fin-Pak Dry Cooling

- Copper tube construction with aluminum magnesium fins (tubes available in Stainless steel 304L/316L as an option)
- Saves water and water treatment chemicals
- Eliminates visible plume during dry operation. Reduces or eliminates visible plume during wet operation



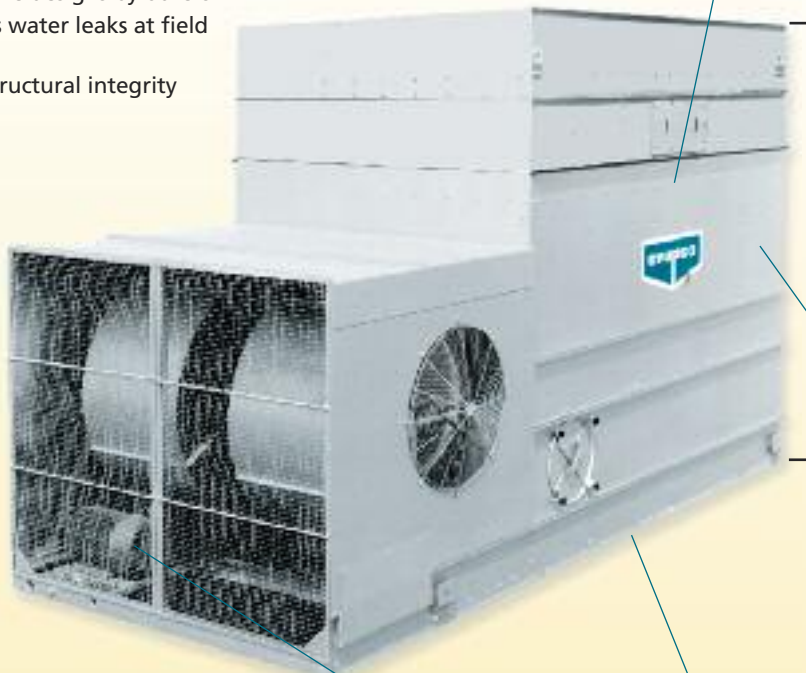
Zero Maintenance PVC Spray Distribution Header with ZM® II Nozzles

- Nozzles are threaded into header at proper orientation
- Fixed position nozzles require zero maintenance
- Large orifice nozzles prevent clogging

Double-Brake Flange Joints

- Stronger than single-brake designs by others
- Minimizes water leaks at field joints
- Greater structural integrity

LRW-H

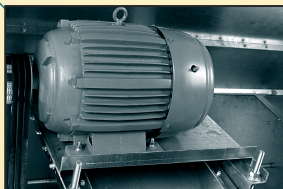


Low Height



Efficient Drift Eliminators

- Advanced design limits maximum drift rate to 0.001% of circulated spray water rate
- Corrosion resistant PVC for long life



Totally Enclosed Fan Motors

- Assures long life
- All normal maintenance can be performed quickly from outside the unit
- If required, motor can be easily removed
- Motors are now located outboard on multi-motor units for even easier drive system access



Standard Stainless Steel Cold Water Basin

- Eliminates the need for unreliable epoxy coatings

Easy to Service Motor & Drive System

- Belt tensioning and bearing lubrication can be performed from outside the unit
- Locking mechanism can also be used as a wrench to adjust the belts (LRW-H only)
- Motor is fully accessible by removing one inlet screen
- Split fan housings allow removal of all mechanical equipment through the end of the unit (LRW-H only)

LSWA-H & LRW-H

DESIGN FEATURES

Application Versatility

Centrifugal fan units are recommended for a wide range of installations. They are excellent for larger installations where very quiet operation is a must, such as residential neighborhoods. In addition, centrifugal fan units can operate against the static pressure loss of ductwork and are ideal for indoor installations.

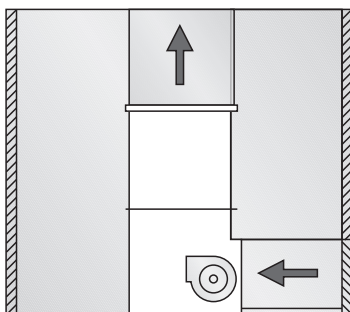
Very Quiet Operation

Centrifugal fan units provide an inherently low noise characteristic which makes this design preferred for most installations that require low sound levels. The sound they produce is predominantly in the high frequencies which is easily attenuated by building walls, windows, and natural barriers. Additionally, since the sound from the fans is directional, single sided air entry models can be turned away from critical areas avoiding a sound problem. When even quieter operation is necessary, centrifugal fan models can be equipped with optional sound attenuation packages.

See the "sound" section for more information.

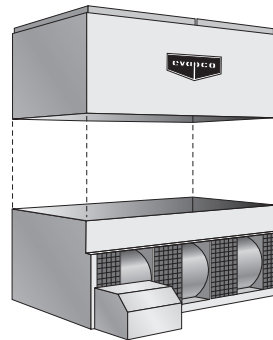
Indoor Installation

Centrifugal cooling towers can be installed indoors when it is desirable to hide the unit or when it is the only space available. In addition to being quiet, they can handle the external static pressure of ductwork by using the next larger size fan motor. Drawings are available showing how to make ductwork connections.



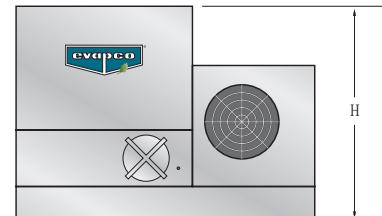
Low Installed Costs

The forced draft closed circuit cooler is designed using a modular concept to minimize rigging, piping and support costs. All major components are factory assembled into complete sections. Fans, shafts, bearings and drives are installed and aligned at the factory as an integral part of the pan section to eliminate the necessity of field rigging these key parts.



Reduced Height and Improved Maintenance Accessibility

LRW-H units have been designed to satisfy installation requirements where height limits must be observed.



The lower profile design of the unit does not, however, sacrifice maintenance accessibility for reduced height. LSWA-H units are designed to install high capacities where available footprint is limited.

Its unique casing design allows the water distribution system, cold water basin, fan section and other unit components to be easily maintained. Small, light weight sections of the drift eliminators can be easily removed to access the water distribution system. Large circular access doors are located on both sides of the cold water basin to allow adjustment of the float assembly, removal of the stainless steel strainers and cleaning of the basin. The fan motor and drive system are located at one end of the unit and are completely accessible by removing the inlet screens. Although, routine maintenance can be performed from the exterior of the unit without removing the inlet screens.

DESIGN FEATURES

LSWA-H & LRW-H

Blow-Thru Construction

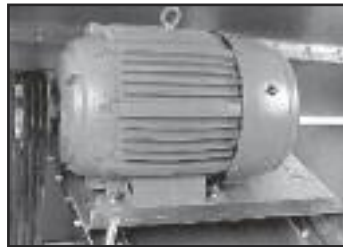
All moving parts of forced draft towers, fans, motors, bearing, drives, and belts, are in the dry entering air stream. This design feature reduces corrosion and maintenance problems in these vital areas.

Fan Motors

All models utilize heavy duty totally enclosed fan motors (T.E.F.C.) designed specifically for cooling tower applications. In addition, EVAPCO offers many optional motors to meet your specific needs.

Fan Motor Location

EVAPCO mounts the fan motor in a convenient open area to make it easy to adjust belt tension, access the motor, electrically connect it, or change the motor if necessary. The fan motor and drive are under a protective cover for safety purposes and to protect them from the elements.



Large Series Motor Mount

Capacity Control

All models come standard with efficient fan motors that can be used with variable frequency drive (VFD) systems for precise capacity control. VFD systems can control the speed of a fan motor by modulating the frequency of the electrical motor input signal. When connected to a building automation system a VFD can receive signals varying fan speeds to meet demand loads. This popular method of capacity control can yield significant energy savings.

Evapco offers two-speed fan motors as an option for alternative capacity control. In periods of lightened loads or reduced wet bulb temperatures the fans can operate at low speed providing about 60% of full speed capacity yet consuming only about 15% of full speed power. These motors do not require the use of VFD systems however they can only operate at two speeds: full or low.

Centrifugal Fan Assembly

Fans on the LSWA-H & LRW-H models are of the forward curved centrifugal type with hot-dip galvanized steel construction. All fans are statically and dynamically balanced and mounted in a hot-dip galvanized steel housing designed and manufactured by EVAPCO.



Centrifugal Wheel

Pressurized Water Distribution System

The water distribution system is made of schedule 40 PVC pipe and ABS plastic water diffusers for corrosion protection in this key area. The piping is easily removable for cleaning. The water diffusers have a large orifice and are practically impossible to clog. They also have an anti-sludge ring extending into the headers to prevent sediment from building up in the diffuser opening.

All units have as per standard the ZM II™ Nozzle to ensure that every square meter of heat transfer surface receives complete and even water coverage, resulting in maximum thermal performance.



ZM II™ Nozzle

LSWA-H & LRW-H

DESIGN FEATURES

Basin Access

The basin/fan section of a centrifugal fan unit is designed for accessibility and ease of maintenance.

Large circular access doors are provided to allow entry into the basin. All float valve and strainer assemblies are located near the door for easy adjustment and cleaning. The sump is designed to catch the dirt accumulated. This can be flushed out simply with a hose. The stainless steel strainers may be easily removed for periodic cleaning.

Stainless Steel Strainers

One other component of evaporative cooling equipment which is subject to excessive wear is the suction strainer. **EVAPCO provides a Type 304 stainless steel strainer on all units as standard** (except remote sump applications). Strainers are positioned around a large anti-vortex hood in easily handled sections.

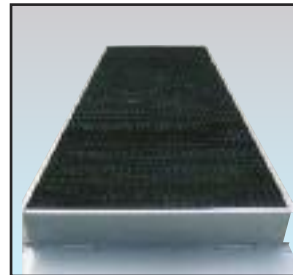


Strainer

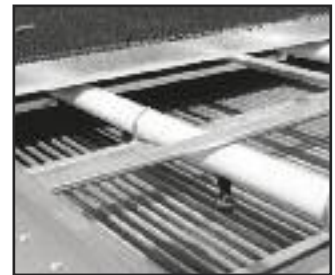
Efficient Drift Eliminators*

An extremely efficient drift eliminator system is standard on the LSWA & LRW-H Cooling Towers. The system removes entrained water droplets from the air stream to limit the drift rate to less than 0.001% of the recirculating water rate. With a low drift rate, the Closed Circuit Cooler saves valuable water and water treatment chemicals. The unit can be located in areas where minimum water carryover is critical, such as parking lots.

The drift eliminators are constructed of an inert polyvinyl chloride (PVC) plastic material which effectively eliminates corrosion of these vital components. They are assembled in sections to facilitate easy removal for inspection of the water distribution system. EVAPCO can provide the Eurovent drift rate certificate in accordance with OM-14-2009.



Eliminator



Drift Eliminator Removed for Coil Inspection

*U.S. Patent No. 4,500,330

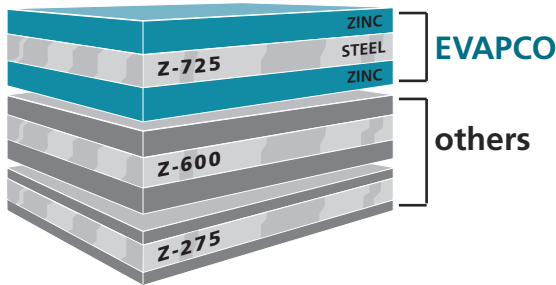
DESIGN FEATURES

LSWA-H & LRW-H

EVAPCOAT:

Z-725 Hot-Dip Galvanized Steel Construction

The Z-725 Mill Hot-Dip Galvanized Steel Construction is the heaviest level of galvanizing available for manufacturing evaporative cooling towers and has more zinc protection than competitive designs using Z-275 and Z-600 steel.



EVAPCO has been a leader in the industry in developing heavier galvanizing, and was the first to standardize on Z-725 mill hot-dip galvanized steel. Z-725 designation means there is a minimum of 725 g/m² total zinc present on the steel.

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

The EVAPCOAT Corrosion Protection System is the heaviest galvanization available for extended corrosion protection eliminating the need for costly, unreliable epoxy paint finishes.

Stainless Steel Material Options

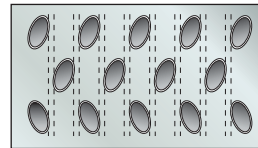
The EVAPCO Corrosion Protection System is satisfactory for most applications. If additional corrosion protection is required the following stainless steel options are available (AISI 304L and 316L). Please contact your local EVAPCO representative for pricing.

- Stainless Steel Cold Water Basins
- Stainless Steel Water Touch Basin
- Stainless Steel Water Touch Units
- All Stainless Steel Units

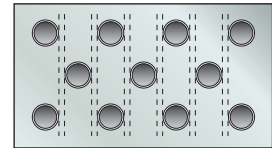
Patented Thermal-Pak II® Coil Design

Only EVAPCO closed circuit coolers offer the patented* Thermal-Pak II® Coil which assures greater operating efficiency in your closed circuit coolers. Its unique elliptical tube design allows for closer tube spacing resulting in more surface area per plan area than traditional round tube designs. The Thermal-Pak II® Coil design, with its new tube circuiting and orientation pattern, has lower resistance to air flow and permits greater water loading, making the Thermal-Pak II® Coil the most efficient design available.

*U.S. Patent No. 4755331



Thermal-Pak® II Coil by EVAPCO



Round Tube Coil by Others

ARID Fin-Pak dry cooling coil

The ARID Fin-Pak Dry Cooling Coil is installed in the air discharge of the closed circuit cooler and it should be piped in series with the wet coil. The ARID Fin-Pak Dry Cooling Coil is constructed of copper tubes with tubular copper headers. 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 made of Aluminum/Magnesium alloy to have a good corrosion resistance. The coils are placed in a heavy-duty galvanized Z-725 frame. The frame has full collars to support the coil correctly and avoid damaging the tubes. The dry coils are pneumatically tested under water at 16 barg. The tubes and frame are available in stainless steel 304L/316L as an option.



LSWA-H & LRW-H

OPTIONAL EQUIPMENT

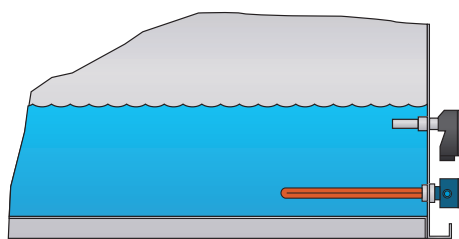
Pan Freeze Protection

Remote Sump

Whenever a closed circuit cooler is idle during sub-freezing weather, the water in the sump must be protected from freezing and damaging the pan. The simplest and most reliable method of accomplishing this is with a remote sump tank located in a heated space in the building under the tower. With this system, the water in the tower drains to the indoor tank whenever the pump is shut-off. When a tower is ordered for remote sump operation, the standard float valve and strainer are omitted, and the unit is provided with an oversized water outlet connection. When a remote sump is not possible, a supplementary means of heating the pan water must be provided.

Electric Heaters

Electric immersion heaters are available factory installed in the basin of the tower. They are sized to maintain a +5°C pan water temperature at -18, -28 and -40°C ambient with the fans off. They are furnished with a combination thermostat/low water protection device to cycle the heater on when required and to prevent the heater elements from energizing unless they are completely submerged. All components are enclosed in rugged, weather proof enclosures for outdoor use. Heater control packages are available as an option. Contact your EVAPCO representative for further details.



Basin Heater

Electric Water Level Control

EVAPCO LSWA-H & LRW-H closed circuit coolers are available with an optional electric water level control system in place of the standard mechanical makeup valve and float assembly. This package provides accurate control of the pan water level and does not require field adjustment, even under widely variable operating conditions.

The control was designed by EVAPCO and consists of multiple heavy duty stainless steel electrodes. These electrodes are mounted external to the unit in a vertical stand pipe. For winter operation, the stand pipe must be wrapped with electric heating cable and insulated to protect it from freezing. The weather protected slow closing solenoid valve for the makeup water connection is factory supplied and is ready for piping to a water supply with a pressure between 140 kPa (minimum) and 340 kPa (maximum).

Vibration Isolators

The fans on EVAPCO closed circuit coolers are balanced and run virtually vibration free. In addition, the rotating mass is very small in relation to the total mass of the cooling tower, further reducing the possibility of objectionable vibration being transmitted to the building structure. As a result, vibration isolation is generally not required.

In those cases where it is determined that vibration isolation is necessary, spring type vibration isolator rails can be furnished. The rails are constructed of heavy gauge Z-725 hot-dip galvanized steel for superior corrosion resistance. Rails are designed to be mounted between the cooling tower and the supporting steel framework. They are 90% efficient and have approximately 25 mm static deflection. Rails are designed for wind loading up to 80 km/h. It is important to note that vibration isolation must be installed continuously along the full length of the cooling tower on both sides of the unit. Point isolators may be used between the supporting steel and the building framework, but not between the unit and the supporting steel.

IBC Certification cannot be given when vibration isolators are installed.

Other Options Available:

- Capacity Dampers and Controls
- Pony Motors
- Tapered Discharge Hoods
- Solid Bottom Panels
- Fill Access Door

APPLICATIONS

LSWA-H & LRW-H

EVAPCO LSWA-H and LRW-H closed circuit coolers have heavy-duty construction and are designed for long, trouble-free operation. However, proper equipment selection, installation and maintenance are necessary to insure good unit performance. Some of the major considerations in the application of a cooling tower are presented below. For additional information, contact the factory.

Air Circulation

In reviewing the system design and unit location, it is important that enough fresh air is provided to enable proper unit performance. The best location is on an unobstructed roof top or on ground level away from walls and other barriers. Care must be taken when locating towers in wells or enclosures or next to high walls. The potential for recirculation of the hot, moist discharge air back into the fan intake exists. Recirculation raises the wet bulb temperature of the entering air causing the leaving water temperature to rise above design. For these cases, a discharge hood or ductwork should be provided to raise the overall unit height even with the adjacent wall, thereby reducing the chance of recirculation. For additional information see the EVAPCO Equipment Layout Manual. Engineering assistance is also available from the factory to identify potential recirculation problems and recommend solutions.

Piping

Closed circuit cooler piping should be designed and installed in accordance with generally accepted engineering practices. All piping should be anchored by properly designed hangers and supports with allowance made for possible expansion and contraction. No external loads should be placed upon cooling tower connections, nor should any of the pipe supports be anchored to the unit framework.

Maintaining the Recirculated Water System

The cooling in a closed circuit cooler is accomplished by the evaporation of a portion of the recirculated spray water. As this water evaporates, it leaves behind all of its mineral content and impurities. Therefore, it is important to bleed-off an amount of water to prevent the buildup of impurities. If this is not done, the mineral content and/or the corrosive nature of the water will continue to increase. This will ultimately result in heavy scaling or a corrosive condition.

Water Treatment

In some cases the make-up water will be so high in mineral content that a normal bleed-off will not prevent scaling. In this case, water treatment will be required. If chemical water treatment is utilized, contact reputable water treatment company familiar with the local water conditions. Any chemical water treatment used must be compatible with the stainless or galvanized construction of the unit. The pH of the water should be maintained between 7 and 8.8.

In order to prevent "white rust", the galvanized steel in the unit may require routine passivation of the steel when operating in higher pH levels. Batch chemical feeding is not recommended because it does not afford the proper degree of control.

If acid cleaning is required, extreme caution must be exercised and only inhibited acids compatible with galvanized steel construction should be used.

Control of Biological Contamination

Water quality should be checked regularly for biological contamination. If biological contamination is detected, a more aggressive water treatment and mechanical cleaning program should be undertaken. The water treatment program should be performed by a qualified water treatment company and in accordance with relevant local legislation. It is important that all internal surfaces be kept clean of accumulated dirt and sludge. In addition, the drift eliminators should be maintained in good operating condition.

Note: The location of the cooling tower must be considered during the equipment layout stages of a project.

It is important to prevent the discharge air (potential of biological contamination) from being introduced into the fresh air intakes of the building.

LSWA-H & LRW-H

Notes:

A large, empty rectangular box with a thin blue border, intended for handwritten notes.

Principle of Operation

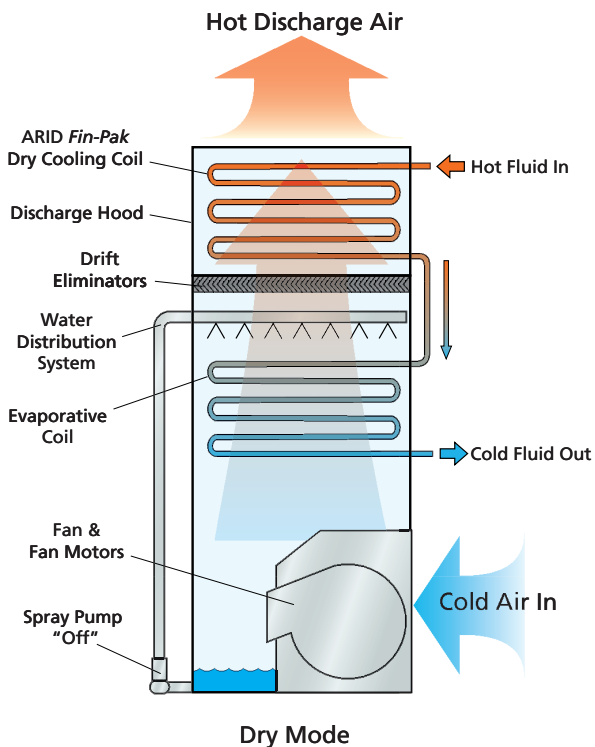
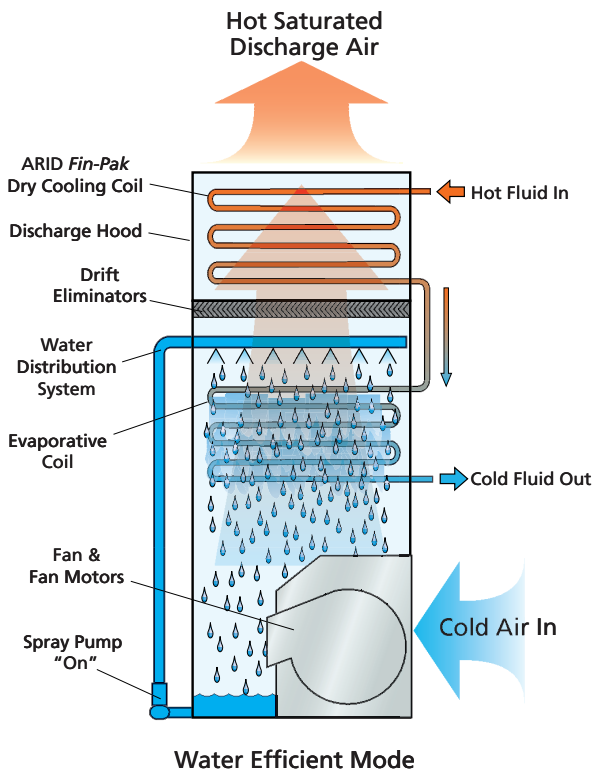


The LSWA-H and LRW-H
Closed Circuit Coolers
have been designed to
save water
with improved
dry operation
and / or reduced
or completely
eliminated plume.



LSWA-H & LRW-H

PRINCIPLE OF OPERATION



Principle of Operation

Water Efficient Mode

(Evaporative and Sensible Heat Transfer)

The joint wet and dry operation mode provides water savings as well as plume reduction. In this joint mode of operation, the fan is on and the process fluid enters the dry coils through the top coil connections in the discharge hood (Fan on, Spray Pump on). The Dry Coil rejects a portion of the heat load to the atmosphere through the tube and fin walls to the air passing over the coils using sensible heat transfer. The spray pump is energized where heat from the process fluid is transferred through the coil tubes to the water cascading downward over the Evaporative Coil. This mode of operation minimizes the amount of water used while maintaining the cooling capacity required. Plume reduction can also be achieved in the mode as the hot saturated discharge air is heated and dried as it passes over the Dry Coil located in the discharge hood.

Dry Mode

(Sensible Heat Transfer)

In the dry mode, the recirculating pump is de-energized (Fan on, Pump off). The process fluid enters the dry coils through the top coil connections in the discharge hood with the Fan on. Heat from the process fluid is dissipated to the atmosphere by sensible heat transfer through the tube walls to the air passing over the Evaporative and Dry Coils. The process fluid then returns to the heat source via the bottom coil connection. This mode of operation eliminates water consumption as well as plume when the dry bulb temperature is favorable.

OPERATION



Ultra Quiet Closed Circuit Coolers

The LSWA-H and LRW-H Closed Circuit Coolers are now available with sound attenuators to reduce the overall sound generated from the side or top of the Closed Circuit Cooler. Each option provides various levels of sound reduction and can be used in combination to provide the lowest sound level.



LSWA-H & LRW-H

SOUND ATTENUATION

Sound Attenuation Packages

The centrifugal fan design of the LSWA-H and LRW-H models operate at lower sound levels which make these units preferable for installations where noise is a concern. For noise-sensitive applications, the LSWA-H and LRW-H centrifugal fan models may be supplied with various stages of intake and/or discharge attenuation packages which greatly reduce sound levels.

Consult the factory for certified sound data for each sound attenuation option.

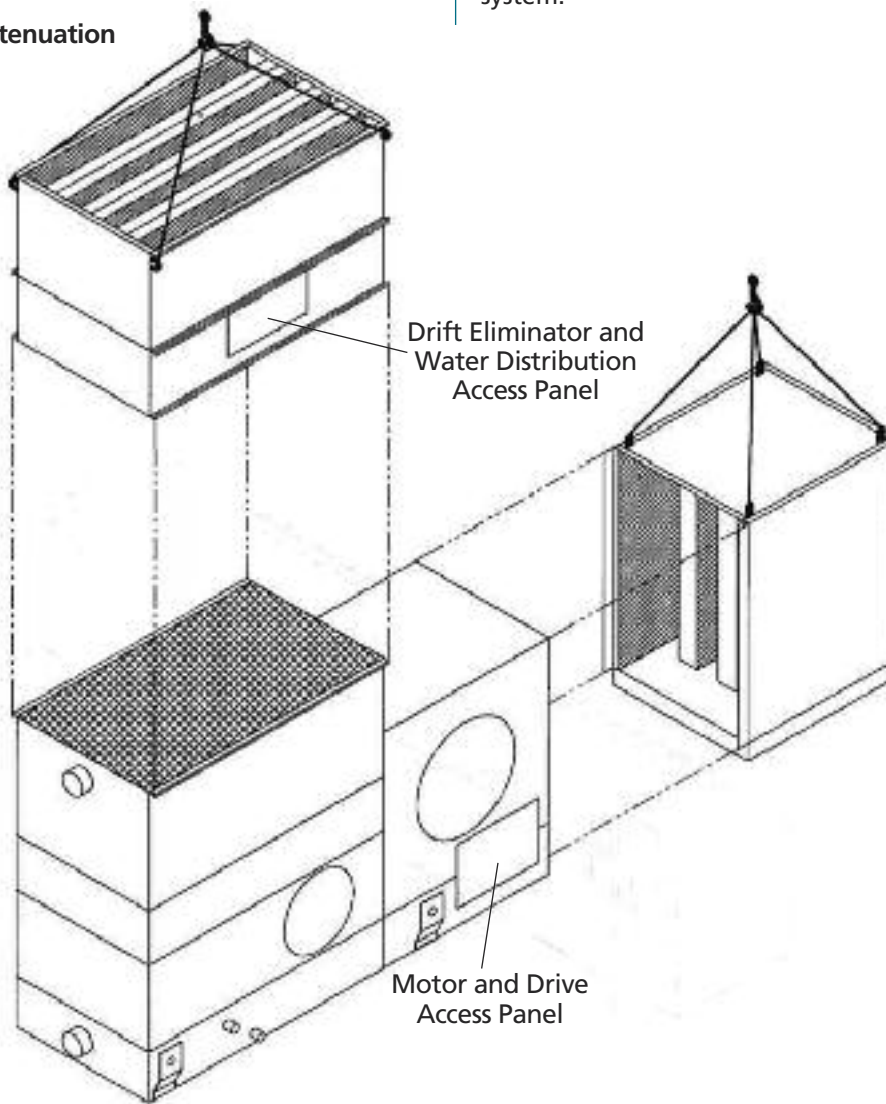
Fan End Inlet Attenuation

Reduces sound radiated through the end air intakes. It consists of baffled panels that change the path of the air entry and capture the radiated noise thus reducing the overall sound levels generated. In addition, the external belt adjustment mechanism is extended through the inlet attenuator to allow for easy adjustment without having to enter the unit. Solid bottom panels are included with this option to force the inlet air through the attenuator.

Discharge Attenuation

The discharge attenuation hood features a straight-sided design with insulated baffles to reduce the overall sound levels of the discharge air. The discharge attenuation incorporates a large access panel to allow entry to the drift eliminators and water distribution system.

Discharge Attenuation



Fan End Inlet Attenuation

DISCHARGE & INTAKE ATTENUATION DIMENSIONS

LSWA-H & LRW-H

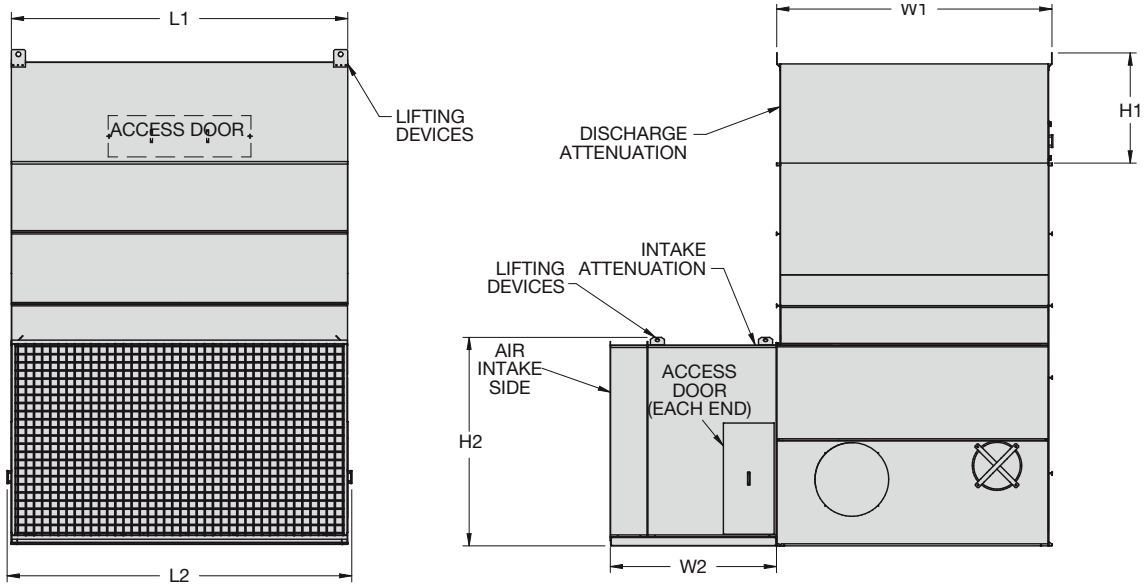
LSWA-H Discharge Attenuation Dimensions*

| Model No. | H1 (mm) | L1 (mm) | W1 (mm) | Weight per Hood (kg) | Number of Attenuators |
|--------------------|---------|---------|---------|----------------------|-----------------------|
| 4-2G6 to 4-5J6 | 1190 | 1830 | 1160 | 195 | 1 |
| 4-3H9 to 4-5K9 | 1190 | 2730 | 1160 | 259 | 1 |
| 4-3I12 to 4-5L12 | 1190 | 3640 | 1160 | 340 | 1 |
| 4-3J18 to 4-5N18 | 1190 | 5490 | 1160 | 467 | 1 |
| 5-3J12 to 5-7N12 | 1190 | 3640 | 1570 | 404 | 1 |
| 5-3K18 to 5-7O18 | 1190 | 5490 | 1570 | 553 | 1 |
| 8P-3L12 to 8P-7P12 | 1810 | 3640 | 2420 | 544 | 1 |
| 8P-3N18 to 8P-7Q18 | 1810 | 5490 | 2420 | 735 | 1 |
| 8P-3L24 to 8P-7P24 | 1810 | 3640 | 2420 | 544 | 2 |
| 8P-3N36 to 8P-7Q36 | 1810 | 5490 | 2420 | 735 | 2 |
| 10-3N12 to 10-7Q12 | 1810 | 3640 | 3020 | 644 | 1 |
| 10-3L18 to 10-7O18 | 1810 | 5490 | 3020 | 870 | 1 |
| 10-3N24 to 10-7Q24 | 1810 | 3640 | 3020 | 644 | 2 |
| 10-3L36 to 107O36 | 1810 | 5490 | 3020 | 870 | 2 |

LSWA-H Intake Attenuation Dimensions*

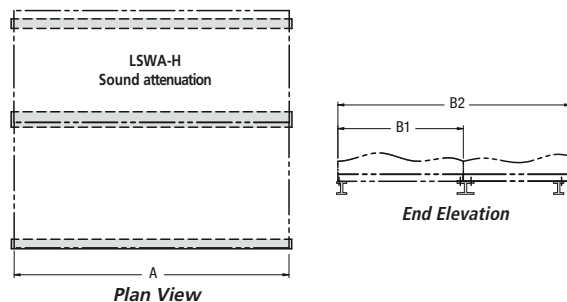
| Model No. | H2 (mm) | L2 (mm) | W2 (mm) | Weight per Hood (kg) | Number of Attenuators |
|--------------------|---------|---------|---------|----------------------|-----------------------|
| 4-2G6 to 4-5J6 | 1010 | 1830 | 1810 | 435 | 1 |
| 4-3H9 to 4-5K9 | 1010 | 2720 | 1810 | 594 | 1 |
| 4-3I12 to 4-5L12 | 1010 | 3640 | 1810 | 753 | 1 |
| 4-3J18 to 4-5N18 | 1010 | 5490 | 1810 | 1107 | 1 |
| 5-3J12 to 5-7N12 | 1170 | 3640 | 1810 | 789 | 1 |
| 5-3K18 to 5-7O18 | 1170 | 5490 | 1810 | 1148 | 1 |
| 8P-3L12 to 8P-7P12 | 2070 | 3640 | 1810 | 1139 | 1 |
| 8P-3N18 to 8P-7Q18 | 2070 | 5490 | 1810 | 1669 | 1 |
| 8P-3L24 to 8P-7P24 | 2070 | 3640 | 1810 | 1139 | 2 |
| 8P-3N36 to 8P-7Q36 | 2070 | 5490 | 1810 | 1669 | 2 |
| 10-3N12 to 10-7Q12 | 2260 | 3640 | 1810 | 1066 | 1 |
| 10-3L18 to 10-7O18 | 2260 | 5490 | 1810 | 1769 | 1 |
| 10-3N24 to 10-7Q24 | 2260 | 3640 | 1810 | 1066 | 2 |
| 10-3L36 to 107O36 | 2260 | 5490 | 1810 | 1769 | 2 |

* Attenuation dimensions may vary slightly from catalog. See Factory certified prints for exact dimensions.



LSWA-H Attenuation

Note: Intake sound attenuation must be fully supported. If the recommended steel support is being used a third "I" beam is required for the intake attenuation.



SOUND

LSWA-H & LRW-H

DISCHARGE & INTAKE ATTENUATION DIMENSIONS

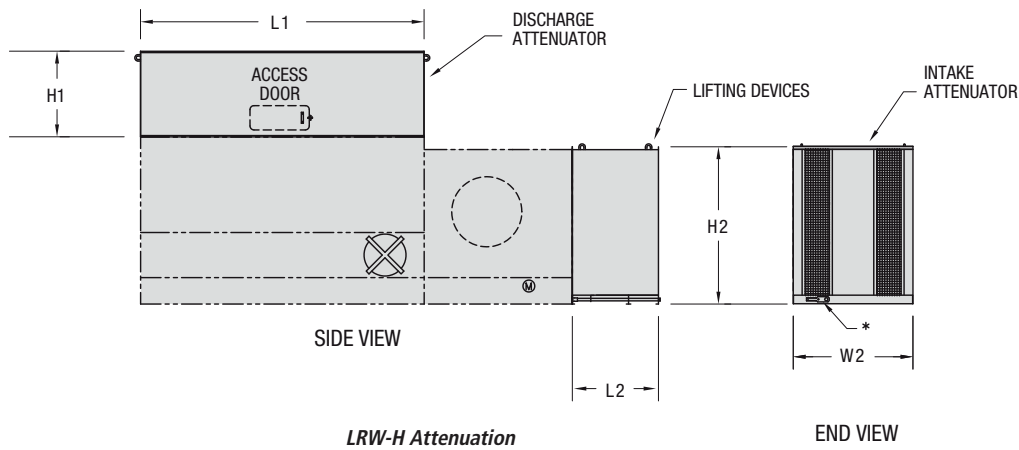
LRW-H Discharge Attenuation Dimensions*

| Model No. | H1 (mm) | L1 (mm) | W1 (mm) | Weight per Hood (kg) | Number of Attenuators |
|------------------|---------|---------|---------|----------------------|-----------------------|
| 3-2E6 to 3-5J6 | 1100 | 1910 | 1030 | 195 | 1 |
| 5-2G6 to 5-5J6 | 1100 | 1910 | 1540 | 240 | 1 |
| 5-3I9 to 5-7L9 | 1100 | 2800 | 1540 | 327 | 1 |
| 5-3K12 to 5-7O12 | 1100 | 3730 | 1540 | 417 | 1 |
| 8-3K9 to 8-5N9 | 1100 | 2800 | 2390 | 440 | 1 |
| 8-4L12 to 8-7P12 | 1100 | 3730 | 2390 | 558 | 1 |

LRW-H Fan End Attenuation Dimensions*

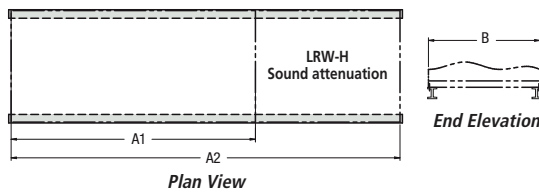
| Model No. | H2 (mm) | L2 (mm) | W2 (mm) | Weight per Hood (kg) | Number of Attenuators |
|------------------|---------|---------|---------|----------------------|-----------------------|
| 3-2E6 to 3-5J6 | 1650 | 1110 | 1030 | 204 | 1 |
| 5-2G6 to 5-5J6 | 2050 | 1110 | 1540 | 313 | 1 |
| 5-3I9 to 5-7L9 | 2050 | 1110 | 1540 | 313 | 1 |
| 5-3K12 to 5-7O12 | 2050 | 1110 | 1540 | 313 | 1 |
| 8-3K9 to 8-5N9 | 2050 | 1110 | 2390 | 417 | 1 |
| 8-4L12 to 8-7P12 | 2050 | 1110 | 2390 | 417 | 1 |

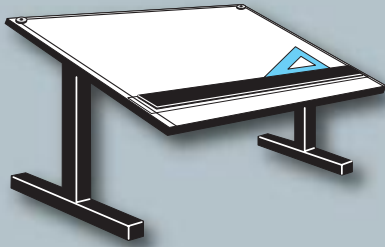
* Attenuation dimensions may vary slightly from catalog. See Factory certified prints for exact dimensions.



Notes: Intake sound attenuation must be fully supported. If the recommended steel support is being used, an extended "I" beam is required for the intake attenuation.

*External belt adjustment mechanism.





Engineering Data & Dimensions

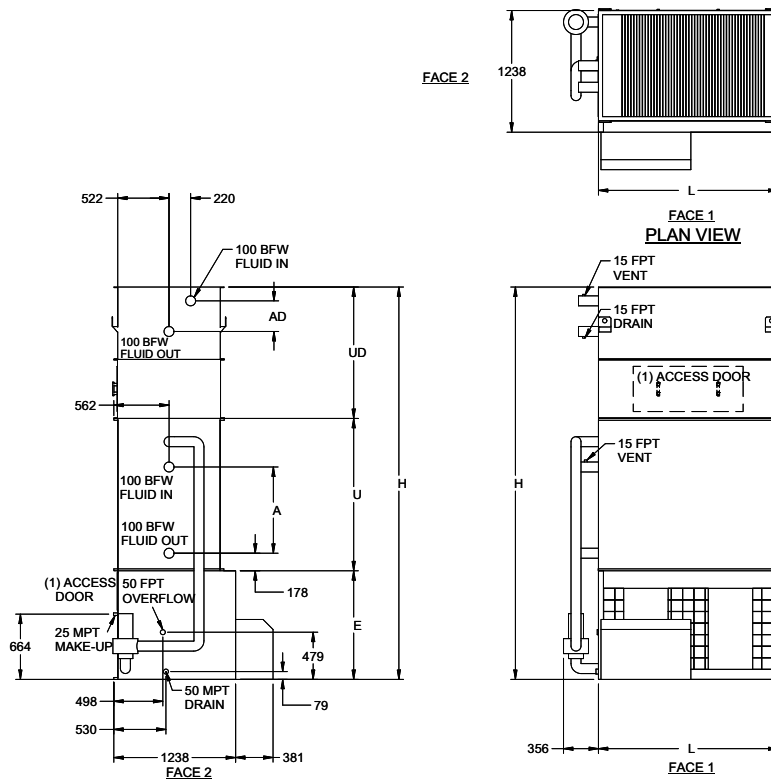


LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 4-2G6 THRU LSWA-H 4-5J6

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 4-2G6 | 1.066 | 1.066 | 1.492 | 4 | 4,6 | 0,55 | 125 | 254 | 100 | 1302 | 3420 | 1826 | 1105 | 978 | 305 | 1337 |
| LSWA-H 4-2H6 | 1.089 | 1.089 | 1.515 | 5,5 | 5,5 | 0,55 | 125 | 254 | 100 | 1324 | 3420 | 1826 | 1105 | 978 | 305 | 1337 |
| LSWA-H 4-2I6 | 1.098 | 1.098 | 1.520 | 7,5 | 6,2 | 0,55 | 125 | 254 | 100 | 1329 | 3420 | 1826 | 1105 | 978 | 305 | 1337 |
| LSWA-H 4-3G6 | 1.234 | 721 | 1.710 | 4 | 4,5 | 0,55 | 178 | 250 | 100 | 1515 | 3610 | 1826 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3H6 | 1.256 | 721 | 1.733 | 5,5 | 5,4 | 0,55 | 178 | 250 | 100 | 1538 | 3610 | 1826 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3I6 | 1.266 | 721 | 1.737 | 7,5 | 6,1 | 0,55 | 178 | 250 | 100 | 1542 | 3610 | 1826 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3J6 | 1.320 | 721 | 1.796 | 11 | 6,7 | 0,55 | 178 | 250 | 100 | 1601 | 3610 | 1826 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-4G6 | 1.388 | 875 | 1.919 | 4 | 4,4 | 0,55 | 227 | 250 | 100 | 1724 | 3801 | 1826 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4H6 | 1.411 | 875 | 1.941 | 5,5 | 5,2 | 0,55 | 227 | 250 | 100 | 1746 | 3801 | 1826 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4I6 | 1.420 | 875 | 1.946 | 7,5 | 6 | 0,55 | 227 | 250 | 100 | 1751 | 3801 | 1826 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4J6 | 1.474 | 875 | 2.005 | 11 | 6,6 | 0,55 | 227 | 250 | 100 | 1810 | 3801 | 1826 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-5H6 | 1.574 | 1.039 | 2.155 | 5,5 | 5,1 | 0,55 | 280 | 254 | 100 | 1964 | 3991 | 1826 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5I6 | 1.583 | 1.039 | 2.159 | 7,5 | 5,9 | 0,55 | 280 | 254 | 100 | 1969 | 3991 | 1826 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5J6 | 1.637 | 1.039 | 2.218 | 11 | 6,5 | 0,55 | 280 | 254 | 100 | 2028 | 3991 | 1826 | 1105 | 1549 | 876 | 1337 |

NOTES:

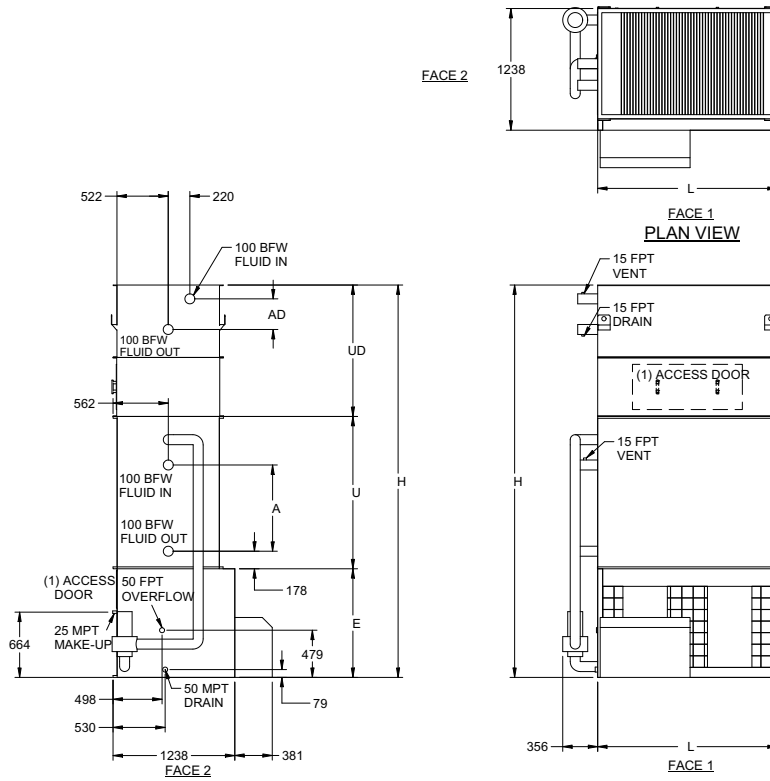
- Model Numbers end in "-Z" for units with Series Flow piping configuration. Series Flow units may require additional coil connections and will require crossover piping.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- Liters shown is water in suspension 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 or dimensions, quantity of coil connections, and piping configuration.

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 34 | 336 | 292 |
| 4 | 140 | 45 | 358 | 328 |
| 6 | 175 | 61 | 386 | 370 |
| 8 | 241 | 76 | 417 | 414 |
| 10 | 311 | 87 | 449 | 458 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 4-3H9 THRU LSWA-H 4-5K9



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 4-3H9 | 1.724 | 1.025 | 2.436 | 5,5 | 7 | 0,75 | 257 | 390 | 150 | 2186 | 3610 | 2724 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3I9 | 1.728 | 1.025 | 2.445 | 7,5 | 8 | 0,75 | 257 | 390 | 150 | 2195 | 3610 | 2724 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3J9 | 1.787 | 1.025 | 2.499 | 11 | 8,8 | 0,75 | 257 | 390 | 150 | 2250 | 3610 | 2724 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3K9 | 1.814 | 1.025 | 2.527 | 15 | 10,1 | 0,75 | 257 | 390 | 150 | 2277 | 3610 | 2724 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-4I9 | 1.955 | 1.252 | 2.753 | 7,5 | 7,9 | 0,75 | 337 | 390 | 150 | 2504 | 3801 | 2724 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4J9 | 2.014 | 1.252 | 2.808 | 11 | 8,6 | 0,75 | 337 | 390 | 150 | 2558 | 3801 | 2724 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4K9 | 2.041 | 1.252 | 2.835 | 15 | 9,9 | 0,75 | 337 | 390 | 150 | 2585 | 3801 | 2724 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-5I9 | 2.200 | 1.497 | 3.071 | 7,5 | 7,7 | 0,75 | 413 | 390 | 150 | 2821 | 3991 | 2724 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5J9 | 2.259 | 1.497 | 3.125 | 11 | 8,5 | 0,75 | 413 | 390 | 150 | 2876 | 3991 | 2724 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5K9 | 2.286 | 1.497 | 3.152 | 15 | 9,7 | 0,75 | 413 | 390 | 150 | 2903 | 3991 | 2724 | 1105 | 1549 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

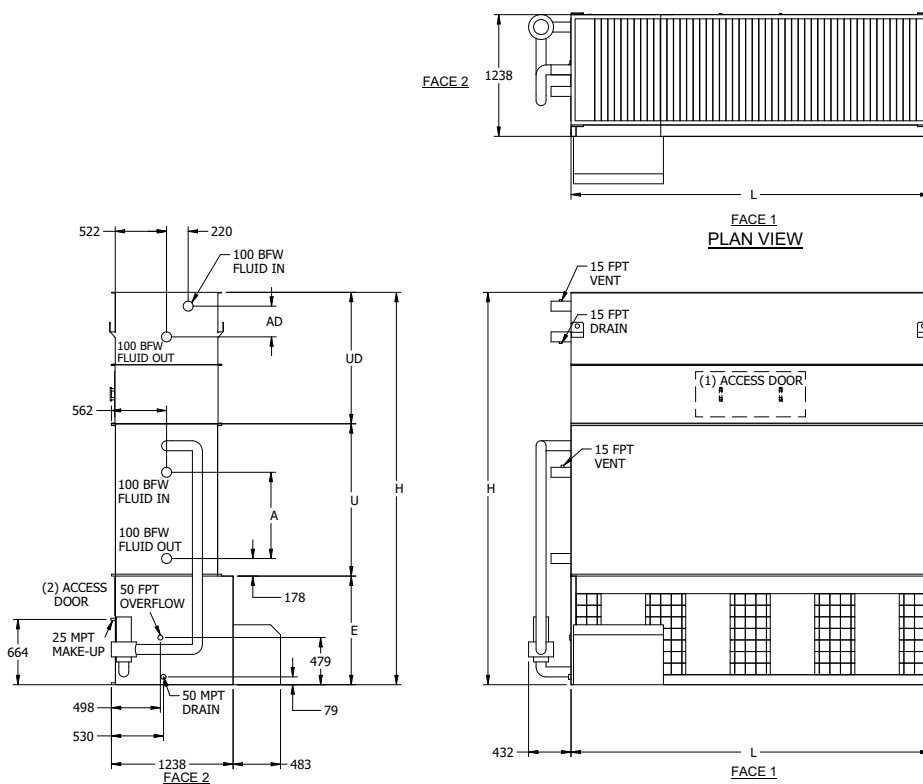
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 42 | 431 | 369 |
| 4 | 140 | 61 | 472 | 428 |
| 6 | 175 | 83 | 513 | 491 |
| 8 | 241 | 106 | 558 | 560 |
| 10 | 311 | 125 | 608 | 629 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 4-3I12 THRU LSWA-H 4-5L12

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 4-3I12 | 2.263 | 1.361 | 3.180 | 7,5 | 9,7 | 1,1 | 337 | 572 | 150 | 2903 | 3610 | 3651 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3J12 | 2.322 | 1.361 | 3.234 | 11 | 10,7 | 1,1 | 337 | 572 | 150 | 2957 | 3610 | 3651 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3K12 | 2.350 | 1.361 | 3.261 | 15 | 12,3 | 1,1 | 337 | 572 | 150 | 2985 | 3610 | 3651 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3L12 | 2.359 | 1.361 | 3.275 | 18,5 | 13,5 | 1,1 | 337 | 572 | 150 | 2998 | 3610 | 3651 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-4J12 | 2.635 | 1.674 | 3.651 | 11 | 10,5 | 1,1 | 443 | 572 | 150 | 3375 | 3801 | 3651 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4K12 | 2.663 | 1.674 | 3.679 | 15 | 12 | 1,1 | 443 | 572 | 150 | 3402 | 3801 | 3651 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4L12 | 2.672 | 1.674 | 3.692 | 18,5 | 13,2 | 1,1 | 443 | 572 | 150 | 3416 | 3801 | 3651 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-5J12 | 2.930 | 1.969 | 4.051 | 11 | 10,3 | 1,1 | 549 | 583 | 150 | 3783 | 3991 | 3651 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5K12 | 2.957 | 1.969 | 4.078 | 15 | 11,8 | 1,1 | 549 | 583 | 150 | 3810 | 3991 | 3651 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5L12 | 2.966 | 1.969 | 4.091 | 18,5 | 13 | 1,1 | 549 | 583 | 150 | 3824 | 3991 | 3651 | 1105 | 1549 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

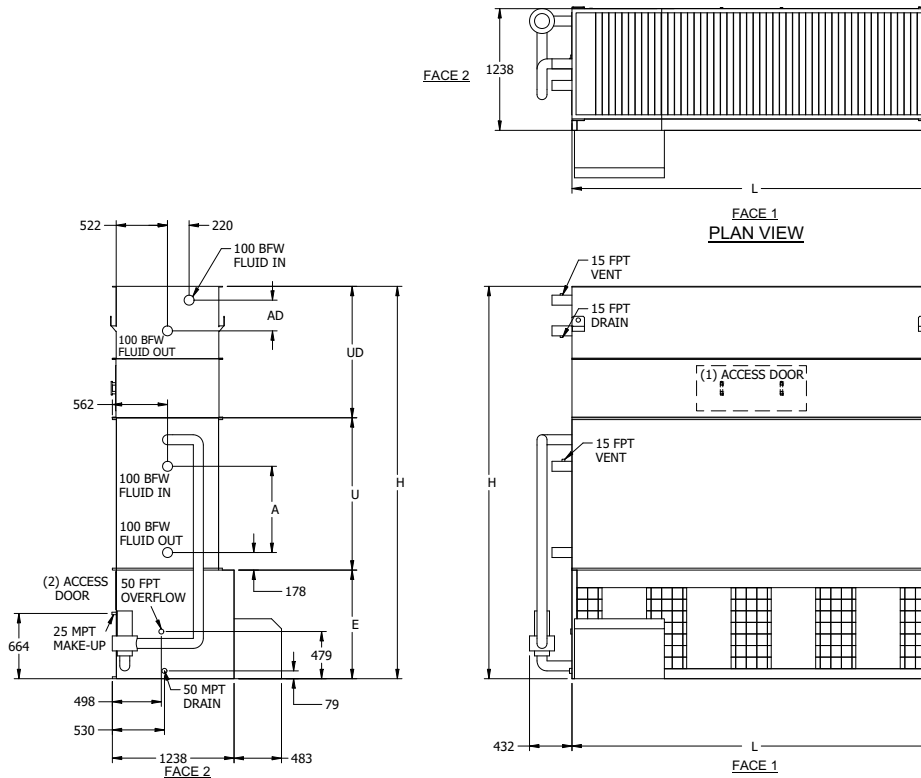
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 49 | 549 | 475 |
| 4 | 140 | 79 | 599 | 556 |
| 6 | 175 | 110 | 658 | 643 |
| 8 | 241 | 136 | 721 | 736 |
| 10 | 311 | 167 | 785 | 829 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 4-3J18 THRU LSWA-H 4-5N18



| Model No.1 | Weights (kg) 2 | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump 5 | | | Dimensions (mm) 6 | | | | | |
|---------------|----------------|--------------------|-----------|------|---------------|---------------|----------------------|-------------------|-----------------|-----------------------|-------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section 3 | Operating | kW | Air Flow m³/s | | | Liters 4 Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 4-3J18 | 3.298 | 1.996 | 4.613 | 11 | 14,1 | 1,5 | 500 | 731 | 200 | 4082 | 3610 | 5486 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3K18 | 3.325 | 1.996 | 4.640 | 15 | 16,1 | 1,5 | 500 | 731 | 200 | 4110 | 3610 | 5486 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3L18 | 3.338 | 1.996 | 4.654 | 18,5 | 17,7 | 1,5 | 500 | 731 | 200 | 4123 | 3610 | 5486 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-3M18 | 3.361 | 1.996 | 4.677 | 22 | 19,1 | 1,5 | 500 | 731 | 200 | 4146 | 3610 | 5486 | 1105 | 1168 | 495 | 1337 |
| LSWA-H 4-4K18 | 3.787 | 2.458 | 5.257 | 15 | 15,8 | 1,5 | 659 | 734 | 200 | 4731 | 3801 | 5486 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4L18 | 3.801 | 2.458 | 5.271 | 18,5 | 17,4 | 1,5 | 659 | 734 | 200 | 4745 | 3801 | 5486 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-4M18 | 3.824 | 2.458 | 5.293 | 22 | 18,7 | 1,5 | 659 | 734 | 200 | 4767 | 3801 | 5486 | 1105 | 1359 | 686 | 1337 |
| LSWA-H 4-5K18 | 4.232 | 2.903 | 5.865 | 15 | 15,5 | 1,5 | 814 | 734 | 200 | 5339 | 3991 | 5486 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5L18 | 4.246 | 2.903 | 5.879 | 18,5 | 17 | 1,5 | 814 | 734 | 200 | 5352 | 3991 | 5486 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5M18 | 4.268 | 2.903 | 5.901 | 22 | 18,3 | 1,5 | 814 | 734 | 200 | 5375 | 3991 | 5486 | 1105 | 1549 | 876 | 1337 |
| LSWA-H 4-5N18 | 4.341 | 2.903 | 5.974 | 30 | 19,5 | 1,5 | 814 | 734 | 200 | 5448 | 3991 | 5486 | 1105 | 1549 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

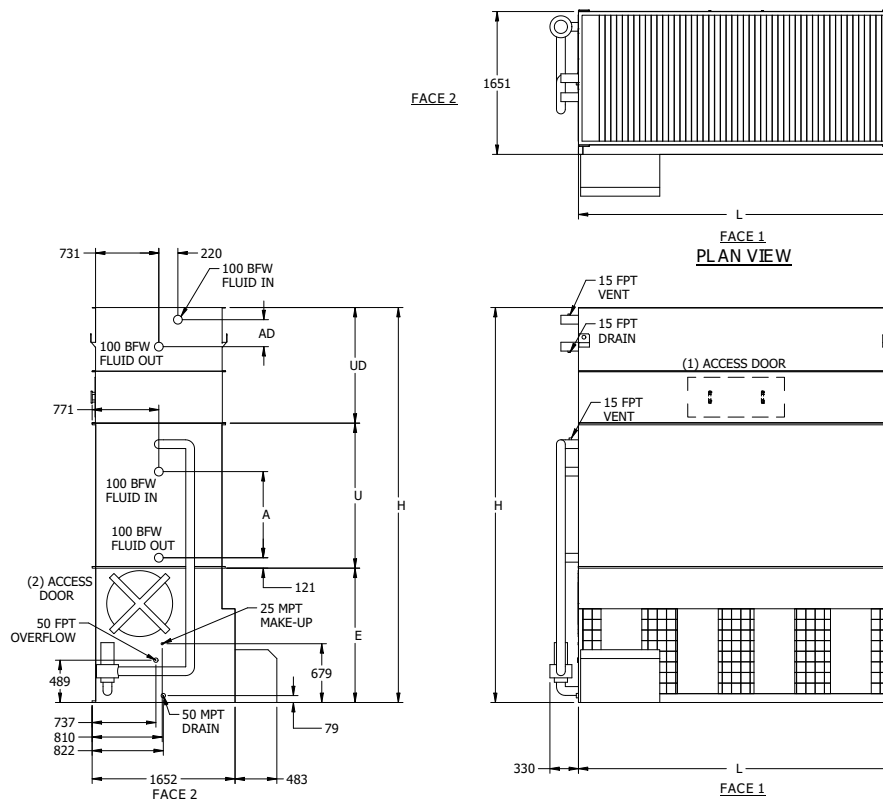
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 64 | 798 | 655 |
| 4 | 140 | 110 | 880 | 780 |
| 6 | 175 | 155 | 966 | 915 |
| 8 | 241 | 201 | 1066 | 1059 |
| 10 | 311 | 246 | 1166 | 1202 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 5-3J12 THRU LSWA-H 5-7N12

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 5-3J12 | 3.021 | 1.801 | 4.595 | 11 | 13,4 | 1,5 | 481 | 591 | 150 | 3819 | 4135 | 3645 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3K12 | 3.048 | 1.801 | 4.622 | 15 | 15,4 | 1,5 | 481 | 591 | 150 | 3846 | 4135 | 3645 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3L12 | 3.062 | 1.801 | 4.636 | 18,5 | 16,9 | 1,5 | 481 | 591 | 150 | 3856 | 4135 | 3645 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3M12 | 3.084 | 1.801 | 4.658 | 22 | 18,3 | 1,5 | 481 | 591 | 150 | 3883 | 4135 | 3645 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-4J12 | 3.456 | 2.236 | 5.185 | 11 | 13,2 | 1,5 | 628 | 598 | 150 | 4418 | 4250 | 3645 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4K12 | 3.484 | 2.236 | 5.212 | 15 | 15,1 | 1,5 | 628 | 598 | 150 | 4445 | 4250 | 3645 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4L12 | 3.497 | 2.236 | 5.225 | 18,5 | 16,6 | 1,5 | 628 | 598 | 150 | 4454 | 4250 | 3645 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4M12 | 3.520 | 2.236 | 5.248 | 22 | 17,9 | 1,5 | 628 | 598 | 150 | 4481 | 4250 | 3645 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-5K12 | 3.937 | 2.690 | 5.815 | 15 | 14,8 | 1,5 | 780 | 606 | 150 | 5053 | 4466 | 3645 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-5L12 | 3.951 | 2.690 | 5.829 | 18,5 | 16,3 | 1,5 | 780 | 606 | 150 | 5062 | 4466 | 3645 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-5M12 | 3.973 | 2.690 | 5.851 | 22 | 17,5 | 1,5 | 780 | 606 | 150 | 5089 | 4466 | 3645 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-6K12 | 4.382 | 3.134 | 6.405 | 15 | 14,5 | 1,5 | 927 | 613 | 150 | 5652 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-6L12 | 4.395 | 3.134 | 6.418 | 18,5 | 15,9 | 1,5 | 927 | 613 | 150 | 5661 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-6M12 | 4.418 | 3.134 | 6.441 | 22 | 17,2 | 1,5 | 927 | 613 | 150 | 5688 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-6N12 | 4.491 | 3.134 | 6.514 | 30 | 18,3 | 1,5 | 927 | 613 | 150 | 5761 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7K12 | 4.890 | 3.642 | 7.062 | 15 | 14,2 | 1,5 | 1079 | 613 | 150 | 6305 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7L12 | 4.903 | 3.642 | 7.076 | 18,5 | 15,6 | 1,5 | 1079 | 613 | 150 | 6323 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7M12 | 4.926 | 3.642 | 7.099 | 22 | 16,8 | 1,5 | 1079 | 613 | 150 | 6341 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7N12 | 4.999 | 3.642 | 7.171 | 30 | 17,9 | 1,5 | 1079 | 613 | 150 | 6414 | 4682 | 3645 | 1553 | 1892 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

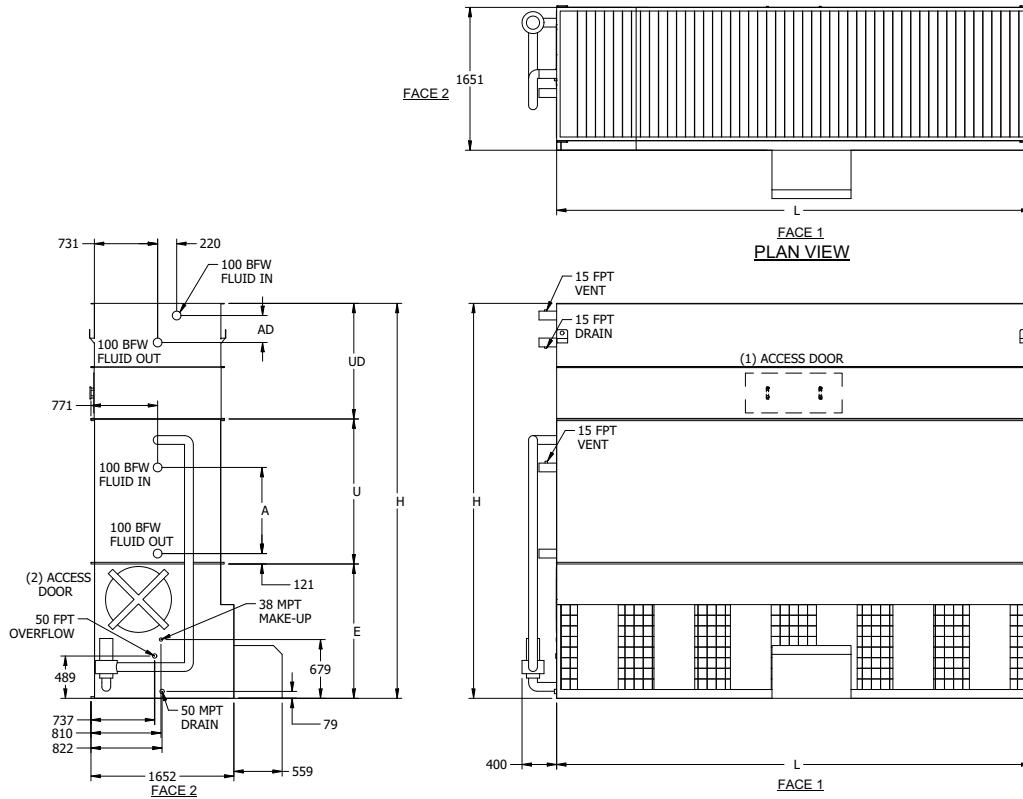
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 68 | 653 | 572 |
| 4 | 140 | 110 | 730 | 688 |
| 6 | 175 | 151 | 807 | 811 |
| 8 | 241 | 193 | 898 | 941 |
| 10 | 311 | 238 | 984 | 1072 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 5-3K18 THRU LSWA-H 5-7O18



| Model No. ¹ | Weights (kg) ² | | | Fans kW | Air Flow m ³ /s | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|---------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | | | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 5-3K18 | 4.481 | 2.694 | 6.745 | 15 | 20,2 | 2,2 | 708 | 689 | 200 | 5389 | 42135 | 5483 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3L18 | 4.495 | 2.694 | 6.759 | 18,5 | 22,2 | 2,2 | 708 | 689 | 200 | 5402 | 4135 | 5483 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3M18 | 4.518 | 2.694 | 6.781 | 22 | 24 | 2,2 | 708 | 689 | 200 | 5425 | 4135 | 5483 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-3N18 | 4.590 | 2.694 | 6.854 | 30 | 25,5 | 2,2 | 708 | 689 | 200 | 5498 | 4135 | 5483 | 1553 | 1245 | 565 | 1337 |
| LSWA-H 5-4L18 | 5.148 | 3.348 | 7.634 | 18,5 | 21,8 | 2,2 | 935 | 697 | 200 | 6282 | 4250 | 5483 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4M18 | 5.171 | 3.348 | 7.657 | 22 | 23,5 | 2,2 | 935 | 697 | 200 | 6305 | 4250 | 5483 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4N18 | 5.244 | 3.348 | 7.729 | 30 | 25 | 2,2 | 935 | 697 | 200 | 6378 | 4250 | 5483 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-4O18 | 5.248 | 3.348 | 7.734 | 37 | 27,5 | 2,2 | 935 | 697 | 200 | 6382 | 4250 | 5483 | 1553 | 1460 | 781 | 1337 |
| LSWA-H 5-5L18 | 5.838 | 4.037 | 8.546 | 18,5 | 21,4 | 2,2 | 1158 | 704 | 200 | 7203 | 4466 | 5483 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-5M18 | 5.860 | 4.037 | 8.568 | 22 | 23 | 2,2 | 1158 | 704 | 200 | 7226 | 4466 | 5483 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-5N18 | 5.933 | 4.037 | 8.641 | 30 | 24,5 | 2,2 | 1158 | 704 | 200 | 7298 | 4466 | 5483 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-5O18 | 5.938 | 4.037 | 8.645 | 37 | 26,9 | 2,2 | 1158 | 704 | 200 | 7303 | 4466 | 5483 | 1553 | 1676 | 997 | 1337 |
| LSWA-H 5-6M18 | 6.527 | 4.704 | 9.462 | 22 | 22,6 | 2,2 | 1385 | 712 | 200 | 8128 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-6N18 | 6.600 | 4.704 | 9.535 | 30 | 24 | 2,2 | 1385 | 712 | 200 | 8201 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-6O18 | 6.604 | 4.704 | 9.539 | 37 | 26,4 | 2,2 | 1385 | 712 | 200 | 8205 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7M18 | 7.289 | 5.466 | 10.451 | 22 | 22,1 | 2,2 | 1613 | 712 | 200 | 9117 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7N18 | 7.362 | 5.466 | 10.523 | 30 | 23,5 | 2,2 | 1613 | 712 | 200 | 9190 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |
| LSWA-H 5-7O18 | 7.366 | 5.466 | 10.528 | 37 | 25,8 | 2,2 | 1613 | 712 | 200 | 9194 | 4682 | 5483 | 1553 | 1892 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

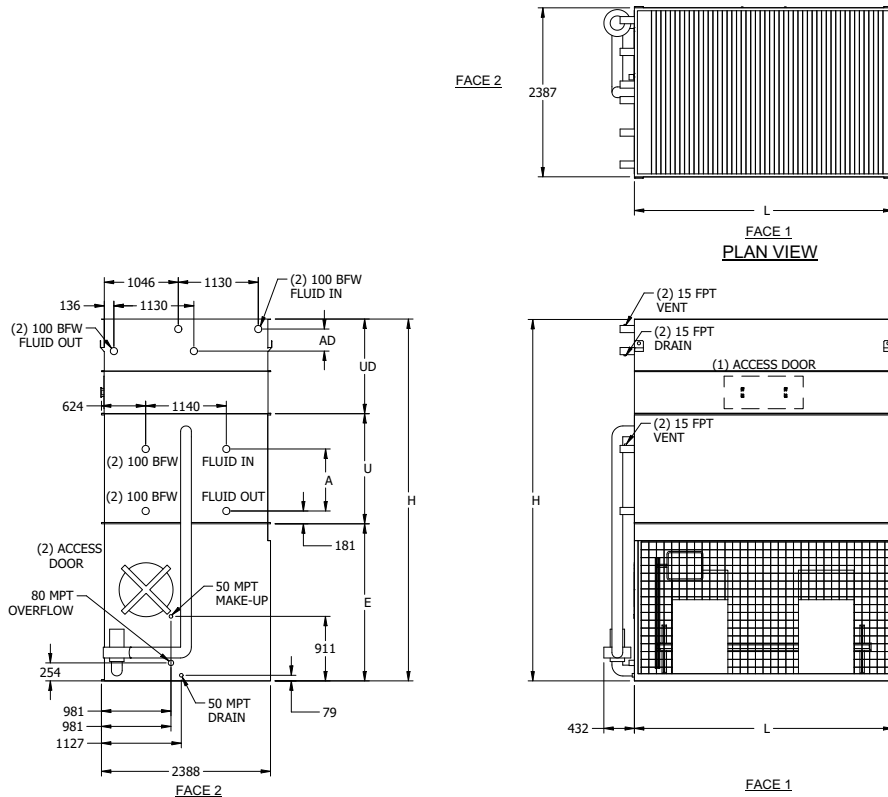
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 91 | 903 | 770 |
| 4 | 140 | 155 | 1016 | 951 |
| 6 | 175 | 223 | 1143 | 1143 |
| 8 | 241 | 288 | 1279 | 1344 |
| 10 | 311 | 352 | 1415 | 1547 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 8P-3L12 THRU LSWA-H 8P-7P12

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 8P-3L12 | 4.395 | 2.663 | 6.677 | 18,5 | 21,9 | 4 | 757 | 1049 | 250 | 5783 | 4731 | 3651 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3M12 | 4.418 | 2.663 | 6.695 | 22 | 23,5 | 4 | 757 | 1049 | 250 | 5806 | 4731 | 3651 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3N12 | 4.491 | 2.663 | 6.768 | 30 | 25 | 4 | 757 | 1049 | 250 | 5879 | 4731 | 3651 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3O12 | 4.495 | 2.663 | 6.777 | 37 | 27,5 | 4 | 757 | 1049 | 250 | 5883 | 4731 | 3651 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-4M12 | 5.076 | 3.320 | 7.593 | 22 | 23,1 | 4 | 992 | 1105 | 250 | 6759 | 4921 | 3651 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4N12 | 5.148 | 3.320 | 7.666 | 30 | 24,5 | 4 | 992 | 1105 | 250 | 6831 | 4921 | 3651 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4O12 | 5.153 | 3.320 | 7.675 | 37 | 27 | 4 | 992 | 1105 | 250 | 6836 | 4921 | 3651 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4P12 | 5.244 | 3.320 | 7.765 | 45 | 29,1 | 4 | 992 | 1105 | 250 | 6926 | 4921 | 3651 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-5N12 | 5.792 | 3.964 | 8.546 | 30 | 24 | 4 | 1226 | 1151 | 250 | 7756 | 5112 | 3651 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5O12 | 5.797 | 3.964 | 8.555 | 37 | 26,5 | 4 | 1226 | 1151 | 250 | 7761 | 5112 | 3651 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5P12 | 5.888 | 3.964 | 8.645 | 45 | 28,5 | 4 | 1226 | 1151 | 250 | 7852 | 5112 | 3651 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-6N12 | 6.455 | 4.627 | 9.439 | 30 | 23,6 | 4 | 1461 | 1204 | 250 | 8704 | 5302 | 3651 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6O12 | 6.459 | 4.627 | 9.448 | 37 | 25,9 | 4 | 1461 | 1204 | 250 | 8709 | 5302 | 3651 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6P12 | 6.550 | 4.627 | 9.539 | 45 | 27,9 | 4 | 1461 | 1204 | 250 | 8800 | 5302 | 3651 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-7N12 | 7.126 | 5.298 | 10.346 | 30 | 23,1 | 4 | 1696 | 1204 | 250 | 9612 | 5353 | 3651 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7O12 | 7.130 | 5.298 | 10.356 | 37 | 25,4 | 4 | 1696 | 1204 | 250 | 9616 | 5353 | 3651 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7P12 | 7.221 | 5.298 | 10.446 | 45 | 27,3 | 4 | 1696 | 1204 | 250 | 9707 | 5353 | 3651 | 2219 | 1797 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

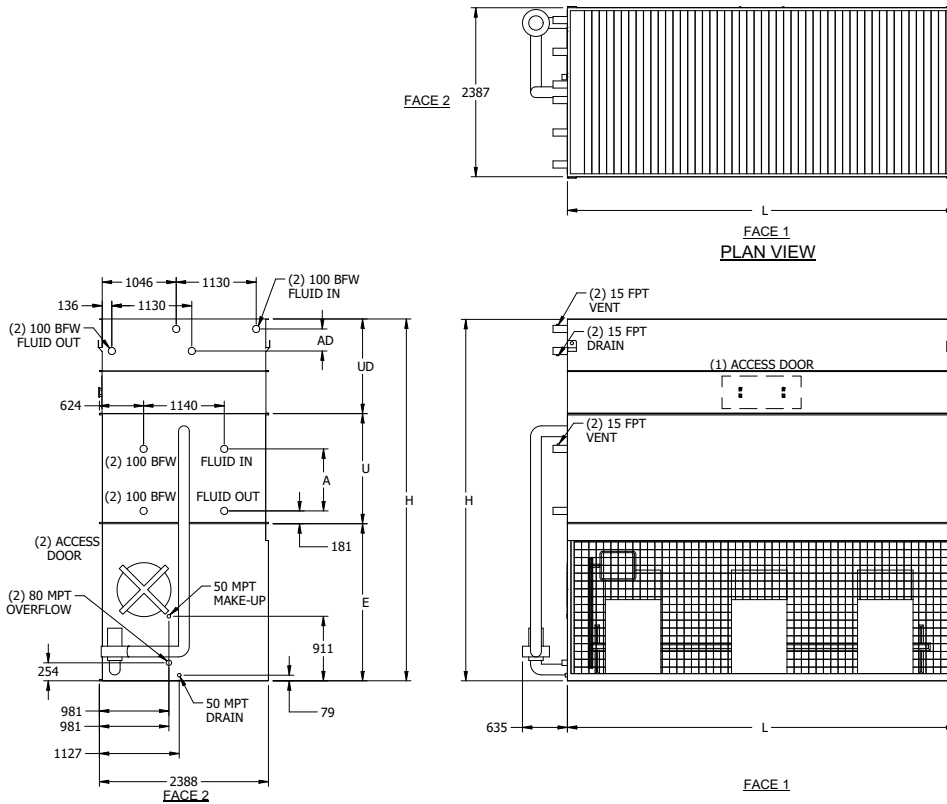
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 102 | 848 | 776 |
| 4 | 140 | 167 | 966 | 959 |
| 6 | 175 | 235 | 1093 | 1152 |
| 8 | 241 | 299 | 1225 | 1353 |
| 10 | 311 | 363 | 1361 | 1554 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 8P-3N18 THRU LSWA-H 8P-7Q18



| Model No. ¹ | Weights (kg) ² | | | Fans kW | Air Flow m ³ /s | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|---------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | | | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 8P-3N18 | 6.391 | 3.942 | 9.829 | 30 | 32,7 | 5,5 | 1117 | 1567 | 300 | 8518 | 4731 | 5486 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3O18 | 6.396 | 3.942 | 9.838 | 37 | 36 | 5,5 | 1117 | 1567 | 300 | 8523 | 4731 | 5486 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3P18 | 6.486 | 3.942 | 9.929 | 45 | 38,8 | 5,5 | 1117 | 1567 | 300 | 8614 | 4731 | 5486 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3Q18 | 6.536 | 3.942 | 9.979 | 55 | 41,2 | 5,5 | 1117 | 1567 | 300 | 8668 | 4731 | 5486 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-4N18 | 7.384 | 4.935 | 11.177 | 30 | 32,1 | 5,5 | 1473 | 1650 | 300 | 9947 | 4921 | 5486 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4O18 | 7.389 | 4.935 | 11.186 | 37 | 35,3 | 5,5 | 1473 | 1650 | 300 | 9952 | 4921 | 5486 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4P18 | 7.480 | 4.935 | 11.276 | 45 | 38 | 5,5 | 1473 | 1650 | 300 | 10043 | 4921 | 5486 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4Q18 | 7.530 | 4.935 | 11.326 | 55 | 40,4 | 5,5 | 1473 | 1650 | 300 | 10097 | 4921 | 5486 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-5O18 | 8.337 | 5.883 | 12.492 | 37 | 34,6 | 5,5 | 1828 | 1726 | 300 | 11335 | 5112 | 5486 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5P18 | 8.428 | 5.883 | 12.583 | 45 | 37,3 | 5,5 | 1828 | 1726 | 300 | 11426 | 5112 | 5486 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5Q18 | 8.478 | 5.883 | 12.633 | 55 | 39,6 | 5,5 | 1828 | 1726 | 300 | 11480 | 5112 | 5486 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-6O18 | 9.349 | 6.895 | 13.857 | 37 | 33,9 | 5,5 | 2184 | 1798 | 300 | 12773 | 5302 | 5486 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6P18 | 9.439 | 6.895 | 13.948 | 45 | 36,5 | 5,5 | 2184 | 1798 | 300 | 12864 | 5302 | 5486 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6Q18 | 9.489 | 6.895 | 13.998 | 55 | 38,8 | 5,5 | 2184 | 1798 | 300 | 12918 | 5302 | 5486 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-7O18 | 10.342 | 7.888 | 15.204 | 37 | 33,2 | 5,5 | 2540 | 1798 | 300 | 14120 | 5353 | 5486 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7P18 | 10.433 | 7.888 | 15.295 | 45 | 35,8 | 5,5 | 2540 | 1798 | 300 | 14211 | 5353 | 5486 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7Q18 | 10.483 | 7.888 | 15.345 | 55 | 38 | 5,5 | 2540 | 1798 | 300 | 14265 | 5353 | 5486 | 2219 | 1797 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

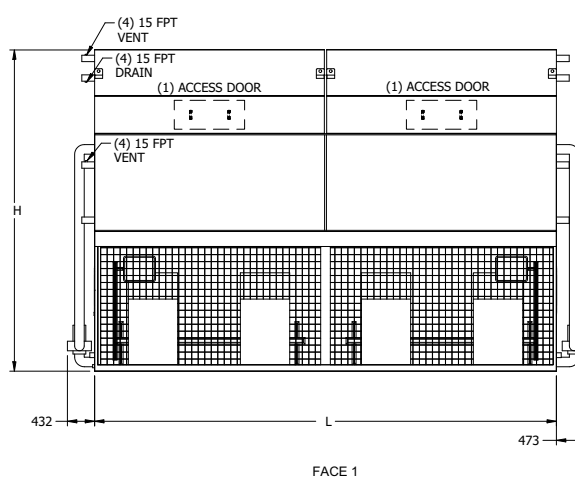
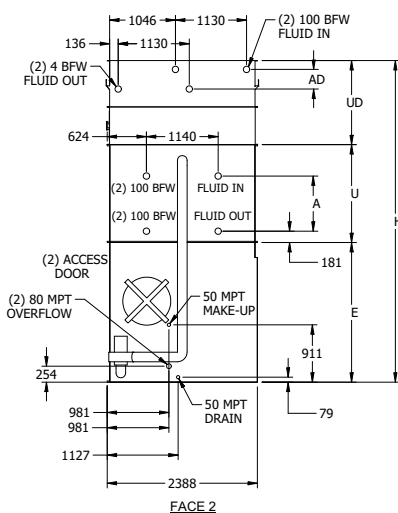
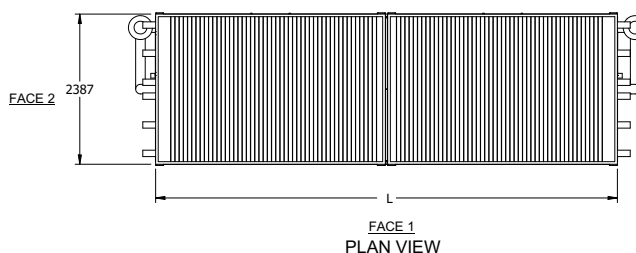
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 136 | 1143 | 1020 |
| 4 | 140 | 238 | 1324 | 1305 |
| 6 | 175 | 341 | 1520 | 1604 |
| 8 | 241 | 443 | 1728 | 1915 |
| 10 | 311 | 545 | 1937 | 2226 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 8P-3L24 THRU LSWA-H 8P-7P24



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|---------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 8P-3L24 | 8.473 | 3.157 | 13.073 | (2)18.5 | 43,7 | (2) 4 | 1514 | 2139 | (2) 250 | 11326 | 4731 | 7341 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3M24 | 8.518 | 3.202 | 13.118 | (2) 22 | 47,1 | (2) 4 | 1514 | 2139 | (2) 250 | 11372 | 4731 | 7341 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3N24 | 8.664 | 3.348 | 13.263 | (2) 30 | 50,1 | (2) 4 | 1514 | 2139 | (2) 250 | 11517 | 4731 | 7341 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3O24 | 8.673 | 3.357 | 13.272 | (2) 37 | 55,1 | (2) 4 | 1514 | 2139 | (2) 250 | 11526 | 4731 | 7341 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-4M24 | 9.843 | 3.320 | 14.914 | (2) 22 | 46,2 | (2) 4 | 1984 | 2252 | (2) 250 | 13281 | 4921 | 7341 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4N24 | 9.988 | 3.348 | 15.059 | (2) 30 | 49,1 | (2) 4 | 1984 | 2252 | (2) 250 | 13426 | 4921 | 7341 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4O24 | 9.997 | 3.357 | 15.068 | (2) 37 | 54 | (2) 4 | 1984 | 2252 | (2) 250 | 13435 | 4921 | 7341 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4P24 | 10.179 | 3.538 | 15.250 | (2) 45 | 58,2 | (2) 4 | 1984 | 2252 | (2) 250 | 13617 | 4921 | 7341 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-5N24 | 11.276 | 3.964 | 16.810 | (2) 30 | 48,1 | (2) 4 | 2453 | 2351 | (2) 250 | 15272 | 5112 | 7341 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5O24 | 11.285 | 3.964 | 16.819 | (2) 37 | 52,9 | (2) 4 | 2453 | 2351 | (2) 250 | 15282 | 5112 | 7341 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5P24 | 11.467 | 3.964 | 17.001 | (2) 45 | 57 | (2) 4 | 2453 | 2351 | (2) 250 | 15463 | 5112 | 7341 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-6N24 | 12.601 | 4.627 | 18.606 | (2) 30 | 47,1 | (2) 4 | 2922 | 2464 | (2) 250 | 17182 | 5302 | 7341 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6O24 | 12.610 | 4.627 | 18.615 | (2) 37 | 51,8 | (2) 4 | 2922 | 2464 | (2) 250 | 17191 | 5302 | 7341 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6P24 | 12.791 | 4.627 | 18.797 | (2) 45 | 55,8 | (2) 4 | 2922 | 2464 | (2) 250 | 17373 | 5302 | 7341 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-7N24 | 13.943 | 5.298 | 20.421 | (2) 30 | 46,1 | (2) 4 | 3396 | 2468 | (2) 250 | 19001 | 5353 | 7341 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7O24 | 13.952 | 5.298 | 20.430 | (2) 37 | 50,8 | (2) 4 | 3396 | 2468 | (2) 250 | 19010 | 5353 | 7341 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7P24 | 14.134 | 5.298 | 20.611 | (2) 45 | 54,7 | (2) 4 | 3396 | 2468 | (2) 250 | 19191 | 5353 | 7341 | 2219 | 1797 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

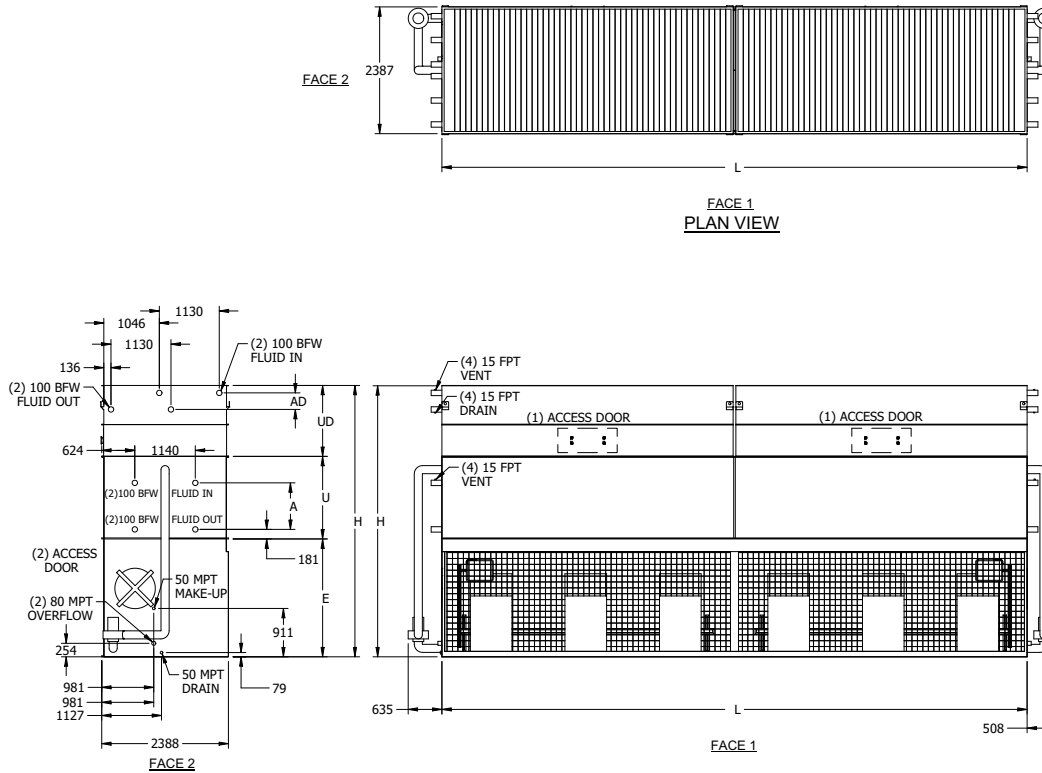
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 201 | 848 | 1552 |
| 4 | 140 | 333 | 966 | 1918 |
| 6 | 175 | 466 | 1093 | 2304 |
| 8 | 241 | 598 | 1225 | 2706 |
| 10 | 311 | 731 | 1361 | 3108 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 8P-3N36 THRU LSWA-H 8P-7Q36



| Model No. ¹ | Weights (kg) ² | | | Fans | Spray Pump | Coil Volume (liters) | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|--------|------------|----------------------|--------------------------|----------------------------|---------|------------------------------|-----------------|-----------------------|----------|----------|---------|---------|
| | Shipping | Heaviest Section ³ | Operating | | | | kW | Air Flow m ³ /s | kW | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U |
| LSWA-H 8P-3N36 | 12.447 | 4.563 | 19.377 | (2) 30 | 65,4 | (2) 5.5 | 2233 | 3187 | (2) 300 | 16806 | 4731 | 11024 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3O36 | 12.456 | 4.572 | 19.387 | (2) 37 | 72 | (2) 5.5 | 2233 | 3187 | (2) 300 | 16815 | 4731 | 11024 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3P36 | 12.637 | 4.754 | 19.568 | (2) 45 | 77,6 | (2) 5.5 | 2233 | 3187 | (2) 300 | 16996 | 4731 | 11024 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-3Q36 | 12.741 | 4.858 | 19.672 | (2) 55 | 82,5 | (2) 5.5 | 2233 | 3187 | (2) 300 | 17100 | 4731 | 11024 | 2219 | 1175 | 495 | 1337 |
| LSWA-H 8P-4N36 | 14.442 | 4.940 | 22.081 | (2) 30 | 64,2 | (2) 5.5 | 2945 | 3339 | (2) 300 | 19663 | 4921 | 11024 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4O36 | 14.451 | 4.940 | 22.090 | (2) 37 | 70,6 | (2) 5.5 | 2945 | 3339 | (2) 300 | 19672 | 4921 | 11024 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4P36 | 14.633 | 4.940 | 22.271 | (2) 45 | 76,1 | (2) 5.5 | 2945 | 3339 | (2) 300 | 19854 | 4921 | 11024 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-4Q36 | 14.737 | 4.940 | 22.376 | (2) 55 | 80,8 | (2) 5.5 | 2945 | 3339 | (2) 300 | 19958 | 4921 | 11024 | 2219 | 1365 | 686 | 1337 |
| LSWA-H 8P-5O36 | 16.357 | 5.892 | 24.712 | (2) 37 | 69,2 | (2) 5.5 | 3657 | 3505 | (2) 300 | 22457 | 5112 | 11024 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5P36 | 16.538 | 5.892 | 24.893 | (2) 45 | 74,6 | (2) 5.5 | 3657 | 3505 | (2) 300 | 22639 | 5112 | 11024 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-5Q36 | 16.642 | 5.892 | 24.997 | (2) 55 | 79,2 | (2) 5.5 | 3657 | 3505 | (2) 300 | 22743 | 5112 | 11024 | 2219 | 1556 | 876 | 1337 |
| LSWA-H 8P-6O36 | 18.361 | 6.895 | 27.415 | (2) 37 | 67,8 | (2) 5.5 | 4365 | 3653 | (2) 300 | 25310 | 5302 | 11024 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6P36 | 18.543 | 6.895 | 27.597 | (2) 45 | 73 | (2) 5.5 | 4365 | 3653 | (2) 300 | 25492 | 5302 | 11024 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-6Q36 | 18.647 | 6.895 | 27.701 | (2) 55 | 77,6 | (2) 5.5 | 4365 | 3653 | (2) 300 | 25596 | 5302 | 11024 | 2219 | 1746 | 1067 | 1337 |
| LSWA-H 8P-7O36 | 20.348 | 7.888 | 30.119 | (2) 37 | 66,4 | (2) 5.5 | 5076 | 3657 | (2) 300 | 28018 | 5353 | 11024 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7P36 | 20.530 | 7.888 | 30.300 | (2) 45 | 71,5 | (2) 5.5 | 5076 | 3657 | (2) 300 | 28200 | 5353 | 11024 | 2219 | 1797 | 1213 | 1337 |
| LSWA-H 8P-7Q36 | 20.634 | 7.888 | 30.404 | (2) 55 | 76 | (2) 5.5 | 5076 | 3657 | (2) 300 | 28304 | 5353 | 11024 | 2219 | 1797 | 1213 | 1337 |

- NOTES:
- 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.
 - Weights don't include ARID Fin-Pak Dry Cooling Coil section.
 - Heaviest section is the coil section.
 - 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

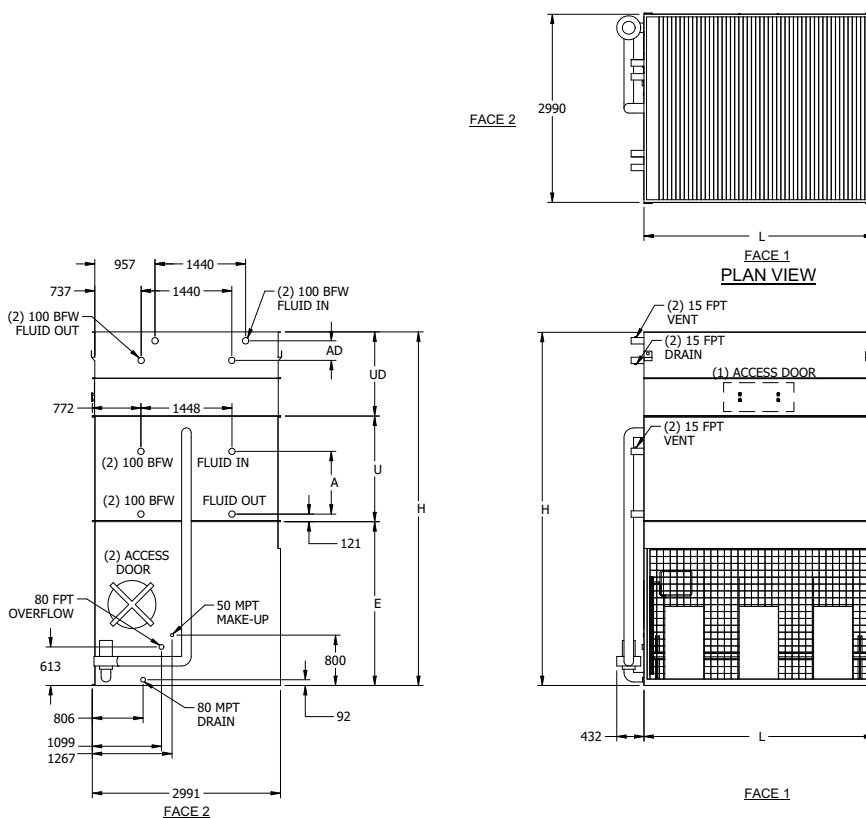
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 273 | 1143 | 2040 |
| 4 | 140 | 477 | 1324 | 2610 |
| 6 | 175 | 685 | 1520 | 3208 |
| 8 | 241 | 890 | 1728 | 3830 |
| 10 | 311 | 1090 | 1937 | 4452 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 10-3N12 THRU LSWA-H 10-7Q12

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | | Fans | Spray Pump | Coil | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|------|------------|------|--------------------------|----------------------------|-----|------------------------------|------------------------------|-----------------|-----------------------|----------|----------|---------|
| | Shipping | Heaviest Section ³ | Operating | | | | kW | Air Flow m ³ /s | kW | Volume (liters) | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E |
| LSWA-H 10-3N12 | 5.865 | 3.574 | 8.795 | 30 | 30,7 | 4 | 958 | 1503 | 250 | 7775 | 5189 | 3651 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3O12 | 5.869 | 3.574 | 8.800 | 37 | 33,8 | 4 | 958 | 1503 | 250 | 7779 | 5189 | 3651 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3P12 | 5.960 | 3.574 | 8.890 | 45 | 36,4 | 4 | 958 | 1503 | 250 | 7870 | 5189 | 3651 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-4N12 | 6.736 | 4.445 | 9.965 | 30 | 30,1 | 4 | 1257 | 1586 | 250 | 9026 | 5405 | 3651 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4O12 | 6.740 | 4.445 | 9.970 | 37 | 33,2 | 4 | 1257 | 1586 | 250 | 9031 | 5405 | 3651 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4P12 | 6.831 | 4.445 | 10.061 | 45 | 35,7 | 4 | 1257 | 1586 | 250 | 9122 | 5405 | 3651 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-5N12 | 7.557 | 5.266 | 11.086 | 30 | 29,5 | 4 | 1556 | 1662 | 250 | 10224 | 5621 | 3651 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5O12 | 7.561 | 5.266 | 11.090 | 37 | 32,5 | 4 | 1556 | 1662 | 250 | 10228 | 5621 | 3651 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5P12 | 7.652 | 5.266 | 11.181 | 45 | 35 | 4 | 1556 | 1662 | 250 | 10319 | 5621 | 3651 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-6N12 | 8.419 | 6.128 | 12.247 | 30 | 28,9 | 4 | 1855 | 1745 | 250 | 11467 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6O12 | 8.423 | 6.128 | 12.252 | 37 | 31,8 | 4 | 1855 | 1745 | 250 | 11471 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6P12 | 8.514 | 6.128 | 12.342 | 45 | 34,3 | 4 | 1855 | 1745 | 250 | 11562 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6Q12 | 8.564 | 6.128 | 12.392 | 55 | 36,5 | 4 | 1855 | 1745 | 250 | 11612 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7N12 | 9.435 | 7.144 | 13.562 | 30 | 28,3 | 4 | 2154 | 1745 | 250 | 12782 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7O12 | 9.439 | 7.144 | 13.567 | 37 | 31,2 | 4 | 2154 | 1745 | 250 | 12787 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7P12 | 9.530 | 7.144 | 13.658 | 45 | 33,6 | 4 | 2154 | 1745 | 250 | 12877 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7Q12 | 9.580 | 7.144 | 13.708 | 55 | 35,7 | 4 | 2154 | 1745 | 250 | 12927 | 5836 | 3651 | 2604 | 1895 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

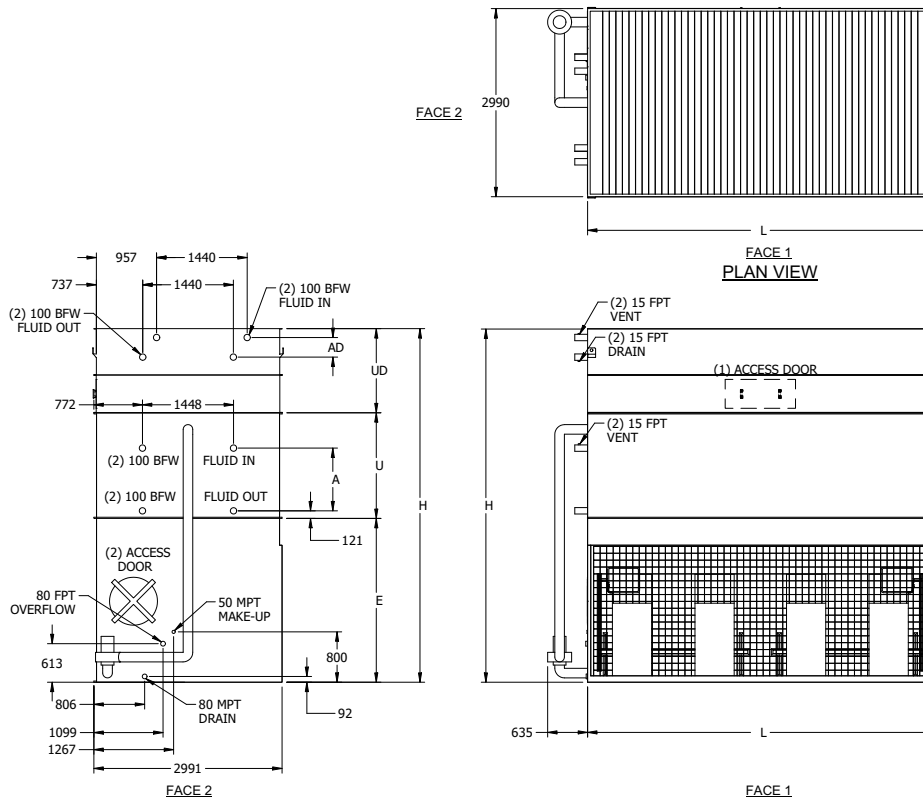
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 132 | 1043 | 961 |
| 4 | 140 | 220 | 1193 | 1195 |
| 6 | 175 | 303 | 1356 | 1441 |
| 8 | 241 | 386 | 1533 | 1701 |
| 10 | 311 | 473 | 1706 | 1963 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 10-3L18 THRU LSWA-H 10-7O18



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump | Coil | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|---------|----------------------------|------------|------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 10-3L18 | 8.491 | 5.230 | 12.909 | (2)18.5 | 44,4 | 5,5 | 1416 | 2150 | 300 | 11313 | 5189 | 5493 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3M18 | 8.537 | 5.230 | 12.955 | (2) 22 | 47,9 | 5,5 | 1416 | 2150 | 300 | 11358 | 5189 | 5493 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3N18 | 8.682 | 5.230 | 13.100 | (2) 30 | 50,9 | 5,5 | 1416 | 2150 | 300 | 11503 | 5189 | 5493 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3O18 | 8.691 | 5.230 | 13.109 | (2) 37 | 56 | 5,5 | 1416 | 2150 | 300 | 11512 | 5189 | 5493 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-4M18 | 9.811 | 6.505 | 14.683 | (2) 22 | 46,9 | 5,5 | 1870 | 2252 | 300 | 13190 | 5405 | 5493 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4N18 | 9.956 | 6.505 | 14.828 | (2) 30 | 49,9 | 5,5 | 1870 | 2252 | 300 | 13336 | 5405 | 5493 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4O18 | 9.965 | 6.505 | 14.837 | (2) 37 | 54,9 | 5,5 | 1870 | 2252 | 300 | 13345 | 5405 | 5493 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-5M18 | 11.040 | 7.734 | 16.361 | (2) 22 | 46 | 5,5 | 2320 | 2366 | 300 | 14982 | 5621 | 5493 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5N18 | 11.186 | 7.734 | 16.506 | (2) 30 | 48,9 | 5,5 | 2320 | 2366 | 300 | 15127 | 5621 | 5493 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5O18 | 11.195 | 7.734 | 16.515 | (2) 37 | 53,8 | 5,5 | 2320 | 2366 | 300 | 15136 | 5621 | 5493 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-6M18 | 12.315 | 9.008 | 18.089 | (2) 22 | 45 | 5,5 | 2771 | 2487 | 300 | 16828 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6N18 | 12.460 | 9.008 | 18.234 | (2) 30 | 47,9 | 5,5 | 2771 | 2487 | 300 | 16973 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6O18 | 12.469 | 9.008 | 18.243 | (2) 37 | 52,7 | 5,5 | 2771 | 2487 | 300 | 16982 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7M18 | 13.839 | 10.532 | 20.067 | (2) 22 | 44,1 | 5,5 | 3221 | 2487 | 300 | 18806 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7N18 | 13.984 | 10.532 | 20.212 | (2) 30 | 46,9 | 5,5 | 3221 | 2487 | 300 | 18951 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7O18 | 13.993 | 10.532 | 20.221 | (2) 37 | 51,6 | 5,5 | 3221 | 2487 | 300 | 18960 | 5836 | 5493 | 2604 | 1895 | 1213 | 1337 |

- NOTES:
- 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.
 - Weights don't include ARID Fin-Pak Dry Cooling Coil section.
 - Heaviest section is the coil section.
 - 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 or dimensions, quantity of coil connections, and piping configuration.

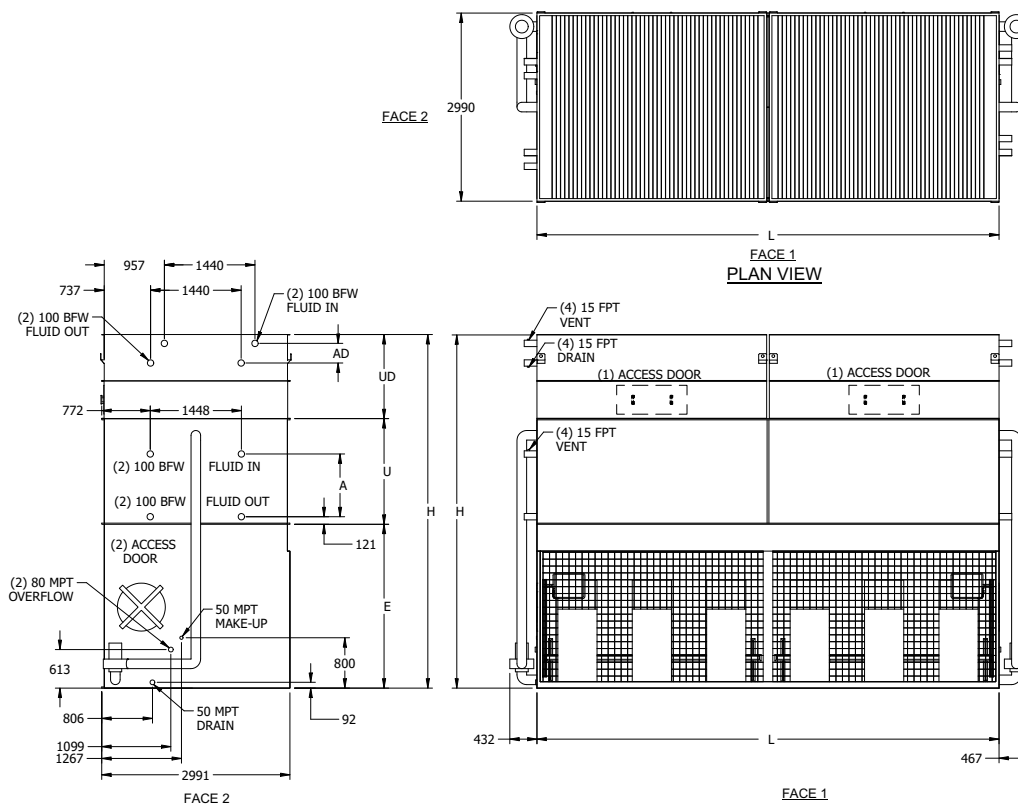
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 182 | 1406 | 1259 |
| 4 | 140 | 310 | 1637 | 1621 |
| 6 | 175 | 443 | 1887 | 2005 |
| 8 | 241 | 575 | 2159 | 2407 |
| 10 | 311 | 708 | 2436 | 2813 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LSWA-H 10-3N24 THRU LSWA-H 10-7Q24



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump | Coil | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|--------|----------------------------|------------|------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LSWA-H 10-3N24 | 11.467 | 4.318 | 17.395 | (2) 30 | 61,5 | (2) 4 | 1919 | 2869 | 250 | 15218 | 5189 | 7347 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3O24 | 11.476 | 4.327 | 17.404 | (2) 37 | 67,7 | (2) 4 | 1919 | 2869 | 250 | 15227 | 5189 | 7347 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3P24 | 11.657 | 4.509 | 17.586 | (2) 45 | 72,9 | (2) 4 | 1919 | 2869 | 250 | 15409 | 5189 | 7347 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-4N24 | 13.200 | 4.441 | 19.727 | (2) 30 | 60,3 | (2) 4 | 2514 | 3013 | 250 | 17695 | 5405 | 7347 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4O24 | 13.209 | 4.441 | 19.736 | (2) 37 | 66,3 | (2) 4 | 2514 | 3013 | 250 | 17704 | 5405 | 7347 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4P24 | 13.390 | 4.509 | 19.917 | (2) 45 | 71,5 | (2) 4 | 2514 | 3013 | 250 | 17885 | 5405 | 7347 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-5N24 | 14.851 | 5.266 | 21.977 | (2) 30 | 59,1 | (2) 4 | 3112 | 3157 | 250 | 20090 | 5621 | 7347 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5O24 | 14.860 | 5.266 | 21.986 | (2) 37 | 65 | (2) 4 | 3112 | 3157 | 250 | 20099 | 5621 | 7347 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5P24 | 15.041 | 5.266 | 22.167 | (2) 45 | 70 | (2) 4 | 3112 | 3157 | 250 | 20280 | 5621 | 7347 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-6N24 | 16.574 | 6.128 | 24.299 | (2) 30 | 57,9 | (2) 4 | 3710 | 3312 | 250 | 22566 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6O24 | 16.583 | 6.128 | 24.308 | (2) 37 | 63,7 | (2) 4 | 3710 | 3312 | 250 | 22575 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6P24 | 16.765 | 6.128 | 24.489 | (2) 45 | 68,6 | (2) 4 | 3710 | 3312 | 250 | 22757 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6Q24 | 16.865 | 6.128 | 24.594 | (2) 55 | 72,9 | (2) 4 | 3710 | 3312 | 250 | 22861 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7N24 | 18.606 | 7.144 | 26.930 | (2) 30 | 56,7 | (2) 4 | 4308 | 3312 | 250 | 25197 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7O24 | 18.615 | 7.144 | 26.939 | (2) 37 | 62,4 | (2) 4 | 4308 | 3312 | 250 | 25206 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7P24 | 18.797 | 7.144 | 27.120 | (2) 45 | 67,2 | (2) 4 | 4308 | 3312 | 250 | 25388 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7Q24 | 18.897 | 7.144 | 27.225 | (2) 55 | 71,4 | (2) 4 | 4308 | 3312 | 250 | 25492 | 5836 | 7347 | 2604 | 1895 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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.
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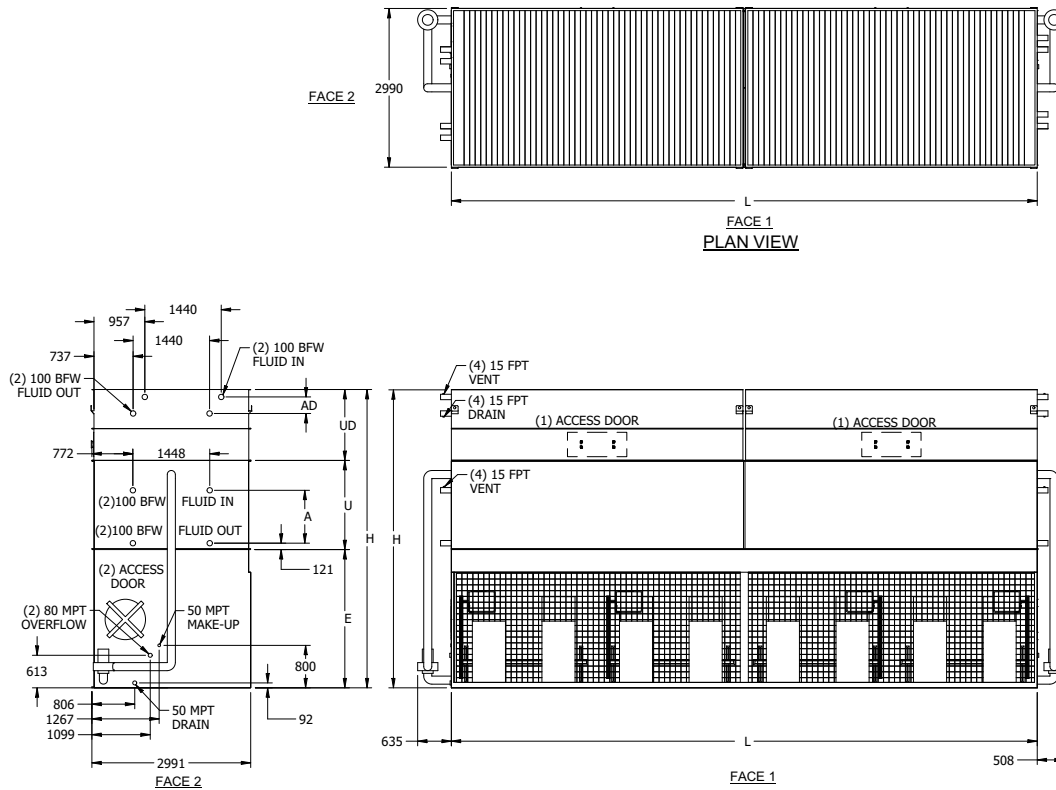
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 269 | 1043 | 1922 |
| 4 | 140 | 439 | 1193 | 2390 |
| 6 | 175 | 609 | 1356 | 2882 |
| 8 | 241 | 776 | 1533 | 3402 |
| 10 | 311 | 946 | 1706 | 3926 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LSWA-H 10-3L36 THRU LSWA-H 10-7O36



| Model No. ¹ | Weights (kg) ² | | | Fans | | Spray Pump | Coil | Remote Sump ⁵ | | | Dimensions (mm) ⁶ | | | | | |
|------------------------|---------------------------|-------------------------------|-----------|----------|----------------------------|------------|------|--------------------------|-----------------|------------------------------|------------------------------|-----------------------|----------|----------|---------|---------|
| | Shipping | Heaviest Section ³ | Operating | kW | Air Flow m ³ /s | | | kW | Volume (liters) | Liters ⁴ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U |
| LSWA-H 10-3L36 | 16.946 | 6.495 | 25.796 | (4) 18.5 | 88,9 | (2)5.5 | 2831 | 4361 | 300 | 22661 | 5189 | 11036 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3M36 | 17.037 | 6.586 | 25.886 | (4) 22 | 95,7 | (2)5.5 | 2831 | 4361 | 300 | 22752 | 5189 | 11036 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3N36 | 17.327 | 6.876 | 26.177 | (4) 30 | 101,7 | (2)5.5 | 2831 | 4361 | 300 | 23042 | 5189 | 11036 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-3O36 | 17.345 | 6.895 | 26.195 | (4) 37 | 112 | (2)5.5 | 2831 | 4361 | 300 | 23061 | 5189 | 11036 | 2604 | 1248 | 565 | 1337 |
| LSWA-H 10-4M36 | 19.586 | 6.586 | 29.334 | (4) 22 | 93,8 | (2)5.5 | 3736 | 4561 | 300 | 26399 | 5405 | 11036 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4N36 | 19.876 | 6.876 | 29.624 | (4) 30 | 99,7 | (2)5.5 | 3736 | 4561 | 300 | 26689 | 5405 | 11036 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-4O36 | 19.895 | 6.895 | 29.642 | (4) 37 | 109,8 | (2)5.5 | 3736 | 4561 | 300 | 26707 | 5405 | 11036 | 2604 | 1464 | 781 | 1337 |
| LSWA-H 10-5M36 | 22.054 | 7.734 | 32.699 | (4) 22 | 92 | (2)5.5 | 4641 | 4796 | 300 | 30001 | 5621 | 11036 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5N36 | 22.344 | 7.734 | 32.990 | (4) 30 | 97,7 | (2)5.5 | 4641 | 4796 | 300 | 30291 | 5621 | 11036 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-5O36 | 22.362 | 7.734 | 33.008 | (4) 37 | 107,6 | (2)5.5 | 4641 | 4796 | 300 | 30309 | 5621 | 11036 | 2604 | 1680 | 997 | 1337 |
| LSWA-H 10-6M36 | 24.603 | 9.008 | 36.156 | (4) 22 | 90,1 | (2)5.5 | 5542 | 5027 | 300 | 33684 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6N36 | 24.893 | 9.008 | 36.446 | (4) 30 | 95,7 | (2)5.5 | 5542 | 5027 | 300 | 33974 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-6O36 | 24.911 | 9.008 | 36.464 | (4) 37 | 105,4 | (2)5.5 | 5542 | 5027 | 300 | 33992 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7M36 | 27.651 | 10.532 | 40.111 | (4) 22 | 88,2 | (2)5.5 | 6447 | 5027 | 300 | 37639 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7N36 | 27.941 | 10.532 | 40.401 | (4) 30 | 93,7 | (2)5.5 | 6447 | 5027 | 300 | 37929 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |
| LSWA-H 10-7O36 | 27.959 | 10.532 | 40.420 | (4) 37 | 103,2 | (2)5.5 | 6447 | 5027 | 300 | 37948 | 5836 | 11036 | 2604 | 1895 | 1213 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- Heaviest section is the coil section.
- 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).
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- Unit dimensions and coil connections may vary slightly from catalog. See factory certified prints or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

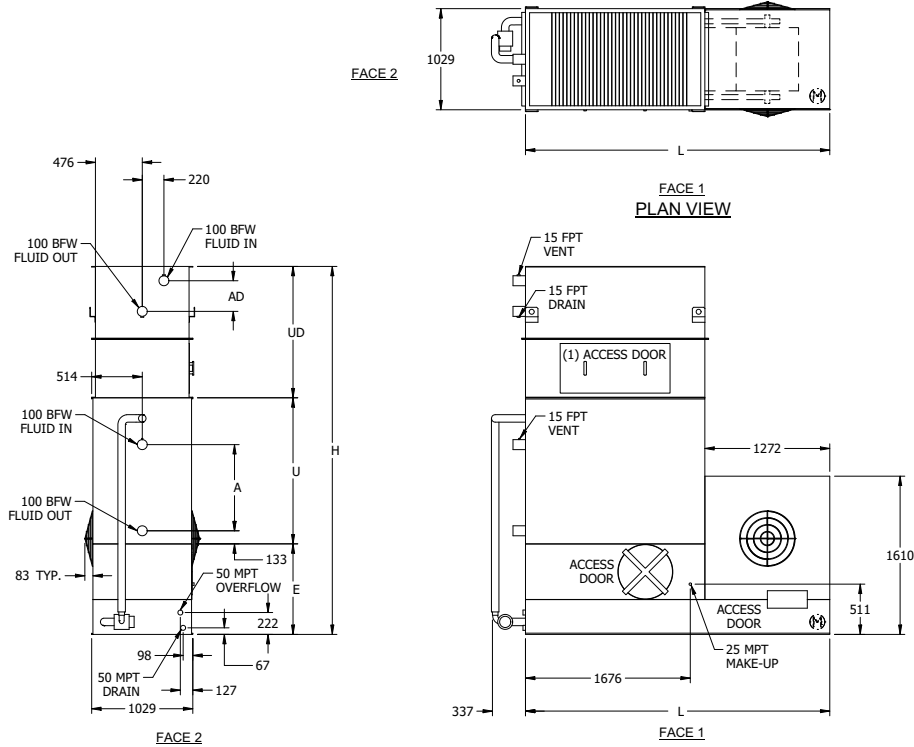
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 360 | 1406 | 2518 |
| 4 | 140 | 625 | 1637 | 3242 |
| 6 | 175 | 890 | 1887 | 4010 |
| 8 | 241 | 1147 | 2159 | 4814 |
| 10 | 311 | 1412 | 2436 | 5625 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LRW-H 3-2E6 THRU LRW-H 3-5J6

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 3-2E6 | 984 | 1.538 | 1,5 | 3,4 | 0,4 | 114 | 167 | 100 | 1134 | 3127 | 3096 | 921 | 914 | 305 | 1337 |
| LRW-H 3-2F6 | 998 | 1.551 | 2,2 | 3,8 | 0,4 | 114 | 167 | 100 | 1148 | 3127 | 3096 | 921 | 914 | 305 | 1337 |
| LRW-H 3-2G6 | 1.002 | 1.556 | 4 | 4,3 | 0,4 | 114 | 167 | 100 | 1152 | 3127 | 3096 | 921 | 914 | 305 | 1337 |
| LRW-H 3-2H6 | 1.025 | 1.579 | 5,5 | 5,1 | 0,4 | 114 | 167 | 100 | 1175 | 3127 | 3096 | 921 | 914 | 305 | 1337 |
| LRW-H 3-2I6 | 1.030 | 1.588 | 7,5 | 5,8 | 0,4 | 114 | 167 | 100 | 1179 | 3127 | 3096 | 921 | 914 | 305 | 1337 |
| LRW-H 3-3F6 | 1.129 | 1.728 | 2,2 | 3,7 | 0,4 | 163 | 167 | 100 | 1324 | 3363 | 3096 | 921 | 1105 | 495 | 1337 |
| LRW-H 3-3G6 | 1.134 | 1.733 | 4 | 4,2 | 0,4 | 163 | 167 | 100 | 1329 | 3363 | 3096 | 921 | 1105 | 495 | 1337 |
| LRW-H 3-3H6 | 1.157 | 1.755 | 5,5 | 5 | 0,4 | 163 | 167 | 100 | 1352 | 3363 | 3096 | 921 | 1105 | 495 | 1337 |
| LRW-H 3-3I6 | 1.161 | 1.764 | 7,5 | 5,7 | 0,4 | 163 | 167 | 100 | 1361 | 3363 | 3096 | 921 | 1105 | 495 | 1337 |
| LRW-H 3-4F6 | 1.270 | 1.919 | 2,2 | 3,6 | 0,4 | 208 | 167 | 100 | 1515 | 3553 | 3096 | 921 | 1295 | 686 | 1337 |
| LRW-H 3-4G6 | 1.275 | 1.923 | 4 | 4,1 | 0,4 | 208 | 167 | 100 | 1520 | 3553 | 3096 | 921 | 1295 | 686 | 1337 |
| LRW-H 3-4H6 | 1.297 | 1.946 | 5,5 | 4,9 | 0,4 | 208 | 167 | 100 | 1542 | 3553 | 3096 | 921 | 1295 | 686 | 1337 |
| LRW-H 3-4I6 | 1.302 | 1.955 | 7,5 | 5,6 | 0,4 | 208 | 167 | 100 | 1551 | 3553 | 3096 | 921 | 1295 | 686 | 1337 |
| LRW-H 3-5G6 | 1.433 | 2.127 | 4 | 4 | 0,4 | 254 | 167 | 100 | 1724 | 3744 | 3096 | 921 | 1486 | 876 | 1337 |
| LRW-H 3-5H6 | 1.456 | 2.150 | 5,5 | 4,8 | 0,4 | 254 | 167 | 100 | 1746 | 3744 | 3096 | 921 | 1486 | 876 | 1337 |
| LRW-H 3-5I6 | 1.461 | 2.159 | 7,5 | 5,5 | 0,4 | 254 | 167 | 100 | 1751 | 3744 | 3096 | 921 | 1486 | 876 | 1337 |
| LRW-H 3-5J6 | 1.520 | 2.214 | 11 | 6 | 0,4 | 254 | 167 | 100 | 1810 | 3744 | 3096 | 921 | 1486 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

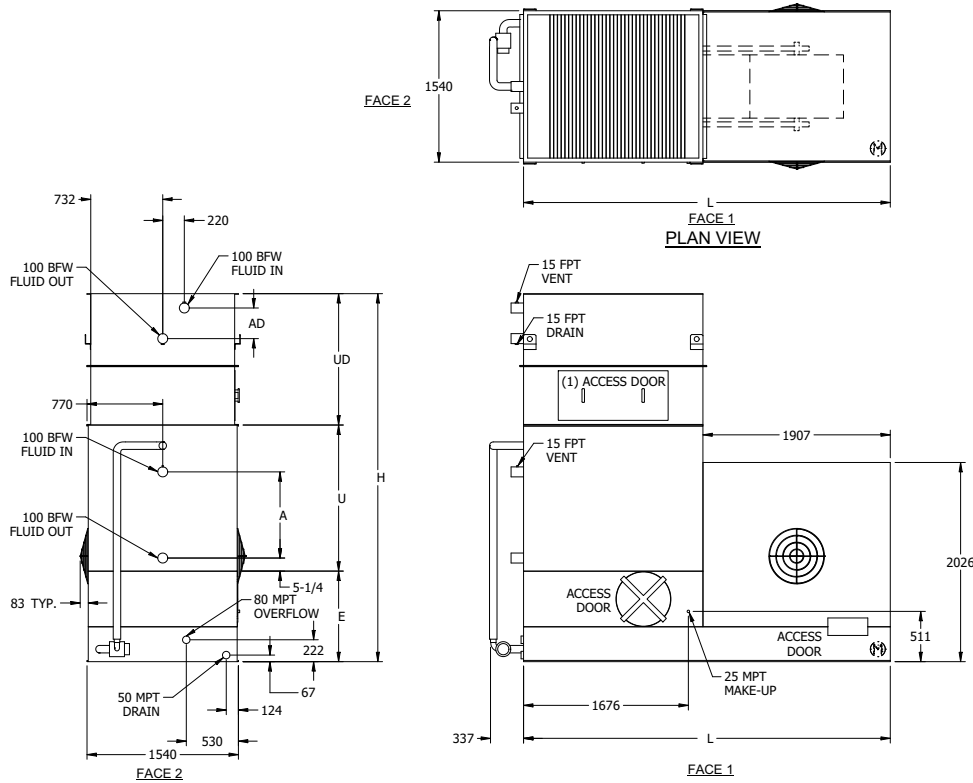
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 30 | 358 | 273 |
| 4 | 140 | 42 | 381 | 307 |
| 6 | 175 | 57 | 408 | 345 |
| 8 | 241 | 68 | 435 | 385 |
| 10 | 311 | 79 | 463 | 426 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LRW-H 5-2G6 THRU LRW-H 5-5J6



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|-------------------------------|------------------|-------------------------|---------------------------------|--------------------|--------------------------|------------------------------|-------------|------------|------------|-----------|-------------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 5-2G6 | 1.488 | 2.445 | 4 | 6,2 | 0,75 | 178 | 257 | 150 | 1755 | 3127 | 3731 | 921 | 914 | 305 | 1337 |
| LRW-H 5-2H6 | 1.510 | 2.468 | 5,5 | 7,4 | 0,75 | 178 | 257 | 150 | 1778 | 3127 | 3731 | 921 | 914 | 305 | 1337 |
| LRW-H 5-2I6 | 1.520 | 2.477 | 7,5 | 8,4 | 0,75 | 178 | 257 | 150 | 1787 | 3127 | 3731 | 921 | 914 | 305 | 1337 |
| LRW-H 5-2J6 | 1.574 | 2.531 | 11 | 9,3 | 0,75 | 178 | 257 | 150 | 1842 | 3127 | 3731 | 921 | 914 | 305 | 1337 |
| LRW-H 5-3G6 | 1.692 | 2.726 | 4 | 6,1 | 0,75 | 250 | 257 | 150 | 2037 | 3363 | 3731 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3H6 | 1.715 | 2.749 | 5,5 | 7,2 | 0,75 | 250 | 257 | 150 | 2059 | 3363 | 3731 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3I6 | 1.724 | 2.758 | 7,5 | 8,3 | 0,75 | 250 | 257 | 150 | 2068 | 3363 | 3731 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3J6 | 1.778 | 2.812 | 11 | 9,1 | 0,75 | 250 | 257 | 150 | 2123 | 3363 | 3731 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-4H6 | 1.928 | 3.035 | 5,5 | 7,1 | 0,75 | 322 | 257 | 150 | 2345 | 3553 | 3731 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-4I6 | 1.937 | 3.044 | 7,5 | 8,1 | 0,75 | 322 | 257 | 150 | 2354 | 3553 | 3731 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-4J6 | 1.991 | 3.098 | 11 | 8,9 | 0,75 | 322 | 257 | 150 | 2409 | 3553 | 3731 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-5H6 | 2.164 | 3.338 | 5,5 | 6,9 | 0,75 | 397 | 257 | 150 | 2649 | 3744 | 3731 | 921 | 1486 | 876 | 1337 |
| LRW-H 5-5I6 | 2.173 | 3.348 | 7,5 | 7,9 | 0,75 | 397 | 257 | 150 | 2658 | 3744 | 3731 | 921 | 1486 | 876 | 1337 |
| LRW-H 5-5J6 | 2.227 | 3.402 | 11 | 8,7 | 0,75 | 397 | 257 | 150 | 2712 | 3744 | 3731 | 921 | 1486 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

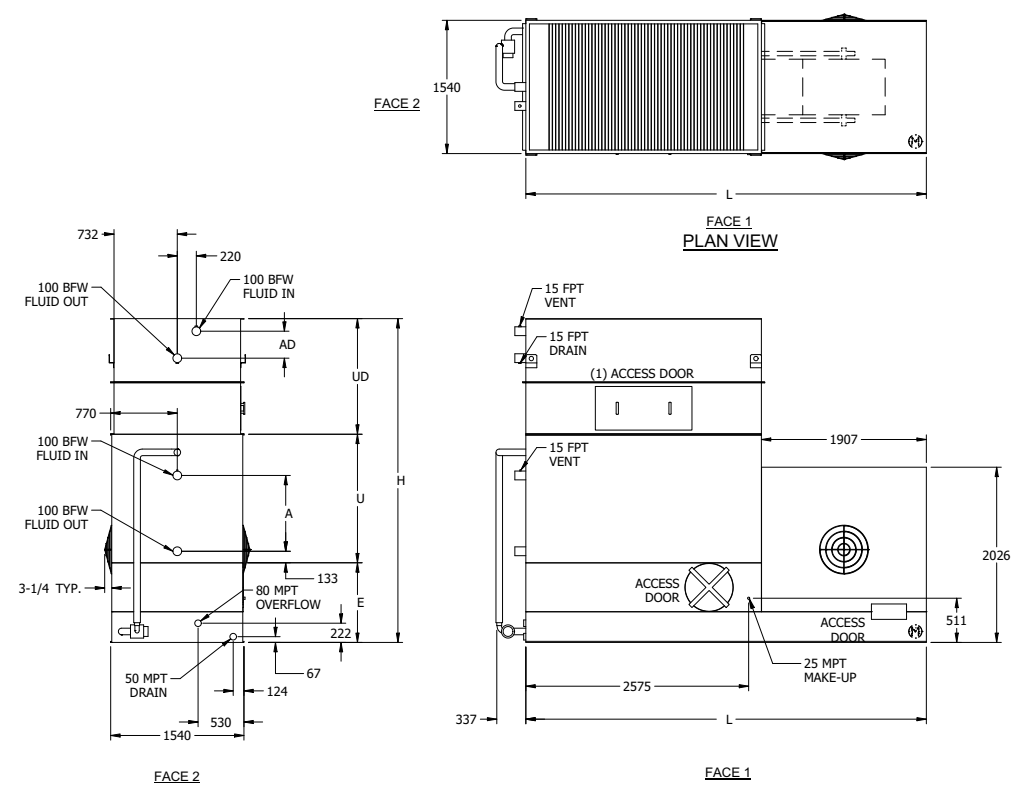
| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|---------------------------|------------|----------------------------------|-------------------------------------|-----------------------------------|
| 2 | 140 | 45 | 517 | 348 |
| 4 | 140 | 64 | 549 | 402 |
| 6 | 175 | 83 | 590 | 460 |
| 8 | 241 | 102 | 630 | 522 |
| 10 | 311 | 121 | 676 | 583 |

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LRW-H 5-3I9 THRU LRW-H 5-7L9

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 5-3I9 | 2.209 | 3.742 | 7,5 | 10,1 | 1,1 | 363 | 390 | 150 | 2744 | 3363 | 4629 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3J9 | 2.263 | 3.797 | 11 | 11,1 | 1,1 | 363 | 390 | 150 | 2799 | 3363 | 4629 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3K9 | 2.291 | 3.824 | 15 | 12,7 | 1,1 | 363 | 390 | 150 | 2826 | 3363 | 4629 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-3L9 | 2.304 | 3.837 | 18,5 | 14 | 1,1 | 363 | 390 | 150 | 2839 | 3363 | 4629 | 921 | 1105 | 495 | 1337 |
| LRW-H 5-4J9 | 2.590 | 4.237 | 11 | 10,9 | 1,1 | 477 | 390 | 150 | 3239 | 3553 | 4629 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-4K9 | 2.617 | 4.264 | 15 | 12,5 | 1,1 | 477 | 390 | 150 | 3266 | 3553 | 4629 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-4L9 | 2.631 | 4.277 | 18,5 | 13,7 | 1,1 | 477 | 390 | 150 | 3279 | 3553 | 4629 | 921 | 1295 | 686 | 1337 |
| LRW-H 5-5J9 | 2.930 | 4.690 | 11 | 10,7 | 1,1 | 587 | 390 | 150 | 3692 | 3744 | 4629 | 921 | 1486 | 876 | 1337 |
| LRW-H 5-5K9 | 2.957 | 4.717 | 15 | 12,2 | 1,1 | 587 | 390 | 150 | 3719 | 3744 | 4629 | 921 | 1486 | 876 | 1337 |
| LRW-H 5-5L9 | 2.971 | 4.731 | 18,5 | 13,5 | 1,1 | 587 | 390 | 150 | 3733 | 3744 | 4629 | 921 | 1486 | 876 | 1337 |
| LRW-H 5-6J9 | 3.225 | 5.094 | 11 | 10,5 | 1,1 | 700 | 390 | 150 | 4096 | 3934 | 4629 | 921 | 1676 | 1067 | 1337 |
| LRW-H 5-6K9 | 3.252 | 5.121 | 15 | 12 | 1,1 | 700 | 390 | 150 | 4123 | 3934 | 4629 | 921 | 1676 | 1067 | 1337 |
| LRW-H 5-6L9 | 3.266 | 5.135 | 18,5 | 13,2 | 1,1 | 700 | 390 | 150 | 4137 | 3934 | 4629 | 921 | 1676 | 1067 | 1337 |
| LRW-H 5-7J9 | 3.592 | 5.570 | 11 | 10,2 | 1,1 | 810 | 390 | 150 | 4572 | 4080 | 4629 | 921 | 1822 | 1213 | 1337 |
| LRW-H 5-7K9 | 3.620 | 5.597 | 15 | 11,7 | 1,1 | 810 | 390 | 150 | 4599 | 4080 | 4629 | 921 | 1822 | 1213 | 1337 |
| LRW-H 5-7L9 | 3.633 | 5.611 | 18,5 | 12,9 | 1,1 | 810 | 390 | 150 | 4613 | 4080 | 4629 | 921 | 1822 | 1213 | 1337 |

- NOTES:**
- 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.
 - Weights don't include ARID Fin-Pak Dry Cooling Coil section.
 - 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 or dimensions, quantity of coil connections, and piping configuration.

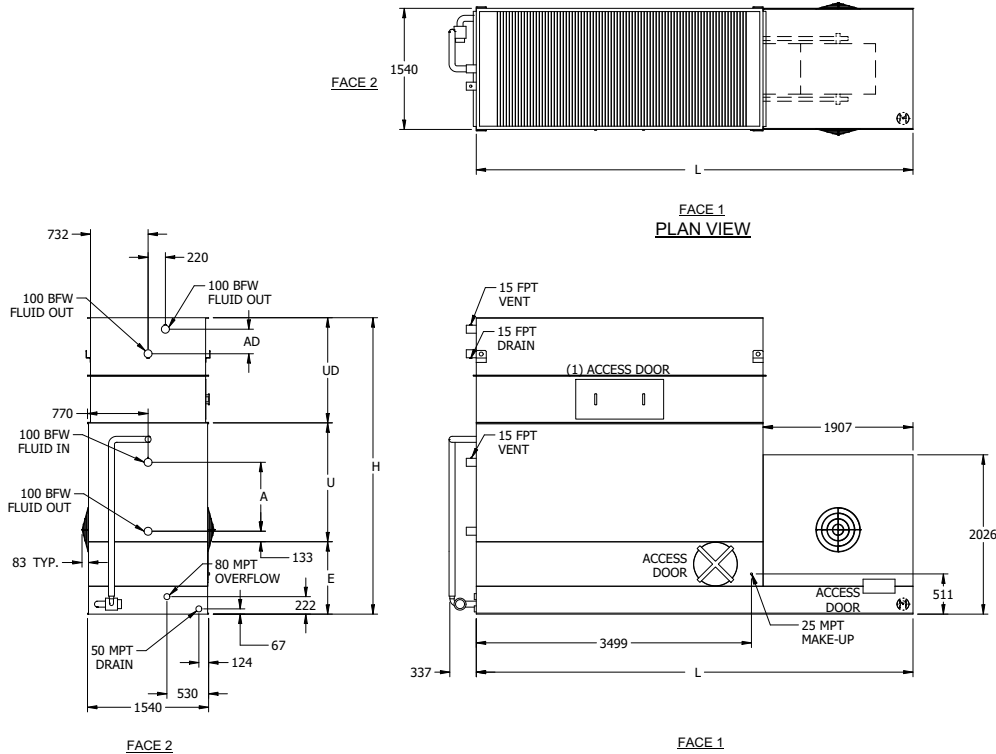
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 57 | 630 | 442 |
| 4 | 140 | 87 | 685 | 526 |
| 6 | 175 | 117 | 744 | 617 |
| 8 | 241 | 148 | 812 | 714 |
| 10 | 311 | 178 | 875 | 811 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LRW-H 5-3K12 THRU LRW-H 5-7O12



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 5-3K12 | 2.744 | 4.813 | 15 | 14,3 | 1,5 | 481 | 530 | 200 | 3497 | 3388 | 5553 | 921 | 1130 | 565 | 1337 |
| LRW-H 5-3L12 | 2.758 | 4.826 | 18,5 | 15,7 | 1,5 | 481 | 530 | 200 | 3511 | 3388 | 5553 | 921 | 1130 | 565 | 1337 |
| LRW-H 5-3M12 | 2.781 | 4.849 | 22 | 16,9 | 1,5 | 481 | 530 | 200 | 3533 | 3388 | 5553 | 921 | 1130 | 565 | 1337 |
| LRW-H 5-3N12 | 2.853 | 4.921 | 30 | 18 | 1,5 | 481 | 530 | 200 | 3606 | 3388 | 5553 | 921 | 1130 | 565 | 1337 |
| LRW-H 5-4K12 | 3.184 | 5.402 | 15 | 14 | 1,5 | 628 | 530 | 200 | 4087 | 3579 | 5553 | 921 | 1321 | 781 | 1337 |
| LRW-H 5-4L12 | 3.198 | 5.416 | 18,5 | 15,4 | 1,5 | 628 | 530 | 200 | 4100 | 3579 | 5553 | 921 | 1321 | 781 | 1337 |
| LRW-H 5-4M12 | 3.221 | 5.439 | 22 | 16,6 | 1,5 | 628 | 530 | 200 | 4123 | 3579 | 5553 | 921 | 1321 | 781 | 1337 |
| LRW-H 5-4N12 | 3.293 | 5.511 | 30 | 17,6 | 1,5 | 628 | 530 | 200 | 4196 | 3579 | 5553 | 921 | 1321 | 781 | 1337 |
| LRW-H 5-5L12 | 3.624 | 5.996 | 18,5 | 15,1 | 1,5 | 780 | 530 | 200 | 4681 | 3769 | 5553 | 921 | 1511 | 997 | 1337 |
| LRW-H 5-5M12 | 3.647 | 6.019 | 22 | 16,2 | 1,5 | 780 | 530 | 200 | 4704 | 3769 | 5553 | 921 | 1511 | 997 | 1337 |
| LRW-H 5-5N12 | 3.719 | 6.092 | 30 | 17,3 | 1,5 | 780 | 530 | 200 | 4776 | 3769 | 5553 | 921 | 1511 | 997 | 1337 |
| LRW-H 5-5O12 | 3.724 | 6.096 | 37 | 19 | 1,5 | 780 | 530 | 200 | 4781 | 3769 | 5553 | 921 | 1511 | 997 | 1337 |
| LRW-H 5-6M12 | 4.046 | 6.568 | 22 | 15,9 | 1,5 | 927 | 530 | 200 | 5253 | 3960 | 5553 | 921 | 1702 | 1213 | 1337 |
| LRW-H 5-6N12 | 4.119 | 6.641 | 30 | 16,9 | 1,5 | 927 | 530 | 200 | 5325 | 3960 | 5553 | 921 | 1702 | 1213 | 1337 |
| LRW-H 5-6O12 | 4.123 | 6.645 | 37 | 18,6 | 1,5 | 927 | 530 | 200 | 5330 | 3960 | 5553 | 921 | 1702 | 1213 | 1337 |
| LRW-H 5-7M12 | 4.618 | 7.285 | 22 | 15,6 | 1,5 | 1079 | 530 | 200 | 5969 | 4106 | 5553 | 921 | 1848 | 1213 | 1337 |
| LRW-H 5-7N12 | 4.690 | 7.357 | 30 | 16,6 | 1,5 | 1079 | 530 | 200 | 6042 | 4106 | 5553 | 921 | 1848 | 1213 | 1337 |
| LRW-H 5-7O12 | 4.695 | 7.362 | 37 | 18,2 | 1,5 | 1079 | 530 | 200 | 6046 | 4106 | 5553 | 921 | 1848 | 1213 | 1337 |

- NOTES:
- 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.
 - Weights don't include ARID Fin-Pak Dry Cooling Coil section.
 - 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 68 | 798 | 572 |
| 4 | 140 | 110 | 875 | 688 |
| 6 | 175 | 151 | 953 | 811 |
| 8 | 241 | 193 | 1043 | 941 |
| 10 | 311 | 238 | 1129 | 1072 |

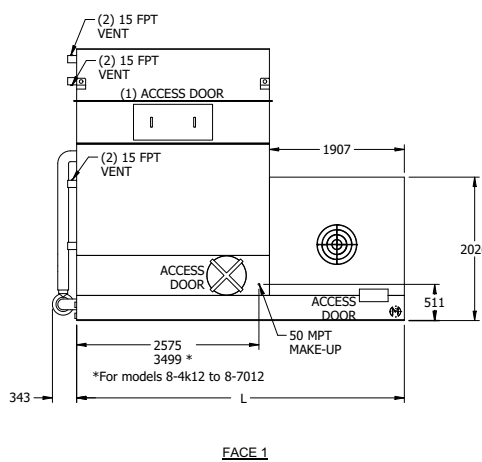
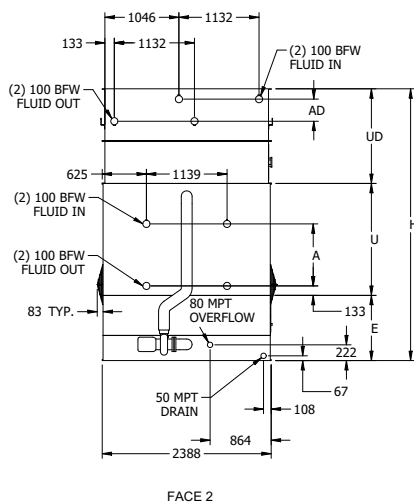
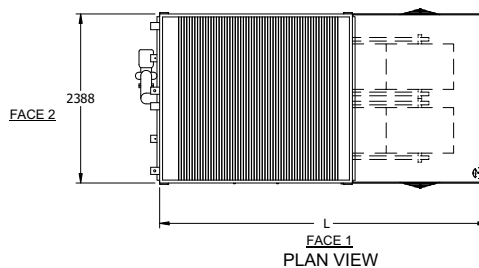
ENGINEERING

LSWA-H & LRW-H

ENGINEERING DATA AND DIMENSIONS

MODELS LRW-H 8-3K9 THRU LRW-H 8-5N9

ENGINEERING



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 8-3K9 | 3.393 | 5.502 | 15 | 17,1 | 1,5 | 575 | 344 | 200 | 4051 | 3458 | 4629 | 921 | 1200 | 495 | 1337 |
| LRW-H 8-3L9 | 3.406 | 5.516 | 18,5 | 18,8 | 1,5 | 575 | 344 | 200 | 4064 | 3458 | 4629 | 921 | 1200 | 495 | 1337 |
| LRW-H 8-3M9 | 3.429 | 5.538 | 22 | 20,3 | 1,5 | 575 | 344 | 200 | 4087 | 3458 | 4629 | 921 | 1200 | 495 | 1337 |
| LRW-H 8-3N9 | 3.502 | 5.611 | 30 | 21,5 | 1,5 | 575 | 344 | 200 | 4159 | 3458 | 4629 | 921 | 1200 | 495 | 1337 |
| LRW-H 8-4K9 | 3.883 | 6.164 | 15 | 16,8 | 1,5 | 750 | 344 | 200 | 4713 | 3649 | 4629 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4L9 | 3.896 | 6.178 | 18,5 | 18,4 | 1,5 | 750 | 344 | 200 | 4726 | 3649 | 4629 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4M9 | 3.919 | 6.201 | 22 | 19,9 | 1,5 | 750 | 344 | 200 | 4749 | 3649 | 4629 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4N9 | 3.992 | 6.273 | 30 | 21,1 | 1,5 | 750 | 344 | 200 | 4822 | 3649 | 4629 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-5L9 | 4.509 | 6.972 | 18,5 | 18,1 | 1,5 | 927 | 344 | 200 | 5520 | 3839 | 4629 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-5M9 | 4.531 | 6.994 | 22 | 19,5 | 1,5 | 927 | 344 | 200 | 5543 | 3839 | 4629 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-5N9 | 4.604 | 7.067 | 30 | 20,7 | 1,5 | 927 | 344 | 200 | 5615 | 3839 | 4629 | 921 | 1581 | 876 | 1337 |

NOTES:

- 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.
- Weights don't include ARID Fin-Pak Dry Cooling Coil section.
- 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 or dimensions, quantity of coil connections, and piping configuration.

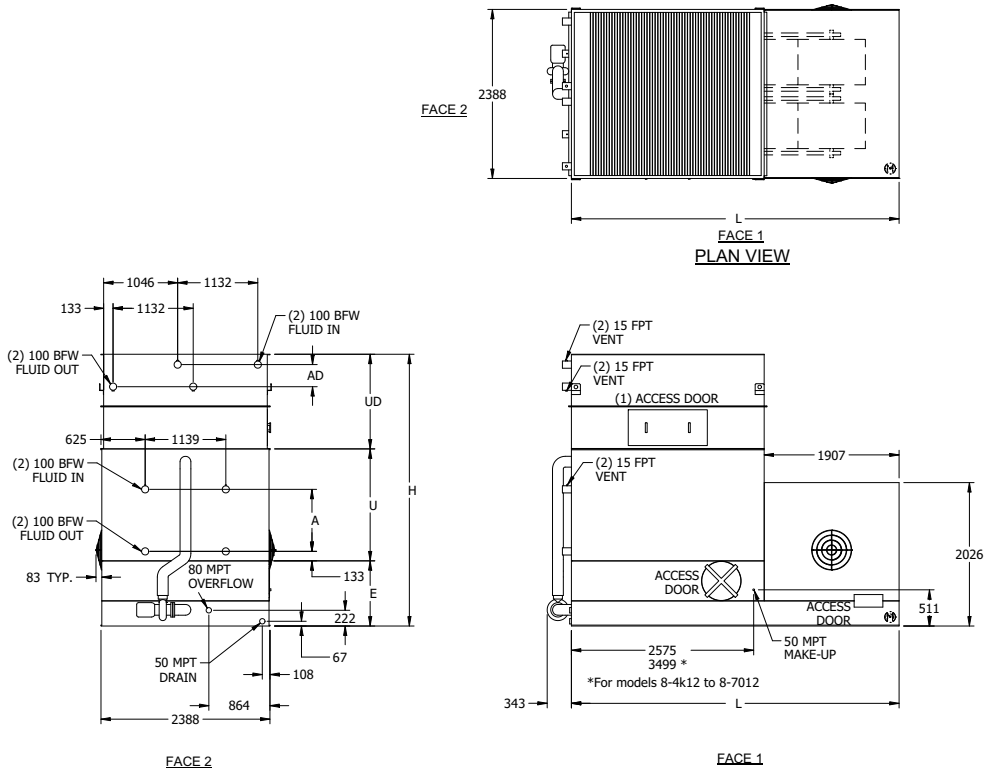
ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 83 | 789 | 584 |
| 4 | 140 | 132 | 875 | 717 |
| 6 | 175 | 178 | 971 | 858 |
| 8 | 241 | 227 | 1070 | 1007 |
| 10 | 311 | 276 | 1170 | 1156 |

ENGINEERING DATA AND DIMENSIONS

LSWA-H & LRW-H

MODELS LRW-H 8-4L12 THRU LRW-H 8-7P12



| Model No. ¹ | Weights (kg) ² | | Fans | | Spray Pump kW | Coil Volume (liters) | Remote Sump ⁴ | | | Dimensions (mm) ⁵ | | | | | |
|------------------------|---------------------------|-----------|------|----------------------------|---------------|----------------------|------------------------------|-----------------|-----------------------|------------------------------|----------|---------|---------|--------|----------|
| | Shipping | Operating | kW | Air Flow m ³ /s | | | Liters ³ Required | Conn. Size (mm) | Operating Weight (kg) | Height H | Length L | Lower E | Upper U | Coil A | Upper UD |
| LRW-H 8-4L12 | 4.645 | 7.756 | 18,5 | 21,5 | 1,5 | 992 | 466 | 250 | 5815 | 3649 | 5553 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4M12 | 4.667 | 7.779 | 22 | 23,2 | 1,5 | 992 | 466 | 250 | 5838 | 3649 | 5553 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4N12 | 4.740 | 7.852 | 30 | 24,6 | 1,5 | 992 | 466 | 250 | 5910 | 3649 | 5553 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4O12 | 4.745 | 7.856 | 37 | 27,1 | 1,5 | 992 | 466 | 250 | 5915 | 3649 | 5553 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-4P12 | 4.835 | 7.947 | 45 | 29,2 | 1,5 | 992 | 466 | 250 | 6006 | 3649 | 5553 | 921 | 1391 | 686 | 1337 |
| LRW-H 8-5M12 | 5.330 | 8.677 | 22 | 22,7 | 1,5 | 1226 | 466 | 250 | 6736 | 3839 | 5553 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-5N12 | 5.402 | 8.750 | 30 | 24,2 | 1,5 | 1226 | 466 | 250 | 6808 | 3839 | 5553 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-5O12 | 5.407 | 8.754 | 37 | 26,6 | 1,5 | 1226 | 466 | 250 | 6813 | 3839 | 5553 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-5P12 | 5.498 | 8.845 | 45 | 28,6 | 1,5 | 1226 | 466 | 250 | 6904 | 3839 | 5553 | 921 | 1581 | 876 | 1337 |
| LRW-H 8-6N12 | 6.028 | 9.612 | 30 | 23,7 | 1,5 | 1461 | 466 | 250 | 7670 | 4030 | 5553 | 921 | 1772 | 1067 | 1337 |
| LRW-H 8-6O12 | 6.033 | 9.616 | 37 | 26 | 1,5 | 1461 | 466 | 250 | 7675 | 4030 | 5553 | 921 | 1772 | 1067 | 1337 |
| LRW-H 8-6P12 | 6.123 | 9.707 | 45 | 28 | 1,5 | 1461 | 466 | 250 | 7765 | 4030 | 5553 | 921 | 1772 | 1067 | 1337 |
| LRW-H 8-7N12 | 6.772 | 10.591 | 30 | 23,2 | 1,5 | 1696 | 466 | 250 | 8650 | 4176 | 5553 | 921 | 1918 | 1213 | 1337 |
| LRW-H 8-7O12 | 6.777 | 10.596 | 37 | 25,5 | 1,5 | 1696 | 466 | 250 | 8655 | 4176 | 5553 | 921 | 1918 | 1213 | 1337 |
| LRW-H 8-7P12 | 6.867 | 10.687 | 45 | 27,5 | 1,5 | 1696 | 466 | 250 | 8745 | 4176 | 5553 | 921 | 1918 | 1213 | 1337 |

- NOTES:
- 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.
 - Weights don't include ARID Fin-Pak Dry Cooling Coil section.
 - 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 or dimensions, quantity of coil connections, and piping configuration.

ARID Fin-Pak Cooling Coil Section

| ARID Fin-Pak Coil Rows | AD (mm) | Coil Volume (liters) per unit | Shipping Weight (kg) per section | Operating Weight (kg) per unit |
|------------------------|---------|-------------------------------|----------------------------------|--------------------------------|
| 2 | 140 | 102 | 998 | 744 |
| 4 | 140 | 167 | 1116 | 928 |
| 6 | 175 | 235 | 1243 | 1120 |
| 8 | 241 | 299 | 1374 | 1321 |
| 10 | 311 | 363 | 1510 | 1522 |

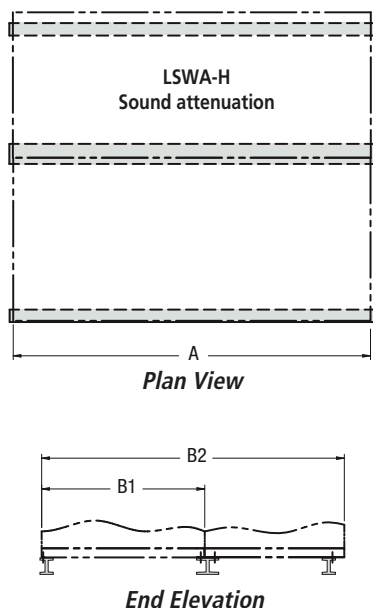
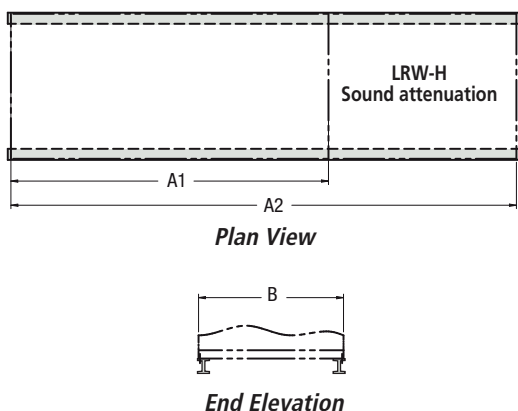
LSWA-H & LRW-H

STRUCTURAL STEEL SUPPORT

Structural Steel Support

The recommended method of support for the LSWA-H & LRW-H closed evaporative coolers is two structural "I" beams located under the outer flanges and running the entire length of the unit. Intake sound attenuation must be fully supported. An extended "I" beam is required for the intake attenuation of LRW-H units. A third "I" beam is required for the intake attenuation of LSWA-H units.

Mounting holes 19 mm in diameter, are located at the bottom channels of the pan section to provide for bolting to the structural steel. Refer to certified drawings from the factory for bolt hole locations. See the drawing and chart below for unit dimensions.



| LRW-H Dimensions | | | |
|------------------|------|------|------|
| Model No. | A1 | A2 | B |
| 3-2E6 to 3-5J6 | 3097 | 4205 | 1034 |
| 5-2G6 to 5-5J6 | 3734 | 4842 | 1544 |
| 5-3I9 to 5-7L9 | 4632 | 5740 | 1544 |
| 5-3K12 to 5-7O12 | 5556 | 6664 | 1544 |
| 8-3K9 to 8-5N9 | 4632 | 5740 | 2391 |
| 8-4L12 to 8-7P12 | 5556 | 6664 | 2391 |

| LSWA-H Dimensions | | | |
|--------------------|-------|------|------|
| Model No. | A | B1 | B2 |
| 4-2G6 to 4-5J6 | 1826 | 1235 | 3036 |
| 4-3H9 to 4-5K9 | 2724 | 1235 | 3036 |
| 4-3I12 to 4-5L12 | 3645 | 1235 | 3036 |
| 4-3J18 to 4-5N18 | 5486 | 1235 | 3036 |
| 5-3J12 to 5-7N12 | 3645 | 1652 | 3453 |
| 5-3K18 to 5-7O18 | 5483 | 1652 | 3453 |
| 8P-3L12 to 8P-7P12 | 3651 | 2388 | 4188 |
| 8P-3N18 to 8P-7Q18 | 5486 | 2388 | 4188 |
| 8P-3L24 to 8P-7P24 | 7341 | 2388 | 4188 |
| 8P-3N36 to 8P-7Q36 | 11030 | 2388 | 4188 |
| 10-3N12 to 10-7Q12 | 3651 | 2991 | 4792 |
| 10-3L18 to 10-7O18 | 5493 | 2991 | 4792 |
| 10-3N24 to 10-7Q24 | 7343 | 2991 | 4792 |
| 10-3L36 to 10-7O36 | 11036 | 2991 | 4792 |

Note:

- 1) Beams should be level to within 1/360 of unit length, not to exceed 13 mm before setting the unit in place.
- 2) Do not level the unit by shimming between it and the "I" beams as this will not provide proper longitudinal support.
- 3) Beams should be sized in accordance with accepted structural practices. Support beams and anchor bolts are to be furnished by others.

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LSWA-H & LRW-H

1.0 FORCED DRAFT CLOSED CIRCUIT COOLER

1.1 General – LSWA-H

Furnish and install factory assembled closed circuit cooler of blow through, counterflow design with a horizontal single air side entry and a vertical air discharge. The unit shall be completely factory assembled and be conform to the specifications and schedules.

The total fan power should not exceed ____ kW and the total overall unit dimensions should not exceed the following:

Length: mm
Width: mm
Height: mm

The unit will be delivered in three parts: the bottom section (pan-fan), the middle section (heat transfer - wet coil and spray system) and the top section (heat transfer – dry coil). The unit (top, middle and bottom section) shall be joined together with elastic sealer and bolted together with corrosion resistance fasteners.

Approved manufacturer: Evapco – LSWA-H _____

General – LRW-H

Furnish and install factory assembled closed circuit cooler of blow through, counterflow design with a horizontal single air side entry and a vertical air discharge. The unit shall be completely factory assembled and be conform to the specifications and schedules.

The total fan power should not exceed ____ kW and the total overall unit dimensions should not exceed the following:

Length: mm
Width: mm
Height: mm

The unit will be delivered in two parts: the bottom section (pan, fan, wet coil and spray system) and the top section (heat transfer - wet coil and spray section).

The unit (top, middle and bottom section) shall be joined together with elastic sealer and bolted together with corrosion resistance fasteners.

Approved manufacturer: Evapco – LRW-H _____

1.2 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 guaranteed by the manufacturer.

1.3 Applicable Standards

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

1.4 Submittals

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

1.5 Product Delivery – Storage and Handling

- a) The contractor shall make the provisions for proper storage at site before installation and handle the product per the instructions of the manufacturer.

- b) Once installed provide the necessary measures that the units remain clean and protected from any dust and mechanical damage.

1.6 Quality Assurance

- a) The manufacturer shall have a quality assurance system in place which is certified by an accredited registrar and complying with the requirements of ISO 9001:2008. This is to guarantee a consistent level of product and service quality.
- b) Manufacturers without ISO 9001:2008 certification are not acceptable.

1.7 Warranty

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

2.0 PRODUCT

2.1 Construction – Corrosion Resistance

STANDARD EXECUTION – GALVANIZED STEEL Z-725

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

OPTIONAL EXECUTION – BASIN IN SST 304L

- a) The structure and all steel elements of the pan up to the water level shall be made of SST 304L.
- b) Alternatives with hot dip galvanized steel and epoxy coatings in lieu of the SST 304L are not considered equal and will not be accepted.
- c) All other steel components and the casing shall be constructed of Z-725 hot dip galvanized steel for long life and durability. Alternatives with lower zinc layer thickness and external paint or coating are not accepted as equal.
- d) The strainer shall be made of stainless steel type 304L.
- e) During fabrication all galvanized steel panel edges shall be coated with a 95 % pure zinc compound.
- f) Casing materials shall be of non flammable construction.

OPTIONAL EXECUTION – COMPLETE UNIT IN STAINLESS STEEL SST 304L (except moving parts)

- a) The structure and all steel elements shall be made of SST 304L.
- b) Alternatives with hot dip galvanized steel and epoxy coatings to replace the SST 304L are not considered equal and accepted.
- c) Casing materials shall be of non flammable construction.

2.2 Pan / Fan section

- a) The heat transfer section shall be removable from the pan to provide easy handling and rigging.
- b) The pan – fan section shall include fans and drives mounted and aligned in the factory. These items shall be located in the dry air stream.
- c) Standard pan accessories shall included circular access doors, strainer(s) of anti vortex design, brass make up valve with unsinkable, foam filled plastic float arranged for easy adjustment.
- d) The basin bottom shall be sloped to provide drainage of the complete basin section.

2.3 Mechanical Equipment

2.3.1 Fan(s)

- a) Fans shall be dynamically balanced forwardly curved centrifugal type fans.

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- b) Fan housings shall have curved inlet rings for efficient air entry and rectangular discharge cowls which extend into the basin to increase fan efficiency and to prevent water from splashing into the fans.
- c) Curved inlet rings shall be made of the same material as the closed circuit cooler.
- d) All fans will undergo a dry running test in the factory after being installed in the closed circuit cooler basin.
- e) The fans will be mounted on either a solid shaft with forged bearing journals.
- f) Easy to remove fan screens shall be provided to avoid direct contact with the moving parts.

2.3.2 Bearings and Drive

- a) The fan shaft(s) shall be supported by heavy duty, self aligning pillow block bearings with cast iron housings and lubrication fittings for maintenance.
- b) The fan drives shall be V belt type with taper lock sheaves designed for 150 % of the motor nameplate horsepower.
- c) The bearings shall be rated for an L-10 life of 40,000 hours.

2.3.3 Motor

- a) The fan motor shall be Totally Enclosed, Fan Cooled (TEFC), squirrel cage, ball bearing type motor.
- b) The motor shall be minimum IP 55 degree of protection, Class F insulation, Service Factor 1 and selected for the appropriate closed circuit cooler duty and the correct ambient temperature but minimum 40°C.
- c) Motor bearings shall be greased for life or external grease lines shall be provided.
- d) The motor shall be mounted on an adjustable heavy duty steel motor base.
- e) The motor selection shall be selected for the appropriate external static pressure.
- f) The motor power supply shall be ___ volts, ___ Hertz and ___ Phase.

2.4. Casing Section

2.4.1 Latent Heat Transfer 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.
- b) The heat transfer coil(s) shall be made of all prime surface, encased in a steel framework and hot dip galvanized after fabrication as a complete assembly.
- c) The tubes shall be arranged in a self spacing, staggered pattern in the direction of air flow for maximum heat transfer efficiency and minimum pressure drop.
- d) The heat exchange coils shall be air pressure tested under water.
- e) The design and manufacturing process shall be approved and in accordance with the "Pressure Equipment Directive" – PED 97 / 23 EC.
- f) The manufacturer shall be responsible for the manufacturing and performance testing of the entire heat transfer coil. This is to assure single source responsibility.
- g) The casing shall totally encase the complete coil section to protect the complete coil from direct atmospheric contact.
- h) The pressure drop of the process fluid through the coil shall not exceed ___ kPa.

OPTIONAL – Latent Heat Transfer Coil in SST 304L

- 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.
- b) The heat transfer coil(s) shall be made of SST 304L encased in an SST 304L framework and passivated after fabrication as a complete assembly.
- c) The tubes shall be arranged in a self spacing, staggered pattern in the direction of air flow for maximum heat transfer efficiency and minimum pressure drop.
- d) The heat exchange coils shall be air pressure tested under water.

- e) The design and manufacturing process shall be approved and in accordance with the "Pressure Equipment Directive" – PED 97 / 23 EC.
- f) The manufacturer shall be responsible for the manufacturing and performance testing of the entire heat transfer coil. This is to assure single source responsibility.
- g) The casing shall totally encase the complete coil section to protect the complete coil from direct atmospheric contact.
- h) The pressure drop of the process fluid through the coil shall not exceed ___ kPa.

2.4.2 Sensible Heat Transfer Coil

- a) The sensible heat transfer coil is installed in the air discharge of the closed circuit cooler and should be piped in series with the wet coil.
- b) The sensible heat transfer coil shall be constructed of copper tubes with tubular copper headers.
- 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 consistent 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 3 mm to avoid clogging.
- f) The coils should be placed in a heavy-duty galvanized Z-725 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 16 barg.

OPTIONAL – Sensible Heat Transfer Coil in SST 304L

- a) The sensible heat transfer coil is installed in the air discharge of the closed circuit cooler and should be piped in series with the wet coil.
- b) The sensible heat transfer coil shall be constructed of SST 304L tubes with tubular SST 304L headers.
- 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 consistent 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 3 mm to avoid clogging.
- f) The coils should be placed in a heavy-duty SST 304L 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 16 barg.

2.4.3 Water Distribution

- a) The spray header and branches shall be constructed of Schedule 40, Polyvinyl Chloride (PVC) pipe for corrosion resistance and shall have a steel connection to attach the external piping.
- b) The internal tower water distribution piping shall be easily removable for cleaning purposes.
- c) The water shall be distributed over the fill by precision molded ABS spray nozzles with large minimum 25 mm orifice openings and integral sludge ring to eliminate clogging.
- d) The nozzles shall be threaded into the water distribution piping to assure positive positioning.
- e) Each cell shall have only one hot water return inlet, otherwise the closed circuit cooler manufacturer shall provide the necessary extra provisions (piping, balancing valves, ...) to achieve the same at no extra cost.

2.4.4 Drift Eliminators

- a) The drift eliminators shall be constructed entirely inert polyvinyl (PVC) that has been specially treated to resist ultra violet light. external piping.

2.5 Sound Levels

The maximum sound pressure levels (dB) measured 15m from

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the closed circuit cooler operating at full fan speed shall not exceed the sound levels detailed below.

| | | | | | | | | | |
|-----------|------|-------|-------|-------|--------|--------|--------|--------|-------|
| Location | 63Hz | 125Hz | 250Hz | 500Hz | 1000Hz | 2000Hz | 4000Hz | 8000Hz | dB(A) |
| Discharge | | | | | | | | | |
| Air inlet | | | | | | | | | |

3.0 ACCESSORIES (optional)

3.1 Electric Heaters

- a) The closed circuit cooler cold water basin shall be provided with a electric heater package to prevent freezing of the water in the cold water basin.
- b) The electric heater package includes: electric heater elements and a combination of 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.

3.2 Three 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 SST-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 a 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 for the water make up ready for piping to a water supply with pressure between 140 kPa and 340 kPa.

3.3 Intake Sound Attenuation

- a) The unit will be equipped with intake sound attenuation consisting of a hot dip galvanized steel housing of the same quality of the unit and completed with acoustical baffles made of fiberglass material which is suitable for use in closed circuit coolers.
- b) The intake sound attenuator is provided with large access doors which allow access to maintain the fans and bearings.
- c) The closed circuit cooler motor size must be adjusted for the additional static pressure drop caused by the sound attenuator.

3.4 Discharge Sound Attenuation

- a) The unit will be equipped with discharge sound attenuation consisting of a hot dip galvanized steel housing of the same quality of the unit and completed with acoustical baffles made of fiberglass material which is suitable for use in closed circuit coolers.
- b) The discharge sound attenuator is provided with large access doors which allow access to maintain the water distribution system and the drift eliminators without removing the baffles.
- c) The closed circuit cooler motor size must be adjusted for the additional static pressure drop caused by the sound attenuator.

3.5 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 will be to interrupt power the motor in the event of excessive vibration.
- b) The switch shall be adjustable for sensitivity, and shall require manual reset.

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Notes:

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Notes:



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