

ENGINEERED FOR EFFICIENT DRY PERFORMANCE



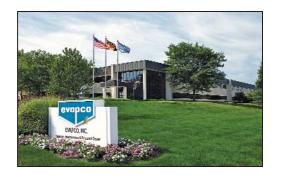












C ince its founding in 1976, EVAPCO, Incorporated • Thas become an industry leader in the engineering and manufacturing of quality heat transfer products around the world. EVAPCO's mission is to provide first class service and quality products for the following markets:

- 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 in 19 locations in 9 countries around the world and supplied through a sales network consisting of over 180 offices.

ATC-DC Dry Performance

Evolution of Heat Transfer Technology

EVAPCO has a long standing commitment to heat transfer research and development. This commitment has resulted in a number of advancements in heat transfer coil design. Up until the mid-1980's, evaporative condensers were manufactured with tightly packed round tube coils. Through thousands of hours of testing and research, EVAPCO developed the Thermal Pak[®] coil. The Thermal Pak[®] coil was patented in 1987. (now expired), and changed the thinking of system design engineers by changing the shape of the coil tubes. The elliptical tube design maximized the effective tube surface area while lowering airside pressure drop and allowing for higher water loading. The combination of the elliptical shape tube in the Thermal Pak® orientation increased heat transfer efficiency and resulted in one of the highest capacities per plan area of evaporative condensers available today.

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



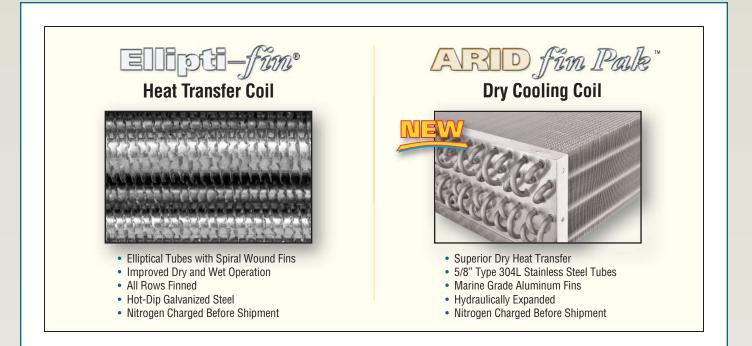
Thermal-Pak® II Coil by EVAPCO

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

The combination of EVAPCO's R&D, manufacturing and environmental commitment has resulted in the development of **Ellipti**-fin[®] Coil Heat Transfer Technology.

The **Ellipti**-fin[®] coil utilizes elliptical shape tube with extended surface fins for maximum heat transfer efficiency. The extended surface increases the heat transfer efficiency in the evaporative or wet mode as well as the dry mode of operation.

Powered by Innovative Coil Technology





Ellipti—*fin*[®] Finned Elliptical Tube by EVAPCO (Patent Pending)

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

Ellipti—*fine*[®] coils are manufactured from high quality carbon steel tubing following the most stringent quality control procedures and in accordance with the ASME B31.5 Refrigerant Piping Code. Each circuit is inspected to assure the material quality and tested before fins are wound onto the surface of the tube. Each circuit is then assembled into a complete coil. Finally, the assembled coil is tested at 390 P.S.I.G. air pressure under water to make sure it is leak free. To protect the coil against corrosion, and complete the bond between tube and fin, the entire assembly is dipped in molten zinc (hot dip galvanized) at a temperature of approximately 800°F.

The **Ellipti**—*fin*[®] coil design utilizes counterflow heat transfer. The rows of the finned elliptical tubes are positioned vertically in the direction of airflow to enhance turbulence, which increases heat transfer while minimizing airside pressure drop. The design features of EVAPCO's **Ellipti**—*fin*[®] condensing coils ensure the end-user will receive maximized evaporative heat transfer efficiency wet or dry.

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ARID *fin Pak*[™] Dry Cooling Coil

ARID fin Pak^m Dry Cooling Coils are constructed with 5/8" diameter type 304L stainless steel tubing and marinegrade aluminum fins. The stainless steel tubing meets the requirements of ASME B31.5 refrigerant piping code. The standard **ARID** fin Pak^m Dry Cooling Coils are designed with a fin density of 10 fins per inch for maximum heat transfer efficiency in the smallest plan area. Optional fin densities are available (Consult the factory for selections and pricing).

The SST 304L round tubes are fit into the aluminum fin plate and hydraulically expanded. EVAPCO's precisely controlled hydraulic expansion process results in more consistent contact between the tube and fin plate than conventional mechanical expansion methods. The entire **ARID** *fin Pak*^m Dry Cooling Coil is pressure tested to 390 psig, evacuated and nitrogen charged prior to final assembly and shipment.



MEW ATC-DC Design and Construction Features

The ATC-DC line of evaporative condensers represents EVAPCO's newest advancement in thermal heat transfer research and development. Utilizing the <u>NEW</u> **ARID** fin Pak[™] heat transfer coil, the ATC-DC offers improved heat transfer during dry operation and significant water savings due to extended periods of dry operation. The ATC-DC is the latest example in EVAPCO's on-going commitment to quality, environmentally friendly products.



PVC Spray Distribution Header with ZM® II Nozzles

- Large orifice nozzles prevent clogging (no moving parts).
- Redesigned nozzles for superior water distribution.
- Nozzles are threaded into header at proper orientation.
- Fixed position nozzles require zero maintenance.
- Threaded end caps for ease of cleaning.
- Guaranteed for life.

Self Supporting Service Platforms (Optional)

- Dual platform arrangement provides access to wet/dry
- coils and drive system.Includes access ladders field installed.

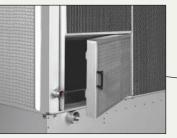


Water Saver Drift Eliminators

- Patented design reduces drift rate to 0.001%.
- Made from corrosion resistant PVC for long life.
- Prevents water droplets from contacting Arid-*fin Pak*[™] coil.
 U.S. Patent No. 6,315,804



- Increased ease of access to basin.
- Hinged access panel with quick release mechanism.
- Not available on all models.



WST Framed Inlet Louvers (Water and Sight Tight)

- Framed for easy handling, tighter fit and longer life
- Design keeps sunlight out preventing biological growth.
- Keeps water in while keeping dirt and debris out.



"Clean Pan" Basin Design

- Access from all four sides.
- Large open area simplifies maintenance.

D

COMPLIANT

DESIGNS

- Basin may be inspected with pumps running.
- Sloped basin design prevents sediment buildup, biological film and standing water.





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Super Low Sound Fan (Optional)

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

Advanced Drive System Design

- Totally Enclosed Fan Motors assures Long Life.
- Power-Band Belts for Better Lateral Rigidity.
- Advanced Design Aluminum Fan Blades.
- Non-corroding Cast Aluminum Sheaves.
- Heavy-Duty Fan Shaft Bearings with L-10 Life of 75,000 - 135,000 hrs.
- All Other Components Corrosion Resistant Materials.
- All Components Covered by 5 Year Warranty.

ARID *fin Pak*[™] *Heat Transfer Technology*

- Type 304L stainless steel tube/aluminum fin coil located above drift eliminators.
- Designed to operate in dry mode for an extended period.
- High heat transfer efficiency.

Ellipti-fin[®] Heat Transfer Technology

- Features EVAPCO's exclusive CROSScooL[™] tube enhancement for greater internal heat transfer.
- Thermal Pak[®] coil with extended surface.
- Water savings through extended periods of dry operation.
- High heat transfer efficiency.
- Low refrigerant charge. Patent Pending



*CROSS*cool[™]

Unique Field Seam

- Eliminates up to 66% of fasteners.
- Self guiding channels improve quality of field seam to reduce leaks.
- Easy to install.
- · Lower installation cost.



Solid Chemistry Water Treatment (Optional)

- Controlled release chemistry provides uniform treatment over a 30 day period.
- Factory mounted and wired.
- Easier and safer, eliminates the potential for liquid spills. U.S. Patent No. 8,398,850

Totally Enclosed Pump Motors

D

• Help assure long, trouble-free operation.



Non-Chemical Water Treatment (Optional)

- Scale, corrosion and bacteria control.
- Factory mounted with single source responsibility.
- Environmentally safe, chemical-free water treatment.
- U.S. Patent No. 7,704,364

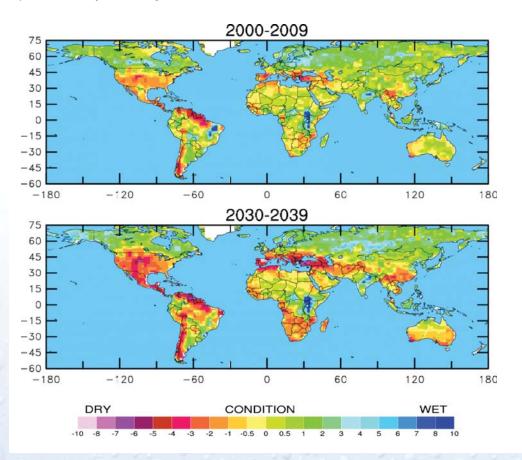


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ATC-DC Water Saving Technology

Future Drought Projections Worldwide

The frequency and persistence of global drought conditions is not expected to change with current climatic conditions. The maps below illustrate the *potential* for future drought worldwide over the decades indicated, based on current projections of future greenhouse gas emissions.¹ It is quite clear that by 2030 drought conditions will be severe if no action is taken NOW to reduce water use.



Maps are not intended as forecasts, since the actual course of projected greenhouse gas emissions as well as natural climate variations could alter the drought patterns.²

ATC-DC Industrial Condensers are an example of EVAPCO's corporate commitment to protect the world's valuable potable water resources. The ATC-DC product line incorporates the latest research and development in heat transfer technologies.

- Based on a study released by the National Center for Atmospheric Research (NCAR) titled "Drought under Global Warming: A Review", by Aiguo Dai, a leading climatologist.
- ² The scale used to measure drought on these maps is the Palmer Drought Severity Index, which assigns positive numbers when conditions are unusually wet for a particular region, and negative numbers when conditions are unusually dry. A reading of -4 or below is considered extreme drought. Regions that are blue or green will likely be at lower risk of drought, while those in the red and purple spectrum could face more unusually extreme drought conditions.



ATC-DC Water Saving Technology

Engineered for Efficient Dry Performance to Meet Future Global Climate Change and Water Use Restrictions

Significant Water Savings

The **ARID** fin Pak^{**} Dry Coil combined with EVAPCO's **Ellipti**-fin[®] coil technology enables the ATC-DC to be operated in a 100% Dry Mode at a significantly higher switchover temperature than that of a typical bare tube coil evaporative condenser. This leads to a much higher number of hours per year the condenser can operate in dry mode (spray pumps off), thus significantly reducing annual water consumption. This combination of heat transfer technologies makes the ATC-DC the most water efficient EVAPCO condenser.

Consider a meat processing plant application near Wichita, KS where a condenser is required to reject a constant heat load of approximately 400 tons of refrigeration at a 95°F condensing temperature and a summer design wet bulb temperature of 78°F. The process operates 24 hours a day 7 days a week.

The ATC-E evaporative condenser, the eco-ATC-A and the new ATC-DC evaporative condenser are compared as follows:

	Mod	el Comparison	
Model	ATC-559E	eco-ATC-562A	ATC-DC-1218M-35-2EF
Plan Area	12' x 12'	12' x 18'	12' x 18'
Fan Motor	30 hp	30 hp	30 hp
Pump Motor	5 hp	7.5 hp	7.5 hp

Dry Operation Performance Comparison

1	Model	Design TR	Dry	Bulb Switch Poir (% Design TR)	nt (°F)		
ŝ	No.	(R-717)*	100%	75%	50%		
			409TR	307TR	205TR		
	ATC-559E	397	-29.3	1.2	32.3		
	eco-ATC-562A	399	-1.7	21.2	46.6		
1	ATC-DC-1218M-35-2EF	409	45	57	70		

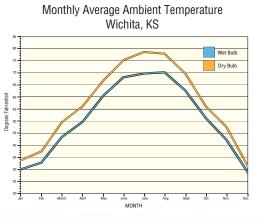
Every model in the ATC-DC product line has been engineered to provide a minimum of 50% of the design heat rejection (MBH) at 60°F ambient dry bulb temperature or higher, based on maintaining 96.3°F condensing temperature.



ATC-DC Water Saving Technology

ATC-DC Water Saving Analysis

Utilizing the Water & Energy Savings Calculator in evap Select with required key inputs:

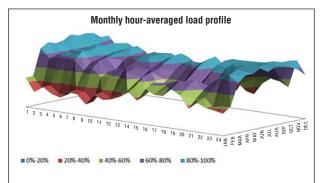


Weather Station: For Wichita, KS, the selected weather station is McConnell AFB

The Temperature Profile generated to estimate water and energy usage is based on 5 year weather data from the National Climatic Data Center (NCDC). The weather data shown above was collected from MC CONNELL AFB, USA

For more information visit: http://www.ncdc.noaa.gov/oa/ncdc.html

Load Profile: Meat Processing



Meat Processing Profile Provided Courtesy of Cascade Energy

Cycles of Concentration:	5
	KS is on average 4 cycles
Profile Days:	. 5 Week Days, and 2 Weekend Days
Potable Water Cost for Wichita:	Estimated at .0028 \$/gal
Waste Water Treatment Costs for Wichita:	Estimated at .0031 \$/gal
Power Costs:	Estimated at .0637 \$/kwh

Water and Energy Analysis Selected Weather Station: M Condensing Temperature: 90 Wet Bulb: 78.00 Refrigerant: NH3	IcConnell AFB	Load Profile: E Week Days: 5 Weekend Days Cycles of Cond	5: 2
Model Description: Quantity: Dry Bulb Switchover(°F)	ATC-559E 1.00 -28.42	eco-ATC-562A 1.00 1.22	ATC-DC-1218M-35-2EF 1.00 45.00
Total Water Usage per year (gal.) Total Water Cost	3,598,010	3,245,607	733,372
per year (USD)	23,271	20,992	4,710
Total Energy Usage per year (kWh)	51,777	59,433	52,064
Total Energy Cost per year (USD)	3,298	3,786	3,316
Total Estimated Operating Cost	\$26,569	\$24,778	\$8,026

*Water and energy use and costs are estimates only and are provided for the purpose of comparing the performance of evaporative condensers. Actual water/energy usage and costs will vary depending on weather, load profile, cycles of concentration and the control logic used to optimize system performance. Also, power, water and sewer costs are subject to local rates. The water and energy usage is calculated assuming a fixed condensing temperature and the use of variable frequency drives. Projected energy use is for evaporative condensers only, NOT total refrigeration system energy usa. The Temperature Profile generated to estimate water and energy usage is based on 5 Year weather data from the National Climatic Data Center (NCDC). Load profiles utilized in the program are based on industrial refrigeration applications and have been provided courtesy of Cascade Energy- Portland, OR.

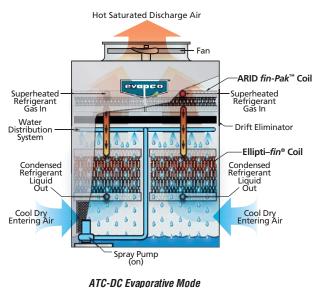


ATC-DC Design Features ATC-DC Dry Performance Powered by Innovative Coil Technology

Principle of Operation

Evaporative (Wet) Mode - Spray Pump(s) Energized

The refrigerant gas is discharged from the compressor into the inlet of the **ARID** *fin Pak*[™] **Dry Coil** which is positioned in the discharge air stream above the unit's drift eliminators and below the fan section. Ambient air is drawn into the unit, by the condenser's fans, through inlet louvers located in the lower section above the water basin. The air is drawn upward through the wet coil into the drift eliminators (which remove entrained water droplets from the air stream) and into the ARID *fin Pak*[™] Dry Coil Heat from the refrigerant gas is transferred to the air as it comes into contact with the tubes and densely packed fins of the ARID *fin Pak*[™] Dry Coil. The refrigerant gas exits the ARID *fin Pak*[™] Dry Coil and travels via inter-connecting piping (by others) to the inlet of the **Ellipti**-fin[®] **Coil** located in the lower section of the ATC-DC Condenser. Water from the condenser's sump is circulated over the wet coil as the ambient air is simultaneously drawn into the unit and travels up through the Ellipti-*fin*[®]. A portion of the sprav water is evaporated into the air stream as it travels through the wet



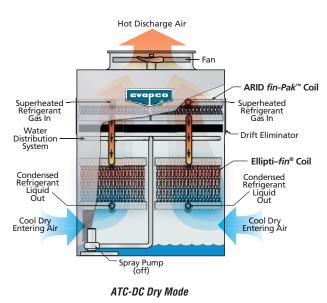
coil. This evaporative process cools the spray water, which in turn cools the coil tubes and extended surface fins. The cool tube walls and extended surface fins cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the Ellipti–*fin*[®] to the high pressure receiver for return to the system. The water which has not evaporated falls into the sump and is recirculated by the spray pump to the water distribution system located above the Ellipti–*fin*[®].

The amount of water consumed during this mode of operation is a function of the amount of heat rejected. Water consumption includes the volume of water which is evaporated during the cooling process and the amount of water which is discharged (referred to as "blow-down") to maintain the required cycles of concentration in order to meet water quality guidelines.

Dry Mode – Spray Pump De-energized

The refrigerant gas is discharged from the compressor into the inlet of the **ARID** *fin Pak*[™] **Dry Coil** which is positioned in the dry air stream above the unit's drift eliminators and below the fan section. Ambient air is drawn into the unit by the condenser's fans, through inlet louvers located in the lower section above the water basin. The air is drawn upward through the **Ellipti**-*fin*[®] into the ARID *fin Pak*[™] Dry Coil above. Heat from the refrigerant gas is transferred to the air as it comes into contact with the tubes and densely packed fins of the ARID *fin Pak*[™] Dry Coil. The refrigerant gas exits the ARID *fin Pak*[™] Dry Coil and travels via the inter-connecting piping to the inlet of the Ellipti-*fin*[®]. The ambient air entering the unit travels upward through the Ellipti~fin Coil which in turn cools the coil tubes and extended surface fins. The cool tube walls and extended surface fins cause the refrigerant gas to give up heat and condense into a liquid. The condensed liquid flows out of the Ellipti-fin® to the high pressure receiver for return to the system.

There is **NO WATER** consumed during this mode of operation.



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ATC-DC Design Features

Construction Features

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

G-235 Mill Hot-Dip Galvanized Steel Construction

Mill hot-dip galvanized steel has been successfully used for over 40 years for the protection of evaporative condensers against corrosion. There are various grades of mill galvanized steel each with differing amounts of zinc protection. EVAPCO has been a leader in the industry in developing heavier galvanizing, and was the first to standardize on G-235 mill hot-dip galvanized steel.

G-235 designation means there is a minimum of 2.35 ounces of zinc per square foot of surface area as measured in a triple spot test. G-235 is the heaviest level of galvanizing available for manufacturing evaporative condensers and has a minimum of 12% more zinc protection than competitive designs using G-210 steel.

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

Type 304 Stainless Steel Strainers

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

Unique Seam Design-Eliminate Field Leaks

The ATC-DC features EVAPCO's unique panel construction design which includes a special butyl tape sealer with an integral sealing gasket. Each joint is then backed with a secondary caulking compound and encased in a double-brake flange for added strength and structural integrity. This unique sealing system has been proven effective in both laboratory tests and years of field application.

Easy Field Assembly

The ATC-DC features a unique field seam design which ensures easier assembly and fewer field seam leaks. The field seam incorporates self-guiding channels to guide the coil casing section into position and set in place on the bottom basin section of the condenser. In addition, the



design eliminates up to 66% of the fasteners typically used to join the condenser sections in the field significantly reducing the contractor labor costs for installation.

Improved Maintenance

ZM® II Spray Nozzle Water Distribution System

Even and constant water distribution is paramount for reliable, scale-free evaporative condensing. EVAPCO'S <u>Zero Maintenance</u> ZM® II Spray Nozzle remains clog-free under the toughest conditions to deliver approximately 6 GPM to every square foot of coil plan area.

The heavy-duty ABS ZM® II Spray Nozzles have a 1-1/4" diameter opening and a 1-1/4" splash plate clearance. The fixed position ZM® II Spray Nozzles are mounted in corrosion-free PVC water distribution pipes that have threaded end caps. Together, these elements combine to provide enhanced water



ZM® II Nozzle

droplet formation, delivered uniformly over the coil resulting in superior thermal performance and a virtually maintenance free water distribution system.

Alternate Materials of Construction

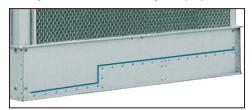
EVAPCO induced draft condensers have a modular design which allows for specific areas to be enhanced for increased corrosion protection. For particularly corrosive environments, EVAPCO condensers are available with Stainless Steel construction for the basin, casing and/or coil.

Stainless Steel Basin

In addition to the EVAPCOAT Corrosion Protection System, EVAPCO offers optional Type 304 or Type 316 stainless steel construction for superior corrosion resistance. EVAPCO induced draft condensers have a modular design which allows for specific areas to be enhanced for increased corrosion protection. The basin area of a condenser is often subjected to high concentrations of impurities and silt. EVAPCO's stainless steel basin option includes welded seam construction as standard. For particularly corrosive environments, stainless steel construction is also available for the coil casing / fan section.

"Clean Pan" Basin Design

EVAPCO ATC-DC condensers feature a sloped basin from the upper to lower pan section. This "Clean Pan" design allows the water to be completely drained from the basin. The condenser water will drain from the upper section to the depressed lower pan section where the dirt and debris can be easily flushed out through the drain. This design helps prevent buildup of



sedimentary deposits, biological films and minimizes standing water.



ATC-DC Design Features

Belt Drive Units – 8-1/2' & 17' Wide Models

The fan motor and drive assembly are designed to allow easy servicing of the motor and **adjustment of the belt tension from**

the exterior of the unit. A

T.E.F.C. fan motor is mounted on the outside of these models. A protective cover swings away to allow servicing and belt adjustment.

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



External Motor Mount (with optional ladder)

Belt Drive Units – 10', 12' & 24' Wide Models

The fan motor and drive assembly are designed to allow easy

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



Motor Base Assembly

The motor base is designed to swing out through a very large, 14 square foot access opening. This allows for easy servicing of the motor.

Drive System

Inverter Duty Motors: Inverter Duty Motors are standard on ATC-DC condensers. Inverter Duty motors are totally enclosed premium efficiency and inverter capable (VFD by others).

Note: Variable Frequency Drive control may require other component modification such as motor shaft grounding brushes, AC load reactors, low pass filters and tuned trap filters to ensure proper motor performance and service life.

Power- Band Drive Belt: The Power-Band is a solid-back, multigroove belt system that has high lateral rigidity. The proven drive system is used on 8' wide and wider models. The belt is constructed of neoprene with polyester cords. The drive belt is designed for minimum 150% of the motor nameplate horsepower for long life and durability.

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

Aluminum Alloy Sheaves: Fan sheaves are constructed of corrosion free aluminum for long life, eliminating the corrosion that occurs on cast steel sheaves, thereby extending belt life.

Five Year Drive Warranty: All drive components on ATC-DC units are covered by EVAPCO's exclusive 5 year drive warranty - including fan motors and belts!

Superior Water Saver Drift Eliminators

An extremely efficient drift eliminator system is standard on EVAPCO condensers. The patented system removes entrained

water droplets from the air stream to limit the drift rate to less than 0.001% of the recirculating water rate. 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



Water Saver Drift Eliminator

sections to facilitate easy removal for inspection of the water distribution system.

Superior WST Framed Air Inlet Louver Design

EVAPCO'S WST Framed Inlet Louvers keep water in and sunlight out of the basins of induced draft products. The unique nonplanar design is made from light-weight PVC sections which easily fit together and have no loose hardware, enabling easy basin access. U.S. Patent 7,927,196



Framed Inlet Louver Design

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

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

Air Inlet Access Door (Optional)

To aid in basin maintenance, ATC-DC models can be equipped with an optional air inlet access door. This feature improves the main-

tainability of the condenser by allowing easy access to the makeup float assembly and strainer for inspection without removing an entire inlet louver.





ATC-DC Dry Operation Performance Data

Model	Design TR	Dry Bulb Switch Point (°F) (% Design TR)								
No.	(R-717)*	100%	75%) 50%						
ATC-DC-99H-25-1EF ATC-DC-99H-35-1EF	96 98	52 56	62 65	74 76						
ATC-DC-99I-25-1EF	103	52	62	70						
ATC-DC-99I-35-1EF	105	56	66	76						
ATC-DC-99J-25-1EF ATC-DC-99J-35-1EF	112 114	51 56	62 66	73 76						
ATC-DC-99H-25-2EF	127	41	54	68						
ATC-DC-99H-35-2EF	129	44	56	70						
ATC-DC-99I-25-2EF ATC-DC-99I-35-2EF	135 137	41 45	54 57	68 70						
ATC-DC-99J-25-2EF	148	41	54	68						
ATC-DC-99J-35-2EF	151	45	57	70						
ATC-DC-912I-25-1EF ATC-DC-912I-35-1EF	130 132	52 55	62 65	74 76						
ATC-DC-912J-25-1EF	144	51	62	73						
ATC-DC-912J-35-1EF ATC-DC-912K-25-1EF	147 151	55 51	65 62	76 73						
ATC-DC-912K-25-1EF	151	56	66	73						
ATC-DC-912I-25-2EF	171	41	54	68						
ATC-DC-912I-35-2EF ATC-DC-912J-25-2EF	174 189	43 40	56 54	69 68						
ATC-DC-912J-35-2EF	193	44	56	70						
ATC-DC-912K-25-2EF	199	41	54	68						
ATC-DC-912K-35-2EF ATC-DC-914J-25-1EF	203	45 52	57 62	70 74						
ATC-DC-914J-35-1EF	163	56	66	74						
ATC-DC-914K-25-1EF	170	52	62	74						
ATC-DC-914K-35-1EF ATC-DC-914I-25-2EF	173 192	56 41	66 54	76 68						
ATC-DC-914I-35-2EF	196	43	56	69						
ATC-DC-914J-25-2EF	211	41	54	68						
ATC-DC-914J-35-2EF ATC-DC-914K-25-2EF	215 223	44 41	57 55	70 68						
ATC-DC-914K-35-2EF	227	45	57	70						
ATC-DC-918H-25-1EF	200	51	62	73						
ATC-DC-918H-35-1EF ATC-DC-918I-25-1EF	203 214	54 50	64 61	75 73						
ATC-DC-918I-35-1EF	218	55	65	75						
ATC-DC-918J-25-1EF ATC-DC-918J-35-1EF	232 237	50 55	61 65	73 75						
ATC-DC-918H-25-2EF	262	39	53	67						
ATC-DC-918H-35-2EF	267	42	55	69						
ATC-DC-918I-25-2EF ATC-DC-918I-35-2EF	283 288	39 42	53 55	67 69						
ATC-DC-918J-25-2EF	306	40	53	68						
ATC-DC-918J-35-2EF	311	44	56	70						
ATC-DC-921H-25-1EF ATC-DC-921H-35-1EF	229 234	48 52	60 62	72 74						
ATC-DC-9211-25-1EF	245	48	60	72						
ATC-DC-9211-35-1EF	249	52	63	74 72						
ATC-DC-921J-25-1EF ATC-DC-921J-35-1EF	266 272	48 53	60 63	72 74						
ATC-DC-921H-25-2EF	302	36	51	66						
ATC-DC-921H-35-2EF ATC-DC-921I-25-2EF	307 322	38 37	52 51	67 66						
ATC-DC-9211-35-2EF	328	39	53	67						
ATC-DC-921J-25-2EF	351	37	51	66						
ATC-DC-921J-35-2EF ATC-DC-1712I-25-1EF	358 259	41 56	54 66	68 76						
ATC-DC-1712I-35-1EF	264	57	66	76						
ATC-DC-1712J-25-1EF	288	56	66 67	76 77						
ATC-DC-1712J-35-1EF ATC-DC-1712K-25-1EF	293 302	58 57	66	77 76						
ATC-DC-1712K-35-1EF	308	58	67	77						
ATC-DC-1712I-25-2EF ATC-DC-1712I-35-2EF	338 344	41 44	54 56	68 70						
ATC-DC-1712K-25-2EF	393	41	55	68						
ATC-DC-1712K-35-2EF	401	45	58	70						
ATC-DC-1714J-25-1EF ATC-DC-1714J-35-1EF	320 326	52 56	62 66	74 76						
ATC-DC-1714K-25-1EF	340	50	62	76 74						
ATC-DC-1714K-35-1EF	346	56	66	76						
ATC-DC-1714I-25-2EF ATC-DC-1714I-35-2EF	377 384	42 44	55 57	69 70						
ATC-DC-1714J-25-2EF	412	42	55	69						
ATC-DC-1714J-35-2EF	420	45	58	70						
ATC-DC-1714K-25-2EF ATC-DC-1714K-35-2EF	437 446	43 46	55 58	69 71						

Model	Design TR	Dry Bu	lb Switch Poi % Design TR	nt (°F))
No.	(R-717)*	100%	75%	, 50%
ATC-DC-1012I-25-1EF ATC-DC-1012I-35-1EF ATC-DC-1012J-25-1EF ATC-DC-1012J-35-1EF ATC-DC-1012K-25-1EF ATC-DC-1012K-35-1EF	190 194 209 213 221 225	37 41 36 42 36 42	51 54 51 55 51 55	66 68 66 69 66 69
ATC-DC-1012L-25-1EF ATC-DC-1012L-25-1EF ATC-DC-1012L-25-2EF ATC-DC-1012L-35-2EF ATC-DC-1012J-25-2EF ATC-DC-1012J-25-2EF ATC-DC-1012J-35-2EF ATC-DC-1012K-25-2EF	230 235 230 235 252 252 257 266	36 43 27 30 28 31 28	51 56 44 46 44 47 45	66 69 61 63 61 63 62
ATC-DC-1012K-35-2EF ATC-DC-1012L-25-2EF ATC-DC-1012L-25-2EF ATC-DC-1012L-35-2EF ATC-DC-1018I-25-1EF	272 278 283 247	33 29 34 40	48 45 49 54	64 62 65 68
ATC-DC-10181-23-1EF ATC-DC-10181-35-1EF ATC-DC-1018J-35-1EF ATC-DC-1018J-35-1EF ATC-DC-1018K-25-1EF ATC-DC-1018K-35-1EF ATC-DC-1018L-25-1EF ATC-DC-1018M-35-1EF ATC-DC-1018M-35-1EF ATC-DC-1018I-35-2EF ATC-DC-1018I-35-2EF ATC-DC-1018J-35-2EF ATC-DC-1018K-35-2EF ATC-DC-1018K-35-2EF ATC-DC-1018L-35-2EF ATC-DC-1018L-35-2EF ATC-DC-1018L-35-2EF ATC-DC-1018L-35-2EF ATC-DC-1018M-35-2EF ATC-DC-1018M-35-2EF	247 252 273 292 297 308 314 320 326 298 303 328 303 328 334 352 359 371 378 385 392	40 44 40 45 40 45 39 45 31 33 32 34 32 35 32 35 32 35 32 35 32 35 32 35 32 35 32 35 32 36	54 56 54 57 53 57 53 57 53 57 47 48 47 48 47 50 47 50 47 50	68 70 68 70 68 70 67 70 63 64 65 64 65 64 65 64 65 64 65 64 65
ATC-DC-1024I-25-1EF ATC-DC-1024I-35-1EF ATC-DC-1024J-35-1EF ATC-DC-1024J-35-1EF ATC-DC-1024K-35-1EF ATC-DC-1024K-35-1EF ATC-DC-1024L-25-1EF ATC-DC-1024L-35-1EF ATC-DC-1024J-25-2EF ATC-DC-1024J-35-2EF ATC-DC-1024J-35-2EF ATC-DC-1024K-35-2EF ATC-DC-1024K-35-2EF ATC-DC-1024K-35-2EF ATC-DC-1024K-35-2EF ATC-DC-1024L-25-2EF ATC-DC-1024L-35-2EF	380 387 418 426 442 451 461 469 459 467 459 467 533 543 543 555 566	37 41 36 42 36 42 36 43 27 30 28 31 28 31 28 33 29 34	51 54 51 55 51 55 51 56 44 46 44 46 44 47 45 48 45 49	66 68 69 66 69 66 69 61 63 61 63 61 63 62 64 62 65
ATC-DC-1036I-25-1EF ATC-DC-1036I-35-1EF ATC-DC-1036J-25-1EF ATC-DC-1036J-25-1EF ATC-DC-1036K-25-1EF ATC-DC-1036K-25-1EF ATC-DC-1036L-25-1EF ATC-DC-1036M-25-1EF ATC-DC-1036M-25-1EF ATC-DC-1036I-25-2EF ATC-DC-1036J-25-2EF ATC-DC-1036K-25-2EF ATC-DC-1036K-25-2EF ATC-DC-1036K-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036L-25-2EF ATC-DC-1036M-25-2EF ATC-DC-1036M-25-2EF ATC-DC-1036M-25-2EF	495 504 545 555 583 594 615 627 640 652 595 607 656 668 704 717 743 757 771 786	40 44 40 45 40 45 39 45 34 34 36 35 36 36 36 37 37 37 37 38	54 56 57 53 57 53 57 53 57 49 49 50 51 51 51 51 51 51 52	68 70 68 70 68 70 67 70 65 65 65 65 65 66 66 66 66 66 66 66

 * Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.



ATC-DC Dry Operation Performance Data

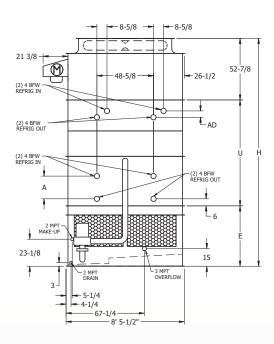
Model	Design TR	Dry Bulb Switch Point (°F) (% Design TR)									
No.	(R-717)*	100%	75%	, 50%							
ATC-DC-1212J-25-1EF	193	51	62	73							
ATC-DC-1212J-35-1EF	196	55	65	75							
ATC-DC-1212K-25-1EF	205	50	61	73							
ATC-DC-1212K-35-1EF ATC-DC-1212L-25-1EF	209 213	55 51	65 62	75 73							
ATC-DC-1212L-25-1EF	213	56	65	76							
ATC-DC-1212J-25-2EF	253	39	53	67							
ATC-DC-1212J-35-2EF	258	42	55	69							
ATC-DC-1212K-25-2EF	271	39	53	67							
ATC-DC-1212K-35-2EF	276	43	56	69							
ATC-DC-1212L-25-2EF	281	40	54	68							
ATC-DC-1212L-35-2EF ATC-DC-1214K-25-1EF	286 221	44 53	56 63	70 74							
ATC-DC-1214K-35-1EF	225	57	66	74							
ATC-DC-1214L-25-1EF	232	53	63	74							
ATC-DC-1214L-35-1EF	236	57	66	76							
ATC-DC-1214M-25-1EF	238	53	63	74							
ATC-DC-1214M-35-1EF	243	57	67	77							
ATC-DC-1214K-25-2EF ATC-DC-1214K-35-2EF	291	42	55	69 70							
ATC-DC-1214L-25-2EF	296 305	45 42	57 55	70 69							
ATC-DC-1214L-35-2EF	310	46	58	71							
ATC-DC-1214M-25-2EF	314	43	56	69							
ATC-DC-1214M-35-2EF	320	47	58	71							
ATC-DC-1218K-25-1EF	277	53	63	74							
ATC-DC-1218K-35-1EF	282	56	66	76							
ATC-DC-1218L-25-1EF	292	53	63	74							
ATC-DC-1218L-35-1EF	297	57	66	76							
ATC-DC-1218M-25-1EF	305	52	63	74							
ATC-DC-1218M-35-1EF	310	57	66 55	76 69							
ATC-DC-1218K-25-2EF ATC-DC-1218K-35-2EF	364 371	42 45	55	69 70							
ATC-DC-1218L-25-2EF	384	43	55	69							
ATC-DC-1218L-35-2EF	391	45	57	70							
ATC-DC-1218M-25-2EF	401	42	55	69							
ATC-DC-1218M-35-2EF	409	45	57	70							
ATC-DC-1220L-25-1EF	305	54	64	75							
ATC-DC-1220L-35-1EF	311	58	67	77							
ATC-DC-1220M-25-1EF	317	54	64	75							
ATC-DC-1220M-35-1EF ATC-DC-1220N-25-1EF	323 337	58 54	67 64	77 75							
ATC-DC-1220N-35-1EF	344	58	67	77							
ATC-DC-1220L-25-2EF	401	44	56	70							
ATC-DC-1220L-35-2EF	409	46	58	71							
ATC-DC-1220M-25-2EF	417	44	56	70							
ATC-DC-1220M-35-2EF	425	47	59	71							
ATC-DC-1220N-25-2EF	444	44	56	70							
ATC-DC-1220N-35-2EF	453	47	59	71							
ATC-DC-1224K-25-1EF ATC-DC-1224K-35-1EF	410 418	50 55	61 65	73 75							
ATC-DC-1224K-35-1EF ATC-DC-1224L-25-1EF	416	50 51	62	75 73							
ATC-DC-1224L-25-1EF	434	56	65	76							
ATC-DC-1224J-25-2EF	506	39	53	67							
ATC-DC-1224J-35-2EF	515	42	55	69							
ATC-DC-1224K-25-2EF	538	40	53	68							
ATC-DC-1224K-35-2EF	548	43	56	69							
ATC-DC-1224L-25-2EF	561	40	54	68 70							
ATC-DC-1224L-35-2EF	572	44	56	70							
ATC-DC-1228K-25-1EF ATC-DC-1228K-35-1EF	442 451	53 57	63 66	74 76							
ATC-DC-1228K-35-1EF ATC-DC-1228L-25-1EF	451	57 53	63	76 74							
ATC-DC-1228L-35-1EF	404	57	66	74							
ATC-DC-1228M-25-1EF	477	53	63	70							
ATC-DC-1228M-35-1EF	486	57	67	77							
ATC-DC-1228K-25-2EF	581	42	55	69							
ATC-DC-1228K-35-2EF	592	45	57	70							
ATC-DC-1228L-25-2EF	609	42	55	69 71							
ATC-DC-1228L-35-2EF ATC-DC-1228M-25-2EF	621	46	58	71 69							
ATC-DC-1228M-25-2EF ATC-DC-1228M-35-2EF	628 639	43 47	56 58	69 71							
	000	-1	00								

Model	Design TR		lb Switch Poi % Design TR	
No.	(R-717)*	100%	75%	, 50%
ATC-DC-1236K-25-1EF	554	53	63	74
ATC-DC-1236K-35-1EF	564	56	66	76
ATC-DC-1236L-25-1EF	583	53	63	74
ATC-DC-1236L-35-1EF	594	57	66	76
ATC-DC-1236M-25-1EF	609	52	63	74
ATC-DC-1236M-35-1EF ATC-DC-1236K-25-2EF	621 728	57 42	66 55	76 69
ATC-DC-1236K-25-2EF	742	42	57	70
ATC-DC-1236L-25-2EF	768	43	55	69
ATC-DC-1236L-35-2EF	783	45	57	70
ATC-DC-1236M-25-2EF	803	42	55	69
ATC-DC-1236M-35-2EF	818	45	57	70
ATC-DC-1240L-25-1EF	610	54	64	75
ATC-DC-1240L-35-1EF	622	58	67	77
ATC-DC-1240M-25-1EF	635	54	64	75
ATC-DC-1240M-35-1EF	647	58	67	77
ATC-DC-1240N-25-1EF	675	54	64	75
ATC-DC-1240N-35-1EF ATC-DC-1240L-25-2EF	688 799	58 44	67 56	77 70
ATC-DC-1240L-35-2EF	815	44	58	70
ATC-DC-1240E-33-2EF	832	44	56	70
ATC-DC-1240M-35-2EF	847	47	59	71
ATC-DC-1240N-25-2EF	884	44	57	70
ATC-DC-1240N-35-2EF	901	48	59	72
ATC-DC-2412K-25-1EF	410	50	61	73
ATC-DC-2412K-35-1EF	418	55	65	75
ATC-DC-2412L-25-1EF	426	51	62	73
ATC-DC-2412L-35-1EF	434	56	65	76
ATC-DC-2412J-25-2EF	507	39	53	67
ATC-DC-2412J-35-2EF	516	42	55	69
ATC-DC-2412L-25-2EF ATC-DC-2412L-35-2EF	562 573	40 44	54 56	68 70
ATC-DC-2412E-33-2EF	442	53	63	70
ATC-DC-2414K-25-1EF	442	57	66	74 76
ATC-DC-2414L-25-1EF	464	53	63	74
ATC-DC-2414L-35-1EF	472	57	66	76
ATC-DC-2414K-25-2EF	581	42	55	69
ATC-DC-2414K-35-2EF	592	45	57	70
ATC-DC-2414L-25-2EF	609	42	55	69
ATC-DC-2414L-35-2EF	621	46	58	71
ATC-DC-2414M-25-2EF	628	43	56	69 71
ATC-DC-2414M-35-2EF ATC-DC-2418K-25-1EF	639	47	58	71 74
ATC-DC-2418K-25-1EF ATC-DC-2418K-35-1EF	554 564	53 56	63 66	74 76
ATC-DC-2418L-25-1EF	583	53	63	76 74
ATC-DC-2418L-35-1EF	594	57	66	74
ATC-DC-2418M-25-1EF	609	52	63	74
ATC-DC-2418M-35-1EF	621	57	66	76
ATC-DC-2418K-25-2EF	729	42	55	69
ATC-DC-2418K-35-2EF	743	45	57	70
ATC-DC-2418L-25-2EF	770	42	55	69
ATC-DC-2418L-35-2EF	785	45	57	70
ATC-DC-2418M-25-2EF	804 819	42 45	55 57	69 70
ATC-DC-2418M-35-2EF				
ATC-DC-2420L-25-1EF ATC-DC-2420L-35-1EF	610 622	54 58	64 67	75 77
ATC-DC-2420L-35-1EF	635	54	64	75
ATC-DC-2420M-35-1EF	647	58	67	77
ATC-DC-2420N-25-1EF	675	54	64	75
ATC-DC-2420N-35-1EF	688	58	67	77
ATC-DC-2420L-25-2EF	799	44	56	70
ATC-DC-2420L-35-2EF	815	47	58	71
ATC-DC-2420M-25-2EF	827	44	57	70
ATC-DC-2420M-35-2EF	842	47	59	71
ATC-DC-2420N-25-2EF	880	44	57	70
ATC-DC-2420N-35-2EF	897	48	59	72

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.



Engineering Dimensions & Data ATC-DC-99H-25-1EF to ATC-DC-99J-35-2EF



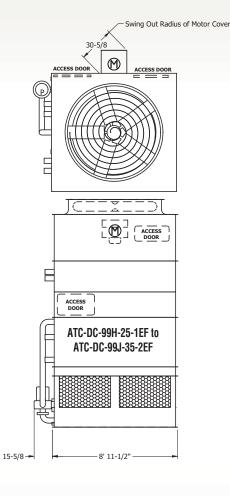


Table 1 Engineering Data

	R-7*	17 Tons*	F	ans		Weights†				Spray	Pump	R	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft ³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-99H-25-1EF	96	76	7.5	38,500	8,870	5,300	11,470	81	20	2	410	250	8"	10,120	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-99H-35-1EF	98	84	7.5	38,100	9,340	5,760	11,940	87	26	2	410	250	8"	10,600	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-99I-25-1EF	103	80	10	42,300	8,880	5,300	11,480	81	20	2	410	250	8"	10,130	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-99I-35-1EF	105	91	10	41,900	9,350	5,760	11,950	87	26	2	410	250	8"	10,610	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-99J-25-1EF	112	87	15	48,500	9,020	5,300	11,610	81	20	2	410	250	8"	10,270	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-99J-35-1EF	114	100	15	48,000	9,490	5,760	12,090	87	26	2	410	250	8"	10,740	15' 1-1/2"	4' 3-7/8"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-99H-25-2EF	127	80	7.5	37,700	10,880	7,300	13,520	131	27	2	410	250	8"	12,180	15' 8"	4' 3-7/8"	6' 11"	12"	5-1/2"
ATC-DC-99H-35-2EF	129	86	7.5	37,300	11,340	7,770	14,000	137	33	2	410	250	8"	12,650	15' 8"	4' 3-7/8"	6' 11"	12"	6-7/8"
ATC-DC-99I-25-2EF	135	85	10	41,500	10,890	7,300	13,530	131	27	2	410	250	8"	12,190	15' 8"	4' 3-7/8"	6' 11"	12"	5-1/2"
ATC-DC-99I-35-2EF	137	93	10	41,100	11,350	7,770	14,010	137	33	2	410	250	8"	12,660	15' 8"	4' 3-7/8"	6' 11"	12"	6-7/8"
ATC-DC-99J-25-2EF	148	93	15	47,500	11,020	7,300	13,670	131	27	2	410	250	8"	12,330	15' 8"	4' 3-7/8"	6' 11"	12"	5-1/2"
ATC-DC-99J-35-2EF	151	103	15	47,000	11,490	7,770	14,140	137	33	2	410	250	8"	12,800	15' 8"	4' 3-7/8"	6' 11"	12"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

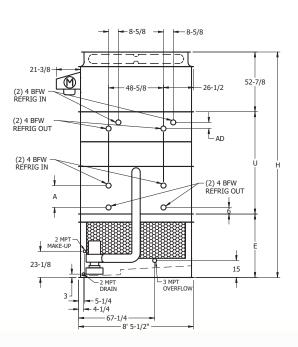
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-912I-25-1EF to ATC-DC-912K-35-2EF



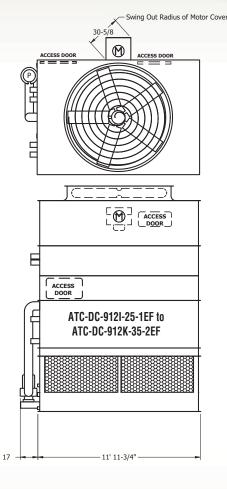


Table 2 Engineering Data

	R-71	7 Tons*	F	ans		Weights†				Spray	Pump	R	lemote S	ump			Dimensions		
Model No.	Wet	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft ³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (Ibs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-912I-25-1EF	130	101	10	51,300	10,880	6,510	14,500	95	26	5	570	330	10"	12,630	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-912I-35-1EF	132	113	10	50,800	11,510	7,140	15,140	103	34	5	570	330	10"	13,270	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-912J-25-1EF	144	110	15	58,700	11,020	6,510	14,630	95	26	5	570	330	10"	12,760	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-912J-35-1EF	147	125	15	58,100	11,650	7,140	15,270	103	34	5	570	330	10"	13,400	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-912K-25-1EF	151	116	20	64,600	11,080	6,510	14,700	95	26	5	570	330	10"	12,830	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-912K-35-1EF	154	134	20	64,000	11,710	7,140	15,340	103	34	5	570	330	10"	13,470	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-912I-25-2EF	171	107	10	50,300	13,270	8,900	16,960	165	35	5	570	330	10"	15,090	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-912I-35-2EF	174	115	10	49,800	13,900	9,530	17,600	173	43	5	570	330	10"	15,730	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"
ATC-DC-912J-25-2EF	189	117	15	57,600	13,410	8,900	17,100	165	35	5	570	330	10"	15,230	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-912J-35-2EF	193	128	15	57,000	14,040	9,530	17,740	173	43	5	570	330	10"	15,870	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"
ATC-DC-912K-25-2EF	199	125	20	63,300	13,470	8,900	17,160	165	35	5	570	330	10"	15,290	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-912K-35-2EF	203	137	20	62,700	14,100	9,530	17,800	173	43	5	570	330	10"	15,930	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)
*** Performance is shown for P.717. Multiply by 1.02 for P. 22 and 1.09 for P. 124a.

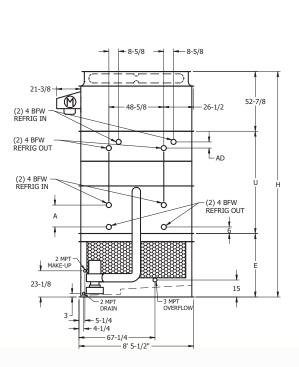
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-914J-25-1EF to ATC-DC-914K-35-2EF



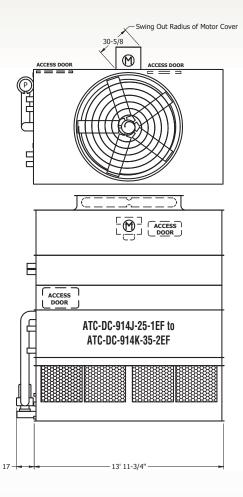


Table 3 Engineering Data

	R-7	17 Tons*	F	ans		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (Ibs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-914J-25-1EF	160	125	15	65,600	13,390	8,520	17,600	118	31	5	650	380	10"	15,460	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-914J-35-1EF	163	141	15	64,900	14,130	9,260	18,350	126	39	5	650	380	10"	16,210	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-914K-25-1EF	170	132	20	72,200	13,450	8,520	17,660	118	31	5	650	380	10"	15,530	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-914K-35-1EF	173	151	20	71,500	14,190	9,260	18,410	126	39	5	650	380	10"	16,280	15' 5-7/8"	4' 8-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-914I-25-2EF	192	121	10	56,200	15,070	10,330	19,350	188	41	5	650	380	10"	17,220	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-914I-35-2EF	196	129	10	55,600	15,810	11,070	20,100	196	49	5	650	380	10"	17,970	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"
ATC-DC-914J-25-2EF	211	133	15	64,300	15,200	10,330	19,490	188	41	5	650	380	10"	17,350	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-914J-35-2EF	215	144	15	63,700	15,950	11,070	20,240	196	49	5	650	380	10"	18,100	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"
ATC-DC-914K-25-2EF	223	142	20	70,800	15,270	10,330	19,550	188	41	5	650	380	10"	17,420	16' 3/8"	4' 8-1/4"	6' 11"	12"	5-1/2"
ATC-DC-914K-35-2EF	227	155	20	70,100	16,010	11,070	20,300	196	49	5	650	380	10"	18,170	16' 3/8"	4' 8-1/4"	6' 11"	12"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

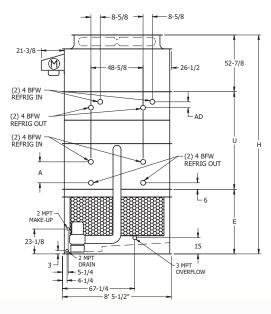
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-918H-25-1EF to eco-ATC-434A-1g



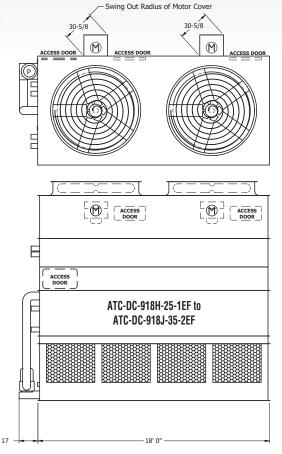


Table 4 Engineering Data

	R-71	7 Tons*	Fa	ns		Weights†				Spray	Pump	R	emote S	ump			Dimensions		
Model No.	Wet	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-918H-25-1EF	200	153	(2) 7 1/2	77,200	16,280	9,190	21,780	143	39	5	800	510	12"	19,110	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-918H-35-1EF	203	170	(2) 7 1/2	76,400	17,240	10,140	22,750	154	50	5	800	510	12"	20,080	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-918I-25-1EF	214	162	(2) 10	85,000	16,310	9,190	21,810	143	39	5	800	510	12"	19,140	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-918I-35-1EF	218	182	(2) 10	84,100	17,270	10,140	22,790	154	50	5	800	510	12"	20,110	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-918J-25-1EF	232	175	(2) 15	97,300	16,570	9,190	22,080	143	39	5	800	510	12"	19,400	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-918J-35-1EF	237	201	(2) 15	96,300	17,530	10,140	23,050	154	50	5	800	510	12"	20,370	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-918H-25-2EF	262	161	(2) 7 1/2	75,700	19,810	12,710	25,420	243	53	5	800	510	12"	22,740	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-918H-35-2EF	267	173	(2) 7 1/2	74,900	20,770	13,670	26,390	254	64	5	800	510	12"	23,710	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"
ATC-DC-918I-25-2EF	283	172	(2) 10	83,300	19,840	12,710	25,450	243	53	5	800	510	12"	22,770	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-918I-35-2EF	288	186	(2) 10	82,500	20,800	13,670	26,420	254	64	5	800	510	12"	23,740	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"
ATC-DC-918J-25-2EF	306	188	(2) 15	95,400	20,100	12,710	25,710	243	53	5	800	510	12"	23,030	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-918J-35-2EF	311	207	(2) 15	94,400	21,060	13,670	26,680	254	64	5	800	510	12"	24,000	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)
*** Performance is shown for P.717. Multiply by 1.02 for P. 22 and 1.09 for P. 124a.

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-921H-25-1EF to ATC-DC-921J-35-2EF

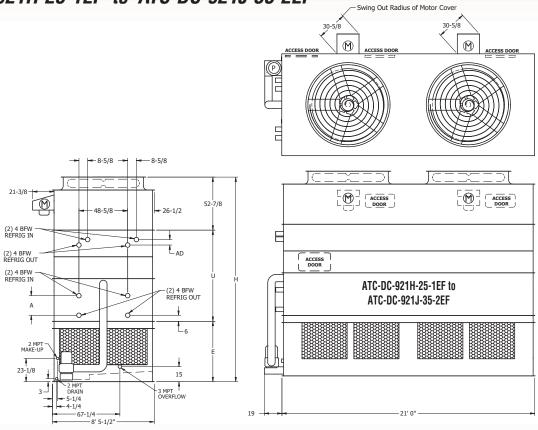


Table 5 Engineering Data

	R-71	17 Tons*	Fa	ns		Weights†				Spray	Pump	R	emote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-921H-25-1EF	229	167	(2) 7 1/2	81,700	18,350	10,480	24,910	167	45	7.5	1050	590	12"	21,790	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-921H-35-1EF	234	183	(2) 7 1/2	80,900	19,470	11,600	26,040	180	58	7.5	1050	590	12"	22,920	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-921I-25-1EF	245	178	(2) 10	89,900	18,380	10,480	24,940	167	45	7.5	1050	590	12"	21,820	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-921I-35-1EF	249	198	(2) 10	89,000	19,500	11,600	26,070	180	58	7.5	1050	590	12"	22,950	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-921J-25-1EF	266	193	(2) 15	102,900	18,640	10,480	25,200	167	45	7.5	1050	590	12"	22,080	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-921J-35-1EF	272	218	(2) 15	101,900	19,760	11,600	26,330	180	58	7.5	1050	590	12"	23,220	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-921H-25-2EF	302	175	(2) 7 1/2	80,100	22,710	14,840	29,380	277	61	7.5	1050	590	12"	26,260	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-921H-35-2EF	307	185	(2) 7 1/2	79,300	23,820	15,960	30,510	290	74	7.5	1050	590	12"	27,390	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"
ATC-DC-9211-25-2EF	322	188	(2) 10	88,100	22,740	14,840	29,410	277	61	7.5	1050	590	12"	26,290	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-921I-35-2EF	328	201	(2) 10	87,300	23,860	15,960	30,540	290	74	7.5	1050	590	12"	27,430	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"
ATC-DC-921J-25-2EF	351	206	(2) 15	100,900	23,000	14,840	29,670	277	61	7.5	1050	590	12"	26,560	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-921J-35-2EF	358	224	(2) 15	99,900	24,120	15,960	30,810	290	74	7.5	1050	590	12"	27,690	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



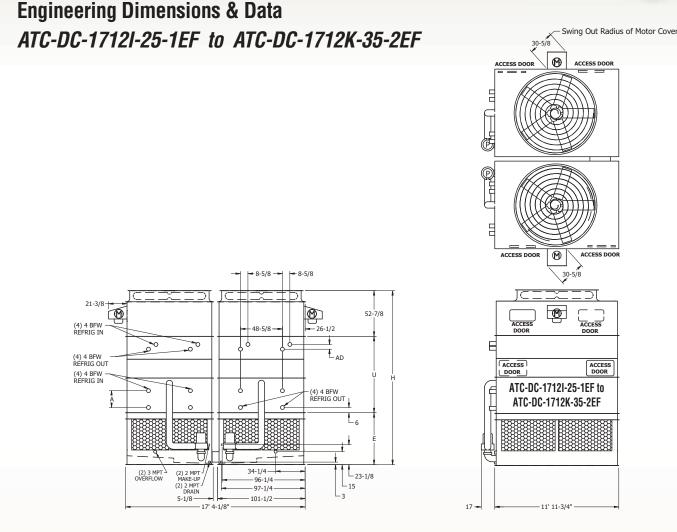


Table 6 Engineering Data

	R-7*	17 Tons*	F	ans		Weights†				Spray	Pump		Remote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1712I-25-1EF	259	226	(2) 10	102,600	21,630	6,440	29,990	191	37	(2) 5	1140	660	(2) 10"	26,250	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-1712I-35-1EF	264	234	(2) 10	101,500	22,900	7,070	31,270	206	45	(2) 5	1140	660	(2) 10"	27,530	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-1712J-25-1EF	288	249	(2) 15	117,400	21,900	6,440	30,260	191	37	(2) 5	1140	660	(2) 10"	26,530	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-1712J-35-1EF	293	265	(2) 15	116,200	23,170	7,070	31,540	206	45	(2) 5	1140	660	(2) 10"	27,810	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-1712K-25-1EF	302	267	(2) 20	129,200	22,030	6,440	30,390	191	37	(2) 5	1140	660	(2) 10"	26,650	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-1712K-35-1EF	308	283	(2) 20	127,900	23,290	7,070	31,670	206	45	(2) 5	1140	660	(2) 10"	27,930	15' 9-7/8"	5' 1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-1712I-25-2EF	338	214	(2) 10	100,600	26,480	8,870	34,990	331	55	(2) 5	1140	660	(2) 10"	31,250	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-1712I-35-2EF	344	229	(2) 10	99,600	27,750	9,500	36,270	346	63	(2) 5	1140	660	(2) 10"	32,530	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"
ATC-DC-1712K-25-2EF	393	250	(2) 20	126,700	26,880	8,870	35,390	331	55	(2) 5	1140	660	(2) 10"	31,650	16' 4-3/8"	5' 1/4"	6' 11"	12"	5-1/2"
ATC-DC-1712K-35-2EF	401	275	(2) 20	125,400	28,150	9,500	36,670	346	63	(2) 5	1140	660	(2) 10"	32,930	16' 4-3/8"	5' 1/4"	6' 11"	12"	6-7/8"

Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

Gallons 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. (12" would normally be sufficient.) **

**

Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

Heaviest section is the coil section. t

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



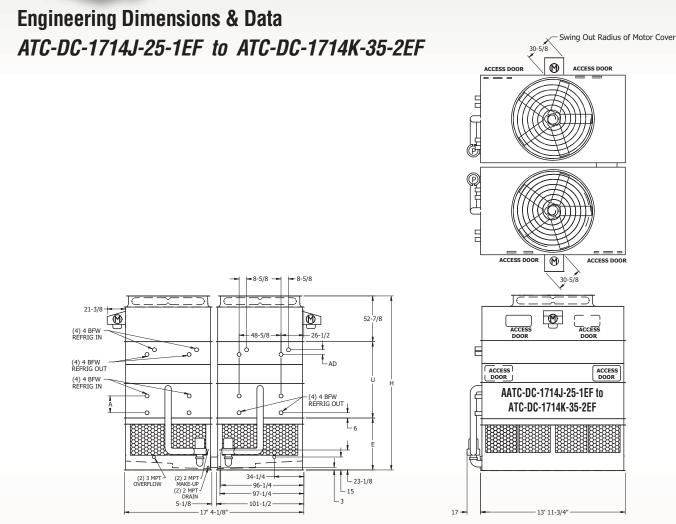


Table 7 Engineering Data

	R-71	17 Tons*	F	ans		Weights†				Spray	Pump		Remote Sı	ımp			Dimensions		
Model No.	Wet	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1714J-25-1EF	320	250	(2) 15	128,600	26,650	8,450	36,410	235	43	(2) 5	1300	760	(2) 10"	32,150	16' 3-7/8"	5' 6-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-1714J-35-1EF	326	282	(2) 15	127,300	28,130	9,190	37,910	253	51	(2) 5	1300	760	(2) 10"	33,650	16' 3-7/8"	5' 6-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-1714K-25-1EF	340	265	(2) 20	141,500	26,780	8,450	36,540	235	43	(2) 5	1300	760	(2) 10"	32,270	16' 3-7/8"	5' 6-1/4"	6' 4-1/2"	5-1/2"	5-1/2"
ATC-DC-1714K-35-1EF	346	302	(2) 20	140,100	28,260	9,190	38,040	253	51	(2) 5	1300	760	(2) 10"	33,770	16' 3-7/8"	5' 6-1/4"	6' 4-1/2"	5-1/2"	6-7/8"
ATC-DC-1714I-25-2EF	377	242	(2) 10	112,300	29,900	10,220	39,810	375	64	(2) 5	1300	760	(2) 10"	35,550	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	5-1/2"
ATC-DC-1714I-35-2EF	384	258	(2) 10	111,200	31,390	10,960	41,310	393	72	(2) 5	1300	760	(2) 10"	37,050	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	6-7/8"
ATC-DC-1714J-25-2EF	412	266	(2) 15	128,600	30,180	10,220	40,080	375	64	(2) 5	1300	760	(2) 10"	35,820	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	5-1/2"
ATC-DC-1714J-35-2EF	420	288	(2) 15	127,300	31,660	10,960	41,590	393	72	(2) 5	1300	760	(2) 10"	37,320	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	6-7/8"
ATC-DC-1714K-25-2EF	437	284	(2) 20	141,500	30,300	10,220	40,210	375	64	(2) 5	1300	760	(2) 10"	35,950	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	5-1/2"
ATC-DC-1714K-35-2EF	446	310	(2) 20	140,100	31,790	10,960	41,710	393	72	(2) 5	1300	760	(2) 10"	37,450	16' 10-3/8"	5' 6-1/4"	6' 11"	12"	6-7/8"

Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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.

(12" would normally be sufficient.)
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

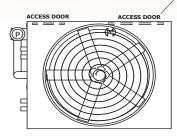
+ Heaviest section is the coil section.

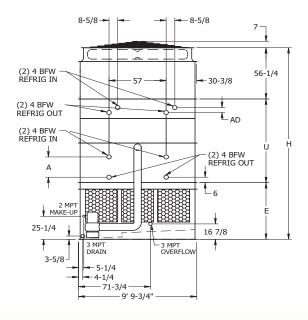
Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.



Engineering Dimensions & Data ATC-DC-1012I-25-1EF to ATC-DC-1012L-35-2EF

 Access Doors Swing Inside Unit





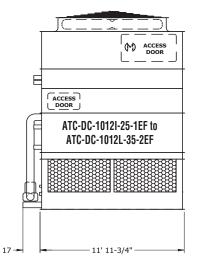


Table 8 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	R	emote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1012I-25-1EF	190	111	10	54,200	13,690	8,450	18,860	118	31	5	685	420	12"	15,110	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1012I-35-1EF	194	122	10	53,600	14,430	9,200	19,620	127	40	5	685	420	12"	15,870	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1012J-25-1EF	209	121	15	62,000	13,820	8,450	19,000	118	31	5	685	420	12"	15,250	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1012J-35-1EF	213	136	15	61,400	14,570	9,200	19,750	127	40	5	685	420	12"	16,010	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1012K-25-1EF	221	129	20	68,300	13,890	8,450	19,060	118	31	5	685	420	12"	15,310	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1012K-35-1EF	225	146	20	67,600	14,630	9,200	19,820	127	40	5	685	420	12"	16,070	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1012L-25-1EF	230	134	25	73,500	13,920	8,450	19,090	118	31	5	685	420	12"	15,340	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1012L-35-1EF	235	154	25	72,800	14,660	9,200	19,850	127	40	5	685	420	12"	16,100	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1012I-25-2EF	230	116	10	53,100	16,650	11,410	21,900	198	42	5	685	420	12"	18,160	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1012I-35-2EF	235	123	10	52,600	17,390	12,160	22,660	207	51	5	685	420	12"	18,910	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1012J-25-2EF	252	128	15	60,800	16,780	11,410	22,040	198	42	5	685	420	12"	18,290	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1012J-35-2EF	257	138	15	60,200	17,530	12,160	22,800	207	51	5	685	420	12"	19,050	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1012K-25-2EF	266	137	20	66,900	16,850	11,410	22,100	198	42	5	685	420	12"	18,360	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1012K-35-2EF	272	149	20	66,300	17,590	12,160	22,860	207	51	5	685	420	12"	19,110	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1012L-25-2EF	278	144	25	72,100	16,880	11,410	22,140	198	42	5	685	420	12"	18,390	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1012L-35-2EF	283	158	25	71,400	17,630	12,160	22,890	207	51	5	685	420	12"	19,140	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.
** Callons shown is water in suspanying in unit and piping. Allow for additional

Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

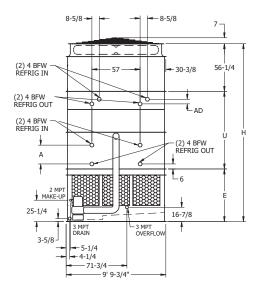
Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.



Engineering Dimensions & Data ATC-DC-1018I-25-1EF to ATC-DC-1018M-35-2EF

- Access Doors Swing Inside Unit





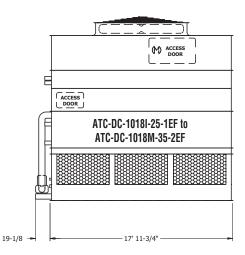


Table 9 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1018I-25-1EF	247	154	10	72,600	19,030	11,930	26,870	167	46	7.5	1030	630	12"	21,360	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1018I-35-1EF	252	167	10	71,800	20,160	13,060	28,020	180	59	7.5	1030	630	12"	22,510	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1018J-25-1EF	273	169	15	83,100	19,170	11,930	27,010	167	46	7.5	1030	630	12"	21,490	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1018J-35-1EF	278	186	15	82,200	20,300	13,060	28,150	180	59	7.5	1030	630	12"	22,640	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1018K-25-1EF	292	181	20	91,400	19,230	11,930	27,070	167	46	7.5	1030	630	12"	21,560	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1018K-35-1EF	297	201	20	90,500	20,360	13,060	28,220	180	59	7.5	1030	630	12"	22,710	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1018L-25-1EF	308	189	25	98,500	19,260	11,930	27,100	167	46	7.5	1030	630	12"	21,590	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1018L-35-1EF	314	212	25	97,500	20,390	13,060	28,250	180	59	7.5	1030	630	12"	22,740	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1018M-25-1EF	320	196	30	104,700	19,310	11,930	27,150	167	46	7.5	1030	630	12"	21,640	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1018M-35-1EF	326	222	30	103,600	20,450	13,060	28,300	180	59	7.5	1030	630	12"	22,790	16' 1-5/8"	5' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1018I-25-2EF	298	160	10	71,100	23,470	16,370	31,430	277	62	7.5	1030	630	12"	25,920	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1018I-35-2EF	303	167	10	70,400	24,610	17,500	32,580	290	75	7.5	1030	630	12"	27,060	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1018J-25-2EF	328	178	15	81,400	23,610	16,370	31,560	277	62	7.5	1030	630	12"	26,050	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1018J-35-2EF	334	188	15	80,600	24,740	17,500	32,710	290	75	7.5	1030	630	12"	27,200	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1018K-25-2EF	352	191	20	89,600	23,670	16,370	31,630	277	62	7.5	1030	630	12"	26,110	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1018K-35-2EF	359	204	20	88,700	24,800	17,500	32,770	290	75	7.5	1030	630	12"	27,260	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1018L-25-2EF	371	201	25	96,600	23,700	16,370	31,660	277	62	7.5	1030	630	12"	26,150	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1018L-35-2EF	378	217	25	95,600	24,840	17,500	32,810	290	75	7.5	1030	630	12"	27,290	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1018M-25-2EF	385	209	30	102,600	23,760	16,370	31,710	277	62	7.5	1030	630	12"	26,200	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1018M-35-2EF	392	227	30	101,600	24,890	17,500	32,860	290	75	7.5	1030	630	12"	27,350	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

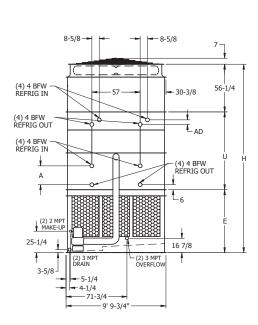
** Gallons shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (12" would normally be sufficient.)
*** Performant shares in shown for P.717. Multiply by 1.02 for P. 22 and 1.08 for P. 124a.

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.
 † Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1024I-25-1EF to ATC-DC-1024L-35-2EF



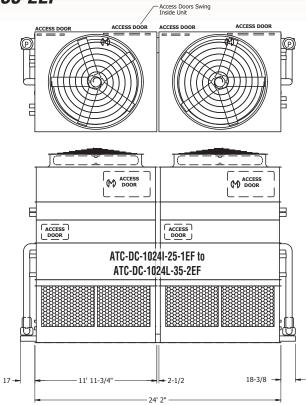


Table 10 Engineering Data

	R-71	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	Remote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1024I-25-1EF	380	222	(2) 10	108,400	27,180	8,360	39,590	235	44	(2) 5	1370	840	(2) 12"	32,090	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1024I-35-1EF	387	244	(2) 10	107,300	28,680	9,100	41,100	254	53	(2) 5	1370	840	(2) 12"	33,610	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1024J-25-1EF	418	243	(2) 15	124,100	27,460	8,360	39,860	235	44	(2) 5	1370	840	(2) 12"	32,360	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1024J-35-1EF	426	271	(2) 15	122,800	28,950	9,100	41,380	254	53	(2) 5	1370	840	(2) 12"	33,880	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1024K-25-1EF	442	257	(2) 20	136,500	27,580	8,360	39,990	235	44	(2) 5	1370	840	(2) 12"	32,490	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1024K-35-1EF	451	291	(2) 20	135,200	29,080	9,100	41,500	254	53	(2) 5	1370	840	(2) 12"	34,010	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1024L-25-1EF	461	269	(2) 25	147,100	27,640	8,360	40,050	235	44	(2) 5	1370	840	(2) 12"	32,550	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1024L-35-1EF	469	307	(2) 25	145,600	29,140	9,100	41,570	254	53	(2) 5	1370	840	(2) 12"	34,070	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1024I-25-2EF	459	232	(2) 10	106,200	33,210	11,370	45,780	395	65	(2) 5	1370	840	(2) 12"	38,290	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1024I-35-2EF	467	246	(2) 10	105,200	34,700	12,120	47,300	414	74	(2) 5	1370	840	(2) 12"	39,800	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1024J-25-2EF	459	257	(2) 15	121,600	33,480	11,370	46,060	395	65	(2) 5	1370	840	(2) 12"	38,560	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1024J-35-2EF	467	276	(2) 15	120,400	34,980	12,120	47,570	414	74	(2) 5	1370	840	(2) 12"	40,070	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1024K-25-2EF	533	274	(2) 20	133,900	33,610	11,370	46,180	395	65	(2) 5	1370	840	(2) 12"	38,690	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1024K-35-2EF	543	298	(2) 20	132,500	35,100	12,120	47,700	414	74	(2) 5	1370	840	(2) 12"	40,200	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1024L-25-2EF	555	288	(2) 25	144,200	33,670	11,370	46,250	395	65	(2) 5	1370	840	(2) 12"	38,750	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1024L-35-2EF	566	315	(2) 25	142,800	35,170	12,120	47,760	414	74	(2) 5	1370	840	(2) 12"	40,260	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1036I-25-1EF to ATC-DC-1036M-35-2EF

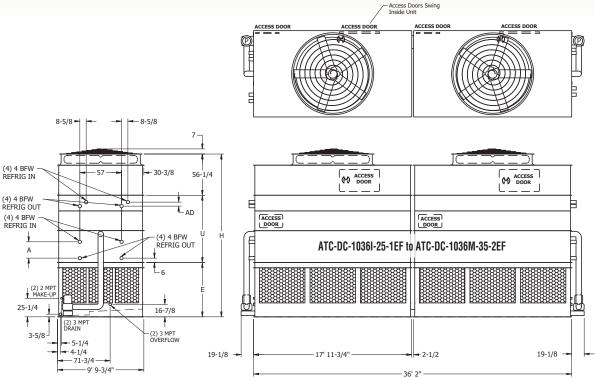


Table 11 Engineering Data

	R-71	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1036I-25-1EF	495	308	(2) 10	145,100	37,810	11,800	56,510	334	64	(2) 7.5	2060	1260	(2) 12"	45,490	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1036I-35-1EF	504	333	(2) 10	143,700	40,080	12,930	58,810	361	77	(2) 7.5	2060	1260	(2) 12"	47,780	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1036J-25-1EF	545	339	(2) 15	166,100	38,080	11,800	56,790	334	64	(2) 7.5	2060	1260	(2) 12"	45,760	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1036J-35-1EF	555	372	(2) 15	164,500	40,350	12,930	59,080	361	77	(2) 7.5	2060	1260	(2) 12"	48,060	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1036K-25-1EF	583	361	(2) 20	182,900	38,210	11,800	56,910	334	64	(2) 7.5	2060	1260	(2) 12"	45,890	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1036K-35-1EF	594	402	(2) 20	181,000	40,470	12,930	59,210	361	77	(2) 7.5	2060	1260	(2) 12"	48,180	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1036L-25-1EF	615	378	(2) 25	197,000	38,270	11,800	56,980	334	64	(2) 7.5	2060	1260	(2) 12"	45,950	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1036L-35-1EF	627	425	(2) 25	195,000	40,540	12,930	59,270	361	77	(2) 7.5	2060	1260	(2) 12"	48,250	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1036M-25-1EF	640	392	(2) 30	209,300	38,380	11,800	57,080	334	64	(2) 7.5	2060	1260	(2) 12"	46,060	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	5-1/2"
ATC-DC-1036M-35-1EF	652	444	(2) 30	207,200	40,640	12,930	59,380	361	77	(2) 7.5	2060	1260	(2) 12"	48,350	17' 1-5/8"	6' 2-1/4"	6'3 "	5-1/2"	6-7/8"
ATC-DC-1036I-25-2EF	595	335	(2) 10	142,300	46,800	16,290	65,730	554	96	(2) 7.5	2060	1260	(2) 12"	54,710	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1036I-35-2EF	607	338	(2) 10	140,900	49,060	17,430	68,030	581	109	(2) 7.5	2060	1260	(2) 12"	57,000	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1036J-25-2EF	656	377	(2) 15	162,900	47,070	16,290	66,010	554	96	(2) 7.5	2060	1260	(2) 12"	54,980	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1036J-35-2EF	668	383	(2) 15	161,300	49,340	17,430	68,300	581	109	(2) 7.5	2060	1260	(2) 12"	57,280	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1036K-25-2EF	704	409	(2) 20	179,300	47,200	16,290	66,130	554	96	(2) 7.5	2060	1260	(2) 12"	55,110	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1036K-35-2EF	717	417	(2) 20	177,500	49,460	17,430	68,430	581	109	(2) 7.5	2060	1260	(2) 12"	57,400	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1036L-25-2EF	743	434	(2) 25	193,100	47,260	16,290	66,190	554	96	(2) 7.5	2060	1260	(2) 12"	55,170	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1036L-35-2EF	757	446	(2) 25	191,200	49,530	17,430	68,490	581	109	(2) 7.5	2060	1260	(2) 12"	57,460	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1036M-25-2EF	771	454	(2) 30	205,200	47,360	16,290	66,300	554	96	(2) 7.5	2060	1260	(2) 12"	55,270	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1036M-35-2EF	786	469	(2) 30	203,200	49,630	17,430	68,590	581	109	(2) 7.5	2060	1260	(2) 12"	57,570	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)
*** Performant charge is shown for P-717. Multiply by 102 for P-22 and 108 for P-124a.

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.
 † Heaviest section is the coil section.

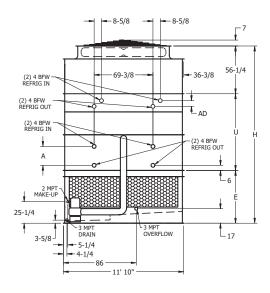
Dimensions are subject to change. Do not use for pre-fabrication. Quantity of coil connections subject to change based on refrigerant and design conditions.



Engineering Dimensions & Data ATC-DC-1212J-25-1EF to ATC-DC-1212L-35-2EF

 Access Door Swings Inside Unit





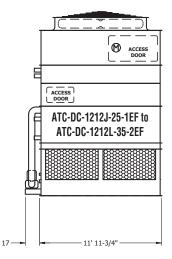


Table 12 Engineering Data

	R-7'	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1212J-25-1EF	193	147	15	74,500	15,370	9,550	21,390	142	38	5	800	490	12"	17,240	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1212J-35-1EF	196	164	15	73,700	16,280	10,460	22,310	153	49	5	800	490	12"	18,170	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1212K-25-1EF	205	156	20	82,000	15,430	9,550	21,450	142	38	5	800	490	12"	17,300	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1212K-35-1EF	209	176	20	81,200	16,350	10,460	22,380	153	49	5	800	490	12"	18,230	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1212L-25-1EF	213	163	25	88,300	15,460	9,550	21,480	142	38	5	800	490	12"	17,330	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1212L-35-1EF	217	186	25	87,400	16,380	10,460	22,410	153	49	5	800	490	12"	18,260	16' 1-5/8"	5' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1212J-25-2EF	253	155	15	73,000	18,820	13,000	24,940	232	51	5	800	490	12"	20,790	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1212J-35-2EF	258	166	15	72,300	19,740	13,920	25,860	243	62	5	800	490	12"	21,720	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1212K-25-2EF	271	166	20	80,400	18,890	13,000	25,000	232	51	5	800	490	12"	20,850	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1212K-35-2EF	276	180	20	79,600	19,800	13,920	25,930	243	62	5	800	490	12"	21,780	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1212L-25-2EF	281	174	25	86,600	18,920	13,000	25,030	232	51	5	800	490	12"	20,880	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1212L-35-2EF	286	191	25	85,700	19,830	13,920	25,960	243	62	5	800	490	12"	21,810	16' 9-7/8"	5' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

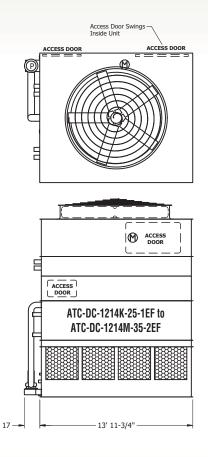
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

† Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1214K-25-1EF to ATC-DC-1214M-35-2EF



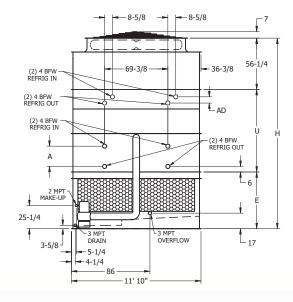


Table 13 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	Remote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft ³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1214K-25-1EF	221	177	20	90,800	17,280	10,790	24,390	166	44	5	900	570	12"	19,590	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1214K-35-1EF	225	198	20	89,800	18,360	11,870	25,480	179	57	5	900	570	12"	20,680	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1214L-25-1EF	232	185	25	97,800	17,310	10,790	24,420	166	44	5	900	570	12"	19,620	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1214L-35-1EF	236	209	25	96,800	18,390	11,870	25,510	179	57	5	900	570	12"	20,710	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1214M-25-1EF	238	191	30	103,900	17,370	10,790	24,470	166	44	5	900	570	12"	19,670	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1214M-35-1EF	243	218	30	102,900	18,450	11,870	25,560	179	57	5	900	570	12"	20,770	16' 7-5/8"	5' 8-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1214K-25-2EF	291	187	20	89,000	21,230	14,740	28,450	276	60	5	900	570	12"	23,650	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1214K-35-2EF	296	201	20	88,100	22,310	15,820	29,540	289	73	5	900	570	12"	24,750	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1214L-25-2EF	305	197	25	95,800	21,260	14,740	28,480	276	60	5	900	570	12"	23,680	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1214L-35-2EF	310	214	25	94,900	22,340	15,820	29,580	289	73	5	900	570	12"	24,780	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1214M-25-2EF	314	205	30	101,900	21,310	14,740	28,530	276	60	5	900	570	12"	23,730	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1214M-35-2EF	320	224	30	100,800	22,390	15,820	29,630	289	73	5	900	570	12"	24,830	17' 3-7/8"	5' 8-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

Gallons 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. (12" would normally be sufficient.) * *

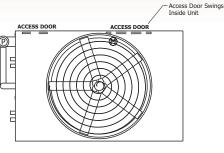
Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

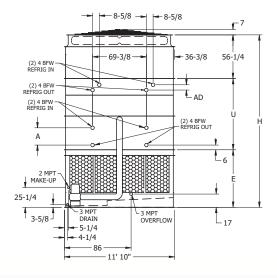
Heaviest section is the coil section. ŧ

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



Engineering Dimensions & Data ATC-DC-1218K-25-1EF to ATC-DC-1218M-35-2EF





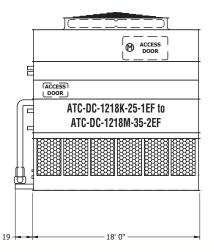


Table 14 Engineering Data

	R-71	17 Tons*	Fa	ins		Weights†				Spray	Pump	F	Remote S	ump			Dimensions		
Model No.	Wet	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1218K-25-1EF	277	222	20	112,100	21,420	13,450	30,400	203	56	7.5	1200	720	12"	24,240	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1218K-35-1EF	282	246	20	111,000	22,820	14,840	31,810	220	73	7.5	1200	720	12"	25,650	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1218L-25-1EF	292	233	25	120,800	21,460	13,450	30,440	203	56	7.5	1200	720	12"	24,270	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1218L-35-1EF	297	261	25	119,600	22,850	14,840	31,850	220	73	7.5	1200	720	12"	25,680	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1218M-25-1EF	305	241	30	128,300	21,510	13,450	30,490	203	56	7.5	1200	720	12"	24,330	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1218M-35-1EF	310	272	30	127,100	22,900	14,840	31,900	220	73	7.5	1200	720	12"	25,740	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1218K-25-2EF	364	234	20	109,900	26,680	18,710	35,810	343	75	7.5	1200	720	12"	29,650	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1218K-35-2EF	371	251	20	108,800	28,080	20,100	37,220	360	92	7.5	1200	720	12"	31,060	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1218L-25-2EF	384	246	25	118,400	26,720	18,710	35,840	343	75	7.5	1200	720	12"	29,680	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1218L-35-2EF	391	266	25	117,200	28,110	20,100	37,250	360	92	7.5	1200	720	12"	31,090	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1218M-25-2EF	401	257	30	125,800	26,770	18,710	35,900	343	75	7.5	1200	720	12"	29,730	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1218M-35-2EF	409	279	30	124,600	28,160	20,100	37,310	360	92	7.5	1200	720	12"	31,140	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

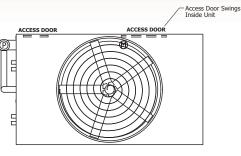
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

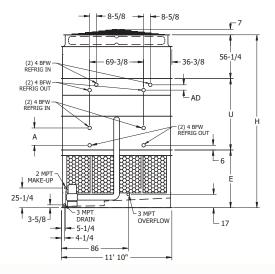
† Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1220L-25-1EF to ATC-DC-1220N-35-2EF





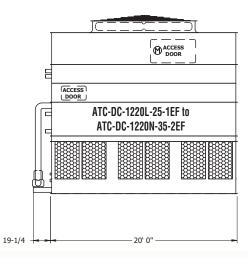


Table 15 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	R	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1220L-25-1EF	305	251	25	128,500	23,510	14,690	33,640	217	62	10	1400	800	14"	26,600	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1220L-35-1EF	311	280	25	127,200	25,060	16,250	35,210	236	81	10	1400	800	14"	28,170	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1220M-25-1EF	317	261	30	136,600	23,560	14,690	33,690	217	62	10	1400	800	14"	26,660	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1220M-35-1EF	323	293	30	135,200	25,110	16,250	35,260	236	81	10	1400	800	14"	28,230	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1220N-25-1EF	337	276	40	150,300	23,730	14,690	33,860	217	62	10	1400	800	14"	26,820	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1220N-35-1EF	344	314	40	148,800	25,280	16,250	35,430	236	81	10	1400	800	14"	28,390	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1220L-25-2EF	401	266	25	126,000	29,250	20,440	39,560	387	84	10	1400	800	14"	32,530	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1220L-35-2EF	409	286	25	124,700	30,800	21,990	41,130	406	103	10	1400	800	14"	34,100	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1220M-25-2EF	417	277	30	133,900	29,300	20,440	39,610	387	84	10	1400	800	14"	32,580	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1220M-35-2EF	425	300	30	132,500	30,860	21,990	41,180	406	103	10	1400	800	14"	34,150	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1220N-25-2EF	444	295	40	147,400	29,470	20,440	39,780	387	84	10	1400	800	14"	32,750	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1220N-35-2EF	453	322	40	145,900	31,020	21,990	41,350	406	103	10	1400	800	14"	34,320	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

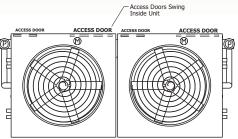
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

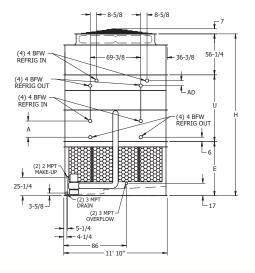
+ Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1224K-25-1EF to ATC-DC-1224L-35-2EF





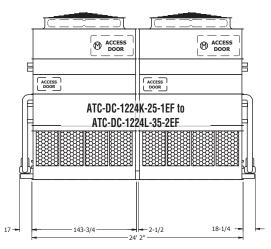


Table 16 Engineering Data

	R-71	17 Tons*	F	ans		Weights†				Spray	Pump		Remote Si	ımp			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1224K-25-1EF	410	312	(2) 20	164,000	30,690	9,460	44,370	284	54	(2) 5	1600	980	(2) 12"	36,070	17' 15/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1224K-35-1EF	418	352	(2) 20	162,300	32,530	10,380	46,220	306	65	(2) 5	1600	980	(2) 12"	37,930	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1224L-25-1EF	426	326	(2) 25	176,600	30,760	9,460	44,430	284	54	(2) 5	1600	980	(2) 12"	36,140	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1224L-35-1EF	434	371	(2) 25	174,900	32,590	10,380	46,290	306	65	(2) 5	1600	980	(2) 12"	37,990	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1224J-25-2EF	506	310	(2) 15	161,700	37,560	12,960	51,430	464	80	(2) 5	1600	980	(2) 12"	43,130	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1224J-35-2EF	515	333	(2) 15	160,100	39,390	13,870	53,280	486	91	(2) 5	1600	980	(2) 12"	44,990	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1224K-25-2EF	538	332	(2) 20	178,000	37,690	12,960	51,550	464	80	(2) 5	1600	980	(2) 12"	43,260	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1224K-35-2EF	548	360	(2) 20	176,200	39,520	13,870	53,410	486	91	(2) 5	1600	980	(2) 12"	45,110	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1224L-25-2EF	561	349	(2) 25	191,700	37,750	12,960	51,610	464	80	(2) 5	1600	980	(2) 12"	43,320	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1224L-35-2EF	572	381	(2) 25	189,800	39,580	13,870	53,470	486	91	(2) 5	1600	980	(2) 12"	45,170	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

Gallons 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. (12" would normally be sufficient.) * *

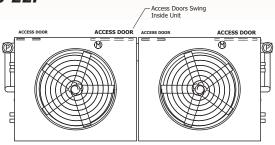
Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

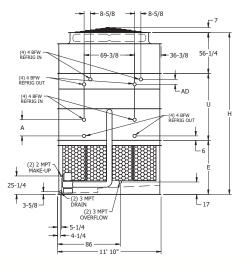
Heaviest section is the coil section. ŧ

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



Engineering Dimensions & Data ATC-DC-1228K-25-1EF to ATC-DC-1228M-35-2EF





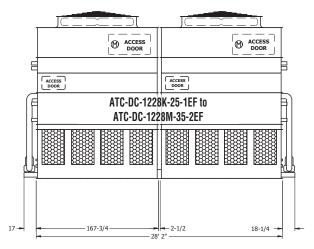


Table 17 Engineering Data

	R-71	17 Tons*	Fa	ns		Weights†				Spray	Pump	R	emote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1228K-25-1EF	442	353	(2) 20	181,500	34,350	10,680	50,420	331	62	(2) 5	1800	1140	(2) 12"	40,820	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1228K-35-1EF	451	395	(2) 20	179,700	36,520	11,760	52,610	358	75	(2) 5	1800	1140	(2) 12"	43,010	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1228L-25-1EF	464	369	(2) 25	195,500	34,420	10,680	50,480	331	62	(2) 5	1800	1140	(2) 12"	40,890	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1228L-35-1EF	472	418	(2) 25	193,600	36,580	11,760	52,670	358	75	(2) 5	1800	1140	(2) 12"	43,080	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1228M-25-1EF	477	383	(2) 30	207,800	34,520	10,680	50,590	331	62	(2) 5	1800	1140	(2) 12"	40,990	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1228M-35-1EF	486	436	(2) 30	205,700	36,680	11,760	52,780	358	75	(2) 5	1800	1140	(2) 12"	43,180	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1228K-25-2EF	581	374	(2) 20	178,000	42,330	14,670	58,630	551	93	(2) 5	1800	1140	(2) 12"	49,030	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1228K-35-2EF	592	403	(2) 20	176,200	44,500	15,750	60,820	578	106	(2) 5	1800	1140	(2) 12"	51,220	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1228L-25-2EF	609	394	(2) 25	191,700	42,400	14,670	58,690	551	93	(2) 5	1800	1140	(2) 12"	49,100	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1228L-35-2EF	621	427	(2) 25	189,800	44,560	15,750	60,880	578	106	(2) 5	1800	1140	(2) 12"	51,290	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1228M-25-2EF	628	410	(2) 30	203,700	42,500	14,670	58,800	551	93	(2) 5	1800	1140	(2) 12"	49,200	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1228M-35-2EF	639	448	(2) 30	201,700	44,660	15,750	60,990	578	106	(2) 5	1800	1140	(2) 12"	51,390	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1236K-25-1EF to ATC-DC-1236M-35-2EF

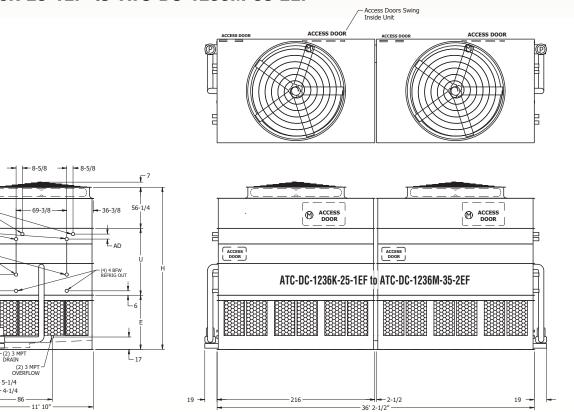


Table 18 Engineering Data

(4) 4 BFW REFRIG IN

(4) 4 BFW REFRIG OUT

(4) 4 BFW REFRIG IN

(2) 2 MPT MAKE-UF 25-1/4 3-5/8

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	R-71	17 Tons*	Fa	ins		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†		Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1236K-25-1EF	554	443	(2) 20	224,200	42,600	13,320	63,150	406	78	(2) 7.5	2400	1440	(2) 12"	50,820	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1236K-35-1EF	564	493	(2) 20	222,000	45,380	14,720	65,970	440	95	(2) 7.5	2400	1440	(2) 12"	53,640	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1236L-25-1EF	583	466	(2) 25	241,500	42,660	13,320	63,210	406	78	(2) 7.5	2400	1440	(2) 12"	50,890	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
AATC-DC-1236L-35-1EF	594	522	(2) 25	239,100	45,440	14,720	66,030	440	95	(2) 7.5	2400	1440	(2) 12"	53,710	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1236M-25-1EF	609	482	(2) 30	256,700	42,760	13,320	63,320	406	78	(2) 7.5	2400	1440	(2) 12"	50,990	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1236M-35-1EF	621	545	(2) 30	254,100	45,550	14,720	66,140	440	95	(2) 7.5	2400	1440	(2) 12"	53,810	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1236K-25-2EF	728	468	(2) 20	219,800	53,220	18,640	74,070	686	117	(2) 7.5	2400	1440	(2) 12"	61,740	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1236K-35-2EF	742	501	(2) 20	217,600	56,010	20,030	76,890	720	134	(2) 7.5	2400	1440	(2) 12"	64,560	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1236L-25-2EF	768	493	(2) 25	236,800	53,290	18,640	74,130	686	117	(2) 7.5	2400	1440	(2) 12"	61,810	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1236L-35-2EF	783	532	(2) 25	234,400	56,070	20,030	76,950	720	134	(2) 7.5	2400	1440	(2) 12"	64,630	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1236M-25-2EF	803	514	(2) 30	251,600	53,390	18,640	74,240	686	117	(2) 7.5	2400	1440	(2) 12"	61,910	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1236M-35-2EF	818	559	(2) 30	249,100	56,170	20,030	77,060	720	134	(2) 7.5	2400	1440	(2) 12"	64,730	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

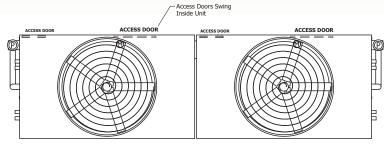
*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

† Heaviest section is the coil section.

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



Engineering Dimensions & Data ATC-DC-1240L-25-1EF to ATC-DC-1240N-35-2EF



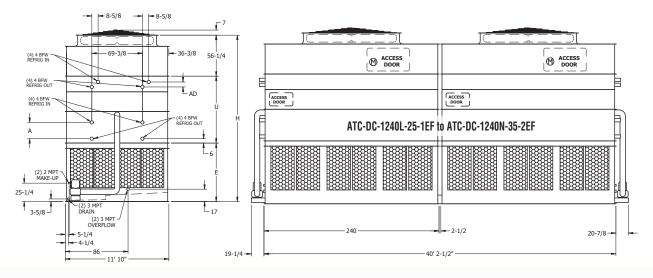


Table 19 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-1240L-25-1EF	610	502	(2) 25	257,000	46,720	14,550	69,720	435	86	(2) 10	2800	1600	(2) 14"	55,650	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1240L-35-1EF	622	560	(2) 25	254,500	49,830	16,100	72,870	472	105	(2) 10	2800	1600	(2) 14"	58,800	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1240M-25-1EF	635	522	(2) 30	273,100	46,830	14,550	69,830	435	86	(2) 10	2800	1600	(2) 14"	55,760	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1240M-35-1EF	647	586	(2) 30	270,400	49,930	16,100	72,970	472	105	(2) 10	2800	1600	(2) 14"	58,900	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1240N-25-1EF	675	552	(2) 40	300,600	47,160	14,550	70,160	435	86	(2) 10	2800	1600	(2) 14"	56,090	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-1240N-35-1EF	688	628	(2) 40	297,600	50,270	16,100	73,310	472	105	(2) 10	2800	1600	(2) 14"	59,240	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-1240L-25-2EF	799	532	(2) 25	252,000	58,360	20,360	81,710	775	130	(2) 10	2800	1600	(2) 14"	67,640	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1240L-35-2EF	815	571	(2) 25	249,500	61,460	21,920	84,860	812	149	(2) 10	2800	1600	(2) 14"	70,790	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1240M-25-2EF	832	554	(2) 30	267,800	58,460	20,360	81,820	775	130	(2) 10	2800	1600	(2) 14"	67,750	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1240M-35-2EF	847	599	(2) 30	265,100	61,570	21,920	84,960	812	149	(2) 10	2800	1600	(2) 14"	70,890	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-1240N-25-2EF	884	591	(2) 40	294,700	58,800	20,360	82,160	775	130	(2) 10	2800	1600	(2) 14"	68,090	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-1240N-35-2EF	901	645	(2) 40	291,800	61,900	21,920	85,300	812	149	(2) 10	2800	1600	(2) 14"	71,230	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



Access Doors Swing Inside Unit

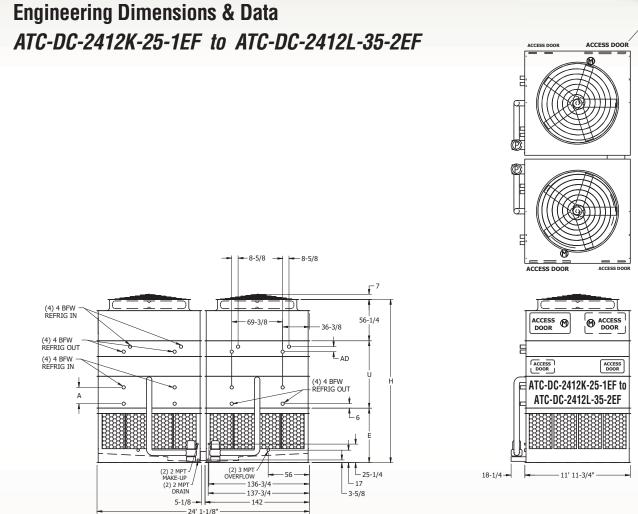


Table 20 Engineering Data

	R-71	17 Tons*	F	ans		Weights†				Spray	Pump		Remote Si	ımp			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-2412K-25-1EF	410	312	(2) 20	164,000	30,690	9,460	44,370	284	54	(2) 5	1600	980	(2) 12"	36,070	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2412K-35-1EF	418	352	(2) 20	162,300	32,530	10,380	46,220	306	65	(2) 5	1600	980	(2) 12"	37,930	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2412L-25-1EF	426	326	(2) 25	176,600	30,760	9,460	44,430	284	54	(2) 5	1600	980	(2) 12"	36,140	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2412L-35-1EF	434	371	(2) 25	174,900	32,590	10,380	46,290	306	65	(2) 5	1600	980	(2) 12"	37,990	17' 1-5/8"	6' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2412J-25-2EF	507	310	(2) 15	146,100	37,560	12,960	51,430	464	80	(2) 5	1600	980	(2) 12"	43,130	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2412J-35-2EF	516	333	(2) 15	144,600	39,390	13,870	53,280	486	91	(2) 5	1600	980	(2) 12"	44,990	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2412L-25-2EF	562	349	(2) 25	173,200	37,750	12,960	51,610	464	80	(2) 5	1600	980	(2) 12"	43,320	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2412L-35-2EF	573	381	(2) 25	171,400	39,580	13,870	53,470	486	91	(2) 5	1600	980	(2) 12"	45,170	17' 9-7/8"	6' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

+ Heaviest section is the coil section.

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



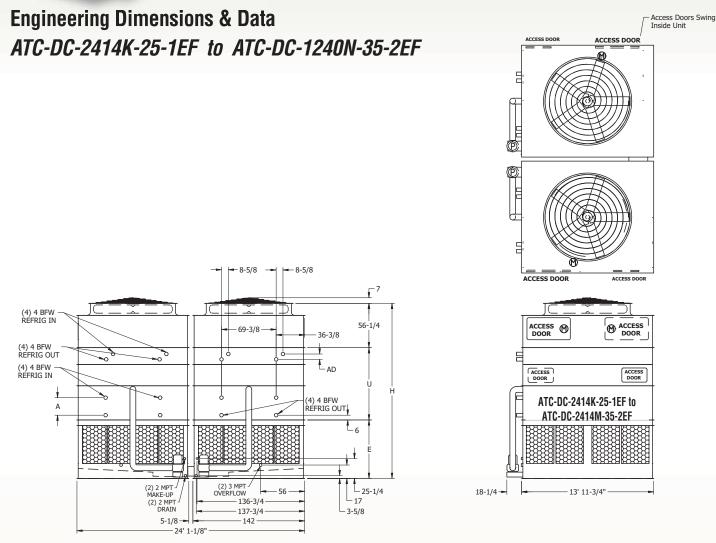


Table 21 Engineering Data

	R-7'	17 Tons*	F	ans		Weights†				Spray	Pump		Remote Si	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-2414K-25-1EF	442	353	(2) 20	181,500	34,390	10,700	50,460	331	62	(2) 5	1800	1140	(2) 12"	40,860	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2414K-35-1EF	451	395	(2) 20	179,700	36,560	11,780	52,650	358	75	(2) 5	1800	1140	(2) 12"	43,060	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2414L-25-1EF	464	369	(2) 25	195,500	34,460	10,700	50,520	331	62	(2) 5	1800	1140	(2) 12"	40,930	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2414L-35-1EF	472	418	(2) 25	193,600	36,620	11,780	52,720	358	75	(2) 5	1800	1140	(2) 12"	43,120	18' 1-5/8"	7' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2414K-25-2EF	581	374	(2) 20	178,000	42,350	14,680	58,650	551	93	(2) 5	1800	1140	(2) 12"	49,050	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2414K-35-2EF	592	403	(2) 20	176,200	44,520	15,760	60,840	578	106	(2) 5	1800	1140	(2) 12"	51,250	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2414L-25-2EF	609	394	(2) 25	191,700	42,420	14,680	58,710	551	93	(2) 5	1800	1140	(2) 12"	49,120	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2414L-35-2EF	621	427	(2) 25	189,800	44,580	15,760	60,910	578	106	(2) 5	1800	1140	(2) 12"	51,310	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2414M-25-2EF	628	410	(2) 30	203,700	42,520	14,680	58,820	551	93	(2) 5	1800	1140	(2) 12"	49,220	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2414M-35-2EF	639	448	(2) 30	201,700	44,680	15,760	61,010	578	106	(2) 5	1800	1140	(2) 12"	51,410	18' 9-7/8"	7' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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.

(12" would normally be sufficient.) *** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.

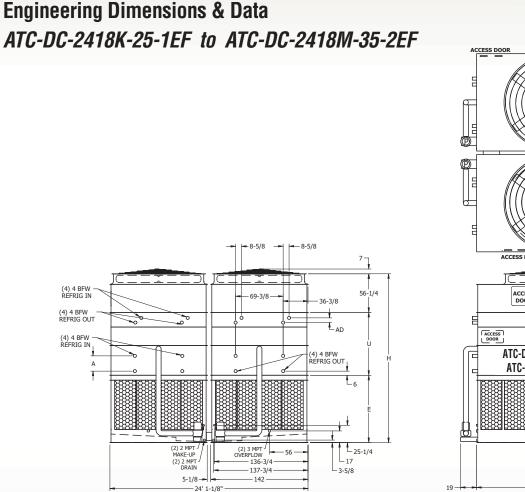
+ Heaviest section is the coil section.

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



Access Doors Swing Inside Unit

ACCESS DOO



ATC-DC-2418K-25-1EF 10 ATC-DC-2418M-35-2EF

Table 22 Engineering Data

	R-7	17 Tons*	Fa	ins		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F DB Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-2418K-25-1EF	554	443	(2) 20	224,200	42,680	13,370	63,230	406	78	(2) 7.5	2400	1440	(2) 12"	50,910	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2418K-35-1EF	564	493	(2) 20	222,000	45,460	14,760	66,060	440	95	(2) 7.5	2400	1440	(2) 12"	53,730	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2418L-25-1EF	583	466	(2) 25	241,500	42,740	13,370	63,300	406	78	(2) 7.5	2400	1440	(2) 12"	50,970	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2418L-35-1EF	594	522	(2) 25	239,100	45,530	14,760	66,120	440	95	(2) 7.5	2400	1440	(2) 12"	53,790	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2418M-25-1EF	609	482	(2) 30	256,700	42,850	13,370	63,400	406	78	(2) 7.5	2400	1440	(2) 12"	51,080	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2418M-35-1EF	621	545	(2) 30	254,100	45,630	14,760	66,220	440	95	(2) 7.5	2400	1440	(2) 12"	53,900	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2418K-25-2EF	729	468	(2) 20	219,800	53,290	18,670	74,130	686	117	(2) 7.5	2400	1440	(2) 12"	61,810	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2418K-35-2EF	743	501	(2) 20	217,600	56,070	20,060	76,950	720	134	(2) 7.5	2400	1440	(2) 12"	64,630	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2418L-25-2EF	770	493	(2) 25	236,800	53,350	18,670	74,200	686	117	(2) 7.5	2400	1440	(2) 12"	61,870	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2418L-35-2EF	785	532	(2) 25	234,400	56,130	20,060	77,020	720	134	(2) 7.5	2400	1440	(2) 12"	64,690	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2418M-25-2EF	804	514	(2) 30	251,600	53,450	18,670	74,300	686	117	(2) 7.5	2400	1440	(2) 12"	61,970	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2418M-35-2EF	819	559	(2) 30	249,100	56,240	20,060	77,120	720	134	(2) 7.5	2400	1440	(2) 12"	64,800	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

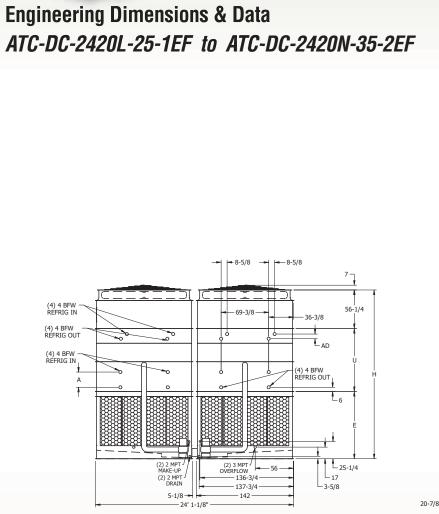
* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a. + Heaviest section is the coil section.

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





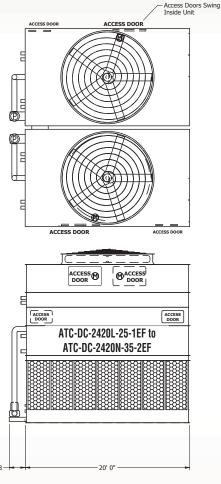


Table 23 Engineering Data

	R-7	17 Tons*	Fa	ns		Weights†				Spray	Pump	F	lemote S	ump			Dimensions		
Model No.	Wet Capacity	Dry Capacity @ 60°F Switch Point	HP	CFM	Shipping	Heaviest Section†	Operating	Refrigerant Op. Charge (lbs.)***	Coil Volume ft³	HP	GPM	Gallons Req'd**	Conn. Size	Operating Weight (lbs)	Height H	Lower E	Middle U	Wet Coil A	Dry Coil AD
ATC-DC-2420L-25-1EF	610	502	(2) 25	257,000	46,850	14,610	69,850	435	86	(2) 10	2800	1600	(2) 14"	55,780	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2420L-35-1EF	622	560	(2) 25	254,500	49,950	16,160	72,990	472	105	(2) 10	2800	1600	(2) 14"	58,920	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2420M-25-1EF	635	522	(2) 30	273,100	46,950	14,610	69,950	435	86	(2) 10	2800	1600	(2) 14"	55,880	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2420M-35-1EF	647	586	(2) 30	270,400	50,060	16,160	73,100	472	105	(2) 10	2800	1600	(2) 14"	59,030	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2420N-25-1EF	675	552	(2) 40	300,600	47,290	14,610	70,290	435	86	(2) 10	2800	1600	(2) 14"	56,220	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	5-1/2"
ATC-DC-2420N-35-1EF	688	628	(2) 40	297,600	50,390	16,160	73,430	472	105	(2) 10	2800	1600	(2) 14"	59,360	19' 1-5/8"	8' 2-1/4"	6' 3"	5-1/2"	6-7/8"
ATC-DC-2420L-25-2EF	799	532	(2) 25	252,000	58,420	20,400	81,780	775	130	(2) 10	2800	1600	(2) 14"	67,710	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2420L-35-2EF	815	571	(2) 25	249,500	61,520	21,950	84,920	812	149	(2) 10	2800	1600	(2) 14"	70,850	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2420M-25-2EF	827	554	(2) 30	267,800	58,520	20,400	81,880	775	130	(2) 10	2800	1600	(2) 14"	67,810	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2420M-35-2EF	842	599	(2) 30	265,100	61,630	21,950	85,020	812	149	(2) 10	2800	1600	(2) 14"	70,950	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"
ATC-DC-2420N-25-2EF	880	591	(2) 40	294,700	58,860	20,400	82,220	775	130	(2) 10	2800	1600	(2) 14"	68,150	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	5-1/2"
ATC-DC-2420N-35-2EF	897	645	(2) 40	291,800	61,960	21,950	85,360	812	149	(2) 10	2800	1600	(2) 14"	71,290	19' 9-7/8"	8' 2-1/4"	6' 11-1/4"	13-3/4"	6-7/8"

* Tons at standard conditions: 96.3°F condensing, 20°F suction and 78°F W.B.

** Gallons 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. (12" would normally be sufficient.)

*** Refrigerant charge is shown for R-717. Multiply by 1.93 for R-22 and 1.98 for R-134a.
 + Heaviest section is the coil section.

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

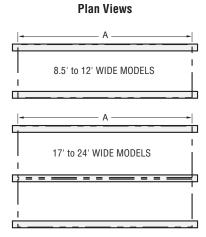


ATC-DC Steel Support

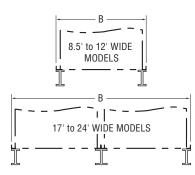
EVAPCO ATC-DC condensers are designed to be supported with structural "I" beams located under the outer flanges and running the entire length of the unit. Mounting holes, 3/4" in diameter are located in the bottom channels of the pan section to provide for bolting to the structural steel. (Refer to certified drawings from the factory for bolt hole locations.)

Beams should be level to within 1/8" in 6' before setting the unit in place. Do not level the unit by shimming between it and the "I" beams as this will not provide proper longitudinal support.

NOTE: Consult IBC 2012 for required steel support layout and structural design. See page 38-39 for more information on IBC Compliance.



End Elevations



ATC-DC Steel Support											
8-1/2' Wide Models	Α	В									
ATC-DC-99H-25-1EF to 99J-35-2EF	8' 11-1/2"	8' 5-1/2"									
ATC-DC-912I-25-1EF to 912K-35-2EF	11' 11-3/4"	8' 5-1/2"									
ATC-DC-914J-25-1EF to 914K-35-2EF	13' 11-3/4"	8' 5-1/2"									
ATC-DC-918H-25-1EF to 918J-35-2EF	18'	8' 5-1/2"									
ATC-DC-921H-25-1EF to 921J-35-2EF	21'	8' 5-1/2"									
17' Wide Models	Α	В									
ATC-DC-1712I-25-1EF to 1712K-35-2EF	11' 11-3/4"	17' 4-1/8"									
ATC-DC-1714J-25-1EF to 1714K-35-2EF	13' 11-3/4"	17' 4-1/8"									
10' Wide Models	Α	В									
ATC-DC-1012I-25-1EF to 1012L-35-2EF	11' 11-3/4"	9' 9-3/4"									
ATC-DC-1018I-25-1EF to 1018M-35-2EF	18'	9' 9-3/4"									
ATC-DC-1024I-25-1EF to 1024L-35-2EF	24' 2"	9' 9-3/4"									
ATC-DC-1036I-25-1EF to 1036M-35-2EF	36' 2-1/2"	9' 9-3/4"									
12' Wide Models	Α	В									
ATC-DC-1212J-25-1EF to 1212L-35-2EF	11' 11-3/4"	11' 10"									
ATC-DC-1214K-25-1EF to 1214M-35-2EF	13' 11-3/4"	11' 10"									
ATC-DC-1218K-25-1EF to 1218M-35-2EF	18'	11' 10"									
ATC-DC-1220L-25-1EF to 1220N-35-2EF	20'	11' 10"									
ATC-DC-1224K-25-1EF to 1224L-35-2EF	24' 2"	11' 10"									
ATC-DC-1228K-25-1EF to 1228M-35-2EF	28' 2"	11' 10"									
ATC-DC-1236K-25-1EF to 1236M-35-2EF	36' 2-1/2"	11' 10"									
ATC-DC-1240L-25-1EF to 1240N-35-2EF	40' 2-1/2"	11' 10"									
24' Wide Models	Α	В									
ATC-DC-2412K-25-1EF to 2412L-35-2EF	11' 11-3/4"	24' 1-1/8"									
ATC-DC-2414K-25-1EF to 2414M-35-2EF	13' 11-3/4"	24' 1-1/8"									
ATC-DC-2418K-25-1EF to 2418M-35-2EF	18'	24' 1-1/8"									
ATC-DC-2420L-25-1EF to 2420N-35-2EF	20'	24' 1-1/8"									



IBC Compliance

IBC Compliance

EVAPCO has been applying advanced structural technology to evaporative condensers for many years. Following seismic events in the mid 1990's EVAPCO introduced the UB Series of induced draft cooling towers, fluid coolers and evaporative condensers. These products were designed, built and independently certified for extreme seismic and wind forces. EVAPCO's new line of ATC-DC Evaporative Condensers are IBC compliant as standard construction.

International Building Code

The International Building Code (IBC) is a comprehensive set of regulations addressing the structural design and installation requirements for building systems – including HVAC and industrial refrigeration equipment. As of June 2008, all 50 states plus Washington D.C have adopted the International Building Code. Compared to previous building codes that solely examined anchorage, the earthquake provisions contained within the International Building Code address anchorage, structural integrity, and operational capability of a component following a seismic event. The goal of the IBC is to minimize the loss of life and improve the capability of essential facilities to operate after a seismic event.

The International Building Code (IBC) was developed to replace the *BOCA National Building Code*, ICBO's *Uniform Building Code* and SBCCI's *Standard Building Code*. The International Building Code specifies that all components be designed to resist the equivalent seismic forces as the structure to which they are installed whereas previous building codes focused exclusively on the structure of the building to provide resistance against seismic forces. These components include all aspects of the building architectural, electrical and mechanical systems. The failure of these components during a seismic event has been a common occurrence in recent history. Although the structure of the building may be relatively undamaged from an earthquake, the damage to the nonstructural components could be significant and result in considerable secondary damage to the building (ie. flooding, fire, structural damage).

Seismic Design

The IBC specifies that all installed components must meet the requirements of ASCE 7-10 (American Society of Civil Engineers, *Minimum Design Loads for Buildings and Other Structures*). Exemptions noted in the code are for all mechanical components assigned to seismic design categories A or B. <u>ASCE 7-10</u> explicitly states that in addition to the attachment and supports. the component itself must be designed to withstand the seismic

forces prescribed in the code. Simply stated, the code provisions

require that evaporative cooling equipment and all other components permanently installed on a structure must meet the same seismic design criteria as the building.

The seismic design force, utilized for component design, represents an equivalent static force that is applied to the components' center of gravity as described in the following equation:

 $F_{p} = [(0.4 * (a_{p}) * (S_{DS}) * (W_{p})) / (R_{p} / I_{p})] * (1 + 2 * (z / h))$

- F_p = Seismic Design Force centered at the component's center of gravity
- S_{DS} = Design spectral response acceleration, short period
- a_p = Component amplification factor
- I_p = Component importance factor
- W_p = Component operating weight
- R_p = Component response modification factor
- z = Height in structure of point of attachment of component with respect to the base
- h = Average roof height of structure with respect to the base

The minimum and maximum design force limits are specified as:

$$F_p$$
-min = 0.3 $S_{DS} I_p W_p$
 F_p -max = 1.6 $S_{DS} I_p W_p$

A series of charts and graphs are used to determine the appropriate factors based on the location of the installation and ultimately the "importance" of the facility. A chart of the potential seismic activity in the United States is shown below.



Map courtesy US Geological Survey website



IBC Compliance

Importance Factor (I_p)

A major parameter that must be determined prior to calculating the seismic design force is the component importance factor (I_p). ASCE 7-10 defines the component importance factor as:

Importance Factor, I _p	Classification
1.5	 Life safety component required to function after seismic event. Component containing hazardous content where the quantity, if released, exceeds a threshold limit that is sufficient to pose a threat to the public. Components installed at Risk Category IV (essential) facilities
1.0	All other components

According to ASCE 7-10, Section 13.1.3, components containing hazardous contents that could release an amount in excess of code limits require an importance factor of 1.5. <u>However, per ASCE 7-10, Section 1.5.3, the importance factor</u> <u>may be reduced to 1.0 should the authority having jurisdiction</u> <u>deem an acceptable Risk Management Program (RMP) would</u> <u>limit a release such that the release would not pose a threat to</u> <u>the public</u>. The importance factor has significant impact on the design of the equipment necessary for the application. Please contact the factory for assistance in understanding your needs.

Design Implementation

In order to achieve this goal, an architect or civil engineer is responsible for analyzing the soil and the design of a structure to determine the factors to be used and provide those in construction documents. A mechanical consulting engineer and/or design build contractor applies these factors to advise the manufacturer on the proper design for the application. EVAPCO takes this information and determines the necessary condenser construction to meet IBC regulations. This process ensures that the mechanical equipment and its components are seismically compliant per the provisions of the International Building Code.

Independent Certification

As required by the International Building Code, EVAPCO supplies a certificate of compliance as part of its submittal documents. The certificate of compliance should demonstrate that the equipment/unit has been independently tested and analyzed in accordance with the IBC program. Evapco has worked closely with Tobolski Watkins Engineering, Inc., a Certified Seismic Qualification Agency, to complete the independent equipment testing and analysis. A sample of the certificate of compliance and unit label is presented below:



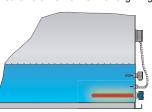


ATC-DC Optional Equipment

Electric Heaters

Electric immersion heaters are available factory installed in the basin of the condenser. They are sized to maintain a $+40^{\circ}$ F pan water temperature with the fans off and an ambient air temperature of 0°F, -20°F or -40°F. They are furnished with a thermostat to cycle the heater on when required and a low water protection device to prevent the heater elements from energizing

unless they are completely submerged. All components are in weather proof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.



ATC-DC Heater	[•] Sizes (kV	V)	
8-1/2' Wide Models	0°F	-20°F	-40°F
ATC-DC-99H-25-1EF to 99J-35-2EF	7	10	15
ATC-DC-912I-25-1EF to 912K-35-2EF	(2) 4	(2) 7	(2) 9
ATC-DC-914J-25-1EF to 914K-35-2EF	(2) 5	(2) 7	(2) 10
ATC-DC-918H-25-1EF to 918J-35-2EF	(2) 6	(2) 9	(2) 12
ATC-DC-921H-25-1EF to 921J-35-2EF	(2) 7	(2) 12	(2) 15
17' Wide Models	0°F	-20°F	-40°F
ATC-DC-1712I-25-1EF to 1712K-35-2EF	(4) 4	(4) 7	(4) 9
ATC-DC-1714J-25-1EF to 1714K-35-2EF	(4) 5	(4) 7	(4) 10
10' Wide Models	0°F	-20°F	-40°F
ATC-DC-1012I-25-1EF to 1012L-35-2EF	(2) 5	(2) 8	(2) 10
ATC-DC-1018I-25-1EF to 1018M-35-2EF	(2) 7	(2) 12	(2) 15
ATC-DC-1024I-25-1EF to 1024L-35-2EF	(4) 5	(4) 8	(4) 10
ATC-DC-1036I-25-1EF to 1036M-35-2EF	(4) 7	(4) 12	(4) 15
12' Wide Models	0°F	-20°F	-40°F
ATC-DC-1212J-25-1EF to 1212L-35-2EF	(2) 6	(2) 9	(2) 12
ATC-DC-1214K-25-1EF to 1214M-35-2EF	(2) 7	(2) 10	(2) 15
ATC-DC-1218K-25-1EF to 1218M-35-2EF	(2) 9	(2) 15	(2) 18
ATC-DC-1220L-25-1EF to 1220N-35-2EF	(2) 10	(2) 15	(3) 15
ATC-DC-1224K-25-1EF to 1224L-35-2EF	(4) 6	(4) 9	(4) 12
ATC-DC-1228K-25-1EF to 1228M-35-2EF	(4) 7	(4) 10	(4) 15
ATC-DC-1236K-25-1EF to 1236M-35-2EF	(4) 9	(4) 15	(4) 18
ATC-DC-1240L-25-1EF to 1240N-35-2EF	(4) 10	(4) 15	(6) 15
24' Wide Models	0°F	-20°F	-40°F
ATC-DC-2412K-25-1EF to 2412L-35-2EF	(4) 6	(4) 9	(4) 12
ATC-DC-2414K-25-1EF to 2414M-35-2EF	(4) 7	(4) 10	(4) 15
ATC-DC-2418K-25-1EF to 2418M-35-2EF	(4) 9	(4) 15	(4) 18
ATC-DC-2420L-25-1EF to 2420N-35-2EF	(4) 10	(4) 15	(4) 20

Water Treatment Solutions

Pulse~Pure® Non-Chemical Treatment



Pulse~Pure[®] is an environmentally sensitive nonchemical water treatment system for evaporative condensers. Developed by EVAPCO, Pulse~Pure offers an alternative to chemical water treatment programs. Utilizing pulse-power technology Pulse~Pure provides chemical-free treatment that is environmentally safe.

U.S. Patent No. 7,704,364

Smart Shield[®] Solid Chemistry Water Treatment System

EVAPCO's SmartShield[®] solid chemistry water treatment system is an innovative solution to conventional liquid chemical programs. SmartSheild[®] was developed specifically for evaporative condensers and closed circuit coolers. The system comes factory mounted and

includes all the components required for an effective water treatment system. Solid products eliminate the potential for liquid spills making it easier and safer to use. Controlled release chemistry provides uniform treatment over a 30 day period.



Self Supporting Service Platforms

Condensers are available with self-supporting service platforms

that include access ladders which are designed for easy field installation. This option offers significant savings in comparison to field constructed, externally supported catwalks. The Evapco service platform option is located at each maintenance access door.

Motor Davit

In the event that a fan motor should need to be replaced, a



ATC-DC Condenser with Optional Service Platforms

lightweight motor davit is available from which a chain fall can be mounted to easily lower the motor to the ground.



ATC-DC Optional Equipment

Electric Water Level Control

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



Two Speed Motors

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

Sound Reduction Options

Super-Low Sound Fan

EVAPCO's Super Low Sound Fan utilizes an extremely wide

chord blade design and is ideal for low energy, sound sensitive installations without sacrificing thermal performance. This revolutionary technology is one-piece molded, heavy duty fiberglass reinforced polyester hub and blade construction utilizing a forward swept blade design. The Super Low Sound Fan is capable of



9 dB(A) to 15 dB(A) depending on specific unit selection and measurement location.

Water Silencer

The water silencer option, constructed of lightweight PVC sections, is located in the falling water area of the cold water basin. This option will reduce the overall sound levels 4 dB(A) to 7 dB(A), measured 5 ft. from the side or end of the unit, with no impact on unit thermal performance. This option will also reduce the overall sound levels 9 dB(A) to 12 dB(A) when operating the condenser with the fans off and water circulating

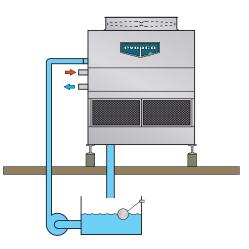


Stainless Steel Basin

In addition to the EVAPCOAT Corrosion Protection System, EVAPCO offers optional Type 304 or Type 316 stainless steel construction for superior corrosion resistance. EVAPCO induced draft condensers have a modular design which allows for specific areas to be enhanced for increased corrosion protection. The basin area of a condenser is often subjected to high concentrations of impurities and silt. EVAPCO's stainless steel basin option includes welded seam construction as standard. For particularly corrosive environments, stainless steel construction is also available for the coil casing / fan section.

Remote Sump Configuration

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



Multiple Circuit Coils

Condensers may be supplied with multiple circuit coils to match various system requirements such as split systems, or if a glycol or water circuit is desired for compressor head cooling.

Additional Options Available – Please contact your local EVAPCO Sales Representative or the EVAPCO factory for assistance.



Design

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

Structural Steel Support

The method of support for EVAPCO condensers is two structural "I" beams located under the outer flanges and running the entire length of the unit. Mounting holes 3/4" in diameter, are located in 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.

Beams should be level to within 1/8" in 6' before setting the unit in place. Do not level the unit by shimming between it and the "I" beams as this will not provide proper longitudinal support.

NOTE: Consult IBC 2012 for required steel support layout and structural design.

Air Circulation

In reviewing the system design and unit location, it is important that proper air circulation be provided. The best location is on an unobstructed roof top or on ground level away from walls and other barriers. Care must be taken when locating condensers in wells or enclosures or next to high walls. The potential for recirculation of hot, moist discharge air back into the fan intake exists. Recirculation raises the wet bulb temperature of the entering air causing the condensing pressure to rise above the 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. Good engineering practice dictates that the evaporative condenser's discharge air not be directed or located close to or in the vicinity of building air intakes. Engineering assistance is available from the factory to identify potential recirculation problems and recommend solutions.

For additional information regarding layout of evaporative condensers, see EVAPCO Bulletin entitled "*Equipment Layout*".

Piping

Condenser piping should be designed and installed in accordance with generally accepted engineering practice. 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 condenser connections, nor should any of the pipe supports be anchored to the unit framework. For additional information concerning refrigerant pipe sizing and layout, see EVAPCO Bulletin entitled *"Piping Evaporative Condensers"*.

Maintaining the Recirculated Water System

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

Bleed-off

Each unit supplied with a pump mounted on the side is furnished with a clear bleed line for visual inspection and a valve which, when fully open, will bleed-off the proper amount of water. If the make-up water supplying the unit is relatively free of impurities, it may be possible to cut back the bleed, but the unit must be checked frequently to make sure scale is not forming. Make-up water pressure should be maintained between 20 and 50 psig.

Water Treatment

A proper water treatment program is an essential part of routine maintenance in order to help assure proper operation and longevity of the unit. To help prevent the formation of "white rust", the interior of the unit should be passivated during start-up and monitored periodically as part of the water treatment program. For more information about white rust, please request a copy of EVAPCO Engineering Bulletin 36. A qualified water treatment protocol specifically based on applicable location, water quality and unit materials of construction.

If acid is used for treatment, it should be accurately metered and the concentration properly controlled. The pH of the water should be maintained between 6.5 and 8.0. Units constructed of galvanized steel operating with circulating water having a pH of 8.3 or higher will require periodic passivation of the galvanized steel to prevent the formation of "white rust". Batch chemical feeding is not recommended because it does not afford the proper degree of control. If acid cleaning is required extreme caution must be exercised and only inhibited acids recommended for use with galvanized construction should be used.

NOTE: Operating the condenser below 6.0 pH for any period of time may cause the removal of the protective zinc coating on the galvanized steel components.

For more information see EVAPCO Bulletin entitled *"Maintenance Instructions"*.

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 in conjunction with a qualified water treatment company. 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.

Solutions for Sound Sensitive Applications

The ATC-DC product line is available with four (4) equipment options to reduce the overall sound generated from the side or top of the unit. Each option provides various levels of sound reduction and can be used in combination to provide the lowest sound level. Consult EVAPCO's $evapSelect^{\circ}$ selection program for unit sound levels. If a detailed analysis or full octave band data sheet is required for your application, please consult your EVAPCO Sales Representative.

NOTE: These low sound options may impact the overall installed dimensions and weight of the unit.



ATC-DC Mechanical Specifications

Furnish and install, as shown on the plans, an EVAPCO model ______ induced draft, counterflow evaporative condenser with a condensing capacity of ______ MBH total heat of rejection when operating with ______ refrigerant at ______ °F condensing temperature at a design ______ ambient dry bulb temperature of _____ °F.

IBC 2012 Compliance

The condenser shall be designed and constructed to meet the International Building Code (IBC) specifications for installed components per ASCE. The manufacturer shall provide a certificate of compliance to demonstrate that the equipment/unit has been independently tested and certified in accordance with the IBC.

Basin and Casing

The basin and casing shall be constructed of G-235 hot-dip galvanized steel for long life and durability. Standard basin accessories shall include overflow, drain, type 304 stainless steel strainers, and brass make-up valve with plastic float.

Models ATC-DC-99H-25-1EF to ATC-DC-1714K-35-2EF Fan Motor

______ horsepower totally enclosed fan cooled motors with 1.15 service factor shall be furnished suitable for outdoor service on ______ volts, ______ hertz, and ______ phase. Motor(s) shall be mounted on an adjustable base which is accessible from the outside of the unit for service. A swing away protective cover shall shield the motor and sheave from the weather.

Drive

The fan drive shall be multigroove, solid back V-belt type with taper lock bushings designed for 150% of the motor nameplate horsepower. The belt material shall be neoprene reinforced with polyester cord and specifically designed for evaporative condenser service. Fan sheave shall be aluminum alloy construction. The fans and the fan sheaves shall be mounted on the shaft with a specially coated bushing to provide maximum corrosion protection. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance.

Models ATC-DC-1012I-25-1EF to ATC-DC-2420N-35-2EF

Fan Motor

______ horsepower totally enclosed air over ball bearing fan motor(s), with 1.15 service factor shall be furnished suitable for service on ______ volts, ______ hertz, and ______ phase. Motor(s) shall be mounted on an adjustable base which allows the motor to swing to the outside of the unit for servicing.

Drive

The fan drive shall be a multigroove, solid back V-belt type with taper lock bushings designed for 150% of the motor nameplate horsepower. The belt material shall be neoprene reinforced with polyester cord and specifically designed for evaporative condenser service. Fan and motor sheaves shall be aluminum alloy construction. The fans and fan sheaves shall be mounted on the shaft with a specially coated bushing to provide maximum corrosion protection. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance.

Axial Propeller Fans

Fans shall be heavy duty axial propeller type statically balanced. The fans shall be constructed of aluminum alloy or fiberglass reinforced polypropylene blades, installed in a closely fitted cowl with venturi air inlet. Fan screens shall be galvanized steel mesh and frame, bolted to the fan cowl.

Fan Shaft Bearings

Fan shaft bearings shall be heavy duty self-aligning ball type with grease fittings extended to the outside of the unit. Bearings shall be designed for a minimum L-10 life of 75,000 hours.

Water Recirculation Pump

The pump(s) shall be a close-coupled, centrifugal type with mechanical seal, installed vertically at the factory to allow free drainage on shut down. ______ horsepower totally enclosed motor(s) shall be furnished suitable for outdoor service on _____ volts, _____ hertz, and ______ phase.

Heat Transfer Coils

Dry Coil

Arid-fin Pak dry cooling coils shall be constructed of 5/8" diameter type 304L stainless steel round tubing with marine grade aluminum fins with a fin density of 10 fins per inch. Tubing shall be hydraulically expanded into the fin plate for consistent contact. Coil shall be pressure tested to 390 psig, evacuated and nitrogen charged prior to final assembly and shipment. Stainless steel tubing meets the requirements of ASME B31.5 of the refrigerant piping code.

Wet Coil

Ellipti-fin[®] condensing coils with standard elliptical tube design shall be all prime surface steel, encased in a steel framework and hot-dip galvanized after fabrication as a complete assembly. All coil rows shall be manufactured with elliptical extended surface fins designed with sloping tubes for liquid drainage and tested to 390 psig air under water, evacuated and nitrogen charged prior to final assembly and shipment. Carbon steel tubing meets the requirements of ASME B31.5 of the refrigerant piping code.

Water Distribution System

The system shall provide a water flow rate of 6 GPM over each square foot of unit face area to ensure proper flooding of the coil. The spray header shall be constructed of schedule 40 polyvinyl chloride pipe for corrosion resistance. All spray branches shall be removable for cleaning. Heavy-duty ABS spray nozzles with large 1-1/4" diameter opening and internal sludge ring to eliminate clogging. Nozzles shall be threaded into spray header to provide easy removal for maintenance.

Eliminators

The eliminators shall be constructed entirely of inert polyvinyl chloride (PVC) in easily handled sections. The eliminator design shall incorporate three changes in air direction to assure complete removal of all entrained moisture from the discharge air stream. Maximum drift rate shall be less than 0.001% of the circulating water rate.

Louvers

The louvers shall be constructed from polyvinyl chloride (PVC) and mounted in a rugged steel frame. The louvers shall be mounted in easily removable sections for access to the pan for maintenance. The louvers shall have a minimum of two changes in air direction to prevent splashout and block direct sunlight.

Finish

All basin and casing materials shall be constructed of G-235 heavy gauge mill hot-dip galvanized steel. During fabrication, all panel edges shall be coated with a 95% pure zinc-rich compound for superior protection against corrosion.



EVAPCO, Inc. — World Headquarters & Research/Development Center

EVAPCO, Inc. • P.O. Box 1300 • Westminster, MD 21158 USA PHONE: 410-756-2600 • Fax: 410-756-6450 • E-MAIL: marketing@evapco.com

EVAPCO North America

EVAPCO, Inc. World Headquarters P.O. Box 1300 Westminster, MD 21158 USA Phone: 410-756-2600 Fax: 410-756-6450 E-mail: marketing@evapco.com

EVAPCO East 5151 Allendale Lane Taneytown, MD 21787 USA Phone: 410-756-2600 Fax: 410-756-6450 E-mail: marketing@evapco.com

EVAPCO Midwest 1723 York Road Greenup, IL 62428 USA Phone: 217-923-3431 Fax: 217-923-3300 E-mail: evapcomw@evapcomw.com

EVAPCO West 1900 West Almond Avenue Madera, CA 93637 USA Phone: 559-673-2207 Fax: 559-673-2378 E-mail: contact@evapcowest.com

EVAPCO lowa 925 Quality Drive Lake View, IA 51450 USA Phone: 712-657-3223 Fax: 712-657-3226

EVAPCO Iowa Sales & Engineering 215 1st Street, NE P.O. Box 88 Medford, MN 55049 USA Phone: 507-446-8005 Fax: 507-446-8239 E-mail: evapcomn@evapcomn.com **EVAPCO Northwest** 5775 S.W. Jean Road, Suite 104 Lake Oswego, Oregon 97035 USA Phone: 503-639-2137

EVAPCO Newton 701 East Jourdan Street Newton, IL 62448 USA Phone: 618-783-3433 Fax: 618-783-3499 E-mail: evapcomw@evapcomw.com

Fax: 503-639-1800

EVAPCO-BLCT Dry Cooling, Inc. 981 US Highway 22 West Bridgewater, New Jersey 08807 USA Phone: 1-908-379-2665 E-mail: info@evapco-blct.com

Refrigeration Valves & Systems Corporation A wholly owned subsidiary of EVAPCO, Inc. 1520 Crosswind Dr. Bryan, TX 77808 USA Phone: 979-778-0095 Fax: 979-778-0030 E-mail: rvs@rvscorp.com

EvapTech. Inc. A wholly owned subsidiary of EVAPCO, Inc. 8331 Nieman Road Lenexa, KS 66214 USA Phone: 913-322-5165 Fax: 913-322-5166 E-mail: marketing@evaptech.com

Tower Components, Inc. A wholly owned subsidiary of EVAPCO, Inc. 5960 US HWY 64E Ramseur, NC 27316 Phone: 336-824-2102 Fax: 336-824-2190 E-mail: mail@towercomponentsinc.com

EVAPCO...Specialists in Heat Transfer **PRODUCTS AND SERVICES.**

EVAPCO Europe **EVAPCO Europe BVBA**

European Headquarters Industrieterrein Oost 4010 3700 Tongeren, Belgium Phone: (32) 12-395029 Fax: (32) 12-238527 E-mail: evapco.europe@evapco.be

EVAPCO Europe, S.r.I. Via Ciro Menotti 10 I-20017 Passirana di Rho Milan, Italy Phone: (39) 02-939-9041 Fax: (39) 02-935-00840 E-mail: evapcoeurope@evapco.it

EVAPCO Europe, S.r.I. Via Dosso 2 23020 Piateda Sondrio, Italy

EVAPCO Europe GmbH Meerbuscher Straße 64-78 Haus 5 40670 Meerbusch, Germany Phone: (49) 2159-69560 Fax: (49) 2159-695611 E-mail: info@evapco.de

Flex coil a/s *A wholly owned subsidiary of EVAPCO, Inc.* Knøsgårdvej 115 DK-9440 Aabybro Denmark Phone: (45) 9824 4999 Fax: (45) 9824 4990 E-mail: info@flexcoil.dk

EVAPCO S.A. (Pty.) Ltd. A licensed manufacturer of EVAPCO, Inc. 18 Quality Road Isando 1600 Republic of South Africa Phone: (27) 11-392-6630 Fax: (27) 11-392-6615 E-mail: evapco@evapco.co.za

Evap Egypt Engineering Industries Co. A licensed manufacturer of EVAPCO, Inc. 5 El Nasr Road Nasr City, Cairo, Egypt Phone: 2 02 24022866/2 02 24044997 Fax: 2 02 24044667/2 02 24044668 E-mail: Primacool@link.net / Shady@primacool.net

EVAPCO Asia/Pacific

EVAPCO Asia/Pacific Headquarters

1159 Luoning Rd. Baoshan Industrial Zone Shanghai, P. R. China, Postal Code: 200949 Phone: (86) 21-6687-7786 Fax: (86) 21-6687-7008 E-mail: marketing@evapcochina.com

EVAPCO (Shanghai) Refrigeration

Equipment Co., Ltd. 1159 Louning Rd., Baoshan Industrial Zone Shanghai, P.R. China, Postal Code: 200949 Phone: (86) 21-6687-7706 Fax: (86) 21-6687-7008 E-mail: marketing@evapcochina.com

Beijing EVAPCO Refrigeration

Equipment Co., Ltd. Yan Qi Industrial Development District Huai Rou County Beijing, P.R. China, Postal Code: 101407 Phone: (86) 10 6166-7238 Fax: (86) 10 6166-7395 E-mail: evapcobj@evapcochina.com

EVAPCO Australia (Pty.) Ltd. 34-42 Melbourne Road P.O. Box 436 Riverstone, N.S.W. Australia 2765 Phone: (61) 2 9627-3322 Fax: (61) 2 9627-1715 E-mail: sáles@evapco.com.au

EVAPCO Composites Sdn. Bhd

No. 70 (Lot 1289) Jalan Industri 2/3 Rawang Integrated Industrial Park Rawang, Selangor, 48000 Malaysia Phone: 60 3 6092-2209 Fax: 60 3 6092-2210

EvapTech Asia Pacific Sdn. Bhd

A wholly owned subsidiary of EvapTech, Inc. B-6-1, IOI Boulevard Jalen Kenari 5, Bandar Puchong Jaya 47170 Puchong, Selangor Darul Ehsan Malaysia Phone: (60-3) 8070-7255 Fax: (60-3) 8070-5731 E-mail: marketing-ap@evaptech.com

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