



DXair Pool Dehumidifiers

EC Series 6 to 30 Tons

G-60 Galvanized

NOTE – ADDENDUM TO EC072 AND EC096; SEE CHANGES IN COMPRESSORS ADDENDUM ON PAGE 30

The EC Model Series with dual compressors provides the best combination of performance, comfort and one-of-a-kind features that satisfy the high demands of any residential or commercial natatorium.



Made in
the U.S.A.



The perfect balance of water and air.

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PERFORMANCE DATA

Model	GPM	Cooling 86°F		Cooling 59°F		Cooling 77°F	
		Capacity Btuh	EER Btuh/W	Capacity Btuh	EER Btuh/W	Capacity Btuh	EER Btuh/W
EC072	16	72000	13.0	80400	18.6	75600	14.2
EC096	21	96000	14.0	116000	20.6	104000	15.4
EC120	28	124000	13.2	134000	18.3	127200	14.7
EC150	35	157000	16.0	185000	24.0	166000	17.9
EC151	35	147000	16.0	175000	24.0	155000	17.9
EC180	42	182000	14.2	195000	20.0	185000	15.4
EC181	42	170000	14.2	185000	20.0	175000	15.4
EC210	50	220000	14.6	292000	22.5	250000	17.2
EC240	60	248000	14.4	310000	21.1	275000	16.0
EC242	60	248000	14.4	310000	21.1	275000	16.0
EC300	75	295000	13.0	365000	18.8	318000	14.0
EC360	90	386000	14.8	472000	22.0	412000	16.4





DXAIR POOL DEHUMIDIFICATION SYSTEMS

DXair specializes in humidity control for indoor pools by providing efficient green technology for residential and commercial natatoriums in an extremely small footprint. Our DXair pool dehumidifiers are the leading dehumidifiers in the market today based on our designs and options, which assures that you are buying a unit that you can trust.

DXair is always on the forefront of product development and innovative design to optimize the performance of DXair units. Our products are designed and manufactured to the highest quality, reflecting the no-compromise standards for which DXair is renowned in order to provide our customers with the highest level of humidity control and comfort. Along with a large variety of options and the added benefit of many units being designed for tight retrofitted spaces, DXair products are extremely energy efficient and come with the DXair quality you expect. DXair products are an ideal choice for new construction, residential, hospitality, and other commercial new construction or retrofit markets.

DXair engineering efforts have been focused on providing a greener world for future generations. Faced with today's tough environmental challenges and with global warming, DXair is more committed than ever to develop solutions which utilize sustainable energy sources in order to

conserve our planet's resources. With our design, we provide the least amount of refrigerant per ton in our reduced refrigerant management systems

The EC Model dehumidifier is the result of our nearly 30+ years of research, development, and experience in the US market. The model contains the most flexible air humidity control technology available today, and is designed for reliability while reducing installation costs and providing the comfort and cost savings you'd expect from DXair.

EC MODEL

DXair EC Model pool dehumidifiers provide the best combination of performance and efficiency available. Safety devices are built into each unit to provide the maximum system protection possible.

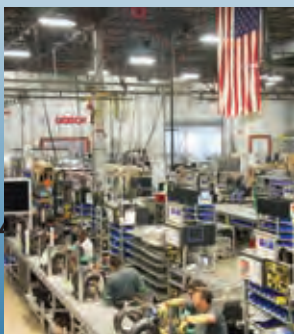
All EC units now utilize scroll compressors.

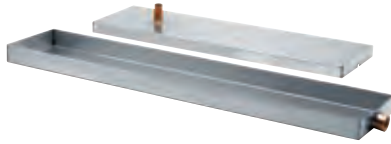
Quality

The EC Model features (as standard) G-60 galvanized steel cabinet and stainless steel drain pan to ensure long life. To help prevent formicary corrosion, evaporator coils with DuoGuard™ coil protection can be applied as an option. Rigorous factory testing helps to ensure fewer hassles from the start while our 40+ years of experience in designing pool dehumidifiers is your assurance of the highest quality product.

Proven and Tested Technologies

DXair pool dehumidification systems are manufactured with rigorous standards and factory tested to ensure trustworthy operation over the life of the unit. ISO 9001 and ISO 14001 certified facilities provide consistent quality in every unit built.



**Drain Pan****High-Density
Compressor Blankets
(Optional)****Schrader Charging Valves
for Servicing**

Advantages of DXair Technology

- Least amount of refrigerant per ton
- Field cleanable evaporator coils
- Smallest footprint in the industry
- Free flow low horse power blowers
- Super extended warranties
- Reduced refrigerant management RRM's
- Optimum comfort
- Two single-step compressors for 2-stage operation
- Simple installation and operation
- Low installation costs
- Lower operating costs
- Flexibility in designing and installation
- Energy efficiency
- Superior quality
- Quiet operation

Flexible Installation

All air handling units are available in horizontal and vertical configurations. Additional options of return air and supply air are offered as standard, providing configuration flexibility. For ease of installation, horizontal units are provided with hanging supports. All horizontal units are equipped with angle or box section supports for hanging the unit. Field supplied spring or rubber isolation must be installed to isolate the unit from the building structure.

Quiet Operation

All panels are insulated with ½" thick, 1.5 lb./cu. ft. dual-density fiberglass insulation for both thermal insulation and noise reduction. Noise reduction is a critical consideration of the unit's design. For vibration isolation, all compressors are mounted on rubber grommets. Compressor rubber isolators are necessary in preventing vibration transmission from the compressor to the unit cabinet and duct work. Vertical cabinets have an insulated divider panel between the blower compartment and the compressor section to minimize the transmission of compressor noise, and to permit operational service testing without air bypass.

For additional sound attenuation, high-density compressor blankets and fiber free closed cell foam insulation are available as options on all EC Models.

Serviceability

All units are designed to be serviced from the front of the unit. Standard schrader valves along with easily accessible electrical box components, make diagnosing and servicing the unit a simple task. Insulated bulkheads in all EC Models separate the compressor section from the blower section, allowing the unit to be serviced easily during operation.

Sizeable panels are removable to facilitate servicing of the unit. Separate electrical knockouts in the unit corner post allow for easy and safe routing of high and low voltage lines to the inside of the cabinet. These service friendly features benefit equipment owners with easier service access which saves time and money.

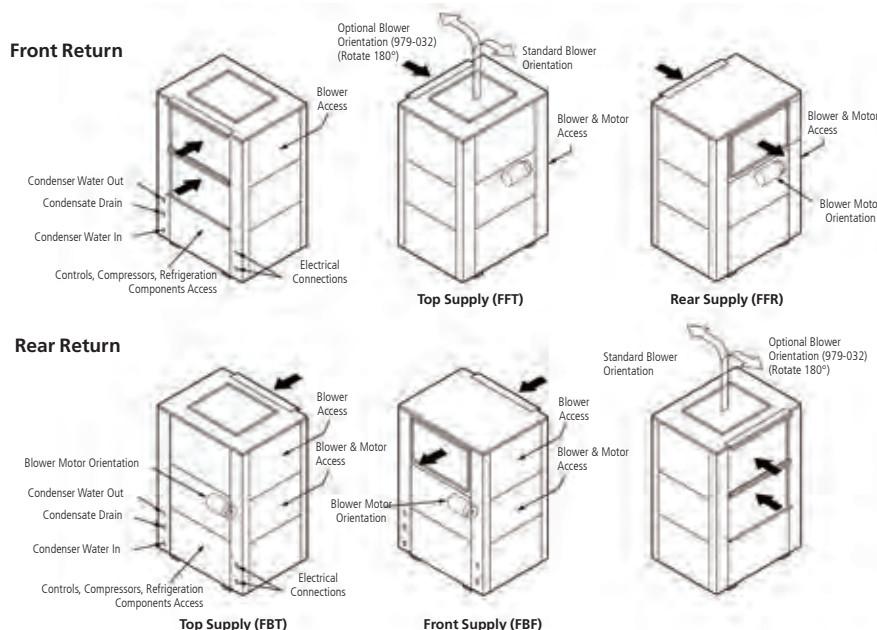
DXAIR EC MODELS 072-360

- 12 Models from 6 through 30 tons
- All units are designed with dual refrigeration circuits for staged operation. Horizontal unit sizes 120, 180 and 242 have dual blower assemblies. Vertical unit sizes 210 to 360 have dual blower assemblies.
- Units are available in both horizontal and vertical configurations depending on size. Additionally, several options of return and supply air are offered as standard, providing configuration flexibility.

UNIT CONFIGURATIONS

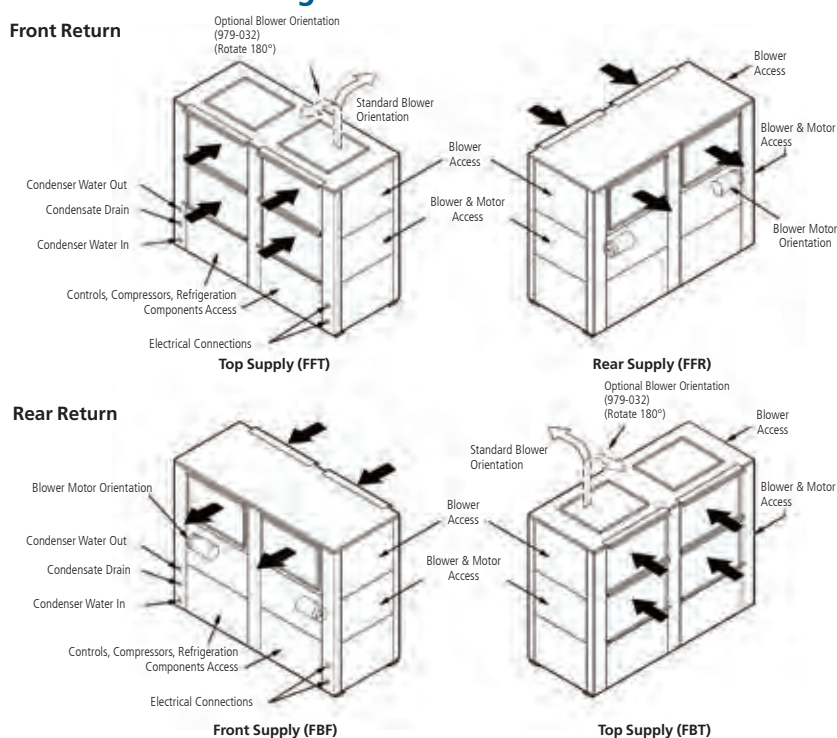
EC072-181 Vertical Single Blower Large Commercial Units

Figure 1



EC210-360 Vertical Dual Blower Large Commercial Units

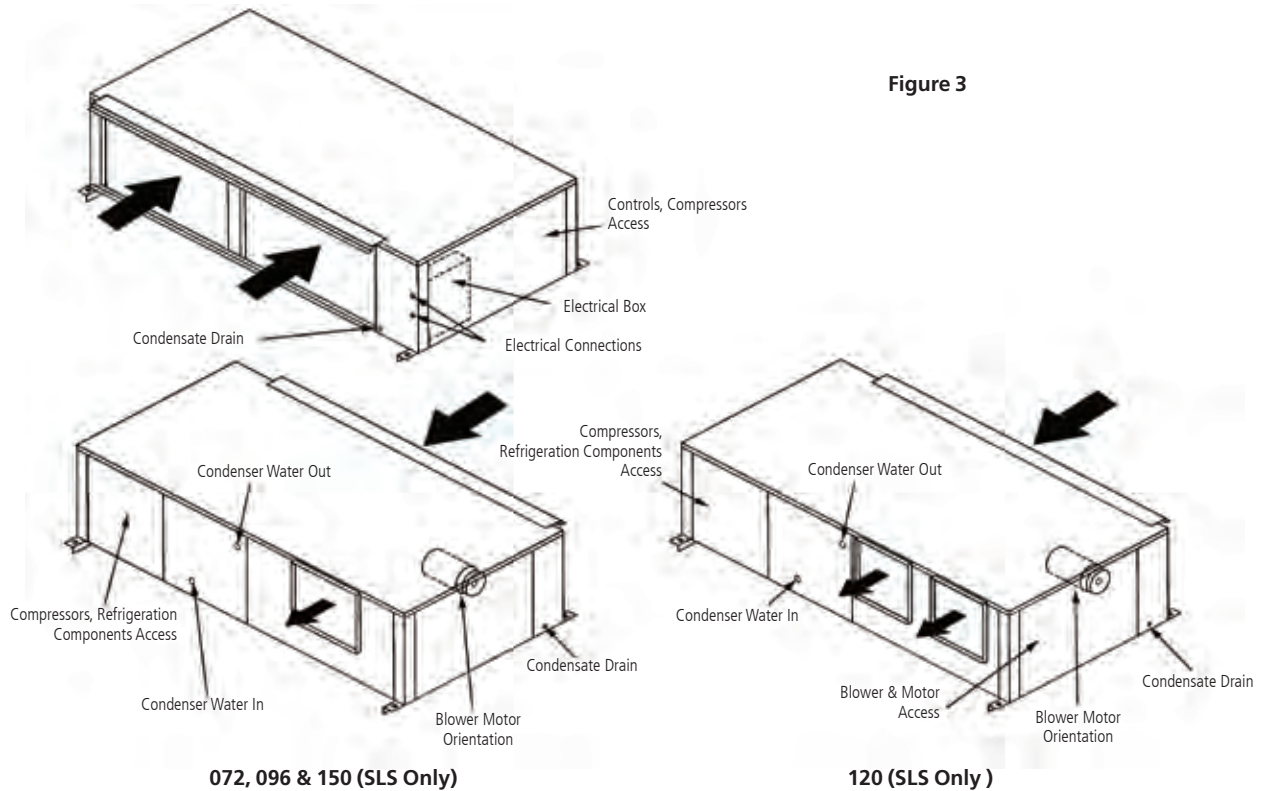
Figure 2



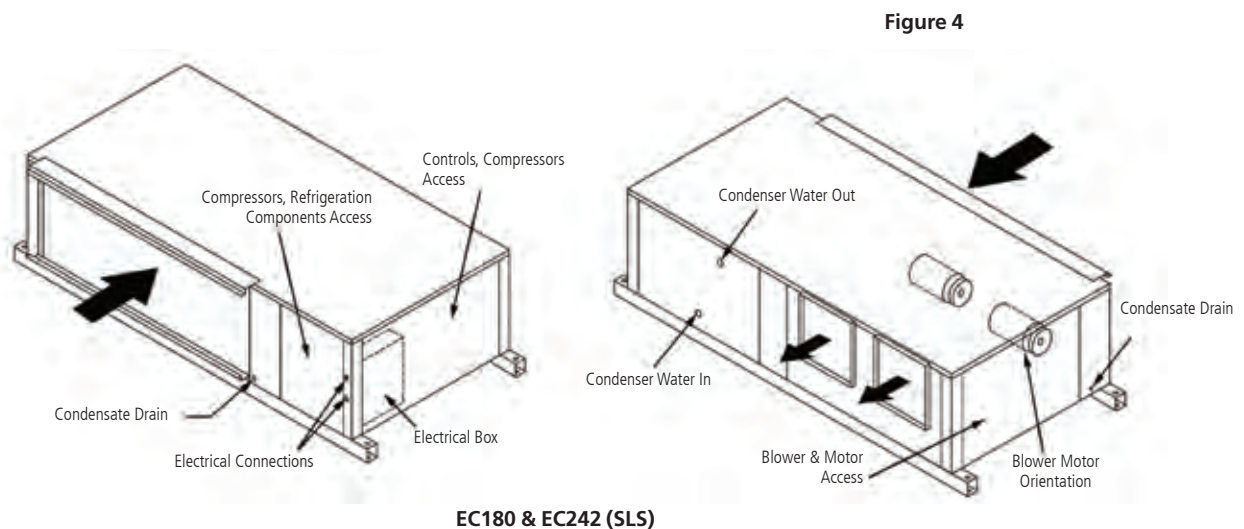
UNIT CONFIGURATIONS

EC072-150 Horizontal Large Commercial Units

NOTE: ADDENDUM TO EC072 AND EC096; SEE CHANGES IN COMPRESSORS ADDENDUM ON PAGE 30



EC180-242 Horizontal Commercial Units





**2" 4-Sided Filter
Rack Option**



**Belt Drive,
and Motor**

FEATURES, FUNCTIONS AND BENEFITS

Cabinet

The EC Model cabinetry is constructed using heavy-gauge, G-60 galvanized steel. This type of steel provides superior corrosion protection for units installed indoors.

All interior surfaces are lined with ½" thick, 1.5 lb./cu.ft. dual-density, fiberglass insulation for thermal insulation and acoustical attenuation. This insulation is non-combustible, non-hygroscopic and does not support fungal growth. The unit insulation also meets NFPA 90A and 90B for fire protection, UL 181 for erosion, and is certified to meet the GreenGuard™ Indoor Air Quality Standard for Low Emitting Products.

Protection against corrosion is a feature in the Large EC Model. A stainless steel drain pan will last the lifetime of the unit and resist corrosion and cracking that may occur with painted steel, galvanized steel or plastic materials.

Filter Racks and Options

Two-sided filter racks accommodating a 1" filter are standard on all EC units. A two-sided 2" filter rack is optional to accommodate a nominal 1" or a 2" thick filter. Four sided filter racks are available as an option and minimize unfiltered air from entering the unit. Filter doors allow for easy routine maintenance and changing of the air filter. A 1" return duct collar is integral to the filter rack eliminating the need for field mounted duct collars. Units are shipped with a standard MERV-5 1" construction filter.

Blower and Motor

All fan assemblies are belt-driven double width, double inlet (DWDI), forward curved, and precisely balanced to ensure smooth operation. The blower housing and fan wheels are designed for quiet, low velocity operation, which helps keep high frequency fan wheel noise to a minimum. The fan motors are 1725 or 3450 RPM, 56 frame sealed ball bearing type, permanently lubricated and have thermal overload protection.

Evaporator Coil and DuoGuard™ (Option)

Air handling sections come standard with a copper tube aluminum fin evaporator coil. Available as an option is the DuoGuard™ evaporator coil protection system. DuoGuard™ Protection® - Tin Electro-Plated Copper Tubing with High-Tech Polymer Coated Aluminum Fins will aid in protecting the evaporator coil from most forms of corrosive elements in the airstream. The tin plating provides a best-in-class protection of the copper tubing from formicary corrosion while the fin coating provides protection against salt spray and other corrosive elements. DuoGuard™ protected coils are able to exceed 1000 hours salt spray per ASTM standard B-117.

Refrigerant Circuit

EC Models are designed using the optimum combination of compressor and field cleanable coils to provide peak performance.

Heavy-duty compressors are used in all units. Scroll compressors offer optimum performance for each unit size.



**DuoGuard™ Evaporator Coil
Protection (Optional)**



**Variable Frequency
Drive (Optional)**



Scroll Compressors

Refrigerant to water heat exchangers are coaxial tube-in-tube type providing a robust construction, ensuring years of trouble free operation. Coaxial coils are selected and designed for peak performance, offering the best combination of low water pressure drop and maximum heat transfer in both the cooling and heating modes. Standard coaxial coils have a copper interior water tube and a steel outer shell. Optional cupro-nickel coils are available for applications where the water is of lower quality.

Air coils are state of the art, employing lanced fin and rifled tubing for maximum heat transfer. Large face areas result in lower face velocity reducing sound while ensuring high latent heat removal for maximum dehumidification in the cooling mode.

Thermal Expansion Valves come standard on the EC and are designed to vary the flow of refrigerant depending on the load. TXV's provide unit optimization and a more stable control over a wider range of operating conditions.

EC Model units are rated to withstand 600 PSIG working refrigerant pressure and 400 PSIG working water pressure. All EC Model are provided with filter driers to ensure that no residual water or other foreign material is present to contaminate the refrigerant system and lead to premature failure.

High and low pressure switches are factory installed in the refrigerant circuit, protecting the unit against high pressure conditions or loss of refrigerant charge.

Schrader service valves are standard on the high and low pressure lines of all units, allowing connection of gauges for service diagnostics and to evacuate, reclaim or recharge refrigerant into the system. Optional Schrader valves are available with the connection to field installed water regulating valves.



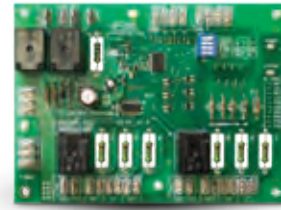
(Panels removed for internal view of the EC Model)



Coax Coil



Four-way Reversing Valve



UPM Control Board

UNIT PROTECTION MODULE (UPM)

Each EC Model is built in the factory with a Unit Protection Module (UPM) that controls the unit operation and monitors the safety controls that protect the unit. The UPM interfaces with the thermostat or human-machine interface (HMI). The main purpose of the UPM is to protect the compressor by monitoring the different states of switches and sensors. This module provides time delays and protects the unit against freezing of the water-to-refrigerant and air-to-refrigerant heat exchangers as well as condensate overflow. This level of protection helps provide the peace of mind that comes with offering DXair products to the customer.

UPM Control Board Features

- **Condensate Overflow Protection** — The UPM controller continuously monitors the drain pan for high condensate water level, and if this exceeds normal operating levels, the compressor operation is interrupted to protect against drain pan overflow.
- **Anti-Short Cycle Timer** — 5 minute delay on break timer to prevent compressor short cycling.
- **Random Start** — Each controller has a unique random start delay ranging from 270 to 300 seconds after power is applied to the board. This will prevent the simultaneous start of multiple units after a power outage.
- **Low Pressure Bypass Timer** — The low pressure switch is bypassed for 120 seconds after a call for compressor operation to prevent nuisance low pressure lockouts during cold start-up.
- **Brownout/Surge/Power Interruption Protection** — Prevents compressor operation should the voltage drop below 10% of unit rated value. The unit will restart once the voltage is within tolerance and the random start has timed out.
- **Malfunction (Alarm) Output** — The controller has a set of contacts for remote fault indication. This can be either a steady output or can be set to pulse with the fault code. Two connections are available; one to provide a 24 volt output, the other to provide a dry contact.
- **Test Service Mode** — A dip switch setting is provided to reduce all time delay settings to 10 seconds maximum during troubleshooting for verification of unit operation.
- **LED Fault Indication (2-Stage)** — Two LED indicators are provided as follows:
 - **Green:** Power LED indicates 18-30 VAC present at the board.
 - **Red:** Fault indicator with blink codes identifying the particular fault. This information is available via the malfunction (alarm) output contacts.

1 Blink - High Pressure

2 Blinks - Low Pressure

3 Blinks - High Pressure (2-stage)

4 Blinks - Low Pressure (2-stage)

5 Blinks - Low Fluid Temperature

6 Blinks - Condensate Overflow

7 Blinks - Brownout condition

- **Intelligent Reset**—If a fault condition is initiated, the 5 minute delay on break time period is initiated and the unit will restart after this delay expires. The UPM is configurable for either 2 or 4 fault occurrences before going into a hard lockout. The selection is made through a DIP switch setting on the board. If the fault condition still exists or reoccurs twice or four times within one hour, the unit will go into a hard lockout and requires a manual lockout reset. A condensate overflow fault will, however, put the unit into a hard lockout immediately.
- **Lockout Reset**—A hard lockout can be reset by turning the unit thermostat off and then back on or by shutting off unit power at the circuit breaker. The method of reset is selectable by the dip switch on the board.



Water Connections

All water connections are heavy-duty bronze FPT fittings securely fastened to the unit corner post.

ADDITIONAL OPTIONS

- 100VA transformer
- Inverter duty motor
- Relays - EMS, blower monitor, compressor monitor, and pump/valve
- Phase monitor
- Pump/valve relay
- Fire alarm relay/dual power
- Wire to 208V
- 1/2 " Closed cell foam insulation
- Take-Apart construction
- 100% outside air
- Rotate blower
- Cooling only

Take-Apart Construction

Where there is a restriction in the available height to the access of a mechanical space, the EC unit is available in a take-apart construction. The unit is built so that the condensing section can be field separated from the air handling section and both transported separately into the mechanical space where they would be reassembled. The unit is built with the refrigerant lines in both sections capped and with a holding charge of nitrogen in each section. It is the installer's responsibility to reassemble the unit and join all refrigerant lines, evacuate and charge the refrigerant system. The blower motor, condensate sensor and freeze protection wires would be wired to the condensing section. The take-apart option is only available on vertical units, allow for an increase of approximately 3" in the height of the unit.

Energy Management Switch (EMS)

This switch allows you to connect to an energy management system that can turn the unit off and on. Energy management systems are commonly used by individual commercial entities to monitor, measure, and control their

electrical building loads. Energy management systems can be used to centrally control devices like HVAC units and lighting systems across multiple applications sites.

Flow Proving Switch (DPS)

The function of the flow proving switch is to prevent or stop compressor operation should the condenser fluid supply fail. This will prevent the unit from locking out on a safety requiring a manual reset to restart. The switch is piped between the liquid entering and leaving connections. Should the pressure drop fall below set value, the switch will open de-energizing the DPS relay, thereby stopping the compressor. The blower operation will not be affected by this option.

Hot Gas Reheat

Hot gas reheat (HGR) allows the user to control space temperature and humidity levels within the conditioned space. Excessive moisture in the space can promote mold growth leading to damage in the structure or interior surfaces, as well as reducing the air quality and creating an unhealthy environment.

Possible causes of excess humidity could be by the unit having to operate under a widely varying load, an oversized short cycling unit, a high percentage of unconditioned outside air being introduced into the space, a high latent load in the space or any location where humidity infiltration is a problem.

The HGR unit is controlled by wall mounted thermostat and humidistat device(s) to control temperature and humidity. By utilizing a humidistat in addition to the thermostat, we are able to monitor the humidity levels in the space as well. The HGR option allows cooling and dehumidification to satisfy both the thermostat and humidistat while preventing over cooling of the space while in the dehumidification mode.

Once the thermostat reaches set point temperature and the humidity is above set point, the unit controller will energize the reheat valve operating the unit in hot gas reheat mode, first cooling and dehumidifying, then reheating the air using hot refrigerant gas before delivering it to the space. By reheating the air along a constant sensible heat line, the relative humidity of the leaving air is reduced. This option offers significant energy savings over

the traditional means of reheating air with electric or hot water heating coils.

In the reheat mode, the compressor discharge gas is diverted through the reheat valve to the reheat coil which is located downstream of the cooling coil. The superheated refrigerant gas reheats the air leaving the cooling coil. The hot refrigerant gas then passes through the water to refrigerant coil where it is condensed to a liquid. From this point the rest of the cooling cycle is completed. There are two check valves to prevent refrigerant flow into the reheat coil during standard cooling cycles. A small copper bleeder line is connected to the outlet line of the reheat coil and between the expansion valve outlet and distributor to the air coil. This line is necessary to let any liquid/oil that may have migrated to the reheat coil during reheat to escape during standard cooling mode.

Hot Gas Reheat Sequence of Operation – On/Off Control

The sequence of operation in the cooling and heating mode is the same.

In the reheat mode, on a call from the humidistat, the reheat relay coil is energized through the “H” circuit. The cooling relay remains de-energized enabling the reheat solenoid. The blower relay, reversing valve and compressor contactor are energized through contacts on the reheat relay. (Note: The reheat mode always operates in the cooling mode.) Should the temperature in the space increase above set point, the compressor terminal Y is energized, which will de-energize the reheat valve putting the unit into straight cooling mode. A call for cooling will always take precedence over hot gas reheat.

Hot Gas Reheat Control Options

There are several ways to control pool dehumidifier with hot gas reheat. You should choose the means that best suits your specific application. Please refer to the Hot Gas Reheat wiring diagrams for typical thermostat wiring. Most compatible thermostats in conjunction with a humidistat are acceptable for use.



“O” output for reversing valve energized in cooling mode is required.

Special Considerations

Some applications require special attention to maximize the performance of the hot gas reheat function.

Indoor Pool Dehumidifying During Winter Months

It is important to remember that when in the reheat/dehumidification mode the pool dehumidifier is cooling and reheating. A secondary means of heating the space during the dehumidification mode should be provided. The indoor space temperature must be kept at least 2° F above the pool water temperature, with normal settings of 80°F to 84°F pool water temperature, 82°F to 86°F air temperature at 50-60 percent relative humidity. If this is not done the warm pool water attempts to heat the space and the humidity levels increase exponentially. The dehumidifier is normally sized to handle the design latent load moisture removal.



Protective coatings such as Bronze Glow Coating are highly recommended for all pool applications, due to the highly corrosive chemical environment.

Combination thermostat/humidistat are also available.

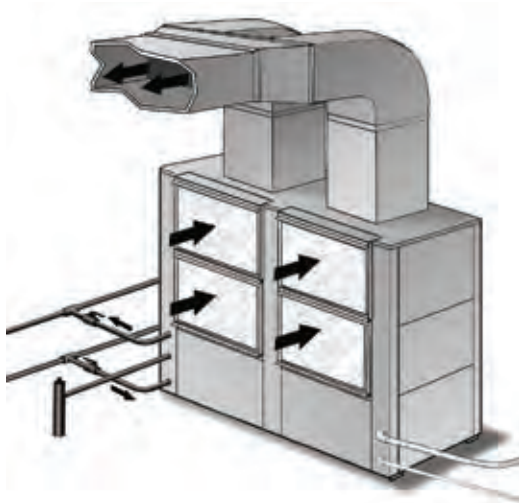


Figure 7

INSTALLATION

Vertical Unit Installation

Large Vertical units are typically installed in a mechanical room. If installed in a confined space, ensure adequate space (not recommended) for return air to the unit.

Sufficient space must be provided for filter replacement and access to the compressors and blower compartment for service.

Unit Location

Any mechanical device will, at some point in time, require servicing and repair. With this in mind, sufficient space must be provided around the unit for service personnel to perform maintenance or repair.

Units are not designed for outdoor installation. Avoid locations where the unit may be exposed to freezing conditions or where the humidity levels could cause condensation on the unit panels for example when exposed to outdoor ambient conditions.

Typical Unit Installation

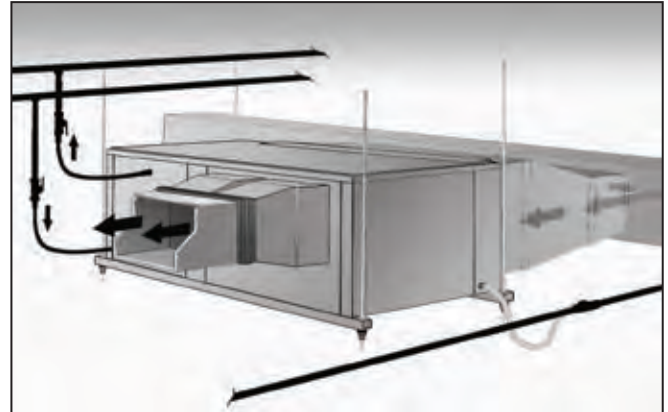


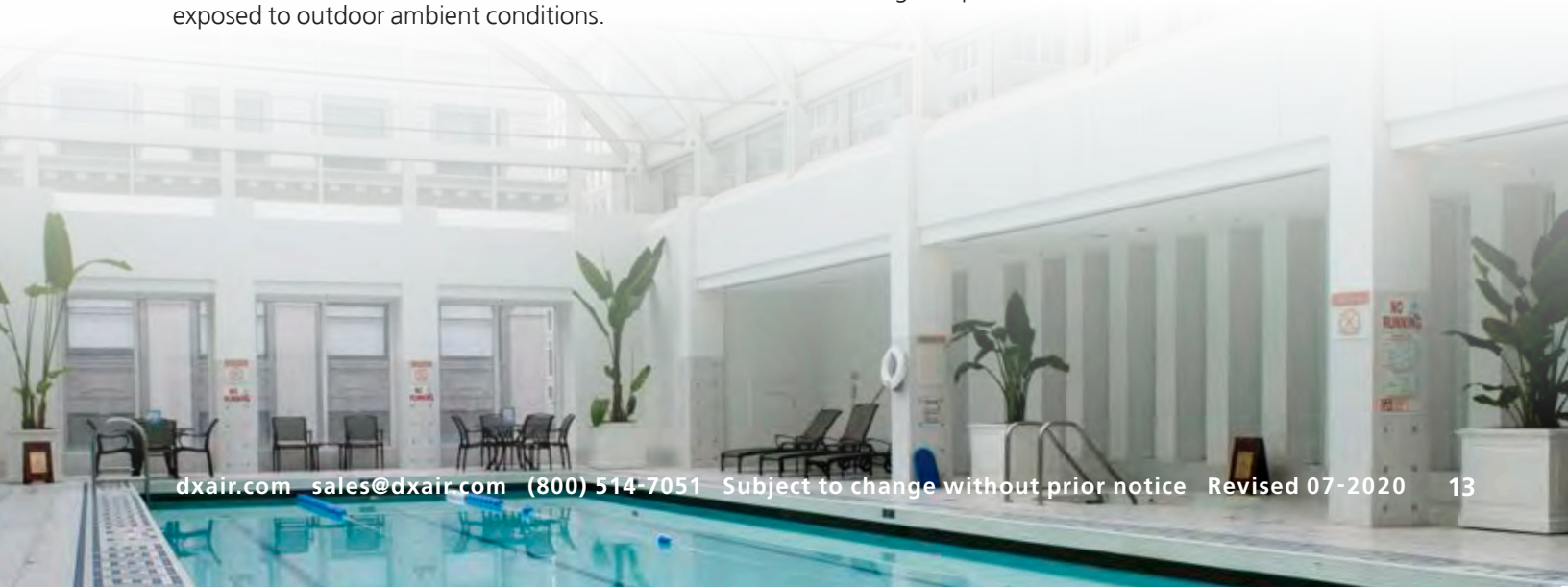
Figure 8

Horizontal Unit Installation

Large horizontal units are supplied with angle or box section supports for suspension. Field supplied hanging rods, spring or rubber isolators should be used to isolate the unit from the building structure to prevent vibration transmission to the building. Units should be located directly below a structural member so that it is securely anchored.

A horizontal unit should be positioned to allow for removal of the filters and access panels. Allow at least 24" clearance on each side of the unit for service and 36" in front of the unit for maintenance access. The filter needs to be slid out and sufficient space must be provided to allow this.

Do not install the unit above any piping or electrical raceways. The unit should be able to be removed to the floor without major rearrangement of other mechanical or ceiling components.



Ductwork and Sound Attenuation Considerations

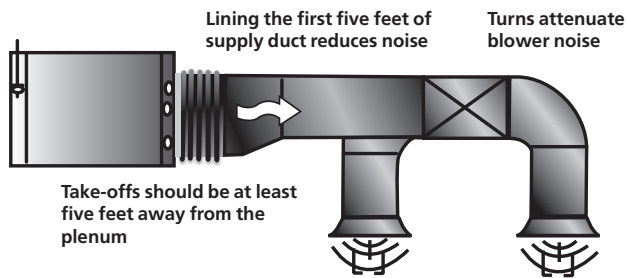


Figure 9 Supply Air Ducting

Sound is becoming an increasingly important factor in all HVAC installations. The EC Model has been designed to minimize sound, but sound acoustical design plays an important part of the sound level in the space.

Most of the problems associated with HVAC generated sound can be avoided by paying close attention to duct design and equipment placement.

A discharge flange is provided on all horizontal unit models for fastening of ductwork. We recommend using a flexible collar between the discharge flange and the duct transformation to reduce vibration transmission from the cabinet and to simplify disconnection of the unit from the ceiling ductwork.

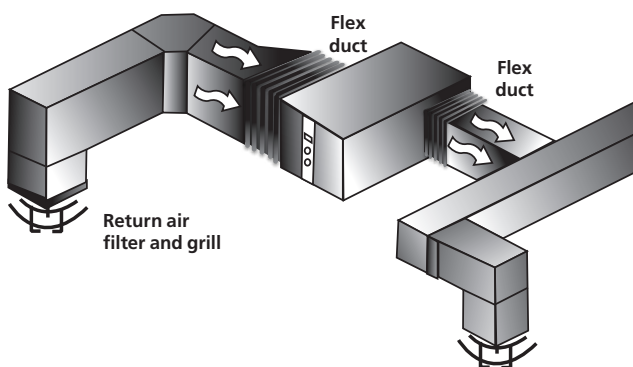


Figure 10 Return Air Ducting

Return air to the unit could be either free return or ducted. The filter rack is provided with a 1" flange should a ducted return be used. We recommend using a flexible collar

between the return flange and the duct transformation to reduce vibration transmission from the cabinet and to simplify disconnection of the unit from the ductwork.

Sound is transmitted down the ductwork and it is important to avoid direct line of sight between the unit and the space, both on the return or supply side. To accomplish this, design the duct runs with two 90° turns.

As a general recommendation, duct interiors should have an acoustic / thermal lining of least $\frac{1}{2}$ " thick over the entire duct run or a minimum of the first 5 feet of the supply trunk. DXair recommends fiber-free insulation for ducts and internally within the unit (as an option).

Line the last five diameters of duct before each outlet with a one-inch thick sound blanket. Line elbows and transition pieces, as well as a short distance upstream and downstream of the fittings.

Elbows, tees and dampers can create turbulence or distortion in the airflow. Using aerodynamic fittings will help in reducing this effect. Place a straight length of duct, 5 to 10 times the duct width, before the next fitting to smooth out airflow.

Diffusers that are located in the bottom of a trunk duct can also produce noise.

Balancing dampers should be located several duct widths upstream from an air outlet.

Ductwork should be mounted and supported using isolation devices that absorb vibration.

Applications such as a hotel that uses single duct discharges are susceptible to noise. These applications typically have low static pressures and short duct lengths. In these applications the discharge duct must be fully lined and have a square elbow without turning vanes. A velocity not exceeding 500 to 600 fpm is recommended. Return air for these applications should enter through a sidewall grille and route up the stud space to a ceiling plenum.

For horizontal systems mounted in the ceiling plenum, an insulated return plenum is sometimes placed at the return air opening to further attenuate line-of-sight sound transmission through return openings. A secondary drain pan is required under all above grade installations.



PIPING

Condensate Drain Piping

Condensate piping can be made of steel, copper or PVC pipe. In most cases, PVC pipe eliminates the need to wrap insulation around the pipe to prevent sweating.

All EC Models provide a standard FPT condensate drain connection installed in the unit (reference install manual for exact diameter based on capacity of unit). The condensate piping must be trapped at the unit and pitched away from the unit not less than ¼" per foot. A vent is required after the trap so that the condensate will drain away from the unit. The vent can also act as a cleanout if the trap becomes clogged. The condensate drain should not be directly piped to a drain/waste/vent stack. See local codes for the correct application of condensate piping to drains.

OPERATING LIMITS

EC Models are capable of operating over a wide range of conditions.

- Maximum and minimum fluid conditions are at unit rated flow rate.
- Maximum and minimum operating limits may not be combined. If one value is at either maximum or minimum, the other two should be at normal operating range.

EQUIPMENT SELECTION

To ensure that you get the optimal performance from your DXair dehumidifier, it is important that they be selected accurately to match your design conditions and criteria.

Prior to making equipment selections the zone conditions need to be determined.

UNIT OPERATING LIMITS—EC MODEL

Operating Limits – Cooling & Heating	Standard Unit
Minimum evaporator entering air db/wb °F	68/57
Rated air coil entering air db/wb °F	80/67
Maximum evaporator entering air db/wb °F	95/85
Minimum water coil entering fluid temperature °F	50
Water loop typical coil entering fluid range temperature °F	70/90
Maximum water coil entering fluid temperature °F	110
Minimum evaporator entering air db °F	50
Rated air coil entering air °F	68
Maximum evaporator entering air db °F	80
Normal water coil entering fluid range °F	50-80
Minimum water coil entering Fluid °F	50

*Antifreeze solution is required at these fluid temperatures.

Units are designed to be installed in an air conditioned space.

ANTIFREEZE CORRECTION DATA

Antifreeze Correction					
Antifreeze Type	Antifreeze %	Cooling			WPD Correction Factor EWT 30 °F
		Avg. Water Temp 90 °F			
		Total Cap.	Sens. Cap	Power	
Water	0	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.997	0.997	1.004	1.060
	10	0.994	0.994	1.006	1.125
	15	0.990	0.990	1.009	1.190
	25	0.983	0.983	1.016	1.300
Methanol	5	0.997	0.997	1.003	1.060
	10	0.996	0.996	1.005	1.100
	15	0.994	0.994	1.008	1.140
Ethanol	5	0.998	0.998	1.002	1.160
	10	0.996	0.996	1.004	1.230
	15	0.992	0.992	1.006	1.280
	25	0.986	0.986	1.009	1.400
Ethylene Glycol	5	0.997	0.997	1.003	1.060



WATERSIDE PRESSURE DROP

Model	GPM	Pressure Drop (PSIG)	Pressure Drop (ft of H2O)
EC072	10	2.6	6.0
	12	3.6	8.3
	14	4.8	11.0
	16	6.1	14.0
	18	7.5	17.3
EC096	12	2.5	5.7
	14	3.3	7.5
	18	5.1	11.8
	21	6.8	15.6
	24	8.6	19.8
EC120	16	2.1	4.9
	20	3.1	7.3
	24	4.4	10.1
	28	5.8	13.3
	32	7.3	16.9
EC150	20	1.4	3.3
	25	2.1	4.9
	30	3.0	6.8
	35	3.9	9.0
	50	7.4	17.1
EC151	20	1.4	3.3
	25	2.1	4.9
	30	3.0	6.8
	35	3.9	9.0
	50	7.4	17.1
EC180	22	1.7	3.9
	27	2.5	5.7
	32	3.3	7.7
	42	5.4	12.5
	52	8.0	18.4
EC181	22	1.7	3.9
	27	2.5	5.7
	32	3.3	7.7
	42	5.4	12.5
	52	8.0	18.4
EC210	30	2.6	5.9
	40	4.3	9.9
	50	6.4	14.9
	60	8.9	20.6
	70	11.8	27.2
EC240	30	1.6	3.7
	40	2.7	6.2
	50	4.0	9.3
	60	5.6	12.9
	75	8.3	19.2
EC242	30	1.6	3.7
	40	2.7	6.2
	50	4.0	9.3
	60	5.6	12.9
	75	8.3	19.2
EC300	40	2.7	6.2
	50	4.0	9.3
	60	5.6	12.9
	75	8.3	19.2
	85	10.4	24.1
EC360	50	3.7	8.5
	70	6.7	15.5
	80	8.5	19.7
	90	10.6	24.4
	100	12.8	29.5

NOTE: Based on 70° F pure entering water



CAPACITY DATA

EC072 2300 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	9	2.3 (5.3)	75/63	81.4	61.2	93.8	4.0	20.3
			80/67	87.5	63.5	100.1	4.0	21.9
			85/71	93.8	65.6	106.6	4.0	23.6
	12	3.9 (8.9)	75/63	83.6	62.0	95.7	3.8	21.8
			80/67	90.0	64.4	102.2	3.8	23.7
			85/71	96.6	66.5	109.0	3.7	25.8
	18	8.0 (18.5)	75/63	85.9	62.9	97.6	3.7	23.5
			80/67	92.6	65.3	104.4	3.6	25.8
			85/71	99.6	67.5	111.5	3.5	28.4
60	9	2.2 (5.1)	75/63	77.0	58.9	90.1	4.4	17.5
			80/67	82.8	61.3	96.2	4.4	18.8
			85/71	88.8	63.5	102.4	4.4	20.2
	12	3.7 (8.6)	75/63	79.0	59.9	91.8	4.2	18.7
			80/67	85.1	62.2	98.1	4.2	20.2
			85/71	91.5	64.4	104.7	4.2	22.0
	18	7.7 (17.9)	75/63	81.2	60.8	93.6	4.0	20.1
			80/67	87.6	63.2	100.2	4.0	21.9
			85/71	94.2	65.7	106.9	3.9	23.9
70	9	2.1 (5.0)	75/63	72.2	57.2	86.0	4.8	15.1
			80/67	77.8	59.3	92.0	4.8	16.2
			85/71	83.6	61.6	98.1	4.8	17.3
	12	3.6 (8.3)	75/63	74.2	57.8	87.7	4.6	16.0
			80/67	80.1	60.2	93.9	4.6	17.3
			85/71	86.1	62.5	100.2	4.6	18.7
	18	7.5 (17.3)	75/63	76.2	58.8	89.3	4.5	17.1
			80/67	82.3	61.4	95.7	4.4	18.6
			85/71	88.8	63.4	102.4	4.4	20.2
80	9	2.1 (4.8)	75/63	67.5	54.9	82.0	5.2	13.0
			80/67	72.7	57.4	87.7	5.2	13.9
			85/71	78.1	59.9	93.5	5.3	14.9
	12	3.5 (8.1)	75/63	69.2	55.8	83.5	5.0	13.7
			80/67	74.8	58.1	89.5	5.1	14.8
			85/71	80.6	60.5	95.6	5.1	15.9
	18	7.2 (16.7)	75/63	71.1	56.4	85.1	4.9	14.6
			80/67	76.9	59.2	91.2	4.9	15.7
			85/71	82.9	61.8	97.5	4.9	17.1
85	9	2.0 (4.7)	75/63	64.9	54.2	79.8	5.4	12.1
			80/67	70.1	56.4	85.5	5.4	12.9
			85/71	75.4	58.7	91.3	5.5	13.8
	12	3.4 (7.9)	75/63	66.7	54.5	81.4	5.2	12.7
			80/67	72.1	57.2	87.2	5.3	13.7
			85/71	77.6	59.8	93.1	5.3	14.7
	18	7.1 (16.5)	75/63	68.5	55.3	82.9	5.1	13.4
			80/67	74.1	58.2	88.9	5.1	14.5
			85/71	80.2	60.2	95.3	5.1	15.7
90	9	2.0 (4.7)	75/63	62.6	52.9	77.8	5.6	11.3
			80/67	67.5	55.2	83.3	5.6	12.0
			85/71	72.6	57.7	88.9	5.7	12.7
	12	3.4 (7.8)	75/63	64.1	53.6	79.1	5.4	11.8
			80/67	69.3	56.1	84.9	5.5	12.6
			85/71	74.9	58.4	90.9	5.5	13.5
	18	7.0 (16.2)	75/63	65.8	54.2	80.6	5.3	12.4
			80/67	71.4	56.7	86.7	5.3	13.4
			85/71	77.1	59.7	92.6	5.3	14.4
100	9	2.0 (4.5)	75/63	57.9	49.5	73.7	5.9	9.8
			80/67	62.4	52.3	78.9	6.0	10.4
			85/71	67.2	56.0	84.3	6.1	11.0
	12	3.3 (7.6)	75/63	59.3	50.2	75.0	5.8	10.2
			80/67	64.0	54.3	80.3	5.9	10.9
			85/71	69.1	56.4	86.0	6.0	11.5
	18	6.8 (15.7)	75/63	60.8	50.8	76.2	5.7	10.7
			80/67	65.7	54.9	81.8	5.8	11.4
			85/71	71.1	57.1	87.7	5.8	12.2
110	9	1.9 (4.4)	75/63	52.8	47.5	69.3	6.2	8.5
			80/67	57.2	50.0	74.4	6.4	8.9
			85/71	61.6	52.3	79.5	6.5	9.4
	12	3.2 (7.4)	75/63	54.1	48.0	70.4	6.2	8.8
			80/67	58.7	50.6	75.7	6.3	9.3
			85/71	63.3	53.1	81.1	6.4	9.9
	18	6.6 (15.3)	75/63	55.5	48.7	71.7	6.1	9.2
			80/67	60.3	51.2	77.1	6.2	9.8
			85/71	65.2	53.7	82.6	6.3	10.4





CAPACITY DATA

EC096 2800 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Cooling					EER
			Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	
50	12	2.6 (6.0)	75/63	106.9	77.7	122.9	5.0	21.2
			80/67	113.9	80.0	130.3	5.1	22.5
			85/71	121.3	82.1	138.0	5.1	23.9
	16	4.4 (10.1)	75/63	109.3	78.7	124.7	4.7	23.1
			80/67	116.7	81.1	132.3	4.7	24.7
			85/71	124.4	83.2	140.3	4.7	26.3
	24	9.1 (21.1)	75/63	111.9	79.7	126.5	4.4	25.3
			80/67	119.6	82.2	134.4	4.4	27.2
			85/71	127.7	84.3	142.7	4.4	29.3
60	12	2.5 (5.8)	75/63	102.6	75.6	120.0	5.6	18.3
			80/67	109.4	78.0	127.2	5.6	19.4
			85/71	116.5	79.9	134.7	5.7	20.5
	16	4.2 (9.8)	75/63	104.9	76.7	121.6	5.3	19.8
			80/67	112.1	79.0	129.0	5.3	21.1
			85/71	119.4	81.6	136.6	5.3	22.5
	24	8.8 (20.3)	75/63	107.4	77.7	123.3	5.0	21.5
			80/67	114.8	80.1	131.0	5.0	23.1
			85/71	122.5	82.8	138.9	4.9	24.8
70	12	2.4 (5.7)	75/63	98.2	73.6	117.1	6.2	15.8
			80/67	104.6	76.2	123.9	6.3	16.7
			85/71	111.4	78.0	131.1	6.3	17.6
	16	4.1 (9.5)	75/63	100.4	74.6	118.5	5.9	17.0
			80/67	107.1	77.3	125.6	5.9	18.1
			85/71	114.3	79.1	133.1	6.0	19.2
	24	8.5 (19.7)	75/63	102.7	75.6	120.1	5.6	18.3
			80/67	109.8	78.4	127.4	5.6	19.6
			85/71	117.3	80.3	135.2	5.6	21.0
80	12	2.4 (5.5)	75/63	93.5	71.7	114.1	6.9	13.5
			80/67	99.7	73.9	120.8	7.0	14.3
			85/71	106.1	76.2	127.6	7.0	15.1
	16	4.0 (9.2)	75/63	95.6	72.6	115.4	6.6	14.5
			80/67	102.2	74.8	122.4	6.6	15.4
			85/71	108.7	77.8	129.2	6.6	16.4
	24	8.2 (19.0)	75/63	97.8	73.7	116.8	6.3	15.6
			80/67	104.7	76.0	124.0	6.3	16.7
			85/71	111.6	78.8	131.2	6.3	17.8
85	12	2.3 (5.4)	75/63	91.1	70.8	112.6	7.3	12.5
			80/67	97.2	72.8	119.3	7.3	13.3
			85/71	103.2	75.7	125.7	7.4	14.0
	16	3.9 (9.0)	75/63	93.2	71.6	113.9	7.0	13.4
			80/67	99.6	73.7	120.7	7.0	14.3
			85/71	106.1	76.2	127.6	7.0	15.1
	24	8.1 (18.7)	75/63	95.4	72.6	115.2	6.6	14.4
			80/67	102.1	74.7	122.3	6.6	15.4
			85/71	108.9	77.3	129.5	6.6	16.4
90	12	2.3 (5.3)	75/63	88.7	69.8	111.2	7.7	11.6
			80/67	94.5	72.3	117.5	7.7	12.2
			85/71	100.6	74.2	124.1	7.8	12.9
	16	3.9 (8.9)	75/63	90.7	70.7	112.4	7.3	12.4
			80/67	96.8	73.2	118.9	7.4	13.1
			85/71	103.1	75.7	125.6	7.4	13.9
	24	8.1 (18.5)	75/63	92.8	71.5	113.7	7.0	13.3
			80/67	99.2	74.1	120.4	7.0	14.1
			85/71	106.0	76.1	127.6	7.0	15.1
100	12	2.2 (5.1)	75/63	83.8	67.7	108.5	8.5	9.9
			80/67	89.2	70.3	114.4	8.5	10.4
			85/71	94.7	72.7	120.4	8.6	11.0
	16	3.7 (8.6)	75/63	85.9	68.1	109.7	8.2	10.5
			80/67	91.4	71.1	115.7	8.2	11.2
			85/71	97.2	73.6	121.9	8.2	11.8
	24	7.8 (17.9)	75/63	87.8	68.9	110.8	7.8	11.2
			80/67	93.9	71.5	117.2	7.8	12.0
			85/71	100.1	74.0	123.8	7.9	12.7
110	12	2.2 (5.0)	75/63	78.8	65.2	106.1	9.4	8.4
			80/67	83.9	67.7	111.7	9.5	8.9
			85/71	88.7	70.7	117.0	9.5	9.3
	16	3.6 (8.4)	75/63	80.6	65.9	106.9	9.1	8.9
			80/67	85.7	68.9	112.5	9.1	9.4
			85/71	91.2	71.5	118.4	9.1	10.0
	24	7.5 (17.4)	75/63	82.5	66.8	107.9	8.7	9.4
			80/67	88.1	69.3	113.9	8.8	10.1
			85/71	93.6	72.4	119.8	8.8	10.7





CAPACITY DATA

EC120 4000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wh) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	15	2.0 (4.6)	75/63	132.0	99.0	153.8	6.7	19.6
			80/67	141.2	102.2	163.7	6.8	20.7
			85/71	150.7	105.1	173.7	6.9	21.9
	20	3.3 (7.7)	75/63	134.9	100.3	156.1	6.4	21.0
			80/67	144.5	103.4	166.3	6.5	22.2
			85/71	154.4	106.4	176.7	6.6	23.5
	30	6.9 (16.0)	75/63	138.0	101.2	158.6	6.1	22.4
			80/67	148.0	104.7	169.0	6.2	23.9
			85/71	158.3	107.8	179.9	6.2	25.4
60	15	1.9 (4.4)	75/63	126.7	96.2	149.9	7.3	17.3
			80/67	135.6	99.6	159.4	7.4	18.3
			85/71	144.7	102.7	169.0	7.5	19.3
	20	3.2 (7.5)	75/63	129.5	97.4	152.0	7.0	18.4
			80/67	138.7	100.8	161.8	7.1	19.6
			85/71	148.2	104.0	171.8	7.1	20.8
	30	6.7 (15.5)	75/63	132.4	98.6	154.2	6.7	19.7
			80/67	142.0	102.1	164.4	6.8	21.0
			85/71	151.9	105.5	174.7	6.8	22.4
70	15	1.9 (4.3)	75/63	121.0	93.6	146.0	8.0	15.1
			80/67	129.7	96.9	155.1	8.1	16.0
			85/71	138.1	100.8	164.1	8.1	17.0
	20	3.1 (7.2)	75/63	123.7	94.8	147.9	7.7	16.1
			80/67	132.5	98.6	157.1	7.7	17.1
			85/71	141.5	102.1	166.6	7.8	18.2
	30	6.5 (15.0)	75/63	126.5	95.9	149.9	7.4	17.2
			80/67	135.6	99.9	159.4	7.4	18.4
			85/71	145.1	103.4	169.3	7.4	19.6
80	15	1.8 (4.2)	75/63	115.3	90.9	142.1	8.8	13.1
			80/67	123.3	94.8	150.7	8.9	13.9
			85/71	131.6	98.2	159.5	8.9	14.8
	20	3.0 (7.0)	75/63	117.8	92.0	143.8	8.5	13.9
			80/67	126.4	95.5	152.8	8.5	14.9
			85/71	134.8	99.5	161.8	8.5	15.8
	30	6.3 (14.5)	75/63	120.5	93.1	145.6	8.1	14.9
			80/67	129.4	96.8	154.9	8.1	15.9
			85/71	138.5	100.2	164.5	8.1	17.0
85	15	1.8 (4.1)	75/63	112.1	90.0	140.1	9.2	12.2
			80/67	120.3	93.1	148.8	9.3	13.0
			85/71	128.0	97.5	156.9	9.3	13.7
	20	3.0 (6.9)	75/63	114.6	91.0	141.6	8.9	12.9
			80/67	123.1	94.3	150.6	8.9	13.8
			85/71	131.6	97.7	159.6	8.9	14.7
	30	6.2 (14.2)	75/63	117.2	92.2	143.3	8.5	13.8
			80/67	125.8	95.9	152.4	8.5	14.8
			85/71	135.0	99.0	161.9	8.5	15.8
90	15	1.7 (4.0)	75/63	109.3	88.2	138.4	9.7	11.3
			80/67	117.0	91.9	146.7	9.7	12.0
			85/71	124.5	96.3	154.7	9.8	12.7
	20	2.9 (6.8)	75/63	111.7	89.3	139.9	9.3	12.0
			80/67	119.6	93.4	148.3	9.3	12.8
			85/71	127.9	96.9	157.0	9.4	13.7
	30	6.1 (14.0)	75/63	114.2	90.4	141.4	9.0	12.7
			80/67	122.7	94.1	150.4	9.0	13.7
			85/71	131.2	98.1	159.2	9.0	14.6
100	15	1.7 (3.9)	75/63	102.8	86.4	134.5	10.7	9.6
			80/67	110.5	89.6	142.9	10.7	10.3
			85/71	117.7	94.1	150.5	10.8	10.9
	20	2.8 (6.6)	75/63	105.3	86.6	136.1	10.3	10.2
			80/67	112.6	91.3	143.8	10.3	10.9
			85/71	120.5	95.6	152.1	10.3	11.7
	30	5.9 (13.6)	75/63	107.6	87.6	137.4	9.9	10.9
			80/67	115.4	92.2	145.5	9.9	11.6
			85/71	123.8	95.5	154.3	9.9	12.5
110	15	1.6 (3.8)	75/63	96.9	83.0	131.7	11.8	8.2
			80/67	103.9	86.8	139.3	11.8	8.8
			85/71	110.8	90.9	146.7	11.9	9.3
	20	2.8 (6.4)	75/63	99.0	84.0	132.8	11.4	8.7
			80/67	106.3	87.8	140.5	11.4	9.3
			85/71	113.6	92.0	148.3	11.4	10.0
	30	5.7 (13.2)	75/63	101.1	84.9	133.9	11.0	9.2
			80/67	108.7	88.8	141.9	11.0	9.9
			85/71	116.3	93.5	149.7	11.0	10.6





CAPACITY DATA

EC150 5000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Cooling					EER
			Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	
50	18.8	1.4 (3.2)	75/63	159.4	124.0	183.4	7.3	21.7
			80/67	169.7	128.0	194.3	7.4	22.9
			85/71	180.4	132.1	205.6	7.5	24.2
	25	2.3 (5.3)	75/63	162.8	125.1	186.2	7.0	23.2
			80/67	173.5	129.3	197.4	7.1	24.5
			85/71	184.3	134.2	208.7	7.1	25.9
	37.6	4.8 (11.0)	75/63	166.3	126.5	189.0	6.7	24.9
			80/67	177.4	130.8	200.6	6.7	26.3
			85/71	188.6	135.8	212.3	6.8	27.9
60	18.8	1.3 (3.0)	75/63	152.8	120.8	178.3	8.0	19.1
			80/67	162.8	125.0	188.8	8.0	20.2
			85/71	172.8	130.3	199.3	8.1	21.3
	25	2.2 (5.1)	75/63	156.0	122.1	180.8	7.7	20.3
			80/67	166.1	127.1	191.4	7.7	21.6
			85/71	177.0	130.9	202.8	7.7	22.9
	37.6	4.6 (10.6)	75/63	159.2	124.0	183.2	7.3	21.7
			80/67	169.9	128.6	194.4	7.4	23.1
			85/71	181.2	132.4	206.2	7.4	24.5
70	18.8	1.3 (2.9)	75/63	145.6	115.5	172.8	8.7	16.7
			80/67	155.5	122.4	183.2	8.8	17.7
			85/71	165.2	127.5	193.4	8.8	18.7
	25	2.1 (4.9)	75/63	148.7	116.9	175.1	8.4	17.7
			80/67	158.9	123.7	185.8	8.4	18.9
			85/71	169.1	128.9	196.4	8.4	20.0
	37.6	1.2 (10.3)	75/63	151.9	121.1	177.5	8.1	18.9
			80/67	162.5	125.1	188.6	8.1	20.1
			85/71	173.1	130.2	199.6	8.1	21.4
80	18.8	2.1 (2.9)	75/63	138.5	112.6	167.7	9.6	14.5
			80/67	147.9	119.4	177.7	9.6	15.4
			85/71	157.3	124.8	187.6	9.6	16.3
	25	4.3 (4.8)	75/63	141.5	116.2	169.9	9.2	15.4
			80/67	151.3	120.8	180.1	9.2	16.4
			85/71	161.3	125.2	190.6	9.2	17.5
	37.6	1.2 (9.9)	75/63	144.7	114.4	172.2	8.9	16.3
			80/67	154.5	122.7	182.4	8.9	17.5
			85/71	165.2	126.6	193.5	8.9	18.7
85	18.8	2.0 (2.8)	75/63	135.1	110.4	165.5	10.0	13.5
			80/67	144.2	118.0	175.1	10.1	14.3
			85/71	153.5	122.7	185.0	10.1	15.2
	25	2.0 (4.7)	75/63	137.9	111.7	167.4	9.7	14.3
			80/67	147.2	119.8	177.1	9.7	15.2
			85/71	157.1	124.3	187.4	9.7	16.2
	37.6	4.2 (9.8)	75/63	140.8	115.9	169.4	9.3	15.1
			80/67	150.7	120.6	179.7	9.3	16.2
			85/71	160.7	126.0	190.0	9.3	17.3
90	18.8	1.2 (2.8)	75/63	131.4	108.8	163.1	10.5	12.5
			80/67	140.2	113.9	172.4	10.6	13.3
			85/71	149.6	117.8	182.3	10.6	14.1
	25	2.0 (4.6)	75/63	134.2	110.0	164.9	10.1	13.2
			80/67	143.3	115.1	174.5	10.2	14.1
			85/71	153.0	122.5	184.6	10.2	15.0
	37.6	4.0 (9.6)	75/63	137.0	111.2	166.8	9.8	14.0
			80/67	146.5	119.6	176.6	9.8	15.0
			85/71	156.3	124.5	186.8	9.7	16.0
100	18.8	1.2 (2.7)	75/63	124.1	105.4	158.7	11.6	10.7
			80/67	132.6	110.2	167.8	11.7	11.4
			85/71	141.3	115.3	177.0	11.7	12.1
	25	1.9 (4.5)	75/63	126.6	106.6	160.2	11.2	11.3
			80/67	135.3	112.1	169.3	11.2	12.0
			85/71	144.8	115.8	179.2	11.3	12.9
	37.6	4.0 (9.3)	75/63	129.1	108.3	161.6	10.8	11.9
			80/67	138.3	113.3	171.2	10.8	12.8
			85/71	148.1	117.2	181.3	10.8	13.7
110	18.8	1.1 (2.6)	75/63	116.2	102.7	154.5	12.9	9.0
			80/67	124.5	107.5	163.3	13.0	9.6
			85/71	132.9	112.3	172.2	13.0	10.2
	25	1.9 (4.4)	75/63	118.7	103.8	155.7	12.5	9.5
			80/67	127.4	108.0	164.9	12.5	10.2
			85/71	136.2	112.6	174.1	12.5	10.9
	37.6	3.9 (9.1)	75/63	121.1	104.8	157.0	12.1	10.0
			80/67	130.2	109.1	166.4	12.1	10.8
			85/71	139.1	114.7	175.6	12.0	11.6





CAPACITY DATA

EC151 5000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	18.8	1.4 (3.2)	75/63	155.7	119.3	179.6	7.3	21.4
			80/67	166.2	127.1	190.7	7.4	22.6
			85/71	176.2	131.3	201.3	7.4	23.7
	25	2.3 (5.3)	75/63	160.0	123.9	183.2	7.0	22.9
			80/67	169.9	128.6	193.7	7.0	24.2
			85/71	180.3	132.9	204.6	7.1	25.5
	37.6	4.8 (11.0)	75/63	163.2	125.9	185.7	6.7	24.5
			80/67	174.0	129.5	197.1	6.7	25.9
			85/71	184.6	134.5	208.2	6.7	27.4
60	18.8	1.3 (3.0)	75/63	149.5	120.4	174.9	8.0	18.8
			80/67	158.9	124.6	184.9	8.0	19.8
			85/71	168.6	129.3	195.0	8.1	20.9
	25	2.2 (5.1)	75/63	152.9	121.4	177.6	7.6	20.0
			80/67	162.5	126.0	187.7	7.7	21.2
			85/71	172.3	131.3	198.0	7.7	22.4
	37.6	4.6 (10.6)	75/63	156.2	122.8	180.2	7.3	21.3
			80/67	166.3	127.2	190.8	7.3	22.7
			85/71	176.8	131.7	201.8	7.4	24.0
70	18.8	1.3 (2.9)	75/63	142.9	117.8	170.0	8.7	16.4
			80/67	151.3	119.4	178.8	8.7	17.3
			85/71	161.6	126.2	189.7	8.8	18.4
	25	2.1 (4.9)	75/63	145.6	118.7	171.9	8.4	17.4
			80/67	155.5	123.5	182.3	8.4	18.5
			85/71	165.4	127.5	192.7	8.4	19.7
	37.6	4.4 (10.3)	75/63	148.7	120.0	174.3	8.0	18.5
			80/67	158.6	124.2	184.7	8.0	19.7
			85/71	168.9	128.6	195.3	8.1	21.0
80	18.8	1.2 (2.9)	75/63	134.4	110.6	163.5	9.5	14.1
			80/67	147.4	110.6	177.3	9.6	15.4
			85/71	152.6	116.8	182.8	9.6	15.9
	25	2.1 (4.8)	75/63	137.9	113.3	166.1	9.2	15.0
			80/67	148.0	120.0	176.7	9.2	16.1
			85/71	153.9	126.0	183.0	9.2	16.7
	37.6	4.3 (9.9)	75/63	141.2	113.9	168.7	8.8	16.0
			80/67	150.8	121.0	178.7	8.8	17.1
			85/71	161.3	125.7	189.6	8.8	18.3
85	18.8	1.2 (2.8)	75/63	131.3	110.6	161.6	10.0	13.1
			80/67	139.0	116.7	169.8	10.0	13.9
			85/71	147.1	119.0	178.3	10.1	14.6
	25	2.0 (4.7)	75/63	134.0	114.1	163.4	9.6	13.9
			80/67	146.6	110.8	176.6	9.7	15.2
			85/71	152.0	116.9	182.3	9.7	15.7
	37.6	4.2 (9.8)	75/63	139.5	111.1	168.1	9.3	15.0
			80/67	147.3	119.8	176.2	9.3	15.9
			85/71	156.9	124.4	186.3	9.3	16.9
90	18.8	1.2 (2.8)	75/63	127.9	108.2	159.4	10.5	12.2
			80/67	135.4	114.4	167.5	10.5	12.9
			85/71	144.0	117.4	176.5	10.6	13.6
	25	2.0 (4.6)	75/63	130.3	110.1	160.9	10.1	12.9
			80/67	139.4	117.1	170.4	10.1	13.8
			85/71	152.3	101.4	184.1	10.2	15.0
	37.6	4.2 (9.6)	75/63	133.0	108.7	162.8	9.8	13.6
			80/67	145.7	110.7	176.0	9.8	14.9
			85/71	151.2	116.9	181.7	9.7	15.5
100	18.8	1.2 (2.7)	75/63	120.3	105.0	154.8	11.6	10.4
			80/67	128.3	109.4	163.3	11.6	11.0
			85/71	134.9	113.9	170.4	11.7	11.6
	25	1.9 (4.5)	75/63	122.8	106.2	156.3	11.2	11.0
			80/67	130.8	111.3	164.7	11.2	11.7
			85/71	136.5	120.5	170.7	11.2	12.2
	37.6	4.0 (9.3)	75/63	125.5	107.2	157.9	10.8	11.6
			80/67	134.0	111.9	166.8	10.8	12.4
			85/71	140.8	121.3	173.9	10.8	13.1
110	18.8	1.1 (2.6)	75/63	112.5	101.6	150.7	12.9	8.7
			80/67	119.9	106.3	158.6	13.0	9.3
			85/71	128.2	110.3	167.4	13.0	9.9
	25	1.9 (4.4)	75/63	115.1	102.3	152.1	12.5	9.2
			80/67	123.1	107.2	160.5	12.5	9.8
			85/71	130.9	112.0	168.8	12.5	10.5
	37.6	3.9 (9.1)	75/63	117.5	103.4	153.3	12.1	9.7
			80/67	125.7	107.9	161.9	12.1	10.4
			85/71	132.9	116.0	169.4	12.0	11.0





CAPACITY DATA

EC180 6000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Cooling					EER
			Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	
50	22.6	1.9 (4.4)	75/63	183.3	141.0	212.4	8.8	20.8
			80/67	194.9	146.4	224.5	8.9	22.0
			85/71	207.0	151.0	237.2	8.9	23.1
	30	3.2 (7.3)	75/63	186.8	142.8	215.0	8.5	22.0
			80/67	198.9	147.8	227.7	8.5	23.4
			85/71	211.5	152.3	240.8	8.6	24.7
	45	6.6 (15.2)	75/63	190.5	144.2	218.0	8.1	23.4
			80/67	203.1	149.2	231.0	8.2	24.9
			85/71	216.2	153.6	244.6	8.2	26.5
60	22.6	1.8 (4.2)	75/63	175.9	138.1	206.6	9.5	18.5
			80/67	187.3	143.0	218.6	9.6	19.5
			85/71	198.8	148.4	230.8	9.7	20.5
	30	3.1 (7.1)	75/63	179.4	139.5	209.3	9.2	19.5
			80/67	191.2	144.4	221.6	9.2	20.7
			85/71	203.1	150.1	234.1	9.3	21.9
	45	6.4 (14.7)	75/63	183.0	140.9	212.1	8.8	20.7
			80/67	195.2	145.8	224.8	8.9	22.0
			85/71	207.8	151.0	237.9	8.9	23.4
70	22.6	1.8 (4.1)	75/63	168.4	134.4	201.1	10.4	16.3
			80/67	179.3	139.6	212.7	10.4	17.2
			85/71	190.4	145.4	224.4	10.5	18.1
	30	3.0 (6.8)	75/63	171.7	135.9	203.6	10.0	17.2
			80/67	182.8	141.9	215.2	10.0	18.2
			85/71	194.5	146.8	227.5	10.1	19.3
	45	6.1 (14.2)	75/63	174.9	138.0	205.9	9.6	18.2
			80/67	186.6	143.4	218.1	9.7	19.3
			85/71	198.9	148.4	230.8	9.7	20.5
80	22.6	1.7 (4.0)	75/63	160.4	131.7	195.4	11.3	14.3
			80/67	171.1	136.5	206.7	11.3	15.1
			85/71	181.6	142.3	217.9	11.4	15.9
	30	2.9 (6.6)	75/63	163.5	133.2	197.5	10.9	15.0
			80/67	174.6	137.9	209.2	10.9	16.0
			85/71	185.8	143.2	221.1	11.0	16.9
	45	5.9 (13.7)	75/63	166.9	134.2	200.0	10.5	15.9
			80/67	178.0	140.0	211.7	10.5	16.9
			85/71	190.1	144.3	224.3	10.6	18.0
85	22.6	1.7 (3.9)	75/63	156.4	130.1	192.6	11.7	13.3
			80/67	166.9	134.6	203.9	11.8	14.1
			85/71	177.2	140.5	214.8	11.9	14.9
	30	2.8 (6.5)	75/63	159.5	131.4	194.7	11.4	14.0
			80/67	170.4	136.1	206.2	11.4	14.9
			85/71	181.0	142.2	217.5	11.5	15.8
	45	5.9 (13.5)	75/63	162.6	132.9	196.9	11.0	14.8
			80/67	173.9	137.5	208.7	11.0	15.8
			85/71	185.3	143.0	220.6	11.1	16.8
90	22.6	1.7 (3.9)	75/63	152.6	127.5	190.2	12.3	12.4
			80/67	162.5	133.5	200.8	12.3	13.2
			85/71	173.0	138.1	212.0	12.4	13.9
	30	2.8 (6.4)	75/63	155.5	129.0	192.1	11.9	13.1
			80/67	166.1	134.2	203.3	11.9	13.9
			85/71	176.5	140.3	214.3	12.0	14.7
	45	5.8 (13.3)	75/63	158.6	130.4	194.2	11.5	13.8
			80/67	169.5	135.6	205.6	11.5	14.7
			85/71	180.6	141.1	217.3	11.6	15.6
100	22.6	1.6 (3.7)	75/63	144.4	123.9	185.0	13.4	10.8
			80/67	154.0	129.4	195.3	13.5	11.4
			85/71	163.9	134.5	205.9	13.6	12.1
	30	2.7 (6.2)	75/63	147.2	125.2	186.7	13.0	11.3
			80/67	157.2	130.7	197.3	13.1	12.0
			85/71	167.5	135.9	208.3	13.1	12.8
	45	5.6 (12.9)	75/63	150.0	126.4	188.5	12.6	11.9
			80/67	160.2	132.8	199.2	12.6	12.7
			85/71	171.1	137.3	210.7	12.7	13.5
110	22.6	1.6 (3.6)	75/63	135.9	120.2	179.9	14.7	9.3
			80/67	144.8	126.5	189.5	14.7	9.8
			85/71	154.2	131.8	199.6	14.8	10.4
	30	2.6 (6.0)	75/63	138.5	121.4	181.5	14.3	9.7
			80/67	147.8	127.7	191.3	14.3	10.4
			85/71	157.6	133.0	201.7	14.3	11.0
	45	5.4 (12.5)	75/63	141.1	122.5	183.0	13.9	10.2
			80/67	150.8	128.9	193.2	13.9	10.9
			85/71	161.3	133.5	204.2	13.9	11.6



CAPACITY DATA

EC181 6000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	22.6	1.9 (4.4)	75/63	176.9	137.6	207.7	9.3	18.9
			80/67	187.9	142.9	219.3	9.4	20.0
			85/71	200.0	146.8	232.0	9.5	21.1
	30	3.2 (7.3)	75/63	180.4	139.2	210.5	9.0	20.0
			80/67	191.9	144.5	222.5	9.0	21.2
			85/71	204.2	149.1	235.3	9.1	22.5
	45	6.6 (15.2)	75/63	183.1	140.4	212.5	8.7	21.1
			80/67	195.1	145.4	224.9	8.7	22.4
			85/71	208.9	150.2	239.2	8.7	24.0
60	22.6	1.8 (4.2)	75/63	169.2	134.8	201.7	10.1	16.8
			80/67	180.1	139.7	213.2	10.1	17.8
			85/71	191.4	144.7	225.1	10.2	18.8
	30	3.1 (7.1)	75/63	172.6	136.3	204.3	9.7	17.8
			80/67	183.7	141.9	216.0	9.8	18.8
			85/71	195.5	146.7	228.3	9.8	19.9
	45	6.4 (14.7)	75/63	176.3	137.4	207.3	9.4	18.8
			80/67	188.3	142.1	219.7	9.4	20.0
			85/71	200.3	147.4	232.2	9.4	21.2
70	22.6	1.8 (4.1)	75/63	160.5	131.9	194.9	10.9	14.8
			80/67	169.2	140.5	204.1	10.9	15.5
			85/71	180.9	136.6	216.6	11.0	16.4
	30	3.0 (6.8)	75/63	166.9	127.5	200.6	10.5	15.8
			80/67	175.7	137.7	209.9	10.6	16.6
			85/71	186.8	142.9	221.6	10.6	17.6
	45	6.1 (14.2)	75/63	168.1	134.2	200.9	10.2	16.5
			80/67	179.8	138.7	213.1	10.2	17.6
			85/71	191.3	144.1	225.1	10.2	18.7
80	22.6	1.7 (4.0)	75/63	152.7	127.7	189.4	11.8	13.0
			80/67	161.8	128.8	199.2	11.8	13.7
			85/71	168.9	145.3	206.8	11.9	14.2
	30	2.9 (6.6)	75/63	155.8	129.0	191.6	11.4	13.7
			80/67	163.2	139.7	199.4	11.4	14.3
			85/71	176.0	134.7	213.0	11.5	15.3
	45	5.9 (13.7)	75/63	157.6	127.9	192.6	11.0	14.3
			80/67	167.8	139.9	203.2	11.1	15.2
			85/71	176.6	148.9	212.4	11.1	16.0
85	22.6	1.7 (3.9)	75/63	148.6	125.8	186.6	12.2	12.1
			80/67	157.6	126.8	196.2	12.3	12.8
			85/71	166.7	133.5	205.9	12.4	13.5
	30	2.8 (6.5)	75/63	151.9	126.6	189.0	11.9	12.8
			80/67	160.9	128.2	198.6	11.9	13.5
			85/71	168.4	144.7	206.4	12.0	14.1
	45	5.9 (13.5)	75/63	155.0	128.0	191.2	11.5	13.5
			80/67	162.6	138.8	199.1	11.5	14.1
			85/71	175.9	133.2	213.1	11.6	15.2
90	22.6	1.7 (3.9)	75/63	142.7	122.6	182.0	12.8	11.2
			80/67	149.9	137.3	189.7	12.8	11.7
			85/71	162.3	130.9	203.0	12.9	12.6
	30	2.8 (6.4)	75/63	147.7	124.8	186.0	12.4	11.9
			80/67	153.9	137.5	192.7	12.4	12.4
			85/71	165.5	133.7	205.0	12.5	13.2
	45	5.8 (13.3)	75/63	150.5	126.5	187.9	12.0	12.5
			80/67	159.9	127.7	197.8	12.1	13.3
			85/71	167.6	144.3	205.9	12.1	13.9
100	22.6	5.8 (3.7)	75/63	135.8	119.9	178.1	13.9	9.8
			80/67	141.0	134.0	183.8	13.9	10.1
			85/71	159.6	107.1	203.7	14.1	11.3
	30	2.7 (6.2)	75/63	138.8	121.3	180.1	13.5	10.3
			80/67	147.9	127.6	189.8	13.6	10.9
			85/71	151.1	140.3	193.3	13.6	11.1
	45	5.6 (12.9)	75/63	141.4	122.9	181.7	13.1	10.8
			80/67	150.3	124.1	191.2	13.2	11.4
			85/71	159.5	131.0	200.9	13.2	12.1
110	22.6	1.6 (3.6)	75/63	127.3	116.1	173.1	15.2	8.4
			80/67	136.9	119.5	183.4	15.2	9.0
			85/71	136.7	135.6	183.5	15.2	9.0
	30	2.6 (6.0)	75/63	129.6	118.1	174.3	14.8	8.8
			80/67	138.7	123.5	183.9	14.8	9.4
			85/71	140.8	136.9	186.4	14.8	9.5
	45	5.4 (12.5)	75/63	132.4	118.7	176.1	14.4	9.2
			80/67	140.7	120.6	184.9	14.4	9.8
			85/71	156.2	106.7	201.2	14.5	10.8





CAPACITY DATA

EC210 7000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Cooling					EER
			Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	
50	26.2	2.1 (4.9)	75/63	233.5	175.0	272.3	12.0	19.5
			80/67	248.9	180.3	289.0	12.2	20.4
			85/71	264.8	185.7	306.1	12.4	21.3
	35	3.6 (8.3)	75/63	238.7	177.0	276.4	11.5	20.8
			80/67	254.8	186.8	293.6	11.7	21.9
			85/71	271.5	192.6	311.4	11.8	22.9
	52.6	7.5 (17.3)	75/63	244.2	179.2	280.6	10.9	22.4
			80/67	260.7	190.2	298.0	11.1	23.6
			85/71	278.6	195.2	317.0	11.2	24.8
60	26.2	2.1 (4.8)	75/63	224.5	170.5	265.7	13.0	17.3
			80/67	239.4	176.1	281.8	13.2	18.2
			85/71	254.1	182.9	297.6	13.4	19.0
	35	3.5 (8.0)	75/63	229.5	172.7	269.4	12.4	18.5
			80/67	244.6	179.5	285.6	12.6	19.4
			85/71	260.6	185.3	302.6	12.8	20.4
	52.6	7.2 (16.7)	75/63	234.8	174.8	273.5	11.9	19.8
			80/67	250.6	182.0	290.2	12.0	20.9
			85/71	267.3	187.9	308.0	12.2	22.0
70	26.2	2.0 (4.6)	75/63	215.1	166.1	258.9	14.0	15.3
			80/67	229.2	172.1	274.1	14.2	16.1
			85/71	243.8	177.6	289.9	14.4	16.9
	35	3.4 (7.8)	75/63	219.9	168.2	262.4	13.5	16.3
			80/67	234.7	174.3	278.2	13.7	17.2
			85/71	250.0	180.0	294.6	13.8	18.1
	52.6	7.0 (16.2)	75/63	224.6	171.3	265.7	12.9	17.4
			80/67	240.4	176.6	282.5	13.1	18.4
			85/71	256.5	182.6	299.6	13.2	19.4
80	26.2	1.9 (4.5)	75/63	205.2	161.9	251.9	15.2	13.5
			80/67	218.6	167.9	266.5	15.4	14.2
			85/71	232.1	174.7	281.2	15.6	14.9
	35	3.3 (7.5)	75/63	209.8	164.0	255.1	14.6	14.3
			80/67	223.5	171.0	269.9	14.8	15.1
			85/71	238.5	175.8	286.0	15.0	15.9
	52.6	6.8 (15.6)	75/63	214.6	166.0	258.5	14.1	15.3
			80/67	229.1	173.2	273.9	14.2	16.1
			85/71	244.4	179.3	290.2	14.3	17.1
85	26.2	1.9 (4.4)	75/63	200.1	159.6	248.5	15.8	12.6
			80/67	212.9	166.6	262.4	16.0	13.3
			85/71	226.8	171.3	277.5	16.2	14.0
	35	3.2 (7.4)	75/63	204.6	161.6	251.5	15.3	13.4
			80/67	218.4	167.7	266.4	15.4	14.2
			85/71	232.2	174.8	281.2	15.6	14.9
	52.6	6.7 (15.4)	75/63	209.4	163.6	254.8	14.7	14.3
			80/67	223.8	169.9	270.2	14.8	15.1
			85/71	238.8	175.8	286.2	14.9	16.0
90	26.2	1.9 (4.3)	75/63	194.9	157.5	245.0	16.5	11.8
			80/67	207.8	163.4	259.1	16.7	12.4
			85/71	220.9	169.3	273.4	16.9	13.1
	35	3.2 (7.3)	75/63	199.0	160.3	247.6	15.9	12.5
			80/67	212.4	166.6	262.0	16.1	13.2
			85/71	226.2	172.5	276.9	16.2	13.9
	52.6	6.6 (15.2)	75/63	203.6	162.2	250.7	15.3	13.3
			80/67	217.7	168.5	265.7	15.5	14.1
			85/71	232.6	173.7	281.7	15.6	14.9
100	26.2	1.8 (4.2)	75/63	184.2	153.8	238.2	18.0	10.3
			80/67	196.2	160.1	251.4	18.2	10.8
			85/71	208.5	166.1	264.9	18.4	11.4
	35	3.1 (7.1)	75/63	188.3	155.7	240.7	17.4	10.9
			80/67	201.2	161.2	254.7	17.5	11.5
			85/71	213.6	168.8	268.0	17.7	12.1
	52.6	6.4 (14.7)	75/63	192.8	156.9	243.6	16.8	11.5
			80/67	205.8	164.0	257.6	16.9	12.2
			85/71	219.4	170.4	272.1	17.0	12.9
110	26.2	1.8 (4.1)	75/63	173.4	149.4	232.1	19.6	8.8
			80/67	185.1	154.6	245.0	19.8	9.3
			85/71	196.3	161.7	257.4	20.0	9.8
	35	3.0 (6.9)	75/63	177.2	150.7	234.1	19.0	9.3
			80/67	189.4	156.5	247.4	19.2	9.9
			85/71	201.8	162.6	260.9	19.3	10.4
	52.6	6.2 (14.3)	75/63	181.3	152.6	236.5	18.4	9.9
			80/67	194.1	158.2	250.3	18.5	10.5
			85/71	206.6	165.4	263.6	18.6	11.1





CAPACITY DATA

EC240 8000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	30	1.7 (3.9)	75/63	269.0	198.4	312.2	13.2	20.3
			80/67	285.7	205.5	330.5	13.5	21.1
			85/71	303.4	210.6	350.1	13.9	21.8
	40	2.8 (6.5)	75/63	274.1	201.7	316.0	12.6	21.7
			80/67	291.9	207.8	335.4	12.9	22.6
			85/71	310.0	214.3	355.1	13.3	23.4
	60	5.9 (13.6)	75/63	280.0	204.0	320.5	12.0	23.3
			80/67	298.5	210.1	340.6	12.3	24.2
			85/71	317.1	217.3	360.8	12.6	25.2
60	30	1.6 (3.8)	75/63	258.3	194.5	304.2	14.3	18.0
			80/67	274.9	200.5	322.4	14.7	18.7
			85/71	291.9	206.1	341.2	15.0	19.4
	40	2.7 (6.3)	75/63	263.7	196.8	308.2	13.8	19.2
			80/67	281.0	202.8	327.1	14.1	20.0
			85/71	298.7	208.7	346.4	14.4	20.8
	60	5.7 (13.1)	75/63	269.3	199.1	312.5	13.2	20.5
			80/67	287.4	205.2	332.0	13.4	21.4
			85/71	305.8	211.4	352.0	13.7	22.3
70	30	1.6 (3.6)	75/63	247.5	189.5	296.4	15.6	15.9
			80/67	263.6	195.4	314.2	15.9	16.6
			85/71	279.8	201.6	332.0	16.3	17.2
	40	2.6 (6.1)	75/63	252.8	191.8	300.2	15.0	16.9
			80/67	269.1	198.9	318.0	15.3	17.6
			85/71	285.9	205.3	336.4	15.6	18.4
	60	5.5 (12.7)	75/63	258.3	193.9	304.2	14.4	18.0
			80/67	275.1	201.5	322.5	14.6	18.8
			85/71	292.8	207.9	341.7	14.9	19.7
80	30	1.5 (3.5)	75/63	236.5	184.3	288.9	17.0	13.9
			80/67	251.8	190.5	305.8	17.3	14.6
			85/71	266.8	198.1	322.4	17.6	15.2
	40	2.6 (5.9)	75/63	241.5	186.4	292.3	16.4	14.8
			80/67	257.5	192.9	309.8	16.6	15.5
			85/71	273.2	200.4	327.0	16.9	16.2
	60	5.3 (12.3)	75/63	246.7	188.5	296.0	15.7	15.7
			80/67	263.3	195.3	314.0	15.9	16.5
			85/71	279.9	202.8	331.9	16.2	17.3
85	30	1.5 (3.5)	75/63	230.5	182.5	284.7	17.7	13.0
			80/67	245.7	188.2	301.6	18.0	13.6
			85/71	260.4	195.5	317.9	18.3	14.2
	40	2.5 (5.8)	75/63	235.4	184.6	288.0	17.1	13.8
			80/67	250.8	191.5	304.9	17.3	14.5
			85/71	266.6	198.0	322.3	17.6	15.1
	60	5.2 (12.1)	75/63	240.4	186.9	291.4	16.4	14.6
			80/67	256.6	193.8	308.9	16.7	15.4
			85/71	273.6	199.2	327.5	16.9	16.2
90	30	1.5 (3.4)	75/63	224.9	179.2	281.4	18.5	12.1
			80/67	239.1	186.8	297.0	18.8	12.7
			85/71	254.5	194.1	314.1	19.1	13.3
	40	2.5 (5.7)	75/63	229.7	181.3	284.4	17.9	12.8
			80/67	244.6	188.8	300.7	18.1	13.5
			85/71	260.0	195.3	317.6	18.4	14.1
	60	5.2 (11.9)	75/63	234.6	183.4	287.6	17.2	13.6
			80/67	250.6	190.1	304.9	17.4	14.4
			85/71	266.2	198.0	322.0	17.7	15.1
100	30	1.4 (3.3)	75/63	212.3	176.0	273.4	20.3	10.5
			80/67	225.8	183.3	288.3	20.6	11.0
			85/71	240.1	190.5	304.2	20.9	11.5
	40	2.4 (5.6)	75/63	216.9	177.7	276.0	19.6	11.1
			80/67	232.4	184.1	293.1	19.9	11.7
			85/71	247.2	190.7	309.4	20.1	12.3
	60	5.0 (11.6)	75/63	221.8	178.9	279.2	18.9	11.7
			80/67	236.9	185.9	295.6	19.1	12.4
			85/71	253.0	193.5	313.1	19.3	13.1
110	30	1.4 (3.2)	75/63	200.4	170.9	267.0	22.3	9.0
			80/67	213.6	177.1	281.9	22.6	9.5
			85/71	226.8	184.0	296.6	22.9	9.9
	40	2.3 (5.4)	75/63	204.8	172.6	269.4	21.6	9.5
			80/67	219.0	178.0	285.0	21.8	10.0
			85/71	232.3	186.1	299.8	22.0	10.5
	60	4.9 (11.2)	75/63	209.6	173.1	272.4	20.9	10.0
			80/67	223.3	181.6	287.2	21.0	10.6
			85/71	237.5	189.5	302.6	21.2	11.2





CAPACITY DATA

EC242 8000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	30	1.7 (3.9)	75/63	262.0	195.2	305.2	13.2	19.9
			80/67	277.4	199.5	322.2	13.5	20.6
			85/71	296.0	207.6	342.5	13.9	21.4
	40	2.8 (6.5)	75/63	267.6	197.0	309.6	12.6	21.2
			80/67	283.5	201.8	326.9	12.9	22.0
			85/71	303.2	209.1	348.4	13.2	22.9
	60	5.9 (13.6)	75/63	273.3	199.3	313.9	12.0	22.7
			80/67	290.0	204.0	332.0	12.3	23.6
			85/71	309.8	212.8	353.4	12.6	24.6
60	30	1.6 (3.8)	75/63	251.6	190.6	297.4	14.3	17.6
			80/67	266.3	195.3	313.7	14.6	18.3
			85/71	284.4	203.4	333.5	15.0	19.0
	40	2.7 (6.3)	75/63	255.5	191.1	299.9	13.7	18.6
			80/67	273.7	199.5	319.7	14.0	19.5
			85/71	291.0	205.9	338.5	14.3	20.3
	60	5.7 (13.1)	75/63	261.0	193.3	304.1	13.1	19.9
			80/67	279.8	202.0	324.4	13.4	20.9
			85/71	298.0	208.3	344.0	13.7	21.8
70	30	1.6 (3.6)	75/63	239.7	183.6	288.5	15.5	15.4
			80/67	256.5	192.6	306.9	15.9	16.2
			85/71	272.4	198.8	324.4	16.2	16.8
	40	2.6 (6.1)	75/63	244.7	185.8	292.1	15.0	16.4
			80/67	262.2	194.9	311.0	15.2	17.2
			85/71	278.8	201.2	329.2	15.5	18.0
	60	5.5 (12.7)	75/63	250.1	187.9	296.0	14.4	17.4
			80/67	268.1	197.2	315.4	14.6	18.4
			85/71	286.0	202.6	334.9	14.9	19.2
80	30	1.5 (3.5)	75/63	229.7	181.1	282.0	16.9	13.6
			80/67	244.7	187.8	298.5	17.2	14.2
			85/71	259.3	195.8	314.6	17.5	14.8
	40	2.6 (5.9)	75/63	234.5	183.3	285.3	16.3	14.4
			80/67	250.2	190.0	302.4	16.6	15.1
			85/71	266.0	196.6	319.7	16.9	15.8
	60	5.3 (12.3)	75/63	239.5	185.4	288.7	15.7	15.2
			80/67	255.9	192.3	306.4	15.9	16.1
			85/71	272.6	198.7	324.6	16.2	16.9
85	30	1.5 (3.5)	75/63	224.0	178.7	278.2	17.7	12.7
			80/67	238.8	185.0	294.5	18.0	13.3
			85/71	253.7	191.4	311.1	18.3	13.9
	40	2.5 (5.8)	75/63	228.7	180.7	281.3	17.1	13.4
			80/67	244.0	187.5	298.1	17.3	14.1
			85/71	259.1	195.4	314.5	17.6	14.8
	60	5.2 (12.1)	75/63	233.6	182.8	284.6	16.4	14.2
			80/67	249.5	189.9	301.9	16.7	15.0
			85/71	265.9	196.3	319.7	16.9	15.8
90	30	1.5 (3.4)	75/63	218.2	176.1	274.5	18.5	11.8
			80/67	232.5	182.8	290.3	18.8	12.4
			85/71	247.1	189.1	306.6	19.1	13.0
	40	2.5 (5.7)	75/63	222.8	178.1	277.4	17.9	12.5
			80/67	237.8	184.7	293.9	18.1	13.1
			85/71	253.0	191.4	310.5	18.4	13.8
	60	5.2 (11.9)	75/63	227.6	180.2	280.6	17.2	13.2
			80/67	243.2	187.1	297.5	17.4	14.0
			85/71	259.1	193.7	314.8	17.6	14.7
100	30	1.4 (3.3)	75/63	206.7	171.2	267.8	20.3	10.2
			80/67	219.9	177.9	282.4	20.5	10.7
			85/71	239.7	171.9	304.3	20.9	11.5
	40	2.4 (5.6)	75/63	210.7	174.0	269.9	19.6	10.7
			80/67	224.9	179.8	285.5	19.8	11.4
			85/71	237.6	184.1	299.6	20.0	11.9
	60	5.0 (11.6)	75/63	214.9	176.7	272.2	18.9	11.4
			80/67	230.5	180.7	289.3	19.1	12.1
			85/71	245.7	187.3	305.8	19.3	12.7
110	30	1.4 (3.2)	75/63	194.0	165.8	260.7	22.3	8.7
			80/67	208.1	170.6	276.4	22.6	9.2
			85/71	219.0	181.6	288.4	22.8	9.6
	40	2.3 (5.4)	75/63	197.3	169.4	261.8	21.6	9.1
			80/67	211.4	176.0	277.3	21.8	9.7
			85/71	232.2	165.8	300.2	22.1	10.5
	60	4.9 (11.2)	75/63	202.1	171.1	264.7	20.9	9.7
			80/67	213.8	181.9	277.6	21.0	10.2
			85/71	227.0	191.4	292.0	21.2	10.7





CAPACITY DATA

EC300 10000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Cooling								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	37.6	2.5 (5.9)	75/63	323.5	238.4	385.2	18.7	17.3
			80/67	343.9	244.4	407.6	19.1	18.0
			85/71	363.9	252.1	429.6	19.5	18.6
	50	4.2 (9.8)	75/63	330.2	241.3	390.3	18.1	18.3
			80/67	351.3	247.8	413.3	18.4	19.1
			85/71	372.5	254.5	436.4	18.8	19.8
	75	8.8 (20.3)	75/63	337.2	244.1	395.8	17.4	19.4
			80/67	359.0	251.2	419.3	17.7	20.3
			85/71	381.7	259.7	443.8	18.1	21.1
60	37.6	2.5 (5.7)	75/63	310.8	232.7	375.8	20.0	15.5
			80/67	330.5	239.0	397.5	20.5	16.2
			85/71	350.5	245.6	419.5	20.9	16.8
	50	4.1 (9.5)	75/63	317.4	235.6	380.7	19.3	16.4
			80/67	337.6	242.8	402.7	19.7	17.1
			85/71	357.9	250.5	424.8	20.1	17.8
	75	8.5 (19.6)	75/63	324.2	238.6	385.8	18.6	17.4
			80/67	345.5	245.1	408.8	19.0	18.2
			85/71	366.5	253.3	431.5	19.3	19.0
70	37.6	2.4 (5.5)	75/63	299.3	227.5	368.5	21.6	13.8
			80/67	316.3	233.8	387.3	22.0	14.4
			85/71	336.7	243.6	409.8	22.4	15.0
	50	4.0 (9.1)	75/63	305.7	230.2	373.0	20.9	14.7
			80/67	323.6	236.3	392.6	21.2	15.3
			85/71	344.7	246.5	415.6	21.6	16.0
	75	8.2 (19.0)	75/63	310.7	232.1	375.9	20.1	15.5
			80/67	330.6	240.3	397.5	20.4	16.2
			85/71	353.1	249.6	421.7	20.7	17.0
80	37.6	2.3 (5.3)	75/63	285.5	221.3	359.5	23.4	12.2
			80/67	302.1	226.9	377.9	23.7	12.7
			85/71	321.4	237.9	399.3	24.2	13.3
	50	3.8 (8.9)	75/63	289.9	223.2	361.6	22.5	12.9
			80/67	308.4	231.1	381.9	22.9	13.5
			85/71	329.1	240.8	404.5	23.3	14.1
	75	8.0 (18.4)	75/63	296.6	225.5	366.1	21.7	13.6
			80/67	317.1	235.9	388.4	22.1	14.4
			85/71	337.2	243.8	410.2	22.4	15.1
85	37.6	2.3 (5.2)	75/63	277.8	219.7	354.3	24.3	11.4
			80/67	295.4	227.3	373.9	24.7	12.0
			85/71	313.5	235.0	394.0	25.2	12.5
	50	3.8 (8.7)	75/63	282.8	219.8	357.0	23.5	12.1
			80/67	302.3	230.1	378.3	23.8	12.7
			85/71	321.6	236.5	399.7	24.2	13.3
	75	7.8 (18.1)	75/63	289.3	222.0	361.3	22.7	12.8
			80/67	309.3	232.9	383.0	23.0	13.5
			85/71	329.0	240.8	404.4	23.3	14.1
90	37.6	2.2 (5.1)	75/63	269.7	213.7	349.0	25.3	10.6
			80/67	287.8	224.3	369.2	25.8	11.2
			85/71	305.4	232.2	388.8	26.2	11.7
	50	3.7 (8.6)	75/63	275.6	216.2	352.7	24.5	11.3
			80/67	294.5	227.0	373.3	24.8	11.9
			85/71	313.0	234.8	393.7	25.2	12.4
	75	7.7 (17.8)	75/63	281.4	219.5	356.1	23.6	11.9
			80/67	301.4	229.7	377.7	24.0	12.6
			85/71	320.6	237.7	398.7	24.3	13.2
100	37.6	2.2 (5.0)	75/63	254.5	207.7	340.3	27.6	9.2
			80/67	272.5	217.1	360.3	28.0	9.7
			85/71	289.5	224.3	379.4	28.5	10.2
	50	3.6 (8.3)	75/63	261.1	208.3	344.5	26.7	9.8
			80/67	278.5	220.5	363.6	27.1	10.3
			85/71	295.6	230.0	382.4	27.4	10.8
	75	7.5 (17.3)	75/63	267.1	215.1	348.0	25.9	10.3
			80/67	285.1	223.2	367.5	26.1	10.9
			85/71	303.5	231.2	387.7	26.4	11.5
110	37.6	2.1 (4.8)	75/63	239.8	203.1	333.1	30.2	7.9
			80/67	255.9	212.4	351.2	30.6	8.4
			85/71	271.4	218.1	368.8	31.0	8.8
	50	3.5 (8.1)	75/63	244.8	205.7	335.5	29.3	8.4
			80/67	260.8	214.1	353.3	29.6	8.8
			85/71	277.7	217.1	372.1	30.0	9.3
	75	7.3 (16.8)	75/63	250.6	207.8	338.6	28.4	8.8
			80/67	267.0	217.5	356.4	28.6	9.3
			85/71	282.7	229.7	373.8	28.9	9.8





CAPACITY DATA

EC360 12000 NOMINAL CFM (without Max Evap Option)

Horizontal & Vertical Configurations

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Cooling					EER
			Entering Air Temp (db/wb) °F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	
50	45	3.1 (7.1)	75/63	419.8	305.0	494.5	22.9	18.3
			80/67	446.2	313.2	523.6	23.4	19.1
			85/71	473.3	321.2	553.3	23.9	19.8
	60	5.1 (11.9)	75/63	428.5	308.8	501.6	22.1	19.4
			80/67	456.1	316.9	531.7	22.5	20.2
			85/71	484.3	324.8	562.5	23.0	21.1
	90	10.7 (24.7)	75/63	437.6	311.3	509.2	21.3	20.6
			80/67	466.0	320.7	540.0	21.7	21.5
			85/71	495.7	328.1	572.2	22.1	22.4
60	45	2.9 (6.8)	75/63	403.7	298.1	482.0	24.5	16.5
			80/67	429.3	306.1	510.3	25.0	17.2
			85/71	455.6	314.0	539.3	25.6	17.8
	60	5.0 (11.5)	75/63	412.4	300.4	488.8	23.7	17.4
			80/67	439.0	309.7	517.9	24.1	18.2
			85/71	466.4	317.7	547.9	24.6	19.0
	90	10.3 (23.8)	75/63	421.3	304.1	495.9	22.8	18.5
			80/67	449.0	313.4	526.0	23.2	19.4
			85/71	476.9	323.9	556.2	23.6	20.2
70	45	2.9 (6.6)	75/63	387.1	289.4	469.7	26.4	14.7
			80/67	411.8	298.4	497.0	26.9	15.3
			85/71	436.3	309.1	524.1	27.4	15.9
	60	4.8 (11.1)	75/63	395.4	293.0	475.9	25.5	15.5
			80/67	421.2	302.0	504.1	25.9	16.3
			85/71	446.7	313.0	532.1	26.3	17.0
	90	9.7 (23.1)	75/63	404.2	296.5	482.5	24.5	16.5
			80/67	430.9	305.7	511.6	24.9	17.3
			85/71	457.6	317.1	540.6	25.3	18.1
80	45	2.8 (6.4)	75/63	369.6	281.5	457.4	28.5	13.0
			80/67	392.9	292.3	483.2	29.0	13.6
			85/71	416.9	301.7	509.9	29.5	14.1
	60	4.7 (10.8)	75/63	377.7	284.9	463.0	27.5	13.7
			80/67	401.9	295.9	489.6	27.9	14.4
			85/71	427.7	303.6	518.0	28.4	15.1
	90	9.7 (22.3)	75/63	386.1	288.3	469.1	26.5	14.6
			80/67	411.3	299.7	496.5	26.9	15.3
			85/71	438.2	307.5	525.9	27.3	16.1
85	45	2.7 (6.3)	75/63	360.7	277.5	451.3	29.7	12.1
			80/67	383.3	288.9	476.4	30.2	12.7
			85/71	406.8	298.4	502.7	30.7	13.3
	60	4.6 (10.6)	75/63	368.6	280.9	456.7	28.7	12.9
			80/67	392.2	292.3	482.6	29.1	13.5
			85/71	416.9	301.8	509.8	29.5	14.1
	90	4.5 (22.0)	75/63	376.8	284.2	462.4	27.7	13.6
			80/67	401.4	296.0	489.2	28.0	14.3
			85/71	427.3	305.5	517.4	28.4	15.1
90	45	2.7 (6.2)	75/63	351.6	273.4	445.4	30.9	11.4
			80/67	374.2	283.4	470.6	31.4	11.9
			85/71	397.3	292.7	496.4	31.9	12.5
	60	4.5 (10.4)	75/63	359.3	276.7	450.4	29.9	12.0
			80/67	382.9	286.8	476.5	30.3	12.6
			85/71	407.0	296.4	503.1	30.7	13.3
	90	9.4 (21.6)	75/63	366.8	281.4	455.3	28.8	12.7
			80/67	391.9	290.4	482.7	29.2	13.4
			85/71	416.6	301.9	509.6	29.5	14.1
100	45	2.6 (6.0)	75/63	332.4	267.5	433.1	33.6	9.9
			80/67	353.8	277.6	457.1	34.1	10.4
			85/71	375.7	287.4	481.8	34.6	10.9
	60	4.4 (10.1)	75/63	339.7	270.0	437.6	32.6	10.4
			80/67	362.1	280.7	462.4	32.9	11.0
			85/71	385.8	288.6	488.7	33.4	11.6
	90	9.1 (21.0)	75/63	347.7	271.9	442.8	31.5	11.1
			80/67	370.7	283.9	468.0	31.8	11.7
			85/71	394.8	293.9	494.4	32.1	12.3
110	45	2.5 (5.9)	75/63	313.6	257.8	422.8	36.8	8.5
			80/67	334.0	268.3	445.8	37.2	9.0
			85/71	354.6	277.8	469.2	37.7	9.4
	60	4.3 (9.8)	75/63	320.5	260.9	426.5	35.6	9.0
			80/67	341.3	273.0	449.7	36.0	9.5
			85/71	362.9	283.0	473.8	36.4	10.0
	90	8.8 (20.4)	75/63	327.4	264.0	430.5	34.5	9.5
			80/67	349.8	274.1	455.0	34.8	10.1
			85/71	372.0	286.0	479.5	35.1	10.6



DXAIR EC072 AND EC096

ADDENDUM FOR EC SERIES



Figure 1 – DXair EC Series

GENERAL DESCRIPTION

The compressor on EC072 models will change from a reciprocating compressor to a scroll compressor. This change will take place on (208/230V 1Ph), (208/230V 3Ph), and (460V 3Ph) voltages and apply only to units under “B” revision.

The compressor on EC096 models will change from a reciprocating compressor to a scroll compressor. This change will take place on (208/230V 1Ph) and (208/230V 3Ph), (460V 3Ph) and (575V 3Ph) voltages and apply only to units under “B” revision.

This addendum provides updated production information for this EC072 and EC096 models.

- Pressure Temp Tables
- Electrical Data Tables

ABOUT THE ADDENDUM

This addendum’s intention is to provide information on compressor changes to the EC072 and EC096 models, highlighting only the difference from the current EC072 and EC096 models where applicable.



EC072 and EC096 are no longer available with Bristol Compressors.

ADDENDUM EC072–EC096 COMPRESSOR DATA

PRESSURE TEMP

OPERATING DATA						
Model	Enter Fluid Temp (°F)	Water flow (GPM/Ton)	Cooling			
			Suction Pressure (PSIG)	Discharge Pressure (PSIG)	Water Temp Rise (°F)	Air Temp Drop (°F)
072	30	10.0				
		16.0				
	40	10.0	121-148	184-225	17-21	18-22
		16.0	117-143	167-204	10-13	19-23
	50	10.0	123-151	222-271	17-20	17-21
		16.0	119-145	202-247	10-12	18-23
	60	10.0	125-153	260-318	16-19	17-21
		16.0	120-147	237-289	10-12	18-22
	70	10.0	127-155	298-365	15-19	17-20
		16.0	122-149	271-331	9-11	18-21
	80	10.0	129-158	336-411	14-18	16-20
		16.0	124-152	306-374	9-11	17-21
	90	10.0	131-160	374-458	14-17	16-19
		16.0	126-154	340-416	8-10	17-20
	100	10.0	133-162	413-504	13-16	15-19
		16.0	128-156	375-458	8-10	16-20

OPERATING DATA						
Model	Enter Fluid Temp (°F)	Water flow (GPM/Ton)	Cooling			
			Suction Pressure (PSIG)	Discharge Pressure (PSIG)	Water Temp Rise (°F)	Air Temp Drop (°F)
096	30	13.0				
		22.0				
	40	13.0	114-139	155-190	14-17	22-27
		22.0	108-132	147-180	10-12	23-28
	50	13.0	116-142	192-234	13-16	21-26
		22.0	111-135	182-222	9-12	22-27
	60	13.0	119-146	228-279	13-16	21-26
		22.0	113-138	217-265	9-11	22-27
	70	13.0	122-149	264-323	13-15	20-25
		22.0	116-142	251-307	9-11	21-26
	80	13.0	125-152	301-368	12-15	20-24
		22.0	118-145	286-349	9-11	21-26
	90	13.0	127-156	337-412	12-15	19-24
		22.0	121-148	320-392	9-10	20-25
	100	13.0	130-159	374-457	12-14	19-23
		22.0	124-151	355-434	8-10	20-24

ELECTRICAL DATA TABLES – EC072 AND EC096

Belt Drive Motor – No VFD												
Models	Voltage Code	Rated Voltage	Voltage Min/Max	Compressor			"Total Unit w/ Standard Duty Motor"					
				QTY	RLA (each)	LRA (each)	Motor Qty	Motor HP	FLA	Min Circuit Amps	MOP CALC	Max Fuse/HACR
072	1	208-230/1/60	197/253	2	16.7	79	1	1.0	7.0	44.6	61.3	60
	1	208-230/1/60	197/253	2	16.7	79	1	1.5	8.5	46.1	62.8	60
	1	208-230/1/60	197/253	2	16.7	79	1	2.0	9.8	47.4	64.1	60
	3	208-230/3/60	197/253	2	10.4	73	1	1.0	3.6	27.0	37.4	35
	3	208-230/3/60	197/253	2	10.4	73	1	1.5	4.8	28.2	38.6	35
	3	208-230/3/60	197/253	2	10.4	73	1	2.0	6.2	29.6	40.0	40
	3	208-230/3/60	197/253	2	10.4	73	1	3.0	8.0	31.4	41.8	40
	4	460/3/60	414/506	2	5.8	38	1	1.0	1.8	14.9	20.7	20
	4	460/3/60	414/506	2	5.8	38	1	1.5	2.4	15.5	21.3	20
	4	460/3/60	414/506	2	5.8	38	1	2.0	3.1	16.2	22.0	20
096	4	460/3/60	414/506	2	5.8	38	1	3.0	3.9	17.0	22.8	20
	1	208-230/1/60	197/253	2	19.6	130	1	1.5	8.5	52.6	72.2	70
	1	208-230/1/60	197/253	2	19.6	130	1	2.0	9.8	53.9	73.5	70
	3	208-230/3/60	197/253	2	13.7	83	1	1.5	4.8	35.6	49.3	45
	3	208-230/3/60	197/253	2	13.7	83	1	2.0	6.2	37.0	50.7	50
	3	208-230/3/60	197/253	2	13.7	83	1	3.0	8.0	38.8	52.5	50
	4	460/3/60	414/506	2	6.2	41	1	1.5	2.4	16.4	22.6	20
	4	460/3/60	414/506	2	6.2	41	1	2.0	3.1	17.1	23.3	20
	4	460/3/60	414/506	2	6.2	41	1	3.0	3.9	17.9	24.1	20
	5	575/3/60	518/632	2	4.8	33	1	1.5	2.0	12.8	17.6	15
	5	575/3/60	518/632	2	4.8	33	1	2.0	2.6	13.4	18.2	15
	5	575/3/60	518/632	2	4.8	33	1	3.0	3.7	14.5	19.3	15

Compressor Characteristics					
MODEL	Voltage Code	Cold Winding Resistance			Run Capacitor (µF/V)
		Single Phase R-C	Single Phase S-C	"Three Phase Line-Line"	
072	1	0.82	1.63	-	40/370
	3	-	-	1.15	-
	4	-	-	4.61	-
096	1	0.50	0.81	-	70/370
	3	-	-	1.13	-
	4	-	-	4.60	-
	5	-	-	6.32	-



ELECTRICAL DATA

Belt Drive Motor

NOTE: ADDENDUM TO EC072 AND EC096; SEE CHANGES IN COMPRESSORS ADDENDUM ON PAGE 30

Model	Voltage Code	Voltage/Ph/Hz	Voltage Min/Max	Compressor			Belt Drive Motor		Total Unit		Compressor Services			Run Capacitor (µF/V)
				Quantity	RLA	LRA	Motor Quantity	FLA	Min Circuit Amps	Max Fuse Amps	Cold Wind Resistance		Three Phase Line-Line	
											Single Phase R-C	Single Phase S-C		
EC072 See p.30														
EC096 See p.30														
EC120	1	208-230/1/60	197/253	2	26.3	134	1	9.8	69.0	90	0.45	0.79	-	80/370*
	3	208-230/3/60	197/253	2	15.6	110	1	6.2/9.2*	41.3/44.3*	50/50*	-	-	0.68	-
	4	460/3/60	414/506	2	7.8	52	1	3.1/4.3*	20.6/21.9*	25/25*	-	-	3.20	-
	5	575/3/60	518/632	2	5.8	39	1	2.6/3.7*	15.7/16.8*	20/20*	-	-	5.33	-
EC150	3	208-230/3/60	197/253	2	19.2	136	1	9.2	52.4	70	-	-	0.60	-
	4	460/3/60	414/506	2	8.7	66	1	4.3	23.9	30	-	-	2.52	-
	5	575/3/60	518/632	2	6.9	55	1	3.7	19.2	25	-	-	3.74	-
EC151	3	208-230/3/60	197/253	2	19.2	136	1	9.2	52.4	70	-	-	0.60	-
	4	460/3/60	414/506	2	8.7	66	1	4.3	23.9	30	-	-	2.52	-
	5	575/3/60	518/632	2	6.9	55	1	3.7	19.2	25	-	-	3.74	-
EC180	3	208-230/3/60	197/253	2	22.4	149	2	6.2	62.8	80	-	-	0.56	-
	4	460/3/60	414/506	2	10.6	75	2	3.2	30.1	40	-	-	2.27	-
	5	575/3/60	518/632	2	7.7	54	2	2.6	22.5	30	-	-	3.56	-
EC181	3	208-230/3/60	197/253	2	22.4	149	1	12.2	62.6	80	-	-	0.56	-
	4	460/3/60	414/506	2	10.6	75	1	6.1	30.0	40	-	-	2.27	-
	5	575/3/60	518/632	2	7.7	54	1	5.4	22.7	30	-	-	3.56	-
EC210	3	208-230/3/60	197/253	2	29.5	195	2	4.8	76.0	100	-	-	0.40	-
	4	460/3/60	414/506	2	14.7	95	2	2.4	37.9	50	-	-	1.59	-
	5	575/3/60	518/632	2	12.2	80	2	2	31.5	40	-	-	2.55	-
EC240	3	208-230/3/60	197/253	2	30.1	225	2	6.2	80.1	110	-	-	0.35	-
	4	460/3/60	414/506	2	16.7	114	2	3.1	43.8	60	-	-	1.36	-
	5	575/3/60	518/632	2	12.2	80	2	2.6	32.6	40	-	-	2.55	-
EC242	3	208-230/3/60	197/253	2	30.1	225	2	6.2	80.1	110	-	-	0.35	-
	4	460/3/60	414/506	2	16.7	114	2	3.1	43.8	60	-	-	1.36	-
	5	575/3/60	518/632	2	12.2	80	2	2.6	32.6	40	-	-	2.55	-
EC300	3	208-230/3/60	197/253	2	48.1	245	2	9.2	126.6	150	-	-	0.28	-
	4	460/3/60	414/506	2	18.6	125	2	4.3	50.5	60	-	-	1.24	-
	5	575/3/60	518/632	2	14.7	100	2	3.7	40.5	50	-	-	1.88	-
EC360	3	208-230/3/60	197/253	2	55.8	340	2	12.2	150.0	200	-	-	0.21	-
	4	460/3/60	414/506	2	26.9	173	2	6.1	72.7	90	-	-	0.83	-
	5	575/3/60	518/632	2	23.7	132	2	5.4	64.1	80	-	-	1.27	-

NOTES: *First value is for vertical configurations and second value is for horizontals. Resistance value tolerance +/- 7%. All resistance values must be measured with compressor at room temperature.



BLOWER MOTOR PERFORMANCE

Belt Drive Motor

Model	Motor Sheave	Rated Airflow	External Static Pressure (in wc Wet coil and filter included)											
			0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
EC072	Closed		–	–	–	–	–	–	–	–	2420	2160	1900	1700
	Half Open	2,300	–	–	2980	2800	2610	2400	2100	1800	–	–	–	–
	Open		2780	2590	2350	2050	1780	–	–	–	–	–	–	–
EC096	Closed		–	–	–	–	–	–	–	2800	2650	2450	2300	2200
	Half Open	2,800	–	–	3480	3340	3230	3075	2880	2690	2555	2355	–	–
	Open		3110	2965	2835	2615	2460	2275	–	–	–	–	–	–
EC120	Closed		–	–	–	–	–	–	–	–	4400	4150	3830	3600
	Half Open	4,000	–	–	–	4660	4490	4240	3959	4600	3000	–	–	–
	Open		4680	4490	4270	4000	3700	3370	–	–	–	–	–	–
EC150	Closed		–	–	–	–	–	–	7120	6920	6530	6080	5660	5120
	Half Open	5,000	–	–	–	6860	6530	6120	5780	5380	4880	4090	–	–
	Open		6770	6300	5880	5430	4970	4340	3750	–	–	–	–	–
EC151	Closed		–	–	–	–	–	–	7120	6920	6530	6080	5660	5120
	Half Open	5,000	–	–	–	6860	6530	6120	5780	5380	4880	4090	–	–
	Open		6770	6300	5880	5430	4970	4340	3750	–	–	–	–	–
EC180	Closed		–	–	–	–	–	–	7200	6940	6560	6150	5710	5140
	Half Open	6,000	–	–	7200	6930	6580	6200	5800	5450	4920	–	–	–
	Open		6780	6350	5970	5540	5050	4510	–	–	–	–	–	–
EC181	Closed		–	–	–	–	–	–	7200	6940	6560	6150	5710	5140
	Half Open	6,000	–	–	7200	6930	6580	6200	5800	5450	4920	–	–	–
	Open		6780	6350	5970	5540	5050	4510	–	–	–	–	–	–
EC210	Closed		–	–	–	–	–	–	–	–	–	–	7800	7500
	Half Open	7,000	–	–	–	–	–	8600	8200	7600	6900	5240	–	–
	Open		8840	8400	8000	7560	7000	6400	–	–	–	–	–	–
EC240	Closed		–	–	–	–	–	–	–	–	9000	8800	8330	7660
	Half Open	8,000	–	–	–	–	9320	8980	8480	7900	7200	6000	–	–
	Open		9360	8980	8540	8000	7400	6740	–	–	–	–	–	–
EC242	Closed		–	–	–	–	–	–	–	–	–	–	8120	7500
	Half Open	8,000	–	–	–	–	–	–	8280	7700	7000	5800	–	–
	Open		–	–	8340	7800	7200	6540	–	–	–	–	–	–
EC300	Closed		–	–	–	–	10000	9650	9300	8950	8600	8200	–	–
	Half Open	10,000	–	10500	10100	9700	8900	8500	8100	–	–	–	–	–
	Open		9900	9100	8700	8300	–	–	–	–	–	–	–	–
Model	Motor Sheave	Rated Airflow	External Static Pressure (in wc Wet coil and filter included)											
			0.2	0.3	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2
EC360	Closed		–	–	–	–	–	–	–	–	–	–	12900	10800
	Half Open	12,000	–	–	–	–	–	13050	11850	10350	7500	–	–	–
	Open		12200	11575	10950	9600	7800	–	–	–	–	–	–	–



PHYSICAL DATA

EC Model

NOTE: EC072 AND EC096 NOW UTILIZE SCROLL COMPRESSORS; PLEASE REFER TO ADDENDUM ON PAGE 30

EC Model	EC072	EC096	EC120	EC150	EC151	EC180
Compressor Type (Qty 2)	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge (oz)*	124	148	166	204	194	234
Max Water Working Pressure (PSIG/kPa)	450/3100	450/3100	450/3100	450/3100	450/3100	450/3100
Number of Refrigeration Circuits	2	2	2	2	2	2
Evaporator Coil						
Coil Type	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin
Air Coil Dimensions Vertical (H x L)	18 x 28 (2)	20 x 32.5 (2)	20 x 32.5 (2)	-	24 x 43 (2)	-
Air Coil Dimensions Horizontal (H x L)	18 x 28 (2)	20 x 32.5 (2)	20 x 32.5 (2)	24 x 65	-	24 x 65
Row(s)	3	3	3	3	3	3
Motor & Blower						
Fan Motor Type/Speeds	Belt Drive/1	Belt Drive/1	Belt Drive/1	Belt Drive/1	Belt Drive/1	Belt Drive/2
Fan Motor (HP x Qty)	1 x 1	1 1/2 x 1 (2 x 1 for HZ)	2 x 1 (3 x 1 for HZ)	3 x 1	3 x 1	2 x 2
Blower Wheel Size (Dia. x W x Qty)	12 x 12 x 1	12 x 12 x 1	12 x 9 x 2 for HZ 15 x 15 x 1 for VT	15 x 15 x 1	15 x 15 x 1	12 x 12 x 2
Water Coil						
Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Size	1"	1"	1 1/4"	1 1/2"	1 1/2"	1 1/2"
Water Coil Type	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Coil Volume (gal)	0.42	0.64	0.87	1.06	1.06	1.06
Vertical Cabinet						
Nominal size of Standard Filter - 1" (H x L)	20 x 34.5 (2)	20 x 34.5 (2)	20 x 34.5 (2)	-	24 x 24 (4)	-
Weight - Operating (lbs)	670	702	935	-	1050	-
Weight - Shipping (lbs)	715	752	980	-	1140	-
Horizontal Cabinet						
Nominal size of Standard Filter - 1" (H x L)	20 x 34.5 (2)	20 x 34.5 (2)	20 x 34.5 (2)	24 x 34 (2)	-	24 x 34 (2)
Weight - Operating (lbs)	670	702	935	1060	-	1530
Weight - Shipping (lbs)	715	752	980	1150	-	1620
EC Model	EC181	EC210	EC240	EC242	EC300	EC360
Compressor Type (Qty 2)	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge (oz)	224	260	290	290	290	576
Max Water Working Pressure (PSIG/kPa)	450/3100	450/3100	450/3100	450/3100	450/3100	450/3100
Number of Refrigeration Circuits	2	2	2	2	2	2
Evaporator Coil						
Coil Type	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin
Air Coil Dimensions Vertical (H x L)	24 x 43 (2)	20 x 32.5 (4)	20 x 32.5 (4)	-	20 x 32.5 (4)	30 x 32.5 (2)
Air Coil Dimensions Horizontal (H x L)	-	-	-	34 x 65	-	-
Row(s)	3	3	3	3	3	3
Motor & Blower						
Fan Motor Type/Speeds	Belt Drive/1	Belt Drive/2	Belt Drive/2	Belt Drive/2	Belt Drive/2	Belt Drive/2
Fan Motor (HP x Qty)	5 x 1	1 1/2 x 2	2 x 2	2 x 2	3 x 2	5 x 2
Blower Wheel Size (Dia. x W x Qty)	15 x 15 x 1	15 x 15 x 2	15 x 15 x 2	15 x 15 x 2	15 x 15 x 2	15 x 15 x 2
Water Coil						
Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Size	1 1/2"	2"	2"	2"	2"	2"
Water Coil Type	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Coil Volume (gal)	1.06	3.04	3.40	3.40	3.40	3.31
Vertical Cabinet						
Nominal size of Standard Filter - 1" (H x L)	24 x 24 (4)	20 x 34.5 (4)	20 x 34.5 (4)	-	20 x 34.5 (4)	30 x 34.5 (4)
Weight - Operating (lbs)	1090	1090	1310	-	1530	1650
Weight - Shipping (lbs)	1180	1180	1400	-	1630	1750
Horizontal Cabinet						
Nominal size of Standard Filter - 1" (H x L)	-	-	-	17.25 x 34.5 (4)	-	-
Weight - Operating (lbs)	-	-	-	1655	-	-
Weight - Shipping (lbs)	-	-	-	1755	-	-

*Refrigerant charge total

HORIZONTAL CABINET CORNER WEIGHTS

Configuration			Left Hand Evaporator			
Model		Total	Left Front*	Right Front*	Left Back	Right Back
EC072	Lbs	670	147	274	137	112
	kg	305	67	125	62	51
EC096	Lbs	702	155	287	143	117
	kg	319	70	130	65	53
EC120	Lbs	935	206	382	191	156
	kg	425	94	174	87	71
EC150	Lbs	1060	233	434	216	177
	kg	482	106	197	98	80
EC180	Lbs	1530	337	626	312	255
	kg	695	153	285	142	116
EC242	Lbs	1655	365	677	337	276
	kg	752	166	308	153	125

* Front is control box end.

VERTICAL UNIT DIMENSIONS

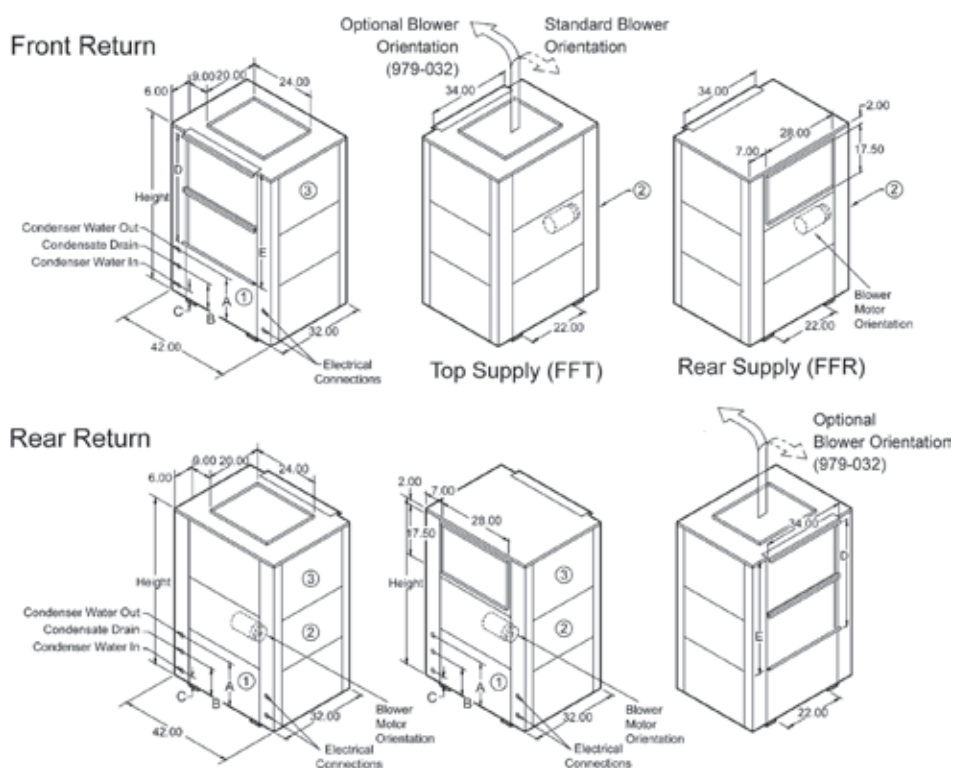
EC072-120 Single Blower Large Vertical

Model	Width	Depth	Height	Distance Between Base Rails	Top Supply: Supply Depth	Top Supply: Supply Width	Top Supply: Front to Supply	Top Supply: Left Side to Supply	Rear Supply: Supply Height	Rear Supply: Supply Width	Rear Supply: Top to Supply	Rear Supply: Right Side to Supply	A	B	C	R/A Duct Width	D	E	Condenser Water Connections	Condensate Drain Connection	Recommended Replacement Filter Size - 1" Thick
EC072	42.00	32.00	62.00	22.00	20.00	24.00	6.00	9.00	17.50	28.00	2.00	7.00	14.75	8.50	2.75	34.00	38.00	40.00	1" FPT	3/4" FPT	20 x 34.5 (2)
EC096	42.00	32.00	62.00	22.00	20.00	24.00	6.00	9.00	17.50	28.00	2.00	7.00	14.75	8.50	2.75	34.00	38.00	40.00	1" FPT	3/4" FPT	20 x 34.5 (2)
EC120	42.00	32.00	62.00	22.00	20.00	24.00	6.00	9.00	17.50	28.00	2.00	7.00	15.00	9.00	3.00	34.00	38.00	40.00	1 1/4" FPT	3/4" FPT	20 x 34.5 (2)

NOTE: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice.

Service Access Access to:		
1	2	3
Controls, Compressors, Refrigeration Components	Blower & Motor	Blower

Figure 11



VERTICAL UNIT DIMENSIONS

EC151-181 Single Blower Large Vertical

Model	Width	Depth	Height	Distance Between Base Rails	Top Supply: Supply Depth	Top Supply: Supply Width	Top Supply: Front to Supply	Top Supply: Left Side to Supply	Rear Supply: Supply Height	Rear Supply: Supply Width	Rear Supply: Top to Supply	Rear Supply: Right Side to Supply	A	B	C	R/A Duct Width	D	E	Condenser Water Connections	Condensate Drain Connection	Recommended Replacement Nominal Filter Size - 1" Thick
EC151	52.50	32.00	70.00	22.00	20.00	24.00	5.00	17.50	17.50	28.00	2.00	12.12	17.00	10.50	3.00	44.25	48.00	50.00	1 1/2" FPT	3/4" FPT	24 x 24 (4)
EC181	52.50	32.00	70.00	22.00	20.00	24.00	5.00	17.50	17.50	28.00	2.00	12.12	17.00	10.50	3.00	44.25	48.00	50.00	1 1/2" FPT	3/4" FPT	24 x 24 (4)

NOTE: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice.

Service Access Access to:		
1	2	3
Controls, Compressors, Refrigeration Components	Blower & Motor	Blower

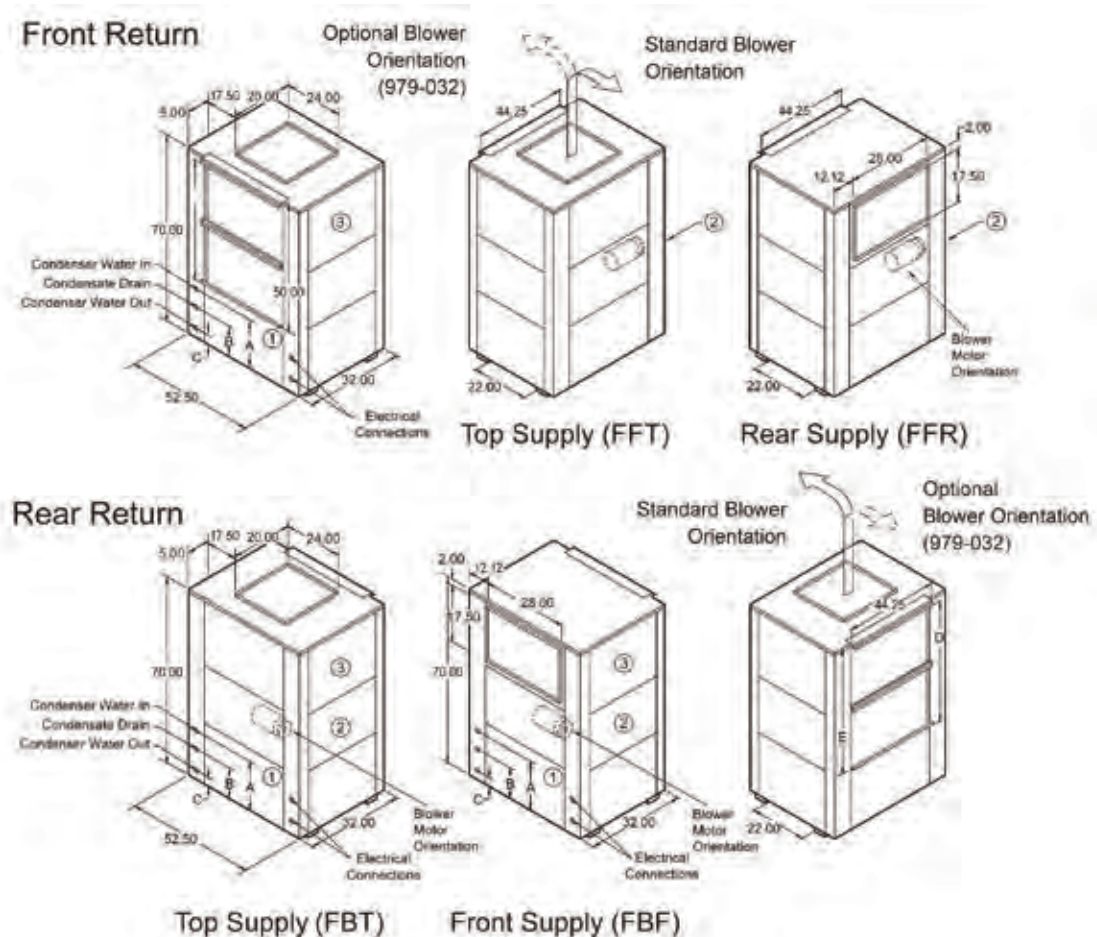


Figure 12

VERTICAL UNIT DIMENSIONS

EC210-360 Dual Blower Large Vertical

Model	Width	Depth	Height	Distance Between Base Rails	Top Supply: Supply Depth	Top Supply: Supply Width	Top Supply: Front to Supply	Top Supply: Left Side to Supply	Top Supply: Distance b/t Supply Ducts	Rear Supply: Supply Height	Rear Supply: Supply Width	Rear Supply: Top to Supply	Rear Supply: Right Side to Supply	Rear Supply: Distance b/t Supply Ducts	A	B	C	R/A Duct Width	Distance Between R/A Ducts	D	E	Condenser Water Connections	Condensate Drain Connection	Recommended Replacement Nominal Filter Size - 1" Thick
EC210	80.00	32.00	62.00	22.00	20.00	24.00	6.00	9.00	14.00	17.50	28.00	2.00	7.00	10.00	18.00	8.75	2.75	34.00	4.50	40.00	38.00	2" FPT	1 1/4" FPT	20 x 34.5 (4)
EC240	80.00	32.00	66.50	22.00	20.00	24.00	6.00	9.00	14.00	17.50	28.00	2.00	7.00	10.00	18.00	8.75	2.75	34.00	4.50	40.00	38.00	2" FPT	1 1/4" FPT	20 x 34.5 (4)
EC300	80.00	32.00	66.50	22.00	20.00	24.00	6.00	9.00	14.00	17.50	28.00	2.00	7.00	10.00	18.00	8.75	2.75	34.00	4.50	40.00	38.00	2" FPT	1 1/4" FPT	20 x 34.5 (4)
EC360	80.00	32.00	86.50	22.00	20.00	24.00	6.00	9.00	14.00	17.50	28.00	2.00	7.00	10.00	17.00	9.00	3.50	34.00	4.50	60.00	58.00	2" FPT	1 1/4" FPT	30 x 34.5 (4)

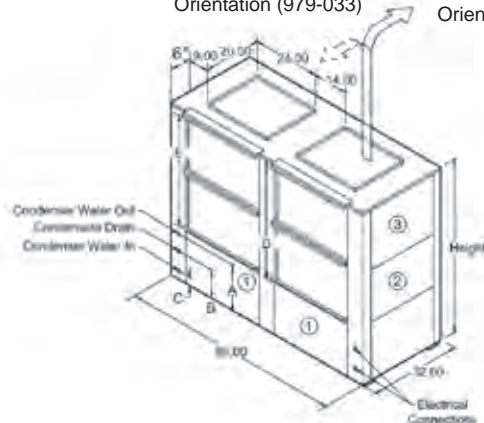
NOTE: All dimensions in inches unless otherwise noted. All dimensions within $\pm 0.125"$. Specifications subject to change without notice.

Service Access		
Access to:		
1	2	3
Controls, Compressors, Refrigeration Components	Blower & Motor	Blower

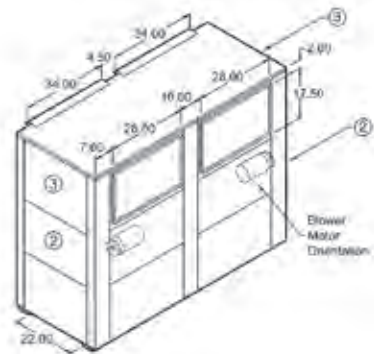
Front Return

Optional Blower Orientation (979-033)

Standard Blower Orientation

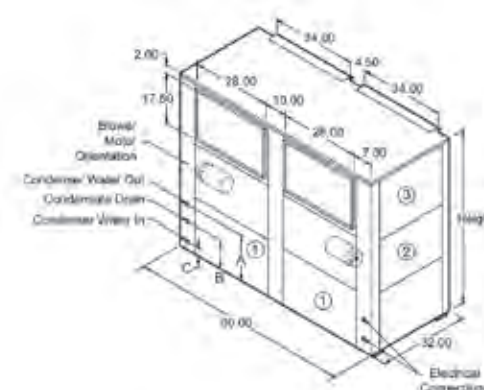


Top Supply (FFT)



Rear Supply (FFR)

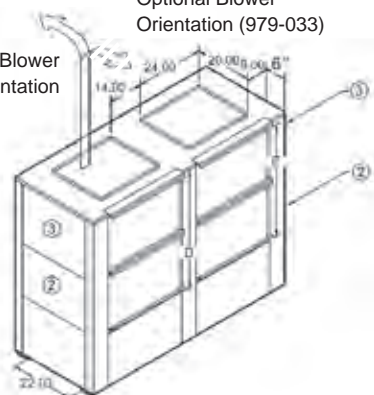
Rear Return



Front Supply (FBF)

Optional Blower Orientation (979-033)

Standard Blower Orientation



Top Supply (FBT)

Figure 13

HORIZONTAL UNIT DIMENSIONS

EC072-150 Large Horizontal

Model	Width	Depth	Height	A	B	C	R/A Duct Width	E	F	G	H	J	K	L	M	Condenser Water Connections	Condensate Drain Connection	Recommended Replacement Nominal Filter Size - 1" Thick
				Cal End to Filter Rack	Filter Rack Height	R/A Duct Flange Height		Front to Water In	Water In Height	Front to Water Out	Water Out Height	Supply Width	Supply Height	Rear to Supply	Distance b/t Supply Ducts			
EC072	38.00	78.00	21.50	2.00	20.50	18.50	66.00	28.00	2.75	28.00	14.50	15.50	13.50	10.50	5.50	1" FPT	3/4" FPT	20 x 34.5 (2)
EC096	38.00	78.00	21.50	2.00	20.50	18.50	66.00	26.25	3.50	28.00	19.25	15.50	13.50	10.50	5.50	1" FPT	3/4" FPT	20 x 34.5 (2)
EC120	38.00	78.00	21.50	2.00	20.50	18.50	66.00	27.50	3.38	28.00	16.75	12.50	13.50	5.25	5.50	1 1/4" FPT	3/4" FPT	20 x 34.5 (2)
EC150	42.00	82.00	26.75	2.00	20.50	18.50	66.00	24.00	2.75	24.00	17.75	18.50	16.00	14.00	5.50	1 1/2" FPT	3/4" FPT	24 x 34 (2)

NOTE: All dimensions in inches unless otherwise noted. All dimensions within $\pm 0.125"$. Specifications subject to change without notice.

Service Access Access to:		
1	2	3
Controls, Compressors, Refrigeration Components	Blower & Motor	Blower

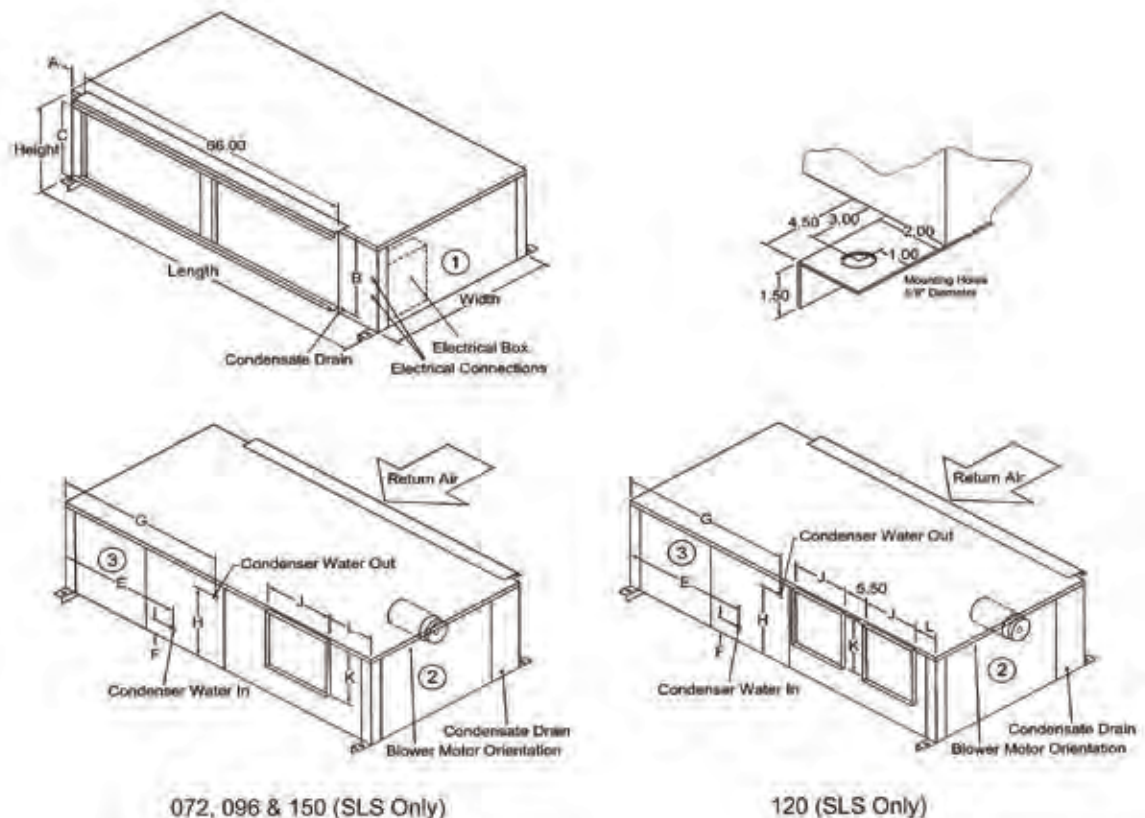


Figure 14

HORIZONTAL UNIT DIMENSIONS

EC180-242 Large Horizontal

Model	Width	Depth	Height	A Cab End to Filter Rack	B Filter Rack Height	C R/A Duct Flange Height	R/A Duct Width	E Front to Water In	F Water In Height	G Front to Water Out	H Water Out Height	J Supply Width	K Supply Height	L Rear to Supply	M Distance b/t Supply Ducts	Condenser Water Connections	Condensate Drain Connection	Recommended Replacement Nominal Filter Size - 1" Thick
EC180	60.25	106.50	25.25	2.00	24.00	22.00	67.00	22.00	6.25	22.00	16.00	27.75	17.25	5.00	4.00	1 1/2" FPT	1 1/4" FPT	24 x 34 (2)
EC242	60.25	106.50	36.00	2.00	34.75	32.75	67.00	24.50	7.25	24.50	19.62	23.75	19.75	7.75	9.75	2" FPT	1 1/4" FPT	17.25 x 34.5 (4)

NOTE: All dimensions in inches unless otherwise noted. All dimensions within $\pm 0.125"$. Specifications subject to change without notice.

Service Access		
Access to:		
1	2	3
Controls, Compressors, Refrigeration Components	Blower & Motor	Blower

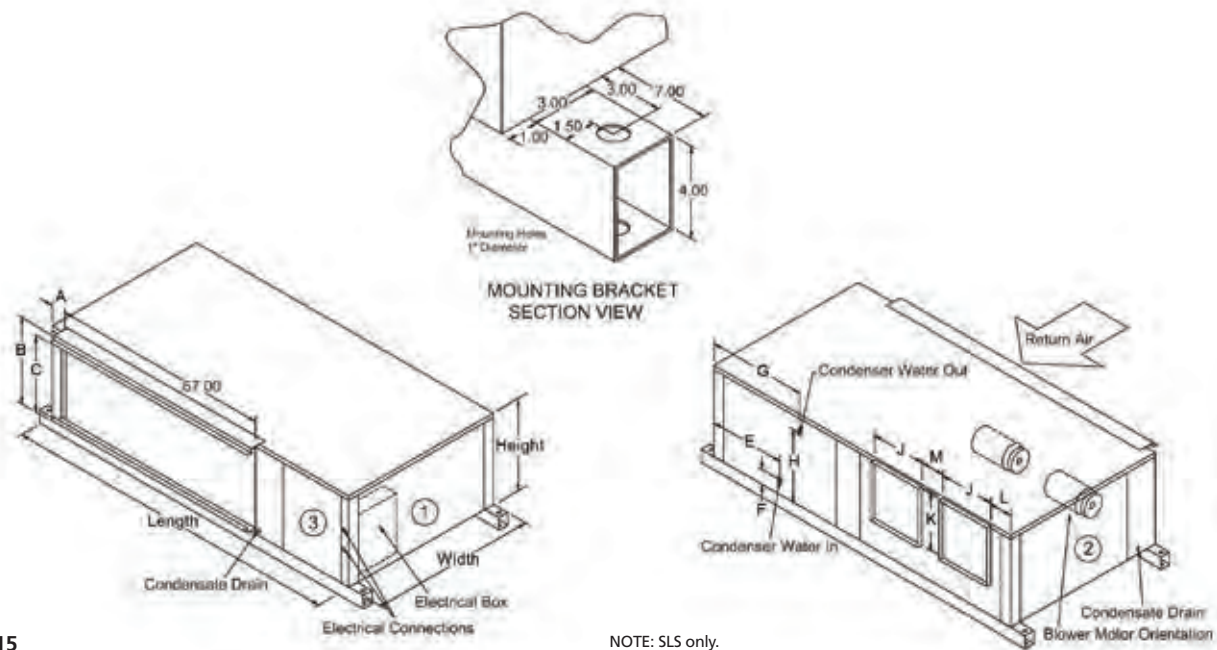


Figure 15

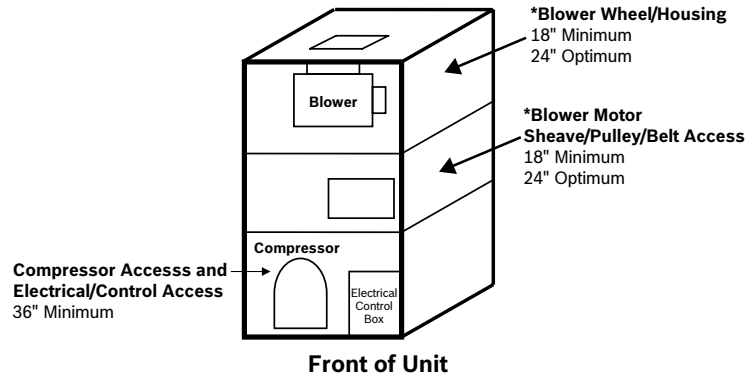
NOTE: SLS only.

SERVICE CLEARANCES

EC072 thru 181 Large Vertical

NOTE: * Blower motor and Blower housing access is required on BOTH SIDES of the unit

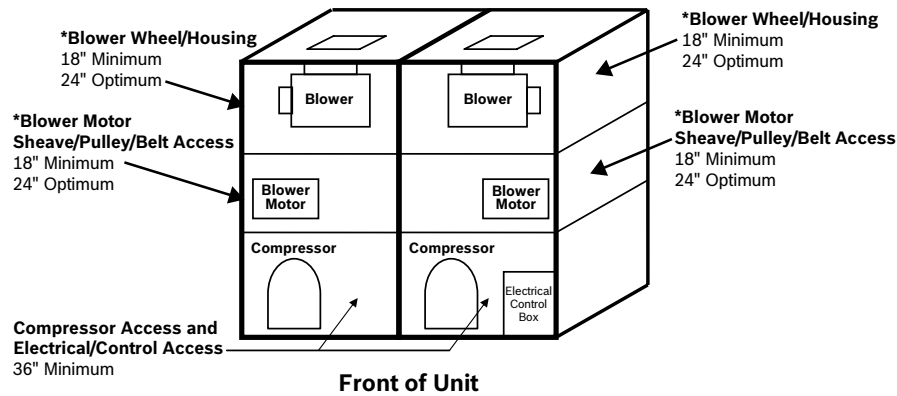
Figure 16



EC210 thru 360 Large Vertical

NOTE: * Blower motor and Blower housing access is required on BOTH SIDES of the unit

Figure 17



EC072 thru 150 Large Horizontal

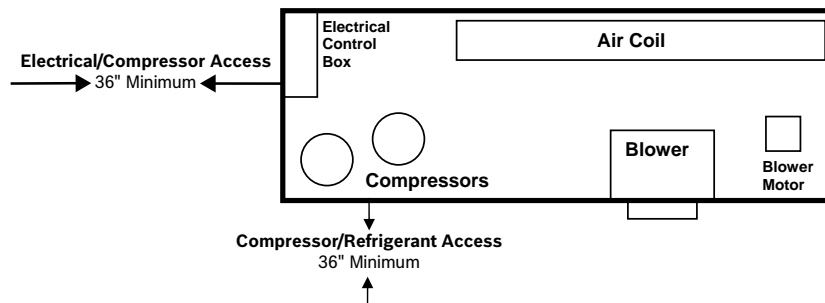


Figure 18

EC180 thru 242 Large Horizontal

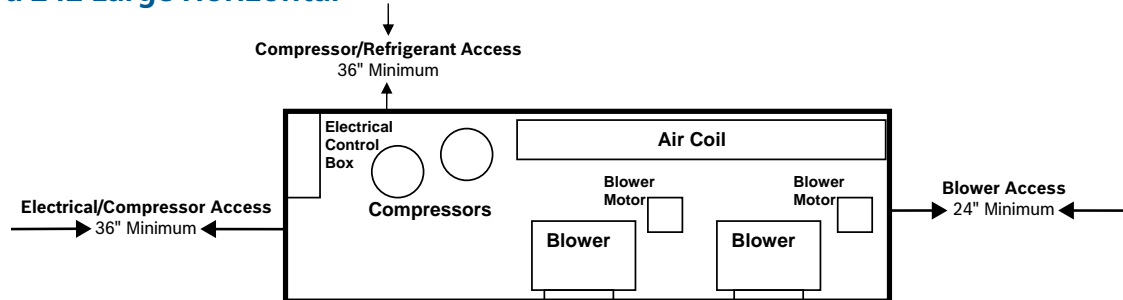


Figure 19

NOTE: The local electric codes may require 36\" or more clearance at all electrical control boxes.

GUIDE SPECIFICATIONS

All units conform to UL1995 Standard and are Certified to CAN/CAS C22.2 No 236 by Intertek-ETL.

General

Furnish and install DXair dehumidifier as indicated on the plans with capacities and characteristics as listed in the schedule and the specifications that follow. The units shall be manufactured in an ISO 9001 certified facility.

Horizontal/Vertical Dehumidifiers

DXair dehumidifiers shall be designed to operate throughout the range of entering fluid temperature of 50°F to 110°F in the cooling mode.

All equipment in this section must meet or exceed the DOE mandated minimum EERs as listed in ASHRAE 90.1.

Basic Construction

Units shall have the air flow arrangement as shown on the plans. If units with these arrangements are not used, the contractor supplying the DXair dehumidifier is responsible for any extra costs incurred by other trades and must submit detailed mechanical drawings showing ductwork requirements and changes or relocation of any other mechanical or electrical system. If other arrangements make servicing difficult the contractor must provide access panels and clear routes to ease service. The architect must approve all changes 10 days prior to bid.

All DXair dehumidifiers shall have stainless steel drain pans to comply with this project's IAQ requirements. Painted/coated steel or plastic material shall not be permitted.

All DXair dehumidifiers shall be fabricated from heavy-gauge sheet metal steel. All interior surfaces shall be lined with ½" thick, multi density acoustic insulation. Insulation within the air handling section shall not have any exposed edges. All insulation must meet NFPA 90A, UL 181 and be certified to meet the GreenGuard™ Indoor Air Quality Standard for Low Emitting Products. One blower access panel and two compressor compartment access panels shall be removable with supply and return air ductwork in place.

Unit compressors shall have rubber isolators to the prevent transmission of vibration to the structure.

All units shall have a factory installed two sided filter rack capable of accepting one inch filters. Units shall have a 1" thick throwaway type glass fiber filter as standard. The filter rack shall incorporate a 1" duct flange. The contractor shall purchase one spare set of filters and replace factory-shipped filters upon completion of start-up.

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. Supply and return liquid connections shall be copper FPT fittings and shall be securely mounted flush to the cabinet allowing for connection to a flexible hose without the use of a back-up wrench. Liquid connections which protrude through the cabinet shall not be allowed.

Condensate overflow protection shall be provided as standard for horizontal and vertical package units.

Fan and Motor Assembly

The fan(s) shall be belt driven DWDI forward curved type with dynamically balanced wheel(s). The fan motor(s) shall be 1725 or 3450 RPM 56 frame sealed ball bearing type.

The motor(s) shall be permanently lubricated and have thermal overload protection.

The fan and motor assembly must be capable of overcoming the external static pressures as shown on the schedule. External static pressure rating of the unit shall be based on a wet coil. Ratings based on a dry coil shall NOT be acceptable.

Refrigerant Circuit

Units shall use R-410A refrigerant. Units that use R-22 refrigerant shall not be allowed.

All units shall have a factory sealed and fully charged refrigerant circuit with the following components:

- A. Hermetic compressor: Hermetic scroll compressors shall be specifically designed for R-410A refrigerant, externally isolated and with thermal overload protection.



GUIDE SPECIFICATIONS

All units conform to UL1995 Standard and are Certified to CAN/CAS C22.2 No 236 by Intertek-ETL.

- B. Refrigerant metering thermal expansion valves.
- C. Finned tube refrigerant to air heat exchanger. Refrigerant to air heat exchangers shall utilize enhanced aluminum fins and rifled copper tube construction rated to withstand 600 PSIG refrigerant working pressure. All air coils shall have non-ferrous aluminum end plates.
- D. DuoGuard™ Coil Protection System – A corrosion protection option for refrigerant to air heat exchangers that features tin plating of the copper tubing and coating of the aluminum fins with a protective film. The tin plating shall provide best in class protection of the copper tubing from formicary corrosion while the fin coating provides protection against salt spray and other corrosive elements. DuoGuard™ protected coils will exceed 1000 hours salt spray per ASTM standard B-117.
- E. Coaxial (tube in tube) refrigerant to liquid heat exchanger. Refrigerant to liquid heat exchangers shall be of copper inner water tube and steel outer refrigerant tube design rated to withstand 600 PSIG working refrigerant pressure and 400 PSIG working liquid pressure.
- F. Cupro-nickel water coil (option) – The refrigerant to liquid heat exchanger shall be of cupro-nickel inner liquid tube construction.
- G. Safety controls including both a high pressure and low pressure switch shall be provided on both circuits. Temperature sensors shall not replace these safety switches. See the controls section of this specification for additional information.
- H. Access fittings shall be factory installed on high and low pressure refrigerant lines to facilitate field service.
- I. Activation of any safety device shall prevent compressor operation via a lockout circuit, in the affected circuit. The lockout circuit shall be reset at the thermostat or at the contractor supplied disconnect switch. Units which may be reset at the disconnect switch only shall not be acceptable. A condensate alarm on package units shall prevent both compressors from operating.
- J. Service valves on split system condensing sections must incorporate a Schrader service port to facilitate field service.

Electrical

A control box shall be located within the unit and shall contain a transformer, controls for the compressor, reversing valve and fan motor operation and shall have a terminal block for low voltage field wiring connections. The transformer shall be rated for a minimum 100VA. All units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 volts.

Solid-State Safety Circuit

All DXair dehumidifiers shall have a solid-state UPM safety control circuit with the following features:

1. Freeze Protection: the optional freeze protection sensor shall be mounted close to the water coil to monitor refrigerant temperature between water coil and the thermal expansion valve for all horizontal and vertical package units.
2. The refrigerant to air coil shall have a sensor mounted after the expansion valve to monitor refrigeration and temperature. Should the temperature drop below the set point, the compressor shall be disabled.
3. Condensate overflow protection: A condensate sensor shall activate the lockout circuit upon sensing a high level of condensate in the drain pan and immediately put the unit into a hard lockout.
4. Anti-short cycle time delay on compressor operation.
5. Random start on power up mode.
6. Brown out/Surge/Power Interruption protection.
7. Low Pressure Switch 120 second bypass timer.
8. Shutdown on high or low refrigerant pressure safety switch inputs, and shutdown for the optional freezestat or high level condensate sensor.
9. Alarm output which closes for selectable dry contact closure or 24 VAC remote fault indication.
10. Alarm output selectable for constant output for general alarm notification, or pulse output for annunciation of the specific fault alarm.
11. Reset unit at thermostat or disconnect.



GUIDE SPECIFICATIONS

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12. Automatic intelligent reset. Unit shall automatically reset after a safety shut down and restart the unit after the anti-short cycle timer and random start timer expire. Should a fault re-occur within 60 minutes after reset, then a permanent lockout will occur. Reset attempts shall be selectable for either 2 or 4 tries. Condensate overflow shall put the unit into a hard lockout on the first fault.
13. Ability to defeat time delays for servicing.
14. A light emitting diode (LED) to indicate safety alarms shall be provided for each circuit. The LED shall annunciate the following alarms: high refrigerant pressure, low refrigerant pressure, low liquid temperature, a high level of condensate in the drain pan, or brown out/surge/ power interruption. The LED will display each fault condition as soon as the fault occurs. If a permanent lockout occurs, then the fault LED will display the type of fault until the unit is reset.
15. 1. ETL listed, and RFI, ESD, and transient protected.

Options

- A. Extra quiet construction: Optional compressor blankets shall be provided on units, for additional sound attenuation.
- B. Hot Gas Reheat: Vertical or horizontal package units as noted on the schedule shall be equipped with optional Hot Gas Reheat (HGRH). HGRH shall be either on/off control as noted in the specifications.

On/Off HGRH shall be controlled by a humidistat connected to the unit H terminal and shall start the unit in the reheat mode should the humidity be above setpoint once the thermostat control is satisfied.

Other Factory Installed Options:

- Relays
- Phase protection monitor
- Phase monitor
- Fire alarm/dual power
- Boilerless control



UNIT LOCATION

DO NOT STORE pool equipment and/or pool chemicals in the mechanical space designed for the DXair Dehumidification System. Failure to follow these instructions may void your warranty as chemicals are highly corrosive and destructive to any HVAC system.

Any mechanical device will, at some point in time, require servicing and repair. With this in mind, sufficient mechanical space must be designed and sufficient clearances around each horizontal and vertical unit must be provided. 30-36" clearance is required around the unit and access panels. This equipment is not recommended to be located or installed in the pool room above an open pool, closets, crawl spaces without the proper access, "trap" door type accessible spaces. The proper space must be allocated to install the system, clearances required, peripheral installation, ductwork and bypass installation. Failure to provide the appropriate space may void your warranty.

Proper clearances for installation of peripherals and space must be allowed for the proper duct work installation. Choking down ductwork in this mechanical space will have negative air flow effects for your pool room. Sufficient space must be provided for filter replacement and access to the compressors. Units should be set on a piece of rubber, neoprene or other vibration absorbing material at least 1/3-1/2" thick. The pad should extend 3/4" over the entire base of the unit. Avoid direct line of sight to the unit. Install a sound baffle over any door that has a return air grille.

Horizontal units are typically suspended above the ceiling by four (field supplied) 3/8" threaded rods fastened to the unit by factory supplier hanger bracket kits. This kit includes rubber isolators to help prevent transmission of vibration and noise to the building structure. Units should be located directly below a structural member, so that it is securely anchored. A horizontal unit always requires the proper clearances (18" clearance on either side of the unit for service and 36" in the front of the unit for maintenance access). The filter needs to be slid out and sufficient space must be provided to allow this.

Do not install any unit above any piping or electrical raceways. This unit must be able to be removed at any time without major re-arrangement of other mechanical or ceiling components.

SOUND

Sound is becoming an increasingly important factor in all HVAC Installations. Most of the problems associated with HVAC generated noise can be avoided by paying close attention to the equipment placement in properly designed mechanical space and the duct work/air delivery system.

NEGATIVE PRESSURE

A negative pressure fan must be installed in the pool room to prevent moisture migration. This is mandatory for all indoor pool room environments.

DUCT AIR DELIVERY SYSTEM

DXair requires a very high standard of duct systems for our equipment. All specifications for the air delivery system must be met and all ASHRAE and ACCA Manuals pertaining to properly sized duct work must be followed. Air delivery is critical to these structures. A continuous loop of duct is recommended at a .20 static on supply and a .07 on one high return air. All diffusers should be double deflection and moving air 6-12" from all glass or surfaces that are prone to condensation. Diffusers are not designed "blowing down", "blowing over" a pool area, they must be deflected at surfaces that can reach Dew Point Temperature. Diffusers are not built into the walls between windows blowing across an open pool.

We do not recommend blowing air across an open pool ; this serves to increase the evaporation of pool water and create a chill effect on the patrons. Blowing air across an open pool does not resolve chloramine issues; this is a water quality issue that must be addressed by those proper balancing of pool water at all times; it is not a HVAC issue.

Square throats and restrictions in the air delivery system must be minimized. If square throats are used, the proper elbows/radius and turning vanes are required. The more restrictive air flow in a duct system, the less likely this system will control the environment properly and may place additional stress due to lack of air flow on the system itself.

No fiberboard duct or flex duct should be used in these systems unless approved in writing by DXair Engineering. All skylights must be addressed with air flow. If ducting cannot reach these areas, ceiling fans blowing up must be installed between the skylights to move air into them and prevent condensation.



NOTES



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DXair is not a licensed architectural firm, not a licensed mechanical engineering firm or installation contractor. We do not provide building loads (Sensible/Latent) for any natatorium. This information must be provided by customer for proper sizing of the system to your design requirements. Our 'engineering' consists of calculations based on pool room data for evaporation rate at design temperatures and RH, supply air/return air cfm, outside air requirements, and negative pressure for the space. Please provide mechanical schedules for all projects (new or retrofits) when requesting a quote for new construction or quotes for retrofitting an existing natatorium. If only competitor specs are provided and no building loads are obtained, DXAir will not be liable or responsible for any undersizing or oversizing, or lack of performance due to lack of information.

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