



BAC

Vertex™ Evaporative Condenser

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Introducing the Vertex™ Evaporative Condenser, where peak reliability meets easy maintenance. This new benchmark combines what you like most about legacy BAC evaporative condensers with new innovations for the future.



BAC's Vertex™ Evaporative Condenser: Where Peak Reliability Meets Easy Maintenance

750kW to 5,040kW in a Single Unit

Maximum
Uptime
and Reliability

Easy and Safe
Accessibility

Lowest
Installation
Costs

Lowest
Maintenance
Costs

Superior
Efficiency



Vertex™ Evaporative Condenser Benefits

The Vertex Condenser offers maximum uptime and offers the easiest and safest accessibility. It also has the lowest total cost of ownership with the lowest installation, maintenance, and operating costs. And of course, the Vertex Condenser uses evaporative cooling, so it's an inherently sustainable solution for your industrial refrigeration and other industrial process applications.

> Maximum Uptime & Reliability Year-Round Operation

- ▶ Maximize reliability and minimize unplanned downtime with the EC Fan System (direct-drive fan system with EC motors and axial fans)
- ▶ Enjoy peace of mind and uninterrupted operation with multiple fans, motors, and optional redundant pumps
- ▶ Perform through the harshest conditions with a durable and robust industrial design
- ▶ Increase reliability, corrosion resistance, and longevity with superior material options that save you time and money



Industrial Design for Harshest Conditions

> Easy & Safe Accessibility Alleviate Confined Space Limitations^[1]

- ▶ The largest access door easily accommodates a 1.95m tall person; a sturdy step and safety handle provides safe entry and exit
- ▶ Ground level access to the drive system, pump(s), and terminal box eliminates the need for platforms or ladders to access them
- ▶ Stay dry while safely inspecting the basin with an internal walkway
- ▶ Reduce maintenance labor costs by 50% and address confined space hazards with a walkable, spacious interior and easy entry and exit^[1]
- ▶ Industry-leading, most configurable AS1657 compliant modular platforms to meet your specific site requirements



Alleviate Confined Space Limitations; Easily Accommodates a 1.95m Tall Person

> Lowest Installation Costs 30% Reduction in Installation Costs^[2]

- ▶ Reduce on-site labor requirements and ensure on-time commissioning with pre-assembled platform options
- ▶ Align the upper section to the lower section in less than 15 minutes per cell, due to the industrial-grade rigidity of the unit
- ▶ Simplify field installation and save time with single-point wiring
- ▶ Save time and money; no VFD or vibration switch is required^[3]



Simplify Field Installation with Single Point Wiring



> Lowest Maintenance Costs

50% Reduction in Maintenance Costs^[2]

- ▶ No regular maintenance required for the direct-drive EC Fan System
- ▶ Easy inspection of the basin, strainer, and drive components with a sturdy internal walkway
- ▶ Easy cleaning and improved hygiene with a compact, sloped water basin
- ▶ Save on chemical and water costs with up to 30% lower water volume^[2]
- ▶ Fast and easy inspection of all nozzles with optional pre-assembled platforms at an ergonomic working height

> Superior Efficiency

10% Lower Energy Usage^[2]

- ▶ Reduce operating costs with the highly-efficient, direct-drive, variable-speed EC Fan System
- ▶ For many replacement jobs, the innovative design can provide a higher capacity or reduced energy usage at the same weight
- ▶ Save energy with improved head pressure control in winter months due to the EC Fan System's lower minimum speeds



Stay Dry While Safely Inspecting the Basin with the Internal Walkway



Superior Efficiency with the EC Fan System

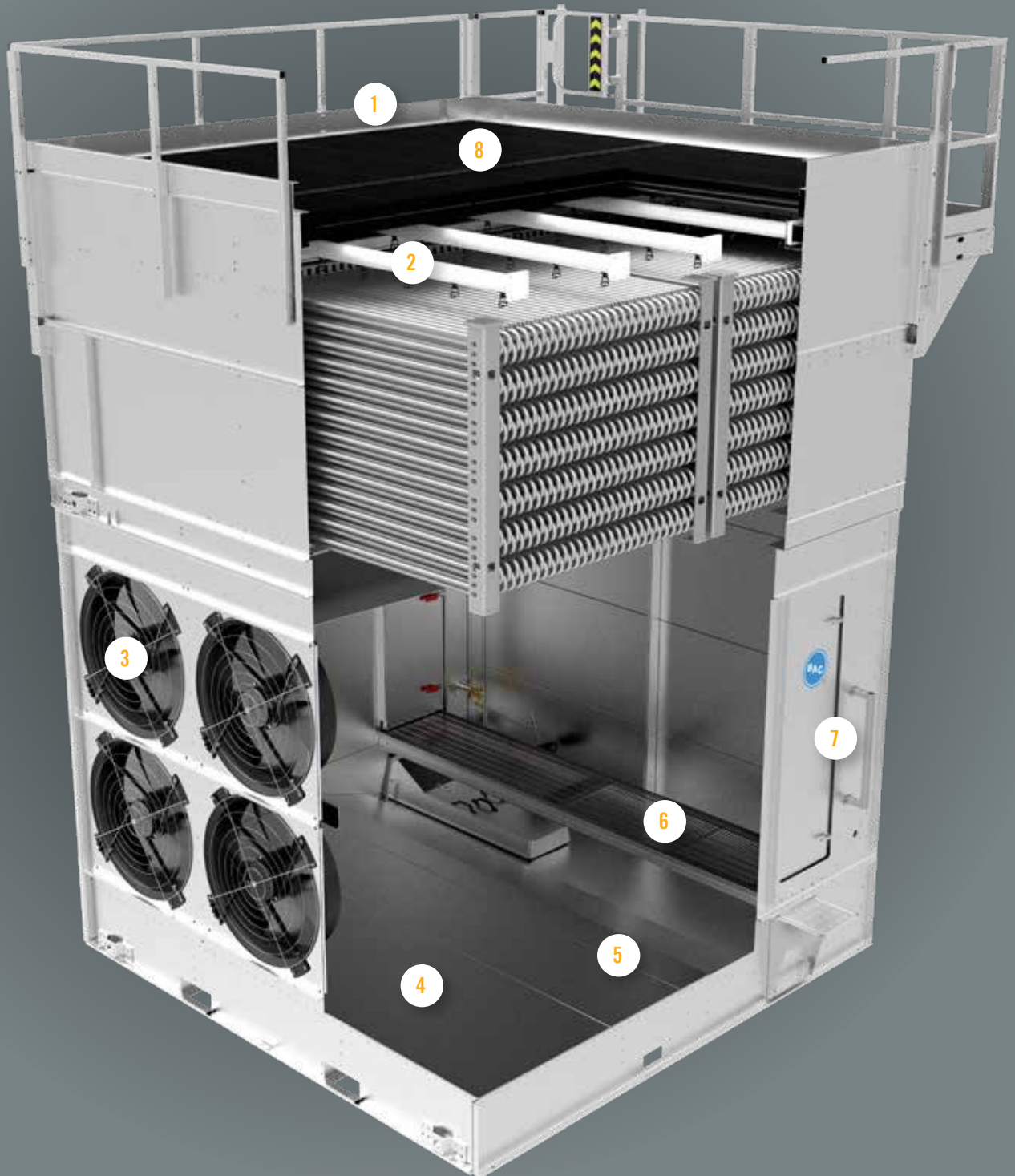


NOTES:

1. Check local codes to verify confined space requirements.
2. Comparisons are based on the Vertex Condenser vs. traditional forced draft axial fan evaporative condensers.
3. For EC Fan System models only.

Vertex™ Evaporative Condenser

Innovative Design Features



1 Factory Pre-Assembled Platforms with Perimeter Handrails (OPTIONAL)

Easy-to-install design for contractors and owners looking to reduce the cost of installation and ensure on-time commissioning. Safely inspect the nozzles across the entire unit with platforms at an ergonomic height.

2 BranchLok™ Removal System

No tools required to remove or inspect spray branches and nozzles, reducing maintenance costs. Faster cleaning makes peak energy efficiency easier to sustain.

3 EC Fan System

Simple design for lowest maintenance, easiest access and maximum efficiency, this system includes single-stage axial fans and variable-speed EC motors. There is no transmission to maintain!

4 TriArmor® Corrosion Protection System & EVERTOUGH™ Construction (NOT AVAILABLE IN AUSTRALIA)

Superior material options increase reliability, corrosion resistance, and longevity; 5-year leak-free warranty and seamless basins allow for higher cycles of concentration, save water and reduce chemical usage.

5 Basin

The falling water on the high step of the basin causes turbulence and reduces cleaning requirements. The lower water volume reduces chemical and water volume by up to 30%.

6 Internal Walkway

Stay dry while safely inspecting the basin with a sturdy internal walkway.

7 Largest Access Door(s)

The largest access door (1.7 H x 0.5 W) is also safe with a sturdy step and safety handle. It's easy for a 1.95m tall person to enter and exit for service. (2nd door optional)

Vertex™ Evaporative Condenser Custom Features & Options

> Materials of Construction

Determining the appropriate material of construction for a project depends on several factors, including water quality, climate and environmental conditions, availability of time and manpower for maintenance, unit lifetime requirements, and budget. BAC provides the widest variety of material of construction options in the industry and has the ability to provide a solution to meet all conditions and budgets.

▶ STANDARD CONSTRUCTION

G-235 mill galvanized steel is the heaviest commercially available galvanized steel, universally recognized for its strength and corrosion resistance. To assure long life, a G-235 mill galvanized steel frame with fiberglass reinforced polyester (FRP) casing panels and louvers is used as the standard material of construction. The structural integrity of the unit is provided by its strong steel frame. With proper maintenance and water treatment, G-235 galvanized steel and FRP will provide an excellent service life under the operating conditions normally encountered in most applications.

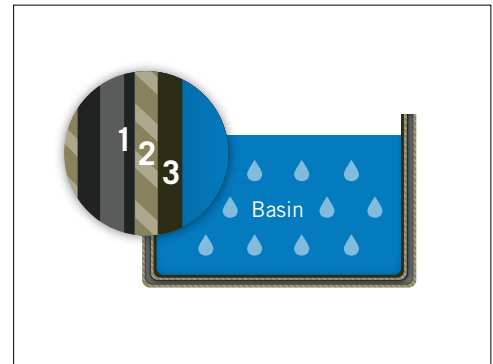


Standard Construction



TRIARMOR® CORROSION PROTECTION SYSTEM (NOT AVAILABLE IN AUSTRALIA)

The TriArmor® Corrosion Protection System consists of heavy gauge G-235 mill galvanized steel panels fully encapsulated by a thermosetting hybrid polymer and further protected by a polyurethane barrier applied to all submerged surfaces of the cold water basin. The triple layers of protection form a completely seamless cold water basin for the most leak resistant and durable basin in the industry. Other components within the basin, such as the strainer and submerged structural supports, will be constructed of stainless steel. The TriArmor® Corrosion Protection System was specifically designed for evaporative cooling applications and released in 2006 after a decade of extensive R&D and field testing. To date, there are thousands of successful installations in North America. Every basin is leak tested at the factory and warranted against leaks and corrosion for 5 years.



TriArmor® Corrosion Protection System Triple Layer Protection of the Basin



Factory Application of TriArmor® Corrosion Protection System



EVERTOUGH™ CONSTRUCTION (NOT AVAILABLE IN AUSTRALIA)

EVERTOUGH™ Construction combines the most corrosion-resistant materials to provide the best value in corrosion protection for most water chemistries. EVERTOUGH™ Construction is backed by a comprehensive 5-year warranty which covers ALL components from the fan to the cold water basin, from louver to louver, including the motor (excluding the coil).

Specifically, the following materials are used in EVERTOUGH™ Construction:

- The basin is constructed with the TriArmor® Corrosion Protection System. The basin is leak tested at the factory and warranted against leaks and corrosion for 5 years.
- Designated steel components above the basin are constructed of heavy-gauge G-235 mill galvanized steel and further protected with a thermosetting hybrid polymer.
- The distribution system is non-corrosive Schedule 40 PVC.
- Other components within the basin, such as the strainer and submerged structural supports, will be constructed of stainless steel.



EVERTOUGH™ Construction

▶ **THERMOSETTING HYBRID POLYMER (NOT AVAILABLE IN AUSTRALIA)**

A thermosetting hybrid polymer, used to extend equipment life, is applied to select G-235 mill galvanized steel components of the unit. The polymerized coating is baked onto the G-235 mill galvanized steel and creates a barrier to the already corrosion resistant galvanized steel. The thermosetting hybrid polymer has been tested to withstand 6,000 hours in a 5% salt spray without blistering, chipping, or losing adhesion.

▶ **STAINLESS STEEL (OPTION)**

Several stainless steel material of construction options are available

• **WELDED STAINLESS STEEL BASIN**

All steel panels and structural members of the basin are constructed from stainless steel. Seams between panels inside the basin are welded, providing an advantage over bolted stainless steel basins for minimizing susceptibility to leaks at basin seams. The basin is leak tested at the factory and welded seams are provided with a 5-year, leak-proof warranty.

• **ALL STAINLESS STEEL CONSTRUCTION (OPTION)**

Steel panels and structural elements are constructed of stainless steel. Seams between panels inside the basin are welded. The basin is leak tested at the factory and welded seams are provided with a 5-year leak-proof warranty.



Welded Stainless Steel Basin

Vertex™ Evaporative Condenser Custom Features & Options

> Coil Configurations

BAC offers a large selection of coil configuration options to fulfill any thermal and pressure drop requirements.

▶ **STANDARD SERPENTINE COIL**

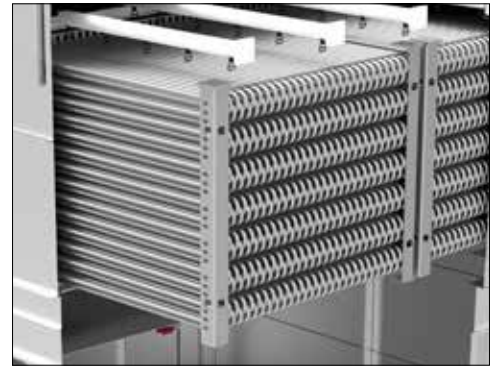
The standard cooling coil is constructed of continuous lengths of all prime surface steel. The coil is hot-dip galvanized after fabrication (HDGAF) to apply a thick, zinc corrosion barrier over the entire exterior surface of the coil. The coil is designed for low pressure drop with sloping tubes for free drainage of fluid. Each coil has a maximum allowable working pressure of 2750 kPa and is fabricated as per AS/NZ Design Registration standards to ensure the highest quality and integrity.

▶ **STAINLESS STEEL COIL (OPTION)**

Coils are available in stainless steel for specialized applications. The coil is designed for low pressure drop with sloping tubes for free drainage of fluid. Each coil has a maximum allowable working pressure of 2750 kPa and is fabricated as per AS/NZ Design Registration standards to ensure the highest quality and integrity.

▶ **EXTENDED SURFACE COIL (NOT AVAILABLE IN AUSTRALIA)**

Coils are available with up to all rows finned at 5 fins per inch for seasonal wet/dry operation. The fins increase the surface area of the coil, therefore increasing the condensing capability. The coil is hot-dip galvanized after fabrication (HDGAF) to apply a thick, zinc corrosion barrier over the entire exterior surface of the coil and fins. BAC coils are designed for low pressure drops and to be completely drainable with sloping tubes for free drainage of fluid. Each coil has a maximum allowable working pressure of 300 psig (2,068 kPa) and is fabricated per ASME B31.5 standards to ensure the highest quality and integrity.



Standard Serpentine Coil



Extended Surface Coil

▶ **MULTIPLE CIRCUIT COILS/AUXILIARY COOLING CIRCUIT (OPTION)**

Split coil configurations are available to allow separate process fluid or refrigerant loops through the same unit. Separate loops may be needed for multiple applications requiring different temperature processes or multiple types of process fluids or refrigerants. Multiple refrigerant circuit coils are generally required on halocarbon refrigerant systems, where it is common practice to maintain individual compressor systems. The quantity of circuits, capacity per circuit, and desired connection size and type should be specified when requesting this option.

▶ **SUBCOOLING COILS (OPTION)**

Subcooling coils are available for those halocarbon refrigerant installations where subcooled refrigerant is specified, or where the pressure drop or a vertical rise in the liquid line is great enough to cause excessive flashing. Standard subcooling coil sections provide approximately 5.6°C of subcooling at standard conditions. Subcooling sections are approximately 7" high and are mounted between the coil and basin sections. Coils are hot-dip galvanized after fabrication and have a maximum allowable working pressure of 2750 kPa.

▶ **COPPER SWEAT FITTINGS (OPTION)**

Factory installed copper sweat fittings are available to simplify field piping.



Multiple Circuit Coil



Copper Sweat Fitting

Vertex™ Evaporative Condenser Custom Features & Options

> Drive System Options

The fan drive system provides the cooling air necessary to reject unwanted heat from the system to the atmosphere. The Vertex™ Evaporative Condenser is available with the EC Fan System.



EC Fan System



EC FAN SYSTEM (STANDARD ON VRC-X-X-XB MODELS)

The EC Fan System is a direct-drive system with single-stage electronically commutated (EC) motors and axial fans. It's simple design for lowest maintenance, allows for easiest access, maximum efficiency, and offers the highest reliability. Here, there is no transmission to maintain!



VIBRATION CUTOFF SWITCH (OPTION)

A factory mounted vibration cutoff switch is available to effectively protect against rotating equipment failure. BAC can provide either a mechanical or solid-state electronic vibration cutoff switch in a NEMA 4 enclosure to ensure reliable protection. Additional contacts can be provided on either switch type to activate an alarm. Remote reset capability is also available on either switch type.



Vibration Cutoff Switch



> Basin

The spray water collects in the basin which is pumped back over the condensing coil. The hygienic basin is sloped toward the pump suction. During operation, this design eliminates any stagnant water zones, which are susceptible to biological growth. Save on chemical and water costs with up to 30% lower water volume.

▶ STANDARD MECHANICAL WATER LEVEL CONTROL

Mechanical make-up valves must operate continuously in the moist and turbulent environment existing within evaporative cooling equipment. Due to this environment, the operation of the valve must be simple, and the valve must be durable. BAC's high quality mechanical water level control assembly is standard with all units, and has been specially designed to provide the most reliable operation while being easy to maintain. This accessory is omitted for remote sump applications.

▶ ELECTRIC WATER LEVEL CONTROL (OPTION)

BAC's Electric Water Level Control (EWLC) is a state-of-the-art, conductivity actuated, probe type liquid level control. The hermetically sealed EWLC is engineered and manufactured specifically for use in evaporative cooling systems and is equipped with an error code LED to indicate status, including when the water and/or probes are dirty. The EWLC option replaces the standard mechanical make-up valve, and includes a slow closing, solenoid activated valve in the make-up water line to minimize water hammer. EWLC is recommended when more precise water level control is required and in areas that experience sub-freezing conditions.

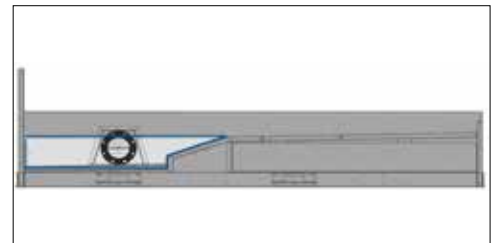


BASIN SWEEPER PIPING (OPTION)

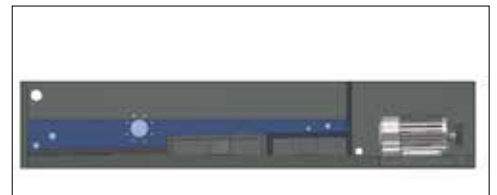
Basin sweeper piping is an effective method of reducing sediment that may collect in the basin of the unit. A complete piping system, including nozzles, is provided in the basin to connect to side stream filtration equipment (provided by others). For more information on filtration systems, consult "Filtration Guide" available on www.baltimoreaircoil.com.



Vibration Cutout Switch



Traditional Forced Draft Evaporative Condenser Basin



Vertex Evaporative Condenser Basin
30% Lower Water Volume

Vertex™ Evaporative Condenser Custom Features & Options



BASIN HEATERS (OPTION)

Evaporative cooling equipment exposed to below freezing ambient temperatures require protection to prevent freezing of the water in the basin when the unit is idle. Factory-installed electric immersion heaters, which maintain 4.4°C water temperature, are a simple and inexpensive way of providing such protection.

HEATER KW DATA

Model Number	-17.8°C Ambient Heaters				-28.9°C Ambient Heaters			
	Baltidrive Models		EC Direct Drive Models		Baltidrive Models		EC Direct Drive Models	
	Number of Heaters	kW per Heater	Number of Heaters	kW per Heater	Number of Heaters	kW per Heater	Number of Heaters	kW per Heater
VRC-x-1012-x	1	7	1	10	1	9	1	14
VRC-x-1018-x	1	10	2	7	1	14	2	10
VRC-x-1212-x	1	8	1	12	1	12	1	15
VRC-x-1218-x	1	12	2	9	1	18	2	12
VRC-x-1024-x	2	7	2	10	2	9	2	14
VRC-x-1036-x	2	10	4	7	2	14	4	10
VRC-x-1224-x	2	8	2	12	2	12	2	15
VRC-x-1236-x	2	12	4	9	2	18	4	12

▶ LOW AND HIGH LEVEL ALARMS (OPTION)

Low and high level alarm float switches are available to provide added control to your equipment operation. Level alarms can alert operators to an abnormal operating condition to ensure the highest system efficiency with minimal water usage.

> Water Distribution System



BRANCHLOCK REMOVAL SYSTEM

The BranchLok™ Removal System is a water distribution branch removal system that requires no tools, allowing for easy inspection and maintenance of the water distribution. Maintainability ensures continued even flow over the heat transfer surface for maximum capacity.

▶ STANDARD SPRAY WATER PUMP

The Vertex Condenser water distribution system comes standard with an integral spray water pump sized to distribute the recirculating water over the coil, maximizing capacity. The patented BAC 360 Spray Nozzles are non-clog, ensure even flow over the coil area, and are simple to remove for maintenance.



BranchLok™ Removal System

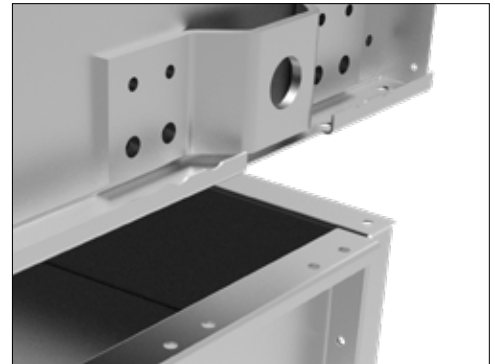


▶ **REDUNDANT PUMPS (OPTION)**

An optional secondary spray pump is available. This pump can be switched easily and maintained while the unit remains in operation.

> **Shipping and Rigging**

BAC units are factory-assembled to ensure uniform quality with minimum field assembly. Each unit has been designed with rigging and assembly in mind and includes features to minimize the number of tools required and installation time. Align the upper section to the lower section in less than 15 minutes per cell. You can also simplify field installation with single-point wiring standard on the EC Fan System.



Single Point Wiring

Vertex™ Evaporative Condenser

Custom Features & Options

> Access Options

BAC's evaporative equipment is designed to be easily maintained for sustaining capacity over a longer life. All access options meet AS1657 requirements to ensure personnel safety and code compliance.



STANDARD INTERNAL WALKWAY

All Vertex Condensers are supplied with a sturdy internal walkway above the water line. The walkway provides outstanding access to inspect the cold water basin, drive components, and the underside of the condensing coil, all while keeping your feet dry.

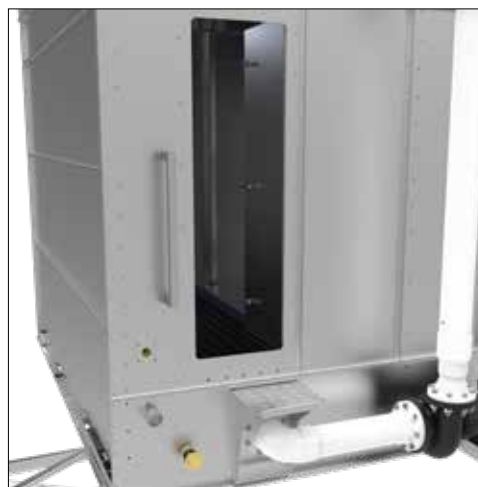


LARGEST ACCESS DOOR (2ND DOOR AVAILABLE AS AN OPTION)

The largest access door (1.5 H x .5m W) is also safe with a sturdy step and safety handle. It's easy for a 1.95m tall person to enter and exit for service.

▶ FACTORY PRE-ASSEMBLED PLATFORMS WITH PERIMETER HANDRAILS – INDUSTRY LEADING FLEXIBILITY (OPTION)

Easy-to-install design for contractors and owners looking to reduce the cost of installation and ensure on-time commissioning. Safely inspect the nozzles across the entire unit with platforms at an ergonomic height. Every external platform module is pre-assembled at the factory to ensure that every component will fit and function exactly as described. The platform will attach quickly in the field with minimal fasteners. Platforms, ladders, and safety cages can be added at the time of order or as an aftermarket item. All components are designed to meet AS1657 requirements.



Alleviate Confined Space Constraints; Oversized Access Door

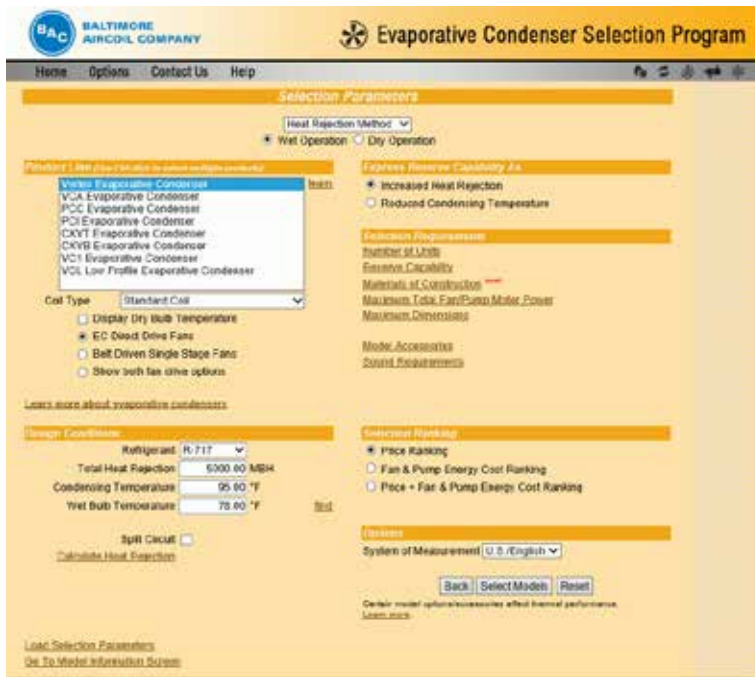


Pre-Assembled External Platform



Selection Software

BAC's Vertex Evaporative Condenser has the best selection software in the industry.



SELECTION

Making selections for your specific application is easier than ever with BAC's selection software. You can compare various condensers to see which one is the perfect fit.

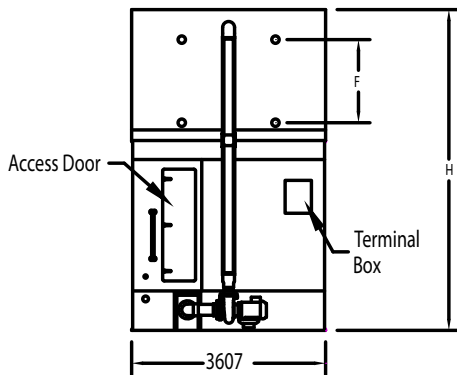


INFORMATION PACKET

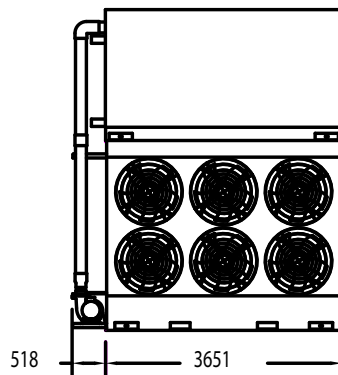
Since the Vertex Evaporative Condenser has premium features, BAC can provide a customized report for your specific project to show the value of the Vertex versus other evaporative condensers.

The selection output will include technical details, explanations of features, a value table, and more.

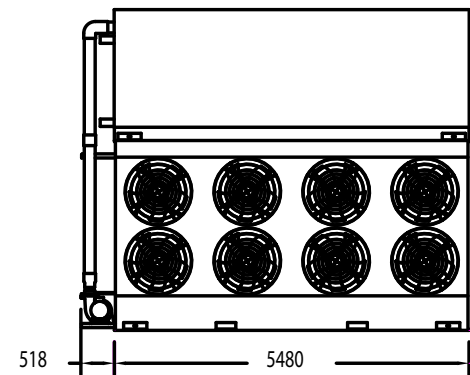
Vertex™ Evaporative Condenser Engineering Data



Face A: Vertex 1012 and 1018
EC Fan System Units



Face D: Vertex 1012
EC Fan System Units



Face D: Vertex 1018
EC Fan System Units

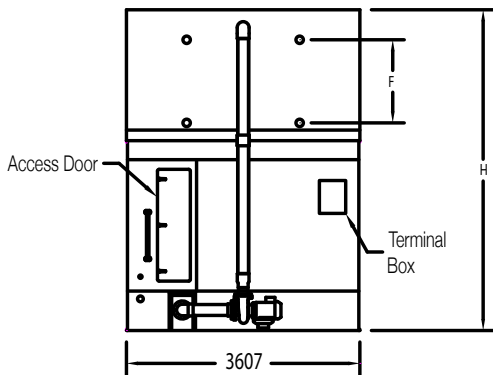
Nom. Box Size	Model Number ⁽¹⁾	Base Heat	R-22 Tons ⁽²⁾	Fan Motor (kW)	Airflow Rate (m3/s)	Pump Motor (kW)	Spray Flow Rate (l/s)	Approximate Weight (kg)			R-717	Remote Sump					
								Ship Weight	Heaviest Section ⁽³⁾	Oper. Weight ⁽⁴⁾		Drain Size ⁽⁶⁾ (mm)	Volume Req. (l)	F (mm)	H (mm)		
1012 EC	VRC-0241A-1012N-GB	1,461	339	(6) 1.9	33.2	4.0	31.5	5,439	3,334	7,407	156	1189	200	1185	6,591	718	4394
	VRC-0269A-1012N-HB	1,632	379	(6) 3.2	39.2			5,466	3,334	7,435	156	1189			6,623	718	4394
	VRC-0297A-1012N-JB	1,804	419	(6) 5.0	45.5			5,511	3,334	7,480	156	1189			6,668	718	4394
	VRC-0270A-1012N-GB	1,633	379	(6) 1.9	30.1			6,051	3,946	8,056	194	1472			7,239	908	4572
	VRC-0301A-1012N-HB	1,824	423	(6) 3.2	35.5			6,078	3,946	8,083	194	1472			7,271	908	4572
	VRC-0332A-1012N-JB	2,016	468	(6) 5.0	41.2			6,124	3,946	8,129	194	1472			7,317	908	4572
	VRC-0289A-1012N-GB	1,751	406	(6) 1.9	25.0			7,081	4,976	9,149	257	1954			8,328	1092	4775
	VRC-0323A-1012N-HB	1,955	454	(6) 3.2	29.4			7,108	4,976	9,176	257	1954			8,360	1092	4775
	VRC-0356A-1012N-JB	2,161	502	(6) 5.0	34.1			7,153	4,976	9,222	257	1954			8,405	1092	4775
	VRC-0310A-1012N-GB	1,881	437	(6) 1.9	25.8			7,761	5,656	9,870	298	2265			9,054	1283	4953
	VRC-0346A-1012N-HB	2,101	488	(6) 3.2	30.4			7,788	5,656	9,898	298	2265			9,086	1283	4953
	VRC-0383A-1012N-JB	2,323	539	(6) 5.0	35.2			7,834	5,656	9,943	298	2265			9,131	1283	4953
1018 EC	VRC-0357A-1018N-GB	2,164	502	(8) 1.9	45.7	5.5	47.9	7,453	4,736	10,338	233	1784	250	1726	9,194	718	4394
	VRC-0399A-1018N-HB	2,419	562	(8) 3.2	53.9			7,493	4,736	10,378	233	1784			9,235	718	4394
	VRC-0441A-1018N-JB	2,675	621	(8) 5.0	62.5			7,552	4,736	10,437	233	1784			9,294	718	4394
	VRC-0389A-1018N-GB	2,362	548	(8) 1.9	42.4			8,351	5,634	11,290	289	2209			10,147	908	4572
	VRC-0435A-1018N-HB	2,641	613	(8) 3.2	50.1			8,392	5,634	11,331	289	2209			10,188	908	4572
	VRC-0481A-1018N-JB	2,920	678	(8) 5.0	58.1			8,451	5,634	11,390	289	2209			10,247	908	4572
	VRC-0426A-1018N-GB	2,583	599	(8) 1.9	34.9			9,852	7,135	12,887	385	2945			11,744	1092	4775
	VRC-0476A-1018N-HB	2,887	670	(8) 3.2	41.1			9,893	7,135	12,928	385	2945			11,785	1092	4775
	VRC-0526A-1018N-JB	3,191	741	(8) 5.0	47.7			9,952	7,135	12,987	385	2945			11,843	1092	4775
	VRC-0457A-1018N-GB	2,775	644	(8) 1.9	35.7			10,846	8,129	13,944	448	3426			12,801	1283	4953
	VRC-0511A-1018N-HB	3,103	720	(8) 3.2	42.1			10,886	8,129	13,984	448	3426			12,841	1283	4953
	VRC-0565A-1018N-JB	3,431	796	(8) 5.0	48.9			10,945	8,129	14,043	448	3426			12,900	1283	4953

NOTES:

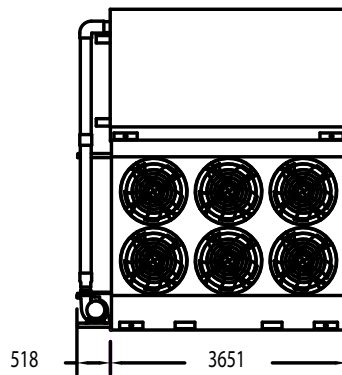
- Model number denotes nominal tons using R-717 tons are at a 35.7°C condensing temperature, a -6.7°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- R-22 tons are at a 40.6°C condensing temperature, a 4.4°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- Unless otherwise noted, the coil section is the heaviest section.
- Operating weight is for the unit with the water level at the overflow level and with the coil charged with R-717.
- The R-22 operating charge is 1.93 times the R-717 charge; R-134a is 1.98 times.
- Drain size is based on a bottom connection.
- Coil inlet and outlet connections are 4" beveled for welding.

Do not use for construction. Refer to factory certified dimensions. This catalog includes data current at the time of publication, which should be reconfirmed at the time of purchase.

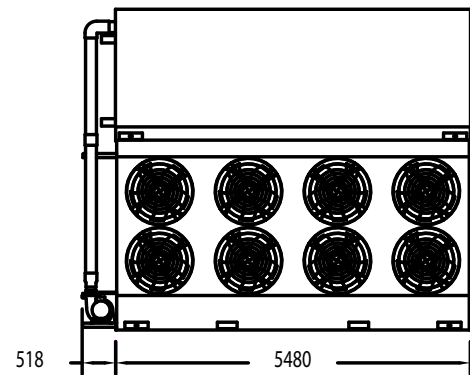
Vertex™ Evaporative Condenser Engineering Data



Face A: VRC 1212 and 1218
EC Fan System Units



Face D: VRC 1212
EC Fan System Units



Face D: VRC 1218
EC Fan System Units

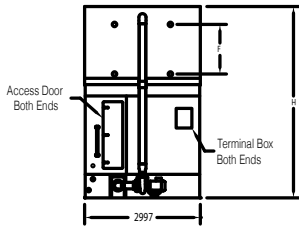
Nom. Box Size	Model Number ⁽¹⁾	Base Heat	R-22 Tons ⁽²⁾	Fan Motor (kW)	Airflow Rate (m3/s)	Pump Motor (kW)	Spray Flow Rate (l/s)	Approximate Weight (kg)			R-717	Remote Sump					
								Ship Weight	Heaviest Section ⁽³⁾	Oper. Weight ⁽⁴⁾		Drain Size ⁽⁶⁾ (mm)	Volume Req. (l)	F (mm)	H (mm)		
1212 EC	VRC-0281A-1212N-GB	1,705	396	(6) 1.9	34.0	4.0	38.4	6,278	3,996	8,437	192	1472	200	1628	7,906	718	4394
	VRC-0314A-1212N-HB	1,905	442	(6) 3.2	40.0			6,305	3,996	8,464	192	1472			7,933	718	4394
	VRC-0348A-1212N-JB	2,106	489	(6) 5.0	46.5			6,350	3,996	8,510	192	1472			7,979	718	4394
	VRC-0311A-1212N-GB	1,885	437	(6) 1.9	32.7			7,026	4,745	9,231	238	1812			8,700	908	4572
	VRC-0347A-1212N-HB	2,105	488	(6) 3.2	38.6			7,053	4,745	9,258	238	1812			8,727	908	4572
	VRC-0383A-1212N-JB	2,326	540	(6) 5.0	44.8			7,099	4,745	9,303	238	1812			8,773	908	4572
	VRC-0338A-1212N-GB	2,052	476	(6) 1.9	30.8			8,197	5,915	10,474	310	2379			9,938	1092	4775
	VRC-0378A-1212N-HB	2,292	532	(6) 3.2	36.3			8,224	5,915	10,501	310	2379			9,966	1092	4775
	VRC-0418A-1212N-JB	2,533	588	(6) 5.0	42.2			8,269	5,915	10,546	310	2379			10,011	1092	4775
	VRC-0363A-1212N-GB	2,200	511	(6) 1.9	28.6			9,013	6,731	11,345	360	2747			10,809	1283	4953
	VRC-0405A-1212N-HB	2,457	570	(6) 3.2	33.7			9,040	6,731	11,372	360	2747			10,837	1283	4953
	VRC-0448A-1212N-JB	2,716	630	(6) 5.0	39.2			9,086	6,731	11,417	360	2747			10,882	1283	4953
1218 EC	VRC-0417A-1218N-GB	2,532	588	(8) 1.9	47.8	5.5	58.0	8,655	5,684	11,866	632	2180	250	2343	11,054	718	4394
	VRC-0467A-1218N-HB	2,829	657	(8) 3.2	56.4			8,696	5,684	11,907	632	2180			11,095	718	4394
	VRC-0516A-1218N-JB	3,127	726	(8) 5.0	65.4			8,754	5,684	11,966	632	2180			11,154	718	4394
	VRC-0457A-1218N-GB	2,768	642	(8) 1.9	45.8			9,752	6,781	13,032	785	2718			12,220	908	4572
	VRC-0510A-1218N-HB	3,093	718	(8) 3.2	54.1			9,793	6,781	13,073	785	2718			12,261	908	4572
	VRC-0564A-1218N-JB	3,419	794	(8) 5.0	62.7			9,852	6,781	13,132	785	2718			12,320	908	4572
	VRC-0497A-1218N-GB	3,015	700	(8) 1.9	43.3			11,453	8,482	14,842	1,024	3540			14,034	1092	4775
	VRC-0555A-1218N-HB	3,369	782	(8) 3.2	51.1			11,494	8,482	14,883	1,024	3540			14,075	1092	4775
	VRC-0614A-1218N-JB	3,723	864	(8) 5.0	59.3			11,553	8,482	14,942	1,024	3540			14,134	1092	4775
	VRC-0536A-1218N-GB	3,251	755	(8) 1.9	39.8			12,651	9,680	16,116	1,192	4134			15,304	1283	4953
	VRC-0599A-1218N-HB	3,633	843	(8) 3.2	46.9			12,692	9,680	16,157	1,192	4134			15,345	1283	4953
	VRC-0662A-1218N-JB	4,016	932	(8) 5.0	54.4			12,751	9,680	16,216	1,192	4134			15,404	1283	4953

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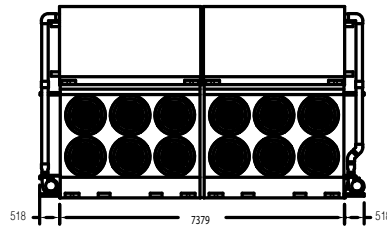
- Model number denotes nominal tons using R-717 tons are at a 35.7°C condensing temperature, a -6.7°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- R-22 tons are at a 40.6°C condensing temperature, a 4.4°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- Unless otherwise noted, the coil section is the heaviest section.
- Operating weight is for the unit with the water level at the overflow level and with the coil charged with R-717.
- The R-22 operating charge is 1.93 times the R-717 charge; R-134a is 1.98 times.
- Drain size is based on a bottom connection.
- Coil inlet and outlet connections are 4" beveled for welding.

Do not use for construction. Refer to factory certified dimensions. This catalog includes data current at the time of publication, which should be reconfirmed at the time of purchase.

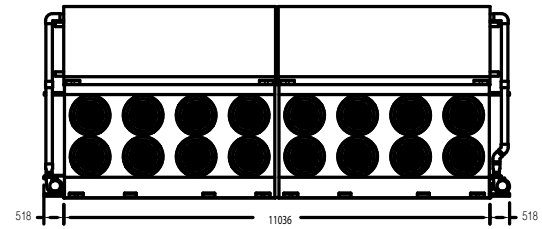
Vertex™ Evaporative Condenser Engineering Data



Face A: VRC 1024 and 1036
EC Fan System Units



Face D: VRC 1024
EC Fan System Units



Face D: VRC 1036
EC Fan System Units

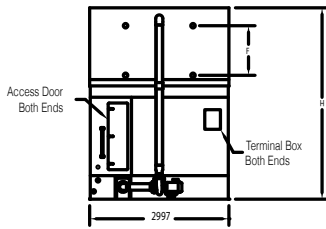
Nom. Box Size	Model Number ⁽¹⁾	Base Heat	R-22 Tons ⁽²⁾	Fan Motor (kW)	Airflow Rate (m3/s)	Pump Motor (kW)	Spray Flow Rate (l/s)	Approximate Weight (kg)			R-717	Remote Sump					
								Ship Weight	Heaviest Section ⁽³⁾	Oper. Weight ⁽⁴⁾		Drain Size ⁽⁶⁾ (mm)	Volume Req. (l)	F (mm)	H (mm)		
1024 EC	VRC-0482A-1024N-GB	2,923	678	(12) 1.9	66.5	(2) 4.0	31.5	10,877	3,334	14,815	313	2379	(2) 200	2373	7,929	718	4394
	VRC-0538A-1024N-HB	3,264	758	(12) 3.2	78.3			10,932	3,334	14,869	313	2379			7,961	718	4394
	VRC-0595A-1024N-JB	3,608	838	(12) 5.0	90.9			11,022	3,334	14,960	313	2379			8,006	718	4394
	VRC-0539A-1024N-GB	3,266	758	(12) 1.9	60.2			12,102	3,946	16,112	387	2945			8,614	908	4572
	VRC-0601A-1024N-HB	3,648	847	(12) 3.2	70.9			12,156	3,946	16,166	387	2945			8,646	908	4572
	VRC-0665A-1024N-JB	4,033	936	(12) 5.0	82.3			12,247	3,946	16,257	387	2945			8,691	908	4572
	VRC-0577A-1024N-GB	3,501	813	(12) 1.9	49.9			14,157	4,976	18,294	513	3908			9,771	1092	4775
	VRC-0646A-1024N-HB	3,910	908	(12) 3.2	58.8			14,211	4,976	18,348	513	3908			9,802	1092	4775
	VRC-0713A-1024N-JB	4,323	1003	(12) 5.0	68.2			14,302	4,976	18,439	513	3908			9,848	1092	4775
	VRC-0620A-1024N-GB	3,763	873	(12) 1.9	51.5			15,518	5,656	19,741	597	4559			10,533	1283	4953
	VRC-0693A-1024N-HB	4,202	975	(12) 3.2	60.7			15,572	5,656	19,795	597	4559			10,564	1283	4953
VRC-0766A-1024N-JB	4,646	1078	(12) 5.0	70.4	15,663	5,656	19,886	597	4559	10,610	1283	4953					
1036 EC	VRC-0713A-1036N-GB	4,328	1005	(16) 1.9	91.3	(2) 5.5	47.9	14,905	4,736	20,671	465	3540	(2) 250	3456	11,149	718	4394
	VRC-0798A-1036N-HB	4,839	1123	(16) 3.2	107.7			14,987	4,736	20,752	465	3540			11,190	718	4394
	VRC-0882A-1036N-JB	5,350	1242	(16) 5.0	125.0			15,105	4,736	20,870	465	3540			11,249	718	4394
	VRC-0779A-1036N-GB	4,725	1097	(16) 1.9	84.8			16,702	5,634	22,580	578	4417			12,161	908	4572
	VRC-0871A-1036N-HB	5,281	1226	(16) 3.2	100.1			16,783	5,634	22,662	578	4417			12,202	908	4572
	VRC-0963A-1036N-JB	5,840	1355	(16) 5.0	116.1			16,901	5,634	22,780	578	4417			12,261	908	4572
	VRC-0851A-1036N-GB	5,165	1199	(16) 1.9	69.7			19,700	7,135	25,769	769	5862			13,853	1092	4775
	VRC-0952A-1036N-HB	5,773	1340	(16) 3.2	82.3			19,781	7,135	25,851	769	5862			13,894	1092	4775
	VRC-1052A-1036N-JB	6,383	1482	(16) 5.0	95.4			19,899	7,135	25,969	769	5862			13,953	1092	4775
	VRC-0915A-1036N-GB	5,551	1288	(16) 1.9	71.4			21,691	8,129	27,887	895	6824			14,973	1283	4953
	VRC-1023A-1036N-HB	6,205	1440	(16) 3.2	84.2			21,773	8,129	27,969	895	6824			15,014	1283	4953
VRC-1131A-1036N-JB	6,861	1593	(16) 5.0	97.7	21,891	8,129	28,087	895	6824	15,073	1283	4953					

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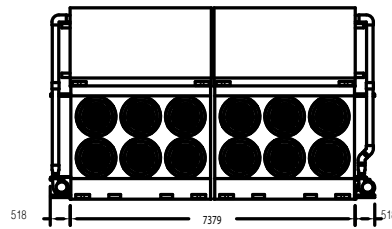
- Model number denotes nominal tons using R-717 tons are at a 35.7°C condensing temperature, a -6.7°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- R-22 tons are at a 40.6°C condensing temperature, a 4.4°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- Unless otherwise noted, the coil section is the heaviest section.
- Operating weight is for the unit with the water level at the overflow level and with the coil charged with R-717.
- The R-22 operating charge is 1.93 times the R-717 charge; R-134a is 1.98 times.
- Drain size is based on a bottom connection.
- Coil inlet and outlet connections are 4" beveled for welding.

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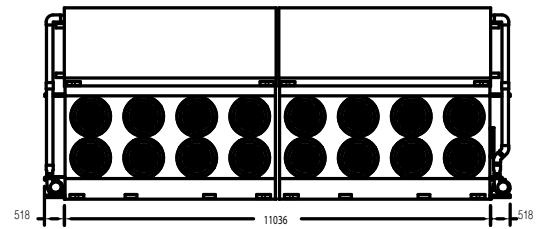
Vertex™ Evaporative Condenser Engineering Data



Face A: VRC 1224' and 1236 EC Fan System Units



Face D: VRC 1224 EC Fan System Units



Face D: VRC 1236 EC Fan System Units

Nom. Box Size	Model Number ⁽¹⁾	Base Heat	R-22 Tons ⁽²⁾	Fan Motor (kW)	Airflow Rate (m3/s)	Pump Motor (kW)	Spray Flow Rate (l/s)	Approximate Weight (kg)			R-717	Remote Sump					
								Ship Weight	Heaviest Section ⁽³⁾	Oper. Weight ⁽⁴⁾		Drain Size ⁽⁶⁾ (mm)	Volume Req. (l)	F (mm)	H (mm)		
1224 EC	VRC-0562A-1224N-GB	3,411	792	(12) 1.9	68.0	(2) 4.0	38.4	12,551	3,996	16,874	385	104	(2) 200	3,255	9,721	718	4394
	VRC-0628A-1224N-HB	3,809	884	(12) 3.2	80.1			12,606	3,996	16,928	385	104			9,748	718	4394
	VRC-0695A-1224N-JB	4,211	977	(12) 5.0	93.0			12,696	3,996	17,019	385	104			9,793	718	4394
	VRC-0621A-1224N-GB	3,769	875	(12) 1.9	65.4			14,048	4,745	18,462	476	128			10,560	908	4572
	VRC-0694A-1224N-HB	4,209	977	(12) 3.2	77.1			14,102	4,745	18,516	476	128			10,587	908	4572
	VRC-0767A-1224N-JB	4,653	1080	(12) 5.0	89.5			14,193	4,745	18,607	476	128			10,632	908	4572
	VRC-0676A-1224N-GB	4,104	953	(12) 1.9	61.6			16,389	5,915	20,943	620	167			11,875	1092	4775
	VRC-0755A-1224N-HB	4,583	1064	(12) 3.2	72.6			16,443	5,915	20,997	620	167			11,902	1092	4775
	VRC-0835A-1224N-JB	5,067	1176	(12) 5.0	84.3			16,534	5,915	21,088	620	167			11,948	1092	4775
	VRC-0725A-1224N-GB	4,400	1021	(12) 1.9	57.2			18,026	6,731	22,685	721	194			12,796	1283	4953
	VRC-0810A-1224N-HB	4,914	1141	(12) 3.2	67.5			18,080	6,731	22,739	721	194			12,823	1283	4953
	VRC-0895A-1224N-JB	5,433	1261	(12) 5.0	78.3			18,171	6,731	22,830	721	194			12,869	1283	4953
1236 EC	VRC-0835A-1236N-GB	5,063	1175	(16) 1.9	95.6	(2) 5.5	58	17,305	5,684	23,732	573	154	(2) 250	4,683	13,681	718	4394
	VRC-0934A-1236N-HB	5,658	1313	(16) 3.2	112.7			17,386	5,684	23,814	573	154			13,721	718	4394
	VRC-1032A-1236N-JB	6,253	1451	(16) 5.0	130.8			17,504	5,684	23,932	573	154			13,780	718	4394
	VRC-0914A-1236N-GB	5,536	1285	(16) 1.9	91.7			19,500	6,781	26,064	712	192			14,914	908	4572
	VRC-1020A-1236N-HB	6,186	1436	(16) 3.2	108.1			19,582	6,781	26,146	712	192			14,955	908	4572
	VRC-1127A-1236N-JB	6,837	1587	(16) 5.0	125.4			19,700	6,781	26,263	712	192			15,014	908	4572
	VRC-0994A-1236N-GB	6,029	1399	(16) 1.9	86.7			22,902	8,482	29,684	929	250			16,833	1092	4775
	VRC-1111A-1236N-HB	6,738	1564	(16) 3.2	102.2			22,984	8,482	29,765	929	250			16,874	1092	4775
	VRC-1227A-1236N-JB	7,447	1728	(16) 5.0	118.6			23,102	8,482	29,883	929	250			16,933	1092	4775
	VRC-1072A-1236N-GB	6,503	1509	(16) 1.9	79.5			25,297	9,680	32,233	1,081	291			18,185	1283	4953
	VRC-1198A-1236N-HB	7,266	1687	(16) 3.2	93.8			25,379	9,680	32,314	1,081	291			18,226	1283	4953
	VRC-1324A-1236N-JB	8,031	1864	(16) 5.0	108.8			25,497	9,680	32,432	1,081	291			18,285	1283	4953

NOTES:

- Model number denotes nominal tons using R-717 tons are at a 35.7°C condensing temperature, a -6.7°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- R-22 tons are at a 40.6°C condensing temperature, a 4.4°C suction temperature, and a 25.6°C entering wet-bulb temperature.
- Unless otherwise noted, the coil section is the heaviest section.
- Operating weight is for the unit with the water level at the overflow level and with the coil charged with R-717.
- The R-22 operating charge is 1.93 times the R-717 charge; R-134a is 1.98 times.
- Drain size is based on a bottom connection.
- Coil inlet and outlet connections are 4" beveled for welding.

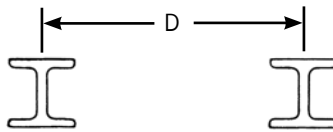
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Vertex™ Evaporative Condenser Structural Support

The recommended support arrangement for Vertex Evaporative Condensers consists of parallel structural members running the full length of the unit. In addition to providing adequate support, the members also serve to raise the unit above any solid foundation which might restrict air movement or prevent access to the unit. Refer to the BAC unit certified print for bolt hole location.

Center line distances between bolt holes are tabulated in the table below.

Model Number	D
VRC-x-1012-x	2933mm
VRC-x-1018-x	2933mm
VRC-x-1212-x	3537mm
VRC-x-1218-x	3537mm
VRC-x-1024-x	2933mm
VRC-x-1036-x	2933mm
VRC-x-1224-x	3537mm
VRC-x-1236-x	3537mm



NOTES:

1. Support members and anchor bolts shall be designed, furnished, and installed by others.
2. Design of support members and anchor bolts shall be in accordance with the strength and serviceability requirements of the applicable building code and project specifications.
3. Support members shall be level at the top.
4. Refer to the certified unit support drawing for loading and additional support requirements.
5. The length of the support members shall be at least equal to the length of the basin. Refer to Engineering Data for basin dimensions.
6. If vibration isolation (provided by others) is used, the isolators should be located under a structural base that complies with one of the recommended support arrangements. Contact your local BAC Representative for all other isolator configurations.