REFPLUS®

TECHNICAL CATALOGUE

AIR-COOLED CONDENSERS

FLAT SLAB

CNW-CNR-CLW-CLR-CMR-CCR
CBW-CVW-CBR-CVR SERIES
HEAT RECLAIMS HCD-HMD SERIES

ecoefficient+

cityquiet zeroleak smartpower

R3

REFPLUS

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DESIGN IT, WE'LL BUILD IT.

Although this catalogue gives precise and useful product description and capabilities, we recommend the use of our **Nomis** software for a more accurate and up-to-date selection.

Nomis is a web-based refrigeration equipment selection and configuration platform. It can be used from your desktop computer, laptop, tablet or smart-phone. Request a Nomis access and discover just how easy it is to find the right equipment for your needs. Simply select a fluid cooler from our myriad choices, and then add the options that are right for your project. All technical and pricing information is updated continuously and is right there, at your finger tips.

DESIGN YOUR OWN CONDENSER

This easy-to-use product selector allows you to build your condenser the way you want it:

1. Select Base Configuration
2. Select Options
3. Select Accessories
4. Get a complete quote with prices

You can Print, Email or Share your personalized custom quote as well as select your nearest dealer so they can follow up with you directly.

To request a Nomis Access, simply go to www.refplus.com and click on Tools.

Unit Nomenclature

C B R - 0 9 4 L - 8

VOLTAGE
2 = 240/1/60
5 = 208-240/3/60
8 = 600/3/60
9 = 480/3/60

AIR FLOW SPEED OPTION
H = Horizontal air flow
L = Low speed
S = Horizontal air flow and low speed

MODEL NUMBER / NOMINAL CAPACITY @ 20°FTD
094 = Approximately 940 MBH
(low speed models does not follow this rule)

DESIGN OPTION
D = Smooth tubes
R = Riffled Tubes
W = Wide fin spacing (8 FPI)
X = Coil Mounted V-Shaped
Y = Coil Mounted Big V

MOTOR TYPE
B = 2.6 HP - 680/970 RPM High Efficiency (6 poles) - 30" Dia.
C = 1/4 HP - 825 RPM - 20" Dia
L = 1 HP - 825 RPM - 30" Dia.
M = 1/2 HP - 1140 RPM - 20" Dia
N = 2 HP - 1140 RPM - 30" Dia.
V = 1.25 HP - 510/730 RPM High Efficiency (8 poles) - 30" Dia.

UNIT TYPE
C= Condenser
H= Heat Reclaim

Control Panel Nomenclature

P01 CONTROL BOX, TERMINAL BLOCK, NO CONTROL, NO CONTACTOR
P02 CONTACTOR(S) WITHOUT CONTROL
P03 CONTACTOR(S), AMBIENT FAN CYCLING
P04 CONTACTOR(S), PRESSURE FAN CYCLING (2)
P05 CONTACTOR(S), PRESSURE FAN CYCLING, DUAL CIRCUITS (3)
P12 CONTACTOR(S), MOTORS INDIVIDUALLY WIRED, NO CONTROL. (4, 5)
P18 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, AMBIENT FAN CYCLING (4, 5, 6)
P19 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, PRESSURE FAN CYCLING (3, 4, 5, 6)
P21 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, WITHOUT CONTROL
P30 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, WITHOUT CONTROL, HIGH SPEED ZIEHL-ABEGG
P31 CONTACTOR(S), MOTORS INDIVIDUALLY WIRED, NO CONTROL, HIGH SPEED ZIEHL-ABEGG
P32 CONTACTOR(S) WITHOUT CONTROL, HIGH SPEED ZIEHL-ABEGG
P33 CONTACTOR(S), AMBIENT FAN CYCLING, HIGH SPEED ZIEHL-ABEGG)
P34 CONTACTOR(S), PRESSURE FAN CYCLING, HIGH SPEED ZIEHL-ABEGG
P35 CONTACTOR(S), PRESSURE FAN CYCLING, DUAL CIRCUITS, HIGH SPEED ZIEHL-ABEGG
P38 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, AMBIENT FAN CYCLING, HIGH-SPEED ZIEHL-ABEGG
P39 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, PRESSURE FAN CYCLING, HIGH-SPEED ZIEHL-ABEGG
P40 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, WITHOUT CONTROL, LOW-SPEED ZIEHL-ABEGG
P41 CONTACTOR(S), MOTORS INDIVIDUALLY WIRED, NO CONTROL, LOW-SPEED ZIEHL-ABEGG
P42 CONTACTOR(S) WITHOUT CONTROL, LOW SPEED ZIEHL-ABEGG
P43 CONTACTOR(S), AMBIENT FAN CYCLING, LOW SPEED ZIEHL-ABEGG
P44 CONTACTOR(S), PRESSURE FAN CYCLING, LOW SPEED ZIEHL-ABEGG
P45 CONTACTOR(S), PRESSURE FAN CYCLING, DUAL CIRCUITS, LOW SPEED ZIEHL-ABEGG
P48 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, AMBIENT FAN CYCLING, LOW SPEED ZIEHL-ABEG
P49 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, PRESSURE FAN CYCLING, LOW SPEED ZIEHL-ABEGG
P50 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, WITHOUT CONTROL, TWIN SPEED ZIEHL-ABEGG
P51 CONTACTOR(S), MOTORS INDIVIDUALLY WIRED, NO CONTROL, TWIN SPEED ZIEHL-ABEGG
P52 CONTACTOR(S) WITHOUT CONTROL, TWIN SPEED ZIEHL-ABEGG
P53 CONTACTOR(S), AMBIENT FAN CYCLING, TWIN SPEED ZIEHL-ABEGG
P54 CONTACTOR(S), PRESSURE FAN CYCLING, TWIN SPEED ZIEHL-ABEGG
P55 CONTACTOR(S), PRESSURE FAN CYCLING, DUAL CIRCUITS, TWIN SPEED ZIEHL-ABEGG
P58 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, AMBIENT FAN CYCLING, TWIN SPEED ZIEHL-ABEGG
P59 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, PRESSURE FAN CYCLING, TWIN SPEED ZIEHL-ABEGG
P62 CONTACTOR(S), PRESSURE FAN CYCLING, NO CONTACTOR ON FIRST STAGE (2)
P65 SPLIT ELECTRICAL, CONTACTOR(S), 2 ELECTRIC BOX, 2 POWER SUPPLY, PRESSURE FAN CYCLING, NO CONTACTOR ON 1ST STAGE (3, 4, 5, 6)
P68 8 FEET OF WIRE ONLY, NO CONTROL BOX
P69 CONTROL BOX, 8 FEET OF WIRE ONLY
P70 SPLIT ELECTRICAL, CONTACTOR(S), AMBIENT FAN CYCLING, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P71 SPLIT ELECTRICAL, CONTACTOR(S), PRESSURE FAN CYCLING, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P72 SPLIT ELECTRICAL, CONTACTOR(S), AMBIENT FAN CYCLING, HIGH SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P73 SPLIT ELECTRICAL, CONTACTOR(S), PRESSURE FAN CYCLING, HIGH SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P74 SPLIT ELECTRICAL, CONTACTOR(S), AMBIENT FAN CYCLING, LOW SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P75 SPLIT ELECTRICAL, CONTACTOR(S), PRESSURE FAN CYCLING, LOW SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P76 SPLIT ELECTRICAL, CONTACTOR(S), AMBIENT FAN CYCLING, TWIN SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P77 SPLIT ELECTRICAL, CONTACTOR(S), PRESSURE FAN CYCLING, TWIN SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P78 SPLIT ELECTRICAL, CONTACTOR(S), WITHOUT CONTROL, HIGH SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P79 SPLIT ELECTRICAL, CONTACTOR(S), WITHOUT CONTROL, LOW SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS
P80 SPLIT ELECTRICAL, CONTACTOR(S), WITHOUT CONTROL, TWIN SPEED ZIEHL-ABEGG, 1 ELECTRIC BOX, 1 POWER SUPPLY, 2 INDIVIDUAL TRANSFORMERS

DESCRIPTION

RefPlus' flat slab condensers are air-cooled, vertical air flow commercial and industrial units available in an array of sizes for refrigeration and air conditioning applications. They are designed to meet any heat load, from as small as 38,460 BTU/HR to up to 3.35 million BTU/HR (@ 20°TD with R-448A). All models are available with both single or multiple circuits and models are available in low or high CFM configurations, depending on the fan motor type.

Each condenser can be individually designed for a specific job. Each unit includes a control box and a wiring diagram that meets the customer's requirements. The wiring diagram displays all the components with all the protections and the necessary controls. The unit can be supplied with mechanical or optional electronic controls.

CONSTRUCTION

CASINGS

Casings for all models are heavy-gauge galvanized steel G90 with plated hardware for a corrosion-free assembly. The unit is sectionalized with individual lengthwise fan chambers. The unit is a bolted construction. Coil section is independent of the fan section. All models include an access panel for easy coil inspection and cleaning.

COILS

Coils are manufactured using seamless, deoxidized, copper tubes, mechanically expanded in self-spaced, full collared aluminum corrugated plate fins for permanent bond and maximum heat transfer. Connections and bends are brazed with high temperature brazing alloy. Coils are factory leak tested at 600 psig using -40 °F/°C dew point dry air. They are pressurized and sealed at 20 psig before assembly.

Headers are made with seamless copper tube type K or L and connections.

FRICTION-FREE COIL TRACKS®

All tubes sheets are provided with oversized holes and tubes are supported in sliding cushions for friction-free assembly and maximum reliability. Because tubes do not make contact with the frame, they are protected against wear. Free tube expansion allow them to "float" freely.

FANS

Condensers are available as standard or high-efficiency models. All motors are available for 208/240/3/60, 480/3/60 or 575/3/60 volts. Smaller models are available for 240/1/60.

Twin-speed AC and variable-speed (EC or VFD) motors are optional. Those options provide better operation stability in all conditions, specially at part load and during winter.

MODELS WITH HIGH-EFFICIENCY FANS/MOTORS

These models are equipped with 800mm (31.5") **high-efficiency** cast-aluminum fans. They are designed with a polymer aerodynamic ventury for maximum air-flow dynamics. Seven sickle-shaped fan blades are made from cast aluminum for good corrosion resistance, low weight, excellent airflow output and sound power reduction. Motors are integrated to the fan assembly for vibration-free behaviour and ease of maintenance.

All fans have an IP54 protection rating. They allow for low-temperature applications down to -40°F. Motors are permanently lubricated.

These high-efficiency fans are equipped with standard AC motors. Low speed models are locked into lower RPM. **CB** models have 2.6 HP - 680/970 RPM (6 poles) - 31.5" dia. fan motors. **CV** models have 1.25 HP - 730/510 RPM (8 poles) - 31.5" Dia. fan motors.

Optional ECblue ECM motors are operated by an on/off relay and a 0-10V signal. Fan speed (airflow output) can vary from 20 to 100% with an optional variable-speed controller.

MODELS WITH STANDARD-EFFICIENCY FANS/MOTORS

These models are equipped with **standard-efficiency** direct drive fan motors. Fans have aluminum blades riveted to a steel hub. They are statically and dynamically balanced for smooth and vibration free operation.

CC models are equipped 20" diameter fans with 1/4 HP - 825 RPM motors. **CL** models have 30" diameter fans with 1 HP - 825 RPM motors. **CM** models have 20" diameter fans with 1/2 HP - 1140 RPM motors while **CN** models have 30" diameter with 2 HP - 1140 RPM motors.

Fan guards and motor mounts are welded wire construction for full protection from moving parts. Baked-on powder epoxy-coating provides corrosion protection.

All fan motors feature permanently lubricated, sealed ball bearings and inherent thermal protection for long life and dependable service.

CONDENSER CONTROLLER

Two types of optional controllers can be provided with a condenser, either the Guardian+ RC-C Controller or a set of electromechanical relays and/or analog output modules. Both systems control the condenser by monitoring the head pressure (condenser outlet) and adjusting the fans accordingly.

When a unit is built without a controller, an electrical terminal block is provided to either energize contactors and/or send an analog input (0-10V or VFD frequency output, whichever is applicable) to the variable-speed fans for customer control operation.

FAN CONTROL

Each unit is either fitted with single, twin or fully variable speed (VFD controlled AC or EC motor) fan motors. When a unit is equipped with an electronic controller (either Guardian+ RC-C or electromechanical modules), the controller reads the condenser outlet pressure and/or the ambient temperature and sends signals to the fan motors (0-10V and/or enable/disable).

Depending on the motor selection, the controller will either cycle fans, vary the fan speed, or both. The electronic controller requires a signal from the remote compressor unit or rack to start. It can be through a dry contact or, in the case of the Refplus Guardian+ RC-C, via a digital input or optionally communicated via an address (BacNET, MODBUS, LONWORKS, etc.).

NOTE: Some motors offered by Refplus can be controlled by a VFD. However, caution is advised on the following motors:

- 1/2 HP motors and lower (CC, CM series) are not VFD ready and should never be speed controlled by a VFD.
- 1 HP motors and over with standard efficiency fan blades (CL, CN series) are VFD ready.
- High-efficiency motors (CB, CV) are VFD ready provided adequate line reactors are installed to avoid harmonics which can shorten life of the fan motors.

ELECTRICAL - CONTROL PANEL

Each panel comes complete with fan motor contactors and fuses, optional controller, pressure or temperature fan cycling and transformer. Control panels are fully customizable.

All motors are wired to weather resistant box. The unit is provided with terminal blocks for easy field installation. Terminals are clearly identified to match wiring diagram supplied with the unit. Motors are wired using flexible cord type SOW 90°C #16 AWG and they are terminated with liquid tight fittings.

STANDARD FEATURES

- Galvanized steel construction
- Low-GWP refrigerant compatible
- Narrow width design for easy shipment (in containers) on single-row models.
- Side access panels for easy coil service
- Epoxy-coated motor mount and fan guards for maximum corrosion protection (standard-efficiency versions)
- Thermospan coil design
- Friction-free coil tracks®
- Riffled tubes (Condensers)
- Smooth tubes (Heat Reclaims)
- Individually baffled fan sections
- Full selection of fan cycling
- Single point electrical connection
- 240V standard circuit voltage

FAN FEATURES

HIGH-EFFICIENCY MODELS:

- Cast aluminum industrial fans
- Polymer aerodynamic venturis
- High-efficiency AC fan motors (two-speed compatible)
- Standard 2-year warranty on fan motor assemblies
- Excellent sound levels - as low as 51 DBA for a 1 fan wide unit & 54 DBA for a 2-fan wide unit
- Permanently lubricated

STANDARD-EFFICIENCY MODELS:

- Direct-drive fan motors
- 0.25, 0.5, 1 or 2 HP motors
- Statically and dynamically balanced
- Permanently lubricated
- Aluminum riveted blades

OPTIONAL FEATURES

- ECblue fan motors 0-10V for high-efficiency models
- Stainless steel or painted casing
- Coil Coating (Blygold, Heresite or Electrofin)
- Custom coil design (FPI, material, geometry)
- Optional hydrophobic epoxy aluminum fins
- Customizable control panel: split electrical, fuses, circuit breaker, disconnect switch, NEMA 4/4X construction, communication boards
- Narrow width design for easy shipment (in containers) on double-row models
- Terminal block
- 24V and 120V control circuit transformer where applicable
- Pressure or ambient temperature controlled fan cycling
- Guardian+ RC-C Controller
- Variable-speed ECM motors with controller for header fan motors on two-fan wide units
- Individual motor fusing standard efficiency models
- Individual ambient temperature thermostat or pressure control
- Fused or non-fused disconnect
- Horizontal air discharge
- Adjustable flooded head pressure control
- Extended leg kits
- Receivers shipped loose or factory installed with extended legs and re-reinforced base
- Split condenser valves kit
- Adiabatic pre-cooling system

Standard & Optional Features

CONTROL PANEL
STANDARD FAN MOTOR CONTACTORS AND FUSES, PRESSURE OR TEMPERATURE FAN CYCLING, TERMINAL BLOCK AND TRANSFORMERS

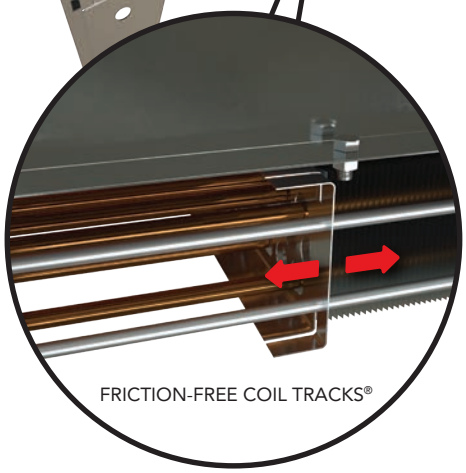
GUARDIAN+ RC-C CONDENSER CONTROLLER (OPTIONAL)

HIGH-EFFICIENCY FANS
800mm (31.5")
CAST-ALUMINIUM BLADES
HIGH-PERFORMANCE
(TWO-SPEED OR ECM)

ACCESS PANELS
SIDE PANELS ARE PROVIDED FOR EASY COIL MAINTENANCE

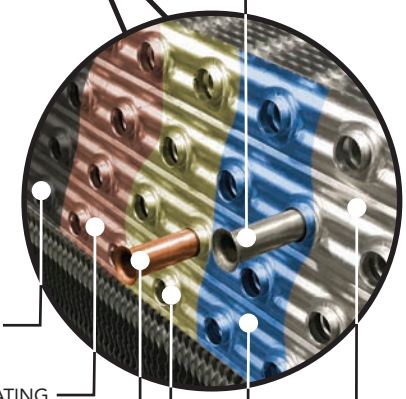
STANDARD-EFFICIENCY FANS
20" OR 30" ALUMINIUM
DIRECT DRIVE
0.25, 0.5, 1 OR 2 HP

CASING
GALVANIZED STEEL
OPTIONS: EPOXY PAINT COATED OR FULL 316 STAINLESS STEEL



FRICTION-FREE COIL TRACKS®

STAINLESS STEEL TUBING (OPTIONAL)



ELECTROFIN (OPTIONAL)

HERESITE COATING (OPTIONAL)

COPPER RIFFLED TUBING

BLYGOLD COATING (OPTIONAL)

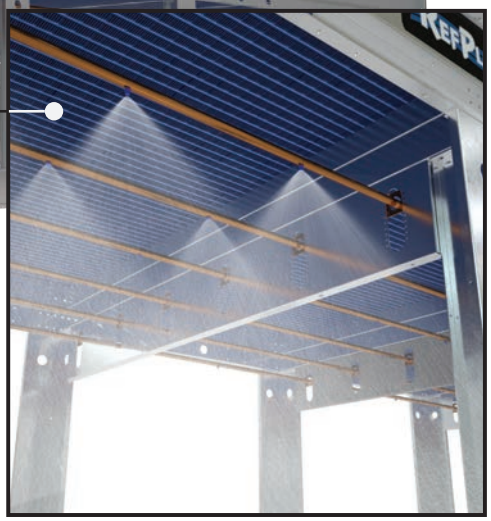
BLUE EPOXY ALUMINUM FINS (OPTIONAL)

FINS
ALUMINIUM (STANDARD)
COPPER OR 316 STAINLESS STEEL (OPTIONAL)

Opti-Mist Plus®

The Opti-Mist Plus system significantly increases the unit's capacity and overall efficiency. It uses a natural air cooling process by evaporating a small amount of water to pre-cool air entering a heat exchanger. A system of headers with atomizing nozzles generates a fog of ultra-fine water droplets in the entering air of the unit. A modulating control (20 to 100%) will adjust the air cooling to the application requirements, thus reducing the amount of water used. Moreover, Opti-Mist Plus completely eliminates the proliferation of bacteria, including legionella.

RUSTPROOF BLUE EPOXY-COATED ALUMINUM FINS FOR AN EXTENDED SERVICE LIFE WHILE IMPROVING THE EVACUATION OF RESIDUAL WATER.



OPTIMIZED NOZZLES FOR A UNIFORM MIST DISTRIBUTION - 120° SPRAY

NO AIR FLOW RESTRICTION - NO PADS REQUIRED

FULLY AUTOMATED PLC CONTROLLED FILTRATION & PUMPING STATION:

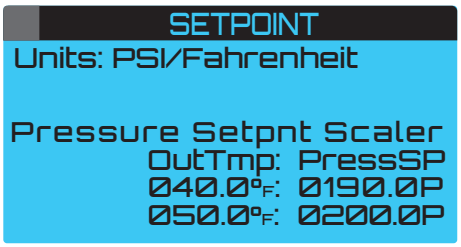
- PARTICLE FILTER
- DEMINERALIZATION SYSTEM (ANTI-SCALING)
- ANTIMICROBIAL UV LIGHT

Guardian+ CONDENSER CONTROL RC-C

- Specially designed for condensers
- 2-parameter quick setup
- Total control over refrigerant pressure
- Full remote communication capability

KEY FEATURES

- Runs condensers with up to 20 fans (11 stages)
- Controls multiple condensers (optional)
- Sensor failure alarm
- Full time event logging for diagnostic
- Fan run hours information
- No simultaneous stage starts - prevents power spikes
- Modulating speed ECM fan start - prevents freezing
- Remote communication (optional)
- Can control adiabatic systems (optional)
- Fan overload alarms (optional)
- Current sensor switch to proof fan status (optional)

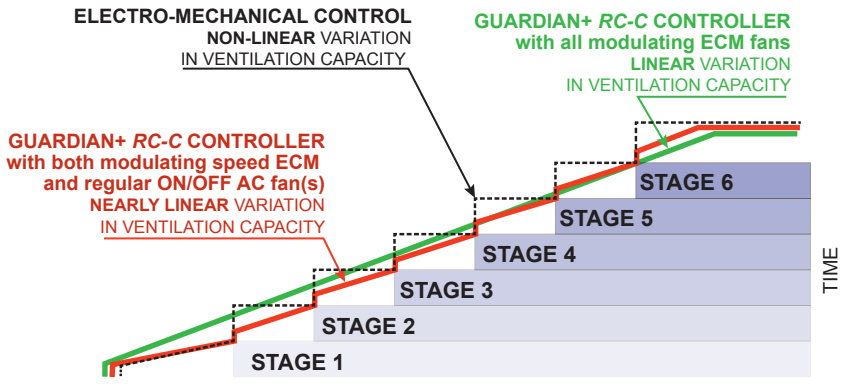


THE REAL ADVANTAGE OF THE RC-C CONTROLLER VS ELECTRO-MECHANICAL CONTROLS

Conventional electro-mechanical controls simply use switches to turn fans on and off in order to control the refrigerant pressure. They can only regulate a modulating fan stage using fixed settings and consequently are not able to generate a smooth, linear variation in ventilation capacity.

Guardian+ RC-C Controller regulates a modulating speed ECM fan stage every time a regular ON-OFF fan stage is added or stopped. This leads to a nearly linear variation in ventilation capacity, as shown by the red line on the graph.

If all fans are modulating speed ECM, the ventilation capacity variation is perfectly linear, as shown by the green line on the graph.



Ventilation Capacity Behavior Comparison Graph

Fan control allows for ultra-precise and stable refrigerant pressure

PID

ENGINEERING DATA CCR - 1/2HP/1140 RPM/12 FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CCR-02	1 X 1	1.92	28.85	38.46	48.08	57.69	3	641	(1) 5/8"	(1) 5/8"	1.9	6.2	190
CCR-03	1 X 1	2.23	33.41	44.54	55.68	66.81	4	557	(1) 5/8"	(1) 5/8"	2.9	9.2	201
CCR-04	1 X 1	2.33	34.92	46.56	58.20	69.84	6	388	(1) 5/8"	(1) 5/8"	3.8	12.3	210

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA CMR - 1/2HP/1140 RPM/12 FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CMR-06	1 X 1	3.04	45.54	60.72	75.90	91.08	7	434	(1) 7/8"	(1) 7/8"	3.5	11.1	308
CMR-07	1 X 1	3.75	56.18	74.90	93.63	112.35	7	535	(1) 7/8"	(1) 7/8"	5.2	16.6	335
CMR-08	1 X 1	4.15	62.24	82.98	103.73	124.47	7	593	(1) 7/8"	(1) 7/8"	6.9	22.1	350
CMR-12	1 X 2	6.17	92.61	123.48	154.35	185.22	13	475	(1) 1 1/8"	(1) 1 1/8"	6.5	20.9	489
CMR-15	1 X 2	7.59	113.85	151.80	189.75	227.70	14	542	(1) 1 1/8"	(1) 1 1/8"	9.8	31.4	532
CMR-16	1 X 2	8.30	124.49	165.98	207.48	248.97	14	593	(1) 1 1/8"	(1) 1 1/8"	13.1	41.9	566
CMR-18	1 X 3	9.21	138.15	184.20	230.25	276.30	13	708	(1) 1 3/8"	(1) 1 3/8"	9.6	30.8	727
CMR-22	1 X 3	11.34	170.03	226.70	283.38	340.05	20	567	(1) 1 3/8"	(1) 1 3/8"	14.4	46.2	741
CMR-25	1 X 3	14.45	216.72	288.96	361.20	433.44	27	535	(1) 1 5/8"	(1) 1 5/8"	19.2	61.6	789
CMR-30	2 X 2	15.08	226.20	301.60	377.00	452.40	28	539	(2) 1 1/8"	(2) 1 1/8"	19.6	62.8	1,064
CMR-33	2 X 2	16.60	248.97	331.96	414.95	497.94	28	593	(2) 1 1/8"	(2) 1 1/8"	26.1	83.7	1,132
CMR-36	2 X 3	18.42	276.29	368.38	460.48	552.57	40	460	(2) 1 3/8"	(2) 1 3/8"	19.2	61.6	1,454
CMR-45	2 X 3	22.67	340.05	453.40	566.75	680.10	40	567	(2) 1 3/8"	(2) 1 3/8"	28.8	92.3	1,482
CMR-49	2 X 3	24.90	373.46	497.94	622.43	746.91	54	461	(2) 1 3/8"	(2) 1 3/8"	38.4	123.1	1,578

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

CLR - 1HP/850 RPM/10+ FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CLR-010	1 X 1	5.34	80.13	106.84	133.55	160.26	11	486	(1) 1 1/8	(1) 1 1/8	6.1	19.6	515
CLR-011	1 X 1	5.88	88.26	117.68	147.10	176.52	11	535	(1) 1 1/8	(1) 1 1/8	6.1	19.6	525
CLR-013	1 X 1	6.86	102.96	137.28	171.60	205.92	17	404	(1) 1 1/8	(1) 1 1/8	9.2	29.4	592
CLR-014	1 X 1	7.46	111.87	149.16	186.45	223.74	17	439	(1) 1 1/8	(1) 1 1/8	9.2	29.4	602
CLR-015	1 X 1	7.83	117.44	156.58	195.73	234.87	17	461	(1) 1 1/8	(1) 1 1/8	12.3	39.3	641
CLR-016	1 X 1	8.30	124.43	165.90	207.38	248.85	17	488	(1) 1 1/8	(1) 1 1/8	12.3	39.3	654
CLR-021	1 X 2	10.68	160.26	213.68	267.10	320.52	17	628	(1) 1 3/8	(1) 1 3/8	11.8	37.7	985
CLR-023	1 X 2	11.77	176.51	235.34	294.18	353.01	17	692	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,005
CLR-027	1 X 2	13.73	205.92	274.56	343.20	411.84	26	528	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,063
CLR-029	1 X 2	14.92	223.74	298.32	372.90	447.48	26	574	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,091
CLR-031	1 X 2	15.66	234.87	313.16	391.45	469.74	35	447	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,117
CLR-032	1 X 2	16.59	248.84	331.78	414.73	497.67	35	474	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,159
CLR-040	1 X 3	20.59	308.88	411.84	514.80	617.76	52	396	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,460
CLR-044	1 X 3	22.37	335.61	447.48	559.35	671.22	52	430	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,490
CLR-046	1 X 3	23.49	352.31	469.74	587.18	704.61	70	336	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,570
CLR-049	1 X 3	24.88	373.26	497.68	622.10	746.52	70	355	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,609
CLR-053	1 X 4	27.46	411.84	549.12	686.40	823.68	52	528	(1) 2 1/8	(1) 2 1/8	34.5	110.7	1,875
CLR-054	2 X 2	27.46	411.84	549.12	686.40	823.68	52	528	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,792
CLR-057	1 X 4	29.83	447.48	596.64	745.80	894.96	70	426	(1) 2 1/8	(1) 2 1/8	34.5	110.7	1,915
CLR-058	2 X 2	29.83	447.48	596.64	745.80	894.96	52	574	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,781
CLR-060	1 X 4	31.32	469.76	626.34	782.93	939.51	70	447	(1) 2 1/8	(1) 2 1/8	46.1	147.5	2,019
CLR-062	2 X 2	31.32	469.76	626.34	782.93	939.51	70	447	(2) 1 5/8	(2) 1 5/8	47.1	150.8	1,882
CLR-064	1 X 4	33.18	497.67	663.56	829.45	995.34	70	474	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,071
CLR-065	2 X 2	33.18	497.67	663.56	829.45	995.34	70	474	(2) 1 5/8	(2) 1 5/8	47.1	150.8	1,934
CLR-069	2 X 3	35.30	529.53	706.04	882.55	1,059.06	70	504	(2) 1 5/8	(2) 1 5/8	34.8	111.5	2,323
CLR-072	1 X 5	36.90	553.46	737.94	922.43	1,106.91	43	858	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,338
CLR-077	1 X 5	39.65	594.69	792.92	991.15	1,189.38	43	922	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,403
CLR-080	2 X 3	41.18	617.75	823.66	1,029.58	1,235.49	104	396	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,430
CLR-081	1 X 5	41.23	618.50	824.66	1,030.83	1,236.99	58	711	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,475
CLR-084	1 X 5	43.08	646.14	861.52	1,076.90	1,292.28	58	743	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,540
CLR-086	1 X 6	44.28	664.16	885.54	1,106.93	1,328.31	43	1,030	(1) 2 5/8	(1) 2 5/8	73.5	235.5	2,730
CLR-087	2 X 3	44.75	671.22	894.96	1,118.70	1,342.44	104	430	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,508
CLR-092	2 X 3	46.98	704.63	939.50	1,174.38	1,409.25	140	336	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,664
CLR-093	1 X 6	47.58	713.63	951.50	1,189.38	1,427.25	43	1,106	(1) 2 5/8	(1) 2 5/8	73.5	235.5	2,808
CLR-096	1 X 6	49.48	742.20	989.60	1,237.00	1,484.40	58	853	(1) 2 5/8	(1) 2 5/8	98	313.9	2,964
CLR-097	2 X 3	49.77	746.52	995.36	1,244.20	1,493.04	140	355	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,742
CLR-101	1 X 6	51.69	775.37	1,033.82	1,292.28	1,550.73	58	891	(2) 2 1/8	(2) 2 1/8	98	313.9	3,042
CLR-107	2 X 4	54.91	823.67	1,098.22	1,372.78	1,647.33	104	528	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,029
CLR-114	1 X 7	55.85	837.78	1,117.04	1,396.30	1,675.56	43	1,299	(2) 2 1/8	(2) 2 1/8	85.6	274.1	2,605
CLR-117	2 X 4	59.66	894.96	1,193.28	1,491.60	1,789.92	104	574	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,129
CLR-121	1 X 7	59.62	894.24	1,192.32	1,490.40	1,788.48	43	1,386	(2) 2 1/8	(2) 2 1/8	85.6	274.1	2,685
CLR-122	2 X 4	62.63	939.50	1,252.66	1,565.83	1,878.99	140	447	(2) 2 1/8	(2) 2 1/8	92.1	295.1	3,338
CLR-123	1 X 7	62.67	940.02	1,253.36	1,566.70	1,880.04	58	1,080	(2) 2 1/8	(2) 2 1/8	114.1	365.4	2,888
CLR-124	1 X 7	63.69	955.29	1,273.72	1,592.15	1,910.58	58	1,098	(2) 2 1/8	(2) 2 1/8	114.1	365.4	2,988
CLR-130	2 X 4	66.36	995.36	1,327.14	1,658.93	1,990.71	140	474	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,442
CLR-144	2 X 5	66.36	995.36	1,327.14	1,658.93	1,990.71	86	772	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,198
CLR-155	2 X 5	66.36	995.36	1,327.14	1,658.93	1,990.71	86	772	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,298
CLR-161	2 X 5	82.47	1,236.99	1,649.32	2,061.65	2,473.98	116	711	(2) 2 5/8	(2) 2 5/8	163.8	524.7	4,560
CLR-167	2 X 5	86.15	1,292.28	1,723.04	2,153.80	2,584.56	116	743	(2) 2 5/8	(2) 2 5/8	163.8	524.7	4,690
CLR-173	2 X 6	88.55	1,328.30	1,771.06	2,213.83	2,656.59	86	1,030	(2) 2 5/8	(2) 2 5/8	147	470.8	5,292
CLR-186	2 X 6	95.15	1,427.27	1,903.02	2,378.78	2,854.53	86	1,106	(2) 2 5/8	(2) 2 5/8	147	470.8	5,642
CLR-193	2 X 6	98.96	1,484.39	1,979.18	2,473.98	2,968.77	116	853	(2) 2 5/8	(2) 2 5/8	196	627.7	5,798
CLR-202	2 X 6	103.38	1,550.73	2,067.64	2,584.55	3,101.46	116	891	(4) 2 1/8	(4) 2 1/8	196	627.7	5,798
CLR-228	2 X 7	111.81	1,677.09	2,236.12	2,795.15	3,354.18	86	1,300	(4) 2 1/8	(4) 2 1/8	171.1	548.2	4,215
CLR-242	2 X 7	119.13	1,786.97	2,382.62	2,978.28	3,573.93	86	1,385	(4) 2 1/8	(4) 2 1/8	171.1	548.2	4,365
CLR-243	2 X 7	119.13	1,786.97	2,382.62	2,978.28	3,573.93	116	1,027	(4) 2 1/8	(4) 2 1/8	228.2	730.9	4,771
CLR-248	2 X 7	127.37	1,910.57	2,547.42	3,184.28	3,821.13	116	1,098	(4) 2 1/8	(4) 2 1/8	228.2	730.9	4,971

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA — CLW - 1HP/850 RPM/8 FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CLW-009	1 X 1	4.74	71.07	94.76	118.45	142.14	11	431	(1) 7/8	(1) 7/8	5.6	17.9	515
CLW-012	1 X 1	6.22	93.35	124.46	155.58	186.69	17	367	(1) 1 1/8	(1) 1 1/8	8.4	26.9	592
CLW-014	1 X 1	7.24	108.57	144.76	180.95	217.14	17	426	(1) 1 1/8	(1) 1 1/8	11.2	35.8	641
CLW-019	1 X 2	9.76	146.40	195.20	244.00	292.80	17	574	(1) 1 3/8	(1) 1 3/8	10.7	34.4	985
CLW-024	1 X 2	12.45	186.71	248.94	311.18	373.41	26	479	(1) 1 3/8	(1) 1 3/8	16.1	51.6	1,063
CLW-028	1 X 2	14.48	217.13	289.50	361.88	434.25	35	414	(1) 1 5/8	(1) 1 5/8	21.5	68.8	1,117
CLW-036	1 X 3	19.67	295.05	393.40	491.75	590.10	52	378	(1) 2 1/8	(1) 2 1/8	23.8	76.3	1,460
CLW-042	1 X 3	21.71	325.70	434.26	542.83	651.39	70	310	(1) 2 1/8	(1) 2 1/8	31.8	101.8	1,570
CLW-048	1 X 4	24.89	373.41	497.88	622.35	746.82	52	479	(1) 2 1/8	(1) 2 1/8	31.5	101	1,875
CLW-049	2 X 2	24.89	373.41	497.88	622.35	746.82	52	479	(2) 1 3/8	(2) 1 3/8	32.2	103.2	1,792
CLW-056	1 X 4	28.95	434.25	579.00	723.75	868.50	70	414	(1) 2 1/8	(1) 2 1/8	42	134.7	2,019
CLW-057	2 X 2	28.95	434.25	579.00	723.75	868.50	70	414	(2) 1 5/8	(2) 1 5/8	43	137.6	1,882
CLW-066	1 X 5	33.68	505.14	673.52	841.90	1,010.28	43	783	(1) 2 5/8	(1) 2 5/8	60.9	195.1	2,403
CLW-073	2 X 3	37.34	560.10	746.80	933.50	1,120.20	104	359	(2) 1 5/8	(2) 1 5/8	47.6	152.6	2,508
CLW-075	1 X 5	38.55	578.25	771.00	963.75	1,156.50	58	665	(1) 2 5/8	(1) 2 5/8	81.2	260.1	2,475
CLW-079	1 X 6	40.41	606.17	808.22	1,010.28	1,212.33	43	940	(1) 2 5/8	(1) 2 5/8	72.9	233.4	2,808
CLW-085	2 X 3	43.43	651.38	868.50	1,085.63	1,302.75	140	310	(2) 2 1/8	(2) 2 1/8	63.5	203.5	2,664
CLW-090	1 X 6	46.26	693.89	925.18	1,156.48	1,387.77	58	798	(1) 2 5/8	(1) 2 5/8	97.2	311.2	2,964
CLW-095	1 X 7	48.93	734.01	978.68	1,223.35	1,468.02	43	1,138	(1) 2 5/8	(1) 2 5/8	84.8	271.8	2,645
CLW-097	2 X 4	49.79	746.81	995.74	1,244.68	1,493.61	104	479	(2) 2 1/8	(2) 2 1/8	63.1	202.1	3,029
CLW-105	1 X 7	54.53	817.95	1,090.60	1,363.25	1,635.90	58	940	(2) 2 1/8	(2) 2 1/8	113.1	362.3	2,928
CLW-113	2 X 4	57.90	868.52	1,158.02	1,447.53	1,737.03	140	414	(2) 2 1/8	(2) 2 1/8	84.1	269.4	3,338
CLW-131	2 X 5	67.35	1,010.27	1,347.02	1,683.78	2,020.53	86	783	(2) 2 5/8	(2) 2 5/8	121.8	390.2	4,198
CLW-151	2 X 5	77.10	1,156.49	1,541.98	1,927.48	2,312.97	112	688	(2) 2 5/8	(2) 2 5/8	162.4	520.2	4,560
CLW-158	2 X 6	80.82	1,212.33	1,616.44	2,020.55	2,424.66	86	940	(2) 2 5/8	(2) 2 5/8	145.7	466.8	5,292
CLW-181	2 X 6	92.52	1,387.79	1,850.38	2,312.98	2,775.57	116	798	(2) 2 5/8	(2) 2 5/8	194.3	622.4	5,642
CLW-190	2 X 7	97.87	1,468.02	1,957.36	2,446.70	2,936.04	86	1,138	(2) 2 5/8	(2) 2 5/8	169.7	543.5	4,275
CLW-210	2 X 7	109.06	1,635.89	2,181.18	2,726.48	3,271.77	116	940	(4) 2 1/8	(4) 2 1/8	226.2	724.7	4,861

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA — CNR - 2HP/1140 RPM/10+ FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CNR-012	1 X 1	6.24	93.63	124.84	156.05	187.26	11	567	(1) 1 1/8	(1) 1 1/8	6.1	19.6	515
CNR-014	1 X 1	6.97	104.52	139.36	174.20	209.04	11	633	(1) 1 1/8	(1) 1 1/8	6.1	19.6	525
CNR-016	1 X 1	8.12	121.79	162.38	202.98	243.57	17	478	(1) 1 1/8	(1) 1 1/8	9.2	29.4	592
CNR-017	1 X 1	8.87	133.08	177.44	221.80	266.16	17	522	(1) 1 1/8	(1) 1 1/8	9.2	29.4	602
CNR-018	1 X 1	9.27	139.01	185.34	231.68	278.01	17	545	(1) 1 3/8	(1) 1 3/8	12.3	39.3	641
CNR-019	1 X 1	9.86	147.83	197.10	246.38	295.65	17	580	(1) 1 3/8	(1) 1 3/8	12.3	39.3	654
CNR-024	1 X 2	12.48	187.25	249.66	312.08	374.49	17	734	(1) 1 3/8	(1) 1 3/8	11.8	37.7	985
CNR-027	1 X 2	13.94	209.06	278.74	348.43	418.11	17	820	(1) 1 5/8	(1) 1 5/8	11.8	37.7	1,005
CNR-032	1 X 2	16.24	243.57	324.76	405.95	487.14	26	625	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,063
CNR-035	1 X 2	17.74	266.15	354.86	443.58	532.29	26	682	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,091
CNR-036	1 X 2	18.54	278.03	370.70	463.38	556.05	35	530	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,117
CNR-038	2 X 1	18.32	274.77	366.36	457.95	549.54	34	539	(2) 1 3/8	(2) 1 3/8	24.5	78.5	1,117
CNR-039	1 X 2	19.71	295.65	394.20	492.75	591.30	35	563	(1) 2 1/8	(1) 2 1/8	23.5	75.4	1,159
CNR-048	1 X 3	24.36	365.37	487.16	608.95	730.74	52	468	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,460
CNR-052	1 X 3	26.62	399.23	532.30	665.38	798.45	52	512	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,490
CNR-054	1 X 3	27.80	417.03	556.04	695.05	834.06	70	397	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,570
CNR-058	1 X 3	29.56	443.46	591.28	739.10	886.92	70	422	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,609
CNR-063	1 X 4	32.48	487.16	649.54	811.93	974.31	52	625	(1) 2 1/8	(1) 2 1/8	34.5	110.7	1,875
CNR-064	2 X 2	32.48	487.16	649.54	811.93	974.31	52	625	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,792
CNR-069	1 X 4	35.49	532.31	709.74	887.18	1,064.61	70	507	(1) 2 5/8	(1) 2 5/8	34.5	110.7	1,915
CNR-070	2 X 2	35.49	532.31	709.74	887.18	1,064.61	52	682	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,781
CNR-072	1 X 4	37.07	556.05	741.40	926.75	1,112.10	70	530	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,019
CNR-073	2 X 2	37.07	556.05	741.40	926.75	1,112.10	70	530	(2) 1 5/8	(2) 1 5/8	47.1	150.8	1,934
CNR-077	1 X 4	38.42	576.29	768.38	960.48	1,152.57	70	549	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,071
CNR-078	2 X 2	38.42	576.29	768.38	960.48	1,152.57	70	549	(2) 2 1/8	(2) 2 1/8	47.1	150.8	2,071
CNR-082	2 X 3	41.81	627.15	836.20	1,045.25	1,254.30	70	597	(2) 2 1/8	(2) 2 1/8	34.8	111.5	2,323
CNR-085	1 X 5	43.75	656.18	874.90	1,093.63	1,312.35	43	1,017	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,338
CNR-092	1 X 5	47.30	709.44	945.92	1,182.40	1,418.88	43	1,100	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,403
CNR-095	2 X 3	48.72	730.73	974.30	1,217.88	1,461.45	104	468	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,430
CNR-096	1 X 5	49.30	739.46	985.94	1,232.43	1,478.91	58	850	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,475
CNR-101	1 X 5	51.75	776.18	1,034.90	1,293.63	1,552.35	58	892	(2) 2 1/8	(2) 2 1/8	81.9	262.3	2,540
CNR-102	1 X 6	52.49	787.41	1,049.88	1,312.35	1,574.82	43	1,221	(2) 2 1/8	(2) 2 1/8	73.5	235.5	2,730
CNR-104	2 X 3	53.23	798.45	1,064.60	1,330.75	1,596.90	104	512	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,508
CNR-109	2 X 3	55.61	834.08	1,112.10	1,390.13	1,668.15	140	397	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,664
CNR-111	1 X 6	56.76	851.33	1,135.10	1,418.88	1,702.65	43	1,320	(2) 2 1/8	(2) 2 1/8	73.5	235.5	2,808
CNR-115	2 X 3	59.13	886.94	1,182.58	1,478.23	1,773.87	140	422	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,742
CNR-116	1 X 6	59.16	887.34	1,183.12	1,478.90	1,774.68	58	1,020	(2) 2 1/8	(2) 2 1/8	98	313.9	2,964
CNR-121	1 X 6	62.09	931.41	1,241.88	1,552.35	1,862.82	58	1,071	(2) 2 1/8	(2) 2 1/8	98	313.9	3,000
CNR-126	1 X 7	65.25	978.75	1,305.00	1,631.25	1,957.50	43	1,517	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,160
CNR-127	2 X 4	64.95	974.31	1,299.08	1,623.85	1,948.62	104	625	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,029
CNR-135	1 X 7	68.16	1,022.43	1,363.24	1,704.05	2,044.86	43	1,585	(2) 2 5/8	(2) 2 5/8	85.6	274.1	3,240
CNR-139	2 X 4	70.97	1,064.60	1,419.46	1,774.33	2,129.19	104	682	(2) 2 5/8	(2) 2 5/8	69.1	221.3	3,129
CNR-140	1 X 7	68.16	1,022.43	1,363.24	1,704.05	2,044.86	58	1,175	(2) 2 5/8	(2) 2 5/8	114.1	365.4	3,443
CNR-144	1 X 7	73.66	1,104.84	1,473.12	1,841.40	2,209.68	58	1,270	(2) 2 5/8	(2) 2 5/8	114.1	365.4	3,543
CNR-145	2 X 4	74.14	1,112.10	1,482.80	1,853.50	2,224.20	140	530	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,338
CNR-154	2 X 4	78.84	1,182.59	1,576.78	1,970.98	2,365.17	140	563	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,442
CNR-171	2 X 5	87.49	1,312.34	1,749.78	2,187.23	2,624.67	86	1,017	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,198
CNR-185	2 X 5	94.59	1,418.88	1,891.84	2,364.80	2,837.76	86	1,100	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,298
CNR-193	2 X 5	98.59	1,478.90	1,971.86	2,464.83	2,957.79	116	850	(2) 2 5/8	(2) 2 5/8	163.8	524.7	4,560
CNR-202	2 X 5	103.49	1,552.37	2,069.82	2,587.28	3,104.73	116	892	(4) 2 1/8	(4) 2 1/8	163.8	524.7	4,690
CNR-205	2 X 6	104.99	1,574.81	2,099.74	2,624.68	3,149.61	86	1,221	(4) 2 1/8	(4) 2 1/8	147	470.8	5,136
CNR-222	2 X 6	113.51	1,702.67	2,270.22	2,837.78	3,405.33	86	1,320	(4) 2 1/8	(4) 2 1/8	147	470.8	5,292
CNR-231	2 X 6	118.31	1,774.68	2,366.24	2,957.80	3,549.36	116	1,020	(4) 2 1/8	(4) 2 1/8	196	627.7	5,642
CNR-243	2 X 6	124.19	1,862.84	2,483.78	3,104.73	3,725.67	116	1,071	(4) 2 1/8	(4) 2 1/8	196	627.7	5,798
CNR-252	2 X 7	127.07	1,905.99	2,541.32	3,176.65	3,811.98	86	1,478	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,325
CNR-270	2 X 7	136.32	2,044.86	2,726.48	3,408.10	4,089.72	86	1,585	(4) 2 5/8	(4) 2 5/8	171.1	548.2	5,475
CNR-271	2 X 7	136.32	2,044.86	2,726.48	3,408.10	4,089.72	116	1,175	(4) 2 5/8	(4) 2 5/8	228.2	730.9	5,881
CNR-288	2 X 7	147.41	2,211.20	2,948.26	3,685.33	4,422.39	116	1,271	(4) 2 5/8	(4) 2 5/8	228.2	730.9	6,081

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

CNW - 2HP/1140 RPM/8 FPI

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CNW-011	1 X 1	5.45	81.74	108.98	136.23	163.47	11	495	(1) 1 1/8	(1) 1 1/8	6.1	19.6	520
CNW-014	1 X 1	7.23	108.42	144.56	180.70	216.84	17	425	(1) 1 1/8	(1) 1 1/8	9.2	29.4	597
CNW-017	1 X 1	8.49	127.35	169.80	212.25	254.70	17	499	(1) 1 1/8	(1) 1 1/8	12.3	39.3	648
CNW-021	1 X 2	10.90	163.47	217.96	272.45	326.94	17	641	(1) 1 3/8	(1) 1 3/8	11.8	37.7	612
CNW-028	1 X 2	14.46	216.86	289.14	361.43	433.71	26	556	(1) 1 5/8	(1) 1 5/8	17.6	56.5	995
CNW-033	1 X 2	16.98	254.70	339.60	424.50	509.40	35	485	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,138
CNW-034	2 X 1	16.98	254.70	339.60	424.50	509.40	34	499	(2) 1 1/8	(2) 1 1/8	24.5	78.5	1,138
CNW-042	1 X 3	21.69	325.28	433.70	542.13	650.55	52	417	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,475
CNW-050	1 X 3	25.47	382.07	509.42	636.78	764.13	70	364	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,590
CNW-056	1 X 4	28.91	433.70	578.26	722.83	867.39	52	556	(1) 2 1/8	(1) 2 1/8	34.5	110.7	1,796
CNW-057	2 X 2	28.91	433.70	578.26	722.83	867.39	52	556	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,900
CNW-066	1 X 4	33.96	509.42	679.22	849.03	1,018.83	70	485	(1) 2 5/8	(1) 2 5/8	46.1	147.5	1,908
CNW-067	2 X 2	33.96	509.42	679.22	849.03	1,018.83	70	485	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,045
CNW-077	1 X 5	39.41	591.15	788.20	985.25	1,182.30	43	917	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,361
CNW-085	2 X 3	43.37	650.55	867.40	1,084.25	1,301.10	104	417	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,468
CNW-089	1 X 5	45.77	686.51	915.34	1,144.18	1,373.01	58	789	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,507
CNW-092	1 X 6	47.29	709.38	945.84	1,182.30	1,418.76	43	1,100	(1) 2 5/8	(1) 2 5/8	73.5	235.5	2,768
CNW-100	2 X 3	50.84	762.62	1,016.82	1,271.03	1,525.23	140	363	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,703
CNW-107	2 X 3	54.92	823.82	1,098.42	1,373.03	1,647.63	58	947	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,003
CNW-112	1 X 7	57.48	862.20	1,149.60	1,437.00	1,724.40	43	1,337	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,200
CNW-113	2 X 4	57.83	867.41	1,156.54	1,445.68	1,734.81	104	556	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,079
CNW-130	1 X 7	64.70	970.55	1,294.06	1,617.58	1,941.09	86	752	(2) 2 1/8	(2) 2 1/8	114.1	365.4	3,483
CNW-133	2 X 4	67.92	1,018.83	1,358.44	1,698.05	2,037.66	140	485	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,390
CNW-154	2 X 5	78.82	1,182.32	1,576.42	1,970.53	2,364.63	86	917	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,248
CNW-179	2 X 5	91.53	1,373.01	1,830.68	2,288.35	2,746.02	112	817	(2) 2 5/8	(2) 2 5/8	163.8	524.7	4,625
CNW-185	2 X 6	94.59	1,418.78	1,891.70	2,364.63	2,837.55	86	1,100	(2) 2 5/8	(2) 2 5/8	147	470.8	5,242
CNW-215	2 X 6	109.84	1,647.62	2,196.82	2,746.03	3,295.23	116	947	(4) 2 1/8	(4) 2 1/8	196	627.7	5,716
CNW-224	2 X 7	115.06	1,725.92	2,301.22	2,876.53	3,451.83	86	1,338	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,385
CNW-260	2 X 7	129.51	1,942.62	2,590.16	3,237.70	3,885.24	116	1,116	(4) 2 1/8	(4) 2 1/8	228.2	730.9	5,971

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

CVR NORMAL/HIGH SPEED 1.25HP/730 RPM/10+ FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CVR-012	1 X 1	6.30	94.52	126.02	157.53	189.03	11	573	(1) 1 1/8	(1) 1 1/8	6.1	19.6	565
CVR-014	1 X 1	7.04	105.62	140.82	176.03	211.23	11	640	(1) 1 1/8	(1) 1 1/8	6.1	19.6	575
CVR-016	1 X 1	7.97	119.55	159.40	199.25	239.10	17	469	(1) 1 1/8	(1) 1 1/8	9.2	29.4	642
CVR-017	1 X 1	8.66	129.96	173.28	216.60	259.92	17	510	(1) 1 1/8	(1) 1 1/8	9.2	29.4	652
CVR-018	1 X 1	9.04	135.59	180.78	225.98	271.17	17	532	(1) 1 3/8	(1) 1 3/8	12.3	39.3	691
CVR-019	1 X 1	9.55	143.19	190.92	238.65	286.38	17	562	(1) 1 3/8	(1) 1 3/8	12.3	39.3	704
CVR-025	1 X 2	12.60	189.02	252.02	315.03	378.03	17	741	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,085
CVR-028	1 X 2	10.08	151.22	201.62	252.03	302.43	17	593	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,105
CVR-031	1 X 2	15.94	239.09	318.78	398.48	478.17	26	613	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,163
CVR-034	1 X 2	17.33	259.92	346.56	433.20	519.84	26	666	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,191
CVR-035	1 X 2	18.07	271.07	361.42	451.78	542.13	35	516	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,217
CVR-037	1 X 2	19.09	286.37	381.82	477.28	572.73	35	545	(1) 2 1/8	(1) 2 1/8	23.5	75.4	1,259
CVR-038	2 X 1	18.82	282.36	376.48	470.60	564.72	34	554	(2) 1 3/8	(2) 1 3/8	24.5	78.5	1,259
CVR-047	1 X 3	23.91	358.64	478.18	597.73	717.27	52	460	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,610
CVR-051	1 X 3	25.99	389.90	519.86	649.83	779.79	52	500	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,640
CVR-053	1 X 3	25.63	384.48	512.64	640.80	768.96	70	366	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,720
CVR-056	1 X 3	28.64	429.56	572.74	715.93	859.11	70	409	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,759
CVR-061	1 X 4	31.88	478.17	637.56	796.95	956.34	52	613	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,075
CVR-062	2 X 2	31.88	478.17	637.56	796.95	956.34	52	613	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,910
CVR-067	1 X 4	34.66	519.86	693.14	866.43	1,039.71	52	666	(1) 2 5/8	(1) 2 5/8	34.5	110.7	2,115
CVR-068	2 X 2	34.66	519.86	693.14	866.43	1,039.71	52	666	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,992
CVR-070	1 X 4	36.16	542.34	723.12	903.90	1,084.68	70	517	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,219
CVR-071	2 X 2	36.16	542.34	723.12	903.90	1,084.68	70	517	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,082
CVR-074	1 X 4	38.18	572.75	763.66	954.58	1,145.49	70	545	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,271
CVR-075	2 X 2	38.18	572.75	763.66	954.58	1,145.49	70	545	(2) 2 1/8	(2) 2 1/8	47.1	150.8	2,134
CVR-083	2 X 3	42.24	633.66	844.88	1,056.10	1,267.32	70	603	(2) 2 1/8	(2) 2 1/8	34.8	111.5	2,623
CVR-084	1 X 5	42.14	632.06	842.74	1,053.43	1,264.11	43	980	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CVR-089	1 X 5	45.27	679.11	905.48	1,131.85	1,358.22	43	1,053	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CVR-092	1 X 5	47.20	707.96	943.94	1,179.93	1,415.91	58	814	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,725
CVR-094	2 X 3	50.56	758.46	1,011.28	1,264.10	1,516.92	104	486	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,730
CVR-096	1 X 5	49.25	738.72	984.96	1,231.20	1,477.44	58	849	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,790
CVR-099	1 X 6	50.56	758.46	1,011.28	1,264.10	1,516.92	43	1,176	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,000
CVR-101	2 X 3	54.33	814.94	1,086.58	1,358.23	1,629.87	104	522	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,808
CVR-105	1 X 6	54.33	814.94	1,086.58	1,358.23	1,629.87	43	1,263	(2) 2 1/8	(2) 2 1/8	73.5	235.5	3,108
CVR-106	2 X 3	57.27	859.11	1,145.48	1,431.85	1,718.22	140	409	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,964
CVR-111	1 X 6	57.27	859.11	1,145.48	1,431.85	1,718.22	58	987	(2) 2 1/8	(2) 2 1/8	98	313.9	3,264
CVR-112	2 X 3	59.10	886.47	1,181.96	1,477.45	1,772.94	140	422	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,042
CVR-116	1 X 6	59.10	886.47	1,181.96	1,477.45	1,772.94	58	1,019	(2) 2 1/8	(2) 2 1/8	98	313.9	3,342
CVR-120	1 X 7	60.94	914.09	1,218.78	1,523.48	1,828.17	43	1,417	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,775
CVR-125	2 X 4	63.76	956.34	1,275.12	1,593.90	1,912.68	104	613	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,429
CVR-128	1 X 7	64.60	969.02	1,292.02	1,615.03	1,938.03	43	1,502	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,855
CVR-131	1 X 7	64.60	969.02	1,292.02	1,615.03	1,938.03	58	1,114	(2) 2 1/8	(2) 2 1/8	114.1	365.4	4,058
CVR-133	1 X 7	68.06	1,020.90	1,361.20	1,701.50	2,041.80	58	1,173	(2) 2 5/8	(2) 2 5/8	114.1	365.4	4,158
CVR-135	2 X 4	74.33	1,114.88	1,486.50	1,858.13	2,229.75	104	715	(2) 2 5/8	(2) 2 5/8	69.1	221.3	3,529
CVR-141	2 X 4	76.37	1,145.49	1,527.32	1,909.15	2,290.98	140	545	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,738
CVR-149	2 X 4	78.22	1,173.30	1,564.40	1,955.50	2,346.60	140	559	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,842
CVR-165	2 X 5	84.27	1,264.11	1,685.48	2,106.85	2,528.22	86	980	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,698
CVR-177	2 X 5	90.55	1,358.22	1,810.96	2,263.70	2,716.44	86	1,053	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,798
CVR-184	2 X 5	94.40	1,415.93	1,887.90	2,359.88	2,831.85	116	814	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,060
CVR-192	2 X 5	98.50	1,477.44	1,969.92	2,462.40	2,954.88	116	849	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,190
CVR-200	2 X 6	101.13	1,516.92	2,022.56	2,528.20	3,033.84	86	1,176	(2) 2 5/8	(2) 2 5/8	147	470.8	5,736
CVR-212	2 X 6	108.66	1,629.86	2,173.14	2,716.43	3,259.71	86	1,263	(4) 2 1/8	(4) 2 1/8	147	470.8	5,892
CVR-221	2 X 6	113.27	1,699.11	2,265.48	2,831.85	3,398.22	116	977	(4) 2 1/8	(4) 2 1/8	196	627.7	6,242
CVR-231	2 X 6	118.20	1,772.93	2,363.90	2,954.88	3,545.85	116	1,019	(4) 2 1/8	(4) 2 1/8	196	627.7	6,398
CVR-240	2 X 7	121.78	1,826.64	2,435.52	3,044.40	3,653.28	86	1,416	(4) 2 1/8	(4) 2 1/8	171.1	548.2	6,237
CVR-256	2 X 7	129.30	1,939.56	2,586.08	3,232.60	3,879.12	86	1,504	(4) 2 1/8	(4) 2 1/8	171.1	548.2	6,387
CVR-257	2 X 7	129.30	1,939.56	2,586.08	3,232.60	3,879.12	116	1,115	(4) 2 1/8	(4) 2 1/8	228.2	730.9	6,793
CVR-266	2 X 7	136.02	2,040.29	2,720.38	3,400.48	4,080.57	116	1,173	(4) 2 5/8	(4) 2 5/8	228.2	730.9	6,993

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

CVR LOW SPEED 0.5HP/510 RPM/10+ FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CVR-012L	1 X 1	5.42	81.23	108.30	135.38	162.45	11	492	(1) 1 1/8	(1) 1 1/8	6.1	19.6	565
CVR-014L	1 X 1	5.83	87.47	116.62	145.78	174.93	11	530	(1) 1 1/8	(1) 1 1/8	6.1	19.6	575
CVR-016L	1 X 1	6.45	96.72	128.96	161.20	193.44	17	379	(1) 1 1/8	(1) 1 1/8	9.2	29.4	642
CVR-017L	1 X 1	6.73	100.95	134.60	168.25	201.90	17	396	(1) 1 1/8	(1) 1 1/8	9.2	29.4	652
CVR-018L	1 X 1	6.77	101.61	135.48	169.35	203.22	17	398	(1) 1 1/8	(1) 1 1/8	12.3	39.3	691
CVR-019L	1 X 1	6.85	102.75	137.00	171.25	205.50	17	403	(1) 1 1/8	(1) 1 1/8	12.3	39.3	704
CVR-025L	1 X 2	10.83	162.45	216.60	270.75	324.90	17	637	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,085
CVR-028L	1 X 2	11.66	174.95	233.26	291.58	349.89	17	686	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,105
CVR-031L	1 X 2	12.90	193.43	257.90	322.38	386.85	26	496	(1) 1 3/8	(1) 1 3/8	17.6	56.5	1,163
CVR-034L	1 X 2	13.46	201.89	269.18	336.48	403.77	26	518	(1) 1 3/8	(1) 1 3/8	17.6	56.5	1,191
CVR-035L	1 X 2	13.55	203.21	270.94	338.68	406.41	35	387	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,217
CVR-037L	1 X 2	13.70	205.49	273.98	342.48	410.97	35	391	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,259
CVR-047L	1 X 3	19.34	290.15	386.86	483.58	580.29	52	372	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,610
CVR-051L	1 X 3	20.19	302.84	403.78	504.73	605.67	52	388	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,640
CVR-053L	1 X 3	20.32	304.82	406.42	508.03	609.63	70	290	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,720
CVR-056L	1 X 3	20.55	308.24	410.98	513.73	616.47	70	294	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,759
CVR-061L	1 X 4	25.79	386.87	515.82	644.78	773.73	52	496	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,075
CVR-062L	2 X 2	25.79	386.87	515.82	644.78	773.73	52	496	(2) 1 3/8	(2) 1 3/8	35.3	113.1	1,910
CVR-067L	1 X 4	26.92	403.79	538.38	672.98	807.57	70	385	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,115
CVR-068L	2 X 2	26.92	403.79	538.38	672.98	807.57	52	518	(2) 1 3/8	(2) 1 3/8	35.3	113.1	1,992
CVR-070L	1 X 4	27.09	406.41	541.88	677.35	812.82	70	387	(1) 2 1/8	(1) 2 1/8	46.1	147.5	2,219
CVR-071L	2 X 2	27.09	406.41	541.88	677.35	812.82	70	387	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,082
CVR-074L	1 X 4	27.40	410.99	547.98	684.98	821.97	70	391	(1) 2 1/8	(1) 2 1/8	46.1	147.5	2,271
CVR-075L	2 X 2	27.40	410.99	547.98	684.98	821.97	70	391	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,134
CVR-083L	2 X 3	34.99	524.82	699.76	874.70	1,049.64	70	500	(2) 1 5/8	(2) 1 5/8	34.8	111.5	2,623
CVR-084L	1 X 5	32.22	483.27	644.36	805.45	966.54	43	749	(1) 2 1/8	(1) 2 1/8	61.4	196.7	2,653
CVR-089L	1 X 5	33.53	503.01	670.68	838.35	1,006.02	43	780	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CVR-092L	1 X 5	34.19	512.90	683.86	854.83	1,025.79	58	590	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,725
CVR-094L	2 X 3	38.66	579.92	773.22	966.53	1,159.83	104	372	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,730
CVR-096L	1 X 5	34.55	518.25	691.00	863.75	1,036.50	58	596	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,790
CVR-099L	1 X 6	38.66	579.92	773.22	966.53	1,159.83	43	899	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,000
CVR-101L	2 X 3	40.24	603.62	804.82	1,006.03	1,207.23	104	387	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,808
CVR-105L	1 X 6	40.24	603.62	804.82	1,006.03	1,207.23	43	936	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,108
CVR-106L	2 X 3	41.10	616.47	821.96	1,027.45	1,232.94	140	294	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,964
CVR-111L	1 X 6	41.10	616.47	821.96	1,027.45	1,232.94	58	709	(1) 2 5/8	(1) 2 5/8	98	313.9	3,264
CVR-112L	2 X 3	41.46	621.90	829.20	1,036.50	1,243.80	140	296	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,042
CVR-116L	1 X 6	41.46	621.90	829.20	1,036.50	1,243.80	58	715	(1) 2 5/8	(1) 2 5/8	98	313.9	3,342
CVR-120L	1 X 7	46.80	701.97	935.96	1,169.95	1,403.94	43	1,088	(1) 2 5/8	(1) 2 5/8	85.6	274.1	3,355
CVR-125L	2 X 4	51.58	773.73	1,031.64	1,289.55	1,547.46	104	496	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,429
CVR-128L	1 X 7	48.83	732.48	976.64	1,220.80	1,464.96	43	1,136	(1) 2 5/8	(1) 2 5/8	85.6	274.1	3,435
CVR-131L	1 X 7	48.83	732.48	976.64	1,220.80	1,464.96	58	842	(1) 2 5/8	(1) 2 5/8	114.1	365.4	3,638
CVR-133L	1 X 7	49.34	740.12	986.82	1,233.53	1,480.23	58	851	(1) 2 5/8	(1) 2 5/8	114.1	365.4	3,738
CVR-135L	2 X 4	56.13	841.92	1,122.56	1,403.20	1,683.84	104	540	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,529
CVR-141L	2 X 4	54.80	821.96	1,095.94	1,369.93	1,643.91	140	391	(2) 2 1/8	(2) 2 1/8	92.1	295.1	3,738
CVR-149L	2 X 4	56.73	850.98	1,134.64	1,418.30	1,701.96	140	405	(2) 2 1/8	(2) 2 1/8	92.1	295.1	3,842
CVR-165L	2 X 5	64.44	966.53	1,288.70	1,610.88	1,933.05	86	749	(2) 2 1/8	(2) 2 1/8	122.8	393.5	4,698
CVR-177L	2 X 5	67.07	1,006.04	1,341.38	1,676.73	2,012.07	86	780	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,798
CVR-184L	2 X 5	68.39	1,025.79	1,367.72	1,709.65	2,051.58	116	590	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,060
CVR-192L	2 X 5	69.10	1,036.50	1,382.00	1,727.50	2,073.00	116	596	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,190
CVR-200L	2 X 6	77.32	1,159.85	1,546.46	1,933.08	2,319.69	86	899	(2) 2 5/8	(2) 2 5/8	147	470.8	5,736
CVR-212L	2 X 6	80.48	1,207.25	1,609.66	2,012.08	2,414.49	86	936	(2) 2 5/8	(2) 2 5/8	147	470.8	5,892
CVR-221L	2 X 6	82.63	1,239.45	1,652.60	2,065.75	2,478.90	116	712	(2) 2 5/8	(2) 2 5/8	196	627.7	6,242
CVR-231L	2 X 6	82.92	1,243.82	1,658.42	2,073.03	2,487.63	116	715	(2) 2 5/8	(2) 2 5/8	196	627.7	6,398
CVR-240L	2 X 7	93.60	1,403.94	1,871.92	2,339.90	2,807.88	86	1,088	(2) 2 5/8	(2) 2 5/8	171.1	548.2	5,685
CVR-256L	2 X 7	97.56	1,463.45	1,951.26	2,439.08	2,926.89	86	1,134	(2) 2 5/8	(2) 2 5/8	171.1	548.2	5,835
CVR-257L	2 X 7	97.56	1,463.45	1,951.26	2,439.08	2,926.89	116	841	(2) 2 5/8	(2) 2 5/8	228.2	730.9	6,241
CVR-266L	2 X 7	98.78	1,481.76	1,975.68	2,469.60	2,963.52	116	852	(2) 2 5/8	(2) 2 5/8	228.2	730.9	6,441

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

CVW NORMAL/HIGH SPEED 1.25HP/730 RPM/8 FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CVW-011	1 X 1	5.50	82.47	109.96	137.45	164.94	11	500	(1) 1 1/8	(1) 1 1/8	6.1	19.6	570
CVW-014	1 X 1	7.14	107.10	142.80	178.50	214.20	17	420	(1) 1 1/8	(1) 1 1/8	9.2	29.4	647
CVW-016	1 X 1	8.34	125.04	166.72	208.40	250.08	17	490	(1) 1 1/8	(1) 1 1/8	12.3	39.3	698
CVW-021	1 X 2	11.00	164.96	219.94	274.93	329.91	17	647	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,012
CVW-028	1 X 2	14.28	214.22	285.62	357.03	428.43	26	549	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,095
CVW-033	1 X 2	16.67	250.08	333.44	416.80	500.16	35	476	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,238
CVW-042	1 X 3	21.42	321.32	428.42	535.53	642.63	52	412	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,625
CVW-049	1 X 3	25.01	375.14	500.18	625.23	750.27	70	357	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,740
CVW-055	1 X 4	28.56	428.43	571.24	714.05	856.86	52	549	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,100
CVW-056	2 X 2	28.56	428.43	571.24	714.05	856.86	52	549	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,996
CVW-064	1 X 4	33.35	500.18	666.90	833.63	1,000.35	70	476	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,245
CVW-065	2 X 2	33.35	500.18	666.90	833.63	1,000.35	70	476	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,108
CVW-070	1 X 5	35.70	535.53	714.04	892.55	1,071.06	43	830	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,611
CVW-081	1 X 5	41.68	625.22	833.62	1,042.03	1,250.43	58	719	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,757
CVW-084	2 X 3	42.84	642.65	856.86	1,071.08	1,285.29	104	412	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,768
CVW-090	1 X 6	42.84	642.65	856.86	1,071.08	1,285.29	43	996	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,068
CVW-098	2 X 3	50.02	750.26	1,000.34	1,250.43	1,500.51	140	357	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,003
CVW-104	1 X 6	50.02	750.26	1,000.34	1,250.43	1,500.51	58	862	(1) 2 5/8	(1) 2 5/8	98	313.9	3,303
CVW-109	1 X 7	53.51	802.68	1,070.24	1,337.80	1,605.36	43	1,244	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,395
CVW-112	2 X 4	57.12	856.85	1,142.46	1,428.08	1,713.69	104	549	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,479
CVW-120	1 X 7	58.19	872.88	1,163.84	1,454.80	1,745.76	58	1,003	(2) 2 1/8	(2) 2 1/8	114.1	365.4	3,678
CVW-130	2 X 4	66.69	1,000.34	1,333.78	1,667.23	2,000.67	140	476	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,790
CVW-140	2 X 5	71.40	1,071.06	1,428.08	1,785.10	2,142.12	86	830	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,748
CVW-163	2 X 5	83.36	1,250.43	1,667.24	2,084.05	2,500.86	112	744	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,125
CVW-167	2 X 6	85.69	1,285.28	1,713.70	2,142.13	2,570.55	86	996	(2) 2 5/8	(2) 2 5/8	147	470.8	5,842
CVW-195	2 X 6	100.03	1,500.51	2,000.68	2,500.85	3,001.02	116	862	(2) 2 5/8	(2) 2 5/8	196	627.7	6,316
CVW-218	2 X 7	107.02	1,605.36	2,140.48	2,675.60	3,210.72	86	1,244	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,751
CVW-240	2 X 7	117.71	1,765.61	2,354.14	2,942.68	3,531.21	116	1,015	(4) 2 1/8	(4) 2 1/8	228.2	730.9	6,331

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

CVW LOW SPEED 0.5HP/510 RPM/8 FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CVW-011L	1 X 1	4.92	73.76	98.34	122.93	147.51	11	447	(1) 7/8	(1) 7/8	6.1	19.6	570
CVW-014L	1 X 1	6.05	90.74	120.98	151.23	181.47	17	356	(1) 1 1/8	(1) 1 1/8	9.2	29.4	647
CVW-016L	1 X 1	6.56	98.34	131.12	163.90	196.68	17	386	(1) 1 1/8	(1) 1 1/8	12.3	39.3	698
CVW-021L	1 X 2	9.83	147.51	196.68	245.85	295.02	17	578	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,012
CVW-028L	1 X 2	12.10	181.47	241.96	302.45	362.94	26	465	(1) 1 3/8	(1) 1 3/8	17.6	56.5	1,095
CVW-033L	1 X 2	13.11	196.68	262.24	327.80	393.36	35	375	(1) 1 3/8	(1) 1 3/8	23.5	75.4	1,238
CVW-042L	1 X 3	18.15	272.22	362.96	453.70	544.44	52	349	(1) 1 5/8	(1) 1 5/8	26.1	83.6	1,625
CVW-049L	1 X 3	19.67	295.04	393.38	491.73	590.07	70	281	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,740
CVW-055L	1 X 4	24.20	362.96	483.94	604.93	725.91	52	465	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,100
CVW-056L	2 X 2	24.20	362.96	483.94	604.93	725.91	52	465	(2) 1 3/8	(2) 1 3/8	35.3	113.1	1,996
CVW-064L	1 X 4	26.23	393.38	524.50	655.63	786.75	70	375	(1) 2 1/8	(1) 2 1/8	46.1	147.5	2,245
CVW-065L	2 X 2	26.23	393.38	524.50	655.63	786.75	70	375	(2) 1 3/8	(2) 1 3/8	47.1	150.8	2,108
CVW-070L	1 X 5	30.25	453.69	604.92	756.15	907.38	43	703	(1) 2 1/8	(1) 2 1/8	61.4	196.7	2,611
CVW-081L	1 X 5	32.78	491.72	655.62	819.53	983.43	58	565	(1) 2 1/8	(1) 2 1/8	81.9	262.3	2,757
CVW-084L	2 X 3	36.30	544.43	725.90	907.38	1,088.85	104	349	(2) 1 5/8	(2) 1 5/8	52.2	167.2	2,768
CVW-090L	1 X 6	36.30	544.43	725.90	907.38	1,088.85	43	844	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,068
CVW-098L	2 X 3	39.34	590.06	786.74	983.43	1,180.11	140	281	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,003
CVW-104L	1 X 6	39.34	590.06	786.74	983.43	1,180.11	58	678	(1) 2 5/8	(1) 2 5/8	98	313.9	3,303
CVW-109L	1 X 7	43.03	645.51	860.68	1,075.85	1,291.02	43	1,001	(1) 2 5/8	(1) 2 5/8	85.6	274.1	3,395
CVW-112L	2 X 4	48.39	725.91	967.88	1,209.85	1,451.82	104	465	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,479
CVW-120L	1 X 7	45.98	689.76	919.68	1,149.60	1,379.52	58	793	(1) 2 5/8	(1) 2 5/8	114.1	365.4	3,678
CVW-130L	2 X 4	52.45	786.75	1,049.00	1,311.25	1,573.50	140	375	(2) 2 1/8	(2) 2 1/8	92.1	295.1	3,790
CVW-140L	2 X 5	60.49	907.38	1,209.84	1,512.30	1,814.76	86	703	(2) 2 1/8	(2) 2 1/8	122.8	393.5	4,748
CVW-163L	2 X 5	65.56	983.43	1,311.24	1,639.05	1,966.86	112	585	(2) 2 1/8	(2) 2 1/8	163.8	524.7	5,125
CVW-167L	2 X 6	72.59	1,088.85	1,451.80	1,814.75	2,177.70	86	844	(2) 2 5/8	(2) 2 5/8	147	470.8	5,842
CVW-195L	2 X 6	78.68	1,180.13	1,573.50	1,966.88	2,360.25	116	678	(2) 2 5/8	(2) 2 5/8	196	627.7	6,316
CVW-218L	2 X 7	86.07	1,291.01	1,721.34	2,151.68	2,582.01	86	1,001	(2) 2 5/8	(2) 2 5/8	171.1	548.2	5,751
CVW-240L	2 X 7	91.87	1,377.99	1,837.32	2,296.65	2,755.98	116	792	(2) 2 5/8	(2) 2 5/8	228.2	730.9	6,331

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

CBR NORMAL/HIGH SPEED 2.6HP/970 RPM/10+ FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CBR-015	1 X 1	7.44	111.56	148.74	185.93	223.11	11	676	(1) 1 1/8	(1) 1 1/8	6.1	19.6	565
CBR-017	1 X 1	8.25	123.78	165.04	206.30	247.56	14	589	(1) 1 1/8	(1) 1 1/8	6.1	19.6	575
CBR-019	1 X 1	9.43	141.47	188.62	235.78	282.93	17	555	(1) 1 3/8	(1) 1 3/8	9.2	29.4	642
CBR-020	1 X 1	10.20	152.99	203.98	254.98	305.97	17	600	(1) 1 3/8	(1) 1 3/8	9.2	29.4	652
CBR-022	1 X 1	10.95	164.30	219.06	273.83	328.59	17	644	(1) 1 3/8	(1) 1 3/8	12.3	39.3	691
CBR-023	1 X 1	11.71	175.61	234.14	292.68	351.21	17	689	(1) 1 3/8	(1) 1 3/8	12.3	39.3	704
CBR-028	1 X 2	15.18	227.63	303.50	379.38	455.25	17	893	(1) 1 5/8	(1) 1 5/8	11.8	37.7	1,085
CBR-033	1 X 2	16.75	251.27	335.02	418.78	502.53	17	985	(1) 1 5/8	(1) 1 5/8	11.8	37.7	1,105
CBR-037	1 X 2	19.26	288.90	385.20	481.50	577.80	26	741	(1) 2 1/8	(1) 2 1/8	17.6	56.5	1,163
CBR-042	1 X 2	20.77	311.52	415.36	519.20	623.04	26	799	(1) 2 1/8	(1) 2 1/8	17.6	56.5	1,191
CBR-044	1 X 2	21.92	328.79	438.38	547.98	657.57	35	626	(1) 2 1/8	(1) 2 1/8	23.5	75.4	1,217
CBR-046	1 X 2	23.16	347.40	463.20	579.00	694.80	35	662	(1) 2 1/8	(1) 2 1/8	23.5	75.4	1,259
CBR-055	1 X 3	28.13	421.94	562.58	703.23	843.87	52	541	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,610
CBR-060	1 X 3	30.44	456.59	608.78	760.98	913.17	52	585	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,640
CBR-062	1 X 3	31.95	479.21	638.94	798.68	958.41	70	456	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,720
CBR-066	1 X 3	33.87	508.10	677.46	846.83	1,016.19	70	484	(1) 2 5/8	(1) 2 5/8	34.8	111.5	1,759
CBR-075	1 X 4	38.59	578.82	771.76	964.70	1,157.64	52	742	(1) 2 5/8	(1) 2 5/8	34.5	110.7	2,075
CBR-076	2 X 2	38.59	578.82	771.76	964.70	1,157.64	52	742	(2) 2 1/8	(2) 2 1/8	35.3	113.1	1,910
CBR-082	1 X 4	41.62	624.27	832.36	1,040.45	1,248.54	52	800	(1) 2 5/8	(1) 2 5/8	34.5	110.7	2,115
CBR-083	2 X 2	41.62	624.27	832.36	1,040.45	1,248.54	52	800	(2) 2 1/8	(2) 2 1/8	35.3	113.1	1,992
CBR-088	1 X 4	43.89	658.31	877.74	1,097.18	1,316.61	70	627	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,219
CBR-089	2 X 2	43.89	658.31	877.74	1,097.18	1,316.61	70	627	(2) 2 1/8	(2) 2 1/8	47.1	150.8	2,082
CBR-090	1 X 4	46.38	695.72	927.62	1,159.53	1,391.43	70	663	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,271
CBR-091	2 X 2	46.38	695.72	927.62	1,159.53	1,391.43	70	663	(2) 2 1/8	(2) 2 1/8	47.1	150.8	2,134
CBR-092	2 X 3	46.38	695.72	927.62	1,159.53	1,391.43	70	663	(2) 2 1/8	(2) 2 1/8	34.8	111.5	2,623
CBR-094	2 X 3	49.23	738.50	984.66	1,230.83	1,476.99	70	703	(2) 2 1/8	(2) 2 1/8	34.8	111.5	2,623
CBR-098	1 X 5	49.87	748.05	997.40	1,246.75	1,496.10	43	1,160	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CBR-105	1 X 5	53.50	802.44	1,069.92	1,337.40	1,604.88	43	1,244	(2) 2 1/8	(2) 2 1/8	61.4	196.7	2,653
CBR-110	1 X 5	55.96	839.45	1,119.26	1,399.08	1,678.89	58	965	(2) 2 1/8	(2) 2 1/8	81.9	262.3	2,725
CBR-111	2 X 3	56.32	844.80	1,126.40	1,408.00	1,689.60	104	542	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,730
CBR-115	1 X 5	58.71	880.68	1,174.24	1,467.80	1,761.36	58	1,012	(2) 2 1/8	(2) 2 1/8	81.9	262.3	2,790
CBR-116	1 X 6	60.40	905.97	1,207.96	1,509.95	1,811.94	43	1,405	(2) 2 1/8	(2) 2 1/8	73.5	235.5	3,000
CBR-117	2 X 3	60.88	913.17	1,217.56	1,521.95	1,826.34	104	585	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,808
CBR-124	2 X 3	63.89	958.31	1,277.74	1,597.18	1,916.61	140	456	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,964
CBR-126	1 X 6	64.62	969.30	1,292.40	1,615.50	1,938.60	43	1,503	(2) 2 1/8	(2) 2 1/8	73.5	235.5	3,108
CBR-130	2 X 3	67.68	1,015.16	1,353.54	1,691.93	2,030.31	140	483	(2) 2 5/8	(2) 2 5/8	69.6	222.9	3,042
CBR-131	1 X 6	67.95	1,019.27	1,359.02	1,698.78	2,038.53	58	1,172	(2) 2 5/8	(2) 2 5/8	98	313.9	3,264
CBR-140	1 X 6	71.13	1,066.88	1,422.50	1,778.13	2,133.75	58	1,226	(2) 2 5/8	(2) 2 5/8	98	313.9	3,342
CBR-148	1 X 7	72.44	1,086.53	1,448.70	1,810.88	2,173.05	43	1,685	(2) 2 5/8	(2) 2 5/8	85.6	274.1	3,355
CBR-150	2 X 4	77.18	1,157.66	1,543.54	1,929.43	2,315.31	104	742	(2) 2 5/8	(2) 2 5/8	69.1	221.3	3,429
CBR-159	1 X 7	77.73	1,165.88	1,554.50	1,943.13	2,331.75	43	1,808	(2) 2 5/8	(2) 2 5/8	85.6	274.1	3,435
CBR-164	2 X 4	83.24	1,248.54	1,664.72	2,080.90	2,497.08	104	800	(2) 2 5/8	(2) 2 5/8	69.1	221.3	3,529
CBR-165	1 X 7	77.73	1,165.88	1,554.50	1,943.13	2,331.75	58	1,340	(2) 2 5/8	(2) 2 5/8	114.1	365.4	3,638
CBR-171	1 X 7	83.73	1,255.91	1,674.54	2,093.18	2,511.81	58	1,444	(2) 2 5/8	(2) 2 5/8	114.1	365.4	3,738
CBR-176	2 X 4	87.77	1,316.60	1,755.46	2,194.33	2,633.19	140	627	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,738
CBR-186	2 X 4	92.76	1,391.45	1,855.26	2,319.08	2,782.89	140	663	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,842
CBR-200	2 X 5	99.74	1,496.10	1,994.80	2,493.50	2,992.20	86	1,160	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,698
CBR-210	2 X 5	106.99	1,604.88	2,139.84	2,674.80	3,209.76	86	1,244	(4) 2 1/8	(4) 2 1/8	122.8	393.5	4,798
CBR-220	2 X 5	111.93	1,678.91	2,238.54	2,798.18	3,357.81	116	965	(4) 2 1/8	(4) 2 1/8	163.8	524.7	5,060
CBR-230	2 X 5	117.42	1,761.36	2,348.48	2,935.60	3,522.72	116	1,012	(4) 2 1/8	(4) 2 1/8	163.8	524.7	5,190
CBR-232	2 X 6	120.80	1,811.94	2,415.92	3,019.90	3,623.88	86	1,405	(4) 2 1/8	(4) 2 1/8	147	470.8	5,736
CBR-252	2 X 6	129.24	1,938.60	2,584.80	3,231.00	3,877.20	86	1,503	(4) 2 1/8	(4) 2 1/8	147	470.8	5,892
CBR-262	2 X 6	135.90	2,038.53	2,718.04	3,397.55	4,077.06	116	1,172	(4) 2 5/8	(4) 2 5/8	196	627.7	6,242
CBR-280	2 X 6	142.25	2,133.74	2,844.98	3,556.23	4,267.47	116	1,226	(4) 2 5/8	(4) 2 5/8	196	627.7	6,398
CBR-297	2 X 7	144.77	2,171.52	2,895.36	3,619.20	4,343.04	86	1,683	(4) 2 5/8	(4) 2 5/8	171.1	548.2	5,685
CBR-318	2 X 7	155.45	2,331.75	3,109.00	3,886.25	4,663.50	86	1,808	(4) 2 5/8	(4) 2 5/8	171.1	548.2	5,835
CBR-319	2 X 7	155.45	2,331.75	3,109.00	3,886.25	4,663.50	116	1,340	(4) 2 5/8	(4) 2 5/8	228.2	730.9	6,241
CBR-343	2 X 7	167.46	2,511.83	3,349.10	4,186.38	5,023.65	116	1,444	(4) 2 5/8	(4) 2 5/8	228.2	730.9	6,441

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA CBR LOW SPEED 1HP/680 RPM/10+ FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CBR-015L	1 X 1	6.01	90.17	120.22	150.28	180.33	11	546	(1) 1 1/8	(1) 1 1/8	6.1	19.6	565
CBR-017L	1 X 1	6.61	99.11	132.14	165.18	198.21	14	472	(1) 1 1/8	(1) 1 1/8	6.1	19.6	575
CBR-019L	1 X 1	7.40	110.94	147.92	184.90	221.88	17	435	(1) 1 1/8	(1) 1 1/8	9.2	29.4	642
CBR-020L	1 X 1	7.92	118.74	158.32	197.90	237.48	17	466	(1) 1 1/8	(1) 1 1/8	9.2	29.4	652
CBR-022L	1 X 1	8.38	125.64	167.52	209.40	251.28	17	493	(1) 1 1/8	(1) 1 1/8	12.3	39.3	691
CBR-023L	1 X 1	8.73	130.98	174.64	218.30	261.96	17	514	(1) 1 1/8	(1) 1 1/8	12.3	39.3	704
CBR-028L	1 X 2	12.32	184.86	246.48	308.10	369.72	17	725	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,085
CBR-033L	1 X 2	13.50	202.55	270.06	337.58	405.09	17	794	(1) 1 5/8	(1) 1 5/8	11.8	37.7	1,105
CBR-037L	1 X 2	15.16	227.42	303.22	379.03	454.83	26	583	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,163
CBR-042L	1 X 2	16.17	242.54	323.38	404.23	485.07	26	622	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,191
CBR-044L	1 X 2	16.74	251.16	334.88	418.60	502.32	35	478	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,217
CBR-046L	1 X 2	17.45	261.75	349.00	436.25	523.50	35	499	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,259
CBR-055L	1 X 3	22.05	330.75	441.00	551.25	661.50	52	424	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,610
CBR-060L	1 X 3	23.61	354.08	472.10	590.13	708.15	52	454	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,640
CBR-062L	1 X 3	24.39	365.91	487.88	609.85	731.82	70	348	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,720
CBR-066L	1 X 3	25.50	382.46	509.94	637.43	764.91	70	364	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,759
CBR-075L	1 X 4	30.36	455.36	607.14	758.93	910.71	52	584	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,075
CBR-076L	2 X 2	30.36	455.36	607.14	758.93	910.71	52	584	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,910
CBR-082L	1 X 4	32.38	485.69	647.58	809.48	971.37	52	623	(1) 2 1/8	(1) 2 1/8	34.5	110.7	2,115
CBR-083L	2 X 2	32.38	485.69	647.58	809.48	971.37	52	623	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,992
CBR-088L	1 X 4	33.52	502.74	670.32	837.90	1,005.48	70	479	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,219
CBR-089L	2 X 2	33.52	502.74	670.32	837.90	1,005.48	70	479	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,082
CBR-090L	1 X 4	34.94	524.03	698.70	873.38	1,048.05	70	499	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,271
CBR-091L	2 X 2	34.94	524.03	698.70	873.38	1,048.05	70	499	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,134
CBR-092L	2 X 3	34.94	524.03	698.70	873.38	1,048.05	70	499	(2) 1 5/8	(2) 1 5/8	34.8	111.5	2,623
CBR-094L	2 X 3	39.36	590.34	787.12	983.90	1,180.68	70	562	(2) 2 1/8	(2) 2 1/8	34.8	111.5	2,623
CBR-098L	1 X 5	39.02	585.30	780.40	975.50	1,170.60	43	907	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CBR-105L	1 X 5	41.34	620.16	826.88	1,033.60	1,240.32	43	961	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,653
CBR-110L	1 X 5	42.43	636.50	848.66	1,060.83	1,272.99	58	732	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,725
CBR-111L	2 X 3	44.11	661.59	882.12	1,102.65	1,323.18	104	424	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,730
CBR-115L	1 X 5	43.89	658.40	877.86	1,097.33	1,316.79	58	757	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,790
CBR-116L	1 X 6	47.46	711.87	949.16	1,186.45	1,423.74	43	1,104	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,000
CBR-117L	2 X 3	47.22	708.27	944.36	1,180.45	1,416.54	104	454	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,808
CBR-124L	2 X 3	48.79	731.81	975.74	1,219.68	1,463.61	140	348	(2) 2 1/8	(2) 2 1/8	69.6	222.9	2,964
CBR-126L	1 X 6	50.17	752.58	1,003.44	1,254.30	1,505.16	43	1,167	(1) 2 5/8	(1) 2 5/8	73.5	235.5	3,108
CBR-130L	2 X 3	50.99	764.81	1,019.74	1,274.68	1,529.61	140	364	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,042
CBR-131L	1 X 6	51.63	774.48	1,032.64	1,290.80	1,548.96	58	890	(2) 2 1/8	(2) 2 1/8	98	313.9	3,264
CBR-140L	1 X 6	53.31	799.67	1,066.22	1,332.78	1,599.33	58	919	(2) 2 1/8	(2) 2 1/8	98	313.9	3,342
CBR-148L	1 X 7	57.48	862.20	1,149.60	1,437.00	1,724.40	43	1,337	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,355
CBR-150L	2 X 4	60.71	910.70	1,214.26	1,517.83	1,821.39	104	584	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,429
CBR-159L	1 X 7	60.74	911.03	1,214.70	1,518.38	1,822.05	43	1,412	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,435
CBR-164L	2 X 4	64.76	971.36	1,295.14	1,618.93	1,942.71	104	623	(2) 2 1/8	(2) 2 1/8	69.1	221.3	3,529
CBR-165L	1 X 7	60.74	911.03	1,214.70	1,518.38	1,822.05	58	1,047	(2) 2 1/8	(2) 2 1/8	114.1	365.4	3,638
CBR-171L	1 X 7	64.91	973.59	1,298.12	1,622.65	1,947.18	58	1,119	(2) 2 1/8	(2) 2 1/8	114.1	365.4	3,738
CBR-176L	2 X 4	67.03	1,005.50	1,340.66	1,675.83	2,010.99	140	479	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,738
CBR-186L	2 X 4	70.07	1,051.11	1,401.48	1,751.85	2,102.22	140	501	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,842
CBR-200L	2 X 5	78.04	1,170.60	1,560.80	1,951.00	2,341.20	86	907	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,698
CBR-210L	2 X 5	82.69	1,240.31	1,653.74	2,067.18	2,480.61	86	961	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,798
CBR-220L	2 X 5	84.87	1,273.01	1,697.34	2,121.68	2,546.01	116	732	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,060
CBR-230L	2 X 5	57.79	866.81	1,155.74	1,444.68	1,733.61	116	498	(2) 2 1/8	(2) 2 1/8	163.8	524.7	5,190
CBR-232L	2 X 6	94.92	1,423.73	1,898.30	2,372.88	2,847.45	86	1,104	(2) 2 5/8	(2) 2 5/8	147	470.8	5,736
CBR-252L	2 X 6	100.34	1,505.15	2,006.86	2,508.58	3,010.29	86	1,167	(2) 2 5/8	(2) 2 5/8	147	470.8	5,892
CBR-262L	2 X 6	103.26	1,548.95	2,065.26	2,581.58	3,097.89	116	890	(4) 2 1/8	(4) 2 1/8	196	627.7	6,242
CBR-280L	2 X 6	106.62	1,599.33	2,132.44	2,665.55	3,198.66	116	919	(4) 2 1/8	(4) 2 1/8	196	627.7	6,398
CBR-297L	2 X 7	114.86	1,722.87	2,297.16	2,871.45	3,445.74	86	1,336	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,685
CBR-318L	2 X 7	121.57	1,823.58	2,431.44	3,039.30	3,647.16	86	1,414	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,835
CBR-319L	2 X 7	121.57	1,823.58	2,431.44	3,039.30	3,647.16	116	1,048	(4) 2 1/8	(4) 2 1/8	228.2	730.9	6,241
CBR-343L	2 X 7	129.71	1,945.67	2,594.22	3,242.78	3,891.33	116	1,118	(4) 2 1/8	(4) 2 1/8	228.2	730.9	6,441

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

CBW NORMAL/HIGH SPEED 2.6HP/970 RPM/8 FPI (HIGH-EFFICIENCY)

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)					NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)		SHIP WEIGHT (LB.) *
		1	15	20	25	30			DISCH.	LIQUID	SUMMER	WINTER	
CBW-013	1 X 1	6.29	94.37	125.82	157.28	188.73	11	572	(1) 1 1/8	(1) 1 1/8	6.1	19.6	570
CBW-016	1 X 1	8.03	120.50	160.66	200.83	240.99	17	473	(1) 1 1/8	(1) 1 1/8	9.2	29.4	647
CBW-019	1 X 1	9.31	139.67	186.22	232.78	279.33	17	548	(1) 1 3/8	(1) 1 3/8	12.3	39.3	698
CBW-026	1 X 2	12.88	193.26	257.68	322.10	386.52	17	758	(1) 1 3/8	(1) 1 3/8	11.8	37.7	1,012
CBW-034	1 X 2	16.45	246.72	328.96	411.20	493.44	26	633	(1) 1 5/8	(1) 1 5/8	17.6	56.5	1,095
CBW-038	1 X 2	18.74	281.16	374.88	468.60	562.32	35	536	(1) 1 5/8	(1) 1 5/8	23.5	75.4	1,238
CBW-050	1 X 3	24.20	363.02	484.02	605.03	726.03	52	465	(1) 2 1/8	(1) 2 1/8	26.1	83.6	1,625
CBW-057	1 X 3	27.60	413.97	551.96	689.95	827.94	70	394	(1) 2 1/8	(1) 2 1/8	34.8	111.5	1,740
CBW-068	1 X 4	33.08	496.20	661.60	827.00	992.40	52	636	(1) 2 5/8	(1) 2 5/8	34.5	110.7	2,100
CBW-069	2 X 2	33.08	496.20	661.60	827.00	992.40	52	636	(2) 1 5/8	(2) 1 5/8	35.3	113.1	1,996
CBW-078	1 X 4	37.65	564.69	752.92	941.15	1,129.38	70	538	(1) 2 5/8	(1) 2 5/8	46.1	147.5	2,245
CBW-079	2 X 2	37.65	564.69	752.92	941.15	1,129.38	70	538	(2) 1 5/8	(2) 1 5/8	47.1	150.8	2,108
CBW-089	1 X 5	43.40	651.06	868.08	1,085.10	1,302.12	43	1,009	(1) 2 5/8	(1) 2 5/8	61.4	196.7	2,611
CBW-099	2 X 3	48.40	726.02	968.02	1,210.03	1,452.03	104	465	(2) 2 1/8	(2) 2 1/8	52.2	167.2	2,768
CBW-100	1 X 5	48.69	730.29	973.72	1,217.15	1,460.58	58	839	(1) 2 5/8	(1) 2 5/8	81.9	262.3	2,757
CBW-108	1 X 6	52.80	792.00	1,056.00	1,320.00	1,584.00	43	1,228	(2) 2 1/8	(2) 2 1/8	73.5	235.5	3,068
CBW-113	2 X 3	55.20	827.96	1,103.94	1,379.93	1,655.91	140	394	(2) 2 1/8	(2) 2 1/8	69.6	222.9	3,003
CBW-121	1 X 6	59.18	887.66	1,183.54	1,479.43	1,775.31	58	1,020	(2) 2 1/8	(2) 2 1/8	98	313.9	3,303
CBW-127	1 X 7	62.16	932.40	1,243.20	1,554.00	1,864.80	43	1,446	(2) 2 1/8	(2) 2 1/8	85.6	274.1	3,395
CBW-135	2 X 4	66.16	992.40	1,323.20	1,654.00	1,984.80	104	636	(2) 2 5/8	(2) 2 5/8	69.1	221.3	3,479
CBW-143	1 X 7	69.69	1,045.32	1,393.76	1,742.20	2,090.64	58	1,202	(2) 2 5/8	(2) 2 5/8	114.1	365.4	3,706
CBW-154	2 X 4	75.29	1,129.37	1,505.82	1,882.28	2,258.73	140	538	(2) 2 5/8	(2) 2 5/8	92.1	295.1	3,790
CBW-178	2 X 5	86.81	1,302.12	1,736.16	2,170.20	2,604.24	86	1,009	(2) 2 5/8	(2) 2 5/8	122.8	393.5	4,748
CBW-199	2 X 5	97.37	1,460.58	1,947.44	2,434.30	2,921.16	116	839	(2) 2 5/8	(2) 2 5/8	163.8	524.7	5,125
CBW-216	2 X 6	105.60	1,584.00	2,112.00	2,640.00	3,168.00	86	1,228	(4) 2 1/8	(4) 2 1/8	147	470.8	5,842
CBW-242	2 X 6	118.35	1,775.31	2,367.08	2,958.85	3,550.62	116	1,020	(4) 2 1/8	(4) 2 1/8	196	627.7	6,316
CBW-255	2 X 7	124.32	1,864.79	2,486.38	3,107.98	3,729.57	86	1,446	(4) 2 1/8	(4) 2 1/8	171.1	548.2	5,801
CBW-285	2 X 7	139.27	2,089.11	2,785.48	3,481.85	4,178.22	116	1,201	(4) 2 5/8	(4) 2 5/8	228.2	730.9	6,331

- * Weight is for standard unit without options
- Maximum 25°FTD recommended
- For 50HZ units, multiple capacity by 0.92

- Connections are based on 20°FTD and R-448A
- Refrigerant summer charge is based on 100°F liquid, 30% liquid and 70% vapour
- Refrigerant winter charge is based on -20°F liquid, 90% liquid and 10% vapour

ENGINEERING DATA

HEAT RECLAIM (HCD-HMD) - 1.5HP/825 RPM

MODEL	FAN ARRANGEMENT	TOTAL HEAT REJECTION (MBH) (R-448A) TEMPERATURE DIFFERENCE (°F)				NUMBER OF CIRCUITS	CAPACITY PER CIRCUIT BTU/FTD	CONNECTION SIZES (QTY) (IN)		REFRIGERANT CHARGE (LB.)	SHIP WEIGHT (LB.) *
		1	20	40	60			DISCH.	LIQUID		
HCD-02H	1 X 1	1.40	27.94	55.88	83.82	19	74	(1) 1 1/8	(1) 1 1/8	6.4	190
HCD-03H	1 X 1	1.71	34.20	68.40	102.60	14	122	(1) 1 1/8	(1) 1 1/8	9.6	201
HCD-04H	1 X 1	1.91	38.26	76.52	114.78	19	101	(1) 1 1/8	(1) 1 1/8	12.8	210
HMD-05H	1 X 1	2.66	53.24	106.48	159.72	27	99	(1) 1 3/8	(1) 1 3/8	11.5	308
HMD-07H	1 X 1	3.37	67.40	134.80	202.20	20	169	(1) 1 3/8	(1) 1 3/8	17.3	335
HMD-08H	1 X 1	2.78	55.50	111.00	166.50	27	103	(1) 1 3/8	(1) 1 3/8	23.1	350
HMD-09H	1 X 2	5.33	106.68	213.36	320.04	27	198	(1) 2 1/8	(1) 2 1/8	21.8	489
HMD-11H	1 X 2	6.06	121.24	242.48	363.72	40	152	(1) 2 1/8	(1) 2 1/8	32.7	518
HMD-12H	1 X 2	6.73	134.60	269.20	403.80	40	168	(1) 2 1/8	(1) 2 1/8	32.7	532
HMD-13H	1 X 2	6.95	139.06	278.12	417.18	27	258	(1) 2 1/8	(1) 2 1/8	43.6	544
HMD-14H	1 X 2	7.55	151.00	302.00	453.00	27	280	(1) 2 1/8	(1) 2 1/8	43.6	566
HMD-18H	1 X 3	9.09	181.76	363.52	545.28	40	227	(1) 2 5/8	(1) 2 5/8	48.1	727
HMD-20H	1 X 3	10.10	202.00	404.00	606.00	40	253	(1) 2 5/8	(1) 2 5/8	48.1	741
HMD-21H	1 X 3	10.43	208.68	417.36	626.04	54	193	(1) 2 5/8	(1) 2 5/8	64.1	767
HMD-23H	1 X 3	11.34	226.70	453.40	680.10	54	210	(1) 2 5/8	(1) 2 5/8	64.1	789

- * Weight is for standard unit without options
- For 50HZ units, multiple capacity by 0.92
- Connections are based on 40°FTD and R-448A
- Refrigerant charge is based on 100°F liquid, 50% liquid and 50% vapour

FACTOR TABLE BASED ON R-448A

CONVERSION FACTOR FOR OTHER REFRIGERANTS

REFRIGERANT	FACTOR
410A	1.053
R-22	0.976
R-134a	0.869
R-404A	0.958
R-407F	1.008
R-407A	0.988
R-407C	0.988
R-449A	0.997
R-450A	0.810
R-513A	0.914

How to find a capacity for the CVR-012 with R-407A:

CVR-012 with R-448A = **573 MBH**

573 MBH x 0.988 (refrigerant factor) = **566 MBH**

ELECTRICAL DATA

MODELS	FAN ARRANGEMENT	208-240/1/60	
		MCA	FUSE
CCR & HCD	1 X 1	1.88	15

MODELS	FAN ARRANGEMENT	208-240/1/60		208-240/3/60		480/3/60		575/3/60	
		MCA	FUSE	MCA	FUSE	MCA	FUSE	MCA	FUSE
CMD, CMR & HMD	1 X 1	5	15	2.5	15	1.19	15	1	15
	1 X 2	9	15	4.5	15	2.14	15	1.8	15
	1 X 3	13	15	6.5	15	3.09	15	2.6	15
	2 X 2	17	20	8.5	15	4.04	15	3.4	15
	2 X 3	26	30	12.5	15	5.94	15	5	15

MODELS	FAN ARRANGEMENT	208-240/3/60		480/3/60		575/3/60	
		MCA	FUSE	MCA	FUSE	MCA	FUSE
CLR & CLW	1 X 1	6.5	15	3.25	15	2.5	15
	1 X 2	11.7	15	5.85	15	4.5	15
	1 X 3	16.9	20	8.45	15	6.5	15
	1 X 4	26	30	11.1	15	8.5	15
	1 X 5	31	35	16	20	10.5	15
	1 X 6	36	40	16.3	20	12.5	15
	1 X 7	46	50	21	25	16	20
	2 X 2	26	30	11.1	15	8.5	15
	2 X 3	36	40	16.3	20	12.5	15
	2 X 4	51	60	26	30	16.5	20
	2 X 5	61	70	31	35	20.5	25
	2 X 6	71	80	36	40	26	30
	2 X 7	91	100	46	50	31	35

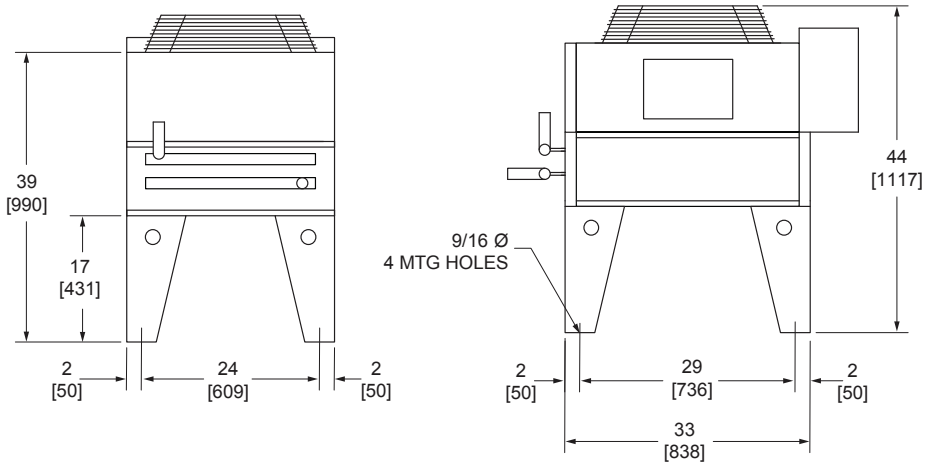
MODELS	FAN ARRANGEMENT	208-240/3/60		480/3/60		575/3/60	
		MCA	FUSE	MCA	FUSE	MCA	FUSE
CNR & CNW	1 X 1	9	15	4.25	15	3.38	15
	1 X 2	16.2	20	7.65	15	6.08	15
	1 X 3	23.4	30	11.1	15	8.78	15
	1 X 4	36	40	16	20	11.5	15
	1 X 5	37.8	45	21	25	16	20
	1 X 6	51	60	26	30	21	25
	1 X 7	61	70	26	30	21	25
	2 X 2	36	40	16	20	11.5	15
	2 X 3	51	60	26	30	21	25
	2 X 4	71	80	31	35	26	30
	2 X 5	81	90	41	45	31	35
	2 X 6	101	110	51	60	41	45
	2 X 7	126	150	51	60	46	50

ELECTRICAL DATA

MODELS	FAN ARRANGEMENT	208-240/3/60		480/3/60		575/3/60	
		MCA	FUSE	MCA	FUSE	MCA	FUSE
CVR & CVW Normal / High speed	1 X 1	7	15	3.13	15	2.5	15
	1 X 2	12.6	15	5.63	15	4.5	15
	1 X 3	21	25	8.13	15	6.5	15
	1 X 4	26	30	10.6	15	8.5	15
	1 X 5	29.4	35	16	20	10.5	15
	1 X 6	41	45	15.6	20	12.5	15
	1 X 7	46	50	21	25	16	20
	2 X 2	26	30	10.6	15	8.5	15
	2 X 3	41	45	15.6	20	12.5	15
	2 X 4	51	60	20.6	25	16.5	20
	2 X 5	61	70	31	35	20.5	25
	2 X 6	81	90	36	40	26	30
	2 X 7	91	100	41	45	31	35
CVR & CVW Low speed	1 X 1	3	15	1.38	15	1.13	15
	1 X 2	5.4	15	2.48	15	2.03	15
	1 X 3	7.8	15	3.58	15	2.93	15
	1 X 4	10.2	15	4.68	15	3.83	15
	1 X 5	12.6	15	5.78	15	4.73	15
	1 X 6	16	20	6.88	15	5.63	15
	1 X 7	21	25	7.98	15	6.53	15
	2 X 2	10.2	15	4.68	15	3.83	15
	2 X 3	16	20	6.88	15	5.63	15
	2 X 4	21	25	9.08	15	7.43	15
	2 X 5	26	30	11.3	15	9.23	15
	2 X 6	36	40	16	20	11	15
	2 X 7	41	45	15.7	20	16	20

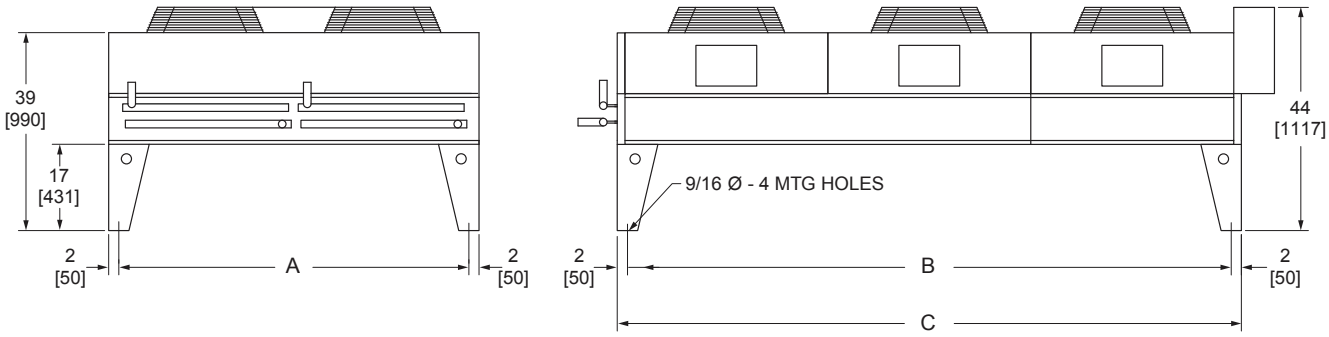
MODELS	FAN ARRANGEMENT	208-240/3/60		480/3/60		575/3/60	
		MCA	FUSE	MCA	FUSE	MCA	FUSE
CBR & CBW Normal / High speed	1 X 1	11.5	20	5.5	15	4.25	15
	1 X 2	20.7	25	9.9	15	7.65	15
	1 X 3	29.9	35	16	20	11.1	15
	1 X 4	46	50	21	25	16	20
	1 X 5	51	60	26	30	21	25
	1 X 6	61	70	31	35	26	30
	1 X 7	81	90	36	40	26	30
	2 X 2	46	50	21	25	16	20
	2 X 3	61	70	31	35	26	30
	2 X 4	91	100	41	45	31	35
	2 X 5	111	125	51	60	41	45
	2 X 6	126	150	61	70	51	60
	2 X 7	151	175	71	80	51	60
CBR & CBW Low speed	1 X 1	5.75	15	2.63	15	2.13	15
	1 X 2	10.4	15	4.73	15	3.83	15
	1 X 3	16	20	6.83	15	5.53	15
	1 X 4	21	25	8.93	15	7.23	15
	1 X 5	26	30	11	15	8.93	15
	1 X 6	31	35	16	20	10.6	15
	1 X 7	41	45	15.2	20	12.3	15
	2 X 2	21	25	8.93	15	7.23	15
	2 X 3	31	35	16	20	10.6	15
	2 X 4	46	50	21	25	16	20
	2 X 5	51	60	26	30	21	25
	2 X 6	61	70	31	35	26	30
	2 X 7	81	90	36	40	26	30

CCR/HCD



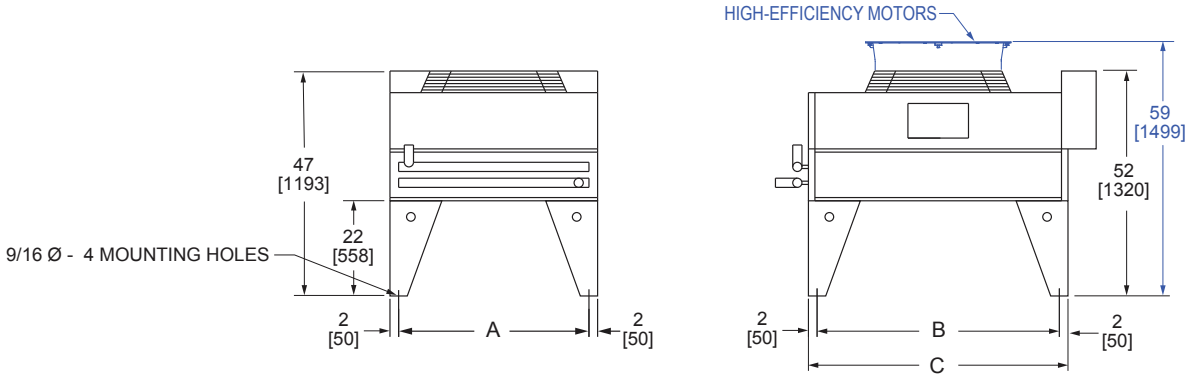
UNIT DIMENSIONS (INCHES [MM])

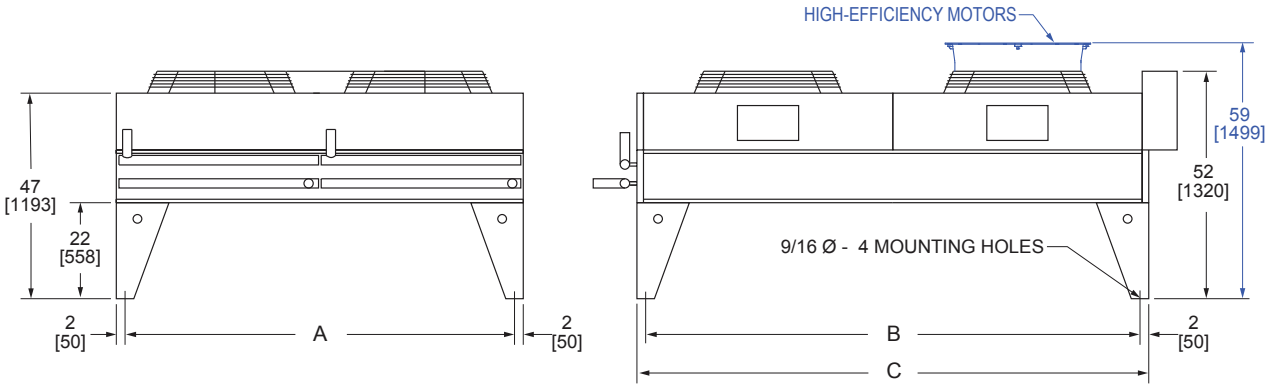
CMR/HMD

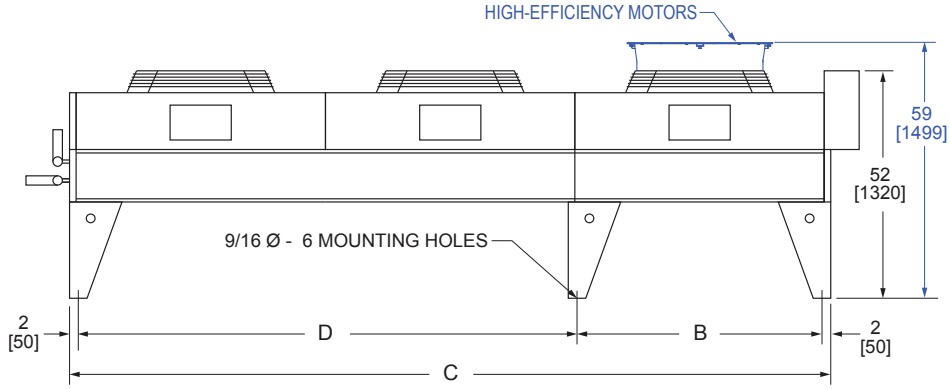


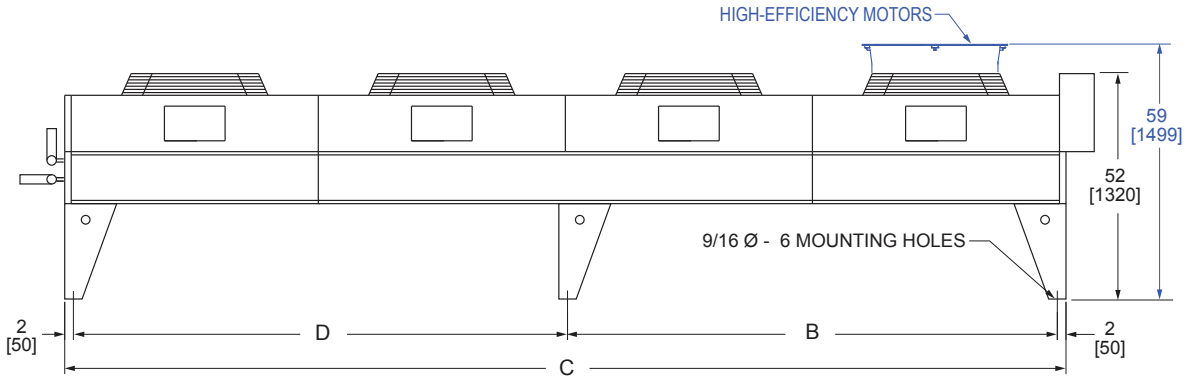
FAN ARRANGEMENT	UNIT DIMENSIONS (INCHES [MM])		
	A	B	C
1X1	34 [863]	39 [990]	43 [1092]
1X2	34 [863]	79 [2006]	83 [2108]
1X3	34 [863]	119 [3022]	123 [3124]
2X2	69 [1753]	79 [2006]	83 [2108]
2X3	69 [1753]	119 [3022]	123 [3124]

CLR-CNR-CBR-CLW-CNW-CVR-CBW-CVW

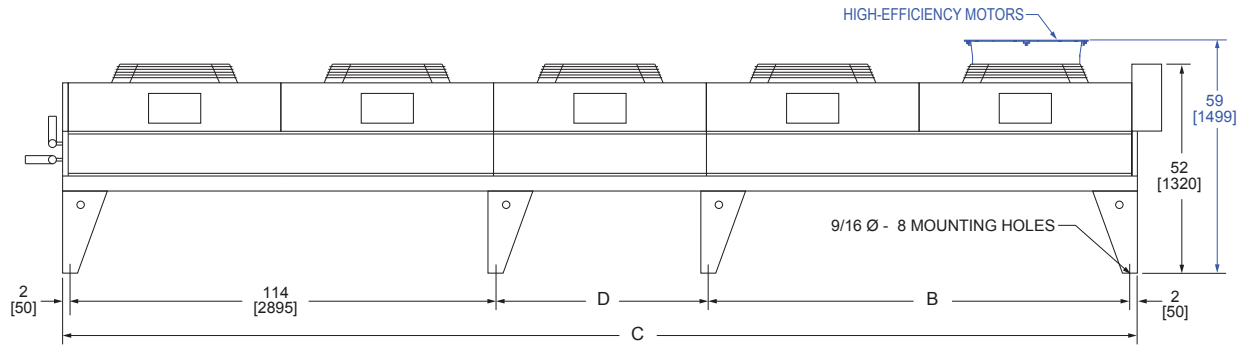


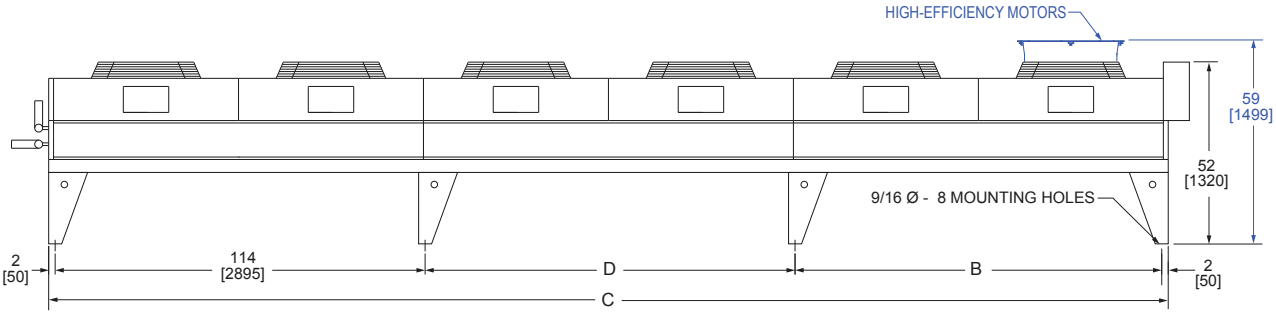


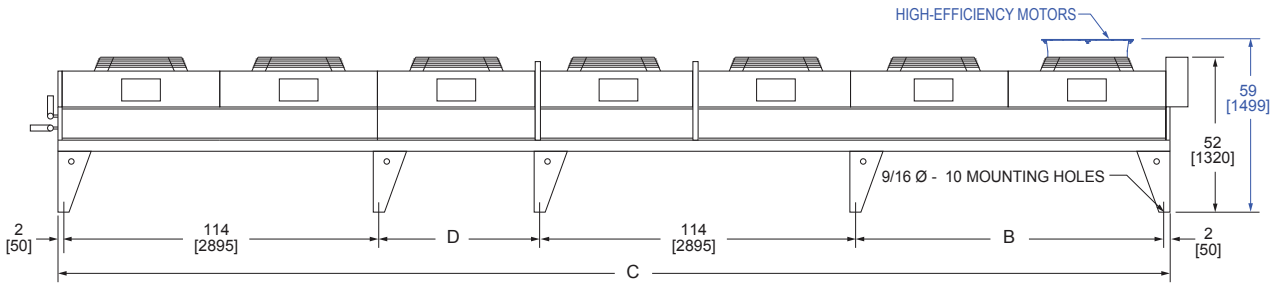




UNIT DIMENSIONS

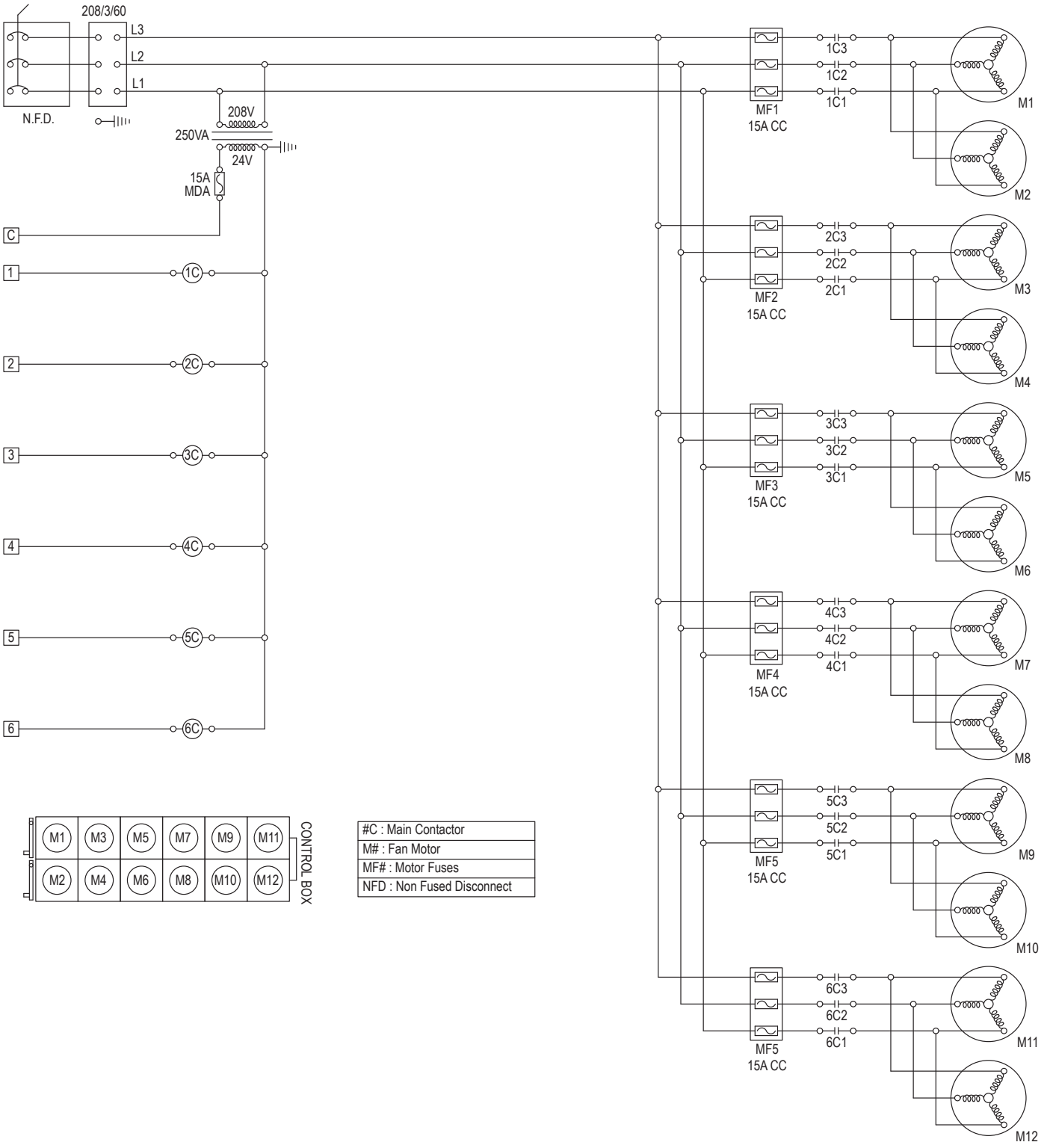






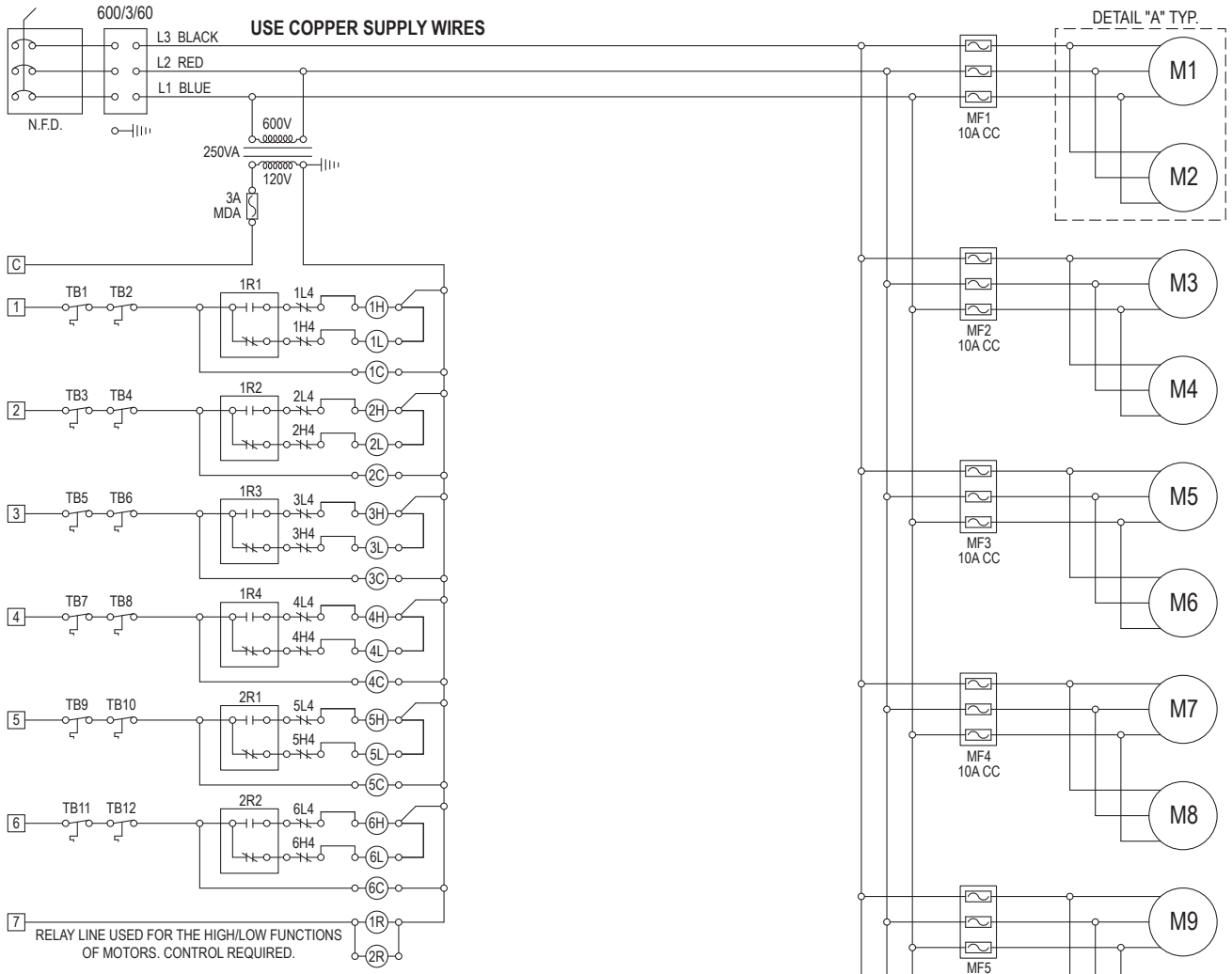
FAN ARRANGEMENT	UNIT DIMENSIONS (INCHES [MM])			
	A	B	C	D
1X1	44 [1117]	56 [1422]	60 [1524]	-
1X2	44 [1117]	113 [2870]	117 [2971]	-
1X3	44 [1117]	56 [1422]	174 [3124]	114 [2896]
1X4	44 [1117]	113 [2870]	231 [5867]	114 [2896]
1X5	44 [1117]	113 [2870]	288 [7315]	57 [1447]
1X6	44 [1117]	113 [2870]	345 [8763]	114 [2895]
1X7	44 [1117]	113 [2870]	402 [10211]	57 [1447]
2X1	89 [2260]	56 [1422]	60 [1524]	-
2X2	89 [2260]	113 [2870]	117 [2971]	-
2X3	89 [2260]	56 [1422]	174 [3124]	114 [2896]
2X4	89 [2260]	113 [2870]	231 [5867]	114 [2896]
2X5	89 [2260]	113 [2870]	288 [7315]	57 [1447]
2X6	89 [2260]	113 [2870]	345 [8763]	114 [2895]
2X7	89 [2260]	113 [2870]	402 [10211]	57 [1447]

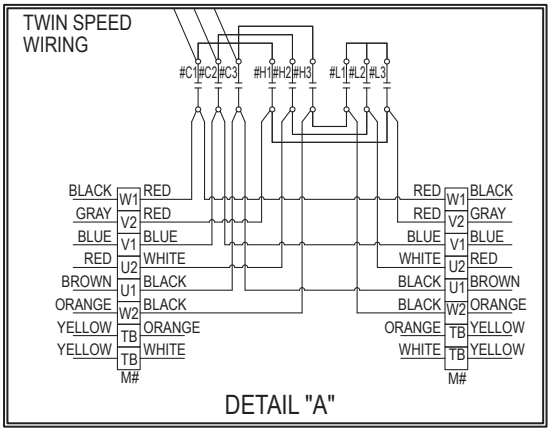
NOTE: Wiring diagrams included in this document are for reference only. Always refer to the diagrams supplied with your unit for proper wiring.



#C : Main Contactor
M# : Fan Motor
MF# : Motor Fuses
NFD : Non Fused Disconnect

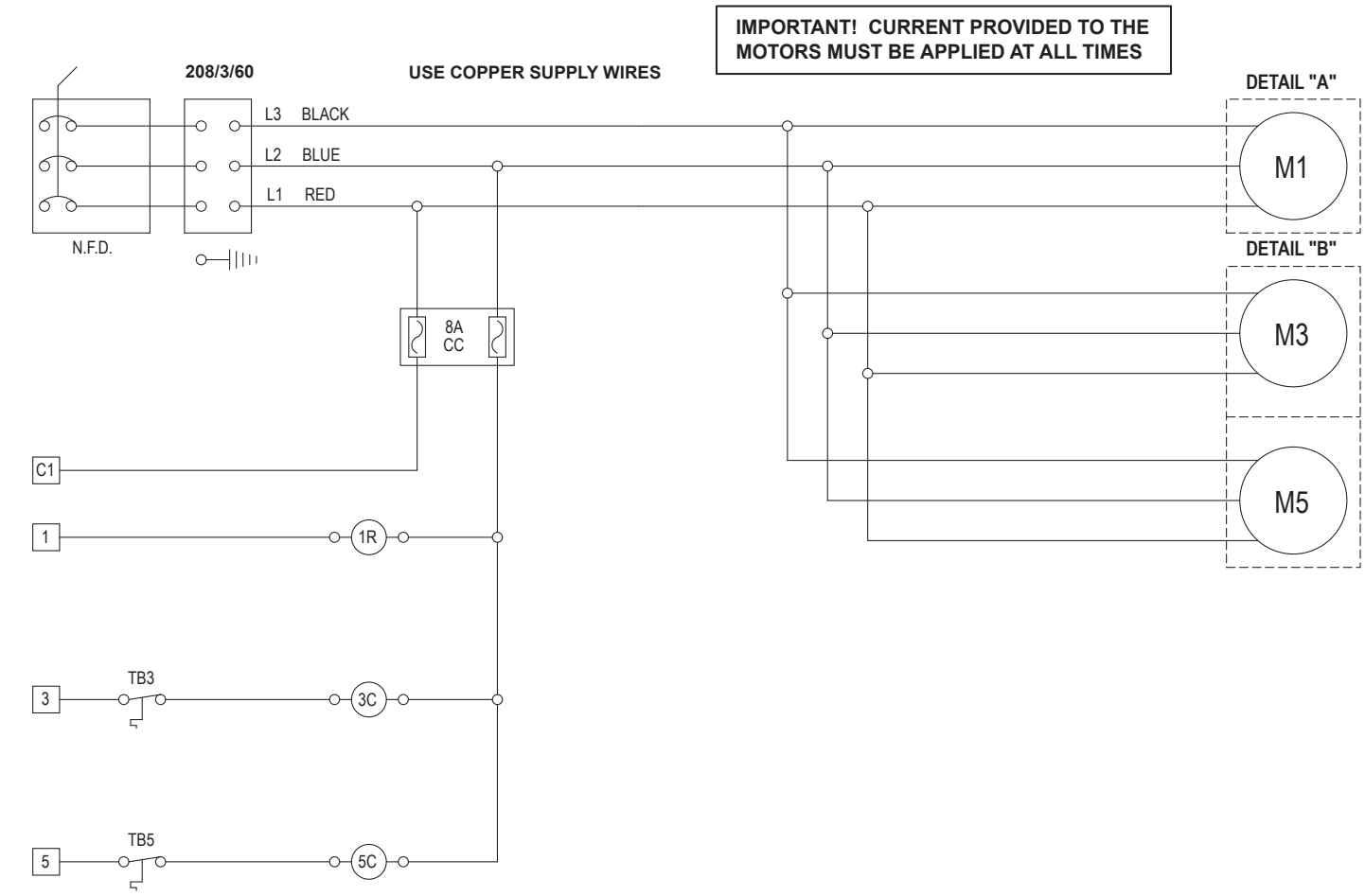
NOTE: Wiring diagrams included in this document are for reference only. Always refer to the diagrams supplied with your unit for proper wiring.

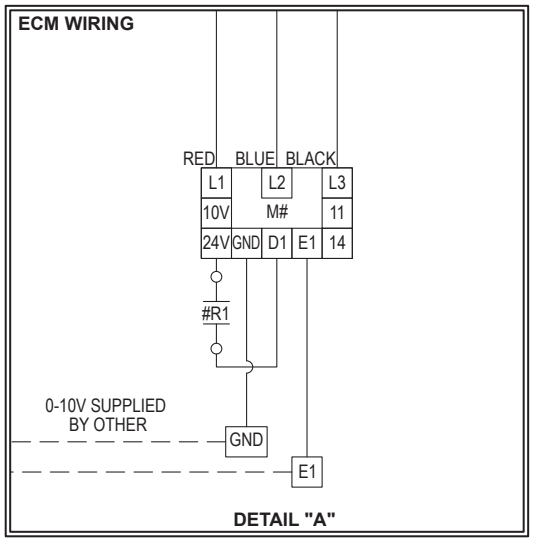




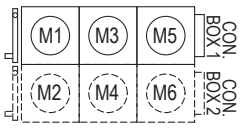
#C : Main Contactor
#H : High Speed Contactor
#L : Low Speed Contactor
#R : Relay
M# : Fan Motor
MF# : Motor Fuses
NFD : Non Fused Disconnect
TB# : Motor Thermal Protection

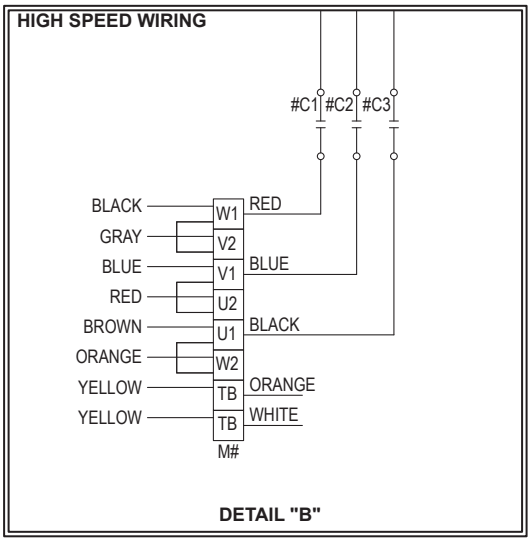
NOTE: Wiring diagrams included in this document are for reference only. Always refer to the diagrams supplied with your unit for proper wiring.





#C : Main Contactor
#R : Relay
ATF# : Auto Transformer Fuses
M# : Fan Motor
NFD : Non Fused Disconnect
TB# : Motor Thermal Protection





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