



## AIR-COOLED SCROLL CHILLERS STYLE C



29302A



YCAL0014 – YCAL0124

10 – 125 TON

35 – 440 kW

R-22

60 Hz

R-407C

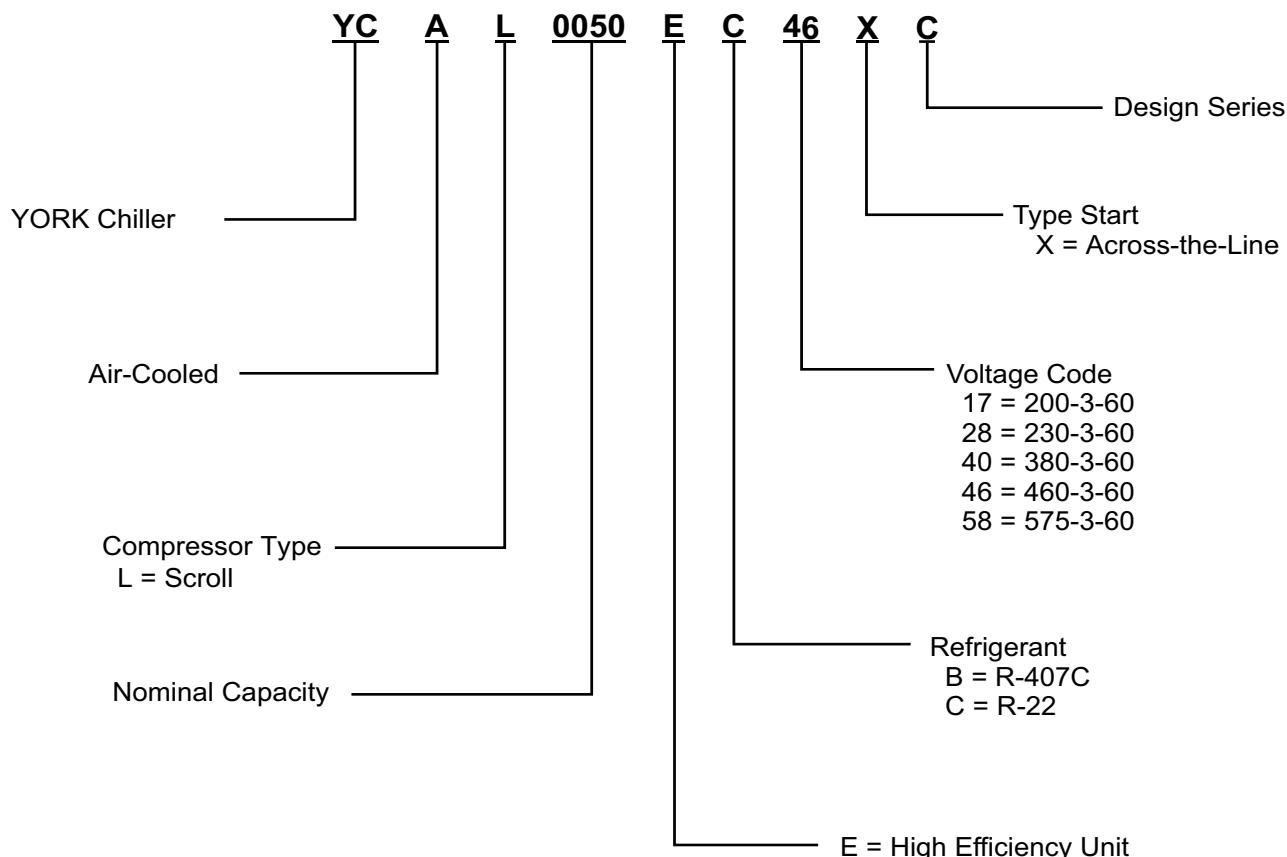


ASHRAE 90.1  
COMPLIANT



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# Introduction

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29302A

*YORK Millennium® Air-Cooled Scroll Chillers provide chilled water for all air conditioning applications using central station air handling or terminal units. They are completely self-contained and are designed for outdoor (roof or ground level) installation. Each unit includes hermetic scroll compressors, a liquid cooler, air cooled condenser, and a weather resistant microprocessor control center, all mounted on a formed steel base.*

# Specification

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## GENERAL

The 10 - 125 Ton (35 - 440 kW) YCAL models are shipped complete from the factory ready for installation and use.

The unit is pressure-tested, evacuated, and fully charged with either Refrigerant-22 (HCFC-22) or Chlorine-free Refrigerant-407C (HFC-407C) and includes an initial oil charge. After assembly, a complete operational test is performed with water flowing through the cooler to assure that the refrigeration circuit operates correctly.

The unit structure is heavy-gauge, galvanized steel. This galvanized steel is coated with baked-on powder paint, which, when subjected to ASTM B117 500 hour, salt spray testing, yields a minimum ASTM 1654 rating of "6". Units are designed in accordance with NFPA 70 (National Electric Code), ASHRAE/ANSI 15 Safety code for mechanical refrigeration, ASME and rated in accordance with ARI Standard 550/590-98.

## COMPRESSORS

The chiller has suction-gas cooled, hermetic, scroll compressors. The YCAL compressors incorporate a compliant scroll design in both the axial and radial direction. All rotating parts are statically and dynamically balanced. A large internal volume and oil reservoir provides greater liquid tolerance. Compressor crankcase heaters are also included for extra protection against liquid migration.

## COOLER

The cooler is equipped with a heater controlled by a separate thermostat. The heater provides freeze protection for the cooler down to -20°F (-29°C) ambient. The cooler is covered with 3/4" flexible, closed-cell, foam

insulation (K=0.25).

The water baffles are constructed of galvanized steel to resist corrosion. The removable heads allow access to the internally enhanced, seamless, copper tubes. Vent and drain connections are included.

Water inlet and outlet connections are grooved for compatibility with field supplied victaulic connections.

## CONDENSER

**Coils** – Fin and tube condenser coils of seamless, internally-enhanced, high-condensing-coefficient, corrosion resistant copper tubes are arranged in staggered rows, mechanically expanded into aluminum fins. Integral subcooling is included. The design working pressure of the coil is 450 PSIG (31 bar).

**Fans** – The condenser fans are composed of corrosion-resistant aluminum hub and glass-fiber-reinforced poly-propylene composite blades molded into a low noise airfoil section. They are designed for maximum efficiency and are statically and dynamically balanced for vibration free operation. They are directly driven by independent motors, and positioned for vertical air discharge. The fan guards are constructed of heavy-gauge, rust-resistant, coated steel. All blades are statically and dynamically balanced for vibration-free operation.

**Motors** – The fan motors are Totally Enclosed Air-Over, squirrel-cage type, current protected. They feature ball bearings that are double-sealed and permanently lubricated.

## MILLENNIUM CONTROL CENTER

All controls are contained in a NEMA 3R/12 (and equivalent to IP55\*) cabinet with hinged outer door and includes:

Liquid Crystal Display with Light Emitting Diode backlighting for outdoor viewing:

Two display lines

Twenty characters per line

Color coded 12-button non-tactile keypad with sections for:

**DISPLAY/PRINT** of typical information:

Chilled liquid temperatures

Ambient temperature

System pressures (each circuit)

Operating hours and starts (each compressor)

Print calls up to the liquid crystal display:

Operating data for the systems

History of fault shutdown data for up to the last six fault shutdown conditions

An RS-232 port, in conjunction with this press-to-print button, is provided to permit the capability of hard copy print-outs via a separate printer (by others).

**ENTRY** section to:

ENTER setpoints or modify system values

**SETPOINTS** updating can be performed to:

Chilled liquid temperature setpoint and range

Remote reset temperature range

Set daily schedule/holiday for start/stop

Manual override for servicing

Low and high ambient cutouts

Number of compressors

Low liquid temperature cutout

Low suction pressure cutout

High discharge pressure cutout

Anti-recycle timer (compressor start cycle time)

Anti-coincident timer (delay compressor starts)

**UNIT** section to:

Set time  
Set unit options

**UNIT ON/OFF** switch

The microprocessor control center is capable of displaying the following:

- Return and leaving liquid temperature
- Low leaving liquid temperature cutout setting
- Low ambient temperature cutout setting
- Outdoor air temperature
- English or Metric data
- Suction pressure cutout setting
- Each system suction pressure (optional on 0014 - 0060 models and standard on 0064 - 0124 models)
- Discharge pressure (optional)
- Liquid Temperature Reset via a YORK ISN DDC or Building Automation System (by others) via:
  - a pulse width modulated (PWM) input as standard
  - a 4-20 milliamp or 0 -10 VDC input, or contact closure with the optional B.A.S. interface option
- Anti-recycle timer status for each system
- Anti-coincident system start timer condition
- Compressor run status
- No cooling load condition
- Day, date and time
- Daily start/stop times
- Holiday status
- Automatic or manual system lead/lag control
- Lead system definition
- Compressor starts & operating hours (each compressor)
- Status of hot gas valves, evaporator heater and fan operation
- Run permissive status
- Number of compressors running
- Liquid solenoid valve status

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Provisions are included for: pumpdown at shutdown; optional remote chilled water temperature reset and two steps of demand load limiting from an external building automation system. Unit alarm contacts are standard.

The operating program is stored in non-volatile memory (EPROM) to eliminate chiller failure due to AC powered failure/battery discharge. Programmed setpoints are retained in lithium battery-backed RTC memory for 5 years minimum.

## **POWER PANEL**

Each panel contains:

- Compressor power terminals
- Compressor motor starting contactors per I.E.C.\*\*
- Control power terminals to accept incoming for 115-1-60 control power
- Fan contactors & overload current protection

The power wiring is routed through liquid-tight conduit to the compressors and fans.

\* Intensity of Protection European Standard

\*\* International Electrotechnical Commission

# Options and Accessories

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## POWER OPTIONS:

**COMPRESSOR POWER CONNECTIONS** – Single-point (YCAL0014-0034) or multiple-point (YCAL0040-0124) terminal block connection(s) are provided as standard. The following power connections are available as options. (See electrical data for specific voltage and options availability.) (Factory-mounted.)

**SINGLE-POINT SUPPLY TERMINAL BLOCK**

– (Available on YCAL0040 - 0080 models (standard on YCAL0014 - 0034 models)). Includes enclosure, terminal-block and interconnecting wiring to the compressors. Separate external protection must be supplied, by others, in the incoming compressor-power wiring. (Do not include this option if either the Single-Point Non-Fused Disconnect Switch or Single-Point Circuit Breaker options have been included.)

**SINGLE-POINT OR MULTIPLE-POINT SUPPLY TERMINAL BLOCK(S) WITH INDIVIDUAL SYSTEM BREAKERS** - (Available on YCAL0090-0124 models) Includes single- or dual-point terminal block connection(s) with factory interconnecting wiring from the terminal block to factory supplied system circuit breakers.

**SINGLE-POINT NON-FUSED DISCONNECT SWITCH** (Available on YCAL0014-0080 models) **OR MULTIPLE-POINT NON-FUSED DISCONNECT SWITCHES**

(Available on YCAL0090-0124 models) – Unit-mounted disconnect switch(es) with external, lockable handle (in compliance with Article 440-14 of N.E.C.), can be supplied to isolate the unit power voltage for servicing. Separate external fusing must be supplied, by others in the power wiring, which must comply with the National Electrical Code and/or local codes.

**SINGLE-POINT NON-FUSED DISCONNECT SWITCH WITH INDIVIDUAL SYSTEM BREAKERS** - (Available on YCAL0090-0124 models) Includes unit-mounted disconnect switch with external, lockable handles (in compliance with Article 440-14 of N.E.C.) to isolate unit power voltage for servicing. Factory interconnecting wiring is provided from the disconnect switch to factory supplied system circuit breakers.

**SINGLE-POINT CIRCUIT BREAKER** – (Available on YCAL0014-0080 models) – A unit mounted circuit breaker with external, lockable handle (in compliance with N.E.C. Article 440-14), can be supplied to isolate the power voltage for servicing. (This option includes the Single-Point Power connection.)

**CONTROL TRANSFORMER** – Converts unit power voltage to 115-1-60 (0.5 or 1.0 KVA capacity). Factory mounting includes primary and secondary wiring between the transformer and the control panel. (Factory-mounted.)

**POWER FACTOR CORRECTION CAPACITORS** – Will correct unit compressor power factors to a 0.90-0.95. (Factory-mounted.)

## CONTROL OPTIONS:

**AMBIENT KIT (LOW)** – (Available on YCAL0014-0080 models only [standard on YCAL0090-0124 models]) Units will operate to 25°F (-4°C). This accessory includes all necessary components to permit chiller operation to 0°F (-18°C). (This option includes the Discharge Pressure Transducer / Readout Capability option.) For proper head pressure control in applications below 25°F (-4°C) where wind gusts may exceed 5 mph, it is recommended that Optional Condenser Louvered Enclosure Panels also be included. (Factory-mounted.)

**AMBIENT KIT (HIGH)** – Required if units are to operate when the ambient temperature is above 115°F (46°C). Includes sun shield panels and discharge pressure transducers. (This option includes the Discharge Pressure Transducer / Readout Capability option.) (Field-mounted.)

**BUILDING AUTOMATION SYSTEM INTERFACE** – The factory addition of a Printed Circuit Board to accept a 4-20 milliamp, 0-10VDC or contact closure input to reset the leaving chiller liquid temperature from a Building Automation System. (Only one of following options can be offered on a unit at a time: BAS, Remote Control Panel or Multi-unit Sequence Control.) (Factory-mounted.)

- (The standard unit capabilities include remote start-stop, remote water temperature reset via a PWM input signal or up to two steps of demand (load) limiting depending on model.)
- (The standard control panel can be directly connected to a YORK Building Automated System via the standard on-board RS485 communication port.)

**LANGUAGE LCD AND KEYPAD DISPLAY** – Spanish, French, German, and Italian unit LCD controls and keypad display available. Standard language is English.

**DISCHARGE PRESSURE TRANSDUCERS AND READ-OUT CAPABILITY** – (Available on YCAL0014-0080 models only [standard on YCAL0090-0124 models]) The addition of pressure transducers allows models to sense and display

discharge pressure. This is recommended for brine chilling applications. (*This option is included with either the low or high ambient kits.*) (Factory-mounted.)

#### **SUCTION PRESSURE TRANSDUCERS AND READOUT CAPABILITY**

**CAPABILITY** – (Available on YCAL0014-0060 models only [standard on YCAL0064-0124 models.]) The addition of suction transducers allows models to sense and display suction pressure. (Factory-mounted.)

**MOTOR CURRENT MODULE** – Capable of monitoring compressor motor current. Provides extra protection against compressor reverse rotation, phase-loss and phase imbalance. Option consists of one module per electrical system. (Factory-mounted.)

#### **REMOTE CONTROL PANEL AND WALL ADAPTOR**

(Available on YCAL0014-0080 models only) (*Only one of following options can be offered on a unit at a time: BAS, Remote Control Panel, Optiview Remote Graphic Panel or Multi-unit Sequence Control.*) (Field-mounted.)

**OPTIVIEW REMOTE CONTROL PANEL** - Graphical interface panel to remotely control and monitor up to 8 different units. (*Refer to form 201.18-SG4 for detailed information*)

**MULTI-UNIT SEQUENCING** – A separate Sequencing Control Center is provided to handle sequencing control of up to eight chillers in parallel based on mixed liquid temperature (interconnecting wiring by others). (*Only one of following options can be offered on a unit at a time: BAS, Remote Control Panel or Multi-unit Sequence Control.*) (Factory-mounted.)

#### **COMPRESSOR, PIPING, EVAPORATOR OPTIONS:**

**LOW TEMPERATURE BRINE** – (*For brine chilling applications below 30°F (-1°C) LCWT. Standard units will operate down to 30°F (-1°C).*) Option includes resized thermal expansion valves. (Factory-mounted.)

**CHICAGO CODE RELIEF VALVES** – Unit will be provided with relief valves to meet Chicago code requirements. (Factory-mounted.)

**SERVICE ISOLATION VALVE** – Service suction and discharge (ball type) isolation valves are added to unit per system. This option also includes a system high pressure relief valve in compliance with ASHRAE 15. (Factory-mounted.)

**HOT GAS BY-PASS** – Permits continuous, stable operation at capacities below the minimum step of compressor un-

loading to as low as 5% capacity (depending on both the unit and operating conditions) by introducing an artificial load on the cooler. Hot gas by-pass is installed on only refrigerant system #1 on two-circuited units. (Factory-mounted.)

**DX COOLER 300 (21 bar) PSIG DWP WATERSIDE** – The waterside will be of 300 PSIG (21 bar) instead of the standard 150 PSIG DWP. 300 PSIG R.F. flanges are included on the DX cooler nozzles. (Factory-mounted.) The companion flanges will be field-supplied by others.

**FLANGES (WELD TYPE)** – Consists of 150 lb. (standard 150 psi [10.5 bar] cooler) R.F. flanges to convert to flanged cooler-connections and includes companion flanges. (*300 lb. flanges included on optional DX cooler 300 PSIG DWP waterside*) (Field-mounted.)

**FLANGES (VICTAULIC TYPE)** – Consists of (2) Flange adapter for grooved end pipe (standard 150 psi [10.5 bar] cooler). (*Not available on optional DX cooler 300 PSIG DWP waterside*.) (Field-mounted.)

**FLOW SWITCH** – The flow switch or its equivalent must be furnished with each unit.

**150 psig (10.5 bar) DWP** – For standard units. Johnson Controls model F61MG-1C Vapor-proof SPDT, NEMA 4X switch (150 PSIG [10.5 bar] DWP), -20°F to 250°F (-29°C to 121°C), with 1" NPT connection for upright mounting in horizontal pipe. (Field-mounted.)

**300 psig (21 bar) DWP** – For units with optional 300 PSIG (21 bar) DX cooler. McDonnell & Miller model FS7-4W Vapor-proof SPDT, NEMA 4X switch (300 PSIG (21 bar) DWP), -20°F to 300°F (-29°C to 149°C), with 1½ inch MPT connection for upright mounting in horizontal pipe. (Field-mounted.)

**DIFFERENTIAL PRESSURE SWITCH** – Alternative to an above mentioned flow switch. Pretempco model DPS300A-P40PF-82582-5 (300 psi max. working pressure), SPDT 5 amp 125/250VAC switch, Range 0 - 40 PSID, deadband 0.5 - 0.8 psi, with 1/4" NPTE Pressure Connections.

**REMOTE DX COOLER** – A split system arrangement with the cooler, leaving & return water sensors, liquid line solenoid valves, filter driers, sightglasses & TXVs shipped loose for field connection to the air-cooled condensing section. The DX cooler and outdoor section will have a nitrogen holding charge. Interconnecting rigid piping, wiring and refrigerant are by others. Includes YORK Service start-up. See Form 150.62-NM1.1 (200) for other application information. (*This option includes the Crankcase Heater option.*)(Field-mounted.)

## **CONDENSER AND CABINET OPTIONS:**

Condenser coil protection against corrosive environments is available by choosing any of the following options. For additional application recommendations, refer to FORM 150.12-ES1. (Factory-mounted.)

**PRE-COATED FIN CONDENSER COILS** – The air-cooled condenser coils are constructed of black epoxy-coated aluminum fins. This can provide corrosion resistance comparable to copper-fin coils in typical seashore locations. Either these or the post-coated coils (below), are recommended for units being installed at the seashore or where salt spray may hit the unit.

**POST-COATED DIPPED CONDENSER COILS** – The unit is built with dipped-cured condenser coils. This is another choice for seashore and other corrosive applications (with the exception of strong alkalies, oxidizers and wet bromine, chlorine and fluorine in concentrations greater than 100 ppm).

**COPPER FIN CONDENSER COILS** – The unit constructed with condenser coils which have copper fins. (This is not recommended for units in areas where they may be exposed to acid rain.)

**ENCLOSURE PANELS (UNIT)** – Tamperproof Enclosure Panels prevent unauthorized access to units. Enclosure Panels can provide an aesthetically pleasing alternative to expensive fencing. Additionally, for proper head pressure control, YORK recommends the use of Condenser Louvered Panels for winter applications where wind gusts may exceed five miles per hour. The following types of

enclosure panels are available:

**WIRE PANELS (Full Unit)** – Consists of welded wire-mesh guards mounted on the exterior of the unit. Prevents unauthorized access, yet provides free air flow. (Factory-mounted.)

**WIRE/LOUVERED PANELS** – Consists of welded wire-mesh panels on the bottom part of unit and louvered panels on the condenser section of the unit. (Factory-mounted).

**LOUVERED PANELS (Condenser Coil Only)** – Louvered panels are mounted on the sides and ends of the condenser coils for protection. (Factory-mounted.)

**LOUVERED PANELS (Full Unit)** – Louvered panels surround the front, back, and sides of the unit. They prevent unauthorized access and visually screen unit components. Unrestricted air flow is permitted through generously sized louvered openings. This option is applicable for any outdoor design ambient temperature up to 115°F (46°). (Factory-mounted.)

**SOUND ATTENUATION** – One or both of the following sound attenuation options are recommended for residential or other similar sound sensitive locations:

**COMPRESSOR ACOUSTIC SOUND BLANKET** – Each compressor is individually enclosed by an acoustic sound blanket. The sound blankets are made with one layer of acoustical absorbent textile fiber of 5/8" (15mm) thickness; one layer of anti-vibrating heavy material thickness of 1/8" (3mm). Both are closed by two sheets of welded PVC, reinforced for temperature and UV resistance. (Factory-mounted.)

**LOW SOUND FANS** – Lower RPM, 8-pole fan motors are used with steeper-pitch fans. (Factory-mounted.)

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# Selection Data

## GUIDE TO SELECTION

Capacity ratings for YORK YCAL Packaged Air-Cooled Liquid Chillers, shown on pages 16 through 39 cover the majority of design applications for these units. For unusual applications or uses beyond the scope of this catalog, please consult your nearest YORK Office or representative.

## SELECTION RULES

1. **Ratings** – Ratings may be interpolated, but must not be extrapolated. The Ratings given on pages 16 through 39 and the DESIGN PARAMETERS given on page 11 indicate the limits of application for these chillers.
2. **Cooler Water** – Ratings are based upon 2.4 GPM per ton which is equal to a 10°F chilled water range and a 0.0001 fouling factor for the cooler at sea level. Tables on pages 16 through 39 give capacity, compressor kW required, cooler GPM and unit EER.
3. **Condenser** – Ratings are given in terms of air on condenser in degrees Fahrenheit.
4. **Copper Fin Condenser Ratings** – Since the thermal conductivity of copper is slightly higher than aluminum, apply the following corrections to the standard ratings. Tons x 0.97 and compressor kW x 0.99.
5. **Performance Data Correction Factors** – Ratings are based on 0.0001 cooler fouling factor, 10°F chilled water range and at sea level. For operation at different conditions, apply the appropriate correction factor from the following table.

FOULING FACTOR					
		0.0001		0.00025	
ALTITUDE	TEMP SPLIT	TONS	COMPR kW	TONS	COMPR kW
SEA LEVEL	8	0.994	0.999	0.991	0.998
	10	1.000	1.000	0.993	0.999
	12	1.005	1.001	0.999	0.999
	14	1.008	1.002	1.005	1.000
2000 FT.	8	0.990	1.010	0.984	1.009
	10	0.995	1.010	0.990	1.009
	12	0.999	1.011	0.995	1.010
	14	1.004	1.015	0.998	1.011
4000 FT.	8	0.983	1.021	0.977	1.020
	10	0.989	1.024	0.983	1.021
	12	0.994	1.025	0.988	1.024
	14	0.997	1.026	0.993	1.025
6000 FT.	8	0.978	1.035	0.973	1.034
	10	0.982	1.037	0.978	1.035
	12	0.987	1.037	0.980	1.036
	14	0.992	1.038	0.986	1.037

6. **Ethylene Glycol Correction Factors** – The following factors are to be applied to the standard ratings for units cooling ethylene glycol.

ETHYLENE GLYCOL					
% WEIGHT	TONS kW	COMPRESSOR	GPM°F/TON	PRESS DROP	FREEZE PT
10	0.985	0.997	24.1	1.034	26
20	0.981	0.996	24.9	1.062	16
30	0.974	0.995	26.1	1.096	5
40	0.966	0.991	27.5	1.134	-10
50	0.957	0.989	29.1	1.172	-32

7. **Propylene Glycol Correction Factors** – The following factors are to be applied to the standard ratings for units cooling propylene glycol.

PROPYLENE GLYCOL					
% WEIGHT	TONS kW	COMPRESSOR	GPM°F/TON	PRESS DROP	FREEZE PT
10	0.983	0.996	24.2	1.048	27
20	0.974	0.995	24.4	1.086	19
30	0.961	0.990	25.1	1.134	8
40	0.946	0.98	26.0	1.186	-5
50	0.928	0.984	27.2	1.247	-25

## METHOD OF SELECTION

To select of YORK Packaged Air-Cooled Liquid Chiller,  
the following data must be known:

1. Design Capacity in tons refrigeration (TR).
2. Entering and Leaving Liquid Temperatures.
3. Outside ambient air temperature in degrees F.
4. GPM of chilled liquid.

Determine capacity requirements from the following formula:

$$\text{GPM} = \frac{\text{TR} \times 24}{\text{RANGE } (\text{°F})}$$

## EXAMPLE – WATER CHILLING

1. **GIVEN:** Provide a capacity of 50 Tons at 42°F leaving water 10°F range, 0.0001FF, 80°F air on the condenser, at sea level and 60 Hz.
2. **FIND:** Unit Size  
Compressor kW Input

3. From the Ratings on pages 16 - 46:

**SELECT:** YCAL0050 (English Units)  
 53.1 Tons  
 48.7 Compressor kW  
 11.7 Unit EER

4. Calculate Compressor kW at 50 Tons:

$$\text{kW} = \frac{50}{53.1} \times 48.7 \text{ kW} = 45.9 \text{ kW}$$

5. Calculate GPM:

$$\text{GPM} = \frac{50 \text{ Tons} \times 24}{10^\circ\text{F Range}} = 120 \text{ GPM}$$

6. From Page 14, read 10 ft of water cooler pressure drop for GPM:

7. A YCAL0050 is suitable.

5. From RATINGS on pages 16 - 46:

**SELECT:** YCAL0040 (English Units)  
 36.1 Tons  
 38.6 Compressor kW

6. Determine YCAL0040 brine cooling capacity and Compressor kW requirement:

A. Tons =  $36.1 \times .974 \times .983 = 34.6$   
 B. Compr. kW =  $38.6 \times .995 \times 1.021 = 39.2$

7. Determine average full load Compressor kW at 34 tons:

$$\frac{34 \text{ tons} \times (39.2 \text{ kW})}{34.6 \text{ tons}} = 38.5 \text{ Compressor kW}$$

8. Determine Ethylene Glycol GPM:

$$\text{GPM} = \frac{\text{Tons} \times \text{Gal. } ^\circ\text{F/min/Ton factor}}{\text{Range}}$$

$$\text{GPM} = \frac{34.0 \times 26.1}{10}$$

$$\text{GPM} = 88.7$$

9. Determine Cooler Pressure Drop:

A. See Ethylene Glycol correction factors for 30% by weight Ethylene Glycol.

**READ:** 1.096 Pressure Drop Factor

B. See page 14 at 88.7 GPM for the YCAL0040.

**READ:** 6.5 Ft. H<sub>2</sub>O Pressure Drop

C. Cooler Pressure Drop =  $6.5 \times 1.096$  or 7.1 Ft. H<sub>2</sub>O

10. YCAL0040 is suitable.

### EXAMPLE – Brine Chilling

1. **GIVEN:** Provide a capacity of 34 tons cooling 30% by weight Ethylene Glycol from 50°F to 40°F, 0.00025FF, 95°F air on the condenser, 60 Hz and 4000 ft. altitude.

2. **DETERMINE:**

Unit Size  
 kW Input  
 Ethylene Glycol GPM  
 Cooler Pressure Drop

3. See Ethylene Glycol correction factors, for 30% by weight Ethylene Glycol.

**READ:** .974 Tons factor  
 .995 Compr. kW factor  
 26.1 Gal./°F/Tons factor

4. See Performance Data Correction Factors for 0.00025 fouling factor and 4000 ft. altitude.

**READ:** .983 Tons factor  
 1.021 kW factor

# Design Parameters

## ENGLISH UNITS

YCAL	LEAVING WATER					
	TEMPERATURE (°F)		COOLER FLOW (GPM <sup>3</sup> )		AIR ON CONDENSER (°F)	
	MIN <sup>1</sup>	MAX <sup>2</sup>	MIN	MAX	MIN <sup>4</sup>	MAX <sup>5</sup>
0014	40	55	25	60	0	125
0020	40	55	25	60	0	125
0024	40	55	30	70	0	125
0030	40	55	35	170	0	125
0034	40	55	35	170	0	125
0040	40	55	60	325	0	125
0042	40	55	60	325	0	125
0044	40	55	60	325	0	125
0050	40	55	60	325	0	125
0060	40	55	60	325	0	125
0064	40	55	100	350	0	125
0070	40	55	100	350	0	125
0074	40	55	100	350	0	125
0080	40	55	100	400	0	125
0090	40	55	138	525	0	125
0094	40	55	138	525	0	125
0104	40	55	156	625	0	125
0114	40	55	156	625	0	125
0124	40	55	156	625	0	125

## SI UNITS

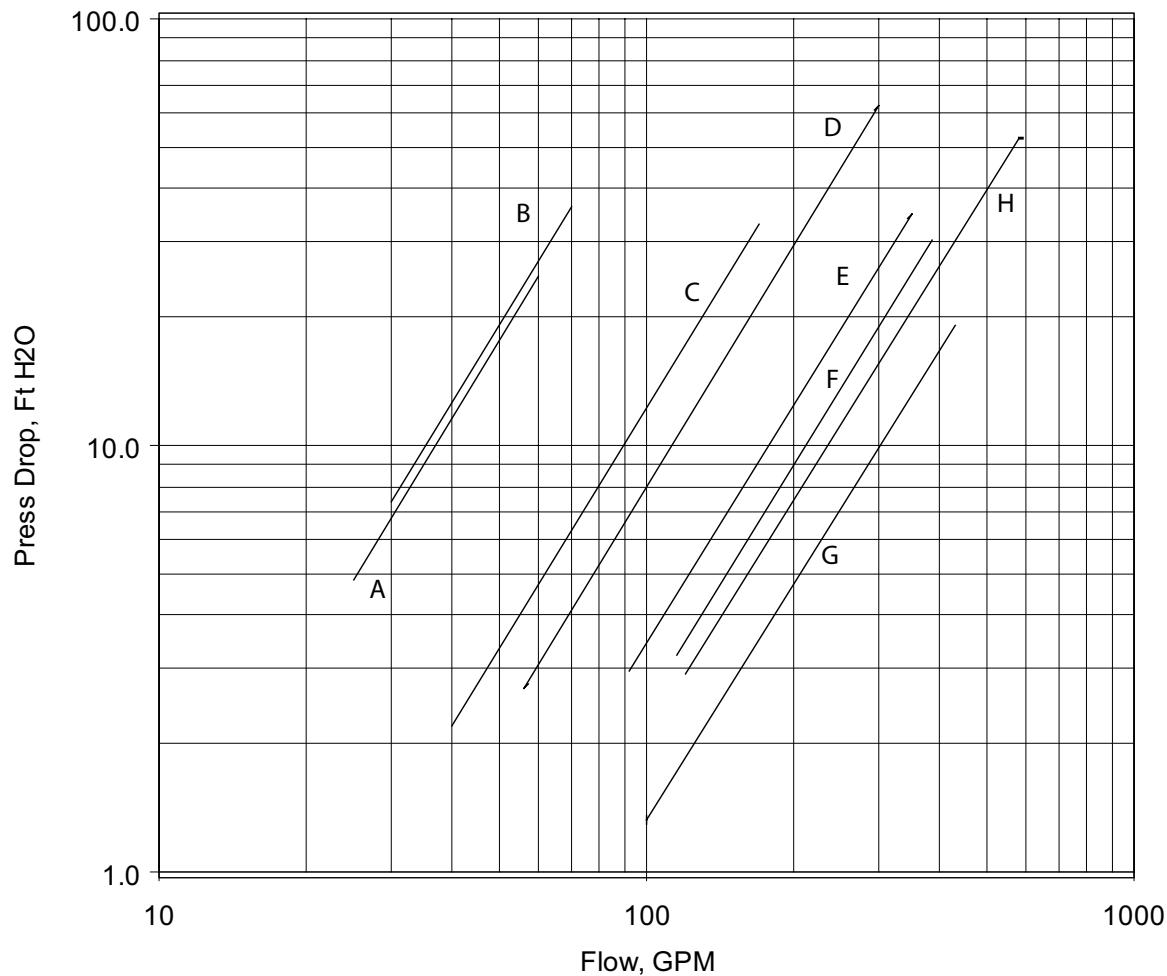
YCAL	LEAVING WATER					
	TEMPERATURE (°C)		COOLER FLOW (l/s <sup>3</sup> )		AIR ON CONDENSER (°C)	
	MIN <sup>1</sup>	MAX <sup>2</sup>	MIN	MAX	MIN <sup>4</sup>	MAX <sup>5</sup>
0014	4.4	12.8	1.6	3.8	-17.7	51.7
0020	4.4	12.8	1.6	3.8	-17.7	51.7
0024	4.4	12.8	1.9	4.4	-17.7	51.7
0030	4.4	12.8	2.2	10.7	-17.7	51.7
0034	4.4	12.8	2.2	10.7	-17.7	51.7
0040	4.4	12.8	3.8	20.5	-17.7	51.7
0042	4.4	12.8	3.8	20.5	-17.7	51.7
0044	4.4	12.8	3.8	20.5	-17.7	51.7
0050	4.4	12.8	3.8	20.5	-17.7	51.7
0060	4.4	12.8	3.8	20.5	-17.7	51.7
0064	4.4	12.8	6.3	22.1	-17.7	51.7
0070	4.4	12.8	6.3	22.1	-17.7	51.7
0074	4.4	12.8	6.3	22.1	-17.7	51.7
0080	4.4	12.8	6.3	25.2	-17.7	51.7
0090	4.4	12.8	8.7	33.1	-17.7	51.7
0094	4.4	12.8	8.7	33.1	-17.7	51.7
0104	4.4	12.8	9.8	39.4	-17.7	51.7
0114	4.4	12.8	9.8	39.4	-17.7	51.7
0124	4.4	12.8	9.8	39.4	-17.7	51.7

### NOTES:

1. For leaving brine temperature below 40°F (4.4°C), contact your nearest YORK Office for application requirements.
2. For leaving water temperature higher than 55°F (12.8°C), contact the nearest YORK Office for application guidelines.
3. The evaporator is protected against freezing to -20°F (-28.8°C) with an electric heater as standard.
4. For operation at temperatures below 25°F (-3.9°C), the optional Low Ambient Kit will need to be installed on the system (for YCAL0014-0080 models only).
5. For operation at temperatures above 115°F (46.1°C), the optional High Ambient Kit will need to be installed on the system.

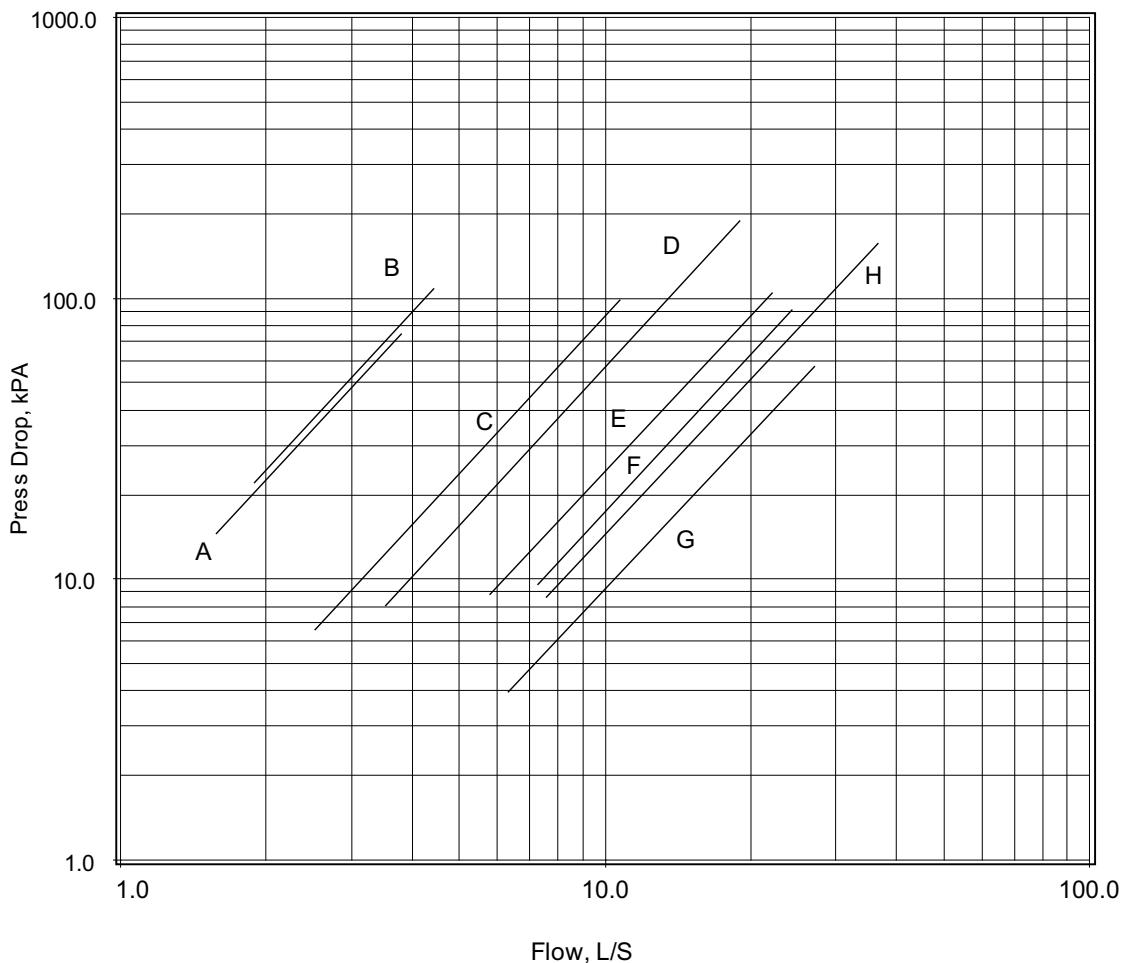
# Water Pressure Drop

ENGLISH



MODEL YCAL	COOLER CURVE
0014, 0020	A
0024	B
0030, 0034	C
0040, 0042 0044, 0050, 0060	D
0064, 0070, 0074	E
0080	F
0090, 0094	G
0104, 0114, 0124	H

Note: Water Pressure Drop Curves may extend past the minimum and maximum water flow ranges. See page 13 for minimum and maximum flow points.

**SI**

MODEL YCAL	COOLER CURVE
<b>0014, 0020</b>	A
<b>0024</b>	B
<b>0030, 0034</b>	C
<b>0040, 0042 0044, 0050, 0060</b>	D
<b>0064, 0070, 0074</b>	E
<b>0080</b>	F
<b>0090, 0094</b>	G
<b>0104, 0114, 0124</b>	H

Note: Water Pressure Drop Curves may extend past the minimum and maximum water flow ranges. See page 13 for minimum and maximum flow points.



**YCAL0014EC**

IPLV=13.1

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER									
40.0	11.7	15.3	7.8	11.3	16.2	7.2	11.0	17.1	6.6	10.6	18.2	6.1	5.3	8.6	5.6
42.0	12.1	15.3	8.0	11.8	16.3	7.4	11.4	17.2	6.8	11.0	18.2	6.3	5.5	8.7	5.8
44.0	12.6	15.4	8.3	12.2	16.3	7.6	11.8	17.3	7.0	11.4	18.3	6.5	5.7	8.7	6.0
45.0	12.8	15.5	8.4	12.4	16.4	7.8	12.0	17.3	7.2	11.6	18.4	6.6	5.9	8.7	6.1
46.0	13.0	15.5	8.5	12.6	16.4	7.9	12.2	17.4	7.3	11.8	18.4	6.7	6.0	8.7	6.3
48.0	13.5	15.6	8.8	13.1	16.5	8.1	12.7	17.5	7.5	12.2	18.5	6.9	6.1	8.7	6.4
50.0	14.0	15.7	9.1	13.6	16.6	8.4	13.1	17.6	7.7	12.7	18.6	7.1	6.5	8.7	6.8

**YCAL0020EC**

IPLV=13.6

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	15.8	21.8	7.7	15.3	23.0	7.1	14.9	24.3	6.6	14.3	25.7	6.0	7.3	11.9	5.9
42.0	16.4	21.9	7.9	15.9	23.2	7.3	15.4	24.5	6.8	14.9	25.8	6.2	7.7	12.0	6.3
44.0	17.0	22.1	8.2	16.4	23.3	7.5	15.9	24.6	7.0	15.4	26.0	6.4	8.0	12.0	6.5
45.0	17.3	22.1	8.3	16.7	23.4	7.6	16.2	24.7	7.1	15.7	26.1	6.5	8.2	12.0	6.6
46.0	17.6	22.2	8.4	17.0	23.5	7.7	16.5	24.8	7.2	15.9	26.2	6.6	8.3	12.1	6.7
48.0	18.2	22.4	8.7	17.5	23.6	8.0	17.0	25.0	7.4	16.5	26.4	6.8	8.6	12.1	6.9
50.0	18.8	22.5	8.9	18.2	23.8	8.2	17.5	25.1	7.5	17.1	26.5	7.0	8.9	12.2	7.2

**YCAL0024EC**

IPLV=13.6

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	19.7	26.9	8.0	19.1	28.5	7.3	18.4	30.1	6.7	17.7	31.7	6.1	17.0	33.5	5.6
42.0	20.4	27.1	8.2	19.8	28.6	7.6	19.1	30.2	6.9	18.4	31.9	6.3	17.6	33.7	5.8
44.0	21.2	27.3	8.4	20.5	28.8	7.8	19.8	30.4	7.2	19.1	32.1	6.6	18.3	33.9	6.0
45.0	21.5	27.3	8.6	20.9	28.9	7.9	20.2	30.5	7.3	19.4	32.2	6.7	10.1	15.1	6.7
46.0	21.9	27.4	8.7	21.2	29.0	8.0	20.5	30.6	7.4	19.8	32.3	6.8	10.2	15.2	6.8
48.0	22.7	27.6	9.0	22.0	29.2	8.3	21.3	30.8	7.6	20.5	32.5	7.0	10.6	15.2	7.1
50.0	23.5	27.8	9.2	22.8	29.3	8.5	22.0	31.0	7.8	21.2	32.7	7.2	11.0	15.3	7.3

**YCAL0030EC**

IPLV=14.1

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	25.0	33.6	8.2	24.2	35.5	7.6	23.5	37.5	7.0	22.7	39.6	6.4	11.7	18.7	6.5
42.0	25.9	33.9	8.5	25.1	35.8	7.8	24.3	37.8	7.2	23.6	39.9	6.6	12.1	18.7	6.8
44.0	26.8	34.1	8.7	26.0	36.0	8.0	25.2	38.1	7.4	12.9	17.8	7.5	12.5	18.8	6.9
45.0	27.3	34.2	8.8	26.5	36.2	8.1	25.6	38.2	7.5	13.1	17.8	7.6	12.7	18.8	7.0
46.0	27.7	34.4	9.0	26.9	36.3	8.3	26.1	38.3	7.6	13.4	17.9	7.8	12.9	18.9	7.2
48.0	28.7	34.6	9.2	27.8	36.6	8.5	27.0	38.6	7.8	13.9	17.9	8.0	13.4	19.0	7.4
50.0	29.7	34.9	9.4	28.8	36.8	8.7	27.9	38.9	8.0	14.4	18.0	8.3	13.9	19.1	7.6

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98



**YCAL0034EC**

IPLV=14.6

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	29.9	42.7	7.9	28.8	45.1	7.2	27.8	47.6	6.6	26.7	50.2	6.0	18.1	32.5	6.2
42.0	30.9	43.0	8.1	29.9	45.4	7.4	28.8	48.0	6.8	27.7	50.6	6.2	18.8	32.6	6.4
44.0	31.9	43.3	8.3	31.0	45.8	7.6	29.9	48.3	7.0	20.3	31.1	7.2	19.6	32.8	6.6
45.0	32.6	43.5	8.4	31.5	46.0	7.8	30.4	48.5	7.1	20.7	31.1	7.3	19.9	32.9	6.7
46.0	33.1	43.7	8.6	32.0	46.1	7.9	30.9	48.7	7.2	21.1	31.2	7.4	20.3	33.0	6.8
48.0	34.3	44.0	8.8	33.1	46.5	8.1	32.0	49.1	7.4	21.8	31.4	7.7	21.0	33.2	7.0
50.0	35.4	44.3	9.0	34.3	46.8	8.3	33.1	49.4	7.6	22.6	31.5	7.9	21.8	33.3	7.2

**YCAL0040EC**

IPLV=14.9

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	34.1	43.3	8.4	33.0	45.7	7.7	32.0	48.4	7.1	31.0	51.2	6.5	15.6	24.5	6.2
42.0	35.3	43.5	8.6	34.3	46.0	8.0	33.2	48.7	7.3	32.1	51.4	6.8	16.3	24.6	6.5
44.0	36.6	43.7	8.9	35.5	46.2	8.2	34.4	48.9	7.6	33.3	51.7	7.0	16.9	24.6	6.7
45.0	37.3	43.8	9.1	36.1	46.4	8.3	35.0	49.0	7.7	33.8	51.8	7.1	17.3	24.7	6.8
46.0	37.9	43.9	9.2	36.8	46.5	8.5	35.6	49.1	7.8	34.5	51.9	7.2	17.6	24.7	7.0
48.0	39.3	44.1	9.5	38.1	46.7	8.7	36.9	49.4	8.1	35.7	52.2	7.4	18.1	24.8	7.2
50.0	40.6	44.3	9.8	39.4	46.9	9.0	38.3	49.6	8.3	37.0	52.5	7.6	18.8	24.8	7.4

**YCAL0042EC**

IPLV=14.2

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	37.7	49.9	8.2	36.6	52.7	7.5	35.4	55.8	6.9	34.1	58.9	6.3	17.3	27.9	6.2
42.0	39.1	50.2	8.4	37.9	53.1	7.8	36.7	56.1	7.1	35.4	59.3	6.5	18.1	28.0	6.5
44.0	40.5	50.5	8.7	39.3	53.4	8.0	38.0	56.4	7.4	36.7	59.6	6.8	18.8	28.1	6.7
45.0	41.2	50.6	8.8	40.0	53.5	8.1	38.7	56.6	7.5	37.4	59.8	6.9	19.1	28.2	6.8
46.0	41.9	50.7	8.9	40.7	53.7	8.2	39.4	56.7	7.6	38.0	59.9	7.0	19.4	28.2	6.9
48.0	43.4	51.0	9.2	42.1	54.0	8.5	40.8	57.0	7.8	39.4	60.3	7.2	20.2	28.3	7.2
50.0	44.9	51.3	9.5	43.5	54.2	8.7	42.2	57.4	8.0	30.5	41.5	7.8	20.9	28.4	7.4

**YCAL0044EC**

IPLV=14.2

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	41.5	55.5	8.1	40.1	58.7	7.5	38.7	62.0	6.9	37.3	65.5	6.3	19.1	30.8	6.3
42.0	43.0	55.9	8.4	41.6	59.1	7.7	40.2	62.4	7.1	38.7	65.9	6.5	19.9	31.0	6.5
44.0	44.5	56.2	8.6	43.1	59.4	8.0	41.7	62.8	7.3	40.2	66.4	6.7	20.6	31.1	6.7
45.0	45.3	56.4	8.8	43.9	59.6	8.1	42.4	63.0	7.4	40.9	66.6	6.8	21.2	31.1	6.9
46.0	46.1	56.6	8.9	44.6	59.8	8.2	43.2	63.2	7.5	41.6	66.8	6.9	21.5	31.2	7.0
48.0	47.7	56.9	9.1	46.2	60.2	8.4	44.7	63.6	7.8	43.1	67.2	7.1	22.2	31.3	7.2
50.0	49.3	57.3	9.4	47.8	60.5	8.7	46.2	64.0	8.0	44.6	67.6	7.3	23.1	31.4	7.5

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98



**YCAL0050EC**

IPLV=14.0

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	45.0	63.6	7.8	43.6	67.2	7.2	42.2	71.0	6.6	30.4	51.4	6.4	29.2	54.3	5.9
42.0	46.6	64.1	8.0	45.2	67.7	7.4	43.6	71.4	6.8	31.5	51.7	6.6	21.8	35.1	6.4
44.0	48.2	64.6	8.3	46.8	68.2	7.6	33.8	49.2	7.4	32.7	52.0	6.8	22.6	35.2	6.6
45.0	49.1	64.8	8.4	47.5	68.4	7.7	34.4	49.3	7.5	33.3	52.1	6.9	23.1	35.3	6.8
46.0	49.9	65.0	8.5	48.4	68.7	7.8	35.1	49.4	7.6	33.9	52.3	7.0	23.5	35.4	6.9
48.0	51.6	65.5	8.7	50.1	69.2	8.0	36.3	49.7	7.9	35.1	52.6	7.2	24.4	35.5	7.1
50.0	53.3	66.0	8.9	51.7	69.8	8.2	37.6	50.0	8.1	36.3	52.9	7.5	25.2	35.7	7.3

**YCAL0060EC**

IPLV=14.7

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	49.7	66.7	8.2	48.2	70.5	7.6	46.7	74.5	7.0	45.3	78.6	6.5	23.2	37.0	6.5
42.0	51.4	67.2	8.5	49.8	71.0	7.8	48.4	75°F	7.2	46.9	79.1	6.6	24.1	37.2	6.8
44.0	53.2	67.7	8.7	51.7	71.6	8.0	50.1	75.6	7.4	48.5	79.7	6.8	25.0	37.3	7.0
45.0	54.1	68.0	8.8	52.6	71.8	8.1	50.9	75.8	7.5	37.7	57.7	7.2	25.5	37.4	7.1
46.0	54.9	68.2	8.9	53.5	72.1	8.3	51.9	76.1	7.6	26.8	35.5	7.8	25.9	37.5	7.2
48.0	56.9	68.8	9.2	55.3	72.7	8.5	53.6	76.7	7.8	27.8	35.6	8.1	26.9	37.7	7.4
50.0	58.8	69.3	9.4	57.2	73.2	8.7	55.5	77.3	8.0	28.8	35.8	8.3	27.8	37.9	7.7

**YCAL0064EC**

IPLV=14.4

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	55.4	77.6	7.9	53.5	82.1	7.2	51.6	86.7	6.6	41.9	71.3	6.4	40.3	75.4	5.9
42.0	57.2	78.2	8.1	55.5	82.7	7.4	53.6	87.3	6.8	43.4	71.8	6.6	41.9	75.8	6.1
44.0	59.4	78.8	8.3	57.5	83.2	7.7	55.5	87.9	7.0	45.1	72.2	6.8	43.4	76.3	6.3
45.0	60.4	79.1	8.4	58.4	83.6	7.8	56.4	88.3	7.1	45.9	72.4	6.9	44.1	76.5	6.4
46.0	61.4	79.3	8.6	59.5	83.9	7.9	57.4	88.6	7.2	46.7	72.6	7.1	44.9	76.7	6.5
48.0	63.5	79.9	8.8	61.5	84.5	8.1	59.4	89.3	7.4	48.4	73.1	7.3	39.0	60.5	7.0
50.0	65.7	80.5	9.0	63.5	85.1	8.3	61.5	89.9	7.6	50.0	73.5	7.5	40.3	60.7	7.2

**YCAL0070EC**

IPLV=14.3

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	61.7	85.2	8.1	59.7	90.1	7.4	57.6	95.2	6.8	55.4	100.6	6.2	37.4	65.5	6.2
42.0	63.9	85.8	8.3	61.6	90.7	7.6	59.7	95.9	7.0	57.5	101.3	6.4	38.8	65.8	6.4
44.0	66.2	86.4	8.5	64.1	91.3	7.8	61.9	96.5	7.2	50.6	82.2	6.8	40.2	66.1	6.6
45.0	67.3	86.7	8.6	65.2	91.6	7.9	62.8	96.8	7.3	42.5	62.7	7.3	41.0	66.3	6.7
46.0	68.5	87.0	8.8	66.3	91.9	8.1	64.0	97.2	7.4	43.3	62.8	7.5	41.7	66.4	6.8
48.0	70.9	87.6	9.0	68.6	92.6	8.3	66.3	97.8	7.6	44.9	63.1	7.7	43.3	66.7	7.1
50.0	73.2	88.1	9.3	71.0	93.2	8.5	68.6	98.5	7.8	46.5	63.3	8.0	44.7	67.0	7.3

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98



**YCAL0074EC**

IPLV=14.4

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	66.9	95.0	7.9	64.7	100.4	7.2	62.6	106.0	6.7	50.6	87.4	6.5	40.9	72.2	6.2
42.0	69.3	95.8	8.1	67.1	101.2	7.5	64.8	106.8	6.8	52.5	87.9	6.7	42.4	72.7	6.4
44.0	71.7	96.5	8.3	69.4	102.0	7.7	56.4	83.8	7.5	54.4	88.5	6.8	44.0	73.1	6.6
45.0	72.9	96.9	8.4	70.6	102.4	7.8	57.4	84.1	7.6	46.4	69.4	7.3	44.7	73.3	6.7
46.0	74.1	97.3	8.5	71.8	102.8	7.9	58.4	84.4	7.7	47.2	69.6	7.4	45.6	73.5	6.8
48.0	76.6	98.1	8.8	74.3	103.6	8.1	60.4	84.9	7.9	48.9	70.0	7.6	47.2	73.9	7.0
50.0	79.2	98.9	9.0	76.7	104.5	8.3	62.5	85.5	8.1	50.6	70.4	7.9	48.9	74.4	7.2

**YCAL0080EC**

IPLV=14.6

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	72.4	104.5	7.8	70.2	110.4	7.2	68.0	116.4	6.6	46.2	74.7	6.8	44.8	78.8	6.3
42.0	74.9	105.4	8.0	72.7	111.3	7.4	69.9	117.3	6.8	47.8	75.1	7.0	46.4	79.4	6.5
44.0	77.6	106.4	8.2	75.1	112.3	7.6	72.7	118.5	7.0	49.5	75.6	7.2	48.0	79.9	6.6
45.0	78.9	106.9	8.3	76.4	112.8	7.7	74.0	119.0	7.1	50.4	75.9	7.3	48.8	80.1	6.7
46.0	80.2	107.4	8.4	77.7	113.3	7.8	75.2	119.6	7.1	51.3	76.1	7.4	49.5	80.4	6.8
48.0	82.8	108.4	8.6	80.3	114.4	8.0	54.9	72.6	8.3	53.1	76.7	7.6	51.3	80.9	7.0
50.0	85.6	109.5	8.8	83.0	115.5	8.1	56.8	73.1	8.5	54.9	77.2	7.8	53.1	81.5	7.2

**YCAL0090EC**

IPLV=13.8

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	73.5	94.2	8.4	71.4	99.3	7.8	69.3	104.7	7.2	67.2	110.4	6.7	65.0	116.5	6.1
42.0	76.2	95.0	8.6	74.1	100.1	8.0	71.9	105.5	7.4	69.7	111.3	6.8	67.5	117.4	6.3
44.0	78.9	95.8	8.9	76.7	101.0	8.2	74.5	106.4	7.6	72.3	112.2	7.1	70.0	118.3	6.5
45.0	80.3	96.2	9.0	78.1	101.4	8.4	75.9	106.8	7.7	73.6	112.7	7.2	71.3	118.8	6.6
46.0	81.7	96.7	9.1	79.5	101.8	8.5	77.2	107.3	7.8	74.9	113.1	7.3	72.6	119.3	6.7
48.0	84.7	97.6	9.4	82.4	102.7	8.7	80.0	108.2	8.1	77.7	114.1	7.5	55.8	83.9	7.1
50.0	87.6	98.4	9.6	85.2	103.6	8.9	82.9	109.1	8.3	80.4	115.0	7.7	57.9	84.5	7.3

**YCAL0094EC**

IPLV=13.8

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	79.5	102.7	8.4	77.3	108.2	7.8	75°F	113.9	7.2	72.8	119.9	6.7	70.6	126.2	6.2
42.0	82.4	103.6	8.6	80.0	109.1	8.0	77.8	114.9	7.4	75.5	121.0	6.9	73.3	127.3	6.4
44.0	85.3	104.6	8.9	82.9	110.1	8.2	80.6	115.8	7.6	78.3	122.0	7.1	75.9	128.4	6.5
45.0	86.8	105.0	9.0	84.4	110.5	8.3	82.0	116.3	7.7	79.7	122.5	7.2	77.4	129.0	6.6
46.0	88.3	105.5	9.1	85.9	111.0	8.5	83.5	116.9	7.9	81.1	123.0	7.3	78.7	129.6	6.7
48.0	91.3	106.5	9.3	88.9	112.0	8.7	86.5	117.9	8.1	84.0	124.1	7.5	42.9	58.0	7.5
50.0	94.6	107.5	9.6	92.0	113.1	8.9	89.5	118.9	8.3	87.0	125.2	7.7	44.5	58.4	7.7

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98

# Ratings - R-22 (English Units)

**YCAL0104EC**

IPLV=14.0

LCWT (°F)	AIR TEMPERATURE ON CONDENSER (°F)																	
	75°F		80°F		85°F		90°F		95°F		100°F							
TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	
40.0	102.6	88.5	12.4	100.3	93.1	11.6	97.9	97.9	10.8	95.5	103.1	10.1	93.0	108.7	9.3	90.4	114.6	8.7
42.0	106.2	89.6	12.7	103.8	94.1	11.9	101.3	99.0	11.1	98.8	104.2	10.3	96.3	109.8	9.6	93.6	115.7	8.9
44.0	109.9	90.7	13.0	107.4	95.2	12.2	104.9	100.1	11.3	102.2	105.3	10.6	99.6	110.9	9.8	96.9	116.9	9.1
45.0	111.8	91.3	13.1	109.2	95.8	12.3	106.7	100.7	11.5	104.0	105.9	10.7	101.4	111.5	9.9	98.6	117.5	9.2
46.0	113.7	91.8	13.3	111.1	96.4	12.4	108.5	101.2	11.6	105.8	106.4	10.8	103.1	112.1	10.1	100.3	118.1	9.3
48.0	117.5	93.0	13.6	114.9	97.5	12.7	112.2	102.4	11.9	109.4	107.6	11.1	106.6	113.3	10.3	103.8	119.4	9.6
50.0	121.4	94.2	13.9	118.7	98.7	13.0	115.9	103.6	12.2	113.1	108.9	11.3	110.2	114.6	10.6	107.3	120.6	9.8

**YCAL0114EC**

IPLV=13.7

LCWT (°F)	AIR TEMPERATURE ON CONDENSER (°F)																	
	75°F		80°F		85°F		90°F		95°F		100°F							
TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	
40.0	113.8	96.6	12.3	111.3	101.6	11.5	108.8	107.0	10.8	106.2	112.7	10.0	103.6	118.8	9.3	100.8	125.3	8.7
42.0	117.8	97.7	12.6	115.3	102.7	11.8	112.6	108.1	11.0	110.0	113.8	10.3	107.3	119.9	9.6	104.5	126.5	8.9
44.0	121.9	98.8	12.9	119.3	103.8	12.1	116.6	109.2	11.3	113.9	114.9	10.6	111.1	121.1	9.8	108.2	127.7	9.1
45.0	124.0	99.3	13.1	121.4	104.4	12.3	118.6	109.7	11.5	115.8	115.5	10.7	113.0	121.7	10.0	110.1	128.3	9.3
46.0	126.2	99.8	13.3	123.4	104.9	12.4	120.7	110.3	11.6	117.8	116.1	10.8	115.0	122.3	10.1	112.0	128.9	9.4
48.0	130.5	101.0	13.6	127.7	106.1	12.7	124.8	111.5	11.9	121.9	117.3	11.1	118.9	123.5	10.4	115.9	130.2	9.6
50.0	135.0	102.1	13.9	132.0	107.2	13.0	129.1	112.7	12.2	126.1	118.5	11.4	123.0	124.8	10.6	119.9	131.4	9.9

**YCAL0124EC**

IPLV=13.5

LCWT (°F)	AIR TEMPERATURE ON CONDENSER (°F)																	
	75°F		80°F		85°F		90°F		95°F		100°F							
TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	
40.0	124.4	107.1	12.3	121.6	112.6	11.5	118.7	118.5	10.7	115.8	124.7	10.0	112.9	131.4	9.3	109.9	138.4	8.6
42.0	128.7	108.4	12.6	125.8	113.8	11.8	122.9	119.7	11.0	119.9	126.0	10.3	116.9	132.6	9.5	113.8	139.8	8.9
44.0	133.2	109.6	12.9	130.2	115.1	12.1	127.2	121.0	11.3	124.1	127.2	10.5	121.0	134.0	9.8	117.8	141.1	9.1
45.0	135.4	110.3	13.0	132.4	115.8	12.2	129.3	121.6	11.4	126.2	127.9	10.6	123.0	134.6	9.9	119.8	141.9	9.2
46.0	137.7	110.9	13.2	134.6	116.4	12.4	131.5	122.3	11.5	128.4	128.6	10.8	125.1	135.3	10.0	121.9	142.5	9.3
48.0	142.4	112.3	13.5	139.2	117.7	12.6	136.0	123.6	11.8	132.7	129.9	11.0	129.4	136.7	10.3	126.0	143.9	9.5
50.0	147.2	113.6	13.8	143.9	119.1	12.9	140.6	125.0	12.1	137.2	131.3	11.3	133.8	138.1	10.5	130.4	145.4	9.8

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98

**YCAL0104EC**

IPLV=14.0

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	87.8	120.9	8.0	85.2	127.7	7.4	82.4	134.9	6.8	79.6	142.5	6.2	64.7	116.1	6.1
42.0	91.0	122.1	8.2	88.2	128.9	7.6	85.4	136.2	7.0	82.6	143.9	6.4	67.1	117.1	6.3
44.0	94.2	123.3	8.4	91.4	130.2	7.8	88.5	137.5	7.2	85.6	145.2	6.6	69.6	118.1	6.5
45.0	95.8	123.9	8.5	93.0	130.8	7.9	90.1	138.2	7.3	87.1	145.9	6.7	52.5	82.5	6.7
46.0	97.4	124.6	8.6	94.6	131.5	8.0	91.7	138.8	7.4	74.5	112.8	7.2	53.4	82.8	6.8
48.0	100.9	125.8	8.9	98.0	132.7	8.2	95.0	140.1	7.5	77.2	113.8	7.4	55.3	83.4	7.0
50.0	104.4	127.1	9.1	101.3	134.1	8.4	98.3	141.5	7.7	80.0	114.9	7.6	57.5	84.1	7.3

**YCAL0114EC**

IPLV=13.7

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	98.0	132.3	8.0	95.0	139.8	7.4	92.0	147.8	6.8	88.9	156.4	6.2	85.6	165.5	5.7
42.0	101.6	133.5	8.2	98.6	141.0	7.6	95.5	149.1	7.0	92.2	157.7	6.4	88.9	166.8	5.9
44.0	105.2	134.7	8.5	102.2	142.3	7.8	99.0	150.4	7.2	95.7	159.0	6.6	92.2	168.2	6.1
45.0	107.1	135.4	8.6	104.0	142.9	7.9	100.8	151.0	7.3	97.4	159.7	6.7	94.0	168.9	6.2
46.0	109.0	136.0	8.7	105.9	143.6	8.0	102.6	151.7	7.4	99.2	160.4	6.8	66.9	104.0	6.8
48.0	112.8	137.3	8.9	109.6	144.9	8.3	106.2	153.1	7.6	102.8	161.8	7.0	69.2	104.7	7.0
50.0	116.7	138.6	9.2	113.4	146.3	8.5	110.0	154.5	7.8	106.5	163.2	7.2	71.7	105.5	7.2

**YCAL0124EC**

IPLV=13.5

AIR TEMPERATURE ON CONDENSER (°F)

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	106.8	146.0	8.0	103.7	154.0	7.4	100.5	162.5	6.8	97.3	171.6	6.3	78.6	143.1	6.0
42.0	110.7	147.4	8.2	107.3	155.4	7.6	104.2	164.1	7.0	100.9	173.1	6.5	81.5	144.3	6.2
44.0	114.6	148.8	8.4	111.3	157.0	7.8	108.0	165.5	7.2	104.6	174.7	6.6	84.6	145.5	6.4
45.0	116.6	149.5	8.5	113.3	157.6	7.9	109.9	166.3	7.3	106.5	175.5	6.7	86.2	146.1	6.4
46.0	118.6	150.3	8.6	115.2	158.4	8.0	111.9	167.1	7.4	108.4	176.3	6.8	73.3	113.8	6.9
48.0	122.7	151.6	8.9	119.3	159.9	8.2	115.8	168.6	7.6	112.2	177.9	7.0	75.9	114.7	7.1
50.0	126.9	153.1	9.1	123.4	161.4	8.4	119.8	170.2	7.8	97.4	141.3	7.5	78.7	115.6	7.3

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98









# Ratings - R-22 (SI Units)

## YCAL0104EC

COP=4.12

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	363.3	90.8	3.6	348.5	99.5	3.2	332.7	109.2	2.8	316.2	120.2	2.4	299.1	132.6	2.1	236.5	112.9	1.9
6.0	375.3	91.8	3.7	359.4	100.4	3.2	343.2	110.2	2.8	326.3	121.3	2.5	308.7	133.7	2.1	244.3	113.7	2.0
7.0	386.8	92.8	3.7	370.7	101.4	3.3	354.0	111.2	2.9	336.6	122.4	2.5	318.7	134.9	2.2	252.5	114.6	2.0
8.0	398.7	93.8	3.8	382.1	102.5	3.4	365.0	112.3	3.0	347.2	123.5	2.6	329.0	136.0	2.2	260.5	115.5	2.1
9.0	410.9	94.9	3.9	393.8	103.5	3.4	376.2	113.4	3.0	358.1	124.6	2.6	339.3	137.3	2.3	268.9	116.4	2.1
10.0	423.2	96.0	4.0	405.7	104.6	3.5	387.6	114.6	3.1	369.1	125.8	2.7	349.9	138.5	2.3	277.8	117.4	2.2
11.0	435.8	97.1	4.0	417.8	105.8	3.6	399.3	115.7	3.2	380.3	127.0	2.8	360.7	139.7	2.4	286.6	118.3	2.2

## YCAL0114EC

COP=4.01

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	403.7	99.1	3.6	387.4	108.6	3.2	370.7	119.4	2.8	352.9	131.5	2.4	334.0	145.1	2.1	313.8	160.6	1.8
6.0	416.4	100.1	3.6	399.7	109.6	3.2	382.5	120.4	2.8	364.4	132.5	2.5	345.1	146.3	2.2	324.4	161.8	1.8
7.0	429.5	101.1	3.7	412.3	110.6	3.3	394.6	121.4	2.9	376.1	133.6	2.5	356.4	147.5	2.2	335.4	163.0	1.9
8.0	442.8	102.1	3.8	425.2	111.7	3.4	407.0	122.5	3.0	388.0	134.8	2.6	367.9	148.6	2.3	346.5	164.3	1.9
9.0	456.5	103.1	3.9	438.3	112.7	3.5	419.7	123.6	3.0	400.2	135.9	2.7	379.6	149.9	2.3	357.8	165.6	2.0
10.0	470.4	104.1	4.0	451.8	113.8	3.5	432.6	124.8	3.1	412.7	137.1	2.7	391.7	151.1	2.4	369.3	166.9	2.0
11.0	484.8	105.2	4.1	465.6	114.9	3.6	445.9	125.9	3.2	425.4	138.4	2.8	403.9	152.4	2.4	380.9	168.4	2.1

## YCAL0124EC

COP=3.96

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	440.9	109.9	3.6	422.7	120.3	3.1	400.6	131.7	2.7	384.5	145.1	2.4	364.5	159.8	2.1	343.9	176.1	1.8
6.0	454.7	111.0	3.6	435.9	121.4	3.2	416.7	133.1	2.8	396.8	146.4	2.5	376.2	161.2	2.1	327.3	140.1	1.9
7.0	468.8	112.2	3.7	449.5	122.6	3.3	429.7	134.4	2.9	409.3	147.7	2.5	388.1	162.4	2.2	307.2	141.1	2.0
8.0	483.2	113.3	3.8	463.4	123.8	3.4	443.0	135.6	3.0	422.1	149.0	2.6	400.9	163.8	2.3	317.4	142.2	2.0
9.0	497.8	114.5	3.9	477.5	125.0	3.4	456.6	136.9	3.0	435.3	150.2	2.6	413.5	165.2	2.3	327.7	143.2	2.1
10.0	512.8	115.8	3.9	491.9	126.2	3.5	470.6	138.1	3.1	448.8	151.5	2.7	426.4	166.6	2.4	338.1	144.4	2.1
11.0	528.2	117.0	4.0	506.7	127.5	3.6	484.9	139.3	3.2	462.4	152.9	2.8	439.5	168.0	2.4	348.8	145.5	2.2

### NOTES:

1. kWo = Unit kW Cooling Capacity Output
2. kWi = Compressor kW Input
3. COP = Coefficient of Performance (Based upon compressor and fan input kW)
4. LCWT = Leaving Chilled Water Temperature
5. Ratings based upon 0.15L/s cooler water per kW

INTENTIONALLY LEFT BLANK



**YCAL0014EB**

IPLV=12.6

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	11.1	16.1	7.0	10.7	17.1	6.4	10.3	18.1	5.9	5.2	8.8	5.4	5.0	9.3	4.9
42.0	11.3	16.6	7.0	11.1	17.1	6.7	10.7	18.1	6.1	5.4	8.8	5.6	5.2	9.3	5.1
44.0	11.8	16.6	7.3	11.4	17.6	6.7	11.1	18.2	6.3	5.6	8.8	5.8	5.4	9.3	5.4
45.0	12.1	16.6	7.4	11.6	17.6	6.8	11.2	18.7	6.3	5.7	8.8	5.9	5.5	9.3	5.5
46.0	12.3	16.7	7.6	11.9	17.7	7.0	11.4	18.7	6.4	5.9	8.8	6.1	5.6	9.3	5.6
48.0	12.8	16.7	7.9	12.3	17.7	7.2	11.9	18.7	6.6	6.1	8.8	6.3	5.9	9.4	5.8
50.0	13.3	16.7	8.2	12.8	17.7	7.5	12.4	18.8	6.9	6.4	8.9	6.6	6.1	9.4	6.0

**YCAL0020EB**

IPLV=12.9

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	15.1	23.6	6.8	14.5	25.0	6.3	14.0	26.5	5.8	7.3	12.3	5.8	7.0	13.1	5.3
42.0	15.7	23.7	7.1	15.1	25.1	6.5	14.6	26.6	6.0	7.6	12.4	6.0	7.3	13.1	5.5
44.0	16.3	23.9	7.3	15.7	25.3	6.7	15.2	26.8	6.2	7.9	12.4	6.2	7.6	13.3	5.7
45.0	16.6	23.9	7.4	16.0	25.4	6.8	15.5	26.9	6.3	8.0	12.5	6.3	7.7	13.3	5.8
46.0	16.9	24.0	7.6	16.3	25.5	6.9	15.8	27.0	6.4	8.2	12.5	6.4	7.9	13.3	5.9
48.0	17.5	24.2	7.8	16.9	25.6	7.2	8.9	11.8	7.3	8.5	12.6	6.7	8.2	13.3	6.1
50.0	18.2	24.3	8.0	17.6	25.8	7.4	9.2	11.9	7.5	8.9	12.6	6.9	8.6	13.4	6.4

**YCAL0024EB**

IPLV=13.2

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	18.9	28.6	7.2	18.2	30.2	6.6	17.5	31.9	6.1	16.8	33.6	5.6	8.6	16.2	5.4
42.0	19.5	29.1	7.3	18.8	30.8	6.7	18.1	32.5	6.2	17.5	33.8	5.7	9.0	16.3	5.7
44.0	20.3	29.3	7.6	19.5	31.0	6.9	18.8	32.7	6.4	9.8	15.5	6.4	9.4	16.3	5.9
45.0	20.7	29.4	7.7	19.9	31.1	7.1	19.2	32.8	6.5	10.0	15.5	6.5	9.6	16.4	6.0
46.0	21.1	29.5	7.8	20.3	31.2	7.2	19.6	32.9	6.6	10.2	15.5	6.6	9.8	16.4	6.1
48.0	21.9	29.7	8.1	21.1	31.4	7.4	20.4	33.1	6.8	10.6	15.6	6.9	10.2	16.5	6.3
50.0	22.7	29.9	8.3	21.9	31.6	7.6	21.2	33.4	7.0	11.0	15.7	7.1	10.6	16.6	6.6

**YCAL0030EB**

IPLV=13.3

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	23.4	35.2	7.4	22.6	37.3	6.7	21.8	39.6	6.2	11.1	18.9	6.2	10.7	20.0	5.6
42.0	24.1	35.8	7.5	23.3	38.0	6.9	12.1	17.8	7.0	11.6	18.9	6.4	11.2	20.1	5.9
44.0	25.1	36.0	7.8	24.2	38.1	7.1	12.5	17.9	7.3	12.1	19.0	6.7	11.6	20.1	6.1
45.0	25.5	36.1	7.9	24.7	38.2	7.2	12.8	17.9	7.4	12.3	19.0	6.8	11.9	20.2	6.2
46.0	26.0	36.2	8.0	25.1	38.4	7.3	13.0	18.0	7.5	12.6	19.1	6.9	12.1	20.2	6.3
48.0	27.0	36.4	8.3	26.1	38.6	7.6	13.6	18.0	7.8	13.1	19.1	7.2	12.6	20.3	6.5
50.0	28.0	36.6	8.5	27.1	38.8	7.8	14.1	18.1	8.1	13.6	19.2	7.4	13.1	20.4	6.8

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98

# Ratings - R-407C (English Units)

**YCAL0034EB**

IPLV=14.1

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER									
40.0	33.3	31.6	11.6	32.4	33.6	10.7	31.4	35.6	9.8	30.4	37.7	9.0	29.4	40.0	8.3	28.4	42.3	7.6
42.0	34.5	31.9	11.9	33.6	33.9	11.0	32.6	35.9	10.1	31.6	38.1	9.3	30.5	40.3	8.5	29.5	42.7	7.8
44.0	35.8	32.3	12.2	34.8	34.2	11.3	33.8	36.2	10.4	32.7	38.4	9.5	31.7	40.7	8.7	30.6	43.0	8.0
45.0	36.4	32.5	12.4	35.4	34.3	11.4	34.4	36.4	10.5	33.3	38.6	9.7	32.2	40.9	8.9	31.2	43.2	8.1
46.0	37.1	32.6	12.5	36.0	34.5	11.6	35.0	36.6	10.7	33.9	38.8	9.8	32.8	41.0	9.0	31.7	43.4	8.2
48.0	38.4	33.0	12.9	37.3	34.9	11.9	36.2	36.9	10.9	35.1	39.1	10.1	34.0	41.4	9.2	32.9	43.8	8.5
50.0	39.7	33.3	13.2	38.6	35.3	12.2	37.5	37.3	11.2	36.4	39.5	10.3	35.2	41.8	9.5	34.1	44.2	8.7

**YCAL0040EB**

IPLV=14.3

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER												
40.0	37.8	31.8	12.1	36.8	33.8	11.2	35.7	35.9	10.3	34.7	38.2	9.5	33.6	40.6	8.7	32.5	43.1	8.0
42.0	39.3	31.9	12.6	38.2	33.9	11.6	36.6	37.2	10.3	36.0	38.3	9.8	34.9	40.8	9.0	33.8	43.3	8.3
44.0	40.8	32.1	13.0	39.7	34.1	12.0	38.1	37.2	10.7	36.9	39.5	9.8	36.3	40.9	9.4	35.2	43.4	8.6
45.0	41.5	32.1	13.2	40.4	34.1	12.2	38.8	37.2	10.9	37.7	39.5	10.0	37.0	40.9	9.5	35.8	43.5	8.8
46.0	42.3	32.2	13.4	41.2	34.2	12.4	39.6	37.1	11.1	38.4	39.5	10.2	37.7	41.0	9.7	36.5	43.6	8.9
48.0	43.9	32.3	13.9	42.7	34.4	12.8	41.2	37.1	11.6	40.0	39.5	10.6	38.8	42.0	9.8	37.9	43.8	9.2
50.0	45.5	32.5	14.4	44.3	34.5	13.3	42.8	37.1	12.0	41.6	39.5	11.1	40.3	42.0	10.2	39.0	44.7	9.3

**YCAL0042EB**

IPLV=13.6

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER									
40.0	41.9	37.5	11.7	40.8	39.8	10.8	39.6	42.2	9.9	38.4	44.8	9.1	37.2	47.6	8.4	36.1	50.2	7.8
42.0	43.5	37.7	12.1	42.4	40.0	11.2	41.1	42.4	10.3	39.9	45.1	9.4	38.7	47.8	8.7	37.4	50.7	8.0
44.0	45.0	38.3	12.3	44.0	40.2	11.5	42.7	42.7	10.6	41.4	45.3	9.8	40.2	48.1	9.0	38.9	51.0	8.2
45.0	45.9	38.4	12.5	44.6	40.7	11.6	43.5	42.8	10.8	42.2	45.4	9.9	40.9	48.2	9.1	39.6	51.1	8.4
46.0	46.7	38.5	12.7	45.5	40.8	11.8	44.3	42.9	11.0	43.0	45.5	10.1	41.7	48.3	9.3	40.4	51.3	8.5
48.0	48.5	38.7	13.1	47.2	41.0	12.2	45.8	43.5	11.2	44.7	45.8	10.4	43.1	49.0	9.5	41.9	51.6	8.8
50.0	50.3	38.9	13.6	49.0	41.2	12.5	47.6	43.7	11.6	46.2	46.4	10.7	44.7	49.2	9.8	43.3	52.2	9.0

**YCAL0044EB**

IPLV=13.7

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER									
40.0	46.2	41.8	11.7	44.9	44.3	10.8	43.6	47.0	9.9	42.2	49.8	9.1	40.9	52.8	8.4	39.5	56.0	7.7
42.0	47.9	42.1	12.1	46.6	44.6	11.1	45.3	47.3	10.3	43.9	50.2	9.4	42.5	53.2	8.7	41.1	56.3	8.0
44.0	49.8	42.4	12.4	48.4	44.9	11.5	47.0	47.6	10.6	45.6	50.5	9.7	44.1	53.5	9.0	42.7	56.6	8.2
45.0	50.7	42.6	12.6	49.3	45.1	11.7	47.9	47.8	10.8	46.4	50.7	9.9	44.9	53.7	9.1	43.5	56.9	8.3
46.0	51.6	42.8	12.8	50.2	45.3	11.8	48.8	48.0	10.9	47.3	50.8	10.1	45.8	53.9	9.2	44.3	57.1	8.5
48.0	53.5	43.2	13.2	52.1	45.7	12.2	50.6	48.3	11.2	49.0	51.2	10.4	47.5	54.3	9.5	46.0	57.5	8.7
50.0	55.5	43.6	13.5	54.0	46.1	12.5	52.4	48.7	11.6	50.9	51.6	10.7	49.3	54.7	9.8	47.7	57.9	9.0

NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98

**YCAL0034EB**

IPLV=14.1

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	27.4	44.7	6.9	26.4	47.2	6.3	25.4	49.7	5.8	17.2	32.6	5.8	16.5	34.3	5.3
42.0	28.5	45.1	7.1	27.4	47.6	6.5	26.4	50.1	6.0	17.9	32.8	6.0	17.2	34.5	5.5
44.0	29.5	45.5	7.3	28.5	48.0	6.7	27.4	50.6	6.2	18.7	33.0	6.3	17.9	34.7	5.7
45.0	30.1	45.7	7.4	29.0	48.2	6.8	28.0	50.8	6.3	19.0	33.1	6.4	18.3	34.9	5.8
46.0	30.6	45.9	7.5	29.6	48.5	6.9	20.2	31.4	7.1	19.4	33.2	6.5	18.7	35.0	5.9
48.0	31.8	46.3	7.8	30.7	48.9	7.1	21.0	31.6	7.3	20.2	33.4	6.7	19.4	35.2	6.1
50.0	32.9	46.8	8.0	31.8	49.4	7.3	21.8	31.9	7.5	21.0	33.6	6.9	20.2	35.5	6.3

**YCAL0040EB**

IPLV=14.3

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	31.4	45.8	7.3	30.4	48.6	6.7	29.3	51.5	6.2	14.8	25.1	5.8	14.2	26.6	5.3
42.0	32.7	45.9	7.6	31.6	48.8	7.0	30.5	51.7	6.4	15.4	25.1	6.0	14.8	26.6	5.5
44.0	34.0	46.1	7.9	32.9	48.9	7.2	31.8	51.9	6.6	16.0	25.1	6.3	15.5	26.6	5.8
45.0	34.7	46.2	8.0	33.5	49.0	7.4	32.4	52.0	6.7	16.4	25.1	6.4	15.8	26.7	5.9
46.0	35.4	46.3	8.2	34.2	49.1	7.5	33.0	52.1	6.9	16.7	25.1	6.5	16.1	26.7	6.0
48.0	36.7	46.5	8.5	35.5	49.3	7.8	34.3	52.4	7.1	17.4	25.2	6.8	16.8	26.7	6.2
50.0	38.1	46.7	8.8	36.9	49.6	8.0	35.7	52.6	7.4	18.1	25.2	7.1	17.5	26.8	6.5

**YCAL0042EB**

IPLV=13.6

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	34.8	53.2	7.1	33.6	56.3	6.5	32.4	59.5	6.0	23.3	43.9	5.6	22.5	46.5	5.2
42.0	36.1	53.7	7.3	34.9	56.9	6.7	33.6	60.2	6.1	24.3	44.2	5.9	23.4	46.7	5.4
44.0	37.6	54.0	7.6	36.3	57.2	6.9	35.0	60.6	6.3	25.3	44.4	6.1	24.4	47.0	5.6
45.0	38.3	54.2	7.7	37.0	57.4	7.0	35.7	60.7	6.5	25.8	44.5	6.2	24.9	47.1	5.7
46.0	39.0	54.3	7.8	37.7	57.5	7.2	36.4	60.9	6.6	26.3	44.6	6.3	25.4	47.2	5.8
48.0	40.5	54.7	8.1	39.2	57.9	7.4	28.3	42.2	7.1	27.4	44.8	6.5	26.4	47.4	6.0
50.0	42.1	55.0	8.3	40.7	58.3	7.6	29.5	42.5	7.4	28.4	45.0	6.7	27.4	47.6	6.2

**YCAL0044EB**

IPLV=13.7

**AIR TEMPERATURE ON CONDENSER (°F)**

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	38.1	59.2	7.1	36.9	61.9	6.6	35.6	65.3	6.0	18.3	31.3	5.9	17.5	33.1	5.4
42.0	39.6	59.6	7.3	38.2	63.0	6.7	36.8	66.4	6.1	19.0	31.5	6.2	18.3	33.3	5.6
44.0	41.2	59.9	7.5	39.7	63.4	6.9	38.3	66.9	6.3	19.8	31.7	6.4	19.1	33.4	5.9
45.0	42.0	60.1	7.7	40.5	63.6	7.0	39.1	67.1	6.4	20.2	31.7	6.5	19.5	33.5	6.0
46.0	42.8	60.4	7.8	41.3	63.8	7.1	39.8	67.4	6.5	20.7	31.8	6.6	19.9	33.6	6.1
48.0	44.4	60.9	8.0	42.9	64.2	7.4	41.4	67.9	6.8	21.5	32.0	6.9	20.7	33.8	6.3
50.0	46.1	61.3	8.3	44.5	64.8	7.6	23.2	30.3	7.8	22.4	32.1	7.1	21.6	34.0	6.5

## NOTES:

1. KW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98









# Ratings - R-407C (English Units)

YCAL0104EB

IPLV=14.0

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER
40.0	99.3	91.7	11.6	96.6	96.8	10.8	93.8	102.2	10.0	91.0	108.1	9.2	88.0	114.4	8.4	85.0	121.3	7.7
42.0	103.0	92.6	12.0	100.3	97.8	11.1	97.4	103.3	10.2	94.5	109.2	9.4	91.4	115.6	8.7	88.2	122.5	7.9
44.0	106.9	93.7	12.3	104.0	98.9	11.4	101.1	104.4	10.5	98.0	110.3	9.7	94.9	116.7	8.9	91.6	123.6	8.2
45.0	108.8	94.2	12.4	105.9	99.4	11.5	102.9	105.0	10.7	99.8	110.9	9.8	96.7	117.3	9.1	93.3	124.2	8.3
46.0	110.8	94.7	12.6	107.9	100.0	11.7	104.8	105.5	10.8	101.7	111.5	10.0	98.4	117.9	9.2	95.0	124.9	8.4
48.0	114.8	95.8	12.9	111.8	101.1	12.0	108.6	106.7	11.1	105.4	112.8	10.2	102.0	119.2	9.4	98.6	126.1	8.6
50.0	119.0	96.9	13.3	115.8	102.3	12.3	112.5	108.0	11.4	109.2	113.9	10.5	105.8	120.4	9.7	102.2	127.3	8.9

YCAL0114EB

IPLV=13.9

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER									
40.0	111.4	99.4	11.7	108.4	105.0	10.9	105.3	111.0	10.1	102.0	117.5	9.3	98.6	124.6	8.5	95.1	132.4	7.8
42.0	115.7	100.4	12.1	112.6	106.0	11.2	109.4	112.0	10.4	106.0	118.5	9.6	102.5	125.6	8.8	98.9	133.4	8.0
44.0	120.0	101.4	12.4	116.9	107.0	11.5	113.6	113.1	10.7	110.1	119.6	9.9	106.5	126.7	9.1	102.8	134.5	8.3
45.0	122.3	101.9	12.6	119.1	107.6	11.7	115.7	113.6	10.8	112.2	120.2	10.0	108.5	127.3	9.2	104.8	135.0	8.4
46.0	124.5	102.5	12.8	121.3	108.2	11.9	117.8	114.3	11.0	114.3	120.7	10.2	110.6	127.8	9.3	106.8	135.6	8.5
48.0	129.1	103.6	13.1	125.7	109.3	12.2	122.2	115.4	11.3	118.6	121.9	10.4	114.8	129.0	9.6	110.9	136.8	8.8
50.0	133.8	104.8	13.5	130.3	110.5	12.5	126.7	116.6	11.6	123.0	123.2	10.7	119.1	130.3	9.9	115.0	138.0	9.1

YCAL0124EB

IPLV=13.3

LCWT (°F)	75°F			80°F			85°F			90°F			95°F			100°F		
	TONS	KW	EER	TONS	KW	EER	TONS	KW	EER									
40.0	119.9	111.2	11.5	116.8	117.4	10.6	113.6	123.9	9.9	110.2	130.8	9.1	106.7	138.3	8.4	103.1	146.5	7.7
42.0	124.4	112.4	11.8	121.2	118.6	10.9	117.9	125.1	10.1	114.4	132.1	9.4	110.9	139.6	8.6	107.1	147.7	7.9
44.0	129.1	113.6	12.1	125.7	119.8	11.2	122.3	126.4	10.4	118.8	133.4	9.6	115.1	140.9	8.9	111.2	149.1	8.2
45.0	131.4	114.2	12.3	128.1	120.5	11.4	124.6	127.1	10.6	120.9	134.1	9.8	117.2	141.6	9.0	113.3	149.7	8.3
46.0	133.8	114.8	12.4	130.4	121.1	11.5	126.8	127.8	10.7	123.2	134.8	9.9	119.4	142.3	9.1	115.4	150.4	8.4
48.0	138.7	116.1	12.8	135.2	122.4	11.9	131.5	129.1	11.0	127.7	136.1	10.2	123.8	143.7	9.4	119.7	151.8	8.6
50.0	143.7	117.3	13.1	140.0	123.7	12.2	136.2	130.5	11.3	132.3	137.6	10.4	128.3	145.2	9.7	124.1	153.3	8.9

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98

**YCAL0104EB**

IPLV=14.0

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER	TONS	KW	EER									
40.0	81.7	128.9	7.0	78.4	137.1	6.4	74.9	146.1	5.7	71.1	156.0	5.1	43.1	89.2	5.2
42.0	84.9	130.0	7.2	81.5	138.2	6.6	77.9	147.2	5.9	74.1	156.9	5.3	45.0	89.6	5.4
44.0	88.2	131.2	7.5	84.7	139.3	6.8	80.9	148.2	6.1	65.8	120.9	6.0	47.1	89.6	5.6
45.0	89.9	131.7	7.6	86.3	139.9	6.9	82.5	148.8	6.2	67.1	121.3	6.1	47.9	90.2	5.7
46.0	91.5	132.4	7.7	87.9	140.5	7.0	84.1	149.3	6.3	68.4	121.7	6.2	49.1	90.0	5.8
48.0	95.0	133.6	7.9	91.2	141.7	7.2	87.4	150.5	6.5	71.1	122.5	6.4	51.1	90.5	6.1
50.0	98.5	134.8	8.1	94.7	142.9	7.4	90.7	151.7	6.7	73.9	123.4	6.6	53.2	91.0	6.3

**YCAL0114EB**

IPLV=13.9

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	91.4	141.0	7.1	87.6	150.5	6.4	83.6	160.9	5.7	79.4	172.3	5.1	53.4	113.3	5.0
42.0	95.1	141.9	7.3	91.2	151.3	6.6	87.0	161.8	5.9	82.8	173.1	5.3	55.8	113.4	5.2
44.0	98.9	143.0	7.5	94.9	152.3	6.8	90.6	162.6	6.1	86.2	174.0	5.5	58.3	113.6	5.5
45.0	100.8	143.5	7.7	96.7	152.9	6.9	92.4	163.1	6.2	88.0	174.4	5.6	59.6	113.8	5.6
46.0	102.8	144.1	7.8	98.6	153.4	7.1	94.3	163.6	6.4	89.7	174.9	5.7	60.9	114.0	5.7
48.0	106.7	145.2	8.0	102.5	154.5	7.3	98.0	164.7	6.6	93.4	175.8	5.9	63.5	114.3	5.9
50.0	110.8	146.5	8.3	106.4	155.7	7.5	101.9	165.8	6.8	97.2	176.8	6.1	66.2	114.8	6.2

**YCAL0124EB**

IPLV=13.3

LCWT (°F)	105°F			110°F			115°F			120°F			125°F		
	TONS	KW	EER												
40.0	99.4	155.3	7.0	95.4	164.9	6.4	91.3	175.4	5.8	87.0	186.8	5.2	58.9	122.1	5.2
42.0	103.3	156.6	7.2	99.2	166.1	6.6	95.0	176.6	6.0	90.5	187.9	5.4	61.5	122.5	5.4
44.0	107.2	157.9	7.5	103.1	167.4	6.8	98.7	177.8	6.2	94.2	189.0	5.6	64.1	123.0	5.6
45.0	109.3	158.6	7.6	105.0	168.1	6.9	100.7	178.4	6.3	96.1	189.6	5.6	65.5	123.3	5.7
46.0	111.3	159.3	7.7	107.1	168.7	7.0	102.6	179.1	6.4	97.9	190.2	5.7	66.8	123.6	5.8
48.0	115.5	160.6	7.9	111.1	170.1	7.2	106.6	180.4	6.6	101.8	191.5	5.9	69.6	124.2	6.0
50.0	119.8	162.1	8.1	115.3	171.5	7.4	110.6	181.8	6.8	89.6	152.3	6.4	72.4	124.9	6.2

## NOTES:

1. kW = Compressor Input Power
2. EER = Chiller EER (includes power from compressors, fans, and the control panels 0.8 kW)
3. LCWT = Leaving Chilled Water Temperature
4. Ratings are based upon 2.4 GPM cooler water per ton and 0.0001 fouling factor
5. Rated in accordance with ARI Standard 550/590-98
6. The shaded points are certified in accordance with ARI Standard 550/590-98





# Ratings - R-407C (SI Units)

## YCAL0050EB

COP=4.03

AIR TEMPERATURE ON - CONDENSER (°C)

LCWT (°C)	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP												
5.0	178.1	48.7	3.3	169.3	54.2	2.8	160.1	60.1	2.4	150.7	66.7	2.1	105.8	50.7	1.9	71.2	36.2	1.7
6.0	184.2	49.1	3.4	175°F	54.5	2.9	165.5	60.6	2.5	155.9	67.1	2.1	109.5	51.0	1.9	73.7	36.5	1.8
7.0	190.3	49.4	3.5	180.9	54.9	3.0	171.1	61.0	2.6	161.2	67.6	2.2	113.4	51.3	2.0	76.6	36.6	1.8
8.0	196.5	49.8	3.6	186.8	55.3	3.1	176.8	61.4	2.6	166.6	68.1	2.3	117.5	51.6	2.1	79.4	36.7	1.9
9.0	202.9	50.2	3.6	192.9	55.7	3.2	182.6	61.8	2.7	172.1	68.6	2.3	121.6	51.9	2.1	82.3	36.9	1.9
10.0	209.3	50.6	3.7	199.1	56.1	3.2	188.5	62.3	2.8	177.7	69.1	2.4	125.8	52.2	2.2	85.2	37.1	2.0
11.0	216.0	51.1	3.8	205.4	56.6	3.3	194.6	62.8	2.9	183.5	69.6	2.4	130.1	52.5	2.2	88.3	37.2	2.1

## YCAL0060EB

COP=4.26

AIR TEMPERATURE ON - CONDENSER (°C)

LCWT (°C)	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP												
5.0	196.2	50.8	3.5	187.6	56.1	3.0	178.0	62.4	2.6	168.4	69.1	2.3	158.1	76.8	1.9	79.2	38.3	1.8
6.0	202.9	51.1	3.6	193.3	56.8	3.1	183.4	63.2	2.7	173.3	70.1	2.3	162.7	77.9	2.0	82.2	38.4	1.9
7.0	209.8	51.4	3.7	199.9	57.1	3.2	189.7	63.5	2.7	179.2	70.5	2.4	168.4	78.2	2.0	85.2	38.5	1.9
8.0	216.7	51.7	3.8	206.5	57.5	3.3	196.0	63.9	2.8	185.2	70.9	2.4	174.2	78.6	2.1	88.2	38.7	2.0
9.0	223.8	52.0	3.9	213.3	57.8	3.4	202.5	64.2	2.9	191.4	71.4	2.5	180.0	79.1	2.1	91.4	38.8	2.1
10.0	230.9	52.4	4.0	220.2	58.2	3.5	209.1	64.7	3.0	197.7	71.8	2.6	185.9	79.7	2.2	94.7	38.9	2.1
11.0	238.2	52.7	4.1	227.2	58.6	3.5	215.8	65.1	3.1	204.1	72.3	2.6	104.5	35.1	2.6	98.0	39.1	2.2

## YCAL0064EB

COP=4.01

AIR TEMPERATURE ON - CONDENSER (°C)

LCWT (°C)	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP															
5.0	219.1	59.7	3.3	207.5	66.4	2.8	195.8	73.8	2.4	183.9	81.9	2.1	172.3	90.5	1.8	113.0	61.6	1.7
6.0	226.5	60.1	3.4	214.6	66.9	2.9	202.5	74.3	2.5	190.4	82.4	2.1	178.4	91.2	1.8	116.9	62.2	1.7
7.0	233.9	60.5	3.5	221.7	67.3	3.0	209.3	74.9	2.6	196.9	83.0	2.2	155.5	72.0	2.0	121.2	62.5	1.8
8.0	241.5	61.0	3.6	229.1	67.8	3.1	216.3	75.4	2.6	203.6	83.6	2.3	161.0	72.4	2.0	125.7	62.8	1.8
9.0	249.4	61.5	3.7	236.6	68.3	3.2	223.4	76.0	2.7	210.3	84.2	2.3	166.6	72.8	2.1	130.3	63.1	1.9
10.0	257.4	61.9	3.7	244.1	68.8	3.2	230.7	76.5	2.8	217.3	84.9	2.4	172.4	73.2	2.2	135.0	63.4	1.9
11.0	265.5	62.5	3.8	251.9	69.4	3.3	238.2	77.1	2.8	224.4	85.5	2.4	178.3	73.7	2.2	139.8	63.7	2.0

## YCAL0070EB

COP=4.05

AIR TEMPERATURE ON - CONDENSER (°C)

LCWT (°C)	25°C			30°C			35°C			40°C			45°C			50°C		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP									
5.0	244.4	65.2	3.4	231.7	72.5	2.9	218.6	80.7	2.5	205.2	89.5	2.1	191.8	98.9	1.8	125.9	67.3	1.7
6.0	252.6	65.7	3.5	239.6	73.0	3.0	226.1	81.2	2.6	212.3	90.1	2.2	198.7	99.5	1.9	130.6	67.7	1.8
7.0	261.1	66.2	3.6	247.6	73.5	3.1	233.7	81.8	2.6	219.7	90.7	2.3	205.7	100.2	1.9	135.4	68.1	1.8
8.0	269.7	66.7	3.7	255.8	74.1	3.2	241.6	82.3	2.7	227.2	91.3	2.3	212.9	100.9	2.0	139.5	69.1	1.8
9.0	278.5	67.2	3.8	264.2	74.6	3.2	249.6	82.9	2.8	234.8	92.0	2.4	220.2	101.7	2.0	144.7	69.4	1.9
10.0	287.5	67.8	3.9	272.8	75.2	3.3	257.8	83.6	2.9	242.6	92.7	2.4	160.5	63.1	2.3	150.0	69.8	2.0
11.0	296.7	68.4	3.9	281.6	75.8	3.4	266.2	84.2	2.9	250.7	93.4	2.5	166.2	63.4	2.4	155.5	70.1	2.0

### NOTES:

1. kWo = Unit kW Cooling Capacity Output
2. kWi = Compressor kW Input
3. COP = Coefficient of Performance (Based upon compressor and fan input kW)
4. LCWT = Leaving Chilled Water Temperature
5. Ratings based upon 0.15L/s cooler water per kW



# Ratings - R-407C (SI Units)

**YCAL0104EB**

COP=4.10

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25.0			30.0			35.0			40.0			45.0			50.0		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	351.9	94.2	3.4	334.3	103.9	2.9	315.5	115.0	2.5	295.4	127.9	2.1	273.6	142.9	1.8	213.4	122.9	1.6
6.0	363.8	95.1	3.4	345.6	104.9	3.0	326.3	116.0	2.6	305.6	128.9	2.2	283.3	143.9	1.8	221.4	123.5	1.7
7.0	375.9	96.0	3.5	357.2	105.9	3.1	337.4	117.0	2.6	316.1	130.0	2.2	293.2	144.9	1.9	229.6	124.2	1.7
8.0	388.3	97.0	3.6	369.1	106.9	3.1	348.6	118.2	2.7	326.8	131.0	2.3	303.5	145.9	1.9	237.9	124.9	1.8
9.0	401.0	98.0	3.7	381.1	108.0	3.2	360.1	119.3	2.8	337.8	132.1	2.4	313.9	147.0	2.0	246.4	125.6	1.8
10.0	413.9	99.0	3.8	393.5	109.1	3.3	371.9	120.4	2.8	349.0	133.3	2.4	324.6	148.1	2.0	255.1	126.4	1.9
11.0	427.0	100.1	3.9	406.1	110.2	3.4	384.0	121.5	2.9	360.5	134.4	2.5	335.5	149.2	2.1	198.9	88.4	2.0

**YCAL0114EB**

COP=4.06

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25.0			30.0			35.0			40.0			45.0			50.0		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	394.9	102.1	3.4	375°F	112.8	3.0	353.7	125.1	2.5	330.6	139.7	2.2	305.8	157.0	1.8	278.8	177.7	1.5
6.0	408.5	103.0	3.5	388.1	113.7	3.0	366.2	126.1	2.6	342.6	140.6	2.2	317.0	157.9	1.8	289.5	178.3	1.5
7.0	422.4	103.9	3.6	401.4	114.7	3.1	378.9	127.1	2.7	354.7	141.5	2.3	328.5	158.7	1.9	300.4	179.0	1.6
8.0	436.5	104.9	3.7	415.0	115.7	3.2	392.0	128.1	2.8	367.1	142.5	2.3	340.3	159.6	2.0	311.6	179.8	1.6
9.0	450.9	106.0	3.8	428.9	116.8	3.3	405.2	129.2	2.8	379.7	143.6	2.4	352.4	160.6	2.0	323.1	180.6	1.7
10.0	465.6	107.1	3.8	443.0	117.9	3.4	418.7	130.3	2.9	392.7	144.7	2.5	364.7	161.6	2.1	334.9	181.4	1.7
11.0	480.7	108.2	3.9	457.5	119.1	3.4	432.6	131.4	3.0	405.9	145.8	2.5	377.4	162.6	2.1	347.0	182.3	1.8

**YCAL0124EB**

COP=3.91

LCWT (°C)	AIR TEMPERATURE ON - CONDENSER (°C)																	
	25.0			30.0			35.0			40.0			45.0			50.0		
	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP	kWo	kWi	COP
5.0	425.1	114.2	3.3	404.5	125.8	2.9	382.5	139.0	2.5	358.9	154.1	2.1	333.4	171.7	1.8	258.3	152.3	1.6
6.0	439.5	115.3	3.4	418.3	127.0	3.0	395.7	140.1	2.6	371.5	155.2	2.2	345.3	172.8	1.8	268.1	152.9	1.6
7.0	454.2	116.4	3.5	432.3	128.1	3.0	409.2	141.4	2.6	384.3	156.4	2.3	357.5	173.9	1.9	278.0	153.7	1.7
8.0	469.2	117.6	3.6	446.7	129.4	3.1	422.9	142.6	2.7	397.2	157.7	2.3	369.9	175.1	2.0	288.2	154.4	1.7
9.0	484.5	118.7	3.6	461.4	130.6	3.2	436.8	143.9	2.8	410.7	159.0	2.4	382.6	176.3	2.0	298.6	155.2	1.8
10.0	500.2	119.9	3.7	476.3	131.9	3.3	451.2	145.1	2.8	424.4	160.3	2.4	395.6	177.6	2.1	309.2	156.1	1.8
11.0	516.1	121.1	3.8	491.7	133.1	3.3	465.8	146.5	2.9	438.4	161.6	2.5	408.9	178.9	2.1	320.1	156.9	1.9



# Part Load Ratings - R-22 (English Units)

YCAL0014EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	13.2	13.7	9.6
50.0	69.0	7.5	4.9	14.2
IPLV:13.1 EER				

YCAL0020EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	18.0	19.7	9.6
50.0	69.0	10.2	6.9	14.8
IPLV:13.6 EER				

YCAL0024EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	22.4	24.5	9.9
50.0	68.6	12.5	8.8	14.7
IPLV: 13.6EER				

YCAL0030EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	28.3	30.5	10.2
50.0	68.0	15.5	10.7	15.4
IPLV:14.1 EER				

YCAL0034EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	34.0	38.9	9.8
66.7	79.4	25.1	19.9	13.3
33.3	58.1	13.1	7.9	16.9
IPLV:14.6 EER				

YCAL0040EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	38.7	39.0	10.4
75°F	82.6	30.7	24.3	12.3
50.0	68.0	21.3	13.5	15.7
25.0	55.0	10.7	5.8	17.9
IPLV:14.9 EER				

YCAL0042EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	42.9	45.1	10.1
78.2	83.7	34.8	30.1	11.7
50.0	67.9	23.5	15.9	15.1
28.2	55.0	13.0	8.1	16.5
IPLV:14.2 EER				

YCAL0044EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	47.1	50.4	10.1
75°F	82.8	37.5	31.8	12.0
50.0	68.0	25.9	18.1	14.9
25.0	55.0	13.1	8.0	16.7
IPLV:14.2 EER				

YCAL0050EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	51.1	57.8	9.7
76.5	83.9	41.6	38.5	11.3
50.0	68.3	28.3	20.4	14.6
26.5	55.0	15.9	9.8	17.0
IPLV:14.0 EER				

YCAL0060EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	56.2	60.6	10.2
75°F	82.9	44.8	38.0	12.3
50.0	68.2	31.1	21.5	15.4
25.0	55.0	15.8	9.3	17.7
IPLV:14.7 EER				

YCAL0064EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	63.1	70.5	9.8
85.5	88.0	55.7	54.0	11.0
66.7	79.2	46.4	35.7	13.1
52.2	69.3	36.0	27.1	14.2
33.3	58.6	24.8	13.9	17.2
18.8	55.0	12.9	7.7	16.5
IPLV:14.4 EER				

YCAL0070EC				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	70.2	77.3	10.0
83.3	87.3	61.3	57.2	11.5
66.7	79.0	51.5	39.8	13.2
50.0	67.7	38.2	28.5	14.4
33.3	57.6	26.4	15.9	16.4
16.7	55.0	13.0	7.8	16.5
IPLV:14.3 EER				

**YCAL0074EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	76.0	86.4	9.8
84.3	88.0	67.1	66.2	11.0
66.7	79.3	56.1	43.9	13.3
51.0	68.6	42.5	33.5	13.8
33.3	58.1	29.2	17.3	17.0
17.7	55.0	15.8	9.0	17.7

IPLV:14.4 EER

**YCAL0080EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	82.2	95.3	9.7
83.3	87.5	71.9	69.9	11.3
66.7	79.4	60.8	47.8	13.4
50.0	67.9	45.0	34.4	14.3
33.3	58.0	31.6	18.3	17.4
16.7	55.0	15.6	8.9	17.7

IPLV:14.6 EER

**YCAL0090EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	83.2	86.5	10.3
77.8	83.3	67.0	58.2	12.0
50.0	66.9	44.2	33.4	14.4
27.8	55.0	24.5	16.5	16.1

IPLV:13.8 EER

**YCAL0094EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	89.9	94.6	10.2
75°F	82.5	71.2	61.1	12.2
50.0	67.3	48.4	37.1	14.3
25.0	55.0	24.4	16.4	16.1

IPLV:13.8 EER

**YCAL0104EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	99.6	110.9	9.8
81.8	86.7	85.9	78.7	11.5
59.1	74.4	65.4	49.0	13.5
40.9	61.9	44.6	31.3	15.4
18.2	55.0	20.2	12.9	16.5

IPLV:14.0 EER

**YCAL0114EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	111.1	121.1	9.8
83.3	87.2	96.6	90.1	11.1
66.7	77.2	78.1	67.9	12.5
50.0	67.4	59.9	45.5	14.1
33.3	56.9	40.5	26.6	16.1
16.7	55.0	20.0	13.0	16.3

IPLV:13.7 EER

**YCAL0124EC**

% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	121.0	134.0	9.8
85.2	87.8	106.4	102.6	10.9
66.7	77.3	85.3	75.8	12.3
51.9	68.3	67.2	53.2	13.8
33.3	57.1	44.6	30.0	15.9
18.5	55.0	23.9	16.2	16.0

IPLV:13.5 EER

# Part Load Ratings - R-22 (SI Units)

YCAL0014EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	46.5	13.7	2.81
50.0	20.6	26.4	4.9	4.17
IPLV:3.85 COP				

YCAL0020EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	63.4	19.7	2.82
50.0	20.6	36.0	6.9	4.35
IPLV:4.00 COP				

YCAL0024EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	78.8	24.5	2.89
50.0	20.3	44.1	8.8	4.31
IPLV:3.98 COP				

YCAL0030EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	99.6	30.5	2.99
50.0	20.0	54.7	10.7	4.50
IPLV:4.14 COP				

YCAL0034EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	119.6	38.9	2.87
66.7	26.3	88.4	19.9	3.90
33.3	14.5	46.0	7.9	4.96
IPLV:4.29 COP				

YCAL0040EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	136.2	39.0	3.06
75°F	28.1	108.1	24.3	3.61
50.0	20.0	75°F	13.5	4.60
25.0	12.8	37.6	5.8	5.24
IPLV:4.37 COP				

YCAL0042EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	150.7	45.1	2.97
78.2	28.7	122.4	30.1	3.43
50.0	20.0	82.7	15.9	4.42
28.2	12.8	45.8	8.1	4.83
IPLV:4.16 COP				

YCAL0044EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	165.8	50.4	2.96
75°F	28.2	132.0	31.8	3.53
50.0	20.0	91.2	18.1	4.37
25.0	12.8	46.1	8.0	4.91
IPLV:4.17 COP				

YCAL0050EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	179.6	57.8	2.83
76.5	28.8	146.4	38.5	3.32
50.0	20.2	99.7	20.4	4.29
26.5	12.8	55.8	9.8	4.99
IPLV:4.11 COP				

YCAL0060EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	197.6	60.6	2.98
75°F	28.3	157.6	38.0	3.62
50.0	20.1	109.3	21.5	4.50
25.0	12.8	55.6	9.3	5.18
IPLV:4.32 COP				

YCAL0064EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	221.8	70.5	2.87
85.5	31.1	195.9	54.0	3.22
66.7	26.2	163.2	35.7	3.84
52.2	20.7	126.6	27.1	4.15
33.3	14.8	87.1	13.9	5.04
18.8	12.8	45.5	7.7	4.83
IPLV:4.23 COP				

YCAL0070EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	247.0	77.3	2.94
83.3	30.7	215.5	57.2	3.37
66.7	26.1	181.0	39.8	3.88
50.0	19.8	134.5	28.5	4.22
33.3	14.2	92.9	15.9	4.81
16.7	12.8	45.7	7.8	4.83
IPLV:4.18 COP				

YCAL0074EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	267.1	86.4	2.87
84.3	31.1	235.9	66.2	3.23
66.7	26.3	197.2	43.9	3.89
51.0	20.3	149.3	33.5	4.05
33.3	14.5	102.9	17.3	4.98
17.7	12.8	55.6	9.0	5.17

IPLV:4.22 COP

YCAL0080EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	289.0	95.3	2.83
83.3	30.8	253.0	69.9	3.30
66.7	26.3	213.9	47.8	3.92
50.0	19.9	158.4	34.4	4.19
33.3	14.5	111.0	18.3	5.10
16.7	12.8	54.9	8.9	5.19

IPLV:4.28 COP

YCAL0090EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	292.7	86.5	3.01
77.8	28.5	235.7	58.2	3.51
50.0	19.4	155.6	33.4	4.21
27.8	12.8	86.2	16.5	4.72

IPLV:4.04 COP

YCAL0094EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	316.3	94.6	3.00
75°F	28.1	250.4	61.1	3.57
50.0	19.6	170.2	37.1	4.18
25.0	12.8	85.9	16.4	4.71

IPLV: 4.05 COP

YCAL0104EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	350.4	110.9	2.88
81.8	30.4	302.1	78.7	3.37
59.1	23.5	229.9	49.0	3.96
40.9	16.6	157.0	31.3	4.50
18.2	12.8	70.9	12.9	4.83

IPLV:4.12 COP

YCAL0114EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	390.6	121.1	2.88
83.3	30.7	339.9	90.1	3.25
66.7	25.1	274.6	67.9	3.66
50.0	19.6	210.6	45.5	4.13
33.3	13.8	142.6	26.6	4.72
16.7	12.8	70.5	13.0	4.77

IPLV:4.01 COP

YCAL0124EC				
% DISPL.	AMBIENT DEG C	UNIT kW <sub>o</sub>	COMPR kW <sub>i</sub>	COP
100.0	35.0	425.4	134.0	2.87
85.2	31.0	374.1	102.6	3.20
66.7	25.2	300.1	75.8	3.62
51.9	20.2	236.3	53.2	4.03
33.3	14.0	156.9	30.0	4.67
18.5	12.8	84.1	16.2	4.68

IPLV:3.96 COP

# Part Load Ratings - R-407C (English Units)

YCAL0014EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	12.7	14.8	8.6
50.0	69.7	7.3	5.0	13.7
IPLV:12.6 EER				

YCAL0020EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	17.4	21.2	8.7
50.0	70.1	10.2	7.2	14.1
IPLV:12.9 EER				

YCAL0024EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	21.7	26.1	9.0
50.0	69.9	12.6	9.2	14.4
IPLV:13.2 EER				

YCAL0030EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	26.7	32.0	9.2
50.0	69.5	15.4	11.0	14.9
IPLV:13.6 EER				

YCAL0034EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	31.7	40.7	8.7
66.7	80.5	24.0	20.9	12.2
33.3	59.9	13.1	8.1	16.6
IPLV:14.1 EER				

YCAL0040EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	36.3	40.9	9.4
75°F	83.2	29.2	25.7	11.2
50.0	69.4	20.8	14.0	14.9
25.0	55.0	10.7	5.9	17.7
IPLV:14.3 EER				

YCAL0042EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	40.2	48.1	9.0
75°F	84.4	33.1	32.1	10.5
50.0	69.6	23.2	16.6	14.3
25.0	55.0	13.1	8.2	16.3
IPLV:13.6 EER				

YCAL0044EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	44.1	53.5	9.0
75°F	83.7	35.8	33.7	10.9
50.0	69.8	25.6	18.7	14.3
25.0	55.0	13.2	8.1	16.6
IPLV:13.7 EER				

YCAL0050EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	48.1	60.8	8.7
76.5	84.6	39.8	40.4	10.4
50.0	69.9	28.0	21.1	14.0
26.5	54.9	15.9	9.6	17.3
IPLV:13.7 EER				

YCAL0060EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	53.3	63.4	9.3
75°F	83.5	43.1	39.8	11.4
50.0	69.6	30.8	22.0	14.9
25.0	55.0	16.0	9.1	18.3
IPLV:14.5 EER				

YCAL0064EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	58.9	74.7	8.7
85.5	88.5	52.5	57.2	9.8
66.7	80.3	44.4	38.0	11.9
52.2	70.2	34.5	28.1	13.2
33.3	59.6	24.1	14.3	16.4
18.8	55.0	13.1	7.9	16.4
IPLV:13.7 EER				

YCAL0070EB				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	65.7	81.6	8.9
83.3	88.0	58.0	60.3	10.4
66.7	80.1	49.5	42.0	12.2
50.0	69.4	37.6	29.4	13.8
33.3	59.4	26.7	16.4	16.2
16.7	55.0	13.1	7.9	16.4
IPLV:13.8 EER				

<b>YCAL0074EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	71.6	90.3	8.8
84.3	88.6	63.9	69.1	10.1
66.7	80.3	54.1	45.9	12.3
51.0	70.0	41.7	34.6	13.2
33.3	59.6	29.4	17.4	17.0
17.7	55.0	16.1	8.7	18.6

IPLV:14.2 EER

<b>YCAL0080EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	78.0	100.0	8.8
83.3	88.0	68.9	73.6	10.3
66.7	80.3	58.9	50.4	12.4
50.0	69.2	44.4	35.8	13.6
33.3	59.7	32.1	18.4	17.7
16.7	55.0	15.9	8.6	18.5

IPLV:14.4 EER

<b>YCAL0090EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	79.6	91.5	9.3
77.8	84.1	65.1	61.3	11.1
50.0	68.4	44.3	34.2	14.0
27.8	55.0	24.6	16.1	16.5

IPLV:13.6 EER

<b>YCAL0094EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	85.8	100.3	9.3
75°F	83.1	68.8	64.5	11.2
50.0	68.2	47.5	38.0	13.7
25.0	55.0	24.5	16.1	16.5

IPLV:13.4 EER

<b>YCAL0104EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	94.9	116.7	8.9
81.8	87.4	82.9	83.2	10.6
59.1	75.8	64.5	51.0	12.9
40.9	63.5	45.0	31.7	15.3
18.2	55.0	20.8	12.4	17.5

IPLV:14.0 EER

<b>YCAL0114EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	106.5	126.7	9.1
83.3	87.8	93.9	94.5	10.3
66.7	78.6	77.5	70.1	12.0
50.0	69.1	60.5	46.5	14.0
33.3	58.6	41.8	26.5	16.7
16.7	55.0	20.7	12.5	17.3

IPLV:13.9 EER

<b>YCAL0124EB</b>				
% DISPL.	AMBIENT DEG F	TONS	COMPR kW	EER
100.0	95.0	115.1	140.9	8.9
85.2	88.3	102.2	108.5	10.0
66.7	78.5	83.3	78.8	11.6
51.9	69.6	66.3	54.9	13.2
33.3	58.6	45.2	29.9	16.2
18.5	55.0	24.2	15.7	16.5

IPLV:13.3 EER

# Part Load Ratings - R-407C (SI Units)

YCAL0014EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	44.5	14.8	2.53
50.0	21.0	25.8	5.0	4.03
IPLV:3.69 COP				

YCAL0020EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	61.1	21.2	2.55
50.0	21.2	35.8	7.2	4.14
IPLV:3.79 COP				

YCAL0024EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	76.4	26.1	2.64
50.0	21.1	44.5	9.2	4.21
IPLV:3.86 COP				

YCAL0030EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	94.0	32.0	2.70
50.0	20.9	54.1	11.0	4.36
IPLV:3.98 COP				

YCAL0034EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	111.3	40.7	2.56
66.7	27.0	84.5	20.9	3.57
33.3	15.5	46.2	8.1	4.86
IPLV:4.13 COP				

YCAL0040EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	127.6	40.9	2.75
75°F	28.5	102.6	25.7	3.28
50.0	20.8	73.1	14.0	4.36
25.0	12.8	37.6	5.9	5.19
IPLV:4.18 COP				

YCAL0042EB				
% DISPL.	AMBIENT DEG C	KW	COMPR KW	COP
100.0	35.0	141.2	48.1	2.63
75°F	29.1	116.2	32.1	3.08
50.0	20.9	81.5	16.6	4.19
25.0	12.8	46.0	8.2	4.79
IPLV:3.99 COP				

YCAL0044EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	155.1	53.5	2.62
75°F	28.7	125.9	33.7	3.20
50.0	21.0	90.1	18.7	4.18
25.0	12.8	46.3	8.1	4.86
IPLV:4.02 COP				

YCAL0050EB				
% DISPL.	AMBIENT DEG C	KW	COMPR KW	COP
100.0	35.0	169.3	60.8	2.55
76.5	29.2	140.1	40.4	3.04
50.0	21.0	98.3	21.1	4.11
26.5	12.7	56.1	9.6	5.08
IPLV:	4.03	COP		

YCAL0060EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	187.5	63.4	2.72
75°F	28.6	151.6	39.8	3.34
50.0	20.9	108.2	22.0	4.37
25.0	12.8	56.1	9.1	5.35
IPLV:4.26 COP				

YCAL0064EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	207.0	74.7	2.54
85.5	31.4	184.5	57.2	2.88
66.7	26.8	156.3	38.0	3.49
52.2	21.2	121.4	28.1	3.85
33.3	15.3	84.8	14.3	4.79
18.8	12.8	46.0	7.9	4.80
IPLV:4.01 COP				

YCAL0070EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	231.2	81.6	2.62
83.3	31.1	204.1	60.3	3.04
66.7	26.7	173.9	42.0	3.56
50.0	20.8	132.4	29.4	4.04
33.3	15.2	93.9	16.4	4.73
16.7	12.8	46.2	7.9	4.80
IPLV:4.05 COP				

YCAL0074EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	251.8	90.3	2.59
84.3	31.4	224.8	69.1	2.96
66.7	26.9	190.3	45.9	3.61
51.0	21.1	146.8	34.6	3.86
33.3	15.3	103.3	17.4	4.98
17.7	12.8	56.7	8.7	5.45

IPLV:4.17 COP

YCAL0080EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	274.4	100.0	2.57
83.3	31.1	242.2	73.6	3.01
66.7	26.8	207.2	50.4	3.62
50.0	20.6	156.2	35.8	3.99
33.3	15.4	112.8	18.4	5.17
16.7	12.8	56.0	8.6	5.43

IPLV:4.22 COP

YCAL0090EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	280.0	91.5	2.74
77.8	28.9	229.1	61.3	3.26
50.0	20.2	155.7	34.2	4.12
27.8	12.8	86.6	16.1	4.84

IPLV:3.98 COP

YCAL0094EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	301.8	100.3	2.72
75°F	28.4	241.9	64.5	3.29
50.0	20.1	167.1	38.0	4.01
25.0	12.8	86.3	16.1	4.83

IPLV:3.92 COP

YCAL0104EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	333.7	116.7	2.62
81.8	30.8	291.5	83.2	3.10
59.1	24.3	226.8	51.0	3.78
40.9	17.5	158.4	31.7	4.49
18.2	12.8	73.1	12.4	5.13

IPLV:4.10 COP

YCAL0114EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	374.7	126.7	2.66
83.3	31.0	330.1	94.5	3.03
66.7	25.9	272.5	70.1	3.53
50.0	20.6	212.7	46.5	4.10
33.3	14.8	147.1	26.5	4.88
16.7	12.8	72.6	12.5	5.07

IPLV:4.06 COP

YCAL0124EB				
% DISPL.	AMBIENT DEG C	UNIT kWo	COMPR kWi	COP
100.0	35.0	404.7	140.9	2.61
85.2	31.3	359.5	108.5	2.92
66.7	25.8	293.1	78.8	3.41
51.9	20.9	233.3	54.9	3.87
33.3	14.8	159.1	29.9	4.75
18.5	12.8	84.9	15.7	4.84

IPLV:3.91 COP

# **Physical Data - (English Units)**

	Model Number YCAL							
	0014	0020	0024	0030	0034	0040	0042	0044
<b>General Unit Data</b>								
Nominal Tons, R-22	13.2	18.0	22.4	28.3	34.0	38.7	42.9	47.1
Nominal Tons, R-407C	12.7	17.4	21.7	26.7	31.7	36.3	40.2	44.1
Number of Refrigerant Circuits	1	1	1	1	1	2	2	2
<b>Refrigerant Charge</b>								
R-22, ckt1 / ckt2, lbs	32	38	58	65	69	45/45	54/45	54/54
R-407C, ckt1 / ckt2, lbs	32	38	58	65	69	45/45	54/45	52/52
Oil Charge, ckt1 / ckt2, gallons	2.2	2.2	2.2	2.2	3.3	2.2/2.2	2.2/2.2	2.2/2.2
<b>Shipping Weight</b>								
Aluminum Fin Coils, lbs	2472	2488	2857	2933	3279	4689	4752	4822
Copper Fin Coils, lbs	2622	2638	3007	3083	3429	4989	5052	5122
<b>Operating Weight</b>								
Aluminum Fin Coils, lbs	2548	2564	2940	3036	3381	4931	4994	5064
Copper Fin Coils, lbs	2762	2778	3275	3371	3717	5300	5363	5433
<b>Compressors, scroll type</b>								
Compressors per circuit	2	2	2	2	3	2	2	2
Compressors per unit	2	2	2	2	3	4	4	4
Nominal Tons per compressor	7.5	10	13	15	13	10/10	13/10	13/13
<b>Condenser</b>								
Total Face Area ft <sup>2</sup>	47.2	47.2	66.1	66.1	66.1	128.0	128.0	128.0
Number of Rows	2	2	2	3	3	2	2	2
Fins per Inch	13	13	13	13	13	13	13	13
<b>Condenser Fans</b>								
Number of Fans total	2	2	2	2	2	4	4	4
Fan hp/kw	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4
Fan RPM	1140	1140	1140	1140	1140	1140	1140	1140
Number of Blades	3	3	3	3	3	3	3	3
Total Chiller CFM	16257	16257	23500	23500	23500	47360	47360	47360
<b>Evaporator, Direct Expansion</b>								
Diameter x Length	8"x6'	8"x6'	8"x6.5'	8"x7'	8"x7'	10"x8'	10"x8'	10"x8'
Water Volume, gallons	9.2	9.2	10.0	12.3	12.3	29.1	29.1	29.1
Maximum Water Side Pressure, PSIG	150	150	150	150	150	150	150	150
Maximum Refrigerant Side Pressure, PSIG	350	350	350	350	350	350	350	350
Minimum Chiller Water Flow Rate, gpm	25	25	30	35	60	60	60	60
Maximum Chiller Water Flow Rate, gpm	60	60	70	170	170	300	300	300
Water Connections, inches	3	3	3	4	4	6	6	6

**Model Number YCAL**

<b>0050</b>	<b>0060</b>	<b>0064</b>	<b>0070</b>	<b>0074</b>	<b>0080</b>	<b>0090</b>	<b>0094</b>	<b>0104</b>	<b>0114</b>	<b>0124</b>
51.1	56.2	63.1	70.2	76.0	82.2	83.2	89.9	99.6	111.1	121.0
48.1	53.3	58.9	65.7	71.6	78.0	79.6	85.8	94.9	106.5	115.1
2	2	2	2	2	2	2	2	2	2	2
60/54	72/72	75/62	75/75	92/83	100/100	94/77	94/94	112/94	112/112	137/112
60/54	57/57	67/57	67/67	88/67	88/88	90/74	90/90	108/90	108/108	132/108
2.2/2.2	2.2/2.2	3.3/3.3	3.3/3.3	3.3/3.3	3.3/3.3	4.2/4.2	4.2/4.2	6.3/4.2	6.3/6.3	6.3/6.3
4906	4994	5866	6045	6217	6448	6541	6619	7434	8824	8842
5206	5294	6166	6425	6597	6828	7369	7448	8378	10083	10107
5148	5236	6208	6386	6558	6779	6981	7059	7923	9313	9331
5517	5605	6651	6829	7001	7222	7809	7888	8867	10572	10596
2	2	3	3	3	3	2	2	3/2	3	3
4	4	6	6	6	6	4	4	5	6	6
15/13	15/15	13/10	13/13	15/13	15/15	25/20	25/25	20/25	20/20	25/20
128.0	128.0	149.3	149.3	149.3	149.3	168.0	168.0	192.0	222.0	222.0
2	3	2	3	3	3	3	3	3	3	3
13	13	13	13	13	13	13	13	13	13	13
4	4	4	4	4	4	6	6	6	8	8
2 / 1.4	2 / 1.4	2 / 1.7	2 / 1.7	2 / 1.7	2 / 1.7	2/1.8	2/1.8	2/1.8	2/1.8	2/1.8
1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
3	3	3	3	3	3	3	3	3	3	3
47360	46080	55253	55253	54550	53760	79800	79800	85800	106400	106400
10"x8'	10"x8'	12"x8'	12"x8'	12"x8'	12"x8'	14"x8'	14"x8'	15"x8'	15"x8'	15"x8'
29.1	29.1	41.2	41.2	41.2	39.9	53.0	53.0	58.9	58.9	58.9
150	150	150	150	150	150	150	150	150	150	150
350	350	350	350	350	350	350	350	350	350	350
60	60	100	100	100	100	125	138	150	165	180
300	300	350	350	350	385	525	525	625	625	625
6	6	6	6	6	6	8	8	8	8	8

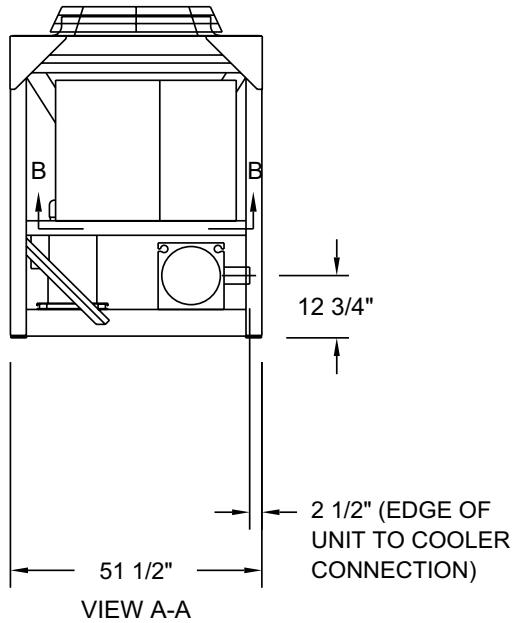
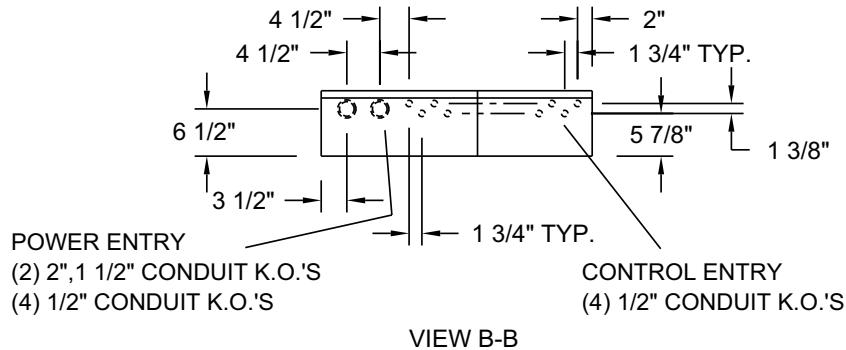
# Physical Data - (SI Units)

	Model Number YCAL							
	0014	0020	0024	0030	0034	0040	0042	0044
<b>General Unit Data</b>								
Nominal kW, R-22	46.4	63.3	78.8	99.5	119.6	136.1	150.9	165.7
Nominal kW, R-407C	44.7	61.2	76.3	93.9	111.5	127.7	141.4	155.1
Number of Refrigerant Circuits	1	1	1	1	1	2	2	2
<b>Refrigerant Charge</b>								
R-22, ckt1 / ckt2, kg	14.5	17.3	24.4	29.5	31.4	20.5/20.5	24.5/20.5	24.5/24.5
R-407C, ckt1 / ckt2, kg	14.5	17.3	24.4	29.5	31.4	20.5/20.5	24.5/20.5	23.5/23.5
Oil Charge, ckt1 / ckt2, liters	8.3	8.3	8.3	8.3	12.5	8.3/8.3	8.3/8.3	8.3/8.3
<b>Shipping Weight</b>								
Aluminum Fin Coils, kg	1121	1129	1296	1330	1487	2127	2155	2187
Copper Fin Coils, kg	1189	1197	1364	1398	1555	2263	2292	2323
<b>Operating Weight</b>								
Aluminum Fin Coils, kg	1156	1163	1334	1377	1534	2237	2265	2297
Copper Fin Coils, kg	1224	1231	1402	1445	1602	2373	2401	2433
<b>Compressors, scroll type</b>								
Compressors per circuit	2	2	2	2	3	2	2	2
Compressors per unit	2	2	2	2	3	4	4	4
Nominal kW <sub>o</sub> per compressor	26	35	46	53	46	35/35	46/35	46/46
<b>Condenser</b>								
Total Face Area meters <sup>2</sup>	4	4	6	6	6	12	12	12
Number of Rows	2	2	2	3	3	2	2	2
Fins per m	512	512	512	512	512	512	512	512
<b>Condenser Fans</b>								
Number of Fans total	2	2	2	2	2	4	4	4
Fan hp/kw	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4	2 / 1.4
Fan RPM	1140	1140	1140	1140	1140	1140	1140	1140
Number of Blades	3	3	3	3	3	3	3	3
Total Chiller Airflow l/s	7672	7672	11091	11091	11091	22351	22351	22351
<b>Evaporator, Direct Expansion</b>								
Diameter x Length	203x1829	203x1830	203x1981	210x2134	210x2134	248x2438	248x2438	248x2438
Water Volume, liters	34.9	34.9	37.7	46.7	46.7	110.3	110.3	110.3
Maximum Water Side Pressure, bar	10	10	10	10	10	10	10	10
Maximum Refrigerant Side Pressure, bar	24	24	24	24	24	24	24	24
Minimum Chiller Water Flow Rate, l/s	1.6	1.6	1.9	2.2	3.8	3.8	3.8	3.8
Maximum Chiller Water Flow Rate, l/s	3.8	3.8	4.4	10.7	10.7	18.9	18.9	18.9
Water Connections, inches	3	3	3	4	4	6	6	6

## Model Number YCAL

0050	0060	0064	0070	0074	0080	0090	0094	0104	0114	0124
179.7	197.7	221.9	246.9	267.3	289.1	292.6	316.2	350.3	390.7	425.6
169.2	187.5	207.2	231.1	251.8	274.3	280.0	301.8	333.8	374.6	404.8
2	2	2	2	2	2	2	2	2	2	2
27.3/24.5	32.7/32.7	34.1/28.2	34.1/34.1	41.8/37.7	45.5/45.5	43/35	43/43	51/43	51/51	62/51
27.3/24.5	26/26	30/26	30/30	40/30	40/40	41/34	41/41	49/41	49/49	60/49
8.3/8.3	8.3/8.3	12.5/12.5	12.5/12.5	12.5/12.5	12.5/12.5	16/16	16/16	24/16	24/24	24/24
2225	2265	2661	2742	2820	2925	2967	3002	3372	4003	4011
2361	2401	2797	2914	2992	3097	3343	3378	3800	4574	4585
2335	2375	2816	2897	2975	3075	3167	3202	3594	4224	4233
2471	2511	2952	3069	3147	3247	3542	3578	4022	4795	4806
2	2	3	3	3	3	2	2	3/2	3	3
4	4	6	6	6	6	4	4	5	6	6
53/46	53/53	46/35	46/46	53/46	53/53	88/70	88/88	70/88	70/70	88/70
12	12	14	14	14	14	16.0	16.0	18.0	21.0	21.0
2	3	2	2	3	3	3	3	3	3	3
512	512	512	512	512	512	512	512	512	512	512
4	4	4	4	4	4	6	6	6	8	8
2 / 1.4	2 / 1.4	2 / 1.7	2 / 1.7	2 / 1.7	2 / 1.7	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8
1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
3	3	3	3	3	3	3	3	3	3	3
22351	21747	26076	26076	25744	25371	37660	37660	39784	50214	50214
248x2438	248x2438	309x2438	309x2438	309x2438	315x2438	356x2438	356x2438	381x2438	381x2438	381x2438
110.3	110.3	156.1	156.1	156.1	151.1	200.6	200.6	222.9	222.9	222.9
10	10	10	10	10	10	10	10	10	10	10
24	24	24	24	24	24	24	24	24	24	24
3.8	3.8	6.3	6.3	6.3	6.3	7.9	8.7	9.5	10.4	11.4
18.9	18.9	22.1	22.1	22.1	24.3	33.1	33.1	39.4	39.4	39.4
6	6	6	6	6	6	8	8	8	8	8

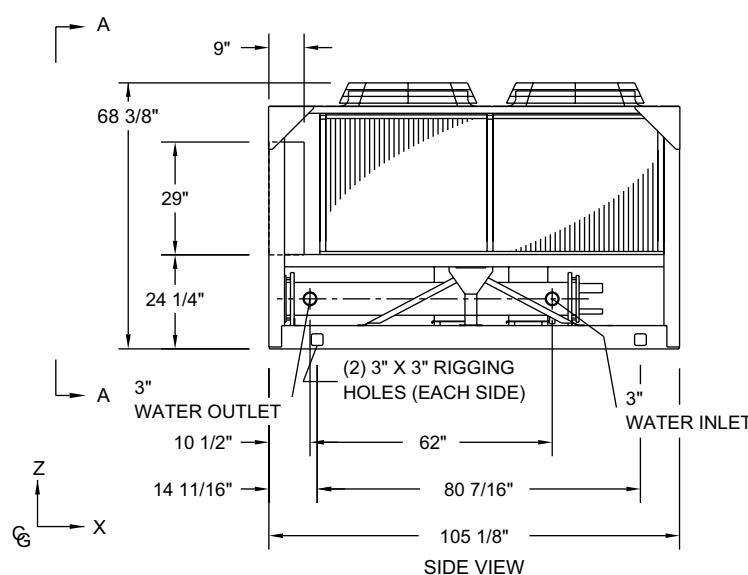
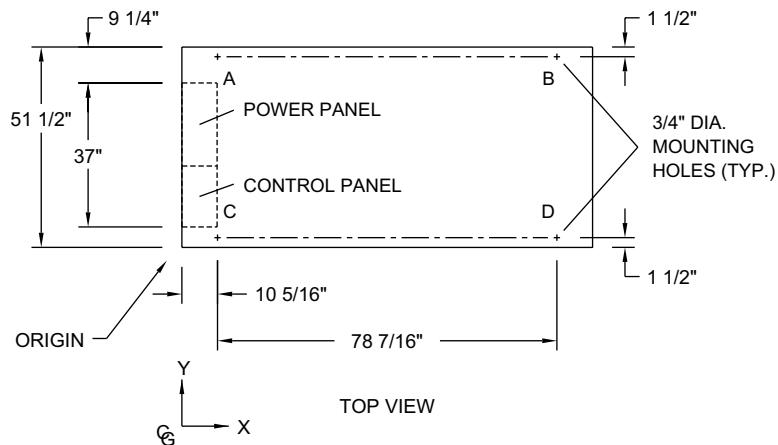
# Dimensions - YCAL0014-YCAL0020 (English)



LD04868

## NOTE:

Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 6'; rear to wall – 6'; control panel to end wall – 4'0"; top – no obstructions allowed; distance between adjacent units – 10'. No more than one adjacent wall may be higher than the unit.



LD04869

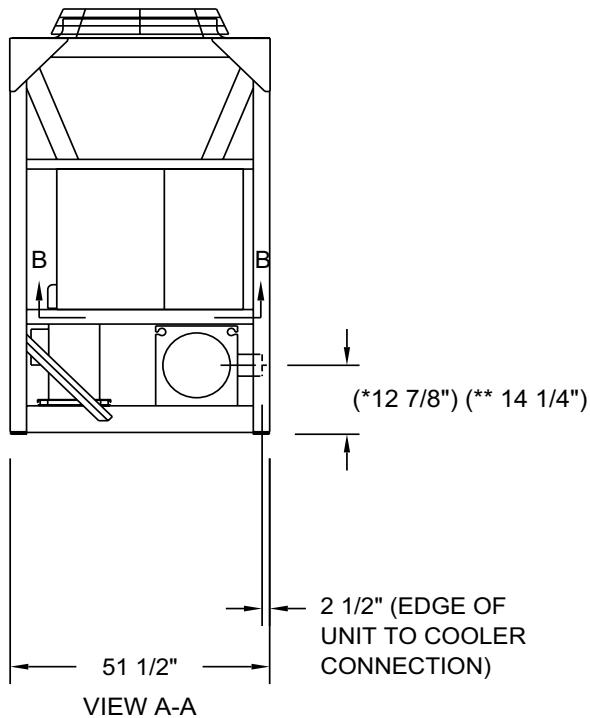
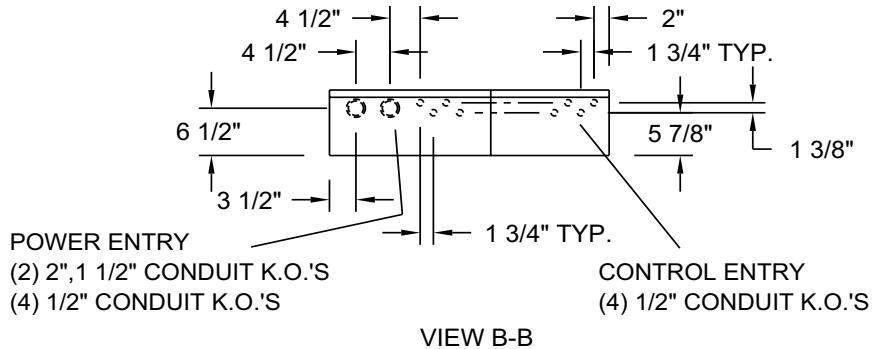
**ALUMINUM**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0014</b>	44.8	24.1	28.3
<b>0020</b>	44.8	24.1	28.3

**COPPER**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0014</b>	45.4	24.2	28.8
<b>0020</b>	45.4	24.2	28.8

# Dimensions - YCAL0024-YCAL0034 (English)



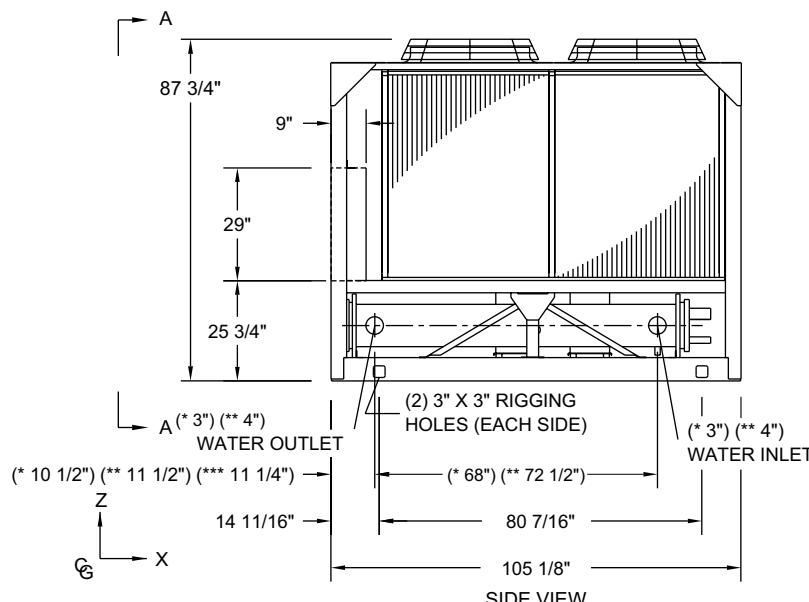
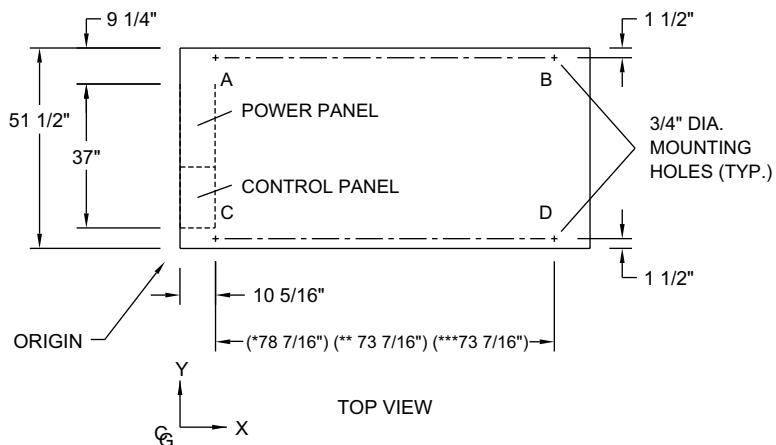
LD04857

\* Refers to Model YCAL0024

\*\* Refers to Model YCAL0030 and YCAL0034

## NOTE:

Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 6'; rear to wall – 6'; control panel to end wall – 4'0"; top – no obstructions allowed; distance between adjacent units – 10'. No more than one adjacent wall may be higher than the unit.



LD04858

\* Refers to Model YCAL0024

\*\* Refers to Model YCAL0030 and YCAL0034

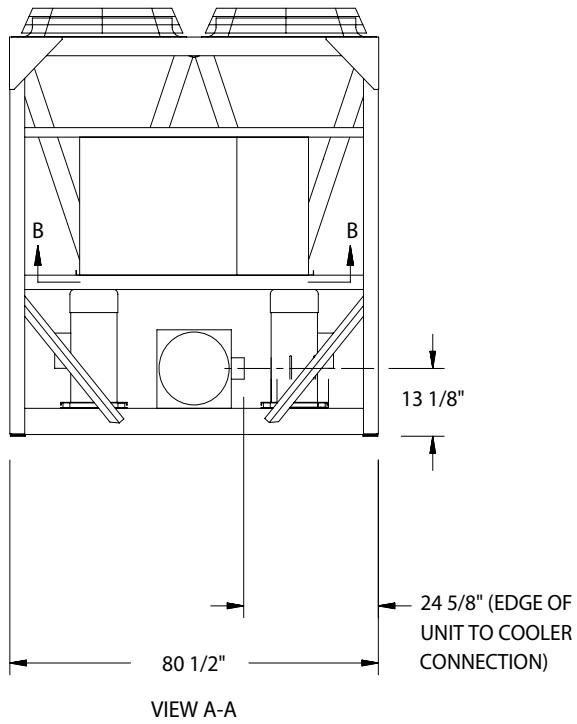
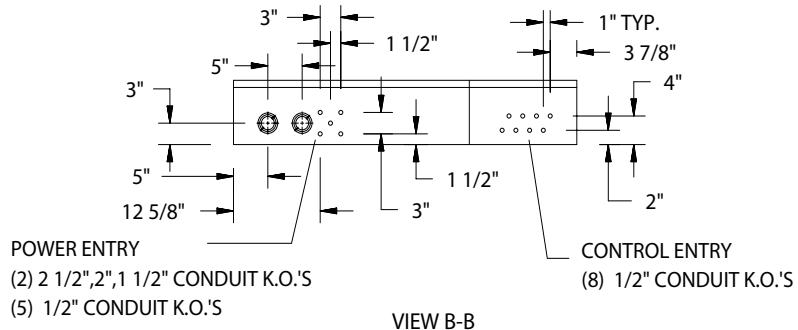
**ALUMINUM**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0024</b>	45.0	24.4	35.3
<b>0030</b>	45.0	24.4	34.9
<b>0034</b>	45.0	25.5	33.8

**COPPER**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0024</b>	45.8	24.5	36.2
<b>0030</b>	45.8	24.5	35.8
<b>0034</b>	45.7	25.5	34.7

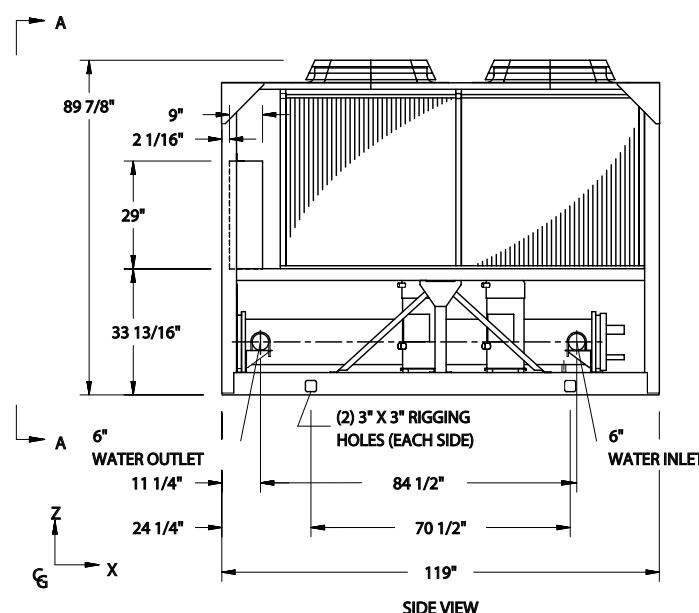
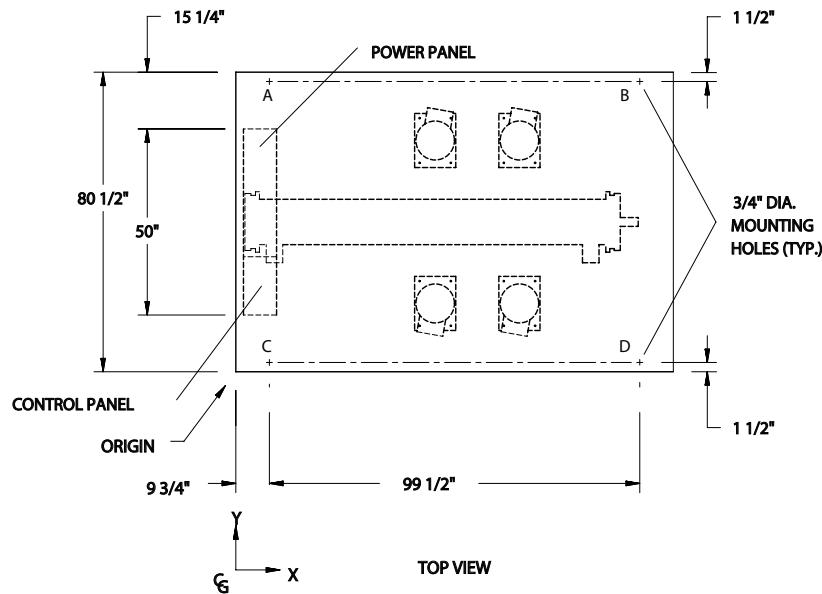
# Dimensions - YCAL0040-YCAL0060 (English)



LD04872

## NOTE:

Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 6'; rear to wall – 6'; control panel to end wall – 4'0"; top – no obstructions allowed; distance between adjacent units – 10'. No more than one adjacent wall may be higher than the unit.



LD04873

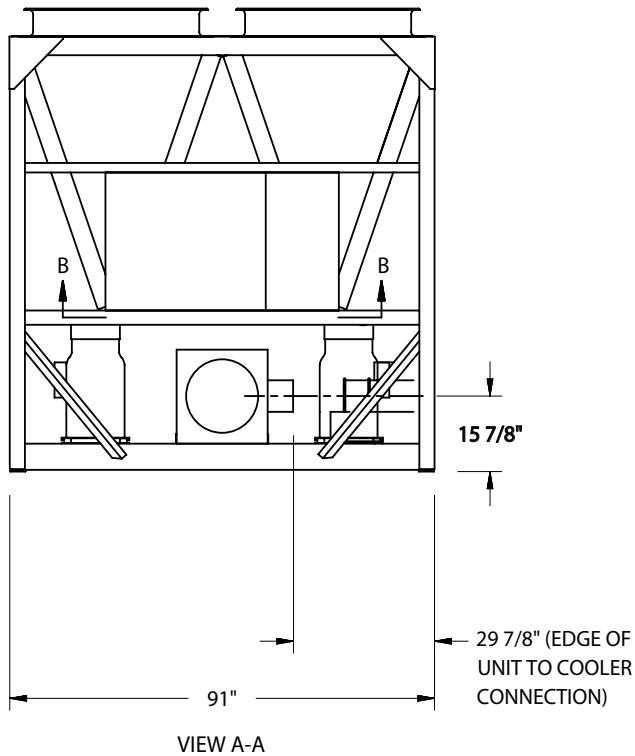
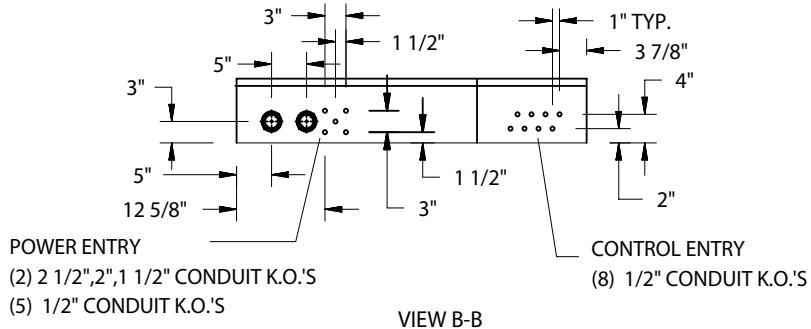
**ALUMINUM**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0040</b>	58.7	40.2	41.2
<b>0042</b>	58.3	40.4	39.7
<b>0044</b>	58.4	40.2	39.5
<b>0050</b>	58.4	40.4	39.5

**COPPER**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0040</b>	58.3	40.2	40.3
<b>0042</b>	58.4	40.4	40.1
<b>0044</b>	58.5	40.2	39.9
<b>0050</b>	58.5	40.4	39.9

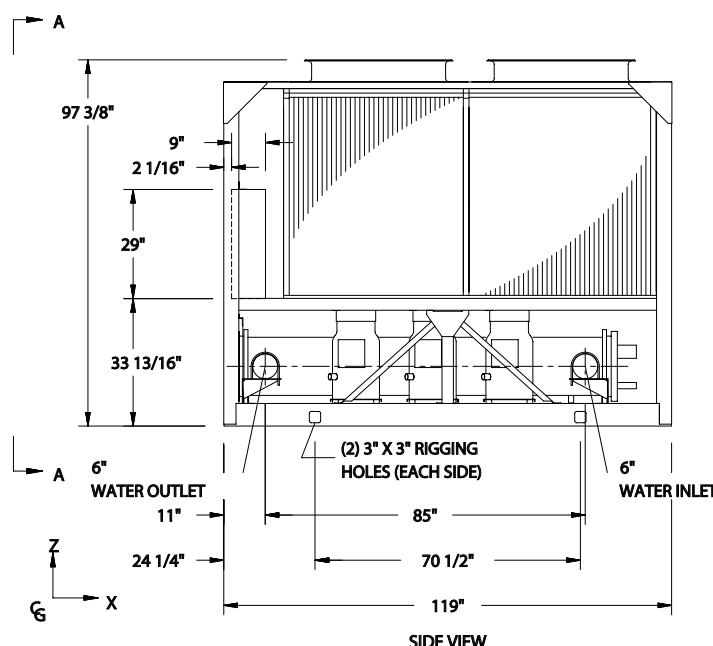
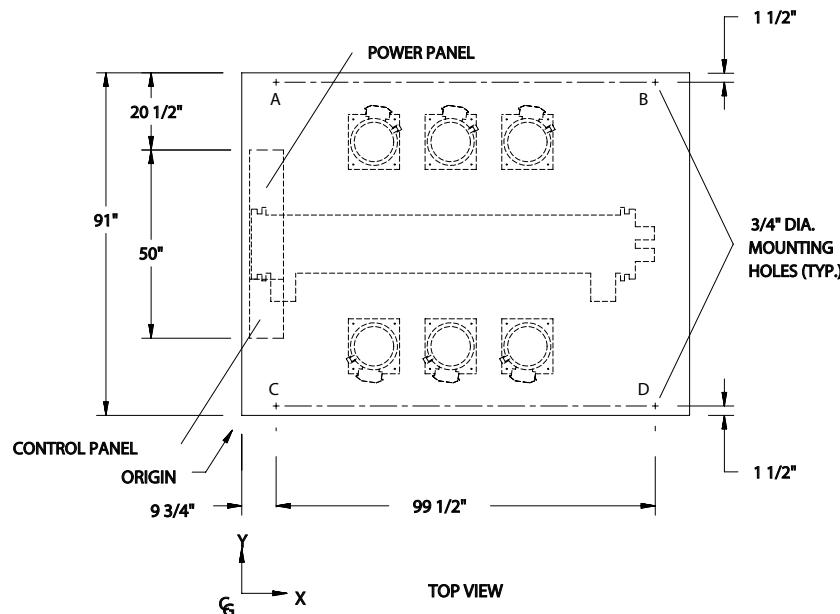
# Dimensions - YCAL0064-YCAL0080 (English)



LD04876

## NOTE:

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LD04877

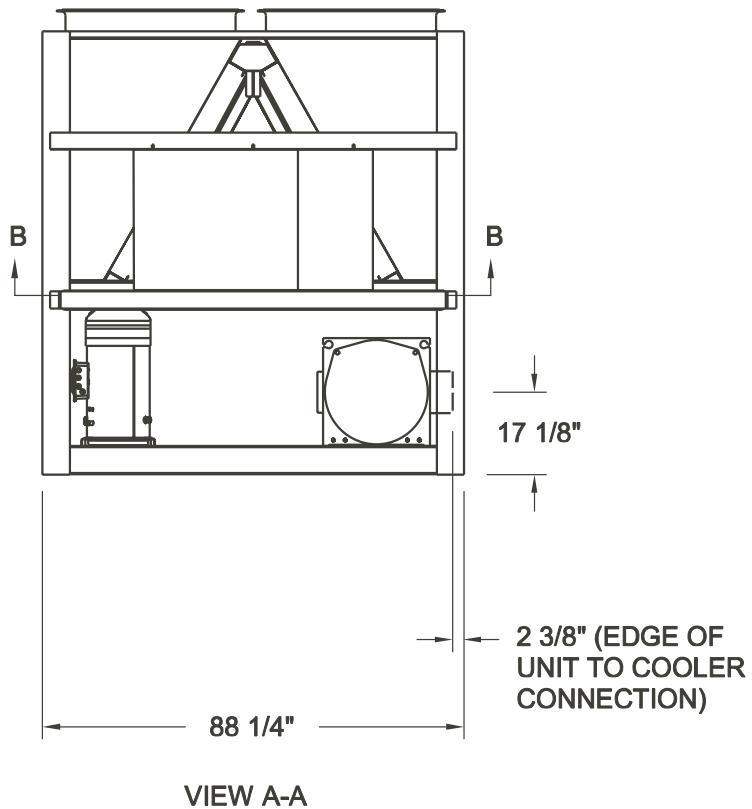
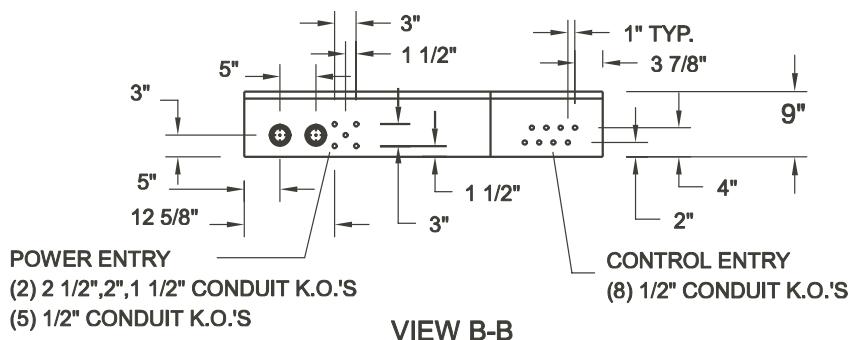
**ALUMINUM**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0060</b>	58.5	40.2	39.4
<b>0064</b>	56.5	45.8	39.4
<b>0070</b>	56.6	45.4	39.4
<b>0074</b>	56.6	45.7	39.5
<b>0080</b>	56.6	45.4	39.0

**COPPER**

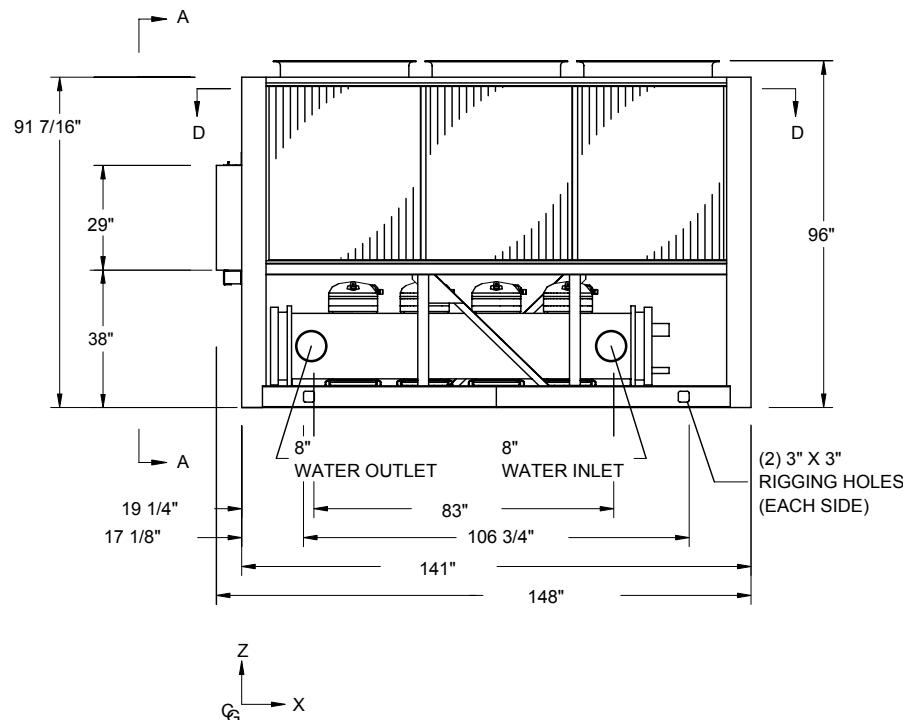
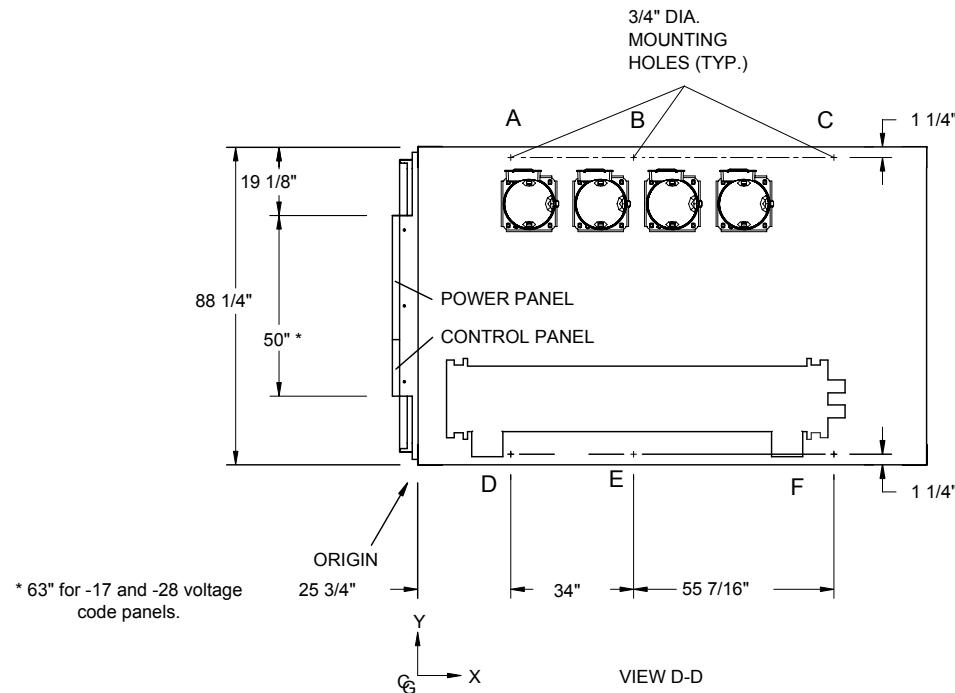
YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0060</b>	58.6	40.2	39.8
<b>0064</b>	56.7	45.7	40.0
<b>0070</b>	56.8	45.5	40.0
<b>0074</b>	56.8	45.7	40.1
<b>0080</b>	56.8	45.5	39.6

# Dimensions - YCAL0090-YCAL0094 (English)



## NOTE:

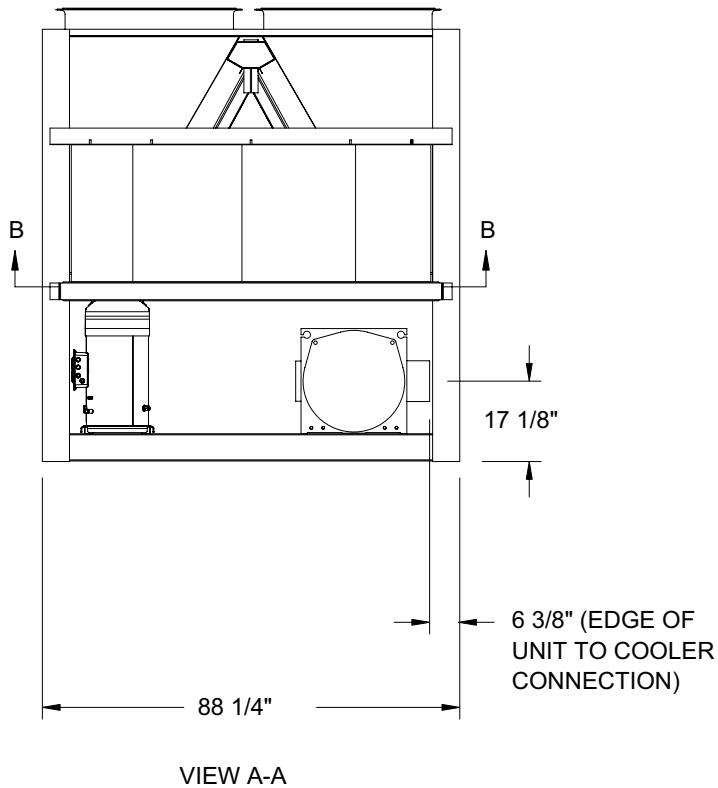
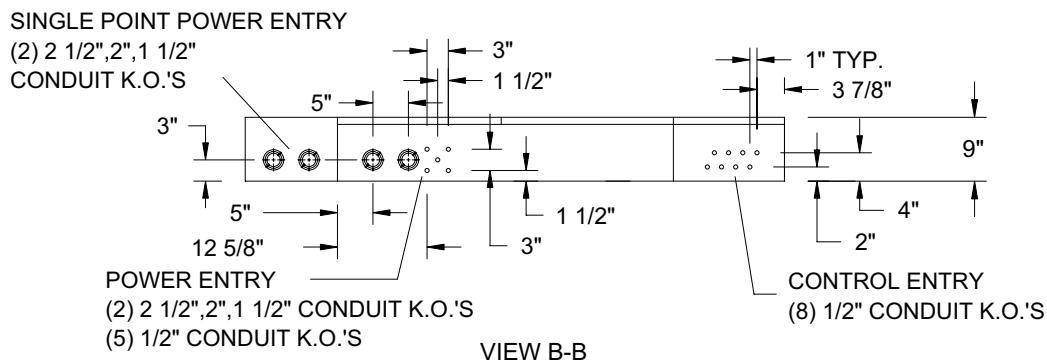
Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 6'; rear to wall – 6'; control panel to end wall – 4'0"; top – no obstructions allowed; distance between adjacent units – 10'. No more than one adjacent wall may be higher than the unit.

**ALUMINUM****COPPER**

YCAL	Center of Gravity (in.)		
	X	Y	Z
0090	63.4	44.3	42.1
0094	64.3	44.4	41.9

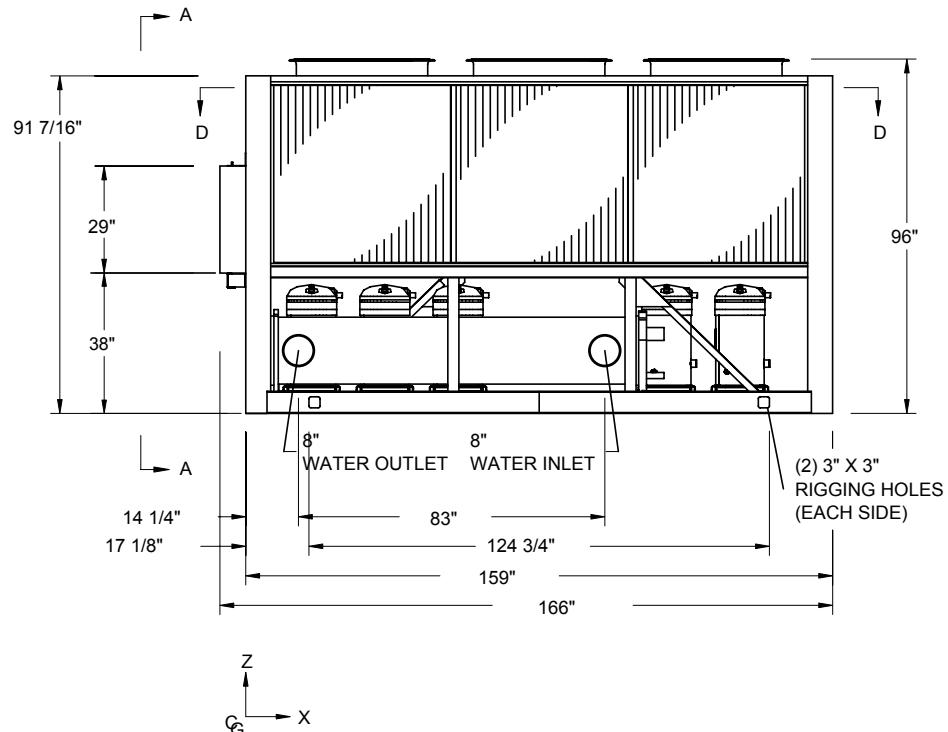
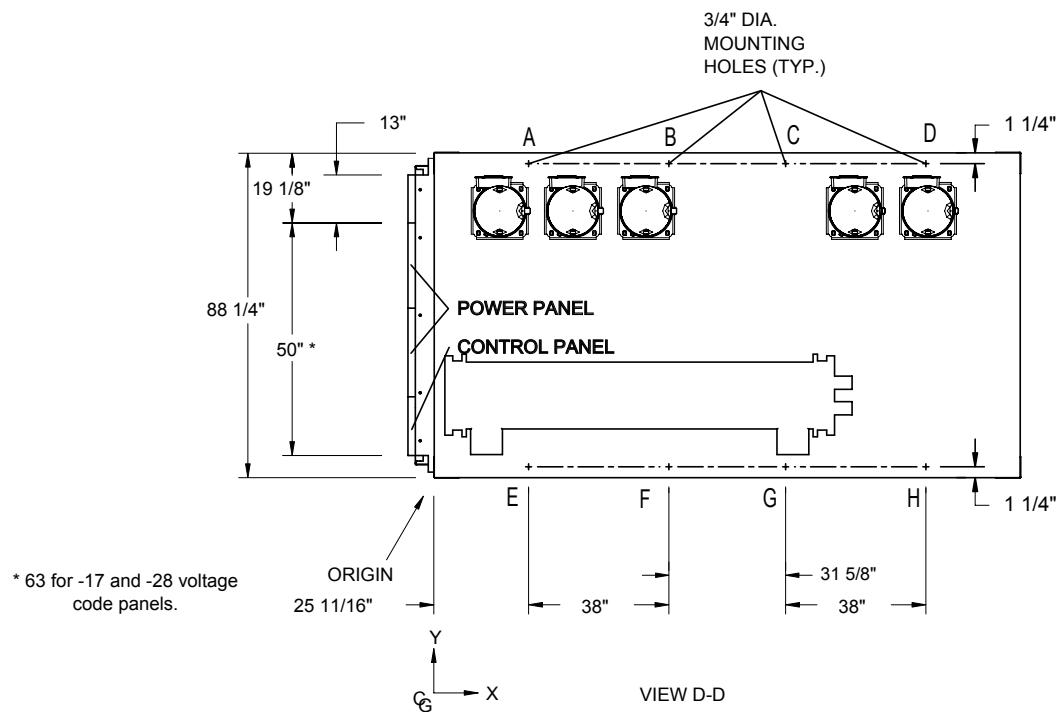
YCAL	Center of Gravity (in.)		
	X	Y	Z
0090	64.1	44.3	44.5
0094	64.8	44.4	44.2

# Dimensions - YCAL0104 (English)



## NOTE:

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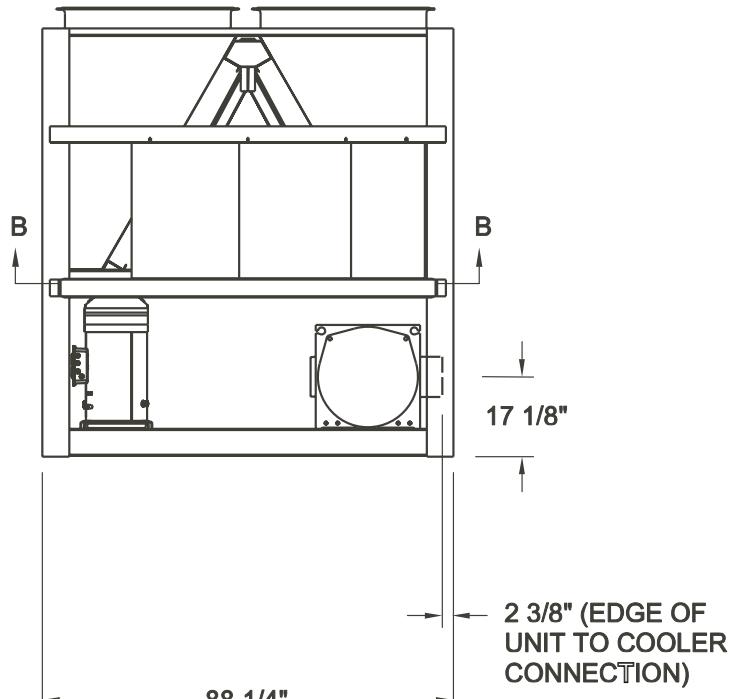
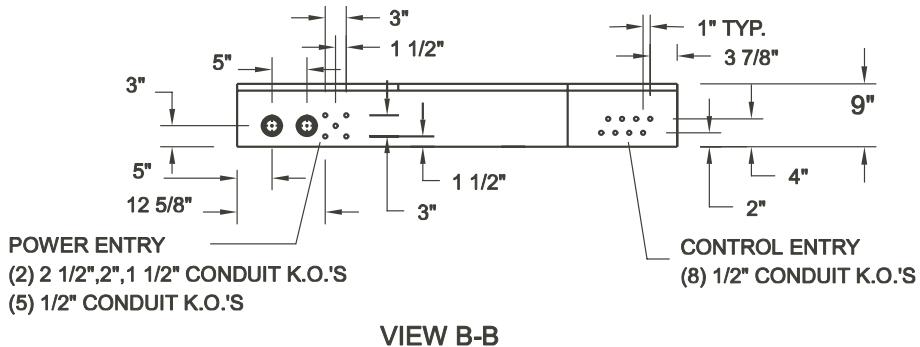
**ALUMINUM**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0104</b>	70.3	45.7	40.8

**COPPER**

YCAL	Center of Gravity (in.)		
	X	Y	Z
<b>0104</b>	71.3	45.5	42.7

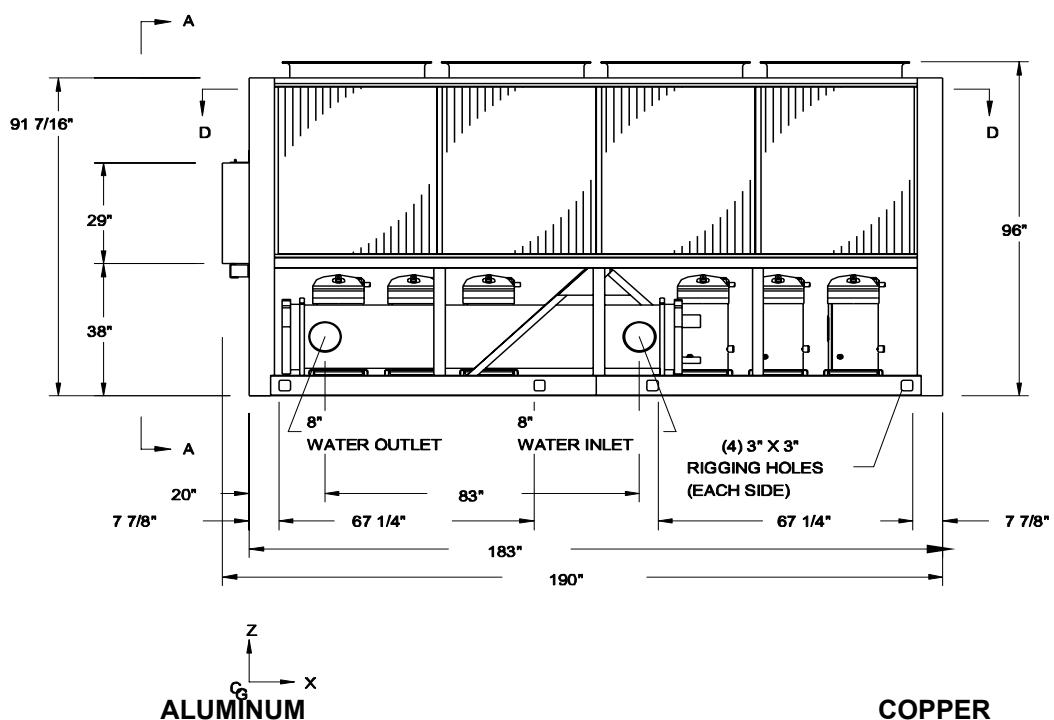
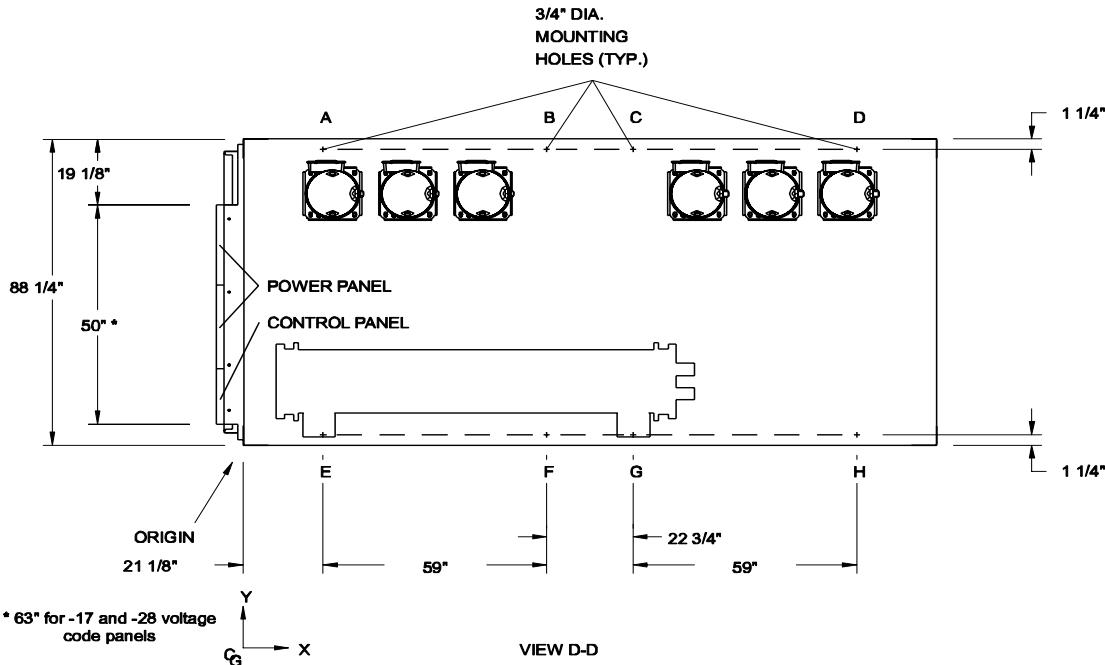
# Dimensions - YCAL0114 - YCAL0124 (English)



**VIEW A-A**

**NOTE:**

Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 6'; rear to wall – 6'; control panel to end wall – 4'0"; top – no obstructions allowed; distance between adjacent units – 10'. No more than one adjacent wall may be higher than the unit.

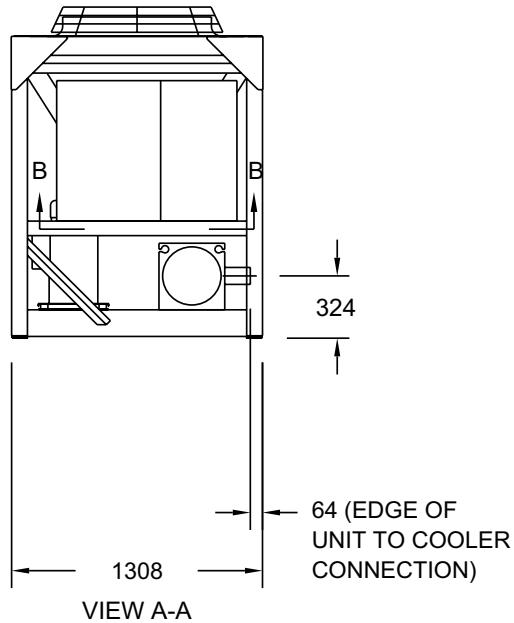
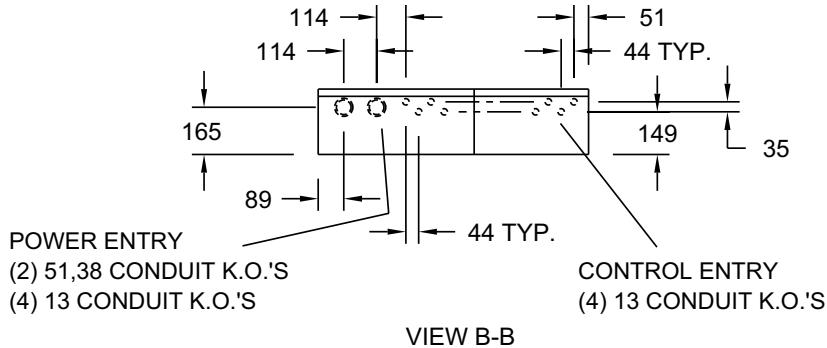


COPPER

YCAL	Center of Gravity (in.)		
	X	Y	Z
0114	79.4	45.0	41.4
0124	79.4	45.0	41.5

YCAL	Center of Gravity (in.)		
	X	Y	Z
0114	80.9	44.9	43.5
0124	80.9	44.9	43.5

# Dimensions - YCAL0014-YCAL0020 (SI)

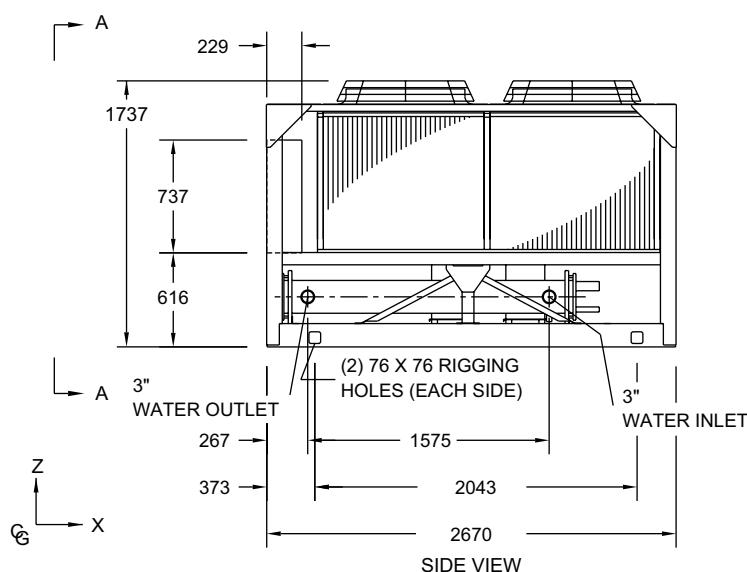
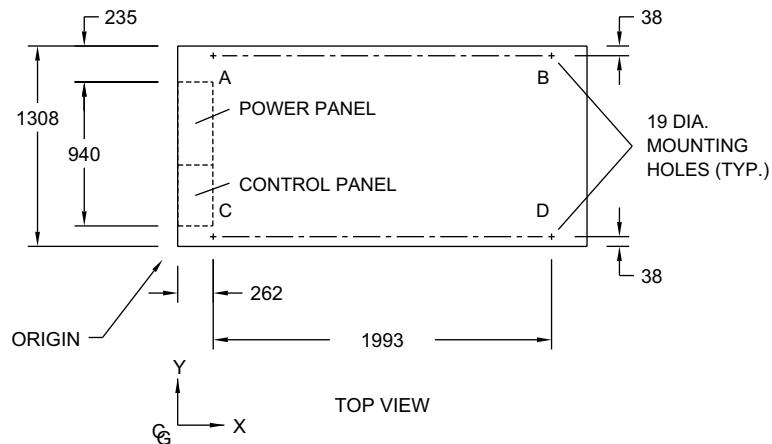


LD04870

**NOTE:** All dimensions are in mm unless specified otherwise.

**NOTE:**

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LD04871

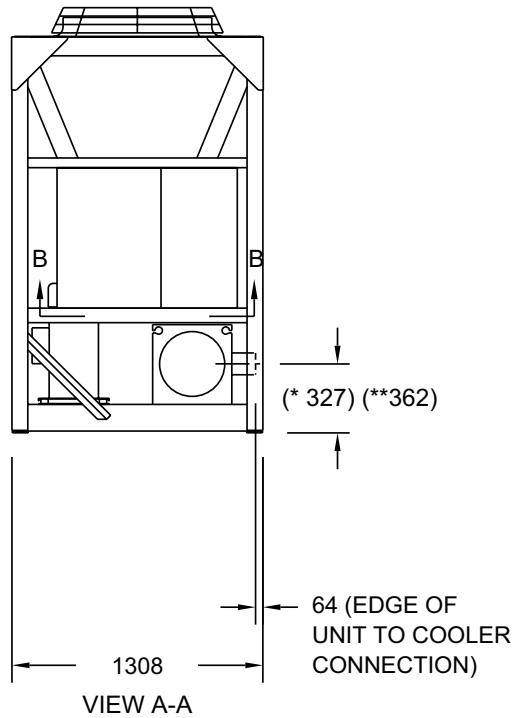
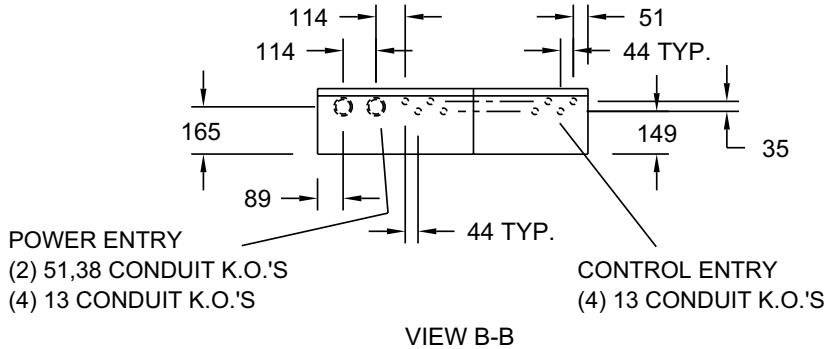
**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0014	1138	612	719
0020	1138	611	719

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0014	1153	615	731
0020	1153	615	731

# Dimensions - YCAL0024-YCAL0034 (SI)



LD04859

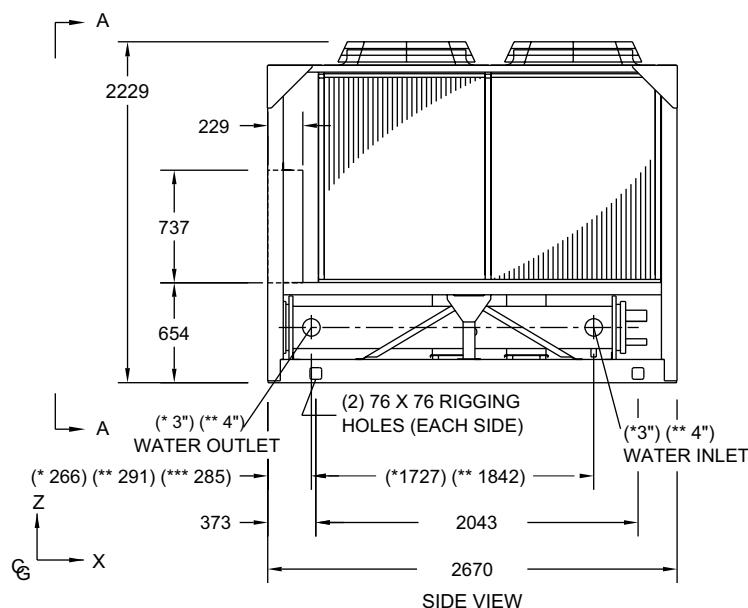
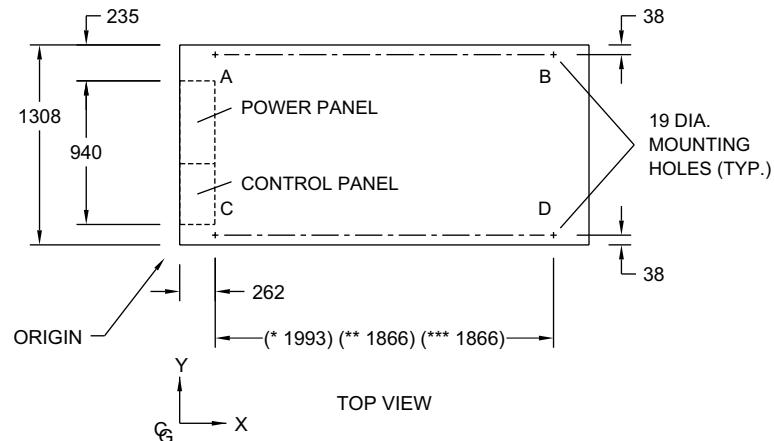
\* Refers to Model YCAL0024

\*\* Refers to Model YCAL0030 and YCAL0034

**NOTE:** All dimensions are in mm unless specified otherwise.

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LD04860

\* Refers to Model YCAL0024

\*\* Refers to Model YCAL0030 and YCAL0034

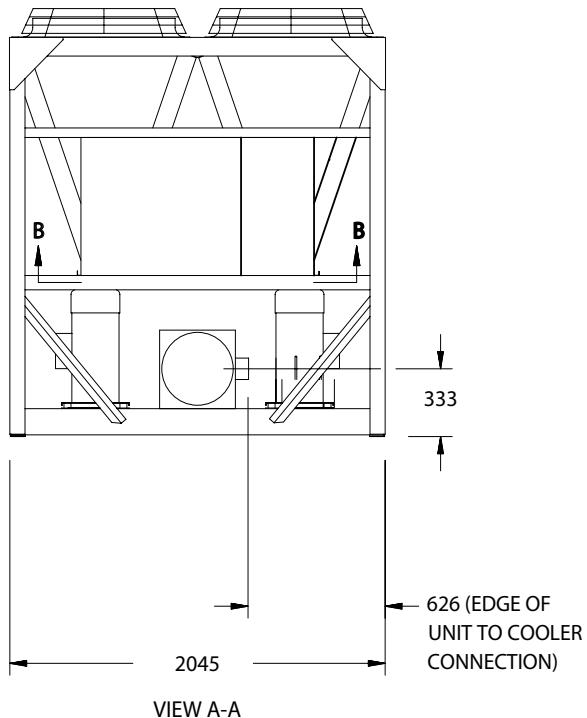
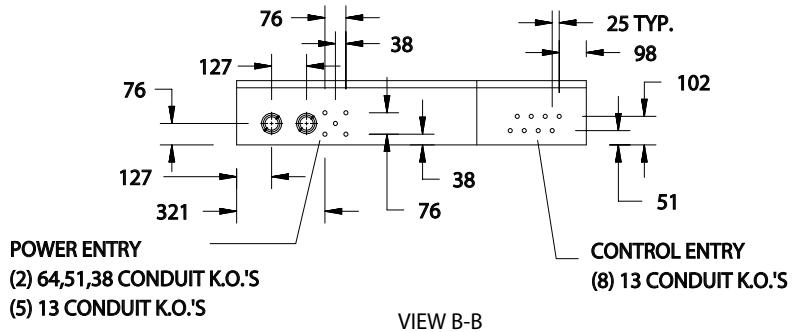
**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0024</b>	1142	619	897
<b>0030</b>	1144	620	887
<b>0034</b>	1142	646	860

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0024</b>	1162	623	919
<b>0030</b>	1163	623	909
<b>0034</b>	1160	647	882

# Dimensions - YCAL0040-YCAL0060 (SI)

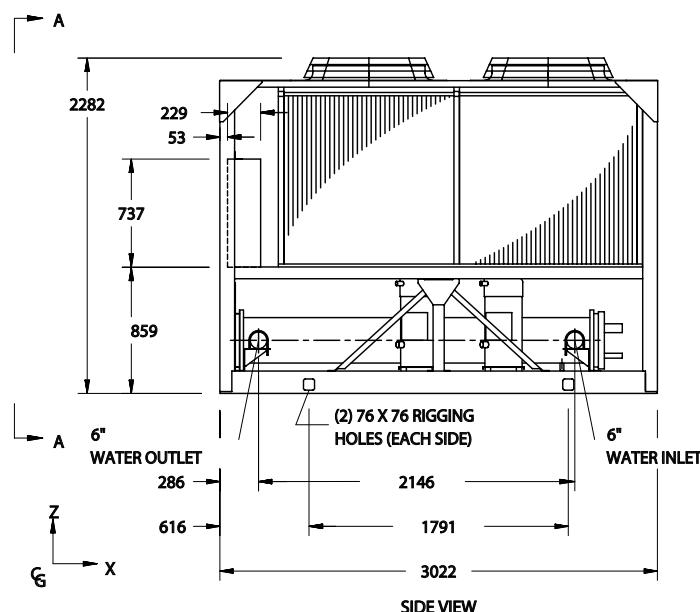
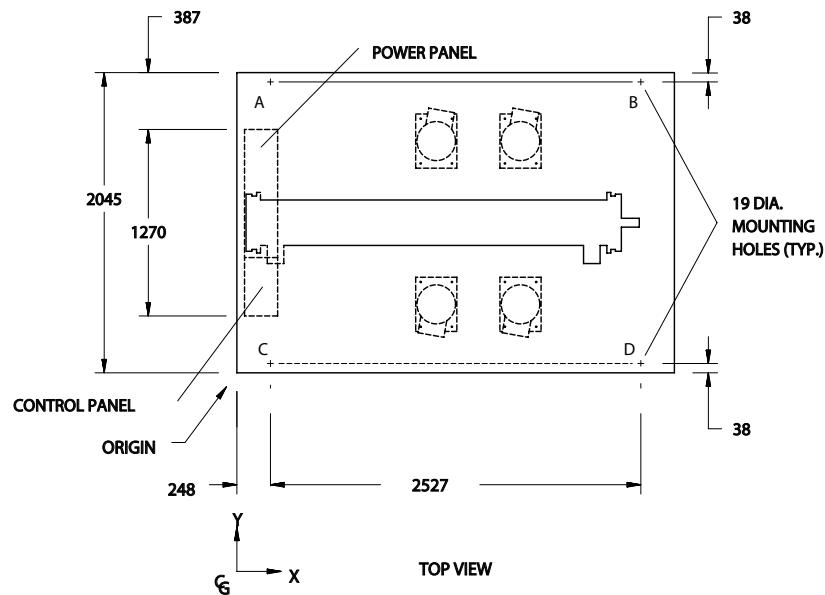


LD04874

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LD04875

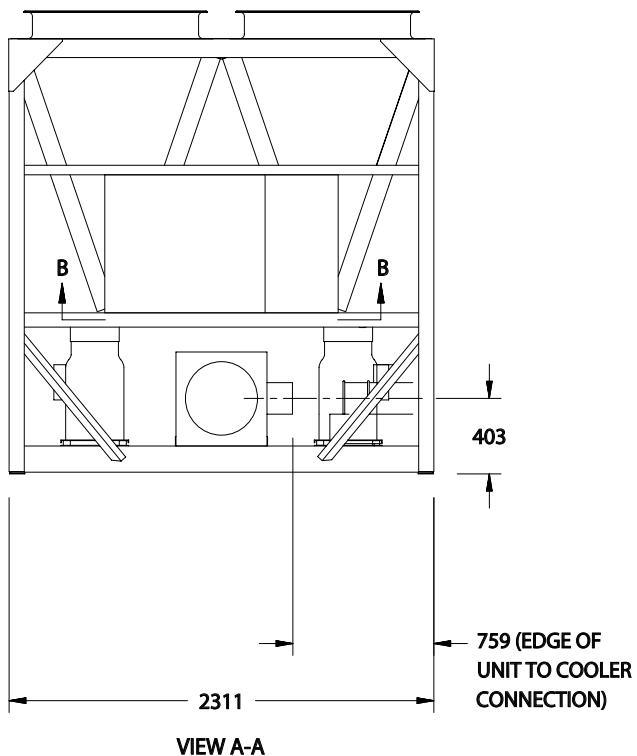
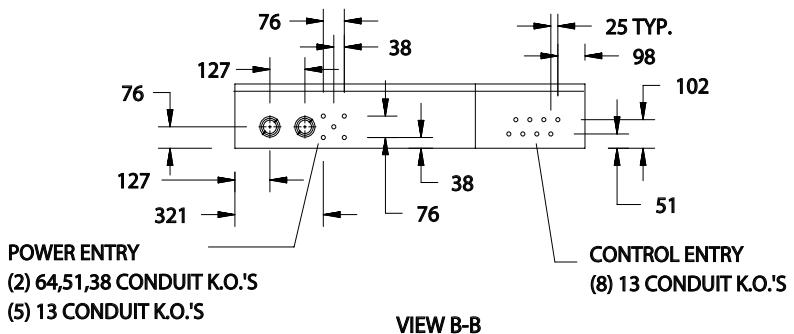
**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0040	1490	1021	1047
0042	1481	1026	1009
0044	1483	1021	1004
0050	1484	1025	1003

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0040	1482	1021	1023
0042	1483	1026	1018
0044	1485	1021	1013
0050	1486	1025	1012

# Dimensions -YCAL0064-YCAL0080 (SI)

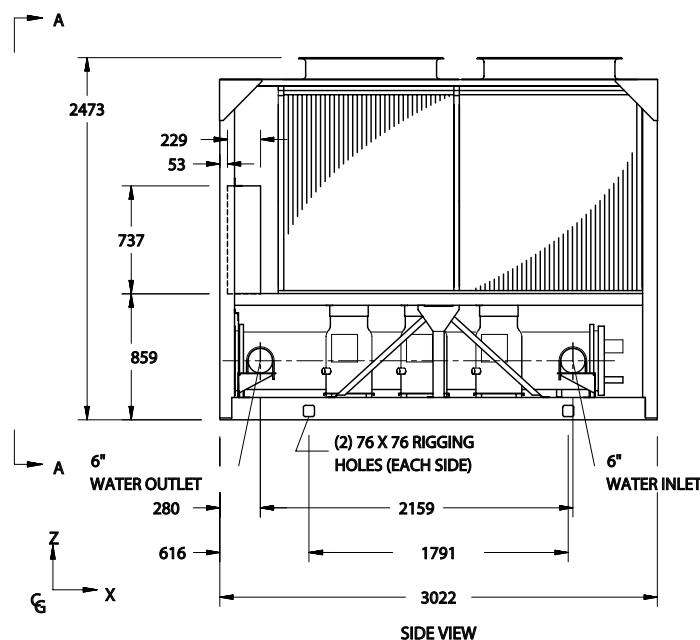
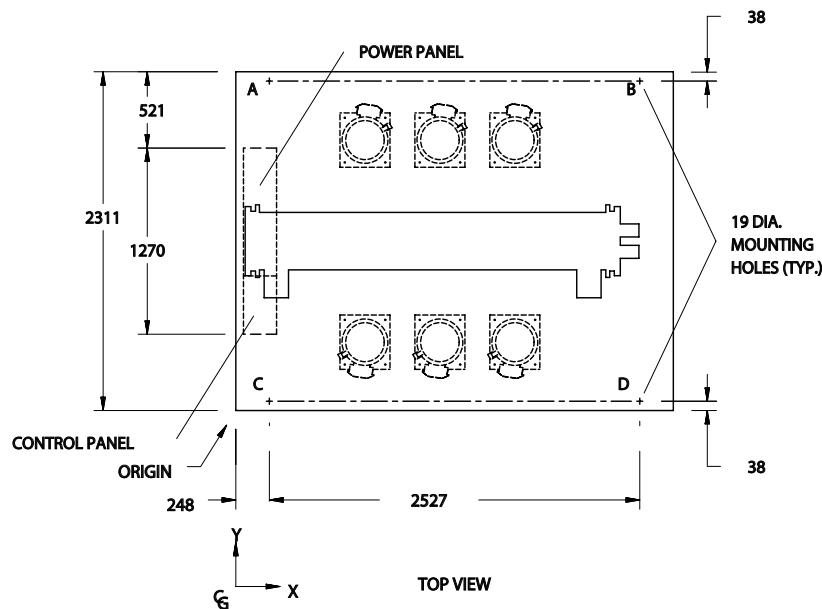


LD04878

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LD04879

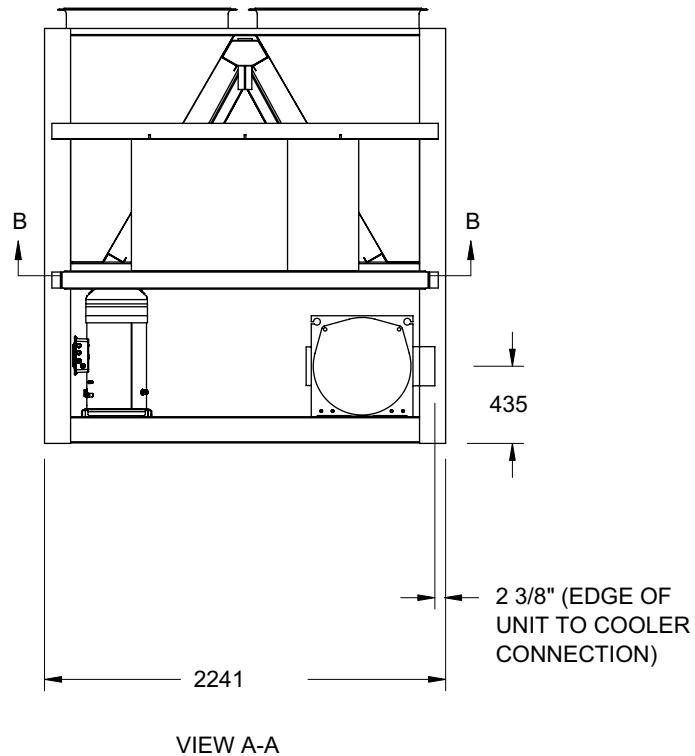
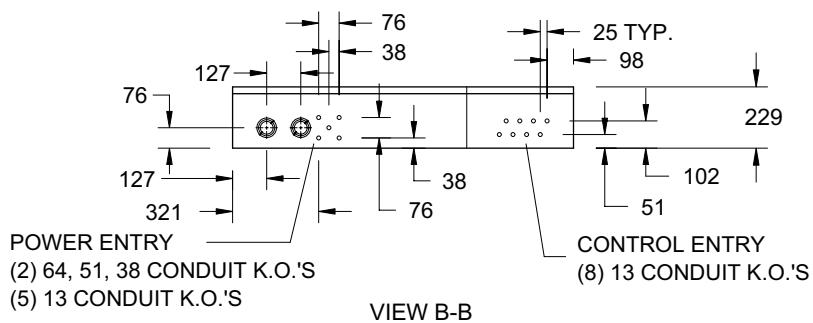
**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0060</b>	1485	1021	1001
<b>0064</b>	1435	1162	1001
<b>0070</b>	1437	1154	1002
<b>0074</b>	1438	1161	1003
<b>0080</b>	1437	1154	991

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0060</b>	1487	1021	1010
<b>0064</b>	1440	1162	1016
<b>0070</b>	1442	1154	1017
<b>0074</b>	1443	1160	1018
<b>0080</b>	1442	1154	1006

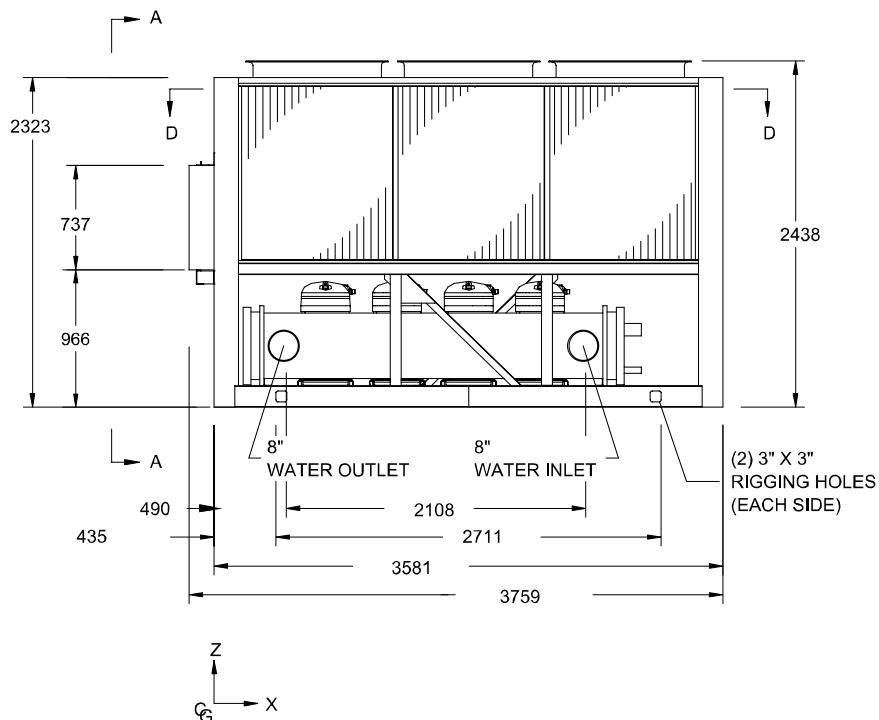
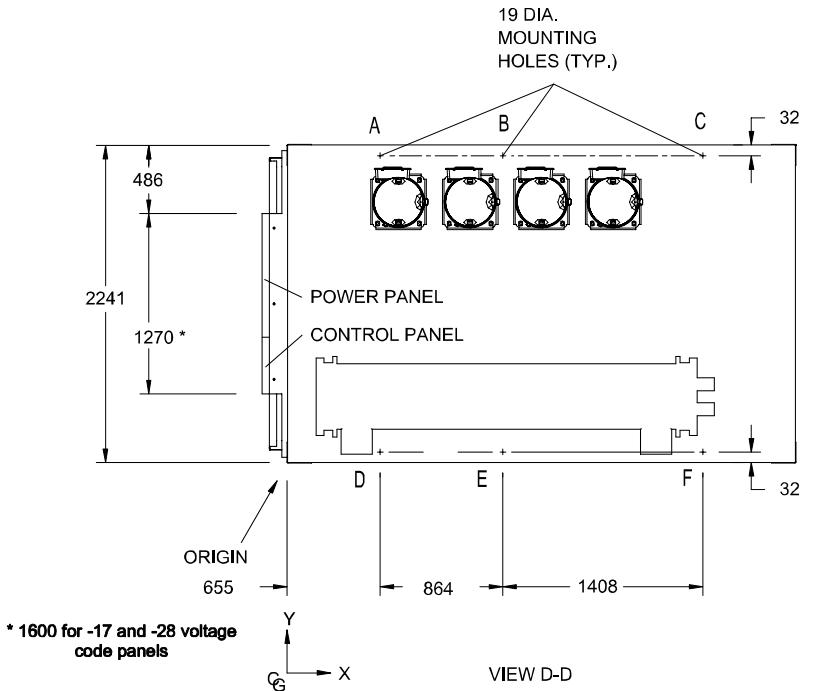
# Dimensions - YCAL0090-YCAL0094 (SI)



**NOTE:** All dimensions are in mm unless specified otherwise.

**NOTE:**

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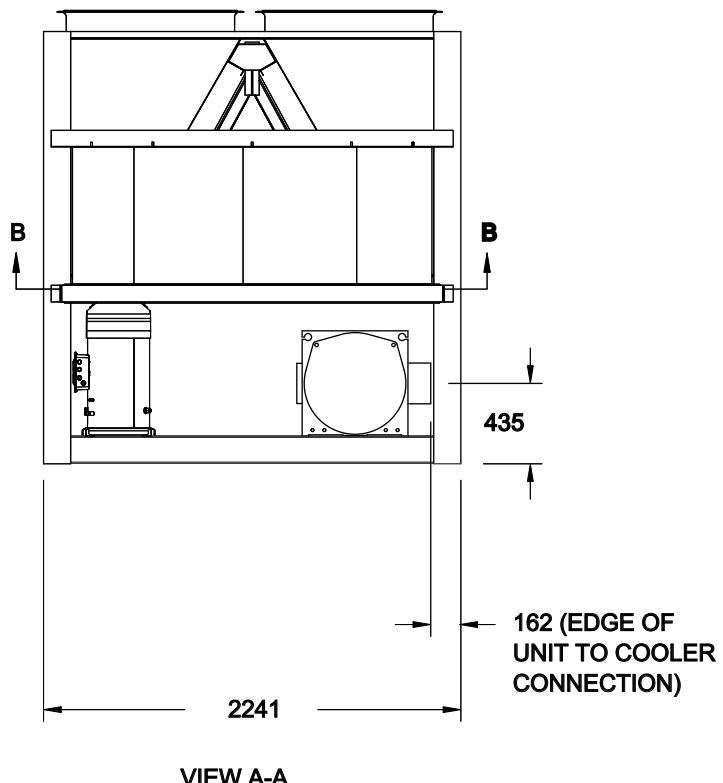
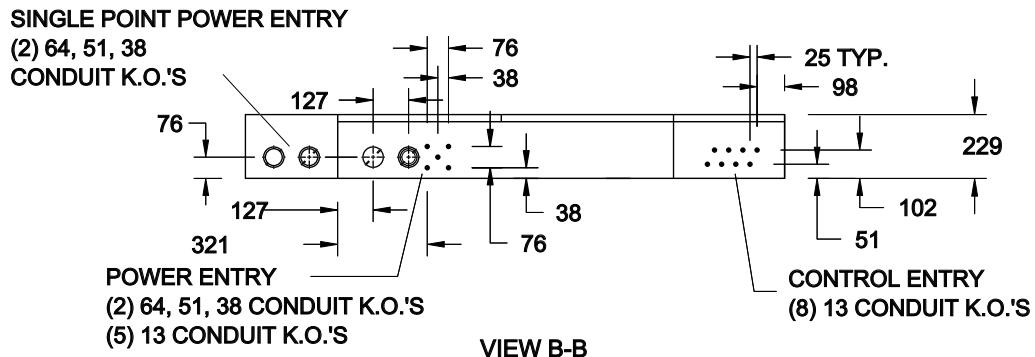
**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0090</b>	1610	1125	1069
<b>0094</b>	1633	1128	1064

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
<b>0090</b>	1628	1125	1130
<b>0094</b>	1646	1127	1124

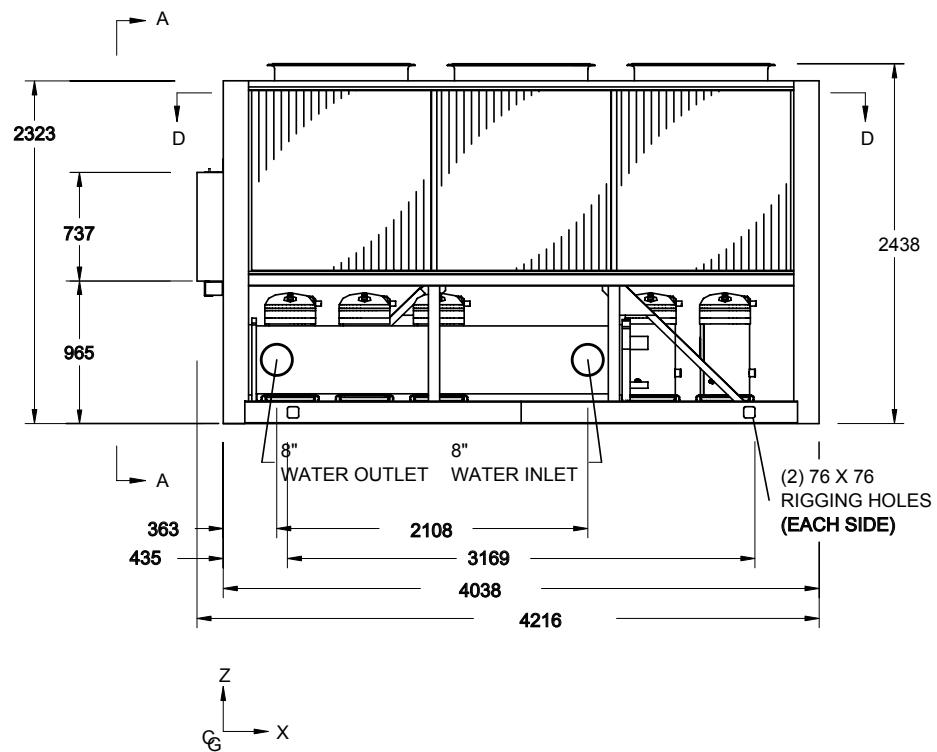
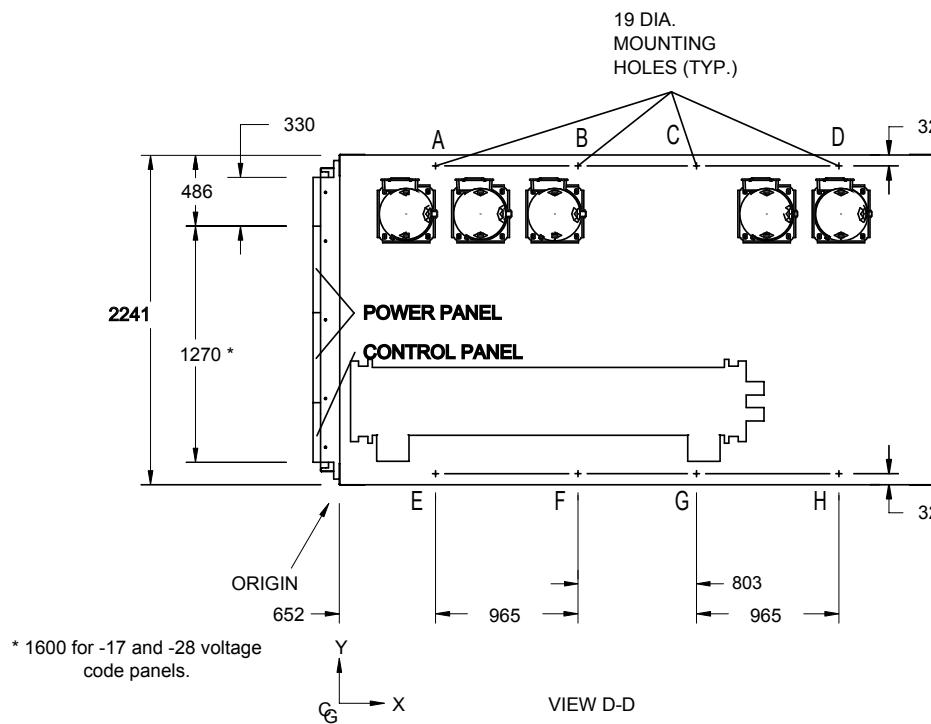
# Dimensions - YCAL0104 (SI)



**NOTE:** All dimensions are in mm unless specified otherwise.

**NOTE:**

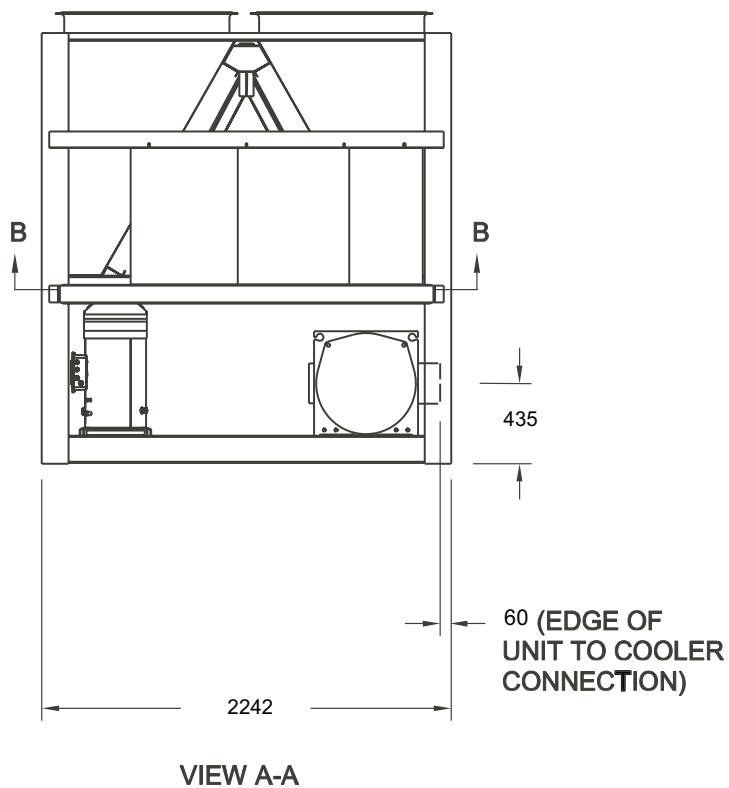
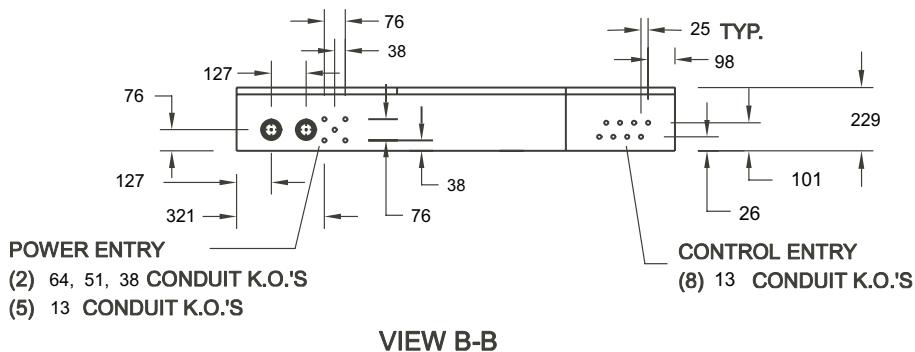
Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 2m; rear to wall – 2m; control panel to end wall – 1.2m; top – no obstructions allowed; distance between adjacent units – 3m. No more than one adjacent wall may be higher than the unit.

**ALUMINUM****COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0104	1786	1160	1035

YCAL	Center of Gravity (mm)		
	X	Y	Z
0104	1811	1155	1084

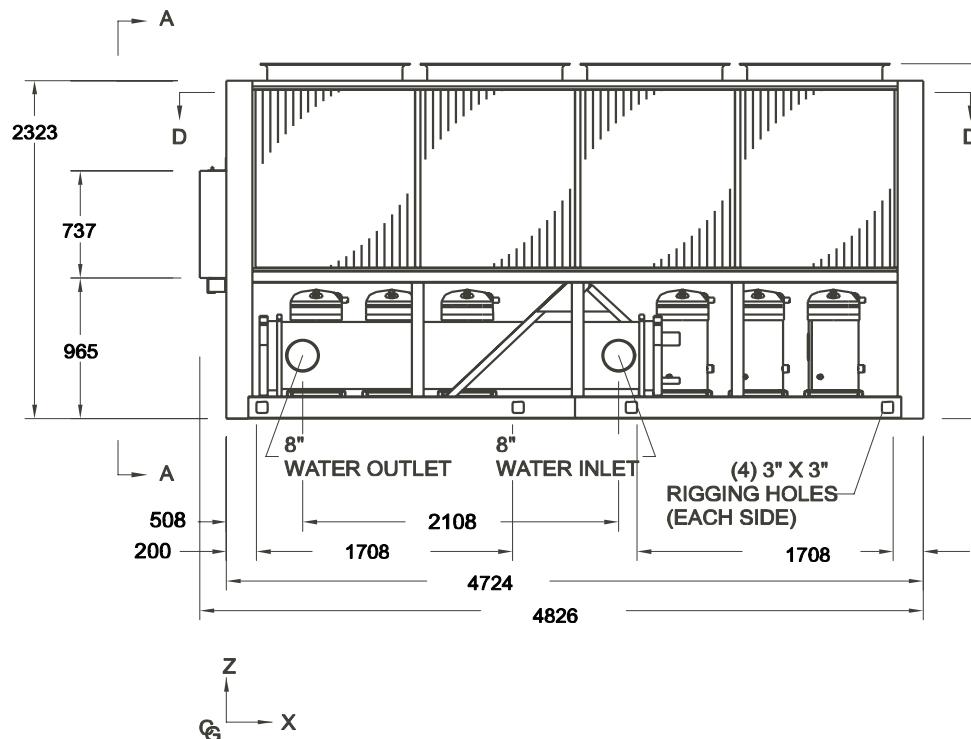
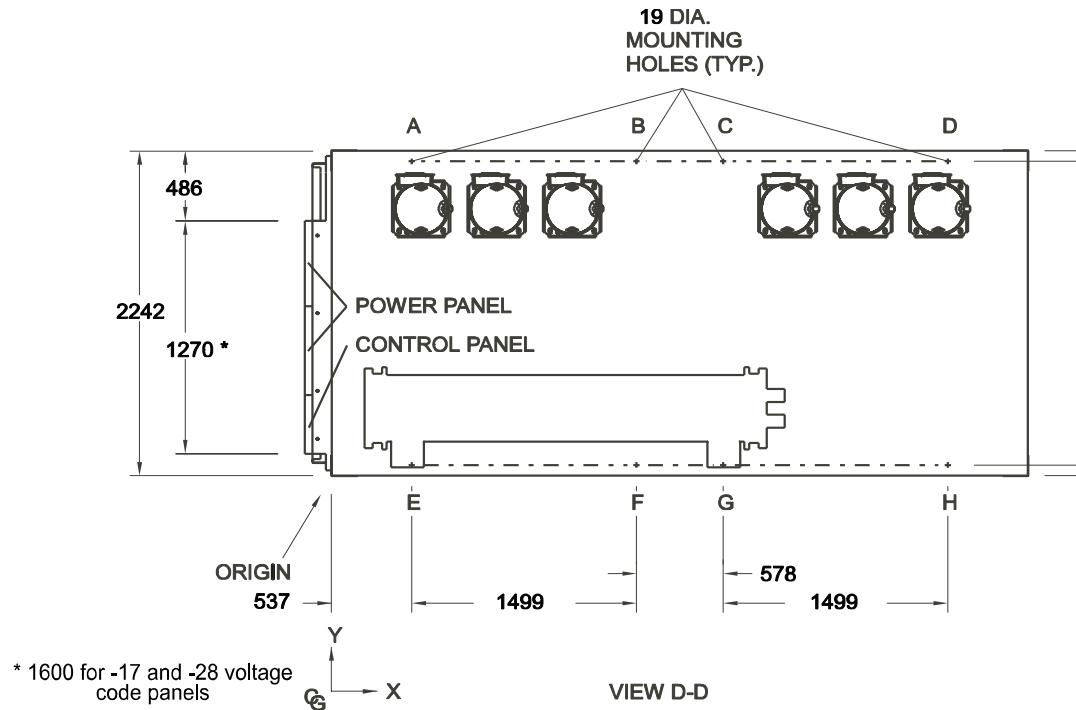
# Dimensions - YCAL0114 - YCAL0124 (SI)



**NOTE:** All dimensions are in mm unless specified otherwise.

**NOTE:**

Placement on a level surface of free of obstructions (including snow, for winter operation) or air circulation ensures rated performance, reliable operation, and ease of maintenance. Site restrictions may compromise minimum clearances indicated below, resulting in unpredictable airflow patterns and possible diminished performance. YORK's unit controls will optimize operation without nuisance high-pressure safety cutouts; however, the system designer must consider potential performance degradation. Access to the unit control center assumes the unit is no higher than on spring isolators. Recommended minimum clearances: Side to wall – 2m; rear to wall – 2m; control panel to end wall – 1.2m; top – no obstructions allowed; distance between adjacent units – 3m. No more than one adjacent wall may be higher than the unit.

**ALUMINUM**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0114	2017	1144	1053
0124	2017	1144	1053

**COPPER**

YCAL	Center of Gravity (mm)		
	X	Y	Z
0114	2055	1140	1105
0124	2054	1140	1105

# Weight Distribution

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## ALUMINUM FIN COILS

English Units

Aluminum Fin Coil Weight Distribution (lbs)									
YCAL	A	B	C	D	E	F	G	H	Total
<b>0014</b>	668	524	760	596	---	---	---	---	2,548
<b>0020</b>	672	527	765	600	---	---	---	---	2,564
<b>0024</b>	776	615	864	685	---	---	---	---	2,940
<b>0030</b>	758	680	842	755	---	---	---	---	3,036
<b>0034</b>	882	789	903	807	---	---	---	---	3,381
<b>0040</b>	1,261	1,200	1,266	1,204	---	---	---	---	4,931
<b>0042</b>	1,283	1,223	1,274	1,214	---	---	---	---	4,994
<b>0044</b>	1,292	1,235	1,297	1,239	---	---	---	---	5,064
<b>0050</b>	1,318	1,263	1,311	1,256	---	---	---	---	5,148
<b>0060</b>	1,333	1,280	1,338	1,284	---	---	---	---	5,236
<b>0064</b>	1,655	1,466	1,637	1,450	---	---	---	---	6,208
<b>0070</b>	1,688	1,501	1,692	1,505	---	---	---	---	6,386
<b>0074</b>	1,742	1,552	1,727	1,538	---	---	---	---	6,558
<b>0080</b>	1,792	1,593	1,797	1,597	---	---	---	---	6,779
<b>0090</b>	1,307	1,172	1,037	1,249	1,155	1,061	---	---	6,981
<b>0094</b>	1,292	1,188	1,082	1,269	1,166	1,062	---	---	7,059
<b>0104</b>	1,344	1,133	923	712	1,246	1,050	855	660	7,923
<b>0114</b>	1,572	1,318	1,063	808	1,501	1,262	1,017	772	9,313
<b>0124</b>	1,579	1,322	1,065	808	1,507	1,262	1,017	771	9,331

SI Units

Aluminum Fin Coil Weight Distribution (kg)									
YCAL	A	B	C	D	E	F	G	H	Total
<b>0014</b>	303	238	345	270	---	---	---	---	1,156
<b>0020</b>	305	239	347	272	---	---	---	---	1,163
<b>0024</b>	352	279	392	311	---	---	---	---	1,333
<b>0030</b>	344	309	382	343	---	---	---	---	1,377
<b>0034</b>	400	358	410	366	---	---	---	---	1,534
<b>0040</b>	572	544	574	546	---	---	---	---	2,236
<b>0042</b>	582	555	578	551	---	---	---	---	2,265
<b>0044</b>	586	560	588	562	---	---	---	---	2,297
<b>0050</b>	598	573	595	570	---	---	---	---	2,335
<b>0060</b>	605	581	607	583	---	---	---	---	2,375
<b>0064</b>	751	665	742	658	---	---	---	---	2,816
<b>0070</b>	766	681	768	683	---	---	---	---	2,897
<b>0074</b>	790	704	783	698	---	---	---	---	2,975
<b>0080</b>	813	723	815	724	---	---	---	---	3,075
<b>0090</b>	593	532	470	567	524	481	---	---	3,167
<b>0094</b>	586	539	491	576	529	482	---	---	3,202
<b>0104</b>	610	514	419	323	565	476	388	299	3,594
<b>0114</b>	713	598	482	367	681	572	461	350	4,224
<b>0124</b>	716	600	483	367	684	572	461	350	4,232

**COPPER FIN COILS**

English Units

<b>Copper Fin Coil Weight Distribution (lbs)</b>									
<b>YCAL</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>Total</b>
<b>0014</b>	718	581	809	654	---	---	---	---	2,762
<b>0020</b>	722	584	814	658	---	---	---	---	2,778
<b>0024</b>	854	704	941	776	---	---	---	---	3,275
<b>0030</b>	830	776	912	853	---	---	---	---	3,371
<b>0034</b>	954	885	974	904	---	---	---	---	3,717
<b>0040</b>	1,354	1,292	1,358	1,296	---	---	---	---	5,300
<b>0042</b>	1,375	1,315	1,366	1,307	---	---	---	---	5,363
<b>0044</b>	1,384	1,327	1,389	1,332	---	---	---	---	5,433
<b>0050</b>	1,410	1,355	1,403	1,348	---	---	---	---	5,517
<b>0060</b>	1,426	1,372	1,430	1,377	---	---	---	---	5,605
<b>0064</b>	1,766	1,577	1,747	1,561	---	---	---	---	6,651
<b>0070</b>	1,799	1,612	1,803	1,616	---	---	---	---	6,829
<b>0074</b>	1,852	1,662	1,838	1,649	---	---	---	---	7,001
<b>0080</b>	1,903	1,704	1,907	1,708	---	---	---	---	7,222
<b>0090</b>	1,427	1,310	1,193	1,409	1,293	1,177	---	---	7,809
<b>0094</b>	1,414	1,326	1,237	1,391	1,304	1,216	---	---	7,888
<b>0104</b>	1,460	1,251	1,041	832	1,364	1,169	973	777	8,867
<b>0114</b>	1,729	1,475	1,222	968	1,660	1,416	1,173	929	10,572
<b>0124</b>	1,735	1,479	1,224	968	1,666	1,420	1,175	929	10,596

SI Units

<b>Copper Fin Coil Weight Distribution (kg)</b>									
<b>YCAL</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>Total</b>
<b>0014</b>	326	263	367	297	---	---	---	---	1,253
<b>0020</b>	327	265	369	299	---	---	---	---	1,260
<b>0024</b>	387	319	427	352	---	---	---	---	1,486
<b>0030</b>	377	352	414	387	---	---	---	---	1,529
<b>0034</b>	433	402	442	410	---	---	---	---	1,686
<b>0040</b>	614	586	616	588	---	---	---	---	2,404
<b>0042</b>	624	597	620	593	---	---	---	---	2,432
<b>0044</b>	628	602	630	604	---	---	---	---	2,464
<b>0050</b>	640	615	637	612	---	---	---	---	2,502
<b>0060</b>	647	622	649	624	---	---	---	---	2,542
<b>0064</b>	801	715	793	708	---	---	---	---	3,017
<b>0070</b>	816	731	818	733	---	---	---	---	3,098
<b>0074</b>	840	754	833	748	---	---	---	---	3,176
<b>0080</b>	863	773	865	775	---	---	---	---	3,276
<b>0090</b>	647	594	541	639	586	534	---	---	3,542
<b>0094</b>	641	601	561	631	591	552	---	---	3,578
<b>0104</b>	662	567	472	377	619	530	441	352	4,022
<b>0114</b>	784	669	554	439	753	642	532	421	4,795
<b>0124</b>	787	671	555	439	756	644	533	421	4,806

# Isolator Selections - Aluminum Fin Coils

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## 1" DEFLECTION ISOLATOR SELECTION - VMC TYPE

YCAL	Aluminum Fin, 1" Isolator Selections							
	VMC Type CP-x-xx							
A	B	C	D	E	F	G	H	
0014	CP-1-27	CP-1-26	CP-1-28	CP-1-27	---	---	---	---
0020	CP-1-27	CP-1-26	CP-1-28	CP-1-27	---	---	---	---
0024	CP-1-28	CP-1-27	CP-1-28	CP-1-28	---	---	---	---
0030	CP-1-28	CP-1-27	CP-1-28	CP-1-28	---	---	---	---
0034	CP-1-28	CP-1-28	CP-1-31	CP-1-28	---	---	---	---
0040	CP-2-27	CP-2-27	CP-2-27	CP-2-27	---	---	---	---
0042	CP-2-27	CP-2-27	CP-2-27	CP-2-27	---	---	---	---
0044	CP-2-27	CP-2-27	CP-2-27	CP-2-27	---	---	---	---
0050	CP-2-27	CP-2-27	CP-2-27	CP-2-27	---	---	---	---
0060	CP-2-27	CP-2-27	CP-2-27	CP-2-27	---	---	---	---
0064	CP-2-28	CP-2-28	CP-2-28	CP-2-28	---	---	---	---
0070	CP-2-28	CP-2-28	CP-2-28	CP-2-28	---	---	---	---
0074	CP-2-28	CP-2-28	CP-2-28	CP-2-28	---	---	---	---
0080	CP-2-28	CP-2-28	CP-2-28	CP-2-28	---	---	---	---
0090	CP-2-27	CP-2-27	CP-2-26	CP-2-27	CP-2-27	CP-2-26	---	---
0094	CP-2-27	CP-2-27	CP-2-26	CP-2-27	CP-2-27	CP-2-26	---	---
0104	CP-2-27	CP-2-27	CP-2-26	CP-2-25	CP-2-27	CP-2-26	CP-2-26	CP-2-25
0114	CP-2-28	CP-2-27	CP-2-26	CP-2-25	CP-2-28	CP-2-27	CP-2-26	CP-2-25
0124	CP-2-28	CP-2-27	CP-2-26	CP-2-25	CP-2-28	CP-2-27	CP-2-26	CP-2-25

## SEISMIC ISOLATOR SELECTION - VMC TYPE

YCAL	Aluminum Fin, Seismic Isolator Selections							
	VMC Model # AEQM-xxxx							
A	B	C	D	E	F	G	H	
0014	AEQM-97	AEQM-96	AEQM-98	AEQM-97	---	---	---	---
0020	AEQM-97	AEQM-96	AEQM-98	AEQM-97	---	---	---	---
0024	AEQM-98	AEQM-97	AEQM-98	AEQM-98	---	---	---	---
0030	AEQM-98	AEQM-97	AEQM-98	AEQM-98	---	---	---	---
0034	AEQM-98	AEQM-98	AEQM-99	AEQM-98	---	---	---	---
0040	AEQM-1300	AEQM-1300	AEQM-1300	AEQM-1300	---	---	---	---
0042	AEQM-1300	AEQM-1300	AEQM-1300	AEQM-1300	---	---	---	---
0044	AEQM-1300	AEQM-1300	AEQM-1300	AEQM-1300	---	---	---	---
0050	AEQM-1600	AEQM-1300	AEQM-1600	AEQM-1300	---	---	---	---
0060	AEQM-1600	AEQM-1300	AEQM-1600	AEQM-1300	---	---	---	---
0064	AEQM-1625	AEQM-1600	AEQM-1625	AEQM-1600	---	---	---	---
0070	AEQM-1625	AEQM-1600	AEQM-1625	AEQM-1600	---	---	---	---
0074	AEQM-1625	AEQM-1600	AEQM-1625	AEQM-1600	---	---	---	---
0080	AEQM-1625	AEQM-1600	AEQM-1625	AEQM-1600	---	---	---	---
0090	AEQM-1600	AEQM-1600	AEQM-1300	AEQM-1600	AEQM-1300	AEQM-1300	---	---
0094	AEQM-1600	AEQM-1600	AEQM-1300	AEQM-1600	AEQM-1300	AEQM-1300	---	---
0104	AEQM-1600	AEQM-1300	AEQM-1000	AEQM-1000	AEQM-1600	AEQM-1300	AEQM-1000	AEQM-1000
0114	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000
0124	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000

## NEOPRENE ISOLATOR SELECTION - VMC TYPE

YCAL	Aluminum Fin, Neoprene Mount Selections							
	A	B	C	D	E	F	G	H
0014	-3 Grn	-2 Gray	-3 Gray	-3 Grn	---	---	---	---
0020	-3 Grn	-2 Gray	-3 Gray	-3 Grn	---	---	---	---
0024	-3 Gray	-3 Grn	-3 Gray	-3 Grn	---	---	---	---
0030	-3 Gray	-3 Grn	-3 Gray	-3 Grn	---	---	---	---
0034	-3 Gray	-3 Grn	-3 Gray	-3 Grn	---	---	---	---
0040	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0042	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0044	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0050	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0060	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0064	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0070	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0074	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0080	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0090	-4 Blk	-4 Blk	-3 Gray	-4 Blk	-4 Blk	-3 Gray	---	---
0094	-4 Blk	-4 Blk	-3 Gray	-4 Blk	-4 Blk	-3 Gray	---	---
0104	-4 Blk	-4 Blk	-3 Gray	-3 Grn	-4 Blk	-3 Gray	-3 Gray	-3 Grn
0114	-4 Red	-4 Blk	-3 Gray	-3 Gray	-4 Red	-4 Blk	-3 Gray	-3 Gray
0124	-4 Red	-4 Blk	-3 Gray	-3 Gray	-4 Red	-4 Blk	-3 Gray	-3 Gray

# **Isolator Selections - Copper Fin Coils**

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## **1" DEFLECTION ISOLATOR SELECTION - VMC TYPE**

YCAL	Copper Fin Coil Weight Distribution (lbs)								
	VMC Type CP-x-xx								
A	B	C	D	E	F	G	H	Total	
0014	718	581	809	654	---	---	---	---	2,762
0020	722	584	814	658	---	---	---	---	2,778
0024	854	704	941	776	---	---	---	---	3,275
0030	830	776	912	853	---	---	---	---	3,371
0034	954	885	974	904	---	---	---	---	3,717
0040	1,354	1,292	1,358	1,296	---	---	---	---	5,300
0042	1,375	1,315	1,366	1,307	---	---	---	---	5,363
0044	1,384	1,327	1,389	1,332	---	---	---	---	5,433
0050	1,410	1,355	1,403	1,348	---	---	---	---	5,517
0060	1,426	1,372	1,430	1,377	---	---	---	---	5,605
0064	1,766	1,577	1,747	1,561	---	---	---	---	6,651
0070	1,799	1,612	1,803	1,616	---	---	---	---	6,829
0074	1,852	1,662	1,838	1,649	---	---	---	---	7,001
0080	1,903	1,704	1,907	1,708	---	---	---	---	7,222
0090	1,427	1,310	1,193	1,409	1,293	1,177	---	---	7,809
0094	1,414	1,326	1,237	1,391	1,304	1,216	---	---	7,888
0104	1,460	1,251	1,041	832	1,364	1,169	973	777	8,867
0114	1,729	1,475	1,222	968	1,660	1,416	1,173	929	10,572
0124	1,735	1,479	1,224	968	1,666	1,420	1,175	929	10,596

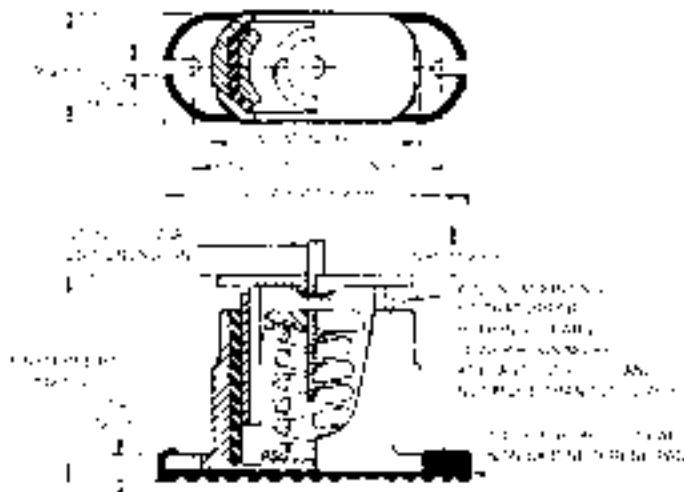
## **SEISMIC ISOLATOR SELECTION - VMC TYPE**

YCAL	Copper Fin, Seismic Isolator Selections							
	VMC Model # AEQM-xxxx							
A	B	C	D	E	F	G	H	
0014	AEQM-97	AEQM-96	AEQM-98	AEQM-97	---	---	---	---
0020	AEQM-97	AEQM-96	AEQM-98	AEQM-97	---	---	---	---
0024	AEQM-98	AEQM-97	AEQM-99	AEQM-98	---	---	---	---
0030	AEQM-98	AEQM-97	AEQM-99	AEQM-98	---	---	---	---
0034	AEQM-99	AEQM-98	AEQM-99	AEQM-98	---	---	---	---
0040	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1300	---	---	---	---
0042	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1300	---	---	---	---
0044	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	---	---	---	---
0050	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	---	---	---	---
0060	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	---	---	---	---
0064	AEQM-1625	AEQM-1600	AEQM-1625	AEQM-1600	---	---	---	---
0070	AEQM-1625	AEQM-1625	AEQM-1625	AEQM-1625	---	---	---	---
0074	AEQM-1625	AEQM-1625	AEQM-1625	AEQM-1625	---	---	---	---
0080	AEQM-1625	AEQM-1625	AEQM-1625	AEQM-1625	---	---	---	---
0090	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	---	---
0094	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	AEQM-1600	---	---
0104	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000	AEQM-1600	AEQM-1300	AEQM-1300	AEQM-1000
0114	AEQM-1625	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000
0124	AEQM-1625	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1625	AEQM-1600	AEQM-1300	AEQM-1000

**NEOPRENE ISOLATOR SELECTION - VMC TYPE**

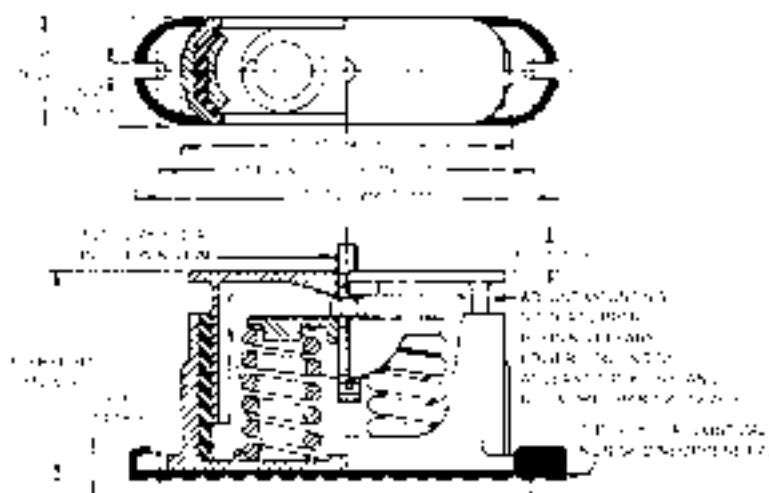
YCAL	Copper Fin, Neoprene Mount Selections							
	VMC Type RD							
A	B	C	D	E	F	G	H	
0014	-3 Grn	-3 Grn	-3 Gray	-3 Grn	---	---	---	---
0020	-3 Grn	-3 Grn	-3 Gray	-3 Grn	---	---	---	---
0024	-3 Gray	-3 Gray	-3 Gray	-3 Gray	---	---	---	---
0030	-3 Gray	-3 Gray	-3 Gray	-3 Gray	---	---	---	---
0034	-3 Gray	-3 Gray	-3 Gray	-3 Gray	---	---	---	---
0040	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0042	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0044	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0050	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0060	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---	---	---
0064	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0070	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0074	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0080	-4 Red	-4 Red	-4 Red	-4 Red	---	---	---	---
0090	-4 Blk	-4 Blk	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---
0094	-4 Blk	-4 Blk	-4 Blk	-4 Blk	-4 Blk	-4 Blk	---	---
0104	-4 Blk	-4 Blk	-3 Gray	-3 Gray	-4 Blk	-4 Blk	-3 Gray	-3 Gray
0114	-4 Red	-4 Blk	-4 Blk	-3 Gray	-4 Red	-4 Blk	-4 Blk	-3 Gray
0124	-4 Red	-4 Blk	-4 Blk	-3 Gray	-4 Red	-4 Blk	-4 Blk	-3 Gray

# Isolator Selections



LD03839

TYPE CP 1



LD03840

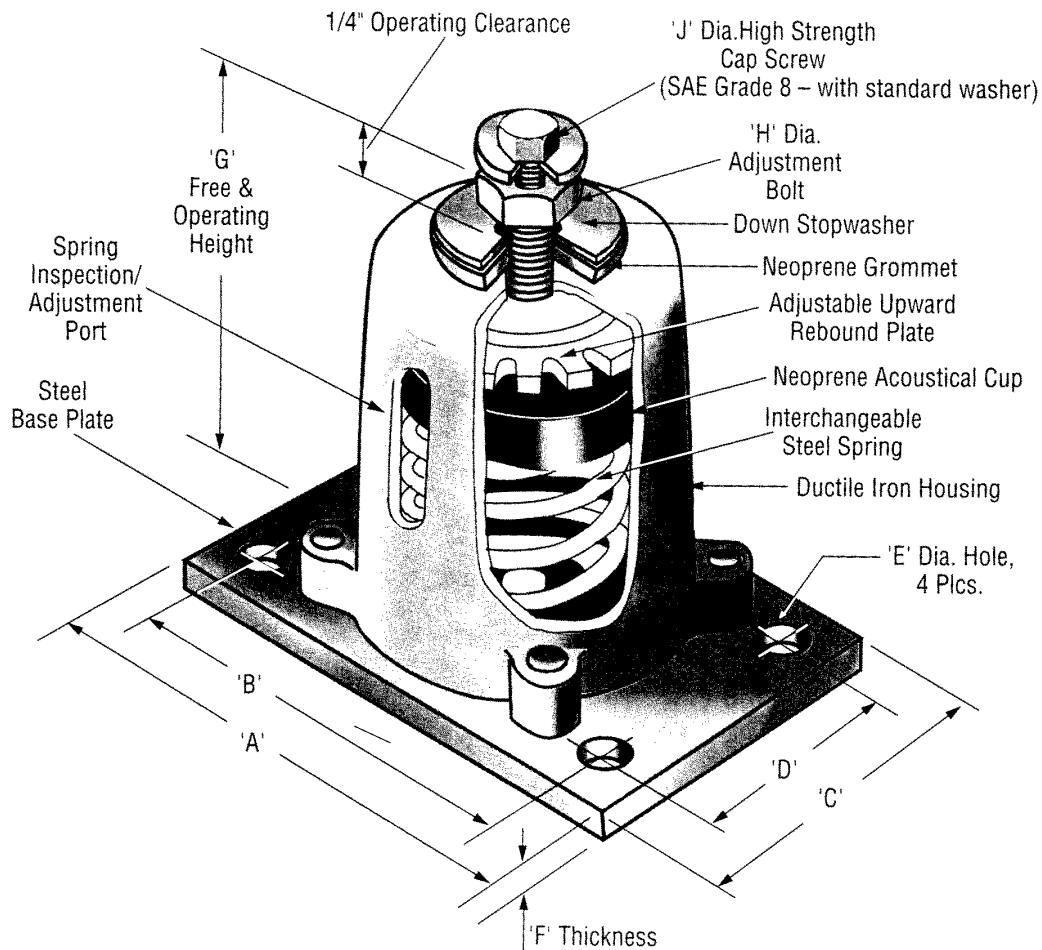
TYPE CP 2

ISOLATOR SPRING IDENTIFICATION TABLE

1" DEFLECTION			SEISMIC		
MODEL	PART #	COLOR	MODEL	PART #	COLOR
CP-1-26	308439-26	PURPLE	AEQM-96	301055-96	BLACK
CP-1-27	308439-27	ORANGE	AEQM-97	301055-97	WHITE
CP-1-28	308439-28	GREEN	AEQM-98	301055-98	GRAY
CP-1-31	308439-31	GRAY	AEQM-99	301055-99	BLUE
CP-2-25	308439-25	RED	AEQM-1000	30106-1000	GREEN
CP-2-26	308692-26	PURPLE	AEQM-1300	30106-1300	YELLOW
CP-2-27	308962-27	ORANGE	AEQM-1600	301060-1600	GRAY
CP-2-28	308692-28	GREEN	AEQM-1625	301060-1625	RED
CP-2-31	308692-31	GRAY	AEQM-1628	301060-1628	GRAY/GREEN

## DIMENSIONS

MODEL #	A	B	C	D	E	F	G	H	J
<b>AEQM-97</b>	7	5-1/2	4-1/2	2-1/2	5/8	1/4	7-1/4	5/8	3/8
<b>AEQM-98</b>	7	5-1/2	4-1/2	2-1/2	5/8	1/4	7-1/4	5/8	3/8
<b>AEQM-99</b>	7	5-1/2	4-1/2	2-1/2	5/8	1/4	7-1/4	5/8	3/8
<b>AEQM-1000</b>	8-1/2	6-1/2	6	4-1/2	3/4	3/8	8-3/8	7/8	1/2
<b>AEQM-1300</b>	8-1/2	6-1/2	6	4-1/2	3/4	3/8	8-3/8	7/8	1/2
<b>AEQM-1600</b>	8-1/2	6-1/2	6	4-1/2	3/4	3/8	8-3/8	7/8	1/2
<b>AEQM-1625</b>	8-1/2	6-1/2	6	4-1/2	3/4	3/8	8-3/8	7/8	1/2
<b>AEQM-1628</b>	8-1/2	6-1/2	6	4-1/2	3/4	3/8	8-3/8	7/8	1/2



TYPE AEQM

# Electrical Data

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## NOTES:

1. Minimum Circuit Ampacity (MCA) is based on 125% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit, per N.E.C. Article 430-24. If the optional Factory Mounted Control Transformer is provided, add the following MCA values to the electrical tables for the system providing power to the transformer: -17, add 2.5 amps; -28, add 2.3 amps; -40, add 1.5 amps, -46, add 1.3 amps; -58, add 1 amps.
2. The minimum recommended disconnect switch is based on 115% of the rated load amps for all loads included in the circuit, per N.E.C. Article 440.
3. Minimum fuse size is based upon 150% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit to avoid nuisance trips at start-up due to lock rotor amps. It is not recommended in applications where brown outs, frequent starting and stopping of the unit, and/or operation at ambient temperatures in excess of 95°F (35°C) is anticipated.
4. Maximum fuse size is based upon 225% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit, per N.E.C. Article 440-22.
5. Circuit breakers must be UL listed and CSA certified and maximum size is based on 225% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit. Exception: YCAL0014 and YCAL0020 must have the optional factory overloads installed to use a standard circuit breaker. Otherwise, an HACR-type circuit breakers must be used. Maximum HACR circuit breaker rating is based on 225% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit.
6. The "INCOMING WIRE RANGE" is the minimum and maximum wire size that can be accommodated by the unit wiring lugs. The (2) preceding the wire range indicates the number of termination points available per phase of the wire range specified. Actual wire size and number of wires per phase must be determined based on the National Electrical Code, using copper connectors only. Field wiring must also comply with local codes.
7. A ground lug is provided for each compressor system to accommodate a field grounding conductor per N.E.C. Table 250-95. A control circuit grounding lug is also supplied.
8. The supplied disconnect is a "Disconnecting Means" as defined in the N.E.C. 100, and is intended for isolating the unit for the available power supply to perform maintenance and troubleshooting. This disconnect is not intended to be a Load Break Device.
9. Field Wiring by others which complies to the National Electrical Code & Local Codes.

## LEGEND

ACR-LINE	ACROSS THE LINE START
C.B.	CIRCUIT BREAKER
D.E.	DUAL ELEMENT FUSE
DISC SW	DISCONNECT SWITCH
FACT MOUNT CB	FACTORY MOUNTED CIRCUIT BREAKER
FLA	FULL LOAD AMPS
Hz	HERTZ
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MIN NF	MINIMUM NON FUSED
RLA	RATED LOAD AMPS
S.P. WIRE	SINGLE POINT WIRING
UNIT MTD SERV SW	UNIT MOUNTED SERVICE (NON-FUSED DISCONNECT SWITCH)
LRA	LOCKED ROTOR AMPS

## VOLTAGE CODE

-17 = 200-3-60
-28 = 230-3-60
-40 = 380-3-60
-46 = 460-3-60
-58 = 575-3-60

**YCAL0014 - YCAL0034****SINGLE POINT POWER SUPPLY CONNECTIONS (See Fig. 1)**

(One Field Provided Power Supply to the chiller. Field connections to Factory Provided Power Terminal Block (standard), Non-Fused Disconnect Switch (optional) or Circuit Breaker (optional).)

MODEL YCAL	VOLT	HZ	SINGLE POINT FIELD SUPPLIED WIRING								SYSTEM #1 COMPRESSOR & FAN								
			MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>			COMPRESSOR #1		COMPRESSOR #2		COMPRESSOR #3		FANS	
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX	TERMINAL BLOCK (std)	NF DISC. SWITCH (opt)	CIRCUIT BREAKER (opt)	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA (EA)
0014	200	60	71	100	80	90	80	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	24.0	189	24.0	189	—	—	2	8.2
	230	60	70	100	80	90	80	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	24.0	189	24.0	189	—	—	2	7.8
	380	60	42	60	50	50	50	50	# 10 - # 1	# 14 - 2	# 14 - 2	14.4	112	14.4	112	—	—	2	4.8
	460	60	35	60	40	45	40	45	# 10 - # 1	# 14 - 2	# 14 - 2	12.0	99	12.0	99	—	—	2	4.0
	575	60	28	30	35	35	35	35	# 10 - # 1	# 14 - 2	# 14 - 2	9.6	74	9.6	74	—	—	2	3.1
0020	200	60	92	100	100	110	100	110	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	33.2	278	33.2	278	—	—	2	8.2
	230	60	91	100	100	110	100	110	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	33.2	278	33.2	278	—	—	2	7.8
	380	60	55	60	60	70	60	70	# 10 - # 1	# 14 - 2	# 14 - 2	19.9	151	19.9	151	—	—	2	4.8
	460	60	46	60	50	60	50	60	# 10 - # 1	# 14 - 2	# 14 - 2	16.6	127	16.6	127	—	—	2	4.0
	575	60	37	60	40	45	40	45	# 10 - # 1	# 14 - 2	# 14 - 2	13.3	100	13.3	100	—	—	2	3.1
0024	200	60	107	150	125	125	125	125	# 10 - # 1	# 2 - 4/0	# 2 - 4/0	40.0	350	40.0	350	—	—	2	8.2
	230	60	106	150	125	125	125	125	# 10 - # 1	# 2 - 4/0	# 2 - 4/0	40.0	350	40.0	350	—	—	2	7.8
	380	60	64	100	70	80	70	80	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	24.0	195	24.0	195	—	—	2	4.8
	460	60	53	60	60	70	60	70	# 10 - # 1	# 14 - 2	# 14 - 2	19.9	167	19.9	167	—	—	2	4.0
	575	60	43	60	50	50	50	50	# 10 - # 1	# 14 - 2	# 14 - 2	16.0	125	16.0	125	—	—	2	3.1
0030	200	60	124	150	150	150	150	150	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0	47.8	425	47.8	425	—	—	2	8.2
	230	60	124	150	150	150	150	150	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0	47.8	425	47.8	425	—	—	2	7.8
	380	60	75	100	90	90	90	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	28.7	239	28.7	239	—	—	2	4.8
	460	60	62	100	70	70	70	70	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	23.9	198	23.9	198	—	—	2	4.0
	575	60	50	60	60	60	60	60	# 10 - # 1	# 14 - 2	# 14 - 2	19.1	148	19.1	148	—	—	2	3.1
0034	200	60	147	200	175	175	175	175	# 10 - 3/0	# 3 - 300	# 3 - 300	40.0	350	40.0	350	40.0	350	2	8.2
	230	60	146	200	175	175	175	175	# 10 - 3/0	# 3 - 300	# 3 - 300	40.0	350	40.0	350	40.0	350	2	7.8
	380	60	88	100	100	110	100	110	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	24.0	195	24.0	195	24.0	195	2	4.8
	460	60	73	100	80	90	80	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	19.9	167	19.9	167	19.9	167	2	4.0
	575	60	59	100	70	70	70	70	# 10 - # 1	# 14 - 1/0	# 14 - 1/0	16.0	125	16.0	125	16.0	125	2	3.1

UNIT VOLTAGE	UNIT VOLTAGE	CONTROL POWER	MCA	OVER CURRENT PROTECTION, SEE NOTE B			NF DISC Sw
				NOTE A	MIN	MAX	
MODELS w/o CONTROL TRANS		115-1-60/50	15A	10A	15A	15A	30 A / 240V
MODELS w/ CONTROL TRANS	-17	200-1-60	15A	10A	15A	15A	30 A / 240V
	-28	230-1-60	15A	10A	15A	15A	30 A / 240V
	-40	380-1-60	15A	10A	15A	15A	30 A / 480V
	-46	460-1-60	15A	10A	15A	15A	30 A / 480V
	-58	575-1-60	15A	10A	15A	15A	30 A / 600V

A. Minimum #14 AWG, 75°C, Copper Recommended

B. Minimum and Maximum Over Current Protection, Dual Element Fuse or Circuit Breaker

VOLTAGE RANGE				
VOLTAGE CODE	UNIT POWER	MIN.	MAX.	
-17	200-3-60	180	220	
-28	230-3-60	207	253	
-40	380/415-3-60	342	440	
-46	460-3-60	414	506	
-58	575-3-60	517	633	

# Electrical Data

## YCAL0040 - YCAL0080

DUAL POINT POWER SUPPLY CONNECTIONS (See Fig. 2)

(Two Field Provided Power Supply Circuits to the chiller. Field connections to Factory Provided Terminal Blocks per system)

MODEL YCAL	VOLT	HZ	SYSTEM #1 FIELD SUPPLIED WIRING						SYSTEM #1 COMPRESSOR & FAN								
			MCA <sup>1</sup>	MIN N/ F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>	COMPR. #1		COMPR. #2		COMPR. #3		FANS	
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX		RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
0040	200	60	92	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	8.2
	230	60	91	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	7.8
	380	60	55	60	60	70	60	70	# 10 - # 1	19.9	151	19.9	151	—	—	2	4.8
	460	60	46	60	50	60	50	60	# 10 - # 1	16.6	127	16.6	127	—	—	2	4.0
	575	60	37	60	40	45	40	45	# 10 - # 1	13.3	100	13.3	100	—	—	2	3.1
0042	200	60	107	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	8.2
	230	60	106	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	7.8
	380	60	64	100	70	90	70	90	# 10 - # 1	24.0	195	24.0	195	—	—	2	4.8
	460	60	53	60	60	70	60	70	# 10 - # 1	19.9	167	19.9	167	—	—	2	4.0
	575	60	43	60	50	50	50	50	# 10 - # 1	16.0	125	16.0	125	—	—	2	3.1
0044	200	60	107	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	8.2
	230	60	106	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	7.8
	380	60	64	100	70	80	70	80	# 10 - # 1	24.0	195	24.0	195	—	—	2	4.8
	460	60	53	60	60	70	60	70	# 10 - # 1	19.9	167	19.9	167	—	—	2	4.0
	575	60	43	60	50	50	50	50	# 10 - # 1	16.0	125	16.0	125	—	—	2	3.1
0050	200	60	124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	8.2
	230	60	124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	7.8
	380	60	75	100	90	100	90	100	# 10 - # 1	28.7	239	28.7	239	—	—	2	4.8
	460	60	62	100	70	80	70	80	# 10 - # 1	23.9	198	23.9	198	—	—	2	4.0
	575	60	50	60	60	60	60	60	# 10 - # 1	19.1	148	19.1	148	—	—	2	3.1
0060	200	60	124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	8.2
	230	60	124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	7.8
	380	60	75	100	90	100	90	100	# 10 - # 1	28.7	239	28.7	239	—	—	2	4.8
	460	60	62	100	70	80	70	80	# 10 - # 1	23.9	198	23.9	198	—	—	2	4.0
	575	60	50	60	60	60	60	60	# 10 - # 1	19.1	148	19.1	148	—	—	2	3.1
0064	200	60	147	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	8.2
	230	60	146	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	7.8
	380	60	88	100	100	110	100	110	# 10 - # 1	24.0	195	24.0	195	24.0	195	2	4.8
	460	60	73	100	80	90	80	90	# 10 - # 1	19.9	167	19.9	167	19.9	167	2	4.0
	575	60	59	100	70	70	70	70	# 10 - # 1	16.0	125	16.0	125	16.0	125	2	3.1
0070	200	60	147	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	8.2
	230	60	146	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	7.8
	380	60	88	100	100	110	100	110	# 10 - # 1	24.0	195	24.0	195	24.0	195	2	4.8
	460	60	73	100	80	90	80	90	# 10 - # 1	19.9	167	19.9	167	19.9	167	2	4.0
	575	60	59	100	70	70	70	70	# 10 - # 1	16.0	125	16.0	125	16.0	125	2	3.1
0074	200	60	172	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	8.2
	230	60	171	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	7.8
	380	60	103	150	125	125	125	125	# 10 - # 1	28.7	239	28.7	239	28.7	239	2	4.8
	460	60	86	100	100	100	100	100	# 10 - # 1	23.9	198	23.9	198	23.9	198	2	4.0
	575	60	69	100	80	80	80	80	# 10 - # 1	19.1	148	19.1	148	19.1	148	2	3.1
0080	200	60	172	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	8.2
	230	60	171	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	7.8
	380	60	103	150	125	125	125	125	# 10 - # 1	28.7	239	28.7	239	28.7	239	2	4.8
	460	60	86	100	100	100	100	100	# 10 - # 1	23.9	198	23.9	198	23.9	198	2	4.0
	575	60	69	100	80	80	80	80	# 10 - # 1	19.1	148	19.1	148	19.1	148	2	3.1

See Notes on page 94.

**YCAL0040 - YCAL0080**

DUAL POINT POWER SUPPLY CONNECTIONS (See Fig. 2)

(Two Field Provided Power Supply Circuits to the chiller. Field connections to Factory Provided Terminal Blocks per system)

MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	SYSTEM #2 FIELD SUPPLIED WIRING					SYSTEM #2 COMPRESSOR & FAN							
		D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>	COMPR. #1		COMPR. #2		COMPR. #3		FANS	
		MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX		RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
92	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	8.2
91	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	7.8
55	60	60	70	60	70	# 10 - # 1	19.9	151	19.9	151	—	—	2	4.8
46	60	50	60	50	60	# 10 - # 1	16.6	127	16.6	127	—	—	2	4.0
37	60	40	45	40	45	# 10 - # 1	13.3	100	13.3	100	—	—	2	3.1
92	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	8.2
91	100	100	110	100	110	# 10 - # 1	33.2	278	33.2	278	—	—	2	7.8
55	60	60	70	60	70	# 10 - # 1	19.9	151	19.9	151	—	—	2	4.8
46	60	50	60	50	60	# 10 - # 1	16.6	127	16.6	127	—	—	2	4.0
37	60	40	45	40	45	# 10 - # 1	13.3	100	13.3	100	—	—	2	3.1
107	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	8.2
106	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	7.8
64	100	70	80	70	80	# 10 - # 1	24.0	195	24.0	195	—	—	2	4.8
53	60	60	70	60	70	# 10 - # 1	19.9	167	19.9	167	—	—	2	4.0
43	60	50	50	50	50	# 10 - # 1	16.0	125	16.0	125	—	—	2	3.1
107	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	8.2
106	150	125	125	125	125	# 10 - # 1	40.0	350	40.0	350	—	—	2	7.8
64	100	70	80	70	80	# 10 - # 1	24.0	195	24.0	195	—	—	2	4.8
53	60	60	70	60	70	# 10 - # 1	19.9	167	19.9	167	—	—	2	4.0
43	60	50	50	50	50	# 10 - # 1	16.0	125	16.0	125	—	—	2	3.1
124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	8.2
124	150	150	150	150	150	# 10 - 3/0	47.8	425	47.8	425	—	—	2	7.8
75	100	90	100	90	100	# 10 - # 1	28.7	239	28.7	239	—	—	2	4.8
62	100	70	80	70	80	# 10 - # 1	23.9	198	23.9	198	—	—	2	4.0
50	60	60	60	60	60	# 10 - # 1	19.1	148	19.1	148	—	—	2	3.1
125	150	150	150	150	150	# 10 - 3/0	33.2	278	33.2	278	33.2	278	2	8.2
124	150	150	150	150	150	# 10 - 3/0	33.2	278	33.2	278	33.2	278	2	7.8
75	100	80	90	80	90	# 10 - # 1	19.9	151	19.9	151	19.9	151	2	4.8
62	100	70	70	70	70	# 10 - # 1	16.6	127	16.6	127	16.6	127	2	4.0
50	60	60	60	60	60	# 10 - # 1	13.3	100	13.3	100	13.3	100	2	3.1
147	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	8.2
146	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	7.8
88	100	100	110	100	110	# 10 - # 1	24.0	195	24.0	195	24.0	195	2	4.8
73	100	80	90	80	90	# 10 - # 1	19.9	167	19.9	167	19.9	167	2	4.0
59	100	70	70	70	70	# 10 - # 1	16.0	125	16.0	125	16.0	125	2	3.1
147	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	8.2
146	200	175	175	175	175	# 10 - 3/0	40.0	350	40.0	350	40.0	350	2	7.8
88	100	100	100	100	100	# 10 - # 1	24.0	195	24.0	195	24.0	195	2	4.8
73	100	80	90	80	90	# 10 - # 1	19.9	167	19.9	167	19.9	167	2	4.0
59	100	70	70	70	70	# 10 - # 1	16.0	125	16.0	125	16.0	125	2	3.1
172	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	8.2
171	200	200	200	200	200	# 10 - 3/0	47.8	425	47.8	425	47.8	425	2	7.8
103	150	125	125	125	125	# 10 - # 1	28.7	239	28.7	239	28.7	239	2	4.8
86	100	100	100	100	100	# 10 - # 1	23.9	198	23.9	198	23.9	198	2	4.0
69	100	80	80	80	80	# 10 - # 1	19.1	148	19.1	148	19.1	148	2	3.1

## YCAL0040 - YCAL0080

### SINGLE POINT POWER SUPPLY CONNECTIONS (see Fig. 1)

(One Field Provided Power Supply Circuit to the chiller. Field connections to Factory Provided Terminal Block (optional), Non-Fused Disconnect Switch (optional) or Circuit Breaker (optional).)

MODEL YCAL	VOLT	HZ	SINGLE POINT FIELD SUPPLIED WIRING								
			MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>		
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX	TERMINAL BLOCK (opt)	NF DISC. SWITCH (opt)	CIRCUIT BREAKER (opt)
0040	200	60	174	200	200	200	200	200	# 10 - 3/0	# 6 - 350	# 3 - 300
	230	60	173	200	200	200	200	200	# 10 - 3/0	# 6 - 350	# 3 - 300
	380	60	104	150	110	110	110	110	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
	460	60	87	100	100	100	100	100	# 10 - # 1	# 14 - 1/0	# 14 - 1/0
	575	60	69	100	80	80	80	80	# 10 - # 1	# 14 - 1/0	# 14 - 1/0
0042	200	60	190	250	200	225	200	225	# 10 - 300	# 6 - 350	# 3 - 300
	230	60	188	250	200	225	200	225	# 10 - 300	# 6 - 350	# 3 - 300
	380	60	113	150	125	125	125	125	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
	460	60	94	150	100	110	100	110	# 10 - # 1	# 2 - 4/0	# 14 - 1/0
	575	60	75	100	80	90	80	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0
0044	200	60	203	250	225	225	225	225	# 10 - 300	# 6 - 350	# 3 - 300
	230	60	202	250	225	225	225	225	# 10 - 300	# 6 - 350	# 3 - 300
	380	60	122	150	150	125	150	125	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0
	460	60	101	150	110	110	110	110	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
	575	60	81	100	90	90	90	90	# 10 - # 1	# 14 - 1/0	# 14 - 1/0
0050	200	60	221	250	250	250	250	250	# 10 - 300	# 6 - 350	# 6 - 350
	230	60	219	250	250	250	250	250	# 10 - 300	# 6 - 350	# 6 - 350
	380	60	132	150	150	150	150	150	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0
	460	60	110	150	125	125	125	125	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
	575	60	88	100	100	100	100	100	# 10 - # 1	# 14 - 1/0	# 14 - 1/0
0060	200	60	236	400	250	250	250	250	# 10 - 300	250-500	# 6 - 350
	230	60	235	400	250	250	250	250	# 10 - 300	250-500	# 6 - 350
	380	60	142	200	150	150	150	150	# 10 - 3/0	# 6 - 350	# 2 - 4/0
	460	60	118	150	125	125	125	125	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0
	575	60	94	150	100	110	100	110	# 10 - # 1	# 2 - 4/0	# 14 - 1/0
0064	200	60	263	400	300	300	300	300	# 4 - 500	250-500	250-500
	230	60	261	400	300	300	300	300	# 4 - 500	250-500	250-500
	380	60	157	200	175	175	175	175	# 10 - 3/0	# 6 - 350	# 2 - 4/0
	460	60	131	150	150	150	150	150	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0
	575	60	105	150	110	110	110	110	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
0070	200	60	283	400	300	300	300	300	# 4 - 500	250-500	250-500
	230	60	282	400	300	300	300	300	# 4 - 500	250-500	250-500
	380	60	170	200	200	200	200	200	# 10 - 3/0	# 6 - 350	# 4 - 300
	460	60	141	200	150	150	150	150	# 10 - 3/0	# 6 - 350	# 2 - 4/0
	575	60	113	150	125	125	125	125	# 10 - # 1	# 2 - 4/0	# 2 - 4/0
0074	200	60	309	400	350	350	350	350	# 4 - 500	250-500	250-500
	230	60	307	400	350	350	350	350	# 4 - 500	250-500	250-500
	380	60	185	250	200	200	200	200	# 10 - 300	# 6 - 350	# 4 - 300
	460	60	154	200	175	175	175	175	# 10 - 3/0	# 6 - 350	# 4 - 300
	575	60	123	150	150	125	150	125	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0
0080	200	60	332	400	350	350	350	350	# 4 - 500	250-500	250-500
	230	60	330	400	350	350	350	350	# 4 - 500	250-500	250-500
	380	60	199	250	225	225	225	225	# 10 - 300	# 6 - 350	# 4 - 300
	460	60	166	200	175	175	175	175	# 10 - 3/0	# 6 - 350	# 4 - 300
	575	60	132	150	150	150	150	150	# 10 - 3/0	# 2 - 4/0	# 2 - 4/0

See Notes on page 94.

**YCAL0040 - YCAL0080**

SINGLE POINT POWER SUPPLY CONNECTIONS (see Fig. 1)

(One Field Provided Power Supply Circuit to the chiller. Field connections to Factory Provided Terminal Block (optional), Non-Fused Disconnect Switch (optional) or Circuit Breaker (optional).)

SYSTEM #1 COMPRESSOR & FAN								SYSTEM #2 FIELD SUPPLIED WIRING							
COMPR. #1		COMPR. #2		COMPR. #3		FANS		COMPR. #1		COMPR. #2		COMPR. #3		FANS	
RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
33.2	278	33.2	278	—	—	2	8.2	33.2	278	33.2	278	—	—	2	8.2
33.2	278	33.2	278	—	—	2	7.8	33.2	278	33.2	278	—	—	2	7.8
19.9	151	19.9	151	—	—	2	4.8	19.9	151	19.9	151	—	—	2	4.8
16.6	127	16.6	127	—	—	2	4.0	16.6	127	16.6	127	—	—	2	4.0
13.3	100	13.3	100	—	—	2	3.1	13.3	100	13.3	100	—	—	2	3.1
40.0	350	40.0	350	—	—	2	8.2	33.2	278	33.2	278	—	—	2	8.2
40.0	350	40.0	350	—	—	2	7.8	33.2	278	33.2	278	—	—	2	7.8
24.0	195	24.0	195	—	—	2	4.8	19.9	151	19.9	151	—	—	2	4.8
19.9	167	19.9	167	—	—	2	4.0	16.6	127	16.6	127	—	—	2	4.0
16.0	125	16.0	125	—	—	2	3.1	13.3	100	13.3	100	—	—	2	3.1
40.0	350	40.0	350	—	—	2	8.2	40.0	350	40.0	350	—	—	2	8.2
40.0	350	40.0	350	—	—	2	7.8	40.0	350	40.0	350	—	—	2	7.8
24.0	195	24.0	195	—	—	2	4.8	24.0	195	24.0	195	—	—	2	4.8
19.9	167	19.9	167	—	—	2	4.0	19.9	167	19.9	167	—	—	2	4.0
16.0	125	16.0	125	—	—	2	3.1	16.0	125	16.0	125	—	—	2	3.1
47.8	425	47.8	425	—	—	2	8.2	40.0	350	40.0	350	—	—	2	8.2
47.8	425	47.8	425	—	—	2	7.8	40.0	350	40.0	350	—	—	2	7.8
28.7	239	28.7	239	—	—	2	4.8	24.0	195	24.0	195	—	—	2	4.8
23.9	198	23.9	198	—	—	2	4.0	19.9	167	19.9	167	—	—	2	4.0
19.1	148	19.1	148	—	—	2	3.1	16.0	125	16.0	125	—	—	2	3.1
47.8	425	47.8	425	—	—	2	8.2	47.8	425	47.8	425	—	—	2	8.2
47.8	425	47.8	425	—	—	2	7.8	47.8	425	47.8	425	—	—	2	7.8
28.7	239	28.7	239	—	—	2	4.8	28.7	239	28.7	239	—	—	2	4.8
23.9	198	23.9	198	—	—	2	4.0	23.9	198	23.9	198	—	—	2	4.0
19.1	148	19.1	148	—	—	2	3.1	19.1	148	19.1	148	—	—	2	3.1
40.0	350	40.0	350	40.0	350	2	8.2	33.2	278	33.2	278	33.2	278	2	8.2
40.0	350	40.0	350	40.0	350	2	7.8	33.2	278	33.2	278	33.2	278	2	7.8
24.0	195	24.0	195	24.0	195	2	4.8	19.9	151	19.9	151	19.9	151	2	4.8
19.9	167	19.9	167	19.9	167	2	4.0	16.6	127	16.6	127	16.6	127	2	4.0
16.0	125	16.0	125	16.0	125	2	3.1	13.3	100	13.3	100	13.3	100	2	3.1
40.0	350	40.0	350	40.0	350	2	8.2	40.0	350	40.0	350	40.0	350	2	8.2
40.0	350	40.0	350	40.0	350	2	7.8	40.0	350	40.0	350	40.0	350	2	7.8
24.0	195	24.0	195	24.0	195	2	4.8	24.0	195	24.0	195	24.0	195	2	4.8
19.9	167	19.9	167	19.9	167	2	4.0	19.9	167	19.9	167	19.9	167	2	4.0
16.0	125	16.0	125	16.0	125	2	3.1	16.0	125	16.0	125	16.0	125	2	3.1
47.8	425	47.8	425	47.8	425	2	8.2	40.0	350	40.0	350	40.0	350	2	8.2
47.8	425	47.8	425	47.8	425	2	7.8	40.0	350	40.0	350	40.0	350	2	7.8
28.7	239	28.7	239	28.7	239	2	4.8	24.0	195	24.0	195	24.0	195	2	4.8
23.9	198	23.9	198	23.9	198	2	4.0	19.9	167	19.9	167	19.9	167	2	4.0
19.1	148	19.1	148	19.1	148	2	3.1	16.0	125	16.0	125	16.0	125	2	3.1
47.8	425	47.8	425	47.8	425	2	8.2	47.8	425	47.8	425	47.8	425	2	8.2
47.8	425	47.8	425	47.8	425	2	7.8	47.8	425	47.8	425	47.8	425	2	7.8
28.7	239	28.7	239	28.7	239	2	4.8	28.7	239	28.7	239	28.7	239	2	4.8
23.9	198	23.9	198	23.9	198	2	4.0	23.9	198	23.9	198	23.9	198	2	4.0
19.1	148	19.1	148	19.1	148	2	3.1	19.1	148	19.1	148	19.1	148	2	3.1

# Electrical Data

## YCAL0090 - YCAL0124

### MULTIPLE POINT POWER SUPPLY CONNECTIONS (see Fig. 3)

(Two Field Provided Power Supply Circuits to the chiller. Field connections to Factory Provided Terminal Blocks (standard), Non-Fused Disconnect Switches (optional), or Individual System Circuit Breakers (optional) per electrical system)

MODEL YCAL	VOLT	HZ	SYSTEM #1 FIELD SUPPLIED WIRING								
			MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>		
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX	TERMINAL BLOCK (std)	NF DISC. SWITCHES (opt)	CIR BREAKERS (opt)
0090	200	60	251	400	300	350	300	350	# 6 - 400	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	233	250	300	300	300	300	# 6 - 400	(1) # 6 - 350	(1 or 2) 3/0 - 500
	380	60	135	150	150	175	150	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	111	150	125	150	125	150	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
	575	60	89	100	100	110	100	110	# 14 - 2/0	(1) # 6 - 350	(1) # 10 - 1/0
0094	200	60	251	400	300	350	300	350	# 6 - 400	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	233	250	300	300	300	300	# 6 - 400	(1) # 6 - 350	(1 or 2) 3/0 - 500
	380	60	135	150	150	175	150	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	111	150	125	150	125	150	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
	575	60	89	100	100	110	100	110	# 14 - 2/0	(1) # 6 - 350	(1) # 10 - 1/0
0104	200	60	274	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	254	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	380	60	148	200	175	175	175	175	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
	460	60	122	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 10 - 1/0
	575	60	98	150	110	110	110	110	# 14 - 2/0	(1) # 10 - 1/0	(1) # 10 - 1/0
0114	200	60	274	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	254	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	380	60	148	200	175	175	175	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	122	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	575	60	98	150	110	110	110	110	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
0124	200	60	359	400	400	450	400	450	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	333	400	400	400	400	400	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	380	60	194	250	225	225	225	225	# 6 - 400	(1) # 6 - 350	(1) # 6 - 350
	460	60	159	200	175	200	175	200	# 6 - 400	(1) # 6 - 350	(1) # 6 - 350
	575	60	128	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350

MODEL YCAL	VOLT	HZ	SYSTEM #2 FIELD SUPPLIED WIRING								
			MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>		
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX	TERMINAL BLOCK (std)	NF DISC. SWITCHES (opt)	CIR BREAKERS (opt)
0090	200	60	191	200	225	250	225	250	# 6 - 400	(1) # 6 - 350	(1) # 6 - 350
	230	60	178	200	200	225	200	225	# 6 - 400	(1) # 6 - 350	(1) # 6 - 350
	380	60	104	150	125	125	125	125	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
	460	60	85	100	100	110	100	110	# 14 - 2/0	(1) # 10 - 1/0	(1) # 10 - 1/0
	575	60	68	100	80	90	80	90	# 14 - 2/0	(1) # 10 - 1/0	(1) # 10 - 1/0
0094	200	60	251	400	300	350	300	350	# 6 - 400	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	233	250	300	300	300	300	# 6 - 400	(1) # 6 - 350	(1 or 2) 3/0 - 500
	380	60	135	150	150	175	150	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	111	150	125	150	125	150	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
	575	60	89	100	100	110	100	110	# 14 - 2/0	(1) # 6 - 350	(1) # 10 - 1/0
0104	200	60	259	400	300	350	300	350	# 6 - 400	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	241	250	300	300	300	300	# 6 - 400	(1) # 6 - 350	(1 or 2) 3/0 - 500
	380	60	140	150	175	175	175	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	115	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	575	60	92	100	110	125	110	125	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
0114	200	60	274	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	254	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	380	60	148	200	175	175	175	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	122	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	575	60	98	150	110	110	110	110	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0
0124	200	60	374	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	230	60	354	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500	(1 or 2) 3/0 - 500
	380	60	148	200	175	175	175	175	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	460	60	122	150	150	150	150	150	# 14 - 2/0	(1) # 6 - 350	(1) # 6 - 350
	575	60	98	150	110	110	110	110	# 14 - 2/0	(1) # 6 - 350	(1) # 3 - 3/0

See Notes on page 94.

**YCAL0090 - YCAL0124****MULTIPLE POINT POWER SUPPLY CONNECTIONS (see Fig. 3)**

(Two Field Provided Power Supply Circuits to the chiller. Field connections to Factory Provided Terminal Blocks (standard), Non-Fused Disconnect Switches (optional), or Individual System Circuit Breakers (optional) per electrical system)

**SYSTEM #1 COMPRESSOR & FAN**

COMPR. #1		COMPR. #2		COMPR. #3		FANS	
RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
100.2	550	100.2	550	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1
100.2	550	100.2	550	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1
73.9	450	73.9	450	73.9	450	3	8.2
68.5	450	68.5	450	68.5	450	3	7.8
39.5	260	39.5	260	39.5	260	3	4.8
32.6	215	32.6	215	32.6	215	3	4.0
26.1	180	26.1	180	26.1	180	3	3.1
73.9	450	73.9	450	73.9	450	4	8.2
68.5	450	68.5	450	68.5	450	4	7.8
39.5	260	39.5	260	39.5	260	4	4.8
32.6	215	32.6	215	32.6	215	4	4.0
26.1	180	26.1	180	26.1	180	4	3.1
100.2	550	100.2	550	100.2	550	4	8.2
92.8	550	92.8	550	92.8	550	4	7.8
53.5	305	53.5	305	53.5	305	4	4.8
44.2	270	44.2	270	44.2	270	4	4.0
35.4	210	35.4	210	35.4	210	4	3.1

**SYSTEM #2 COMPRESSOR & FAN**

COMPR. #1		COMPR. #2		COMPR. #3		FANS	
RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
73.9	450	73.9	450	—	—	3	8.2
68.5	450	68.5	450	—	—	3	7.8
39.5	260	39.5	260	—	—	3	4.8
32.6	215	32.6	215	—	—	3	4.0
26.1	180	26.1	180	—	—	3	3.1
100.2	550	100.2	550	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1
100.2	550	100.2	550	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1
73.9	450	73.9	450	73.9	450	4	8.2
68.5	450	68.5	450	68.5	450	4	7.8
39.5	260	39.5	260	39.5	260	4	4.8
32.6	215	32.6	215	32.6	215	4	4.0
26.1	180	26.1	180	26.1	180	4	3.1
73.9	450	73.9	450	73.9	450	4	8.2
68.5	450	68.5	450	68.5	450	4	7.8
39.5	260	39.5	260	39.5	260	4	4.8
32.6	215	32.6	215	32.6	215	4	4.0
26.1	180	26.1	180	26.1	180	4	3.1

# Electrical Data

## YCAL0090 - YCAL0124

SINGLE POINT POWER SUPPLY CONNECTIONS WITH INDIVIDUAL SYSTEM CIRCUIT BREAKERS (see Fig. 4)  
 (One Field Provided Power Supply Circuit to the chiller. Field connections to Factory Provided Terminal Block (optional) or Non-Fused Disconnect Switch (optional). Includes Individual Branch Circuit Protection (Breakers) per electrical system)

MODEL YCAL	VOLT	HZ	SINGLE POINT FIELD SUPPLIED WIRING							
			MCA <sup>1</sup>	MIN N/F DISC SW <sup>2</sup>	D.E. FUSE		CKT. BKR. <sup>5</sup>		INCOMING (LUGS) WIRE RANGE <sup>6</sup>	
					MIN <sup>3</sup>	MAX <sup>4</sup>	MIN	MAX	TERMINAL BLOCK (opt)	NF DISC. SWITCH (opt)
0090	200	60	423	600	450	500	450	500	(2) # 4 - 500	(1 or 2) 3/0 - 500
	230	60	393	600	450	450	450	450	(2) # 4 - 500	(1 or 2) 3/0 - 500
	380	60	229	250	250	250	250	250	(2) # 4 - 500	(1) # 6 - 350
	460	60	188	250	250	200	250	200	# 6 - 400	(1) # 6 - 350
	575	60	151	200	200	175	200	175	# 14 - 2/0	(1) # 6 - 350
0094	200	60	476	600	600	600	600	600	(2) # 4 - 500	(1 or 2) 3/0 - 500
	230	60	442	600	500	500	500	500	(2) # 4 - 500	(1 or 2) 3/0 - 500
	380	60	257	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500
	460	60	211	250	225	250	225	250	# 6 - 400	(1) # 6 - 350
	575	60	169	200	200	200	200	200	# 6 - 400	(1) # 6 - 350
0104	200	60	513	600	600	600	600	600	(2) # 4 - 500	(1 or 2) 3/0 - 500
	230	60	477	600	500	500	500	500	(2) # 4 - 500	(1 or 2) 3/0 - 500
	380	60	278	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500
	460	60	228	250	250	250	250	250	# 6 - 400	(1) # 6 - 350
	575	60	183	200	200	200	200	200	# 6 - 400	(1) # 6 - 350
0114	200	60	528	600	600	600	600	600	(2) # 4 - 500	(1 or 2) 3/0 - 500
	230	60	491	600	600	600	600	600	(2) # 4 - 500	(1 or 2) 3/0 - 500
	380	60	286	400	300	300	300	300	(2) # 4 - 500	(1 or 2) 3/0 - 500
	460	60	235	400	250	250	250	250	# 6 - 400	(1 or 2) 3/0 - 500
	575	60	188	250	200	200	200	200	# 6 - 400	(1) # 6 - 350
0124	200	60	607	800	700	700	700	700	(2) # 4 - 500	(1 or 2) 3/0 - 500
	230	60	564	800	600	600	600	600	(2) # 4 - 500	(1 or 2) 3/0 - 500
	380	60	328	400	350	350	350	350	(2) # 4 - 500	(1 or 2) 3/0 - 500
	460	60	269	400	300	300	300	300	# 6 - 400	(1 or 2) 3/0 - 500
	575	60	216	250	250	250	250	250	# 6 - 400	(1) # 6 - 350

See Notes on page 94.

See Notes on page 74.

**YCAL0090 - YCAL0124**

SINGLE POINT POWER SUPPLY CONNECTIONS WITH INDIVIDUAL SYSTEM CIRCUIT BREAKERS (see Fig. 4)  
 (One Field Provided Power Supply Circuit to the chiller. Field connections to Factory Provided Terminal Block (optional) or Non-Fused Disconnect Switch (optional). Includes Individual Branch Circuit Protection (Breakers) per electrical system)

SYSTEM #1 COMPRESSOR & FAN								SYSTEM #2 FIELD SUPPLIED WIRING							
COMPR. #1		COMPR. #2		COMPR. #3		FANS		COMPR. #1		COMPR. #2		COMPR. #3		FANS	
RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA(EA)
100.2	550	100.2	550	—	—	3	8.2	73.9	450	73.9	450	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8	68.5	450	68.5	450	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8	39.5	260	39.5	260	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0	32.6	215	32.6	215	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1	26.1	180	26.1	180	—	—	3	3.1
100.2	550	100.2	550	—	—	3	8.2	100.2	550	100.2	550	—	—	3	8.2
92.8	550	92.8	550	—	—	3	7.8	92.8	550	92.8	550	—	—	3	7.8
53.5	305	53.5	305	—	—	3	4.8	53.5	305	53.5	305	—	—	3	4.8
44.2	270	44.2	270	—	—	3	4.0	44.2	270	44.2	270	—	—	3	4.0
35.4	210	35.4	210	—	—	3	3.1	35.4	210	35.4	210	—	—	3	3.1
73.9	450	73.9	450	73.9	450	3	8.2	100.2	550	100.2	550	—	—	3	8.2
68.5	450	68.5	450	68.5	450	3	7.8	92.8	550	92.8	550	—	—	3	7.8
39.5	260	39.5	260	39.5	260	3	4.8	53.5	305	53.5	305	—	—	3	4.8
32.6	215	32.6	215	32.6	215	3	4.0	44.2	270	44.2	270	—	—	3	4.0
26.1	180	26.1	180	26.1	180	3	3.1	35.4	210	35.4	210	—	—	3	3.1
73.9	450	73.9	450	73.9	450	4	8.2	73.9	450	73.9	450	73.9	450	4	8.2
68.5	450	68.5	450	68.5	450	4	7.8	68.5	450	68.5	450	68.5	450	4	7.8
39.5	260	39.5	260	39.5	260	4	4.8	39.5	260	39.5	260	39.5	260	4	4.8
32.6	215	32.6	215	32.6	215	4	4.0	32.6	215	32.6	215	32.6	215	4	4.0
26.1	180	26.1	180	26.1	180	4	3.1	26.1	180	26.1	180	26.1	180	4	3.1
100.2	550	100.2	550	100.2	550	4	8.2	73.9	450	73.9	450	73.9	450	4	8.2
92.8	550	92.8	550	92.8	550	4	7.8	68.5	450	68.5	450	68.5	450	4	7.8
53.5	305	53.5	305	53.5	305	4	4.8	39.5	260	39.5	260	39.5	260	4	4.8
44.2	270	44.2	270	44.2	270	4	4.0	32.6	215	32.6	215	32.6	215	4	4.0
35.4	210	35.4	210	35.4	210	4	3.1	26.1	180	26.1	180	26.1	180	4	3.1

# Power Wiring

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Figure 1: Single Point Supply Connection – Terminal Block, Non-Fused Disconnect Switch or Circuit Breaker (YCAL0014-0080)

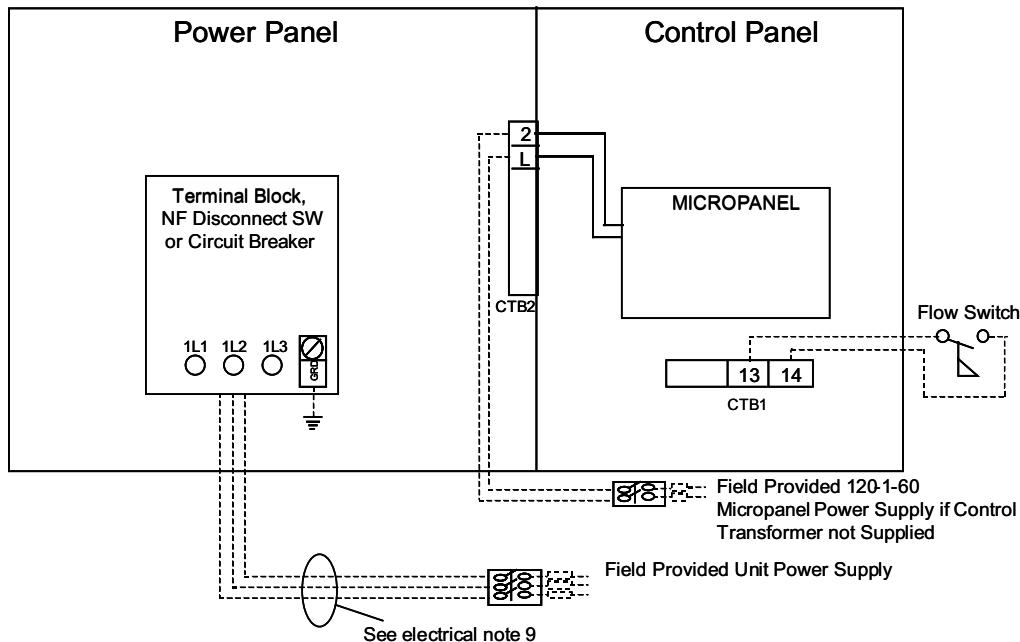


Figure 2: Multiple Point Power Supply Connection – Terminal Block (YCAL0040-0080)

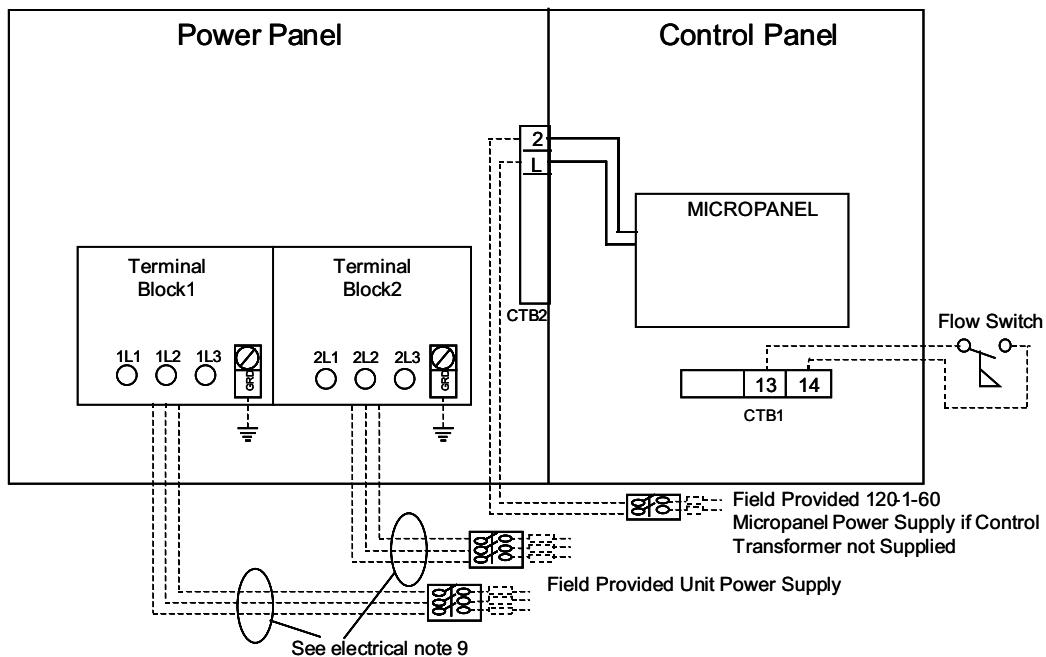


Figure 3: Multiple Point Power Supply Connection – Terminal Block, Non-Fused Disconnect Switches or Circuit Breakers (YCAL0090-0124)

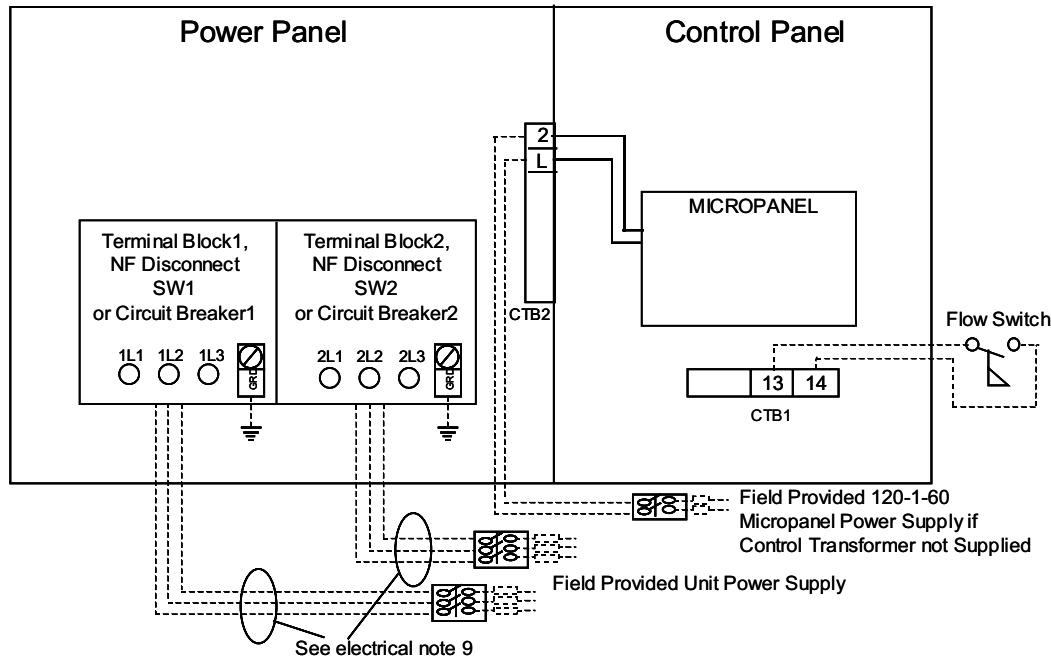
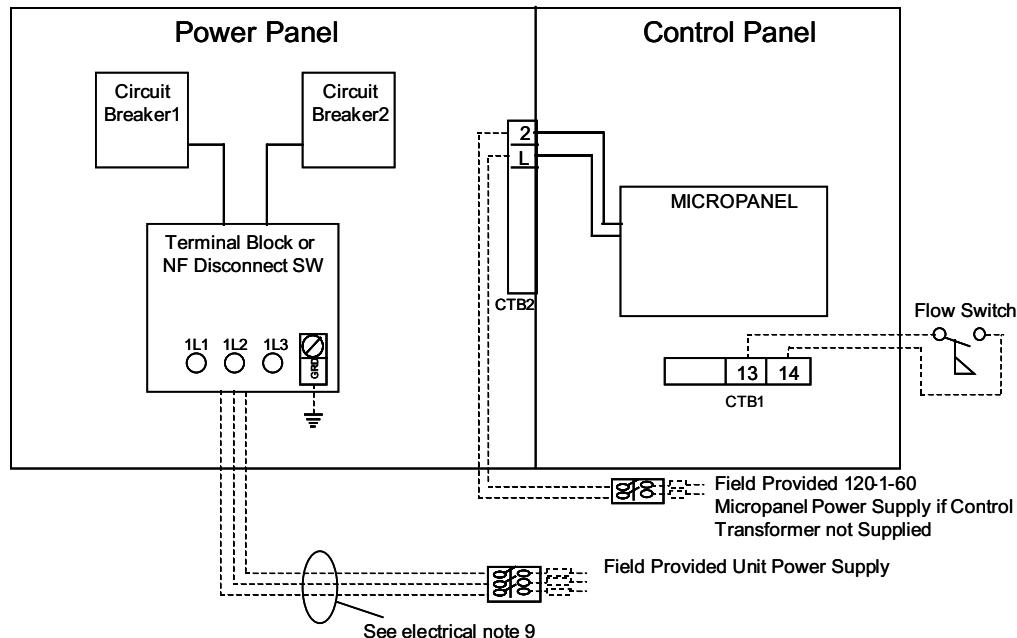
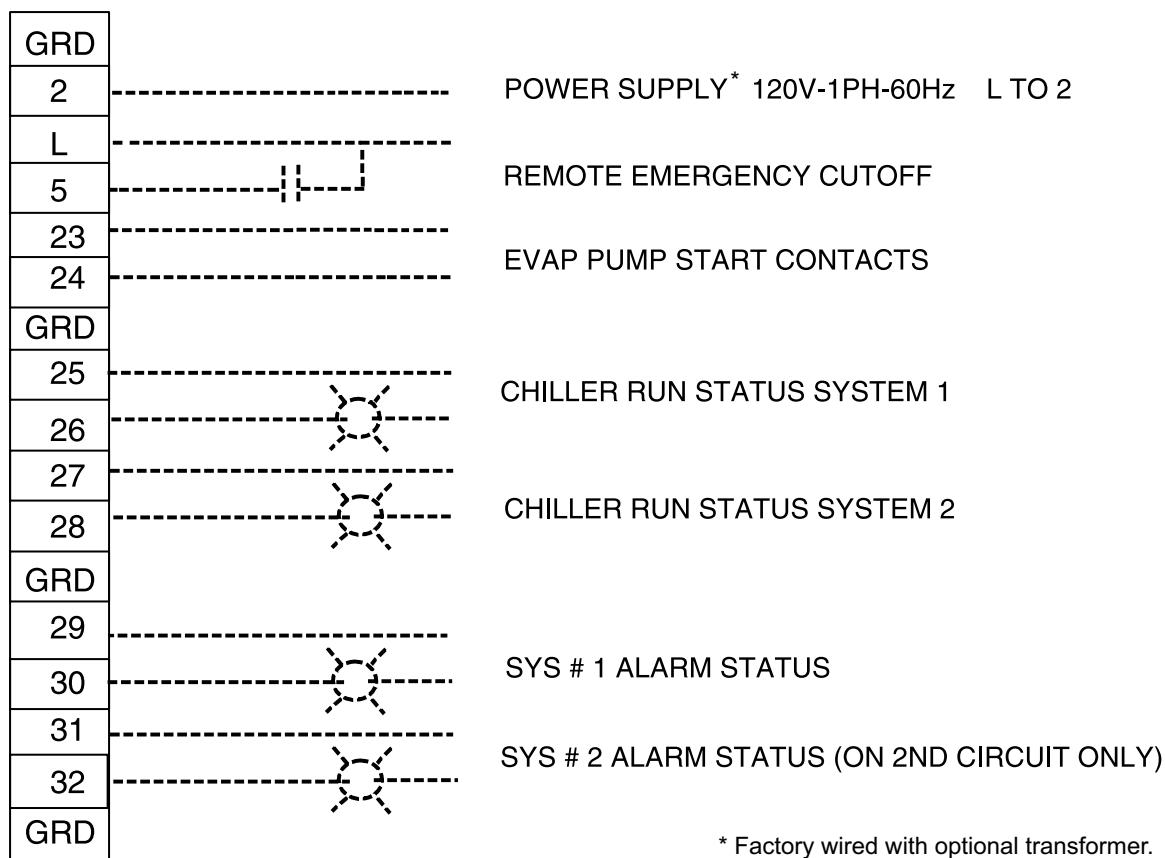
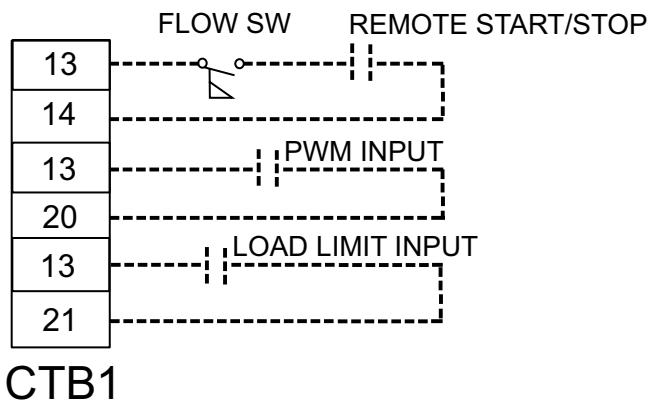


Figure 4: Single Point Supply Connection – Terminal Block or Non-Fused Disconnect Switch to Individual System Circuit Breakers (YCAL0090-0124)



# Control Wiring

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CTB2



LD03819

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LD03611

# Application Data

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## UNIT LOCATION

The YCAL chillers are designed for outdoor installation. When selecting a site for installation, be guided by the following conditions:

1. For outdoor locations of the unit, select a place having an adequate supply of fresh air for the condenser.
2. Avoid locations beneath windows or between structures where normal operating sounds may be objectionable.
3. Installation sites may be either on a roof, or at ground level. (See FOUNDATION.)
4. The condenser fans are the propeller-type, and are not recommended for use with duct work in the condenser air stream.
5. When it is desirable to surround the unit(s), it is recommended that the screening be able to pass the required chiller CFM without exceeding 0.1" of water external static pressure.
6. Protection against corrosive environments is available by supplying the units with either copper fin, cured phenolic, or epoxy coating on the condenser coils. The phenolic or epoxy coils should be offered with any units being installed at the seashore or where salt spray may hit the unit.

In installations where winter operation is intended and snow accumulations are expected, additional height must be provided to ensure normal condenser air flow.

Recommended clearances for units are given in DIMENSIONS. When the available space is less, the unit(s) must be equipped with the discharge pressure transducer option to permit high pressure unloading in the event that air recirculation were to occur.

## FOUNDATION

The unit should be mounted on a flat and level foundation, ground or roof, capable of supporting the entire operating weight of the equipment. Operating weights are given in the PHYSICAL DATA tables.

**ROOF LOCATIONS** – Choose a spot with adequate structural strength to safely support the entire weight

of the unit and service personnel. Care must be taken not to damage the roof during installation. If the roof is "bonded", consult the building contractor or architect for special installation requirements. Roof installations should incorporate the use of spring-type isolators to minimize the transmission of vibration into the building structure.

**GROUND LEVEL INSTALLATIONS** – It is important that the units be installed on a substantial base that will not settle, causing strain on the liquid lines and resulting in possible leaks. A one-piece concrete slab with footers extending below the frost line is highly recommended. Additionally, the slab should not be tied to the main building foundation as noises will telegraph.

Mounting holes (11/16" diameter) are provided in the steel channel for bolting the unit to its foundation. See DIMENSIONS.

For ground level installations, precautions should be taken to protect the unit from tampering by or injury to unauthorized persons. Screws on access panels will prevent casual tampering; however, further safety precautions, such as unit enclosure options, a fenced-in enclosure, or locking devices on the panels may be advisable. Check local authorities for safety regulations.

## CHILLED LIQUID PIPING

The chilled liquid piping system should be laid out so that the circulating pump discharges into the cooler. The inlet and outlet cooler liquid connections are given in DIMENSIONS.

Hand stop valves are recommended for use in all lines to facilitate servicing. Drain connections should be provided at all low points to permit complete drainage of the cooler and system piping. Additionally, a strainer (40 mesh) is recommended for use on the INLET line to the cooler.

Pressure gauge connections are recommended for installation in the inlet and outlet water lines. Gauges are not furnished with the unit and are to be furnished by other suppliers.

The chilled liquid lines that are exposed to outdoor ambient should be wrapped with a supplemental heater cable and covered with insulation. As an alternative, ethylene glycol should be added to protect against freeze-up during low ambient periods.

A flow switch is available as an accessory on all units. The flow switch (or its equivalent) must be installed in the leaving water piping of the cooler and must not be

# Guide Specifications

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## PART 1 – GENERAL

### 1.01 SCOPE

- A. The requirements of the General Conditions, Supplementary Conditions, Division 1, and Drawings apply to all Work herein.
- B. Provide Microprocessor controlled, multiple-scroll compressor, air-cooled, liquid chillers of the scheduled capacities as shown and indicated on the Drawings, including but not limited to:
  - 1. Chiller package
  - 2. Electrical power and control connections
  - 3. Chilled water connections

### 1.02 QUALITY ASSURANCE

- A. Products shall be Designed, Tested, Rated and Certified in accordance with, and installed in compliance with applicable sections of the following Standards and Codes:
  - 1. ANSI/ASHRAE Standard 15 – *Safety Code for Mechanical Refrigeration*
  - 2. ASHRAE 90.1 – *Energy Efficiency compliance*.
  - 3. ANSI/NFPA Standard 70 – *National Electrical Code (N.E.C.)*.
  - 4. ASME Boiler & Pressure Vessel Code, Section VIII, Division 1.
  - 5. ARI Standard 550/590 – *Positive Displacement Compressors and Air Cooled Rotary Screw Water-Chilling Packages*.
  - 6. Conform to Intertek Testing Services, formerly ETL, for construction of chillers and provide ETL/cETL Listing label.
  - 7. Manufactured in facility registered to ISO 9002.
- B. Factory Test: Chiller shall be pressure-tested, evacuated and fully charged with refrigerant and oil, and shall be factory operational run tested with water flowing through the vessel.
- C. Warranty: Manufacturer shall Warrant all equipment and material of its manufacture against defects in workmanship and material for a period of one year from date of initial start-up or eighteen (18) months from date of shipment, whichever occurs first.

### 1.03 DELIVERY AND HANDLING

- A. Unit shall be delivered to job site fully assembled, and charged with refrigerant and oil by the Manufacturer.
- B. Unit shall be stored and handled per Manufacturer's instructions.

## PART 2 - PRODUCTS

### 2.01 CHILLER MATERIALS AND COMPONENTS

- A. General: Install and commission, as shown on the schedules and plans, factory assembled, charged, and tested air cooled scroll compressor chiller(s) as specified herein. Chiller shall be designed, selected, and constructed using a refrigerant with Flammability rating of "1", as defined by ANSI/ASHRAE STANDARD - 34 *Number Designation and Safety Classification of Refrigerants*. Chiller shall include, but is not limited to: a complete system with a single refrigerant circuit 35 tons (123kW) and below, and not less than two refrigerant circuits above 35 tons (123kW), scroll compressors, direct expansion type evaporator, air-cooled condenser, refrigerant, lubrication system, interconnecting wiring, safety and operating controls including capacity controller, control center, motor starting components, and special features as specified herein or required for safe, automatic operation.
- B. Cabinet: External structural members shall be constructed of heavy gauge, galvanized steel coated with baked on powder paint which, when subject to ASTM B117, 500 hour, 5% salt spray test, yields minimum ASTM 1654 rating of "6".

### 2.02 COMPRESSORS

Compressors: Shall be hermetic, scroll-type, including:

- 1. Compliant design for axial and radial sealing
- 2. Refrigerant flow through the compressor with 100% suction cooled motor.
- 3. Large suction side free volume and oil sump to provide liquid handling capability.
- 4. Compressor crankcase heaters to provide extra liquid migration protection.
- 5. Annular discharge check valve and reverse vent assembly to provide low pressure drop, silent shutdown and reverse rotation protection.
- 6. Initial Oil charge.
- 7. Oil Level sightglass.
- 8. Vibration isolator mounts for compressors.
- 9. Brazed-type connections for fully hermetic refrigerant circuits.

# Guide Specifications

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## 2.03 REFRIGERANT CIRCUIT COMPONENTS

Each refrigerant circuit shall include: liquid line shutoff valve with charging port, low side pressure relief device, filter-drier, solenoid valve, sight glass with moisture indicator, thermostatic expansion valves, and flexible, closed-cell foam insulated suction line.

## 2.04 HEAT EXCHANGERS

### A. Evaporator:

1. Direct expansion type with refrigerant inside high efficiency copper tubes, chilled liquid forced over the tubes by galvanized steel baffles.
2. Constructed, tested, and stamped in accordance with applicable sections of ASME pressure vessel code for minimum 350 PSIG (24 bar) refrigerant side design working pressure and 150 PSIG (10 bar) water side design working pressure.
3. Shell covered with  $\frac{3}{4}$ " (19mm), flexible, closed cell insulation, thermal conductivity of 0.26k ([BTU/HR-Ft<sup>2</sup>-°F]/in.) maximum. Water nozzles with grooves for mechanical couplings, and insulated by Contractor after pipe installation.
4. Provide vent and drain fittings, and thermostatically controlled heaters to protect to -20°F (29°C) ambient in off-cycle.

### B. Air Cooled Condenser:

1. Coils: Internally enhanced, seamless copper tubes, mechanically expanded into aluminum alloy fins with full height collars. Subcooling coil an integral part of condenser. Design working pressure shall be 450 PSIG (31 bar).
2. Fans: Shall be dynamically and statically balanced, direct drive, corrosion resistant glass fiber reinforced composite blades molded into a low noise, full-airfoil cross section, providing vertical air discharge and low sound. Each fan in its own compartment to prevent crossflow during fan cycling. Guards of heavy gauge, PVC (polyvinylchloride) coated or galvanized steel.
3. Fan Motors: High efficiency, direct drive, 6 pole, 3 phase, insulation class "F", current protected, Totally Enclosed Air-Over (TEAO), rigid mounted, with double sealed, permanently lubricated, ball bearings.

## 2.05 CONTROLS

### A. General: Automatic start, stop, operating, and protection sequences across the range of scheduled

conditions and transients.

- B. Microprocessor Enclosure: Rain and dust tight NEMA 3R/12 (IP55) powder painted steel cabinet with hinged, latched, and gasket sealed door.
- C. Microprocessor Control Center:
  1. Automatic control of compressor start/stop, anti-coincidence and anti-recycle timers, automatic pumpdown shutdown, condenser fans, evaporator pump, evaporator heater, unit alarm contacts, and chiller operation from 0°F to 125°F (-18°C to 52°C) ambient. Automatic reset to normal chiller operation after power failure.
  2. Remote water temperature reset via a Pulse Width Modulated (PWM) input signal or up to two steps of demand (load) limiting.
  3. Software stored in non-volatile memory, with programmed setpoints retained in lithium battery backed real time clock (RTC) memory for minimum 5 years.
  4. Forty character liquid crystal display, descriptions in English (or Spanish, French, Italian, or German), numeric data in English (or Metric) units. Sealed keypad with sections for Setpoints, Display/Print, Entry, Unit Options & clock, and On/Off Switch.
  5. Programmable Setpoints (within Manufacturer limits): display language; chilled liquid temperature setpoint and range, remote reset temperature range, set daily schedule/holiday for start/stop, manual override for servicing, low and high ambient cutouts, number of compressors, low liquid temperature cutout, low suction pressure cutout, high discharge pressure cutout, anti-recycle timer (compressor start cycle time), and anti-coincident timer (delay compressor starts).
  6. Display Data: Return and leaving liquid temperatures, low leaving liquid temperature cutout setting, low ambient temperature cutout setting, outdoor air temperature, English or metric data, suction pressure cutout setting, each system suction pressure (optional on YCAL0014 0060 models), discharge pressure (optional), liquid temperature reset via a YORK ISN DDC or Building Automation System (by others) via PWM input as standard or a 4-20milliamp or 0-10 VDC input or contact closure with optional BAS interface, anti-recycle timer status for each compressor, anti-coincident system start timer condition, compressor run status, no cooling load condition, day, date and time, daily start/stop times, holiday status, automatic or manual

- system lead/lag control, lead system definition, compressor starts/operating hours (each), status of hot gas valves, evaporator heater and fan operation, run permissive status, number of compressors running, liquid solenoid valve status, load & unload timer status, water pump status.
7. System Safeties: Shall cause individual compressor systems to perform auto shut down; manual reset required after the third trip in 90 minutes. Includes: high discharge pressure, low suction pressure, high pressure switch, and motor protector. Compressor motor protector shall protect against damage due to high input current or thermal overload of windings.
  8. Unit Safeties: Shall be automatic reset and cause compressors to shut down if low ambient, low leaving chilled liquid temperature, under voltage, and flow switch operation. Contractor shall provide flow switch and wiring per chiller manufacturer requirements.
  9. Alarm Contacts: Low ambient, low leaving chilled liquid temperature, low voltage, low battery, and (per compressor circuit): high discharge pressure, and low suction pressure.
- D. Manufacturer shall provide any controls not listed above, necessary for automatic chiller operation. Mechanical Contractor shall provide field control wiring necessary to interface sensors to the chiller control system.

## **2.06 POWER CONNECTION AND DISTRIBUTION**

- A. Power Panels:
1. NEMA 3R/12 (IP55) rain/dust tight, powder painted steel cabinets with hinged, latched, and gasket sealed outer doors. Provide main power connection(s), control power connections, compressor and fan motor start contactors, current overloads, and factory wiring.
  2. Power supply shall enter unit at a single location, be 3 phase of scheduled voltage, and connect to individual terminal blocks per compressor. Separate disconnecting means and/or external branch circuit protection (by Contractor) required per applicable local or national codes.
- B. Exposed compressor, control and fan motor power wiring shall be routed through liquid tight conduit.
- C. Power Supply Options:
- Some accessories and options supercede standard product features. Your YORK representative will be pleased to provide assistance.
  - A. Microprocessor controlled, Factory installed Across-the-Line type compressor motor starters as standard.
  - B. Outdoor Ambient Temperature Control
    1. Low Ambient Control: Permits unit operation to 0°F ambient. Standard unit controls to 25°F ambient. Low Ambient Control standard on YCAL0090-0124 models.
    2. High Ambient Control: Permits unit operation above 115°F ambient.
  - C. Power Supply Connections:
    1. Single Point Power Supply: Single point Terminal Block for field connection and interconnecting wiring to the compressors. Separate external protection must be supplied, by others, in the incoming power wiring, which must comply with the National Electric Code and/or local codes. Single Point Supply option available on YCAL0040-0080 models and standard on YCAL0014 - 0034 models.
    2. Single Point or Multiple Point Power Supply with individual System Breakers: Single or Multiple Point Terminal Block(s) for field connection and factory interconnecting wiring to factory supplied system breakers . Available on YCAL0090-0124 models.
    3. Single Point or Multiple Point Disconnect: Single or Dual point Non-Fused Disconnect(s) and lockable external handle (in compliance with Article 440-14 of N.E.C.) can be supplied to isolate the unit power voltage for servicing. Separate external fusing must be supplied, by others, in the incoming power wiring, which must comply with the National Electric Code and/or local codes.
    4. Single Point Disconnect with Individual System Breakers: Single point Terminal Block with Non-Fused Disconnect and lockable external handle (in compliance with Article 440-14 of N.E.C.) can be supplied to isolate power voltage for servicing. Factory interconnecting wiring from disconnect to factory supplied circuit breakers. Available on YCAL0090-0124 models.
    5. Single Point Circuit Breaker: Single point Terminal Block with Circuit Breaker and lockable external handle (in compliance with Article 440-14 of N.E.C.) can be supplied to isolate power voltage for servicing. Incoming power wiring

## **2.07 ACCESSORIES AND OPTIONS**

# Guide Specifications

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must comply with the National Electric Code and/or local codes. Single Point Circuit Breakers available on YCAL0014-0080 models.

## D. Pressure Transducers and Readout Capability

1. Discharge Pressure Transducers: Permits unit to sense and display discharge pressure. Standard on YCAL0080-0124 models.

2. Suction Pressure Transducers: Permits unit to sense and display suction pressure. This capability is standard on YCAL0064-0124 models.

## E. Control Power Transformer: Converts unit power voltage to 120-1-60 (500 VA capacity). Factory-mounting includes primary and secondary wiring between the transformer and the control panel.

## F. Motor Current Module: Capable of monitoring compressor motor current. Provides extra protection against compressor reverse rotation, phase-loss and phase imbalance. Option consists of one module per electrical system. (Factory-mounted.)

## G. Power Factor Correction Capacitors: Provided to correct unit compressor factors to a 0.90-0.95.

## H. Condenser Coil Environmental Protection:

1. Pre-Coated: Epoxy coated aluminum fin stock to guard from corrosive agents and insulate against galvanic potential. For mild seashore or industrial locations.
2. Copper Fin: Provide copper fins in lieu of aluminum.
3. Post-Coated Dipped: Dipped-cured coating on condenser coils for seashore and other corrosive applications (with the exception of strong alkalis, oxidizers, and wet bromine, chlorine and fluorine in concentrations greater than 100ppm).

## I. Protective Chiller Panels (Factory or Field Mounted)

1. Louvered Panels (condenser coils only): Painted steel as per remainder of unit cabinet, over external condenser coil faces.
2. Wire Panels (full unit): Heavy gauge, welded wire-mesh, coated to resist corrosion, to protect condenser coils from incidental damage and restrict unauthorized access to internal components.
3. Louvered Panels (full unit): Painted steel as per

remainder of unit cabinet, to protect condenser coils from incidental damage, visually screen internal components, and prevent unauthorized access to internal components.

4. Louvered/Wire Panels: Louvered steel panels on external condenser coil faces, painted as per remainder of unit cabinet. Heavy gauge, welded wire-mesh, coated to resist corrosion, around base of machine to restrict unauthorized access.

- J. Flow Switch (Field-mounted): Vapor proof SPDT, NEMA 4X switch ( \_\_\_\_ 150 PSIG or \_\_\_\_ 300 PSIG), -20°F to 250°F.

- K. Differential Pressure Switch: Alternative to an above mentioned flow switch. Pretempco model DPS300A-P40PF-82582-5 (300 psi max. working pressure) SPDT 5 amp 125/250VAC switch, Range 0 - 40 PSID, deadband 0.5 - 0.8 psi, with 1/4" NPTE Pressure Connections.

## L. Evaporator options:

1. Provide 1½" cooler insulation in lieu of standard ¾".
2. Provide DX Cooler with 300 PSIG water-side design working pressure in lieu of standard 150 PSIG.
3. Provide Raised Face Flanges for field installation on cooler nozzles and field piping:
  - a. 150 PSIG, welded Flanges.
  - b. 300 PSIG, welded Flanges.

- M. Service Isolation valves: Service suction and discharge (ball type) isolation valves are added to unit per system. This option also includes a system high pressure relief valve in compliance with ASHRAE 15. (Factory-mounted.)

- N. Remote Cooler: Manufacturer shall provide separately: chiller less evaporator, leaving and return water sensors, and liquid line components (solenoid valves, filter driers, sight glasses, and TXVs), as discrete elements of a complete factory system. Contractor shall be field erect system and provide interconnecting refrigerant piping and wiring in accordance with Manufacturer recommendations, and project plans and schedules. Where not otherwise specified, Contractor provided system piping shall be in accordance with applicable sections of ASHRAE Handbook.

- O. Hot Gas By-Pass: Permits continuous, stable operation at capacities below the minimum step of unloading to as low as 5% capacity (depending on

- both the unit & operating conditions) by introducing an artificial load on the cooler. Hot gas by-pass is installed on only one refrigerant circuit.
- P. Microprocessor Membrane Keypad Graphics on in lieu of Standard English:
1. French language.
  2. German language.
  3. Spanish language.
  4. Italian language.
- Q. Thermal Storage: Leaving chilled liquid setpoint range for charge cycle from 25°F to 20°F minimum, with automatic reset of the leaving brine temperature up to 40°F above the setpoint.
- R. Low Temperature Process Brine: Leaving chilled liquid setpoint range 20°F to 50°F.
- S. Chicago Code Relief Valves to meet Chicago Code requirements.
- T. Building Automation System (EMS) Reset Interface: Chiller to accept 4 to 20mA, 0 to 10 VDC, or discrete contact closure input to reset the leaving chilled liquid temperature.
- U. Remote Control Panel (Field-mounted): Auxiliary panel for remote user interface for functions normally made at the unit control center. Available on YCAL0014-0080 models.
- V. OptiView Remote Control Panel (Field-mounted): Graphical interface panel to remotely control and monitor up to 8 different units.
- W. Multi-Unit Sequencing Panel (Field-mounted): Separate Sequencing control center is provided to permit control of up to eight chillers in parallel based on mixed liquid temperature.
- X. Sound Reduction (Factory-mounted):
1. Low speed, reduced noise fans
  2. Compressor Acoustic Sound Blankets
- Y. Vibration Isolation (Field-mounted):
1. Neoprene Pad Isolators.
  2. 1 Inch Deflection Spring Isolators: Level adjustable, spring and cage type isolators for mounting under the unit base rails.
  3. 2 Inch Deflection Seismic Isolators: Level adjustable, restrained mounts in rugged welded steel housing with vertical and horizontal limit stops. Housings shall be designed to withstand a minimum 1.0g accelerated force in all directions to 2 inches.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. General: Rig and Install in full accordance with Manufacturers requirements, Project drawings, and Contract documents.
- B. Location: Locate chiller as indicated on drawings, including cleaning and service maintenance clearance per Manufacturer instructions. Adjust and level chiller on support structure.
- C. Components: Installing Contractor shall provide and install all auxiliary devices and accessories for fully operational chiller.
- D. Electrical: Coordinate electrical requirements and connections for all power feeds with Electrical Contractor (Division 16).
- E. Controls: Coordinate all control requirements and



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