

# Medium Profile Unit Cooler MEDIUM TO LARGE WALK-INS

**Cooler and Freezer Applications** 





### **Features**

ColdZone's Medium Profile Unit Coolers are the perfect evaporator solution for medium to large walk-in coolers and freezers. Designed with efficiency, performance and service in mind, the Medium Profile line truly stands out from the competition. The unit coolers were engineered to meet the Department of Energy's new AWEF\* performance regulations and all feature energy-efficient rail-mount Dual Speed EC Motors. For maximum performance, all units are circuited for multiple refrigerants and feature optimized circuit patterns, enhanced surface coil tubing, and new high efficiency fan and venturi designs. The Medium Profile product line has several serviceability features including rail-mount motors, easily removable fan guards and modular fan panels, face mount defrost heaters, hinged drain pans, and shipping pallets designed to facilitate quicker installation.

#### SIZES

There are a wide array of sizes available with capacities ranging from 11,000 to 76,900 BTUH at a 10°TD. Models are available with air flow spanning a range of 2,090 to 9,580 CFM.

#### HOUSING

Each unit is constructed with a rust-free, heavy gauge, textured, aluminum housing which is light weight yet extremely durable. Models feature hinged onepiece drain pans to allow for convenient servicing and maintenance. Hanger holes are provided on all units for fast installation.

#### COIL

Seamless copper tubes are staggered and mechanically expanded into corrugated aluminum fins to assure maximum heat transfer. Die formed fin collars are provided for accurate fin spacing. Top panel is fastened directly to the tube sheets of the coil to provide high structural strength. Electric Defrost and Hot Gas Defrost Models are available in both 6 FPI and 4 FPI.

#### MOTORS

All models feature highly efficient Dual Speed Electronically Commutated (EC) motors which are compliant with California Title 24 regulations<sup>1</sup>.

#### FANS & FAN GUARDS

Powerful heavy-duty aluminum fans are individually balanced to provide vibration free operation. Standard heavy-gauge wire fan guards are UL/cUL-approved epoxy coated for corrosion resistance. Air throw for Medium Profile Unit Coolers is 75 ft.

#### REFRIGERANTS

Medium Profile Unit Coolers are optimized for multiple refrigerants including R404A, R407A, R448A, R449A and R744 DX ( $CO_2$ ). Please specify system refrigerant requirements when ordering. A separate compartment is provided for all refrigerant connections which allows ample room for internal mounting of expansion valves.

#### ELECTRICAL

Available in 115V/1<sup>2</sup>, 208/230V/1<sup>2</sup>, 208-230V/3<sup>2</sup>, 460V/1 or 460/3<sup>2</sup>. A large compartment is supplied for all electrical components and is easily accessible by removing the end panel. All models are UL and cUL listed.

#### AIR DEFROST

Air Defrost models (CM6A) are designed for use in coolers at +35°F and warmer.

#### **ELECTRIC DEFROST**

Electric Defrost models (CM6E or CM4E) are designed for use in coolers and freezers between 35°F to -30°F. Electric Defrost 4 FPI models (CM4E) are designed for use in freezers between 32°F and -30°F. Defrost heaters are mounted on the air intake side of the unit for optimal performance and easy maintenance. Heaters are installed inside the drain pan for fast, reliable drainage. Fixed defrost termination, fan delay and heater safety controls are factory mounted for optimum performance of each control function.

#### HOT GAS DEFROST

There are two types of Hot Gas Defrost models available: 3-pipe Hot Gas models (CM6H or CM4H) and 2-pipe Hot Gas Reverse Cycle units (CM6G or CM4G). Hot Gas Defrost models are designed for use in coolers and freezers between 35°F and -30°F. Hot Gas Defrost 4 FPI models (CM4H or CM4G) are designed for use in freezers between 32°F and -30°F. All units include fixed defrost termination and fan delay controls which are factory mounted for optimum performance of each control function. Hot Gas Defrost models feature electric drain pan heaters making it possible to open the hinged drain pan for easy cleaning and servicing. Refer to the current ColdZone Technical Bulletin for piping.

#### **Optional Features**

- EcoNet<sup>®</sup> Enabled Controller<sup>3</sup> (factory-installed)
- EcoNet® Command Center (loose)
- Thermostat Mechanical or Electric (mounted or loose)
- Thermostatic Expansion Valve (mounted or loose)
- Adjustable Defrost Termination
- Electronic Expansion Valve (mounted or loose)
- Liquid Line Solenoid Valve (mounted or loose)
- Insulated Drain Pan
- Painted Cabinet (White or Black)
- Stainless Steel Cabinet
- Coated Coil (Russproof, Bronz-Glow, or Electrofin®)
- Suction/Liquid Heat Exchanger (loose)

#### NOTES

- \* AWEF (Annual Walk-in Energy Factor)
- 1. Single Compressor system without variable capacity.
- 2. Some limitations apply. For specific electrical offering, consult electrical data tables in this brochure.
- 3. EcoNet Control Package includes: EEV; suction pressure transducer; suction, entering air coil temp. thermistors; local on-board two-row backlit LCD display and push-button adjustments. (Controller replacesTXV, liquid line solenoid valve, room thermostat, defrost termination and fan delay, and time clock.)

#### **Highlighted Features and Options**





#### FANS AND HOUSING

- 24" heavy duty aluminum fans are balanced for vibration-free operation
- High efficiency deep draw venturi provides optimal air flow
- Removeable end panels NSF approved



#### **COILS AND DEFROST HEATERS**

- Available in 4 or 6 fins per inch (FPI)
- Electric defrost heaters are mounted on the air intake coil face to provide easy service access
- The drain pan heater is affixed to the drain pan and is easily accessed for service or cleaning



#### ECONET ENABLED UNIT COOLERS (OPTIONAL)

- Developed in conjunction with Rheem Manufacturing specifically for walk-in coolers and freezers — it builds on the reliability and efficiency of Rheem's EcoNet technology
- Saves energy in refrigeration systems through precise superheat and space temperature control, fan cycling, and controlling how often the system goes into defrost based on compressor runtime
- Eliminates unnecessary defrosts
  - Maximizes energy efficiency with less compressor runtime
  - Reduces fan speed to 50% during off cycle for energy savings
- Can be used with a condensing unit in single and multiple evaporator installations as a group
- Optional EcoNet Command Center with intuitive graphical interface controls up to 32 devices (including the Command Center) through one display, provides continuous communication between system components, and the remote mount display allows for EcoNet Enabled Unit Coolers to be programmed, monitored and troubleshot outside of the space being cooled

#### **ELECTRICAL AND PIPING**

- End panels slide out for easy service from the front or sides of the unit
- Ample room in electrical and piping compartments for easy access





|              | MODEL NUMBER NOMENCLATURE |                              |                                                                      |                     |                                                                                      |                          |         |  |  |  |  |  |
|--------------|---------------------------|------------------------------|----------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------|--------------------------|---------|--|--|--|--|--|
|              | CONFIGURABLE BASE MODEL   |                              |                                                                      |                     |                                                                                      |                          |         |  |  |  |  |  |
| С            | Μ                         | 6                            | E                                                                    | 153                 | D                                                                                    | D                        | Α       |  |  |  |  |  |
| Brand        | Style                     | Fins<br>Per<br>Inch<br>(FPI) | Defrost<br>Type                                                      | BTUH in<br>Hundreds | Unit<br>Voltage¹                                                                     | Motor<br>Type            | Vintage |  |  |  |  |  |
| C = ColdZone | M = Medium<br>Profile     | 4<br>6                       | A = Air<br>E = Electric<br>H = Hot Gas 3-Pipe<br>G = Hot Gas Reverse |                     | A = 115/1/60<br>D = 208-230/1/60<br>E = 208-230/3/60<br>F = 460/1/60<br>G = 460/3/60 | <b>D</b> = Dual Speed EC |         |  |  |  |  |  |

MODEL NUMBED NOMENOLATUD

#### Note:

1. 50 Hz available. Contact Factory for additional information.

#### **EVAPORATOR APPLICATION RATINGS**

Multiple conditions combine to determine the application capacity of an evaporator. Walk-in space temperature, relative humidity, saturated suction temperature difference, and outdoor ambient temperature. All of the factors are considered when calculating an evaporator application rating. These ratings are considerably higher than the net capacity value used for DOE ratings (AWEF).

The AWEF of an evaporator is calculated using the dry coil capacity and the daily evaporator power consumption. Power consumption included fan and defrost power. Evaporator net capacity reported to the DOE database is dry coil capacity less the full power fan watts. DOE test conditions are at 10°F evaporator/SST temperature difference and less than 50% relative humidity and 96°F liquid temperature. These conditions create a uniform test method, but should not be used for equipment selection. The equipment selected would be too large for the application.

ColdZone's published application ratings are a guideline for proper equipment selection. They account for true operating conditions experienced by equipment.

|                 | BTUH Cap                             | acity                      |       |            | Total                  | Fan Motor      | AMPS   |      |    |
|-----------------|--------------------------------------|----------------------------|-------|------------|------------------------|----------------|--------|------|----|
|                 | @ 25°F S.T &                         |                            | No.   | Dual S     | peed EC <sup>+</sup> N | /lotors        |        |      |    |
| Model<br>Number |                                      | <b>D407A</b> /             | CFM   | of<br>Fans | M                      | otor Volta     | МСА    | MOPD |    |
|                 | R404A/<br>R744 DX (CO <sub>2</sub> ) | R407A/<br>R448A/<br>R449A^ |       |            | 115V/1                 | 208-<br>230V/1 | 460V/1 |      |    |
| CM6A182*DA      | 18,200                               | 21,100                     | 3,190 | 1          | 3.2                    | 1.9            | 1.2    | 15.0 | 20 |
| CM6A220*DA      | 22,000                               | 25,800                     | 2,950 | I          | 3.2                    | 1.9            | 1.2    | 15.0 | 20 |
| CM6A276*DA      | 27,600                               | 32,300                     | 6,950 |            |                        |                |        |      |    |
| CM6A370*DA      | 37,000                               | 43,100                     | 6,380 | 2          | 6.4                    | 3.8            | 2.4    | 15.0 | 20 |
| CM6A442*DA      | 44,200                               | 51,900                     | 5,900 |            |                        |                |        |      |    |
| CM6A549*DA      | 54,900                               | 64,200                     | 9,580 | 3          | 9.6                    | 5.7            | 3.6    | 15.0 | 20 |
| CM6A658*DA      | 65,800                               | 76,900                     | 8,860 | 3          | 9.0                    | 5.7            | 3.0    | 15.0 | 20 |

### **Application Rating and Electrical Data - Air Defrost Models - 6 FPI**

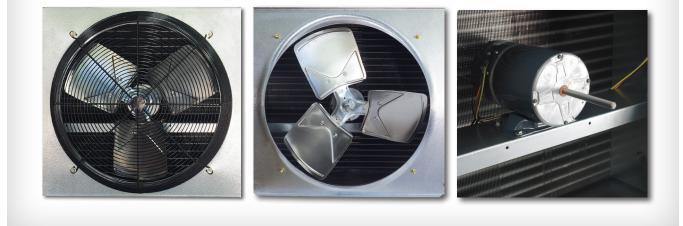
\* Asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

† Dual Speed EC motors are compliant with California Title 24 regulations.

Models were designed in anticipation of the July 2020 Department of Energy Annual Walk-in Energy Factor (AWEF) regulations for evaporators for Walk-in Coolers and Freezers in boxes less than 3,000 sq. ft. See page 16 for AWEF compliance ratings.

### FAN GUARDS EASILY REMOVABLE FOR QUICK ACCESS TO FAN BLADES AND RAIL-MOUNTED MOTORS



### **Application Rating and Electrical Data - Electric Defrost Models**

|                                                                                                          | BTUH   | Capacity                 |       |                   | Total Fan N                       | lotor AMPS |
|----------------------------------------------------------------------------------------------------------|--------|--------------------------|-------|-------------------|-----------------------------------|------------|
| Model                                                                                                    |        | . & 10°F TD <sup>1</sup> |       | No.<br>of<br>Fans | Dual Speed EC Motors <sup>†</sup> |            |
| Number                                                                                                   | R404A/ |                          | CFM   |                   | Motor V                           | Voltage    |
| $\begin{array}{c c} R744 \text{ DX } (CO_2) \end{array} \xrightarrow{\text{R407A}} R449A^{\text{R449A}}$ |        | R407A/ R448A/<br>R449A^  |       |                   | 208-230V/1                        | 460V/1     |
| 6 FPI                                                                                                    |        |                          |       |                   |                                   |            |
| CM6E153*DA                                                                                               | 15,300 | 17,400                   | 2,250 | 1                 | 1.0                               | 1.0        |
| CM6E184*DA                                                                                               | 18,400 | 21,100                   | 2,090 | 1                 | 1.9                               | 1.2        |
| CM6E311*DA                                                                                               | 31,100 | 35,700                   | 4,500 | 2                 | 3.8                               | 2.4        |
| CM6E374*DA                                                                                               | 37,400 | 42,900                   | 4,180 | 2                 | 5.0                               |            |
| CM6E469*DA                                                                                               | 46,900 | 53,600                   | 6,750 | 3                 | 5.7                               | 3.6        |
| CM6E564*DA                                                                                               | 56,400 | 64,300                   | 6,270 |                   | 5.7                               |            |
| 4 FPI                                                                                                    |        |                          |       |                   |                                   |            |
| CM4E110*DA                                                                                               | 11,000 | 12,400                   | 2,350 | 1                 | 1.0                               | 1.0        |
| CM4E143*DA                                                                                               | 14,300 | 16,200                   | 2,210 | 1                 | 1.9                               | 1.2        |
| CM4E232*DA                                                                                               | 23,200 | 26,100                   | 4,690 | 2                 | 3.8                               | 2.4        |
| CM4E288*DA                                                                                               | 28,800 | 32,700                   | 4,420 | 2                 | 3.0                               | 2.4        |
| CM4E336*DA                                                                                               | 33,600 | 38,300                   | 7,040 | 3                 | 5.7                               | 2.0        |
| CM4E419*DA                                                                                               | 41,900 | 47,600                   | 6,640 | 3                 | 0.7                               | 3.6        |

| Model<br>Number |               | 208-2                          | Heater        | Heater                         |            |       |
|-----------------|---------------|--------------------------------|---------------|--------------------------------|------------|-------|
|                 | MCA           |                                | MOPD          |                                | Amps       |       |
|                 | Base<br>Model | EcoNet<br>Enabled <sup>2</sup> | Base<br>Model | EcoNet<br>Enabled <sup>2</sup> | 208-230V/1 | Watts |
| 6 FPI           |               |                                |               |                                |            |       |

#### 6 FPI

| CM6E153DDA<br>CM6E184DDA | 15.0 | 20.5 | 20 | 25 | 19.5 | 4,480 |
|--------------------------|------|------|----|----|------|-------|
| CM6E311DDA<br>CM6E374DDA | 15.0 | 40.5 | 20 | 45 | 38.5 | 8,860 |

#### 4 FPI

| CM4E110DDA<br>CM4E143DDA | 15.0 | 20.5 | 20 | 25 | 19.5 | 4,480 |
|--------------------------|------|------|----|----|------|-------|
| CM4E232DDA<br>CM4E288DDA | 15.0 | 40.5 | 20 | 45 | 38.5 | 8,860 |

Notes:

1.

| Capacity Correction for Electric Defrost Evaporators |      |       |        |       |        |       |  |  |
|------------------------------------------------------|------|-------|--------|-------|--------|-------|--|--|
| S.S.T. (Dew)                                         | 20°F | 0°F   | -10°F  | -20°F | -30°F  | -40°F |  |  |
| Multiply Capacity by:                                | 1.15 | 1.075 | 1.0375 | 1     | 0.9625 | 0.925 |  |  |

2. EcoNet Enabled Units are not powered by Condensing Unit so Defrost Heaters are incorporated into shown MCA/MOPD.

\* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

† Dual Speed EC motors are compliant with CaliforniaTitle 24 regulations.

### **Application Rating and Electrical Data - Electric Defrost Models continued**

|                          |               | 208-2                          | 230V/3        |                                | Heater     |        |  |  |  |
|--------------------------|---------------|--------------------------------|---------------|--------------------------------|------------|--------|--|--|--|
| Model                    | MCA           |                                | M             | OPD                            | Amps       | Heater |  |  |  |
| Number                   | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | 208-230V/3 | Watts  |  |  |  |
| 6 FPI                    |               |                                |               |                                |            |        |  |  |  |
| CM6E153EDA<br>CM6E184EDA | 15.0          | 15.0                           | 20            | 25                             | 11.2       | 4,480  |  |  |  |
| CM6E311EDA<br>CM6E374EDA | 15.0          | 23.2                           | 20            | 25                             | 22.2       | 8,860  |  |  |  |
| CM6E469EDA<br>CM6E564EDA | 15.0          | 35.5                           | 20            | 40                             | 33.5       | 13,340 |  |  |  |
| 4 FPI                    |               |                                |               |                                |            |        |  |  |  |
| CM4E110EDA<br>CM4E143EDA | 15.0          | 15.0                           | 20            | 25                             | 11.2       | 4,480  |  |  |  |
| CM4E232EDA<br>CM4E288EDA | 15.0          | 23.2                           | 20            | 25                             | 22.2       | 8,860  |  |  |  |
| CM4E336EDA<br>CM4E419EDA | 15.0          | 35.5                           | 20            | 40                             | 33.5       | 13,340 |  |  |  |

| Model  |               | 46                             | Heater        |                                |        |        |
|--------|---------------|--------------------------------|---------------|--------------------------------|--------|--------|
|        | M             | CA                             | MOPD          |                                | Amps   | Heater |
| Number | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | 460V/1 | Watts  |

#### 6 FPI

| CM6E153FDA<br>CM6E184FDA | 15.0 | 15.0 | 20 | 25 | 9.7  | 4,480  |
|--------------------------|------|------|----|----|------|--------|
| CM6E311FDA<br>CM6E374FDA | 15.0 | 20.3 | 20 | 25 | 19.3 | 8,860  |
| CM6E469FDA<br>CM6E564FDA | 15.0 | 30.0 | 20 | 35 | 29.0 | 13,340 |

#### 4 FPI

| CM4E110FDA<br>CM4E143FDA | 15.0 | 15.0 | 20 | 25 | 9.7  | 4,480  |
|--------------------------|------|------|----|----|------|--------|
| CM4E232FDA<br>CM4E288FDA | 15.0 | 20.3 | 20 | 25 | 19.3 | 8,860  |
| CM4E336FDA<br>CM4E419FDA | 15.0 | 30.0 | 20 | 35 | 29.0 | 13,340 |

#### Notes:

1. EcoNet Enabled Units are not powered by Condensing Unit so Defrost Heaters are incorporated into shown MCA/MOPD.

^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

† Dual Speed EC motors are compliant with California Title 24 regulations.

### **Application Rating and Electrical Data - Electric Defrost Models continued**

|                          |               | 46                             | 0V/3          |                                | Heater |        |  |  |  |
|--------------------------|---------------|--------------------------------|---------------|--------------------------------|--------|--------|--|--|--|
| Model                    | MCA           |                                | M             | OPD                            | Amps   | Heater |  |  |  |
| Number                   | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | Base<br>Model | EcoNet<br>Enabled <sup>1</sup> | 460V/3 | Watts  |  |  |  |
| 6 FPI                    |               |                                |               |                                |        |        |  |  |  |
| CM6E153GDA<br>CM6E184GDA | 15.0          | 15.0                           | 20            | 20                             | 5.6    | 4,480  |  |  |  |
| CM6E311GDA<br>CM6E374GDA | 15.0          | 15.0                           | 20            | 20                             | 11.1   | 8,860  |  |  |  |
| CM6E469GDA<br>CM6E564GDA | 15.0          | 17.7                           | 20            | 20                             | 16.7   | 13,340 |  |  |  |
| 4 FPI                    |               |                                |               |                                |        |        |  |  |  |
| CM4E110GDA<br>CM4E143GDA | 15.0          | 15.0                           | 20            | 20                             | 5.6    | 4,480  |  |  |  |
| CM4E232GDA<br>CM4E288GDA | 15.0          | 15.0                           | 20            | 20                             | 11.1   | 8,860  |  |  |  |
| CM4E336GDA<br>CM4E419GDA | 15.0          | 17.7                           | 20            | 20                             | 16.7   | 13,340 |  |  |  |

Notes:

1. EcoNet Enabled Units are not powered by Condensing Unit so Defrost Heaters are incorporated into shown MCA/MOPD.

^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

† Dual Speed EC motors are compliant with California Title 24 regulations.

Models were designed in anticipation of the July 2020 Department of Energy Annual Walk-in Energy Factor (AWEF) regulations for evaporators for Walk-in Coolers and Freezers in boxes less than 3,000 sq. ft. See page 16 for AWEF compliance ratings.



SUPPORTS ARE BOLTED TO PALLET AND UNIT COOLER FOR PRODUCT SAFETY AND QUICKER INSTALLATION

| <b>Application Rating</b> | y and Electrical Data - Hot | t Gas 3-Pipe Defrost Models |
|---------------------------|-----------------------------|-----------------------------|
|---------------------------|-----------------------------|-----------------------------|

47,600

| BTUH Capa<br>@ -20°F S.<br>Hot Gas |        | F S.T. &                |       |           | Total Fan Motor AMPS |                        |       |      |
|------------------------------------|--------|-------------------------|-------|-----------|----------------------|------------------------|-------|------|
| 3-Pipe                             | 10°    | F TD <sup>1</sup>       | CFM   | No.<br>of | Dual Speed           | EC Motors <sup>†</sup> | МСА   | MOPD |
| Model<br>Number <sup>+</sup>       |        |                         | CFIVI | Fans      | Motor                | Voltage                | INICA | WOPD |
| Number                             | R404A  | R407A/ R448A/<br>R449A^ |       |           | 208-<br>230V/1       | 460V/1                 |       |      |
| 6 FPI                              |        |                         |       |           |                      |                        |       |      |
| CM6H153*DA                         | 15,300 | 17,400                  | 2,250 | 1         | 1.9                  | 1.2                    | 15.0  | 20   |
| CM6H184*DA                         | 18,400 | 21,100                  | 2,090 | <u> </u>  | 1.0                  | 1.2                    | 10.0  |      |
| CM6H311*DA                         | 31,100 | 35,700                  | 4,500 | 2         | 3.8                  | 2.4                    | 15.0  | 20   |
| CM6H374*DA                         | 37,400 | 42,900                  | 4,180 | 2         | 5.0                  | 2.4                    | 15.0  | 20   |
| CM6H469*DA                         | 46,900 | 53,600                  | 6,750 | 3         | 5.7                  | 3.6                    | 15.0  | 20   |
| CM6H564*DA                         | 56,400 | 64,300                  | 6,270 | 3         | 5.7                  | 5.0                    | 15.0  | 20   |
| 4 FPI                              |        |                         |       |           |                      |                        |       |      |
| CM4H110*DA                         | 11,000 | 12,400                  | 2,350 |           | 1.0                  | 1.0                    | 45.0  |      |
| CM4H143*DA                         | 14,300 | 16,200                  | 2,210 | 1         | 1.9                  | 1.2                    | 15.0  | 20   |
| CM4H232*DA                         | 23,200 | 26,100                  | 4,690 |           |                      | 0.4                    | 45.0  |      |
| CM4H288*DA                         | 28,800 | 32,700                  | 4,420 | 2         | 3.8                  | 2.4                    | 15.0  | 20   |
| CM4H336*DA                         | 33,600 | 38,300                  | 7,040 | 2         | <b>F 7</b>           | 2.0                    | 15.0  | 20   |
| СМ4Н419*DΔ                         | 41 900 | 47600                   | 6 640 | 3         | 5.7                  | 3.6                    | 15.0  | 20   |

6,640

| Hot Gas<br>3-Pipe            | Drain Pan Hea | Drain Pan |                 |
|------------------------------|---------------|-----------|-----------------|
| Model<br>Number <sup>+</sup> | 208-230V/1    | 460V/1    | Heater<br>Watts |

41,900

#### 6 FPI

CM4H419\*DA

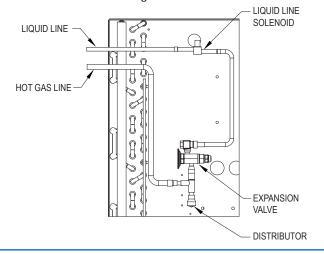
| CM6H153*DA<br>CM6H184*DA | 6.4  | 3.2 | 1,480 |
|--------------------------|------|-----|-------|
| CM6H311*DA<br>CM6H374*DA | 12.9 | 6.4 | 2,960 |
| CM6H469*DA<br>CM6H564*DA | 19.3 | 9.7 | 4,440 |

#### 4 FPI

| CM4H110*DA<br>CM4H143*DA | 6.4  | 3.2 | 1,480 |
|--------------------------|------|-----|-------|
| CM4H232*DA<br>CM4H288*DA | 12.9 | 6.4 | 2,960 |
| CM4H336*DA<br>CM4H419*DA | 19.3 | 9.7 | 4,440 |

#### Hot Gas 3-Pipe Model

The system uses 3 pipes -1 for liquid line, 1 for suction line and 1 for hot gas. The hot gas is taken from the discharge line, between the compressor and the condenser, through a hot-gas solenoid valve to the distributor tee then through the coil.



#### Notes:

1.

| Capacity Correction for Hot Gas Defrost Evaporators |      |       |        |       |        |       |  |  |  |
|-----------------------------------------------------|------|-------|--------|-------|--------|-------|--|--|--|
| S.S.T. (Dew)                                        | 20°F | 0°F   | -10°F  | -20°F | -30°F  | -40°F |  |  |  |
| Multiply Capacity by:                               | 1.15 | 1.075 | 1.0375 | 1     | 0.9625 | 0.925 |  |  |  |

\* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

+ Hot Gas models include an electric drain pan.
 † Dual Speed EC motors are compliant with California Title 24 regulations.
 ^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

### **Application Rating and Electrical Data - Hot Gas Reverse Cycle Defrost Models**

| Hot Gas          | BTUH Capacity<br>@ -20°F S.T. &<br>10°F TD¹ |                         |       | No.      |                | Motor AMPS   |      |      |
|------------------|---------------------------------------------|-------------------------|-------|----------|----------------|--------------|------|------|
| Reverse Cycle    |                                             | 1                       | CFM   | of       | Dual Speed     | I EC WIOTORS | МСА  | MOPD |
| Model<br>Number⁺ |                                             |                         |       | Fans     | Motor          | Voltage      |      |      |
| NUMBER           | R404A                                       | R407A/ R448A/<br>R449A^ |       |          | 208-<br>230V/1 | 460V/1       |      |      |
| 6 FPI            |                                             |                         |       |          |                |              |      |      |
| CM6G153*DA       | 15,300                                      | 17,400                  | 2,250 | 1        | 1.9            | 1.2          | 15.0 | 20   |
| CM6G184*DA       | 18,400                                      | 21,100                  | 2,090 |          | 1.5            | 1.2          | 15.0 | 20   |
| CM6G311*DA       | 31,100                                      | 35,700                  | 4,500 | 2        | 3.8            | 2.4          | 15.0 | 20   |
| CM6G374*DA       | 37,400                                      | 42,900                  | 4,180 | 2        | 5.0            | 2.4          | 15.0 | 20   |
| CM6G469*DA       | 46,900                                      | 53,600                  | 6,750 | 3        | 5.7            | 3.6          | 15.0 | 20   |
| CM6G564*DA       | 56,400                                      | 64,300                  | 6,270 | 3        | 5.7            | 5.0          | 15.0 | 20   |
| 4 FPI            |                                             |                         |       |          |                |              |      |      |
| CM4G110*DA       | 11,000                                      | 12,400                  | 2,350 | 1        | 1.9            | 1.2          | 15.0 | 20   |
| CM4G143*DA       | 14,300                                      | 16,200                  | 2,210 | <u> </u> | 1.5            | 1.2          | 15.0 | 20   |
|                  |                                             |                         |       |          |                |              |      |      |

|            | 11,000 | 12,400 | 2,000 | 1 | 1.9 | 1.2 | 15.0 | 20 |
|------------|--------|--------|-------|---|-----|-----|------|----|
| CM4G143*DA | 14,300 | 16,200 | 2,210 | 1 | 1.9 | 1.2 | 15.0 | 20 |
| CM4G232*DA | 23,200 | 26,100 | 4,690 | 2 | 3.8 | 2.4 | 15.0 | 20 |
| CM4G288*DA | 28,800 | 32,700 | 4,420 | Z | 3.0 | 2.4 | 15.0 | 20 |
| CM4G336*DA | 33,600 | 38,300 | 7,040 | 2 | 5.7 | 3.6 | 15.0 | 20 |
| CM4G419*DA | 41,900 | 47,600 | 6,640 | 3 | 5.7 | 3.0 | 15.0 | 20 |

| Hot Gas<br>Reverse Cycle | Drain Pan Hea | Drain Pan |                 |
|--------------------------|---------------|-----------|-----------------|
| Model<br>Number+         | 208-230V/1    | 460V/1    | Heater<br>Watts |

#### 6 FPI

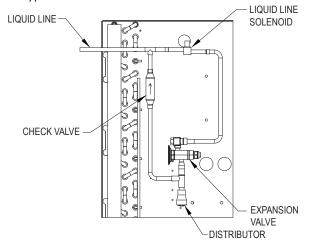
| CM6G153*DA<br>CM6G184*DA | 6.4  | 3.2 | 1,480 |
|--------------------------|------|-----|-------|
| CM6G311*DA<br>CM6G374*DA | 12.9 | 6.4 | 2,960 |
| CM6G469*DA<br>CM6G564*DA | 19.3 | 9.7 | 4,440 |

#### 4 FPI

| CM4G110*DA<br>CM4G143*DA | 6.4  | 3.2 | 1,480 |
|--------------------------|------|-----|-------|
| CM4G232*DA<br>CM4G288*DA | 12.9 | 6.4 | 2,960 |
| CM4G336*DA<br>CM4G419*DA | 19.3 | 9.7 | 4,440 |

#### Hot Gas Reverse Cycle 2-Pipe Model

A changeover valve is located in the discharge suction line of the compressor, so that when defrost is required, the valve changes over from the normal refrigeration flow so that the discharged gas flows into the suction connection and bypassesTX valve.



#### Notes:

1.

| Capacity Correction for Hot Gas Defrost Evaporators |      |       |        |       |        |       |  |  |
|-----------------------------------------------------|------|-------|--------|-------|--------|-------|--|--|
| S.S.T. (Dew)                                        | 20°F | 0°F   | -10°F  | -20°F | -30°F  | -40°F |  |  |
| Multiply Capacity by:                               | 1.15 | 1.075 | 1.0375 | 1     | 0.9625 | 0.925 |  |  |

\* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

+ Hot Gas models include an electric drain pan. † Dual Speed EC motors are compliant with California Title 24 regulations.
 ^ R407A, R448A and R449A are rated at dew point temperature. Use R407A capacity ratings for R407C and R407F.

|          | Model        |          |            | Part Nu   | mbers      |          |          | No.      |  |
|----------|--------------|----------|------------|-----------|------------|----------|----------|----------|--|
|          | Number       | Nozzle @ | Liq. Temp. | TXV^ @ L  | .iq. Temp. | EEV @ Li | q. Temp. | of       |  |
|          | Number       | 50°F     | 105°F      | 50°F      | 105°F      | 50°F     | 105°F    | Circuits |  |
|          | R404A        |          |            |           |            |          |          |          |  |
|          | CM6A182*DA   | L-3/4    | L-2        | SBFSE-B-C | SBFSE-B-C  | SER-B    | SER-B    | 4        |  |
|          | CM6A220*DA   | L-3/4    | L-2-1/2    | SBFSE-B-C | SBFSE-B-C  | SER-B    | SER-B    | 6        |  |
|          | CM6A276*DA   | L-1      | L-3        | SBFSE-B-C | SBFSE-C-C  | SER-B    | SER-C    | 8        |  |
| 6<br>FPI | CM6A370*DA   | L-1-1/2  | L-4        | SBFSE-C-C | SBFSE-C-C  | SER-C    | SER-C    | 9        |  |
|          | CM6A442*DA   | G-1-1/2  | G-5        | EBSSE-6-C | EBSSE-6-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A549*DA   | G-2      | G-6        | EBSSE-6-C | EBSSE-6-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A658*DA   | G-2-1/2  | G-8        | EBSSE-6-C | EBSSE-6-C  | SER-C    | SER-D    | 16       |  |
|          | R407A/ R407C | t        |            |           |            |          |          |          |  |
|          | CM6A182*DA   | L-3/4    | L-2        | SBFDE-B-C | SBFDE-B-C  | SER-B    | SER-B    | 4        |  |
|          | CM6A220*DA   | L-3/4    | L-2-1/2    | SBFDE-B-C | SBFDE-B-C  | SER-B    | SER-B    | 6        |  |
|          | CM6A276*DA   | L-1      | L-3        | SBFDE-B-C | SBFDE-B-C  | SER-B    | SER-C    | 8        |  |
| 6<br>FPI | CM6A370*DA   | L-1-1/2  | L-4        | SBFDE-C-C | SBFDE-C-C  | SER-C    | SER-C    | 9        |  |
|          | CM6A442*DA   | G-1-1/2  | G-5        | SBFDE-C-C | SBFDE-C-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A549*DA   | G-2      | G-6        | EBSDE-7-C | SBFDE-C-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A658*DA   | G-2-1/2  | G-8        | EBSDE-7-C | EBSDE-7-C  | SER-C    | SER-D    | 16       |  |
|          | R448A/ R449A | t        |            |           |            |          |          |          |  |
|          | CM6A182*DA   | L-3/4    | L-2        | SBFDE-B-C | SBFDE-B-C  | SER-B    | SER-B    | 4        |  |
|          | CM6A220*DA   | L-3/4    | L-2-1/2    | SBFDE-B-C | SBFDE-B-C  | SER-B    | SER-B    | 6        |  |
|          | CM6A276*DA   | L-1      | L-3        | SBFDE-C-C | SBFDE-C-C  | SER-B    | SER-C    | 8        |  |
| 6<br>FPI | CM6A370*DA   | L-1-1/2  | L-4        | SBFDE-C-C | SBFDE-C-C  | SER-C    | SER-C    | 9        |  |
|          | CM6A442*DA   | G-1-1/2  | G-5        | SBFDE-C-C | EBSDE-7-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A549*DA   | G-2      | G-6        | EBSDE-7-C | EBSDE-7-C  | SER-C    | SER-C    | 12       |  |
|          | CM6A658*DA   | G-2-1/2  | G-8        | EBSDE-7-C | EBSDE-7-C  | SER-C    | SER-D    | 16       |  |

### **Distributor Nozzle and Expansion Valves - Air Defrost Models**

Note: The distributor lines are 3/16" tube & 21" long.

\* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

^ TXV selections are based on +25°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.

<sup>†</sup> SBFDE expansion values are compatible with R407A, R448A and R449A/B. For other values, follow manufacturers selection guidelines.

Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

#### **TYPICAL APPLICATIONS:**



Small to Medium Warehouses



**Industrial and Pharmaceuticals** 



**Walk-in Coolers and Freezers** 

### **Distributor Nozzle and Expansion Valves - Electric Defrost Models**

|      |                       |          |            | Part Nu       | mhers         |         |           | No.      |
|------|-----------------------|----------|------------|---------------|---------------|---------|-----------|----------|
|      | Model                 | Nozzle @ | Lia. Temp. |               | Liq. Temp.    | EEV @ L | iq. Temp. | of       |
|      | Number                | 50°F     | 105°F      | 50°F          | 105°F         | 50°F    | 105°F     | Circuits |
|      | R404A                 |          |            |               |               |         |           |          |
|      | CM6E153*DA            | L-1-1/2  | L-2-1/2    | SBFSE-B-Z     | SBFSE-B-Z     | SER-B   | SER-B     | 6        |
|      | CM6E184*DA            | L-1-1/2  | L-3        | SBFSE-B-Z     | SBFSE-C-Z     | SER-B   | SER-B     | 8        |
| 6    | CM6E311*DA            | G-2-1/2  | G-5        | SBFSE-C-Z     | EBSSE-6-Z     | SER-B   | SER-C     | 12       |
| FPI  | CM6E374*DA            | G-3      | G-6        | EBSSE-6-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 16       |
|      | CM6E469*DA            | G-4      | G-10       | EBSSE-6-Z     | EBSSE-7-1/2-Z | SER-C   | SER-C     | 18       |
|      | CM6E564*DA            | G-5      | G-12       | EBSSE-7-1/2-Z | EBSSE-10-Z    | SER-C   | SER-C     | 24       |
|      | CM4E110*DA            | L-1      | L-2        | SBFSE-A-Z     | SBFSE-A-Z     | SER-A   | SER-A     | 4        |
|      | CM4E143*DA            | L-1-1/2  | L-2-1/2    | SBFSE-A-Z     | SBFSE-B-Z     | SER-A   | SER-B     | 6        |
| 4    | CM4E232*DA            | L-2      | L-4        | SBFSE-B-Z     | SBFSE-C-Z     | SER-B   | SER-B     | 9        |
| FPI  | CM4E288*DA            | G-2-1/2  | G-5        | SBFSE-C-Z     | EBSSE-6-Z     | SER-B   | SER-C     | 12       |
|      | CM4E336*DA            | G-3      | G-6        | SBFSE-C-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 12       |
|      | CM4E419*DA            | G-4      | G-8        | EBSSE-6-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 16       |
| R407 | A/ R407C <sup>†</sup> |          |            |               |               |         |           |          |
|      | CM6E153*DA            | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
|      | CM6E184*DA            | L-1-1/2  | L-3        | SBFDE-B-Z     | SBFDE-B-Z     | SER-B   | SER-B     | 8        |
| 6    | CM6E311*DA            | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
| FPI  | CM6E374*DA            | G-3      | G-6        | SBFDE-C-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
|      | CM6E469*DA            | G-4      | G-10       | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 18       |
|      | CM6E564*DA            | G-5      | G-12       | EBSDE-7-Z     | EBSDE-10-Z    | SER-C   | SER-C     | 24       |
|      | CM4E110*DA            | L-1      | L-2        | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-A     | 4        |
|      | CM4E143*DA            | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
| 4    | CM4E232*DA            | L-2      | L-4        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-B     | 9        |
| FPI  | CM4E288*DA            | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|      | CM4E336*DA            | G-3      | G-6        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|      | CM4E419*DA            | G-4      | G-8        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
| R448 | A/ R449A <sup>†</sup> |          |            |               |               |         |           |          |
|      | CM6E153*DA            | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
|      | CM6E184*DA            | L-1-1/2  | L-3        | SBFDE-B-Z     | SBFDE-B-Z     | SER-B   | SER-B     | 8        |
| 6    | CM6E311*DA            | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
| FPI  | CM6E374*DA            | G-3      | G-6        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
|      | CM6E469*DA            | G-4      | G-10       | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 18       |
|      | CM6E564*DA            | G-5      | G-12       | EBSDE-10-Z    | EBSDE-10-Z    | SER-C   | SER-C     | 24       |
|      | CM4E110*DA            | L-1      | L-2        | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-A     | 4        |
|      | CM4E143*DA            | L-1-1/2  | L-2-1/2    | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-B     | 6        |
| 4    | CM4E232*DA            | L-2      | L-4        | SBFDE-B-Z     | SBFDE-C-Z     | SER-B   | SER-B     | 9        |
| FPI  | CM4E288*DA            | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|      | CM4E336*DA            | G-3      | G-6        | SBFDE-C-Z     | EBSDE-7-Z     | SER-B   | SER-C     | 12       |
|      | CM4E419*DA            | G-4      | G-8        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |

Note: The distributor lines are 3/16" tube & 21" long.

\* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.

<sup>^</sup> TXV selections for Electric Defrost Models are based on -20°F suction temp., 8°F to 12°F evaporator TD. Contact factory for

operating conditions outside of this range. Do not use pressure limiting TXVs when the condensing unit includes a CPR valve.
SBFDE expansion valves are compatible with R407A, R448A and R449A/B. For other refrigerant valves, follow manufacturers selection guidelines.

Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

### **Distributor Nozzle and Expansion Valves - Hot Gas Defrost Models**

|     | Model        |          |            | Part Nu       | mbers         |         |           | No.      |
|-----|--------------|----------|------------|---------------|---------------|---------|-----------|----------|
|     | Number       | Nozzle @ | Liq. Temp. |               | Liq. Temp.    | EEV @ L | iq. Temp. | of       |
|     | CM*H/CM*G    | 50°F     | 105°F      | 50°F          | 105°F         | 50°F    | 105°F     | Circuits |
| I   | R404A        |          |            |               |               |         |           |          |
|     | CM6*153*DA   | L-1-1/2  | L-2-1/2    | SBFSE-B-Z     | SBFSE-B-Z     | SER-B   | SER-B     | 6        |
|     | CM6*184*DA   | G-1-1/2  | G-3        | SBFSE-B-Z     | SBFSE-C-Z     | SER-B   | SER-B     | 8        |
| 6   | CM6*311*DA   | G-2-1/2  | G-5        | SBFSE-C-Z     | EBSSE-6-Z     | SER-B   | SER-C     | 12       |
| FPI | CM6*374*DA   | G-3      | G-6        | EBSSE-6-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 16       |
|     | CM6*469*DA   | G-4      | G-10       | EBSSE-6-Z     | EBSSE-7-1/2-Z | SER-C   | SER-C     | 18       |
|     | CM6*564*DA   | G-5      | G-12       | EBSSE-7-1/2-Z | EBSSE-10-Z    | SER-C   | SER-C     | 24       |
|     | CM4*110*DA   | L-1      | L-2        | SBFSE-A-Z     | SBFSE-A-Z     | SER-A   | SER-A     | 4        |
|     | CM4*143*DA   | L-1-1/2  | L-2-1/2    | SBFSE-A-Z     | SBFSE-B-Z     | SER-A   | SER-B     | 6        |
| 4   | CM4*232*DA   | G-2      | G-4        | SBFSE-B-Z     | SBFSE-C-Z     | SER-B   | SER-B     | 9        |
| FPI | CM4*288*DA   | G-2-1/2  | G-5        | SBFSE-C-Z     | EBSSE-6-Z     | SER-B   | SER-C     | 12       |
|     | CM4*336*DA   | G-3      | G-6        | SBFSE-C-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 12       |
|     | CM4*419*DA   | G-4      | G-8        | EBSSE-6-Z     | EBSSE-6-Z     | SER-C   | SER-C     | 16       |
|     | R407A/ R407C | t        |            |               |               |         |           |          |
|     | CM6*153*DA   | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
|     | CM6*184*DA   | G-1-1/2  | G-3        | SBFDE-B-Z     | SBFDE-B-Z     | SER-B   | SER-B     | 8        |
| 6   | CM6*311*DA   | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
| FPI | CM6*374*DA   | G-3      | G-6        | SBFDE-C-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
|     | CM6*469*DA   | G-4      | G-10       | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 18       |
|     | CM6*564*DA   | G-5      | G-12       | EBSDE-7-Z     | EBSDE-10-Z    | SER-C   | SER-C     | 24       |
|     | CM4*110*DA   | L-1      | L-2        | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-A     | 4        |
|     | CM4*143*DA   | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
| 4   | CM4*232*DA   | G-2      | G-4        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-B     | 9        |
| FPI | CM4*288*DA   | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|     | CM4*336*DA   | G-3      | G-6        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|     | CM4*419*DA   | G-4      | G-8        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
|     | R448A/ R449A | t        |            |               |               |         |           |          |
|     | CM6*153*DA   | L-1-1/2  | L-2-1/2    | SBFDE-B-Z     | SBFDE-B-Z     | SER-A   | SER-B     | 6        |
|     | CM6*184*DA   | G-1-1/2  | G-3        | SBFDE-B-Z     | SBFDE-B-Z     | SER-B   | SER-B     | 8        |
| 6   | CM6*311*DA   | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
| FPI | CM6*374*DA   | G-3      | G-6        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |
|     | CM6*469*DA   | G-4      | G-10       | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 18       |
|     | CM6*564*DA   | G-5      | G-12       | EBSDE-10-Z    | EBSDE-10-Z    | SER-C   | SER-C     | 24       |
|     | CM4*110*DA   | L-1      | L-2        | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-A     | 4        |
|     | CM4*143*DA   | L-1-1/2  | L-2-1/2    | SBFDE-A-Z     | SBFDE-A-Z     | SER-A   | SER-B     | 6        |
| 4   | CM4*232*DA   | G-2      | G-4        | SBFDE-B-Z     | SBFDE-C-Z     | SER-B   | SER-B     | 9        |
| FPI | CM4*288*DA   | G-2-1/2  | G-5        | SBFDE-C-Z     | SBFDE-C-Z     | SER-B   | SER-C     | 12       |
|     | CM4*336*DA   | G-3      | G-6        | SBFDE-C-Z     | EBSDE-7-Z     | SER-B   | SER-C     | 12       |
|     | CM4*419*DA   | G-4      | G-8        | EBSDE-7-Z     | EBSDE-7-Z     | SER-C   | SER-C     | 16       |

Note: The distributor lines are 1/4" tube & 21" long.

\* Each asterisk represents a variable character based on defrost and voltage ordered. See page 4 for nomenclature.

^ TXV selections are based on -20°F suction temp., 8°F to 12°F evaporatorTD. Contact factory for operating conditions outside of this range. Do not use pressure limiting TXVs when the condensing unit includes a CPR valve.

<sup>+</sup> SBFDE expansion valves are compatible with R407A, R448A and R449A/B. For other refrigerant valves, follow manufacturers selection guidelines.

Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

### **Specifications - Air Defrost Models**

| Models      | Fan<br>Dia. | Mot           | tor Da | ata |                 | gerant<br>ections | No. of<br>Hanger<br>Slot | <sup>er</sup> Figure |          |         | Unit<br>limensions<br>(Inches) |        | Approx.<br>Unit<br>Wt. |
|-------------|-------------|---------------|--------|-----|-----------------|-------------------|--------------------------|----------------------|----------|---------|--------------------------------|--------|------------------------|
|             | (Inches)    | Motor<br>Qty. | HP     | RPM | Liquid<br>Line^ | Suction           | Locations                |                      | L        | W       | н                              | (Lbs.) |                        |
| 6 FPI       |             |               |        |     |                 |                   |                          |                      |          |         |                                |        |                        |
| CM6A182*DA  | 24          | 1             | 1/3    | 850 | 3/8             | 7/8               | 4                        | 1                    | 47-1/2   | 21-5/16 | 33-7/8                         | 120    |                        |
| CM6A220*DA  | 24          | 1             | 1/3    | 850 | 3/8             | 7/8               | 4                        | 1                    | 47-1/2   | 21-5/16 | 33-7/8                         | 120    |                        |
| CM6A276* DA | 24          | 2             | 1/3    | 850 | 1/2             | 1-1/8             | 6                        | 2                    | 80-1/2   | 21-5/16 | 33-7/8                         | 220    |                        |
| CM6A370*DA  | 24          | 2             | 1/3    | 850 | 1/2             | 1-1/8             | 6                        | 2                    | 80-1/2   | 21-5/16 | 33-7/8                         | 220    |                        |
| CM6A442*DA  | 24          | 2             | 1/3    | 850 | 5/8             | 1-1/8             | 6                        | 2                    | 80-1/2   | 21-5/16 | 33-7/8                         | 220    |                        |
| CM6A549*DA  | 24          | 3             | 1/3    | 850 | 5/8             | 1-3/8             | 8                        | 3                    | 113-9/16 | 21-5/16 | 33-7/8                         | 316    |                        |
| CM6A658*DA  | 24          | 3             | 1/3    | 850 | 5/8             | 1-3/8             | 8                        | 3                    | 113-9/16 | 21-5/16 | 33-7/8                         | 316    |                        |

| Shipping Information -<br>All Models |     |                                   |        |                        |  |  |  |  |
|--------------------------------------|-----|-----------------------------------|--------|------------------------|--|--|--|--|
| No.<br>of<br>Fans                    | D   | Shipping<br>Dimensior<br>(Inches) |        | Approx.<br>Ship<br>Wt. |  |  |  |  |
| 1 uno                                | L   | W                                 | Н      | (Lbs.)                 |  |  |  |  |
| 1                                    | 60  | 43-1/4                            | 48-1/2 | 346                    |  |  |  |  |
| 2                                    | 93  | 510                               |        |                        |  |  |  |  |
| 3                                    | 126 | 673                               |        |                        |  |  |  |  |

- \* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
- ^ For units with mountedTXV components. See Nozzle/TXV table for distributor connection size whenTXV is field installed.
- For dimensional distance between hanger slots, consult model's corresponding dimension drawing. Hanger slots are 3/8" deep x 1" wide.
- 2. Drain is 1-1/4" NPT for all models.



### **Specifications - Electric and Hot Gas Models**

| Models     | Fan<br>Diameter |               |     |     | No. of<br>Hanger |         |                        |                   |
|------------|-----------------|---------------|-----|-----|------------------|---------|------------------------|-------------------|
| CM*E/G/H   | (Inches)        | Motor<br>Qty. | HP  | RPM | Liquid<br>Line   | Suction | 3-Pipe Hot<br>Gas Line | Slot<br>Locations |
| 6 FPI      |                 |               |     |     |                  |         |                        |                   |
| CM6*153*DA | 24              | 1             | 1/3 | 850 | 3/8              | 1-1/8   | 1/2                    | 4                 |
| CM6*184*DA | 24              | 1             | 1/3 | 850 | 3/8              | 1-1/8   | 1/2                    | 4                 |
| CM6*311*DA | 24              | 2             | 1/3 | 850 | 1/2              | 1-5/8   | 5/8                    | 6                 |
| CM6*374*DA | 24              | 2             | 1/3 | 850 | 5/8              | 1-5/8   | 7/8                    | 6                 |
| CM6*469*DA | 24              | 3             | 1/3 | 850 | 5/8              | 2-1/8   | 7/8                    | 8                 |
| CM6*564*DA | 24              | 3             | 1/3 | 850 | 5/8              | 2-1/8   | 7/8                    | 8                 |
| 4 FPI      |                 |               |     |     |                  |         |                        |                   |
| CM4*110*DA | 24              | 1             | 1/3 | 850 | 3/8              | 1-1/8   | 1/2                    | 4                 |
| CM4*143*DA | 24              | 1             | 1/3 | 850 | 3/8              | 1-1/8   | 1/2                    | 4                 |
| CM4*232*DA | 24              | 2             | 1/3 | 850 | 1/2              | 1-3/8   | 5/8                    | 6                 |
| CM4*288*DA | 24              | 2             | 1/3 | 850 | 1/2              | 1-3/8   | 5/8                    | 6                 |
| CM4*336*DA | 24              | 3             | 1/3 | 850 | 1/2              | 1-5/8   | 5/8                    | 8                 |
| CM4*419*DA | 24              | 3             | 1/3 | 850 | 5/8              | 1-5/8   | 7/8                    | 8                 |

| Models<br>CM*E/G/H | Figure | C     | Unit<br>Dimension<br>(Inches) | s      | Approx.<br>Unit<br>Wt. |
|--------------------|--------|-------|-------------------------------|--------|------------------------|
|                    |        | L W H |                               | (Lbs.) |                        |

#### 6 FPI

| CM6*153*DA | 1 | 47-1/2   | 21-5/16 | 33-7/8 | 120 |
|------------|---|----------|---------|--------|-----|
| CM6*184*DA | 1 | 47-1/2   | 21-5/16 | 33-7/8 | 120 |
| CM6*311*DA | 2 | 80-1/2   | 21-5/16 | 33-7/8 | 220 |
| CM6*374*DA | 2 | 80-1/2   | 21-5/16 | 33-7/8 | 220 |
| CM6*469*DA | 3 | 113-9/16 | 21-5/16 | 33-7/8 | 320 |
| CM6*564*DA | 3 | 113-9/16 | 21-5/16 | 33-7/8 | 320 |

#### 4 FPI

| CM4*110*DA | 1 | 47-1/2   | 21-5/16 | 33-7/8 | 120 |
|------------|---|----------|---------|--------|-----|
| CM4*143*DA | 1 | 47-1/2   | 21-5/16 | 33-7/8 | 120 |
| CM4*232*DA | 2 | 80-1/2   | 21-5/16 | 33-7/8 | 220 |
| CM4*288*DA | 2 | 80-1/2   | 21-5/16 | 33-7/8 | 220 |
| CM4*336*DA | 3 | 113-9/16 | 21-5/16 | 33-7/8 | 320 |
| CM4*419*DA | 3 | 113-9/16 | 21-5/16 | 33-7/8 | 320 |

\* Each asterisk represents a variable character based on defrost and voltage ordered. See page 4 for nomenclature.

^ For units with mounted TXV components. See Nozzle/TXV table for distributor connection size when TXV is field installed.

1. For dimensional distance between hanger slots, consult model's corresponding dimension drawing. Hanger slots are 3/8" deep x 1" wide.

2. Drain is 1-1/4" NPT for all models.

3. For shipping dimensions and weights, see Shipping Information table on page 14.

### **Specifications - All Models**

|                            | nent of Energy Anr<br>rgy Factor (AWEF) |     | -In  |   |
|----------------------------|-----------------------------------------|-----|------|---|
| Base Model<br>Number       | Defrost<br>Type                         | FPI | AWEF |   |
| Cooler Models <sup>1</sup> |                                         |     |      | _ |
| CM6A182*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A220*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A276*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A370*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A442*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A549*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6A658*DA                 | Air Defrost                             | 6   | 9    |   |
| CM6E153*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6E184*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6E311*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6E374*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6E469*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6E564*DA                 | Electric Defrost                        | 6   | 9    |   |
| CM6*153*DA                 | Hot Gas Defrost                         | 6   | 9    |   |
| CM6*184*DA                 | Hot Gas Defrost                         | 6   | 9    |   |
| CM6*311*DA                 | Hot Gas Defrost                         | 6   | 9    |   |
| CM6*374*DA                 | Hot Gas Defrost                         | 6   | 9    |   |
| CM6*469*DA                 | Hot Gas Defrost                         | 6   | 9    |   |
| CM6*564*DA                 | Hot Gas Defrost                         | 6   | 9    |   |

|                             | Department of Energy Annual Walk-In<br>Energy Factor (AWEF) Ratings |     |      |  |  |  |  |  |  |
|-----------------------------|---------------------------------------------------------------------|-----|------|--|--|--|--|--|--|
| Base Model<br>Number        | Defrost<br>Type                                                     | FPI | AWEF |  |  |  |  |  |  |
| Freezer Models <sup>2</sup> |                                                                     |     |      |  |  |  |  |  |  |
| CM6E153*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM6E184*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM6E311*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM6E374*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM6E469*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM6E564*DA                  | Electric Defrost                                                    | 6   | 4.15 |  |  |  |  |  |  |
| CM4E110*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM4E143*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM4E232*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM4E288*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM4E336*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM4E419*DA                  | Electric Defrost                                                    | 4   | 4.15 |  |  |  |  |  |  |
| CM6*153*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM6*184*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM6*311*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM6*374*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM6*469*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM6*564*DA                  | Hot Gas Defrost                                                     | 6   | 4.15 |  |  |  |  |  |  |
| CM4*110*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |
| CM4*143*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |
| CM4*232*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |
| CM4*288*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |
| CM4*336*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |
| CM4*419*DA                  | Hot Gas Defrost                                                     | 4   | 4.15 |  |  |  |  |  |  |

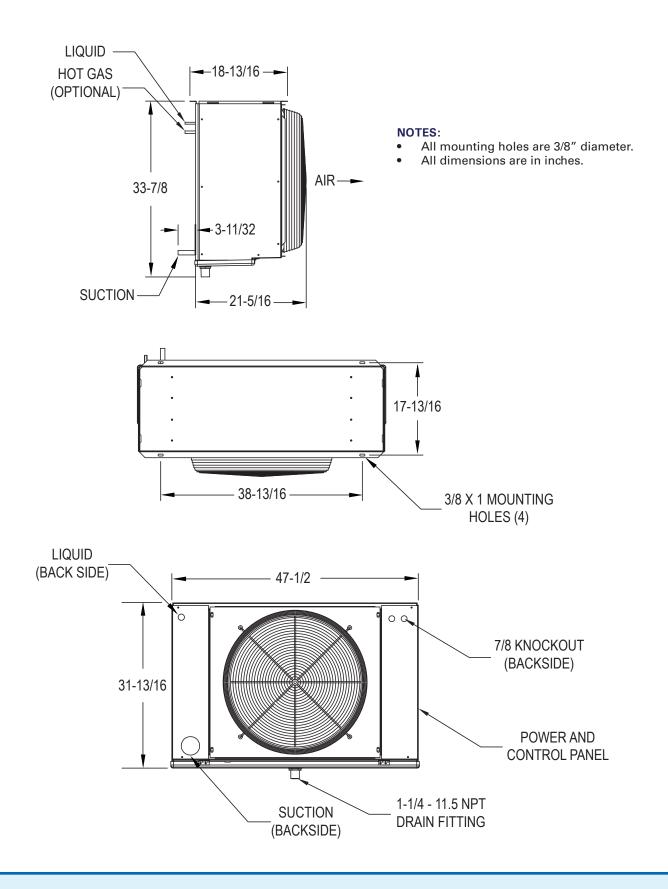
\* Each asterisk represents a variable character based upon voltage ordered. See page 4 for nomenclature.

1. If the model has a numerical value in the table above, the following statement applies: "The refrigeration system is designed and certified for use in walk-in cooler applications."

2. If the model has a numerical value in the table above, the following statement applies: "The refrigeration system is designed and certified for use in walk-in freezer applications."

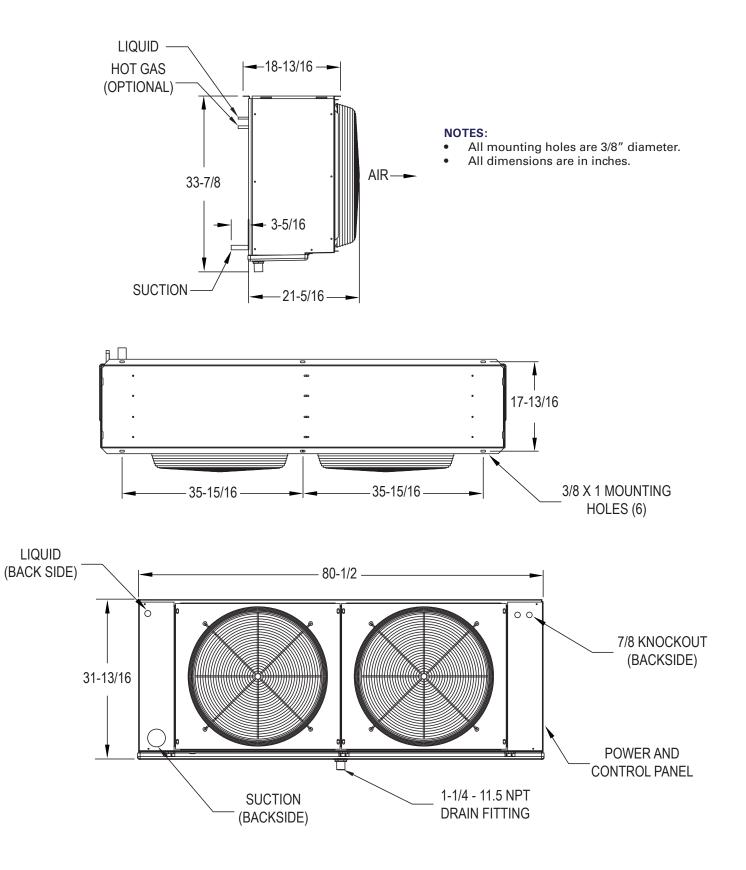
### **Physical Dimensions**

FIGURE 1 - SINGLE FAN



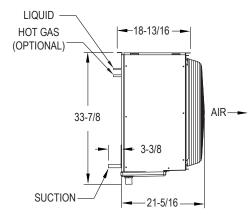
### **Physical Dimensions**

#### FIGURE 2- TWO FAN



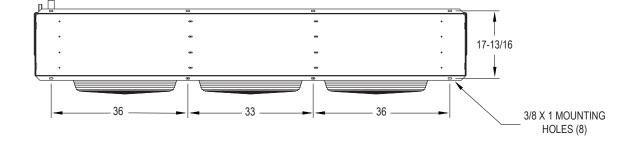
### **Physical Dimensions**

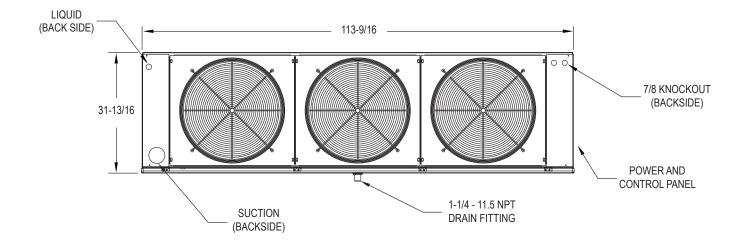
FIGURE 3- THREE FAN



#### NOTES:

- All mounting holes are 3/8" diameter.
- All dimensions are in inches.





Due to continuing product development, specifications are subject to change without notice.



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