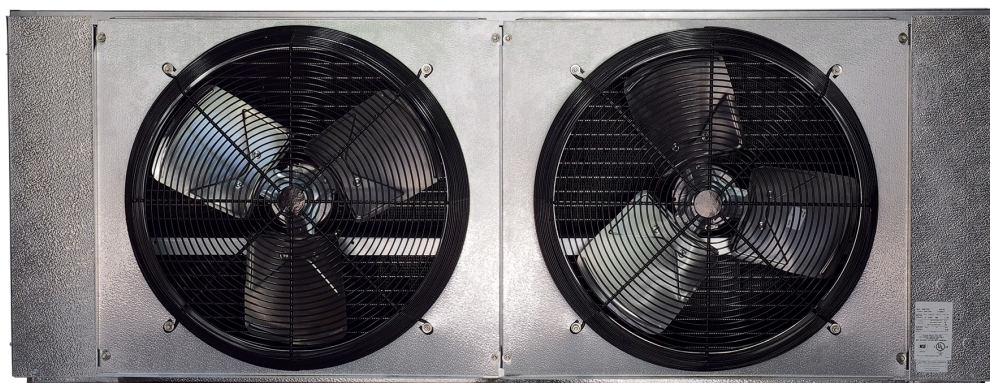




# A2L MEDIUM PROFILE UNIT COOLER



## Walk-Ins: Medium to Large Cooler and Freezer Applications

Air Defrost

21,900 to 99,000 BTUH

Medium Temperature Electric Defrost

21,900 to 98,900 BTUH

Low Temperature Electric Defrost

12,900 to 89,000 BTUH



### FEATURES

Our 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 99,000 BTUH at a 10° TD. Models are available with air flow spanning a range of 2,090 to 12,770 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 one-piece 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. Low Temp Electric Defrost is available in both 6 FPI and 4 FPI. Medium Temp Electric Defrost and Air Defrost models are available in 6 FPI.

### MOTORS

All models feature highly efficient Dual Speed Electronically Commutated (EC) motors which are compliant with California Title 24 regulations<sup>2</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 R454A, R454C, R455A. 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.

## AIR DEFROST

Air Defrost models are designed for use in coolers at +35°F room temperature and warmer.

## ELECTRIC DEFROST - MEDIUM TEMP

Medium Temperature Electric Defrost Models are designed for use in coolers between 10°F and 35°F room temperatures. 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. Adjustable defrost termination, fan delay and heater safety controls are factory mounted for optimum performance of each control function.

## ELECTRIC DEFROST - LOW TEMP

Low Temperature Electric Defrost Models are designed for use in freezers between +10°F and -30°F room temperatures. 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. Adjustable defrost termination, fan delay and heater safety controls are factory mounted for optimum performance of each control function.

## ELECTRICAL

Available in 115/1<sup>2</sup> (Air Defrost only) 208-230V/1<sup>2</sup>, 208-230V/3<sup>2</sup>, 460V/1, or 460V/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.

## OPTIONAL FEATURES

- EcoNet® 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)
- Solenoid Shut Off Valve (loose)
- Check Shut Off Valve (loose)
- Insulated Drain Pan
- Painted Cabinet (White or Black)
- Stainless Steel Cabinet
- Coated Coil (Bronz-Glow, or Electrofin®)
- Suction/Liquid Heat Exchanger (loose)

\* 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 and entering air coil temp. thermistors, local on-board two-row backlit LCD display and push-button adjustments. (Controller replaces TXV, liquid line solenoid valve, room thermostat, defrost termination and fan delay, and time clock.)

## 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, continuous communication between system components, and remote mount display allows for EcoNet® Enabled Unit Coolers to be programmed, monitored and troubleshoot outside of space being cooled.



## MODEL NOMENCLATURE

| R          | A                 | M                  | 6                   | E                                                                            | 181               | D                                                                                    | D                 | A       |
|------------|-------------------|--------------------|---------------------|------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|-------------------|---------|
| Brand      | Refrigerant Class | Style              | Fins per Inch (FPI) | Defrost Type                                                                 | BTUH in Thousands | Unit Voltage <sup>1</sup>                                                            | Motor Type        | Vintage |
| R = Russel | A = A2L           | M = Medium Profile | 4 FPI<br>6 FPI      | A = Air<br>D = Medium Temp Electric Defrost<br>E = Low Temp Electric Defrost | XXX               | 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 | D = Dual Speed EC | A       |

<sup>1</sup> 50 Hz available. Contact Factory for Additional Information.  
EcoNet® approved refrigerants are: R454A, R454C, R455A.

## APPLICATION RATING &amp; ELECTRICAL DATA

## AIR DEFROST

| Model No. |             | BTUH Capacity<br>@ +25°F S.T. & 10°F TD | CFM    | No. of<br>Fans | Total Fan Motor AMPS |            |        | MCA  | MOPD |
|-----------|-------------|-----------------------------------------|--------|----------------|----------------------|------------|--------|------|------|
|           |             | R454A/R454C/<br>R455A                   |        |                | 115V/1               | 208-230V/1 | 460V/1 |      |      |
| 6 FPI     | RAM6A219*DA | 21,900                                  | 3,190  | 1              | 3.2                  | 1.9        | 1.2    | 15.0 | 20   |
|           | RAM6A268*DA | 26,800                                  | 2,950  | 1              | 3.2                  | 1.9        | 1.2    | 15.0 | 20   |
|           | RAM6A336*DA | 33,600                                  | 6,950  | 2              | 6.4                  | 3.8        | 2.4    | 15.0 | 20   |
|           | RAM6A448*DA | 44,800                                  | 6,380  | 2              | 6.4                  | 3.8        | 2.4    | 15.0 | 20   |
|           | RAM6A540*DA | 54,000                                  | 5,900  | 2              | 6.4                  | 3.8        | 2.4    | 15.0 | 20   |
|           | RAM6A668*DA | 66,800                                  | 9,580  | 3              | 9.6                  | 5.7        | 3.6    | 15.0 | 20   |
|           | RAM6A800*DA | 80,000                                  | 8,860  | 3              | 9.6                  | 5.7        | 3.6    | 15.0 | 20   |
|           | RAM6A888*DA | 88,800                                  | 12,770 | 4              | 12.8                 | 7.6        | 4.8    | 15.0 | 20   |
|           | RAM6A990*DA | 99,000                                  | 11,800 | 4              | 12.8                 | 7.6        | 4.8    | 15.0 | 20   |

\* Asterisk represents a variable character based on voltage ordered.

## APPLICATION RATING &amp; ELECTRICAL DATA

## MEDIUM TEMPERATURE ELECTRIC DEFROST

| Model No. |             | BTUH Capacity<br>@ +25°F S.T. & 10°F TD | CFM    | No. of<br>Fans | Total Fan Motor AMPS<br>Dual Speed EC |        |
|-----------|-------------|-----------------------------------------|--------|----------------|---------------------------------------|--------|
|           |             | R454A/R454C/R454A                       |        |                | 208-230V/1                            | 460V/1 |
| 6 FPI     | RAM6D218*DA | 21,900                                  | 3,190  | 1              | 1.9                                   | 1.2    |
|           | RAM6D267*DA | 26,800                                  | 2,950  | 1              | 1.9                                   | 1.2    |
|           | RAM6D335*DA | 33,600                                  | 6,950  | 2              | 3.8                                   | 2.4    |
|           | RAM6D447*DA | 44,800                                  | 6,380  | 2              | 3.8                                   | 2.4    |
|           | RAM6D539*DA | 54,000                                  | 5,900  | 2              | 3.8                                   | 2.4    |
|           | RAM6D667*DA | 66,800                                  | 9,580  | 3              | 5.7                                   | 3.6    |
|           | RAM6D799*DA | 80,000                                  | 8,860  | 3              | 5.7                                   | 3.6    |
|           | RAM6D887*DA | 88,700                                  | 12,770 | 4              | 7.6                                   | 4.8    |
|           | RAM6D989*DA | 98,900                                  | 11,800 | 4              | 7.6                                   | 4.8    |

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

| Model No. |             | 208-230V/1 |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 208-230V/1  |              |
| 6 FPI     | RAM6D218DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM6D267DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM6D335DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |
|           | RAM6D447DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |
|           | RAM6D539DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |

208-230 ratings include 2 amp for controls on EcoNet® Enabled units.

| Model No. |             | 208-230V/3 |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 208-230V/3  |              |
| 6 FPI     | RAM6D218EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM6D267EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM6D335EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM6D447EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM6D539EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM6D667EDA | 15.0       | 20   | 43.9            | 45   | 33.5        | 13,340       |
|           | RAM6D799EDA | 15.0       | 20   | 43.9            | 45   | 33.5        | 13,340       |
|           | RAM6D887EDA | 15.0       | 20   | 58.1            | 60   | 44.9        | 17,920       |
|           | RAM6D989EDA | 15.0       | 20   | 58.1            | 60   | 44.9        | 17,850       |

208-230 ratings include 2 amp for controls on EcoNet® Enabled units.

## APPLICATION RATING &amp; ELECTRICAL DATA

## MEDIUM TEMPERATURE ELECTRIC DEFROST

| Model No. |             | 460V/1     |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 460V/1      |              |
| 6 FPI     | RAM6D218FDA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM6D267FDA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM6D335FDA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM6D447FDA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM6D539FDA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM6D667FDA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM6D799FDA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM6D887FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17850        |
|           | RAM6D989FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17850        |

460 ratings include 1 amp for controls on EcoNet® Enabled units.

| Model No. |             | 460V/3     |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 460V/3      |              |
| 6 FPI     | RAM6D218GDA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM6D267GDA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM6D335GDA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM6D447GDA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM6D539GDA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM6D667GDA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM6D799GDA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM6D887GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |
|           | RAM6D989GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |

460 ratings include 1 amp for controls on EcoNet® Enabled units.



## APPLICATION RATING &amp; ELECTRICAL DATA

## LOW TEMPERATURE ELECTRIC DEFROST

| Model No. |             | BTUH Capacity<br>@ -20°F S.T. & 10°F TD <sup>†</sup> | CFM    | No. of<br>Fans | Total Fan Motor AMPS<br>Dual Speed EC <sup>†</sup> |        |
|-----------|-------------|------------------------------------------------------|--------|----------------|----------------------------------------------------|--------|
|           |             | R454A/R454C/R454A                                    |        |                | 208-230V/1                                         | 460V/1 |
| 6 FPI     | RAM6E181*DA | 18,100                                               | 3,190  | 1              | 1.9                                                | 1.2    |
|           | RAM6E217*DA | 21,900                                               | 2,950  | 1              | 1.9                                                | 1.2    |
|           | RAM6E371*DA | 37,100                                               | 6,380  | 2              | 3.8                                                | 2.4    |
|           | RAM6E446*DA | 44,600                                               | 5,900  | 2              | 3.8                                                | 2.4    |
|           | RAM6E557*DA | 55,700                                               | 9,570  | 3              | 5.7                                                | 3.6    |
|           | RAM6E669*DA | 66,900                                               | 8,850  | 3              | 5.7                                                | 3.6    |
|           | RAM6E741*DA | 74,100                                               | 12,760 | 4              | 7.6                                                | 4.8    |
|           | RAM6E890*DA | 89,000                                               | 11,800 | 4              | 7.6                                                | 4.8    |
| 4 FPI     | RAM4E129*DA | 12,900                                               | 3,580  | 1              | 1.9                                                | 1.2    |
|           | RAM4E168*DA | 16,800                                               | 3,360  | 1              | 1.9                                                | 1.2    |
|           | RAM4E271*DA | 27,100                                               | 7,170  | 2              | 3.8                                                | 2.4    |
|           | RAM4E340*DA | 34,000                                               | 6,730  | 2              | 3.8                                                | 2.4    |
|           | RAM4E398*DA | 39,800                                               | 10,750 | 3              | 5.7                                                | 3.6    |
|           | RAM4E495*DA | 49,500                                               | 10,100 | 3              | 5.7                                                | 3.6    |
|           | RAM4E529*DA | 52,900                                               | 14,300 | 4              | 7.6                                                | 4.8    |
|           | RAM4E658*DA | 65,800                                               | 13,500 | 4              | 7.6                                                | 4.8    |

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

<sup>†</sup> Dual Speed EC Motors are compliant with California Title 24 regulations.

<sup>†</sup> EC Motors Thermally Protected Internally

## 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 |

<sup>†</sup> Capacity values adjusted using the Correction Table for Electric Defrost Evaporators.



## APPLICATION RATING &amp; ELECTRICAL DATA

## LOW TEMPERATURE ELECTRIC DEFROST

| Model No. |             | 208-230V/1 |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 208-230V/1  |              |
| 6 FPI     | RAM6E181DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM6E217DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM6E371DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |
|           | RAM6E446DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |
| 4 FPI     | RAM4E129DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM4E168DDA | 15.0       | 20   | 26.3            | 30   | 19.5        | 4,480        |
|           | RAM4E271DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |
|           | RAM4E340DDA | 15.0       | 20   | 50.2            | 60   | 38.5        | 8,860        |

208-230 ratings include 2 amp for controls on EcoNet® Enabled units.

| Model No. |             | 208-230V/3 |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 208-230V/3  |              |
| 6 FPI     | RAM6E181EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM6E217EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM6E371EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM6E446EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM6E557EDA | 15.0       | 20   | 43.9            | 45   | 33.5        | 13,340       |
|           | RAM6E669EDA | 15.0       | 20   | 43.9            | 45   | 33.5        | 13,340       |
|           | RAM6E741EDA | 15.0       | 20   | 58.1            | 60   | 44.9        | 17,850       |
|           | RAM6E890EDA | 15.0       | 20   | 58.1            | 60   | 44.9        | 17,850       |
| 4 FPI     | RAM4E129EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM4E168EDA | 15.0       | 20   | 16.1            | 20   | 11.3        | 4,480        |
|           | RAM4E271EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM4E340EDA | 15.0       | 20   | 29.8            | 30   | 22.2        | 8,860        |
|           | RAM4E398EDA | 15.0       | 20   | 43.9            | 45   | 35.5        | 13,340       |
|           | RAM4E495EDA | 15.0       | 20   | 43.9            | 45   | 35.5        | 13,340       |
|           | RAM4E529EDA | 15.0       | 20   | 58.1            | 60   | 44.7        | 17,850       |
|           | RAM4E658EDA | 15.0       | 20   | 58.1            | 60   | 44.7        | 17,850       |

208-230 ratings include 2 amp for controls on EcoNet® Enabled units.

APPLICATION RATING & ELECTRICAL DATA

LOW TEMPERATURE ELECTRIC DEFROST

| Model No. |             | 460V/1     |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 460V/1      |              |
| 6 FPI     | RAM6E181EFA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM6E217EFA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM6E371EFA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM6E446EFA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM6E557EFA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM6E669EFA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM6E741FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17,850       |
|           | RAM6E890FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17,850       |
| 4 FPI     | RAM4E129FDA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM4E168FDA | 15.0       | 20   | 15.0            | 20   | 9.7         | 4,480        |
|           | RAM4E271FDA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM4E340FDA | 15.0       | 20   | 25.1            | 30   | 19.3        | 8,860        |
|           | RAM4E398FDA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM4E495FDA | 15.0       | 20   | 37.3            | 40   | 29.0        | 13,340       |
|           | RAM4E529FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17,850       |
|           | RAM4E658FDA | 15.0       | 20   | 49.5            | 50   | 38.8        | 17,850       |

460 ratings include 1 amp for controls on EcoNet® Enabled units.

## APPLICATION RATING &amp; ELECTRICAL DATA

## LOW TEMPERATURE ELECTRIC DEFROST

| Model No. |             | 460V/3     |      |                 |      | Heater Amps | Heater Watts |
|-----------|-------------|------------|------|-----------------|------|-------------|--------------|
|           |             | Base Model |      | EcoNet® Enabled |      |             |              |
|           |             | MCA        | MOPD | MCA             | MOPD | 460V/3      |              |
| 6 FPI     | RAM6E181EGA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM6E217EGA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM6E371EGA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM6E446EGA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM6E557EGA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM6E669EGA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM6E741GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |
|           | RAM6E890GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |
| 4 FPI     | RAM4E129GDA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM4E168GDA | 15.0       | 20   | 15.0            | 20   | 5.6         | 4,480        |
|           | RAM4E271GDA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM4E340GDA | 15.0       | 20   | 15.0            | 20   | 11.1        | 8,860        |
|           | RAM4E398GDA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM4E495GDA | 15.0       | 20   | 22.0            | 25   | 16.8        | 13,340       |
|           | RAM4E529GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |
|           | RAM4E658GDA | 15.0       | 20   | 29.0            | 30   | 22.4        | 17,850       |

460 ratings include 1 amp for controls on EcoNet® Enabled units.

## DISTRIBUTOR NOZZLES &amp; EXPANSION VALVES

AIR DEFROST MODELS // 6 FPI

| Model No.     |             | Part Numbers        |               |                   |           |                  |        | No. of<br>Circuits |
|---------------|-------------|---------------------|---------------|-------------------|-----------|------------------|--------|--------------------|
|               |             | Nozzle @ Liq. Temp. |               | TXV^ @ Liq. Temp. |           | EEV @ Liq. Temp. |        |                    |
|               |             | 50°F                | 100°F         | 50°F              | 100°F     | 50°F             | 100°F  |                    |
| 6 FPI - R454A | RAM6A219*DA | 3/4, TYPE L         | 2, TYPE L     | SBFTE-A-C         | SBFTE-B-C | SER-B            | SER-B  | 6                  |
|               | RAM6A268*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFTE-B-C         | SBFTE-B-C | SER-B            | SER-B  | 6                  |
|               | RAM6A336*DA | 1, TYPE L           | 3, TYPE L     | SBFTE-B-C         | SBFTE-C-C | SER-B            | SER-C  | 8                  |
|               | RAM6A448*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFTE-B-C         | SBFTE-C-C | SER-C            | SER-C  | 9                  |
|               | RAM6A540*DA | 2, TYPE G           | 5, TYPE G     | SBFTE-C-C         | SBFTE-C-C | SER-C            | SER-C  | 12                 |
|               | RAM6A668*DA | 2-1/2, TYPE G       | 6, TYPE G     | SBFTE-C-C         | ERTE-8-C  | SER-C            | SER-C  | 12                 |
|               | RAM6A800*DA | 3, TYPE G           | 10, TYPE G    | SBFTE-C-C         | ERTE-8-C  | SER-C            | SER-DS | 16                 |
|               | RAM6A888*DA | 3, TYPE G           | 10, TYPE G    | ERTE-8-C          | ERTE-10-C | SER-C            | SER-DS | 18                 |
|               | RAM6A990*DA | 4, TYPE G           | 10, TYPE G    | ERTE-8-C          | ERTE-10-C | SER-C            | SER-DS | 24                 |
| 6 FPI - R454C | RAM6A219*DA | 3/4, TYPE L         | 2, TYPE L     | SBFVE-B-C         | SBFVE-B-C | SER-B            | SER-B  | 6                  |
|               | RAM6A268*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFVE-B-C         | SBFVE-C-C | SER-B            | SER-C  | 6                  |
|               | RAM6A336*DA | 1, TYPE L           | 3, TYPE L     | SBFVE-B-C         | SBFVE-C-C | SER-C            | SER-C  | 8                  |
|               | RAM6A448*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFVE-C-C         | SBFVE-C-C | SER-C            | SER-C  | 9                  |
|               | RAM6A540*DA | 2, TYPE G           | 5, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-C  | 12                 |
|               | RAM6A668*DA | 2-1/2, TYPE G       | 6, TYPE G     | OVE-10-C          | OVE-10-C  | SER-C            | SER-DS | 12                 |
|               | RAM6A800*DA | 3, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-C            | SER-DS | 16                 |
|               | RAM6A888*DA | 3, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-DS           | SER-DS | 18                 |
|               | RAM6A990*DA | 4, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-DS           | SER-DS | 24                 |
| 6 FPI - R455A | RAM6A219*DA | 3/4, TYPE L         | 2, TYPE L     | SBFVE-B-C         | SBFVE-B-C | SER-B            | SER-B  | 6                  |
|               | RAM6A268*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFVE-B-C         | SBFVE-C-C | SER-B            | SER-C  | 6                  |
|               | RAM6A336*DA | 1, TYPE L           | 3, TYPE L     | SBFVE-B-C         | SBFVE-C-C | SER-C            | SER-C  | 8                  |
|               | RAM6A448*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFVE-C-C         | SBFVE-C-C | SER-C            | SER-C  | 9                  |
|               | RAM6A540*DA | 2, TYPE G           | 5, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-C  | 12                 |
|               | RAM6A668*DA | 2-1/2, TYPE G       | 6, TYPE G     | OVE-10-C          | OVE-10-C  | SER-C            | SER-DS | 12                 |
|               | RAM6A800*DA | 3, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-C            | SER-DS | 16                 |
|               | RAM6A888*DA | 3, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-DS           | SER-DS | 18                 |
|               | RAM6A990*DA | 4, TYPE G           | 10, TYPE G    | OVE-10-C          | OVE-10-C  | SER-DS           | SER-DS | 24                 |

The Distributor lines are 3/16" or 1/4" diameter and 27" long.

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

Expansion valve selections based on +25° Suction Temp and 8°F to 12°F evaporator TD. Contact factory for operating conditions outside this range.

<sup>^</sup> SBFTE and ERTE Expansion Valves are compatible with R454A refrigerant.

<sup>^</sup> SBFVE and OVE Expansion Valves are compatible with R454C and R455A refrigerants. For other valves, follow manufacturer's selection guidelines.

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

## LOOSE COMPONENTS REQUIRED FOR A2L ISOLATION CONTROL

**A<sub>MIN</sub>** (MINIMUM ALLOWABLE ROOM SIZE) VALUES // AIR DEFROST // 6 FPI

| Model No.     |             | A <sub>min</sub> Values (Ft <sup>2</sup> ) |                   |                   |                   |                   | Loose SSOV (solenoid shut off valve)<br>Isolation Valve @ Liquid Temp |            |            | Loose CSOV (check shut<br>off valve) Isolation CV |             |
|---------------|-------------|--------------------------------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------------------------------------------|------------|------------|---------------------------------------------------|-------------|
|               |             | 10 Ft<br>Line Run                          | 20 Ft<br>Line Run | 30 Ft<br>Line Run | 40 Ft<br>Line Run | 50 Ft<br>Line Run | Size                                                                  | 50°F       | 100°F      | Size                                              | Description |
| 6 FPI - R455A | RAM6A219*DA | 42                                         | 54                | 66                | 77                | 89                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A268*DA | 47                                         | 58                | 70                | 81                | 93                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A336*DA | 47                                         | 58                | 70                | 82                | 93                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A448*DA | 55                                         | 67                | 79                | 92                | 104               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A540*DA | 69                                         | 88                | 106               | 124               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A668*DA | 74                                         | 92                | 111               | 129               | 147               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A800*DA | 86                                         | 105               | 124               | 143               | 162               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A888*DA | 112                                        | 148               | 183               | 219               | 254               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A990*DA | 119                                        | 155               | 190               | 226               | 261               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
| 6 FPI - R454C | RAM6A219*DA | 41                                         | 52                | 63                | 74                | 86                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A268*DA | 45                                         | 56                | 67                | 78                | 90                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A336*DA | 45                                         | 56                | 68                | 79                | 90                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A448*DA | 53                                         | 65                | 77                | 88                | 100               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A540*DA | 67                                         | 85                | 102               | 120               | 138               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A668*DA | 71                                         | 89                | 107               | 125               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A800*DA | 83                                         | 101               | 120               | 138               | 157               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A888*DA | 108                                        | 143               | 177               | 212               | 246               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A990*DA | 115                                        | 150               | 184               | 219               | 253               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
| 6 FPI - R455A | RAM6A219*DA | 37                                         | 48                | 58                | 68                | 78                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A268*DA | 41                                         | 51                | 61                | 72                | 82                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A336*DA | 41                                         | 52                | 62                | 72                | 82                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6A448*DA | 49                                         | 59                | 70                | 81                | 91                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A540*DA | 61                                         | 77                | 94                | 110               | 126               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A668*DA | 65                                         | 81                | 98                | 114               | 130               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6A800*DA | 76                                         | 93                | 109               | 126               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A888*DA | 99                                         | 130               | 162               | 193               | 225               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6A990*DA | 105                                        | 137               | 168               | 200               | 231               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |

Solenoid Shut Off Valves operate as double duty isolation/liquid line solenoid valve and are required to ship loose and be installed in the field, outside the refrigerated space.

SSOV/CSOV Selection Criteria: Maximum 10 Foot Line Rise, 100 Foot Line Run, 1:1 Condensing Unit/Evaporator.

Contact applications for additional lengths or design considerations.

A<sub>min</sub> values calculated using operating conditions included in UL 60335-2-89 101.DVU.1.2 and standard connection sizes (liquid and suction).

A<sub>min</sub> values provided for 10 Ft, 20 Ft, 30 Ft, 40 Ft and 50 Ft line lengths. Contact applications for additional lengths or design considerations.

A<sub>min</sub> values intended to determine compliance with UL 2-89 and is NOT for charging calculations.

## DISTRIBUTOR NOZZLES &amp; EXPANSION VALVES

MEDIUM TEMPERATURE ELECTRIC DEFROST // 6 FPI

| Model No.     |             | Part Numbers        |               |                   |           |                  |        | No. of Circuits |
|---------------|-------------|---------------------|---------------|-------------------|-----------|------------------|--------|-----------------|
|               |             | Nozzle @ Liq. Temp. |               | TXV^ @ Liq. Temp. |           | EEV @ Liq. Temp. |        |                 |
|               |             | 50°F                | 100°F         | 50°F              | 100°F     | 50°F             | 100°F  |                 |
| 6 FPI - R454A | RAM6D218*DA | 3/4, TYPE L         | 2, TYPE L     | SBFTE-A-C         | SBFTE-B-C | SER-B            | SER-B  | 6               |
|               | RAM6D267*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFTE-B-C         | SBFTE-B-C | SER-B            | SER-B  | 6               |
|               | RAM6D335*DA | 1, TYPE L           | 3, TYPE L     | SBFTE-B-C         | SBFTE-C-C | SER-B            | SER-C  | 8               |
|               | RAM6D447*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFTE-B-C         | SBFTE-C-C | SER-C            | SER-C  | 9               |
|               | RAM6D539*DA | 2, TYPE G           | 5, TYPE G     | SBFTE-C-C         | SBFTE-C-C | SER-C            | SER-C  | 12              |
|               | RAM6D667*DA | 2-1/2, TYPE G       | 6, TYPE G     | SBFTE-C-C         | ERTE-8-C  | SER-C            | SER-C  | 12              |
|               | RAM6D799*DA | 3, TYPE G           | 10, TYPE G    | SBFTE-C-C         | ERTE-8-C  | SER-C            | SER-DS | 16              |
|               | RAM6D887*DA | 3, TYPE G           | 10, TYPE G    | ERTE-8-C          | ERTE-10-C | SER-C            | SER-DS | 16              |
|               | RAM6D989*DA | 4, TYPE G           | 10, TYPE G    | ERTE-8-C          | ERTE-10-C | SER-C            | SER-DS | 24              |
| 6 FPI - R454C | RAM6D218*DA | 3/4, TYPE L         | 2, TYPE L     | SBFVE-B-C         | SBFVE-B-C | SER-B            | SER-B  | 6               |
|               | RAM6D267*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFVE-B-C         | SBFVE-C-C | SER-B            | SER-C  | 6               |
|               | RAM6D335*DA | 1, TYPE L           | 3, TYPE L     | SBFVE-B-C         | SBFVE-C-C | SER-C            | SER-C  | 8               |
|               | RAM6D447*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFVE-C-C         | SBFVE-C-C | SER-C            | SER-C  | 9               |
|               | RAM6D539*DA | 2, TYPE G           | 5, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-C  | 12              |
|               | RAM6D667*DA | 2-1/2, TYPE G       | 6, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-DS | 12              |
|               | RAM6D799*DA | 3, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-10-C  | SER-C            | SER-DS | 16              |
|               | RAM6D887*DA | 3, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-15-C  | SER-DS           | SER-DS | 16              |
|               | RAM6D989*DA | 4, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-15-C  | SER-DS           | SER-DS | 24              |
| 6 FPI - R455A | RAM6D218*DA | 3/4, TYPE L         | 2, TYPE L     | SBFVE-B-C         | SBFVE-B-C | SER-B            | SER-B  | 6               |
|               | RAM6D267*DA | 1, TYPE L           | 2-1/2, TYPE L | SBFVE-B-C         | SBFVE-C-C | SER-B            | SER-C  | 6               |
|               | RAM6D335*DA | 1, TYPE L           | 3, TYPE L     | SBFVE-B-C         | SBFVE-C-C | SER-C            | SER-C  | 8               |
|               | RAM6D447*DA | 1-1/2, TYPE L       | 4, TYPE L     | SBFVE-C-C         | SBFVE-C-C | SER-C            | SER-C  | 9               |
|               | RAM6D539*DA | 2, TYPE G           | 5, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-C  | 12              |
|               | RAM6D667*DA | 2-1/2, TYPE G       | 6, TYPE G     | SBFVE-C-C         | OVE-10-C  | SER-C            | SER-DS | 12              |
|               | RAM6D799*DA | 3, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-10-C  | SER-C            | SER-DS | 16              |
|               | RAM6D887*DA | 3, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-15-C  | SER-DS           | SER-DS | 16              |
|               | RAM6D989*DA | 4, TYPE G           | 10, TYPE G    | ERVE-8-C          | OVE-15-C  | SER-DS           | SER-DS | 24              |

The Distributor lines are 3/16" or 1/4" diameter and 27" long.

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

Expansion valve selections based on +25°F Suction Temp and 8°F to 12°F evaporator TD.

Contact factory for operating conditions outside this range.

^ SBFTE and ERTE Expansion Valves are compatible with R454A refrigerant.

^ SBFVE, ERVE and OVE Expansion Valves are compatible with R454C and R455A refrigerants. For other valves, follow manufacturer's selection guidelines.

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

## LOOSE COMPONENTS REQUIRED FOR A2L ISOLATION CONTROL

**A<sub>MIN</sub>** (MINIMUM ALLOWABLE ROOM SIZE) VALUES // MEDIUM TEMPERATURE ELECTRIC DEFROST // 6 FPI

| Model No.     |             | A <sub>min</sub> Values (Ft <sup>2</sup> ) |                   |                   |                   |                   | Loose SSOV (solenoid shut off valve)<br>Isolation Valve @ Liquid Temp |            |            | Loose CSOV (check shut<br>off valve) Isolation CV |             |
|---------------|-------------|--------------------------------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------------------------------------------|------------|------------|---------------------------------------------------|-------------|
|               |             | 10 Ft<br>Line Run                          | 20 Ft<br>Line Run | 30 Ft<br>Line Run | 40 Ft<br>Line Run | 50 Ft<br>Line Run | Size                                                                  | 50°F       | 100°F      | Size                                              | Description |
| 6 FPI - R455A | RAM6D218*DA | 42                                         | 54                | 66                | 77                | 89                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D267*DA | 47                                         | 58                | 70                | 81                | 93                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D335*DA | 47                                         | 58                | 70                | 82                | 93                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D447*DA | 55                                         | 67                | 79                | 92                | 104               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D539*DA | 69                                         | 88                | 106               | 124               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D667*DA | 74                                         | 92                | 111               | 129               | 147               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D799*DA | 86                                         | 105               | 124               | 143               | 162               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D887*DA | 112                                        | 148               | 183               | 219               | 254               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D989*DA | 119                                        | 155               | 190               | 226               | 261               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
| 6 FPI - R454C | RAM6D218*DA | 41                                         | 52                | 63                | 74                | 86                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D267*DA | 45                                         | 56                | 67                | 78                | 90                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D335*DA | 45                                         | 56                | 68                | 79                | 90                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D447*DA | 53                                         | 65                | 77                | 88                | 100               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D539*DA | 67                                         | 85                | 102               | 120               | 138               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D667*DA | 71                                         | 89                | 107               | 125               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D799*DA | 83                                         | 101               | 120               | 138               | 157               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D887*DA | 108                                        | 143               | 177               | 212               | 246               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D989*DA | 115                                        | 150               | 184               | 219               | 253               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
| 6 FPI - R455A | RAM6D218*DA | 37                                         | 48                | 58                | 68                | 78                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D267*DA | 41                                         | 51                | 61                | 72                | 82                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D335*DA | 41                                         | 52                | 62                | 72                | 82                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM6D447*DA | 49                                         | 59                | 70                | 81                | 91                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D539*DA | 61                                         | 77                | 94                | 110               | 126               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D667*DA | 65                                         | 81                | 98                | 114               | 130               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-3/8"                                            | CSOV-11S    |
|               | RAM6D799*DA | 76                                         | 93                | 109               | 126               | 143               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D887*DA | 99                                         | 130               | 162               | 193               | 225               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |
|               | RAM6D989*DA | 105                                        | 137               | 168               | 200               | 231               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 1-5/8"                                            | CSOV-13S    |

Solenoid Shut Off Valves operate as double duty isolation/liquid line solenoid valve and are required to ship loose and be installed in the field, outside the refrigerated space.

SSOV/CSOV Selection Criteria: Maximum 10 Foot Line Rise, 100 Foot Line Run, 1:1 Condensing Unit/Evaporator.

Contact applications for additional lengths or design considerations.

A<sub>min</sub> values calculated using operating conditions included in UL 60335-2-89 101.DVU.1.2 and standard connection sizes (liquid and suction).

A<sub>min</sub> values provided for 10 Ft, 20 Ft, 30 Ft, 40 Ft and 50 Ft line lengths. Contact applications for additional lengths or design considerations.

A<sub>min</sub> values intended to determine compliance with UL 2-89 and is NOT for charging calculations.



## DISTRIBUTOR NOZZLES &amp; EXPANSION VALVES

LOW TEMPERATURE ELECTRIC DEFROST // 6 FPI

| Model No.     |             | Part Numbers        |            |                   |           |                  |        | No. of<br>Circuits |
|---------------|-------------|---------------------|------------|-------------------|-----------|------------------|--------|--------------------|
|               |             | Nozzle @ Liq. Temp. |            | TXV^ @ Liq. Temp. |           | EEV @ Liq. Temp. |        |                    |
|               |             | 50°F                | 100°F      | 50°F              | 100°F     | 50°F             | 100°F  |                    |
| 6 FPI - R454A | RAM6E181*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFTE-B-Z         | SBFTE-B-Z | SER-A            | SER-B  | 6                  |
|               | RAM6E217*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFTE-B-Z         | SBFTE-C-Z | SER-B            | SER-B  | 8                  |
|               | RAM6E371*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFTE-C-Z         | SBFTE-C-Z | SER-B            | SER-C  | 12                 |
|               | RAM6E446*DA | 3, TYPE G           | 6, TYPE G  | SBFTE-C-Z         | ERTE-8-Z  | SER-C            | SER-C  | 16                 |
|               | RAM6E557*DA | 4, TYPE G           | 10, TYPE G | ERTE-8-Z          | OTE-10-Z  | SER-C            | SER-C  | 18                 |
|               | RAM6E669*DA | 4, TYPE G           | 10, TYPE G | ERTE-8-Z          | OTE-15-Z  | SER-C            | SER-C  | 24                 |
|               | RAM6E741*DA | 5, TYPE G           | 15, TYPE G | OTE-10-Z          | OTE-15-Z  | SER-C            | SER-DS | 18                 |
|               | RAM6E890*DA | 6, TYPE G           | 15, TYPE G | OTE-15-Z          | OTE-20-Z  | SER-C            | SER-DS | 24                 |
| 6 FPI - R454C | RAM6E181*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-B            | SER-B  | 6                  |
|               | RAM6E217*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-B            | SER-C  | 8                  |
|               | RAM6E371*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM6E446*DA | 3, TYPE G           | 6, TYPE G  | ERVE-8-Z          | OVE-10-Z  | SER-C            | SER-C  | 16                 |
|               | RAM6E557*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-15-Z  | SER-C            | SER-C  | 18                 |
|               | RAM6E669*DA | 4, TYPE G           | 10, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-C            | SER-DS | 24                 |
|               | RAM6E741*DA | 5, TYPE G           | 15, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-C            | SER-DS | 18                 |
|               | RAM6E890*DA | 6, TYPE G           | 15, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-DS           | SER-DS | 24                 |
| 6 FPI - R455A | RAM6E181*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-B            | SER-B  | 6                  |
|               | RAM6E217*DA | 1-1/2, TYPE L       | 3, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-B            | SER-C  | 8                  |
|               | RAM6E371*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM6E446*DA | 3, TYPE G           | 6, TYPE G  | ERVE-8-Z          | OVE-10-Z  | SER-C            | SER-C  | 16                 |
|               | RAM6E557*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-15-Z  | SER-C            | SER-C  | 18                 |
|               | RAM6E669*DA | 4, TYPE G           | 10, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-C            | SER-DS | 24                 |
|               | RAM6E741*DA | 5, TYPE G           | 15, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-C            | SER-DS | 18                 |
|               | RAM6E890*DA | 6, TYPE G           | 15, TYPE G | OVE-15-Z          | OVE-20-Z  | SER-DS           | SER-DS | 24                 |

The Distributor lines are 3/16" or 1/4" diameter and 27" long.

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

Expansion valve selections based on -20°F Suction Temp and 8°F to 12°F evaporator TD.

Contact factory for operating conditions outside this range.

Do not use pressure limiting TXVs when the condensing unit includes a CPR valve.

<sup>^</sup> SBFTE, ERTE and OTE Expansion Valves are compatible with R454A refrigerant.

<sup>^</sup> SBFVE, ERVE and OVE Expansion Valves are compatible with R454C and R455A refrigerants. For other valves, follow manufacturer's selection guidelines.

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

## LOOSE COMPONENTS REQUIRED FOR A2L ISOLATION CONTROL

**A<sub>min</sub>** (MINIMUM ALLOWABLE ROOM SIZE) VALUES // LOW TEMPERATURE ELECTRIC DEFROST // 6 FPI

| Model No.     |             | A <sub>min</sub> Values (Ft <sup>2</sup> ) |                   |                   |                   |                   | Loose SSOV (solenoid shut off valve)<br>Isolation Valve @ Liquid Temp |            |            | Loose CSOV (check shut<br>off valve) Isolation CV |             |
|---------------|-------------|--------------------------------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------------------------------------------|------------|------------|---------------------------------------------------|-------------|
|               |             | 10 Ft<br>Line Run                          | 20 Ft<br>Line Run | 30 Ft<br>Line Run | 40 Ft<br>Line Run | 50 Ft<br>Line Run | Size                                                                  | 50°F       | 100°F      | Size                                              | Description |
| 6 FPI - R455A | RAM6E181*DA | 42                                         | 54                | 65                | 76                | 87                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E217*DA | 46                                         | 58                | 69                | 80                | 91                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E371*DA | 56                                         | 68                | 79                | 91                | 102               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM6E446*DA | 71                                         | 89                | 108               | 127               | 146               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E557*DA | 78                                         | 97                | 115               | 134               | 153               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E669*DA | 89                                         | 108               | 126               | 145               | 164               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E741*DA | 92                                         | 111               | 130               | 148               | 167               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E890*DA | 116                                        | 153               | 189               | 225               | 261               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 2-5/8"                                            | CSOV-21S    |
| 6 FPI - R454C | RAM6E181*DA | 41                                         | 52                | 63                | 74                | 85                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E217*DA | 45                                         | 56                | 67                | 78                | 88                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E371*DA | 54                                         | 65                | 77                | 88                | 99                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM6E446*DA | 68                                         | 87                | 105               | 123               | 141               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E557*DA | 75                                         | 94                | 112               | 130               | 148               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E669*DA | 86                                         | 104               | 122               | 140               | 158               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E741*DA | 89                                         | 107               | 125               | 144               | 162               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E890*DA | 113                                        | 148               | 183               | 218               | 253               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 2-5/8"                                            | CSOV-21S    |
| 6 FPI - R455A | RAM6E181*DA | 37                                         | 47                | 57                | 67                | 77                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E217*DA | 41                                         | 51                | 61                | 71                | 81                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM6E371*DA | 50                                         | 60                | 70                | 80                | 90                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM6E446*DA | 62                                         | 79                | 95                | 112               | 128               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E557*DA | 69                                         | 85                | 102               | 118               | 135               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E669*DA | 79                                         | 95                | 112               | 128               | 145               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E741*DA | 81                                         | 98                | 114               | 131               | 147               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM6E890*DA | 103                                        | 135               | 167               | 199               | 231               | 7/8"                                                                  | SSOV19S270 | SSOV19S270 | 2-5/8"                                            | CSOV-21S    |

Solenoid Shut Off Valves operate as double duty isolation/liquid line solenoid valve and are required to ship loose and be installed in the field, outside the refrigerated space.

SSOV/CSOV Selection Criteria: Maximum 10 Foot Line Rise, 100 Foot Line Run, 1:1 Condensing Unit/Evaporator.

Contact applications for additional lengths or design considerations.

A<sub>min</sub> values calculated using operating conditions included in UL 60335-2-89 101.DVU.1.2 and standard connection sizes (liquid and suction).

A<sub>min</sub> values provided for 10 Ft, 20 Ft, 30 Ft, 40 Ft and 50 Ft line lengths. Contact applications for additional lengths or design considerations.

A<sub>min</sub> values intended to determine compliance with UL 2-89 and is NOT for charging calculations.

## DISTRIBUTOR NOZZLES &amp; EXPANSION VALVES

LOW TEMPERATURE ELECTRIC DEFROST // 4 FPI

| Model No.     |             | Part Numbers        |            |                   |           |                  |        | No. of<br>Circuits |
|---------------|-------------|---------------------|------------|-------------------|-----------|------------------|--------|--------------------|
|               |             | Nozzle @ Liq. Temp. |            | TXV^ @ Liq. Temp. |           | EEV @ Liq. Temp. |        |                    |
|               |             | 50°F                | 100°F      | 50°F              | 100°F     | 50°F             | 100°F  |                    |
| 4 FPI - R454A | RAM4E129*DA | 1, TYPE L           | 2, TYPE L  | SBFTE-A-Z         | SBFTE-B-Z | SER-A            | SER-A  | 4                  |
|               | RAM4E168*DA | 1, TYPE L           | 2, TYPE L  | SBFTE-B-Z         | SBFTE-B-Z | SER-A            | SER-B  | 6                  |
|               | RAM4E271*DA | 2, TYPE G           | 4, TYPE G  | SBFTE-B-Z         | SBFTE-C-Z | SER-B            | SER-B  | 9                  |
|               | RAM4E340*DA | 2-1/2, TYPE G       | 4, TYPE G  | SBFTE-C-Z         | SBFTE-C-Z | SER-B            | SER-C  | 12                 |
|               | RAM4E398*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFTE-C-Z         | ERTE-8-Z  | SER-C            | SER-C  | 12                 |
|               | RAM4E495*DA | 4, TYPE G           | 10, TYPE G | SBFTE-C-Z         | ERTE-8-Z  | SER-C            | SER-C  | 16                 |
|               | RAM4E529*DA | 4, TYPE G           | 10, TYPE G | SBFTE-C-Z         | ERTE-8-Z  | SER-C            | SER-C  | 18                 |
|               | RAM4E658*DA | 5, TYPE G           | 10, TYPE G | ERTE-8-Z          | OTE-15-Z  | SER-C            | SER-C  | 24                 |
| 4 FPI - R454C | RAM4E129*DA | 1, TYPE L           | 2, TYPE L  | SBFVE-B-Z         | SBFVE-B-Z | SER-A            | SER-B  | 4                  |
|               | RAM4E168*DA | 1, TYPE L           | 2, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-A            | SER-B  | 6                  |
|               | RAM4E271*DA | 2, TYPE G           | 4, TYPE G  | SBFVE-C-Z         | SBFVE-C-Z | SER-B            | SER-C  | 9                  |
|               | RAM4E340*DA | 2-1/2, TYPE G       | 4, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM4E398*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM4E495*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-10-Z  | SER-C            | SER-C  | 16                 |
|               | RAM4E529*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-15-Z  | SER-C            | SER-C  | 18                 |
|               | RAM4E658*DA | 5, TYPE G           | 10, TYPE G | OVE-10-Z          | OVE-20-Z  | SER-C            | SER-DS | 24                 |
| 4 FPI - R455A | RAM4E129*DA | 1, TYPE L           | 2, TYPE L  | SBFVE-B-Z         | SBFVE-B-Z | SER-A            | SER-B  | 4                  |
|               | RAM4E168*DA | 1, TYPE L           | 2, TYPE L  | SBFVE-B-Z         | SBFVE-C-Z | SER-A            | SER-B  | 6                  |
|               | RAM4E271*DA | 2, TYPE G           | 4, TYPE G  | SBFVE-C-Z         | SBFVE-C-Z | SER-B            | SER-C  | 9                  |
|               | RAM4E340*DA | 2-1/2, TYPE G       | 4, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM4E398*DA | 2-1/2, TYPE G       | 6, TYPE G  | SBFVE-C-Z         | OVE-10-Z  | SER-C            | SER-C  | 12                 |
|               | RAM4E495*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-10-Z  | SER-C            | SER-C  | 16                 |
|               | RAM4E529*DA | 4, TYPE G           | 10, TYPE G | ERVE-8-Z          | OVE-15-Z  | SER-C            | SER-C  | 18                 |
|               | RAM4E658*DA | 5, TYPE G           | 10, TYPE G | OVE-10-Z          | OVE-20-Z  | SER-C            | SER-DS | 24                 |

The Distributor lines are 3/16" or 1/4" diameter and 27" long.

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

Expansion valve selections based on -20 Suction Temp and 8F to 12F evaporator TD.

Contact factory for operating conditions outside this range.

Do not use pressure limiting TXVs when the condensing unit includes a CPR valve.

<sup>^</sup> SBFTE, ERTE and OTE Expansion Valves are compatible with R454A refrigerant.

<sup>^</sup> SBFVE, ERVE and OVE Expansion Valves are compatible with R454C and R455A refrigerants. For other valves, follow manufacturer's selection guidelines.

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

## LOOSE COMPONENTS REQUIRED FOR A2L ISOLATION CONTROL

**A<sub>min</sub>** (MINIMUM ALLOWABLE ROOM SIZE) VALUES // LOW TEMPERATURE ELECTRIC DEFROST // 4 FPI

| Model No.     |             | A <sub>min</sub> Values (Ft <sup>2</sup> ) |                   |                   |                   |                   | Loose SSOV (solenoid shut off valve)<br>Isolation Valve @ Liquid Temp |            |            | Loose CSOV (check shut<br>off valve) Isolation CV |             |
|---------------|-------------|--------------------------------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------------------------------------------|------------|------------|---------------------------------------------------|-------------|
|               |             | 10 Ft<br>Line Run                          | 20 Ft<br>Line Run | 30 Ft<br>Line Run | 40 Ft<br>Line Run | 50 Ft<br>Line Run | Size                                                                  | 50°F       | 100°F      | Size                                              | Description |
| 4 FPI - R455A | RAM4E129*DA | 42                                         | 53                | 64                | 75                | 86                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM4E168*DA | 46                                         | 58                | 69                | 80                | 91                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM4E271*DA | 55                                         | 66                | 78                | 89                | 101               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E340*DA | 62                                         | 73                | 85                | 97                | 108               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E398*DA | 67                                         | 80                | 92                | 105               | 117               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E495*DA | 85                                         | 103               | 122               | 141               | 159               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E529*DA | 92                                         | 111               | 130               | 148               | 167               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E658*DA | 103                                        | 119               | 137               | 155               | 174               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
| 4 FPI - R454C | RAM4E129*DA | 41                                         | 51                | 62                | 73                | 83                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM4E168*DA | 45                                         | 56                | 67                | 77                | 88                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM4E271*DA | 53                                         | 64                | 75                | 86                | 97                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E340*DA | 60                                         | 71                | 82                | 93                | 105               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E398*DA | 65                                         | 77                | 89                | 101               | 113               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E495*DA | 82                                         | 100               | 118               | 136               | 154               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E529*DA | 89                                         | 107               | 125               | 144               | 162               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E658*DA | 99                                         | 116               | 134               | 153               | 170               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
| 4 FPI - R455A | RAM4E129*DA | 37                                         | 47                | 57                | 66                | 76                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-1/8"                                            | CSOV-9S     |
|               | RAM4E168*DA | 41                                         | 51                | 61                | 71                | 81                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-3/8"                                            | CSOV-11S    |
|               | RAM4E271*DA | 48                                         | 58                | 69                | 79                | 89                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E340*DA | 55                                         | 65                | 75                | 85                | 96                | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 1-5/8"                                            | CSOV-13S    |
|               | RAM4E398*DA | 59                                         | 70                | 81                | 92                | 103               | 1/2"                                                                  | SSOV6S140  | SSOV6S140  | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E495*DA | 75                                         | 91                | 108               | 124               | 141               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E529*DA | 81                                         | 98                | 114               | 130               | 148               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |
|               | RAM4E658*DA | 91                                         | 107               | 114               | 139               | 157               | 5/8"                                                                  | SSOV10S150 | SSOV10S150 | 2-1/8"                                            | CSOV-17S    |

Solenoid Shut Off Valves operate as double duty isolation/liquid line solenoid valve and are required to ship loose and be installed in the field, outside the refrigerated space.

SSOV/CSOV Selection Criteria: Maximum 10 Foot Line Rise, 100 Foot Line Run, 1:1 Condensing Unit/Evaporator.

Contact applications for additional lengths or design considerations.

A<sub>min</sub> values calculated using operating conditions included in UL 60335-2-89 101.DVU.1.2 and standard connection sizes (liquid and suction).

A<sub>min</sub> values provided for 10 Ft, 20 Ft, 30 Ft, 40 Ft and 50 Ft line lengths. Contact applications for additional lengths or design considerations.

A<sub>min</sub> values intended to determine compliance with UL 2-89 and is NOT for charging calculations.

## PHYSICAL SPECIFICATIONS

### AIR DEFROST MODELS

| Model No. |             | Fan Diam.<br>(In.) | Motor Data |     |     | Refrigerant Connections  |                      | No. of Hangers Slot Location | Fig. | Unit Dimensions (In.) |         |        | Approx. Unit Wt. (Lbs.) |
|-----------|-------------|--------------------|------------|-----|-----|--------------------------|----------------------|------------------------------|------|-----------------------|---------|--------|-------------------------|
|           |             |                    | Motor Qty. | HP  | RPM | Liquid Line <sup>^</sup> | Suction <sup>^</sup> |                              |      | L                     | W       | H      |                         |
| 6 FPI     | RAM6A219*DA | 24                 | 1          | 1/3 | 850 | 3/8                      | 7/8                  | 4                            | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                     |
|           | RAM6A268*DA | 24                 | 1          | 1/3 | 850 | 3/8                      | 7/8                  | 4                            | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                     |
|           | RAM6A336*DA | 24                 | 2          | 1/3 | 850 | 1/2                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6A448*DA | 24                 | 2          | 1/3 | 850 | 1/2                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6A540*DA | 24                 | 2          | 1/3 | 850 | 5/8                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6A668*DA | 24                 | 3          | 1/3 | 850 | 5/8                      | 1-3/8                | 8                            | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 316                     |
|           | RAM6A800*DA | 24                 | 3          | 1/3 | 850 | 5/8                      | 1-3/8                | 8                            | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 316                     |
|           | RAM6A888*DA | 24                 | 4          | 1/3 | 850 | 7/8                      | 1-5/8                | 10                           | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                     |
|           | RAM6A990*DA | 24                 | 4          | 1/3 | 850 | 7/8                      | 1-5/8                | 10                           | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                     |

### MEDIUM TEMPERATURE ELECTRIC DEFROST MODELS

| Model No. |             | Fan Diam.<br>(In.) | Motor Data |     |     | Refrigerant Connections  |                      | No. of Hangers Slot Location | Fig. | Unit Dimensions (In.) |         |        | Approx. Unit Wt. (Lbs.) |
|-----------|-------------|--------------------|------------|-----|-----|--------------------------|----------------------|------------------------------|------|-----------------------|---------|--------|-------------------------|
|           |             |                    | Motor Qty. | HP  | RPM | Liquid Line <sup>^</sup> | Suction <sup>^</sup> |                              |      | L                     | W       | H      |                         |
| 6 FPI     | RAM6D218*DA | 24                 | 1          | 1/3 | 850 | 3/8                      | 7/8                  | 4                            | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                     |
|           | RAM6D267*DA | 24                 | 1          | 1/3 | 850 | 3/8                      | 7/8                  | 4                            | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                     |
|           | RAM6D335*DA | 24                 | 2          | 1/3 | 850 | 1/2                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6D447*DA | 24                 | 2          | 1/3 | 850 | 1/2                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6D539*DA | 24                 | 2          | 1/3 | 850 | 5/8                      | 1-1/8                | 6                            | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                     |
|           | RAM6D667*DA | 24                 | 3          | 1/3 | 850 | 5/8                      | 1-3/8                | 8                            | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 316                     |
|           | RAM6D799*DA | 24                 | 3          | 1/3 | 850 | 5/8                      | 1-3/8                | 8                            | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 316                     |
|           | RAM6D887*DA | 24                 | 4          | 1/3 | 850 | 7/8                      | 1-5/8                | 10                           | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                     |
|           | RAM6D989*DA | 24                 | 4          | 1/3 | 850 | 7/8                      | 1-5/8                | 10                           | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                     |

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

<sup>^</sup> For units with mounted TXV components, See Nozzle TXV table for distributor connection size when a TXV is field supplied.

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

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

For shipping dimensions and weights, see the Shipping information included with each dimensional drawing.

# PHYSICAL SPECIFICATIONS

## LOW TEMPERATURE ELECTRIC DEFROST MODELS

| Model No.<br>RM*E/G/H |             | Fan<br>Diam.<br>(In.) | Motor Data    |     |     | Refrigerant<br>Connections |          | No. of<br>Hangers<br>Slot<br>Location | Fig. | Unit Dimensions (In.) |         |        | Approx.<br>Unit Wt.<br>(Lbs.) |
|-----------------------|-------------|-----------------------|---------------|-----|-----|----------------------------|----------|---------------------------------------|------|-----------------------|---------|--------|-------------------------------|
|                       |             |                       | Motor<br>Qty. | HP  | RPM | Liquid<br>Line^            | Suction^ |                                       |      | L                     | W       | H      |                               |
| 6 FPI                 | RAM6E181*DA | 24                    | 1             | 1/3 | 850 | 3/8                        | 1-1/8    | 4                                     | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                           |
|                       | RAM6E217*DA | 24                    | 1             | 1/3 | 850 | 3/8                        | 1-1/8    | 4                                     | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                           |
|                       | RAM6E371*DA | 24                    | 2             | 1/3 | 850 | 1/2                        | 1-5/8    | 6                                     | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                           |
|                       | RAM6E446*DA | 24                    | 2             | 1/3 | 850 | 5/8                        | 1-5/8    | 6                                     | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                           |
|                       | RAM6E557*DA | 24                    | 3             | 1/3 | 850 | 5/8                        | 2-1/8    | 8                                     | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 320                           |
|                       | RAM6E669*DA | 24                    | 3             | 1/3 | 850 | 5/8                        | 2-1/8    | 8                                     | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 320                           |
|                       | RAM6E741*DA | 24                    | 4             | 1/3 | 850 | 5/8                        | 2-1/8    | 10                                    | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                           |
|                       | RAM6E890*DA | 24                    | 4             | 1/3 | 850 | 7/8                        | 2-5/8    | 10                                    | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                           |
| 4 FPI                 | RAM4E129*DA | 24                    | 1             | 1/3 | 850 | 3/8                        | 1-1/8    | 4                                     | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                           |
|                       | RAM4E168*DA | 24                    | 1             | 1/3 | 850 | 3/8                        | 1-1/8    | 4                                     | 1    | 47-1/2                | 21-5/16 | 33-7/8 | 120                           |
|                       | RAM4E271*DA | 24                    | 2             | 1/3 | 850 | 1/2                        | 1-3/8    | 6                                     | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                           |
|                       | RAM4E340*DA | 24                    | 2             | 1/3 | 850 | 1/2                        | 1-3/8    | 6                                     | 2    | 80-1/2                | 21-5/16 | 33-7/8 | 220                           |
|                       | RAM4E398*DA | 24                    | 3             | 1/3 | 850 | 1/2                        | 1-5/8    | 8                                     | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 320                           |
|                       | RAM4E495*DA | 24                    | 3             | 1/3 | 850 | 5/8                        | 1-5/8    | 8                                     | 3    | 113-9/16              | 21-5/16 | 33-7/8 | 320                           |
|                       | RAM4E529*DA | 24                    | 4             | 1/3 | 850 | 5/8                        | 2-1/8    | 10                                    | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                           |
|                       | RAM4E658*DA | 24                    | 4             | 1/3 | 850 | 5/8                        | 2-1/8    | 10                                    | 4    | 146-9/16              | 21-5/16 | 33-7/8 | 420                           |

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

^ For units with mounted TXV components, See Nozzle TXV table for distributor connection size when a TXV is field supplied.

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

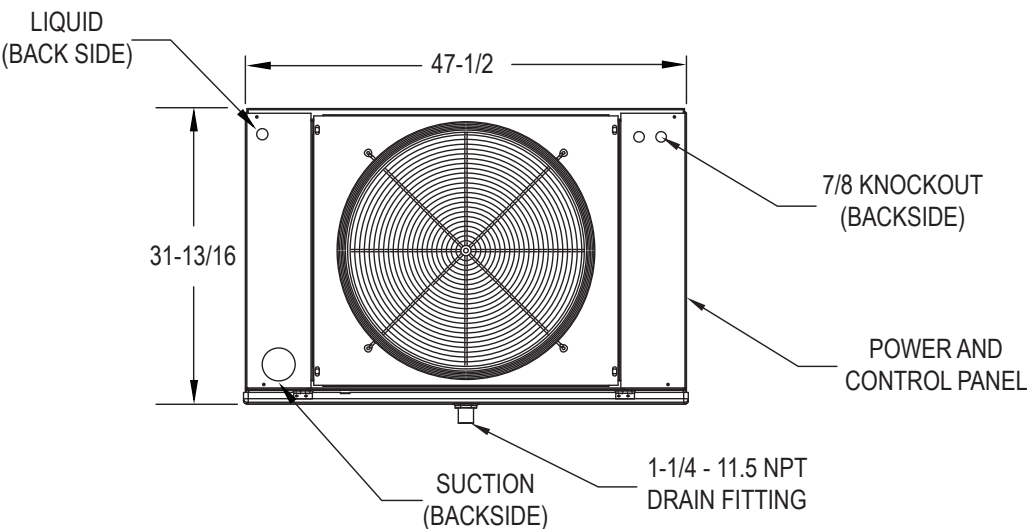
Drain connection is 1-1/4" NPT for all models.

For shipping dimensions and weights, see the Shipping information included with each dimensional drawing.

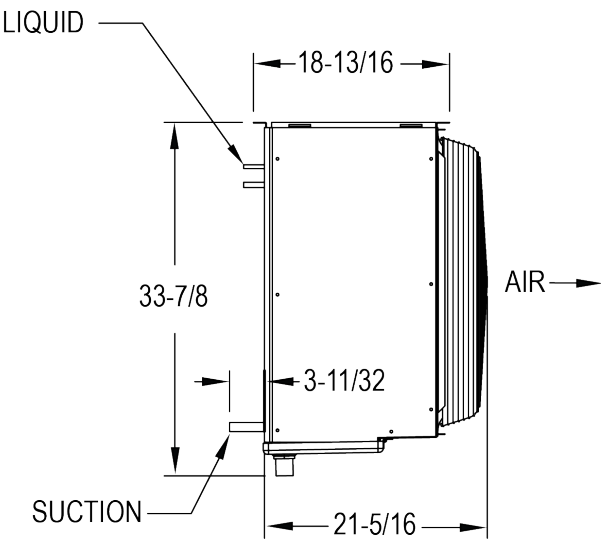
DIMENSIONAL DRAWINGS

Figure 1: Single Fan

Front View



Side View



Top View

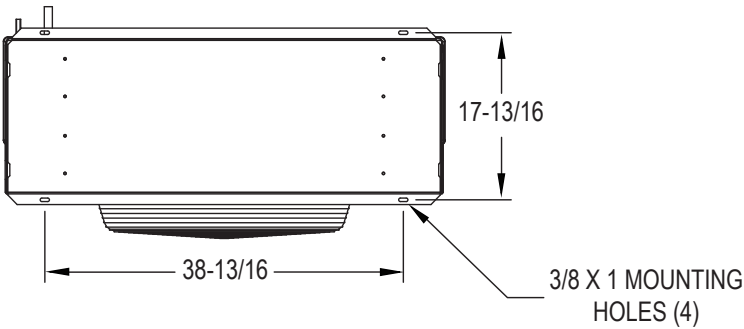


FIGURE 1: SHIPPING INFORMATION

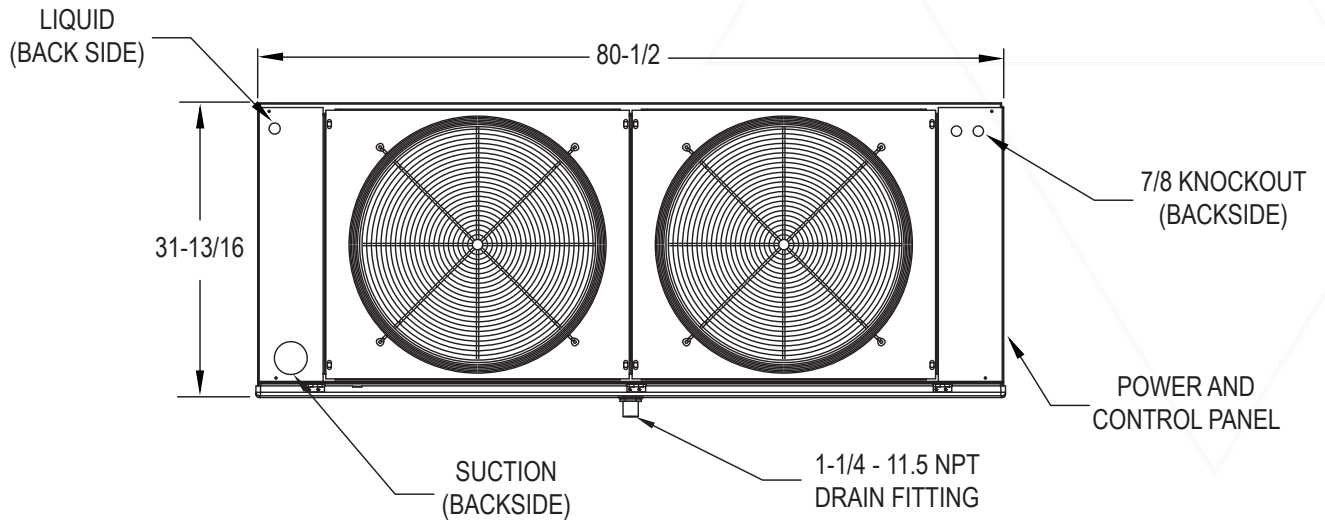
| No. of Fans | Shipping Dimensions (Inches) |        |        | Shipping Weight (Lbs) |
|-------------|------------------------------|--------|--------|-----------------------|
|             | L                            | W      | H      |                       |
| 1           | 60                           | 43-1/4 | 48-1/2 | 346                   |

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

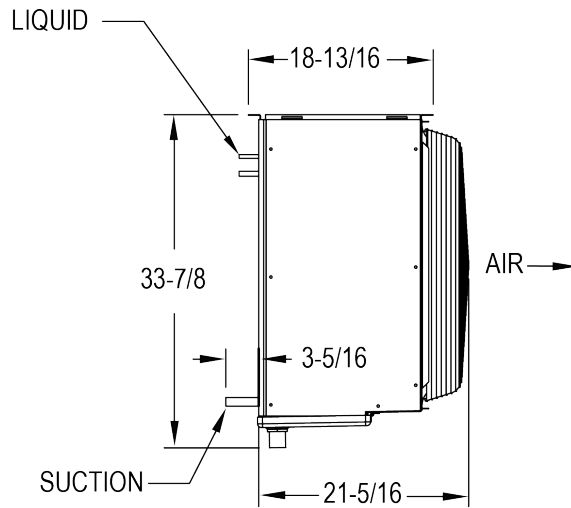
## DIMENSIONAL DRAWINGS

**Figure 2: Two Fan**

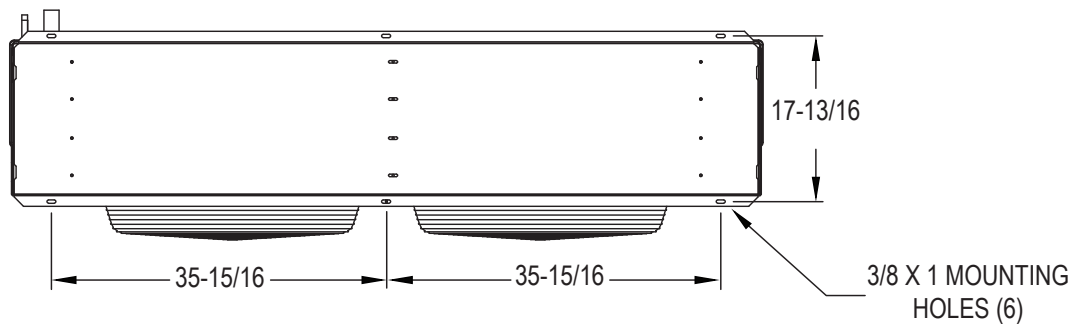
Front View



Side View



Top View



**FIGURE 2: SHIPPING INFORMATION**

| No. of Fans | Shipping Dimensions (Inches) |        |        | Shipping Weight (Lbs) |
|-------------|------------------------------|--------|--------|-----------------------|
|             | L                            | W      | H      |                       |
| 2           | 93                           | 43-1/4 | 48-1/2 | 510                   |

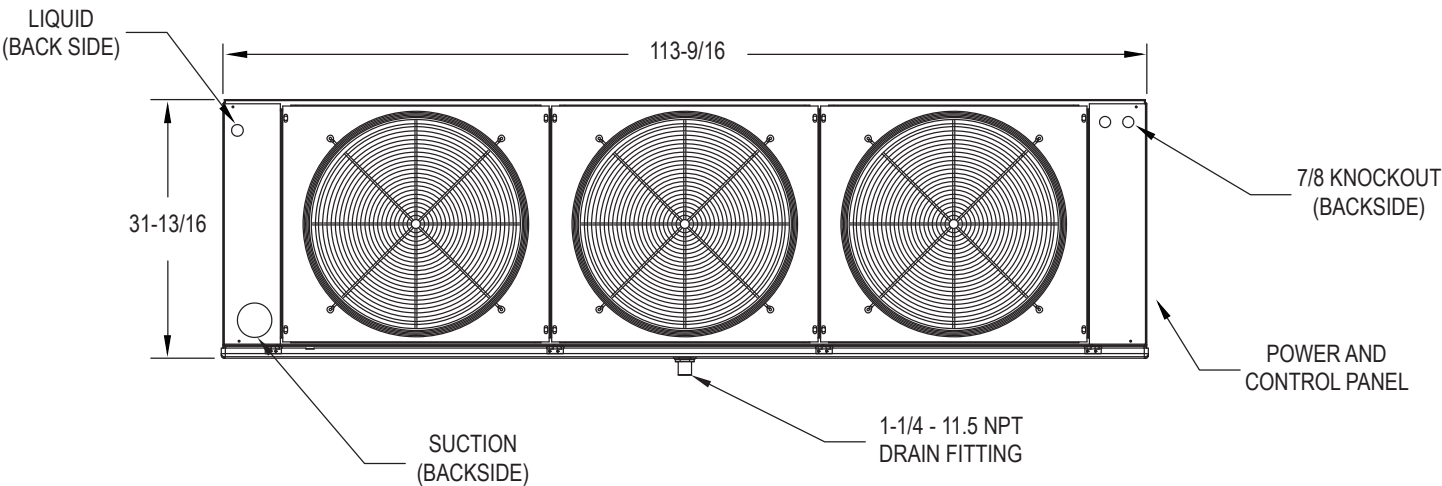
All mounting holes are 3/8" diameter. All dimensions are in inches.



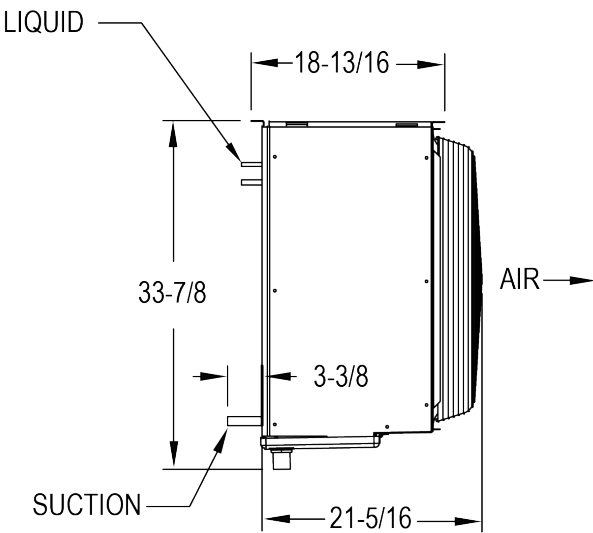
DIMENSIONAL DRAWINGS

Figure 3: Three Fan

Front View



Side View



Top View

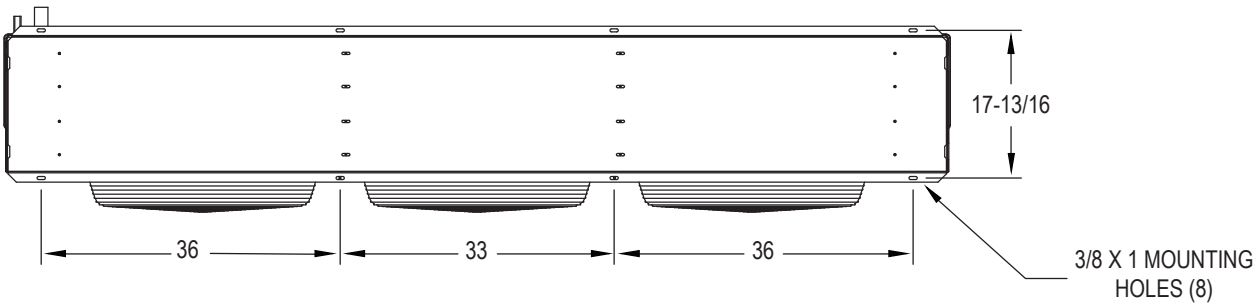


FIGURE 3: SHIPPING INFORMATION

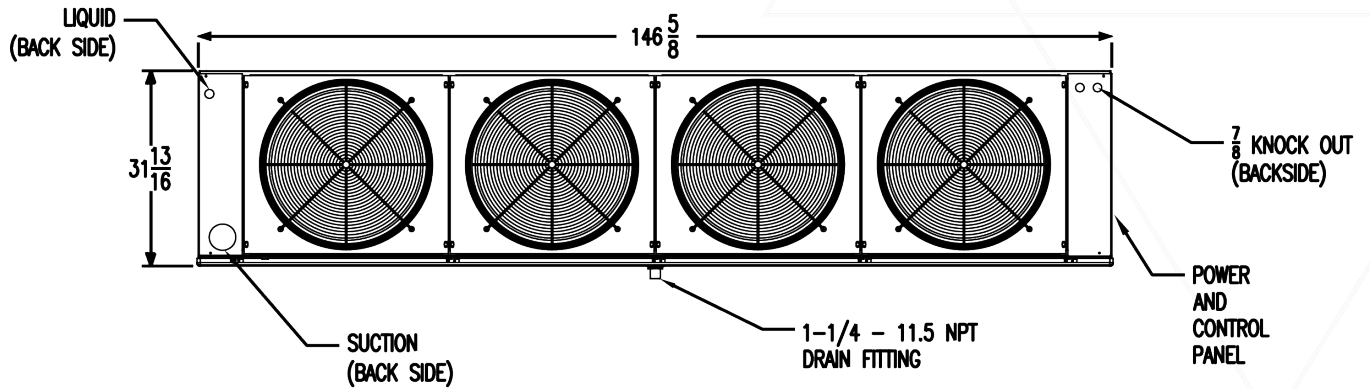
| No. of Fans | Shipping Dimensions (Inches) |        |        | Shipping Weight (Lbs) |
|-------------|------------------------------|--------|--------|-----------------------|
|             | L                            | W      | H      |                       |
| 3           | 120                          | 43-1/4 | 48-1/2 | 673                   |

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

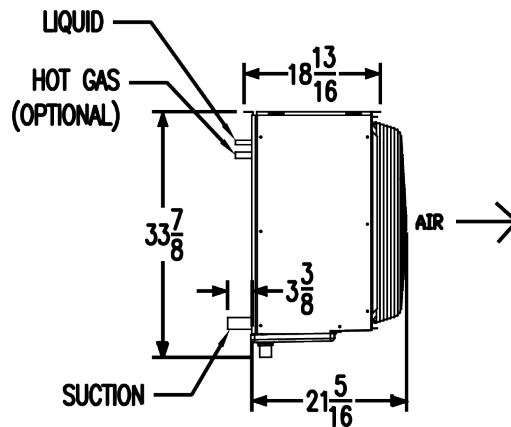
## DIMENSIONAL DRAWINGS

Figure 4: Four Fan

Front View



Side View



Top View

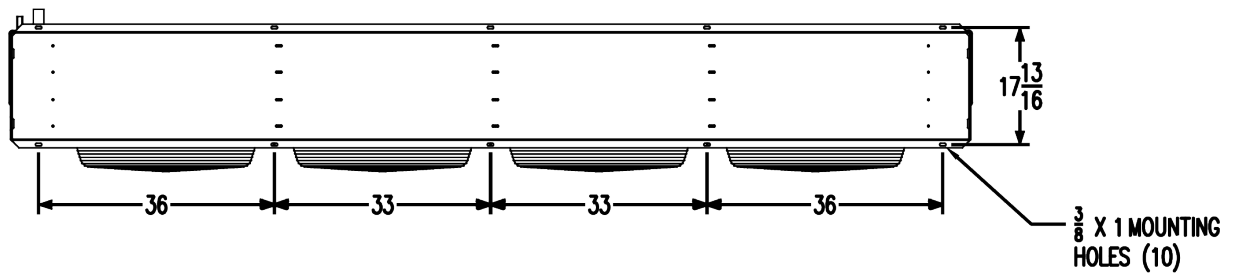


FIGURE 4: SHIPPING INFORMATION

| No. of Fans | Shipping Dimensions (Inches) |        |        | Shipping Weight (Lbs) |
|-------------|------------------------------|--------|--------|-----------------------|
|             | L                            | W      | H      |                       |
| 4           | 160                          | 43-1/4 | 48-1/2 | 843                   |

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

## 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.

Published application ratings are a guideline for proper equipment selection. They account for true operating conditions experienced by equipment.

### AWEF RATINGS // COOLER AND FREEZER MODELS

| Department of Energy Annual Walk-In Energy Factor (AWEF) Ratings |                           |     |      |
|------------------------------------------------------------------|---------------------------|-----|------|
| Base Model No.                                                   | Defrost Type              | FPI | AWEF |
| <b>COOLER MODELS<sup>1</sup></b>                                 |                           |     |      |
| RAM6A219*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A268*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A336*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A448*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A540*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A668*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A800*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A888*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6A990*DA                                                      | Air Defrost               | 6   | 9    |
| RAM6D218*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D267*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D335*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D447*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D539*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D667*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D799*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D887*DA                                                      | Med Temp Electric Defrost | 6   | 9    |
| RAM6D989*DA                                                      | Med Temp Electric Defrost | 6   | 9    |

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

<sup>1</sup> 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."

<sup>2</sup> 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."

| Department of Energy Annual Walk-In Energy Factor (AWEF) Ratings |                           |     |      |
|------------------------------------------------------------------|---------------------------|-----|------|
| Base Model No.                                                   | Defrost Type              | FPI | AWEF |
| <b>FREEZER MODELS<sup>2</sup></b>                                |                           |     |      |
| RAM6E181*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E217*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E371*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E446*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E557*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E669*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E741*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM6E890*DA                                                      | Low Temp Electric Defrost | 6   | 4.15 |
| RAM4E129*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E168*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E271*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E340*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E398*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E495*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E529*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |
| RAM4E658*DA                                                      | Low Temp Electric Defrost | 4   | 4.15 |





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