50PM16−28
Single Package Rooftop Units
Electric Cooling with Electric Heat Option and
Electromechanical Controls with PURON® (R−410A) Refrigerant

Carrier®
Turn to the Experts℠

Installation Instructions

TABLE OF CONTENTS

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform the basic maintenance functions of replacing filters. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for unbrazing operations. Have fire extinguishers available for all brazing operations.

Recognize safety information. This is the safety−alert symbol ⚠. When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety−alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ WARNING

UNIT OPERATION AND SAFETY HAZARD

Failure to follow this warning could cause personal injury, death and/or equipment damage.

Puron® (R−410A) refrigerant systems operate at higher pressures than standard R−22 systems. Do not use R−22 service equipment or components on Puron refrigerant equipment.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could cause personal injury or death.

Before performing service or maintenance operations on unit, turn off main power switch to unit and install lockout tag. Ensure electrical service to rooftop unit agrees with voltage and amperage listed on the unit rating plate.

Printed in U.S.A. Edition Date: 4/09 **Catalog No:50PM−03SI**

Replaces:50PM−1SI

IMPORTANT: Units have high ambient operating limits. If limits are exceeded, the units will automatically lock the compressor out of operation. Manual reset will be required to restart the compressor.

INSTALLATION

Step 1 — Provide Unit Support

Roof Curb

Assemble or install accessory roof curb in accordance with instructions shipped with this accessory. (See Fig. 1.) Install insulation, cant strips, roofing, and counter flashing as shown. Ductwork can be installed to roof curb before unit is set in place. Ductwork must be attached to curb and not to unit. Curb must be level. This is necessary to permit unit drain to function properly. Unit leveling tolerance is ± $^1/_{16}$-in. per linear ft in any direction. Refer to Accessory Roof Curb Installation Instructions for additional information as required.

When accessory roof curb is used, unit may be installed on class A, B, or C roof covering material. Carrier roof curb accessories are for flat roofs or slab mounting.

IMPORTANT: The gasketing of the unit to the roof curb is critical for a watertight seal. Install gasket with the roof curb as shown in Fig. 1. Improperly applied gasket can also result in air leaks and poor unit performance. Do not slide unit to position on roof curb.

Alternate Unit Support

When a curb cannot be used, install unit on a noncombustible surface. Support unit with sleepers, using unit curb support area. If sleepers cannot be used, support long sides of unit with a minimum of 3 equally spaced 4-in. x 4-in. pads on each side.

Slab Mount (Horizontal Units Only)

Provide a level concrete slab that extends a minimum of 6 in. beyond unit cabinet. Install a gravel apron in front of condenser coil air inlet to prevent grass and foliage from obstructing airflow.

NOTE: Horizontal units may be installed on a roof curb if required.

Step 2 — Remove Shipping Rails

Remove shipping rails prior to lowering unit onto roof curb. See Fig. 2. The rails are attached to the unit at both the return end and condenser end. Remove the screws from both ends of each rail. Be careful not to drop the rails onto any surface that could be damaged. Discard the rails. It is important to replace the screws into the unit to avoid any air or water leakage.

⚠ CAUTION

UNIT OR PROPERTY DAMAGE HAZARD

Failure to follow this caution may result in equipment or property damage.

Do not allow the shipping rail to drop on the roof surface. Damage to the roof surface may result.

Step 3 — Rig and Place Unit

Inspect unit for transportation damage. See Tables 1-3 for physical data. File any claim with transportation agency.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

All panels must be in place when rigging. Unit is not designed for handling by fork truck.

Do not drop unit; keep upright. Use spreader bars over unit to prevent sling or cable damage. Rollers may be used to move unit across a roof. Level by using unit frame as a reference; leveling tolerance is ± $^1/_{16}$-in. per linear ft in any direction. See Fig. 3 for additional information and unit rigging weight.

Four lifting holes are provided in the unit base rails as shown in Fig. 3. Refer to rigging instructions on unit.

Positioning

Maintain clearance, per Fig. 4, around and above unit to provide minimum distance from combustible materials, proper airflow, and service access.

Do not install unit in an indoor location. Do not locate air inlets near exhaust vents or other sources of contaminated air.

Although unit is weatherproof, guard against water from higher level runoff and overhangs.

Roof Mount

Check building codes for weight distribution requirements. Unit operating weight is shown in Table 1.

Installation onto Curb

The 50PM units are designed to fit on the accessory full perimeter curb. Correct placement of the unit onto the curb is critical to operating performance. To aid in correct positioning, $^3/_8$-in. diameter locating holes have been added to the unit base rails. When placing the unit, these holes should line up with the roof curb edge as shown in Fig. 5 and 6, to assure proper duct opening alignment. For placement on the curb, use the alignment holes located approximately 2-in. from the end of the base rail on the return end of the unit. See labels on the side of the unit for more details.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Do not slide unit to position when it is sitting on the curb. Curb gasketing material may be damaged and leaks may result.

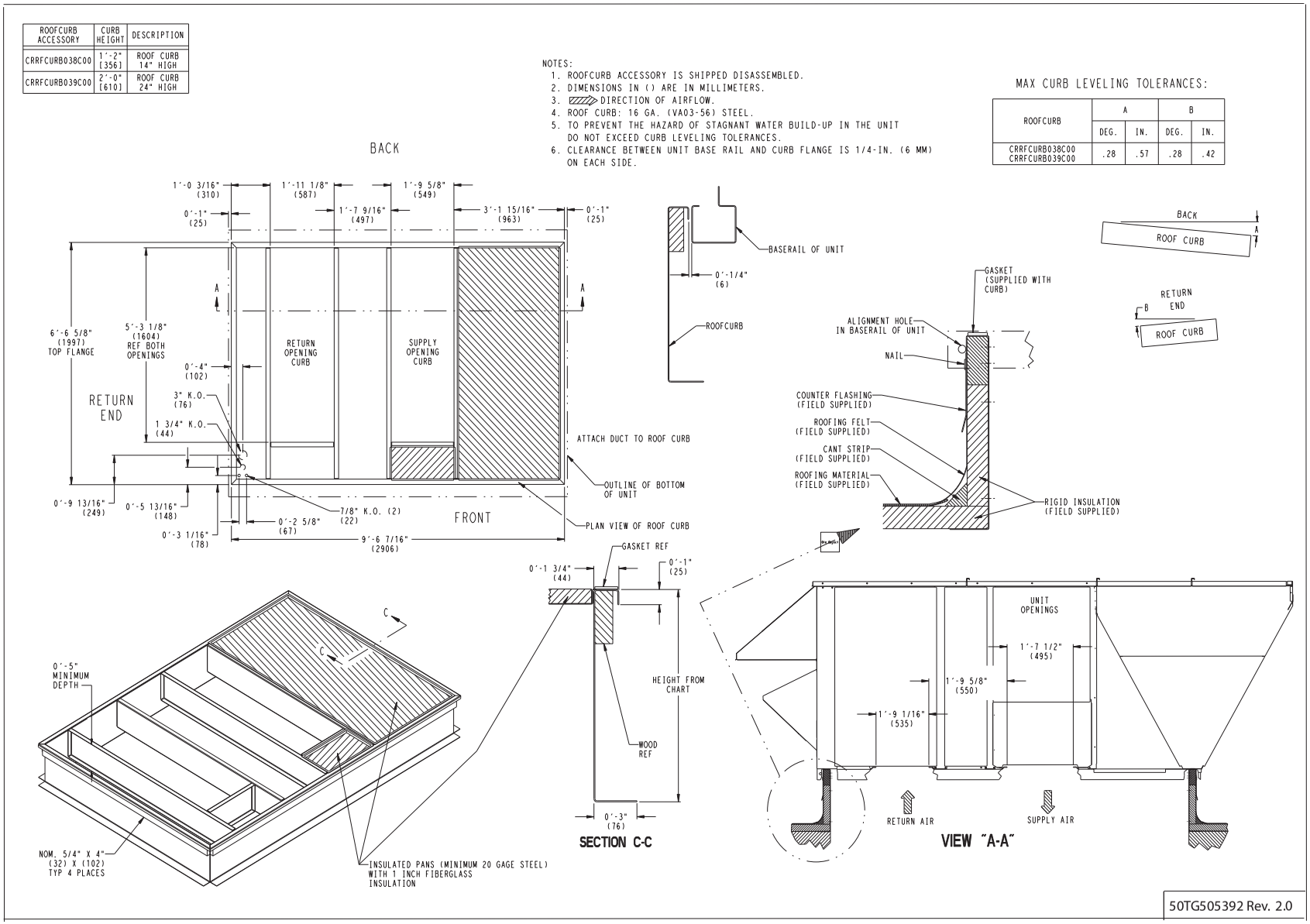
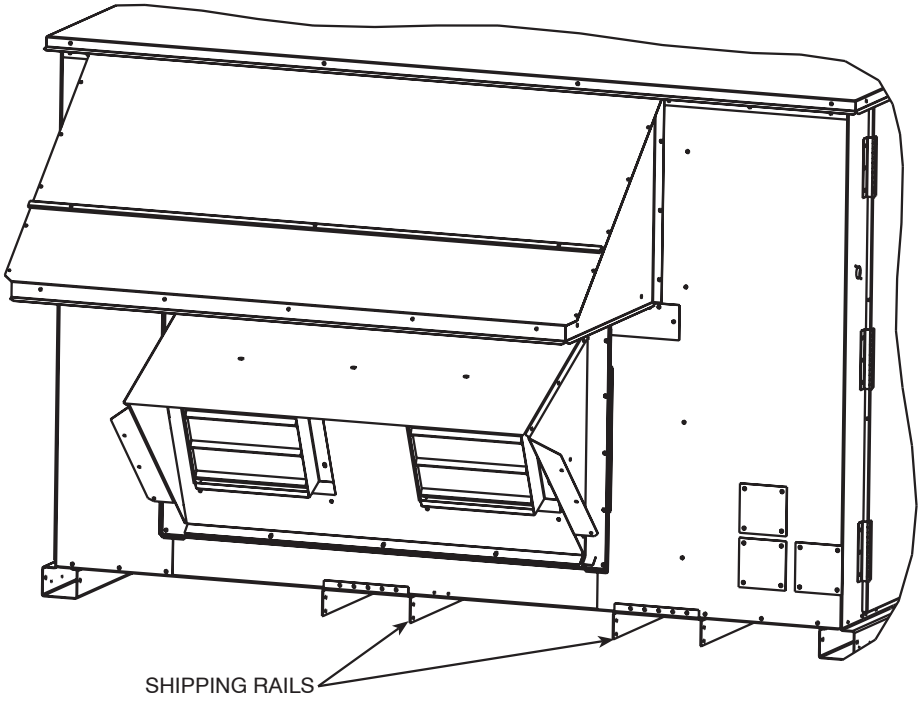


Fig. 1 - Roof Curb Details

C07327



C06273

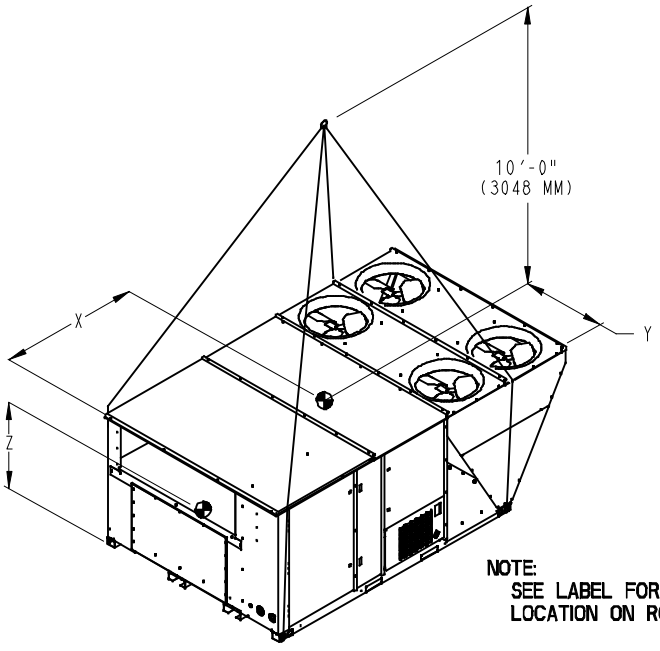
Fig. 2 - Shipping Rail Removal

CAUTION - NOTICE TO RIGGERS:

ALL PANELS MUST BE IN PLACE WHEN RIGGING.

NOTICE TO RIGGERS: Rig by inserting hooks into unit base rails as shown. Maintain a distance of 120 inches (3048 MM) from top of unit to eyehook. Leave coil cover attached to unit while rigging to protect coil of unit from damage.

UNIT SIZE	MAX WEIGHT (LBS)	CENTER OF GRAVITY (IN)		
		X	Y	Z
PG20	3825	73.0	36.0	30.5
PG24	4075	77.5	36.7	31.0
PG28	4300	70.9	35.1	34.3
PM16	3293	62.0	34.5	30.0
PM20	3338	62.0	34.5	30.0
PM24	3371	62.0	34.5	30.0
PM28	3633	66.0	34.5	34.5
PG20 ERV	4526	172.7	86.6	29.6
PG24 ERV	4698	172.7	86.6	29.6
PG28 ERV	4968	158.9	86.6	33.2
PM16 ERV	4330	74.5	38.0	29.0
PM20 ERV	4375	74.5	38.0	29.0
PM24 ERV	4454	74.5	38.0	29.0
PM28 ERV	4689	79.0	38.0	32.5



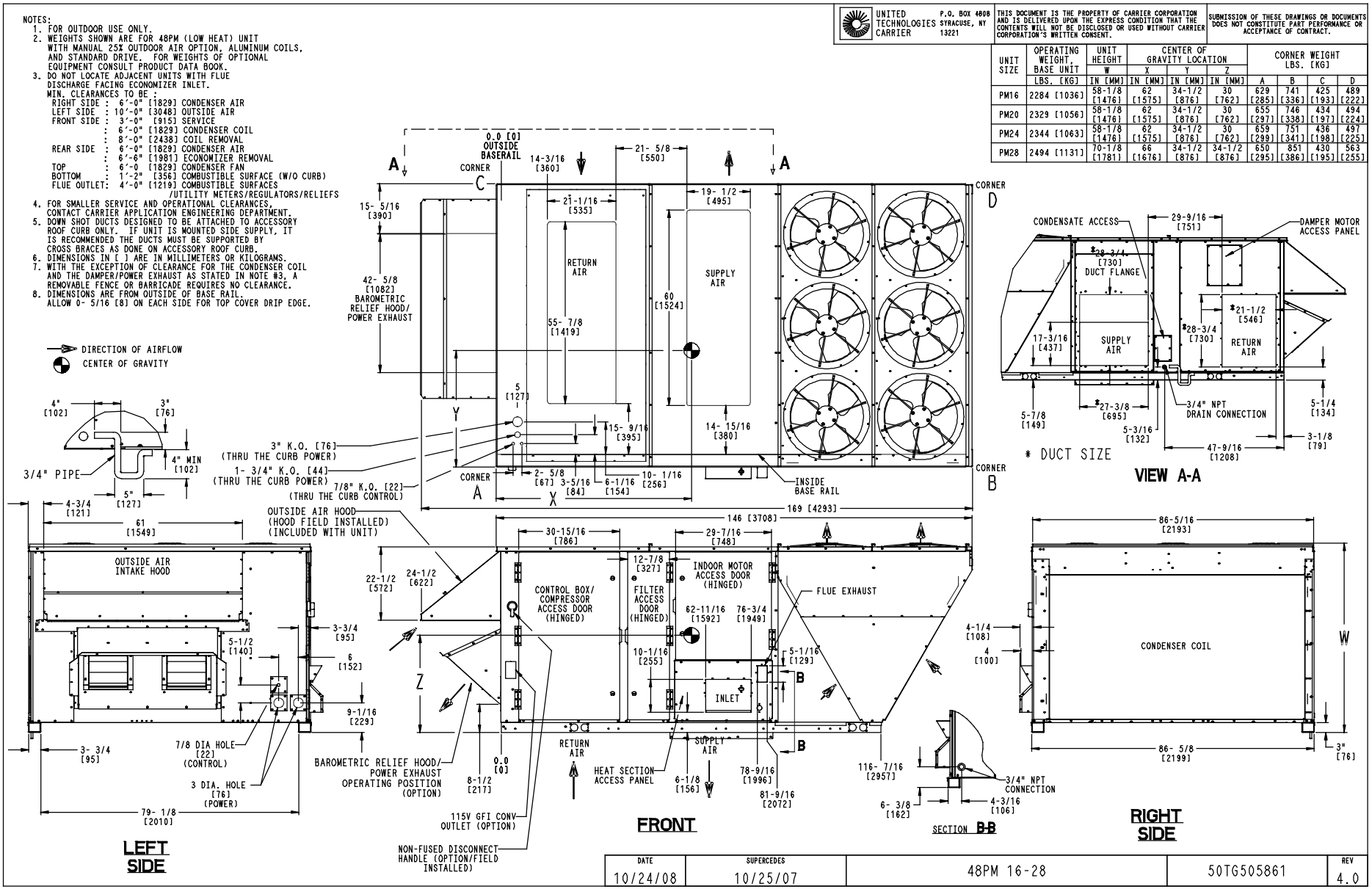
NOTE:
SEE LABEL FOR UNIT
LOCATION ON ROOF CURB

NOTE:
Add 150lb (68kg) for domestic crating.

50TG503592 | 6.0

C09196

Fig. 3 - Rigging Details



C09176

Fig. 4 - Base Unit Dimensions

Table 1 – Physical Data

UNIT 50PM	Units	PM16	PM20	PM24	PM28
DIMENSIONS					
Length	**in**	145.8	145.8	145.8	145.8
Width	**in**	86.3	86.3	86.3	86.3
Height	**in**	57.8	57.8	57.8	69.8
OPERATING WEIGHT					
Base unit (50 series)	**lb**	2210	2216	2269	2389
Base unit (48 series, low heat)	**lb**	2325	2329	2344	2494
COMPRESSOR					
Type		Scroll			
Quantity		2	2	2	2
Number of circuits		2	2	2	2
Capacity Stages (%) Circuit 1 - Circuit 2		50 - 50	50 - 50	50 - 50	50 - 50
Oil type		Copeland 3MA			
Oil quantity					
Circuit A	**fl oz**	110	110	110	110
Circuit B	**fl oz**	60	60	110	110
REFRIGERANT					
Type		Puron (R410A)			
Operating charge - standard unit					
Circuit A	**lb**	13.7	13.7	15.0	16.7
Circuit B	**lb**	12.0	12.0	15.0	16.7
Operating charge - w/ Humidi-MiZer™					
Circuit A	**lb**	22.6	22.6	22.6	27.1
Circuit B	**lb**	20.9	20.9	22.6	27.1
CONDENSER COIL					
Type		MicroChannel			
Rows		1	1	1	1
Fin density	**fins/in**	20	20	20	20
Total face area	**ft^2**	52.6	52.6	57.0	65.5
CONDENSER FAN					
Type		Propeller			
Nominal airflow	**ft^3/min**	14400	14400	21000	21000
Quantity		4	4	6	6
Diameter	**in**	22	22	22	22
Motor Output (nominal)	**HP**	0.25	0.25	0.25	0.25
Motor speed (nominal)	**rev/min**	1100	1100	1100	1100
EVAPORATOR COIL					
Type		Round Tube Plate Fin			
Rows		4	4	4	4
Fin density	**fins/in**	15	15	15	15
Total face area	**ft^2**	23.1	23.1	23.1	28.9
Expansion device type		Balanced-Port TXV w/ bypass			
EVAPORATOR FAN					
Type		Forward Curve Centrifugal			
Nominal airflow	**ft^3/min**	7200	7200	8000	10000
Quantity		2	2	2	2
Diameter x Width	**in x in**	15x11	15x11	15x11	15x11
Maximum allowable speed	**RPM**	1400	1400	1400	1400
Fan shaft diameter (nominal)	**in**	1 3/16	1 3/16	1 3/16	1 3/16
Drive type				Belt	
Motor Output (nominal)	**HP**	3.7, 5, 7.5, or 10	3.7, 5, 7.5, or 10	3.7, 5, 7.5, or 10	5, 7.5, or 10
FILTERS					
Type		Disposable			
Quantity		9	9	9	9
Size - 2" (standard)	**in^3**	16x25x2	16x25x2	16x25x2	20x25x2
Size - 4" (optional)	**in^3**	16x25x4	16x25x4	16x25x4	20x25x4

* Aluminum evaporator coil/aluminum condenser coil with low heat ** For applications less than 2000 ft elevation *** Vertical application numbers shown.

Table 2 – Fan and Motor Drive Data - Vertical Supply/Return

UNIT 50PM	16		20		24		28	
Voltage (volts)	**208/230 and 460**	**575**	**208/230 and 460**	**575**	**208/230 and 460**	**575**	**208/230 and 460**	**575**
LOW RANGE								
Motor HP	3.7	5	3.7	5	3.7	5	5	5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	4.26	5.75	4.26	5.75	4.26	5.75	5.37 / 5.75	5.75
Maximum Continuous Watts	3700	5015	3700	5015	3700	5015	4578 / 5115	5015
Motor Frame Size	56HZ	S184T	56HZ	S184T	56HZ	S184T	S184T	S184T
Motor shaft diameter (in.)	7/8	1 1/8	7/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8
Motor Pulley Pitch Diameter Min - Max (in)	2.7 - 3.7	3.7 - 4.7	2.7 - 3.7	3.7 - 4.7	2.7 - 3.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7
Fan RPM Range	685-939	751-954	685-939	751-954	685-939	751-954	687-873	687-873
Blower Pulley Pitch Diameter (in.)	6.8	8.6	6.8	8.6	6.8	8.6	9.4	9.4
Pulley center line distance (in.)	11.293-13.544	9.81-13.055	11.293-13.544	9.81-13.055	11.293-13.544	9.81-13.055	9.81-13.055	9.81-13.055
Belt, Quantity..Type..Length (in.)	1..BX38..39.8	1..BX40..41.8	1..BX38..39.8	1..BX40..41.8	1..BX38..39.8	1..BX40..41.8	1..BX41..42.8	1..BX41..42.8
Speed change per turn - moveable pulley (RPM)	42	34	42	34	42	34	31	31
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	812	853	812	853	812	853	780	780
MID-LOW RANGE								
Motor HP	5	5	5	5	5	5	5	5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	5.37 / 5.75	5.75	5.37 / 5.75	5.75	5.37 / 5.75	5.75	5.37 / 5.75	5.75
Maximum Continuous Watts	4578 / 5115	5015	4578 / 5115	5015	4578 / 5115	5015	4578 / 5115	5015
Motor Frame Size	S184T	S184T	S184T	S184T	S184T	S184T	S184T	S184T
Motor shaft diameter (in.)	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Motor Pulley Pitch Diameter Min - Max (in)	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	4.8 - 6	4.8 - 6
Fan RPM Range	949-1206	949-1206	949-1206	949-1206	949-1206	949-1206	805-1007	805-1007
Blower Pulley Pitch Diameter (in.)	6.8	6.8	6.8	6.8	6.8	6.8	10.4	10.4
Pulley center line distance (in.)	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055
Belt, Quantity..Type..Length (in.)	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX45..46.8	1..BX45..46.8
Speed change per turn - moveable pulley (RPM)	43	43	43	43	43	43	34	34
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	1078	1078	1078	1078	1078	1078	906	906
MID-HIGH RANGE								
Motor HP	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63
Maximum Continuous Watts	6458 / 7586	7586	6458 / 7586	7586	6458 / 7586	7586	6458 / 7586	7586
Motor Frame Size	S213T	S213T	S213T	S213T	S213T	S213T	S213T	S213T
Motor shaft diameter (in.)	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8
Motor Pulley Pitch Diameter Min - Max (in)	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0
Fan RPM Range	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176
Blower Pulley Pitch Diameter (in.)	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Pulley center line distance (in.)	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179
Belt, Quantity..Type..Length (in.)	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8
Speed change per turn - moveable pulley (RPM)	39	39	39	39	39	39	39	39
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	1059	1059	1059	1059	1059	1059	1059	1059
HIGH RANGE								
Motor HP	N/A	N/A	10	10	10	10	10	10
Motor Nominal RPM	N/A	N/A	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	N/A	N/A	9.94/10.45 / 11.19	11.5	9.94/10.45 / 11.19	11.5	9.94/10.45 / 11.19	11.5
Maximum Continuous Watts	N/A	N/A	8284 / 9330	9711	8284 / 9330	9711	8284 / 9330	9711
Motor Frame Size	N/A	N/A	S215T	S215T	S215T	S215T	S215T	S215T
Motor shaft diameter (in.)	N/A	N/A	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8
Motor Pulley Pitch Diameter Min - Max (in)	N/A	N/A	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5
Fan RPM Range	N/A	N/A	1014-1297	1014-1297	1014-1297	1014-1297	1014-1297	1014-1297
Blower Pulley Pitch Diameter (in.)	N/A	N/A	7.4	7.4	7.4	7.4	7.4	7.4
Pulley center line distance (in.)	N/A	N/A	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179
Belt, Quantity..Type..Length (in.)	N/A	N/A	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8
Speed change per turn - moveable pulley (RPM)	N/A	N/A	47	47	47	47	47	47
Moveable pulley maximum full turns	N/A	N/A	6	6	6	6	6	6
Factory Speed setting (RPM)	N/A	N/A	1156	1156	1156	1156	1156	1156

NOTE: See evaporator fan motor specifications.

Table 3 – Fan Motor and Drive Data - Horizontal Supply/Return

UNIT 50PM	16		20		24		28	
Voltage (volts)	**208/230 and 460**	**575**	**208/230 and 460**	**575**	**208/230 and 460**	**575**	**208/230 and 460**	**575**
LOW RANGE								
Motor HP	3.7	5	3.7	5	3.7	5	5	5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	4.26	5.75	4.26	5.75	4.26	5.75	5.37 / 5.75	5.75
Maximum Continuous Watts	3700	5015	3700	5015	3700	5015	4578 / 5115	5015
Motor Frame Size	56HZ	S184T	56HZ	S184T	56HZ	S184T	S184T	S184T
Motor shaft diameter (in.)	7/8	1 1/8	7/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8
Motor Pulley Pitch Diameter Min - Max (in)	2.7 - 3.7	3.7 - 4.7	2.7 - 3.7	3.7 - 4.7	2.7 - 3.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7
Fan RPM Range	685-939	751-954	685-939	751-954	685-939	751-954	687-873	687-873
Blower Pulley Pitch Diameter (in.)	6.8	8.6	6.8	8.6	6.8	8.6	9.4	9.4
Pulley center line distance (in.)	11.293-13.544	9.81-13.055	11.293-13.544	9.81-13.055	11.293-13.544	9.81-13.055	9.81-13.055	9.81-13.055
Belt, Quantity..Type..Length (in.)	1..BX38..39.8	1..BX40..41.8	1..BX38..39.8	1..BX40..41.8	1..BX38..39.8	1..BX40..41.8	1..BX41..42.8	1..BX41..42.8
Speed change per turn - moveable pulley (RPM)	42	34	42	34	42	34	31	31
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	812	853	812	853	812	853	780	780
MID-LOW RANGE								
Motor HP	5	5	5	5	5	5	5	5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	5.37 / 5.75	5.75	5.37 / 5.75	5.75	5.37 / 5.75	5.75	5.37 / 5.75	5.75
Maximum Continuous Watts	4578 / 5115	5015	4578 / 5115	5015	4578 / 5115	5015	4578 / 5115	5015
Motor Frame Size	S184T	S184T	S184T	S184T	S184T	S184T	S184T	S184T
Motor shaft diameter (in.)	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Motor Pulley Pitch Diameter Min - Max (in)	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	3.7 - 4.7	4.8 - 6	4.8 - 6
Fan RPM Range	949-1206	949-1206	949-1206	949-1206	949-1206	949-1206	805-1007	805-1007
Blower Pulley Pitch Diameter (in.)	6.8	6.8	6.8	6.8	6.8	6.8	10.4	10.4
Pulley center line distance (in.)	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055	9.81-13.055
Belt, Quantity..Type..Length (in.)	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX38..39.8	1..BX45..46.8	1..BX45..46.8
Speed change per turn - moveable pulley (RPM)	43	43	43	43	43	43	34	34
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	1078	1078	1078	1078	1078	1078	906	906
MID-HIGH RANGE								
Motor HP	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Motor Nominal RPM	1750	1750	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63	7.66/8.51 / 8.63	8.63
Maximum Continuous Watts	6458 / 7586	7586	6458 / 7586	7586	6458 / 7586	7586	6458 / 7586	7586
Motor Frame Size	S213T	S213T	S213T	S213T	S213T	S213T	S213T	S213T
Motor shaft diameter (in.)	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8
Motor Pulley Pitch Diameter Min - Max (in)	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0	4.8 - 6.0
Fan RPM Range	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176	941-1176
Blower Pulley Pitch Diameter (in.)	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Pulley center line distance (in.)	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179
Belt, Quantity..Type..Length (in.)	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8	1..BX42..43.8
Speed change per turn - moveable pulley (RPM)	39	39	39	39	39	39	39	39
Moveable pulley maximum full turns	6	6	6	6	6	6	6	6
Factory Speed setting (RPM)	1059	1059	1059	1059	1059	1059	1059	1059
HIGH RANGE								
Motor HP	N/A	N/A	10	10	10	10	10	10
Motor Nominal RPM	N/A	N/A	1750	1750	1750	1750	1750	1750
Maximum Continuous BHP	N/A	N/A	9.94/10.45 / 11.19	11.5	9.94/10.45 / 11.19	11.5	9.94/10.45 / 11.19	11.5
Maximum Continuous Watts	N/A	N/A	8284 / 9330	9711	8284 / 9330	9711	8284 / 9330	9711
Motor Frame Size	N/A	N/A	S215T	S215T	S215T	S215T	S215T	S215T
Motor shaft diameter (in.)	N/A	N/A	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8
Motor Pulley Pitch Diameter Min - Max (in)	N/A	N/A	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5	4.3 - 5.5
Fan RPM Range	N/A	N/A	1014-1297	1014-1297	1014-1297	1014-1297	1014-1297	1014-1297
Blower Pulley Pitch Diameter (in.)	N/A	N/A	7.4	7.4	7.4	7.4	7.4	7.4
Pulley center line distance (in.)	N/A	N/A	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179	9.025-12.179
Belt, Quantity..Type..Length (in.)	N/A	N/A	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8	2..BX38..39.8
Speed change per turn - moveable pulley (RPM)	N/A	N/A	47	47	47	47	47	47
Moveable pulley maximum full turns	N/A	N/A	6	6	6	6	6	6
Factory Speed setting (RPM)	N/A	N/A	1156	1156	1156	1156	1156	1156

NOTE: See evaporator fan motor specifications.

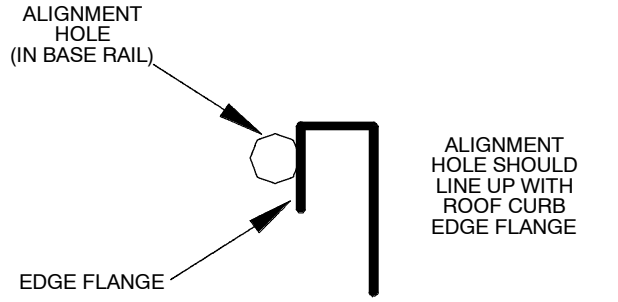


Fig. 5 - Alignment Hole Details

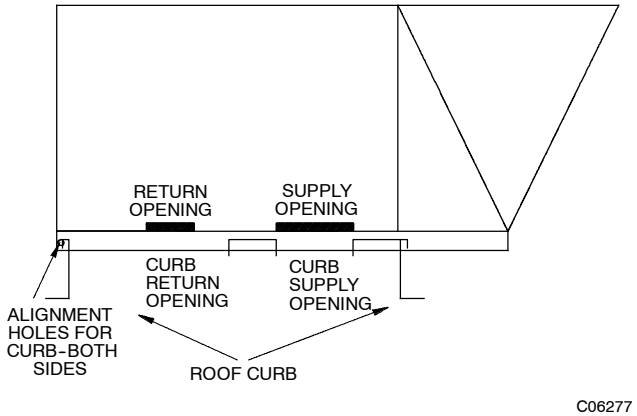


Fig. 6 - Alignment Hole Location

Step 4 — Field Fabricate Ductwork

On vertical units, secure all ducts to roof curb and building structure. *Do not connect ductwork to unit.* For horizontal applications, field-supplied flanges should be attached to horizontal discharge openings and all ductwork secured to the flanges. Insulate and weatherproof all external ductwork, joints, and roof openings with counter flashing and mastic in accordance with applicable codes.

Ducts passing through an unconditioned space must be insulated and covered with a vapor barrier.

If a plenum return is used on a vertical unit, the return should be ducted through the roof deck to comply with applicable fire codes.

A minimum clearance is not required around ductwork. Cabinet return-air static shall not exceed .35-in. wg with economizer or .45-in. wg without economizer.

These units are designed for a minimum continuous return-air temperature in heating of 50°F (dry bulb), or an intermittent operation down to 45°F (dry bulb), such as when used with a night set-back thermostat.

To operate at lower return-air temperatures, a field-supplied outdoor-air temperature control must be used to initiate both stages of heat when the temperature is below 45°F. Indoor comfort may be compromised when these lower air temperatures are used with insufficient heating temperature rise.

Step 5 — Make Unit Duct Connections

Vertical Configuration

Unit is shipped for thru-the-bottom duct connections. Ductwork openings are shown in Fig. 1 and 4. Duct connections for vertical supply and return configuration are shown in Fig. 7. Field-fabricated concentric ductwork may be connected as shown in Fig. 8. The unit is designed to attach the ductwork to the roof curb. Do not attach duct directly to the unit.

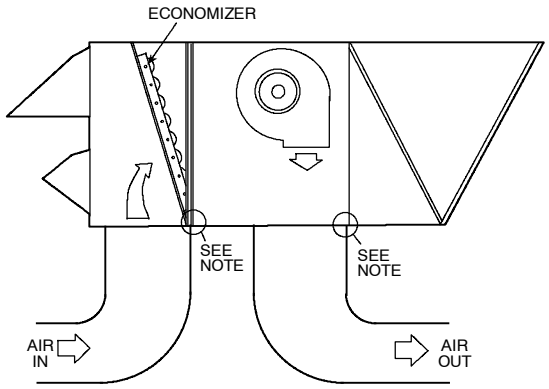
⚠ WARNING

UNIT DAMAGE AND PERSONAL INJURY HAZARD

Failure to follow this warning could cause equipment damage and/or personal injury.

For vertical supply and return units, tools or parts could drop into ductwork and cause an injury. Install a 90-degree turn in the return ductwork between the unit and the conditioned space. If a 90-degree elbow cannot be installed, then a grille of sufficient strength and density should be installed to prevent objects from falling into the conditioned space.

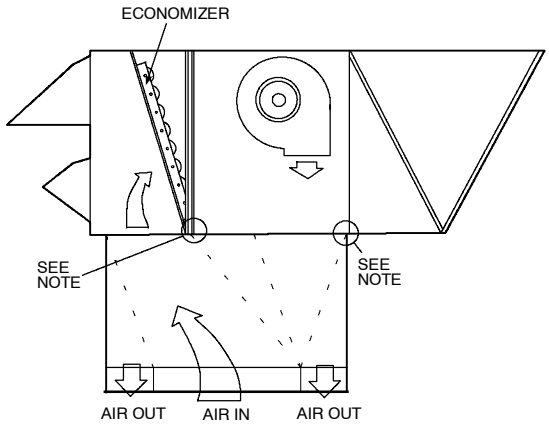
Units with electric heat require a 1-in. clearance for the first 24 in. of ductwork. Outlet grilles must not lie directly below unit discharge.



NOTE: Do not drill in this area. Damage to basepan may result in water leak.

C06378

Fig. 7 - Air Distribution - Vertical Supply and Return



NOTE: Do not drill in this area. Damage to basepan may result in water leak.

C06379

Fig. 8 - Air Distribution - Concentric Duct

NOTE: A 90-degree elbow must be provided in the supply ductwork to comply with UL (Underwriters' Laboratories) codes for use with electric heat.

Horizontal Applications

Horizontal units are shipped with outer panels that allow for side by side horizontal duct connections. If specified during ordering, the unit will be shipped with the vertical duct openings blocked off from the factory, ready for side supply installation. If the horizontal option was not specified at time of ordering the unit, a field-installed accessory kit is required to convert the vertical unit into a horizontal supply configuration.

Installation of the duct block-off covers should be completed prior to placing the unit unless sufficient side clearance is available. A minimum of 66 in. is required between the unit and any obstruction to install the duct block-off covers. Side supply duct dimensions and locations are shown on Fig. 4. Connect ductwork to horizontal duct flange connections on side of unit.

Step 6 — Trap Condensate Drain

See Fig. 9 for drain location. One $^{3}/_{4}$-in. half coupling is provided outside unit evaporator section for condensate drain connection. A trap at least 4-in. deep must be used. (See Fig. 10.)

All units must have an external trap for condensate drainage. Install a trap at least 4 in. deep and protect against freeze-up. If drain line is installed downstream from the external trap, pitch the line away from the unit at 1 in. per 10 ft of run. Do not use a pipe size smaller than the unit connection.

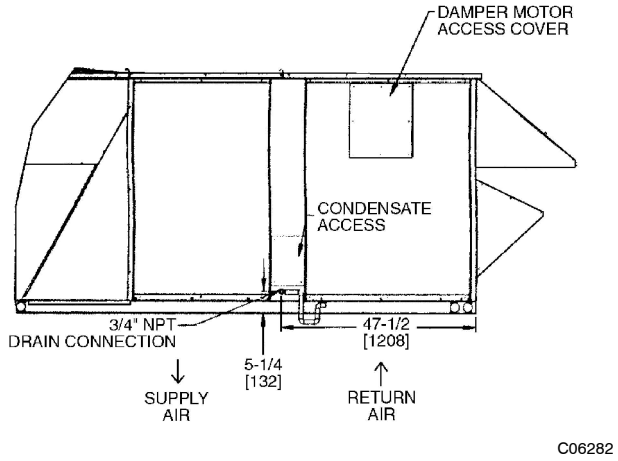


Fig. 9 - Condensate Drain Details

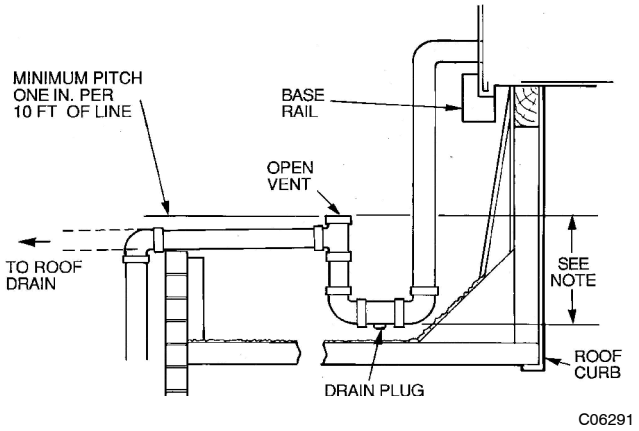


Fig. 10 - Condensate Drain Piping Details

Step 7 — Make Electrical Connections

Field Power Supply

Unit is factory wired for voltage shown on unit nameplate. Be sure to check for correct voltage.

When installing units, provide disconnect per NEC (National Electrical Code) of adequate size (MOCP [Maximum Overcurrent protection] of unit is on the informative plate). (See Appendix C.) All field wiring must comply with NEC and local codes. Size wire based on MCA (Minimum Circuit Amps) on the unit informative plate. See Fig. 11 for power wiring connections to the unit power terminal block and equipment grounds.

Route power and ground lines through control box end panel or unit basepan (see Fig. 4) to connections as shown on unit wiring diagram and Fig. 12.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in damage to unit.

The correct power phasing is critical to the operation of the scroll compressors. An incorrect phasing will result in an alarm being generated and compressor operation lockout. Should this occur, power phase correction must be made to the incoming power.

⚠ WARNING

ELECTRICAL SHOCK AND FIRE HAZARD

Failure to follow this warning could result in electrical shock, fire, or death.

The cabinet MUST have an uninterrupted, unbroken electrical ground to minimize the possibility of personal injury if an electrical fault should occur. This ground may consist of electrical wire connected to unit ground lug in control compartment, or conduit approved for electrical ground when installed in accordance with NEC, ANSI/NFPA (American National Standards Institute/National Fire Protection Association), latest edition, and local electrical codes.

Field wiring must conform to temperature limitations for type "T" wire. All field wiring must comply with NEC and local requirements.

Operating voltage to compressor must be within voltage range indicated on unit nameplate. On 3-phase units, voltages between phases must be balanced within 2%.

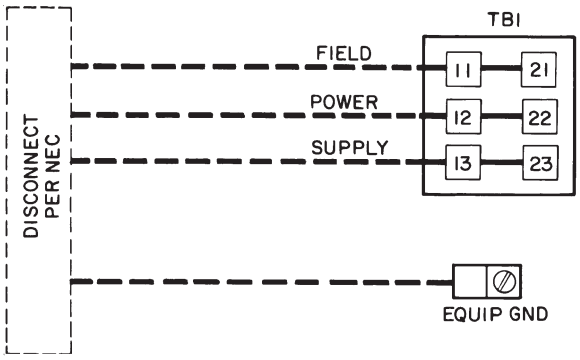
Unit failure as a result of operation on improper line voltage or excessive phase imbalance constitutes abuse and may cause damage to electrical components.

Field Control Wiring

Unit can be controlled with a Carrier-approved accessory thermostat. Install thermostat according to the installation instructions included with accessory. Locate thermostat assembly or space temperature sensor on a solid interior wall in the conditioned space to sense average temperature.

Route thermostat cable or equivalent single leads of colored wire from subbase terminals through conduit into unit to low-voltage connections as shown on unit label wiring diagram and in Fig. 12.

NOTE: For wire runs up to 50 ft, use no. 18 AWG (American Wire Gauge) insulated wire (35°C minimum). For 50 to 75 ft, use no. 16 AWG insulated wire (35°C minimum). For over 75 ft, use no. 14 AWG insulated wire (35°C minimum). All wire larger than no. 18 AWG cannot be directly connected at the thermostat and will require a junction box and splice at the thermostat.

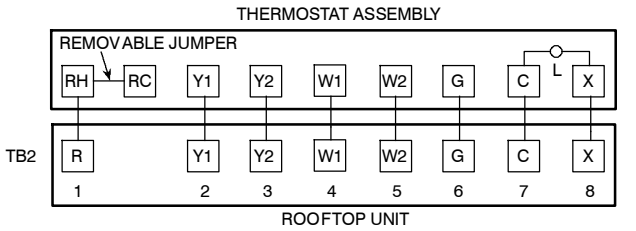


LEGEND
EQUIP - Equipment
GND - Ground
NEC - National Electrical Code
TB - Terminal Board

NOTE: The maximum wire size for TB1 is 2/0

C06293

Fig. 11 - Field Power Wiring Connections



C06298

Fig. 12 - Field Control Thermostat Wiring

Set heat anticipator settings as shown in Table 4.

Table 4 – Heat Anticipator Settings

UNIT SIZE 50PM	ELECTRIC HEAT (kW)	STAGE 1 (W1) ON			STAGES 1 AND 2 (W1 and W2) ON		
		Voltage			Voltage		
		208/240	480	600	208/240	480	600
20-28	25	0.2	0.2	0.2	0.4	0.4	0.4
	50	0.4	0.2	0.2	0.8	0.4	0.4
	75	0.4	0.2	0.2	0.8	0.4	0.4

Settings may be changed slightly to provide a greater degree of comfort for a particular installation.

Step 8 — Install Outdoor Air Hood

Perform the following procedure to install the outdoor-air hood on units equipped with an economizer, two-position damper, or outdoor-air damper:

1. Remove blank panel from return end of unit (hood section). Save the screws. See Fig. 13 for shipping location of components.
2. Hood sides are fastened to sides of outdoor air opening. Remove the hood sides and save the screws (3 each side).
3. Remove the bracket holding the bottom half of the hood in the shipping position. Remove the hood bottom half and filters (or manual dampers on units so equipped) from outdoor section.

NOTE: On units without economizers, the components are attached to the unit basepan. To access the components, remove the panel below the outdoor air intake section.

4. Remove inner filter track from shipping position in outdoor section. Position inner filter track so the track is facing outward from the unit. Install the filter track with 4 screws provided.
5. Apply seal strip (provided) to back flange of both hood sides where hood side connects to the unit back panel. (See Fig. 14.)
6. Apply seal strip (provided) to top flange of both hood sides where hood sides connect to the hood top panels. (See Fig. 14.)
7. Install hood sides to the back panels using the screws from Step 2. The sloped flanges point outward. The drip edges of the side panels should face outward as well. The filter guides should face inward to hold the filters in place. (See Fig. 14.)
8. Apply seal strip along the entire length of the bottom flange of the hood top. (See Fig. 14.)
9. Install the bottom part of the hood top using 4 screws provided. (See Fig. 14.)
10. Remove the packaging from filters (3) and install into the filter tracks. Slide the filters to the sides then place the last filter into the center of the filter track.

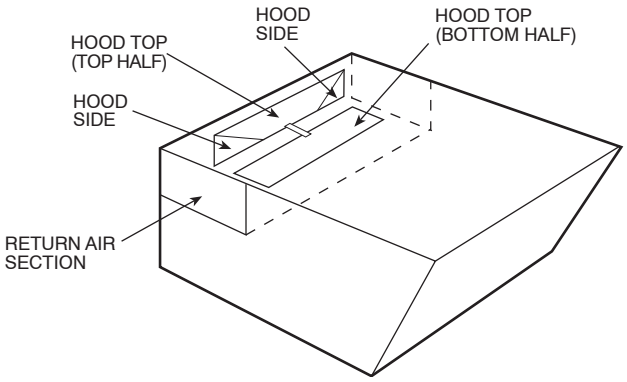
NOTE: For units with manual dampers, replace the end filters with the manual dampers. Install the filter in the center between the manual dampers.

11. Install the filter retainer track along the bottom edge of the outdoor air hood using 4 screws provided. (See Fig. 14.)
12. Install top section of the outdoor air hood using 9 screws provided. (See Fig. 14.) See Fig. 15 for a picture of the assembled outdoor air hood.

NOTE: For filter removal, remove the four screws holding the filter retainer. The filters can then be removed, cleaned, or replaced. Install the filters by reversing the procedure.

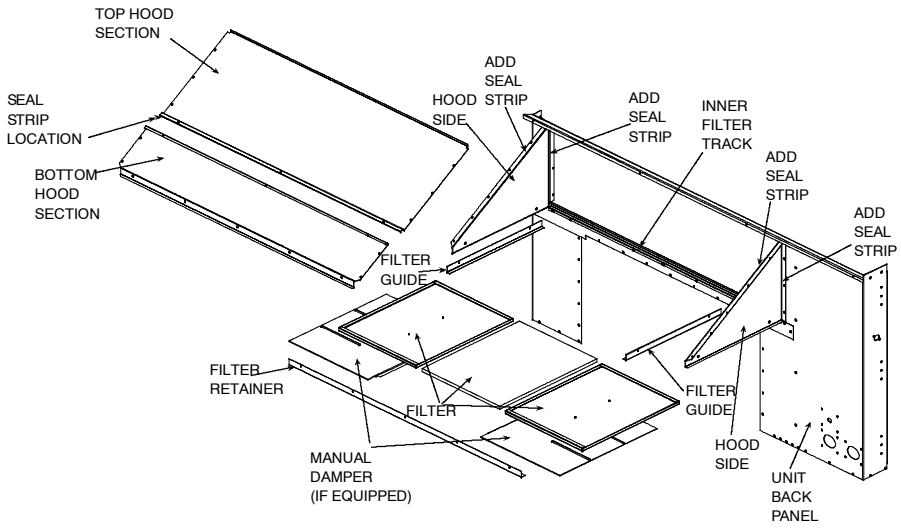
Manual Damper Assembly

For units equipped with manual dampers, the assembly process is similar to the outdoor air hood for units with economizers. There are two slide dampers shipped with the unit to allow for manual setting of the outside air volume. When assembling the hood, place one of the manual slide dampers in each of the end positions and the remaining filter in the center position. The manual dampers can then be moved to the appropriate position and then locked into place using the screws mounted in the adjustment slots. (See Fig. 16.)



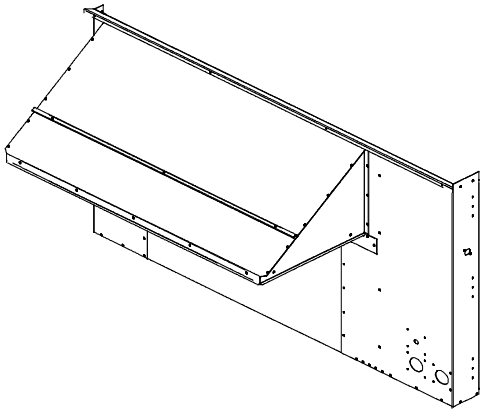
C06283

Fig. 13 - Outdoor-Air Hood Compartment Shipping Location



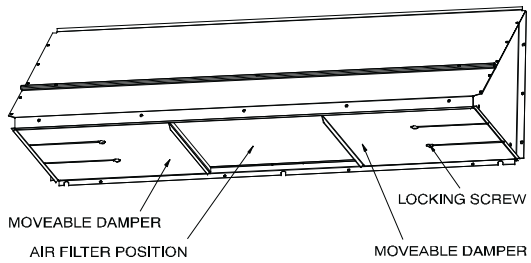
C07199

Fig. 14 - Outdoor Air Hood Details



C06285

Fig. 15 - Outdoor Air Hood Assembled



C06286

Fig. 16 - Manual Damper Details

Step 9 — Position Optional Power Exhaust or Barometric Relief Damper Hood

The optional power exhaust or barometric relief dampers are shipped assembled and tilted back into the unit for shipping. Brackets and extra screws are shipped in shrink wrap around the dampers.

1. Remove 9 screws holding each damper assembly in place. (See Fig. 17.) Each damper assembly is secured with 3 screws on each side and 3 screws along the bottom. Save screws.

⚠ CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Be careful when tilting blower assembly. Hoods and blowers are heavy and can cause injury if dropped.

2. Pivot the damper assembly outward until top edge of damper assembly rests against inside wall of unit.
3. Secure each damper assembly to unit with 6 screws across top (3 screws provided) and bottom (3 screws from Step 1) of damper.
4. With screws saved from Step 1, install brackets on each side of damper assembly. (See Fig. 18.)
5. Remove tape from damper blades.

Step 10 — Non-Fused Disconnect

The handle for the factory-installed non-fused disconnect is shipped inside the unit to prevent the handle from damage during shipping. Follow these steps to complete installation of the handle.

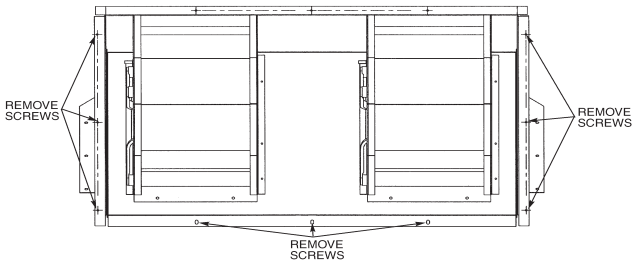
⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

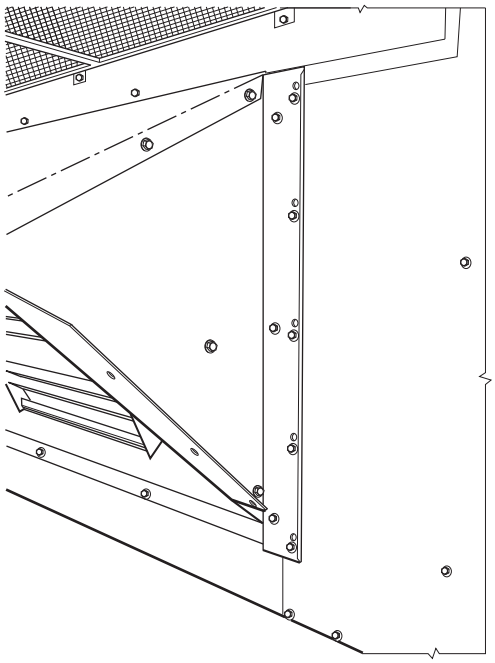
Be sure power is shut-off to the unit from the building power supply and install lock-out tag-out for safety.

1. Open the control box access door.
2. Remove the small cover plate located on the unit corner post near the control section.
3. Remove the inner control box cover. The handle and shaft are located in a plastic bag at the bottom of the control box.
4. Insert the square shaft into the disconnect with the pins vertical. On the 100 amp disconnect the shaft is keyed into the disconnect and can only be installed one way with the pins vertical.



C06287

Fig. 17 - Power Exhaust or Barometric Relief Damper Mounting Details



C06288

Fig. 18 - Bracket and Hood Positioning

5. Insert the handle through the corner post and onto the shaft with the handle positioned so that “OFF” is on top.
6. Rotate the handle to the “ON” position to lock the pins into the handle.
7. From the inside of the corner post, attach the handle mounting screws to the handle. Slide the shaft fully into the handle and tighten the set screws(s) on the disconnect to lock the shaft. Tighten the screws that attach the handle to the corner post.
8. Rotate the handle back to the “OFF” position.
9. Replace all panels and doors.
10. Restore power to unit.

Step 11 — Install All Accessories

After all of the factory-installed options have been adjusted, install all field-installed accessories. Refer to the accessory installation instructions included with each accessory. Consult the Carrier Price Pages for accessory package numbers for particular applications.

PRE-START-UP

⚠ WARNING

ELECTRICAL OPERATION HAZARD

Failure to observe the following warnings could result in personal injury and/or death:

1. Follow recognized safety practices and wear protective goggles when checking or service refrigerant system.
2. Do not operate compressor or provide any electric power to unit unless compressor terminal cover is in place and secured.
3. Do not remove compressor terminal cover until all electrical sources are disconnected.
4. Relieve all pressure from system before touching or disturbing anything inside compressor terminal box if refrigerant leak is suspected around compressor terminals.
5. Never attempt to repair soldered connection while refrigerant system is under pressure.
6. Do not use torch to remove any component. System contains oil and refrigerant under pressure. To remove a component, wear protective goggles and proceed as follows:
   a. Shut off gas, then electrical power to unit. Install lockout tag.
   b. Relieve all pressure from system using both high and low-pressure ports.
   c. Cut component connection tubing with tubing cutter and remove component from unit.
   d. Carefully unsweat remaining tubing stubs when necessary. Oil can ignite when exposed to torch flame.

Proceed as follows to inspect and prepare the unit for initial start-up:

1. Remove all access panels.
2. Read and follow instructions on all WARNING, CAUTION, and INFORMATION labels attached to or shipped with unit.
3. Make the following inspections:
   a. Inspect for shipping and handling damages such as broken lines, loose parts, or disconnected wires.
   b. Inspect for oil at all refrigerant tubing connections and on unit base. Detecting oil generally indicates a refrigerant leak. Leak-test all refrigerant tubing connections using electronic leak detector, halide torch, or liquid-soap solution.
   c. Inspect all field-wiring and factory-wiring connections. Be sure that connections are completed and tight.
   d. Inspect coil fins. If damaged during shipping and handling, carefully straighten fins with a fin comb.
4. Verify the following:
   a. Make sure that condenser-fan blades are correctly positioned in fan orifice. Refer to Condenser-Fan Adjustment section for more details.
   b. Make sure that air filters are in place.
   c. Make sure that condensate drain trap is filled with water to ensure proper drainage.
   d. Make sure that all tools and miscellaneous loose parts have been removed.
   e. Make sure that the start-up checklist has been performed and filled out.

NOTE: Ensure wiring does not contact any refrigerant tubing.

START-UP

Use the following information and Start-Up Checklist to check out unit PRIOR to start-up.

Unit Preparation

Check that unit has been installed in accordance with these installation instructions and all applicable codes.

Compressor Mounting

Compressors are internally spring mounted. Do not loosen or remove compressor holddown bolts.

Refrigerant Service Ports

Each independent refrigerant system has a total of 3 Schrader-type service gauge ports per circuit. One port is located on the suction line, one on the compressor discharge line, and one on the liquid line. Be sure that caps on the ports are tight.

Crankcase Heater(s)

Crankcase heaters are energized as long as there is power to the unit and the compressor is not operating.

IMPORTANT: Unit power must be on for 24 hours prior to start-up. Otherwise, damage to compressor may result.

Compressor Rotation

On 3-phase units, it is important to be certain the scroll compressor is rotating in the proper direction. To determine whether or not compressor is rotating in the proper direction:

1. Connect service gauges to suction and discharge pressure fittings.
2. Energize the compressor.
3. The suction pressure should drop and the discharge pressure should rise, as is normal on any start-up.

If the suction pressure does not drop and the discharge pressure does not rise to normal levels:

1. Note that the evaporator fan is probably also rotating in the wrong direction.
2. Turn off power to the unit and install lockout tag.
3. Reverse any two of the unit power leads.
4. Turn on power to the unit.

The suction and discharge pressure levels should now move to their normal start-up levels.

NOTE: When the compressor is rotating in the wrong direction, the unit makes an elevated level of noise and does not provide heating or cooling.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Compressor damage will occur if rotation is not immediately corrected.

Power Supply

All 208/230-v units are factory wired for 230-v power supply. If the 208/230-v unit is to be connected to a 208-v power supply, the transformers (TRAN1 and TRAN2) must be rewired by moving the wire from the 230-volt connection and moving to the 200-volt terminal on the primary side of the transformer. Refer to unit label diagram for additional information.

Internal Wiring

Check all electrical connections in unit control boxes; tighten as required.

Evaporator Fan

Fan belt and variable pulleys are factory-installed but may need to be adjusted for specific applications. Be sure that fans rotate in the proper direction. See Appendix A for fan performance data. See Appendix B for air quantity limits, evaporator fan motor specifications, FIOP static pressures, and fan RPM for various motor pulley settings. To alter fan performance, see Evaporator Fan Performance Adjustment in the Service section.

Condenser Fans and Motors

Condenser fans and motors are factory set. Refer to Condenser-Fan Adjustment section, as required.

Return-Air Filters

Check that correct filters are installed in filter tracks. (See Table 1.) Do not operate unit without return-air filters.

NOTE: For units with 4-in. filter option, units are shipped with standard 2-in. filters. To install 4-in. filters, the filter spacers must be removed.

Outdoor-Air Inlet Screens

Outdoor-air inlet screens must be in place before operating unit.

Accessory Installation

Check to make sure that all accessories including space thermostats have been installed and wired as required by the instructions and unit wiring diagrams.

Optional EconoMi$er IV

See Fig. 19 for EconoMi$er IV component locations. The optional EconoMi$er IV comes from the factory fully wired and assembled. No field wiring or assembly is required for standard outdoor dry bulb changeover operation. Field wiring of accessory sensors is required for different operational modes.

EconoMi$er IV Standard Sensors

Outdoor Air Temperature (OAT) Sensor

The outdoor air temperature sensor is a 10 to 20 mA device used to measure the outdoor-air temperature. The outdoor-air temperature is used to determine when the EconoMi$er IV can be used for free cooling. The sensor is factory-installed on the EconoMi$er IV in the outdoor airstream. (See Fig. 20.) The operating range of temperature measurement is 40° to 100°F.

Mixed Air Temperature (MAT) Sensor

The mixed air temperature sensor is a 3 K thermistor located at the outlet of the indoor fan. (See Fig. 20.) This sensor is factory installed. The operating range of temperature measurement is 0° to 158°F.

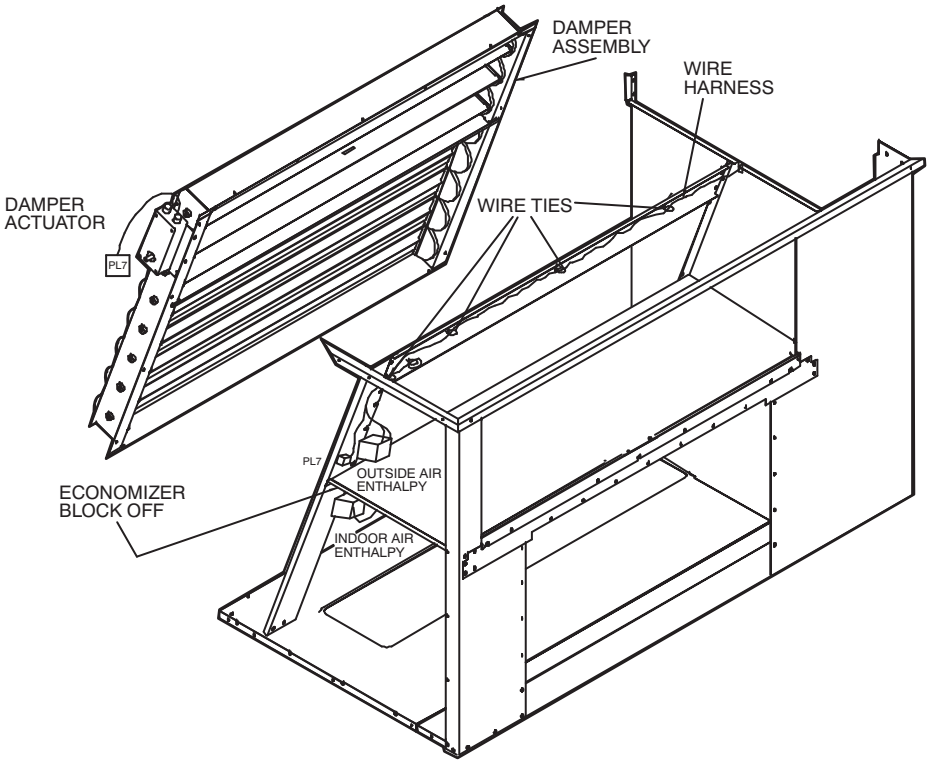
The temperature sensor is a short probe with blue wires running to it.

Outdoor Air Lockout Sensor

The EconoMi$er IV is equipped with an ambient temperature lockout switch located in the outdoor airstream which is used to lock out the compressors below a 42°F ambient temperature.

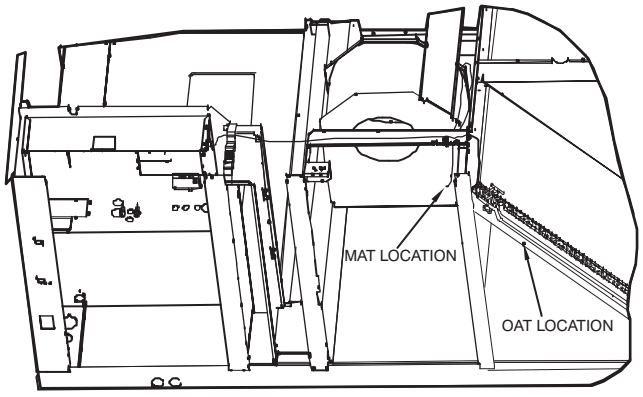
EconoMi$er IV Controller Wiring and Operational Modes

Determine the EconoMi$er IV control mode before set up of the control. Some modes of operation may require different sensors. Refer to Table 5. The EconoMi$er IV is supplied from the factory with a mixed air temperature sensor and an outdoor air temperature sensor. This allows for operation of the EconoMi$er IV with outdoor air dry bulb changeover control. Additional accessories can be added to allow for different types of changeover control and operation of the EconoMi$er IV and unit.



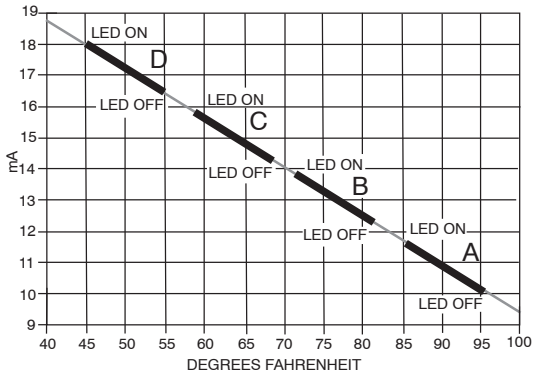
C08044

Fig. 19 - EconoMi$er IV Component Locations (Exploded View)



C08045

Fig. 20 - Sensor Locations (OAT and MAT)



C06035

Fig. 21 - Temperature Changeover Set Points

Outdoor Dry Bulb Changeover

The standard controller is shipped from the factory configured for outdoor dry bulb changeover control. The outdoor air and mixed air temperature sensors are included as standard. For this control mode, the outdoor temperature is compared to an adjustable set point selected on the control. If the outdoor-air temperature is above the set point, the EconoMi$er IV will adjust the outdoor-air dampers to minimum position. If the outdoor-air temperature is below the set point, the position of the outdoor-air dampers will be controlled to provided free cooling using outdoor air. When in this mode, the LED next to the free cooling set point potentiometer will be on. The changeover temperature set point is controlled by the free cooling set point potentiometer located on the control. The scale on the potentiometer is A, B, C, and D. See Fig. 21 for the corresponding temperature changeover values.

Differential Dry Bulb Control

For differential dry bulb control the standard outdoor dry bulb sensor is used in conjunction with an additional accessory dry bulb sensor (part number CRTEMPSN002A00). The accessory sensor must be mounted in the return airstream. Wiring is provided in the EconoMi$er IV wiring harness. (See Fig. 22.)

In this mode of operation, the outdoor-air temperature is compared to the return air temperature and the lower temperature airstream is used for cooling. When using this mode of changeover control, turn the enthalpy set point potentiometer fully clockwise to the D setting.

Outdoor Enthalpy Changeover

For enthalpy control, accessory enthalpy sensor (part number HH57AC078) is required. Replace the standard outdoor dry bulb temperature sensor with the accessory enthalpy sensor in the same mounting location. When the outdoor air enthalpy rises above the outdoor enthalpy changeover set point, the outdoor-air damper moves to its minimum position. The outdoor enthalpy changeover set point is set with the outdoor enthalpy set point potentiometer on the EconoMi$er IV controller. The set points are A, B, C, and D. (See Fig. 23.) The factory-installed 620-ohm jumper must be in place across terminals S_R and + on the EconoMi$er IV controller. (See Fig. 22.)

Differential Enthalpy Control

For differential enthalpy control, the EconoMi$er IV controller uses two enthalpy sensors (HH57AC078 and CRENTDIF004A00), one in the outside air and one in the return air duct. The EconoMi$er IV controller compares the outdoor air enthalpy to the return air enthalpy to determine EconoMi$er IV use. The controller selects the lower enthalpy air (return or outdoor) for cooling. For example, when the outdoor air has a lower enthalpy than the return air, the EconoMi$er IV opens to bring in outdoor air for free cooling.

Replace the standard outside air dry bulb temperature sensor with the accessory enthalpy sensor in the same mounting location. Mount the return air enthalpy sensor in the return air duct. Wiring is provided in the EconoMi$er IV wiring harness. (See Fig. 22.) The outdoor enthalpy changeover set point is set with the outdoor enthalpy set point potentiometer on the EconoMi$er IV controller. When using this mode of changeover control, turn the enthalpy set point potentiometer fully clockwise to the D setting. (See Fig. 24.)

Indoor Air Quality (IAQ) Sensor Input

The IAQ input can be used for demand control ventilation control based on the level of CO_2 measured in the space or return air duct.

Mount the optional IAQ sensor according to manufacturer specifications. The IAQ sensor should be wired to the AQ and AQ1 terminals of the controller. Adjust the DCV (demand controlled ventilation) potentiometers to correspond to the DCV voltage output of the indoor air quality sensor at the user-determined set point. (See Fig. 25.)

If a separate field-supplied transformer is used to power the IAQ sensor, the sensor must not be grounded or the EconoMi$er IV control board will be damaged.

Exhaust Set Point Adjustment

The exhaust set point will determine when the exhaust fan runs based on damper position (if accessory power exhaust is installed). The set point is modified with the Exhaust Fan Set Point (EXH SET) potentiometer. (See Fig. 24.) The set point represents the damper position above which the exhaust fans will be turned on. When there is a call for exhaust, the EconoMi$er IV controller provides a 45 ± 15 second delay before exhaust fan activation to allow the dampers to open. This delay allows the damper to reach the appropriate position to avoid unnecessary fan overload.

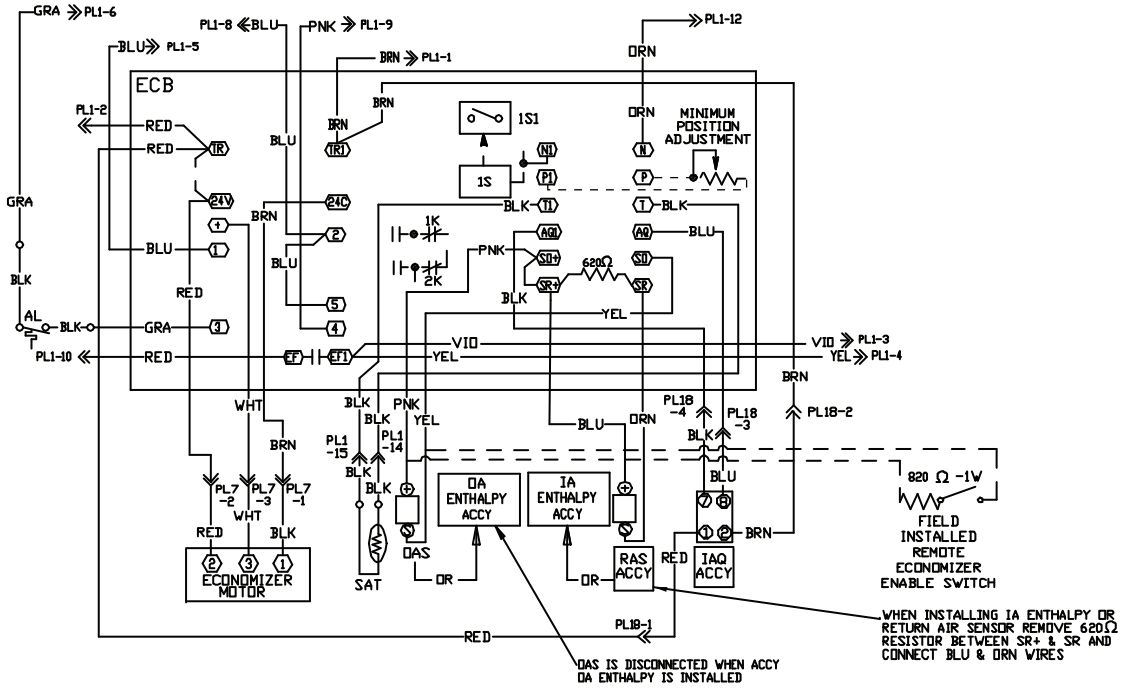
Minimum Position Control

There is a minimum damper position potentiometer on the EconoMi$er IV controller. (See Fig. 24.) The minimum damper position maintains the minimum airflow into the building during the occupied period.

When using demand ventilation, the minimum damper position represents the minimum ventilation position for VOC (volatile organic compounds) ventilation requirements. The maximum demand ventilation position is used for fully occupied ventilation.

When demand ventilation control is not being used, the minimum position potentiometer should be used to set the occupied ventilation position. The maximum demand ventilation position should be turned fully clockwise.

Adjust the minimum position potentiometer to allow the minimum amount of outdoor air, as required by local codes, to enter the building. Make minimum position adjustments with at least 10°F temperature difference between the outdoor and return-air temperatures.



C06332

Fig. 22 - EconoMi$er IV Wiring

Table 5 – EconoMi$er IV Sensor Usage

APPLICATION	ECONOMI$ER IV WITH OUTDOOR AIR DRY BULB SENSOR			ECONOMI$ER IV WITH SINGLE ENTHALPY SENSOR		
	Accessories Required			Accessories Required		
Outdoor Air Dry Bulb	None. The outdoor air dry bulb sensor is factory installed.			CRTEMPSN002A00*		
Differential Dry Bulb	CRTEMPSN002A00*			(2) CRTEMPSN002A00*		
Single Enthalpy	HH57AC078			None. The single enthalpy sensor is factory installed.		
Differential Enthalpy	HH57AC078 and CRENTDIF004A00*			CRENTDIF004A00*		
CO_2 for DCV Control using a Wall-Mounted CO_2 Sensor	33ZCSENCO2			33ZCSENCO2		
CO_2 for DCV Control using a Duct-Mounted CO_2 Sensor	33ZCSENCO2† and 33ZCASPCO2**	OR	CRCBDIOX005A00††	33ZCSENCO2† and 33ZCASPCO2**	OR	CRCBDIOX005A00††

*CRENTDIF004A00 and CRTEMPSN002A00 accessories are used on many different base units. As such, these kits may contain parts that will not be needed for installation.

†33ZCSENCO2 is an accessory CO_2 sensor.

**33ZCASPCO2 is an accessory aspirator box required for duct-mounted applications.

††CRCBDIOX005A00 is an accessory that contains both 33ZCSENCO2 and 33ZCASPCO2 accessories.

To determine the minimum position setting, perform the following procedure:

1. Calculate the appropriate mixed air temperature using the following formula:

   $(T_O \times OA) + (T_R \times RA) = T_M$

   T_O = Outdoor-Air Temperature

   OA = Percent of Outdoor Air

   T_R = Return-Air Temperature

   RA = Percent of Return Air

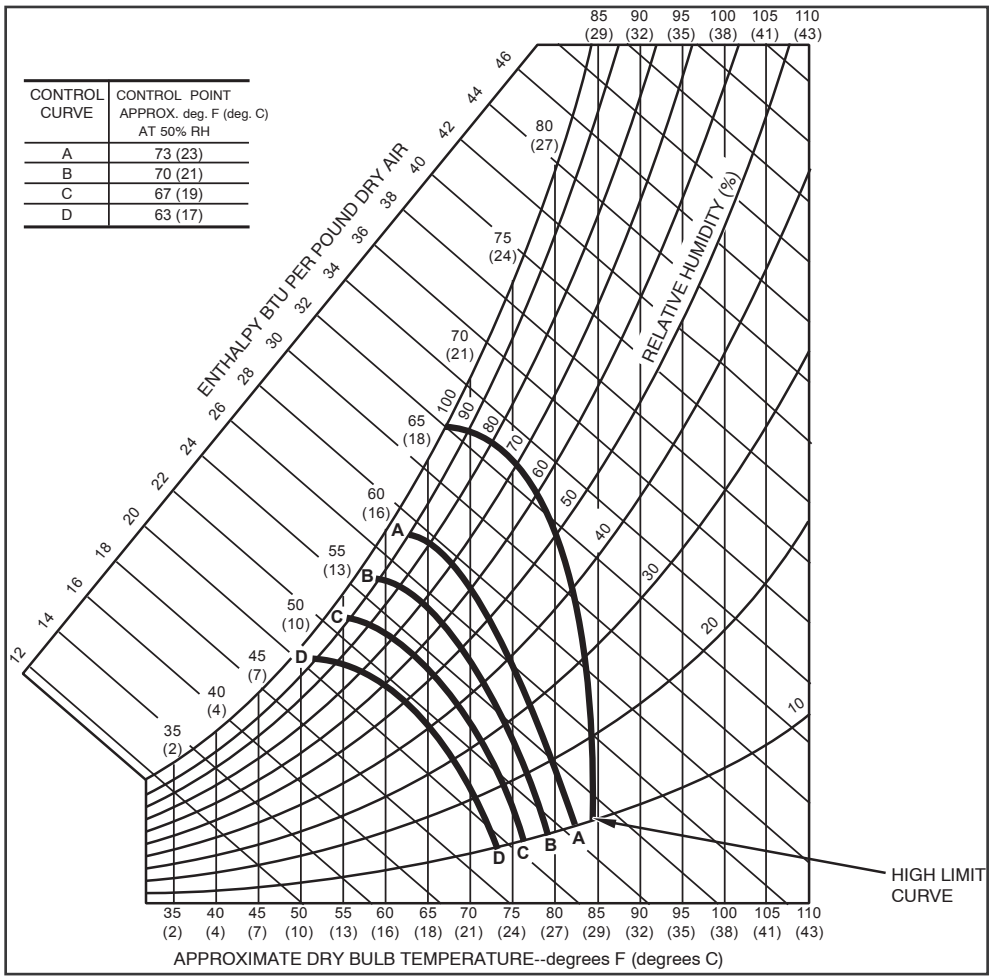
   T_M = Mixed-Air Temperature

   As an example, if local codes require 10% outdoor air during occupied conditions, outdoor-air temperature is 60°F, and return-air temperature is 75°F.

   (60 x .10) + (75 x .90) = 73.5°F

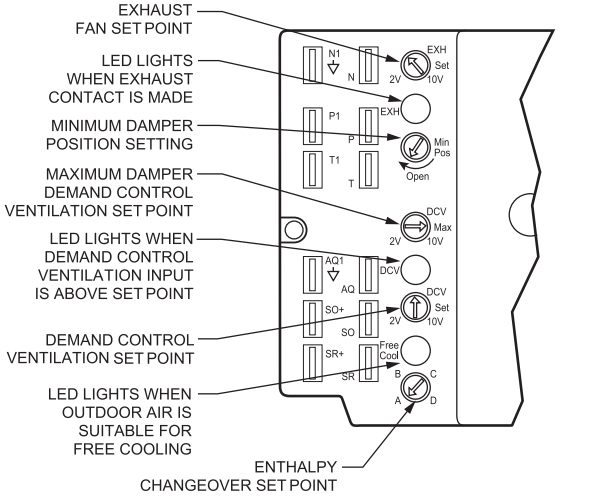
2. Disconnect the mixed air sensor from terminals T and T1.
3. Ensure that the factory-installed jumper is in place across terminals P and P1. If remote damper positioning is being used, make sure that the terminals are wired according to Fig. 22 and that the minimum position potentiometer is turned fully clockwise.
4. Connect 24 vac across terminals TR and TR1.
5. Carefully adjust the minimum position potentiometer until the measured mixed air temperature matches the calculated value.
6. Reconnect the mixed air sensor to terminals T and T1.

Remote control of the EconoMi$er IV damper is desirable when requiring additional temporary ventilation. If a field-supplied remote potentiometer (Honeywell part number S963B1128) is wired to the EconoMi$er IV controller, the minimum position of the damper can be controlled from a remote location.



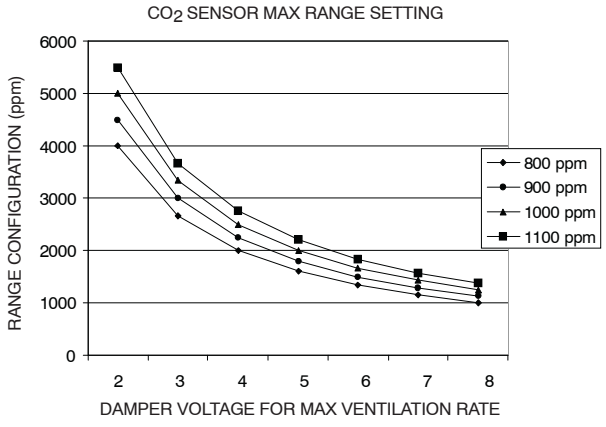
C06037

Fig. 23 - Enthalpy Changeover Set Points



C06034

Fig. 24 - EconoMi$er IV Controller Potentiometer and LED Locations



C06039

Fig. 25 - CO_2 Sensor Maximum Range Setting

To control the minimum damper position remotely, remove the factory-installed jumper on the P and P1 terminals on the EconoMi$er IV controller. Wire the field-supplied potentiometer to the P and P1 terminals on the EconoMi$er IV controller. (See Fig. 22.)

Damper Movement

When the EconoMi$er IV board receives initial power, it can take the damper up to $2^1/_2$ minutes before it begins to position itself. After the initial positioning, subsequent changes to damper position will take up to 30 seconds to initiate. Damper movement from full open to full closed (or vice versa) takes $2^1/_2$ minutes.

Thermostats

The EconoMi$er IV control works with conventional thermostats that have a Y1 (cool stage 1), Y2 (cool stage 2), W1 (heat stage 1), W2 (heat stage 2), and G (fan). The EconoMi$er IV control does not support space temperature sensors like the T55 or T56. Connections are made at the thermostat terminal connection board located in the main control box.

Demand Control Ventilation

When using the EconoMi$er IV for demand control ventilation, there are some equipment selection criteria which should be considered. When selecting the heat capacity and cool capacity of the equipment, the maximum ventilation rate must be evaluated for design conditions. The maximum damper position must be calculated to provide the desired fresh air.

Typically the maximum ventilation rate will be about 5 to 10% more than the typical cfm required per person, using normal outside air design criteria.

A proportional anticipatory strategy should be taken with the following conditions: a zone with a large area, varied occupancy, and equipment that cannot exceed the required ventilation rate at design conditions. Exceeding the required ventilation rate means the equipment can condition air at a maximum ventilation rate that is greater than the required ventilation rate for maximum occupancy. A proportional-anticipatory strategy will cause the fresh air supplied to increase as the room CO_2 level increases even though the CO_2 set point has not been reached. By the time the CO_2 level reaches the set point, the damper will be at maximum ventilation and should maintain the set point.

In order to have the CO_2 sensor control the economizer damper in this manner, first determine the damper voltage output for minimum or base ventilation. Base ventilation is the ventilation required to remove contaminants during unoccupied periods. The following equation may be used to determine the percent of outside-air entering the building for a given damper position. For best results there should be at least a 10 degree difference in outside and return-air temperatures.

$$(T_O \times OA) + (T_R \times RA) = T_M$$

T_O = Outdoor-Air Temperature

OA = Percent of Outdoor Air

T_R = Return-Air Temperature

RA = Percent of Return Air

T_M = Mixed-Air Temperature

Once base ventilation has been determined, set the minimum damper position potentiometer to the correct position.

The same equation can be used to determine the occupied or maximum ventilation rate to the building. For example, an output of 3.6 volts to the actuator provides a base ventilation rate of 5% and an output of 6.7 volts provides the maximum ventilation rate of 20% (or base plus 15 cfm per person). Use Fig. 25 to determine the maximum setting of the CO_2 sensor. For example, a 1100 ppm set point relates to a 15 cfm per person design. Use the 1100 ppm curve on Fig. 25 to find the point when the CO_2 sensor output will be 6.7 volts. Line up the point on the graph with the left side of the chart to determine that the range configuration for the CO_2 sensor should be 1800 ppm. The EconoMi$er IV controller will output the 6.7 volts from the CO_2 sensor to the actuator when the CO_2 concentration in the space is at 1100 ppm. The DCV set point may be left at 2 volts since the CO_2 sensor voltage will be ignored by the EconoMi$er IV controller until it rises above the 3.6 volt setting of the minimum position potentiometer.

Once the fully occupied damper position has been determined, set the maximum damper demand control ventilation potentiometer to this position. Do not set to the maximum position as this can result in over-ventilation to the space and potential high-humidity levels.

CO_2 Sensor Configuration

The CO_2 sensor has preset standard voltage settings that can be selected anytime after the sensor is powered up. (See Table 6.)

Use setting 1 or 2 for Carrier equipment. (See Table 6.)

1. Press Clear and Mode buttons. Hold at least 5 seconds until the sensor enters the Edit mode.
2. Press Mode twice. The STDSET Menu will appear.
3. Use the Up/Down button to select the preset number. (See Table 6.)
4. Press Enter to lock in the selection.
5. Press Mode to exit and resume normal operation.

The custom settings of the CO_2 sensor can be changed anytime after the sensor is energized. Follow the steps below to change the non-standard settings:

1. Press Clear and Mode buttons. Hold at least 5 seconds until the sensor enters the Edit mode.
2. Press Mode twice. The STDSET Menu will appear.
3. Use the Up/Down button to toggle to the NONSTD menu and press Enter.
4. Use the Up/Down button to toggle through each of the nine variables, starting with Altitude, until the desired setting is reached.
5. Press Mode to move through the variables.
6. Press Enter to lock in the selection, then press Mode to continue to the next variable.

Dehumidification of Fresh Air with DCV Control

Information from ASHRAE (American Society of Heating, Refrigeration, and Air Conditioning Engineers) indicates that the largest humidity load on any zone is the fresh air introduced. For some applications, a device such as a 62AQ energy recovery unit is added to reduce the moisture content of the fresh air being brought into the building when the enthalpy is high. In most cases, the normal heating and cooling processes are more than adequate to remove the humidity loads for most commercial applications.

This makes the control of the of the dehumidification device simple when using the enthalpy or differential enthalpy sensor. The enthalpy sensor or differential enthalpy sensor is installed on the equipment to determine economizer operation. The high enthalpy signal from the enthalpy sensor or differential enthalpy sensor can be used to turn on the outdoor air moisture removal device any time fresh air is required for the space.

The energy recovery device should be sized for maximum latent and sensible conditioning at maximum ventilation on a design day. A calculation for leaving-air temperature on a low ambient, low ventilation day should also be done to determine the mixed-air temperature of the return and pre-conditioned outside air. The design should produce an air temperature somewhat near room conditions to prevent reheat of the air mixture. The energy recovery device should be interlocked with the heat to turn off the device when in the heat mode.

Operating Sequence

Cooling, Units Without Economizer

When the thermostat calls for one stage of cooling, Y1 and G are energized. The indoor-fan contactor (IFC) and compressor contactor C.A1 and outdoor-fan contactors (OFC1 and OFC2 when outdoor temperature is above LTS setting) are energized and the indoor fan motor, compressor(s) or A1, and outdoor fans controlled by OFC1 are started. If the outdoor temperature is above the setting of the low temperature switch, the outdoor fans controlled by OFC2 are also started.

If more cooling is required, the thermostat will call for a second stage of cooling, energizing Y2. This in turn energizes the compressor contactor C.B1. The second stage compressor B1 is then started.

Heating, Units Without Economizer

When the thermostat calls for one stage of heating, W1 is energized. The thermostat must be configured such that the blower output (G) is energized when there is a W1 call for heating. The indoor-fan contactor (IFC) and first stage electric heat contactor(s) are energized and the indoor-fan motor, and first stage electric heater are started.

If additional heating is required, the thermostat will call for a second stage of heating, energizing W2. This will energize the second stage of electric heat.

Cooling, Units with EconoMi$er IV

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconoMi$er IV control to provide a 50° to 55°F mixed-air temperature into the zone. As the mixed-air temperature fluctuates above 55° or below 50°F, the dampers will be modulated (open or close) to bring the mixed-air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed air temperature to drop below 45°F, then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48°F.

If optional power exhaust is installed, as the outdoor-air damper opens and closes, the power exhaust fans will be energized and deenergized.

If field-installed accessory CO_2 sensors are connected to the EconoMi$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 set point, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed.

Table 6 – CO_2 Sensor Standard Settings

SETTING	EQUIPMENT	OUTPUT	VENTILATION RATE (cfm/Person)	ANALOG OUTPUT	CO_2 CONTROL RANGE (ppm)	OPTIONAL RELAY SETPOINT (ppm)	RELAY HYSTERESIS (ppm)
1	Interface w/Standard Building Control System	Proportional	Any	0-10V 4-20 mA	0-2000	1000	50
2		Proportional	Any	2-10V 7-20 mA	0-2000	1000	50
3		Exponential	Any	0-10V 4-20 mA	0-2000	1100	50
4	Economizer	Proportional	15	0-10V 4-20 mA	0-1100	1100	50
5		Proportional	20	0-10V 4-20 mA	0-900	900	50
6		Exponential	15	0-10V 4-20 mA	0-1100	1100	50
7		Exponential	20	0-10V 4-20 mA	0-900	900	50
8	Health & Safety	Proportional	—	0-10V 4-20 mA	0-9999	5000	500
9	Parking/Air Intakes/ Loading Docks	Proportional	—	0-10V 4-20 mA	0-2000	700	50

LEGEND
PPM — Parts Per Million

For EconoMi$er IV operation, there must be a thermostat call for the fan (G). This will move the damper to its minimum position.

When the EconoMi$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi$er IV damper to the minimum position.

On the initial power to the EconoMi$er IV control, it will take the damper up to $2^1/_2$ minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between $1^1/_2$ to $2^1/_2$ minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed air temperature set point at 50° to 55°F.

If there is a further demand for cooling (cooling second stage – Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature set point. The EconoMi$er IV damper will be open at maximum position. EconoMi$er IV operation is limited to a single compressor.

Heating, Units with EconoMi$er IV

When the room temperature calls for heat, the heating controls are energized as described in the Heating, Units Without Economizer section. The IFM is energized and the EconoMi$er IV damper modulates to the minimum position. When the thermostat is satisfied, the damper modulates closed.

SERVICE

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before performing service or maintenance operations on unit, turn off main power switch to unit.

⚠ CAUTION

UNIT OPERATION AND SAFETY HAZARD

Failure to follow this caution may result in personal injury or equipment damage.

Puron® (R-410A) refrigerant systems operate at higher pressures than standard R-22 systems. Do not use R-22 service equipment or components on Puron refrigerant equipment.

Cleaning

Inspect unit interior at beginning of each heating and cooling season and as operating conditions require. Remove unit top panel and/or side panels for access to unit interior.

Coil Maintenance and Cleaning Recommendation

Routine cleaning of coil surfaces is essential to maintain proper operation of the unit. Elimination of contamination and removal of harmful residues will greatly increase the life of the coil and extend the life of the unit. The following maintenance and cleaning procedures are recommended as part of the routine maintenance activities to extend the life of the coil.

Remove Surface Loaded Fibers

Surface loaded fibers or dirt should be removed with a vacuum cleaner. If a vacuum cleaner is not available, a soft non-metallic bristle brush may be used. In either case, the tool should be applied in the direction of the fins. Coil surfaces can be easily damaged (fin edges can be easily bent over and damage to the coating of a protected coil) if the tool is applied across the fins.

NOTE: Use of a water stream, such as a garden hose, against a surface loaded coil will drive the fibers and dirt into the coil. This will make cleaning efforts more difficult. Surface loaded fibers must be completely removed prior to using low velocity clean water rinse.

Periodic Clean Water Rinse

A periodic clean water rinse is very beneficial for coils that are applied in coastal or industrial environments. However, it is very important that the water rinse is made with very low velocity water stream to avoid damaging the fin edges. Monthly cleaning as described below is recommended.

Routine Cleaning of Novation Heat Exchanger Condenser Coil Surfaces

To clean the Novation Heat Exchanger condenser coil, chemicals are NOT to be used; only water is approved as the cleaning solution. Only clean portable water is authorized for cleaning Novation Heat Exchanger condensers. Carefully remove any foreign objects or debris attached to the coil face or trapped within the mounting frame and brackets. Using a high pressure water sprayer, purge any soap or industrial cleaners from hose and/or dilution tank prior to wetting the coil.

Clean condenser face by spraying the coil core steadily and uniformly from top to bottom directing the spray straight into or toward the coil face. Do not exceed 900 psig or a 45 degree angle; nozzle must be at least 12" (30 cm) from the coil face. Reduce pressure and use caution to prevent damage to air centers (fins). Do not fracture the braze between air centers and refrigerant tubes. Allow water to drain from the coil core and check for refrigerant leaks prior to start-up.

NOTE: Please see the Novation Heat Exchanger Condenser Service section for specific information on the Novation Heat Exchanger coil.

⚠ CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury or equipment damage.

Chemical cleaning should NOT be used on the aluminum Novation Heat Exchanger condenser. Damage to the coil may occur. Only approved cleaning is recommended.

Routine Cleaning of Evaporator Coil Surfaces

Monthly cleaning with Totaline® environmentally sound coil cleaner is essential to extend the life of coils. This cleaner is available from Carrier Replacement parts division as part number P902-0301 for a one gallon container, and part number P902-0305 for a 5 gallon container. It is recommended that round-tube coils, including standard aluminum, pre-coated, copper/copper or E-coated coils be cleaned with the Totaline environmentally sound coil cleaner as described below. Coil cleaning should be part of the unit's regularly scheduled maintenance procedures to ensure long life of the coil. Failure to clean the coils may result in reduced durability in the environment.

Avoid the use of:

- coil brighteners
- acid cleaning prior to painting
- high pressure washers
- poor quality water for cleaning

Totaline environmentally sound coil cleaner is non-flammable, hypoallergenic, nonbacterial, and a USDA accepted biodegradable agent that will not harm the coil or surrounding components such as electrical wiring, painted metal surfaces, or insulation. Use of non-recommended coil cleaners is strongly discouraged since coil and unit durability could be affected.

Totaline® Environmentally Sound Coil Cleaner Application Equipment

- $2^1/_2$ gallon garden sprayer
- water rinse with low velocity spray nozzle

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Harsh chemicals, household bleach or acid or basic cleaners should not be used to clean outdoor or indoor coils of any kind. These cleaners can be very difficult to rinse out of the coil and can accelerate corrosion at the fin/tube interface where dissimilar materials are in contact. If there is dirt below the surface of the coil, use the Totaline environmentally sound coil cleaner as described above.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

High velocity water form a pressure washer, garden hose, or compressed air should never be used to clean a coil. The force of water or air jet will bend the fin edges and increase airside pressure drop. Reduced unit performance or nuisance unit shutdown may occur.

Totaline Environmentally Sound Coil Cleaner Application Instructions

1. Proper eye protection such as safety glasses is recommended during mixing and application.
2. Remove all surface loaded fibers and dirt with a vacuum cleaner as described above.
3. Thoroughly wet finned surfaces with clean water and a low velocity garden hose, being careful not to bend fins.
4. Mix Totaline environmentally sound coil cleaner in a $2^1/_2$ gallon garden sprayer according to the instructions included with the cleaner. The optimum solution temperature is 100°F.

NOTE: Do NOT USE water in excess of 130°F, as the enzymatic activity will be destroyed.

5. Thoroughly apply Totaline environmentally sound coil cleaner solution to all coil surfaces including finned area, tube sheets and coil headers.
6. Hold garden sprayer nozzle close to finned areas and apply cleaner with a vertical, up-and-down motion. Avoid spraying in horizontal pattern to minimize potential for fin damage.
7. Ensure cleaner thoroughly penetrates deep into finned areas.
8. Interior and exterior finned areas must be thoroughly cleaned.
9. Finned surfaces should remain wet with cleaning solution for 10 minutes.
10. Ensure surfaces are not allowed to dry before rinsing. Reapplying cleaner as needed to ensure 10-minute saturation is achieved.
11. Thoroughly rinse all surfaces with low velocity clean water using downward rinsing motion of water spray nozzle. Protect fins from damage from the spray nozzle.

Condensate Drain

Check and clean each year at the start of the cooling season. In winter, keep drains and traps dry. An access panel is located above the condensate connection to allow easy clean out of the condensate pan. The first time the panel is removed, the insulation behind the access panel will need to be cut away. Carefully cut the insulation with a knife or blade on three sides so the insulation can be folded out of the way during cleaning. Be careful not to damage components behind the insulation while cutting. Once cleaning is completed, fold the insulation back into place and secure the access panel in the original position.

Filters

Clean or replace at start of each heating and cooling season, or more often if operating conditions require. Refer to Table 1 for type and size.

Outdoor-Air Inlet Screens

Clean screens with steam or hot water and a mild detergent. Do not use throwaway filters in place of screens. See Table 1 for quantity and size.

Lubrication

Compressors

Each compressor is charged with the correct amount of oil at the factory.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

The compressor is in a Puron refrigerant system and uses a polyester (POE) oil. This oil is extremely hygroscopic, meaning it absorbs water readily. POE oils can absorb 15 times as much water as other oils designed for HCFC and CFC refrigerants. Avoid exposure of the oil to the atmosphere.

Polyolester (POE) compressor lubricants are known to cause long term damage to some synthetic roofing materials. Exposure, even if immediately cleaned up, may cause roofing materials to become brittle (leading to cracking) within a year. When performing any service which may risk exposure of compressor oil to the roof, take appropriate precautions to protect roofing. Procedures which risk oil leakage include compressor replacement, repairing refrigerant leaks, and replacing refrigerant components. To prepare rooftop:

1. Cover extended roof work area with an impermeable plastic dropcloth or tarp. Make sure a 10 x 10 area around the work area is covered.
2. Cover area in front of the unit service panel with a terry cloth shop towel to absorb lubricant spills and prevent run-offs. Towel will also protect dropcloth from tears caused by tools or components.
3. Place terrycloth shop towel inside the unit directly under components to be serviced to prevent spills through the bottom of the unit.
4. Perform the required service.
5. Remove and dispose of any oil contaminated material per local codes.

Fan Shaft Bearings

Lubricate bearings at least every 6 months with suitable bearing grease. Typical lubricants are given below:

MANUFACTURER	LUBRICANT
Texaco	Regal AFB-2*
Mobil	Mobilplex EP No. 1
Sunoco	Prestige 42
Texaco	Multifak 2

*Preferred lubricant because it contains rust and oxidation inhibitors.

Fan Motor Bearings

Fan motor bearings are of the permanently lubricated type. No field lubrication is required. No lubrication of the condenser or evaporator motors are required.

Manual Outdoor Air Damper

If manual outdoor air damper blade adjustment is required, refer to Step 8 – Install Outdoor Air Hood section.

Economizer Adjustment

If economizer adjustment is required, refer to Optional EconoMi$er IV section.

Evaporator Fan Service and Replacement

The 50PM units feature a slide-out fan deck for easy servicing of the indoor-fan motor, pulleys, belt, and bearings. To service components in this section, perform the following procedure:

1. Turn off unit power.
2. Open the fan section access panel.
3. Remove three no. 10 screws at front of slide-out fan deck. Save screws. (See Fig. 26.)
4. Fan deck can now be slid out to access serviceable components.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

DO NOT SLIDE FAN DECK OUT PAST THE STOP BRACKET. If further access is required, the fan deck must be supported. Make sure plugs and wiring are not pinched between fan housing and unit center post.

5. To replace fan deck to operating position, slide fan deck back into the unit. Secure with the three no. 10 screws removed in Step 3.
6. Close fan section access door.
7. Restore power to unit.

Evaporator Fan Performance Adjustment (Fig. 26 and 27)

Fan motor pulleys are factory set for speed shown in Fan Rpm at Motor Pulley Settings in Appendix B.

To change fan speeds:

1. Shut off unit power supply.
2. Loosen nuts on the 4 carriage bolts in the mounting base. Using adjusting bolts and plate, slide motor and remove belt.
3. Loosen movable-pulley flange setscrew. (See Fig. 27.)
4. Screw movable flange toward fixed flange to increase speed and away from fixed flange to decrease speed. Increasing fan speed increases load on motor. Do not exceed maximum speed specified in Fan Rpm at Motor Pulley Settings in Appendix B.
5. See Appendix A for air quantity limits.
6. Set movable flange at nearest keyway of pulley hub and tighten setscrew. (See Fan Rpm at Motor Pulley Settings in Appendix B for speed change for each full turn of pulley flange.)
7. Replace and tighten belts (see Evaporator Fan Belt Tension Adjustment section below).
8. Restore power to unit.

To align fan and motor pulleys:

1. Loosen fan pulley setscrews.
2. Slide fan pulley along fan shaft.
3. Make angular alignment by loosening motor from mounting plate.

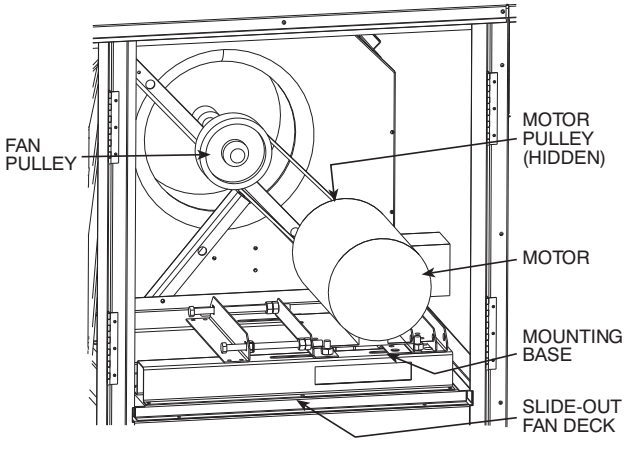
Evaporator Fan Belt Tension Adjustment

To adjust belt tension:

1. Turn off unit power.
2. Slide out fan deck to service position as shown in Evaporator Fan Service and Replacement section above.
3. Loosen fan motor bolts.
4. Move motor mounting plate to adjust to proper belt tension. (See Table 7.) Motor adjuster bolts may be used to tighten belts. (See Fig. 26.)
5. Check for proper belt alignment. Adjust if necessary.
6. Tighten motor mounting plate bolts to lock motor in proper position.
7. Return fan deck back into operating position.
8. Restore power to unit.

Condenser-Fan Adjustment (Fig. 28)

1. Shut off unit power supply.
2. Remove condenser-fan assembly (grille, motor, motor cover, and fan) and loosen fan hub setscrews.
3. Adjust fan height as shown in Fig. 28.
4. Tighten setscrews and replace condenser-fan assembly.
5. Turn on power to unit.



C07203

Fig. 26 – Evaporator-Fan Motor Adjustment

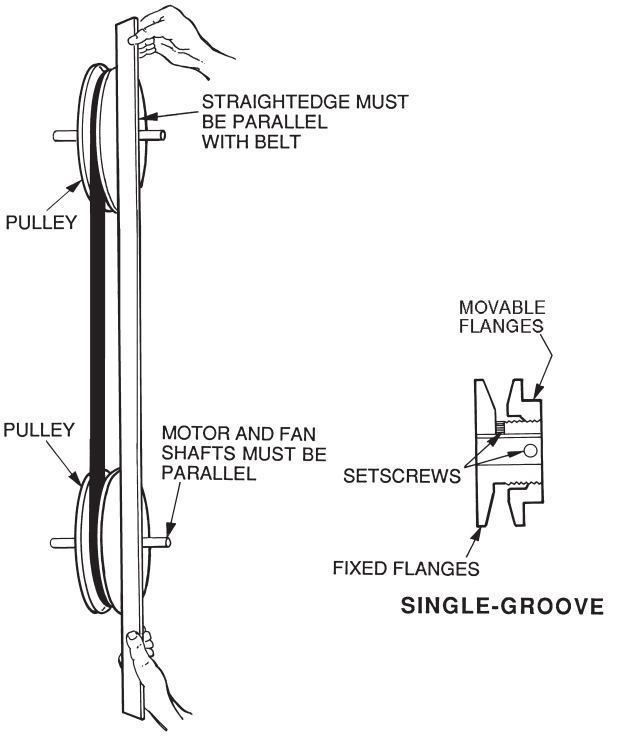


Fig. 27 – Evaporator-Fan Alignment and Adjustment

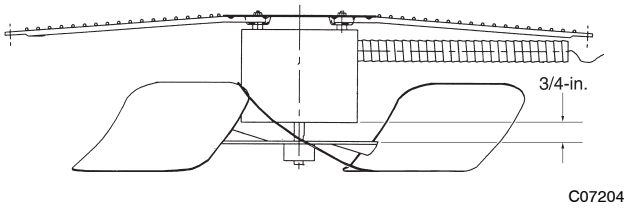


Fig. 28 – Condenser-Fan Adjustment

Novation Heat Exchanger Condenser Service and Replacement

The condenser coil in this unit is a Novation Heat Exchanger surface. The Novation Heat Exchanger is an all-aluminum construction with fins over a single-depth crosstube. The crosstubes have multiple small passages through which the refrigerant passes from header to header on each end. (See Fig. 29.) The all-aluminum construction provides increased resistance to corrosion over aluminum fins on copper tubes in normal and mild marine applications.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Refer to product data manual for coil usage in coastal or industrial applications.

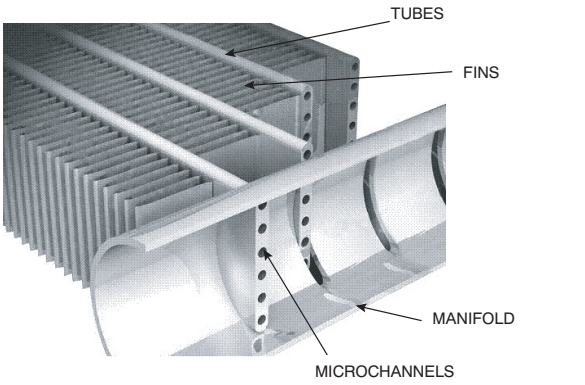


Fig. 29 – Novation Heat Exchanger Coils

Repairing Tube Leaks

RCD offers service repair kits for repairing tube leaks in the crosstubes. These kits include approved braze materials and instructions specific to the aluminum Novation Heat Exchanger coil.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

Use of other than approved repair procedures may affect the pressure rating or the corrosion resistance of the Novation Heat Exchanger condenser coil.

Replacing the Novation Heat Exchanger Coil

The service replacement coil is preformed and is equipped with transition joints with copper stub tubes. When brazing the connection joints to the unit tubing, use a wet cloth around the aluminum tube at the transition joint. Avoid applying torch flame directly onto the aluminum tubing.

Verify Sensor Performance

Using an ohmmeter and a thermometer, compare measured temperature to the resistance shown in Table 8.

Economizer Operation During Power Failure

Dampers have a spring return. In event of power failure, dampers will return to fully closed position until power is restored. *Do not manually operate damper motor.*

Table 7 – Belt Tension Adjustment

50PM	VOLTAGE	BELT TENSION (lb) Unit Model Number Position 10							
		A,J	B,K	C,L	D,M	E,N	F,P	G,Q	H,R
16	230	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	460	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	575	5.3	5.1	5.6	4.5	5.3	5.1	5.6	4.5
20	230	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	460	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	575	5.3	5.1	5.6	4.5	5.3	5.1	5.6	4.5
24	230	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	460	4.8	5.1	5.6	4.5	4.8	5.1	5.6	4.5
	575	5.3	5.1	5.6	4.5	5.3	5.1	5.6	4.5
28	230	4.5	5.4	5.9	4.5	4.5	5.4	5.9	4.5
	460	4.5	5.4	5.9	4.5	4.5	5.4	5.9	4.5
	575	4.5	5.4	5.9	4.5	4.5	5.4	5.9	4.5

Table 8 – Sensor Temperature/Resistance Values

TEMPERATURE (F)	RESISTANCE (ohms)
–58	200,250
–40	100,680
–22	53,010
–4	29,091
14	16,590
32	9,795
50	5,970
68	3,747
77	3,000
86	2,416
104	1,597
122	1,080
140	746
158	525
176	376
185	321
194	274
212	203
230	153
248	116
257	102
266	89
284	70
302	55

Evacuation

Proper evacuation of the system will remove noncondensables and ensure a tight, dry system before charging. Evacuate from both high and low side ports. Never use the system compressor as a vacuum pump. Refrigerant tubes and indoor coil should be evacuated to 500 microns. Always break a vacuum with dry nitrogen. The two possible methods are the deep vacuum method and the triple evacuation method.

Deep Vacuum Method

The deep vacuum method requires a vacuum pump capable of pulling a minimum vacuum of 500 microns and a vacuum gauge capable of accurately measuring this vacuum depth. The deep vacuum method is the most positive way of assuring a system is free of air and liquid water. (See Fig. 30.)

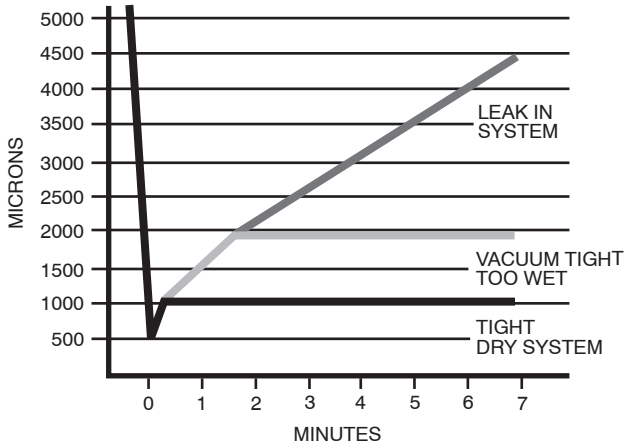


Fig. 30 - Deep Vacuum Graph

Triple Evacuation Method

The triple evacuation method should only be used when vacuum pump is capable of pumping down to 28-in. of mercury and system does not contain any liquid water. Proceed as follows:

1. Pump system down to 28-in. of mercury and allow pump to continue operating for an additional 15 minutes.
2. Close service valves and shut off vacuum pump.
3. Connect a nitrogen cylinder and regulator to system and open until system pressure is 2 psig.
4. Close service valve and allow system to stand for 1 hr. During this time, dry nitrogen will be able to diffuse throughout the system, absorbing moisture.
5. Repeat this procedure. System will then contain minimal amounts of contaminants and water vapor.

Refrigerant Charge

Amount of refrigerant charge is listed on unit nameplate. Refer to Carrier GTAC II; Module 5; Charging, Recovery, Recycling, and Reclamation section for charging methods and procedures. Unit panels must be in place when unit is operating during charging procedure.

Puron® (R-410A) refrigerant cylinders contain a dip tube which allows liquid refrigerant to flow from the cylinder in an upright position. Charge units with cylinder in the upright position and a commercial type metering device in the manifold hose.

⚠ CAUTION

UNIT OPERATION AND SAFETY HAZARD

Failure to follow this caution may result in personal injury or equipment damage.

This unit uses Puron® (R-410A) refrigerant system which operate at higher pressures than R-22 or other systems. No other refrigerant may be used in this system. Gauge set, hoses, and recovery system must be designed to handle Puron refrigerant. If unsure about equipment, consult the equipment manufacturer.

NOTE: Do not use recycled refrigerant as it may contain contaminants.

No Charge

Use standard evacuating techniques. After evacuating system, weigh in the specified amount of refrigerant (refer to unit nameplate).

Low Charge Cooling

Using cooling charging chart (see Fig. 31-33), add or remove refrigerant until conditions of the chart are met. An accurate pressure gauge and temperature-sensing device are required. Charging is accomplished by ensuring the proper amount of liquid subcooling. Measure liquid line pressure at the liquid line service valve using pressure gauge. Connect temperature sensing device to the liquid line near the liquid line service valve and insulate it so that outdoor ambient temperature does not affect reading.

To Use the Cooling Charging Chart

Use the above temperature and pressure readings, and find the intersection point on the cooling charging chart. If intersection point on chart is above line, add refrigerant. If intersection point on chart is below line, carefully recover some of the charge. Recheck suction pressure as charge is adjusted.

NOTE: Indoor-air cfm must be within normal operating range of unit. All outdoor fans must be operating.

The TXV (thermostatic expansion valve) is set to maintain between 10 and 15 degrees of superheat at the compressors. The valves are factory set and cannot be adjusted. Do not use a TXV designed for use with R-22 refrigerant.

Puron® Refrigerant

Puron refrigerant operates at 50 to 70 percent higher pressures than R-22. Be sure that servicing equipment and replacement components are designed to operate with Puron refrigerant. Do not mix with components that have been used with other refrigerants. Puron refrigerant, as with other HFCs, is only compatible with POE oils.

Recovery cylinder service pressure rating must be 400 psig. Puron systems should be charged with liquid refrigerant. Use a commercial-type metering device in the manifold hose. Manifold sets should be 750 psig high-side and 200 psig low-side with 520 psig low-side retard. Use hoses with 750 psig service pressure rating. Leak detectors should be designed to detect HFC refrigerant.

Filter Drier

Replace whenever refrigerant system is exposed to atmosphere. Only use factory specified liquid-line filter driers with working pressures no less than 650 psig. Do not install a suction-line filter drier in liquid line. A liquid-line filter drier designed for use with Puron® refrigerant is required for each circuit.

Protective Devices

Compressor Rotation

Overcurrent

Each compressor has internal line break motor protection.

Overtemperature

Each compressor has an internal protector to protect it against excessively high discharge gas temperatures.

High-Pressure Switch

If the high-pressure switch opens, the compressor will shut down and the compressor lockout (CLO) device will energize to block further compressor operation. The high-pressure switch will reset automatically as the refrigerant pressure drops below its reset level. The CLO will remain energized until manually reset.

Low-Pressure Switch

If the low-pressure switch opens, the compressor will shut down and the compressor lockout (CLO) device will energize to block further compressor operation. The low-pressure switch will reset automatically as the refrigerant pressure rises above its reset level. The CLO will remain energized until manually reset.

Freeze Protection Switch

This switch is installed on each evaporator coil section to provide protection against continued unit operation with a frosted evaporator surface. If the freeze protection switch opens, the compressor on this circuit will shut down and the compressor lockout (CLO) device will energize to block further compressor operation. The freeze protection switch will reset as the evaporator tube temperature rises above its reset level. The CLO will remain energized until manually reset.

Compressor Lockout (CLO) Device

The CLO prevents automatic recycling of the compressor as safety controls reset. If the high-pressure switch, low-pressure switch or freeze protection switch opens, the CLO device will energize to block further compressor operation. To reset the CLO (after all safety switches have reset), either open the thermostat to remove the cooling demand signal (and then re-close) or cycle the control power in the unit.

Evaporator Fan Motor Protection

A manual reset, calibrated trip, magnetic circuit breaker protects against overcurrent. Do not bypass connections or increase the size of the breaker to correct trouble. Determine the cause and correct it before resetting the breaker.

Condenser-Fan Motor Protection

Each condenser-fan motor is internally protected against overtemperature.

Fuses are also located in the control box and feed power to the condenser fan motors. Always replace blown fuses with the correct size fuse as indicated on the unit fuse label.

Relief Devices

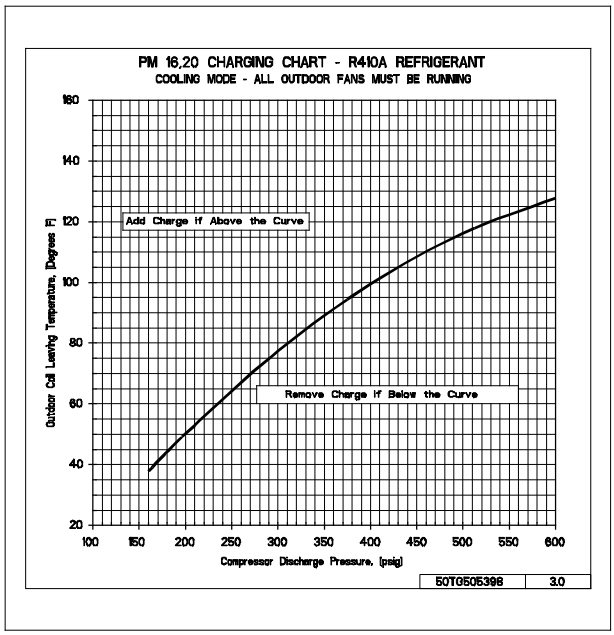
All units have relief devices to protect against damage from excessive pressures (i.e., fire). These devices protect the high and low side and are located at the suction line service port. Protect joint during brazing operations near joint.

Control Circuit, 24-V

Each control circuit is protected against overcurrent by a 3.2 amp circuit breaker. Breaker can be reset. If it trips, determine cause of trouble before resetting. See Fig. 34-36 for wiring diagrams.

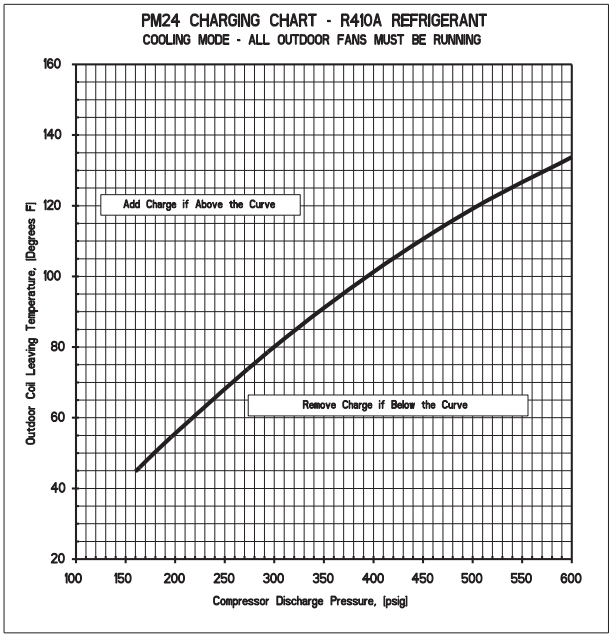
Replacement Parts

A complete list of replacement parts may be obtained from any Carrier distributor upon request.



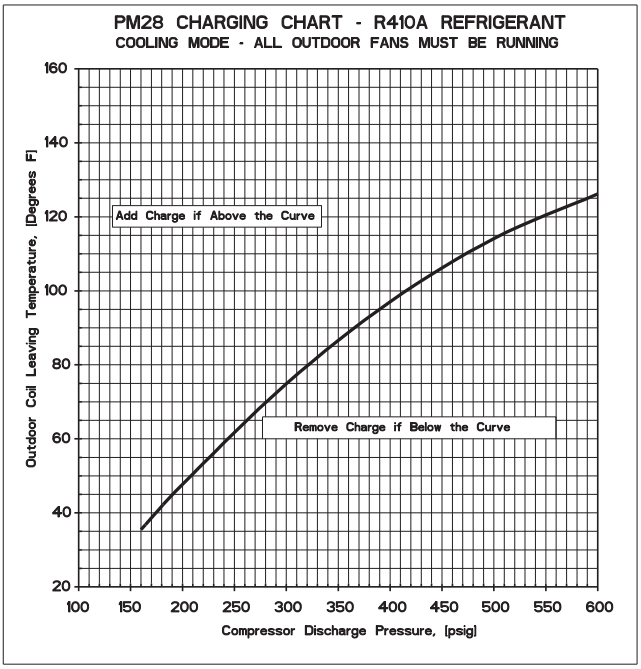
C09202

Fig. 31 - Charging Chart - 50PM16,20



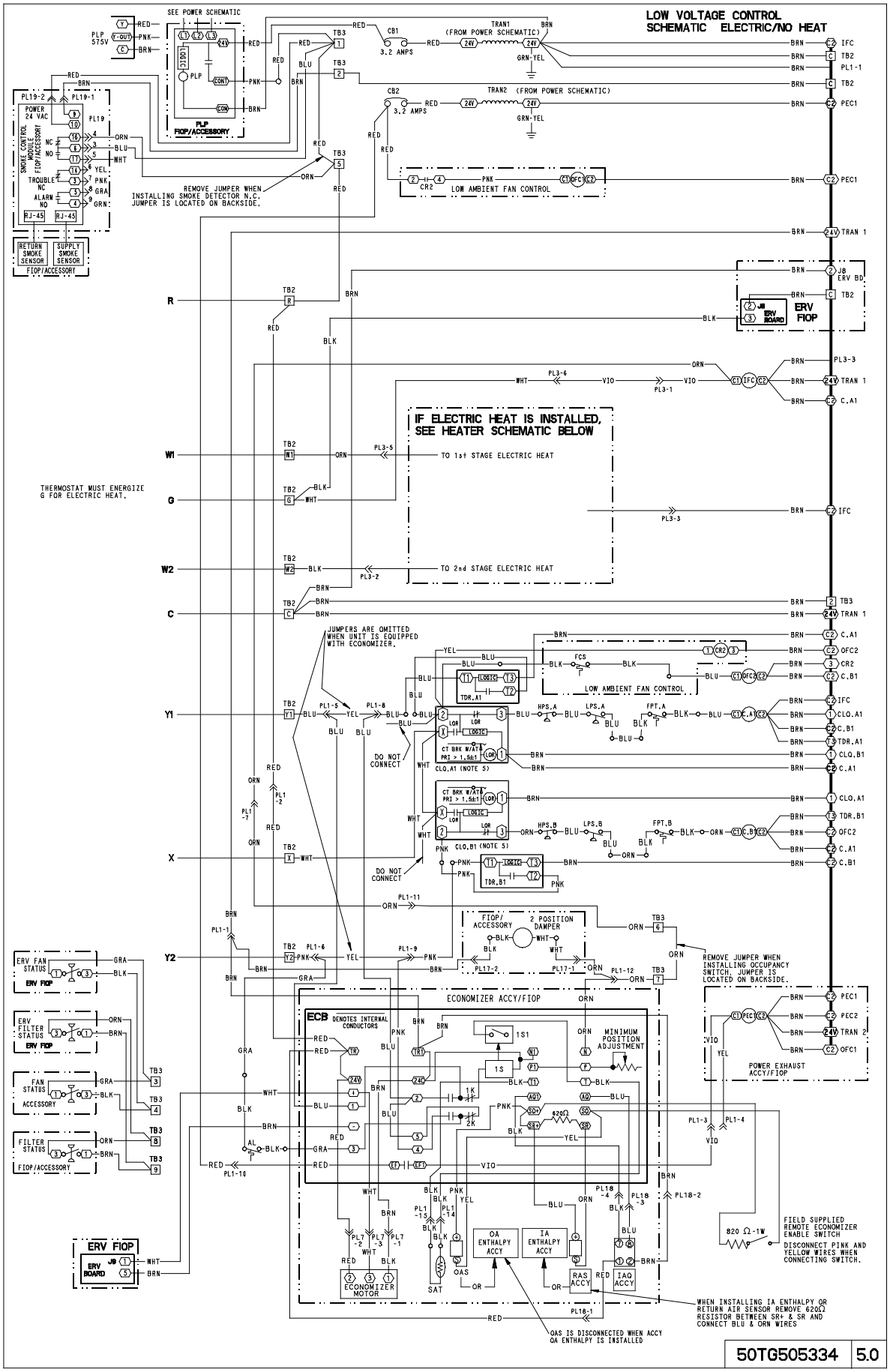
C08048

Fig. 32 - Charging Chart - 50PM24



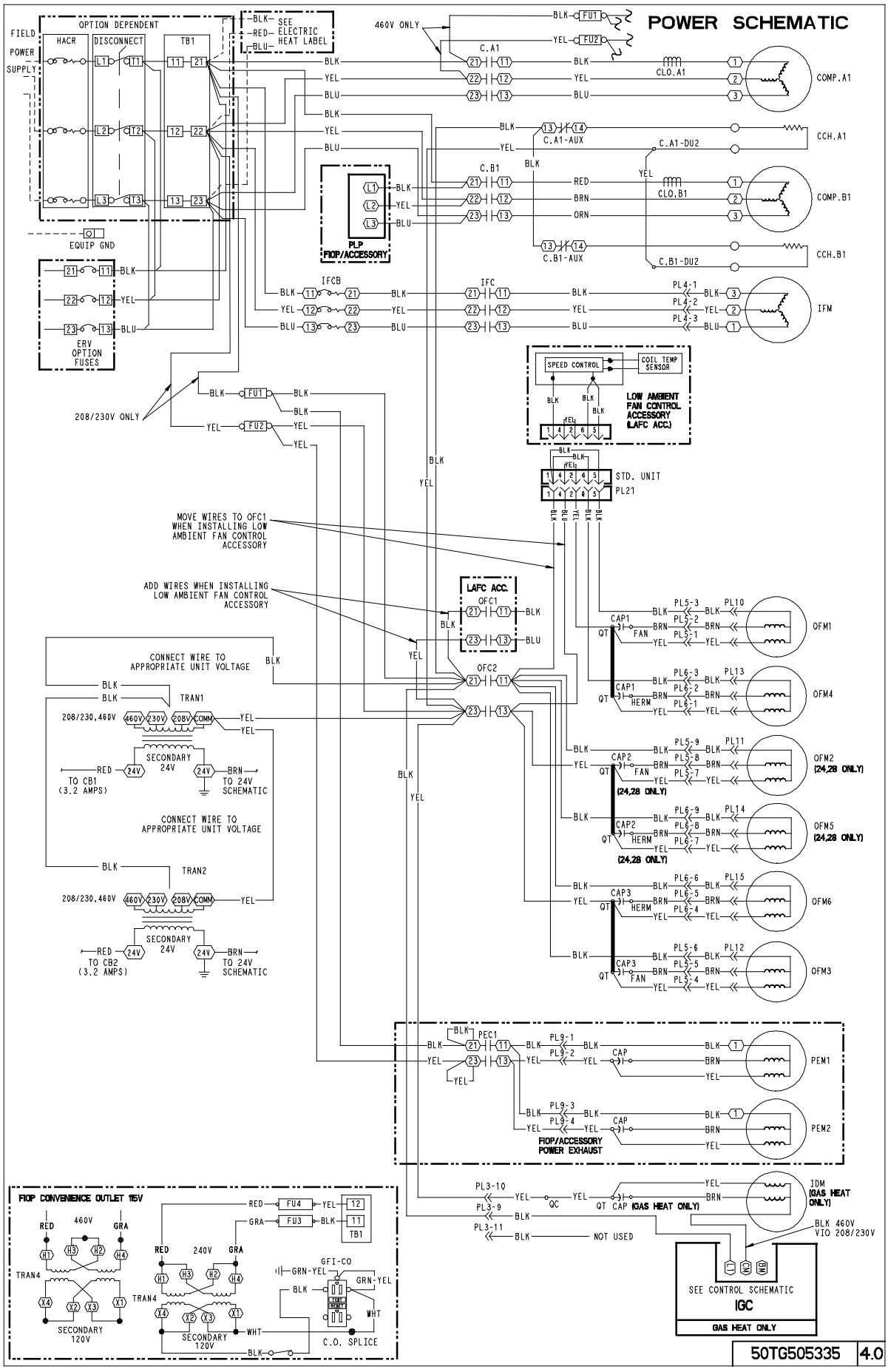
C08049

Fig. 33 - Charging Chart - 50PM28



C09212

Fig. 34 - Low Voltage Control Schematic



C09205

Fig. 35 - Typical Control Schematic

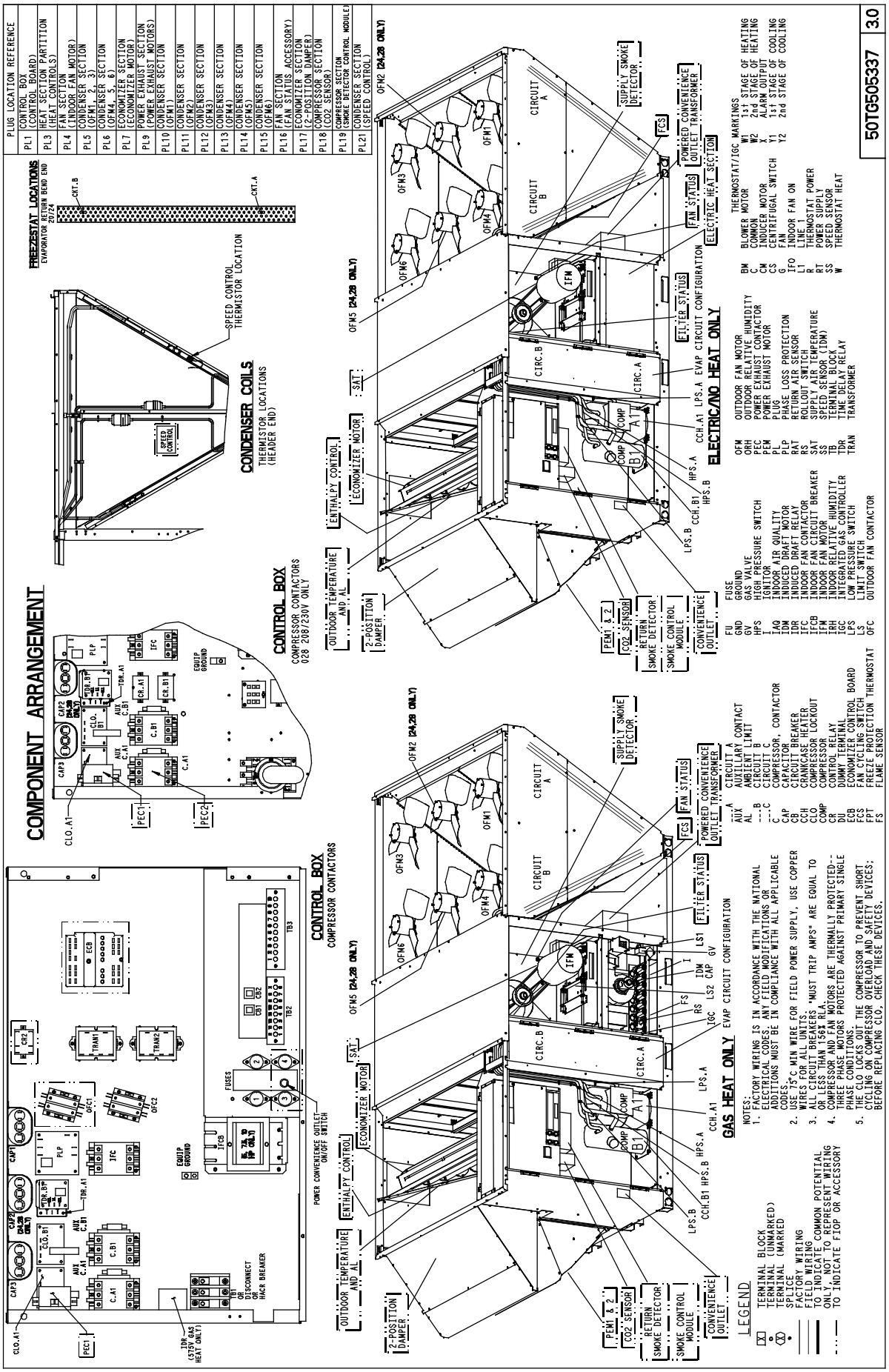


Fig. 36 - Component Arrangement

TROUBLESHOOTING

Unit Troubleshooting

Refer to Tables 9 and 10 for troubleshooting details.

Table 9 – Cooling Service Analysis

PROBLEM	CAUSE	REMEDY
Compressor and Condenser Fan Will Not Start.	Power failure.	Call power company.
	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
	Defective thermostat, contactor, transformer, or control relay.	Replace component.
	Insufficient line voltage.	Determine cause and correct.
	Incorrect or faulty wiring.	Check wiring diagram and rewire correctly.
	Thermostat setting too high.	Lower thermostat setting below room temperature.
Compressor Will Not Start but Condenser Fan Runs.	Faulty wiring or loose connections in compressor circuit.	Check wiring and repair or replace.
	Compressor motor burned out, seized, or internal overload open.	Determine cause. Replace compressor.
	Defective overload.	Determine cause and replace.
	Compressor locked out	Determine cause for safety trip and reset lockout.
	One leg of 3-phase power dead.	Replace fuse or reset circuit breaker. Determine cause.
Compressor Cycles (other than normally satisfying thermostat).	Refrigerant overcharge or undercharge.	Recover refrigerant, evacuate system, and recharge to nameplate.
	Defective compressor.	Replace and determine cause.
	Insufficient line voltage.	Determine cause and correct.
	Blocked condenser.	Determine cause and correct.
	Defective overload.	Determine cause and replace.
	Defective thermostat.	Replace thermostat.
	Faulty condenser-fan motor.	Replace.
	Restriction in refrigerant system.	Locate restriction and remove.
Compressor Operates Continuously.	Dirty air filter.	Replace filter.
	Unit undersized for load.	Decrease load or increase unit size.
	Thermostat set too low.	Reset thermostat.
	Low refrigerant charge.	Locate leak, repair, and recharge.
	Air in system.	Recover refrigerant, evacuate system, and recharge.
	Condenser coil dirty or restricted.	Clean coil or remove restriction.
Excessive Head Pressure.	Dirty air filter.	Replace filter.
	Dirty condenser coil.	Clean coil.
	Refrigerant overcharged.	Recover excess refrigerant.
	Faulty TXV.	1. Check TXV bulb mounting and secure tightly to suction line. 2. Replace TXV if stuck open or closed.
	Air in system.	Recover refrigerant, evacuate system, and recharge.
	Condenser air restricted or air short-cycling.	Determine cause and correct.
Head Pressure Too Low.	Low refrigerant charge.	Check for leaks, repair, and recharge.
	Restriction in liquid tube.	Remove restriction.
Excessive Suction Pressure.	High heat load.	Check for source and eliminate.
	Faulty TXV.	1. Check TXV bulb mounting and secure tightly to suction line. 2. Replace TXV if stuck open or closed.
	Refrigerant overcharged.	Recover excess refrigerant.
Suction Pressure Too Low.	Dirty air filter.	Replace filter.
	Low refrigerant charge.	Check for leaks, repair, and recharge.
	Metering device or low side restricted.	Remove source of restriction.
	Faulty TXV.	1. Check TXV bulb mounting and secure tightly to suction line. 2. Replace TXV if stuck open or closed.
	Insufficient evaporator airflow.	Increase air quantity. Check filter and replace if necessary.
	Temperature too low in conditioned area.	Reset thermostat.
	Field-installed filter drier restricted.	Replace.

LEGEND
TXV – Thermostatic Expansion Valve

Table 10 – Heating Service Analysis

PROBLEM	CAUSE	REMEDY
No Heat.	Power failure.	Call power company.
	Fuse blown or circuit breaker tripped. CB1, CB2, CB3.	Replace fuse or reset circuit breaker.
	Thermostat not calling for heating.	Check thermostat.
	No 24 vac at primary contactor.	Check transformer and circuit breaker.
	No power (high voltage) to L2 of primary contactor.	Check safety switches, one shot backup, and auto limit.
	Bad electrical elements.	With power off, remove high voltage wires and check resistance of heater. Replace if open.

EconoMi$er IV Troubleshooting

EconoMi$er IV Preparation

This procedure is used to prepare the EconoMi$er IV for troubleshooting. No troubleshooting or testing is done by performing the following procedure.

NOTE: This procedure requires a 9-v battery, 1.2 kilo-ohm resistor, and a 5.6 kilo-ohm resistor which are not supplied with the EconoMi$er IV.

IMPORTANT: Be sure to record the positions of all potentiometers before starting troubleshooting.

1. Disconnect power at TR and TR1. All LEDs should be off. Exhaust fan contacts should be open.
2. Disconnect device at P and P1.
3. Jumper P to P1.
4. Disconnect wires at T and T1. Place 5.6 kilo-ohm resistor across T and T1.
5. Jumper TR to 1.
6. Jumper TR to N.
7. If connected, remove sensor from terminals S_O and +. Connect 1.2 kilo-ohm 4074EJM checkout resistor across terminals S_O and +.
8. Put 620-ohm resistor across terminals S_R and +.
9. Set minimum position, DCV set point, and exhaust potentiometers fully CCW (counterclockwise).
10. Set DCV maximum position potentiometer fully CW (clockwise).
11. Set enthalpy potentiometer to D.
12. Apply power (24 vac) to terminals TR and TR1.

Differential Enthalpy

To check differential enthalpy:

1. Make sure EconoMi$er IV preparation procedure has been performed.
2. Place 620-ohm resistor across S_O and +.
3. Place 1.2 kilo-ohm resistor across S_R and +. The Free Cool LED should be lit.
4. Remove 620-ohm resistor across S_O and +. The Free Cool LED should turn off.
5. Return EconoMi$er IV settings and wiring to normal after completing troubleshooting.

Single Enthalpy

To check single enthalpy:

1. Make sure EconoMi$er IV preparation procedure has been performed.
2. Set the enthalpy potentiometer to A (fully CCW). The Free Cool LED should be lit.
3. Set the enthalpy potentiometer to D (fully CW). The Free Cool LED should turn off.
4. Return EconoMi$er IV settings and wiring to normal after completing troubleshooting.

DCV (Demand Controlled Ventilation) and Power Exhaust

To check DCV and power exhaust:

1. Make sure EconoMi$er IV preparation procedure has been performed.
2. Ensure terminals AQ and AQ1 are open. The LED for both DCV and Exhaust should be off. The actuator should be fully closed.
3. Connect a 9-v battery to AQ (positive node) and AQ1 (negative node). The LED for both DCV and Exhaust should turn on. The actuator should drive to between 90 and 95% open.
4. Turn the Exhaust potentiometer CW until the Exhaust LED turns off. The LED should turn off when the potentiometer is approximately 90%. The actuator should remain in position.
5. Turn the DCV set point potentiometer CW until the DCV LED turns off. The DCV LED should turn off when the potentiometer is approximately 9 v. The actuator should drive fully closed.
6. Turn the DCV and Exhaust potentiometers CCW until the Exhaust LED turns on. The exhaust contacts will close 30 to 120 seconds after the Exhaust LED turns on.
7. Return EconoMi$er IV settings and wiring to normal after completing troubleshooting.

DCV Minimum and Maximum Position

To check the DCV minimum and maximum position:

1. Make sure EconoMi$er IV preparation procedure has been performed.
2. Connect a 9-v battery to AQ (positive node) and AQ1 (negative node). The DCV LED should turn on. The actuator should drive to between 90 and 95% open.
3. Turn the DCV Maximum Position potentiometer to midpoint. The actuator should drive to between 20 and 80% open.
4. Turn the DCV Maximum Position potentiometer to fully CCW. The actuator should drive fully closed.
5. Turn the Minimum Position potentiometer to midpoint. The actuator should drive to between 20 and 80% open.
6. Turn the Minimum Position Potentiometer fully CW. The actuator should drive fully open.
7. Remove the jumper from TR and N. The actuator should drive fully closed.
8. Return EconoMi$er IV settings and wiring to normal after completing troubleshooting.

Mixed Air Input

To check mixed air input:

1. Make sure EconoMi$er IV preparation procedure has been performed.
2. Set the Enthalpy potentiometer to A. The Free Cool LED turns on. The actuator should drive to between 20 and 80% open.

3. Remove the 5.6 kilo-ohm resistor and jumper T to T1. The actuator should drive fully open.
4. Remove the jumper across T and T1. The actuator should drive fully closed.
5. Return EconoMi$er IV settings and wiring to normal after completing troubleshooting.

EconoMi$er IV Troubleshooting

This procedure is used to return the EconoMi$er IV to operation. No troubleshooting or testing is done by performing the following procedure.

1. Disconnect power at TR and TR1.
2. Set enthalpy potentiometer to previous setting.
3. Set DCV maximum position potentiometer to previous setting.
4. Set minimum position, DCV set point, and exhaust potentiometers to previous settings.
5. Remove 620-ohm resistor from terminals S_R and +.
6. Remove 1.2 kilo-ohm checkout resistor from terminals S_O and +. If used, reconnect sensor from terminals S_O and +.
7. Remove jumper from TR to N.
8. Remove jumper from TR to 1.
9. Remove 5.6 kilo-ohm resistor from T and T1. Reconnect wires at T and T1.
10. Remove jumper from P to P1. Reconnect device at P and P1.
11. Apply power (24 vac) to terminals TR and TR1.

Phase Loss Protection

The phase loss protection option will monitor the three-phase electrical system to provide phase reversal and phase loss protection.

Phase Reversal Protection

If the control senses an incorrect phase relationship, the relay (K1) will be de-energized (opening its contact). If the phase relationship is correct, the relay will be energized. The control has a self-bypass function after a pre-set time. If the control determines that the three phases stay in a correct relationship for 10 consecutive minutes, the relay will stay energized regardless of the phase sequence of three inputs as long as 24-vac control voltage is applied. This self-bypass function will be reset if all three phases are restored in a phase loss event.

Phase Loss Protection

If the reverse rotation board senses any one of the three phase inputs has no AC voltage, the relay will be deenergized (opening its contact). This protection is always active as long as 24-vac control voltage is applied, and is not affected by the self-bypass function of the phase sequence monitoring function. However, in the event of phase loss, the relay will be re-energized only if all three phases are restored and the three phases are in the correct sequence.

A red LED is provided to indicate the function of the board. See the table below.

LED STATUS	FUNCTION
On Continuously	Relay contact closed (normal operation).
Blinking	Relay contact open (phase loss or phase reversal has occurred) — No power will be supplied to the control system.
Off	24 vac control power not present (off).

APPENDIX A
FAN PERFORMANCE DATA

Fan Performance: 50PM Vertical Supply / Return

50PM16 Vertical Supply/Return units

CFM	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
4500	**467**	**0.67**	**A**	**544**	**0.87**	**A**	**615**	**1.09**	**A**	687	1.35	A	-	-	-
4800	**486**	**0.78**	**A**	**561**	**1.00**	**A**	**628**	**1.22**	**A**	694	1.47	A	763	1.78	A
5100	**506**	**0.91**	**A**	**578**	**1.13**	**A**	**642**	**1.36**	**A**	704	1.61	A	768	1.91	A
5400	**526**	**1.04**	**A**	**596**	**1.28**	**A**	**658**	**1.53**	**A**	717	1.78	A	776	2.06	A
5700	**547**	**1.19**	**A**	**614**	**1.45**	**A**	**674**	**1.70**	**A**	731	1.96	A	786	2.25	A
6000	**568**	**1.36**	**A**	**632**	**1.63**	**A**	691	1.90	A	746	2.17	A	798	2.45	A
6300	**589**	**1.54**	**A**	**651**	**1.82**	**A**	708	2.11	A	761	2.39	A	812	2.68	A
6600	**610**	**1.74**	**A**	**670**	**2.04**	**A**	726	2.33	A	777	2.63	A	827	2.92	A
6900	**632**	**1.96**	**A**	689	2.27	A	743	2.58	A	794	2.88	A	842	3.19	A
7200	**654**	**2.19**	**A**	709	2.51	A	762	2.84	A	811	3.16	A	858	3.48	A
7500	**676**	**2.45**	**A**	729	2.78	A	780	3.12	A	829	3.45	A	874	3.79	A

CFM	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
4500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5100	834	2.26	A	-	-	-	-	-	-	-	-	-	-	-	-
5400	836	2.40	A	900	2.80	A	-	-	-	-	-	-	-	-	-
5700	842	2.57	A	901	2.94	A	-	-	-	-	-	-	-	-	-
6000	851	2.76	A	905	3.12	A	**961**	**3.53**	**A**	-	-	-	-	-	-
6300	862	2.99	A	913	3.33	A	**965**	**3.72**	**A**	**1018**	**4.17**	**A**	-	-	-
6600	875	3.24	A	923	3.58	A	**971**	**3.95**	**A**	1021	4.37	B	1073	4.85	B
6900	888	3.51	A	934	3.85	A	**980**	**4.21**	**A**	1027	4.62	B	1075	5.07	B
7200	903	3.80	A	**947**	**4.15**	**A**	991	4.51	B	1035	4.90	B	1080	5.33	B
7500	918	4.12	A	961	4.47	B	1003	4.83	B	1045	5.22	B	1088	5.64	B

LEGEND

BHP – Brake Horsepower (motor input to fan)
RPM – Revolutions Per Minute (fan speed)
Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

See General Notes for Fan Performance Data Tables on page 41.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(A) Low Range:
208/230 and 460V – RPM Range – 685 to 939, Maximum BHP – 4.26
575V – RPM Range – 751 to 954 , Maximum BHP – 5.75

(B) Mid–Low Range: All voltages,
RPM Range – 949 to 1206, Maximum BHP – 5.75

(C) Mid–High Range: All voltages,
RPM Range – 941 to 1176, Maximum BHP – 8.63

(D) High Range: Not Used

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM16 Horizontal Supply / Return

50PM16 Horizontal Supply/Return units

CFM	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
4500	**533**	**1.09**	**E**	**603**	**1.31**	**E**	**664**	**1.53**	**E**	724	1.76	E	784	2.01	E
4800	**558**	**1.25**	**E**	**626**	**1.48**	**E**	685	1.71	E	742	1.95	E	798	2.20	E
5100	**584**	**1.43**	**E**	**650**	**1.68**	**E**	707	1.91	E	761	2.15	E	813	2.40	E
5400	**610**	**1.63**	**E**	**674**	**1.88**	**E**	729	2.13	E	781	2.38	E	831	2.63	E
5700	**636**	**1.85**	**E**	698	2.11	E	753	2.36	E	802	2.62	E	850	2.88	E
6000	**663**	**2.09**	**E**	723	2.35	E	776	2.62	E	825	2.88	E	871	3.14	E
6300	690	2.35	E	748	2.62	E	800	2.89	E	847	3.16	E	892	3.43	E
6600	717	2.62	E	773	2.90	E	824	3.18	E	870	3.46	E	914	3.73	E
6900	744	2.92	E	799	3.20	E	849	3.49	E	894	3.77	E	936	4.06	E
7200	772	3.24	E	825	3.52	E	873	3.82	E	918	4.11	E	959	4.40	F
7500	800	3.58	E	850	3.86	E	898	4.16	E	942	4.47	F	982	4.77	F

CFM	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
4500	845	2.29	E	907	2.59	E	970	2.93	E	-	-	-	-	-	-
4800	854	2.47	E	912	2.76	E	970	3.08	E	1028	3.42	E	-	-	-
5100	866	2.67	E	920	2.96	E	974	3.26	E	1029	3.60	E	1084	3.95	E
5400	881	2.89	E	931	3.18	E	981	3.48	E	1033	3.80	E	1085	4.14	E
5700	898	3.14	E	945	3.42	E	992	3.72	E	1040	4.03	E	1089	4.36	F
6000	916	3.41	E	960	3.69	E	1005	3.98	E	1050	4.29	F	1096	4.61	F
6300	935	3.70	E	978	3.98	E	1021	4.27	F	1063	4.57	F	1106	4.89	F
6600	956	4.01	E	997	4.29	F	1037	4.59	F	1078	4.89	F	1119	5.20	F
6900	977	4.34	F	1017	4.63	F	1056	4.92	F	1095	5.23	F	1133	5.54	F
7200	999	4.69	F	1037	4.99	F	1075	5.28	F	1112	5.59	F	1150	5.90	G
7500	1021	5.07	F	1059	5.37	F	1095	5.67	F	1131	5.98	G	1167	6.29	G

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(E) Low Range:
208/230 and 460V – RPM Range – 685 to 939, Maximum BHP – 4.26
575V – RPM Range – 751 to 954, Maximum BHP – 5.75

(F) Mid–Low Range:
All voltages, RPM Range – 949 to 1206, Maximum BHP – 5.75

(G) Mid–High Range:
All voltages, RPM Range – 941 to 1176, Maximum BHP – 8.63

(H) High Range: Not Used

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM20 Vertical Supply / Return

50PM20 Vertical Supply/Return units

	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5400	**526**	**1.04**	**A**	**596**	**1.28**	**A**	**658**	**1.53**	**A**	717	1.78	A	776	2.06	A
5700	**547**	**1.19**	**A**	**614**	**1.45**	**A**	**674**	**1.70**	**A**	731	1.96	A	786	2.25	A
6000	**568**	**1.36**	**A**	**632**	**1.63**	**A**	691	1.90	A	746	2.17	A	798	2.45	A
6300	**589**	**1.54**	**A**	**651**	**1.82**	**A**	708	2.11	A	761	2.39	A	812	2.68	A
6600	**610**	**1.74**	**A**	**670**	**2.04**	**A**	726	2.33	A	777	2.63	A	827	2.92	A
6900	**632**	**1.96**	**A**	689	2.27	A	743	2.58	A	794	2.88	A	842	3.19	A
7200	**654**	**2.19**	**A**	709	2.51	A	762	2.84	A	811	3.16	A	858	3.48	A
7500	**676**	**2.45**	**A**	729	2.78	A	780	3.12	A	829	3.45	A	874	3.79	A
7800	698	2.72	A	749	3.06	A	799	3.42	A	846	3.77	A	891	4.11	A
8100	720	3.02	A	770	3.37	A	818	3.73	A	864	4.10	A	**908**	**4.46**	**B**
8400	743	3.33	A	791	3.70	A	837	4.07	A	**883**	**4.45**	**B**	**926**	**4.83**	**B**
8700	765	3.67	A	812	4.05	A	**857**	**4.44**	**B**	**901**	**4.83**	**B**	**943**	**5.22**	**B**
9000	788	4.03	A	**833**	**4.42**	**B**	**877**	**4.82**	**B**	**920**	**5.23**	**B**	961	5.63	B

	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5400	836	2.40	A	900	2.80	A	----	----	---	----	----	---	----	----	---
5700	842	2.57	A	901	2.94	A	----	----	---	----	----	---	----	----	---
6000	851	2.76	A	905	3.12	A	**961**	**3.53**	**A**	----	----	---	----	----	---
6300	862	2.99	A	913	3.33	A	**965**	**3.72**	**A**	**1018**	**4.17**	**A**	----	----	---
6600	875	3.24	A	923	3.58	A	**971**	**3.95**	**A**	1021	4.37	B	1073	4.85	B
6900	888	3.51	A	934	3.85	A	**980**	**4.21**	**A**	1027	4.62	B	1075	5.07	B
7200	903	3.80	A	**947**	**4.15**	**A**	991	4.51	B	1035	4.90	B	1080	5.33	B
7500	918	4.12	A	961	4.47	B	1003	4.83	B	1045	5.22	B	1088	5.64	B
7800	**934**	**4.46**	**B**	975	4.81	B	1016	5.18	B	1057	5.56	B	1097	5.98	C
8100	950	4.82	B	991	5.18	B	1030	5.56	B	1069	5.94	C	1108	6.35	C
8400	967	5.20	B	1007	5.58	B	1045	5.96	C	1083	6.35	C	1120	6.75	C
8700	984	5.61	B	1023	5.99	C	1060	6.38	C	1097	6.78	C	1134	7.19	C
9000	1001	6.03	C	1039	6.43	C	1076	6.84	C	1112	7.24	C	1148	7.66	C

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

See General Notes for Fan Performance Data Tables on page 41.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(A) Low Range:
208/230 and 460V – RPM Range – 685 to 939, Maximum BHP – 4.26
575V – RPM Range – 751 to 954 , Maximum BHP – 5.75

(B) Mid–Low Range: 208/230 and 460V – RPM Range – 949 to 1206, Maximum BHP – 5.75

(C) Mid–High Range: 208/230 and 460V – RPM Range – 941 to 1176, Maximum BHP – 8.63

(D) High Range: Not Used

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM20 Horizontal Supply / Return

50PM20 Horizontal Supply/Return units															
CFM	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5000	575	1.37	E	642	1.61	E	700	1.84	E	754	2.08	E	808	2.33	E
5500	619	1.71	E	682	1.96	E	737	2.21	E	788	2.45	E	837	2.71	E
6000	663	2.09	E	723	2.35	E	776	2.62	E	825	2.88	E	871	3.14	E
6500	708	2.53	E	765	2.80	E	816	3.08	E	863	3.35	E	906	3.63	E
7000	753	3.02	E	807	3.30	E	857	3.59	E	902	3.88	E	949	4.17	F
7500	800	3.58	E	850	3.86	E	898	4.16	E	949	4.47	F	982	4.77	F
8000	847	4.20	E	894	4.48	E	949	4.80	F	982	5.11	F	1022	5.43	F
8500	894	4.88	E	939	5.17	F	982	5.49	F	1024	5.82	G	1062	6.14	G
9000	941	5.63	G	983	5.92	G	1025	6.24	G	1065	6.58	G	1103	6.92	G

CFM	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5000	862	2.60	E	917	2.89	E	972	3.20	F	1028	3.53	F	1084	3.89	F
5500	886	2.97	E	935	3.25	E	985	3.55	F	1035	3.87	F	1086	4.21	F
6000	916	3.41	E	960	3.69	F	1005	3.98	F	1050	4.29	F	1096	4.61	F
6500	949	3.90	F	990	4.19	F	1032	4.48	F	1073	4.78	F	1114	5.10	F
7000	984	4.46	F	1023	4.75	F	1062	5.04	F	1100	5.34	F	1139	5.66	F
7500	1021	5.07	F	1059	5.37	F	1095	5.67	F	1131	5.98	G	1167	6.29	G
8000	1059	5.74	F	1095	6.05	G	1130	6.36	G	1165	6.67	G	1199	6.99	H
8500	1099	6.47	G	1133	6.79	G	1167	7.11	G	1200	7.43	H	1232	7.76	H
9000	1138	7.26	G	1172	7.59	G	1205	7.93	H	1237	8.26	H	1268	8.59	H

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(E) Low Range: 208/230 and 460V – RPM Range – 685 to 939, Maximum 575V – RPM Range – 751 to 954 , Maximum BHP – 5.75

(F) Mid–Low Range: All voltages, RPM Range – 949 to 1206, Maximum BHP – 5.75

(G) Mid–High Range: All voltages, RPM Range – 941 to 1176, Maximum BHP – 8.63

(H) High Range: All voltages, RPM Range – 1014 to 1297 RPM, Maximum BHP – 11.50

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM24 Vertical Supply / Return

50PM24 Vertical Supply/Return units															
CFM	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
6000	**568**	**1.36**	**A**	**632**	**1.63**	**A**	691	1.90	A	746	2.17	A	798	2.45	A
6400	**596**	**1.61**	**A**	**657**	**1.89**	**A**	714	2.18	A	767	2.47	A	817	2.76	A
6800	**625**	**1.88**	**A**	**683**	**2.19**	**A**	737	2.49	A	789	2.80	A	837	3.10	A
7200	**654**	**2.19**	**A**	709	2.51	A	762	2.84	A	811	3.16	A	858	3.48	A
7600	**683**	**2.54**	**A**	736	2.87	A	786	3.21	A	835	3.55	A	880	3.89	A
8000	713	2.91	A	763	3.27	A	812	3.63	A	858	3.99	A	**903**	**4.34**	**B**
8400	743	3.33	A	791	3.70	A	837	4.07	A	**883**	**4.45**	**B**	**926**	**4.83**	**B**
8800	773	3.79	A	819	4.17	A	**864**	**4.56**	**B**	**907**	**4.96**	**B**	949	5.36	B
9200	**803**	**4.28**	**B**	**847**	**4.68**	**B**	**890**	**5.09**	**B**	**933**	**5.51**	**B**	973	5.92	C
9600	**833**	**4.82**	**B**	**876**	**5.24**	**B**	**917**	**5.66**	**B**	958	6.10	C	998	6.53	C
10000	**864**	**5.41**	**B**	**905**	**5.84**	**C**	945	6.28	C	984	6.73	C	1023	7.18	C

50PM24 Vertical Supply/Return units															
CFM	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
6000	851	2.76	A	905	3.12	A	961	3.53	B	----	----	---	----	----	---
6400	866	3.07	A	916	3.41	A	967	3.80	B	1019	4.23	B	1073	4.72	B
6800	884	3.42	A	930	3.75	A	977	4.12	B	1025	4.53	B	1074	4.99	B
7200	903	3.80	A	949	4.15	A	991	4.51	B	1035	4.90	B	1080	5.33	B
7600	923	4.23	A	966	4.58	B	1007	4.94	B	1049	5.33	B	1091	5.74	B
8000	949	4.70	B	986	5.06	B	1025	5.43	B	1065	5.81	C	1104	6.22	C
8400	967	5.20	B	1007	5.58	B	1045	5.96	C	1083	6.35	C	1120	6.75	C
8800	990	5.75	B	1028	6.14	C	1066	6.53	C	1102	6.93	C	1138	7.34	C
9200	1013	6.33	C	1050	6.74	C	1087	7.15	C	1123	7.56	C	1157	7.98	C
9600	1036	6.96	C	1073	7.39	C	1109	7.81	C	1144	8.24	C	1178	8.67	D
10000	1060	7.63	C	1096	8.08	C	1131	8.52	C	1165	8.97	D	1198	9.41	D

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(A) Low Range:
208/230 and 460V – RPM Range – 685 to 939, Maximum BHP – 4.26
575V – RPM Range – 751 to 954 , Maximum BHP – 5.75

(B) Mid–Low Range:
208/230 and 460V – RPM Range – 949 to 1206, Maximum BHP – 5.75

(C) Mid–High Range:
208/230 and 460V – RPM Range – 941 to 1176, Maximum BHP – 8.63

(D) High Range: Not Used

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM24 Horizontal Supply / Return

50PM24 Horizontal Supply/Return units

	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5500	**619**	**1.71**	**E**	**682**	**1.96**	**E**	737	2.21	E	788	2.45	E	837	2.71	E
6000	**663**	**2.09**	**E**	723	2.35	E	776	2.62	E	825	2.88	E	871	3.14	E
6500	708	2.53	E	765	2.80	E	816	3.08	E	863	3.35	E	906	3.63	E
7000	753	3.02	E	807	3.30	E	857	3.59	E	902	3.88	E	949	4.17	F
7500	800	3.58	E	850	3.86	E	898	4.16	E	949	4.47	F	982	4.77	F
8000	847	4.20	E	**894**	**4.48**	**F**	949	4.80	F	982	5.11	F	1022	5.43	F
8500	**894**	**4.88**	**F**	949	5.17	F	982	5.49	F	1024	5.82	G	1062	6.14	G
9000	949	5.63	F	983	5.92	F	1025	6.24	G	1065	6.58	G	1103	6.92	G
9500	989	6.45	F	1029	6.74	F	1069	7.07	G	1108	7.41	G	1144	7.77	G
10000	1037	7.34	F	1075	7.63	F	1113	7.96	G	1150	8.32	G	1186	8.68	H

50PM24 Horizontal Supply/Return units

	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
5500	886	2.97	E	935	3.25	E	985	3.55	F	1035	3.87	F	1086	4.21	F
6000	916	3.41	E	960	3.69	F	1005	3.98	F	1050	4.29	F	1096	4.61	F
6500	949	3.90	F	990	4.19	F	1032	4.48	F	1073	4.78	F	1114	5.10	F
7000	984	4.46	F	1023	4.75	F	1062	5.04	F	1100	5.34	F	1139	5.66	F
7500	1021	5.07	F	1059	5.37	F	1095	5.67	F	1131	5.98	G	1167	6.29	G
8000	1059	5.74	F	1095	6.05	G	1130	6.36	G	1165	6.67	G	1199	6.99	H
8500	1099	6.47	G	1133	6.79	G	1167	7.11	G	1200	7.43	H	1232	7.76	H
9000	1138	7.26	G	1172	7.59	G	1205	7.93	H	1237	8.26	H	1268	8.59	H
9500	1179	8.12	H	1212	8.46	H	1244	8.81	H	1275	9.15	H	**1305**	**9.50**	**H**
10000	1220	9.04	H	1252	9.40	H	1283	9.76	H	**1313**	**10.11**	**H**	**1342**	**10.47**	**H**

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(E) Low Range: 208/230 and 460V –
RPM Range – 685 to 939, Maximum BHP – 4.26

(F) Mid–Low Range: All voltages,
RPM Range – 949 to 1206, Maximum BHP – 5.75

(G) Mid–High Range: All voltages,
RPM Range – 941 to 1176, Maximum BHP – 8.63

(H) High Range: All voltages,
RPM Range – 1014 to 1297 RPM, Maximum BHP – 11.50

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM28 Vertical Supply / Return

50PM28 Vertical Supply/Return units

	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
7500	**640**	**2.12**	**A**	697	2.45	A	750	2.79	A	798	3.13	A	843	3.46	A
8000	**676**	**2.53**	**A**	729	2.88	A	780	3.24	A	827	3.60	A	871	3.95	A
8500	711	2.99	A	762	3.36	A	810	3.74	A	856	4.12	A	899	4.50	B
9000	748	3.50	A	795	3.89	A	842	4.29	A	886	4.70	B	928	5.10	B
9500	784	4.08	A	829	4.48	A	874	4.90	B	916	5.33	B	957	5.76	C
10000	820	4.71	A	864	5.13	A	906	5.57	B	947	6.02	C	987	6.47	C
10500	857	5.41	A	**899**	**5.85**	**C**	**939**	**6.31**	**C**	979	6.78	C	1017	7.25	C
11000	**894**	**6.18**	**C**	**934**	**6.63**	**C**	973	7.11	C	1011	7.60	C	1048	8.10	C
11500	**931**	**7.02**	**C**	969	7.49	C	1007	7.98	C	1043	8.49	C	1079	9.01	D
12000	969	7.93	C	1005	8.42	C	1041	8.93	D	1076	9.46	D	1111	10.00	D

	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
7500	886	3.79	B	927	4.13	B	968	4.49	B	1007	4.88	B	**1050**	**5.30**	**C**
8000	912	4.30	B	952	4.66	B	990	5.03	B	**1028**	**5.41**	**C**	1067	5.82	C
8500	939	4.87	B	978	5.25	B	1015	5.63	C	1051	6.02	C	1087	6.43	C
9000	967	5.50	B	1005	5.89	C	1041	6.29	C	1076	6.69	C	1110	7.11	C
9500	996	6.18	C	1032	6.60	C	1067	7.02	C	1101	7.44	C	1134	7.86	C
10000	1025	6.92	C	1061	7.37	C	1095	7.81	C	1128	8.24	C	1160	8.69	D
10500	1054	7.73	C	1089	8.19	C	1123	8.66	D	1155	9.12	D	1187	9.58	D
11000	1084	8.59	C	1118	9.09	D	1152	9.58	D	1183	10.06	D	1214	10.54	D
11500	1114	9.53	D	1148	10.05	D	1181	10.56	D	1212	11.07	D	----	----	---
12000	1145	10.54	D	1178	11.08	D	----	----	---	----	----	---	----	----	---

LEGEND

BHP – Brake Horsepower (motor input to fan)

RPM – Revolutions Per Minute (fan speed)

Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

(A) Low Range:
All voltages, RPM Range – 687 to 873, Maximum BHP – 5.75

(B) Mid–Low Range:
All voltages, RPM Range – 805 to 1007, Maximum BHP – 5.75

(C) Mid–High Range:
All voltages, RPM Range – 941 to 1176, Maximum BHP – 8.63

(D) High Range:
All voltages, RPM Range – 1014 to 1297, Maximum BHP – 11.50

See General Notes for Fan Performance Data Tables on page 41.

Fan Performance: 50PM28 Horizontal Supply / Return

50PM28 Horizontal Supply/Return units

	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
7500	862	4.12	E	903	4.43	F	939	4.72	F	974	5.00	F	1008	5.29	G
8000	913	4.84	F	953	5.18	F	988	5.48	F	1021	5.77	G	1053	6.07	G
8500	965	5.63	F	1003	5.99	G	1037	6.32	G	1069	6.62	G	1100	6.93	G
9000	1017	6.50	G	1054	6.89	G	1087	7.23	G	1118	7.55	G	1147	7.87	G
9500	1069	7.45	G	1105	7.86	G	1137	8.22	G	1167	8.56	G	1195	8.89	H
10000	1121	8.48	G	1156	8.92	H	1187	9.30	H	1216	9.66	H	1243	10.01	H
10500	1173	9.60	H	1207	10.06	H	1238	10.47	H	1266	10.85	H	1292	11.21	H
11000	1226	10.81	H	1259	11.30	H	**1288**	**11.72**	**H**	**1316**	**12.12**	**H**	**1342**	**12.50**	**H**
11500	**1278**	**12.11**	**H**	**1310**	**12.62**	**H**	**1339**	**13.07**	**H**	**1366**	**13.49**	**H**	----	----	----
12000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
CFM	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive	RPM	BHP	Drive
7500	1041	5.58	G	1075	5.90	G	1110	6.24	G	1145	6.61	G	1182	7.01	H
8000	1085	6.37	G	1116	6.68	G	1148	7.01	G	1180	7.36	H	1214	7.74	H
8500	1129	7.23	G	1159	7.55	G	1189	7.88	H	1219	8.22	H	1249	8.59	H
9000	1175	8.18	G	1204	8.50	H	1232	8.83	H	1260	9.18	H	1288	9.53	H
9500	1222	9.22	H	1249	9.55	H	1276	9.88	H	**1302**	**10.22**	**H**	**1329**	**10.58**	**H**
10000	1270	10.34	H	1296	10.68	H	**1321**	**11.02**	**H**	**1346**	**11.37**	**H**	**1371**	**11.72**	**H**
10500	**1318**	**11.56**	**H**	**1343**	**11.90**	**H**	**1367**	**12.25**	**H**	**1391**	**12.61**	**H**	----	----	----
11000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
12000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

LEGEND

BHP – Brake Horsepower (motor input to fan)
RPM – Revolutions Per Minute (fan speed)
Drive – Motor & Pulley Drive Option Based on 460V motor maximum BHP. See notes on this page.

NOTES:

Grey Cells – Indicates field–supplied pulley change required.
Do not exceed listed motor maximum BHP value.

Motor Drive Ranges

(E) Low Range:
All voltages, RPM Range – 687 to 873, Maximum BHP – 5.75

(F) Mid–Low Range:
All voltages, RPM Range – 805 to 1007, Maximum BHP – 5.75

(G) Mid–High Range:
All voltages, RPM Range – 941 to 1176, Maximum BHP – 8.63

(H) High Range:
All voltages, RPM Range – 1014 to 1297, Maximum BHP – 11.50

See General Notes for Fan Performance Data Tables on this page.

GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES

1. Static pressure losses from accessories and options (Humidi-MiZer™ system, economizer, etc.) must be added to external static pressure before entering Fan Performance table. Refer to Accessory/FIOP Static Pressure information.
2. Extensive motor and drive testing on these units ensures that the full horsepower range of the motor can be utilized with confidence. Using the fan motors up to the bhp rating shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Specifications for additional information.
3. Use of a field-supplied motor may affect wire size. Contact your Carrier representative for details.
4. Interpolation is permissible. Do not extrapolate.

50PM Effectiveness

Size	CFM range	ERV WHEEL	CFM(O/A)	EFFECTIVENESS (%)			
				Sensible	Latent	T Clg	T Htg
20–24	Low CFM	ERC–3628	1800	74.9	68.9	71.3	72.7
			2600	67.6	59.7	62.9	64.8
			3500	59.4	49.2	53.3	55.8
28	Low CFM	ERC–3628	2500	68.6	60.9	63.9	65.8
			3000	64	55.1	58.6	60.8
			3500	59.4	49.2	53.3	55.8

APPENDIX B
ADDITIONAL START-UP DATA

Air Quantity Limits

50PM	COOLING		ELECTRIC HEAT OPTION	ELECTRIC HEAT MINIMUM CFM	
	Minimum Cfm	Maximum Cfm		(Vertical)	(Horizontal)
16	5,000	9,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750
20	5,000	9,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750
24	5,500	10,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750
28	6,500	12,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750

Evaporator Fan Motor Specifications

UNIT	DRIVE	ORIENTATION	VOLTAGE	EFFICIENCY %	MAX BHP	MAX AMPS
16	Low	Vertical	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-Low	Vertical	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-High	Vertical	208	88.5	7.66	22.0
			230	88.5	8.63	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
	High	Vertical	208	N/A	N/A	N/A
			230	N/A	N/A	N/A
			460	N/A	N/A	N/A
			575	N/A	N/A	N/A
	Low	Horizontal	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-Low	Horizontal	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-High	Horizontal	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	High	Horizontal	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4

Evaporator Fan Motor Specifications

UNIT	DRIVE	ORIENTATION	VOLTAGE	EFFICIENCY %	MAX BHP	MAX AMPS
20	Low	Vertical	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-Low	Vertical	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-High	Vertical	208	88.5	7.66	22.0
			230	88.5	8.63	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
	High	Vertical	208	89.5	9.94	28.0
			230	89.5	10.45	28.0
			460	89.5	11.19	15.0
			575	89.5	11.50	12.0
	Low	Horizontal	208	N/A	N/A	N/A
			230	N/A	N/A	N/A
			460	N/A	N/A	N/A
			575	N/A	N/A	N/A
	Mid-Low	Horizontal	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-High	Horizontal	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	High	Horizontal	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
24	Low	Vertical	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-Low	Vertical	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-High	Vertical	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
	High	Vertical	208	89.5	9.94	28.0
			230	89.5	10.45	28.0
			460	89.5	11.19	15.0
			575	89.5	11.5	12.0
	Low	Horizontal	208	N/A	N/A	N/A
			230	N/A	N/A	N/A
			460	N/A	N/A	N/A
			575	N/A	N/A	N/A
	Mid-Low	Horizontal	208	85.8	4.26	10.6
			230	85.8	4.26	9.6
			460	85.8	4.26	4.8
			575	87.5	5.75	6.0
	Mid-High	Horizontal	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	High	Horizontal	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4

Evaporator Fan Motor Specifications (CONT)

UNIT	DRIVE	ORIENTATION	VOLTAGE	EFFICIENCY %	MAX BHP	MAX AMPS
28	Low	Vertical	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-Low	Vertical	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-High	Vertical	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
	High	Vertical	208	89.5	9.94	28.0
			230	89.5	10.45	28.0
			460	89.5	11.19	15.0
			575	89.5	11.5	12.0
	Low	Horizontal	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-Low	Horizontal	208	87.5	5.37	15.8
			230	87.5	5.75	15.4
			460	87.5	5.75	7.7
			575	87.5	5.75	6.0
	Mid-High	Horizontal	208	88.5	7.66	22.0
			230	88.5	8.51	22.0
			460	88.5	8.63	11.6
			575	88.5	8.63	9.4
	High	Horizontal	208	89.5	9.94	28.0
			230	89.5	10.45	28.0
			460	89.5	11.19	15.0
			575	89.5	11.50	12.0

NOTES:

1. Extensive motor and electrical testing ensures that the motors can be utilized with confidence up to the maximum applied bhp, watts, and amps. Using the fan motor up to the maximum ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.
2. Convert bhp to watts using the following formula:

$$\text{watts} = \frac{\text{bhp (746)}}{\text{motor efficiency}}$$

Accessory/FIOP Pressure Drop (in.wg)* — 50PM16-28

COMPONENT	CFM																
	4,000	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000	8,500	9,000	9,500	10,000	10,500	11,000	11,500	12,000
Economizer	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.2
Humidi-MiZer™ (16, 20,24)	0.17	0.19	0.21	0.24	0.27	0.31	0.35	0.39	0.43	0.48	0.52	0.57	0.62	—	—	—	—
Humidi-MiZer™ (28)	—	—	—	—	—	0.19	0.21	0.23	0.26	0.29	0.31	0.34	0.37	0.4	0.43	0.46	0.5

LEGEND

FIOP – Factory–Installed Option

*The static pressure must be added to the external static pressure. The sum and the evaporator entering–air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

Accessory/FIOP Electric Heat Static Pressure Drop (in. wg)

UNIT	Unit Voltages	CFM	Nominal Heater Size (kW)	Pressure Drop (in. wg)	Nominal Heater Size (kW)	Pressure Drop (in. wg)	Nominal Heater Size (kW)	Pressure Drop (in. wg)
16 20 24 28	208/240-3-60	4,800	25	0.01	50	0.02	75	0.03
		5,000		0.01		0.02		0.04
		6,000		0.02		0.04		0.06
		7,000		0.03		0.06		0.08
		8,000		0.04		0.08		0.12
		9,000		0.05		0.10		0.15
		10,000		0.06		0.13		0.20
		11,500		0.09		0.18		0.27
	480-3-60	4,800	25	0.01	50	0.02	75	0.03
		5,000		0.01		0.02		0.04
		6,000		0.02		0.04		0.06
		7,000		0.03		0.06		0.08
		8,000		0.04		0.08		0.12
		9,000		0.05		0.10		0.15
		10,000		0.06		0.13		0.20
		11,500		0.09		0.18		0.27
	575-3-60	4,800	25	0.01	50	0.02	75	0.03
		5,000		0.01		0.02		0.04
		6,000		0.02		0.04		0.06
		7,000		0.03		0.06		0.08
		8,000		0.04		0.08		0.12
		9,000		0.05		0.10		0.15
		10,000		0.06		0.13		0.20
		11,500		0.09		0.18		0.27

LEGEND

FIOP – Factory–Installed Option

NOTES:

1. Heaters are rated at 240v, 480v, and 600v.
2. The static pressure must be added to the external static pressure. The sum and the evaporator entering–air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm, bhp, and watts.

Fan RPM at Motor Pulley Settings*

50PM	DRIVE	MOTOR PULLEY TURNS OPEN												
		0	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6
16, 20, 24 (230 and 460 volt)	Low Range Vertical	685	706	727	749	770	791	812	833	854	876	897	918	939
	Mid-Low Range Vertical	949	970	992	1013	1035	1056	1078	1099	1120	1142	1163	1185	1206
	Mid-High Range Vertical	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Vertical	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297
	Low Range Horizontal	685	706	727	749	770	791	812	833	854	876	897	918	939
	Mid-Low Range Horizontal	949	970	992	1013	1035	1056	1078	1099	1120	1142	1163	1185	1206
	Mid-High Range Horizontal	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Horizontal	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297
16, 20, 24 (575 Volt)	Low Range Vertical	751	768	785	802	819	836	853	869	886	903	920	937	954
	Mid-Low Range Vertical	949	970	992	1013	1035	1056	1078	1099	1120	1142	1163	1185	1206
	Mid-High Range Vertical	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Vertical	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297
	Low Range Horizontal	751	768	785	802	819	836	853	869	886	903	920	937	954
	Mid-Low Range Horizontal	949	970	992	1013	1035	1056	1078	1099	1120	1142	1163	1185	1206
	Mid-High Range Horizontal	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Horizontal	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297
28 (all voltages)	Low Range Vertical	687	703	718	734	749	765	780	796	811	827	842	858	873
	Mid-Low Range Vertical	805	822	839	856	872	889	906	923	940	957	973	990	1007
	Mid-High Range Vertical	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Vertical	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297
	Low Range Horizontal	687	703	718	734	749	765	780	796	811	827	842	858	873
	Mid-Low Range Horizontal	805	822	839	856	872	889	906	923	940	957	973	990	1007
	Mid-High Range Horizontal	941	961	980	1000	1019	1039	1059	1078	1098	1117	1137	1156	1176
	High Range Horizontal	1014	1038	1061	1085	1108	1132	1156	1179	1203	1226	1250	1273	1297

* Approximate fan rpm shown, based on 1725 rpm motor.

NOTE: Factory pulley speed setting is at 3 turns open.

APPENDIX C

Electrical Data – 50PM Units Without Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	0.25	—	—	3.7	10.6 / 9.6	—	—	—	73/72	90/90	73/73	90/90	77/75
															2	1	5.9	85/84	100/100	85/85	100/100	90/89
													5.0	16.7 / 15.2	—	—	—	79/77	100/100	79/79	100/100	84/82
															2	1	5.9	91/89	100/100	91/91	100/100	97/95
													7.5	24.2 / 22.0	—	—	—	86/84	100/100	86/86	100/100	92/90
															2	1	5.9	98/96	110/100	98/98	100/100	106/103
											18.8 / 23.0	52 / 60	3.7	10.6 / 9.6	—	—	—	78/87	90/90	87/87	90/90	77/80
															2	1	5.9	93/102	100/110	102/102	125/125	90/94
													5.0	16.7 / 15.2	—	—	—	86/94	100/100	94/94	100/100	84/86
															2	1	5.9	101/109	110/110	109/109	125/125	97/100
													7.5	24.2 / 22.0	—	—	—	95/103	100/110	103/103	125/125	92/94
															2	1	5.9	110/117	125/125	117/117	125/125	106/108
											37.6 / 45.9	104 / 120	3.7	10.6 / 9.6	—	—	—	143/132	150/150	143/143	150/150	132/149
															2	1	5.9	158/147	175/150	158/158	175/175	145/163
													5.0	16.7 / 15.2	—	—	—	151/139	175/150	151/151	175/175	139/155
															2	1	5.9	166/154	175/175	166/166	175/175	152/169
													7.5	24.2 / 22.0	—	—	—	160/148	175/150	160/160	175/175	147/163
															2	1	5.9	175/162	200/175	175/175	200/200	161/177
											56.3 / 68.9 †	156 / 180	3.7	10.6 / 9.6	—	—	—	73/72	90/90	73/73	90/90	77/75
															2	1	5.9	85/84	100/100	85/85	100/100	90/89
													5.0	16.7 / 15.2	—	—	—	79/77	100/100	79/79	100/100	84/82
															2	1	5.9	91/89	100/100	91/91	100/100	97/95
													7.5	24.2 / 22.0	—	—	—	86/84	100/100	86/86	100/100	92/90
															2	1	5.9	98/96	110/100	98/98	100/100	106/103
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.25	—	—	3.7	10.6 / 9.6	—	—	—	36	45	36	40	40
															2	1	5.9	43	50	43	50	47
													5.0	16.7 / 15.2	—	—	—	39	50	39	50	43
															2	1	5.9	45	50	45	50	50
													7.5	24.2 / 22.0	—	—	—	43	50	43	50	47
															2	1	5.9	49	60	49	60	54
											23	30	3.7	10.6 / 9.6	—	—	—	44	45	44	50	40
															2	1	5.9	51	60	51	60	47
													5.0	16.7 / 15.2	—	—	—	47	50	47	50	43
															2	1	5.9	55	60	55	60	50
													7.5	24.2 / 22.0	—	—	—	51	60	51	60	47
															2	1	5.9	59	60	59	60	54
											45.9	60	3.7	10.6 / 9.6	—	—	—	66	80	66	80	75
															2	1	5.9	74	80	74	80	82
													5.0	16.7 / 15.2	—	—	—	70	80	70	80	78
															2	1	5.9	77	80	77	80	85
													7.5	24.2 / 22.0	—	—	—	74	80	74	80	82
															2	1	5.9	82	90	82	90	89
											68.9	90	3.7	10.6 / 9.6	—	—	—	96	100	96	125	109
															2	1	5.9	104	110	104	125	116
													5.0	16.7 / 15.2	—	—	—	100	110	100	125	112
															2	1	5.9	107	125	107	125	119
													7.5	24.2 / 22.0	—	—	—	104	125	104	125	116
															2	1	5.9	112	125	112	125	123
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.25	—	—	5.0	16.7 / 15.2	—	—	—	31	40	31	40	32
															2	1	5.9	35	40	35	40	38
													7.5	24.2 / 22.0	—	—	—	33	40	33	40	36
															2	1	5.9	38	45	38	40	41
											22.8	30	5.0	16.7 / 15.2	—	—	—	38	40	38	40	35
															2	1	5.9	44	45	44	50	40
													7.5	24.2 / 22.0	—	—	—	41	45	41	50	38
															2	1	5.9	47	50	47	50	43
											44.3	60	5.0	16.7 / 15.2	—	—	—	65	70	65	70	60
															2	1	5.9	71	80	71	80	65
													7.5	24.2 / 22.0	—	—	—	69	70	69	70	63
															2	1	5.9	75	80	75	80	69
											71.8	90	5.0	16.7 / 15.2	—	—	—	83	90	83	90	93
															2	1	5.9	89	100	89	100	99
													7.5	24.2 / 22.0	—	—	—	86	100	86	100	97
															2	1	5.9	92	100	92	100	102

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units Without Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	-	-	-	88/87	100/100	92/91	88/88	100/100
															2	1	5.9	100/99	125/125	105/104	100/100	125/125
													5.0	16.7/15.2	-	-	-	94/93	125/100	99/97	94/94	125/125
															2	1	5.9	106/104	125/125	112/111	106/106	125/125
													7.5	24.2/22	-	-	-	102/99	125/125	107/105	102/102	125/125
															2	1	5.9	113/111	125/125	121/118	113/113	125/125
													10.0	30.8/28	-	-	-	108/105	125/125	115/112	108/108	125/125
															2	1	5.9	120/117	150/150	128/125	120/120	150/150
											19/25	52/60	3.7	10.6/9.6	-	-	-	88/87	100/100	92/91	88/88	100/100
															2	1	5.9	100/102	125/125	105/104	102/102	125/125
													5.0	16.7/15.2	-	-	-	94/94	125/100	99/97	94/94	125/125
															2	1	5.9	106/109	125/125	112/111	109/109	125/125
													7.5	24.2/22	-	-	-	102/103	125/125	107/105	103/103	125/125
															2	1	5.9	113/117	125/125	121/118	117/117	125/125
													10.0	30.8/28	-	-	-	108/110	125/125	115/112	110/110	125/125
															2	1	5.9	120/125	150/150	128/125	125/125	150/150
											38/50	104/120	3.7	10.6/9.6	-	-	-	143/132	150/150	132/149	143/143	150/150
															2	1	5.9	158/147	175/150	145/163	158/158	175/175
													5.0	16.7/15.2	-	-	-	151/139	175/150	139/155	151/151	175/175
															2	1	5.9	166/154	175/175	152/169	166/166	175/175
													7.5	24.2/22	-	-	-	160/148	175/150	147/163	160/160	175/175
															2	1	5.9	175/162	200/175	161/177	175/175	200/200
													10.0	30.8/28	-	-	-	169/155	175/175	155/170	169/169	175/175
															2	1	5.9	183/170	200/175	169/184	183/183	200/200
											56/75 †	156/180	3.7	10.6/9.6	-	-	-	88/87	100/100*	92/91*	88/88	100/100
															2	1	5.9	100/99	125/125	105/104	100/100	125/125
													5.0	16.7/15.2	-	-	-	94/93	125/100	99/97	94/94	125/125
															2	1	5.9	106/104	125/125	112/111	106/106	125/125
													7.5	24.2/22	-	-	-	102/99	125/125	107/105	102/102	125/125
															2	1	5.9	113/111	125/125	121/118	113/113	125/125
													10.0	30.8/28	-	-	-	108/105	125/125	115/112	108/108	125/125
															2	1	5.9	120/117	150/150	128/125	120/120	150/150
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	-	-	-	45	60	46	45	60
															2	1	3.1	51	60	53	51	60
													5.0	7.6	-	-	-	47	60	49	47	60
															2	1	3.1	54	60	56	54	70
													7.5	11	-	-	-	51	60	53	51	60
															2	1	3.1	57	60	60	57	70
													10.0	14	-	-	-	54	60	57	54	70
															2	1	3.1	60	60	64	60	70
											25	30	3.7	4.8	-	-	-	45	60	46	45	60
															2	1	3.1	51	60	53	51	60
													5.0	7.6	-	-	-	47	60	49	47	60
															2	1	3.1	55	60	56	55	70
													7.5	11	-	-	-	51	60	53	51	60
															2	1	3.1	59	60	60	59	70
													10.0	14	-	-	-	55	60	57	55	70
															2	1	3.1	63	70	64	63	70
											50	60	3.7	4.8	-	-	-	66	80	75	66	80
															2	1	3.1	74	80	82	74	80
													5.0	7.6	-	-	-	70	80	78	70	80
															2	1	3.1	77	80	85	77	80
													7.5	11	-	-	-	74	80	82	74	80
															2	1	3.1	82	90	89	82	90
													10.0	14	-	-	-	78	90	85	78	90
															2	1	3.1	85	90	92	85	90
											75	90	3.7	4.8	-	-	-	96	100	109	96	125
															2	1	3.1	104	110	116	104	125
													5.0	7.6	-	-	-	100	110	112	100	125
															2	1	3.1	107	125	119	107	125
													7.5	11	-	-	-	104	125	116	104	125
															2	1	3.1	112	125	123	112	125
													10.0	14	-	-	-	108	125	120	108	125
															2	1	3.1	115	125	127	115	125

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units Without Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5.0	6.1	-	-	-	36	45	38	36	40
															2	1	2.4	41	50	43	41	50
													7.5	9	-	-	-	39	50	41	39	50
															2	1	2.4	44	50	47	44	50
													10.0	11	-	-	-	41	50	43	41	50
															2	1	2.4	46	50	49	46	50
											24.8	24	5.0	6.1	-	-	-	38	45	38	38	40
															2	1	2.4	44	50	43	44	50
													7.5	9	-	-	-	41	50	41	41	50
															2	1	2.4	47	50	47	47	50
													10.0	11	-	-	-	44	50	43	44	50
															2	1	2.4	50	50	49	50	50
											48.3	46	5.0	6.1	-	-	-	65	70	60	65	70
															2	1	2.4	71	80	65	71	80
													7.5	9	-	-	-	69	70	63	69	70
															2	1	2.4	75	80	69	75	80
													10.0	11	-	-	-	71	80	66	71	80
															2	1	2.4	77	80	71	77	80
											78	75	5.0	6.1	-	-	-	83	90	93	83	90
															2	1	2.4	89	100	99	89	100
													7.5	9	-	-	-	86	100	97	86	100
															2	1	2.4	92	100	102	92	100
													10.0	11	-	-	-	89	100	99	89	100
															2	1	2.4	95	100	104	95	100
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	-	-	-	103/102	125/125	107/106	103/103	125/125
															2	1	5.9	115/114	150/150	121/119	115/115	150/150
													5.0	16.7/15.2	-	-	-	109/108	125/125	114/112	109/109	125/125
															2	1	5.9	121/120	150/150	128/126	121/121	150/150
													7.5	24.2/22	-	-	-	117/115	150/150	123/120	117/117	150/150
															2	1	5.9	129/126	150/150	136/134	129/129	150/150
													10.0	30.8/28	-	-	-	123/121	150/150	130/127	123/123	150/150
															2	1	5.9	135/132	175/150	144/141	135/135	175/175
											19/25	52/60	3.7	10.6/9.6	-	-	-	103/102	125/125	107/106	103/103	125/125
															2	1	5.9	115/114	150/150	121/119	115/115	150/150
													5.0	16.7/15.2	-	-	-	109/108	125/125	114/112	109/109	125/125
															2	1	5.9	121/120	150/150	128/126	121/121	150/150
													7.5	24.2/22	-	-	-	117/115	150/150	123/120	117/117	150/150
															2	1	5.9	129/126	150/150	136/134	129/129	150/150
													10.0	30.8/28	-	-	-	123/121	150/150	130/127	123/123	150/150
															2	1	5.9	135/132	175/150	144/141	135/135	175/175
											38/50	104/120	3.7	10.6/9.6	-	-	-	143/132	150/150	132/149	143/143	150/150
															2	1	5.9	158/147	175/150	145/163	158/158	175/175
													5.0	16.7/15.2	-	-	-	151/139	175/150	139/155	151/151	175/175
															2	1	5.9	166/154	175/175	152/169	166/166	175/175
													7.5	24.2/22	-	-	-	160/148	175/150	147/163	160/160	175/175
															2	1	5.9	175/162	200/175	161/177	175/175	200/200
													10.0	30.8/28	-	-	-	169/155	175/175	155/170	169/169	175/175
															2	1	5.9	183/170	200/175	169/184	183/183	200/200
											56/75 †	156/180	3.7	10.6/9.6	-	-	-	103/102	125/125	107/106	103/103	125/125
															2	1	5.9	115/114	150/150	121/119	115/115	150/150
													5.0	16.7/15.2	-	-	-	109/108	125/125	114/112	109/109	125/125
															2	1	5.9	121/120	150/150	128/126	121/121	150/150
													7.5	24.2/22	-	-	-	117/115	150/150	123/120	117/117	150/150
															2	1	5.9	129/126	150/150	136/134	129/129	150/150
													10.0	30.8/28	-	-	-	123/121	150/150	130/127	123/123	150/150
															2	1	5.9	135/132	175/150	144/141	135/135	175/175

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units Without Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
24	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	-	-	-	51	60	53	51	70
															2	1	3.1	57	60	60	57	70
													5.0	7.6	-	-	-	54	60	56	54	70
															2	1	3.1	60	70	63	60	70
													7.5	11	-	-	-	57	60	60	57	70
															2	1	3.1	63	80	67	63	80
													10.0	14	-	-	-	60	70	64	60	70
															2	1	3.1	66	80	71	66	80
											25	30	3.7	4.8	-	-	-	51	60	53	51	70
															2	1	3.1	57	60	60	57	70
													5.0	7.6	-	-	-	54	60	56	54	70
															2	1	3.1	60	70	63	60	70
													7.5	11	-	-	-	57	60	60	57	70
															2	1	3.1	63	80	67	63	80
													10.0	14	-	-	-	60	70	64	60	70
															2	1	3.1	66	80	71	66	80
											50	60	3.7	4.8	-	-	-	66	80	75	66	80
															2	1	3.1	74	80	82	74	80
													5.0	7.6	-	-	-	70	80	78	70	80
															2	1	3.1	77	80	85	77	80
													7.5	11	-	-	-	74	80	82	74	80
															2	1	3.1	82	90	89	82	90
													10.0	14	-	-	-	78	90	85	78	90
															2	1	3.1	85	90	92	85	90
											75	90	3.7	4.8	-	-	-	96	100	109	96	125
															2	1	3.1	104	110	116	104	125
													5.0	7.6	-	-	-	100	110	112	100	125
															2	1	3.1	107	125	119	107	125
													7.5	11	-	-	-	104	125	116	104	125
															2	1	3.1	112	125	123	112	125
													10.0	14	-	-	-	108	125	120	108	125
															2	1	3.1	115	125	127	115	125
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5.0	6.1	-	-	-	44	60	46	44	60
															2	1	2.4	49	60	51	49	60
													7.5	9	-	-	-	47	60	49	47	60
															2	1	2.4	52	60	55	52	60
													10.0	11	-	-	-	49	60	52	49	60
															2	1	2.4	54	60	57	54	70
											24.8	24	5.0	6.1	-	-	-	44	60	46	44	60
															2	1	2.4	49	60	51	49	60
													7.5	9	-	-	-	47	60	49	47	60
															2	1	2.4	52	60	55	52	60
													10.0	11	-	-	-	49	60	52	49	60
															2	1	2.4	54	60	57	54	70
											48.3	46	5.0	6.1	-	-	-	65	70	60	65	70
															2	1	2.4	71	80	65	71	80
													7.5	9	-	-	-	69	70	63	69	70
															2	1	2.4	75	80	69	75	80
													10.0	11	-	-	-	71	80	66	71	80
															2	1	2.4	77	80	71	77	80
											78	75	5.0	6.1	-	-	-	83	90	93	83	90
															2	1	2.4	89	100	99	89	100
													7.5	9	-	-	-	86	100	97	86	100
															2	1	2.4	92	100	102	92	100
													10.0	11	-	-	-	89	100	99	89	100
															2	1	2.4	95	100	104	95	100

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units Without Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
28	280/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5.0	16.7/15.2	-	-	-	134/132	175/175	140/138	134/134	175/175
															2	1	5.9	146/144	175/175	154/152	146/146	175/175
													7.5	24.2/22	-	-	-	141/139	175/175	149/146	141/141	175/175
															2	1	5.9	153/151	200/175	162/160	153/153	200/200
													10.0	30.8/28	-	-	-	148/145	175/175	156/153	148/148	175/175
															2	1	5.9	160/157	200/200	170/167	160/160	200/200
											19/25	52/60	5.0	16.7/15.2	-	-	-	134/132	175/175	140/138	134/134	175/175
															2	1	5.9	146/144	175/175	154/152	146/146	175/175
													7.5	24.2/22	-	-	-	141/139	175/175	149/146	141/141	175/175
															2	1	5.9	153/151	200/175	162/160	153/153	200/200
													10.0	30.8/28	-	-	-	148/145	175/175	156/153	148/148	175/175
															2	1	5.9	160/157	200/200	170/167	160/160	200/200
											38/50	104/120	5.0	16.7/15.2	-	-	-	151/139	175/175	140/155	151/151	175/175
															2	1	5.9	166/154	175/175	154/169	166/166	175/175
													7.5	24.2/22	-	-	-	160/148	175/175	149/163	160/160	175/175
															2	1	5.9	175/162	200/175	162/177	175/175	200/200
													10.0	30.8/28	-	-	-	169/155	175/175	156/170	169/169	175/175
															2	1	5.9	183/170	200/200	170/184	183/183	200/200
											56/75 †	156/180	5.0	16.7/15.2	-	-	-	134/132	175/175	140/138	134/134	175/175
															2	1	5.9	146/144	175/175	154/152	146/146	175/175
													7.5	24.2/22	-	-	-	141/139	175/175	149/146	141/141	175/175
															2	1	5.9	153/151	200/175	162/160	153/153	200/200
													10.0	30.8/28	-	-	-	148/145	175/175	156/153	148/148	175/175
															2	1	5.9	160/157	200/200	170/167	160/160	200/200
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5.0	7.6	-	-	-	62	80	65	62	80
															2	1	3.1	69	90	72	69	90
													7.5	11	-	-	-	66	80	69	66	80
															2	1	3.1	72	90	76	72	90
													10.0	14	-	-	-	69	90	73	69	90
															2	1	3.1	75	90	80	75	90
											25	30	5.0	7.6	-	-	-	62	80	65	62	80
															2	1	3.1	69	90	72	69	90
													7.5	11	-	-	-	66	80	69	66	80
															2	1	3.1	72	90	76	72	90
													10.0	14	-	-	-	69	90	73	69	90
															2	1	3.1	75	90	80	75	90
											50	60	5.0	7.6	-	-	-	70	80	78	70	80
															2	1	3.1	77	90	85	77	90
													7.5	11	-	-	-	74	80	82	74	80
															2	1	3.1	82	90	89	82	90
													10.0	14	-	-	-	78	90	85	78	90
															2	1	3.1	85	90	92	85	90
											75	90	5.0	7.6	-	-	-	100	110	112	100	125
															2	1	3.1	107	125	119	107	125
													7.5	11	-	-	-	104	125	116	104	125
															2	1	3.1	112	125	123	112	125
													10.0	14	-	-	-	108	125	120	108	125
															2	1	3.1	115	125	127	115	125

See General Notes for Electrical Data Tables on page 91.

Electrical Data – 50PM Units Without Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
28	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5.0	6.1	-	-	-	51	60	53	51	60
															2	1	2.4	56	60	59	56	70
													7.5	9	-	-	-	54	60	57	54	70
															2	1	2.4	59	60	62	59	70
													10.0	11	-	-	-	56	60	59	56	70
															2	1	2.4	61	70	64	61	70
											24.8	24	5.0	6.1	-	-	-	51	60	53	51	60
															2	1	2.4	56	60	59	56	70
													7.5	9	-	-	-	54	60	57	54	70
															2	1	2.4	59	60	62	59	70
													10.0	11	-	-	-	56	60	59	56	70
															2	1	2.4	61	70	64	61	70
											48.3	46	5.0	6.1	-	-	-	65	70	60	65	70
															2	1	2.4	71	80	65	71	80
													7.5	9	-	-	-	69	70	63	69	70
															2	1	2.4	75	80	69	75	80
													10.0	11	-	-	-	71	80	66	71	80
															2	1	2.4	77	80	71	77	80
											78	75	5.0	6.1	-	-	-	83	90	93	83	90
															2	1	2.4	89	100	99	89	100
													7.5	9	-	-	-	86	100	97	86	100
															2	1	2.4	92	100	102	92	100
													10.0	11	-	-	-	89	100	99	89	100
															2	1	2.4	95	100	104	95	100

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data – 50PM Units Without Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		POWER EXHAUST			POWER SUPPLY		POWER SUPPLY WITH OPTIONAL BREAKER		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	56 / 75	156 / 180	NA	NA	NA	NA	NA	NA	156 / 180	175 / 200	180 / 180	200 / 200	179 / 207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207
28.	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207

† Electric Heat Branch Circuit For 208/230/240v and nominal 75kW Electric Heat

Electrical Data – 50PM Units Without Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		POWER EXHAUST			POWER SUPPLY		POWER SUPPLY WITH OPTIONAL BREAKER		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56.3 / 68.9	156 / 180	3.7	10.6 / 9.6	—	—	—	169/192	200/225	192/192	200/225	192/218
															2	1	5.9	184/207	200/225	207/207	225/225	205/232
													5	16.7 / 15.2	—	—	—	177/199	200/225	199/199	200/225	199/224
															2	1	5.9	192/214	200/225	214/214	225/225	212/238
													7.5	24.2 / 22.0	—	—	—	186/208	200/225	208/208	225/225	207/232
															2	1	5.9	201/222	225/225	222/222	225/225	221/246
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	-	-	-	169/192	200/225	192/192	200/225	192/218
															2	1	5.9	184/207	200/225	207/207	225/225	205/232
													5	16.7/15.2	-	-	-	177/199	200/225	199/199	200/225	199/224
															2	1	5.9	192/214	200/225	214/214	225/225	212/238
													7.5	24.2/22	-	-	-	186/208	200/225	208/208	225/225	207/232
															2	1	5.9	201/222	225/225	222/222	225/225	221/246
													10	30.8/28	-	-	-	195/215	225/225	215/215	225/225	215/239
															2	1	5.9	209/230	225/250	230/230	250/250	228/253
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	-	-	-	169/192	200/225	192/192	200/225	192/218
															2	1	5.9	184/207	200/225	207/207	225/225	205/232
													5	16.7/15.2	-	-	-	177/199	200/225	199/199	200/225	199/224
															2	1	5.9	192/214	200/225	214/214	225/225	212/238
													7.5	24.2/22	-	-	-	186/208	200/225	208/208	225/225	207/232
															2	1	5.9	201/222	225/225	222/222	225/225	221/246
													10	30.8/28	-	-	-	195/215	225/225	215/215	225/225	215/239
															2	1	5.9	209/230	225/250	230/230	250/250	228/253
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	-	-	-	177/199	200/225	199/199	200/225	199/224
															2	1	5.9	192/214	200/225	214/214	225/225	212/238
													7.5	24.2/22	-	-	-	186/208	200/225	208/208	225/225	207/232
															2	1	5.9	201/222	225/225	222/222	225/225	221/246
													10	30.8/28	-	-	-	195/215	225/225	215/215	225/225	215/239
															2	1	5.9	209/230	225/250	230/230	250/250	228/253

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Feeder Circuit For 208/230/240v Unit with nominal 75kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	0.25	—	—	3.7	10.6 / 9.6	—	—	—	78/77	100/100	78/78	100/100	82/81
															2	1	5.9	90/89	100/100	90/90	100/100	96/95
													5	16.7 / 15.2	—	—	—	84/82	100/100	84/84	100/100	89/88
															2	1	5.9	96/94	100/100	96/96	100/100	103/101
													7.5	24.2 / 22.0	—	—	—	91/89	100/100	91/91	100/100	98/95
															2	1	5.9	103/101	125/125	103/103	125/125	112/109
											18.8 / 23.0	52 / 60	3.7	10.6 / 9.6	—	—	—	85/93	100/100	93/93	100/100	82/86
															2	1	5.9	99/108	100/110	108/108	125/125	96/99
													5	16.7 / 15.2	—	—	—	92/100	100/110	100/100	125/125	89/92
															2	1	5.9	107/115	110/125	115/115	125/125	103/106
													7.5	24.2 / 22.0	—	—	—	102/109	110/110	109/109	125/125	98/100
															2	1	5.9	116/124	125/125	124/124	125/125	112/114
											37.6 / 45.9	104 / 120	3.7	10.6 / 9.6	—	—	—	150/138	150/150	150/150	150/150	138/155
															2	1	5.9	164/153	175/175	164/164	175/175	151/168
													5	16.7 / 15.2	—	—	—	157/145	175/150	157/157	175/175	145/161
															2	1	5.9	172/160	175/175	172/172	175/175	158/175
													7.5	24.2 / 22.0	—	—	—	167/154	175/175	167/167	175/175	153/169
															2	1	5.9	181/169	200/175	181/181	200/200	167/183
											56.3 / 68.9 †	156 / 180	3.7	10.6 / 9.6	—	—	—	78/77	100/100	78/78	100/100	82/81
															2	1	5.9	90/89	100/100	90/90	100/100	96/95
													5	16.7 / 15.2	—	—	—	84/82	100/100	84/84	100/100	89/88
															2	1	5.9	96/94	100/100	96/96	100/100	103/101
													7.5	24.2 / 22.0	—	—	—	91/89	100/100	91/91	100/100	98/95
															2	1	5.9	103/101	125/125	103/103	125/125	112/109
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.25	—	—	3.7	10.6 / 9.6	—	—	—	39	50	39	50	42
															2	1	5.9	46	50	46	50	49
													5	16.7 / 15.2	—	—	—	42	50	42	50	45
															2	1	5.9	48	60	48	60	52
													7.5	24.2 / 22.0	—	—	—	46	50	46	50	49
															2	1	5.9	52	60	52	60	56
											23	30	3.7	10.6 / 9.6	—	—	—	47	50	47	50	43
															2	1	5.9	55	60	55	60	51
													5	16.7 / 15.2	—	—	—	51	60	51	60	47
															2	1	5.9	59	60	59	60	54
													7.5	24.2 / 22.0	—	—	—	55	60	55	60	51
															2	1	5.9	63	70	63	70	58
											45.9	60	3.7	10.6 / 9.6	—	—	—	70	80	70	80	78
															2	1	5.9	78	80	78	80	85
													5	16.7 / 15.2	—	—	—	73	80	73	80	81
															2	1	5.9	81	90	81	90	88
													7.5	24.2 / 22.0	—	—	—	78	80	78	80	85
															2	1	5.9	85	90	85	90	92
											68.9	90	3.7	10.6 / 9.6	—	—	—	100	110	100	125	112
															2	1	5.9	108	125	108	125	120
													5	16.7 / 15.2	—	—	—	103	125	103	125	116
															2	1	5.9	111	125	111	125	123
													7.5	24.2 / 22.0	—	—	—	108	125	108	125	120
															2	1	5.9	115	125	115	125	127
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.25	—	—	5	16.7 / 15.2	—	—	—	34	40	34	40	36
															2	1	5.9	38	45	38	40	41
													7.5	24.2 / 22.0	—	—	—	36	45	36	40	39
															2	1	5.9	41	50	41	50	45
											22.8	30	5	16.7 / 15.2	—	—	—	41	45	41	50	38
															2	1	5.9	47	50	47	50	44
													7.5	24.2 / 22.0	—	—	—	45	50	45	50	41
															2	1	5.9	51	60	51	60	47
											44.3	60	5	16.7 / 15.2	—	—	—	69	70	69	70	63
															2	1	5.9	75	80	75	80	69
													7.5	24.2 / 22.0	—	—	—	73	80	73	80	67
															2	1	5.9	79	80	79	80	72
											71.8	90	5	16.7 / 15.2	—	—	—	86	100	86	100	97
															2	1	5.9	92	100	92	100	102
													7.5	24.2 / 22.0	—	—	—	90	100	90	100	100
															2	1	5.9	96	100	96	100	106

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	-	-	-	93/92	100/100	93/93	125/125	97/96
															2	1	5.9	105/104	125/125	105/105	125/125	111/110
													5	16.7/15.2	-	-	-	99/98	125/125	99/99	125/125	104/103
															2	1	5.9	111/109	125/125	111/111	125/125	118/116
													7.5	24.2/22	-	-	-	107/104	125/125	107/107	125/125	113/111
															2	1	5.9	118/116	150/125	118/118	150/150	127/124
													10	30.8/28	-	-	-	113/110	125/125	113/113	125/125	121/117
															2	1	5.9	125/122	150/150	125/125	150/150	134/131
											19/25	52/60	3.7	10.6/9.6	-	-	-	93/93	100/100	93/93	125/125	97/96
															2	1	5.9	105/108	125/125	108/108	125/125	111/110
													5	16.7/15.2	-	-	-	99/100	125/125	100/100	125/125	104/103
															2	1	5.9	111/115	125/125	115/115	125/125	118/116
													7.5	24.2/22	-	-	-	107/109	125/125	109/109	125/125	113/111
															2	1	5.9	118/124	150/125	124/124	150/150	127/124
													10	30.8/28	-	-	-	113/116	125/125	116/116	125/125	121/117
															2	1	5.9	125/131	150/150	131/131	150/150	134/131
											38/50	104/120	3.7	10.6/9.6	-	-	-	150/138	150/150	150/150	150/150	138/155
															2	1	5.9	164/153	175/175	164/164	175/175	151/168
													5	16.7/15.2	-	-	-	157/145	175/150	157/157	175/175	145/161
															2	1	5.9	172/160	175/175	172/172	175/175	158/175
													7.5	24.2/22	-	-	-	167/154	175/175	167/167	175/175	153/169
															2	1	5.9	181/169	200/175	181/181	200/200	167/183
													10	30.8/28	-	-	-	175/161	175/175	175/175	175/175	161/176
															2	1	5.9	190/176	200/200	190/190	200/200	174/190
											56/75 †	156/180	3.7	10.6/9.6	-	-	-	93/92*	100/100	93/93	125/125	97/96
															2	1	5.9	105/104	125/125	105/105	125/125	111/110
													5	16.7/15.2	-	-	-	99/98	125/125	99/99	125/125	104/103
															2	1	5.9	111/109	125/125	111/111	125/125	118/116
													7.5	24.2/22	-	-	-	107/104	125/125	107/107	125/125	113/111
															2	1	5.9	118/116	150/125	118/118	150/150	127/124
													10	30.8/28	-	-	-	113/110	125/125	113/113	125/125	121/117
															2	1	5.9	125/122	150/150	125/125	150/150	134/131
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	-	-	-	48	60	48	60	50
															2	1	3.1	54	60	54	70	57
													5	7.6	-	-	-	50	60	50	60	53
															2	1	3.1	57	60	57	70	60
													7.5	11	-	-	-	54	60	54	70	57
															2	1	3.1	60	60	60	70	64
													10	14	-	-	-	57	60	57	70	60
															2	1	3.1	63	80	63	80	67
											25	30	3.7	4.8	-	-	-	48	60	48	60	50
															2	1	3.1	55	60	55	70	57
													5	7.6	-	-	-	51	60	51	60	53
															2	1	3.1	59	60	59	70	60
													7.5	11	-	-	-	55	60	55	70	57
															2	1	3.1	63	70	63	70	64
													10	14	-	-	-	59	60	59	70	60
															2	1	3.1	67	80	67	80	67
											50	60	3.7	4.8	-	-	-	70	80	70	80	78
															2	1	3.1	78	80	78	80	85
													5	7.6	-	-	-	73	80	73	80	81
															2	1	3.1	81	90	81	90	88
													7.5	11	-	-	-	78	80	78	80	85
															2	1	3.1	85	90	85	90	92
													10	14	-	-	-	81	90	81	90	89
															2	1	3.1	89	100	89	100	96
											75	90	3.7	4.8	-	-	-	100	110	100	125	112
															2	1	3.1	108	125	108	125	120
													5	7.6	-	-	-	103	125	103	125	116
															2	1	3.1	111	125	111	125	123
													7.5	11	-	-	-	108	125	108	125	120
															2	1	3.1	115	125	115	125	127
													10	14	-	-	-	111	125	111	125	123
															2	1	3.1	119	125	119	125	130

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	-	-	-	39	50	39	50	41
															2	1	2.4	44	50	44	50	47
													7.5	9	-	-	-	42	50	42	50	45
															2	1	2.4	47	50	47	50	50
													10	11	-	-	-	44	50	44	50	47
															2	1	2.4	49	60	49	60	52
											24.8	24	5	6.1	-	-	-	41	50	41	50	41
															2	1	2.4	47	50	47	50	47
													7.5	9	-	-	-	45	50	45	50	45
															2	1	2.4	51	60	51	60	50
													10	11	-	-	-	48	50	48	50	47
															2	1	2.4	54	60	54	60	52
											48.3	46	5	6.1	-	-	-	69	70	69	70	63
															2	1	2.4	75	80	75	80	69
													7.5	9	-	-	-	73	80	73	80	67
															2	1	2.4	79	80	79	80	72
													10	11	-	-	-	75	80	75	80	69
															2	1	2.4	81	90	81	90	75
											78	75	5	6.1	-	-	-	86	100	86	100	97
															2	1	2.4	92	100	92	100	102
													7.5	9	-	-	-	90	100	90	100	100
															2	1	2.4	96	100	96	100	106
													10	11	-	-	-	93	100	93	100	102
															2	1	2.4	99	100	99	100	108
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	-	-	-	108/107	125/125	108/108	125/125	113/112
															2	1	5.9	120/119	150/150	120/120	150/150	126/125
													5	16.7/15.2	-	-	-	114/113	150/150	114/114	150/150	120/118
															2	1	5.9	126/125	150/150	126/126	150/150	133/132
													7.5	24.2/22	-	-	-	122/120	150/150	122/122	150/150	128/126
															2	1	5.9	134/131	150/150	134/134	150/150	142/139
													10	30.8/28	-	-	-	128/126	150/150	128/128	150/150	136/133
															2	1	5.9	140/137	175/175	140/140	175/175	150/146
											19/25	52/60	3.7	10.6/9.6	-	-	-	108/107	125/125	108/108	125/125	113/112
															2	1	5.9	120/119	150/150	120/120	150/150	126/125
													5	16.7/15.2	-	-	-	114/113	150/150	114/114	150/150	120/118
															2	1	5.9	126/125	150/150	126/126	150/150	133/132
													7.5	24.2/22	-	-	-	122/120	150/150	122/122	150/150	128/126
															2	1	5.9	134/131	150/150	134/134	150/150	142/139
													10	30.8/28	-	-	-	128/126	150/150	128/128	150/150	136/133
															2	1	5.9	140/137	175/175	140/140	175/175	150/146
											38/50	104/120	3.7	10.6/9.6	-	-	-	150/138	150/150	150/150	150/150	138/155
															2	1	5.9	164/153	175/175	164/164	175/175	151/168
													5	16.7/15.2	-	-	-	157/145	175/150	157/157	175/175	145/161
															2	1	5.9	172/160	175/175	172/172	175/175	158/175
													7.5	24.2/22	-	-	-	167/154	175/175	167/167	175/175	153/169
															2	1	5.9	181/169	200/175	181/181	200/200	167/183
													10	30.8/28	-	-	-	175/161	175/175	175/175	175/175	161/176
															2	1	5.9	190/176	200/200	190/190	200/200	174/190
											56/75 †	156/180	3.7	10.6/9.6	-	-	-	108/107	125/125	108/108	125/125	113/112
															2	1	5.9	120/119	150/150	120/120	150/150	126/125
													5	16.7/15.2	-	-	-	114/113	150/150	114/114	150/150	120/118
															2	1	5.9	126/125	150/150	126/126	150/150	133/132
													7.5	24.2/22	-	-	-	122/120	150/150	122/122	150/150	128/126
															2	1	5.9	134/131	150/150	134/134	150/150	142/139
													10	30.8/28	-	-	-	128/126	150/150	128/128	150/150	136/133
															2	1	5.9	140/137	175/175	140/140	175/175	150/146

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
24	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	-	-	-	54	60	54	70	57
															2	1	3.1	60	70	60	70	64
													5	7.6	-	-	-	57	60	57	70	60
															2	1	3.1	63	80	63	80	67
													7.5	11	-	-	-	60	70	60	70	64
															2	1	3.1	66	80	66	80	71
													10	14	-	-	-	63	80	63	80	67
															2	1	3.1	69	80	69	80	74
											25	30	3.7	4.8	-	-	-	54	60	54	70	57
															2	1	3.1	60	70	60	70	64
													5	7.6	-	-	-	57	60	57	70	60
															2	1	3.1	63	80	63	80	67
													7.5	11	-	-	-	60	70	60	70	64
															2	1	3.1	66	80	66	80	71
													10	14	-	-	-	63	80	63	80	67
															2	1	3.1	69	80	69	80	74
											50	60	3.7	4.8	-	-	-	70	80	70	80	78
															2	1	3.1	78	80	78	80	85
													5	7.6	-	-	-	73	80	73	80	81
															2	1	3.1	81	90	81	90	88
													7.5	11	-	-	-	78	80	78	80	85
															2	1	3.1	85	90	85	90	92
													10	14	-	-	-	81	90	81	90	89
															2	1	3.1	89	100	89	100	96
											75	90	3.7	4.8	-	-	-	100	110	100	125	112
															2	1	3.1	108	125	108	125	120
													5	7.6	-	-	-	103	125	103	125	116
															2	1	3.1	111	125	111	125	123
													7.5	11	-	-	-	108	125	108	125	120
															2	1	3.1	115	125	115	125	127
													10	14	-	-	-	111	125	111	125	123
															2	1	3.1	119	125	119	125	130
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	-	-	-	47	60	47	60	49
															2	1	2.4	52	60	52	60	55
													7.5	9	-	-	-	50	60	50	60	53
															2	1	2.4	55	60	55	70	58
													10	11	-	-	-	52	60	52	60	55
															2	1	2.4	57	60	57	70	60
											24.8	24	5	6.1	-	-	-	47	60	47	60	49
															2	1	2.4	52	60	52	60	55
													7.5	9	-	-	-	50	60	50	60	53
															2	1	2.4	55	60	55	70	58
													10	11	-	-	-	52	60	52	60	55
															2	1	2.4	57	60	57	70	60
											48.3	46	5	6.1	-	-	-	69	70	69	70	63
															2	1	2.4	75	80	75	80	69
													7.5	9	-	-	-	73	80	73	80	67
															2	1	2.4	79	80	79	80	72
													10	11	-	-	-	75	80	75	80	69
															2	1	2.4	81	90	81	90	75
											78	75	5	6.1	-	-	-	86	100	86	100	97
															2	1	2.4	92	100	92	100	102
													7.5	9	-	-	-	90	100	90	100	100
															2	1	2.4	96	100	96	100	106
													10	11	-	-	-	93	100	93	100	102
															2	1	2.4	99	100	99	100	108

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	-	-	-	139/137	175/175	139/139	175/175	146/144
															2	1	5.9	151/149	175/175	151/151	175/175	160/158
													7.5	24.2/22	-	-	-	146/144	175/175	146/146	175/175	155/152
															2	1	5.9	158/156	200/200	158/158	200/200	168/166
													10	30.8/28	-	-	-	153/150	200/175	153/153	200/200	162/159
															2	1	5.9	165/162	200/200	165/165	200/200	176/173
											19/25	52/60	5	16.7/15.2	-	-	-	139/137	175/175	139/139	175/175	146/144
															2	1	5.9	151/149	175/175	151/151	175/175	160/158
													7.5	24.2/22	-	-	-	146/144	175/175	146/146	175/175	155/152
															2	1	5.9	158/156	200/200	158/158	200/200	168/166
													10	30.8/28	-	-	-	153/150	200/175	153/153	200/200	162/159
															2	1	5.9	165/162	200/200	165/165	200/200	176/173
											38/50	104/120	5	16.7/15.2	-	-	-	157/145	175/175	157/157	175/175	146/161
															2	1	5.9	172/160	175/175	172/172	175/175	160/175
													7.5	24.2/22	-	-	-	167/154	175/175	167/167	175/175	155/169
															2	1	5.9	181/169	200/200	181/181	200/200	168/183
													10	30.8/28	-	-	-	175/161	200/175	175/175	200/200	162/176
															2	1	5.9	190/176	200/200	190/190	200/200	176/190
											56/75 †	156/180	5	16.7/15.2	-	-	-	139/137	175/175	139/139	175/175	146/144
															2	1	5.9	151/149	175/175	151/151	175/175	160/158
													7.5	24.2/22	-	-	-	146/144	175/175	146/146	175/175	155/152
															2	1	5.9	158/156	200/200	158/158	200/200	168/166
													10	30.8/28	-	-	-	153/150	200/175	153/153	200/200	162/159
															2	1	5.9	165/162	200/200	165/165	200/200	176/173
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	-	-	-	65	80	65	80	69
															2	1	3.1	72	90	72	90	76
													7.5	11	-	-	-	69	90	69	90	73
															2	1	3.1	75	90	75	90	80
													10	14	-	-	-	72	90	72	90	76
															2	1	3.1	78	100	78	100	83
											25	30	5	7.6	-	-	-	65	80	65	80	69
															2	1	3.1	72	90	72	90	76
													7.5	11	-	-	-	69	90	69	90	73
															2	1	3.1	75	90	75	90	80
													10	14	-	-	-	72	90	72	90	76
															2	1	3.1	78	100	78	100	83
											50	60	5	7.6	-	-	-	73	80	73	80	81
															2	1	3.1	81	90	81	90	88
													7.5	11	-	-	-	78	90	78	90	85
															2	1	3.1	85	90	85	90	92
													10	14	-	-	-	81	90	81	90	89
															2	1	3.1	89	100	89	100	96
											75	90	5	7.6	-	-	-	103	125	103	125	116
															2	1	3.1	111	125	111	125	123
													7.5	11	-	-	-	108	125	108	125	120
															2	1	3.1	115	125	115	125	127
													10	14	-	-	-	111	125	111	125	123
															2	1	3.1	119	125	119	125	130

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM Units with Optional Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		POWER EXHAUST			POWER SUPPLY * †		POWER SUPPLY WITH OPTIONAL BREAKER †		DISCONNECT SIZE
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
28	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	-	-	-	54	60	54	70	57
															2	1	2.4	59	60	59	70	62
													7.5	9	-	-	-	57	60	57	70	60
															2	1	2.4	62	70	62	70	66
													10	11	-	-	-	59	60	59	70	62
															2	1	2.4	64	80	64	80	68
											24.8	24	5	6.1	-	-	-	54	60	54	70	57
															2	1	2.4	59	60	59	70	62
													7.5	9	-	-	-	57	60	57	70	60
															2	1	2.4	62	70	62	70	66
													10	11	-	-	-	59	60	59	70	62
															2	1	2.4	64	80	64	80	68
											48.3	46	5	6.1	-	-	-	69	70	69	70	63
															2	1	2.4	75	80	75	80	69
													7.5	9	-	-	-	73	80	73	80	67
															2	1	2.4	79	80	79	80	72
													10	11	-	-	-	75	80	75	80	69
															2	1	2.4	81	90	81	90	75
											78	75	5	6.1	-	-	-	86	100	86	100	97
															2	1	2.4	92	100	92	100	102
													7.5	9	-	-	-	90	100	90	100	100
															2	1	2.4	96	100	96	100	106
													10	11	-	-	-	93	100	93	100	102
															2	1	2.4	99	100	99	100	108

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75-kW Electric Heat units must use dual-point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Branch and Feeder Circuit Data for PM16, 208/230V Unit with Nominal 75kW Electric Heater

Electrical Data - 50PM Units with Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		POWER EXHAUST			POWER SUPPLY		POWER SUPPLY WITH OPTIONAL BREAKER		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	56 / 75	156 / 180	NA	NA	NA	NA	NA	NA	156 / 180	175 / 200	180 / 180	200 / 200	179 / 207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	156/180	175/200	180/180	200/200	179/207

† Electric Heat Branch Circuit For 208/230/240v and nominal 75kW Electric Heat

Electrical Data - 50PM Units with Optional Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		POWER EXHAUST			POWER SUPPLY		POWER SUPPLY WITH OPTIONAL BREAKER		DISCONNECT SIZE
				No. 1		No. 2																
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Qty	Hp	FLA (ea)	MCA	MOCP	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56.3 / 68.9	156 / 180	3.7	10.6 / 9.6	—	—	—	176/198	200/225	198/198	200/225	197/224
															2	1	5.9	190/213	200/225	213/213	225/225	211/237
													5	16.7 / 15.2	—	—	—	183/205	200/225	205/205	225/225	204/230
															2	1	5.9	198/220	200/225	220/220	225/225	218/244
													7.5	24.2 / 22.0	—	—	—	193/214	200/225	214/214	225/225	213/238
															2	1	5.9	207/229	225/250	229/229	250/250	227/252
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	-	-	-	176/198	200/225	198/198	200/225	197/224
															2	1	5.9	190/213	200/225	213/213	225/225	211/237
													5	16.7/15.2	-	-	-	183/205	200/225	205/205	225/225	204/230
															2	1	5.9	198/220	200/225	220/220	225/225	218/244
													7.5	24.2/22	-	-	-	193/214	200/225	214/214	225/225	213/238
															2	1	5.9	207/229	225/250	229/229	250/250	227/252
													10	30.8/28	-	-	-	201/221	225/225	221/221	225/225	221/245
															2	1	5.9	216/236	225/250	236/236	250/250	234/259
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	-	-	-	176/198	200/225	198/198	200/225	197/224
															2	1	5.9	190/213	200/225	213/213	225/225	211/237
													5	16.7/15.2	-	-	-	183/205	200/225	205/205	225/225	204/230
															2	1	5.9	198/220	200/225	220/220	225/225	218/244
													7.5	24.2/22	-	-	-	193/214	200/225	214/214	225/225	213/238
															2	1	5.9	207/229	225/250	229/229	250/250	227/252
													10	30.8/28	-	-	-	201/221	225/225	221/221	225/225	221/245
															2	1	5.9	216/236	225/250	236/236	250/250	234/259
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	-	-	-	183/205	200/225	205/205	225/225	204/230
															2	1	5.9	198/220	200/225	220/220	225/225	218/244
													7.5	24.2/22	-	-	-	193/214	200/225	214/214	225/225	213/238
															2	1	5.9	207/229	225/250	229/229	250/250	227/252
													10	30.8/28	-	-	-	201/221	225/225	221/221	225/225	221/245
															2	1	5.9	216/236	225/250	236/236	250/250	234/259

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Feeder Circuit For 208/230/240v Unit with nominal 75kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	98/95	110/100	106/102
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	104/100	125/125	113/108
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	112/107	125/125	121/116
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	110/116	125/125	106/106
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	118/123	125/125	113/113
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/131	150/150	121/121
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/161	200/175	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/168	200/175	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/176	200/200	177/190
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	98/95	110/100	106/102
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	104/100	125/125	113/108
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	112/107	125/125	121/116
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	48	60	51
													5	7.6	2	3.2	2	3	4	0.167	0.35	51	60	55
													7.5	11	2	3.2	2	3	4	0.167	0.35	54	60	59
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	58	60	53
													5	7.6	2	3.2	2	3	4	0.167	0.35	61	70	57
													7.5	11	2	3.2	2	3	4	0.167	0.35	66	70	60
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	40	45	43
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	43	50	46
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	49	50	45
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	53	60	49
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	114/110	125/125	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	120/116	150/125	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/122	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/128	150/150	144/138
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	114/116	125/125	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	120/123	150/125	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/131	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/139	150/150	144/138
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/161	200/175	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/168	200/175	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/176	200/200	177/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/184	225/200	184/197
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	114/110	125/125	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	120/116	150/125	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/122	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/128	150/150	144/138
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	56	60	59
													5	7.6	2	3.2	2	3	4	0.167	0.35	59	60	63
													7.5	11	2	3.2	2	3	4	0.167	0.35	62	70	67
													10	14	2	3.2	2	3	4	0.167	0.35	65	80	70
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	58	60	59
													5	7.6	2	3.2	2	3	4	0.167	0.35	61	70	63
													7.5	11	2	3.2	2	3	4	0.167	0.35	66	70	67
													10	14	2	3.2	2	3	4	0.167	0.35	69	80	70
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	45	50	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	48	60	52
													10	11	2	2.4	2	3	3.3	0.167	0.3	50	60	54
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	49	50	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	53	60	52
													10	11	2	2.4	2	3	3.3	0.167	0.3	55	60	54
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	110	110
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/125	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/131	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/144	175/175	160/154
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/125	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/131	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/144	175/175	160/154
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/161	200/175	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/168	200/175	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/176	200/200	177/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/184	225/200	184/197
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/125	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/131	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/144	175/175	160/154
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	63	80	66
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	80	70
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	74
													10	14	2	3.2	2	3	4	0.167	0.35	72	90	77
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	63	80	66
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	80	70
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	74
													10	14	2	3.2	2	3	4	0.167	0.35	72	90	77
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	57
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	56	60	60
													10	11	2	2.4	2	3	3.3	0.167	0.3	58	60	62
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	57
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	56	60	60
													10	11	2	2.4	2	3	3.3	0.167	0.3	58	60	62
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	110	110

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/155	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/162	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	186/180
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/155	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/162	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	186/180
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/168	200/200	169/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/176	200/200	178/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/184	225/200	186/197
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/155	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/162	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	186/180
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	2	3	4	0.167	0.35	74	90	79
													7.5	11	2	3.2	2	3	4	0.167	0.35	77	90	83
													10	14	2	3.2	2	3	4	0.167	0.35	80	100	86
											25	30	5	7.6	2	3.2	2	3	4	0.167	0.35	74	90	79
													7.5	11	2	3.2	2	3	4	0.167	0.35	77	90	83
													10	14	2	3.2	2	3	4	0.167	0.35	80	100	86
											50	60	5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													10	11	2	2.4	2	3	3.3	0.167	0.3	65	80	70
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													10	11	2	2.4	2	3	3.3	0.167	0.3	65	80	70
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	110	110

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	201/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	209/228	225/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	218/236	225/250	236/259
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	201/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	209/228	225/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	218/236	225/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	201/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	209/228	225/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	218/236	225/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	209/228	225/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	218/236	225/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Unit Powered Convenience Outlet

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	103/100	125/110	112/108
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	109/105	125/125	119/114
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	117/112	125/125	127/122
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	116/122	125/125	112/112
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	124/129	125/150	119/119
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	133/138	150/150	127/127
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/167	200/175	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/174	200/175	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/183	200/200	182/196
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	103/100	125/110	112/108
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	109/105	125/125	119/114
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	117/112	125/125	127/122
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	51	60	55
													5	7.6	2	3.2	2	3	4	0.167	0.35	54	60	58
													7.5	11	2	3.2	2	3	4	0.167	0.35	57	60	62
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	62	70	57
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	70	60
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	70	64
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	43	50	46
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	46	50	50
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	57	60	52
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	110	111
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	119/115	150/125	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	125/121	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	132/127	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	139/133	150/150	150/144
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	119/122	150/125	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	125/129	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	133/138	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/145	150/150	150/144
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/167	200/175	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/174	200/175	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/183	200/200	182/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/190	225/200	190/202
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	119/115	150/125*	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	125/121	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	132/127	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	139/133	150/150	150/144
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	59	60	63
													5	7.6	2	3.2	2	3	4	0.167	0.35	62	70	66
													7.5	11	2	3.2	2	3	4	0.167	0.35	65	80	70
													10	14	2	3.2	2	3	4	0.167	0.35	68	80	73
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	62	70	63
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	70	66
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	70
													10	14	2	3.2	2	3	4	0.167	0.35	73	80	73
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	48	60	52
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	51	60	55
													10	11	2	2.4	2	3	3.3	0.167	0.3	53	60	58
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	52
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	57	60	55
													10	11	2	2.4	2	3	3.3	0.167	0.3	59	60	58
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	110	113
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/130	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/136	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/143	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/149	175/175	165/159
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/130	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/136	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/143	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/149	175/175	165/159
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/167	200/175	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/174	200/175	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/183	200/200	182/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/190	225/200	190/202
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/130	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/136	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/143	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/149	175/175	165/159
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	66	80	70
													5	7.6	2	3.2	2	3	4	0.167	0.35	68	80	73
													7.5	11	2	3.2	2	3	4	0.167	0.35	72	90	77
													10	14	2	3.2	2	3	4	0.167	0.35	75	90	80
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	66	80	70
													5	7.6	2	3.2	2	3	4	0.167	0.35	68	80	73
													7.5	11	2	3.2	2	3	4	0.167	0.35	72	90	77
													10	14	2	3.2	2	3	4	0.167	0.35	75	90	80
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	56	60	60
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	59	60	63
													10	11	2	2.4	2	3	3.3	0.167	0.3	61	70	66
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	56	60	60
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	59	60	63
													10	11	2	2.4	2	3	3.3	0.167	0.3	61	70	66
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	110	113

See General Notes for Electrical Data Tables on page 91.

Electrical Data – 50PM16 - 28 EnergyX with Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/160	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/167	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/173	225/200	191/185
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/160	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/167	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/173	225/200	191/185
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/174	200/200	175/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/183	200/200	184/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/190	225/200	191/202
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/160	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/167	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/173	225/200	191/185
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	2	3	4	0.167	0.35	77	90	82
													7.5	11	2	3.2	2	3	4	0.167	0.35	80	100	86
													10	14	2	3.2	2	3	4	0.167	0.35	83	100	89
											25	30	5	7.6	2	3.2	2	3	4	0.167	0.35	77	90	82
													7.5	11	2	3.2	2	3	4	0.167	0.35	80	100	86
													10	14	2	3.2	2	3	4	0.167	0.35	83	100	89
											50	60	5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	2	3	3.3	0.167	0.3	68	80	73
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	2	3	3.3	0.167	0.3	68	80	73
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	110	113

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Unit Powered Convenience Outlet (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/227	225/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	215/234	225/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	224/243	225/250	242/265
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/227	225/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	215/234	225/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	224/243	225/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	233/250	250/250	250/271
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/227	225/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	215/234	225/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	224/243	225/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	233/250	250/250	250/271
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	215/234	225/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	224/243	225/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	233/250	250/250	250/271

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit with Optional Powered Conv Outlet and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional HACR Breaker

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	98/98	100/100	106/102
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	104/104	125/125	113/108
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	112/112	125/125	121/116
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	116/116	125/125	106/106
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	123/123	125/125	113/113
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	131/131	150/150	121/121
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/175	200/200	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/183	200/200	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	98/98	100/100	106/102
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	104/104	125/125	113/108
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	112/112	125/125	121/116
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	48	60	51
													5	7.6	2	3.2	2	3	4	0.167	0.35	51	60	55
													7.5	11	2	3.2	2	3	4	0.167	0.35	54	60	59
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	58	60	53
													5	7.6	2	3.2	2	3	4	0.167	0.35	61	70	57
													7.5	11	2	3.2	2	3	4	0.167	0.35	66	70	60
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	40	40	43
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	43	50	46
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	49	50	45
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	53	60	49
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	114/114	125/125	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	120/120	150/150	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/127	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/134	150/150	144/138
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	116/116	125/125	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	123/123	150/150	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	131/131	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	139/139	150/150	144/138
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/175	200/200	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/183	200/200	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/200	225/225	184/197
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	114/114	125/125*	121/117
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	120/120	150/150	128/123
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	127/127	150/150	137/131
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/134	150/150	144/138
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	56	70	59
													5	7.6	2	3.2	2	3	4	0.167	0.35	59	70	63
													7.5	11	2	3.2	2	3	4	0.167	0.35	62	70	67
													10	14	2	3.2	2	3	4	0.167	0.35	65	80	70
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	58	70	59
													5	7.6	2	3.2	2	3	4	0.167	0.35	61	70	63
													7.5	11	2	3.2	2	3	4	0.167	0.35	66	70	67
													10	14	2	3.2	2	3	4	0.167	0.35	69	80	70
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional HACR Breaker (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	45	50	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	48	60	52
													10	11	2	2.4	2	3	3.3	0.167	0.3	50	60	54
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	49	50	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	53	60	52
													10	11	2	2.4	2	3	3.3	0.167	0.3	55	60	54
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	125	110
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/129	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/135	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/149	175/175	160/154
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/129	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/135	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/149	175/175	160/154
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	175/175	200/200	161/175
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/183	200/200	168/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/200	225/225	184/197
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/129	150/150	136/132
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	135/135	150/150	143/139
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	149/149	175/175	160/154
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	63	80	66
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	80	70
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	74
													10	14	2	3.2	2	3	4	0.167	0.35	72	90	77
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	63	80	66
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	80	70
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	74
													10	14	2	3.2	2	3	4	0.167	0.35	72	90	77
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	80	90	88
													5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	110	125	122
													5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	57
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	56	70	60
													10	11	2	2.4	2	3	3.3	0.167	0.3	58	70	62
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	57
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	56	70	60
													10	11	2	2.4	2	3	3.3	0.167	0.3	58	70	62
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	125	110

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional HACR Breaker (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/159	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/167	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	186/180
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/159	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/167	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	186/180
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	183/183	200/200	169/182
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	178/190
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	200/200	225/225	186/197
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	159/159	200/200	169/165
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	167/167	200/200	178/173
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	186/180
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	2	3	4	0.167	0.35	74	90	79
													7.5	11	2	3.2	2	3	4	0.167	0.35	77	90	83
													10	14	2	3.2	2	3	4	0.167	0.35	80	100	86
											25	30	5	7.6	2	3.2	2	3	4	0.167	0.35	74	90	79
													7.5	11	2	3.2	2	3	4	0.167	0.35	77	90	83
													10	14	2	3.2	2	3	4	0.167	0.35	80	100	86
											50	60	5	7.6	2	3.2	2	3	4	0.167	0.35	84	90	91
													7.5	11	2	3.2	2	3	4	0.167	0.35	88	90	95
													10	14	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	5	7.6	2	3.2	2	3	4	0.167	0.35	114	125	126
													7.5	11	2	3.2	2	3	4	0.167	0.35	118	125	129
													10	14	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													10	11	2	2.4	2	3	3.3	0.167	0.3	65	80	70
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													10	11	2	2.4	2	3	3.3	0.167	0.3	65	80	70
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	77	80	71
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	80	90	74
													10	11	2	2.4	2	3	3.3	0.167	0.3	83	90	76
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	94	100	104
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													10	11	2	2.4	2	3	3.3	0.167	0.3	100	125	110

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional HACR Breaker

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	221/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	228/228	250/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	236/236	250/250	236/259
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	221/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	228/228	250/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	236/236	250/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	221/221	225/225	221/244
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	228/228	250/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	236/236	250/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	228/228	250/250	228/251
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	236/236	250/250	236/259
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit with Optional HACR Breaker unit and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Powered Conv Outlet and HACR Breaker

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	103/103	125/125	112/108
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	109/109	125/125	119/114
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	117/117	125/125	127/122
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	122/122	125/125	112/112
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/129	150/150	119/119
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	138/138	150/150	127/127
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/181	200/200	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/189	200/200	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/198	200/200	182/196
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	103/103	125/125	112/108
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	109/109	125/125	119/114
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	117/117	125/125	127/122
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	51	60	55
													5	7.6	2	3.2	2	3	4	0.167	0.35	54	60	58
													7.5	11	2	3.2	2	3	4	0.167	0.35	57	60	62
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	62	70	57
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	70	60
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	70	64
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	43	50	46
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	46	50	50
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	49
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	57	60	52
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	125	111
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	119/119	150/150	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	125/125	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	132/132	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	139/139	150/150	150/144
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	122/122	150/150	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	129/129	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	138/138	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	145/145	150/150	150/144
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/181	200/200	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/189	200/200	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/198	200/200	182/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/207	225/225	190/202
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	119/119	150/150	127/123
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	125/125	150/150	134/129
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	132/132	150/150	142/137
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	139/139	150/150	150/144
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	59	70	63
													5	7.6	2	3.2	2	3	4	0.167	0.35	62	70	66
													7.5	11	2	3.2	2	3	4	0.167	0.35	65	80	70
													10	14	2	3.2	2	3	4	0.167	0.35	68	80	73
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	62	70	63
													5	7.6	2	3.2	2	3	4	0.167	0.35	65	70	66
													7.5	11	2	3.2	2	3	4	0.167	0.35	69	80	70
													10	14	2	3.2	2	3	4	0.167	0.35	73	80	73
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Powered Conv Outlet and HACR Breaker (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	48	60	52
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	51	60	55
													10	11	2	2.4	2	3	3.3	0.167	0.3	53	60	58
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	53	60	52
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	57	60	55
													10	11	2	2.4	2	3	3.3	0.167	0.3	59	60	58
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	125	113
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/134	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/140	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/147	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/154	175/175	165/159
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/134	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/140	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/147	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/154	175/175	165/159
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	181/181	200/200	167/181
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/189	200/200	174/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/198	200/200	182/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/207	225/225	190/202
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	134/134	150/150	142/138
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	140/140	175/175	149/145
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	147/147	175/175	158/152
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	154/154	175/175	165/159
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	2	3	4	0.167	0.35	66	80	70
													5	7.6	2	3.2	2	3	4	0.167	0.35	68	80	73
													7.5	11	2	3.2	2	3	4	0.167	0.35	72	90	77
													10	14	2	3.2	2	3	4	0.167	0.35	75	90	80
											25	30	3.7	4.8	2	3.2	2	3	4	0.167	0.35	66	80	70
													5	7.6	2	3.2	2	3	4	0.167	0.35	68	80	73
													7.5	11	2	3.2	2	3	4	0.167	0.35	72	90	77
													10	14	2	3.2	2	3	4	0.167	0.35	75	90	80
											50	60	3.7	4.8	2	3.2	2	3	4	0.167	0.35	84	90	91
													5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	3.7	4.8	2	3.2	2	3	4	0.167	0.35	114	125	126
													5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	56	70	60
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	59	70	63
													10	11	2	2.4	2	3	3.3	0.167	0.3	61	70	66
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	56	70	60
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	59	70	63
													10	11	2	2.4	2	3	3.3	0.167	0.3	61	70	66
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	125	113

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Powered Conv Outlet and HACR Breaker (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/164	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/172	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/178	225/225	191/185
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/164	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/172	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/178	225/225	191/185
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	189/189	200/200	175/188
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	198/198	200/200	184/196
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	207/207	225/225	191/202
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	164/164	200/200	175/171
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	172/172	200/200	184/178
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	178/178	225/225	191/185
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	2	3	4	0.167	0.35	77	90	82
													7.5	11	2	3.2	2	3	4	0.167	0.35	80	100	86
													10	14	2	3.2	2	3	4	0.167	0.35	83	100	89
											25	30	5	7.6	2	3.2	2	3	4	0.167	0.35	77	90	82
													7.5	11	2	3.2	2	3	4	0.167	0.35	80	100	86
													10	14	2	3.2	2	3	4	0.167	0.35	83	100	89
											50	60	5	7.6	2	3.2	2	3	4	0.167	0.35	88	90	94
													7.5	11	2	3.2	2	3	4	0.167	0.35	92	100	98
													10	14	2	3.2	2	3	4	0.167	0.35	96	100	102
											75	90	5	7.6	2	3.2	2	3	4	0.167	0.35	118	125	129
													7.5	11	2	3.2	2	3	4	0.167	0.35	122	125	133
													10	14	2	3.2	2	3	4	0.167	0.35	126	150	136
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	2	3	3.3	0.167	0.3	68	80	73
											24.8	24	5	6.1	2	2.4	2	3	3.3	0.167	0.3	63	80	67
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	2	3	3.3	0.167	0.3	68	80	73
											48.3	46	5	6.1	2	2.4	2	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	84	90	77
													10	11	2	2.4	2	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	2	3	3.3	0.167	0.3	98	100	107
													7.5	9	2	2.4	2	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	2	3	3.3	0.167	0.3	104	125	113

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX with Optional Powered Conv Outlet and HACR Breaker (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	227/227	250/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	234/234	250/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	243/243	250/250	242/265
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	227/227	250/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	234/234	250/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	243/243	250/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	250/250	300/250	250/271
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	227/227	250/250	227/250
													5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	234/234	250/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	243/243	250/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	250/250	300/250	250/271
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	234/234	250/250	234/257
													7.5	24.2/22	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	243/243	250/250	242/265
													10	30.8/28	2	7.08/6.4	2	3	8.85/8.0	0.167	0.66/0.6	250/250	300/250	250/271

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit with Optional Powered Conv Outlet and HACR Breaker unit and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit Without Optional Unit Powered Convenience Outlet, with Economizer

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	107/103	125/125	116/111
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	113/108	125/125	123/118
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	121/115	125/125	132/125
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	121/126	125/150	116/116
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	129/133	150/150	123/122
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	138/141	150/150	132/130
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/171	200/175	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/178	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/186	225/200	187/199
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	107/103	125/125	116/111
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	113/108	125/125	123/118
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	121/115	125/125	132/125
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	52	60	56
													5	7.6	2	3.2	3	3	4	0.167	0.35	55	60	59
													7.5	11	2	3.2	3	3	4	0.167	0.35	58	60	63
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	70	58
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	70	61
													7.5	11	2	3.2	3	3	4	0.167	0.35	71	80	65
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	43	50	47
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	46	50	50
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	53	60	49
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	57	60	52
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	110	111
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	122/118	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	128/124	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	136/130	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/136	175/150	154/147
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	122/126	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	129/133	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	138/141	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	146/149	175/150	154/147
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/171	200/175	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/178	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/186	225/200	187/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/194	225/200	194/206
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	122/118	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	128/124	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	136/130	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/136	175/150	154/147
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	60	70	64
													5	7.6	2	3.2	3	3	4	0.167	0.35	63	80	67
													7.5	11	2	3.2	3	3	4	0.167	0.35	66	80	71
													10	14	2	3.2	3	3	4	0.167	0.35	69	80	75
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	70	64
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	80	67
													7.5	11	2	3.2	3	3	4	0.167	0.35	71	80	71
													10	14	2	3.2	3	3	4	0.167	0.35	74	80	75
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit Without Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	49	60	52
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	52	60	56
													10	11	2	2.4	3	3	3.3	0.167	0.3	54	60	58
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	53	60	52
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	57	60	56
													10	11	2	2.4	3	3	3.3	0.167	0.3	60	60	58
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	110	113
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/133	175/150	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/139	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/146	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/152	175/175	170/163
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/133	175/150	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/139	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/146	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/152	175/175	170/163
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/171	200/175	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/178	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/186	225/200	187/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/194	225/200	194/206
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/133	175/150	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/139	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/146	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/152	175/175	170/163
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	71
													5	7.6	2	3.2	3	3	4	0.167	0.35	69	80	74
													7.5	11	2	3.2	3	3	4	0.167	0.35	73	90	78
													10	14	2	3.2	3	3	4	0.167	0.35	76	90	82
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	71
													5	7.6	2	3.2	3	3	4	0.167	0.35	69	80	74
													7.5	11	2	3.2	3	3	4	0.167	0.35	73	90	78
													10	14	2	3.2	3	3	4	0.167	0.35	76	90	82
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	60
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	60	60	64
													10	11	2	2.4	3	3	3.3	0.167	0.3	62	70	66
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	60
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	60	60	64
													10	11	2	2.4	3	3	3.3	0.167	0.3	62	70	66
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	110	113

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit Without Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/163	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/170	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/176	225/200	196/189
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/163	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/170	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/176	225/200	196/189
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/178	200/200	180/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/186	225/200	188/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/194	225/200	196/206
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/163	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/170	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/176	225/200	196/189
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	3	3	4	0.167	0.35	78	100	83
													7.5	11	2	3.2	3	3	4	0.167	0.35	81	100	87
													10	14	2	3.2	3	3	4	0.167	0.35	84	100	91
											25	30	5	7.6	2	3.2	3	3	4	0.167	0.35	78	100	83
													7.5	11	2	3.2	3	3	4	0.167	0.35	81	100	87
													10	14	2	3.2	3	3	4	0.167	0.35	84	100	91
											50	60	5	7.6	2	3.2	3	3	4	0.167	0.35	89	100	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	63	80	68
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	3	3	3.3	0.167	0.3	68	80	73
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	63	80	68
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	3	3	3.3	0.167	0.3	68	80	73
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	110	113

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit Without Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	212/231	225/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	220/238	225/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	229/246	250/250	247/268
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	212/231	225/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	220/238	225/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	229/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/254	250/300	254/275
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	212/231	225/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	220/238	225/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	229/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/254	250/300	254/275
28	208/230-3-60	187	253	48	245	48	245	6	0.25	1.5	56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	220/238	225/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	229/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/254	250/300	254/275

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit without Optional Powered Conv Outlet with economizer and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with Economizer

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	112/108	125/125	122/117
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	118/113	125/125	129/123
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/120	150/125	137/131
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/132	150/150	122/121
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	135/139	150/150	129/128
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	144/148	150/150	137/136
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/177	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/184	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/193	225/200	193/205
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	112/108	125/125	122/117
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	118/113	125/125	129/123
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/120	150/125	137/131
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	55	60	60
													5	7.6	2	3.2	3	3	4	0.167	0.35	58	60	63
													7.5	11	2	3.2	3	3	4	0.167	0.35	61	70	67
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	70	61
													5	7.6	2	3.2	3	3	4	0.167	0.35	70	80	65
													7.5	11	2	3.2	3	3	4	0.167	0.35	74	80	68
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	46	50	50
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	49	50	54
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	53
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	61	70	56
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	110	115
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/123	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/129	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/135	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/141	175/150	160/153
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/132	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	135/139	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	144/148	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	153/155	175/175	160/153
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/177	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/184	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/193	225/200	193/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/200	225/200	200/212
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/123	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/129	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/135	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/141	175/150	160/153
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	80	67
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	80	71
													7.5	11	2	3.2	3	3	4	0.167	0.35	69	80	75
													10	14	2	3.2	3	3	4	0.167	0.35	72	80	78
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	67
													5	7.6	2	3.2	3	3	4	0.167	0.35	70	80	71
													7.5	11	2	3.2	3	3	4	0.167	0.35	74	80	75
													10	14	2	3.2	3	3	4	0.167	0.35	78	80	78
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	110	106
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	52	60	56
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	55	60	59
													10	11	2	2.4	3	3	3.3	0.167	0.3	57	60	61
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	56
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	61	70	59
													10	11	2	2.4	3	3	3.3	0.167	0.3	63	70	61
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	110	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	110	117
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/144	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/151	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/157	200/175	175/168
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/144	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/151	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/157	200/175	175/168
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/177	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/184	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/193	225/200	193/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/200	225/200	200/212
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/138	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/144	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/151	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/157	200/175	175/168
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	70	80	74
													5	7.6	2	3.2	3	3	4	0.167	0.35	72	90	78
													7.5	11	2	3.2	3	3	4	0.167	0.35	76	90	82
													10	14	2	3.2	3	3	4	0.167	0.35	79	90	85
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	70	80	74
													5	7.6	2	3.2	3	3	4	0.167	0.35	72	90	78
													7.5	11	2	3.2	3	3	4	0.167	0.35	76	90	82
													10	14	2	3.2	3	3	4	0.167	0.35	79	90	85
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	110	106
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	60	60	64
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	63	70	67
													10	11	2	2.4	3	3	3.3	0.167	0.3	65	80	69
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	60	60	64
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	63	70	67
													10	11	2	2.4	3	3	3.3	0.167	0.3	65	80	69
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	110	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	110	117

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/175	225/200	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/181	225/225	202/195
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/175	225/200	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/181	225/225	202/195
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/184	200/200	185/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/193	225/200	194/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/200	225/225	202/212
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/168	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/175	225/200	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/181	225/225	202/195
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	3	3	4	0.167	0.35	81	100	87
													7.5	11	2	3.2	3	3	4	0.167	0.35	84	100	91
													10	14	2	3.2	3	3	4	0.167	0.35	87	100	94
											25	30	5	7.6	2	3.2	3	3	4	0.167	0.35	81	100	87
													7.5	11	2	3.2	3	3	4	0.167	0.35	84	100	91
													10	14	2	3.2	3	3	4	0.167	0.35	87	100	94
											50	60	5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	110	106
											75	90	5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	69	80	75
													10	11	2	2.4	3	3	3.3	0.167	0.3	71	80	77
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	69	80	75
													10	11	2	2.4	3	3	3.3	0.167	0.3	71	80	77
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	110	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	110	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	110	117

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	156/180	175/200	179/207

† Electrical Data – 50PM16 – 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with Economizer

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/237	225/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	235/253	250/300	252/274
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/237	225/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	235/253	250/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/260	250/300	260/281
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/237	225/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	235/253	250/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/260	250/300	260/281
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	226/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	235/253	250/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/260	250/300	260/281

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX Unit with Optional Powered Conv Outlet with economizer and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet, with HACR Breaker, with Economizer

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	107/107	125/125	116/111
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	113/113	125/125	123/118
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	121/121	125/125	132/125
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/126	150/150	116/116
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/133	150/150	123/122
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/141	150/150	132/130
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/186	200/200	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/194	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/203	225/225	187/199
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	107/107	125/125	116/111
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	113/113	125/125	123/118
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	121/121	125/125	132/125
	460	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	52	60	56
													5	7.6	2	3.2	3	3	4	0.167	0.35	55	60	59
													7.5	11	2	3.2	3	3	4	0.167	0.35	58	70	63
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	70	58
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	70	61
													7.5	11	2	3.2	3	3	4	0.167	0.35	71	80	65
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
	575	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	43	50	47
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	46	50	50
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	53	60	49
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	57	60	52
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	125	111
20	208/230	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	122/122	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	128/128	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	136/136	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/143	175/175	154/147
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/126	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/133	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/141	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	149/149	175/175	154/147
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/186	200/200	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/194	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/203	225/225	187/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/211	225/225	194/206
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	122/122	150/150	131/126
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	128/128	150/150	138/133
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	136/136	150/150	147/140
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/143	175/175	154/147
	460	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	60	70	64
													5	7.6	2	3.2	3	3	4	0.167	0.35	63	80	67
													7.5	11	2	3.2	3	3	4	0.167	0.35	66	80	71
													10	14	2	3.2	3	3	4	0.167	0.35	69	80	75
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	70	64
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	80	67
													7.5	11	2	3.2	3	3	4	0.167	0.35	71	80	71
													10	14	2	3.2	3	3	4	0.167	0.35	74	80	75
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet, with HACR Breaker, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	49	60	52
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	52	60	56
													10	11	2	2.4	3	3	3.3	0.167	0.3	54	60	58
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	53	60	52
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	57	60	56
													10	11	2	2.4	3	3	3.3	0.167	0.3	60	60	58
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	125	113
24	208/230	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/137	175/175	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/143	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/151	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/158	175/175	170/163
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/137	175/175	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/143	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/151	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/158	175/175	170/163
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	186/186	200/200	171/185
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/194	200/200	178/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/203	225/225	187/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/211	225/225	194/206
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	137/137	175/175	146/142
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	143/143	175/175	154/148
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	151/151	175/175	162/156
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	158/158*	175/175	170/163
	460	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	71
													5	7.6	2	3.2	3	3	4	0.167	0.35	69	80	74
													7.5	11	2	3.2	3	3	4	0.167	0.35	73	90	78
													10	14	2	3.2	3	3	4	0.167	0.35	76	90	82
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	71
													5	7.6	2	3.2	3	3	4	0.167	0.35	69	80	74
													7.5	11	2	3.2	3	3	4	0.167	0.35	73	90	78
													10	14	2	3.2	3	3	4	0.167	0.35	76	90	82
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	85	90	92
													5	7.6	2	3.2	3	3	4	0.167	0.35	89	90	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	115	125	127
													5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137
	575	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	70	60
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	60	70	64
													10	11	2	2.4	3	3	3.3	0.167	0.3	62	70	66
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	70	60
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	60	70	64
													10	11	2	2.4	3	3	3.3	0.167	0.3	62	70	66
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	125	113

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet, with HACR Breaker, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/168	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/176	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/182	225/225	196/189
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/168	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/176	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/182	225/225	196/189
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	194/194	200/200	180/191
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	203/203	225/225	188/199
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	211/211	225/225	196/206
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	168/168	200/200	180/174
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	176/176	200/200	188/182
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	182/182	225/225	196/189
	460	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	3	3	4	0.167	0.35	78	100	83
													7.5	11	2	3.2	3	3	4	0.167	0.35	81	100	87
													10	14	2	3.2	3	3	4	0.167	0.35	84	100	91
											25	30	5	7.6	2	3.2	3	3	4	0.167	0.35	78	100	83
													7.5	11	2	3.2	3	3	4	0.167	0.35	81	100	87
													10	14	2	3.2	3	3	4	0.167	0.35	84	100	91
											50	60	5	7.6	2	3.2	3	3	4	0.167	0.35	89	100	96
													7.5	11	2	3.2	3	3	4	0.167	0.35	93	100	100
													10	14	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	5	7.6	2	3.2	3	3	4	0.167	0.35	119	125	130
													7.5	11	2	3.2	3	3	4	0.167	0.35	123	125	134
													10	14	2	3.2	3	3	4	0.167	0.35	127	150	137
	575	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	63	80	68
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	3	3	3.3	0.167	0.3	68	80	73
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	63	80	68
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													10	11	2	2.4	3	3	3.3	0.167	0.3	68	80	73
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	81	90	74
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													10	11	2	2.4	3	3	3.3	0.167	0.3	87	90	80
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	98	100	108
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													10	11	2	2.4	3	3	3.3	0.167	0.3	105	125	113

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Without Optional Unit Powered Convenience Outlet, with HACR Breaker, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	125	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	231/231	250/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	238/238	250/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	246/246	250/250	247/268
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	231/231	250/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	238/238	250/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	246/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	254/254	300/300	254/275
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	231/231	250/250	231/254
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	238/238	250/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	246/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	254/254	300/300	254/275
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	238/238	250/250	238/260
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	246/246	250/250	247/268
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	254/254	300/300	254/275

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit without Optional Powered Conv Outlet with HACR Breaker, with economizer and 75–kW Electric Heat
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with HACR, with Economizer

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	112/112	125/125	122/117
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	118/118	125/125	129/123
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/126	150/150	137/131
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	132/132	150/150	122/121
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	139/139	150/150	129/128
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	150/150	137/136
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/200	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/209	225/225	193/205
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	112/112	125/125	122/117
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	118/118	125/125	129/123
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	126/126	150/150	137/131
	460-3-60	414	506	12.8	100	12.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	55	60	60
													5	7.6	2	3.2	3	3	4	0.167	0.35	58	70	63
													7.5	11	2	3.2	3	3	4	0.167	0.35	61	70	67
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	70	61
													5	7.6	2	3.2	3	3	4	0.167	0.35	70	80	65
													7.5	11	2	3.2	3	3	4	0.167	0.35	74	80	68
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
	575-3-60	518	633	9.6	78	9.6	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	46	50	50
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	49	50	54
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	53
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	61	70	56
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	125	115
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/127	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/133	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/141	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	175/175	160/153
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	132/132	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	139/139	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	155/155	175/175	160/153
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/200	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/209	225/225	193/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/218	225/225	200/212
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	127/127	150/150	137/132
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	133/133	150/150	144/138
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	141/141	150/150	152/146
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	175/175	160/153
	460-3-60	414	506	17.7	114	14.8	100	4	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	63	80	67
													5	7.6	2	3.2	3	3	4	0.167	0.35	66	80	71
													7.5	11	2	3.2	3	3	4	0.167	0.35	69	80	75
													10	14	2	3.2	3	3	4	0.167	0.35	72	80	78
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	67	80	67
													5	7.6	2	3.2	3	3	4	0.167	0.35	70	80	71
													7.5	11	2	3.2	3	3	4	0.167	0.35	74	80	75
													10	14	2	3.2	3	3	4	0.167	0.35	78	80	78
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	125	106
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with HACR, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
20	575-3-60	518	633	13	80	11	78	4	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	52	60	56
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	55	60	59
													10	11	2	2.4	3	3	3.3	0.167	0.3	57	60	61
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	57	60	56
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	61	70	59
													10	11	2	2.4	3	3	3.3	0.167	0.3	63	70	61
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	125	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	125	117
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	-	-	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/156	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/163	200/200	175/168
											19/25	52/60	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/156	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/163	200/200	175/168
											38/50	104/120	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	192/192	200/200	177/190
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/200	200/200	184/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/209	225/225	193/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/218	225/225	200/212
											56/75 †	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	142/142	175/175	152/147
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	148/148	175/175	159/154
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	156/156	175/175	168/162
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	163/163	200/200	175/168
	460-3-60	414	506	19.5	125	17.7	114	6	0.25	0.7	-	-	3.7	4.8	2	3.2	3	3	4	0.167	0.35	70	80	74
													5	7.6	2	3.2	3	3	4	0.167	0.35	72	90	78
													7.5	11	2	3.2	3	3	4	0.167	0.35	76	90	82
													10	14	2	3.2	3	3	4	0.167	0.35	79	90	85
											25	30	3.7	4.8	2	3.2	3	3	4	0.167	0.35	70	80	74
													5	7.6	2	3.2	3	3	4	0.167	0.35	72	90	78
													7.5	11	2	3.2	3	3	4	0.167	0.35	76	90	82
													10	14	2	3.2	3	3	4	0.167	0.35	79	90	85
											50	60	3.7	4.8	2	3.2	3	3	4	0.167	0.35	89	90	96
													5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	125	106
											75	90	3.7	4.8	2	3.2	3	3	4	0.167	0.35	119	125	130
													5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141
	575-3-60	518	633	16.6	80	13	80	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	63	70	67
													10	11	2	2.4	3	3	3.3	0.167	0.3	65	80	69
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	60	70	64
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	63	70	67
													10	11	2	2.4	3	3	3.3	0.167	0.3	65	80	69
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	125	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	125	117

See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with HACR, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		OFM			ELECTRIC HEAT †		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY †		DISCONNECT SIZE †
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	-	-	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/181	225/225	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/187	225/225	202/195
											19/25	52/60	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/181	225/225	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/187	225/225	202/195
											38/50	104/120	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	200/200	200/200	185/197
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	209/209	225/225	194/205
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	218/218	225/225	202/212
											56/75 †	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	173/173	200/200	185/180
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	181/181	225/225	194/188
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	187/187	225/225	202/195
	460-3-60	414	506	22.5	125	22.5	125	6	0.25	0.7	-	-	5	7.6	2	3.2	3	3	4	0.167	0.35	81	100	87
													7.5	11	2	3.2	3	3	4	0.167	0.35	84	100	91
													10	14	2	3.2	3	3	4	0.167	0.35	87	100	94
											25	30	5	7.6	2	3.2	3	3	4	0.167	0.35	81	100	87
													7.5	11	2	3.2	3	3	4	0.167	0.35	84	100	91
													10	14	2	3.2	3	3	4	0.167	0.35	87	100	94
											50	60	5	7.6	2	3.2	3	3	4	0.167	0.35	93	100	99
													7.5	11	2	3.2	3	3	4	0.167	0.35	97	100	103
													10	14	2	3.2	3	3	4	0.167	0.35	101	125	106
											75	90	5	7.6	2	3.2	3	3	4	0.167	0.35	123	125	134
													7.5	11	2	3.2	3	3	4	0.167	0.35	127	150	137
													10	14	2	3.2	3	3	4	0.167	0.35	131	150	141
	575-3-60	518	633	18	100	18	100	6	0.25	0.7	-	-	5	6.1	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	69	80	75
													10	11	2	2.4	3	3	3.3	0.167	0.3	71	80	77
											24.8	24	5	6.1	2	2.4	3	3	3.3	0.167	0.3	66	80	71
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	69	80	75
													10	11	2	2.4	3	3	3.3	0.167	0.3	71	80	77
											48.3	46	5	6.1	2	2.4	3	3	3.3	0.167	0.3	85	90	78
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	88	90	81
													10	11	2	2.4	3	3	3.3	0.167	0.3	91	100	83
											78	75	5	6.1	2	2.4	3	3	3.3	0.167	0.3	102	125	111
													7.5	9	2	2.4	3	3	3.3	0.167	0.3	106	125	115
													10	11	2	2.4	3	3	3.3	0.167	0.3	108	125	117

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

* Fuse or circuit breaker.
† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. See separate tables for the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.
See General Notes for Electrical Data Tables on page 91.

Electrical Data - 50PM16 - 28 EnergyX Unit with Optional Unit Powered Convenience Outlet, with HACR, with Economizer (CONT)

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
20	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
24	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207
28	208/230-3-60	187	253	NA	NA	NA	NA	NA	NA	NA	56/75	156/180	NA	NA	NA	NA	NA	NA	NA	NA	NA	180/180	200/200	179/207

† Electric Heat Branch Circuit for 50PM16–28 unit 208/230/240v with 75–kW Electric Heat

UNIT SIZE	NOMINAL VOLTAGE	VOLTAGE RANGE		COMPRESSOR				OFM			ELECTRIC HEAT		IFM		ERV SUPPLY		ERV EXHAUST			ERV WHEEL		POWER SUPPLY		DISCONNECT SIZE
				No. 1		No. 2																		
		Min	Max	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	kW	FLA	Hp	FLA	Hp	FLA (ea)	Qty	Hp	FLA (ea)	Hp	FLA	MCA	MOCP	FLA
16	208/230-3-60	187	253	25	164	25	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/237	250/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	253/253	300/300	252/274
20	208/230-3-60	187	253	33.5	225	29.6	164	4	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/237	250/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	253/253	300/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	260/260	300/300	260/281
24	208/230-3-60	187	253	40	239	33.5	225	6	0.25	1.5	56/75	156/180	3.7	10.6/9.6	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	237/237	250/250	237/259
													5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	253/253	300/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	260/260	300/300	260/281
28	208/230-3-60	187	253	48.1	245	48.1	245	6	0.25	1.5	56/75	156/180	5	16.7/15.2	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	244/244	250/250	244/266
													7.5	24.2/22	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	253/253	300/300	252/274
													10	30.8/28	2	7.08/6.4	3	3	8.85/8.0	0.167	0.66/0.6	260/260	300/300	260/281

LEGEND

FLA – Full Load Amps
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

† Electric Heat Branch Circuit for 50PM16–28, 208/230/240v EnergyX unit with Optional Powered Conv Outlet with HACR Breaker, with economizer and 75–kW Electric Heat

General Notes for Electrical Data Tables

*Fuse or HACR circuit breaker

† 208/230 v 75–kW Electric Heat units must use dual–point wiring. The main table lists the branch circuit values for the refrigeration part of the system. The following two tables list the branch circuit values for the electric heat and values for a feeder circuit for both branch circuits.

NOTES:

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker.
2. **Unbalanced 3-Phase Supply Voltage**
   Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

LEGEND

FLA – Full Load Amps
HACR – Heating, Air Conditioning and Refrigeration
IFM – Indoor (Evaporator) Fan Motor
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
MOCP – Maximum Overcurrent Protection
NEC – National Electrical Code
OFM – Outdoor (Condenser) Fan Motor
RLA – Rated Load Amps

UNIT START-UP CHECKLIST

MODEL NO.:_____ SERIAL NO: _____

DATE:_____ TECHNICIAN: _____

I. PRE-START-UP:

☐ VERIFY THAT ALL PACKING MATERIALS HAVE BEEN REMOVED FROM UNIT
☐ VERIFY INSTALLATION OF OUTDOOR AIR HOOD
☐ VERIFY THAT CONDENSATE CONNECTION IS INSTALLED PER INSTRUCTIONS
☐ VERIFY THAT ALL ELECTRICAL CONNECTIONS AND TERMINALS ARE TIGHT
☐ CHECK THAT INDOOR-AIR FILTERS ARE CLEAN AND IN PLACE
☐ CHECK THAT OUTDOOR AIR INLET SCREENS ARE IN PLACE
☐ VERIFY THAT UNIT IS LEVEL
☐ CHECK FAN WHEEL AND PROPELLER FOR LOCATION IN HOUSING/ORIFICE AND VERIFY SETSCREW IS TIGHT
☐ VERIFY THAT FAN SHEAVES ARE ALIGNED AND BELTS ARE PROPERLY TENSIONED
☐ VERIFY THAT SCROLL COMPRESSORS ARE ROTATING IN THE CORRECT DIRECTION
☐ VERIFY INSTALLATION OF THERMOSTAT
☐ VERIFY THAT CRANKCASE HEATERS HAVE BEEN ENERGIZED FOR AT LEAST 24 HOURS

II. START-UP

ELECTRICAL

SUPPLY VOLTAGE	L1-L2	_____	L2-L3	_____	L3-L1	_____	
COMPRESSOR AMPS — COMPRESSOR A1			L1	_____	L2	_____	L3 _____
—COMPRESSOR B1			L1	_____	L2	_____	L3 _____
ELECTRIC HEAT AMPS (IF EQUIPPED)			L1	_____	L2	_____	L3 _____
SUPPLY FAN AMPS	_____		L1	_____	L2	_____	L3 _____

TEMPERATURES

OUTDOOR-AIR TEMPERATURE _____ F DB (Dry Bulb)
RETURN-AIR TEMPERATURE _____ F DB _____ F WB (Wet Bulb)
COOLING SUPPLY AIR _____ F
ELECTRIC HEAT SUPPLY AIR _____ F

PRESSURES

REFRIGERANT SUCTION	CIRCUIT A	_____	PSIG
	CIRCUIT B	_____	PSIG
		_____	PSIG
REFRIGERANT DISCHARGE	CIRCUIT A	_____	PSIG
	CIRCUIT B		PSIG

☐ VERIFY REFRIGERANT CHARGE USING CHARGING CHARTS

GENERAL

☐ ECONOMIZER MINIMUM VENT AND CHANGEOVER SETTINGS TO JOB REQUIREMENTS