Installation Instructions

CONTENTS

GENERAL

This installation instruction contains basic unit installation information, including installation of thermostats and remote temperature sensors which are required on all units.

For additional information, refer to the separate Controls and Troubleshooting literature also enclosed in this literature packet.

The 50Z6,Z7,Z8,Z9075-105 units are equipped with return/exhaust fan.

The 50ZT,ZW,ZX,ZZ075-105 units are equipped with standard integral economizer and high-capacity power exhaust.

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 basic maintenance functions of cleaning coils and filters and 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, including ANSI (American National Standards Institute) Z223.1. Wear safety glasses and work gloves. Use quenching cloth for unbrazing operations. Have fire extinguisher available for all brazing operations.

⚠ WARNING

Electrical shock can cause personal injury and death. Shut off all power to this equipment during installation. There may be more than one disconnect switch. Tag all disconnect locations to alert others not to restore power until work is completed.

⚠ WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

⚠ WARNING

Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information, consult a qualified installer, service agency, or the gas supplier.

INSTALLATION

Jobsite Survey — Complete the following checks before installation.

1. Consult local building codes and the NEC (National Electrical Code) (ANSI/NFPA [National Fire Protection Association] 70) for special installation requirements.
2. Determine unit location (from project plans) or select unit location.
3. Check for possible overhead obstructions which may interfere with unit lifting or rigging.

⚠ CAUTION

Do not lift unit with forklift truck. Move unit with overhead rigging only. Damage to unit may result.

Unit Placement — Inspect unit for transportation damage. File claim with transportation agency.

Provide clearance around and above unit for airflow, safety, and service access. Do not restrict top (area above condenser fans) in any way. Allow at least 6 ft (1.8 m) on all sides for rated performance, code compliance, and service.

Check unit dimensional drawings for unit arrangement and minimum performance and service clearances.

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

On units equipped with power exhaust option, high velocity air is exhausted out the hood. Unit should be positioned with at least 10 ft (3 m) clearance between the exhaust hood and any obstruction. Although unit is weatherproof, guard against water from higher level runoff and overhangs.

Level by using unit frame as a reference. Physical data is shown in Tables 1A-6.

Roof Mount — Check building codes for weight distribution requirements. Unit weight is shown in Tables 1A-2. Unit may be mounted on class A, B, or C roofing material.

ROOF CURB — Assemble and install as described in instructions shipped with the accessory. Accessory roof curb and information required to field fabricate a roof curb is shown in Fig. 1-5. Install insulation, cant strips, roofing and counter flashing as required. For unit condensate drain to function properly, curb must be level or within tolerances shown in Fig. 1-5.

STEEL BEAMS — If roof curb is not used, support unit with steel beams along its entire length and then support steel as required. As a minimum, unit must be supported across its width at each lifting lug location.

Slab Mount — Provide a level concrete slab that extends beyond unit cabinet at least 6 inches. Make a slab 8 in. thick with 4 in. above grade. Use gravel apron in front of condenser coil air inlet to prevent grass and foliage from obstructing airflow. Ensure that slab is of sufficient height to allow for condensate trap of 4-in. (sizes 030-070) or 7-in. (sizes 075-105).

Curb Gasketing

SIZE 030-050 UNITS — After ductwork has been connected to the roof curb, attach adhesive-backed gasketing on all end rails, cross rails, and duct rails. Be sure all joints and corners of gasket are square and flush to prevent possible water leaks. Follow all applicable building codes.

SIZE 055-105 UNITS — After ductwork has been connected to the roof curb, apply gasket material ($^1/_2$-in. thick x $1^1/_2$ in. wide neoprene) where indicated.

Single-Thickness Gasketing (See Fig. 6 and 7 for Item Numbers) — Apply gasketing in the following places:

1. Along both side rails (1) — 2 places, full length
2. Along return air end rail (2) — 1 place
3. Around return-air internal duct flange (3) — 1 or 2 places
4. Around supply-air internal duct flanges (4) — 3 places

Double-Thickness Gasketing (See Fig. 6 and 7 and Detail A-A) — Locate a line $9^3/_4$-in. from the supply air end of the accessory curb. Apply a double-thickness of gasket material along with line per detail A-A.

NOTE: Do not apply gasket material along the outside edge of the curb (area "X"). This pan area of the curb extends out beneath the end of the unit's air handler section; applying gasket here develops a potential water trap area on top of the curb.

Condenser Section Roof Curb (See Fig. 8) — Apply single-thickness gasket along both side rails (5).

Table 1A — Physical Data (50ZG,ZN,Z2,Z3030,035)

BASE UNIT		50ZG,ZN,Z2,Z3030		50ZG,ZN,Z2,Z3035	
NOMINAL CAPACITY (tons)		30		35	
OPERATING WEIGHT (lb)					
Base Unit		Standard Chassis	Extended Chassis	Standard Chassis	Extended Chassis
Horizontal Discharge and Vertical Discharge with Discharge Plenum		5970	6470	6095	6595
Vertical Discharge		5400	5900	5525	6025
With Economizer					
Horizontal Discharge and Vertical Discharge with Discharge Plenum		6270	6770	6395	6895
Vertical Discharge		5700	6200	5825	6325
COMPRESSORS		Semi-Hermetic			
Quantity...Type		2...06D		1...06D, 1...06E	
Oil Charge (Pints)		8		8, 14	
Capacity Steps (%)					
CV		50,100		43,100	
VAV		17,33,50,67,83,100		14,28,42,57,71,86,100	
Number of Refrigerant Circuits		2		2	
REFRIGERANT		R-22			
Operating Charge (lb) Ckt A/Ckt B					
Standard Evaporator Coil		29.0/29.0		29.0/30.5	
Standard Evaporator with HGBP		31.0/29.0		31.0/30.5	
Alternate High-Capacity Evaporator Coil		N/A		N/A	
Alternate High-Capacity Evaporator with HGBP		N/A		N/A	
CONDENSER COILS		3/8-in. Tube Diameter			
Quantity		2		2	
Rows...Fins/in.					
Aluminum		3...15.0		3...15.0	
Copper (Optional)		3...13.7		3...13.7	
Total Face Area (sq ft)		37.5		37.5	
EVAPORATOR COILS					
Quantity		1			
Total Face Area (sq ft)		32.1			
Refrigerant Feed Device...No. per Circuit		TXV...1			
Standard Evaporator Coils		1/2-in. Tube Diameter		1/2-in. Tube Diameter	
Rows...Fins/in.		3...15.0		4...15.0	
Fin Type		Double Wavy		Double Wavy	
Tube Type		Cross Hatched		Cross Hatched	
Alternate, High-Capacity Evaporator Coils					
Rows...Fins/in.		N/A		N/A	
Fin Type		N/A		N/A	
Tube Type		N/A		N/A	
CONDENSER FANS		Propeller Type			
Quantity...Diameter (in.)		2...30		2...30	
Nominal Cfm		18,600		18,600	
Motor Hp...Rpm		1.0...1140		1.0...1140	
SUPPLY FAN		Centrifugal 25 x 25 in.			
Nominal Cfm		10,500		10,500	
Maximum Allowable Cfm		15,000		15,000	
Maximum Allowable Rpm		900		900	
Shaft Diameter at Pulley (in.)		1 11/16		11 11/16	
SUPPLY-FAN MOTOR AND DRIVE		(Any motor available on any unit)			
Motor Hp		7.5	10	15	20	25
Motor Frame Size		213T	215T	254T	256T	284T
Efficiency at Full Load (%)						
High Efficiency		88.5	89.5	91	91	91.7
Premium Efficiency*		91.7	91.7	93	93.6	93.6
Fan Pulley Pitch Diameter (in.)		13.7	13.7	13.7	13.7	13.7
Motor Pulley Pitch Diameter (in.)		3.4	4.3	4.9	5.5	6.5
Resulting Fan Rpm		438	549	626	703	830
Belts Quantity...Type						
Horizontal, Extended Plenum		2...BX60	2...5VX630	2...5VX630	2...5VX630	2...5VX650
Vertical Discharge		2...BX60	2...5VX630	2...5VX630	2...5VX630	2...5XV650
Center Distance Range (in.)						
Horizontal, Extended Plenum		17.74...14.30	17.74...14.30	17.63...14.01	17.63...14.01	16.63...12.87
Vertical Discharge		19.86...15.87	19.86...15.87	19.04...15.00	19.04...15.00	19.00...14.87
OPTIONAL POWER EXHAUST		Centrifugal, 18 x 15 in. (Any motor available on any unit)			
Quantity...Motor Hp		2...3.0	2...5.0	2...7.5	2...10
Motor Frame Size	High Eff	56HZ	184T	213T	215T
	Prem Eff	182T	184T	213T	215T
Efficiency at Full Load (%) High/Premium		81.0/88.5	87.5/89.5	88.5/91.7	89.5/91.7
Fan Pulley Pitch Diameter (in.)	High Eff	11.0	10.4	12.0	12.0
	Prem Eff	11.0	10.4	12.0	12.0
Motor Pulley Pitch Diameter Range (in.)	High Eff	4.1-3.1	4.7-3.7	6.0-4.8	7.0-5.8
	Prem Eff	4.1-3.1	4.7-3.7	6.0-4.8	7.0-5.8
Motor Pulley Pitch Diameter Factory Setup (in.)		4.1	4.2	5.4	6.4
Blower Shaft Diameter at Pulley (in.)		1 7/16	1 7/16	1 7/16	1 7/16
Fan Rpm Range		500-656	621-785	717-882	854-1000
Factory Setup Fan Rpm		656	703	800	927
Maximum Allowable Rpm		1000	1000	1000	1000
Belts Quantity...No.	High Eff	1...BX71	1...BX71	1...BX77	1...BX79
	Prem Eff	1...BX71	1...BX71	1...BX77	1...BX79
Center Distance Range (in.)		23.62...26.50	23.62...26.50	23.62...26.50	23.62...26.50
FILTERS					
Standard Efficiency Throwaway (Standard)		8...20 x 25 x 2		8...20 x 25 x 2	
Quantity...Size (in.)		8...20 x 20 x 2		8...20 x 20 x 2	
Medium Efficiency (30%) Pleated (Optional)		8...20 x 25 x 2		8...20 x 25 x 2	
Quantity...Size (in.)		8...20 x 20 x 2		8...20 x 20 x 2	
High Efficiency (90%) Bag Filters with High Velocity Prefilters (Optional)					
Quantity...Size (in.)					
Bag Filter		6...20 x 24 x 22		6...20 x 24 x 22	
		6...20 x 20 x 22		6...20 x 20 x 22	
Prefilter		12...16 x 20 x 2		12...16 x 20 x 2	
		3...20 x 24 x 2		3...20 x 24 x 2	
OUTSIDE AIR SCREENS					
Standard Hood (25%) Quantity...Size (in.)		None		None	
OPTIONAL ECONOMIZER FILTER		Aluminum Frame, Permanent			
Quantity...Size (in.)		5...20 x 20 x 2		5...20 x 20 x 1	
		2...20 x 25 x 1		2...20 x 25 x 1	

LEGEND

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

*Not available on 575-v units.

Table 1B — Physical Data (50ZG,ZN,Z2,Z3040,050)

BASE UNIT		50ZG,ZN,Z2,Z3040		50ZG,ZN,Z2,Z3050	
NOMINAL CAPACITY (tons)		40		50	
OPERATING WEIGHT (lb)					
Base Unit		Standard Chassis	Extended Chassis	Standard Chassis	Extended Chassis
Horizontal Discharge and Vertical Discharge with Discharge Plenum		6620	7120	6660	7160
Vertical Discharge		6050	6550	6090	6590
With Economizer					
Horizontal Discharge and Vertical Discharge with Discharge Plenum		6920	7420	6960	7460
Vertical Discharge		6350	6850	6390	6890
COMPRESSORS		Semi-Hermetic			
Quantity...Type		2...06E		2...06E	
Oil Charge (Pints)		14		19, 14	
Capacity Steps (%)					
CV		50,100		57,100	
VAV		25,50,75,100		18,37,56,63,81,100	
Number of Refrigerant Circuits		2		2	
REFRIGERANT		R-22			
Operating Charge (lb) Ckt A/Ckt B					
Standard Evaporator Coil		40.0/40.0		41.5/39.0	
Standard Evaporator with HGBP		42.0/40.0		43.5/39.0	
Alternate High-Capacity Evaporator Coil		50.0/51.0		48.0/47.5	
Alternate High-Capacity Evaporator with HGBP		52.0/51.0		50.0/47.5	
CONDENSER COILS		$^3/_8$-in. Tube Diameter			
Quantity		2		2	
Rows...Fins/in.					
Aluminum		3...15.0		3...15.0	
Copper (Optional)		3...13.7		3...13.7	
Total Face Area (sq ft)		50.0		50.0	
EVAPORATOR COILS					
Quantity		2			
Total Face Area (sq ft)		45.5			
Refrigerant Feed Device...No. per Circuit		TXV...2			
Standard Evaporator Coils		$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter	
Rows...Fins/in.		3...15.0		4...15.0	
Fin Type		Double Wavy		Double Wavy	
Tube Type		Cross Hatched		Cross Hatched	
Alternate, High-Capacity Evaporator Coils		$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter	
Rows...Fins/in.		6...16		6...16	
Fin Type		Double Wavy		Double Wavy	
Tube Type		Cross Hatched		Cross Hatched	
CONDENSER FANS		Propeller Type			
Quantity...Diameter (in.)		3...30		3...30	
Nominal Cfm		26,000		26,000	
Motor Hp...Rpm		1.0...1140		1.0...1140	
SUPPLY FAN		Centrifugal 25 x 25 in.			
Nominal Cfm		14,000		14,000	
Maximum Allowable Cfm		20,000		20,000	
Maximum Allowable Rpm		900		900	
Shaft Diameter at Pulley (in.)		$1^{11}/_{16}$		$1^{11}/_{16}$	
SUPPLY-FAN MOTOR AND DRIVE		(Any motor available on any unit)			
Motor Hp		7.5	10	15	20	25	30†
Motor Frame Size		213T	215T	254T	256T	284T	286T
Efficiency at Full Load (%)							
High Efficiency		88.5	89.5	91	91	91.7	92.4
Premium Efficiency*		91.7	91.7	93	93.6	93.6	93.6
Fan Pulley Pitch Diameter (in.)		13.7	13.7	13.7	13.7	13.7	12.5
Motor Pulley Pitch Diameter (in.)		3.4	4.3	4.9	5.5	6.5	6.5
Resulting Fan Rpm		438	549	626	703	830	910
Belts Quantity...Type							
Horizontal Discharge and Extended Plenum Units		2...BX60	2...5VX630	2...5VX630	2...5VX630	2...5VX650	3...5VX630
Vertical Discharge		2...BX60	2...5VX630	2...5VX630	2...5VX630	2...5XV650	3...5VX630
Center Distance Range (in.)							
Horizontal Discharge and Extended Plenum Units		17.74...14.30	17.74...14.30	17.63...14.01	17.63...14.01	16.63...12.87	16.63...12.87
Vertical Discharge		19.86...15.87	19.86...15.87	19.04...15.00	19.04...15.00	19.00...14.87	19.00...14.87
OPTIONAL POWER EXHAUST		Centrifugal, 18 x 15 in. (Any motor available on any unit)			
Quantity...Motor Hp		2...3.0		2...5.0	2...7.5		2...10
Motor Frame Size	High Eff	56HZ		184T	213T		215T
	Prem Eff	182T		184T	213T		215T
Efficiency at Full Load (%) High/Premium		81.0/88.5		87.5/89.5	88.5/91.7		89.5/91.7
Fan Pulley Pitch Diameter (in.)	High Eff	11.0		10.4	12.0		12.0
	Prem Eff	11.0		10.4	12.0		12.0
Motor Pulley Pitch Diameter Range (in.)	High Eff	4.1-3.1		4.7-3.7	6.0-4.8		7.0-5.8
	Prem Eff	4.1-3.1		4.7-3.7	6.0-4.8		7.0-5.8
Motor Pulley Pitch Diameter Factory Setup (in.)		4.1		4.2	5.4		6.4
Blower Shaft Diameter at Pulley (in.)		$1^7/_{16}$		$1^7/_{16}$	$1^7/_{16}$		$1^7/_{16}$
Fan Rpm Range		500-656		621-785	717-882		854-1000
Factory Setup Fan Rpm		656		703	800		927
Maximum Allowable Rpm		1000		1000	1000		1000
Belts Quantity...No.	High Eff	1...BX71		1...BX71	1...BX77		1...BX79
	Prem Eff	1...BX71		1...BX71	1...BX77		1...BX79
Center Distance Range (in.)		23.62...26.50		23.62...26.50	23.62...26.50		23.62...26.50
FILTERS							
Standard Efficiency Throwaway (Standard) Quantity...Size (in.)		8...20 x 25 x 2 8...20 x 20 x 2			8...20 x 25 x 2 8...20 x 20 x 2		
Medium Efficiency (30%) Pleated (Optional) Quantity...Size (in.)		8...20 x 25 x 2 8...20 x 20 x 2			8...20 x 25 x 2 8...20 x 20 x 2		
High Efficiency (90%) Bag Filters with High Velocity Prefilters (Optional) Quantity...Size (in.)							
Bag Filter		6...20 x 24 x 22 6...20 x 20 x 22 12...16 x 20 x 2			6...20 x 24 x 22 6...20 x 20 x 22 12...16 x 20 x 2		
Prefilter		3...20 x 24 x 2			3...20 x 24 x 2		
OUTSIDE AIR SCREENS							
Standard Hood (25%) Quantity...Size (in.)		None			None		
OPTIONAL ECONOMIZER FILTER		Aluminum Frame, Permanent					
Quantity...Size (in.)		5...20 x 20 x 2 2...20 x 25 x 1			5...20 x 20 x 1 2...20 x 25 x 1		

LEGEND

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

*Not available on 575-v units.
†460-3-60 only.

Table 1C — Physical Data (50ZG,ZN,Z2,Z3055-070)

BASE UNIT	50ZG,ZN,Z2,Z3055		50ZG,ZN,Z2,Z3060		50ZG,ZN,Z2,Z3070	
NOMINAL CAPACITY (tons)	55		60		70	
OPERATING WEIGHT (lb)						
Base Unit	Standard Chassis	Extended Chassis	Standard Chassis	Extended Chassis	Standard Chassis	Extended Chassis
Horizontal Discharge or Vertical Discharge with Discharge Plenum	8250	8800	8550	9100	8970	—
Vertical Discharge	7700	8248	8000	8548	8430	8978
With Economizer						
Horizontal Discharge or Vertical Discharge with Discharge Plenum	8780	9280	9080	9580	9500	10,000
Vertical Discharge	8230	8730	8530	9030	8960	—
COMPRESSORS	Semi-Hermetic					
Quantity...Type	2...06E		2...06E		2...06E	
Oil Charge (Pints)	19, 14		19		19	
Capacity Steps (%)						
CV	60,100		50,100		43,100	
VAV	20,40,60,80,100		17,33,50,67,83,100		14,29,43,51,66,71,85,100	
Number of Refrigerant Circuits	2		2		2	
REFRIGERANT	R-22					
Operating Charge (lb) Ckt A/Ckt B						
Standard Evaporator Coil	59.0/44.5		61.0/61.0		70.5/64.5	
Standard Evaporator with HGBP	62.0/44.5		64.0/61.0		73.5/64.5	
Alternate High-Capacity Evaporator Coil	72.0/58.0		68.5/68.5		76.5/74.0	
Alternate High-Capacity Evaporator with HGBP	75.0/58.0		71.5/68.5		79.5/74.0	
CONDENSER COILS	$^3/_8$-in. Tube Diameter					
Quantity	4		4		4	
Rows...Fins/in.						
Aluminum	2...17.0, 3...17.0		3...17.0		3...17.0	
Copper (Optional)	2...15.7, 3...15.7		3...15.7		3...15.7	
Total Face Area (sq ft)	72.4		72.4		108.4	
EVAPORATOR COILS						
Quantity	2					
Total Face Area (sq ft)	61.5					
Refrigerant Feed Device...No. per Circuit	TXV...2					
Standard Evaporator Coils	$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter	
Rows...Fins/in.	3...17.0		4...17.0		4...17.0	
Fin Type	Double Wavy		Double Wavy		Double Wavy	
Tube Type	Smooth		Smooth		Smooth	
Alternate, High-Capacity Evaporator Coils	$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter		$^1/_2$-in. Tube Diameter	
Rows...Fins/in.	6...16		6...16		6...16	
Fin Type	Double Wavy		Double Wavy		Double Wavy	
Tube Type	Cross Hatched		Cross Hatched		Cross Hatched	
CONDENSER FANS	Propeller Type					
Quantity...Diameter (in.)	4...30		4...30		5...30	
Nominal Cfm	40,000		40,000		50,000	
Motor Hp...Rpm	1.0...1140		1.0...1140		1.0...1140	
SUPPLY FAN	Centrifugal 30 x 27 in.					
Nominal Cfm	17,500		21,000		24,500	
Maximum Allowable Cfm	25,000		30,000		30,000	
Maximum Allowable Rpm	800		800		800	
Shaft Diameter at Pulley (in.)	$1^{11}/_{16}$		$1^{11}/_{16}$		$1^{11}/_{16}$	
SUPPLY-FAN MOTOR AND DRIVE	(Any motor available on any unit)					
Motor Hp	15	20	25	30†	40†	
Motor Frame Size	254T	256T	284T	286T	S324T	
Efficiency at Full Load (%)						
High Efficiency	91.0	91.0	91.7	92.4	93	
Premium Efficiency*	93.0	93.6	93.6	93.6	94.5	
Fan Pulley Pitch Diameter (in.)	13.7	13.7	13.7	15.5	16.1	
Motor Pulley Pitch Diameter (in.)	4.5	5.1	5.5	5.9	6.7	
Resulting Fan Rpm	575	651	703	711	740	
Belts Quantity...Type						
Horizontal Discharge and Extended Plenum Units	2...5VX1230	2...5VX1230	2...5VX1230	2...5VX1230	2...5VX1250	
Vertical Discharge Units	2...5VX1120	2...5VX1150	2...5VX1150	2...5VX1180	2...5XV1180	
Center Distance Range (in.)						
Horizontal Discharge and Extended Plenum Units	48.25...44.00	48.25...44.00	48.50...44.25	48.50...44.25	48.25...44.00	
Vertical Discharge Units	44.25...39.75	44.25...39.75	44.00...40.00	44.00...40.00	43.75...39.75	
OPTIONAL POWER EXHAUST	Centrifugal, 15 x 15 in. (Any motor available on any unit)					
Quantity...Motor Hp	2...5		2...7.5		2...10	
Motor Frame Size	184T		213T		215T	
Efficiency at Full Load (%) High/Premium	87.5/89.5		88.5/91.7		89.5/91.7	
Fan Pulley Pitch Diameter (in.)	10.6		10.6		10.6	
Motor Pulley Pitch Diameter (in.)	4.5		5.0		5.6	
Shaft Diameter at Pulley (in.)	$1^7/_{16}$		$1^7/_{16}$		$1^7/_{16}$	
Resulting Fan Rpm	740		820		920	
Maximum Allowable Rpm	1000		1000		1000	
FILTERS						
Standard Efficiency Throwaway (Standard)	12...20 x 25 x 2		12...20 x 25 x 2		12...20 x 25 x 2	
Quantity...Size (in.)	12...20 x 20 x 2		12...20 x 20 x 2		12...20 x 20 x 2	
Medium Efficiency (30%) Pleated (Optional)	12...20 x 25 x 2		12...20 x 25 x 2		12...20 x 25 x 2	
Quantity...Size (in.)	12...20 x 20 x 2		12...20 x 20 x 2		12...20 x 20 x 2	
High Efficiency (90%) Bag Filters with High Velocity Prefilters (Optional)						
Quantity...Size (in.)						
Bag Filter	6...24 x 24 x 22		6...24 x 24 x 22		6...24 x 24 x 22	
	6...24 x 20 x 22		6...24 x 20 x 22		6...24 x 20 x 22	
Prefilter	6...24 x 24 x 2		6...24 x 24 x 2		6...24 x 24 x 2	
	6...20 x 24 x 2		6...20 x 24 x 2		6...20 x 24 x 2	
OUTSIDE AIR SCREENS						
Standard Hood (25%) Quantity...Size (in.)	4...25 x 16 x 1		4...25 x 16 x 1		4...25 x 16 x 1	
	2...20 x 16 x 1		2...20 x 16 x 1		2...20 x 16 x 1	
OPTIONAL ECONOMIZER FILTER	Aluminum Frame, Permanent					
Quantity...Size (in.)	12...16 x 25 x 1		12...16 x 25 x 1		12...16 x 25 x 1	
	2...16 x 20 x 1		2...16 x 20 x 1		2...16 x 20 x 1	

LEGEND

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

*Not available on 575-v units.
†Not Available on 380-v units.

Table 1D — Physical Data (50ZG,ZN,Z2,Z3075-105)

BASE UNIT	50ZG,ZN,Z2,Z3075	50ZG,ZN,Z2,Z3090	50ZG,ZN,Z2,Z3105
NOMINAL CAPACITY (tons)	75	90	105
OPERATING WEIGHT (lb)			
Base Unit without Economizer	9,870	10,080	10,810
With Economizer	10,400	10,610	11,340
COMPRESSOR		Semi-Hermetic	
Number	2	2	4
Circuit (No. Cyl)	A (6) | B (6)	A (6) | B (6)	A1 (6), A2 (4) | B1 (6), B2 (4)
Model 06E	-275 | -299	-299 | -299	-275, -250 | -275, -250
Oil Charge (pints)	19 | 19	19 | 19	19, 14 | 19, 14
Capacity Steps (%)			
CV	43,100	50,100	50,100
VAV	14,29,43,51,66,71,86,100	17,33,50,67,83,100	20,30,40,50,60,70,80,90,100
Number of Refrigerant Circuits	2	2	2
REFRIGERANT		R-22	
Operating Charge (lb) Ckt A/Ckt B			
Standard Evaporator Coil	70.5/64.5	64.0/64.0	68.0/68.0
Standard Evaporator with HGBP	73.5/64.5	67.0/64.0	71.0/68.0
Alternate High-Capacity Evaporator Coil	76.5/74.0	76.0/76.0	79.5/79.5
Alternate High-Capacity Evaporator with HGBP	79.5/74.0	79.0/76.0	82.5/79.5
CONDENSER COILS		3/8 in. Tube Diameter	
Quantity	4	4	4
Rows...Fins/in.			
Aluminum	3...17.0	3...17.0	3...17.0
Copper (Optional)	3...15.7	3...15.7	3...15.7
Fin Type	Double Wavy	Lanced, Sine-wave	Lanced, Sine-wave
Tube Type	Smooth	Cross-Hatched	Cross-Hatched
Total Face Area (sq ft)	108.4	108.4	108.4
EVAPORATOR COILS			
Quantity		2	
Total Face ARea (sq ft)		61.5	
Refrigerant Feed Device...No. per Circuit		TXV...2	
Standard Evaporator Coils	1/2-in. Tube Diameter	3/8-in. Tube Diameter	3/8-in. Tube Diameter
Rows...Fins/in.	4...17.0	4...17.0	4...17.0
Fin Type	Double Wavy	Lanced, Sine Wave	Lanced, Sine Wave
Tube Type	Smooth	Cross Hatched	Cross Hatched
Alternate High-Capacity Evaporator Coils	1/2-in. Tube Diameter	1/2-in. Tube Diameter	1/2-in. Tube Diameter
Rows...Fins/in.	6...16	6...16	6...16
Fin Type	Double Wavy	Double Wavy	Double Wavy
Tube Type	Cross Hatched	Cross Hatched	Cross Hatched
CONDENSER FAN		Propeller Type	
Quantity...Diameter (in.)	5...30	6...30	6...30
Nominal Airflow (Cfm)	50,000	60,000	60,000
Motor Hp (ea)...rpm	1.0...1140	1.0...1140	1.0...1140
STANDARD SUPPLY FAN		Centrifugal 36 x 30 in., Forward Curved	
Nominal Airflow (Cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (Cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (Rpm)	680	680	680
Shaft Diameter at Pulley (in.)	1 11/16	1 11/16	1 11/16
STANDARD SUPPLY-FAN MOTOR AND DRIVE		(Any motor available on any unit)	
Motor Hp	30 | 40	50 | 60	
Motor Frame Size	S286T | S324T	S364T | S364T	
Efficiency at Full Load (%)			
High Efficiency	92.4 | 93.0	93.0 | 93.6	
Premium Efficiency*	93.6 | 94.5	94.5 | 95.4	
Fan Pulley Pitch Diameter (in.)	18.5 | 18.5	18.5 | 18.5	
Motor Pulley Pitch Diameter (in.)	5.3 | 5.7	6.5 | 7.1	
Resulting Fan Speed (Rpm)	501 | 539	615 | 672	
Belts — Quantity...Model No.	3...5VX1320 | 4...5VX1320	4...5VX1320 | 4...5VX1320	
Center Distance Range (in.)	47.88...45.01 | 47.64...44.76	47.42...44.52 | 47.42...44.52	
ALTERNATE SUPPLY FAN		Airfoil	
Nominal Airflow (cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (rpm)	1846	1846	1846
Shaft Diameter at Pulley (in.)	2 11/16	2 11/16	2 11/16
ALTERNATE SUPPLY FAN MOTOR AND DRIVE		(Any motor available on any unit)	
Motor Hp	30 | 40	50 | 60	75
Motor Frame Size	S286T | S324T	S364T | S364T	365T
Efficiency at Full Load (%)			
High Efficiency	92.4 | 93.0	93.0 | 93.6	94.1
Premium Efficiency*	93.6 | 94.5	94.5 | 95.4	95.4
Fan Pulley Pitch Diameter (in.)	9.7 | 10.2	8.9 | 8.9	10.8
Motor Pulley Pitch Diameter (in.)	7.5 | 8.7	8.1 | 8.7	11.1
Resulting Fan Rpm	1353 | 1493	1593 | 1711	1799
Belts Quantity...Type	2...5VX1150 | 2...5VX1180	3...5VX1150 | 3...5VX1150	3...5VX1230
Center Distance Range (in.)	42.96...45.82 | 42.69...45.57	42.69...45.57 | 42.45...45.35	42.45...45.35
OPTIONAL POWER EXHAUST		Centrifugal, 18 x 15 in. (Any motor available on any unit)	
Quantity...Motor Hp	2...5	2...7.5	2...10
Motor Frame Size	184T	213T	215T
Efficiency at Full Load (%)			
High Efficiency	87.5	88.5	89.5
Premium Efficiency*	89.5	91.7	91.7
Fan Pulley Pitch Diameter (in.)	10.6	10.6	10.6
Motor Pulley Pitch Diameter (in.)	4.5	5.0	5.6
Shaft Diameter at Pulley (in.)	1 7/16	1 7/16	1 7/16
Resulting Fan Rpm	740	820	920
Maximum Allowable Rpm	925	925	925
FILTERS			
Standard Efficiency Throwaway (Standard)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
30% and 65% Pleated (Optional)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
OUTSIDE AIR SCREENS			
Standard Hood (25%) Quantity...Size (in.)	4...25 x 16 x 1 2...20 x 16 x 1	4...25 x 16 x 1 2...20 x 16 x 1	4...25 x 16 x 1 2...20 x 16 x 1
OPTIONAL ECONOMIZER FILTER		Aluminum Frame, Permanent	
Quantity...Size (in.)	12...16 x 25 x 1 2...16 x 20 x 1	12...16 x 25 x 1 2...16 x 20 x 1	12...16 x 25 x 1 2...16 x 20 x 1

LEGEND

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

*Not available on 575-v units.

Table 1E — Physical Data (50Z6,Z7,Z8,Z9075-105)

BASE UNIT	50Z6,Z7,Z8,Z9075	50Z6,Z7,Z8,Z9090	50Z6,Z7,Z8,Z9105
NOMINAL CAPACITY (tons)	75	90	105
OPERATING WEIGHT (lb)			
Base Unit without Economizer	11,340	11,550	12,280
With Economizer	11,870	12,080	12,810
COMPRESSOR		Semi-Hermetic	
Number	2	2	4
Circuit (No. Cyl)	A (6) | B (6)	A (6) | B (6)	A1 (6), A2 (4) | B1 (6), B2 (4)
Model 06E	-275 | -299	-299 | -299	-275, -250 | -275, -250
Oil Charge (pints)	19 | 19	19 | 19	19, 14 | 19, 14
Capacity Steps (%)			
CV	43,100	50,100	50,100
VAV	14,29,43,51,66,71,86,100	17,33,50,67,83,100	20,30,40,50,60,70,80,90,100
Number of Refrigerant Circuits	2	2	2
REFRIGERANT		R-22	
Operating Charge (lb) Ckt A/Ckt B			
Standard Evaporator Coil	70.5/64.5	64.0/64.0	68.0/68.0
Standard Evaporator with HGBP	73.5/64.5	67.0/64.0	71.0/68.0
Alternate High-Capacity Evaporator Coil	76.5/74.0	76.0/76.0	79.5/79.5
Alternate High-Capacity Evaporator with HGBP	79.5/74.0	79.0/76.0	82.5/79.5
CONDENSER COILS		3/8 in. Tube Diameter	
Quantity	4	4	4
Rows...Fins/in.			
Aluminum	3...17.0	3...17.0	3...17.0
Copper (Optional)	3...15.7	3...15.7	3...15.7
Fin Type	Double Wavy	Lanced, Sine-wave	Lanced, Sine-wave
Tube Type	Smooth	Cross-Hatched	Cross-Hatched
Total Face Area (sq ft)	108.4	108.4	108.4
EVAPORATOR COILS			
Quantity		2	
Total Face Area (sq ft)		61.5	
Refrigerant Feed Device...No. per Circuit		TXV...2	
Standard Evaporator Coils	1/2-in. Tube Diameter	3/8-in. Tube Diameter	3/8-in. Tube Diameter
Rows...Fins/in.	4...17.0	4...17.0	4...17.0
Fin Type	Double Wavy	Lanced, Sine Wave	Lanced, Sine Wave
Tube Type	Smooth	Cross Hatched	Cross Hatched
Alternate High-Capacity Evaporator Coils	1/2-in. Tube Diameter	1/2-in. Tube Diameter	1/2-in. Tube Diameter
Rows...Fins/in.	6...16	6...16	6...16
Fin Type	Double Wavy	Double Wavy	Double Wavy
Tube Type	Cross Hatched	Cross Hatched	Cross Hatched
CONDENSER FAN		Propeller Type	
Quantity...Diameter (in.)	5...30	6...30	6...30
Nominal Airflow (Cfm)	50,000	60,000	60,000
Motor Hp (ea)...rpm	1.0...1140	1.0...1140	1.0...1140
STANDARD SUPPLY FAN		Centrifugal 36 x 30 in., Forward Curved	
Nominal Airflow (Cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (Cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (Rpm)	680	680	680
Shaft Diameter at Pulley (in.)	1 11/16	1 11/16	1 11/16

STANDARD SUPPLY-FAN MOTOR AND DRIVE	(Any motor available on any unit)			
Motor Hp	30	40	50	60
Motor Frame Size	S286T	S324T	S364T	S364T
Efficiency at Full Load (%)				
High Efficiency	92.4	93.0	93.0	93.6
Premium Efficiency*	93.6	94.5	94.5	95.4
Fan Pulley Pitch Diameter (in.)	18.5	18.5	18.5	18.5
Motor Pulley Pitch Diameter (in.)	5.3	5.7	6.5	7.1
Resulting Fan Speed (Rpm)	501	539	615	672
Belts — Quantity...Model No.	3...5VX1320	4...5VX1320	4...5VX1320	4...5VX1320
Center Distance Range (in.)	47.88...45.01	47.64...44.76	47.42...44.52	47.42...44.52

ALTERNATE SUPPLY FAN	Airfoil		
Nominal Airflow (cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (rpm)	1846	1846	1846
Shaft Diameter at Pulley (in.)	2 11/16	2 11/16	2 11/16

ALTERNATE SUPPLY FAN MOTOR AND DRIVE	(Any motor available on any unit)				
Motor Hp	30	40	50	60	75
Motor Frame Size	S286T	S324T	S364T	S364T	365T
Efficiency at Full Load (%)					
High Efficiency	92.4	930	93	93.6	94.1
Premium Efficiency*	93.6	94.5	94.5	95.4	95.4
Fan Pulley Pitch Diameter (in.)	9.7	10.2	8.9	8.9	10.8
Motor Pulley Pitch Diameter (in.)	7.5	8.7	8.1	8.7	11.1
Resulting Fan Rpm	1353	1493	1593	1711	1799
Belts Quantity...Type	2...5VX1150	2...5VX1180	3...5VX1150	3...5VX1150	3...5VX1230
Center Distance Range (in.)	42.96...45.82	42.69...45.57	42.69...45.57	42.45...45.35	42.45...45.35

RETURN/EXHAUST FAN	Plenum Fan, 47.13 in. (Any motor available on any unit)			
Quantity...Motor Hp	1...20	1...25	1...30	1...40
Motor Frame Size	256T	284T	286T	324T
Efficiency at Full Load (%) High/Premium	91/93.6	91.7/93.6	92.4/93.6	93/93.8
Fan Pulley Pitch Diameter (in.)	8.5	9.8	8.5	8.5
Motor Pulley Pitch Diameter (in.)	5.3	6.7	6.1	6.7
Blower Shaft Diameter at Pulley (in.)	2 15/16	2 15/16	2 15/16	2 15/16
Resulting Fan Rpm	1104	1209	1271	1396
Maximum Allowable Rpm	1447	1447	1447	1447

FILTERS			
Standard Efficiency Throwaway (Standard)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
30% and 65% Pleated (Optional)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
OUTSIDE AIR SCREENS			
Standard Hood (25%) Quantity...Size (in.)	4...25 x 16 x 1 2...20 x 16 x 1	4...25 x 16 x 1 2...20 x 16 x 1	4...25 x 16 x 1 2...20 x 16 x 1
OPTIONAL ECONOMIZER FILTER		Aluminum Frame, Permanent	
Quantity...Size (in.)	12...16 x 25 x 1 2...16 x 20 x 1	12...16 x 25 x 1 2...16 x 20 x 1	12...16 x 25 x 1 2...16 x 20 x 1

LEGEND

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

*Not available on 575-v units.

Table 1F — Physical Data (50ZT,ZW,ZX,ZZ075-105)

BASE UNIT	50ZT,ZW,ZX,ZZ075	50ZT,ZW,ZX,ZZ090	50ZT,ZW,ZX,ZZ105
NOMINAL CAPACITY (tons)	75	90	105
OPERATING WEIGHT (lb)			
Base Unit without Economizer	12,805	13,015	13,745
COMPRESSOR		Semi-Hermetic	
Number	2	2	4
Circuit (No. Cyl)	A (6) | B (6)	A (6) | B (6)	A1 (6), A2 (4) | B1 (6), B2 (4)
Model 06E	-275 | -299	-299 | -299	-275, -250 | -275, -250
Oil Charge (pints)	19 | 19	19 | 19	19, 14 | 19, 14
Capacity Steps (%)			
CV	43,100	50,100	50,100
VAV	14,29,43,51,66,71,86,100	17,33,50,67,83,100	20,30,40,50,60,70,80,90,100
Number of Refrigerant Circuits	2	2	2
REFRIGERANT		R-22	
Operating Charge (lb) Ckt A/Ckt B			
Standard Evaporator Coil	70.5/64.5	64.0/64.0	68.0/68.0
Standard Evaporator with HGBP	73.5/64.5	67.0/64.0	71.0/68.0
Alternate High-Capacity Evaporator Coil	76.5/74.0	76.0/76.0	79.5/79.5
Alternate High-Capacity Evaporator with HGBP	79.5/74.0	79.0/76.0	82.5/79.5
CONDENSER COILS		3/8 in. Tube Diameter	
Quantity	4	4	4
Rows...Fins/in.			
Aluminum	3...17.0	3...17.0	3...17.0
Copper (Optional)	3...15.7	3...15.7	3...15.7
Fin Type	Double Wavy	Lanced, Sine-wave	Lanced, Sine-wave
Tube Type	Smooth	Cross-Hatched	Cross-Hatched
Total Face Area (sq ft)	108.4	108.4	108.4
EVAPORATOR COILS			
Quantity		2	
Total Face ARea (sq ft)		61.5	
Refrigerant Feed Device...No. per Circuit		TXV...2	
Standard Evaporator Coils	1/2-in. Tube Diameter	3/8-in. Tube Diameter	3/8-in. Tube Diameter
Rows...Fins/in.	4...17.0	4...17.0	4...17.0
Fin Type	Double Wavy	Lanced, Sine Wave	Lanced, Sine Wave
Tube Type	Smooth	Cross Hatched	Cross Hatched
Alternate High-Capacity Evaporator Coils	1/2-in. Tube Diameter	1/2-in. Tube Diameter	1/2-in. Tube Diameter
Rows...Fins/in.	6...16	6...16	6...16
Fin Type	Double Wavy	Double Wavy	Double Wavy
Tube Type	Cross Hatched	Cross Hatched	Cross Hatched
CONDENSER FAN		Propeller Type	
Quantity...Diameter (in.)	5...30	6...30	6...30
Nominal Airflow (Cfm)	50,000	60,000	60,000
Motor Hp (ea)...rpm	1.0...1140	1.0...1140	1.0...1140
STANDARD SUPPLY FAN		Centrifugal 36 x 30 in., Forward Curved	
Nominal Airflow (Cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (Cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (Rpm)	680	680	680
Shaft Diameter at Pulley (in.)	1 11/16	1 11/16	1 11/16

STANDARD SUPPLY-FAN MOTOR AND DRIVE	(Any motor available on any unit)			
Motor Hp	30	40	50	60
Motor Frame Size	S286T	S324T	S364T	S364T
Efficiency at Full Load (%)				
High Efficiency	92.4	93.0	93.0	93.6
Premium Efficiency*	93.6	94.5	94.5	95.4
Fan Pulley Pitch Diameter (in.)	18.5	18.5	18.5	18.5
Motor Pulley Pitch Diameter (in.)	5.3	5.7	6.5	7.1
Resulting Fan Speed (Rpm)	501	539	615	672
Belts — Quantity...Type	3...5VX1320	4...5VX1320	4...5VX1320	4...5VX1320
Center Distance Range (in.)	47.88...45.01	47.64...44.76	47.42...44.52	47.42...44.52

ALTERNATE SUPPLY FAN	Airfoil		
Nominal Airflow (cfm)	24,500	29,750	35,000
Maximum Allowable Airflow (cfm)	30,000	34,000	40,000
Maximum Allowable Wheel Speed (rpm)	1846	1846	1846
Shaft Diameter at Pulley (in.)	2 11/16	2 11/16	2 11/16

ALTERNATE SUPPLY FAN MOTOR AND DRIVE	(Any motor available on any unit)				
Motor Hp	30	40	50	60	75
Motor Frame Size	S286T	S324T	S364T	S364T	365T
Efficiency at Full Load (%)					
High Efficiency	92.4	93.0	93.0	93.6	94.1
Premium Efficiency*	93.6	94.5	94.5	95.4	95.4
Fan Pulley Pitch Diameter (in.)	9.7	10.2	8.9	8.9	10.8
Motor Pulley Pitch Diameter (in.)	7.5	8.7	8.1	8.7	11.1
Resulting Fan Rpm	1353	1493	1593	1711	1799
Belts Quantity...Type	2...5VX1150	2...5VX1180	3...5VX1150	3...5VX1150	3...5VX1230
Center Distance Range (in.)	42.96...45.82	42.69...45.57	42.69...45.57	42.45...45.35	42.45...45.35

POWER EXHAUST	Centrifugal, 22 x 20 in., 1 11/16 in. shaft diameter (Any motor available on any unit)				
Total Hp	20	30	40	50	60
Quantity...Motor Hp	2...10	2...15	2...20	2...25	2...30
Motor Frame Size	S215T	D254T	S256T	S284T	S286T
Efficiency at Full Load (%)					
High Efficiency	89.5	91	91	91.7	92.4
Premium Efficiency*	91.7	93	93.6	93.6	93.6
Fan Sheave Pitch Diameter (in.)	12.4	12.4	11.1	11.1	11.1
Motor Sheave Pitch Diameter (in.)	4.8	5.8	5.9	6.5	6.9
Resulting Fan Rpm	714	841	928	1020	1094
Maximum Allowable Rpm	1175	1175	1175	1175	1175
Belts — Quantity...Type	2...BX93	2...BX93	2...5VX950	2...5VX950	2...5VX950

FILTERS			
Standard Efficiency Throwaway (Standard)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
30% and 65% Pleated (Optional)	12...20 x 25 x 2	12...20 x 25 x 2	12...20 x 25 x 2
Quantity...Size (in.)	12...20 x 20 x 2	12...20 x 20 x 2	12...20 x 20 x 2
OUTSIDE AIR SCREENS			
Standard Hood (25%) Quantity...Size (in.)	8...25 x 16 x 1 2...20 x 16 x 1	8...25 x 16 x 1 2...20 x 16 x 1	8...25 x 16 x 1 2...20 x 16 x 1

LEGEND

*Not available on 575-v units.

CV — Constant Volume
HGBP — Hot Gas Bypass
TXV — Thermostatic Expansion Valve
VAV — Variable Air Volume

Table 2 — Operating Weights of Options and Accessories

OPTION OR ACCESSORY	UNIT SIZE							
	030,035	040,050	055	060	070	075	090	105
Electric Heat*	150	150	150	150	150	200	200	200
Condenser Section Roof Curb	—	—	540	540	625	625	625	625
Economizer†	300	300	530	530	530	530	530	530
Power Exhaust†	600	600	710	710	710	710	710	710
Barometric Relief	200	200	200	200	200	200	200	200
Return/Exhaust Fan*	—	—	—	—	—	1470	1470	1470
Roof Curb								
Horizontal Units	450	480	560	560	560	605	605	605
Vertical Units	380	465	515	515	515	560	560	560
High-Efficiency Filters	20	20	20	20	20	—	—	—
Bag Filters	35	35	40	40	40	—	—	—
Hail Guard	120	150	145	145	210	210	210	210
Copper Condenser Coil Fins	180	235	235	235	420	420	420	420
Inlet Guide Vanes	95	95	115	115	115	115	115	115
Variable Frequency Drive								
7.5 hp	65	65	—	—	—	—	—	—
10 hp	65	65	—	—	—	—	—	—
15 hp	110	110	110	110	110	—	—	—
20 hp	111	111	111	111	111	—	—	—
25 hp	190	190	190	190	190	—	—	—
30 hp	—	190	190	190	190	152	152	152
40 hp	—	—	190	190	190	155	155	155
50 hp	—	—	—	—	—	263	263	263
60 hp	—	—	—	—	—	266	266	266
75 hp	—	—	—	—	—	266	266	266
High-Capacity Evaporator Coil	—	300	300	300	300	300	300	300

*Vertical discharge units only.
†Includes hood.

Table 3 — Supply Fan Drive Data

HP	SHAFT DIA (in.)	SPEED (rpm)	MOTOR SHEAVE	MOTOR PITCH DIA. (in.)	WHEEL SHEAVE	WHEEL PITCH DIA. (in.)	QUANTITY ...BELT
Sizes 030-050							
7.5	$1^3/_8$	438	2BK36	3.4	2B5V136	13.6	2...BX60
10	$1^3/_8$	549	2B5V42	4.3	2B5V136	13.7	2...5VX630
15	$1^5/_8$	626	2B5V48	4.9	2B5V136	13.7	2...5VX630
20	$1^5/_8$	703	2B5V54	5.5	2B5V136	13.7	2...5VX630
25	$1^7/_8$	830	2B5V64	6.5	2B5V136	13.7	2...5VX650
30*	$1^7/_8$	910	3B5V64	6.5	3B5V124	12.5	3...5VX630
Sizes 055-070							
15	$1^5/_8$	575	2B5V44	4.5	2B5V136	13.7	2...5VX1230† 2...5VX1120**
20	$1^5/_8$	651	2B5V50	5.1	2B5V136	13.7	2...5VX1230† 2...5XV1150**
25	$1^7/_8$	703	2B5V54	5.5	2B5V136	13.7	2...5VX1230† 2...5VX1150**
30	$1^7/_8$	711	2B5V62	5.9	2B5V154	15.5	2...5VX1230† 2...5VX1180**
40	$2^1/_8$	740	3B5V66	6.7	3B5V160	16.1	3...5VX1250† 3...5VX1180**
Sizes 075-105 (Forward Curved Fan)							
30	$1^7/_8$	501	3B5V52	5.33	B5V184	18.5	3...5VX1320
40	$2^1/_8$	539	4B5V56	5.74	B5V184	18.5	4...5VX1320
50	$2^1/_8$	615	4B5V64	6.54	B5V184	18.5	4...5VX1320
60	$2^3/_8$	672	4B5V70	7.14	B5V184	18.5	4...5VX1320
Sizes 075-105 (Airfoil Fan)							
30	$1^7/_8$	1353	2B5V74	7.5	2Q5V97	9.7	2...5VX1150
40	$2^1/_8$	1493	2B5V86	8.7	2Q5V103	10.2	2...5VX1180
50	$2^1/_8$	1593	3B5V80	8.1	3R5V90	8.9	3...5VX1150
60	$2^3/_8$	1711	3B5V86	8.7	3R5V90	8.9	3...5VX1150
75	$2^3/_8$	1799	3B5V110	11.1	3R5V109	10.8	3...5VX1230

*Sizes 040,050 only.
†Horizontal discharge units.
**Vertical discharge and extended plenum units.

NOTE: Part numbers are Browning Manufacturing Corp. reference.

Table 4 — Power Exhaust Fan Drive Data

TOTAL HP	MOTOR QTY...HP	MOTOR SHAFT DIA (in.)	FAN SPEED RPM	MOTOR SHEAVE P/N	MOTOR SHEAVE PITCH DIA (in.)	FAN SHEAVE P/N	PITCH DIA (in.)	BELTS QTY...P/N	CENTER DIST RANGE (in.)
Sizes 030-050									
6*	2...3	7/8	656	1VL44	4.1	BK115	11.0	1...BX71	23.62 to 26.50
6†	2...3	1 1/8	656	1VL44L	4.1	BK115	11.0	1...BX71	23.62 to 26.50
10**	2...5	1 1/8	785	1VP50L	4.7	BK110	10.4	1...BX71	23.62 to 26.50
15**	2...7.5	1 3/8	882	1VP65	6.0	BK130	12.0	1...BX77	23.62 to 26.50
20**	2...10	1 3/8	1000	1VP75	7.0	BK130	12.0	1...BX79	23.62 to 26.50
Sizes 055-105 (Vertical Supply and Return)									
10	2...5	1 1/8	740	2P3V45	4.5	2Q3V106	10.6	2...3VX800	26.8 to 28.5
15	2...7.5	1 3/8	820	2P3V50	5.0	2Q3V106	10.6	2...3VX800	26.8 to 28.5
20	2...10	1 3/8	920	2P3V56	5.6	2Q3V106	10.6	2...3VX800	26.8 to 28.5
Sizes 055-105 (Horizontal Supply and Return)									
10	2...5	1 1/8	740	2P3V45	4.5	2Q3V106	10.6	2...3VX500	10.91 to 13.30
15	2...7.5	1 3/8	820	2P3V50	5.0	2Q3V106	10.6	2...3VX500	10.78 to 13.21
20	2...10	1 3/8	920	2P3V56	5.6	2Q3V106	10.6	2...3VX500	10.78 to 13.21

*High Efficiency Motor Option.
†Premium Efficiency Motor Option.
**Applies to both motor options.

NOTE: Part numbers are Browning Manufacturing Corp. reference.

Table 5 — High-Capacity Power Exhaust Fan Drive Data (50ZT,ZW,ZX,ZZ Units)

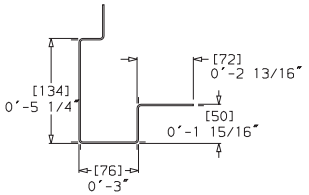
TOTAL HP	MOTOR QTY...HP	MOTOR SHAFT DIA. (in.)	SPEED RPM	MOTOR SHEAVE		BLOWER SHEAVE		QTY...BELT	CENTER DISTANCE RANGE (in.)
				Part Number	Pitch Diameter (in.)	Part Number	Pitch Diameter (in.)		
20	2...10	1.375	714	2B5V48	4.8	2B5V124	12.4	2...BX93	32.8 to 36.7
30	2...15	1.625	841	2B5V58	5.8	2B5V124	12.4	2...BX93	32.6 to 36.5
40	2...20	1.625	928	2B5V58	5.9	2B5V110	11.1	2...5VX950	32.6 to 36.5
50	2...25	1.875	1020	2B5V64	6.5	2B5V110	11.1	2...5VX950	32.5 to 36.3
60	2...30	1.875	1094	2B5V68	6.9	2B5V110	11.1	2...5VX950	32.5 to 36.3

Table 6 — Return/Exhaust Fan Drive Data (50Z6,Z7,Z8,Z9 Units)

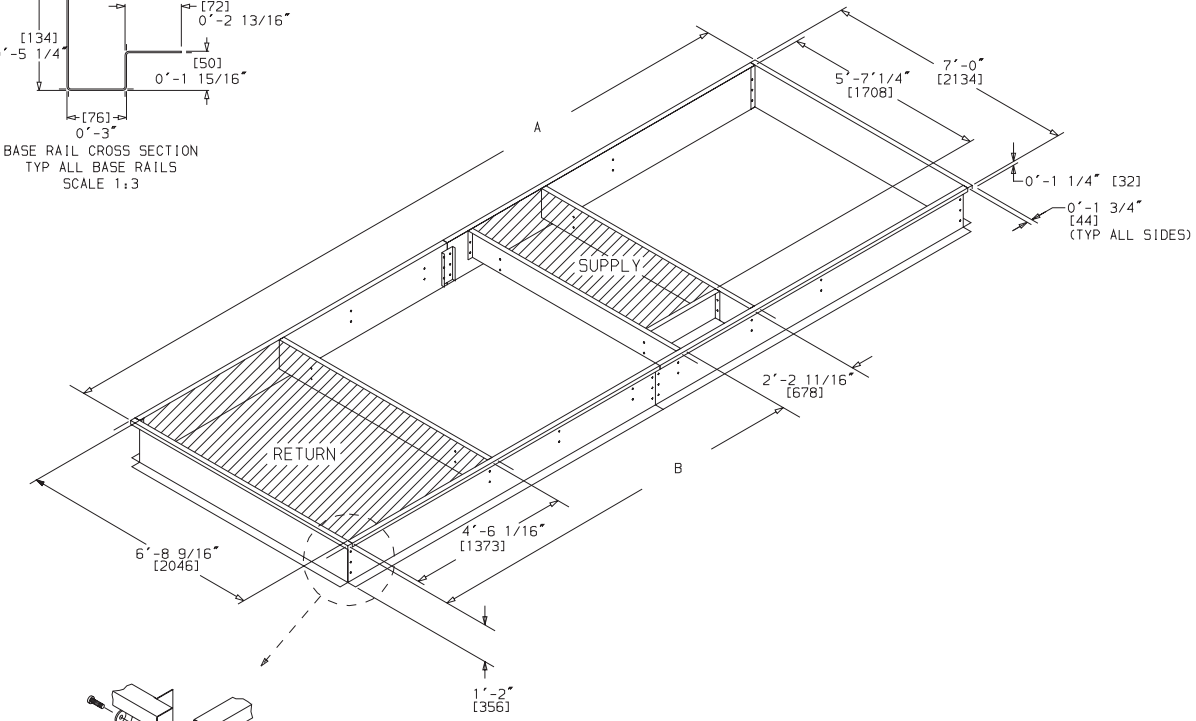
TOTAL HP	MOTOR QTY...HP	MOTOR SHAFT DIA. (in.)	SPEED RPM	MOTOR SHEAVE		BLOWER SHEAVE		QTY...BELT	CENTER DISTANCE RANGE (in.)
				Part Number	Pitch Diameter (in.)	Part Number	Pitch Diameter (in.)		
20	1...20	1.625	1104	3B5V52	5.3	3R5V85	8.5	3...5VX1000	38.1 to 41.0
25	1...25	1.875	1209	3B5V66	6.7	3R5V97	9.8	3...5VX1060	38.9 to 41.8
30	1...30	1.875	1271	3B5V60	6.1	3R5V85	8.5	3...5VX1030	38.9 to 41.8
40	1...40	2.125	1396	3B5V66	6.7	3R5V85	8.5	3...5VX1060	39.9 to 42.8

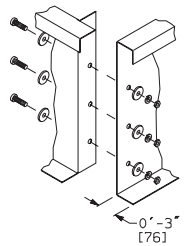
NOTES:

1. ROOF CURB IS SHIPPED DISASSEMBLED.
2. ROOFCURB: 14 GA.[VA03-56] STL.
3. DIMENSIONS IN [ ] ARE MILLIMETERS.

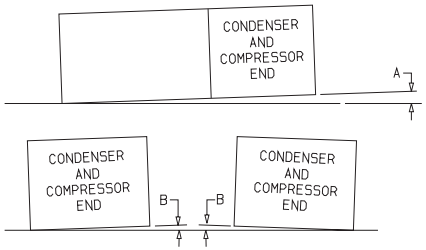


BASE RAIL CROSS SECTION
TYP ALL BASE RAILS
SCALE 1:3





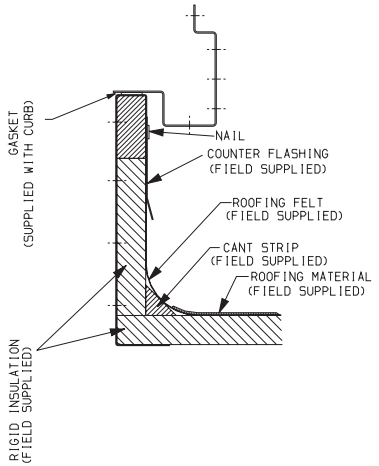
VIEW B
(CORNER CONNECTIONS AND
SPLICE PLATE CONNECTIONS)



DIMENSIONS*
(degrees and inches)

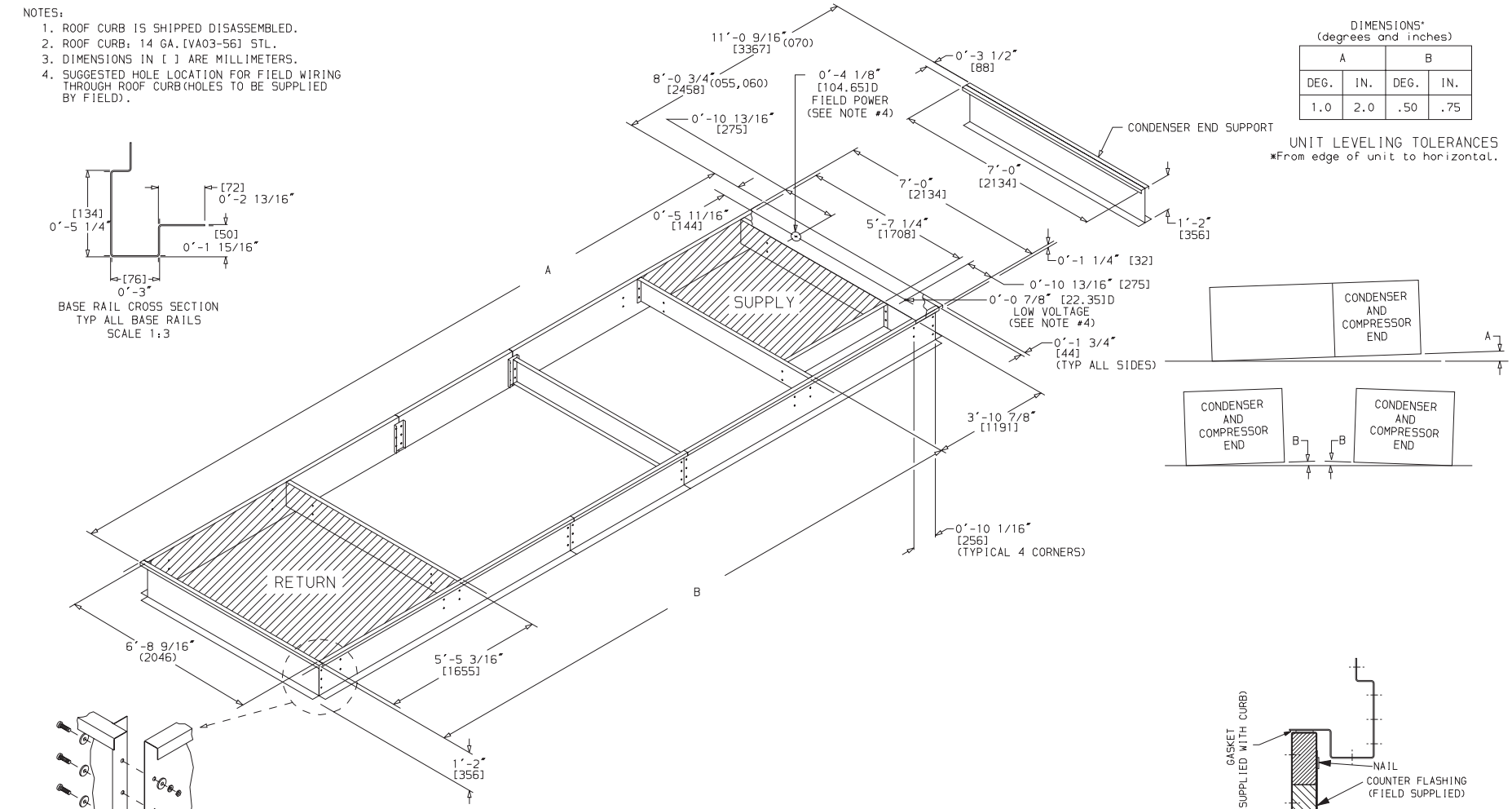
A		B	
DEG.	IN.	DEG.	IN.
1.0	2.0	.50	.75

UNIT LEVELING TOLERANCES
*From edge of unit to horizontal.



UNIT TYPE	DIMENSION	UNIT SIZE 030,035	UNIT SIZE 040,050
VERTICAL SUPPLY AND RETURN	A	20′-1 3/8″	24′-11/8″
	B	10′-10 3/8″	13′-7 1/16″
HORIZONTAL SUPPLY AND RETURN VERTICAL SUPPLY AND RETURN WITH DISCHARGE PLENUM	A	21′-8 1/16″	25′-8 11/16″
	B	13′-3 11/16″	16′-0 5/8″
VERTICAL SUPPLY AND RETURN WITH EXTENDED CHASSIS	A	22′-2 9/16″	26′-2 5/16″
	B	12′-11 9/16″	15′-8 7/32″
HORIZONTAL SUPPLY AND RETURN WITH EXTENDED CHASSIS	A	23′-9 1/4″	27′-9 5/16″
	B	15′-4 7/8″	18′-1 7/8″

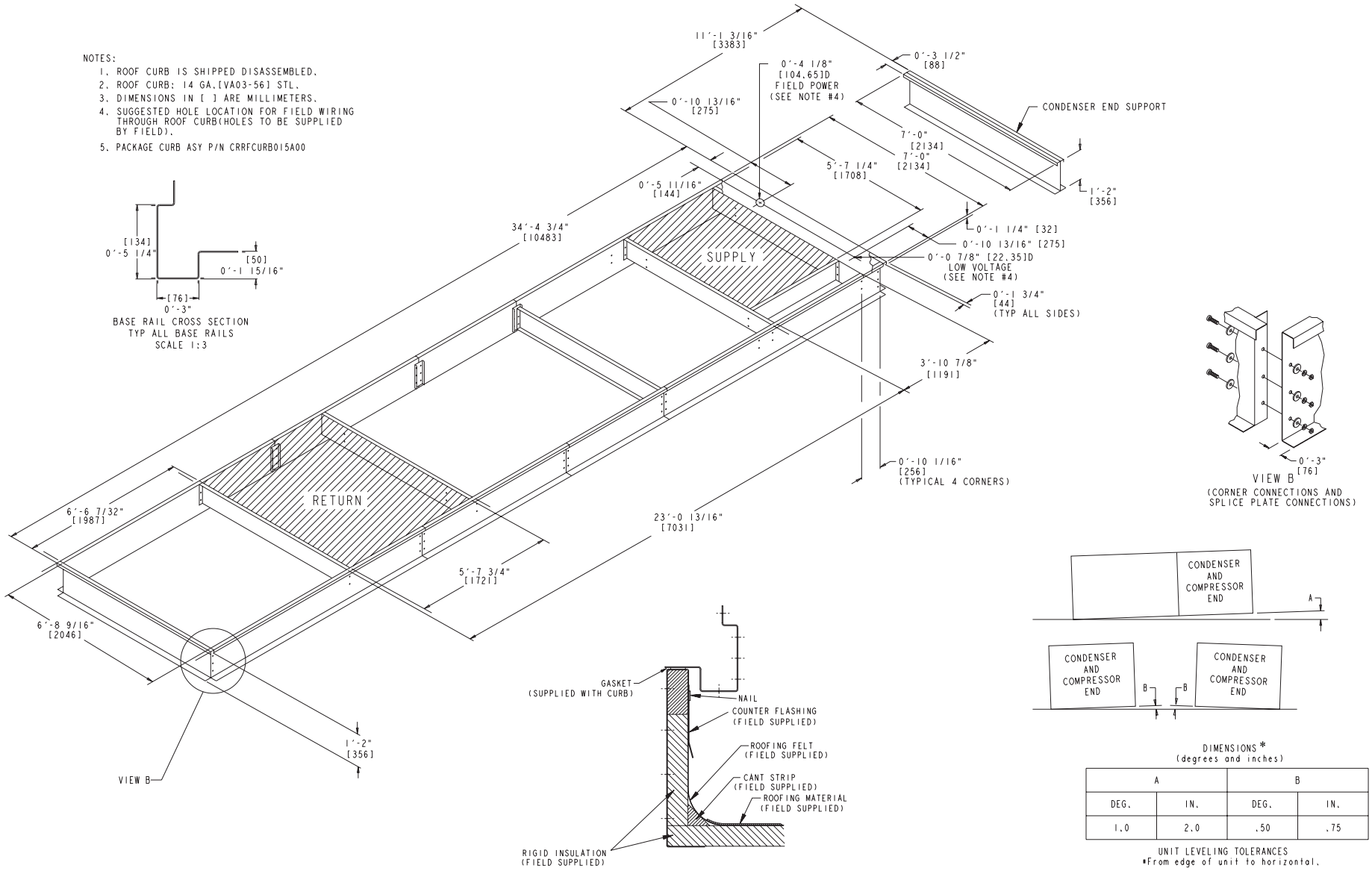
Fig. 1 — Roof Curb; Sizes 030-050



A		B	
DEG.	IN.	DEG.	IN.
1.0	2.0	.50	.75

UNIT TYPE	DIMENSION	UNIT SIZE 055-105
VERTICAL SUPPLY AND RETURN (Size 055-070 Only)	A B	24′-5 1/16″ 19′-5 9/16″
VERTICAL SUPPLY AND RETURN WITH DISCHARGE PLENUM (Size 055-070 Only) VERTICAL SUPPLY AND RETURN (Size 075-105 Only)	A B	27′-9 11/16″ 22′-10 3/16″
VERTICAL SUPPLY AND RETURN WITH EXTENDED CHASSIS (Size 055-070 Only)	A B	26′-6 1/4″ 21′-6 3/4″
HORIZONTAL SUPPLY AND RETURN, WITH EXTENDED CHASSIS VERTICAL SUPPLY AND RETURN WITH DISCHARGE PLENUM AND EXTENDED CHASSIS (Sizes 055-060 Only)	A B	29′-10 7/8″ 24′-11 3/8″

Fig. 2 — Roof Curb; Sizes 055-070 and Sizes 075-105 without High-Capacity Power Exhaust



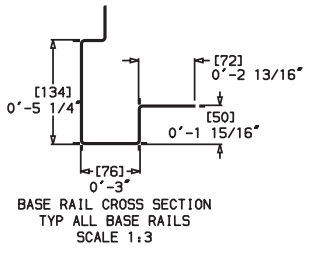
DIMENSIONS *
(degrees and inches)

A		B	
DEG.	IN.	DEG.	IN.
1.0	2.0	.50	.75

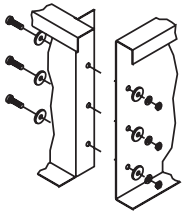
UNIT LEVELING TOLERANCES
*From edge of unit to horizontal.

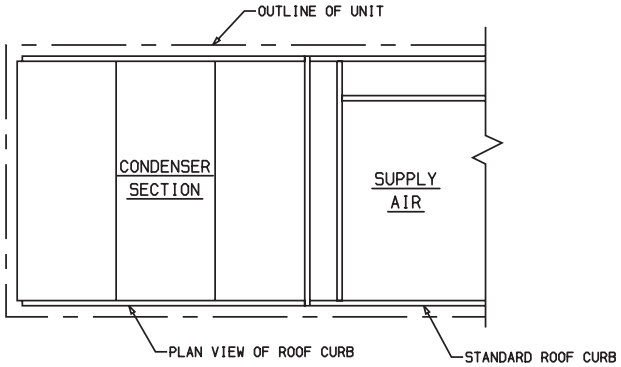
Fig. 3 — Roof Curb; Sizes 075-105 with High-Capacity Power Exhaust

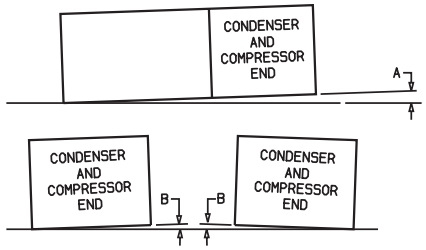
NOTES:
1. Roof curb is shipped disassembled.
2. Roof curb: 14 gage (VA03-56) steel.
3. Dimensions in [ ] are millimeters.



BASE RAIL CROSS SECTION
TYP ALL BASE RAILS
SCALE 1:3


VIEW B
(CORNER CONNECTIONS AND
SPLICE PLATE CONNECTIONS)

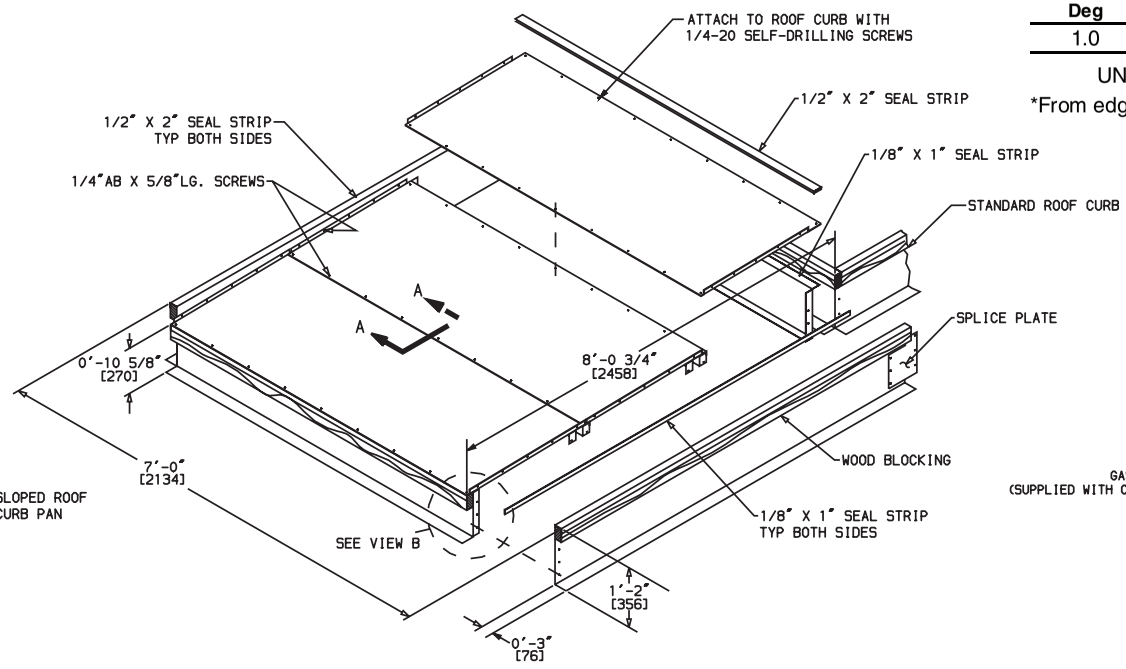


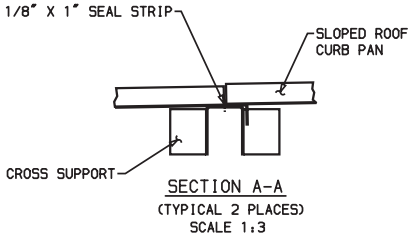


DIMENSIONS*
(degrees and inches)

A		B	
Deg	in.	Deg	in.
1.0	2.0	.50	.75

UNIT LEVELING TOLERANCES
*From edge of unit to horizontal.





SECTION A-A
(TYPICAL 2 PLACES)
SCALE 1:3

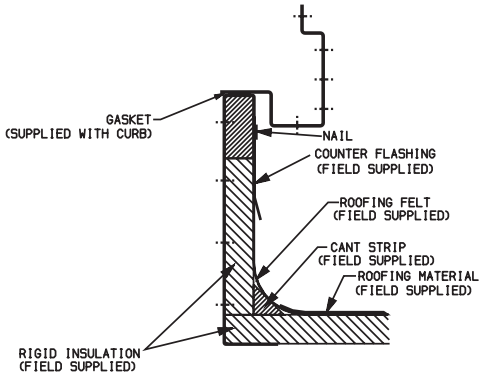
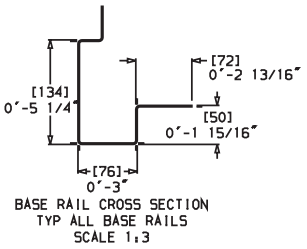
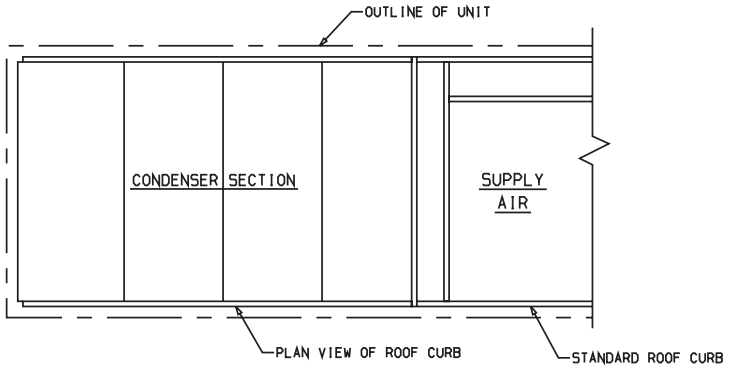


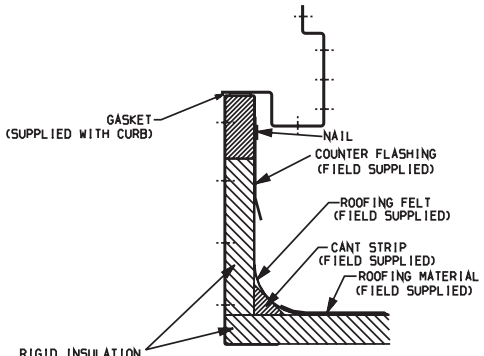
Fig. 4 — Condenser Section Roof Curb — All Units, Sizes 055 and 060

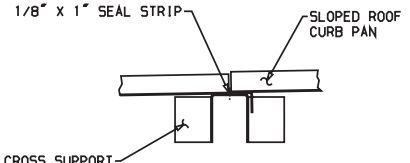
NOTES:
1. Roof curb is shipped disassembled.
2. Dimensions in [ ] are millimeters.
3. Roof curb: 14 gage (VA03-56) steel.
   Roof curb pans, 16 gage (VA03-56) steel.



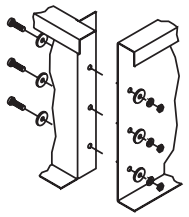
BASE RAIL CROSS SECTION
TYP ALL BASE RAILS
SCALE 1:3

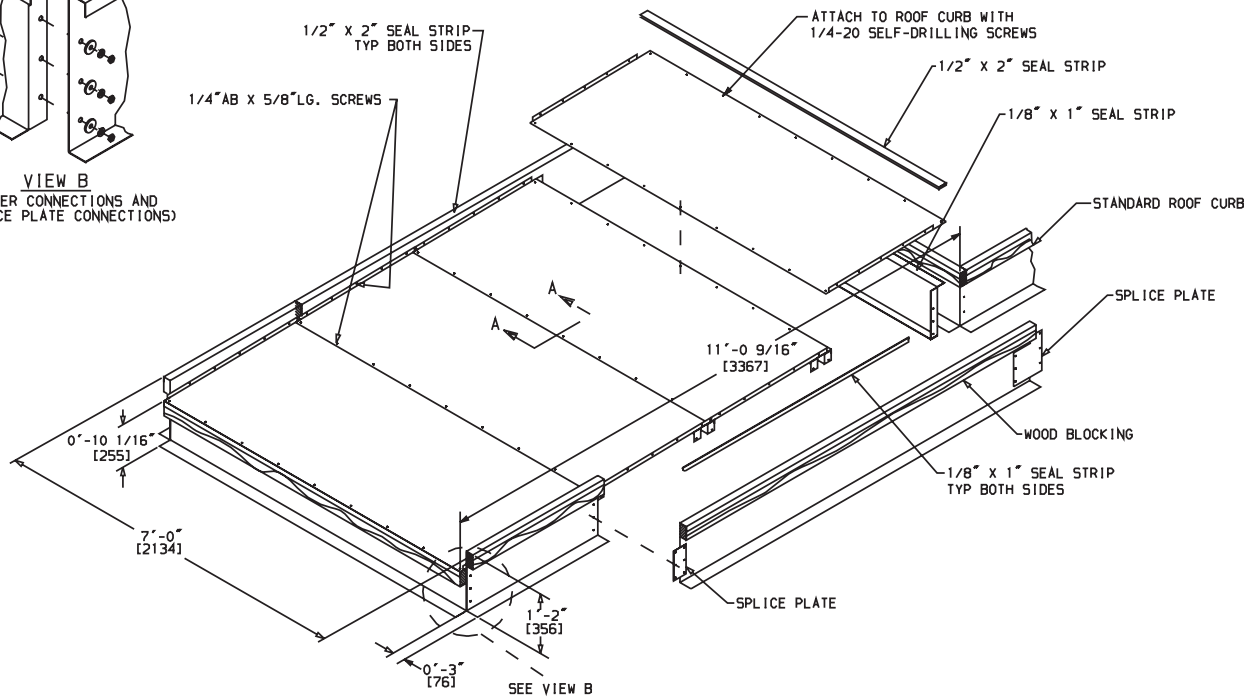


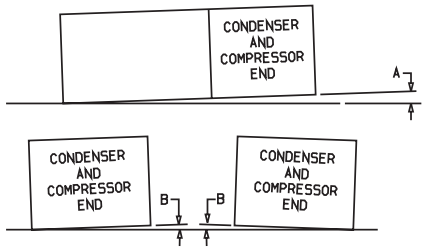




SECTION A-A
(TYPICAL 3 PLACES)
SCALE 1:3


VIEW B
(CORNER CONNECTIONS AND
SPLICE PLATE CONNECTIONS)





DIMENSIONS*
(degrees and inches)

A		B	
Deg	in.	Deg	in.
1.0	2.0	.50	.75

UNIT LEVELING TOLERANCES
*From edge of unit to horizontal.

Fig. 5 — Condenser Section Roof Curb — All Units, Sizes 070-105

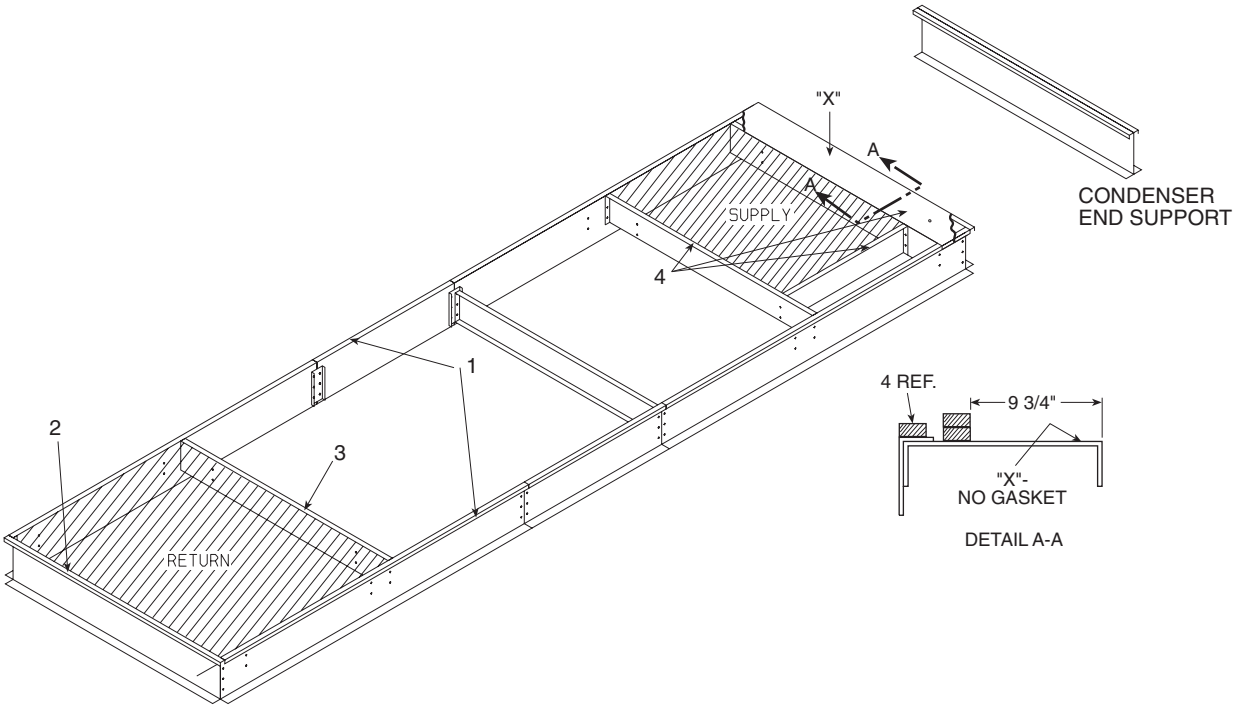


Fig. 6 — Gasket Location on Roof Curb (Size 055-105 Units without High-Capacity Power Exhaust)

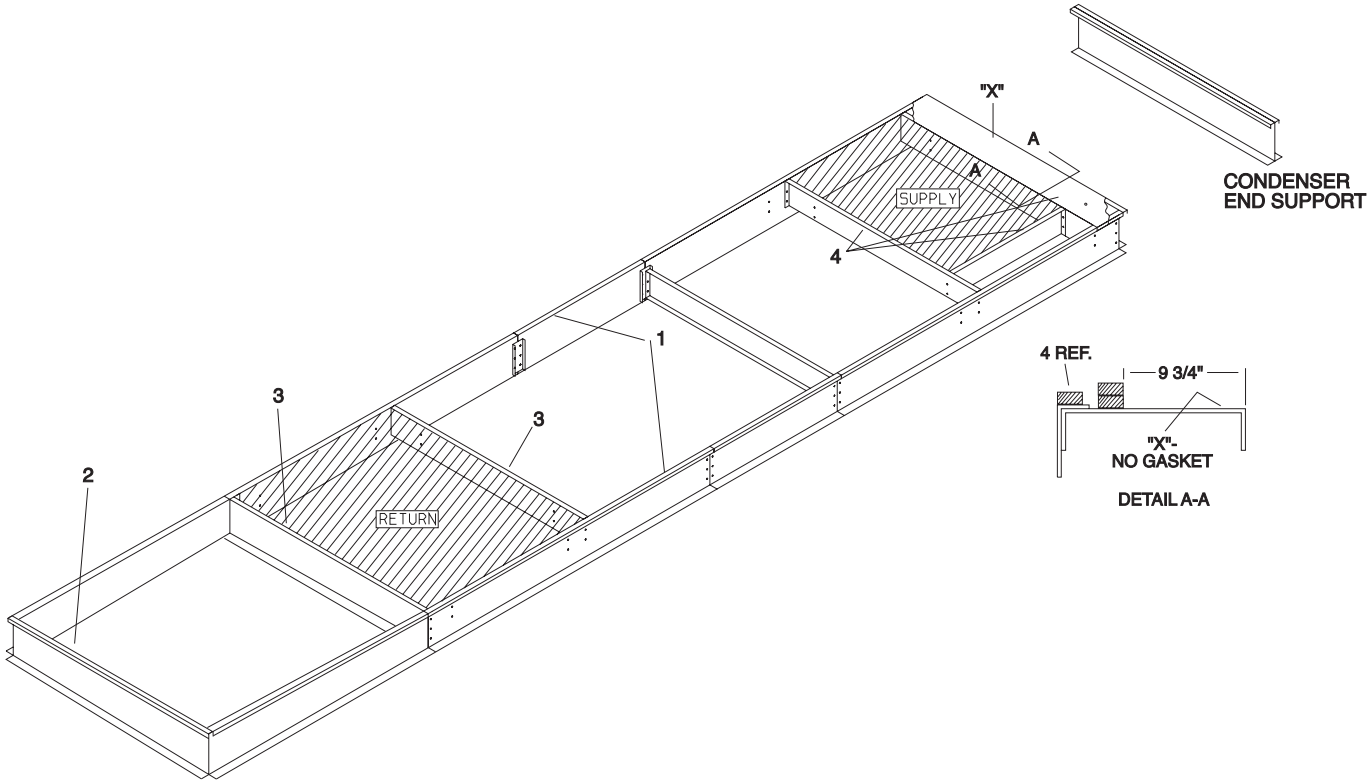


Fig. 7 — Gasket Location on Roof Curb (Size 075-105 Units with High-Capacity Power Exhaust)

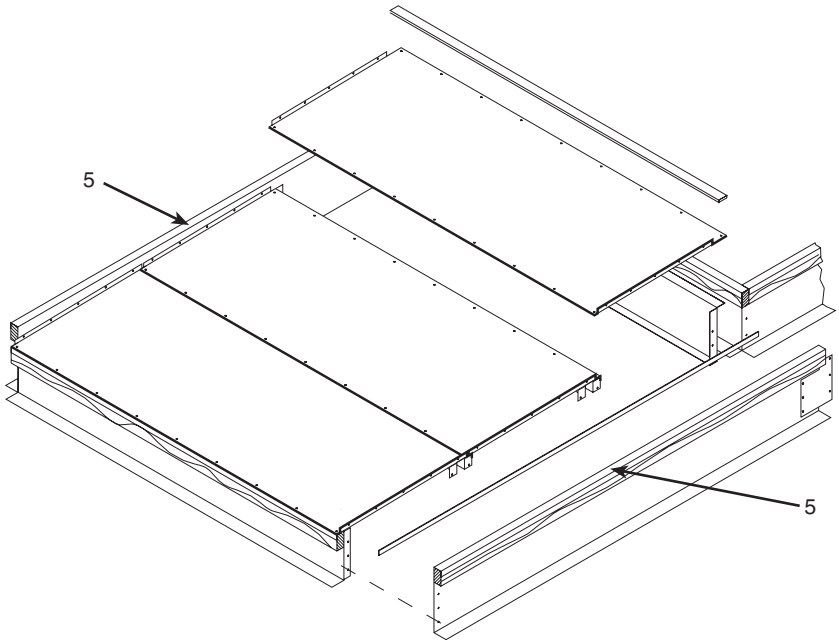


Fig. 8 — Gasket Location — Condenser Section Roof Curb (Size 055-105 Units)

Field-Fabricated Ductwork

⚠ WARNING

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. Due to electric heater, supply duct will require 90-degree elbow. Failure to follow these instructions could result in personal injury or property damage due to fire or falling objects.

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

VERTICAL SUPPLY/RETURN — The 50ZG,ZN,ZT,ZW, Z2,Z6,Z8 units are designed for vertical supply/return only. Field-fabricated ductwork must be attached to the roof curb, on to the support steel, prior to the final rigging and installation of the unit. Supply and return duct dimensions are shown in Fig. 1-3.

To attach ductwork to roof curb, insert duct approximately 10 to 11 in. up into roof curb. Connect ductwork to 14-gage roof curb material with sheet metal screws driven from inside the duct.

Secure all ducts to the building structure, using flexible duct connectors between roof curbs and ducts as required. Ducts passing through an unconditioned space must be insulated and covered with a vapor barrier. Outlet grilles must not lie directly below unit discharge. The return duct must have a 90-degree elbow before opening into the building space if the unit is equipped with power exhaust.

Design supply duct strong enough to handle expected static pressures.

HORIZONTAL SUPPLY/RETURN — The 50ZX,ZZ,Z3 units are designed for horizontal return (end of unit) and horizontal supply (left hand side of unit). Units are shipped with sheet metal duct opening covers. Units are provided with duct flanges on each opening. Ductwork should be connected directly to the unit duct flanges after the unit has been rigged, positioned, and installed. Remove and discard duct covers prior to connecting ductwork. Supply and return duct dimensions are shown in Base Unit Dimensional Drawings on pages 23-46.

To attach ductwork to unit flanges, insert duct approximately 3-in. over the flanges. Connect ductwork to 14-gage flanges with sheet metal screws driven from outside of the duct. Add sealant or caps to sharp points on screws where appropriate for technician safety.

Secure all ducts to the building structure, using flexible duct connectors between roof curbs and ducts as required. Ducts passing through an unconditioned space must be insulated and covered with a vapor barrier.

Design supply duct strong enough to handle expected static pressures.

HORIZONTAL SUPPLY/VERTICAL RETURN WITH RETURN/EXHAUST FAN — The 50Z7,Z9 units with return/exhaust fan are designed for vertical return and horizontal supply (left hand side of unit). Units are shipped with sheet metal duct opening cover for the horizontal supply. Units are provided with duct flanges on the supply opening. Ductwork should be connected directly to the unit duct flanges after the unit has been rigged, positioned and installed. Remove and discard duct covers prior to connecting ductwork. Field-fabricated ductwork must be attached to the return roof curb, on to the support steel, prior to the final rigging and installation of the unit. Return duct dimensions are shown in Fig. 2. Supply duct dimensions are shown in Base Unit Dimensional Drawing on page 46.

To attach ductwork to roof curb, insert duct approximately 10 to 11-in. up into roof curb. Connect ductwork to 14-gage roof curb material with sheet metal screws driven from inside the duct. To attach ductwork to unit flanges, insert duct approximately 3-in. over the flanges. Connect ductwork to 14-gage flanges with sheet metal screws driven from outside of the duct. Add sealant or caps to sharp points on screws where appropriate for technician safety.

Secure all ducts to the building structure, using flexible duct connectors between roof curbs and ducts, as required. Ducts passing through an unconditioned space must be insulated and covered with a vapor barrier. Outlet grilles must not lie directly below unit discharge. The return duct must have a 90-degree elbow before opening into the building space if the unit is equipped with power exhaust.

Design supply duct strong enough to handle expected static pressures.

Rigging — Do not drop unit; keep upright. Use spreader bars over unit to prevent sling or cable damage. Sheets of plywood placed along the condenser coils will provide additional protection. All lifting lugs MUST be used when lifting unit. Level by using unit frame as a reference. See Fig. 9-12 for information. Unit and accessory weights are shown in Tables 1A-1C and 2. Weight distribution and center of gravity can be found in Fig. 13.

⚠ CAUTION

NOTICE TO RIGGERS
1. ALL PANELS MUST BE IN PLACE WHEN RIGGING.
2. DO NOT ATTEMPT TO FORK THESE UNITS.

UNIT	WEIGHT		A		B		ECONOMIZER	
	lb	kg	in.	mm	in.	mm	lb	kg
50ZG,ZN030*	5400	2455	74.06	1881	165.28	4198	300	136
50ZG,ZN035*	5525	2511	74.06	1881	167.01	4242	300	136
50ZG,ZN040*	6050	2750	84.76	2153	194.80	4948	300	136
50ZG,ZN050*	6090	2768	84.76	2153	195.98	4978	300	136
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ030	5970	2714	83.23	2114	159.21	4044	300	136
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ035	6095	2770	83.23	2114	161.02	4090	300	136
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ040	6620	3009	92.64	2353	189.88	4823	300	136
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ050	6660	3027	92.64	2353	190.98	4851	300	136

*Without extended plenum.

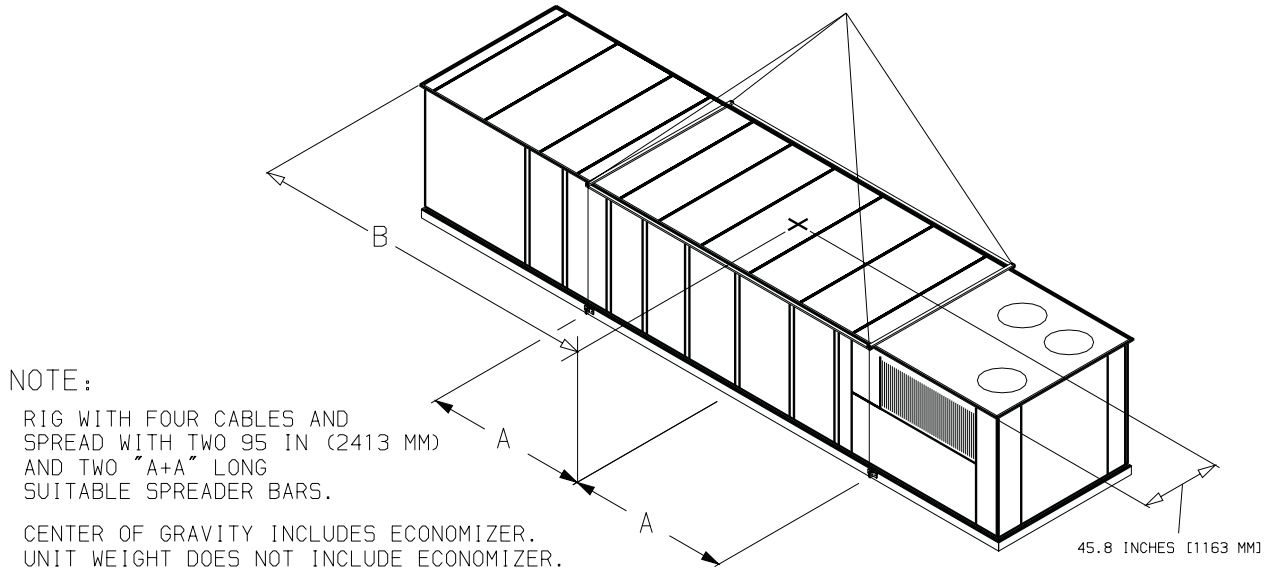


Fig. 9 — Rigging Label — Size 030-050 Units (Standard Chassis)

⚠ CAUTION

NOTICE TO RIGGERS
1. ALL PANELS MUST BE IN PLACE WHEN RIGGING.
2. DO NOT ATTEMPT TO FORK THESE UNITS.

UNIT	WEIGHT		A		B		ECONOMIZER	
	lb	kg	in.	mm	in.	mm	lb	kg
50ZG,ZN055*	7,700	3500	105.25	2673	218	5537	530	240.9
50ZG,ZN060*	8,000	3636	105.25	2673	218	5537	530	240.9
50ZG,ZN070*	8,430	3832	88.25	2242	235	5969	530	240.9
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ055	8,250	3750	126.50	3213	238	6045	530	240.9
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ060	8,550	3886	126.50	3213	238	6045	530	240.9
50Z2,Z3,ZGH,ZGJ,ZNH,ZNJ070	8,970	4077	109.50	2782	255	6477	530	240.9
50ZG,ZN075*	9,870	4477	127.80	3247	257	6528	530	240.9
50ZG,ZN090*	10,080	4572	127.80	3247	259	6579	530	240.9
50ZG,ZN105*	10,810	4903	127.80	3247	267	6782	530	240.9
50Z6,Z7,Z8,Z9075	11,340	5144	127.80	3247	257	6528	530	240.9
50Z6,Z7,Z8,Z9090	11,550	5239	127.80	3247	259	6579	530	240.9
50Z6,Z7,Z8,Z9105	12,280	5570	127.80	3247	267	6782	530	240.9
50ZT,ZW,ZX,ZZ075	12,805	5808	127.80	3247	257	6528	530	240.9
50ZT,ZW,ZX,ZZ090	13,015	5904	127.80	3247	257	6579	530	240.9
50ZT,ZW,ZX,ZZ105	13,745	6235	127.80	3247	267	6782	530	240.9

*Without extended plenum.

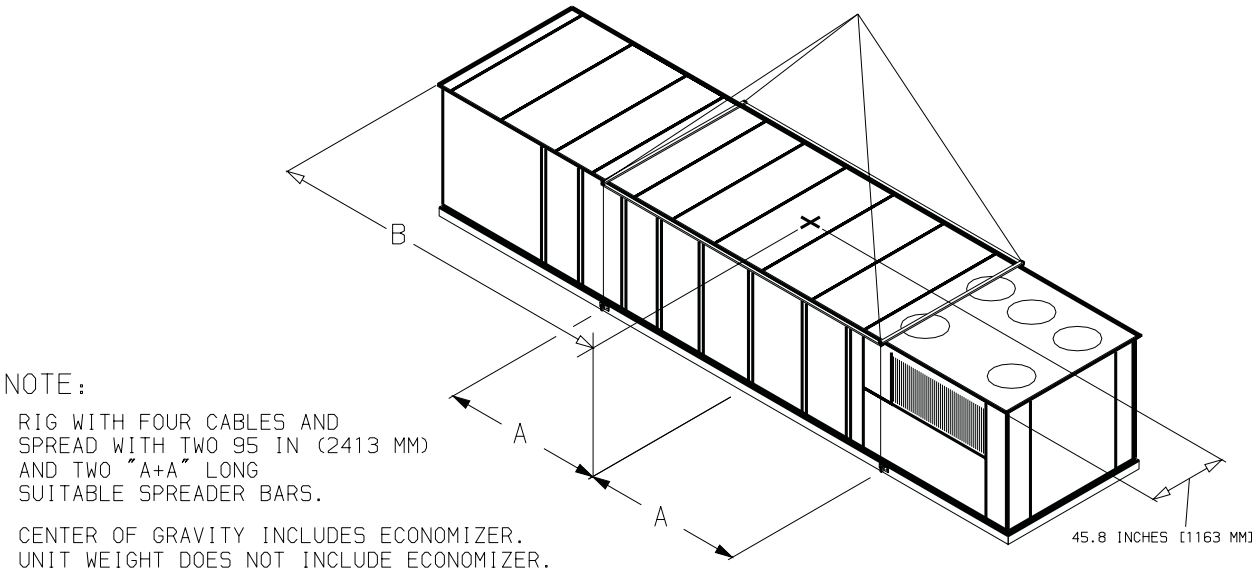


Fig. 10 — Rigging Label — Size 055-105 Units (Standard Chassis)

⚠ CAUTION

NOTICE TO RIGGERS
1. ALL PANELS MUST BE IN PLACE WHEN RIGGING.
2. DO NOT ATTEMPT TO FORK THESE UNITS.

UNIT	WEIGHT		A		B		ECONOMIZER	
	lb	kg	in.	mm	in.	mm	lb	kg
50ZG,ZN030*	5900	2657	86.65	2201	181.69	4615	300	136
50ZG,ZN035*	6025	2732	86.65	2201	183.90	4671	300	136
50ZG,ZN040*	6350	2880	97.36	2473	211.54	5373	300	136
50ZG,ZN050*	6390	2898	97.36	2473	212.64	5401	300	136
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ030	6470	2934	95.83	2434	173.94	4418	300	136
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ035	6596	2991	95.83	2434	176.14	4474	300	136
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ040	7120	3229	105.24	2673	205.16	5211	300	136
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ050	7160	3247	105.24	2673	206.26	5239	300	136

*Without extended plenum.

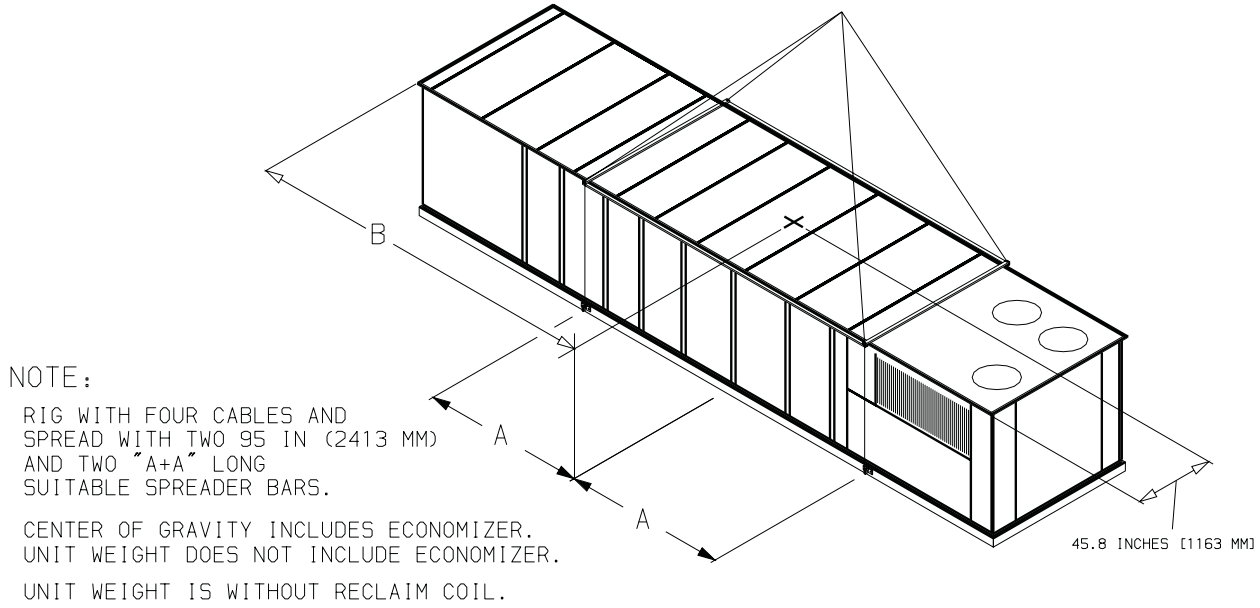


Fig. 11 — Rigging Label — Size 030-050 Units (Extended Chassis)

⚠ CAUTION

NOTICE TO RIGGERS
1. ALL PANELS MUST BE IN PLACE WHEN RIGGING.
2. DO NOT ATTEMPT TO FORK THESE UNITS.

UNIT	WEIGHT		A		B		ECONOMIZER	
	lb	kg	in.	mm	in.	mm	lb	kg
50ZG,ZN055*	8248	3740	107.50	2734	231.81	5888	530	240.9
50ZG,ZN060*	8548	3877	107.50	2734	231.81	5888	530	240.9
50ZG,ZN070*	8978	4071	100.84	2561	269.81	6853	530	240.9
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ055	8800	3990	136.61	3470	251.70	6393	530	240.9
50Z2,Z3,ZGP,ZGQ,ZNP,ZNQ060	9100	4127	136.61	3470	251.70	6393	530	240.9

*Without extended plenum.

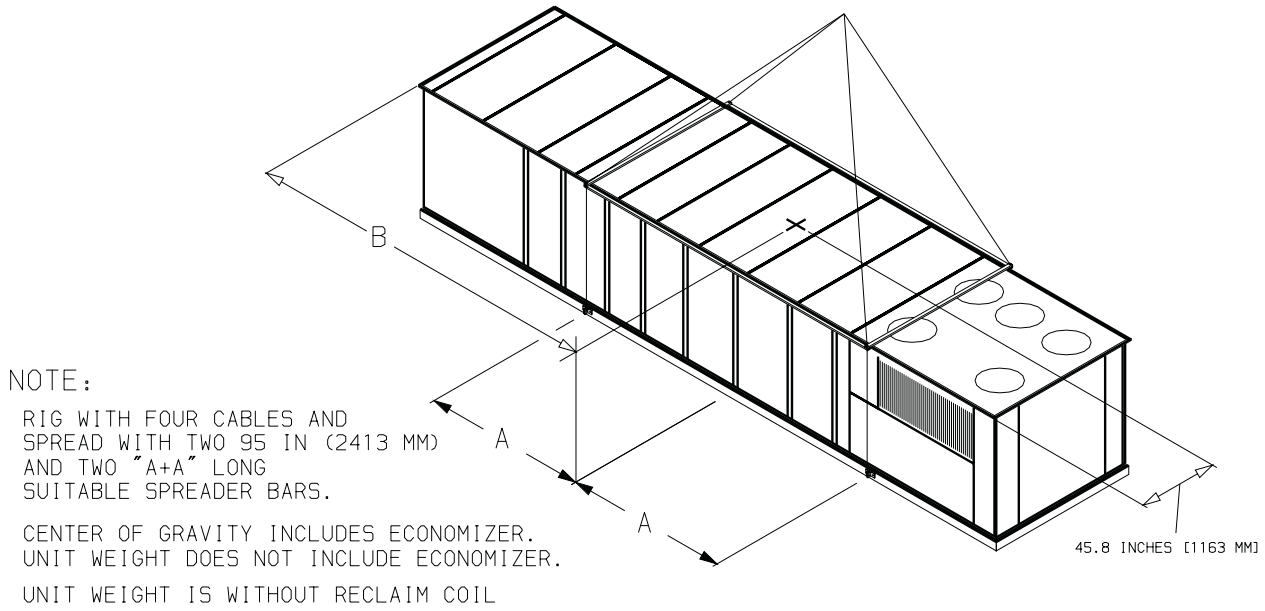


Fig. 12 — Rigging Label — Size 055,060 Units (Extended Chassis)

Condensate Drain Connections — There are a total of five drain connections required on each unit: one primary drain (on right-hand side of the unit) and four secondary drains (two on each side of unit).

PRIMARY DRAIN — The primary drain is a 2-in. NPT pipe connection located on the right-hand side of the unit looking at the unit from the return air end. See Fig. 14-37.

With field-supplied fittings and pipe sections, plumb the primary condensate drain to the 2-in. FPT connector on the base rail. Use a trap height of at least 4-in. for size 030-070 units and 7-in. for size 075-105 units. See Fig. 38 and 39. Install with a height dimensionof at least 2-in. from the top of the exit pipe from the trap section to the bottom of the connector. Apply a bead of RTV or similar sealant around the pipe joint at the connector in the base rail.

SECONDARY DRAINS (Units Installed on Curb) — There are two secondary drain connections on each side of the unit. There are secondary drains on each side of the unit in the filter section and one on each side of the unit in the supply fan section. There are labels marking each location on the unit base rail. See Fig. 14-37.

Locate the four $1^1/_4$-in. drain coupling assemblies and mounting screws (shipped in a bag taped to the basepan in the supply fan section, located behind the access panel marked FAN SECTION). The drain couplings are a 10-gage plate with a $1^1/_4$ in. half coupling welded to the plate.

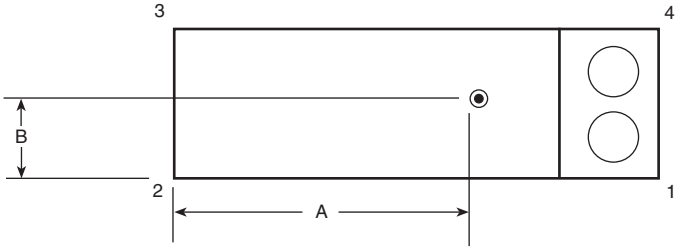
At each secondary drain hole location, there is a $1^3/_8$-in. hole pre-drilled in the bottom of the base rail, surrounded by four 0.20-in. engagement holes. Install a drain coupling assembly using screws provided at each secondary drain hole location. See Fig. 40. Do not attach any drain coupling assemblies in the condenser section base rail.

Using field-supplied fittings and pipe sections, assemble U-traps at each secondary drain fitting. See Fig. 41. Provide a minimum size of ½-in. pipe for secondary drains. Use a trap at least 4-in. deep for size 030-070 units and 7-in. deep for size 075-105 units. Apply a bead of RTV or similar sealant around the drain assemblies.

Consult local plumbing codes for direction on joining multiple drain lines. Total size of any combined line does not need to exceed nominal 2-in. size of primary drain connection.

Fill the U-traps at the secondary drain locations prior to unit start-up. Also check the U-traps before each cooling season to ensure the traps are filled and functioning properly.

SECONDARY DRAINS (Units Installed on Steel Beam or Slab) — There are two secondary drain connections required on each side of the unit. See Fig. 40. There are secondary drains on each side of the unit in the filter section and one on each side of the unit in the supply fan section. There are labels marking each location on the unit base rail. See Fig. 14-37. Prior to final positioning of the unit, apply a bead of RTV or



UNITS	SIZE	CORNER WEIGHTS (lb)				TOTAL (lb)	A ft-in.	B ft-in.
		1	2	3	4			
HORIZONTAL SUPPLY AND RETURN (50Z2,Z3) VERTICAL SUPPLY AND RETURN WITH DISCHARGE PLENUM (50ZG,ZN)	030	1939	1198	1200	1933	6,270	13- 9 1/4	3-9 13/16
	035	1997	1203	1202	1993	6,395	13-11	3-9 13/16
	040	2139	1323	1324	2133	6,920	16- 2 13/16	3-9 13/16
	050	2162	1320	1317	2161	6,960	16- 4	3-9 13/16
	055	2322	2071	2068	2319	8,780	18- 2	3-9 13/16
	060	2401	2142	2139	2398	9,080	18- 2	3-9 13/16
	070	2555	2198	2195	2552	9,500	21- 3	3-9 13/16
VERTICAL SUPPLY AND RETURN (50ZG,ZN)	030	1826	1026	1027	1821	5,700	13- 3 1/4	3-9 13/16
	035	1885	1029	1028	1883	5,825	13- 5	3-9 13/16
	040	2035	1142	1144	2029	6,350	15- 9 7/8	3-9 13/16
	050	2059	1139	1137	2056	6,390	15-11	3-9 13/16
	055	2469	1649	1651	2461	8,230	19-10	3-9 13/16
	060	2559	1709	1712	2550	8,530	19-10	3-9 13/16
	070	2643	1840	1845	2632	8,960	21- 3	3-9 13/16
HORIZONTAL SUPPLY AND RETURN (50Z2,Z3) VERTICAL SUPPLY AND RETURN (50ZG,ZN)	075	2817	2385	2381	2817	10,400	21- 5	3-9 13/16
	090	2897	2410	2407	2896	10,610	21- 7	3-9 13/16
	105	3203	2469	2465	3204	11,340	22- 4	3-9 13/16
HORIZONTAL SUPPLY AND RETURN WITH EXTENDED CHASSIS (50Z2,Z3) VERTICAL SUPPLY AND RETURN WITH DISCHARGE PLENUM AND EXTENDED CHASSIS (50ZG,ZN)	030	2103	1284	1286	2096	6,770	15- 1 5/8	3-9 13/16
	035	2167	1283	1282	2163	6,895	15- 3 7/8	3-9 13/16
	040	2306	1406	1407	2300	7,420	17- 7 9/16	3-9 13/16
	050	2327	1406	1399	2328	7,460	17- 8 5/8	3-9 13/16
	055	2232	2411	2231	2406	9,280	19- 3 13/16	3-9 13/16
	060	2303	2490	2303	2484	9,580	19- 3 13/16	3-9 13/16
	070	3116	1887	1884	3113	10,000	22- 5 13/16	3-9 13/16
VERTICAL SUPPLY AND RETURN WITH EXTENDED CHASSIS (50ZG,ZN)	030	1970	1132	1133	1965	6,200	14- 5 15/16	3-9 13/16
	035	2034	1131	1129	2031	6,325	14- 8 1/8	3-9 13/16
	040	2186	1241	1243	2180	6,850	17- 1 1/8	3-9 13/16
	050	2208	1239	1235	2208	6,890	17- 2 1/4	3-9 13/16
	055	2605	1763	1766	2596	8,730	20-11 11/16	3-9 13/16
	060	2694	1824	1827	2685	9,030	20-11 11/16	3-9 13/16
HORIZONTAL SUPPLY AND RETURN, HIGH-CAPACITY POWER EXHAUST (50ZX,ZZ) VERTICAL SUPPLY AND RETURN, HIGH-CAPACITY POWER EXHAUST (50ZT,ZW)	075	3415	2990	2986	3415	12,806	24- 7 5/16	3-9 13/16
	090	3493	3016	3011	3494	13,014	24- 9 1/4	3-9 13/16
	105	3811	3064	3059	3812	13,746	25- 7 5/64	3-9 13/16
HORIZONTAL SUPPLY AND VERTICAL RETURN WITH RETURN/EXHAUST FAN (50Z7,Z9) VERTICAL SUPPLY/RETURN WITH RETURN/EXHAUST FAN (50Z6,Z8)	075	2726	2938	2944	2732	11,340	19- 0	3-9 13/16
	090	2804	2964	2971	2811	11,550	19- 2	3-9 13/16
	105	3106	3028	3034	3112	12,280	20- 0	3-9 13/16

Fig. 13 — Weight Distribution and Center of Gravity

similar sealant around each secondary drain hole in the bottom of the unit base rail, then position the unit into final location.

Locate the four $1^1/_4$-in. drain coupling assemblies and mounting screws (shipped in a bag taped to the basepan in the supply fan section, located behind the access panel marked FAN SECTION). The drain couplings are a 10-gage plate with a $1^1/_4$ in. half coupling welded to the plate.

After final positioning of the unit, perform the following procedure:

1. At each of the four secondary drain location (marked with labels on the unit base rail), position the drain coupling assembly in the side of the base rail. Mark the screw holes and the drain hole locations on the base rail.
2. Drill holes for drain outlet (use $1^3/_8$-in. hole saw) and for the mounting screws (use $^3/_{16}$-in. drill bit).
3. Install a drain coupling assembly using screws provided at each secondary drain hole location.
4. Using field-supplied fittings and pipe sections, assemble U-traps at each secondary drain fitting. See Fig. 41. Provide minimum size of ½-in. pipe for secondary drains. Use a trap at least 4-in. deep for size 030-070 units and 7-in. deep for size 075-105 units.
5. Apply a bead of RTV or similar sealant around the drain assemblies.

Consult local plumbing codes for direction on joining multiple drain lines. Total size of any combined line does not need to exceed nominal 2-in. size of primary drain connection.

Fill the U-traps at the secondary drain locations prior to unit start-up. Also check the U-traps before each cooling season to ensure the traps are filled and functioning properly.

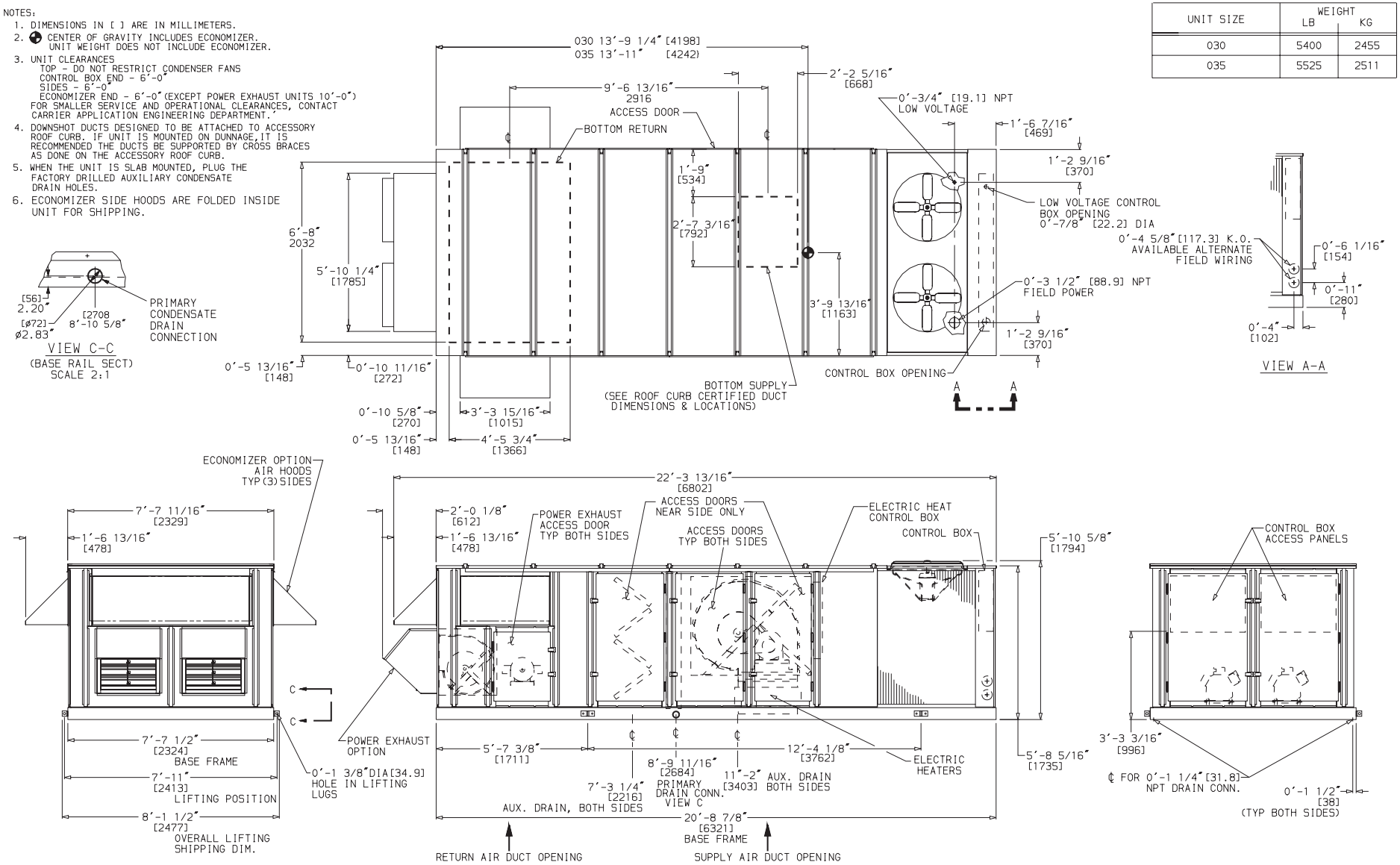


Fig. 14 — Base Unit Dimensional Drawing — 50ZG,ZN030,035 (Standard Chassis)

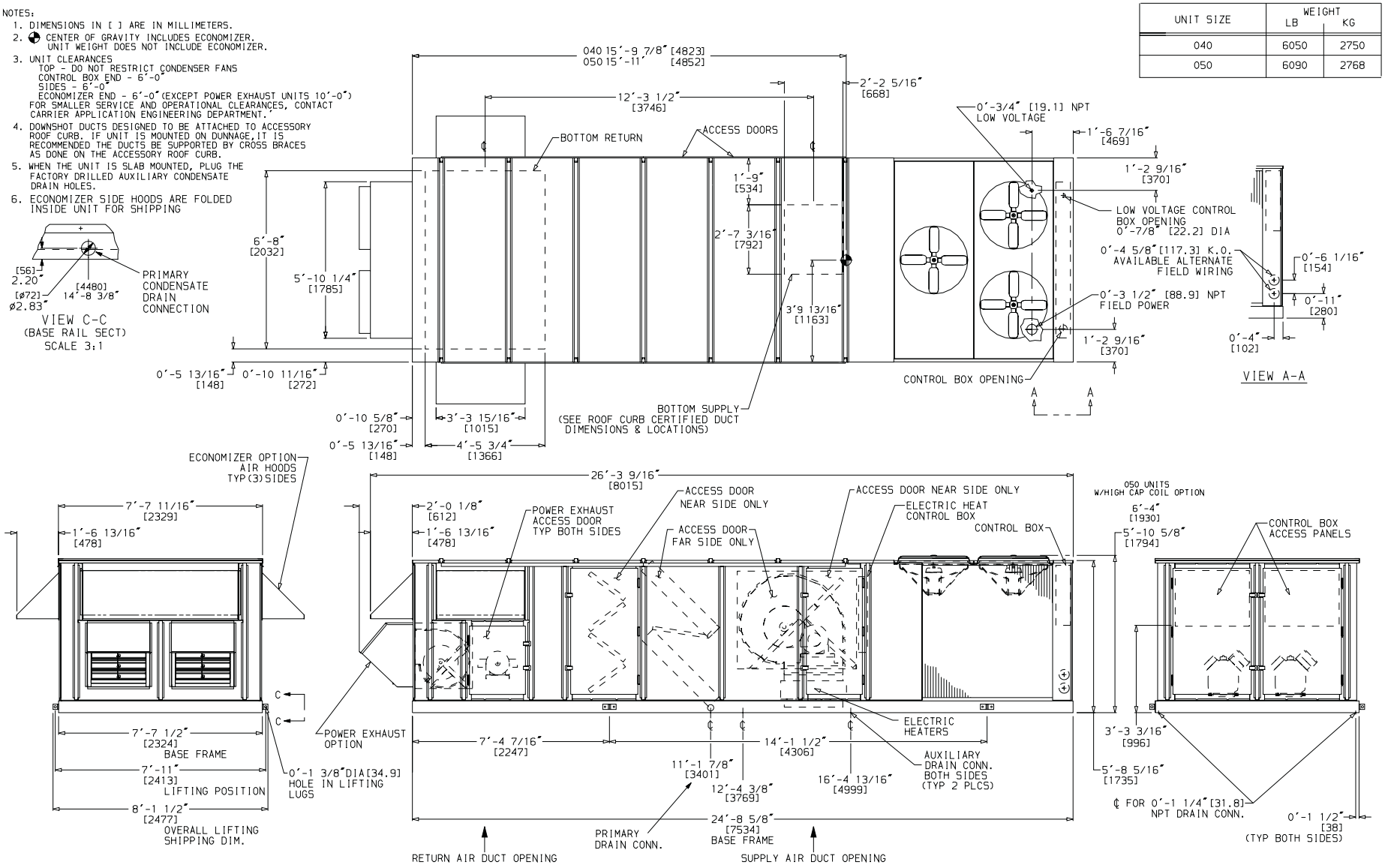


Fig. 15 — Base Unit Dimensional Drawing — 50ZG,ZN040,050 (Standard Chassis)

UNIT SIZE	WEIGHT		A		B		C		D		E		F	
	LBS.	KGS.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.
055	7700	3500	2864	9′-4 3/4"	5347	17′-6 1/2"	5537	18′-2"	1163	3′-9 13/16"	10092	33′-1 5/16"	10476	34′-4 7/16"
060	8000	3636	2864	9′-4 3/4"	5347	17′-6 1/2"	5537	18′-2"	1163	3′-9 13/16"	10092	33′-1 5/16"	10476	34′-4 7/16"
070	8430	3832	3727	12′-2 3/4"	4483	14′-8 1/2"	5969	21′-3"	1163	3′-9 13/16"	11001	36"-1 1/8"	11385	37′-4 1/4"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.′
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE,IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING

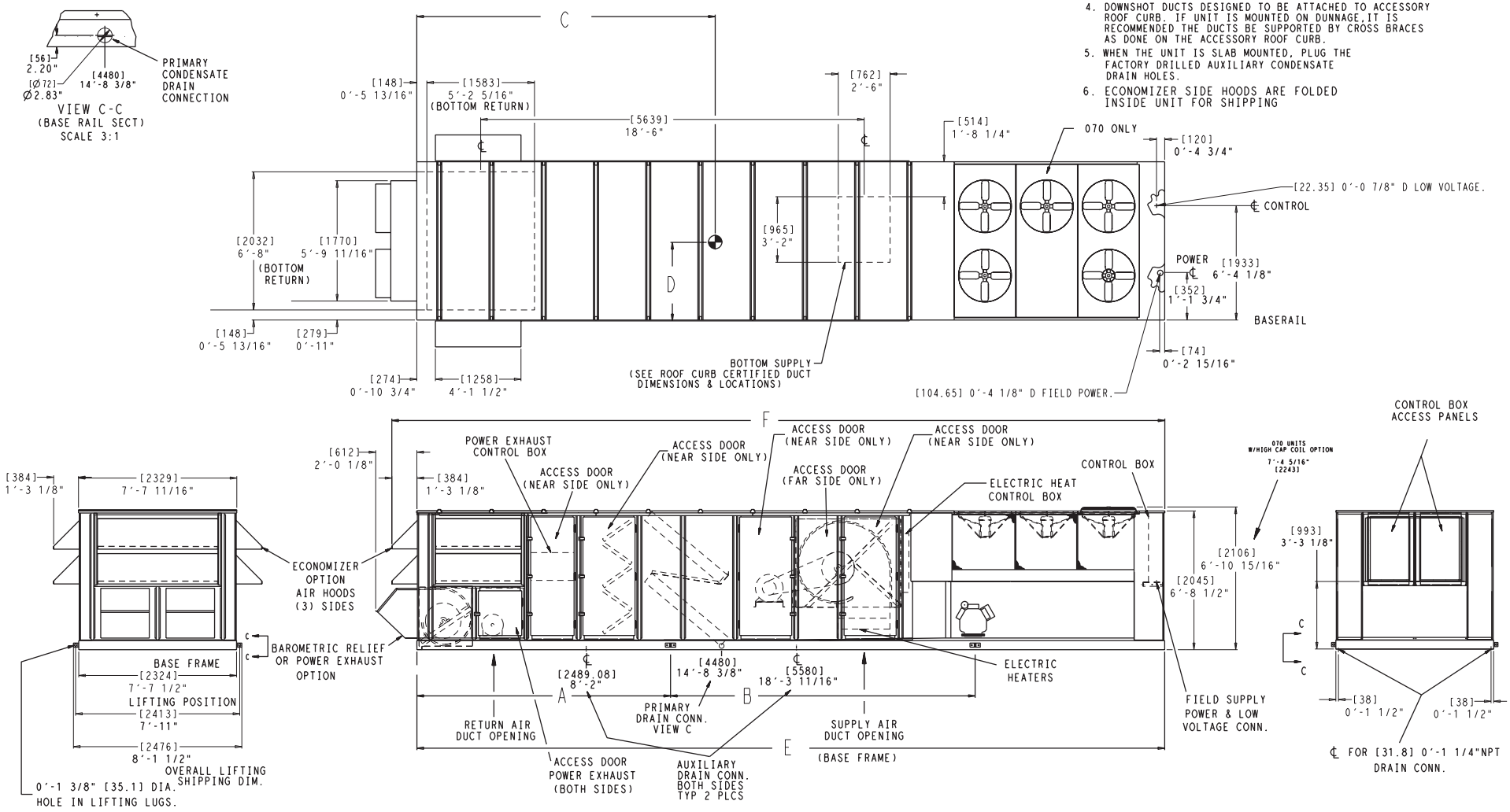


Fig. 16 — Base Unit Dimensional Drawing — 50ZG,ZN055-070 (Standard Chassis)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
075	9870	4477	3543	11′-7 1/2"	6494	21′ -3 5/8"	6528	21′ -5"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
090	10080	4572	3543	11′-7 1/2"	6494	21′ -3 5/8"	6579	21′ -7"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
105	10810	4903	3543	11′-7 1/2"	6494	21′ -3 5/8"	6807	22′ -4"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ◔ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.′
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE,IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.

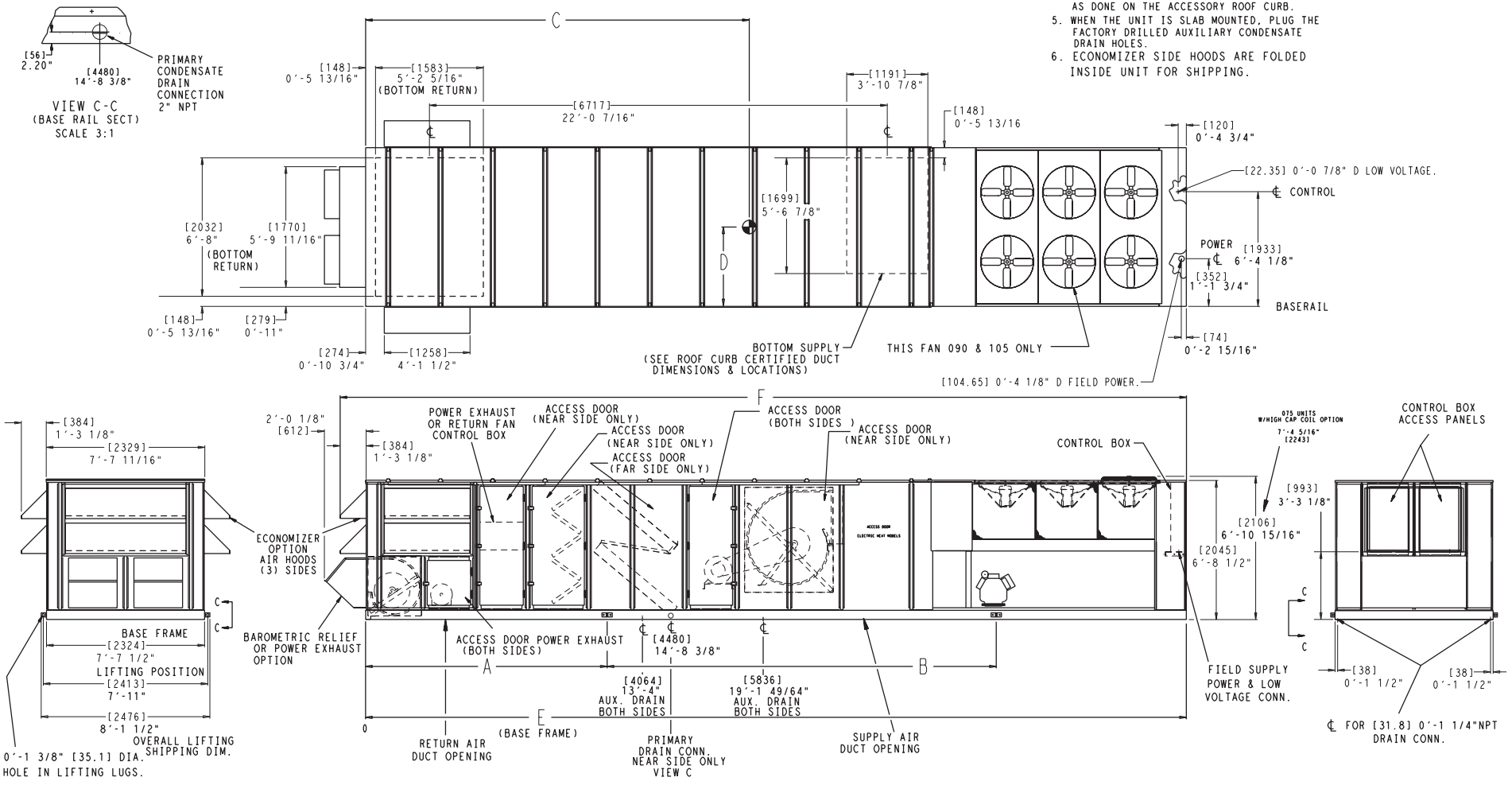


Fig. 17 — Base Unit Dimensional Drawing — 50ZG,ZN075-105 (Standard Chassis)

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 6'-0" (EXCEPT POWER EXHAUST UNITS 10'-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.

UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT-IN.
030	5970	2714	4044	13'-3 1/4"
035	6095	2770	4090	13'-5"

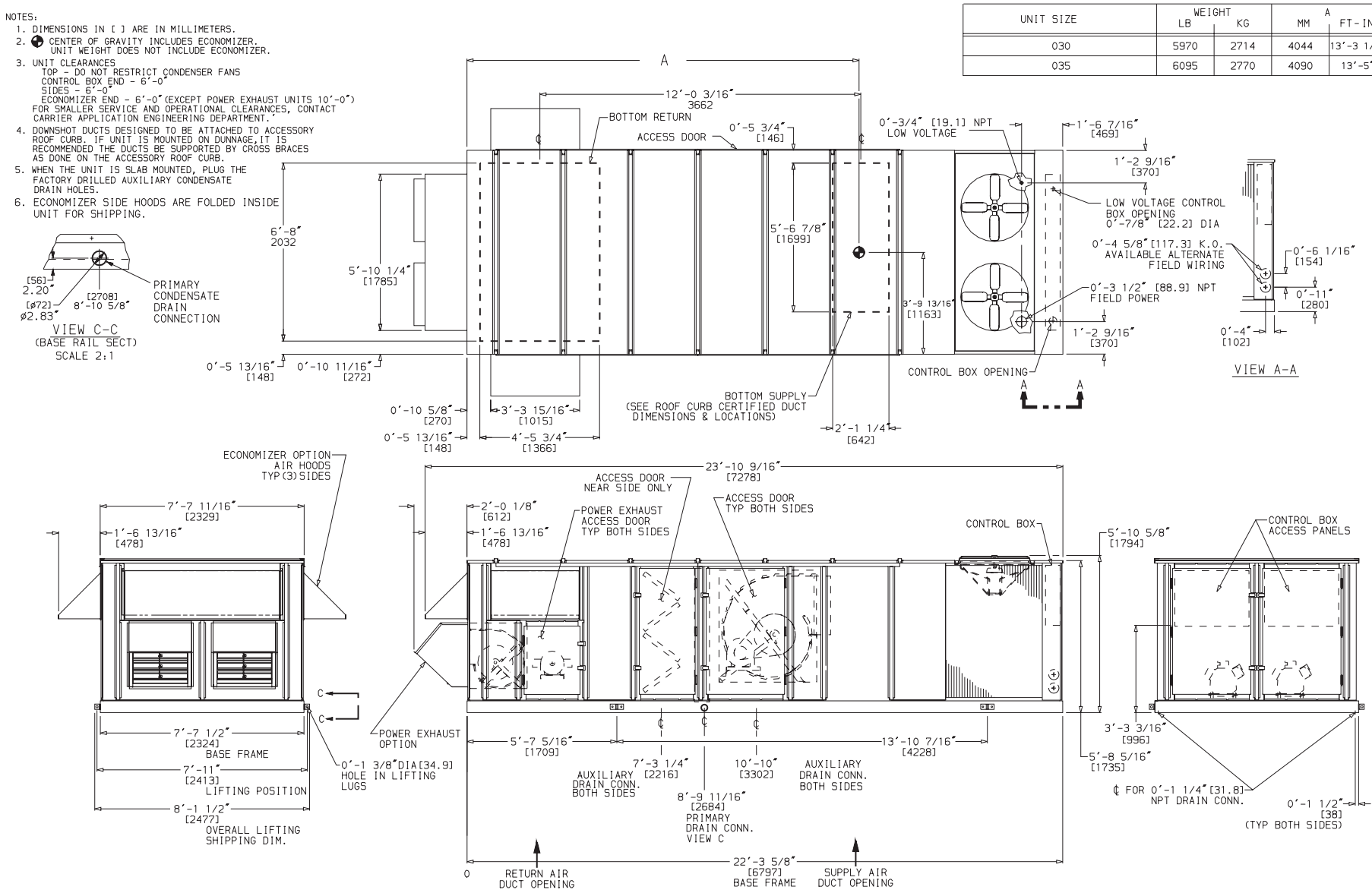


Fig. 18 — Base Unit Dimensional Drawing — 50ZG,ZN030,035 (Standard Chassis with Discharge Plenum)

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 6'-0" (EXCEPT POWER EXHAUST UNITS 10'-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.

UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
040	6620	3009	4948	16'-2 13/16"
050	6660	3027	4978	16'-4"

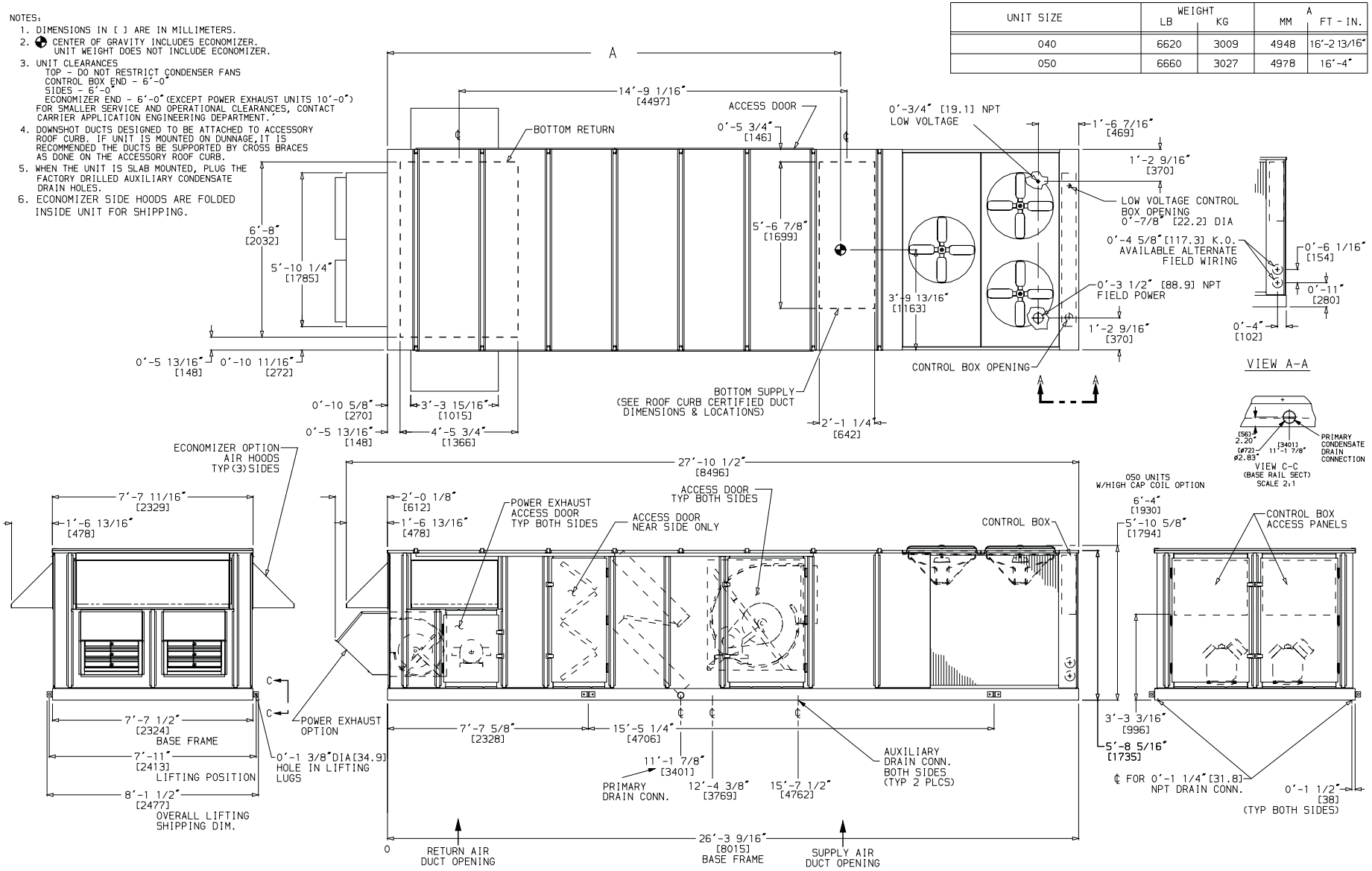


Fig. 19 — Base Unit Dimensional Drawing — 50ZG,ZN040,050 (Standard Chassis with Discharge Plenum)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
055	8250	3750	2830	9′-3 3/4"	6427	21′ 1"	6045	19′- 10"	1163	3′-9 13/16"	11140	36′-6 9/16"	11524	37′-9 11/16"
060	8550	3886	2830	9′-3 3/4"	6427	21′ 1"	6045	19′- 10"	1163	3′-9 13/16"	11140	36′-6 9/16"	11524	37′-9 11/16"
070	8970	4077	3694	12′-1 3/4"	5563	18′- 3"	6477	21′- 3"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.′
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE,IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.

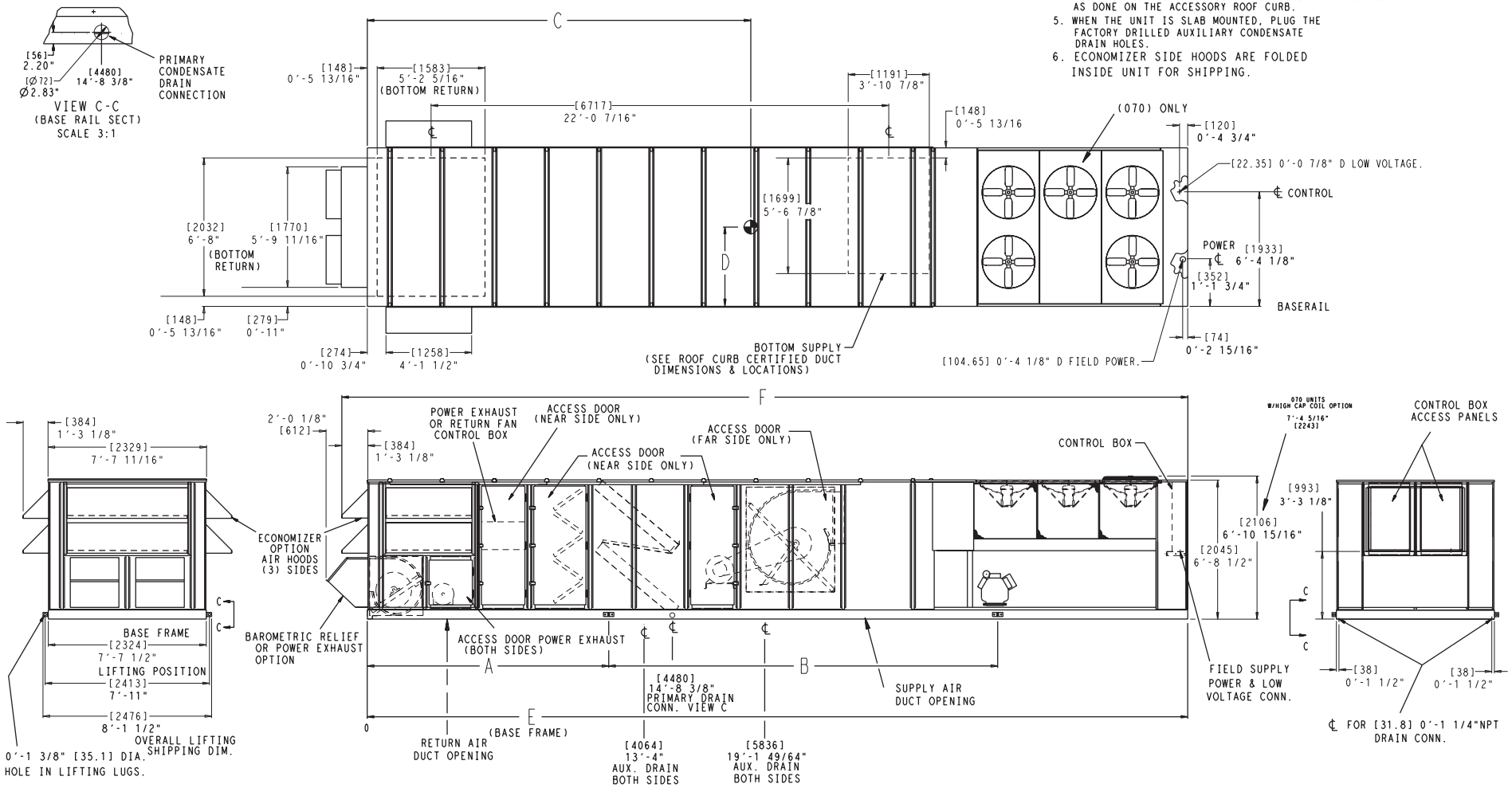


Fig. 20 — Base Unit Dimensional Drawing — 50ZG,ZN055-070 (Standard Chassis with Discharge Plenum)

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 6'-0" (EXCEPT POWER EXHAUST UNITS 10'-0") FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.
7. HEAT RECLAIM COIL DIMENSIONS (MAXIMUM)
   -LENGTH (HEADER INCLUDED):7'-0 1/4"
   -WIDTH : 0' -9 5/8"
   -HEIGHT: 4' -5 15/16"
8. HEAT RECLAIM COIL FIELD SUPPLIED AND INSTALLED.
9. PIPE CHASE LOCATIONS ARE RECOMMENDATIONS ONLY. OPENINGS ARE NOT FACTORY PROVIDED.
10. OPTIONAL FACTORY SUPPLIED HOT WATER COIL, ON UNITS WITHOUT ELECTRIC HEAT.
    DIMENSIONS:
    -LENGTH: 5'-5" - WIDTH: 0'-6" -HEIGHT: 4'-4 1/4"
    -TUBE O.D.: 0'-0 1/2" -ROWS: 2
    -HEADER O.D.: 0'-2 1/2"

UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
030	5900	2675	4615	15' -1 5/8"
035	6025	2732	4671	15' -3 7/8"

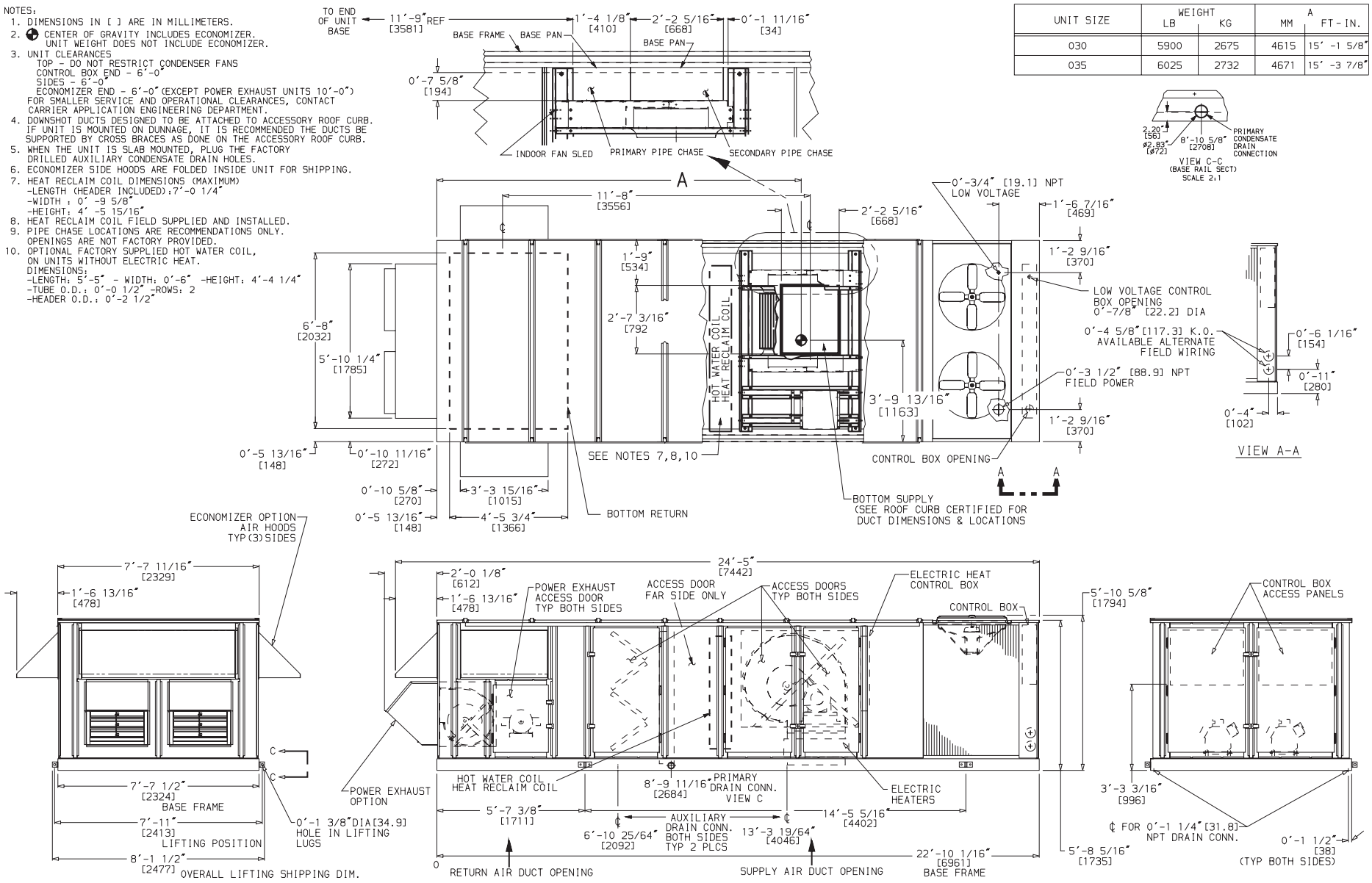


Fig. 21 — Base Unit Dimensional Drawing — 50ZG,ZN030,035 (Extended Chassis)

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 6'-0" (EXCEPT POWER EXHAUST UNITS 10'-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.
7. COIL DIMENSIONS (MAXIMUM)
   -LENGTH (HEADER INCLUDED): 7'-0 1/4"
   -WIDTH : 0' -9 5/8"
   -HEIGHT: 4' 5 15/16"
8. HEAT RECLAIM COIL FIELD SUPPLIED AND INSTALLED.
9. PIPE CHASE LOCATIONS ARE RECOMENDATIONS ONLY. OPENINGS ARE NOT FACTORY PROVIDED

UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
040	6350	2880	5373	17' -7 9/16"
050	6390	2898	5401	17' -8 5/8"

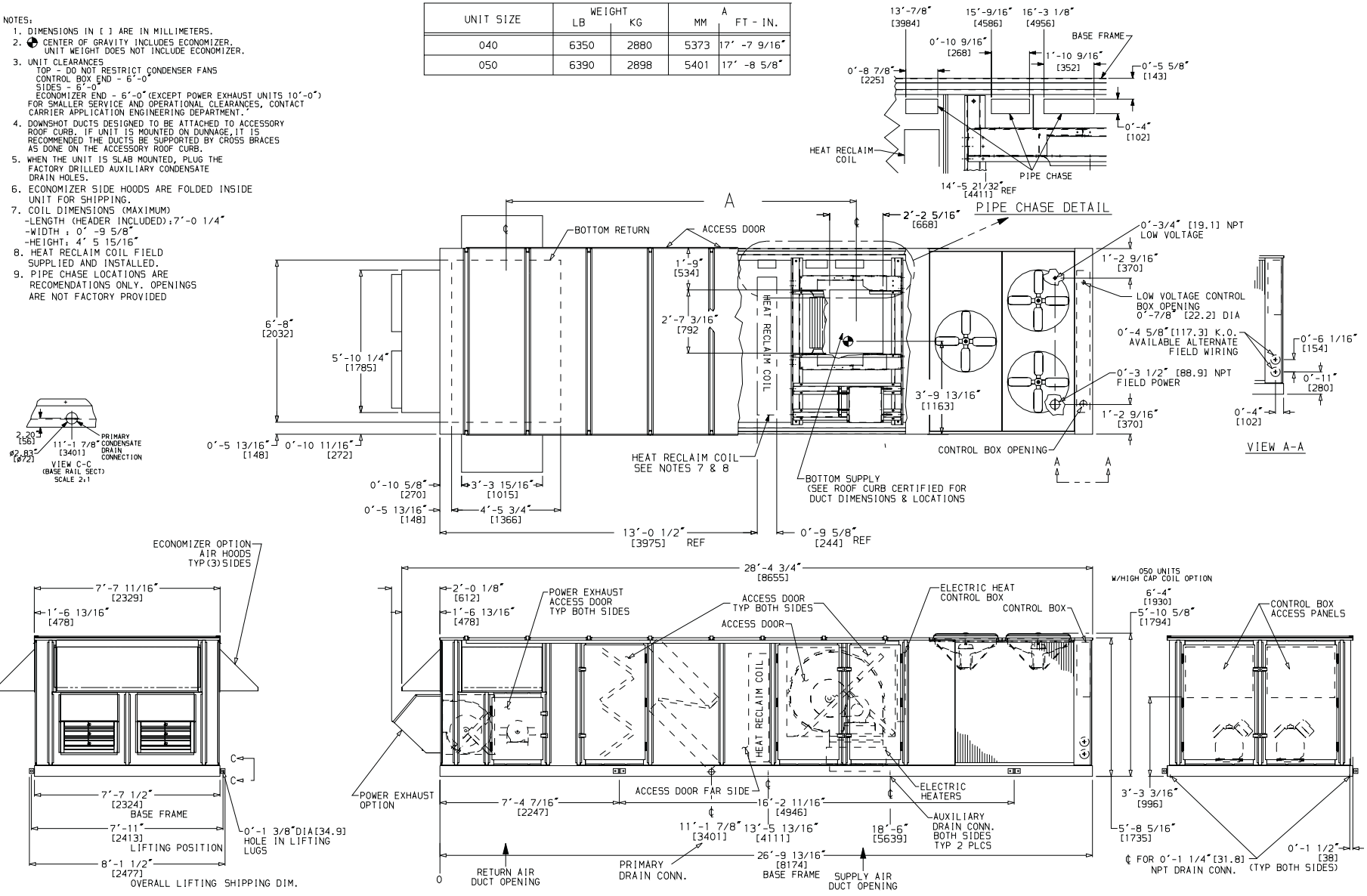


Fig. 22 — Base Unit Dimensional Drawing — 50ZG,ZN040,050 (Extended Chassis)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
055	8248	3740	3383	11′-1 3/16"	5468	17′-11 1/4"	5888	19′ -3 13/16"	1163	3′-9 25/32"	10732	35′-2 1/2"	11116	36′-5 5/8"
060	8548	3877	3383	11′-1 3/16"	5468	17′-11 1/4"	5888	19′ -3 13/16"	1163	3′-9 25/32"	10732	35′-2 1/2"	11116	36′-5 5/8"
070	8978	4071	3727	12′ -2 3/4"	5123	16′ -9 11/16"	6853	22′ -5 13/16"	1163	3′-9 25/32"	11641	38′ -2 5/16"	12025	39′ -5 7/16"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.
7. HEAT RECLAIM COIL DIMENSIONS (MAXIMUM)
   -LENGTH (HEADER INCLUDED):7′-0 1/4"
   -WIDTH : 0′ -9 5/8"
   -HEIGHT: 5′ -6 "
8. HEAT RECLAIM COIL FIELD SUPPLIED AND INSTALLED.
9. PIPE CHASE LOCATIONS ARE RECOMMENDATIONS ONLY. OPENINGS ARE NOT FACTORY PROVIDED.
10. OPTIONAL FACTORY SUPPLIED HOT WATER COIL, ON UNITS WITHOUT ELECTRIC HEAT.
    DIMENSIONS:
    -LENGTH: 5′-5" - WIDTH: 0′-6" -HEIGHT: 5′-4 1/2"
    -TUBE O.D.: 0′-0 1/2" -ROWS: 2
    -HEADER O.D. (2 TUBES): 0′-1 1/2"

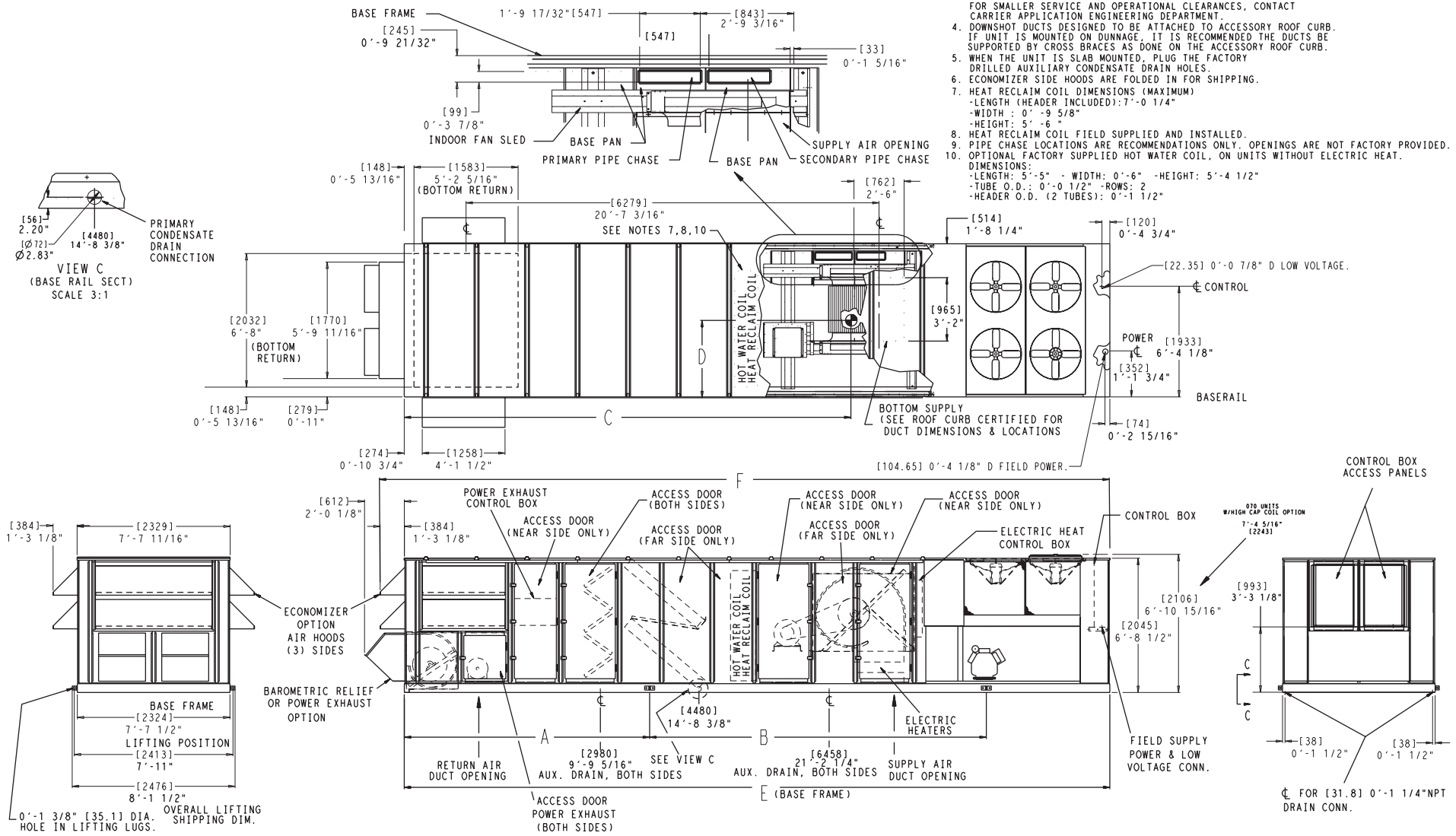
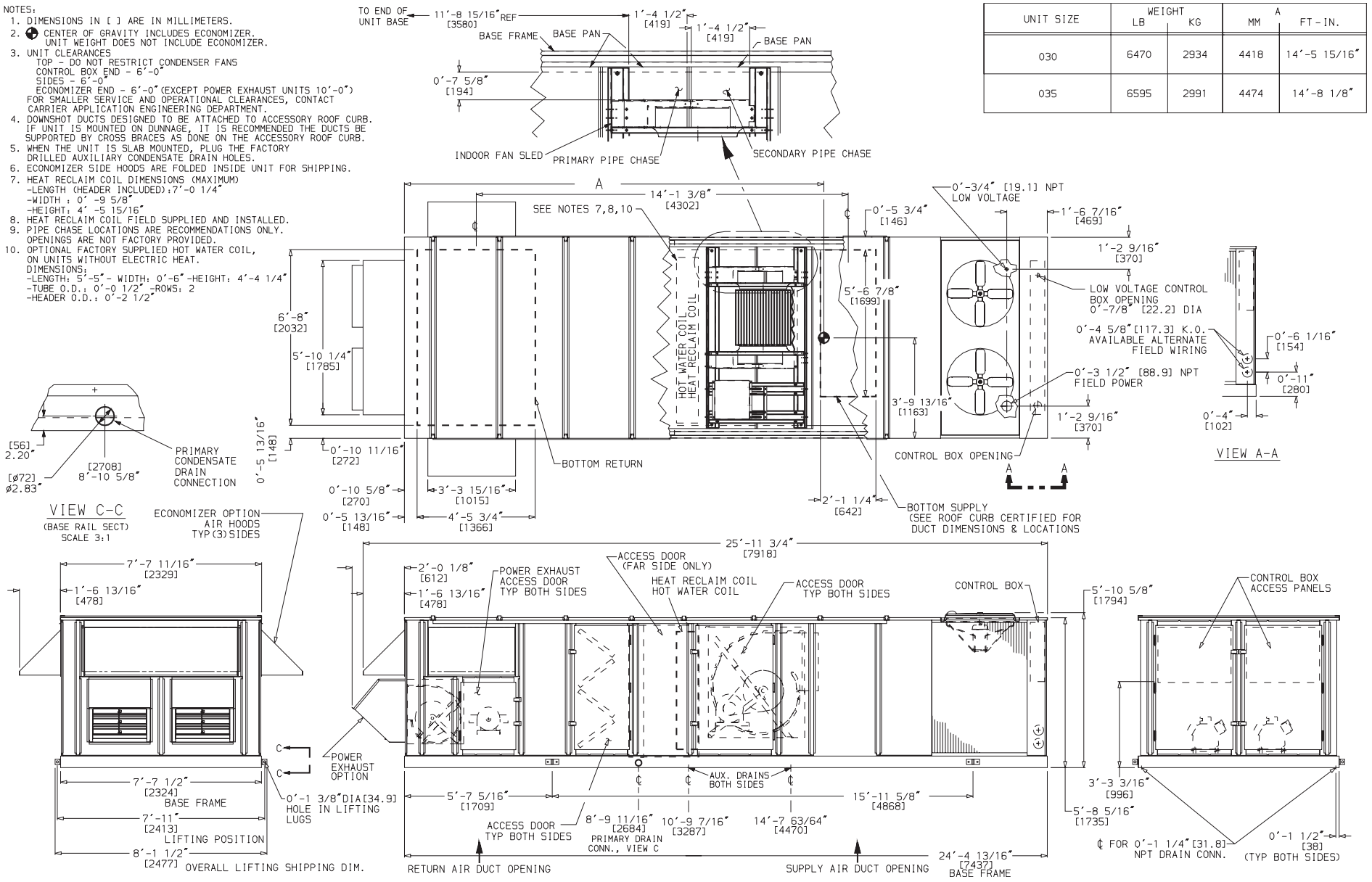
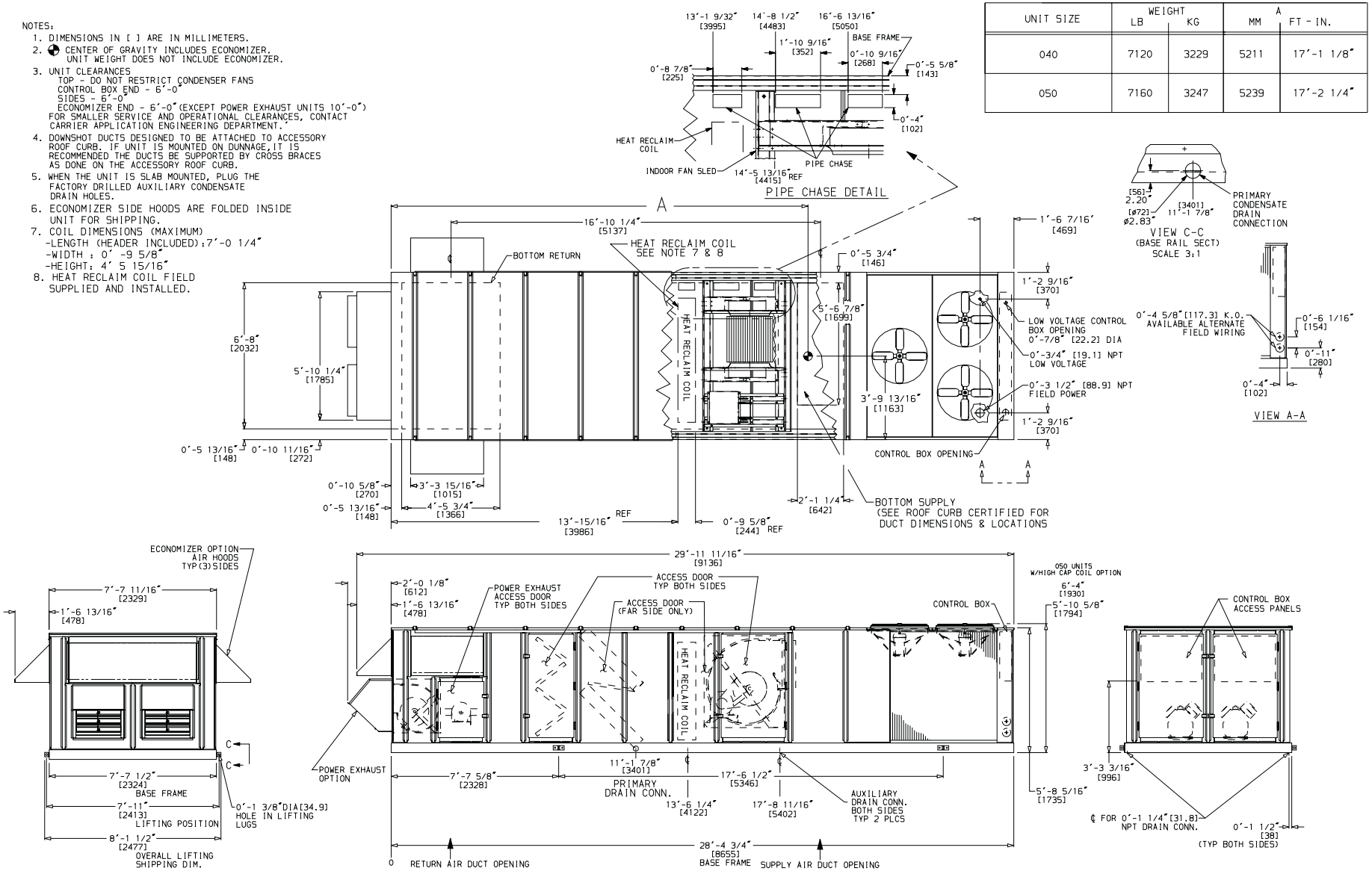


Fig. 23 — Base Unit Dimensional Drawing — 50ZG,ZN055-070 (Extended Chassis)



UNIT SIZE	WEIGHT		A	
	LB	KG	MM	FT - IN.
030	6470	2934	4418	14'-5 15/16"
035	6595	2991	4474	14'-8 1/8"

Fig. 24 — Base Unit Dimensional Drawing — 50ZG,ZN030,035 (Extended Chassis with Discharge Plenum)



UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
040	7120	3229	5211	17'-1 1/8"
050	7160	3247	5239	17'-2 1/4"

Fig. 25 — Base Unit Dimensional Drawing — 50ZG,ZN040,050 (Extended Chassis with Discharge Plenum)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
055	8800	3990	2959	9′-8 1/2"	6940	22′-9 3/4"	6393	20′-11 11/16"	1163	3′-9 25/32"	11780	38′-7 13/16"	12164	39′-10 7/8"
060	9100	4127	2959	9′-8 1/2"	6940	22′-9 3/4"	6393	20′-11 11/16"	1163	3′-9 25/32"	11780	38′-7 13/16"	12164	39′-10 7/8"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.
7. HEAT RECLAIM COIL DIMENSIONS (MAXIMUM)
   -LENGTH (HEADER INCLUDED):7′-0 1/4"
   -WIDTH : 0′ -9 5/8"
   -HEIGHT: 5′ -6 "
8. HEAT RECLAIM COIL FIELD SUPPLIED AND INSTALLED.
9. PIPE CHASE LOCATIONS ARE RECOMMENDATIONS ONLY. OPENINGS ARE NOT FACTORY PROVIDED.
10. OPTIONAL FACTORY SUPPLIED HOT WATER COIL, ON UNITS WITHOUT ELECTRIC HEAT.
    DIMENSIONS:
    -LENGTH: 5′-5" - WIDTH: 0′-6" -HEIGHT: 5′-4 1/2"
    -TUBE O.D.: 0′-0 1/2" -ROWS: 2
    -HEADER O.D. (2 TUBES): 0′-1 1/2"

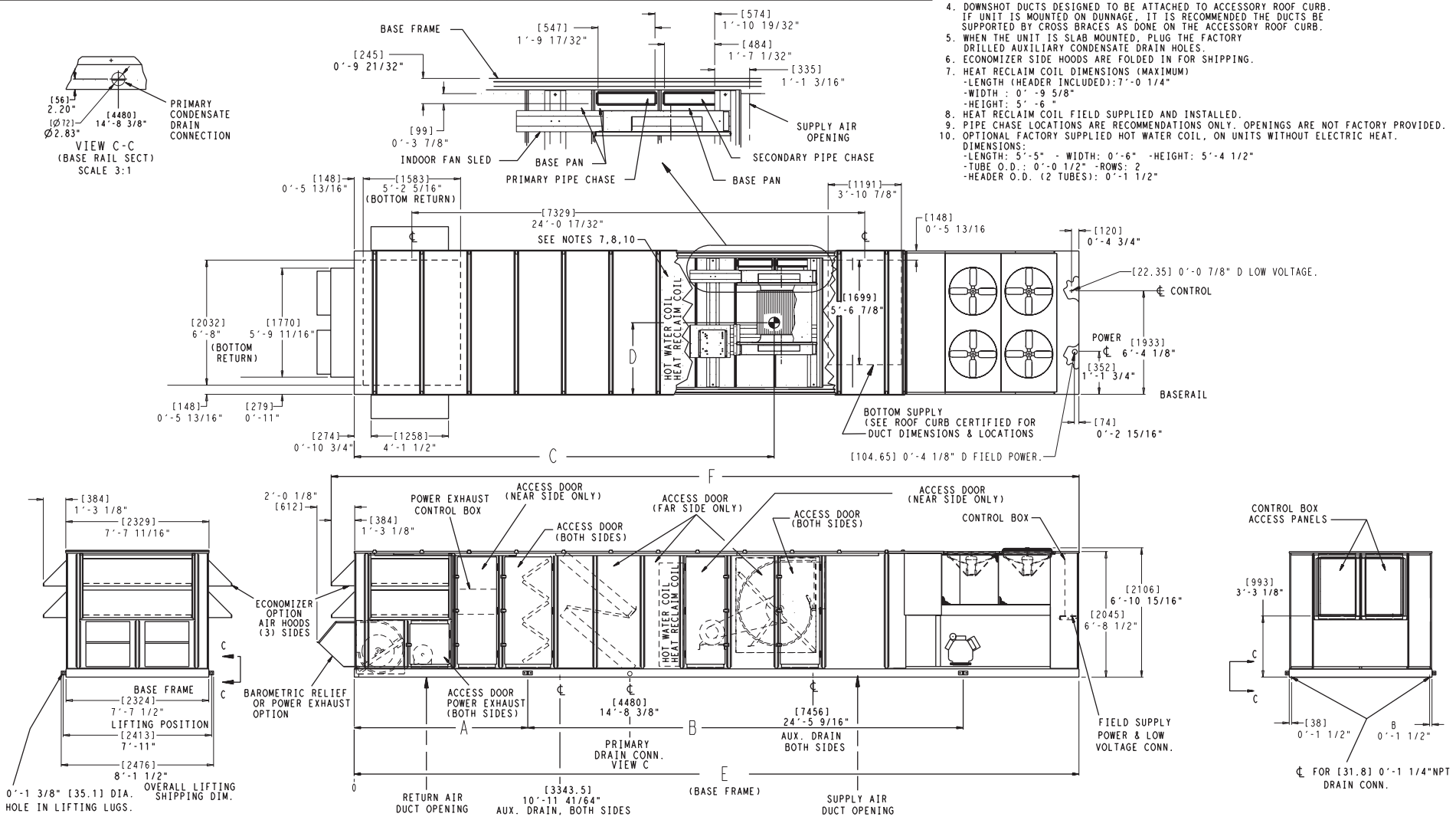


Fig. 26 — Base Unit Dimensional Drawing — 50ZG,ZN055,060 (Extended Chassis with Discharge Plenum)

UNIT SIZE	WEIGHT		"A" DIMENSION	
	LBS.	KGS.	MM	FT. IN.
075	12805	5808	7501	24'-7 5/16"
090	13015	5903	7550	24'-9 1/4"
105	13745	6235	7800	25'-7 5/64"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY AND UNIT WEIGHT INCLUDES ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 10'-0"
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS (END) ARE FOLDED INSIDE UNIT FOR SHIPPING. CENTER HOODS ARE SHIPPED DISASSEMBLED INSIDE ECONOMIZER SECTION.

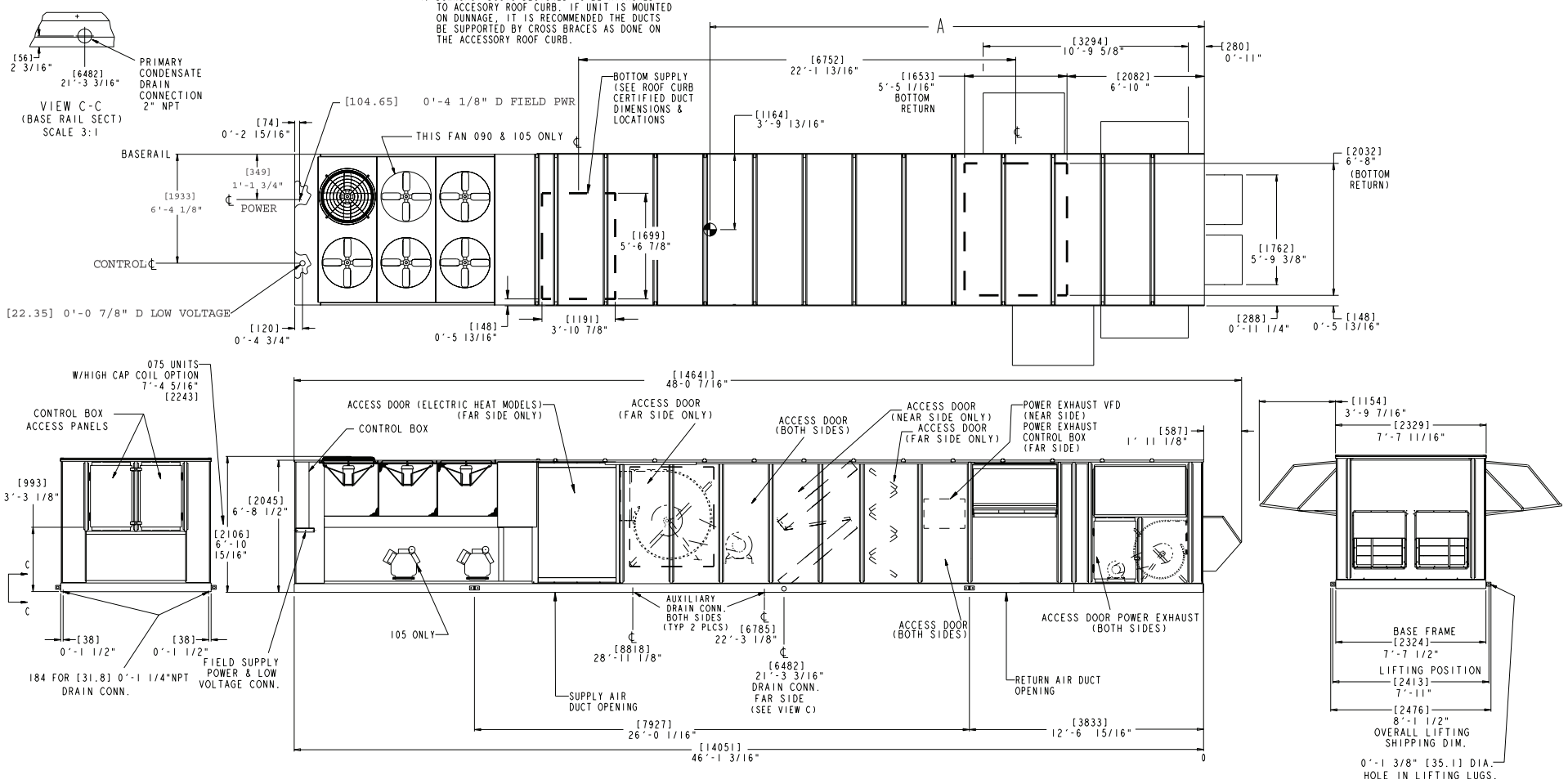


Fig. 27 — Base Unit Dimensional Drawing — 50ZT,ZW075-105 (Units with High-Capacity Power Exhaust)

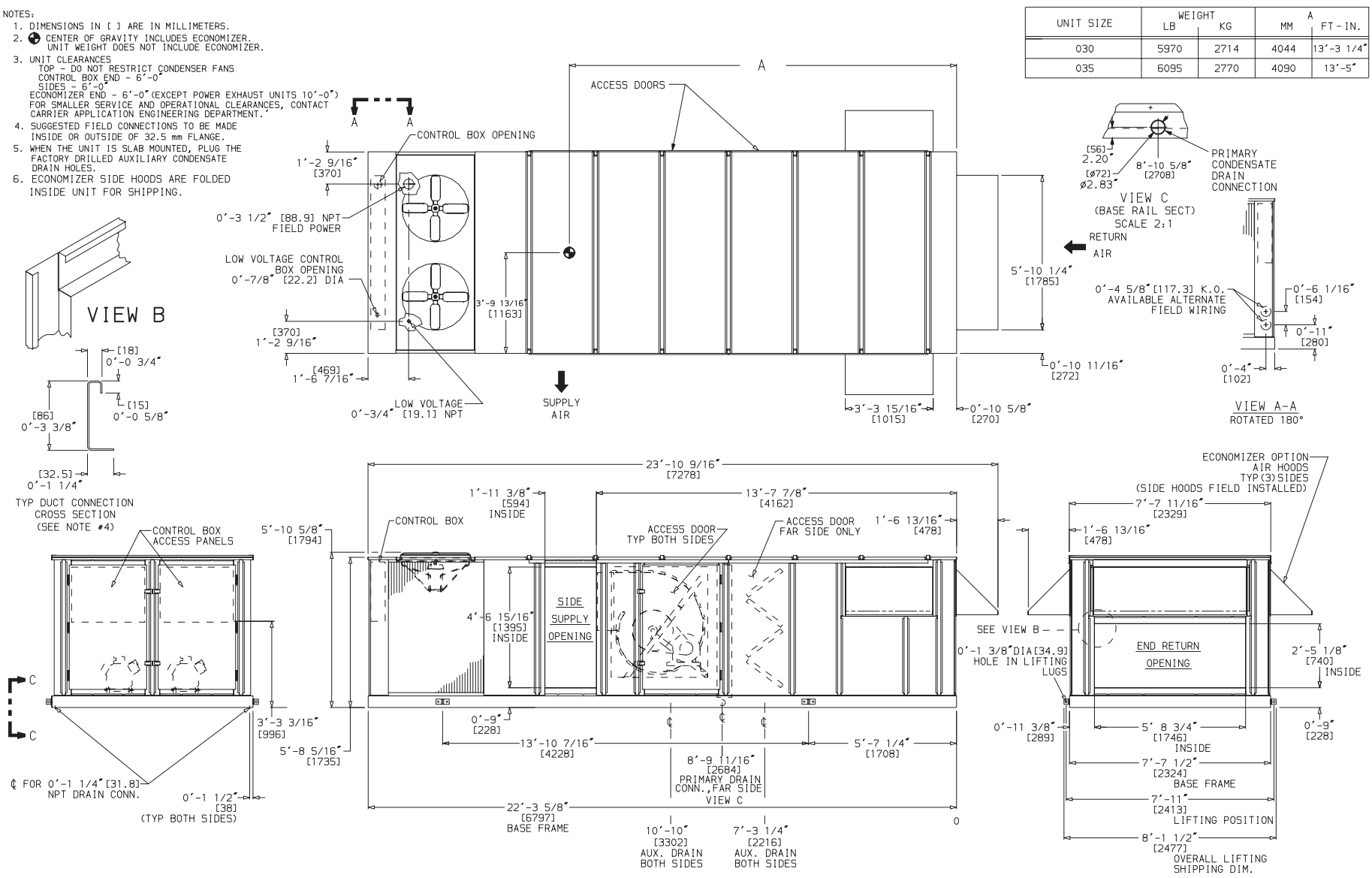


Fig. 28 — Base Unit Dimensional Drawing — 50Z2,Z3030,035 (Standard Chassis)

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 6'-0" (EXCEPT POWER EXHAUST UNITS 10'-0") FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED INSIDE UNIT FOR SHIPPING.

UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
040	6620	3009	4823	15'-9 7/8"
050	6660	3027	4851	15'-11"

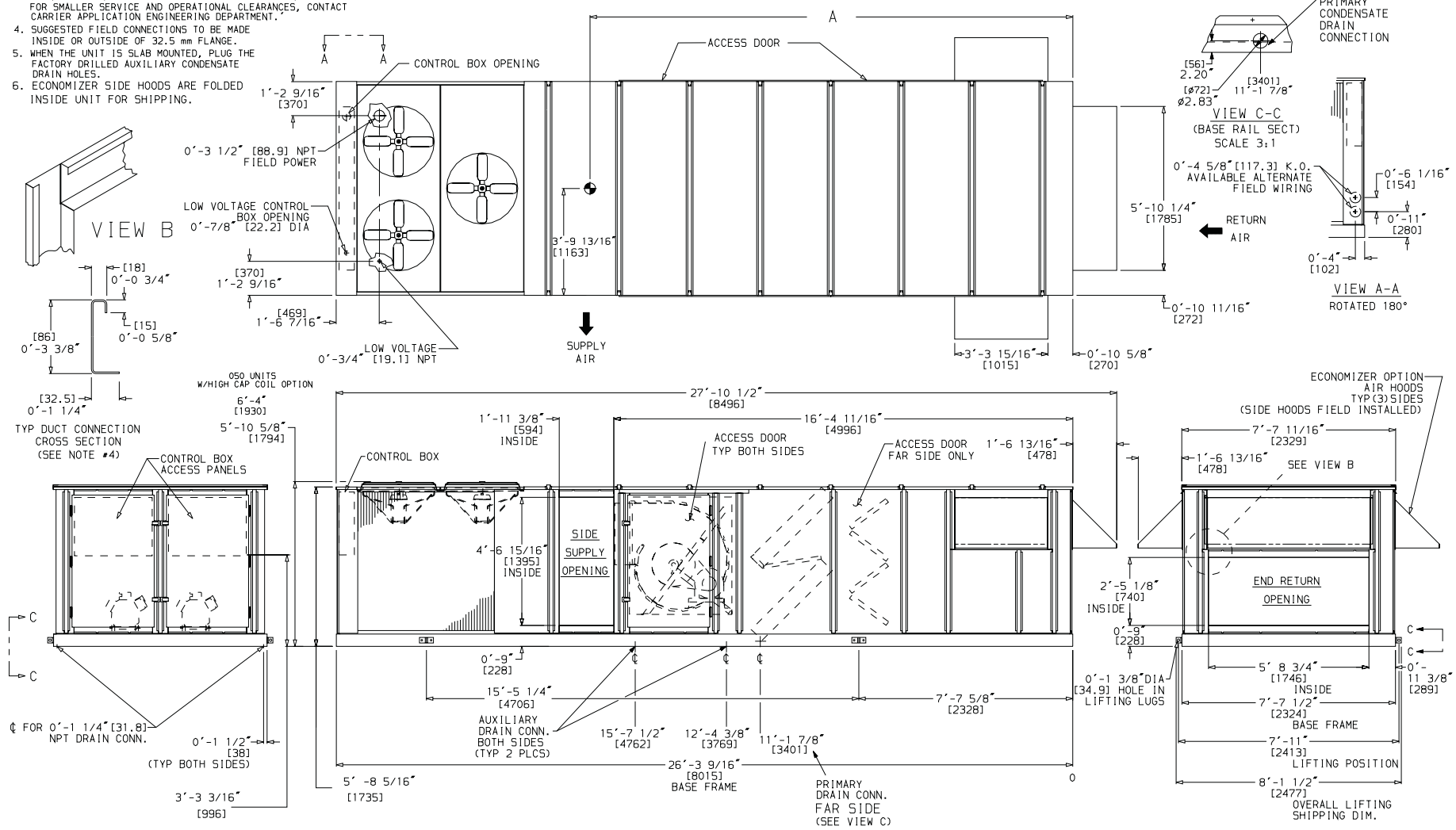


Fig. 29 — Base Unit Dimensional Drawing — 50Z2,Z3040,050 (Standard Chassis)

UNIT SIZE	WEIGHT		A		B		C		D		E		F	
	LBS.	KGS.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.
055	8250	3750	2830	9′-3 3/4"	6427	21′-1"	6045	19′-10"	1163	3′-9 13/16"	11140	36′-6 9/16"	11524	37′-9 11/16"
060	8550	3886	2830	9′-3 3/4"	6427	21′-1"	6045	19′-10"	1163	3′-9 13/16"	11140	36′-6 9/16"	11524	37′-9 11/16"
070	8970	4077	3694	12′-1 3/4"	5563	18′-3"	6477	21′-3"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0" (EXCEPT POWER EXHAUST UNITS 10′-0")
   ECONOMIZER END - 6′-0"
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.′
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.

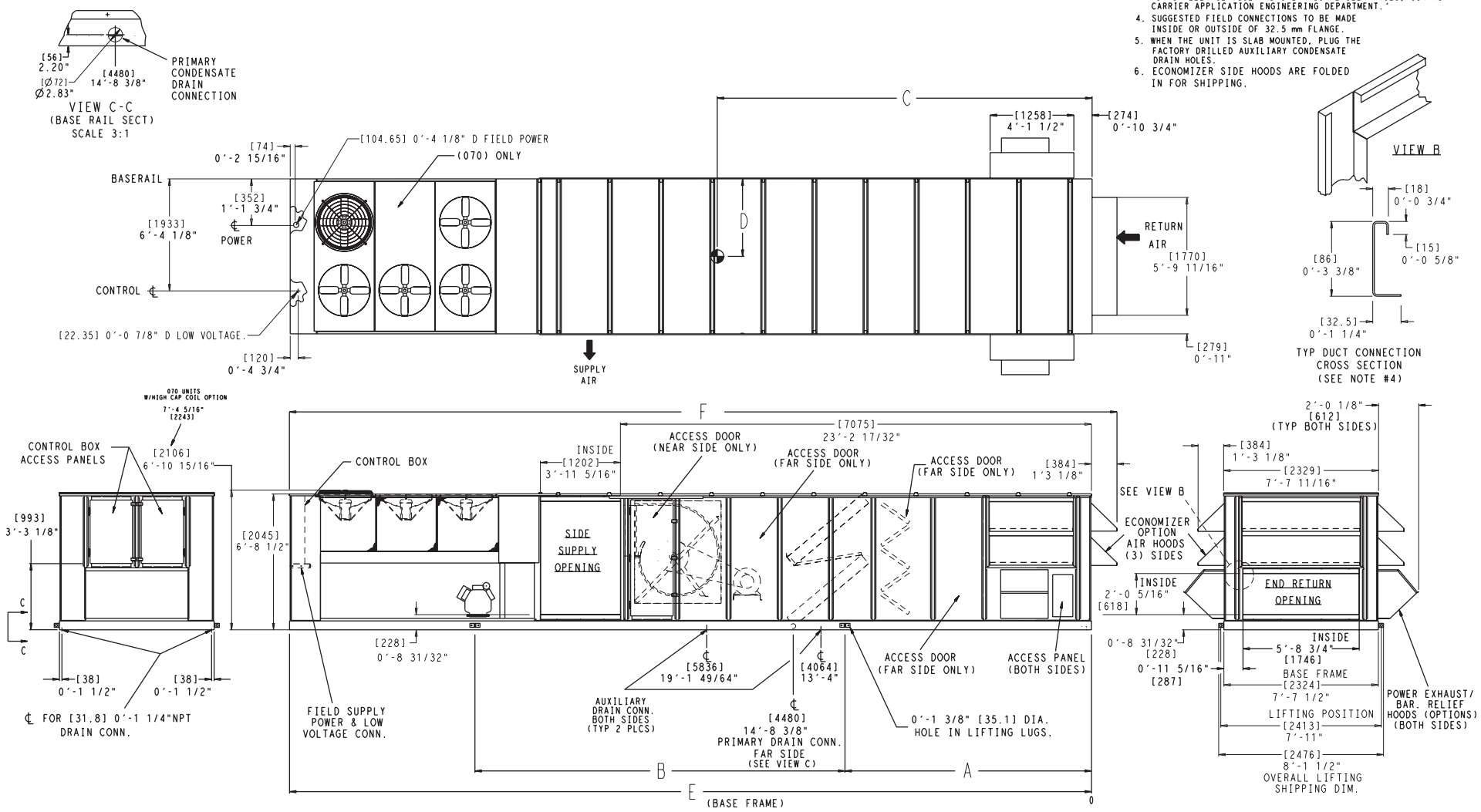


Fig. 30 — Base Unit Dimensional Drawing — 50Z2,Z3055-070 (Standard Chassis)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
075	9870	4477	3544	11′-7 1/2"	6494	21′ 3 5/8"	6528	21′ -5"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
090	10080	4572	3544	11′-7 1/2"	6494	21′ 3 5/8"	6579	21′ -7"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
105	10810	4903	3544	11′-7 1/2"	6494	21′ 3 5/8"	6807	22′ -4"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0" (EXCEPT POWER EXHAUST UNITS 10′-0")
   ECONOMIZER END - 6′-0"
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.

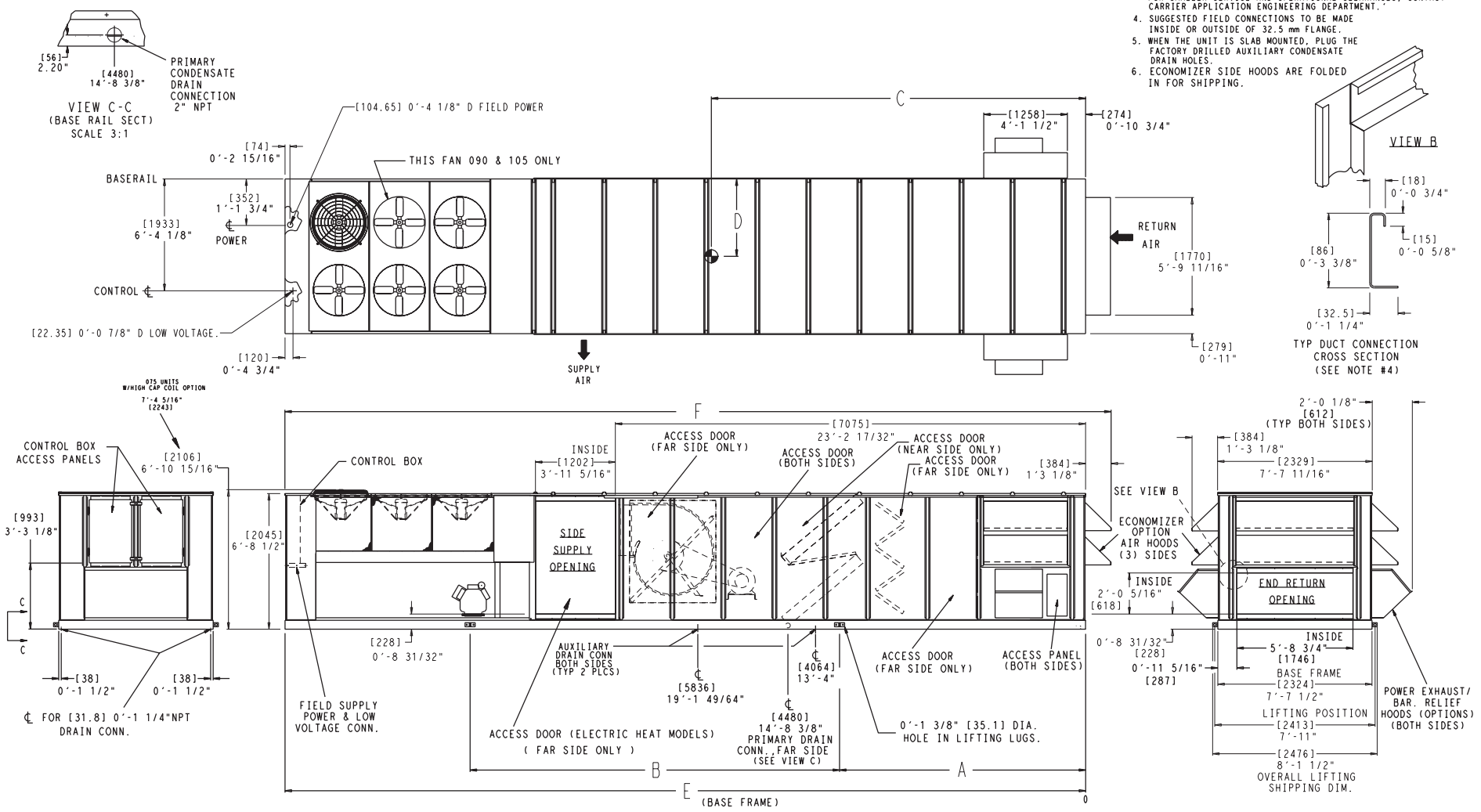
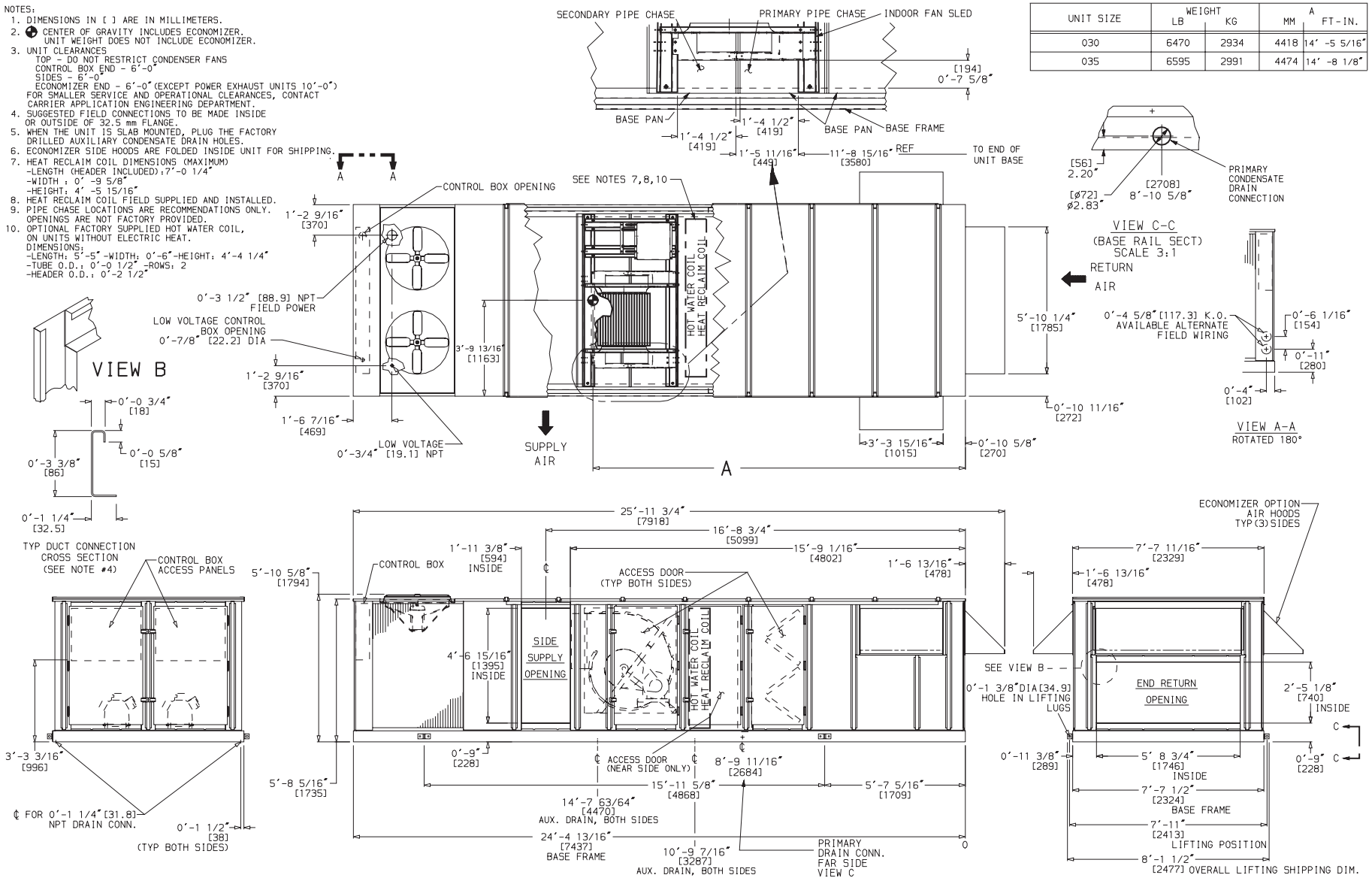
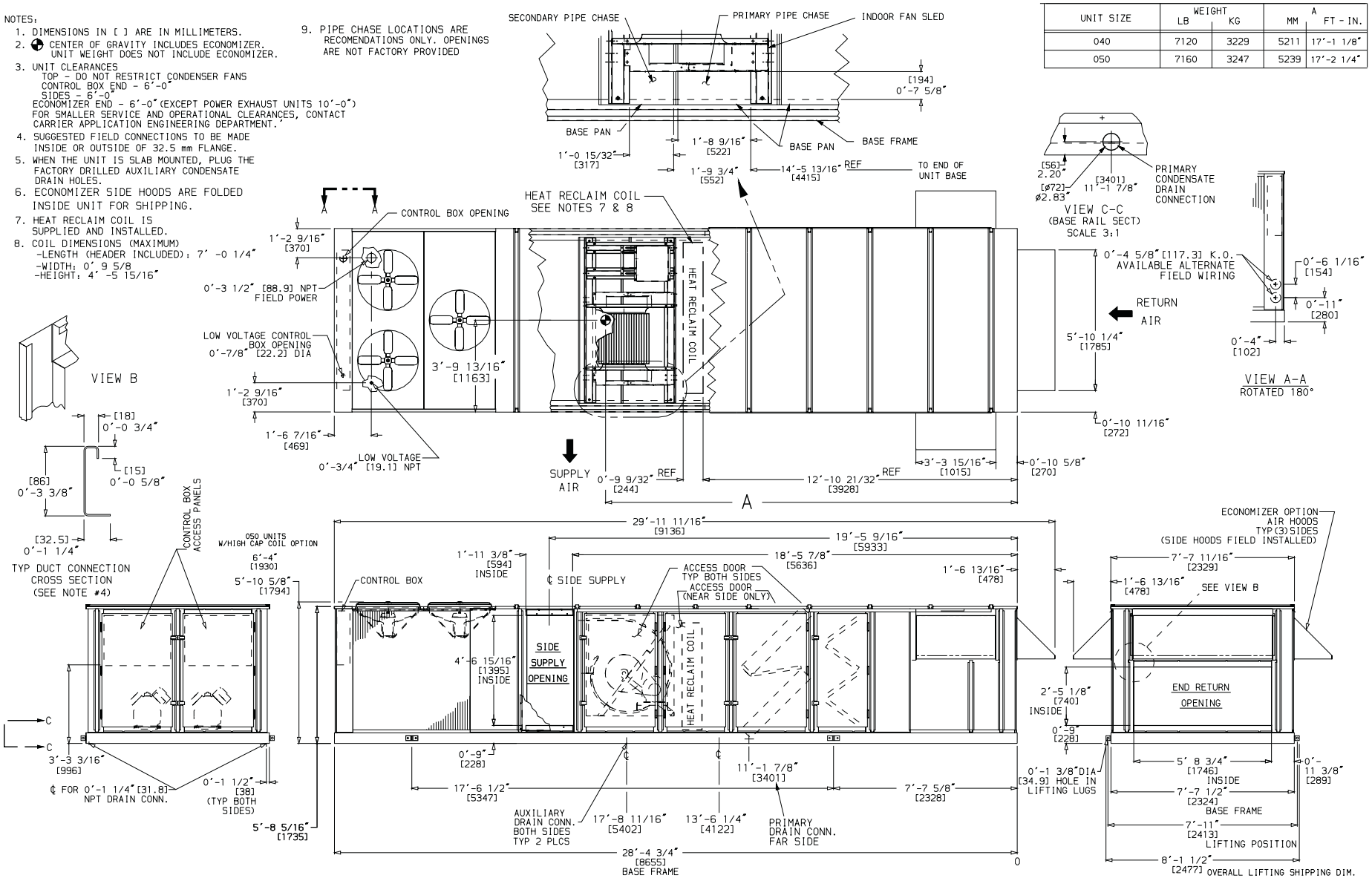


Fig. 31 — Base Unit Dimensional Drawing — 50Z2,Z3075-105 (Standard Chassis)



UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT-IN.
030	6470	2934	4418	14' -5 5/16"
035	6595	2991	4474	14' -8 1/8"

Fig. 32 — Base Unit Dimensional Drawing — 50Z2,Z3030,035 (Extended Chassis)



UNIT SIZE	WEIGHT LB	WEIGHT KG	A MM	A FT - IN.
040	7120	3229	5211	17'-1 1/8"
050	7160	3247	5239	17'-2 1/4"

Fig. 33 — Base Unit Dimensional Drawing — 50Z2,Z3040,050 (Extended Chassis)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
055	8800	3990	2959	9′-8 1/2"	6940	22′-9 3/4"	6393	20′-11 11/16"	1163	3′-9 13/16"	11780	38′-7 13/16"	12164	39"-10 7/8"
060	9100	4127	2959	9′-8 1/2"	6940	22′-9 3/4"	6393	20′-11 11/16"	1163	3′-9 13/16"	11780	38′-7 13/16"	12164	39′-10 7/8"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0" (EXCEPT POWER EXHAUST UNITS 10′-0")
   ECONOMIZER END - 6′-0"
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.
7. HEAT RECLAIM COIL DIMENSIONS (MAXIMUM)
   -LENGTH (HEADER INCLUDED):7′-0 1/4"
   -WIDTH : 0′ -9 5/8"
   -HEIGHT: 5′ -6 "
8. HEAT RECLAIM COIL FIELD SUPPLIED AND INSTALLED.
9. PIPE CHASE LOCATIONS ARE RECOMMENDATIONS ONLY. OPENINGS ARE NOT FACTORY PROVIDED.
10. OPTIONAL FACTORY SUPPLIED HOT WATER COIL, ON UNITS WITHOUT ELECTRIC HEAT.
    DIMENSIONS:
    -LENGTH: 5′-5" - WIDTH: 0′-6" -HEIGHT: 5′-4 1/2"
    -TUBE O.D.: 0′-0 1/2" -ROWS: 2
    -HEADER O.D. (2 TUBES): 0′-1 1/2"

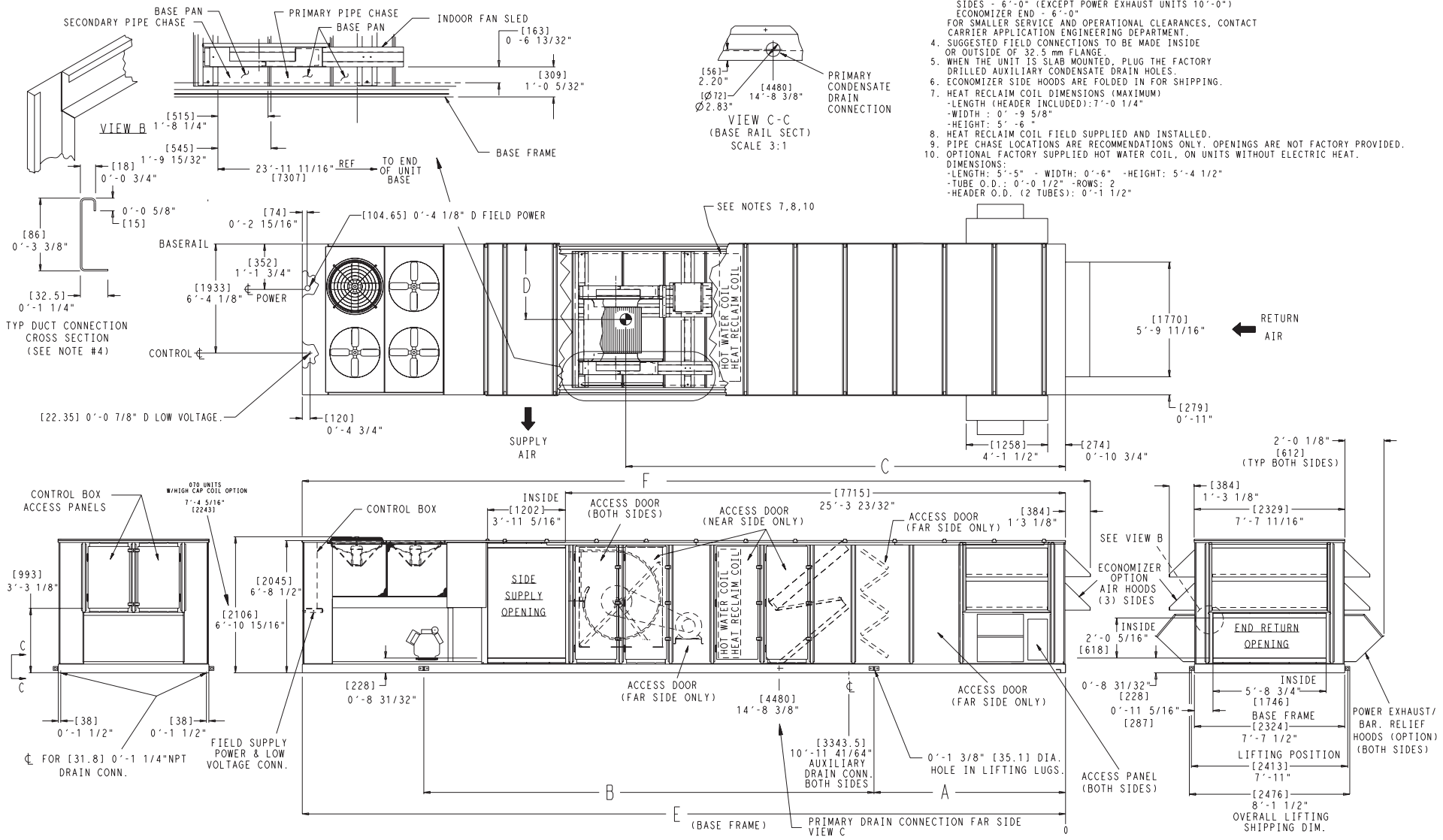


Fig. 34 — Base Unit Dimensional Drawing — 50Z2,Z3055,060 (Extended Chassis)

UNIT SIZE	WEIGHT		"A" DIMENSION	
	LBS.	KGS.	MM	FT. IN.
075	12805	5808	7501	24'-7 5/16"
090	13015	5903	7550	24'-9 1/4"
105	13745	6235	7800	25'-7 5/64"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY AND UNIT WEIGHT INCLUDES ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6'-0"
   SIDES - 6'-0"
   ECONOMIZER END - 10'-0"
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS (END) ARE FOLDED INSIDE UNIT FOR SHIPPING. CENTER HOODS ARE SHIPPED DISASSEMBLED INSIDE ECONOMIZER SECTION.

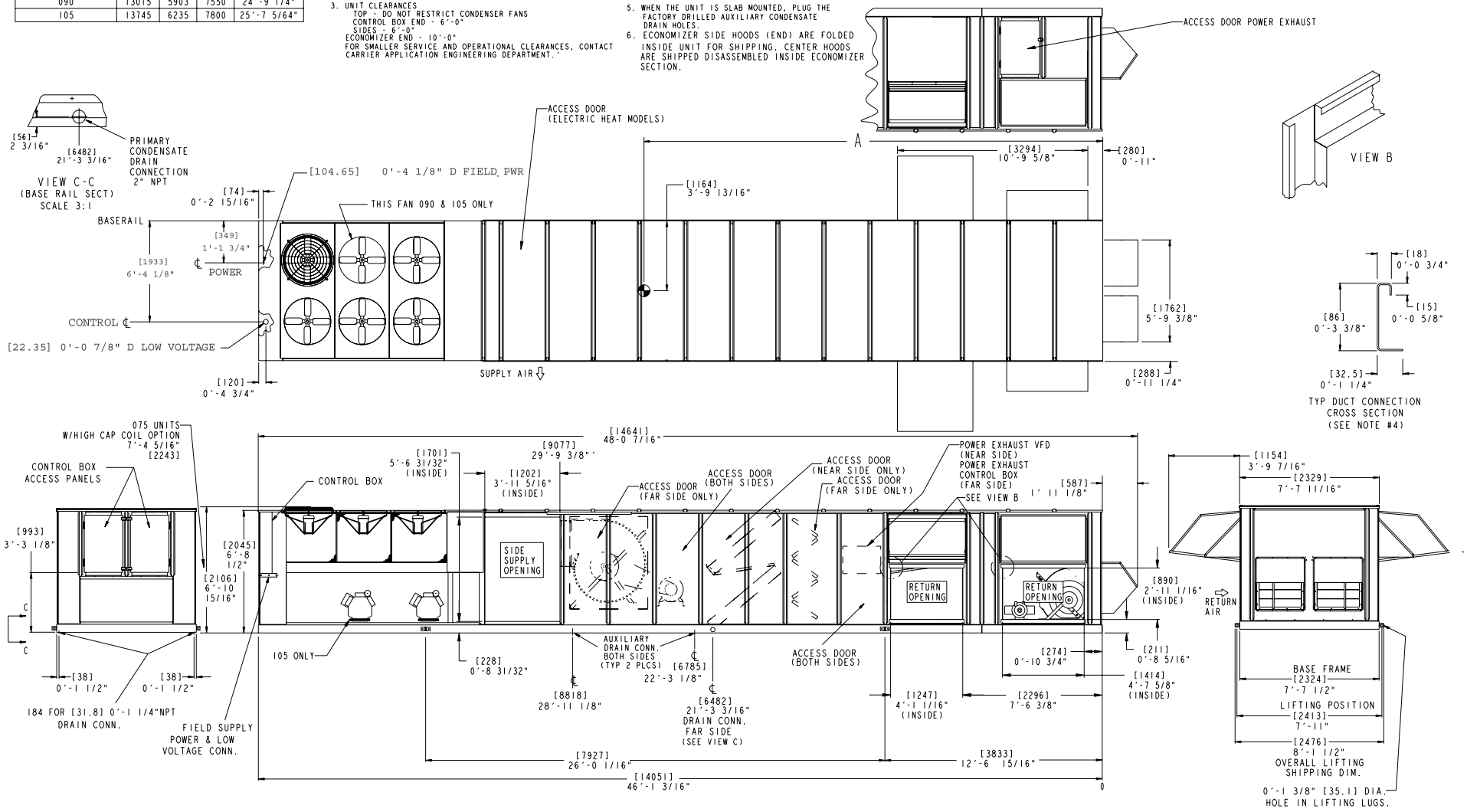


Fig. 35 — Base Unit Dimensional Drawing — 50ZX,ZZ075-105 (Units with High-Capacity Power Exhaust)

UNIT SIZE	WEIGHT LBS.	WEIGHT KGS.	A MM	A FT. IN.	B MM	B FT. IN.	C MM	C FT. IN.	D MM	D FT. IN.	E MM	E FT. IN.	F MM	F FT. IN.
075	11340	5143	3543	11′-7 1/2"	6494	21′ -3 5/8"	5791	19′ 0"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
090	11550	5239	3543	11′-7 1/2"	6494	21′ -3 5/8"	5842	19′ 2"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"
105	12280	5570	3543	11′-7 1/2"	6494	21′ -3 5/8"	6096	20′ 0"	1163	3′-9 13/16"	12049	39′-6 3/8"	12433	40′-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6′-0"
   SIDES - 6′-0"
   ECONOMIZER END - 6′-0"(EXCEPT POWER EXHAUST UNITS 10′-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.′
4. DOWNSHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB. IF UNIT IS MOUNTED ON DUNNAGE,IT IS RECOMMENDED THE DUCTS BE SUPPORTED BY CROSS BRACES AS DONE ON THE ACCESSORY ROOF CURB.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.

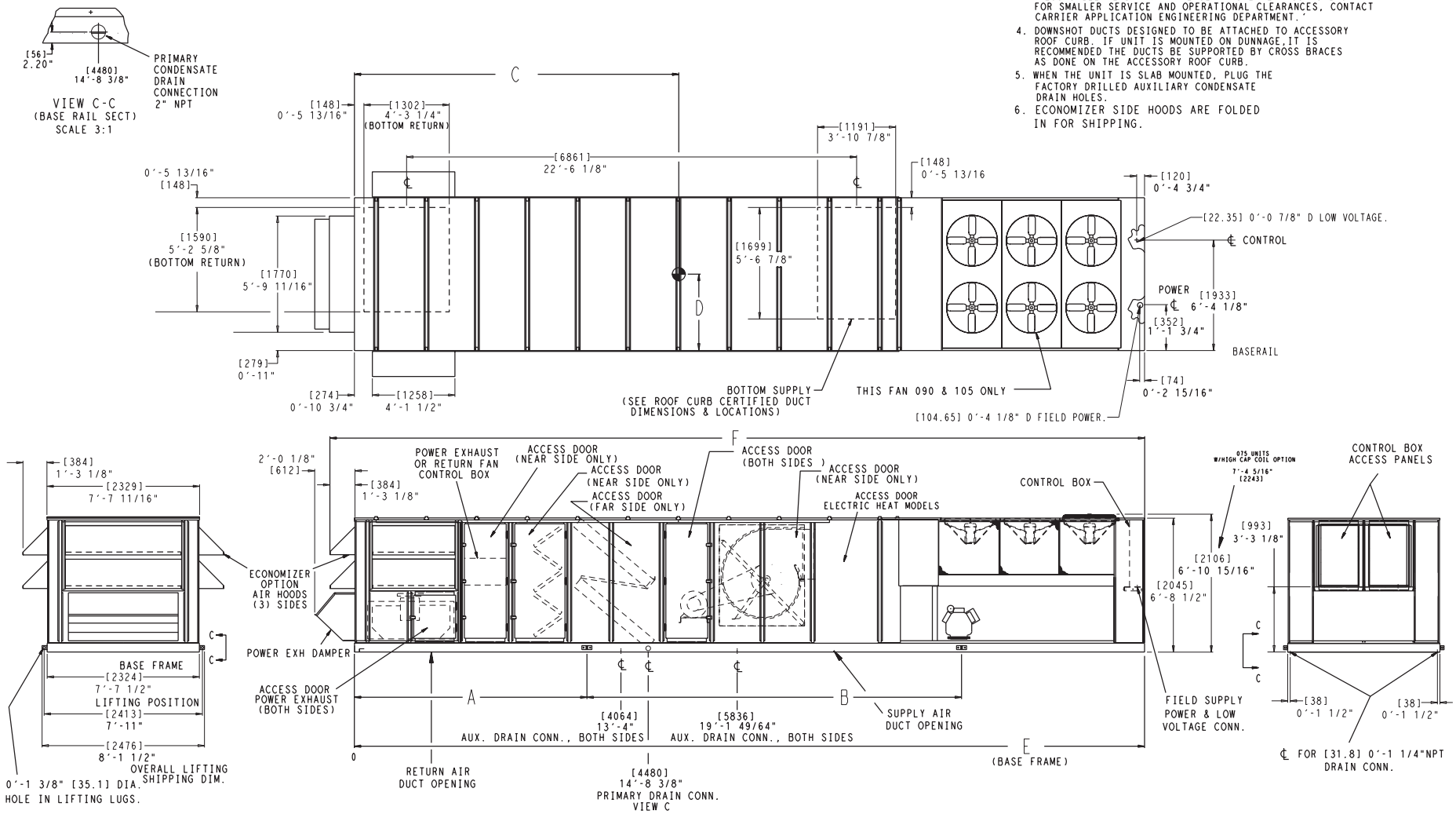


Fig. 36 — Base Unit Dimensional Drawing — 50Z6,Z8075-105 (Return/Exhaust Fan Units)

UNIT SIZE	WEIGHT		A		B		C		D		E		F	
	LBS.	KGS.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.	MM	FT. IN.
075	11340	5143	3544	11´-7 1/2"	6494	21´ 3 5/8"	5791	19´ 0"	1163	3´-9 13/16"	12049	39´-6 3/8"	12433	40´-9 1/2"
090	11550	5239	3544	11´-7 1/2"	6494	21´ 3 5/8"	5842	19´ 2"	1163	3´-9 13/16"	12049	39´-6 3/8"	12433	40´-9 1/2"
105	12280	5570	3544	11´-7 1/2"	6494	21´ 3 5/8"	6096	20" 0"	1163	3´-9 13/16"	12049	39´-6 3/8"	12433	40´-9 1/2"

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY INCLUDES ECONOMIZER. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER.
3. UNIT CLEARANCES
   TOP - DO NOT RESTRICT CONDENSER FANS
   CONTROL BOX END - 6´-0"
   SIDES - 6´-0"
   ECONOMIZER END - 6´-0" (EXCEPT POWER EXHAUST UNITS 10´-0")
   FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
4. SUGGESTED FIELD CONNECTIONS TO BE MADE INSIDE OR OUTSIDE OF 32.5 mm FLANGE.
5. WHEN THE UNIT IS SLAB MOUNTED, PLUG THE FACTORY DRILLED AUXILIARY CONDENSATE DRAIN HOLES.
6. ECONOMIZER SIDE HOODS ARE FOLDED IN FOR SHIPPING.

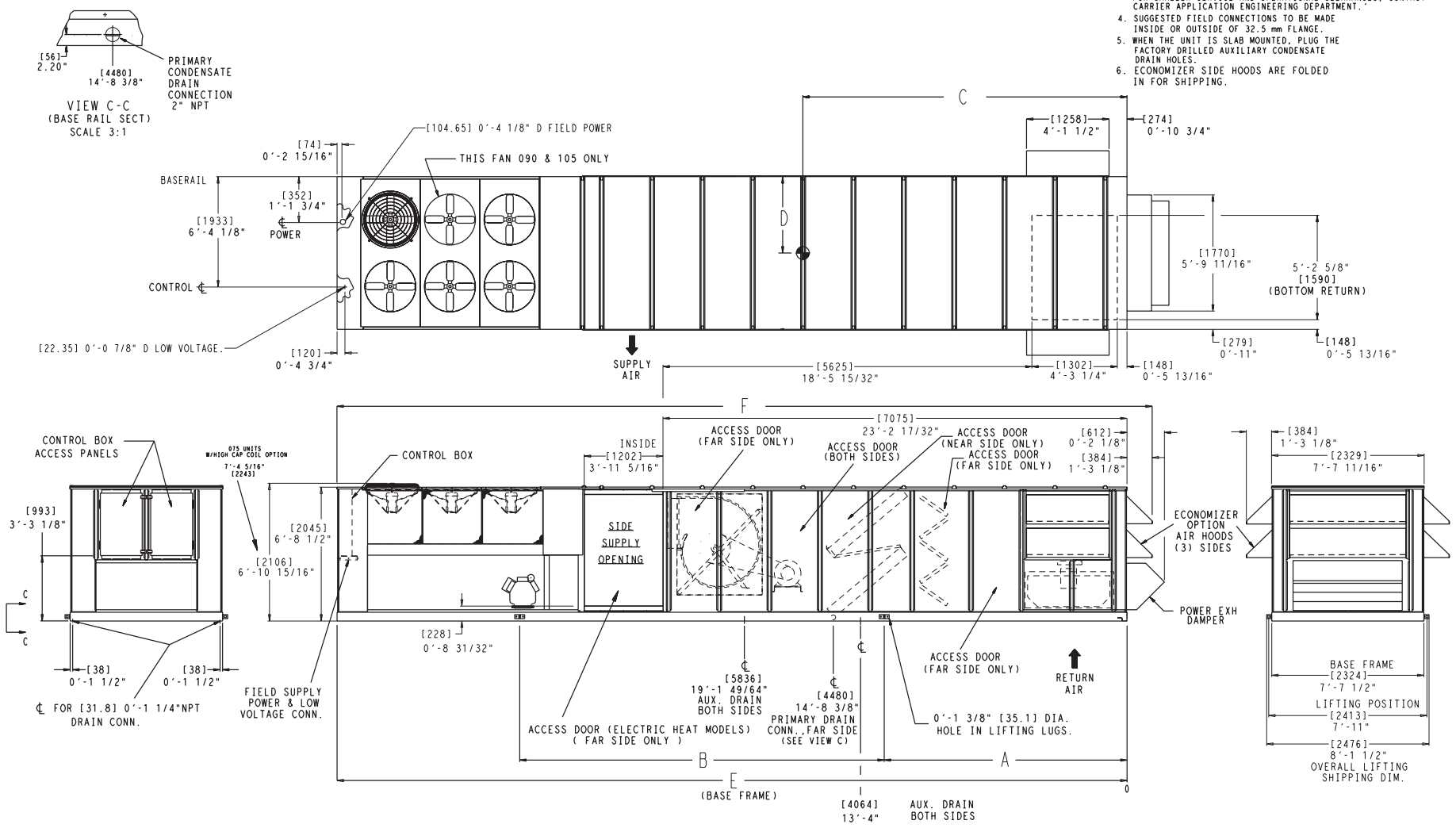


Fig. 37 — Base Unit Dimensional Drawing — 50Z7,Z9075-105 (Return/Exhaust Fan Units)

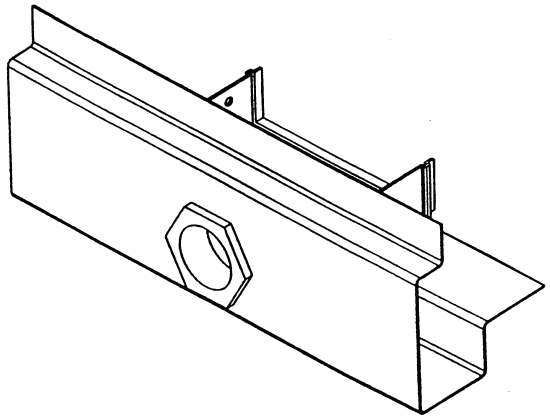


Fig. 38 — Primary Drain Connection

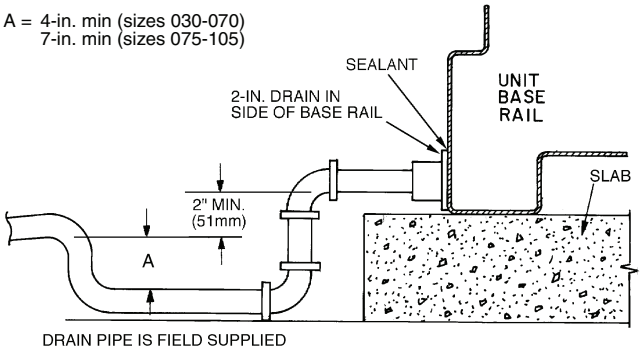


Fig. 39 — Slab-Mounted Condensate Drain Piping Details

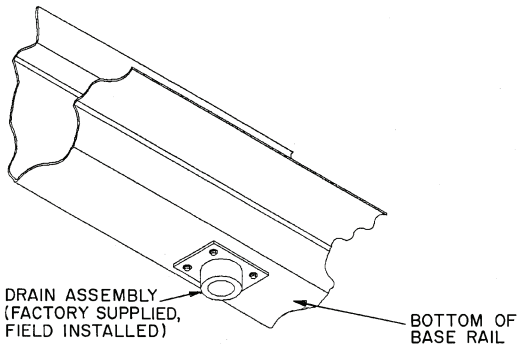


Fig. 40 — Secondary Condensate Drain Location

Install Outdoor Hoods (50ZG,ZN,Z2,Z3,Z6,Z7, Z8,Z9)

UNIT SIZES 030-050

25% Outdoor-Air Hoods (Units without Economizer Option) (Fig. 42)

1. Outdoor-air hoods are shipped bolted to the unit in a shipping position. Remove the 6 screws holding each 25% outdoor-air hood shipping cover in place.

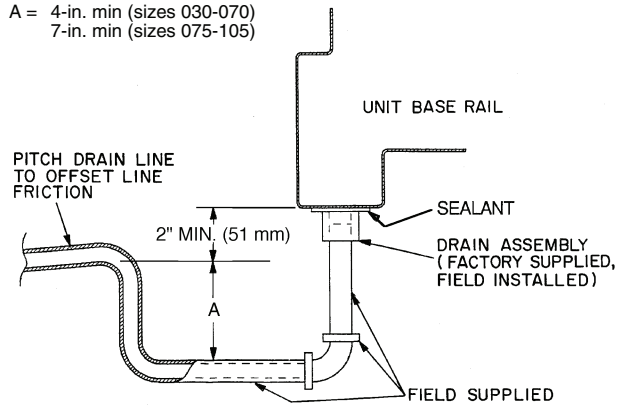


Fig. 41 — Curb Mounted Condensate Drain Piping Details

2. Remove the holddown screw from each upper corner of each hood.
3. Pivot hoods outward (2 hoods).
4. Install 17 screws around outside of each hood. (Screws are in the fastener package taped to the basepan inside the fan section.)
5. Apply a bead of RTV or similar sealant to corner of each hood at pivot point to prevent water leaks. See Fig. 43.

Economizer Hoods (Units with Economizer Option, Fig. 44 and 45)

1. Remove the 4 screws holding each of the 2 economizer side hoods in place.
2. Pivot hoods outward (2 hoods).
3. Apply seal strip to vertical flange of hood sides.
4. Install hood sides to hood top using 19 screws (7 each side, 5 top). Screws are in fastener package located with the hood sides and seal strip which is taped inside the unit.
5. Apply a bead of RTV or similar sealant to corners of economizer hoods to prevent water leaks.

UNIT SIZES 055-105

25% Outdoor-Air Hoods (Fig. 46) — The outdoor-air hoods are factory installed on the 055-105 units.

Economizer Hoods (Units with Economizer Option) (Fig. 47-49)

1. Remove the 6 screws holding each of the 4 economizer shipping covers in place.
2. Remove the holddown screw from each upper corner of each economizer hood.
3. Pivot hoods outward (4 hoods).
4. Apply seal strip to vertical flange of hood sides.
5. Install 18 screws (5 each side, 6 top, and 2 bottom) around the outside of each hood. (Screws are in the fastener package taped to the basepan inside the fan section.)
6. Apply a bead of RTV or similar sealant to corner of economizer hood at pivot point to prevent water leaks. (See Fig. 43.)

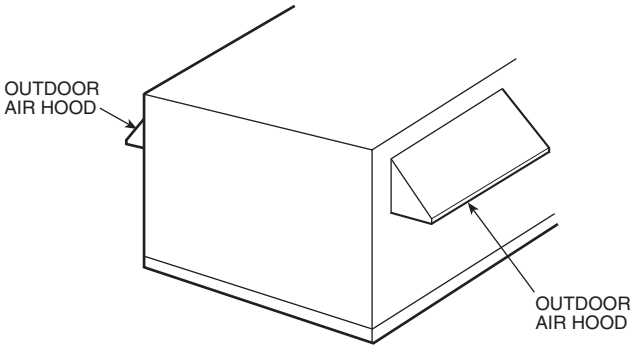


Fig. 42 — Outdoor Air Hood Installation (50ZG,ZN,Z2,Z3030-050)

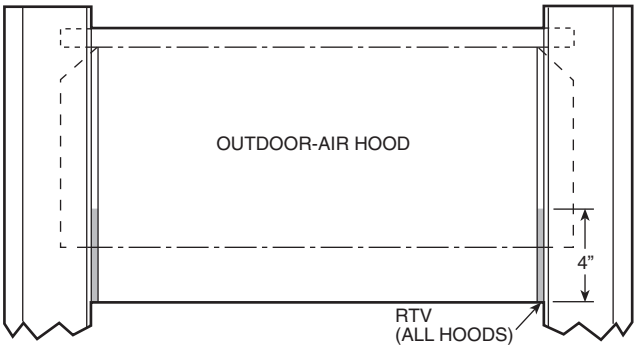


Fig. 43 — Outdoor-Air and Economizer Hood

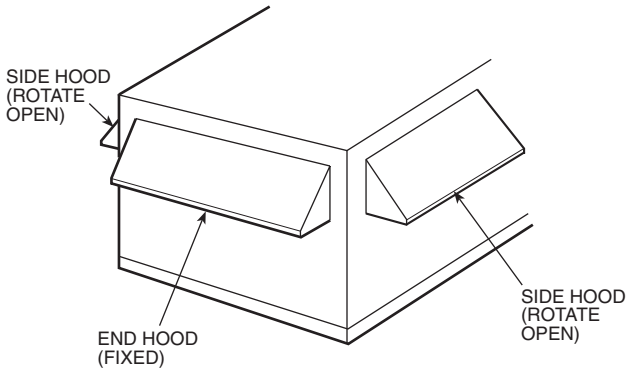


Fig. 44 — Economizer Outdoor-Air Hood Installation (50ZG,ZN,Z2,Z3030-050)

Install Economizer Hoods (50ZT,ZW,ZX, ZZ) — The economizer uses a total of 4 outdoor intake hoods, 2 on each side of the unit. See Fig. 50. Two small hoods (one per side) are factory-installed and are pivoted inside the unit chassis for shipment. Two large hoods are shipped in packages located inside the unit. The large hoods (1 on each side) require field assembly and mounting.

INSTALL SMALL HOODS — To install the small economizer hoods, perform the following procedure:

1. Remove the 10 screws holding each of the small economizer hood shipping covers in place.
2. Pivot hoods outward (2 hoods).

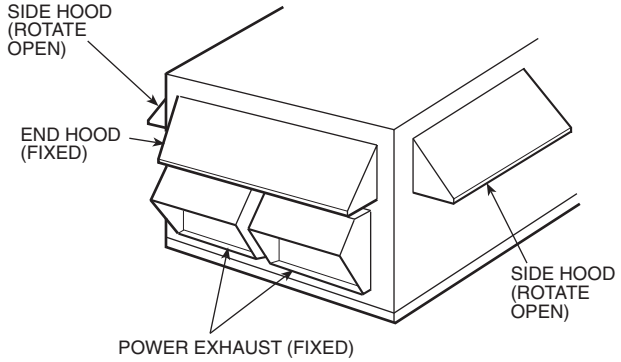


Fig. 45 — Economizer with Power Exhaust Outdoor-Air Hood Installation (50ZG,ZN,Z2,Z3030-050)

3. Apply seal strip to vertical flange of hood sides.
4. Install 15 screws (4 each side, 7 across top) around the outside of each hood. Screws are in the fastener package taped to the basepan inside the fan section.
5. Apply a bead of RTV or similar sealant to corner of economizer hood at pivot point to prevent water leaks. (See Fig. 43.)

INSTALL LARGE HOODS — Large hoods are shipped disassembled in the economizer section of the unit behind the large economizer hood shipping cover. See Fig. 51 for assembly details for large economizer hoods. To install the large economizer hoods, perform the following procedure:

1. Remove the 17 screws holding each of the large economizer hood shipping covers in place.
2. Remove the two packages containing the disassembled large economizer hoods. Each package contains the following: left side hood, right side hood, top hood, front hood, top filter flange, side filter flanges (4), bottom support, front support, filters (6), filter clips (9), seal strip, fasteners.
3. Place seal strip on backside of bottom support along entire length of support, covering 6 clearance holes.
4. Attach bottom support piece to unit. Be sure seal strip is between bottom support and panel on unit.
5. Place seal strip on $^{3}/_{4}$-in. flange on both the left and right side hood.
6. Attach the side filter flanges to the left and right side hoods, 2 on each side hood.
7. Attach left and right side hoods to unit. Be sure seal strip is between side hood and unit.
8. Place seal strip on $^{3}/_{4}$-in. flange on top hood.
9. Attach top filter flange to top hood.
10. Attach top hood to unit and to side hoods. Be sure seal strip is between top hood and unit.
11. Attach front support between left and right side hoods.
12. Place seal strip on all filter flanges.
13. Attach filter clips to front and bottom supports.
14. Install filters and filter clips. Filters are held in place with filter clips.
15. Attach front hood to top and side hoods.
16. Apply RTV or similar sealant to 6 places shown in Fig. 51.

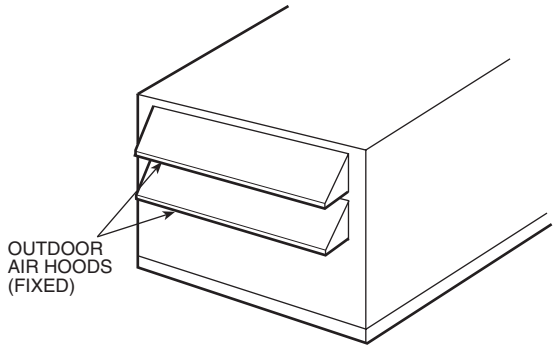


Fig. 46 — 25% Outdoor-Air Hood Location (50ZG,ZN,Z2,Z3055-105)

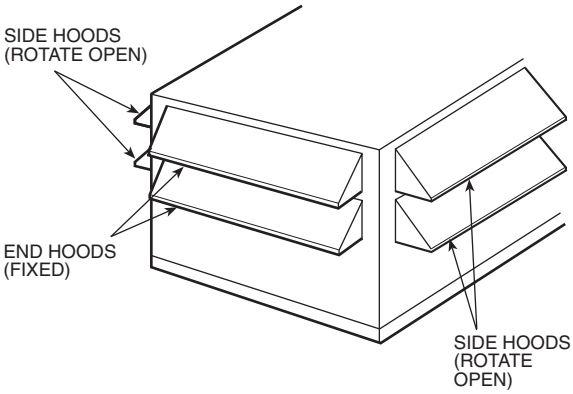


Fig. 47 — Economizer Outdoor-Air Hood Installation (50ZG,ZN,Z2,Z3055-105)

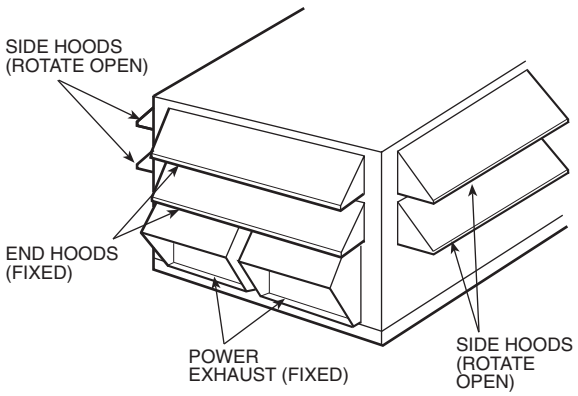


Fig. 48 — Economizer with Power Exhaust Outdoor-Air Hood Installation (50ZG,ZN,Z2,Z3055-105)

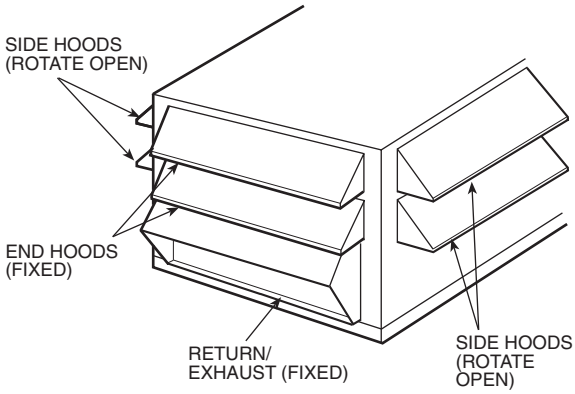
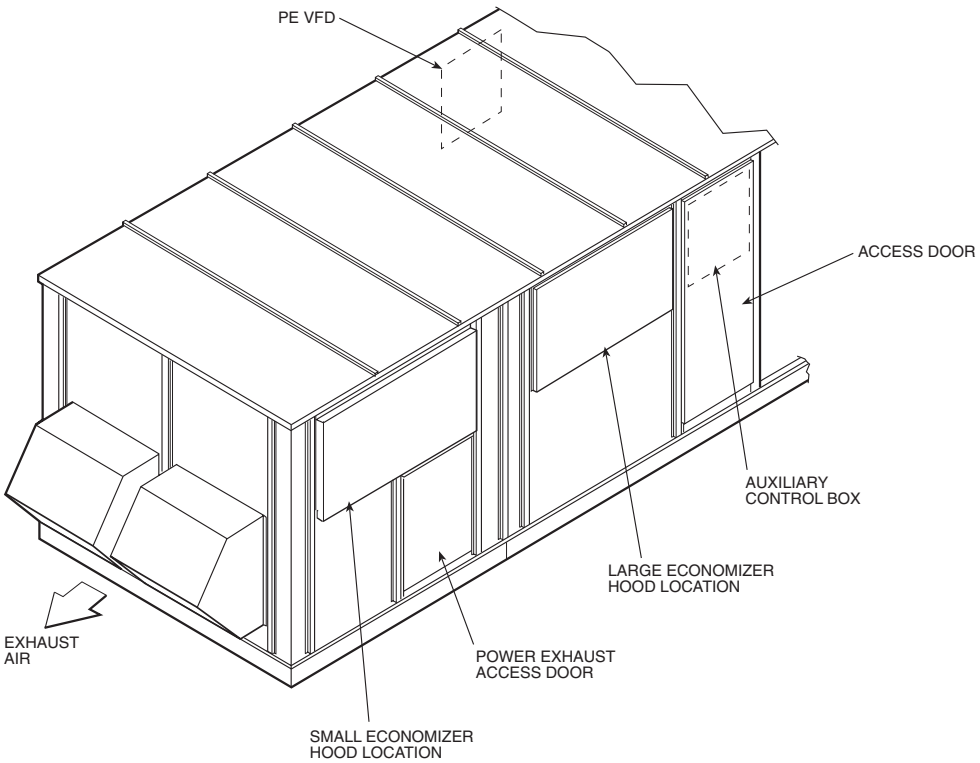


Fig. 49 — Economizer with Return/Exhaust Fan Outdoor-Air Hood Installation (50Z6,Z7,Z8,Z9)



LEGEND

PE VFD — Power Exhaust Variable Frequency Drive

Fig. 50 — Economizer Hood Location — 50ZT,ZW,ZX,ZZ

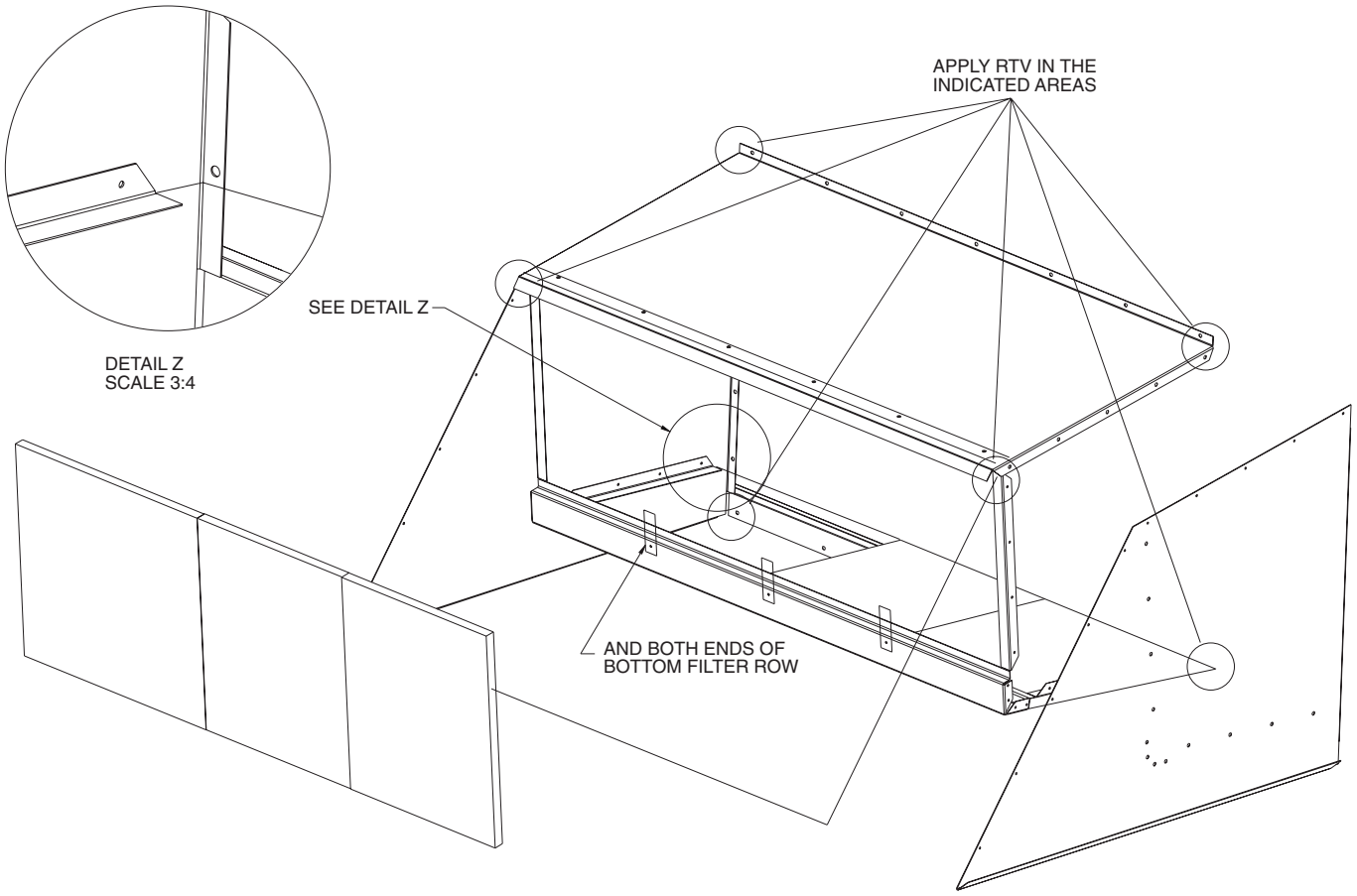


Fig. 51 — Large Economizer Hood Assembly

Field Wire Routing

UNIT SIZES 030-050 — Field wiring can be brought into the unit through the basepan and roof curb or through the corner post in the side of the unit next to the control box.

A $3^{1}/_{2}$-in. NPT coupling for field power and a $^{3}/_{4}$-in. NPT coupling for 24-v control wiring are provided in the basepan. There are two $4^{5}/_{8}$-in. knockouts in the corner post for field power wiring.

If field power wiring is brought through the roof curb, route wiring out through one of the $4^{5}/_{8}$-in. knockouts to the field-supplied disconnect and then back into the unit through the other knockout. See Fig. 52 for recommended disconnect location.

If power wiring is brought through the side of the unit, route wiring from field-supplied disconnect through top $4^{5}/_{8}$-in. knockouts into unit.

If control wiring is to be brought in through the side of the unit, a $^{7}/_{8}$-in. diameter hole must be drilled in the corner post next to the control box.

UNIT SIZES 055-105 — Field wiring is brought into the unit through the bottom of the control box. Wiring can be brought through the roof curb through field-supplied watertight connections. See Fig. 53.

A $4^{5}/_{32}$-in. hole for field power wiring and a $^{7}/_{8}$-in. hole for 24-v control wiring are provided in the bottom of the control box. Field-supplied couplings must be used when routing wiring into the control box.

See Fig. 53 for recommended disconnect location.

Field Electrical Connections

IMPORTANT: The 50ZN,ZW,ZZ,Z3,Z8,Z9 units generate, use, and can radiate radio frequency energy. If units are not installed and used in accordance with these instructions, they may cause radio interference. They have been tested and found to comply with limits of a Class A computing device as defined by FCC (Federal Communications Commission) regulations, Subpart J of Part 15, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

POWER WIRING — Units are factory wired for the voltage shown on the unit nameplate. The main terminal block is suitable for use with aluminum or copper wires. Maximum wire size is 3/0 AWG (American Wire Gage).

Units without Factory-Installed Disconnect — When installing units, provide a disconnect per NEC (National Electrical Code) of adequate size (MOCP [Maximum Overcurrent Protection] of unit is on the informative plate). All field wiring must comply with NEC and all local codes. Size wire based on MCA (Minimum Circuit Amps) on the unit informative plate. See Fig. 54 for power wiring connections to the unit power terminal block and equipment ground. Maximum wire size is two 500 MCM conductors per pole.

Units with Factory-Installed Disconnect — The factory-installed disconnect is an interlocking, door-type. The disconnect handle locks the door when it is in the ON position. The disconnect handle must be in the OFF position to open the

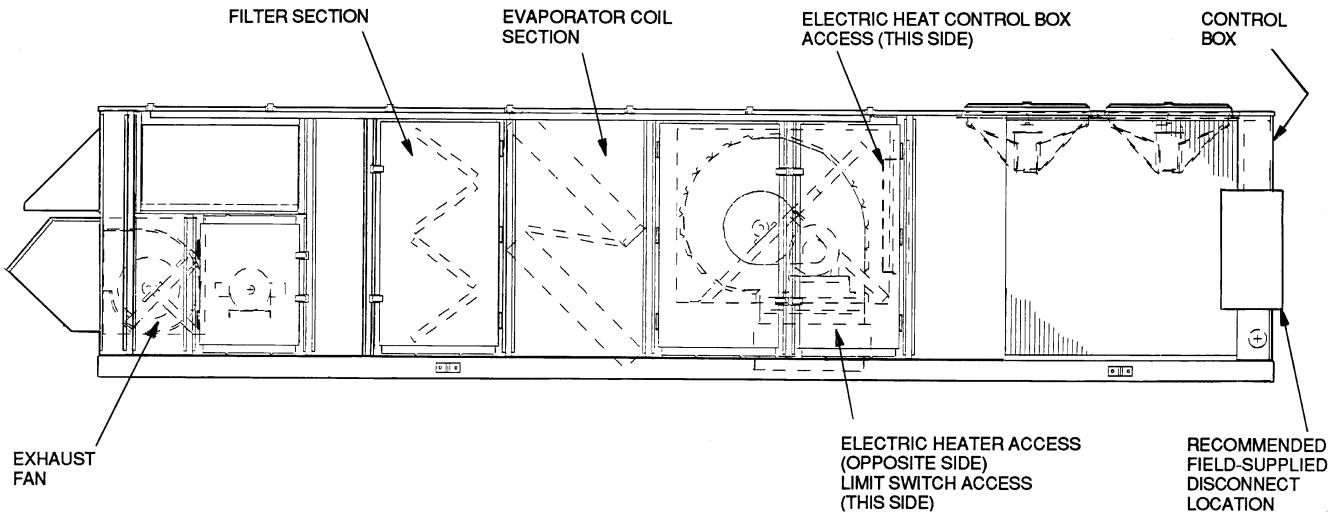
control box door. The disconnect is located in a separate control box behind the control box door. See Fig. 55.

All field wiring must comply with NEC and all local codes. Wire must be sized based on MCA (Minimum Circuit Amps) on the unit informative plate. See Fig. 56 for power wiring connections to the unit disconnect and equipment ground.

DISCONNECT SIZE	MAXIMUM WIRE SIZE (MCM)
200 Amps	300
400 Amps	600
600 Amps	600*

*Two conductors per pole.

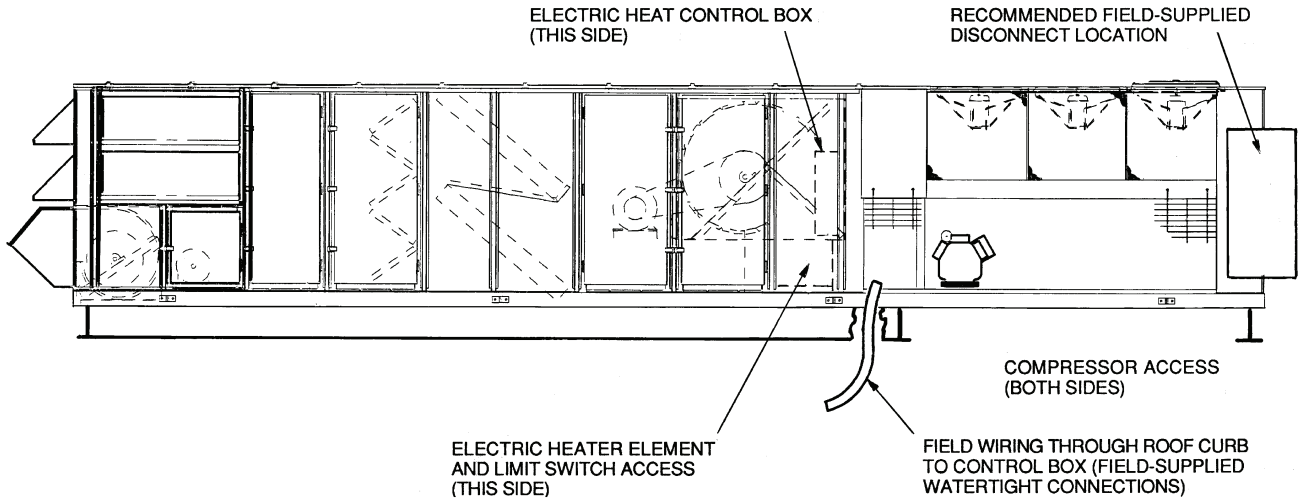
Operating Voltage — Operating voltage to the compressor must be within the voltage range indicated on the unit nameplate. Voltages between phases must be balanced within 2%, and the current must be balanced within 10%. See Tables 7-22 for unit electrical data.



⚠ CAUTION

Use care when drilling into corner post to avoid damage to condenser coil.

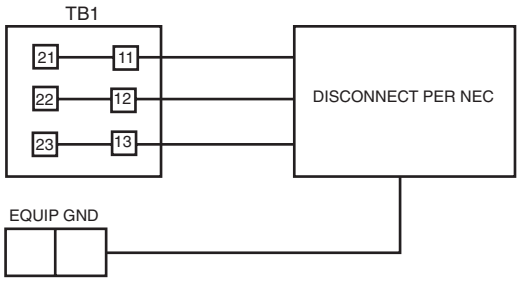
Fig. 52 — Disconnect Location, 030-050 Units (Vertical Discharge Unit Shown)



⚠ CAUTION

Use care when drilling into corner post to avoid damage to condenser coil.

Fig. 53 — Disconnect Location, 055-105 Units (Vertical Discharge Units without High-Capacity Power Exhaust Shown)



LEGEND

EQUIP — Equipment
GND — Ground
NEC — National Electrical Code
TB — Terminal Block

Fig. 54 — Field Power Wiring Connections

Use the following formula to determine the percent voltage imbalance.

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

Example: Supply voltage is 460-3-60.

AB = 452 v
BC = 464 v
AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3}$$

$$= \frac{1371}{3}$$

$$= 457$$

Determine maximum deviation from average voltage:

(AB) 457 – 452 = 5 v
(BC) 464 – 457 = 7 v
(AC) 457 – 455 = 2 v

Maximum deviation is 7 v.

Determine percent voltage imbalance:

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457}$$

$$= 1.53\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact local utility immediately.

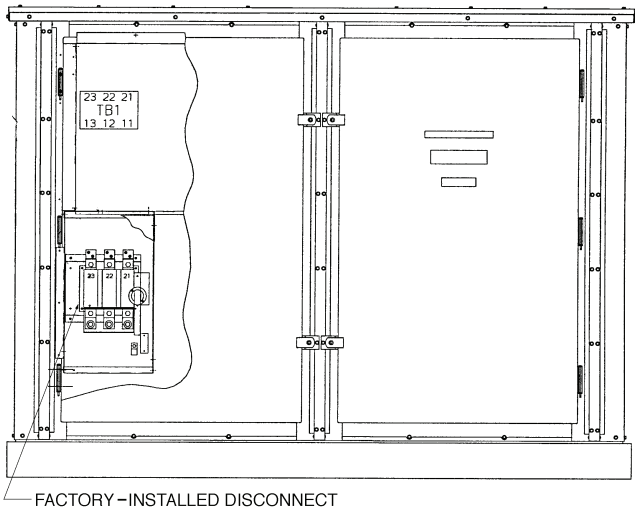
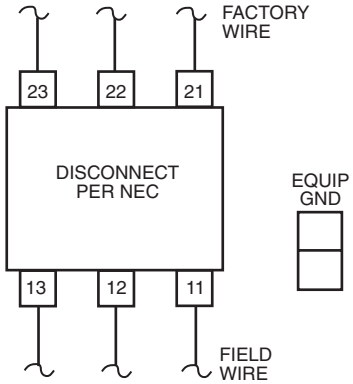


Fig. 55 — Factory-Installed Disconnect Location



LEGEND

EQUIP — Equipment
GND — Ground
NEC — National Electrical Code

Fig. 56 — Field Power Wiring Connections for Factory-Installed Disconnect

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

(Text continued on page 106.)

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	53.2	266	53.2	266	2	6.6 (ea)	7 1/2	24.2/22.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	157.1/154.9 157.1/154.9 188.0/209.5 266.9/300.5	200/200 200/200 225/250 300/350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	178.3/174.1 178.3/174.1 214.5/233.5 293.4/324.5	225/225 225/225 250/250 300/350
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	190.5/185.3 190.5/185.3 229.7/247.5 308.6/338.5	225/225 225/225 250/300 350/350
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	205.5/198.9 205.5/198.9 248.5/264.5 327.4/355.5	250/250 250/250 250/300 350/400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	220.8/211.6 220.8/211.6 265.0/279.5 343.9/370.5	250/250 250/250 300/300 350/400
								10	30.8/28.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	163.7/160.9 163.7/160.9 196.2/217.0 275.1/308.0	200/200 200/200 250/250 300/350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	184.9/180.1 184.9/180.1 222.7/241.0 301.6/332.0	225/225 225/225 250/250 350/350
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	197.1/191.3 197.1/191.3 238.0/255.0 316.9/346.0	250/225 250/225 250/300 350/350
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	212.1/204.9 212.1/204.9 256.7/272.0 335.6/363.0	250/250 250/250 300/300 350/400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	227.4/217.6 227.4/218.8 273.2/287.0 352.1/378.0	250/250 250/250 300/300 400/400
								15	46.2/42.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	179.1/174.9 179.1/174.9 215.5/234.5 294.4/325.5	225/225 225/225 250/250 300/350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	200.3/194.1 200.3/194.1 242.0/258.5 320.9/349.5	250/225 250/225 250/300 350/400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	212.5/205.3 212.5/205.3 257.2/272.5 336.1/363.5	250/250 250/250 300/300 350/400
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	227.5/218.9 227.5/221.3 276.0/289.5 354.9/380.5	250/250 250/250 300/300 400/400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	242.8/231.6 242.8/236.3 292.5/304.5 371.4/395.5	300/250 300/250 300/350 400/400

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

208/230-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	53.2	266	53.2	266	2	6.6 (ea)	20	59.4 / 54.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	193.9/187.1 193.9/187.1 232.0/249.5 310.9/340.5	250/225 250/225 250/300 350/350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	215.1/206.3 215.1/206.3 258.5/273.5 337.4/364.5	250/250 250/250 300/300 350/400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	227.3/217.5 227.3/219.3 273.7/287.5 352.6/378.5	250/250 250/250 300/300 400/400
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	242.3/231.1 242.3/236.3 292.5/304.5 371.4/395.5	300/250 300/250 300/350 400/400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	256.0/243.6 256.0/251.3 309.0/319.5 387.9/410.5	300/250 300/300 350/350 400/450
								25	74.8 / 68.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	213.1/204.6 213.1/204.6 251.2/267.0 330.1/358.0	250/250 250/250 300/300 400/400
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	234.3/223.8 234.3/223.8 277.7/291.0 356.6/382.0	300/250 300/250 300/350 400/400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	246.5/235.0 246.5/236.8 293.0/305.0 371.9/396.0	300/300 300/300 350/350 400/450
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	261.5/248.6 261.5/253.8 311.7/322.0 390.6/413.0	300/300 300/300 350/350 450/450
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	274.7/260.6 274.7/268.8 328.2/337.0 407.1/428.0	300/300 300/300 350/350 450/450

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	34.6	145	34.6	145	2	2.7 (ea)	$7^1/_2$	12.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	95.8 95.8 95.8 130.3	125 125 125 150
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	103.8 103.8 103.8 140.3	125 125 125 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	114.0 114.0 115.2 153.1	125 125 150 175
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	121.8 121.8 124.9 162.8	150 150 150 175
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	129.2 129.2 134.2 172.1	150 150 150 200
								10	16.7	—	—	— 38.3 76.8 114.7	— 36 72 108**	100.0 100.0 100.0 135.6	125 125 125 150
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	108.0 108.0 108.0 145.6	125 125 125 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	118.2 118.2 120.4 158.3	150 150 150 175
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	126.0 126.0 130.2 168.1	150 150 150 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	133.4 133.4 139.4 177.3	150 150 150 200
								15	24.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	107.8 107.8 107.8 145.3	125 125 125 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	115.8 115.8 117.4 155.3	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	126.0 126.0 130.2 168.1	150 150 150 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	133.8 133.8 139.9 177.8	150 150 150 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	141.2 141.2 149.2 187.1	175 175 175 200

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

380-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	34.6	145	34.6	145	2	2.7 (ea)	20	30.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	113.3 113.3 114.3 152.2	125 125 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	121.3 121.3 124.3 162.2	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	131.5 131.5 137.1 175.0	150 150 150 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	139.3 139.3 146.8 184.7	150 150 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	146.7 146.7 156.1 194.0	175 175 175 200
								25	38.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	122.1 122.1 124.3 162.2	150 150 150 200
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	130.1 130.1 134.3 172.2	150 150 150 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	140.3 140.3 147.1 185.0	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	148.1 148.1 156.8 194.7	175 175 175 225
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	155.5 155.5 166.1 204.0	175 175 175 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	28.8	120	28.8	120	2	3.3 (ea)	$7^1/_2$	11.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	82.4 82.4 106.8 152.8	110 110 125 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	92.0 92.0 118.8 164.8	110 110 125 175
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	97.6 97.6 125.8 171.8	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	104.4 104.4 134.3 180.3	125 125 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	110.4 110.4 141.8 187.8	125 125 150 200
								10	14.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	85.4 85.4 110.5 156.5	110 110 125 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	95.0 95.0 122.5 168.5	110 110 150 175
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	100.6 100.6 129.5 175.5	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	107.4 107.4 138.0 184.0	125 125 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	113.4 113.4 145.5 191.5	125 125 150 200
								15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	92.4 92.4 119.3 165.3	110 110 150 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	102.0 102.0 131.3 177.3	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	107.6 107.6 138.3 184.3	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	114.4 114.4 146.8 192.8	125 125 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	120.4 120.4 154.3 200.3	125 125 175 225

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

460-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	28.8	120	28.8	120	2	3.3 (ea)	20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	98.4 98.4 126.8 172.8	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	108.0 108.0 138.8 184.8	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	113.6 113.6 145.8 191.8	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	120.4 120.4 154.3 200.3	125 125 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	126.4 126.6 161.8 207.8	150 150 175 225
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	106.7 106.7 135.5 181.5	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	116.3 116.3 147.5 193.5	150 150 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	121.9 121.9 154.5 200.5	150 150 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	128.7 128.7 163.0 209.0	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	134.7 135.4 170.5 216.5	150 150 175 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	23.1	96	23.1	96	2	2.4 (ea)	$7^1/_2$	9.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	65.8 65.8 83.3 119.3	80 80 100 125
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	73.6 73.6 93.0 129.0	90 90 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	78.0 78.0 98.5 134.5	100 100 110 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	83.8 83.8 105.8 141.8	100 100 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	87.8 87.8 110.8 146.8	110 110 125 150
								10	11.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	67.8 67.8 85.8 121.8	90 90 110 125
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	75.6 75.6 95.5 131.5	90 90 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	80.0 80.0 101.0 137.0	100 100 110 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	85.8 85.8 108.3 144.3	100 100 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	89.8 89.8 113.3 149.3	110 110 125 150
								15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	73.8 73.8 93.3 129.3	90 90 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	81.6 81.6 103.0 139.0	100 100 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	86.0 86.0 108.5 144.5	100 100 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	91.8 91.8 115.8 151.8	110 110 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	95.8 95.8 120.8 156.8	110 110 125 175

Table 7 — Electrical Data — 50ZG,ZN,Z2,Z3030 Units (cont)

575-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	23.1	96	23.1	96	2	2.4 (ea)	20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	78.8 78.8 99.5 135.5	100 100 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	86.6 86.6 109.3 145.3	100 100 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	91.0 91.0 114.8 150.8	110 110 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	96.8 96.8 122.0 158.0	110 110 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	100.8 100.8 127.0 163.0	110 110 150 175
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	84.8 84.8 105.8 141.8	110 110 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	92.6 92.6 115.5 151.5	110 110 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	97.0 97.0 121.0 157.0	110 110 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	102.8 102.8 128.3 164.3	125 125 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	106.8 106.8 133.3 169.3	125 125 150 175

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
								$7^1/_2$	24.2 / 22.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	177.1 / 174.9 177.1 / 174.9 188.0 / 209.5 266.9 / 300.5	225 / 225 225 / 225 250 / 250 300 / 350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	198.3 / 194.1 198.3 / 194.1 214.5 / 233.5 293.4 / 324.5	250 / 250 250 / 250 250 / 300 350 / 400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	210.5 / 205.3 210.5 / 205.3 229.7 / 247.5 308.6 / 338.5	250 / 250 250 / 250 300 / 300 350 / 400
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	225.5 / 218.9 225.5 / 218.9 248.5 / 264.5 327.4 / 355.5	250 / 250 250 / 250 300 / 300 350 / 400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	238.7 / 230.9 238.7 / 230.9 265.0 / 279.5 343.9 / 370.5	300 / 300 300 / 300 300 / 300 400 / 400
								10	30.8 / 28.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	183.7 / 180.9 183.7 / 180.9 196.2 / 217.0 275.1 / 308.0	250 / 250 250 / 250 250 / 250 350 / 350
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	204.9 / 200.1 204.9 / 200.1 222.7 / 241.0 301.6 / 332.0	250 / 250 250 / 250 250 / 300 350 / 400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	217.1 / 211.3 217.1 / 211.3 238.0 / 255.0 316.9 / 346.0	250 / 250 250 / 250 300 / 300 350 / 400
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	232.1 / 224.9 232.1 / 224.9 256.7 / 272.0 335.6 / 363.0	300 / 250 300 / 250 300 / 300 400 / 400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	245.3 / 236.9 245.3 / 236.9 273.2 / 287.0 352.1 / 378.0	300 / 300 300 / 300 300 / 350 400 / 400
187	**253**	53.2	266	69.2	345	2	6.6 (ea)	15	46.2 / 42.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	199.1 / 194.9 199.1 / 194.9 215.5 / 234.5 294.4 / 325.5	250 / 250 250 / 250 250 / 300 350 / 400
										6	21.2 / 19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	220.3 / 214.1 220.3 / 214.1 242.0 / 258.5 320.9 / 349.5	250 / 250 250 / 250 300 / 300 350 / 400
										10	33.4 / 30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	232.5 / 225.3 232.5 / 225.3 257.2 / 272.5 336.1 / 363.5	300 / 250 300 / 250 300 / 300 400 / 400
										15	48.4 / 44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	247.5 / 238.9 247.5 / 238.9 276.0 / 289.5 354.9 / 380.5	300 / 300 300 / 300 300 / 350 400 / 400
										20	61.6 / 56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	260.7 / 250.9 260.7 / 250.9 292.5 / 304.5 371.4 / 395.5	300 / 300 300 / 300 350 / 350 400 / 450

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

208/230-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	53.2	266	69.2	345	2	6.6 (ea)	20	59.4 / 54.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	212.3 / 206.9 212.3 / 206.9 232.0 / 249.5 310.9 / 340.5	250/250 250/250 300/300 350/400
										6	21.2/19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	233.5 / 226.1 233.5 / 226.1 258.5 / 273.5 337.4 / 364.5	300/250 300/250 300/300 400/400
										10	33.4/30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	245.7 / 237.3 245.7 / 237.3 273.7 / 287.5 352.6 / 378.5	300/300 300/300 300/350 400/400
										15	48.4/44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	260.7 / 250.9 260.7 / 250.9 292.5 / 304.5 371.4 / 395.5	300/300 300/300 350/350 400/450
										20	61.6/56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	273.9 / 262.9 273.9 / 262.9 309.0 / 319.5 387.9 / 410.5	300/300 300/300 350/350 400/450
								25	74.8 / 68.0	—	— / —	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	229.1 / 220.9 229.1 / 220.9 251.2 / 267.0 330.1 / 358.0	300/250 300/250 300/300 400/400
										6	21.2/19.2	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	250.3 / 240.1 250.3 / 240.1 277.7 / 291.0 356.6 / 382.0	300/300 300/300 300/350 400/400
										10	33.4/30.4	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	262.5 / 251.3 262.5 / 251.3 293.0 / 305.0 371.9 / 396.0	300/300 300/300 350/350 400/450
										15	48.4/44.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	277.5 / 264.9 277.5 / 264.9 311.7 / 322.0 390.6 / 413.0	350/300 350/300 350/350 450/450
										20	61.6/56.0	— 78.9 / 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	290.7 / 276.9 290.7 / 276.9 328.2 / 337.0 407.1 / 428.0	350/300 350/300 350/350 450/450

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	34.6	145	35.9	191	2	2.7 (ea)	$7^1/_2$	12.5	—	—	—	—	97.4	125
												38.3	36	97.4	125
												76.8	72	97.4	125
												114.7	108**	130.3	150
										6	8.0	—	—	105.4	125
												38.3	36	105.4	125
												76.8	72	105.4	125
												114.7	108**	140.3	175
										10	18.2	—	—	115.6	150
												38.3	36	115.6	150
												76.8	72	115.6	150
												114.7	108**	153.1	175
										15	26.0	—	—	123.4	150
												38.3	36	123.4	150
												76.8	72	124.9	150
												114.7	108**	162.8	175
										20	33.4	—	—	130.8	150
												38.3	36	130.8	150
												76.8	72	134.2	150
												114.7	108**	172.1	200
								10	16.7	—	—	—	—	101.6	125
												38.3	36	101.6	125
												76.8	72	101.6	125
												114.7	108**	135.6	175
										6	8.0	—	—	109.6	125
												38.3	36	109.6	125
												76.8	72	109.6	125
												114.7	108**	145.6	175
										10	18.2	—	—	119.8	150
												38.3	36	119.8	150
												76.8	72	120.4	150
												114.7	108**	158.3	175
										15	26.0	—	—	127.6	150
												38.3	36	127.6	150
												76.8	72	130.2	150
												114.7	108**	168.1	200
										20	33.4	—	—	135.0	150
												38.3	36	135.0	150
												76.8	72	139.4	150
												114.7	108**	177.3	200
								15	24.5	—	—	—	—	109.4	125
												38.3	36	109.4	125
												76.8	72	109.4	125
												114.7	108**	145.3	175
										6	8.0	—	—	117.4	150
												38.3	36	117.4	150
												76.8	72	117.4	150
												114.7	108**	155.3	175
										10	18.2	—	—	127.6	150
												38.3	36	127.6	150
												76.8	72	130.2	150
												114.7	108**	168.1	200
										15	26.0	—	—	135.4	150
												38.3	36	135.4	150
												76.8	72	139.9	150
												114.7	108**	177.8	200
										20	33.4	—	—	142.8	175
												38.3	36	142.8	175
												76.8	72	149.2	175
												114.7	108**	187.1	200

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

380-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	34.6	145	35.9	191	2	2.7 (ea)	20	30.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	114.9 114.9 114.9 152.2	150 150 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	122.9 122.9 124.3 162.2	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	133.1 133.1 137.1 175.0	150 150 150 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	140.9 140.9 146.8 184.7	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	148.3 148.3 156.1 194.0	175 175 175 200
								25	38.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	123.4 123.4 124.3 162.2	150 150 150 200
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	131.4 131.4 134.3 172.2	150 150 150 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	141.6 141.6 147.1 185.0	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	149.4 149.4 156.8 194.7	175 175 175 225
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	156.8 156.8 166.1 204.0	175 175 175 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	28.8	120	34.6	173	2	3.3 (ea)	$7^1/_2$	11.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	89.7 89.7 106.8 152.8	110 110 125 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	99.3 99.3 118.8 164.8	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	104.9 104.9 125.8 171.8	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	111.7 111.7 134.3 180.3	125 125 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	117.7 117.7 141.8 187.8	150 150 175 200
								10	14.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	92.7 92.7 110.5 156.5	125 125 150 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	102.3 102.3 122.5 168.5	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	107.9 107.9 129.5 175.5	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	114.7 114.7 138.0 184.0	125 125 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	120.7 120.7 145.5 191.5	150 150 175 200
								15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	99.7 99.7 119.3 165.3	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	109.3 109.3 131.3 177.3	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	114.9 114.9 138.3 184.3	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	121.7 121.7 146.8 192.8	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	127.7 127.7 154.3 200.3	150 150 175 225

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

460-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	28.8	120	34.6	173	2	3.3 (ea)	20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	105.7 105.7 126.8 172.8	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	115.3 115.3 138.8 184.8	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	120.9 120.9 145.8 191.8	150 150 175 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	127.7 127.7 154.3 200.3	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	133.7 133.7 161.8 207.8	150 150 175 225
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	112.7 112.7 135.5 181.5	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	122.3 122.3 147.5 193.5	150 150 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	127.9 127.9 154.5 200.5	150 150 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	134.7 134.7 163.0 209.0	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	140.7 140.7 170.5 216.5	175 175 175 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	23.1	96	26.7	120	2	2.4 (ea)	$7^1/_2$	9.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	70.3 70.3 83.3 119.3	90 90 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	78.1 78.1 93.0 129.0	100 100 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	82.5 82.5 98.5 134.5	100 100 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	88.3 88.3 105.8 141.8	110 110 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	92.3 92.3 110.8 146.8	110 110 125 150
								10	11.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	72.3 72.3 85.8 121.8	90 90 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	80.1 80.1 95.5 131.5	100 100 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	84.5 84.5 101.0 137.0	110 110 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	90.3 90.3 108.3 144.3	110 110 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	94.3 94.3 113.3 149.3	110 110 125 150
								15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	78.3 78.3 93.3 129.3	100 100 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	86.1 86.1 103.0 139.0	110 110 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	90.5 90.5 108.5 144.5	110 110 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	96.3 96.3 115.8 151.8	110 110 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	100.3 100.3 120.8 156.8	125 125 125 175

Table 8 — Electrical Data — 50ZG,ZN,Z2,Z3035 Units (cont)

575-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	23.1	96	26.7	120	2	2.4 (ea)	20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	83.3 83.3 99.5 135.5	100 100 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	91.1 91.1 109.3 145.3	110 110 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	95.5 95.5 114.8 150.8	110 110 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	101.3 101.3 122.0 158.0	125 125 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	105.3 105.3 127.0 163.0	125 125 150 175
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	88.4 88.4 105.8 141.8	110 110 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	96.2 96.2 115.5 151.5	110 110 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	100.6 100.6 121.0 157.0	125 125 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	106.4 106.4 128.3 164.3	125 125 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	110.4 110.4 133.3 169.3	125 125 150 175

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	69.2	345	69.2	345	3	6.6	7 1/2	24.2/22.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	199.7/197.5 199.7/197.5 199.7/209.5 266.9/300.5	250/250 250/250 250/250 300/350
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	220.9/216.7 220.9/216.7 220.9/233.5 293.4/324.5	250/250 250/250 250/300 350/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	233.1/227.9 233.1/227.9 233.1/247.5 308.6/338.5	300/250 300/250 300/300 350/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	248.1/241.5 248.1/241.5 248.5/264.5 327.4/355.5	300/300 300/300 300/300 350/400
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	261.3/253.5 261.3/253.5 265.0/279.5 343.9/370.5	300/300 300/300 300/300 400/400
								10	30.8/28.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	206.3/203.5 206.3/203.5 206.3/217.0 275.1/308.0	250/250 250/250 250/250 350/350
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	227.5/222.7 227.5/222.7 227.5/241.0 301.6/332.0	250/250 250/250 250/300 350/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	239.7/233.9 239.7/233.9 239.7/255.0 316.9/346.0	300/300 300/300 300/300 350/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	254.7/247.5 254.7/247.5 256.7/272.0 335.6/363.0	300/300 300/300 300/300 400/400
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	267.9/259.5 267.9/259.5 273.2/287.0 352.1/378.0	300/300 300/300 300/350 400/400
								15	46.2/42.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	221.7/217.5 221.7/217.5 221.7/234.5 294.4/325.5	250/250 250/250 250/300 350/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	242.9/236.7 242.9/236.7 242.9/258.5 320.9/349.5	300/300 300/300 300/300 350/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	255.1/247.9 255.1/247.9 257.2/272.5 336.1/363.5	300/300 300/300 300/300 400/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	270.1/261.5 270.1/261.5 276.0/289.5 354.9/380.5	300/300 300/300 300/350 400/400
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	283.3/273.5 283.3/273.5 292.5/304.5 371.4/395.5	350/300 350/300 350/350 400/450

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

208/230-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	69.2	345	69.2	345	3	6.6	20	59.4 / 54.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	234.9/229.5 234.9/229.5 234.9/249.5 310.9/340.5	300/250 300/250 300/300 350/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	256.1/248.7 256.1/248.7 258.5/273.5 337.4/364.5	300/300 300/300 300/300 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	268.3/259.9 268.3/259.9 273.7/287.5 352.6/378.5	300/300 300/300 300/350 400/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	283.3/273.5 283.3/273.5 292.5/304.5 371.4/395.5	350/300 350/300 350/350 400/450
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	296.5/285.5 296.5/285.5 309.0/319.5 387.9/410.5	350/350 350/350 350/350 400/450
								25	74.8 /68.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	251.7/243.5 251.7/243.5 251.7/267.0 330.1/358.0	300/300 300/300 300/300 400/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	272.9/262.7 272.9/262.7 277.7/291.0 356.6/382.0	300/300 300/300 300/350 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	285.1/273.9 285.1/273.9 293.0/305.0 371.9/396.0	350/300 350/300 350/350 400/450
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	300.1/287.5 300.1/287.5 311.7/322.0 390.6/413.0	350/350 350/350 350/350 450/450
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	313.3/299.5 313.3/299.5 328.2/337.0 407.1/428.0	350/350 350/350 350/350 450/450

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	35.9	191	35.9	191	3	2.7 (ea)	$7^1/_2$	12.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	101.4 101.4 101.4 130.3	125 125 125 150
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	109.4 109.4 109.4 140.3	125 125 125 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	119.6 119.6 119.6 153.1	150 150 150 175
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	127.4 127.4 127.4 162.8	150 150 150 175
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	134.8 134.8 134.8 172.1	150 150 150 200
								10	16.7	—	—	— 38.3 76.8 114.7	— 36 72 108**	105.6 105.6 105.6 135.6	125 125 125 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	113.6 113.6 113.6 145.6	125 125 125 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	123.8 123.8 123.8 158.3	150 150 150 175
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	131.6 131.6 131.6 168.1	150 150 150 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	139.0 139.0 139.4 177.3	150 150 150 200
								15	24.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	113.4 113.4 113.4 145.3	125 125 125 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	121.4 121.4 121.4 155.3	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	131.6 131.6 131.6 168.1	150 150 150 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	139.4 139.4 139.9 177.8	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	146.8 146.8 149.2 187.1	175 175 175 200

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

380-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	35.9	191	35.9	191	3	2.7 (ea)	20	30.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	118.9 118.9 118.9 152.2	150 150 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	126.9 126.9 126.9 162.2	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	137.1 137.1 137.1 175.0	150 150 150 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	144.9 144.9 146.8 184.7	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	152.3 152.3 156.1 194.0	175 175 175 200
								25	38.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	127.4 127.4 127.4 162.2	150 150 150 200
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	135.4 135.4 135.4 172.2	150 150 150 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	145.6 145.6 147.1 185.0	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	153.4 153.4 156.8 194.7	175 175 175 225
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	160.8 160.8 166.1 204.0	175 175 175 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	34.6	173	34.6	173	3	3.3 (ea)	$7^1/_2$	11.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	98.8 98.8 106.8 152.8	125 125 125 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	108.4 108.4 118.8 164.8	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	114.0 114.0 125.8 171.8	125 125 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	120.8 120.8 134.3 180.3	150 150 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	126.8 126.8 141.8 187.8	150 150 175 200
								10	14.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	101.8 101.8 110.5 156.5	125 125 150 175
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	111.4 111.4 122.5 168.5	125 125 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	117.0 117.0 129.5 175.5	150 150 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	123.8 123.8 138.0 184.0	150 150 150 200
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	129.8 129.8 145.5 191.5	150 150 175 200
								15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	108.8 108.8 119.3 165.3	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	118.4 118.4 131.3 177.3	150 150 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	124.0 124.0 138.3 184.3	150 150 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	130.8 130.8 146.8 192.8	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	136.8 136.8 154.3 200.3	150 150 175 225

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

460-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	34.6	173	34.6	173	3	3.3 (ea)	20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	114.8 114.8 126.8 172.8	125 125 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	124.4 124.4 138.8 184.8	150 150 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	130.0 130.0 145.8 191.8	150 150 175 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	136.8 136.8 154.3 200.3	150 150 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	142.8 142.8 161.8 207.8	175 175 175 225
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	121.8 121.8 135.5 181.5	150 150 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	131.4 131.4 147.5 193.5	150 150 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	137.0 137.0 154.5 200.5	150 150 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	143.8 143.8 163.0 209.0	175 175 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	149.8 149.8 170.5 216.5	175 175 175 225
								30	40.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	129.1 129.1 143.0 189.0	150 150 175 225
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	138.7 138.7 155.0 201.0	175 175 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	144.3 144.3 162.0 208.0	175 175 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	151.1 151.1 170.5 216.5	175 175 200 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	157.1 157.1 178.0 224.0	175 175 200 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	26.7	120	26.7	120	3	2.4 (ea)	$7^1/_2$	9.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	76.3 76.3 83.3 119.3	100 100 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	84.1 84.1 93.0 129.0	110 110 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	88.5 88.5 98.5 134.5	110 110 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	94.3 94.3 105.8 141.8	110 110 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	98.3 98.3 110.8 146.8	110 110 125 150
								10	11.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	78.3 78.3 85.8 121.8	100 100 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	86.1 86.1 95.5 131.5	110 110 110 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	90.5 90.5 101.0 137.0	110 110 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	96.3 96.3 108.3 144.3	110 110 125 150
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	100.3 100.3 113.3 149.3	125 125 125 150
								15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	84.3 84.3 93.3 129.3	110 110 110 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	92.1 92.1 103.0 139.0	110 110 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	96.5 96.5 108.5 144.5	110 110 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	102.3 102.3 115.8 151.8	125 125 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	106.3 106.3 120.8 156.8	125 125 125 175

Table 9 — Electrical Data — 50ZG,ZN,Z2,Z3040 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	26.7	120	26.7	120	3	2.4 (ea)	20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	89.3 89.3 99.5 135.5	110 110 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	97.1 97.1 109.3 145.3	110 110 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	101.5 101.5 114.8 150.8	125 125 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	107.3 107.3 122.0 158.0	125 125 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	111.3 111.3 127.0 163.0	125 125 125 175
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	94.4 94.4 105.8 141.8	110 110 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	102.2 102.2 115.5 151.5	125 125 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	106.6 106.6 121.0 157.0	125 125 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	112.4 112.4 128.3 164.3	125 125 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	116.4 116.4 133.3 169.3	125 125 150 175

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	89.7	446	69.2	345	3	6.6 (ea)	$7^1/_2$	24.2 / 22.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	225.3/223.1 225.3/223.1 225.3/223.1 266.9/300.5	300/300 300/300 300/300 350/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	246.5/242.3 246.5/242.3 246.5/242.3 293.4/324.5	300/300 300/300 300/300 350/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	258.7/253.5 258.7/253.5 258.7/253.5 308.6/338.5	300/300 300/300 300/300 400/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	273.7/267.1 273.7/267.1 273.7/267.1 327.4/355.5	350/350 350/350 350/350 400/450
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	286.9/279.1 286.9/279.1 286.9/279.5 343.9/370.5	350/350 350/350 350/350 400/450
								10	30.8 / 28.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	231.9/229.1 231.9/229.1 231.9/229.1 275.1/308.0	300/300 300/300 300/300 350/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	253.1/248.3 253.1/248.3 253.1/248.3 301.6/332.0	300/300 300/300 300/300 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	265.3/259.5 265.3/259.5 265.3/259.5 316.9/346.0	350/300 350/300 350/350 400/400
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	280.3/273.1 280.3/273.1 280.3/273.1 335.6/363.0	350/350 350/350 350/350 400/450
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	293.5/285.1 293.5/285.1 293.5/287.0 352.1/378.0	350/350 350/350 350/350 400/450
								15	46.2 / 42.0	—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	247.3/243.1 247.3/243.1 247.3/243.1 294.4/325.5	300/300 300/300 300/300 350/400
										6	21.2/19.2	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	268.5/262.3 268.5/262.3 268.5/262.3 320.9/349.5	350/350 350/350 350/350 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	280.7/273.5 280.7/273.5 280.7/273.5 336.1/363.5	350/350 350/350 350/350 400/450
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	295.7/287.1 295.7/287.1 295.7/289.5 354.9/380.5	350/350 350/350 350/350 400/450
										20	61.6/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	308.9/299.1 308.9/299.1 308.9/304.5 371.4/395.5	350/350 350/350 350/350 450/450

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

208/230-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
187	253	89.7	446	69.2	345	3	6.6 (ea)	20	59.4 / 54.0	—	— / —	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	260.5 / 255.1 260.5 / 255.1 260.5 / 255.1 310.9 / 340.5	350 / 300 350 / 300 350 / 300 400 / 400
										6	21.2 / 19.2	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	281.7 / 274.3 281.7 / 274.3 281.7 / 274.3 337.4 / 364.5	350 / 350 350 / 350 350 / 350 400 / 450
										10	33.4 / 30.4	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	293.9 / 285.5 293.9 / 285.5 293.9 / 287.5 352.6 / 378.5	350 / 350 350 / 350 350 / 350 400 / 450
										15	48.4 / 44.0	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	308.9 / 299.1 308.9 / 299.1 308.9 / 304.5 371.4 / 395.5	350 / 350 350 / 350 350 / 350 450 / 450
										20	61.6 / 56.0	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	322.1 / 311.1 322.1 / 311.1 322.1 / 319.5 387.9 / 410.5	400 / 400 400 / 400 400 / 400 450 / 450
								25	74.8 / 68.0	—	— / —	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	275.9 / 269.1 275.9 / 269.1 275.9 / 269.1 330.1 / 358.0	350 / 350 350 / 350 350 / 350 400 / 450
										6	21.2 / 19.2	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	297.1 / 288.3 297.1 / 288.3 297.1 / 291.0 356.6 / 382.0	350 / 350 350 / 350 350 / 350 400 / 450
										10	33.4 / 30.4	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	309.3 / 299.5 309.3 / 299.5 309.3 / 305.0 371.9 / 396.0	350 / 350 350 / 350 350 / 350 450 / 450
										15	48.4 / 44.0	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	324.3 / 313.1 324.3 / 313.1 324.3 / 322.0 390.6 / 413.0	400 / 400 400 / 400 400 / 400 450 / 450
										20	61.6 / 56.0	— 78.9/ 91.0 157.7 / 182.0 236.6 / 273.0	— 36 72 108**	337.5 / 325.1 337.5 / 325.1 337.5 / 337.0 407.1 / 428.0	400 / 400 400 / 400 400 / 400 450 / 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	45.5	247	35.9	191	3	2.7 (ea)	$7^1/_2$	12.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	113.4 113.4 113.4 130.3	150 150 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	121.4 121.4 121.4 140.3	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	131.6 131.6 131.6 153.1	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	139.4 139.4 139.4 162.8	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	146.8 146.8 146.8 172.1	175 175 175 200
								10	16.7	—	—	— 38.3 76.8 114.7	— 36 72 108**	117.6 117.6 117.6 135.6	150 150 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	125.6 125.6 125.6 145.6	150 150 150 175
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	135.8 135.8 135.8 158.3	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	143.6 143.6 143.6 168.1	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	151.0 151.0 151.0 177.3	175 175 175 200
								15	24.5	—	—	— 38.3 76.8 114.7	— 36 72 108**	125.4 125.4 125.4 145.3	150 150 150 175
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	133.4 133.4 133.4 155.3	175 175 175 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	143.6 143.6 143.6 168.1	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	151.4 151.4 151.4 177.8	175 175 175 200
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	158.8 158.8 158.8 187.1	200 200 200 225

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

380-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	45.5	247	35.9	191	3	2.7 (ea)	20	30.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	130.9 130.9 130.9 152.2	175 175 175 200
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	138.9 138.9 138.9 162.2	175 175 175 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	149.1 149.1 149.1 175.0	175 175 175 200
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	156.9 156.9 156.9 184.7	200 200 200 225
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	164.3 164.3 164.3 194.0	200 200 200 225
								25	38.0	—	—	— 38.3 76.8 114.7	— 36 72 108**	138.9 138.9 138.9 162.2	175 175 175 200
										6	8.0	— 38.3 76.8 114.7	— 36 72 108**	146.9 146.9 146.9 172.2	175 175 175 200
										10	18.2	— 38.3 76.8 114.7	— 36 72 108**	157.1 157.1 157.1 185.0	200 200 200 225
										15	26.0	— 38.3 76.8 114.7	— 36 72 108**	164.9 164.9 164.9 194.7	200 200 200 225
										20	33.4	— 38.3 76.8 114.7	— 36 72 108**	172.3 172.3 172.3 204.0	200 200 200 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	43.6	223	34.6	173	3	3.3 (ea)	$7^1/_2$	11.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	110.0 110.0 110.0 152.8	150 150 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	119.6 119.6 119.6 164.8	150 150 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	125.2 125.2 125.8 171.8	150 150 150 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	132.0 132.0 134.3 180.3	175 175 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	138.0 138.0 141.8 187.8	175 175 175 225
								10	14.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	113.0 113.0 113.0 156.5	150 150 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	122.6 122.6 122.6 168.5	150 150 150 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	128.2 128.2 129.5 175.5	150 150 175 200
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	135.0 135.0 138.0 184.0	175 175 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	141.0 141.0 145.5 191.5	175 175 175 225
								15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	120.0 120.0 120.0 165.3	150 150 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	129.6 129.6 131.3 177.3	150 150 175 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	135.2 135.2 138.3 184.3	175 175 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	142.0 142.0 146.8 192.8	175 175 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	148.0 148.0 154.3 200.3	175 175 175 225

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

460-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	—	— 46.3 93.0 139.0	— 36 72 108**	126.0 126.0 126.8 172.8	150 150 150 200
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	135.6 135.6 138.8 184.8	175 175 175 225
								20	27.0	10	15.2	— 46.3 93.0 139.0	— 36 72 108**	141.2 141.2 145.8 191.8	175 175 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	148.0 148.0 154.3 200.3	175 175 175 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	154.0 154.0 161.8 207.8	175 175 175 225
										—	—	— 46.3 93.0 139.0	— 36 72 108**	133.0 133.0 135.5 181.5	175 175 175 225
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	142.6 142.6 147.5 193.5	175 175 175 225
414	**508**	43.6	223	34.6	173	3	3.3 (ea)	25	34.0	10	15.2	— 46.3 93.0 139.0	— 36 72 108**	148.2 148.2 154.5 200.5	175 175 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	155.0 155.0 163.0 209.0	175 175 200 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	161.0 161.0 170.5 216.5	200 200 200 250
										—	—	— 46.3 93.0 139.0	— 36 72 108**	139.0 139.0 143.0 189.0	175 175 175 225
										6	9.6	— 46.3 93.0 139.0	— 36 72 108**	148.6 148.6 155.0 201.0	175 175 175 225
								30	40.0	10	15.2	— 46.3 93.0 139.0	— 36 72 108**	154.2 154.2 162.0 208.0	175 175 200 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	161.0 161.0 170.5 216.5	200 200 200 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	167.0 167.0 178.0 224.0	200 200 200 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	36.5	164	26.7	120	3	2.4 (ea)	$7^1/_2$	9.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	88.5 88.5 88.5 119.3	125 125 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	96.3 96.3 96.3 129.0	125 125 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	100.7 100.7 100.7 134.5	125 125 125 150
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	106.5 106.5 106.5 141.8	125 125 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	110.5 110.5 110.8 146.8	125 125 125 175
								10	11.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	90.5 90.5 90.5 121.8	125 125 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	98.3 98.3 98.3 131.5	125 125 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	102.7 102.7 102.7 137.0	125 125 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	108.5 108.5 108.5 144.3	125 125 125 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	112.5 112.5 113.3 149.3	125 125 150 175
								15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	96.5 96.5 96.5 129.3	125 125 125 150
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	104.3 104.3 104.3 139.0	125 125 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	108.7 108.7 108.7 144.5	125 125 125 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	114.5 114.5 115.8 151.8	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	118.5 118.5 120.8 156.8	150 150 150 175

Table 10 — Electrical Data — 50ZG,ZN,Z2,Z3050 Units (cont)

575-3-60 (V-Ph-Hz) (cont)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	36.5	164	26.7	120	3	2.4 (ea)	20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	101.5 101.5 101.5 135.5	125 125 125 175
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	109.3 109.3 109.3 145.3	125 125 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	113.7 113.7 114.8 150.8	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	119.5 119.5 122.0 158.0	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	123.5 123.5 127.0 163.0	150 150 150 175
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	106.5 106.5 106.5 141.8	125 125 125 175
										6	7.8	— 36.0 72.0 108.0	— 36 72 108**	114.3 114.3 115.5 151.5	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	118.7 118.7 121.0 157.0	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	124.5 124.5 128.3 164.3	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	128.5 128.5 133.3 169.3	150 150 150 200

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 11 — Electrical Data — 50ZG,ZN,Z2,Z3055 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	281.6/277.4 281.6/277.4 281.6/277.4 294.4/325.5	350/350 350/350 350/350 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	315.0/307.8 315.0/307.8 315.0/307.8 336.1/363.5	400/400 400/400 400/400 450/450
								15	46.2/ 42.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	330.0/321.4 330.0/321.4 330.0/321.4 354.9/380.5	400/400 400/400 400/400 450/450
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	342.7/333.4 342.7/333.4 342.7/333.4 370.7/395.5	450/400 450/400 450/400 450/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	294.8/289.4 294.8/289.4 294.8/289.4 310.9/340.5	400/350 400/350 400/350 400/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	328.2/319.8 328.2/319.8 328.2/319.8 352.6/378.5	400/400 400/400 400/400 450/450
								20	59.4/ 54.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	343.2/333.4 343.2/333.4 343.2/333.4 371.4/395.5	450/400 450/400 450/400 450/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	355.9/345.4 355.9/345.4 355.9/345.4 387.2/410.5	450/450 450/450 450/450 450/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	310.2/303.4 310.2/303.4 310.2/303.4 330.1/358.0	400/400 400/400 400/400 400/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	343.6/333.8 343.6/333.8 343.6/333.8 371.9/396.0	450/400 450/400 450/400 450/500
187	**253**	107.7	506	74.4	345	4	6.6 (ea)	25	74.8/ 68.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	358.6/347.4 358.6/347.4 358.6/347.4 390.6/413.0	450/450 450/450 450/450 450/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	371.3/359.4 371.3/359.4 371.3/359.4 406.5/428.0	450/450 450/450 450/450 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	323.4/315.4 323.4/315.4 323.4/315.4 346.6/373.0	400/400 400/400 400/400 450/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	356.8/345.8 356.8/345.8 356.8/345.8 388.4/411.0	450/450 450/450 450/450 450/500
								30	88.0/ 80.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	371.8/359.4 371.8/359.4 371.8/359.4 407.1/428.0	450/450 450/450 450/450 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	384.5/371.4 384.5/371.4 384.5/371.4 423.0/443.0	450/450 450/450 450/450 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	351.5/339.4 351.5/339.4 351.5/339.4 379.6/403.0	450/400 450/400 450/400 450/500
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	384.9/369.8 384.9/369.8 384.9/369.8 421.4/441.0	450/450 450/450 450/450 500/500
								40	114.4/104.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	399.9/383.4 399.9/383.4 399.9/383.4 440.1/458.0	500/450 500/450 500/450 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	412.6/395.4 412.6/395.4 412.6/395.4 456.0/473.0	500/500 500/500 500/500 500/500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 11 — Electrical Data — 50ZG,ZN,Z2,Z3055 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	—	— 38.3 76.8 114.7	— 25 51 76	141.7 141.7 141.7 145.3	175 175 175 200
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	159.9 159.9 159.9 168.1	200 200 200 225
								15	24.5	15	26.0	— 38.3 76.8 114.7	— 25 51 76	167.7 167.7 167.7 177.8	200 200 200 225
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	175.7 175.7 175.7 187.8	225 225 225 225
										—	—	— 38.3 76.8 114.7	— 25 51 76	147.2 147.2 147.2 152.2	200 200 200 200
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	165.4 165.4 165.4 175.0	200 200 200 225
342	**418**	56.4	280	35.9	191	4	2.7 (ea)	20	30.0	15	26.0	— 38.3 76.8 114.7	— 25 51 76	173.2 173.2 173.2 184.7	225 225 225 225
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	181.2 181.2 181.2 194.7	225 225 225 225
										—	—	— 38.3 76.8 114.7	— 25 51 76	155.2 155.2 155.2 162.2	200 200 200 200
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	173.4 173.4 173.4 185.0	225 225 225 225
								25	38.0	15	26.0	— 38.3 76.8 114.7	— 25 51 76	181.2 181.2 181.2 194.7	225 225 225 225
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	189.2 189.2 189.2 204.7	225 225 225 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 11 — Electrical Data — 50ZG,ZN,Z2,Z3055 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	34.6	173	4	3.3 (ea)	15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	132.1 132.1 132.1 165.3	175 175 175 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	147.3 147.3 147.3 184.3	175 175 175 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	154.1 154.1 154.1 192.8	200 200 200 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	160.1 160.1 160.1 200.3	200 200 200 250
								20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	138.1 138.1 138.1 172.8	175 175 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	153.3 153.3 153.3 191.8	200 200 200 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	160.1 160.1 160.1 200.3	200 200 200 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	166.1 166.1 166.1 207.8	200 200 200 250
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	145.1 145.1 145.1 181.5	175 175 175 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	160.3 160.3 160.3 200.5	200 200 200 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	167.1 167.1 167.1 209.0	200 200 200 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	173.1 173.1 173.1 216.5	200 200 200 250
								30	40.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	151.1 151.1 151.1 189.0	200 200 200 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	166.3 166.3 166.3 208.0	200 200 200 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	173.1 173.1 173.1 216.5	200 200 200 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	179.1 179.1 179.1 224.0	225 225 225 250
								40	52.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	163.4 163.4 163.4 204.0	200 200 200 250
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	178.6 178.6 178.6 223.0	225 225 225 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	185.4 185.4 185.5 231.5	225 225 225 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	191.4 191.4 193.0 239.0	225 225 225 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 11 — Electrical Data — 50ZG,ZN,Z2,Z3055 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	39.1	176	28.8	120	4	2.4 (ea)	15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	104.3 104.3 104.3 129.3	125 125 125 150
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	116.5 116.5 116.5 144.5	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	122.3 122.3 122.3 151.8	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	126.3 126.3 126.3 156.8	150 150 150 175
								20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	109.3 109.3 109.3 135.5	125 125 125 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	121.5 121.5 121.5 150.8	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	127.3 127.3 127.3 158.0	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	131.3 131.3 131.3 163.0	150 150 150 200
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	114.3 114.3 114.3 141.8	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	126.5 126.5 126.5 157.0	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	132.3 132.3 132.3 164.3	150 150 150 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	136.3 136.3 136.3 169.3	175 175 175 200
								30	32.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	119.3 119.3 119.3 148.0	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	131.5 131.5 131.5 163.3	150 150 150 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	137.3 137.3 137.3 170.5	175 175 175 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	141.3 141.3 141.3 175.5	175 175 175 200
								40	41.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	128.8 128.8 128.8 159.3	150 150 150 200
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	141.0 141.0 141.0 174.5	175 175 175 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	146.8 146.8 146.8 181.8	175 175 175 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	150.8 150.8 150.8 186.8	175 175 175 200

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 12 — Electrical Data — 50ZG,ZN,Z2,Z3060 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	314.9/310.7 314.9/310.7 314.9/310.7 314.9/325.5	400/400 400/400 400/400 400/400
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	348.3/341.1 348.3/341.1 348.3/341.1 348.3/363.5	450/400 450/400 450/400 450/450
								15	46.2/ 42.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	363.3/354.7 363.3/354.7 363.3/354.7 363.3/380.5	450/450 450/450 450/450 450/450
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	376.0/366.7 376.0/366.7 376.0/366.7 376.0/395.5	450/450 450/450 450/450 450/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	328.1/322.7 328.1/322.7 328.1/322.7 328.1/340.5	400/400 400/400 400/400 400/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	361.5/353.1 361.5/353.1 361.5/353.1 361.5/378.5	450/450 450/450 450/450 450/450
								20	59.4/ 54.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	376.5/366.7 376.5/366.7 376.5/366.7 376.5/395.5	450/450 450/450 450/450 450/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	389.2/378.7 389.2/378.7 389.2/378.7 389.2/410.5	450/450 450/450 450/450 450/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	343.5/336.7 343.5/336.7 343.5/336.7 343.5/358.0	450/400 450/400 450/400 450/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	376.9/367.1 376.9/367.1 376.9/367.1 376.9/396.0	450/450 450/450 450/450 450/500
187	**253**	107.7	506	107.7	506	4	6.6 (ea)	25	74.8/ 68.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	391.9/380.7 391.9/380.7 391.9/380.7 391.9/413.0	450/450 450/450 450/450 450/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	404.6/392.7 404.6/392.7 404.6/392.7 406.5/428.0	500/500 500/500 500/500 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	356.7/348.7 356.7/348.7 356.7/348.7 356.7/373.0	450/450 450/450 450/450 450/450
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	390.1/379.1 390.1/379.1 390.1/379.1 390.1/411.0	450/450 450/450 450/450 450/500
								30	88.0/ 80.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	405.1/392.7 405.1/392.7 405.1/392.7 407.1/428.0	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	417.8/404.7 417.8/404.7 417.8/404.7 423.0/443.0	500/500 500/500 500/500 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	384.8/372.7 384.8/372.7 384.8/372.7 384.8/403.0	450/450 450/450 450/450 450/500
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	418.2/403.1 418.2/403.1 418.2/403.1 421.4/441.0	500/500 500/500 500/500 500/500
								40	114.4/104.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	433.2/416.7 433.2/416.7 433.2/416.7 440.1/458.0	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	445.9/428.7 445.9/428.7 445.9/428.7 456.0/473.0	500/500 500/500 500/500 500/500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 12 — Electrical Data — 50ZG,ZN,Z2,Z3060 Units (cont)

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
342	418	56.4	280	56.4	280	4	2.7 (ea)	15	24.5	—	—	— 38.3 76.8 114.7	— 25 51 76	162.2 162.2 162.2 162.2	200 200 200 200
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	180.4 180.4 180.4 180.4	225 225 225 225
										15	26.0	— 38.3 76.8 114.7	— 25 51 76	188.2 188.2 188.2 188.2	225 225 225 225
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	196.2 196.2 196.2 196.2	250 250 250 250
								20	30.0	—	—	— 38.3 76.8 114.7	— 25 51 76	167.7 167.7 167.7 167.7	200 200 200 200
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	185.9 185.9 185.9 185.9	225 225 225 225
										15	26.0	— 38.3 76.8 114.7	— 25 51 76	193.7 193.7 193.7 193.7	250 250 250 250
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	201.7 201.7 201.7 201.7	250 250 250 250
								25	38.0	—	—	— 38.3 76.8 114.7	— 25 51 76	175.7 175.7 175.7 175.7	225 225 225 225
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	193.9 193.9 193.9 193.9	250 250 250 250
										15	26.0	— 38.3 76.8 114.7	— 25 51 76	201.7 201.7 201.7 201.7	250 250 250 250
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	209.7 209.7 209.7 209.7	250 250 250 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 12 — Electrical Data — 50ZG,ZN,Z2,Z3060 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	50.6	253	4	3.3 (ea)	15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	148.1 148.1 148.1 165.3	175 175 175 200
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	163.3 163.3 163.3 184.3	200 200 200 225
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	170.1 170.1 170.1 192.8	200 200 200 225
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	176.1 176.1 176.1 200.3	225 225 225 250
								20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	154.1 154.1 154.1 172.8	200 200 200 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	169.3 169.3 169.3 191.8	200 200 200 225
										15	22	— 46.3 93.0 139.0	— 36 72 108**	176.1 176.1 176.1 200.3	225 225 225 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	182.1 182.1 182.1 207.8	225 225 225 250
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	161.1 161.1 161.1 181.5	200 200 200 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	176.3 176.3 176.3 200.5	225 225 225 250
										15	22	— 46.3 93.0 139.0	— 36 72 108**	183.1 183.1 183.1 209.0	225 225 225 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	189.1 189.1 189.1 216.5	225 225 225 250
								30	40.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	167.1 167.1 167.1 189.0	200 200 200 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	182.3 182.3 182.3 208.0	225 225 225 250
										15	22	— 46.3 93.0 139.0	— 36 72 108**	189.1 189.1 189.1 216.5	225 225 225 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	195.1 195.1 195.1 224.0	225 225 225 250
								40	52.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	179.4 179.4 179.4 204.0	225 225 225 250
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	194.6 194.6 194.6 223.0	225 225 225 250
										15	22	— 46.3 93.0 139.0	— 36 72 108**	201.4 201.4 201.4 231.5	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	207.4 207.4 207.4 239.0	250 250 250 250

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 12 — Electrical Data — 50ZG,ZN,Z2,Z3060 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	—	— 36.0 72.0 108.0	— 36 72 108**	114.6 114.6 114.6 129.3	150 150 150 150
								15	17.0	10	12.2	— 36.0 72.0 108.0	— 36 72 108**	126.8 126.8 126.8 144.5	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	132.6 132.6 132.6 151.8	150 150 150 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	136.6 136.6 136.6 156.8	175 175 175 175
								20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	119.6 119.6 119.6 135.5	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	131.8 131.8 131.8 150.8	150 150 150 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	137.6 137.6 137.6 158.0	175 175 175 175
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	141.6 141.6 141.6 163.0	175 175 175 200
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	124.6 124.6 124.6 141.8	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	136.8 136.8 136.8 157.0	175 175 175 175
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	142.6 142.6 142.6 164.3	175 175 175 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	146.6 146.6 146.6 169.3	175 175 175 200
								30	32.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	129.6 129.6 129.6 148.0	150 150 150 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	141.8 141.8 141.8 163.3	175 175 175 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	147.6 147.6 147.6 170.5	175 175 175 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	151.6 151.6 151.6 175.5	175 175 175 200
								40	41.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	139.1 139.1 139.1 159.3	175 175 175 200
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	151.3 151.3 151.3 174.5	175 175 175 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	157.1 157.1 157.1 181.8	175 175 175 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	161.1 161.1 161.1 186.8	200 200 200 200
518	**632**	39.1	176	39.1	176	4	2.4 (ea)								

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 13 — Electrical Data — 50ZG,ZN,Z2,Z3070 Units

208/230-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRICAL HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	364.8/360.6 364.8/360.6 364.8/360.6 364.8/360.6	500/500 500/500 500/500 500/500
								15	46.2/ 42.0	10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	398.2/391.0 398.2/391.0 398.2/391.0 398.2/391.0	500/500 500/500 500/500 500/500
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	413.2/404.6 413.2/404.6 413.2/404.6 413.2/404.6	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	425.9/416.6 425.9/416.6 425.9/416.6 425.9/416.6	500/500 500/500 500/500 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	378.0/372.6 378.0/372.6 378.0/372.6 378.0/372.6	500/500 500/500 500/500 500/500
								20	59.4/ 54.0	10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	411.4/403.0 411.4/403.0 411.4/403.0 411.4/403.0	500/500 500/500 500/500 500/500
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	426.4/416.6 426.4/416.6 426.4/416.6 426.4/416.6	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	439.1/428.6 439.1/428.6 439.1/428.6 439.1/428.6	500/500 500/500 500/500 500/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	393.4/386.6 393.4/386.6 393.4/386.6 393.4/386.6	500/500 500/500 500/500 500/500
								25	74.8/ 68.0	10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	426.8/417.0 426.8/417.0 426.8/417.0 426.8/417.0	500/500 500/500 500/500 500/500
										15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	441.8/430.6 441.8/430.6 441.8/430.6 441.8/430.6	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	454.5/442.6 454.5/442.6 454.5/442.6 454.5/442.6	500/500 500/500 500/500 500/500
187	**253**	107.7	506	142.3	690	5	6.6 (ea)			—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	406.6/398.6 406.6/398.6 406.6/398.6 406.6/398.6	500/500 500/500 500/500 500/500
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	440.0/429.0 440.0/429.0 440.0/429.0 440.0/429.0	500/500 500/500 500/500 500/500
								30	88.0/ 80.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	455.0/442.6 455.0/442.6 455.0/442.6 455.0/442.6	500/500 500/500 500/500 500/500
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	467.7/454.6 467.7/454.6 467.7/454.6 467.7/454.6	600/500 600/500 600/500 600/500
										—	— / —	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	433.0/422.6 433.0/422.6 433.0/422.6 433.0/422.6	500/500 500/500 500/500 500/500
										10	33.4/30.4	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	466.4/453.0 466.4/453.0 466.4/453.0 466.4/453.0	600/500 600/500 600/500 600/500
								40	114.4/104.0	15	48.4/44.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	481.4/466.6 481.4/466.6 481.4/466.6 481.4/466.6	600/600 600/600 600/600 600/600
										20	61.1/56.0	— 78.9/ 91.0 157.7/182.0 236.6/273.0	— 36 72 108**	494.1/478.6 494.1/478.6 494.1/478.6 494.1/478.6	600/600 600/600 600/600 600/600

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 13 — Electrical Data — 50ZG,ZN,Z2,Z3070 Units (cont)

380-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
										—	—	— 38.3 76.8 114.7	— 25 51 76	193.8 193.8 193.8 193.8	250 250 250 250
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	212.0 212.0 212.0 212.0	250 250 250 250
								15	24.5	15	26.0	— 38.3 76.8 114.7	— 25 51 76	219.8 219.8 219.8 219.8	250 250 250 250
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	227.8 227.8 227.8 227.8	300 300 300 300
										—	—	— 38.3 76.8 114.7	— 25 51 76	199.3 199.3 199.3 199.3	250 250 250 250
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	217.5 217.5 217.5 217.5	250 250 250 250
342	**418**	56.4	280	79.5	382	5	2.7 (ea)	20	30.0	15	26.0	— 38.3 76.8 114.7	— 25 51 76	225.3 225.3 225.3 225.3	300 300 300 300
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	233.3 233.3 233.3 233.3	300 300 300 300
										—	—	— 38.3 76.8 114.7	— 25 51 76	207.3 207.3 207.3 207.3	250 250 250 250
										10	18.2	— 38.3 76.8 114.7	— 25 51 76	225.5 225.5 225.5 225.5	300 300 300 300
								25	38.0	15	26.0	— 38.3 76.8 114.7	— 25 51 76	233.3 233.3 233.3 233.3	300 300 300 300
										20	34.0	— 38.3 76.8 114.7	— 25 51 76	241.3 241.3 241.3 241.3	300 300 300 300

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 13 — Electrical Data — 50ZG,ZN,Z2,Z3070 Units (cont)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50-6	253	65.4	345	5	3.3 (ea)	15	21.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	169.9 169.9 169.9 169.9	225 225 225 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	185.1 185.1 185.1 185.1	250 250 250 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	191.9 191.9 191.9 192.8	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	197.9 197.9 197.9 200.3	250 250 250 250
								20	27.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	175.9 175.9 175.9 175.9	225 225 225 225
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	191.1 191.1 191.1 191.8	250 250 250 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	197.9 197.9 197.9 200.3	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	203.9 203.9 203.9 207.8	250 250 250 250
								25	34.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	182.9 182.9 182.9 182.9	225 225 225 250
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	198.1 198.1 198.1 200.5	250 250 250 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	204.9 204.9 204.9 209.0	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	210.9 210.9 210.9 216.5	250 250 250 250
								30	40.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	188.9 188.9 188.9 189.0	250 250 250 250
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	204.1 204.1 204.1 208.0	250 250 250 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	210.9 210.9 210.9 216.5	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	216.9 216.9 216.9 224.0	250 250 250 250
								40	52.0	—	—	— 46.3 93.0 139.0	— 36 72 108**	200.9 200.9 200.9 204.0	250 250 250 250
										10	15.2	— 46.3 93.0 139.0	— 36 72 108**	216.1 216.1 216.1 223.0	250 250 250 250
										15	22.0	— 46.3 93.0 139.0	— 36 72 108**	222.9 222.9 222.9 231.5	250 250 250 250
										20	28.0	— 46.3 93.0 139.0	— 36 72 108**	228.9 228.9 228.9 239.0	250 250 250 300

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 13 — Electrical Data — 50ZG,ZN,Z2,Z3070 Units (cont)

575-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
518	632	39.1	176	52.6	276	5	2.4 (ea)	15	17.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	133.9 133.9 133.9 133.9	175 175 175 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	146.1 146.1 146.1 146.1	175 175 175 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	151.9 151.9 151.9 151.9	200 200 200 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	155.9 155.9 155.9 156.8	200 200 200 200
								20	22.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	138.9 138.9 138.9 138.9	175 175 175 175
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	151.1 151.1 151.1 151.1	200 200 200 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	156.9 156.9 156.9 158.0	200 200 200 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	160.9 160.9 160.9 163.0	200 200 200 200
								25	27.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	143.9 143.9 143.9 143.9	175 175 175 200
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	156.1 156.1 156.1 157.0	200 200 200 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	161.9 161.9 161.9 164.3	200 200 200 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	165.9 165.9 165.9 169.3	200 200 200 200
								30	32.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	148.9 148.9 148.9 148.9	200 200 200 200
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	161.1 161.1 161.1 163.3	200 200 200 200
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	166.9 166.9 166.9 170.5	200 200 200 200
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	170.9 170.9 170.9 175.5	200 200 200 225
								40	41.0	—	—	— 36.0 72.0 108.0	— 36 72 108**	157.9 157.9 157.9 159.3	200 200 200 200
										10	12.2	— 36.0 72.0 108.0	— 36 72 108**	170.1 170.1 170.1 174.5	200 200 200 225
										15	18.0	— 36.0 72.0 108.0	— 36 72 108**	175.9 175.9 175.9 181.8	225 225 225 225
										20	22.0	— 36.0 72.0 108.0	— 36 72 108**	179.9 179.9 179.9 186.8	225 225 225 225

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.
**108 kW available on CV applications only.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 14 — Electrical Data — 50ZG,ZN,Z2,Z3075 Units (without High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR No. 1		COMPRESSOR No. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	65.4	345	5	3.3 (ea)	30	40.0	—	—	— 130.0 260.0	— 108 216	188.9 188.9 310.0	250 250 350
										10	15.2	— 130.0 260.0	— 108 216	204.1 204.1 329.0	250 250 350
										15	22.0	— 130.0 260.0	— 108 216	210.9 210.9 337.5	250 250 400
										20	28.0	— 130.0 260.0	— 108 216	216.9 216.9 345.0	250 250 400
								40	52.0	—	—	— 130.0 260.0	— 108 216	200.9 200.9 325.0	250 250 350
										10	15.2	— 130.0 260.0	— 108 216	216.1 216.1 344.0	250 250 400
										15	22.0	— 130.0 260.0	— 108 216	222.9 222.9 352.5	250 250 400
										20	28.0	— 130.0 260.0	— 108 216	228.9 230.0 360.0	250 250 400
								50	65.0	—	—	— 130.0 260.0	— 108 216	213.9 213.9 341.3	250 250 400
										10	15.2	— 130.0 260.0	— 108 216	229.1 230.3 360.3	250 250 400
										15	22.0	— 130.0 260.0	— 108 216	235.9 238.8 368.8	300 300 400
										20	28.0	— 130.0 260.0	— 108 216	241.9 246.3 376.3	300 300 400
								60	77.0	—	—	— 130.0 260.0	— 108 216	228.8 228.8 356.3	300 300 400
										10	15.2	— 130.0 260.0	— 108 216	244.0 245.3 375.3	300 300 400
										15	22.0	— 130.0 260.0	— 108 216	250.8 253.8 383.8	300 300 450
										20	28.0	— 130.0 260.0	— 108 216	256.8 261.3 391.3	300 300 450
								75	96.0	—	—	— 130.0 260.0	— 108 216	252.5 252.5 380.0	300 300 450
										10	15.2	— 130.0 260.0	— 108 216	267.7 269.0 399.0	350 350 450
										15	22.0	— 130.0 260.0	— 108 216	274.5 277.5 407.5	350 350 450
										20	28.0	— 130.0 260.0	— 108 216	280.5 285.0 415.0	350 350 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 15 — Electrical Data — 50ZG,ZN,Z2,Z3090 Units (without High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR				CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2											
Min	Max	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	65.4	345	65.4	345	6	3.3 (ea)	30	40.0	—	—	— 130.0 260.0	— 108 216	207.0 207.0 310.0	250 250 350
										10	15.2	— 130.0 260.0	— 108 216	222.2 222.2 329.0	250 250 350
										15	22.0	— 130.0 260.0	— 108 216	229.0 229.0 337.5	250 250 400
										20	28.0	— 130.0 260.0	— 108 216	235.0 235.0 345.0	300 300 400
								40	52.0	—	—	— 130.0 260.0	— 108 216	219.0 219.0 325.0	250 250 350
										10	15.2	— 130.0 260.0	— 108 216	234.2 234.2 344.0	250 250 400
										15	22.0	— 130.0 260.0	— 108 216	241.0 241.0 352.5	300 300 400
										20	28.0	— 130.0 260.0	— 108 216	247.0 247.0 360.0	300 300 400
								50	65.0	—	—	— 130.0 260.0	— 108 216	232.0 232.0 341.3	250 250 400
										10	15.2	— 130.0 260.0	— 108 216	247.2 247.2 360.3	300 300 400
										15	22.0	— 130.0 260.0	— 108 216	254.0 254.0 368.8	300 300 400
										20	28.0	— 130.0 260.0	— 108 216	260.0 260.0 376.3	300 300 400
								60	77.0	—	—	— 130.0 260.0	— 108 216	246.9 246.9 356.3	300 300 400
										10	15.2	— 130.0 260.0	— 108 216	262.1 262.1 375.3	300 300 400
										15	22.0	— 130.0 260.0	— 108 216	268.9 268.9 383.8	300 300 450
										20	28.0	— 130.0 260.0	— 108 216	274.9 274.9 391.3	350 350 450
								75	96.0	—	—	— 130.0 260.0	— 108 216	270.6 270.6 380.0	350 350 450
										10	15.2	— 130.0 260.0	— 108 216	285.8 285.8 399.0	350 350 450
										15	22.0	— 130.0 260.0	— 108 216	292.6 292.6 407.5	350 350 450
										20	28.0	— 130.0 260.0	— 108 216	298.6 298.6 415.0	350 350 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 16 — Electrical Data — 50ZG,ZN,Z2,Z3105 Units (without High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	50.6	253	34.6	173	34.6	173	6	3.3 (ea)	30	40.0	—	—	— 130.0 260.0	— 108 216	242.9 242.9 310.0	250 250 350
														10	15.2	— 130.0 260.0	— 108 216	258.1 258.1 329.0	300 300 350
														15	22.0	— 130.0 260.0	— 108 216	264.9 264.9 337.5	300 300 350
														20	28.0	— 130.0 260.0	— 108 216	270.9 270.9 345.0	300 300 350
												40	52.0	—	—	— 130.0 260.0	— 108 216	255.2 255.2 325.0	300 300 350
														10	15.2	— 130.0 260.0	— 108 216	270.4 270.4 344.0	300 300 350
														15	22.0	— 130.0 260.0	— 108 216	277.2 277.2 352.5	300 300 400
														20	28.0	— 130.0 260.0	— 108 216	283.2 283.2 360.0	300 300 400
												50	65.0	—	—	— 130.0 260.0	— 108 216	271.5 271.5 341.3	300 300 400
														10	15.2	— 130.0 260.0	— 108 216	286.7 286.7 360.3	350 350 400
														15	22.0	— 130.0 260.0	— 108 216	293.5 293.5 368.8	350 350 400
														20	28.0	— 130.0 260.0	— 108 216	299.5 299.5 376.3	350 350 400
												60	77.0	—	—	— 130.0 260.0	— 108 216	286.5 286.5 356.3	350 350 400
														10	15.2	— 130.0 260.0	— 108 216	301.7 301.7 375.3	350 350 400
														15	22.0	— 130.0 260.0	— 108 216	308.5 308.5 383.8	350 350 450
														20	28.0	— 130.0 260.0	— 108 216	314.5 314.5 391.3	350 350 450
												75	96.0	—	—	— 130.0 260.0	— 108 216	310.2 310.2 380.0	400 400 450
														10	15.2	— 130.0 260.0	— 108 216	325.4 325.4 399.0	400 400 450
														15	22.0	— 130.0 260.0	— 108 216	332.2 332.2 407.5	400 400 450
														20	28.0	— 130.0 260.0	— 108 216	338.2 338.2 415.0	400 400 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 17 — Electrical Data — 50Z6,Z7,Z8,Z9075 Units (with Return/Exhaust Fan)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	65.4	345	—	—	—	—	5	3.3 (ea)	30	40.0	20	27	— 130.0 260.0	— 108 216	215.9 215.9 343.8	250 250 400
														25	34	— 130.0 260.0	— 108 216	222.9 222.9 352.5	250 250 400
														30	40	— 130.0 260.0	— 108 216	228.9 230.0 360.0	250 250 400
														40	52	— 130.0 260.0	— 108 216	240.9 245.0 375.0	300 300 400
												40	52.0	20	27	— 130.0 260.0	— 108 216	227.9 228.8 358.8	250 250 400
														25	34	— 130.0 260.0	— 108 216	234.9 237.5 367.5	300 300 400
														30	40	— 130.0 260.0	— 108 216	240.9 245.0 375.0	300 300 400
														40	52	— 130.0 260.0	— 108 216	252.9 260.0 390.0	300 300 400
												50	65.0	20	27	— 130.0 260.0	— 108 216	240.9 245.0 375.0	300 300 400
														25	34	— 130.0 260.0	— 108 216	247.9 253.8 383.8	300 300 400
														30	40	— 130.0 260.0	— 108 216	253.9 261.3 391.3	300 300 400
														40	52	— 130.0 260.0	— 108 216	265.9 276.3 406.3	300 300 450
												60	77.0	20	27	— 130.0 260.0	— 108 216	255.8 260.0 390.0	300 300 450
														25	34	— 130.0 260.0	— 108 216	262.8 268.8 398.8	300 300 450
														30	40	— 130.0 260.0	— 108 216	268.8 276.3 406.3	300 300 450
														40	52	— 130.0 260.0	— 108 216	280.8 291.3 421.3	350 350 450
												75	96.0	20	27	— 130.0 260.0	— 108 216	279.5 283.8 413.8	350 350 500
														25	34	— 130.0 260.0	— 108 216	286.5 292.5 422.5	350 350 500
														30	40	— 130.0 260.0	— 108 216	292.5 300.0 430.0	350 350 500
														40	52	— 130.0 260.0	— 108 216	304.5 315.0 445.0	400 400 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 18 — Electrical Data — 50Z6,Z7,Z8,Z9090 Units (with Return/Exhaust Fan)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	65.4	345	65.4	345	—	—	—	—	6	3.3 (ea)	30	40.0	20	27	— 130.0 260.0	— 108 216	234.0 234.0 343.8	250 250 400
														25	34	— 130.0 260.0	— 108 216	241.0 241.0 352.5	300 300 400
														30	40	— 130.0 260.0	— 108 216	247.0 247.0 360.0	300 300 400
														40	52	— 130.0 260.0	— 108 216	259.0 259.0 375.0	300 300 400
												40	52.0	20	27	— 130.0 260.0	— 108 216	246.0 246.0 358.8	300 300 400
														25	34	— 130.0 260.0	— 108 216	253.0 253.0 367.5	300 300 400
														30	40	— 130.0 260.0	— 108 216	259.0 259.0 375.0	300 300 400
														40	52	— 130.0 260.0	— 108 216	271.0 271.0 390.0	300 300 400
												50	65.0	20	27	— 130.0 260.0	— 108 216	259.0 259.0 375.0	300 300 400
														25	34	— 130.0 260.0	— 108 216	266.0 266.0 383.8	300 300 400
														30	40	— 130.0 260.0	— 108 216	272.0 272.0 391.3	300 300 400
														40	52	— 130.0 260.0	— 108 216	284.0 284.0 406.3	300 300 450
												60	77.0	20	27	— 130.0 260.0	— 108 216	273.9 273.9 390.0	350 350 450
														25	34	— 130.0 260.0	— 108 216	280.9 280.9 398.8	350 350 450
														30	40	— 130.0 260.0	— 108 216	286.9 286.9 406.3	350 350 450
														40	52	— 130.0 260.0	— 108 216	298.9 298.9 421.3	350 350 450
												75	96.0	20	27	— 130.0 260.0	— 108 216	297.6 297.6 413.8	350 350 500
														25	34	— 130.0 260.0	— 108 216	304.6 304.6 422.5	400 400 500
														30	40	— 130.0 260.0	— 108 216	310.6 310.6 430.0	400 400 500
														40	52	— 130.0 260.0	— 108 216	322.6 322.6 445.0	400 400 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 19 — Electrical Data — 50Z6,Z7,Z8,Z9105 Units (with Return/Exhaust Fan)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	50.6	253	34.6	173	34.6	173	6	3.3 (ea)	30	40.0	20	27	— 130.0 260.0	— 108 216	269.9 269.9 343.8	300 300 350
														25	34	— 130.0 260.0	— 108 216	276.9 276.9 352.5	300 300 400
														30	40	— 130.0 260.0	— 108 216	282.9 282.9 360.0	300 300 400
														40	52	— 130.0 260.0	— 108 216	294.9 294.9 375.0	300 300 400
												40	52.0	20	27	— 130.0 260.0	— 108 216	282.2 282.2 358.8	300 300 400
														25	34	— 130.0 260.0	— 108 216	289.2 289.2 367.5	300 300 400
														30	40	— 130.0 260.0	— 108 216	295.2 295.2 375.0	300 300 400
														40	52	— 130.0 260.0	— 108 216	307.2 307.2 390.0	350 350 400
												50	65.0	20	27	— 130.0 260.0	— 108 216	298.5 298.5 375.0	350 350 400
														25	34	— 130.0 260.0	— 108 216	305.5 305.5 383.8	350 350 400
														30	40	— 130.0 260.0	— 108 216	311.5 311.5 391.3	350 350 400
														40	52	— 130.0 260.0	— 108 216	323.5 323.5 406.3	350 350 450
												60	77.0	20	27	— 130.0 260.0	— 108 216	313.5 313.5 390.0	350 350 450
														25	34	— 130.0 260.0	— 108 216	320.5 320.5 398.8	350 350 450
														30	40	— 130.0 260.0	— 108 216	326.5 326.5 406.3	400 400 450
														40	52	— 130.0 260.0	— 108 216	338.5 338.5 421.3	400 400 450
												75	96.0	20	27	— 130.0 260.0	— 108 216	337.2 337.2 413.8	400 400 500
														25	34	— 130.0 260.0	— 108 216	344.2 344.2 422.5	400 400 500
														30	40	— 130.0 260.0	— 108 216	350.2 350.2 430.0	400 400 500
														40	52	— 130.0 260.0	— 108 216	362.2 362.2 445.0	450 450 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 20 — Electrical Data — 50ZT,ZW,ZX,ZZ075 Units (with High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	65.4	345	—	—	—	—	5	3.3 (ea)	30	40.0	20	28.0	— 130.0 260.0	— 108 216	216.9 216.9 345.0	250 250 400
														30	42.0	— 130.0 260.0	— 108 216	230.9 232.5 362.5	250 250 400
														40	54.0	— 130.0 260.0	— 108 216	242.9 247.5 377.5	300 300 400
														50	68.0	— 130.0 260.0	— 108 216	256.9 265.0 395.0	300 300 400
														60	80.0	— 130.0 260.0	— 108 216	268.9 280.0 410.0	300 300 450
												40	52.0	20	28.0	— 130.0 260.0	— 108 216	228.9 230.0 360.0	250 250 400
														30	42.0	— 130.0 260.0	— 108 216	242.9 247.5 377.5	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	254.9 262.5 392.5	300 300 400
														50	68.0	— 130.0 260.0	— 108 216	268.9 280.0 410.0	300 300 450
														60	80.0	— 130.0 260.0	— 108 216	280.9 295.0 425.0	300 300 450
												50	65.0	20	28.0	— 130.0 260.0	— 108 216	241.9 246.3 376.3	300 300 400
														30	42.0	— 130.0 260.0	— 108 216	255.9 263.8 393.8	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	267.9 278.8 408.8	300 300 450
														50	68.0	— 130.0 260.0	— 108 216	281.9 296.3 426.3	300 300 450
														60	80.0	— 130.0 260.0	— 108 216	293.9 311.3 441.3	350 350 450
												60	77.0	20	28.0	— 130.0 260.0	— 108 216	256.8 261.3 391.3	300 300 450
														30	42.0	— 130.0 260.0	— 108 216	270.8 278.8 408.8	300 300 450
														40	54.0	— 130.0 260.0	— 108 216	282.8 293.8 423.8	350 350 450
														50	68.0	— 130.0 260.0	— 108 216	296.8 311.3 441.3	350 350 500
														60	80.0	— 130.0 260.0	— 108 216	308.8 326.3 456.3	350 350 500
												75	96.0	20	28.0	— 130.0 260.0	— 108 216	280.5 285.0 415.0	350 350 500
														30	42.0	— 130.0 260.0	— 108 216	294.5 302.5 432.5	350 350 500
														40	54.0	— 130.0 260.0	— 108 216	306.5 317.5 447.5	400 400 500
														50	68.0	— 130.0 260.0	— 108 216	320.5 335.0 465.0	400 400 500
														60	80.0	— 130.0 260.0	— 108 216	332.5 350.0 480.0	400 400 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200 208 230 240	0.756 0.818 1.000 1.089
380	360 380 400	0.897 1.000 1.108
460	440 460 480	0.914 1.000 1.089
575	550 575 600	0.915 1.000 1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 21 — Electrical Data — 50ZT,ZW,ZX,ZZ090 Units (with High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	65.4	345	65.4	345	—	—	—	—	6	3.3 (ea)	30	40.0	20	28.0	— 130.0 260.0	— 108 216	235.0 235.0 345.0	300 300 400
														30	42.0	— 130.0 260.0	— 108 216	249.0 249.0 362.5	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	261.0 261.0 377.5	300 300 400
														50	68.0	— 130.0 260.0	— 108 216	275.0 275.0 395.0	300 300 400
														60	80.0	— 130.0 260.0	— 108 216	287.0 287.0 410.0	350 350 450
												40	52.0	20	28.0	— 130.0 260.0	— 108 216	247.0 247.0 360.0	300 300 400
														30	42.0	— 130.0 260.0	— 108 216	261.0 261.0 377.5	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	273.0 273.0 392.5	300 300 400
														50	68.0	— 130.0 260.0	— 108 216	287.0 287.0 410.0	300 300 450
														60	80.0	— 130.0 260.0	— 108 216	299.0 299.0 425.0	350 350 450
												50	65.0	20	28.0	— 130.0 260.0	— 108 216	260.0 260.0 376.3	300 300 400
														30	42.0	— 130.0 260.0	— 108 216	274.0 274.0 393.8	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	286.0 286.0 408.8	350 350 450
														50	68.0	— 130.0 260.0	— 108 216	300.0 300.0 426.3	350 350 450
														60	80.0	— 130.0 260.0	— 108 216	312.0 312.0 441.3	350 350 450
												60	77.0	20	28.0	— 130.0 260.0	— 108 216	274.9 274.9 391.3	350 350 450
														30	42.0	— 130.0 260.0	— 108 216	288.9 288.9 408.8	350 350 450
														40	54.0	— 130.0 260.0	— 108 216	300.9 300.9 423.8	350 350 450
														50	68.0	— 130.0 260.0	— 108 216	314.9 314.9 441.3	350 350 500
														60	80.0	— 130.0 260.0	— 108 216	326.9 326.9 456.3	400 400 500
												75	96.0	20	28.0	— 130.0 260.0	— 108 216	298.6 298.6 415.0	350 350 500
														30	42.0	— 130.0 260.0	— 108 216	312.6 312.6 432.5	400 400 500
														40	54.0	— 130.0 260.0	— 108 216	324.6 324.6 447.5	400 400 500
														50	68.0	— 130.0 260.0	— 108 216	338.6 338.6 465.0	400 400 500
														60	80.0	— 130.0 260.0	— 108 216	350.6 350.6 480.0	400 400 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Table 22 — Electrical Data — 50ZT,ZW,ZX,ZZ105 Units (with High-Capacity Power Exhaust)

460-3-60 (V-Ph-Hz)

VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST		OPTIONAL ELECTRIC HEAT*		POWER SUPPLY	
		No. 1		No. 2		No. 3		No. 4											
Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	Hp	FLA (total)	FLA	kW	MCA	MOCP†
414	508	50.6	253	50.6	253	34.6	173	34.6	173	6	3.3 (ea)	30	40.0	20	28.0	— 130.0 260.0	— 108 216	270.9 270.9 345.0	300 300 350
														30	42.0	— 130.0 260.0	— 108 216	284.9 284.9 362.5	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	296.9 296.9 377.5	300 300 400
														50	68.0	— 130.0 260.0	— 108 216	310.9 310.9 395.0	350 350 400
														60	80.0	— 130.0 260.0	— 108 216	322.9 322.9 410.0	350 350 450
												40	52.0	20	28.0	— 130.0 260.0	— 108 216	283.2 283.2 360.0	300 300 400
														30	42.0	— 130.0 260.0	— 108 216	297.2 297.2 377.5	300 300 400
														40	54.0	— 130.0 260.0	— 108 216	309.2 309.2 392.5	350 350 400
														50	68.0	— 130.0 260.0	— 108 216	323.2 323.2 410.0	350 350 450
														60	80.0	— 130.0 260.0	— 108 216	335.2 335.2 425.0	350 350 450
												50	65.0	20	28.0	— 130.0 260.0	— 108 216	299.5 299.5 376.3	350 350 400
														30	42.0	— 130.0 260.0	— 108 216	313.5 313.5 393.8	350 350 400
														40	54.0	— 130.0 260.0	— 108 216	325.5 325.5 408.8	350 350 450
														50	68.0	— 130.0 260.0	— 108 216	339.5 339.5 426.3	400 400 450
														60	80.0	— 130.0 260.0	— 108 216	351.5 351.5 441.3	400 400 450
												60	77.0	20	28.0	— 130.0 260.0	— 108 216	314.5 314.5 391.3	350 350 450
														30	42.0	— 130.0 260.0	— 108 216	328.5 328.5 408.8	400 400 450
														40	54.0	— 130.0 260.0	— 108 216	340.5 340.5 423.8	400 400 450
														50	68.0	— 130.0 260.0	— 108 216	354.5 354.5 441.3	400 400 500
														60	80.0	— 130.0 260.0	— 108 216	366.5 366.5 456.3	400 400 500
												75	96.0	20	28.0	— 130.0 260.0	— 108 216	338.2 338.2 415.0	400 400 500
														30	42.0	— 130.0 260.0	— 108 216	352.2 352.2 432.5	400 400 500
														40	54.0	— 130.0 260.0	— 108 216	364.2 364.2 447.5	450 450 500
														50	68.0	— 130.0 260.0	— 108 216	378.2 378.2 465.0	450 450 500
														60	80.0	— 130.0 260.0	— 108 216	390.2 390.2 480.0	450 450 500

LEGEND

CV — Constant Volume
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
Hp — Nominal Horsepower
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps (for wire sizing)
MOCP — Maximum Overcurrent Protection
RLA — Rated Load Amps

*Electric heat available on vertical discharge units.
†Fuse or HACR breaker.

NOTE: Electric resistance heaters are rated at 230-v (for 208/230-v use), 380-v, 460-v, and 575-v. To determine heater capacity (kW) at other unit operating voltage, multiply heater nominal capacity by appropriate multiplier at right.

MULTIPLICATION FACTORS

HEATER kW RATING (VOLTS)	VOLTAGE DISTRIBUTION V-3-60	MULTIPLICATION FACTOR
230	200	0.756
	208	0.818
	230	1.000
	240	1.089
380	360	0.897
	380	1.000
	400	1.108
460	440	0.914
	460	1.000
	480	1.089
575	550	0.915
	575	1.000
	600	1.089

Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.

Air Pressure Tubing — Before options such as inlet guide vanes (IGV), variable frequency drive (VFD), and/or modulating power exhaust can operate properly, the pneumatic tubing for pressure sensing must be installed. Use fire-retardant plenum tubing (field-supplied). All control devices use $^1/_4$-in. tubing. Tubing must be run from the appropriate sensing location (in the duct or in the building space) to the control device location in the unit.

INLET GUIDE VANES — The tubing for the duct pressure (DP) control option should sample supply duct pressure about $^2/_3$ of the way out from the unit in the main trunk duct, at a location where a constant duct pressure is desired.

The duct pressure is sensed by a pressure transducer. The output of the pressure transducer is directed to the unit control module. On all sizes, the DP transducer is located in the unit auxiliary control box. See Fig. 57 and 58 for auxiliary control box location. See Fig. 59 and 60 for auxiliary control box details. Use a nominal $^1/_4$-in. plastic tubing.

VARIABLE FREQUENCY DRIVE — The tubing for the duct pressure (DP) control option should sample supply duct pressure about $^2/_3$ of the way out from the unit in the main trunk duct, at a location where a constant duct pressure is desired.

The duct pressure is sensed by a pressure transducer. The pressure transducer output is directed to the unit control module. On all sizes, the DP transducer is located in the unit auxiliary control box. See Fig. 57 and 58 for auxiliary control box location. See Fig. 59 and 60 for auxiliary control box details. Use a nominal $^1/_4$-in. plastic tubing.

Refer to appropriate base unit Controls and Troubleshooting book for instructions on adjusting set points for Duct Pressure controls.

MODULATING POWER EXHAUST — The tubing for the building pressure (BP) control (achieved via the modulating power exhaust option) should sample building pressure in the area near the entrance lobby (or other appropriate and sensitive location) so that location is controlled as closely to design pressures as possible.

These units use a pressure transducer for sensing building pressure. The BP transducer is located in the unit auxiliary control box. See Fig. 57 and 58 for auxiliary control box location. See Fig. 59 and 60 for auxiliary control box details. Use a nominal $^1/_4$-in. plastic tubing.

For instructions on adjusting BP control set points, refer to the Controls and Troubleshooting book.

HIGH-CAPACITY POWER EXHAUST — The tubing for the building pressure (BP) (control (achieved via the high-capacity power exhaust package) should sample building pressure in the area near the entrance lobby (or other appropriate and sensitive location) so that location is controlled as closely to the design pressures as possible.

These units use a pressure transducer for sensing building pressure (BP). The pressure transducer output is directed to the unit control module. The BP transducer is located in the unit auxiliary control box. See Fig. 57 and 58 for auxiliary control box location. See Fig. 59 and 60 for auxiliary control box details. Use a nominal $^1/_4$-in. plastic tubing.

For instructions on adjusting BP control set points, refer to Controls and Troubleshooting book.

RETURN/EXHAUST POWER EXHAUST — The tubing for the building pressure control (achieved via the return/exhaust power exhaust option) should sample building pressure in the area near the entrance lobby (or other appropriate and sensitive location) so that location is controlled as closely to design pressures as possible.

The units use a pressure transducer for sensing building pressure. The BP transducer is located in the unit auxiliary control box. See Fig. 58 for auxiliary control box location. See Fig. 61 for auxiliary control box details. Use a nominal $^1/_4$-in. plastic tubing.

For instructions on adjusting BP control set points refer to the Controls and Troubleshooting book.

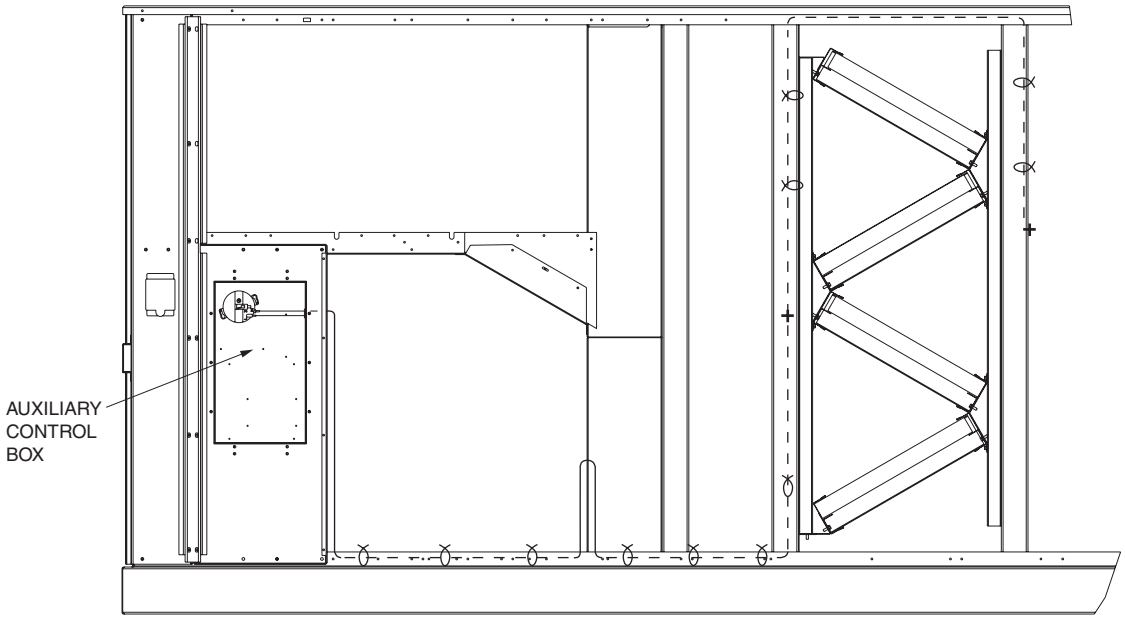


Fig. 57 — Auxiliary Control Box Location (Sizes 030-050)

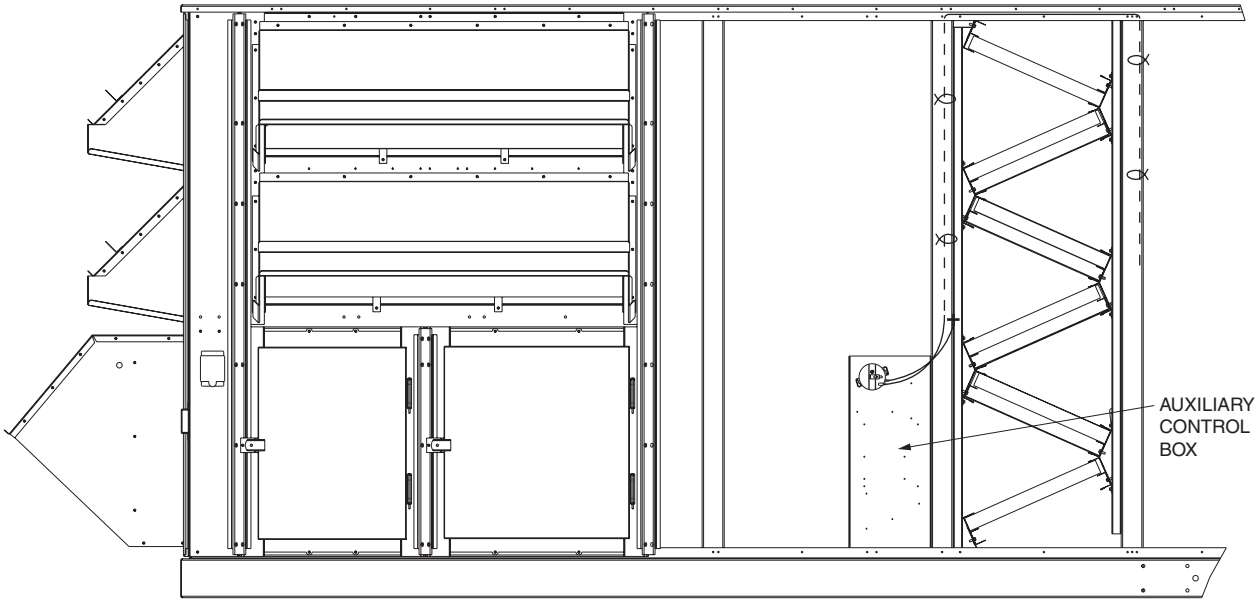
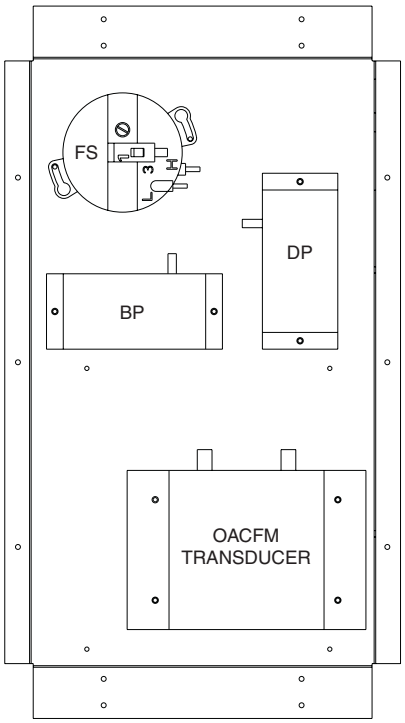


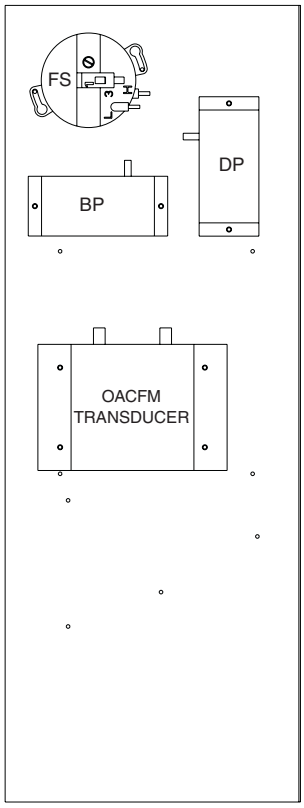
Fig. 58 — Auxiliary Control Box Location (Sizes 055-105)



LEGEND

BP — Building Pressure Transducer
DP — Duct Pressure Transducer
FS — Filter Switch
OACFM — Outdoor Air Cfm Sensor Transducer

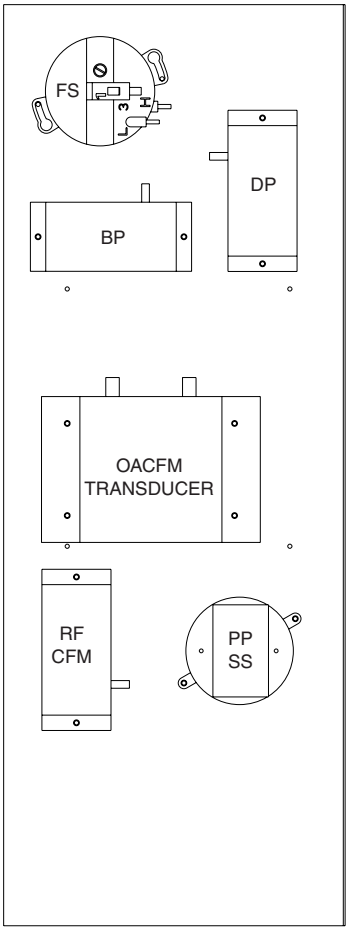
Fig. 59 — Auxiliary Control Box Details (Sizes 030-050)



LEGEND

BP — Building Pressure Transducer
DP — Duct Pressure Transducer
FS — Filter Switch
OACFM — Outdoor Air Cfm Sensor Transducer

Fig. 60 — Auxiliary Control Box Details (Sizes 055-105 without Return Fan)



LEGEND

BP — Building Pressure Transducer
DP — Duct Pressure Transducer
FS — Filter Switch
OACFM — Outdoor Air Cfm Sensor Transducer
PPSS — Plenum Pressure Safety Switch
RFCFM — Return Fan Cfm Sensor Transducer

Fig. 61 — Auxiliary Control Box Details (Sizes 075-105 Units with Return Fan)

Supply-Fan Shipping Brackets — Supply-fan shipping brackets (4 per unit) must be removed from each corner of the fan sled before starting unit.

UNIT SIZES 030-050

1. To remove brackets, raise fan sled by turning adjusting bolt counterclockwise until spring is compressed slightly.
2. Remove screws holding shipping bracket to unit cross rail.
3. Remove shipping bracket (top of bracket is slotted so that it will slide out).
4. After removing all shipping brackets, level fan sled using the adjusting screws. On all 4 corners, dimension from cross rail to fan sled should be as shown in Fig. 62.

UNIT SIZES 055-070 — To remove shipping brackets, remove the 6 screws holding each bracket to the cross rail. There are 8 brackets per unit. See Fig. 62 or 63.

After removing all shipping brackets, level fan sled using the adjusting screws. On all 4 corners dimension from cross rail to fan sled should be as shown in Fig. 62 or 63.

UNIT SIZES 075-105 — The supply-fan shipping brackets must be removed from each corner of the fan sled before starting the unit. To remove shipping brackets, remove 6 screws

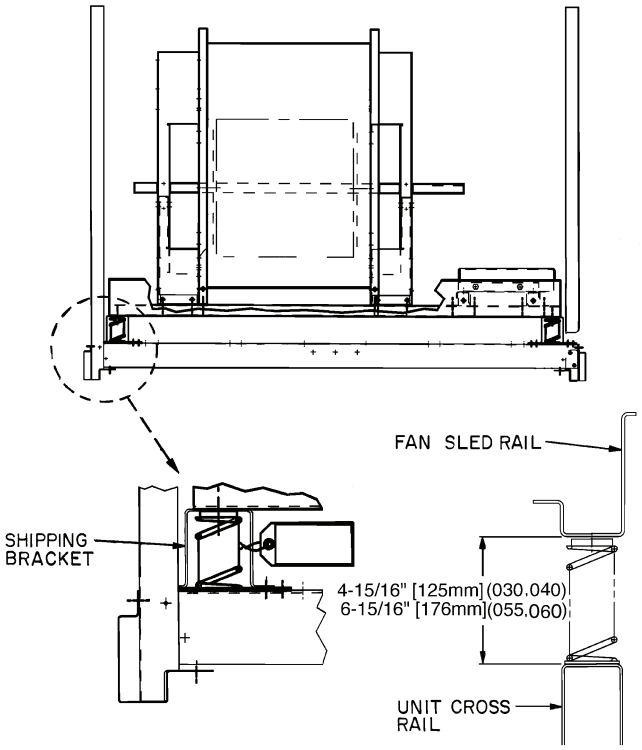


Fig. 62 — Shipping Brackets; 030-050 Units and Vertical Discharge 055-070 Units

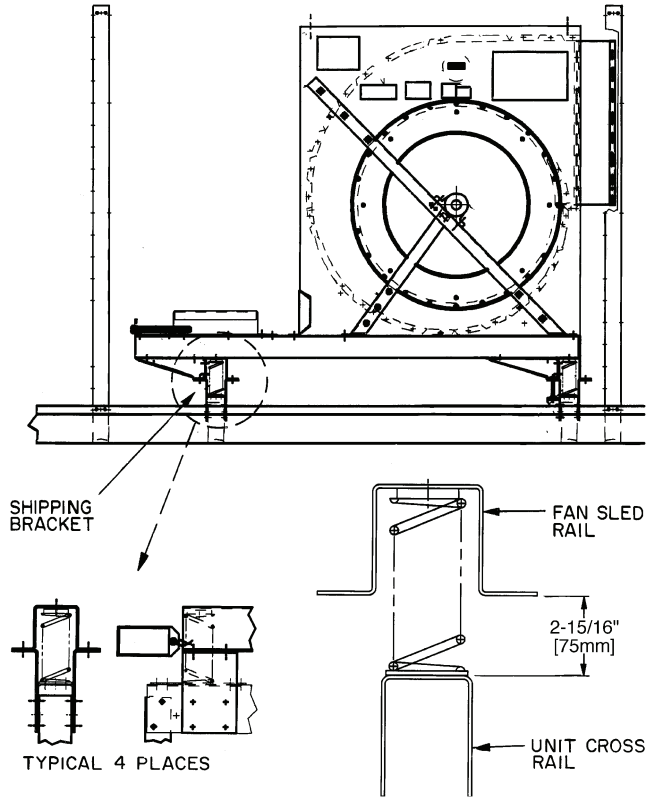


Fig. 63 — Shipping Brackets; Horizontal Discharge 055-070 Units

holding each bracket to the cross rail. There are 4 brackets per unit. See Fig. 64.

After removing all shipping brackets, level fan sled using the adjusting screws. On all 4 corners dimension from cross rail to fan sled should be as shown in Fig. 64.

Return/Exhaust-Fan Shipping Brackets (50Z6,Z7, Z8,Z9075-105 Units) — The return/exhaust fan shipping brackets must be removed from each corner of the fan sled before starting unit.

To remove shipping brackets, remove 2 screws holding each bracket to the cross rail. There are 4 brackets per unit.

After removing all shipping brackets, level the fan using the adjusting screws. On all 4 corners dimension from cross rail to fan sled should be as shown in Fig. 65.

Remove TXV Shipping Blocks — Shipping blocks for the TXV bracket are used on size 030-075 units with high capacity coils and all 075-105 size units. Remove the foam shipping block before starting unit. See Fig. 66.

Compressor Mounting

SIZES 030-090 — Each compressor is supported on 4 springs. The springs are compressed for shipment. After the unit is installed, the holddown nuts need to be loosened for normal operation. See Fig. 67 for compressor mounting details. Loosen each bolt using nut indicated until the flatwasher ($^3/_8$-in.) can be moved with finger pressure. Do not remove the locknuts. Check each compressor mounting to ensure all 4 springs have been loosened properly.

SIZE 105 — Compressors are mounted on rails and held down by rail bolts during shipment. After unit is installed, loosen the rail bolts to allow the rails and compressors to float freely on the springs located under the rails. See Fig. 68 and 69.

Install Unit Accessories — For applications requiring accessories, the following packages are available:

All units:
- barometric relief
- electric heaters
- space temperature sensor
- CO_2 sensor
- space temperature sensor with CO_2
- relative humidity sensor
- airflow switch
- filter switch
- smoke detector

All vertical return/supply units:
- electric heat

All 50ZG,ZT, ZX, Z2, Z6, Z7 units:
- modulating power exhaust
- pressure operated unloaders

All 50ZN, ZW, ZZ, Z3, Z8, Z9 units:
- modulating power exhaust

Refer to the individual accessory installation instructions in each accessory package for information on installing accessories.

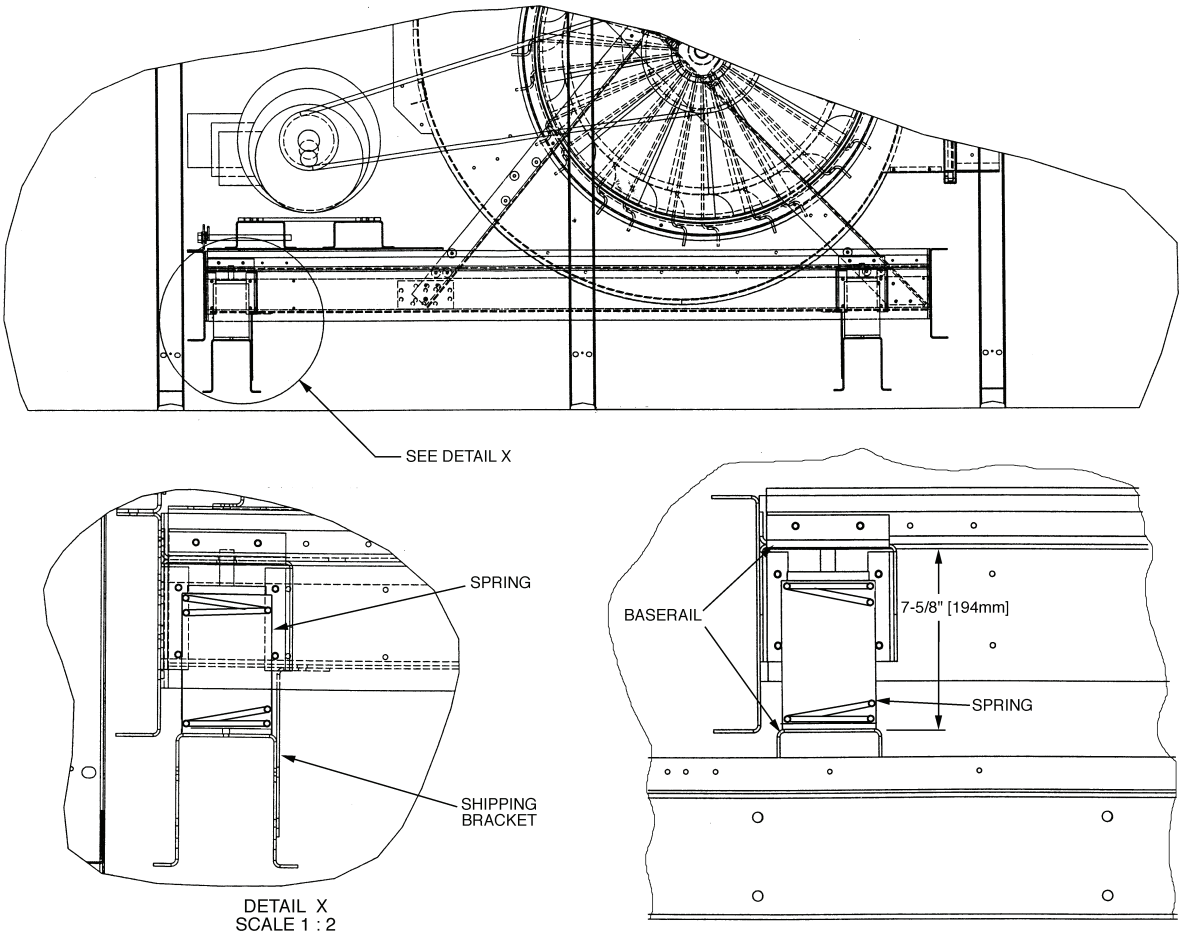
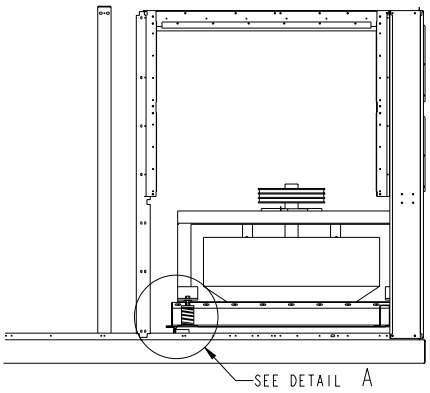


Fig. 64 — Shipping Brackets (Sizes 075-105)



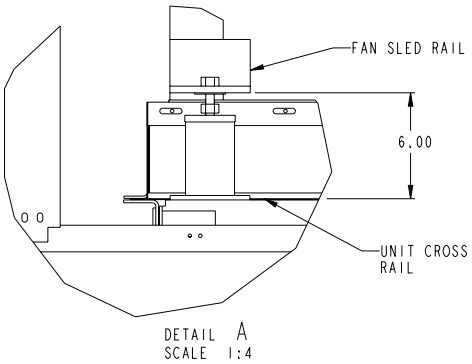


Fig. 65 — Return/Exhaust Fan Shipping Brackets

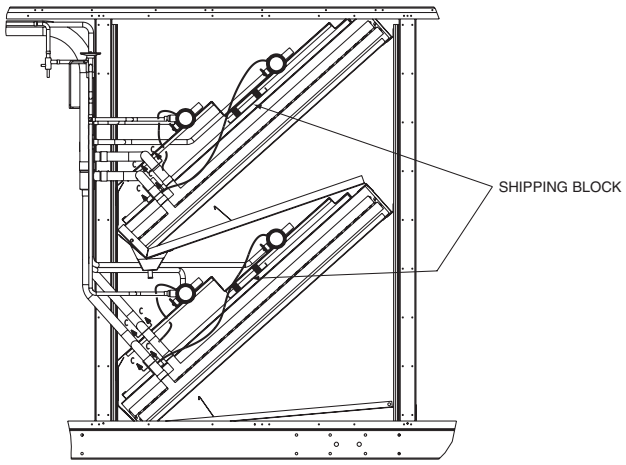
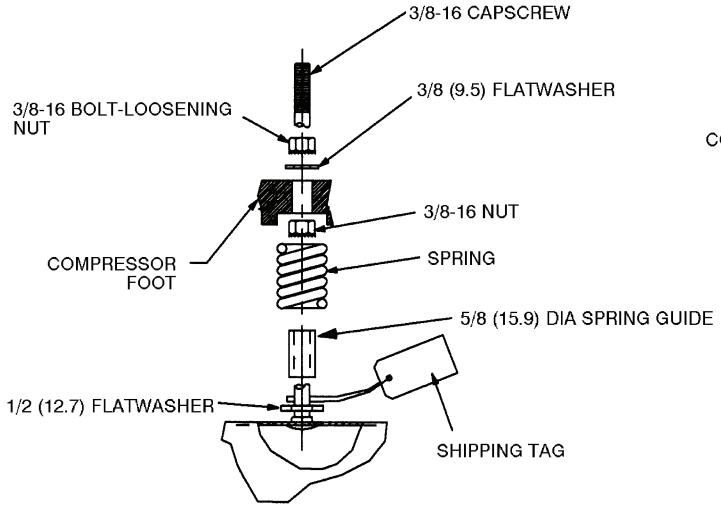
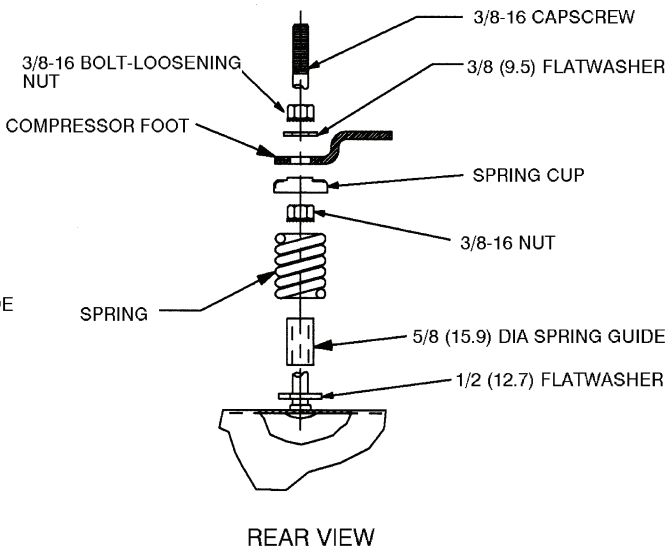


Fig. 66 — Foam TXV Shipping Blocks





NOTE: All dimensions are in inches (mm).

Fig. 67 — Compressor Mounting (Sizes 030-090)

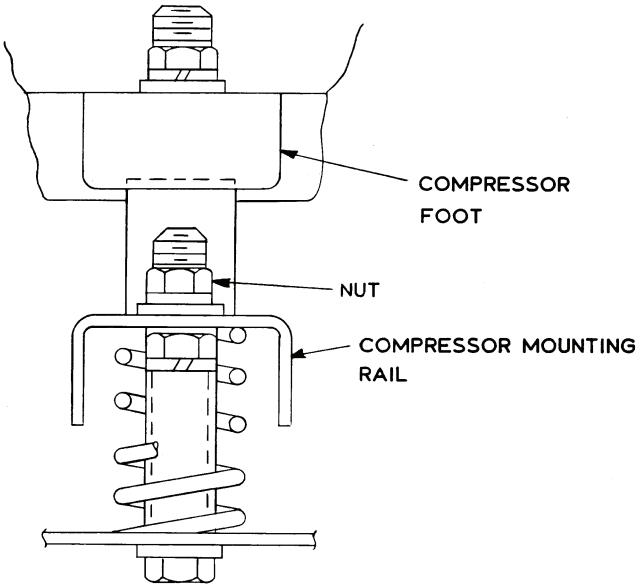


Fig. 68 — Front View of Compressor Mounting Rail Assembly — Size 105 Units

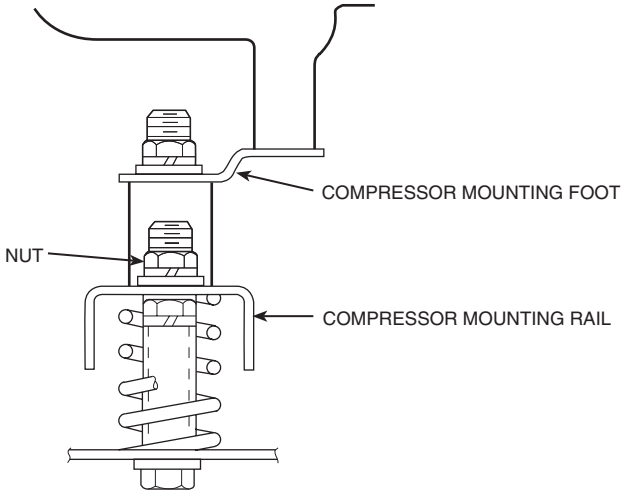


Fig. 69 — Rear View of Compressor Mounting Rail Assembly — Size 105 Units

CONTROLS INSTALLATION

Constant Volume (CV) Units — The 50ZG,ZT,ZX, Z2,Z6,Z7 units may be used in applications with additional control features, options, or accessories. Refer to the appropriate accessory installation instructions for more information on installing that accessory. Control options and accessories available for CV units are:

- thermostats
- enthalpy sensor
- enthalpy switch
- relative humidity sensor
- CEM (controls expansion module)
- Navigator™ hand-held display

CONTROL WIRING — The unit can be controlled with a Carrier-approved accessory electro-mechanical or electronic thermostat that has two stages of cooling, two stages of heating control, and an output for fan control. The thermostat may also include time of day scheduling or use scheduling routines built into the *Comfort*Link™ controls.

Install the thermostat according to the installation instructions shipped with the accessory thermostat. Locate thermostat assembly on a solid interior wall to sense average temperature.

Route thermostat cable or equivalent leads of colored wire from subbase terminals through conduit into the low voltage connections in the main control box. For thermostat TB203 connections, see Fig. 70.

NOTE: For wire runs up to 50 ft, use no. 18 AWG (American Wire Gage) 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.

Variable Air Volume Units — The 50ZN,ZW,ZZ,Z3, Z8,Z9 units may be used in applications with additional control features, options, or accessories. Refer to the appropriate accessory installation instructions for more information on installing that accessory. Refer to the Controls and Troubleshooting manual for more information concerning installation and configuration of options and accessories. Control options and accessories available for VAV units are:

- enthalpy sensor
- enthalpy switch
- relative humidity sensor
- CEM (controls expansion module)
- Navigator hand-held display
- VFD remote display

VAV CONTROL WIRING — The recommended types of control wiring are shown below:

MANUFACTURER	PART NO.	
	Regular Wiring	Plenum Wiring
Alpha	1895	—
American	A21451	A48301
Belden	8205	884421
Columbia	D6451	—
Manhattan	M13402	M64430
Quabik	6130	—

SENSORS — Sensors should be wired using single twisted pairs of 20 AWG (American Wire Gage) conductor cable rated for the application, except for the T-56 accessory sensor which requires 3-conductor cable.

NOTE: Humidity and CO_2 sensors must be powered from isolated 24-v power supplies.

HUMIDITY CONTROL AND HOT WATER AND STEAM VALVES — These devices require 20 AWG twisted pair conductor cables rated for the application for the 4 to 20 mA signal.

SPACE TEMPERATURE SENSOR (T-55) — The space temperature sensor (P/N 33ZCT55SPT) is shipped standard with every unit, and is located in the main control box. Space temperature sensor wires are to be connected to terminals in the unit main control box.

⚠ CAUTION

Jumper **MUST** be in place between pins 1 and 3, 3 and 4 or inaccurate readings could result.

To connect the space temperature sensor, see Fig. 71.

SPACE TEMPERATURE SENSOR (T-56) — The space temperature sensor (P/N 33ZCT56SPT) wires are connected to terminals in the unit main control box.

⚠ CAUTION

Jumper **MUST** be in place between pins 1 and 3, 3 and 4 or inaccurate readings could result.

To connect the space temperature sensor, see Fig. 71.

COMMUNICATING SPACE TEMPERATURE SENSOR (T-58) — The communicating space temperature sensor (P/N 33ZCT58SPT) is wired to the CCN connections on TB202

SPACE TEMPERATURE AVERAGING — Applications that require averaging using multiple space temperature sensors can be satisfied using either 4 or 9 sensors as shown in Fig. 72.

NOTE: Only Carrier sensors may be used for standard T-55 space averaging. Sensors must be used in multiples of 1, 4, and 9 only, with total sensors wiring not to exceed 1000 ft. However, space temperature reset can be accomplished with only one sensor.

NOTE: Do not use T-56 sensors for space temperature averaging because the 5-degree offset function will not work in a multiple sensor application.

HEAT INTERLOCK RELAY (VAV Units Only — Not Necessary For Digital Air Volume Applications) — Variable air volume (VAV) units using optimal start (morning warm-up) and/or occupied heating require that room terminals be controlled to the fully open position when the unit goes into Heating mode. The HIR (heat interlock relay) function is provided for this control. When the unit goes into Heating mode, the HIR is energized to provide switch closure or opening (depending on how the field-supplied power source is set up) to open the room terminals. The field connections for the HIR are at TB201, terminals 7 and 8. See Fig. 73.

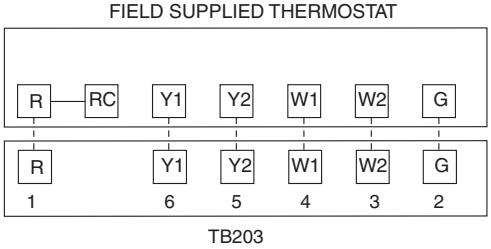


Fig. 70 — Field Control Thermostat Wiring

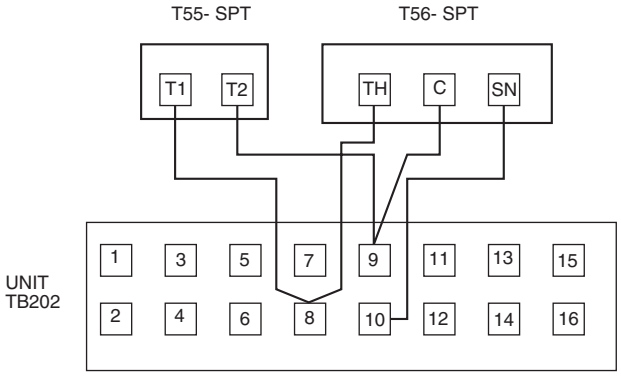


Fig. 71 — T55 or T56 Wiring

Option and Accessory Control Wiring — The Z Series units may be used in applications with additional control features, options, or accessories. Refer to the Controls and Troubleshooting manual for more information concerning installation and configuration of options and accessories. Figures 73-83 contain wiring information on the following features:

- heat interlock relay (Fig. 73)
- outdoor air enthalpy switch (Fig. 74)
- CO_2 space sensor (Fig. 75)
- filter status switch (Fig. 76)
- fan status switch (Fig. 77)
- space humidity sensor (Fig. 78)
- return air humidity sensor (Fig. 78)
- return air CO_2 sensor (Fig. 79)
- return air smoke detector (Fig. 80)
- smoke control — fire shutdown (Fig. 81)
- smoke control — purge (Fig. 82)
- smoke control — evacuation (Fig. 82)
- smoke control — pressurization (Fig. 82)
- CCN connections (Fig. 83)

Carrier Comfort Network® Interface — The 50ZN,ZW,ZZ,Z3,Z8,Z9 units can be connected to the CCN interface if desired. The communication bus wiring is supplied and installed in the field. It consists of shielded, 3-conductor cable with shield wire.

The system elements are connected to the communication bus in a daisy chain arrangement. The positive pin of each system element communication connector must be wired to the positive pins of the system element on either side of it, the negative pins must be wired to the negative pins, and the signal pins must be wired to signal ground pins. Wiring connections for the CCN system should be made at the terminal block using the screw terminals. The board also contains an RJ14 CCN plug that can be used to connect a Navigator™ device or field service computer. There is also another RJ14 LEN connection that is used to download software. Consult CCN Contractor's Manual for further information.

NOTE: Conductors and drain wire must be 20 AWG minimum stranded, tinned copper. Individual conductors must be insulated with PVC, PVC/nylon, vinyl, Teflon, or polyethylene. An aluminum/polyester 100% foil shield and an outer jacket of PVC, PVC/nylon, chrome vinyl, or Teflon with a minimum operating temperature range of –4 to 140 F (–20 C to 60 C) is required. See Table 23 for cables that meet the requirements.

Table 23 — CCN Connection Approved Shielded Cables

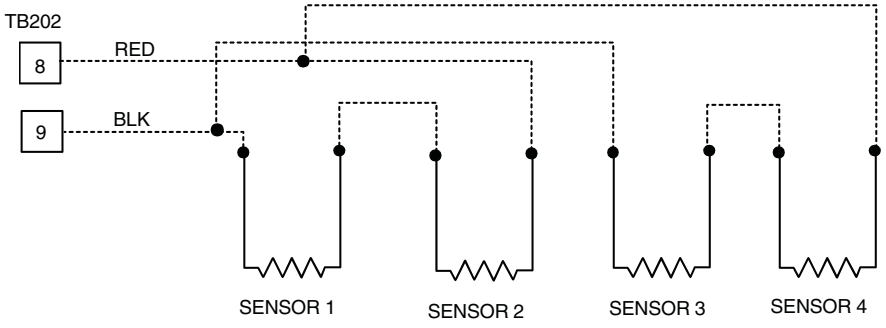
MANUFACTURER	CABLE PART NO.
Alpha	2413 or 5463
American	A22503
Belden	8772
Columbia	02525

IMPORTANT: When connecting the CCN communication bus to a system element, use a color coding system for the entire network to simplify installation and checkout.

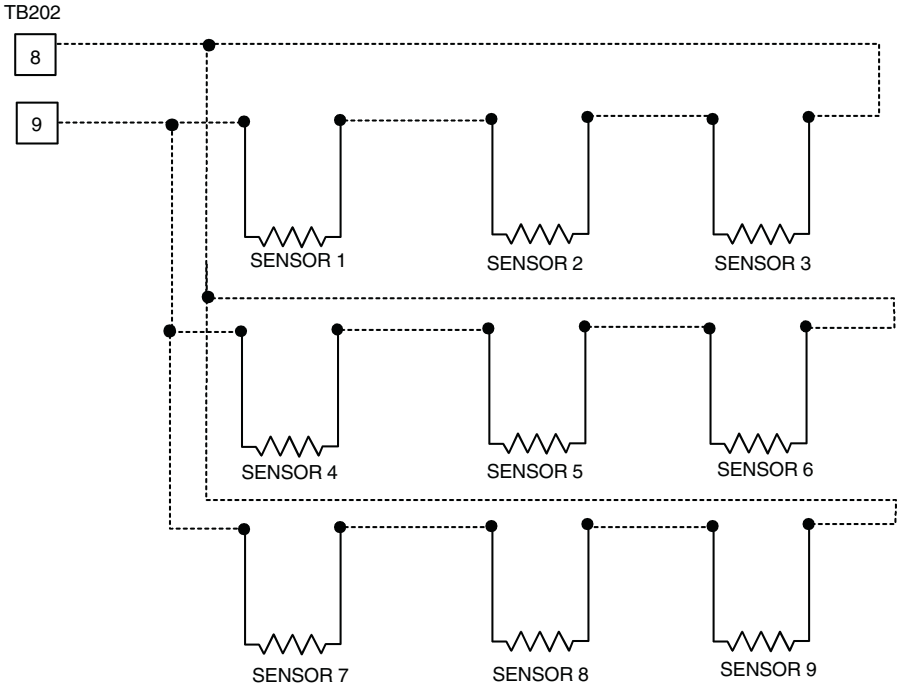
The following color code is recommended:

SIGNAL TYPE	CCN BUS CONDUCTOR INSULATION COLOR	COMM1 PLUG PIN NO.
+	RED	1
GROUND	WHITE	2
–	BLACK	3

NOTE: If a cable with a different color scheme is selected, a similar color code should be adopted for the entire network.



SPACE TEMPERATURE AVERAGING (4 SENSOR APPLICATION)



SPACE TEMPERATURE AVERAGING (9 SENSOR APPLICATION)

NOTE: Use T55 sensor only.

Fig. 72 — Space Temperature Averaging Wiring

At each system element, the shields of its communication bus cables must be tied together. If the communication bus is entirely within one building, the resulting continuous field must be connected to a ground at one point only. If the communication bus cable exits from one building and enters another, the shields must be connected to grounds at the lightning suppressor in each building where the cable enters or exits the building (one point per building only).

To connect the unit to the network (Fig. 83):

1. Turn off power to the control box.
2. Cut the CCN wire and strip the ends of the red (+), white (ground) and black (–) conductors. (If a different network color scheme is used, substitute appropriate colors.)
3. Wire the CCN to the screw terminals on the COMM board as follows (Fig. 83):
   a. Secure the red (+) wire to CCN screw terminal + on the COMM board.
   b. Secure the white (ground) wire to CCN screw terminal C on the COMM board.
   c. Secure the black (–) wire to CCN screw terminal - on the COMM board.
   d. Secure shield wire to CCN screw terminal SHIELD on the COMM board.

IMPORTANT: A shorted CCN bus cable will prevent some routines from running and may prevent unit from starting. If abnormal conditions occur, unplug the connector. If conditions return to normal, check CCN connector, and run new cable if necessary. A short in one section of the bus can cause problems with all system elements on the bus.

RJ14 PLUG WIRING — Units on the CCN can be monitored from the space at the sensor through the RJ14 connector, if desired. To wire the RJ14 connector into the CCN (Fig. 83):

IMPORTANT: The cable selected for the RJ14 connector wiring MUST be identical to the CCN communication bus wire used for the entire network.

1. Cut the CCN wire and strip ends of the red (+), white (ground), and black (–) conductors. (If another wire color scheme is used, strip ends of appropriate wires.)
2. Secure the red (+) wire to CCN screw terminal + on the COMM board.
3. Secure the white (ground) wire to CCN screw terminal C on the COMM board.
4. Secure the black (–) wire to CCN screw terminal - on the COMM board.
5. Secure shield wire to CCN screw terminal SHIELD on the COMM board.
6. Connect the other end of the communication bus cable to the CCN communication bus.

Smoke Control Modes — Rooftop units can be used for aid in building smoke control in the event of a building fire. The available functions include: Fire Shutdown, Pressurization, Evacuation, and Smoke Purge. These functions are enhanced when multiple rooftop units are used to zone a building. See Table 24 and Fig. 81 and 82.

FIRE SHUTDOWN — Fire Shutdown mode terminates all unit operation (cooling, heating, supply fan, and power exhaust). This mode prevents recirculation of contaminated air back into the space. The mode will not allow admission into the space of unsuitable outside air. See Fig. 81 for wiring.

PRESSURIZATION — Pressurization mode is intended to keep smoke out of a zone. The factory-installed optional economizer is required for this function. Pressurization is accomplished by the following:

- opening the economizer (option)
- running the supply fan (optional inlet guide vanes open or optional VFD at normal duct static pressure set point)
- closing the power exhaust dampers (if installed as option or accessory)
- shutting off the power exhaust fans (if installed as option or accessory)

This allows the space to be overpressurized relative to adjacent zones and prevents or slows entry of smoke into this space from adjacent zones. See Fig. 82 for wiring.

EVACUATION — Evacuation mode removes smoke or undesirable air from interior spaces without reintroducing unsuitable air. The factory-installed optional economizer with option/accessory power exhaust is required for this function. Evacuation is accomplished by the following:

- turning the supply fan off
- opening the economizer (option required)
- running the exhaust fans (option or accessory required)
- opening the exhaust dampers.

See Fig. 82 for wiring.

SMOKE PURGE — Smoke Purge mode removes smoke from the interior spaces and replaces it with fresh outside air. The factory-installed optional economizer with option/accessory power exhaust are required for this function. Smoke purge is accomplished by the following:

- turning supply fan on
- opening the economizer (option required)
- running the exhaust fans (option or accessory required)
- opening the exhaust dampers

See Fig. 82 for wiring.

SMOKE CONTROL INSTALLATION — Implementation of the various Smoke Control Modes on these units requires the installer to modify the unit wiring to add contacts (via either manual switches or relays) that will selectively interrupt and override standard factory control sequences. See Table 24 and Fig. 81 and 82 for more information.

Table 24 — Smoke Control Modes

FUNCTION	MODE			
	Fire Shutdown	Pressurization	Evacuation*	Smoke Purge*
Supply Fan	Off	On	Off	On
IGV/VFD†	—	Open/On	—	Open/On
Economizer	Closed	Open	Open	Open
Return Air Damper	Open	Closed	Closed	Closed
Exhaust Fans	Off	Off	On	On
Exhaust Damper	Closed	Closed	Open	Open

LEGEND

IGV — Inlet Guide Vane
VAV — Variable Air Volume
VFD — Variable Frequency Drive

*Power exhaust option required for this mode.
†Applicable to VAV units with appropriate options.

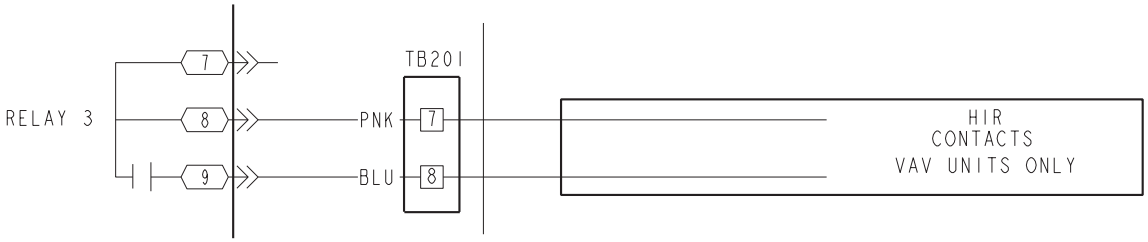


Fig. 73 — Heat Interlock Relay Wiring

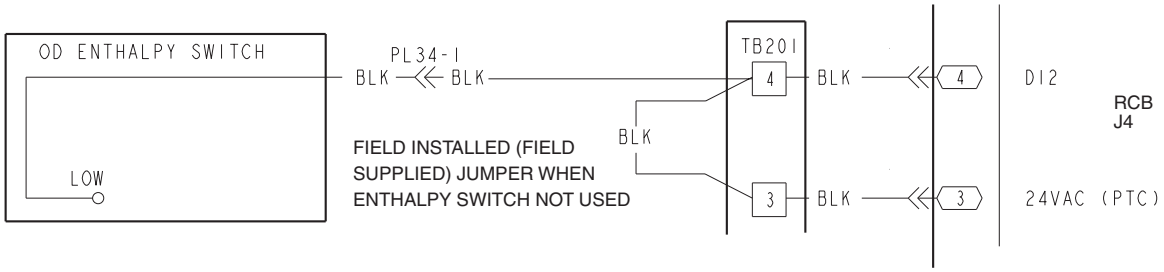


Fig. 74 — Outdoor Air Enthalpy Switch Wiring

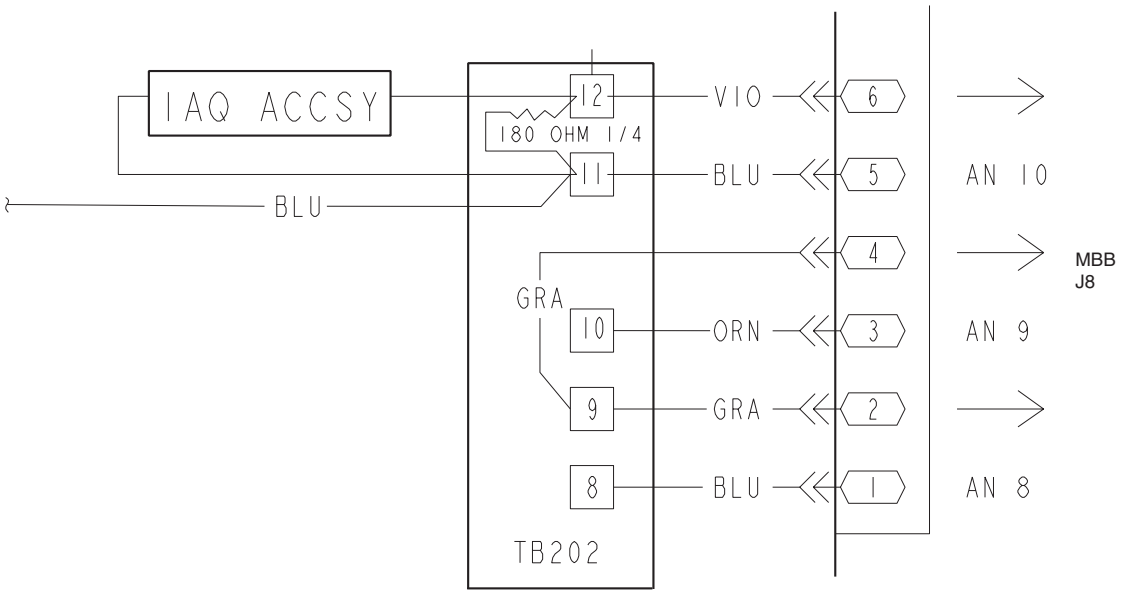


Fig. 75 — CO_2 Space Sensor Wiring

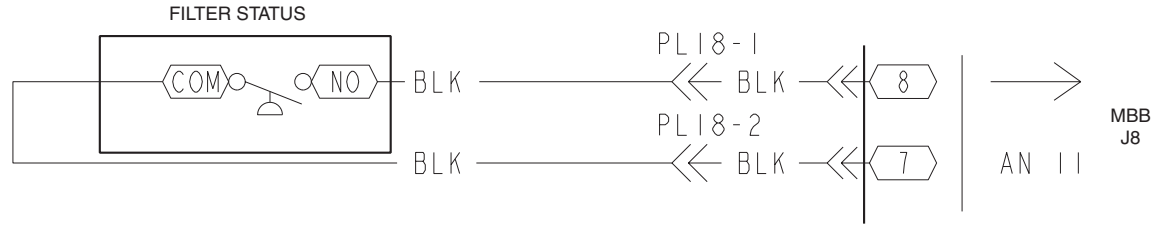


Fig. 76 — Filter Status Wiring

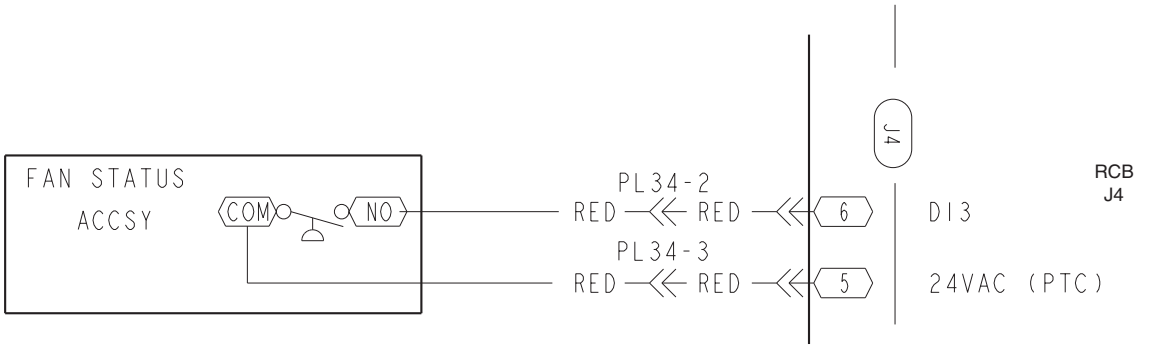


Fig. 77 — Fan Status Switch Wiring

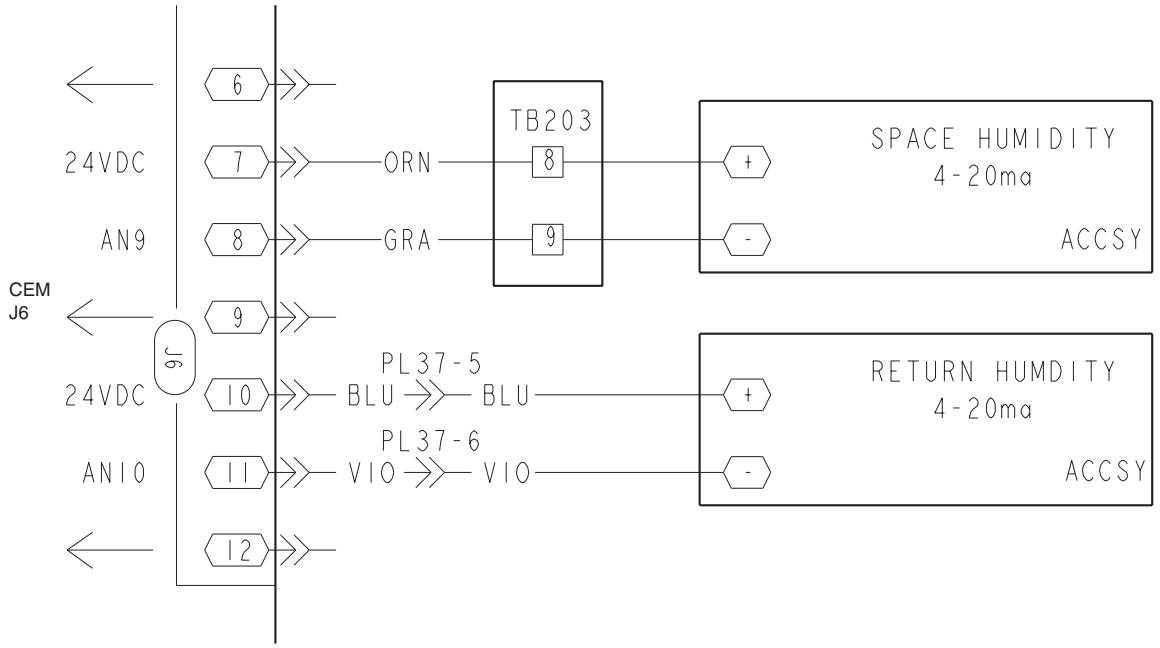


Fig. 78 — Space and Return Air Humidity Sensor Wiring

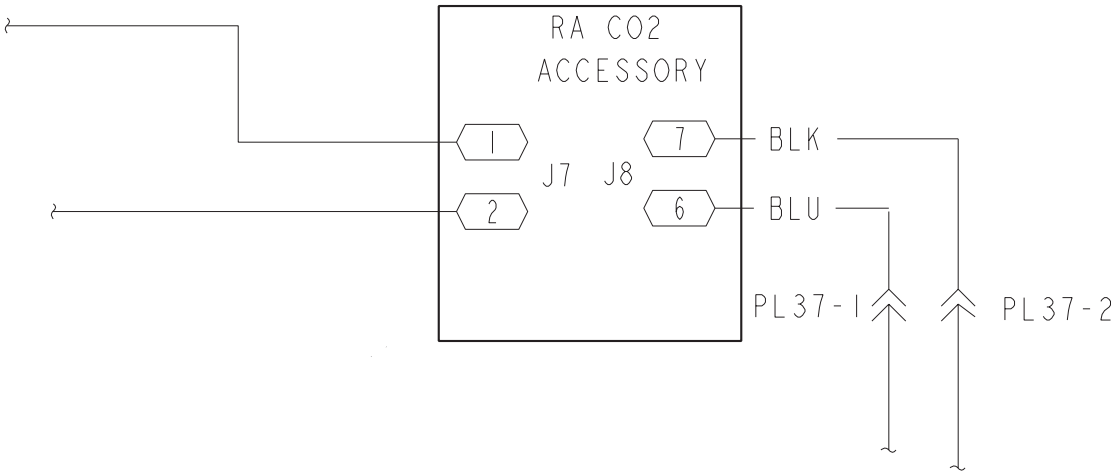


Fig. 79 — Return Air CO_2 Sensor Wiring

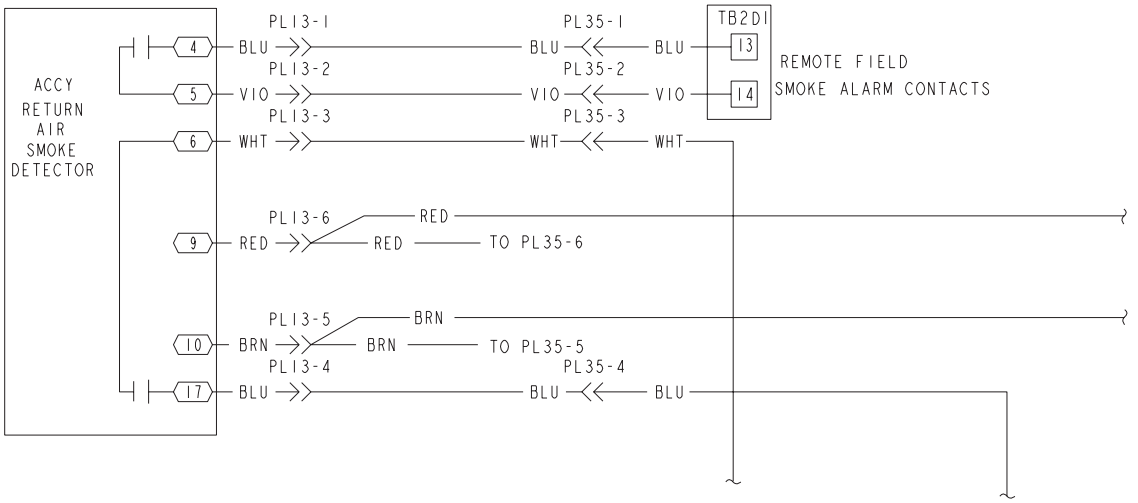


Fig. 80 — Return Air Smoke Detector Wiring

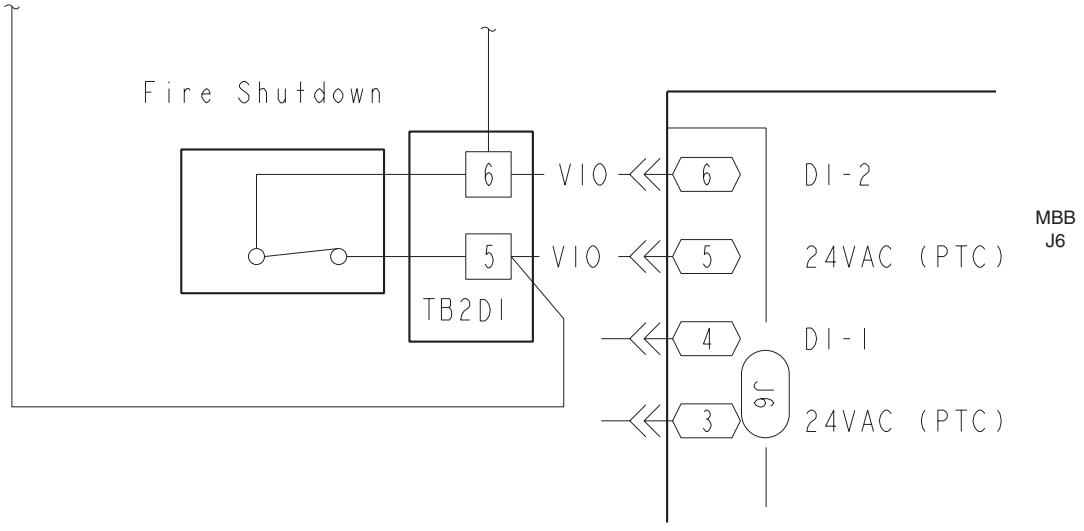


Fig. 81 — Fire Shutdown Wiring

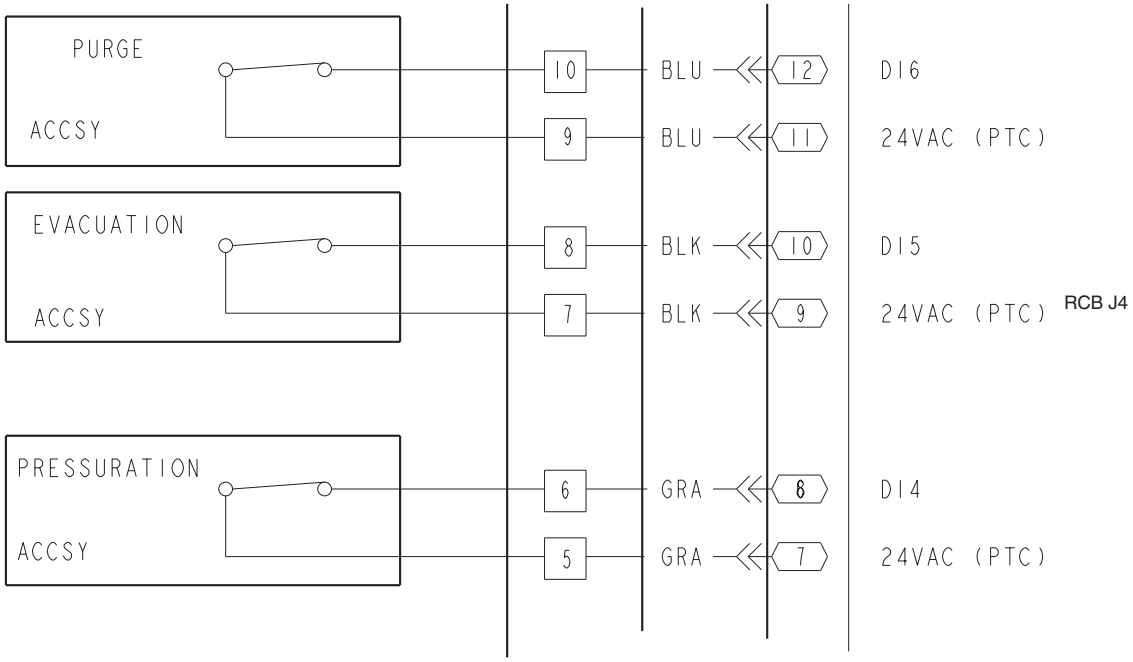


Fig. 82 — Purge, Evacuation, and Pressurization Wiring

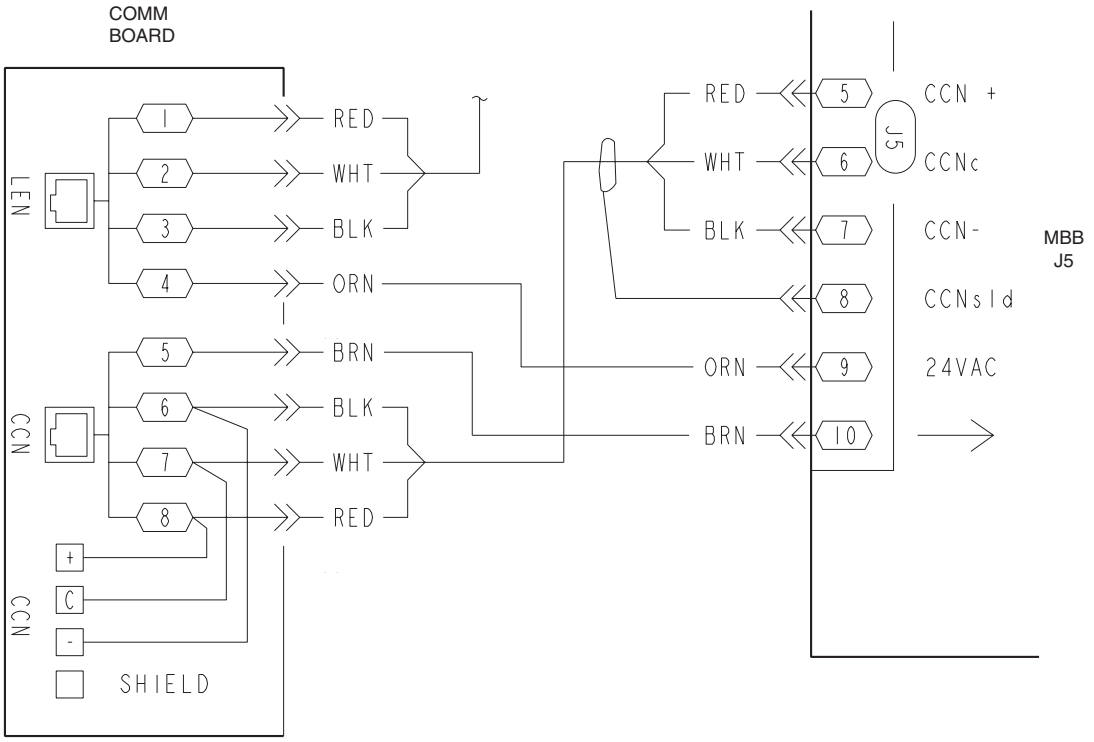


Fig. 83 — CCN Connections

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