Weathermaker® 50A2,A3,A4,A5020-060 Single Package Electric Cooling Rooftop Units with Electric Heat Option, *Comfort*Link Controls and Puron® Refrigerant (R-410A)

Installation Instructions

CONTENTS

SAFETY CONSIDERATIONS

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

Untrained personnel can perform the basic maintenance functions of 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. Wear safety glasses and work gloves. Use quenching cloth for unbrazing operations. Have fire extinguishers available for all brazing operations.

⚠ WARNING

Before performing service or maintenance operations on unit, turn off main power switch to unit. Electrical shock could cause personal injury.

⚠ CAUTION

Puron refrigerant (R-410A) systems operate at higher pressures than standard R-22 systems. Do not use R-22 service equipment or components on Puron refrigerant equipment. If service equipment is not rated for Puron refrigerant, equipment damage or personal injury may result.

⚠ WARNING

1. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Refer to the User's Information Manual provided with this unit for more details.
2. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

⚠ WARNING

DO NOT USE TORCH to remove any component. System contains oil and refrigerant under pressure.

To remove a component, wear protective gloves and goggles and proceed as follows:

a. Shut off electrical power to unit.

b. Recover refrigerant to relieve all pressure from system using both high-pressure and low pressure ports.

c. Traces of vapor should be displaced with nitrogen and the work area should be well ventilated. Refrigerant in contact with an open flame produces toxic gases.

d. Cut component connection tubing with tubing cutter and remove component from unit. Use a pan to catch any oil that may come out of the lines and as a gage for how much oil to add to the system.

e. Carefully unsweat remaining tubing stubs when necessary. Oil can ignite when exposed to torch flame.

Failure to follow these procedures may result in personal injury or death.

⚠ CAUTION

DO NOT re-use compressor oil or any oil that has been exposed to the atmosphere. Dispose of oil per local codes and regulations. DO NOT leave refrigerant system open to air any longer than the actual time required to service the equipment. Seal circuits being serviced and charge with dry nitrogen to prevent oil contamination when timely repairs cannot be completed. Failure to follow these procedures may result in damage to equipment.

ACOUSTICAL CONSIDERATIONS

In order to minimize sound transmitted to the space, please conform to the following recommendations (see Fig. 1):

Location

- Avoid locating the unit above sound-sensitive areas. Instead, locate the unit above restrooms, storage areas, corridors, or other noise-tolerant areas.
- Avoid mounting the unit in the middle of large roof expanses between vertical supports. This will minimize the phenomenon known as roof bounce.
- Install the units close to vertical roof supports (columns or load bearing walls).
- Locate the units at least 25 ft away from critical areas. If this is not possible, the ductwork and ceiling structure should be acoustically treated.
- Consider the use of vibration isolators or an acoustic curb.

Ductwork

- Utilize flexible connectors between the unit and the supply and return ducts.
- Supply and return air main trunk ducts should be located over hallways and/or public areas.
- Provide trailing edge turning vanes in ductwork elbows and tees to reduce air turbulence.
- Make the ductwork as stiff as possible.
- Use round duct wherever possible because it is less noisy.
- Seal all penetrations around ductwork entering the space.
- Make sure that ceiling and wall contractors do not attach hangers or supports to ductwork.
- Provide as smooth and gradual transition as possible when connecting the rooftop unit discharge to the supply duct.
- If a ceiling plenum return is utilized, provide a return elbow or tee to eliminate line-of-sight noise to the space. Face the entrance of the return duct away from other adjacent units.

Acoustic Insulation

- Provide acoustic interior lining for first 20 ft of supply and return duct or until the first elbow is encountered. The elbow prevents line-of-sight transmission in the supply and return ducts.
- Install a double layer of 2-in. low density quilted fiberglass acoustical pad with a $^1/_8$-in. barium-loaded vinyl facing on top of the roof deck before building insulation and roofing installation occur. Place the material inside the curb and for 4 to 8 ft beyond the unit perimeter, dependent upon unit size (larger units require a wider apron outside the curb). Openings in the pad should only be large enough for the supply and return ducts. An alternate approach is to use two layers of gypsum board with staggered seams in addition to the acoustical pad.

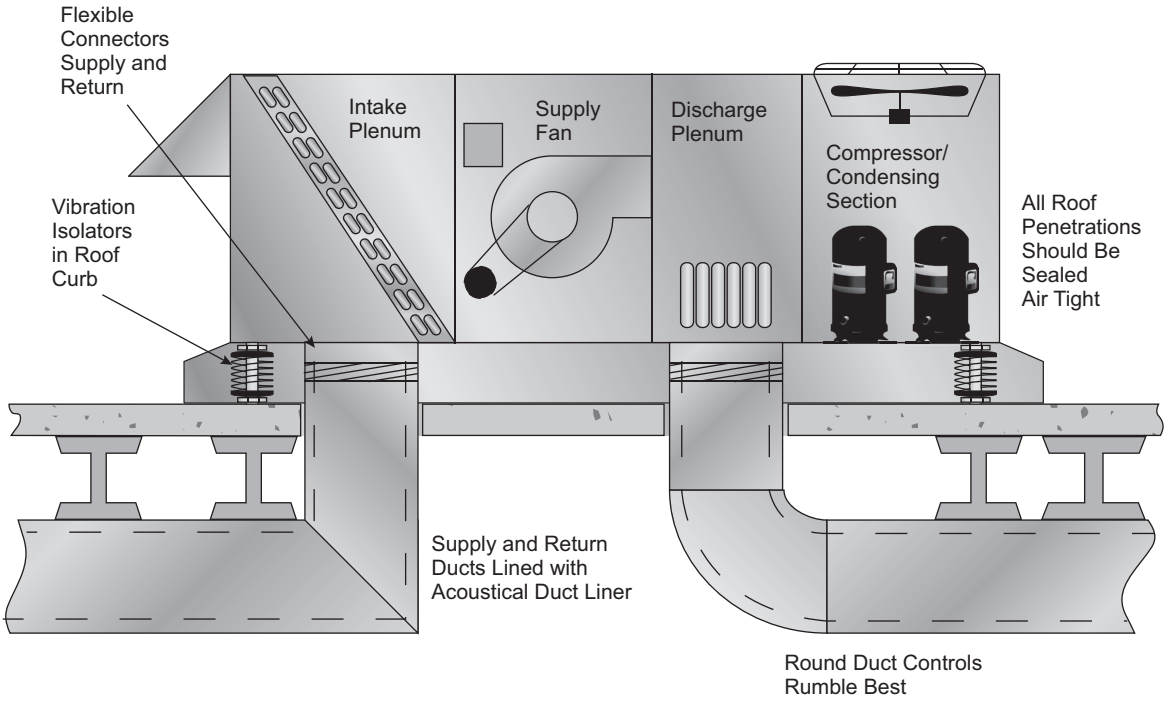


Fig. 1— Acoustical Considerations

INSTALLATION

Step 1 — Provide Unit Support

⚠ CAUTION

1. All panels must be in place when rigging or damage to unit may occur.
2. Unit is not designed for handling by fork truck. Damage to unit may occur.

ROOF CURB — For vertical discharge units, assemble or install accessory roof curb in accordance with instructions shipped with this accessory. See Fig. 2-5. Install insulation, cant strips, roofing, and counter flashing as shown. Ductwork can be installed to roof curb before unit is set in place. Curb should be level. This is necessary to permit unit drain to function properly. Unit leveling tolerance is shown in Fig. 2-5. Refer to Accessory Roof Curb Installation Instructions for additional information as required. When accessory roof curb is used, unit may be installed on class A, B, or C roof covering material.

IMPORTANT: The gasketing of the unit to the roof curb is critical for a watertight seal. Install gasket with the roof curb as shown in Fig. 2-5. Improperly applied gasket can also result in air leaks and poor unit performance.

ALTERNATE UNIT SUPPORT — When the preferred curb or slab mount cannot be used, support unit with sleepers on perimeter, using unit curb support area. If sleepers cannot be used, support long sides of unit (refer to Fig. 6-14) with a minimum number of 4-in. x 4-in. pads spaced as follows: 50A2,A3,A4,A5020-035 units require 3 pads on each side; 50A2,A3,A4,A5040-050 units require 4 pads on each side; 50A2,A3,A4,A5060 units require 6 pads on each side. Unit may sag if supported by corners only.

Step 2 — Rig and Place Unit — Inspect unit for transportation damage. See Tables 1-6 for physical data and specifications. File any claim with transportation agency.

Do not drop unit; keep upright. Use spreader bars over unit to prevent sling or cable damage. This unit must be handled with a crane and cannot be handled by a fork truck. Level by using unit frame as a reference; leveling tolerance is shown in Fig. 2-5. See Fig. 15 for additional information. Unit operating weight is shown in Tables 2-5.

NOTE: On retrofit jobs, ductwork may be attached to the old unit instead of a roof curb. Be careful not to damage ductwork when removing old unit. Attach existing ductwork to roof curb instead of unit.

Four lifting lugs are provided on the unit base rails as shown in Fig. 6-14. Refer to rigging instructions on unit.

POSITIONING — Maintain clearance, per Fig. 6-14, around and above unit to provide minimum distance from combustible materials, proper airflow, and service access.

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

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

ROOF MOUNT — Check building codes for weight distribution requirements. See Fig. 15. Unit operating weight is shown in Tables 2-5.

Step 3 — Field Fabricate Ductwork — Secure all ducts to building structure. Use flexible duct connectors between unit and ducts as required. Insulate and weatherproof all external ductwork, joints, and roof openings with counter flashing and mastic in accordance with applicable codes.

NOTE: Due to width of the horizontal supply and return ductwork, provisions should be made for servicing of the outdoor air filters (i.e., catwalk over ductwork).

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.

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.

Follow AMCA (Air Movement and Control Association) guidelines relating to ductwork connections to the unit. These guidelines recommend a minimum $2^1/_2$ equivalent duct diameters of straight duct connected to supply air inlet and outlet openings before any transitions, fittings, dampers, etc. Failure to adhere to these guidelines may result in system effects which can impact the unit's ability to achieve published performance.

⚠ WARNING

For vertical supply and return units, tools or parts could drop into ductwork and cause an injury. Install a 90-degree elbow turn in the supply and 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.

Step 4 — Make Unit Duct Connections

50A2 AND A3 UNITS — Unit is shipped for thru-the-bottom duct connections. Field-fabricated ductwork should be attached to the roof curb. Supply and return duct dimensions are shown in Fig. 6, 7, 10, and 12. Air distribution is shown in Fig. 16. Refer to installation instructions shipped with roof curb for more information.

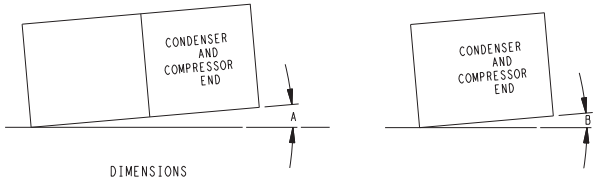
50A4 AND A5 UNITS — Remove shipping covers from supply and return air openings. Attach field-supplied ductwork to unit. Connect to the unit with a single duct for all supply openings and with a single duct for all return openings. Splitting of the airflow into branch ducts should not be done at the unit. Sufficient duct length should be used prior to branching to ensure the air temperatures are well mixed within the ductwork. See Fig. 8, 9, 11, and 13 for duct opening dimensions. Secure all ducts to building structure. Air distribution is shown in Fig. 8, 9, 11, 13, and 17.

Install accessory barometric relief or power exhaust in the field-fabricated return ductwork. Refer to Step 8 — Position Power Exhaust/Barometric Relief Damper Hood section on page 46 for more information.

Instructions continued on page 21.

NOTES:
1. Unless otherwise specified, all dimensions are to outside of part.
2. Roof curb accessory CRRFCURB005A00 is shipped disassembled.
3. All roof curb parts are to be 14 ga. galvanized steel.
4. Units with electric heat must be installed with a 90 degree elbow on the supply duct prior to any supply take offs or branches.
5. Dimensions in [ ] are in millimeters. All other dimensions are in inches.

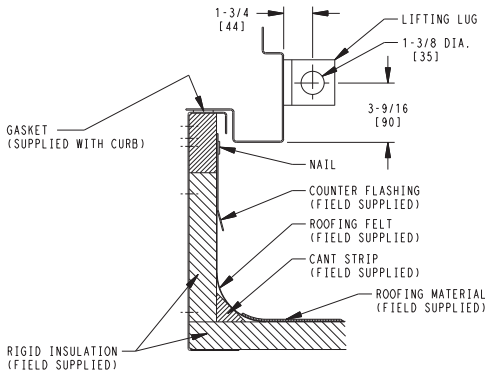
NOTE:
TO PREVENT STANDING WATER IN THE DRAIN PAN OF THE INDOOR SECTION, AND THE HEAT EXCHANGERS
UNIT CAN ONLY BE PITCHED AS SHOWN.

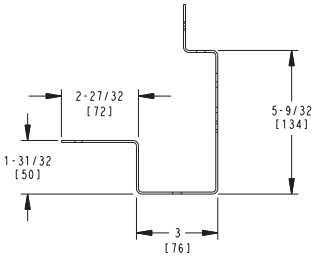


DIMENSIONS
(DEGREES AND INCHES)

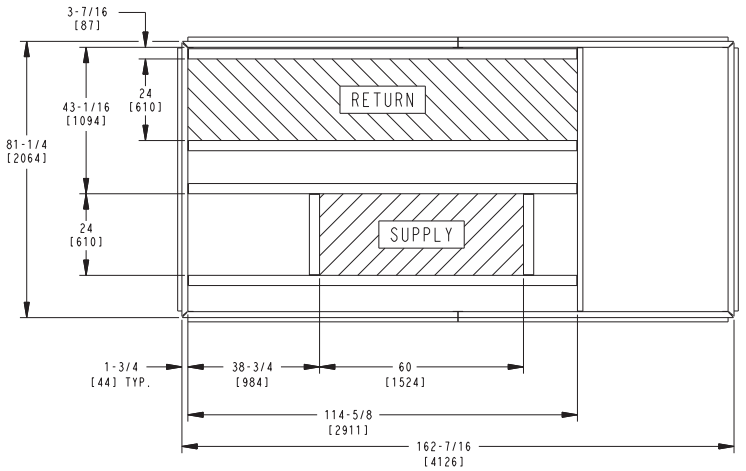
A			B		
DEG.	IN.	mm	DEG.	IN.	mm
1.0	2.9	73	.50	.75	19

UNIT LEVELING TOLERANCES
*FROM EDGE OF UNIT TO HORIZONTAL

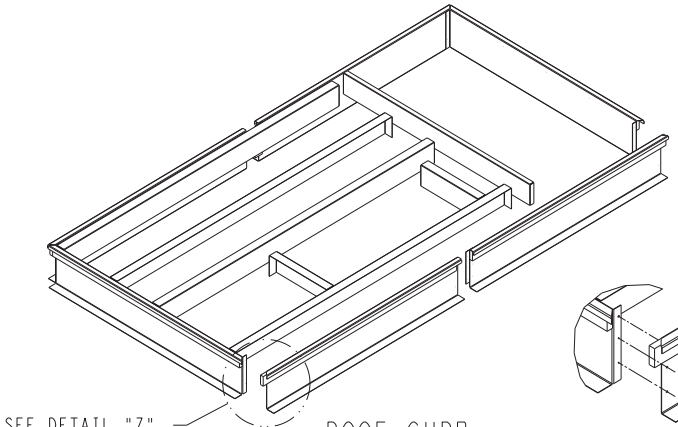




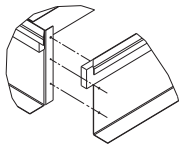
BASE RAIL CROSS SECTION
TYP 2 SIDES



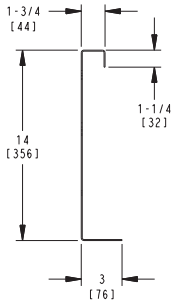
ROOF CURB DETAIL 'A"



ROOF CURB
SCALE 1:16



DETAIL "Z"
SCALE 1:8
TYP 4 CORNERS



ROOF CURB CROSS SECTION
TYP 4 SIDES

Fig. 2 — Roof Curb — 50A2,A3020-035 Units

NOTES:

1. Unless otherwise specified, all dimensions are to outside of part.
2. Roof curb accessory CRRFCURB006A00 is shipped disassembled.
3. All roof curb parts are to be 14 ga. galvanized steel.
4. Units with electric heat must be installed with a 90 degree elbow on the supply duct prior to any supply take offs or branches.
5. Dimensions in [ ] are in millimeters. All other dimensions are in inches.

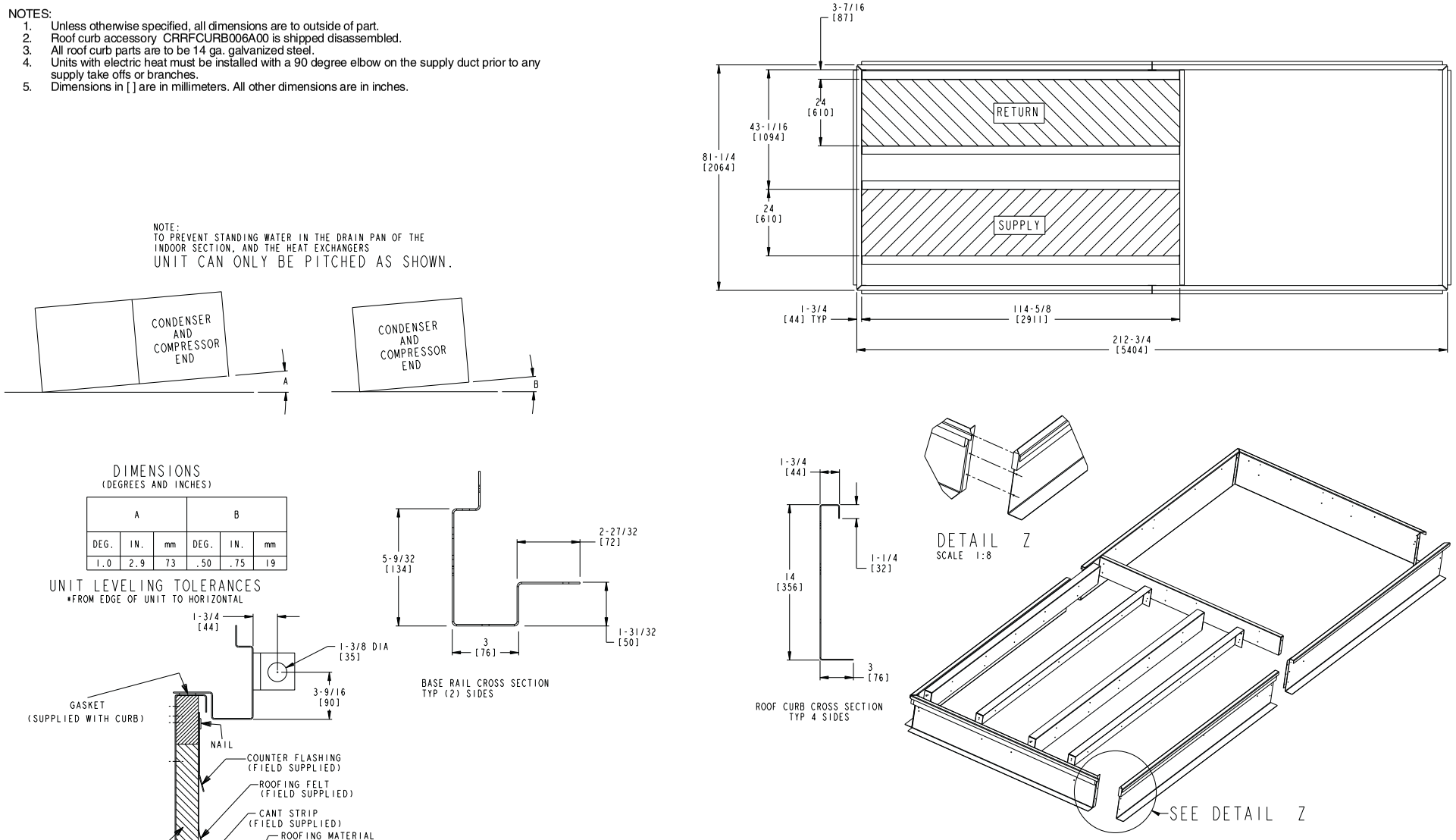


Fig. 3 — Roof Curb — 50A2,A3040-050 Units

NOTES:
1. Unless otherwise specified, all dimensions are to outside of part.
2. Roof curb accessory CRRFCURB014A00 is shipped disassembled.
3. All roof curb parts are to be 14 ga. galvanized steel.
4. Units with electric heat must be installed with a 90 degree elbow on the supply duct prior to any supply take offs or branches.
5. Dimensions in [ ] are in millimeters. All other dimensions are in inches.

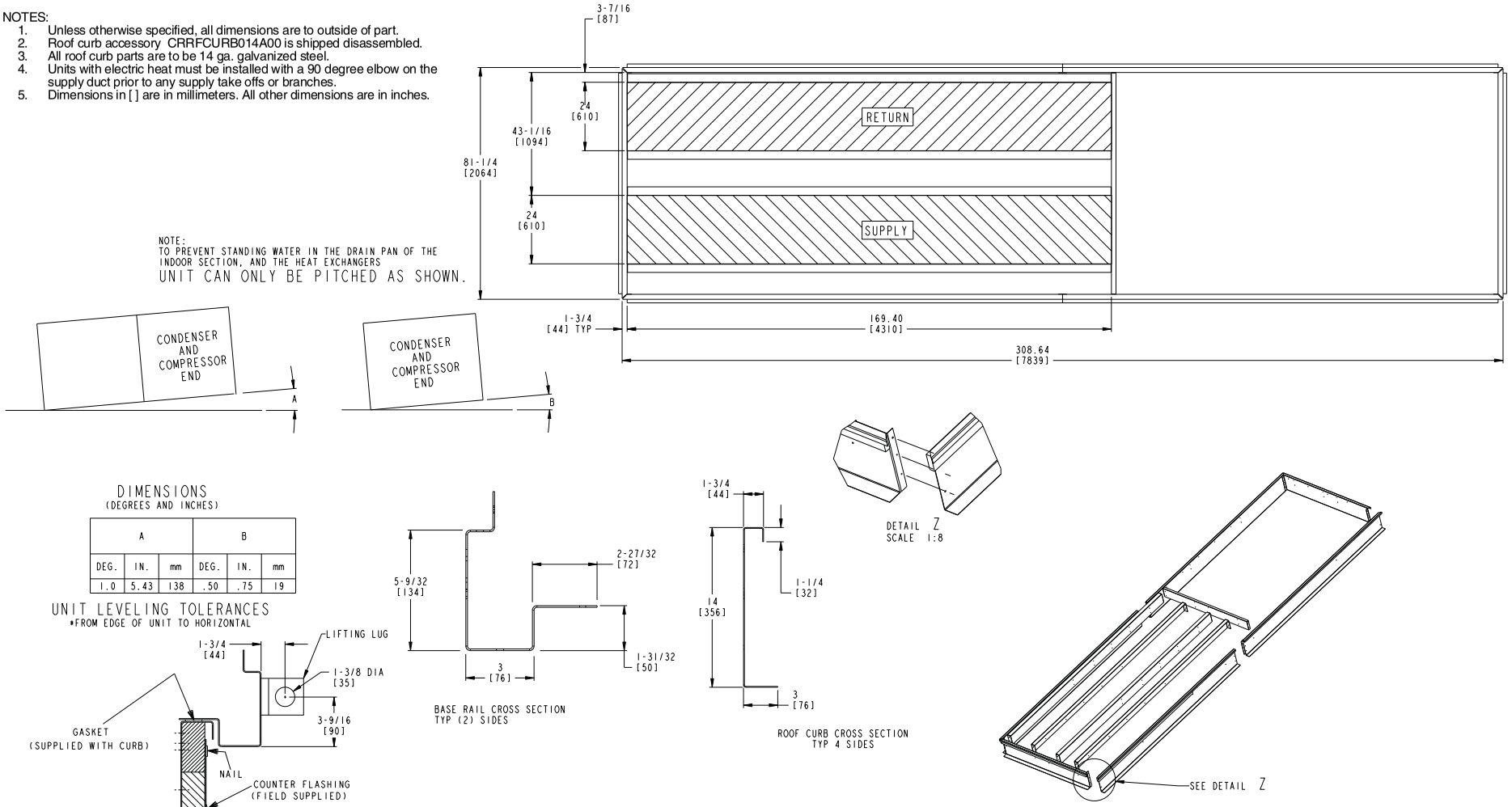
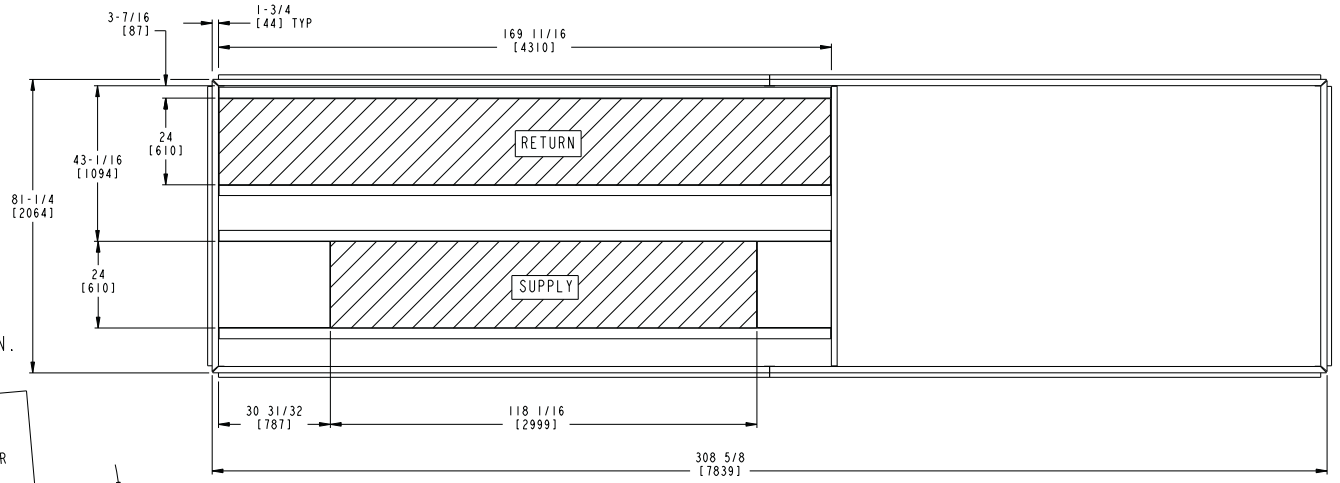
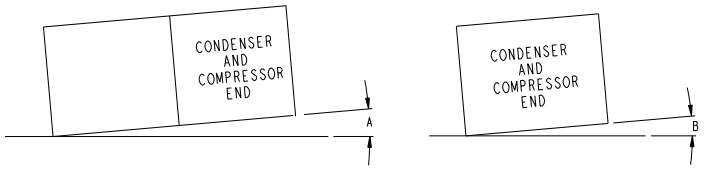


Fig. 4 — Roof Curb — 50A2,A3060 Units

NOTES:
1. Unless otherwise specified, all dimensions are to outside of part.
2. Roof curb accessory CRRFCURB009A00 is shipped disassembled.
3. All roof curb parts are to be 14 ga. galvanized steel.
4. Units with electric heat must be installed with a 90 degree elbow on the supply duct prior to any supply take offs or branches.
5. Dimensions in [ ] are in millimeters. All other dimensions are in inches.



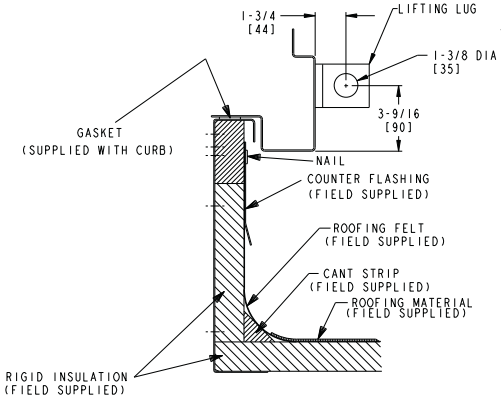
NOTE:
TO PREVENT STANDING WATER IN THE DRAIN PAN OF THE INDOOR SECTION, AND THE HEAT EXCHANGERS UNIT CAN ONLY BE PITCHED AS SHOWN.

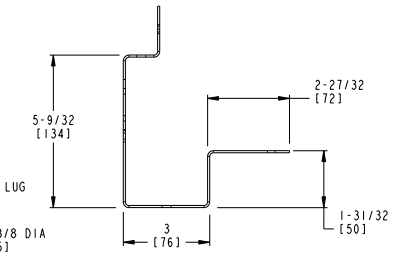


DIMENSIONS
(DEGREES AND INCHES)

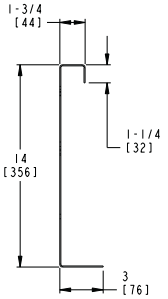
A			B		
DEG.	IN.	mm	DEG.	IN.	mm
1.0	5.43	138	.50	.75	19

UNIT LEVELING TOLERANCES
*FROM EDGE OF UNIT TO HORIZONTAL

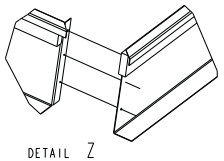




BASE RAIL CROSS SECTION
TYP (2) SIDES



ROOF CURB CROSS SECTION
TYP 4 SIDES



DETAIL Z
SCALE 1:8

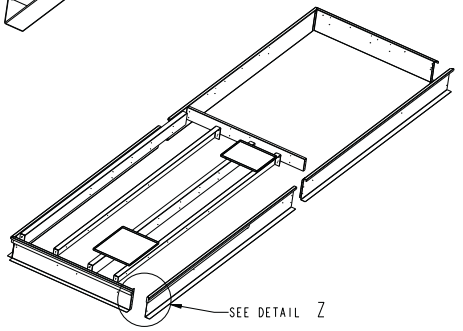


Fig. 5 — Reduced Supply Duct Opening — Roof Curb — 50A2,A3060 Units

NOTES:
1. WEIGHTS INCLUDE ECONOMIZER.
2. ⊕ CENTER OF GRAVITY.
3. FOR MULTIPLE UNIT APPLICATIONS SEE LITERATURE.
4. UNIT CLEARANCES:
   TOP OF UNITS: NO OVERHANG
   CONDENSER COIL: 4′-0"[1219]
   ECONOMIZER SIDE: 6′-0"[1829]
   HEAT SIDE: 4′-0"[1219]
   FILTER ACCESS SIDE: 10′-0"[3048] (FOR REMOVAL OF EVAPORATOR COIL)
5. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
6. BOTTOM DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB IF UNIT IS MOUNTED ON DUNNAGE, IT IS RECOMENDED THE DUCTS MUST BE SUPPORTED BY CROSS BRACES AS DONE ON ACCESSORY ROOF CURB.
7. DIMENSIONS IN [ ] ARE IN MILLIMETERS.

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (LBS)			
		A	B				
	LBS	FT/IN	FT/IN	1	2	3	4
50A2/A3/020	4599	8-2"	3-8 7/8"	905	963	1385	1347
50A2/A3/025	4735	8-2 1/2"	3-8 3/4"	918	989	1416	1411
50A2/A3/027	4801	8-1 1/8"	3-8 1/8"	984	989	1416	1411
50A2/A3/030	4832	7-11 1/8"	3-8 3/8"	1013	1032	1407	1380
50A2/A3/035	5134	7-11 7/8"	3-5 1/2"	1137	1014	1405	1579

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (KGS)			
		A	B				
	kg	MM	MM	1	2	3	4
50A2/A3/020	2086	2489	1141	410	437	628	611
50A2/A3/025	2148	2503	1135	417	449	643	640
50A2/A3/027	2178	2468	1120	447	449	643	640
50A2/A3/030	2192	2417	1128	460	468	638	626
50A2/A3/035	2329	2435	1053	516	460	637	716

* OPERATING WEIGHT INCLUDES LARGEST IFM, MCHX, MODULATING POWER EXHAUST (VAV), AND VFD (VAV).

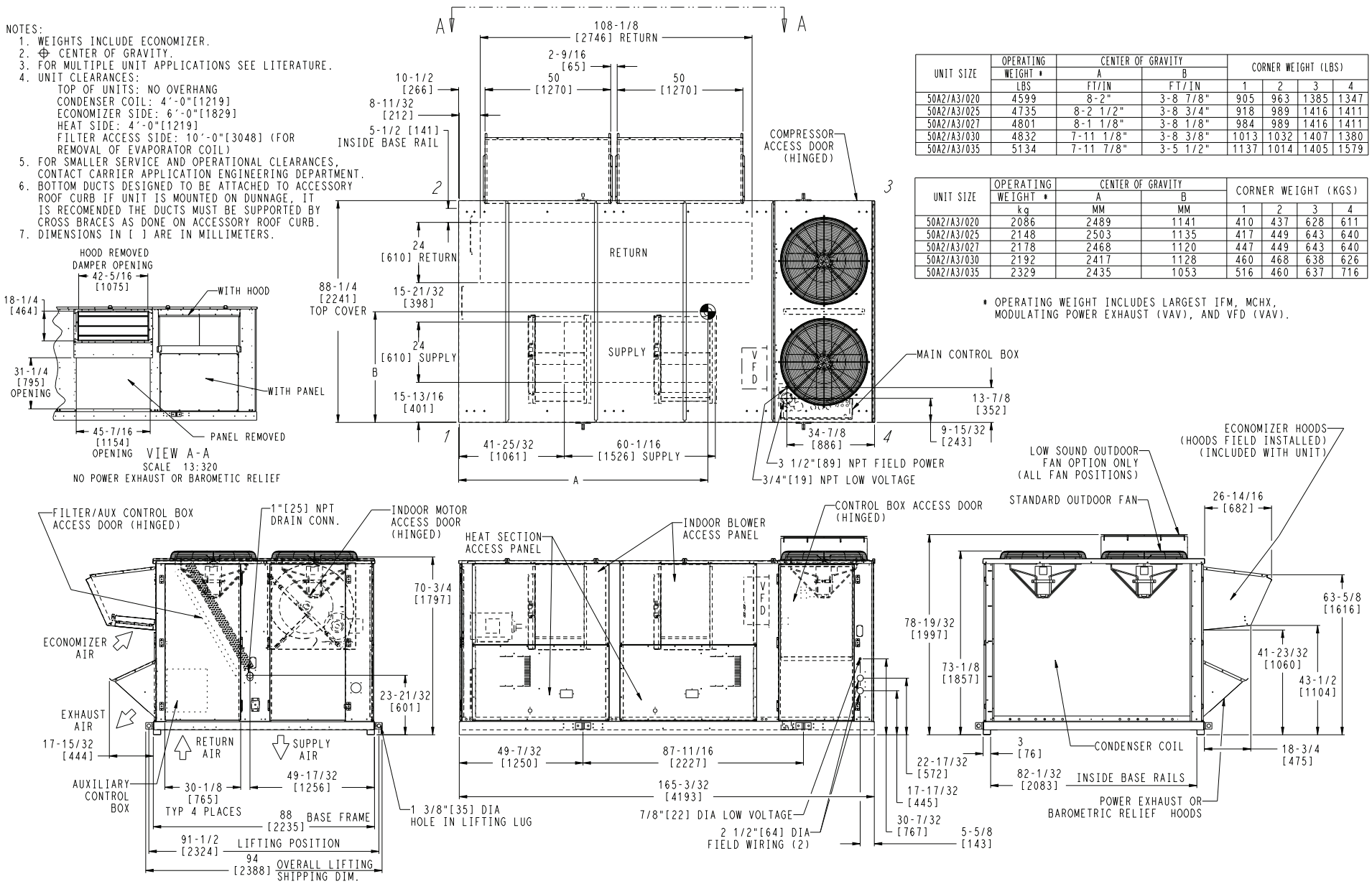


Fig. 6 — Base Unit Dimensions — 50A2,A3020-035

NOTES:
1. Weights include economizer.
2. ⊕ center of gravity.
3. Unit clearances:
   Top of units: no overhang
   Condenser coil: 4' - 0" [1219]
   Economizer side: 6' - 0" [1829]
   Heat side: 4' - 0" [1219]
   Filter access side: 10' - 0" [3048] (for removal of evaporator coil)
4. Bottom ducts are designed to be attached to accessory roof curb. If unit is mounted on dunnage, it is recommended that the ducts be supported by cross braces as done on accessory roof curb.
5. Dimensions in [ ] are in millimeters. All other dimensions are in inches.

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (LB)			
		A	B				
	LB	FT/IN	FT/IN	1	2	3	4
50A2/A3/040	5564	10 - 1 3/4"	3 - 5 3/8"	1276	1137	1481	1671
50A2/A3/050	5744	11 - 1/2"	3 - 5 3/4"	1338	1214	1509	1684

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (KG)			
		A	B				
	kg	MM	MM	1	2	3	4
50A2/A3/040	2524	3093	1052	579	516	672	758
50A2/A3/050	2606	3035	1059	607	551	684	764

*Operating weight includes largest indoor fan motor, microchannel heat exchanger, modulating power exhaust (variable air volume units), and variable frequency drive (variable air volume units).

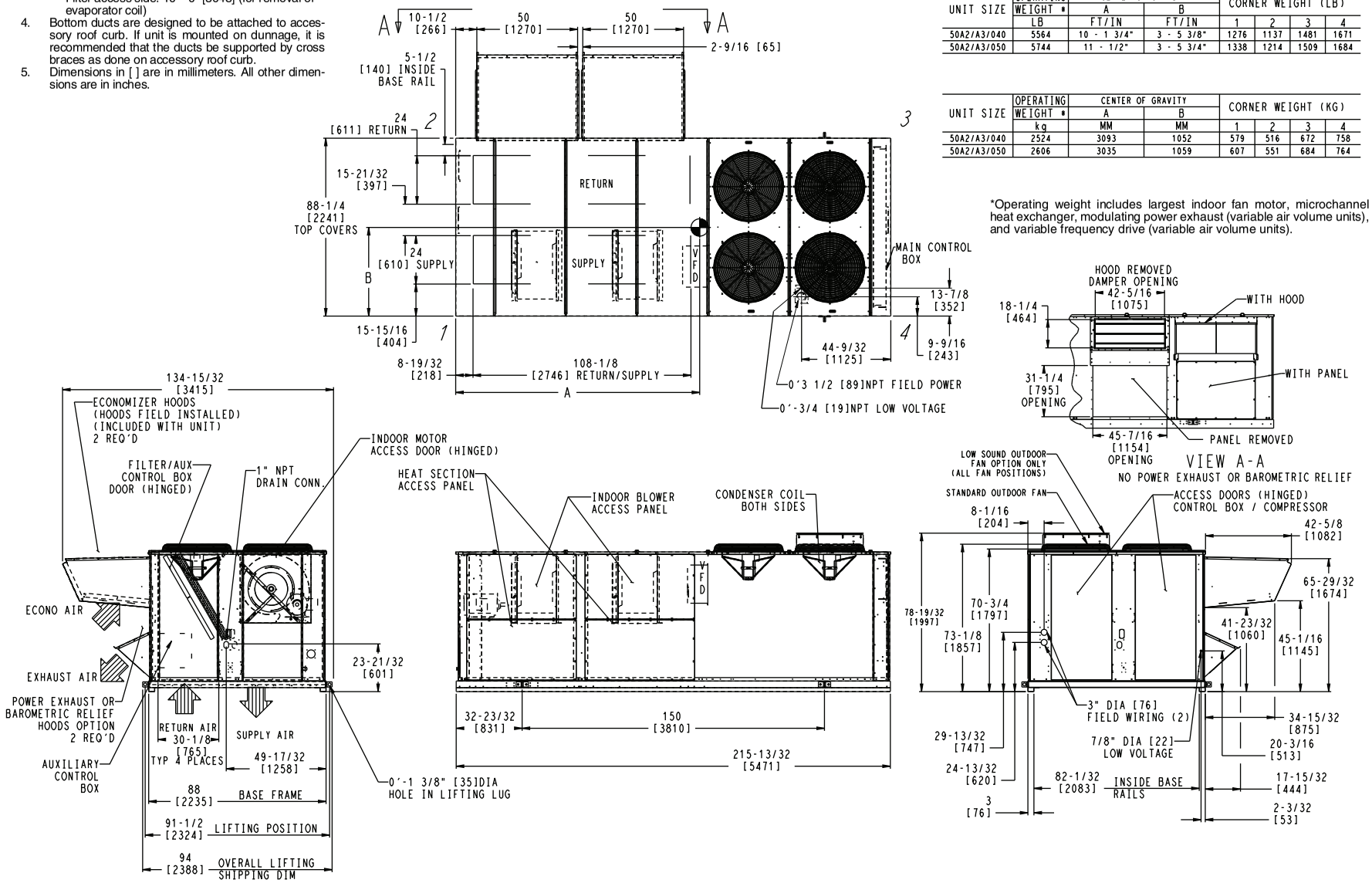


Fig. 7 — Base Unit Dimensions — 50A2,A3040-050

NOTES:
1. WEIGHTS INCLUDE ECONOMIZER.
2. ⊕ CENTER OF GRAVITY.
3. FOR MULTIPLE UNIT APPLICATION SEE LITERATURE.
4. UNIT CLEARANCES:
   TOP OF UNITS: NO OVERHANG
   CONDENSER COIL: 4′-0"[1219]
   ECONOMIZER SIDE: 6′-0"[1829]
   HEAT SIDE: 4′-0"[1219]
   FILTER ACCESS SIDE: 10′-0"[3048] (FOR REMOVAL OF EVAPORATOR COIL)
5. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
6. DIMENSIONS IN [ ] ARE IN MILLIMETERS.

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY A	CENTER OF GRAVITY B	CORNER WEIGHT (LBS)			
	LBS	FT/IN	FT/IN	1	2	3	4
50A4/A5/020	4677	7 - 10 1/4"	4 - 1 1/2"	821	1184	1446	1225
50A4/A5/025	4813	7 - 10 7/8"	4 - 1 1/4"	835	1210	1478	1290
50A4/A5/027	4879	7 - 9 5/8"	4 - 0 1/2"	901	1210	1478	1290
50A4/A5/030	4910	7 - 7 5/8"	4 - 0 3/4"	931	1253	1467	1259
50A4/A5/035	5327	7 - 8 5/8"	3 - 9 3/4"	1073	1263	1506	1486

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY A	CENTER OF GRAVITY B	CORNER WEIGHT (KGS)			
	kg	MM	MM	1	2	3	4
50A4/A5/020	2122	2394	1257	373	537	656	556
50A4/A5/025	2183	2410	1248	379	549	670	585
50A4/A5/027	2213	2377	1232	409	549	670	585
50A4/A5/030	2227	2327	1238	422	568	666	571
50A4/A5/035	2416	2353	1161	487	573	683	674

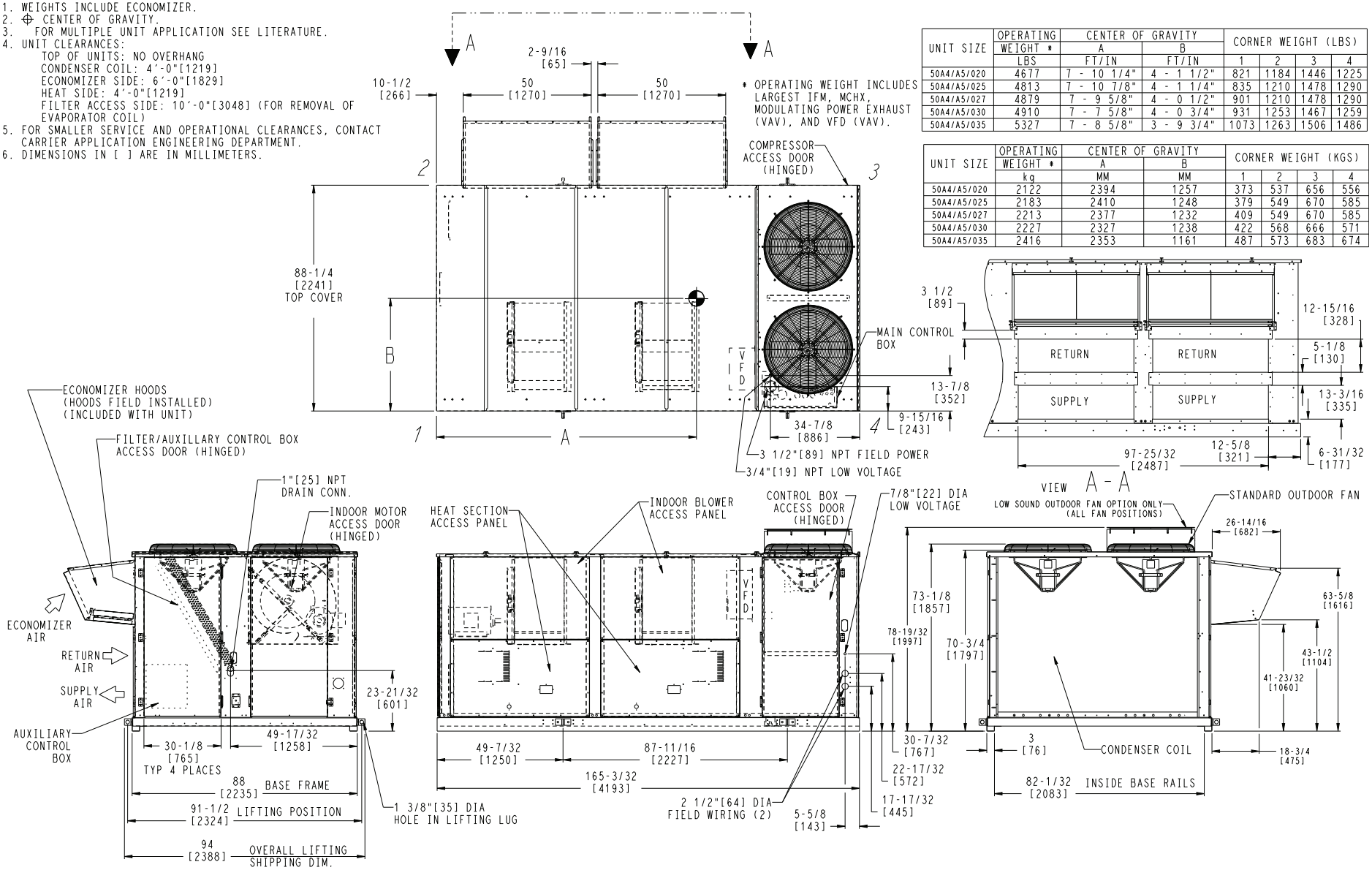


Fig. 8 — Base Unit Dimensions — 50A4,A5020-035

NOTES:
1. Weights include economizer.
2. ◔ center of gravity.
3. Unit clearances:
   Top of units: no overhang
   Condenser coil: 4' - 0" [1219]
   Economizer side: 6' - 0" [1829]
   Heat side: 4' - 0" [1219]
   Filter access side: 10' - 0" [3048] (for removal of evaporator coil)
4. Dimensions in [ ] are in millimeters. All other dimensions are in inches.

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (LB)			
		A	B				
	LB	FT/IN	FT/IN	1	2	3	4
50A4/A5/040	5757	9-8 1/2"	3-9 3/8"	1211	1428	1540	1578
50A4/A5/050	5937	9-6 1/4"	3-9 1/2"	1276	1505	1566	1591

UNIT SIZE	OPERATING WEIGHT *	CENTER OF GRAVITY		CORNER WEIGHT (KG)			
		A	B				
	kg	MM	MM	1	2	3	4
50A4/A5/040	2612	2958	1152	549	648	699	716
50A4/A5/050	2693	2904	1156	579	683	710	722

*Operating weight includes largest indoor fan motor, microchannel heat exchanger, modulating power exhaust (variable air volume units), and variable frequency drive (variable air volume units).

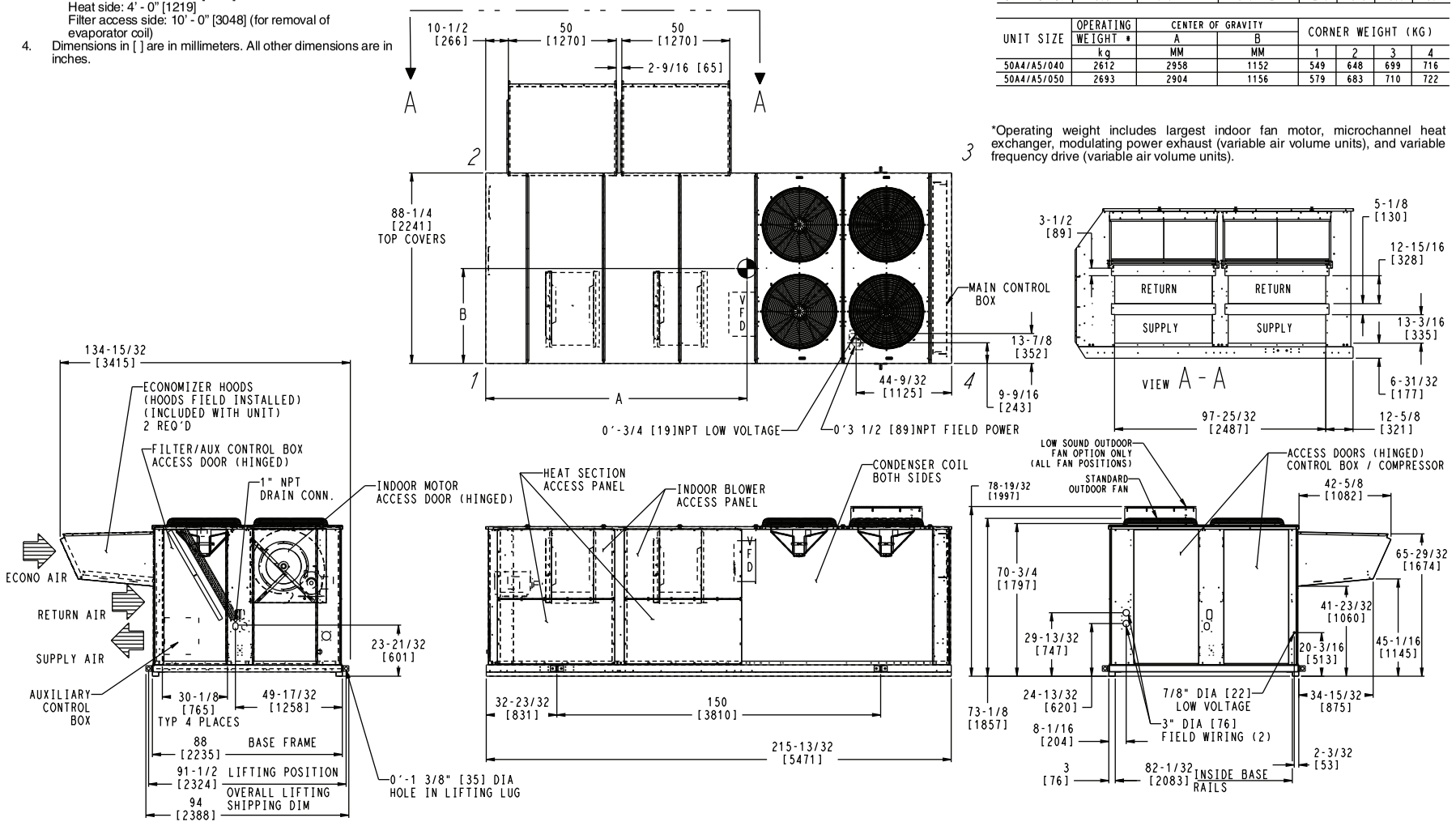


Fig. 9 — Base Unit Dimensions — 50A4,A5040-050

FOR CENTERS OF GRAVITY, OPERATING AND CORNER WEIGHTS, SEE FIG. 14

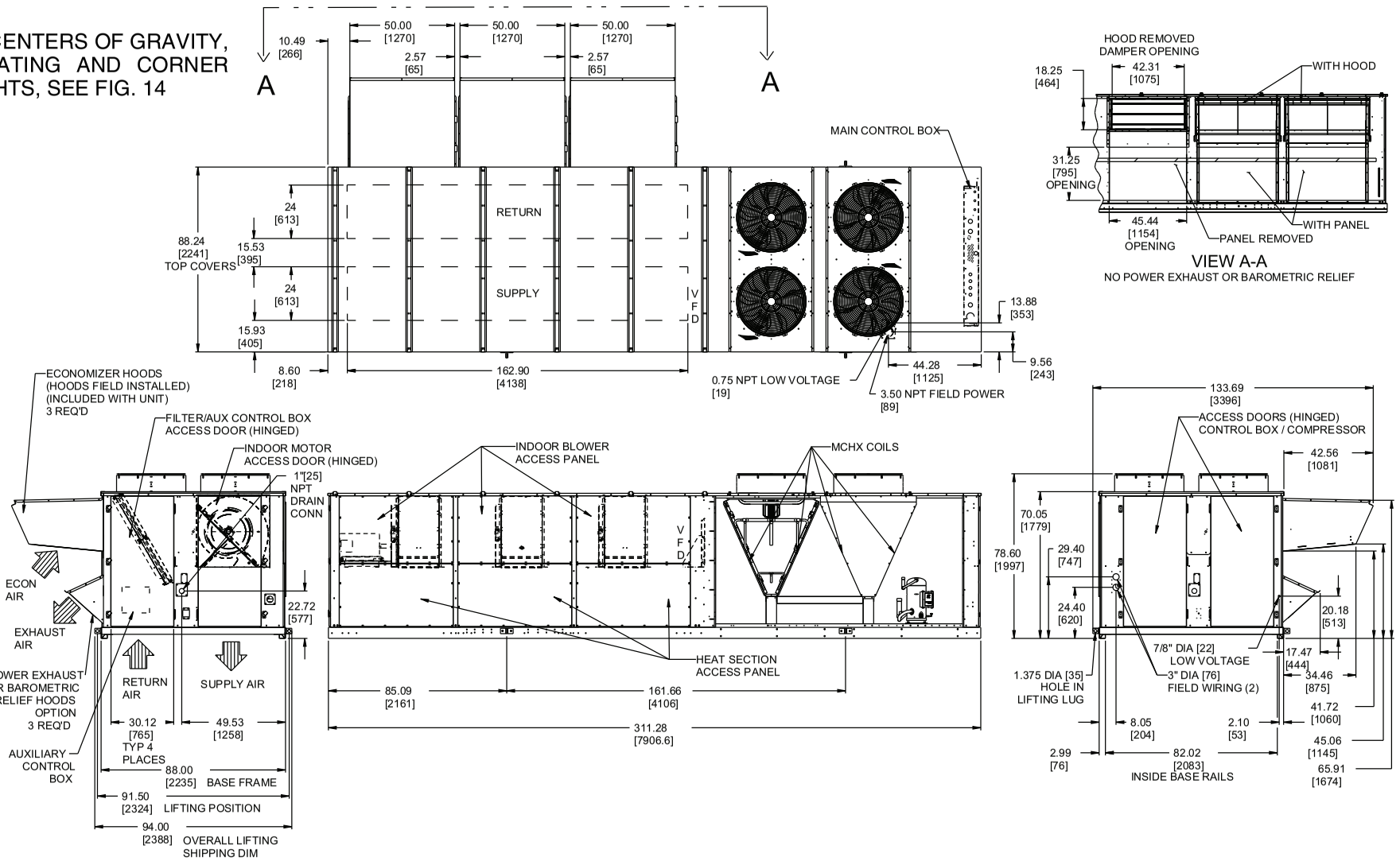


Fig. 10 — Base Unit Dimensions — 50A2,A3060 MCHX

FOR CENTERS OF GRAVITY, OPERATING AND CORNER WEIGHTS, SEE FIG. 14

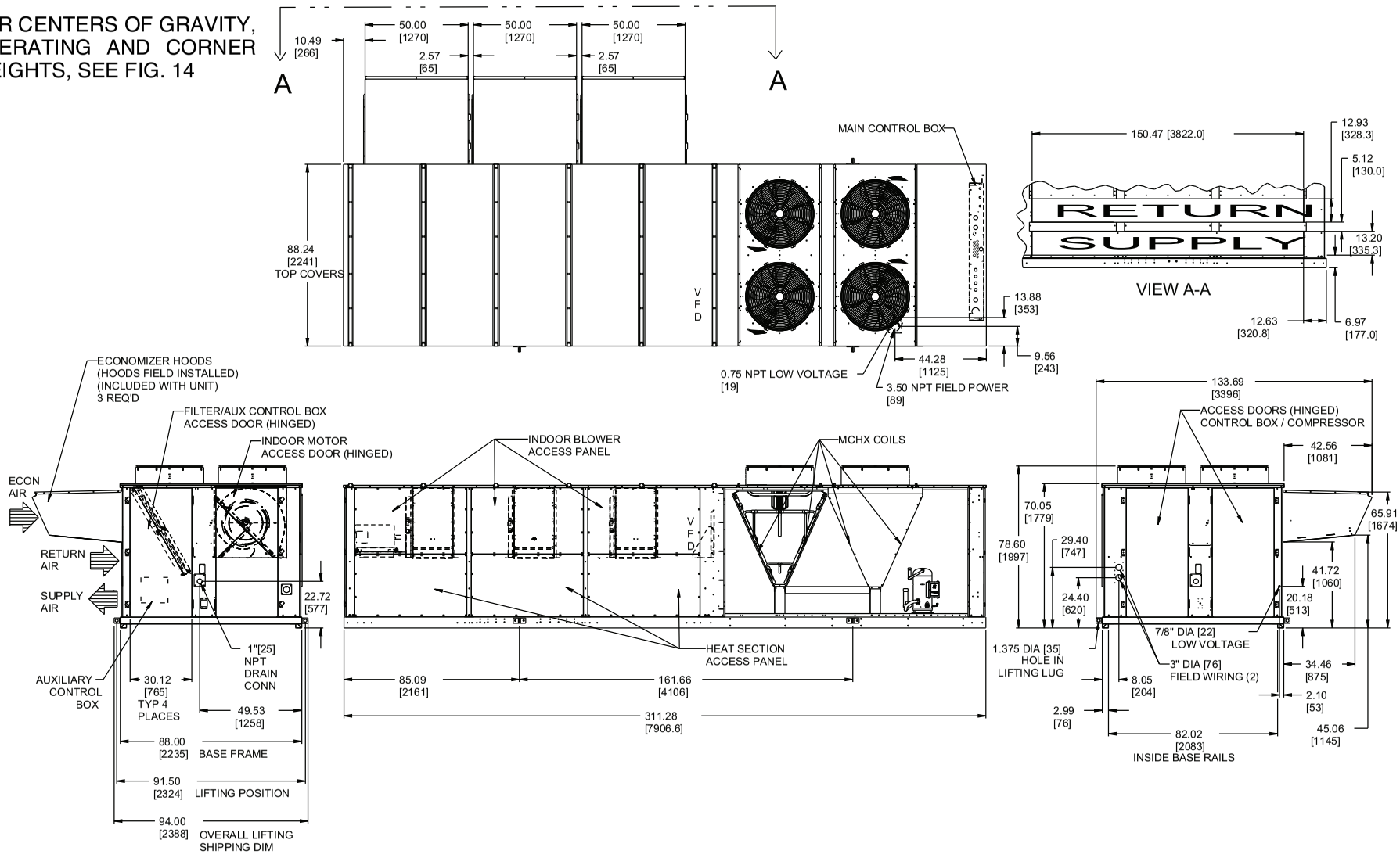


Fig. 11 — Base Unit Dimensions — 50A4,A5060 MCHX

FOR CENTERS OF GRAVITY, OPERATING AND CORNER WEIGHTS, SEE FIG. 14

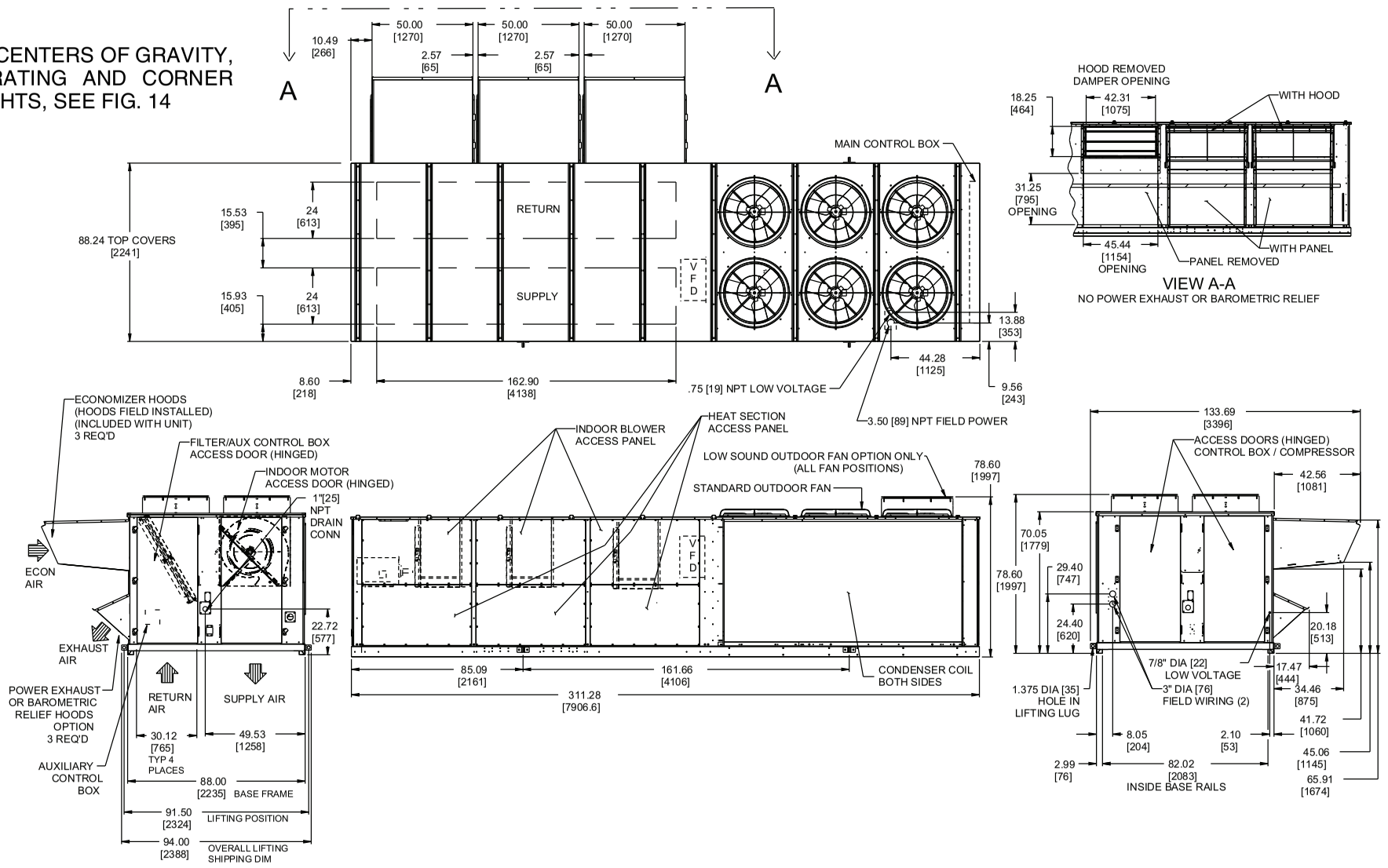


Fig. 12 — Base Unit Dimensions — 50A2,A3060 RTPF

FOR CENTERS OF GRAVITY, OPERATING AND CORNER WEIGHTS, SEE FIG. 14

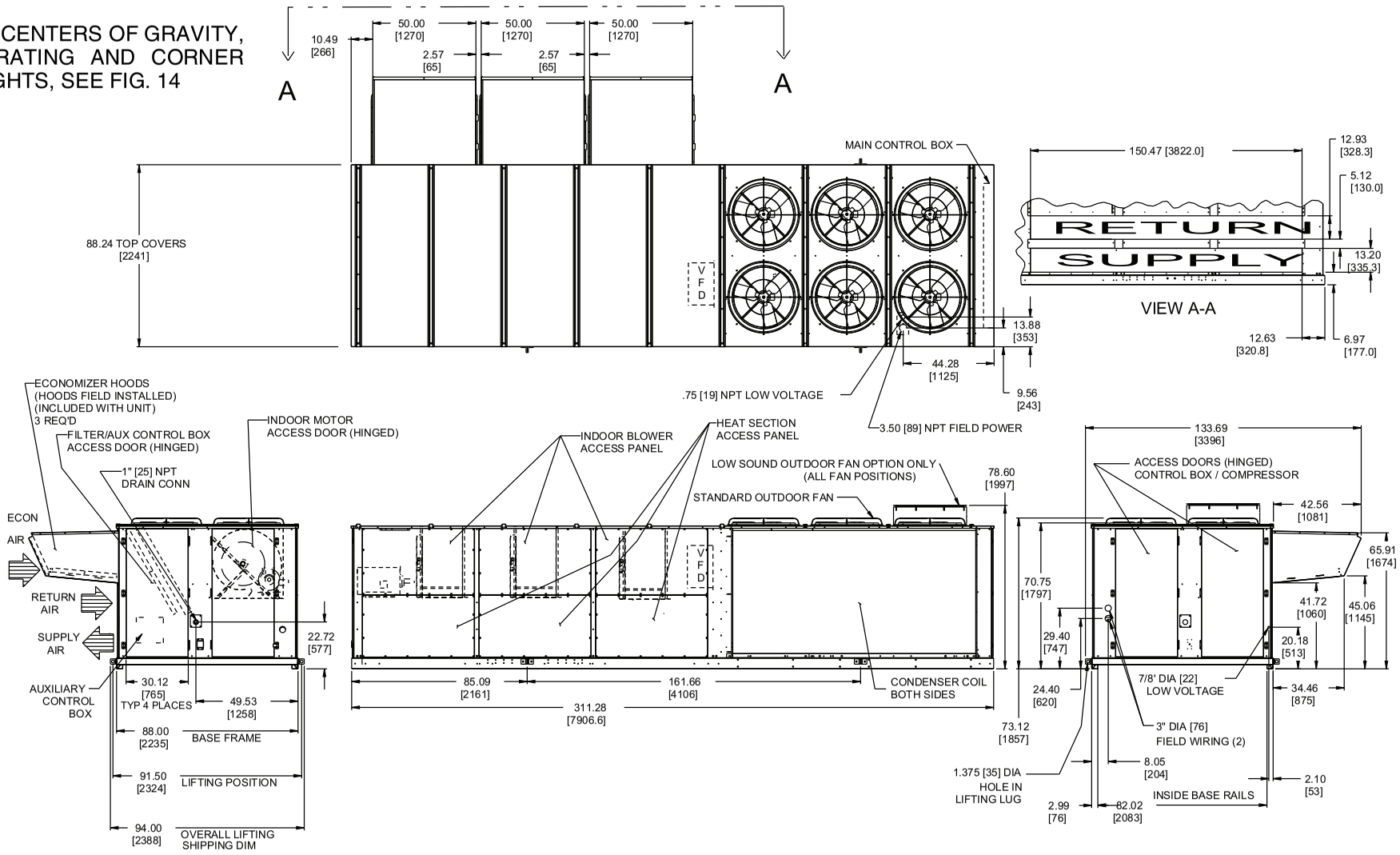


Fig. 13 — Base Unit Dimensions — 50A4,A5060 RTPF

NOTES:
1. Weights include economizer or outdoor air damper.
2. ◒ center of gravity.
3. Unit clearances:
   Top of units: no overhang
   Condenser coil: 4' - 0" [1219]
   Economizer side: 6' - 0" [1829]
   Heat side: 4' - 0" [1219]
   Filter access side: 10' - 0" [3048] (for removal of evaporator coil)
4. Bottom ducts are designed to be attached to accessory roof curb. If unit is mounted on dunnage, it is recommended that the ducts be supported by cross braces as done on accessory roof curb.
5. Base unit weights include outdoor air hoods and filters (indoor fan motor is not included). Add indoor fan motor, FIOPs, and accessories for total operating weight.
6. VAV motor weights include indoor motor, VFD, VFD transducer, and associated wiring.
7. Dimensions in [ ] are in millimeters. All other dimensions are in inches.
8. For side-supply/return applications, a single return and supply ductwork connection is recommended for covering all three return and all three supply openings. The entire area around the duct openings is available for a 1.5" duct flange attachment.

BASE UNIT WEIGHTS (SEE NOTE 5) LB (Kg)	
	060
50A2/A3	6826 (3096)
50A4/A5	7041 (3194)

OPTIONS / ACCESSORIES (SEE NOTE 5)	
BAROMETRIC RELIEF	450 (204)
NON MOD. POWER EXHAUST	675 (306)
MOD. POWER EXHAUST	725 (329)
ELECTRIC HEAT	165 (75)
CU TU/AL FIN COND COIL	26 (12)
CU TU/CU FIN COND COIL	677 (307)

UNIT SIZE	OPERATING WEIGHT	CENTER OF GRAVITY		CORNER WEIGHT (LB)			
		A	B				
	LB	FT/IN	FT/IN	1	2	3	4
50A2/A3 060	8311	15 - 5"	3 - 7 3/8"	1710	1663	2433	2504
50A4/A5 060	8526	14 - 8 1/2"	3 - 11 1/8"	1613	2078	2484	2351

UNIT SIZE	OPERATING WEIGHT	CENTER OF GRAVITY		CORNER WEIGHT (kg)			
		A	B				
	KG	MM	MM	1	2	3	4
50A2/A3 060	3770	4698	1102	776	755	1104	1136
50A4/A5 060	3868	4484	1196	732	942	1127	1066

*Operating weight includes largest indoor fan motor, microchannel heat exchanger, modulating power exhaust (variable air volume units), and variable frequency drive (variable air volume units).

		CV MOTOR WEIGHTS LB (Kg)		VAV MOTOR WEIGHTS LB (Kg) (SEE NOTE 6)	
		HIGH EFFC'Y IFM	PREMIUM EFFC'Y IFM	HIGH EFFC'Y IFM	PREMIUM EFFC'Y IFM
25 HP (18.65 kW)	230/460	240 (109)	309 (140)	375 (170)	444 (201)
	575	240 (109)	319 (145)	375 (170)	454 (206)
30 HP (22.38 kW)	230/460	283 (128)	355 (161)	418 (190)	490 (222)
	575	283 (128)	359 (163)	418 (190)	494 (224)
40 HP (29.84 kW)	230/460	372 (169)	415 (188)	507 (230)	550 (249)
	575	372 (169)	410 (186)	507 (230)	545 (247)

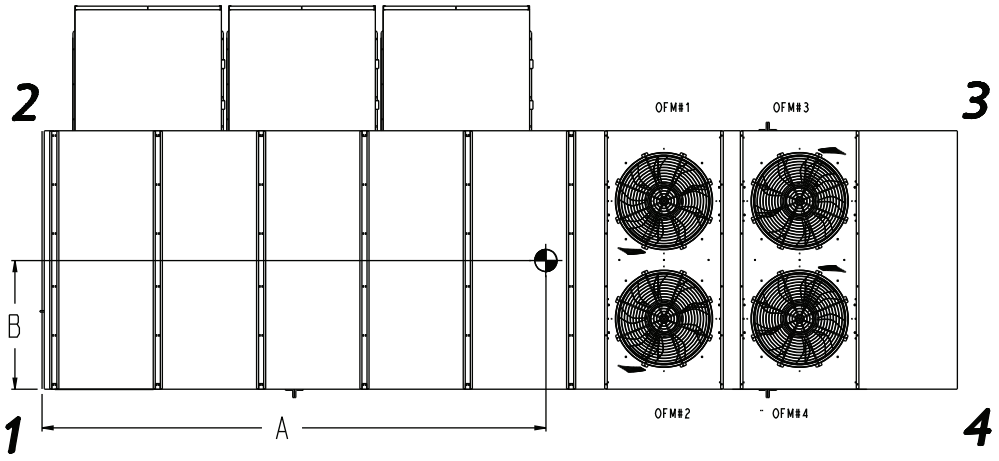


Fig. 14 — Center of Gravity and Weights — 50A2,A3,A4,A5060

Table 1 — Physical Data — 50A2,A3,A4,A5 Units

UNIT 50A2,A3,A4,A5	020	025	027	030
NOMINAL CAPACITY (tons)	20	25	27	30
BASE UNIT OPERATING WEIGHT (lb)	See Unit Weights Table			
COMPRESSOR				
Quantity ... Type (Ckt 1/Ckt 2)	2 ... ZP67/1…ZP91	2 ... ZP91/1…ZP91	2 ... ZP91/1…ZP91	2…ZP72, 2…ZP72
Number of Refrigerant Circuits	2	2	2	2
Oil	Precharged	Precharged	Precharged	Precharged
REFRIGERANT	R-410A			
Operating Charge (lb), Ckt 1/Ckt 2				
RTPF Coils	26.2/18.8	30.2/15.2	32.8/16.5	30.5/34.3
MCHX Coils	14.9/11.8	16.5/11.0	16.5/11.0	15.1/15.3
MCHX Coils with Humidi-MiZer® Coil	22.1/11.8	23.7/11.0	23.7/11.0	15.1/22.5
MCHX CONDENSER*				
Quantity	1	1	1	1
Total Face Area (sq ft)	32.9	32.9	32.9	32.9
RTPF CONDENSER				
Quantity	1	1	1	1
Rows...Fins/in.	2...15	3...15	3...15	4...15
Total Face Area (sq ft)	33.3	33.3	33.3	33.3
CONDENSER FAN	Propeller Type			
Nominal Cfm	19,500	19,500	19,500	19,500
Quantity... Diameter (in.)	2 ... 30	2 ... 30	2 ... 30	2 ... 30
Motor Hp	1	1	1	1
EVAPORATOR COIL	Cross-Hatched Copper Tubes, Aluminum Plate Fins with Intertwined Circuits			
Tube Size (in.)	3/8	3/8	3/8	3/8
Rows ... Fins/in.	3 ... 15	4 ... 14	4 ... 15	4 ... 15
Total Face Area (sq ft)	31.7	31.7	31.7	31.7
HUMIDI-MIZER COIL				
Quantity	1	1	1	1
Face Area (sq ft)	14.4	14.4	14.4	14.4
EVAPORATOR FAN	Centrifugal Type			
Quantity ... Size (in.)	2 ... 20 X 15	2 ... 20 X 15	2 ... 20 X 15	2 ... 20 X 15
Type Drive	Belt	Belt	Belt	Belt
Nominal Cfm	8,000	10,000	11,000	12,000
Motor Hp	5 / 10 / 15	5 / 10 / 15	10 / 15 / 20	10 / 15 / 20
Motor Frame Size	184T / 215T / 254T	184T / 215T / 254T	215T / 254T / 256T	215T / 254T / 256T
Motor Bearing Type	Ball	Ball	Ball	Ball
Maximum Allowable Rpm	1200	1200	1200	1200
Motor Pulley Pitch Diameter (in.)	4.8 / 4.4 / 5.7	5.2 / 6.1 / 5.5	4.4 / 4.9 / 5.9	4.4 / 5.7 / 5.9
Nominal Motor Shaft Diameter (in.)	1 1/8 / 1 3/8 / 1 5/8	1 1/8 / 1 3/8 / 1 5/8	1 3/8 / 1 5/8 / 1 5/8	1 3/8 / 1 5/8 / 1 5/8
Fan Pulley Pitch Diameter (in.)	12.4 / 8.6 / 9.1	12.4 / 11.1 / 8.7	9.4 / 8.1 / 8.7	9.0 / 9.1 / 8.7
Nominal Fan Shaft Diameter (in.)	1 15/16	1 15/16	1 15/16	1 15/16
Belt Quantity	1 / 2 / 2	1 / 1 / 2	2 / 2 / 2	2 / 2 / 2
Belt Type	BX56 / BX50 / 5VX530	BX56 / 5VX570 / 5VX530	BX50 / 5VX500 / 5VX530	BX50 / 5VX530 / 5VX530
Belt Length (in.)	56 / 63 / 53	56 / 57 / 53	50 / 50 / 53	50 / 53 / 53
Pulley Center Line Distance (in.)	16.0-18.7 / 15.6-18.4 / 15.0-17.9	15.6-18.4 / 15.6-18.4 / 15.0-17.9	15.6-18.4 / 15.0-17.9 / 15.0-17.9	15.6-18.4 / 15.0-17.9 / 15.0-17.9
Factory Speed Setting (rpm)	717 / 924 / 1096	773 / 962 / 1106	848 / 1059 / 1187	856 / 1096 / 1187
HIGH-PRESSURE SWITCH (psig)				
Cutout	650	650	650	650
Reset (Auto.)	500	500	500	500
MIXED-AIR FILTERS				
Quantity ... Size (in.) Standard	10 ... 20 x 24 x 2	10 ... 20 x 24 x 2	10 ... 20 x 24 x 2	10 ... 20 x 24 x 2
Pleated	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4
OUTDOOR-AIR FILTERS				
Quantity...Size (in.)	8...16 x 25 x 2 4...20 x 25 x 2			
POWER EXHAUST	Direct Drive, Single-Phase Motors (Factory-Wired for High Speed Operation), Forward-Curved Fan Wheels with Backdraft Dampers on Each Fan Housing			
Motor, Quantity...Hp	4...1			
Fan, Diameter...Width (in.)	11 x 10			

LEGEND

MCHX— Microchannel Heat Exchanger
RTPF — Round Tube Plate Fin

*Sizes 020 to 027: Circuit 1 uses the lower portion of condenser coil, Circuit 2 uses the upper portion.
Sizes 030 and 035: Circuit 1 uses the upper portion of condenser coil, Circuit 2 uses the lower portion.
Sizes 040 and 050: Circuit 1 uses the left condenser coil, Circuit 2 the right.
Size 060: Circuit A uses the two MCHX coils near the bulkhead, Circuit B uses the two MCHX coils near the control box.

Table 1 — Physical Data — 50A2,A3,A4,A5 Units (cont)

UNIT 50A2,A3,A4,A5	035	040	050	060
NOMINAL CAPACITY (tons)	35	40	50	60
BASE UNIT OPERATING WEIGHT (lb)	See Unit Weights Table			
COMPRESSOR				
Quantity ... Type (Ckt 1/Ckt 2)	2 ... ZP67/2…ZP104	2…ZP104/2…ZP104	2…ZP122/2…ZP122	2…ZP154/2…ZP154
Number of Refrigerant Circuits	2	2	2	2
Oil	Precharged	Precharged	Precharged	Precharged
REFRIGERANT	R-410A			
Operating Charge (lb), Ckt 1/Ckt 2				
RTPF Coils	28.7/44.0	44.0/44.0	56.3/57.3	78.5/82.0
MCHX Coils	19.0/27.7	25.5/26.0	27.0/28.0	30.6/38.3
MCHX Coils with Humidi-MiZer® Coil	19.0/33.2	25.4/33.0	26.5/34.5	30.6/48.1
MCHX CONDENSER*				
Quantity	1	2	2	4
Total Face Area (sq ft)	32.9	65.8	65.8	105.2
RTPF CONDENSER				
Quantity	1	2	2	2
Rows...Fins/in	4...15	3...15	4...15	6...30
Total Face Area (sq ft)	33.3	66.7	66.7	100.0
CONDENSER FAN	Propeller Type			
Nominal Cfm	19,500	32,000	35,000	40,000
Quantity... Diameter (in.)	2 ... 30	4 ... 30	4 ... 30	4...30.5(MCHX), 6...30(RTPF)
Motor Hp	1	1	1	1
EVAPORATOR COIL	Cross-Hatched Copper Tubes, Aluminum Plate Fins with Intertwined Circuits			
Tube Size (in.)	1/2	1/2	1/2	1/2
Rows ... Fins/in.	6 ... 16	4 ... 17	6 ... 16	4...17
Total Face Area (sq ft)	31.3	31.3	31.3	48.1
HUMIDI-MIZER COIL				
Quantity	1	1	1	1
Face Area (sq ft)	14.4	14.4	14.4	14.4
EVAPORATOR FAN	Centrifugal Type			
Quantity ... Size (in.)	2 ... 20 X 15	2 ... 20 X 15	2 ... 20 X 15	3 ... 20 X 15
Type Drive	Belt	Belt	Belt	Belt
Nominal Cfm	14,000	16,000	18,000	24,000
Motor Hp	15 / 20 / 25	15 / 20 / 25	20 / 25 / 30	25 / 30 / 40
Motor Frame Size	254T / 256T / 284T	254T / 256T / 284T	256T / 284T / 286T	284T / 286T / 324T
Motor Bearing Type	Ball	Ball	Ball	Ball
Maximum Allowable Rpm	1300	1300	1300	1200
Motor Pulley Pitch Diameter (in.)	5.1 / 5.7 / 6.2	5.3 / 5.7 / 7.5	5.7 / 6.2 / 6.7	5.3 / 5.9 / 6.5
Nominal Motor Shaft Diameter (in.)	1 5/8 / 1 5/8 / 1 7/8	1 5/8 / 1 5/8 / 1 7/8	1 5/8 / 1 7/8 / 1 7/8	1 7/8 / 1 7/8 / 2 1/8
Fan Pulley Pitch Diameter (in.)	8.7 / 8.7 / 8.7	9.5 / 9.5 / 11.1	9.5 / 9.5 / 9.5	9.1 / 9.5 / 9.5
Nominal Fan Shaft Diameter (in.)	1 15/16	1 15/16	1 15/16	1 15/16
Belt Quantity	2 / 2 / 2	2 / 2 / 2	2 / 2 / 2	3 / 3 / 3
Belt Type	5VX500 / 5VX530 / 5VX550	5VX530 / 5VX550 / 5VX590	5VX550 / 5VX570 / 5VX570	5VX530 / 5VX550 / 5VX570
Belt Length (in.)	50 / 53 / 55	53 / 55 / 59	55 / 57 / 57	53 / 55 / 57
Pulley Center Line Distance (in.)	15.0-17.9 / 15.0-17.9 / 15.0-17.9	15.0-17.9 / 15.0-17.9 / 14.6-17.6	15.0-17.9 / 14.6-17.6 / 14.6-17.6	15.2-17.5 / 14.7-17.2 / 14.2-17.0
Factory Speed Setting (rpm)	1025 / 1147 / 1247	976 / 1050 / 1182	1050 / 1142 / 1234	1019 / 1087 / 1197
HIGH-PRESSURE SWITCH (psig)				
Cutout	650	650	650	650
Reset (Auto.)	500	500	500	500
MIXED-AIR FILTERS				
Quantity ... Size (in.) Standard	10 ... 20 x 24 x 2	10 ... 20 x 24 x 2	10 ... 20 x 24 x 2	16...20 x 24 x 2
Pleated	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	5 ... 20 x 20 x 4 5 ... 20 x 24 x 4	8...20 x 20 x 4 8...20 x 24 x 4
OUTDOOR-AIR FILTERS				
Quantity...Size (in.)	8...16 x 25 x 2 4...20 x 25 x 2	8...16 x 25 x 2 4...20 x 25 x 2	8...16 x 25 x 2 4...20 x 25 x 2	12...16 x 25 x 2 6...20 x 25 x 2
POWER EXHAUST	Direct Drive, Single-Phase Motors (Factory-Wired for High Speed Operation), Forward-Curved Fan Wheels with Backdraft Dampers on Each Fan Housing			
Motor, Quantity...Hp	4...1	4...1	4...1	6...1
Fan, Diameter...Width (in.)	11 x 10	11 x 10	11 x 10	11 x 10

LEGEND

MCHX— Microchannel Heat Exchanger
RTPF — Round Tube Plate Fin

*Sizes 020 to 027: Circuit 1 uses the lower portion of condenser coil, Circuit 2 uses the upper portion.
Sizes 030 and 035: Circuit 1 uses the upper portion of condenser coil, Circuit 2 uses the lower portion.
Sizes 040 and 050: Circuit 1 uses the left condenser coil, Circuit 2 the right.
Size 060: Circuit A uses the two MCHX coils near the bulkhead, Circuit B uses the two MCHX coils near the control box.

Table 2 — 50A2,A3,A4,A5 Base Unit Operating Weights (lb)

UNIT SIZE	020	025	027	030	035	040	050	060
50A2,A3	3625	3761	3761	3792	4025	4455	4599	6826
50A4,A5	3703	3839	3839	3870	4218	4648	4792	7041

Table 3 — 50A2,A3,A4,A5 Option and Accessory Weights (lb)

UNIT SIZE	020	025	027	030	035	040	050	060
Barometric Relief	300	300	300	300	300	300	300	450
Non-Modulating Power Exhaust	450	450	450	450	450	450	450	675
Modulating Power Exhaust	500	500	500	500	500	500	500	725
Electric Heat	110	110	110	110	110	110	110	165
Cu Tube/Alum Fin Cond. Coil	100	100	100	150	150	187	317	26
Cu Tube/Cu Fin Cond. Coil	263	263	263	370	370	512	751	677
OA Hood Crate/Packaging (Less Hoods' Weight)	45	45	45	45	45	45	45	45
	(Packaging Only)							
Outdoor Air Hoods/Filters (included with unit)	170	170	170	170	170	170	170	255
Hail Guards	73	73	73	73	73	146	146	219
Roof Curb (14-in.)	365	365	365	365	365	410	410	540
Double Wall	275	275	275	275	275	275	275	375
Humidi-MiZer Coil	150	150	150	150	150	180	180	195

Table 4 — Constant Volume Fan Motor Weights (lb)

MOTOR HP	UNIT VOLTAGE	PREMIUM EFFICIENCY IFM
5 HP	230/460	80
	380	75
	575	80
10 HP	230/460	126
	380	120
	575	126
15 HP	230/460	217
	380	155
	575	217
20 HP	230/460	250
	380	185
	575	250
25 HP	230/460	309
	380	225
	575	309
30 HP	230/460	303
	380	283
	575	303
40 HP	230/460	551
	380	601
	575	551

Table 5 — Variable Air Volume / Staged Air Volume Fan Motor Weights (lb)

MOTOR HP	UNIT VOLTAGE	PREMIUM EFFICIENCY IFM
5 HP	230/460	138
	380	133
	575	149
10 HP	230/460	195
	380	198
	575	195
15 HP	230/460	316
	380	254
	575	319
20 HP	230/460	385
	380	320
	575	357
25 HP	230/460	444
	380	360
	575	454
30 HP	230/460	338
	380	318
	575	342
40 HP	230/460	686
	380	736
	575	686

LEGEND AND NOTES FOR TABLES 2-5

LEGEND

Cu — Copper
FIOP — Factory-Installed Option
HP — Horsepower
IFM — Indoor Fan Motor
OA — Outdoor Air
SAV — Staged Air Volume
VAV — Variable Air Volume
VFD — Variable Frequency Drive

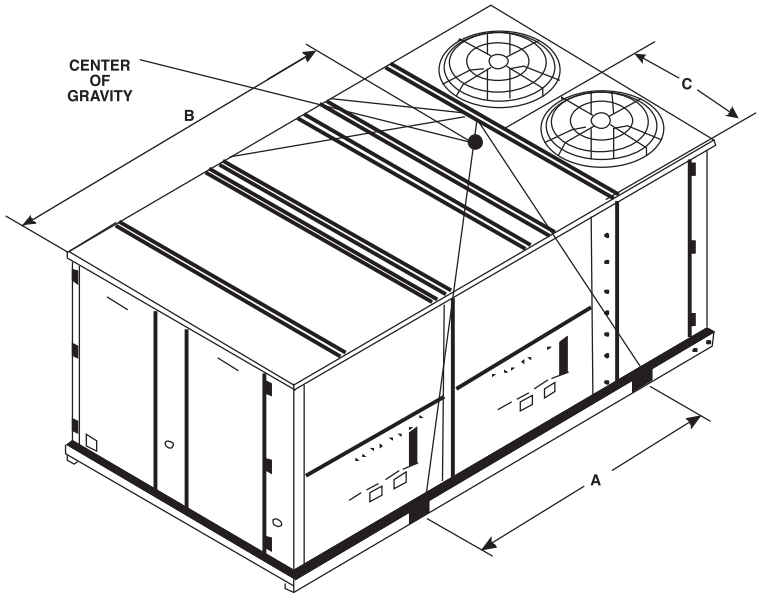
NOTES:

1. Base unit weight includes outdoor-air hoods. Base unit weight does NOT include indoor-fan motor. ADD indoor-fan motor, FIOPs, and accessories for TOTAL operating weight.
2. VAV/SAV™ motor weights include the indoor motor and the VFD, optional VFD bypass, VFD transducer and associated wiring.

⚠ CAUTION - NOTICE TO RIGGERS:

ALL PANELS MUST BE IN PLACE WHEN RIGGING.

NOTE: Rig with four cables and spread with two 92 inch (2337 MM) spreader bars.
Maintain a distance of 74 inches (1880 MM) from top of unit to eyehook.



NOTE:
Add 312 lbs (142 kg) for export crating. (020-035 units)
Add 346 lbs (157 kg) for export crating. (040-050 units)
Add 588 lbs (266 kg) for export crating. (060 units)
Add the weights shown below for round tube plate fin coils

Unit Size ---------	020-027	030-035	040	050	060
Copper Tube/Aluminum Fin Cond Coil	100 lbs (45 kg)	150 lbs (68 kg)	187 lbs (85 kg)	317 lbs (144 kg)	26 lbs (12 kg)
Copper Tube/Copper Fin Cond.Coil	263 lbs (119 kg)	370 lbs (168 kg)	512 lbs (232 kg)	751 lbs (341 kg)	677 lbs (307 kg)

MODEL	WEIGHT		A		B		C	
	LBS	KGS	INCHES	MM	INCHES	MM	INCHES	MM
50A2/A3 020	4599	2086	87.7	2227	98.0	2489	44.9	1141
48A2/A3D 020	4689	2127	87.7	2227	96.8	2460	44.5	1130
48A2/A3E 020	4769	2163	87.7	2227	96.3	2446	44.2	1122
50A4/A5 020	4677	2122	87.7	2227	94.2	2394	49.5	1257
48A4/A5D 020	4729	2145	87.7	2227	93.2	2368	49.1	1246
48A4/A5E 020	4809	2182	87.7	2227	92.8	2358	48.7	1237
50A2/A3 025	4735	2148	87.7	2227	98.5	2503	44.7	1135
48A2/A3D 025	4825	2189	87.7	2227	97.4	2474	44.3	1125
48A2/A3E 025	4905	2225	87.7	2227	96.9	2460	44.0	1117
50A4/A5 025	4813	2183	87.7	2227	94.9	2410	49.1	1248
48A4/A5D 025	4865	2207	87.7	2227	93.9	2385	48.7	1238
48A4/A5E 025	4945	2243	87.7	2227	93.5	2374	48.4	1229
50A2/A3 027	4801	2178	87.7	2227	97.2	2468	44.1	1120
48A2/A3D 027	4891	2219	87.7	2227	96.1	2440	43.7	1110
48A2/A3E 027	4971	2255	87.7	2227	95.6	2427	43.4	1102
50A4/A5 027	4879	2213	87.7	2227	93.6	2377	48.5	1232
48A4/A5D 027	4931	2237	87.7	2227	92.6	2353	48.1	1221
48A4/A5E 027	5011	2273	87.7	2227	92.2	2343	47.7	1213
50A2/A3 030	4832	2192	87.7	2227	95.2	2417	44.4	1128
48A2/A3D 030	4922	2233	87.7	2227	94.1	2389	44.0	1118
48A2/A3E 030	5002	2269	87.7	2227	93.6	2376	43.7	1110
50A4/A5 030	4910	2227	87.7	2227	91.6	2327	48.8	1238
48A4/A5D 030	4962	2251	87.7	2227	90.7	2303	48.3	1228
48A4/A5E 030	5042	2287	87.7	2227	90.3	2293	48.0	1219
50A2/A3 035	5134	2329	87.7	2227	95.9	2435	41.5	1053
48A2/A3D 035	5339	2422	87.7	2227	94.8	2408	41.0	1043
48A2/A3E 035	5499	2494	87.7	2227	94.2	2393	40.7	1035
50A4/A5 035	5327	2416	87.7	2227	92.7	2353	45.7	1161
48A4/A5D 035	5379	2440	87.7	2227	91.7	2329	45.3	1151
48A4/A5E 035	5539	2513	87.7	2227	91.2	2317	44.9	1141
50A2/A3 040	5564	2524	87.7	2227	121.8	3093	41	1052
48A2/A3D 040	5769	2617	87.7	2227	120.3	3056	41	1041
48A2/A3E 040	5929	2690	87.7	2227	118.8	3018	41	1034
50A4/A5 040	5757	2612	87.7	2227	116.5	2958	45.4	1152
48A4/A5D 040	5809	2635	87.7	2227	115.1	2924	44.9	1142
48A4/A5E 040	5969	2708	87.7	2227	113.9	2893	44.6	1132
50A2/A3 050	5744	2606	87.7	2227	119.5	3035	42	1059
48A2/A3D 050	5949	2699	87.7	2227	118.1	2999	41	1048
48A2/A3E 050	6109	2771	87.7	2227	116.6	2962	41	1040
50A4/A5 050	5937	2693	87.7	2227	114.3	2904	45.5	1156
48A4/A5D 050	5989	2717	87.7	2227	112.9	2868	45.1	1145
48A4/A5E 050	6149	2789	87.7	2227	111.7	2837	44.7	1135
50A2/A3 060	8311	3770	161.7	4106	184.9	4698	43	1102
48A2/A3D 060	8386	3804	161.7	4106	177.6	4511	41	1049
48A2/A3E 060	8626	3913	161.7	4106	170.4	4329	39	996
50A4/A5 060	8526	3868	161.7	4106	176.5	4484	47.1	1196
48A4/A5D 060	8426	3822	161.7	4106	169.6	4309	45.2	1149
48A4/A5E 060	8676	3936	161.7	4106	163.3	4147	43.2	1097

The weight distribution and center of gravity information are representative of a standard unit and include the impact of factory installed economizer, largest IFM motor & VFD, modulating power exhaust (both factory installed and field installed options), and electric heat (on 50A only). **50EJ500305 REV. 3.0**

Fig. 15 — Rigging Information

Table 6 — Evaporator Fan Motor Data

UNIT SIZE 50A2,A3, A4,A5	MOTOR HP	MOTOR SHAFT DIA. (in.)	FAN SHAFT SPEED (RPM)	MOTOR SHEAVE (P/N)	MOTOR SHEAVE PITCH DIAMETER (in.)	BUSHING DIAMETER (in.)	FAN SHEAVE (P/N)	FAN SHEAVE PITCH DIAMETER (in.)	BUSHING DIAMETER (in.)	BELT (QUANTITY) (P/N)	BELT TENSION (lb at .25 in.)
020	5 10 15	1.125 1.375 1.625	717 924 1096	BK55 2BK50 2B5V56	4.8 4.4 5.7	NONE - 1.125 NONE - 1.375 B - 1.625	1B5V124 2B5V86 2B5V90	12.4 8.6 9.1	B - 1.9375 B - 1.9375 B - 1.9375	BX56 (2) BX50 (2) 5VX530	8 8 9
025	5 10 15	1.125 1.375 1.625	773 962 1106	BK55 1B5V60 2B5V54	5.2 6.1 5.5	NONE - 1.125 H - 1.375 B - 1.625	1B5V124 1B5V110 2B5V86	12.4 11.1 8.7	B - 1.9375 B - 1.9375 B - 1.9375	BX56 5VX570 (2) 5VX530	8 11 9
027	10 15 20	1.375 1.625 1.625	848 1059 1187	2BK50 2B5V56 2B5V58	4.4 4.9 5.9	NONE - 1.375 B - 1.625 B - 1.625	2B5V94 2B5V90 2B5V86	9.4 8.1 8.7	B - 1.9375 B - 1.9375 B - 1.9375	(2) BX50 (2) 5VX530 (2) 5VX530	8 10 11
030	10 15 20	1.375 1.625 1.625	856 1096 1187	2BK50 2B5V56 2B5V58	4.4 5.7 5.9	H - 1.375 B - 1.625 B - 1.625	2B5V94 2B5V90 2B5V86	9.0 9.1 8.7	B - 1.9375 B - 1.9375 B - 1.9375	(2) BX50 (2) 5VX530 (2) 5VX530	8 9 11
035	15 20 25	1.625 1.625 1.875	1025 1147 1247	2B5V50 2B5V56 2B5V62	5.1 5.7 6.2	B - 1.625 B - 1.625 B - 1.875	2B5V86 2B5V86 2B5V86	8.7 8.7 8.7	B - 1.9375 B - 1.9375 B - 1.9375	(2) 5VX500 (2) 5VX530 (2) 5VX530	9 10 11
040	15 20 25	1.625 1.625 1.875	976 1050 1182	2B5V52 2B5V56 2B5V74	5.3 5.7 7.5	B - 1.625 B - 1.625 B - 1.875	2B5V94 2B5V94 2B5V110	9.5 9.5 11.1	B - 1.9375 B - 1.9375 B - 1.9375	(2) 5VX530 (2) 5VX550 (2) 5VX590	10 11 11
050	20 25 30	1.625 1.875 1.875	1050 1142 1234	2B5V56 2B5V62 2B5V66	5.7 6.2 6.7	B - 1.625 B - 1.875 B - 1.875	2B5V94 2B5V94 2B5V94	9.5 9.5 9.5	B - 1.9375 B - 1.9375 B - 1.9375	(2) 5VX550 (2) 5VX570 (2) 5VX570	10 11 13
060	25 30 40	1.875 1.875 2.125	1019 1087 1197	3B5V52 3B5V58 3B5V64	5.3 5.9 6.5	B - 1.875 B - 1.875 B - 2.125	3B5V90 3B5V94 3B5V94	9.1 9.5 9.5	B - 1.9375 B - 1.9375 B - 1.9375	(3) 5VX530 (3) 5VX550 (3) 5VX570	12 12 14

NOTES:
1. Motor shaft speed is 1750 rpm. The fan shaft diameter is $1^{15}/_{16}$ inches.
2. All indoor fan motors meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT), effective October 24, 1997.

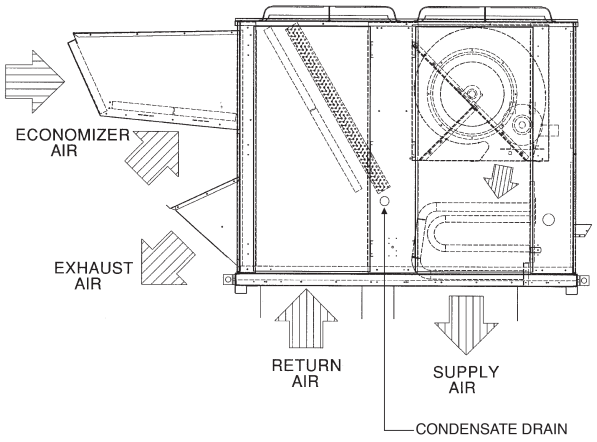


Fig. 16 — Air Distribution — Thru-the-Bottom

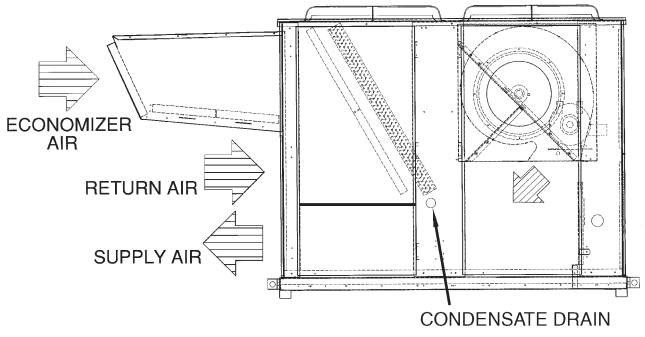


Fig. 17 — Air Distribution — Thru-the-Side

Step 5 — Trap Condensate Drain — See Fig. 6-14 for drain location. Condensate drain is open to atmosphere and must be trapped. Install a trapped drain at the drain location. One 1-in. female pipe coupling is provided inside the unit evaporator section for condensate drain connection. A trap at least 4 in. deep must be used. See Fig. 18. Trap must be installed to prevent freeze-up.

Condensate pans are sloped so that water will completely drain from the condensate pan to comply with indoor air quality guidelines. The condensate drain pans are not insulated.

Step 6 — Make Electrical Connections

POWER WIRING — Units are factory wired for the voltage shown on the unit nameplate.

Provide a unit safety disconnect switch in the main power supply to each unit (see Fig. 19). Select switch size and mounting location in accordance with applicable local codes or National Electrical Code (NEC). If combining the functions of safety disconnect with maximum overcurrent protection (MOCP) fuses ("fused disconnect"), coordinate safety switch size with MOCP size data as marked on unit informative plate.

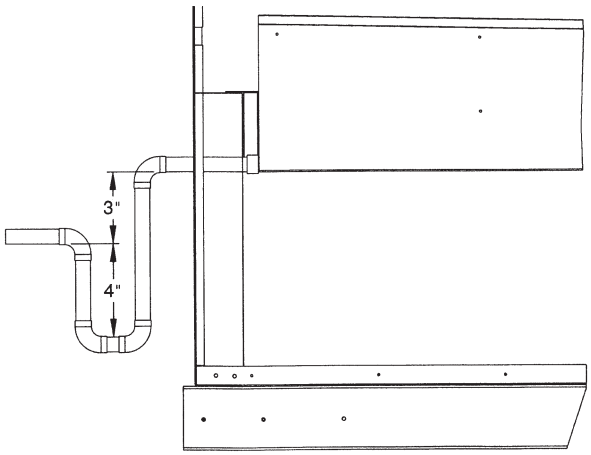


Fig. 18 — Condensate Drain Trap Piping Details (Typical Roof Curb or Slab Mount Shown)

Unit may be equipped with optional factory-installed non-fused disconnect switch (see Fig. 19). Provide maximum over-current protection devices (fuses or UL489 rated breakers, per local codes) in branch circuit wiring remote from unit. Observe requirements of NEC Article 440. Install service switch up-stream of remote fuses if required.

The main power terminal block is suitable for use with aluminum or copper wire. See Fig. 19. Units have circuit breakers for compressors, fan motors, and control circuit. If required by local codes, provide an additional disconnect switch. Unit must be electrically grounded in accordance with local codes or, in absence of local codes, with NEC, ANSI (American National Standards Institute) C1-latest year.

FIELD POWER SUPPLY — Unit is factory wired for voltage shown on unit nameplate. See Tables 7 and 8 for electrical data.

Field wiring can be brought into the unit from bottom (through basepan and roof curb) or through side of unit (corner post next to control box).

A $3^1/_2$-in. NPT coupling for field power wiring and a $^3/_4$-in. NPT coupling for 24-v control wiring are provided in basepan. In the side post, there are two $2^1/_2$-in. (sizes 020-035) or 3-in. (sizes 040-060) knockouts for the field power wiring. See Fig. 6-13. If control wiring is to be brought in through side of unit, a $^7/_8$-in. diameter hole is provided in the condenser side post next to the control box.

Do not route control wiring in the same conduit as power wiring.

If disconnect box is mounted to corner post, be careful not to drill or screw into the condenser coil.

Routing Through Bottom of Unit — If wiring is brought in through bottom of unit, use field-supplied watertight conduit to route power wiring through the $3^1/_2$-in. diameter hole provided in the unit basepan.

Install conduit connector in unit basepan as shown in Fig. 6-13. Route power and ground lines through connector to terminal connections in unit control box as shown on unit wiring diagram and Fig. 19.

Use strain relief going into control box through $3^5/_8$-in. diameter hole provided. After wires are in unit control box, connect to power terminal block (see Power Wiring section on page 21).

Low-voltage wiring must be run in watertight conduit from the basepan to control box and through $^7/_8$-in. diameter hole provided in bottom of unit control box. Field-supplied strain relief must be used going into the box. After wiring is in control box, make connections to proper terminals on terminal blocks (see Field Control Wiring section on page 23).

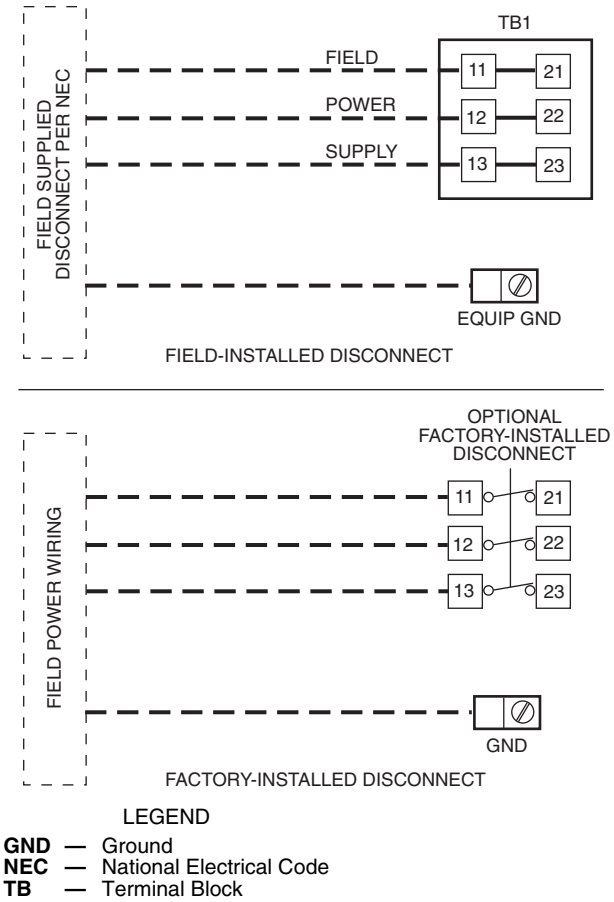
Routing Through Side of Unit — Route power wiring in field-supplied watertight conduit into unit through $2^1/_2$-in. (sizes 020-035) or 3-in. (sizes 040-060 units) hole.

Use field-supplied strain relief going into control box through $3^5/_8$-in. diameter hole provided. After wires are in unit control box, connect to power terminal block (see Power Wiring section on page 21).

Bring low-voltage control wiring through the $^7/_8$-in. diameter hole provided in the condenser section side post. Use strain relief going into $^7/_8$-in. diameter hole in bottom of unit control box.

After wiring is in control box, make connection to proper terminals on terminal blocks (see Field Control Wiring section on page 23).

Affix crankcase heater sticker (located in the installer's packet) to unit disconnect switch.



LEGEND

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

Fig. 19 — Field Power Wiring Connections

IMPORTANT: The VAV (variable air volume) units use variable frequency drives, which generate 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 pursuant to International Standard in North American FN 61000-2/3, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

⚠ WARNING

The unit must be electrically grounded in accordance with local codes and NEC ANSI/NFPA 70 (National Fire Protection Association). Failure to ground unit could cause personal injury.

Voltage to compressor terminals during compressor operation must be within the voltage range indicated on the unit nameplate. Phases must be balanced within 2%.

Use the formula in Tables 7 and 8 to determine the percentage of voltage imbalance.

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

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

IMPORTANT: On 208/230-v units, transformers 1 to 5 are wired for 230-v. If 208/230-v unit is to be run with 208-v power supply, the transformers must be rewired as follows:

For transformer 1 move the black wire connected to terminal H2 and connect it to terminal H3.

For transformers 2 to 4, used for the 24 volt control circuits, connect as follows:

1. Remove cap from red (208 v) wire.
2. Remove cap from spliced orange (230 v) wire. Disconnect orange wire from black unit power wire.
3. Cap orange wire.
4. Splice red wire and black unit power wire. Cap wires.

If the unit is equipped with the optional convenience outlet, connect the yellow wire to H2 on transformer 5.

IMPORTANT: BE CERTAIN UNUSED WIRES ARE CAPPED. Failure to do so may damage the transformers.

FIELD CONTROL WIRING — The 50A Series units support a large number of control options that can impact the field control wiring. Refer to Fig. 20 and 21.

The control options that the unit can provide relate to the following parameters:

- CV (constant volume), VAV (variable air volume), SAV (staged air volume), or VVT® (variable volume and variable temperature) control operation
- Standalone with a thermostat (CV) or with a space sensor (CV and VAV)
- Network application with CCN (Carrier Comfort Network®) or other networks
- Demand controlled ventilation with CO_2 sensor
- Economizer and economizer with changeover control
- Building and duct static pressure control
- Fire shutdown and smoke control
- Diagnostics and monitoring
- For constant volume applications a thermostat (T-Stat) or space temperature sensor (SPT) will be required.

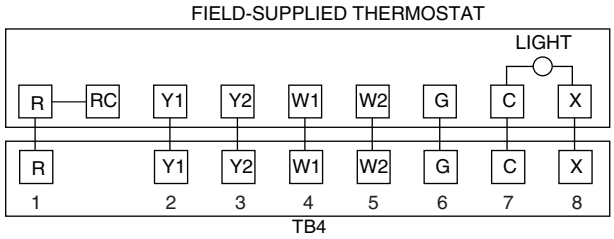


Fig. 20 — Field Control Thermostat Wiring

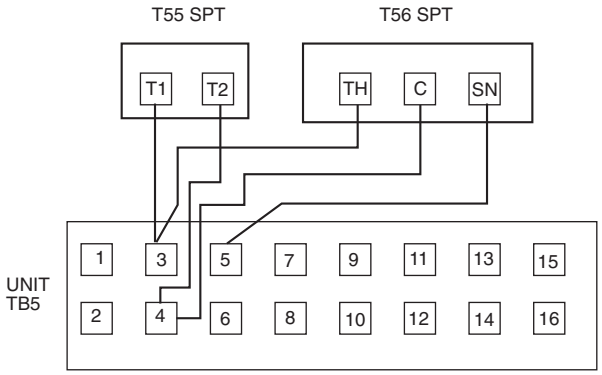


Fig. 21 — Space Temperature Sensor Wiring

LEGEND AND NOTES FOR TABLES 7 AND 8

LEGEND

FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MCHX — Microchannel Heat Exchanger
MOCP — Maximum Overcurrent Protection
NEC — National Electrical Code
RLA — Rated Load Amps
RTPF — Round Tube Plate Fin Coil

*Fuse or HACR circuit breaker per NEC.

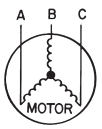
NOTES:

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

   % 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 of 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 your local electric utility company immediately.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
020	208	187	229	22.4	149	22.4	149	27.6	191	—	—	2	6.5 (ea)	5	16.7	—	— 75.1 150.1	— 27 54	109.0 114.8 171.0	125 125 200
																23.6	— 75.1 150.1	— 27 54	132.6 144.3 200.5	150 150 225
														10	30.8	—	— 75.1 150.1	— 27 54	123.9 132.4 188.6	150 150 200
																23.6	— 75.1 150.1	— 27 54	147.5 161.9 218.1	175 175 225
														15	46.2	—	— 75.1 150.1	— 27 54	143.2 151.6 207.9	175 175 250
																23.6	— 75.1 150.1	— 27 54	166.8 181.1 237.4	200 200 250
	230	207	253	22.4	149	22.4	149	27.6	191	—	—	2	6.6 (ea)	5	15.2	—	— 86.6 173.2	— 36 72	107.7 127.3 192.2	125 150 225
																23.6	— 86.6 173.2	— 36 72	131.3 156.8 221.7	150 175 225
														10	28.0	—	— 86.6 173.2	— 36 72	120.6 143.3 208.2	125 150 225
																23.6	— 86.6 173.2	— 36 72	144.2 172.8 237.7	150 175 250
														15	42.0	—	— 86.6 173.2	— 36 72	138.1 160.8 225.7	175 175 250
																23.6	— 86.6 173.2	— 36 72	161.7 190.3 255.2	200 200 300
	380	342	418	11	75.3	11	75.3	16.7	123	—	—	2	3.6 (ea)	5	9.1	—	— 34.2 68.4	— 23 45	59.2 59.2 96.9	70 70 100
																14.8	— 34.2 68.4	— 23 45	74.0 74.0 115.4	90 90 125
														10	16.7	—	— 34.2 68.4	— 23 45	66.8 66.8 106.4	80 80 110
																14.8	— 34.2 68.4	— 23 45	81.6 82.1 124.9	90 90 125
														15	24.5	—	— 34.2 68.4	— 23 45	76.5 76.5 116.1	100 100 125
																14.8	— 34.2 68.4	— 23 45	91.3 91.9 134.6	110 110 150
	460	414	508	10.6	75	10.6	75	12.8	100	—	—	2	3.3 (ea)	5	7.6	—	— 43.3 86.6	— 36 72	51.4 63.6 96.1	60 70 110
																12.6	— 43.3 86.6	— 36 72	64.0 79.4 111.9	70 80 125
														10	14.0	—	— 43.3 86.6	— 36 72	58.1 71.6 104.1	70 80 110
																12.6	— 43.3 86.6	— 36 72	70.7 87.4 119.9	80 90 125
														15	21.0	—	— 43.3 86.6	— 36 72	66.9 80.4 112.9	80 90 125
																12.6	— 43.3 86.6	— 36 72	79.5 96.1 128.6	100 100 150
	575	518	632	7.7	54	7.7	54	12.2	80	—	—	2	2.6 (ea)	5	6.1	—	— 34.6 69.3	— 36 72	42.0 50.9 76.9	50 60 90
																9.6	— 34.6 69.3	— 36 72	51.6 62.9 88.9	60 70 100
														10	11.0	—	— 34.6 69.3	— 36 72	46.9 57.0 83.1	50 60 90
																9.6	— 34.6 69.3	— 36 72	56.5 69.0 95.1	60 70 100
														15	17.0	—	— 34.6 69.3	— 36 72	54.1 64.5 90.6	70 70 100
																9.6	— 34.6 69.3	— 36 72	63.7 76.5 102.6	80 80 110

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
025	208	187	229	27.6	191	27.6	191	27.6	191	—	—	2	6.5 (ea)	5	16.7	—	— 75.1 150.1	— 27 54	119.4 119.4 171.0	125 125 200
																23.6	— 75.1 150.1	— 27 54	143.0 144.3 200.5	150 150 225
														10	30.8	—	— 75.1 150.1	— 27 54	134.3 134.3 188.6	150 150 200
																23.6	— 75.1 150.1	— 27 54	157.9 161.9 218.1	175 175 225
														15	46.2	—	— 75.1 150.1	— 27 54	153.6 153.6 207.9	175 175 250
																23.6	— 75.1 150.1	— 27 54	177.2 181.1 237.4	200 200 250
	230	207	253	27.6	191	27.6	191	27.6	191	—	—	2	6.6 (ea)	5	15.2	—	— 86.6 173.2	— 36 72	118.1 127.3 192.2	125 150 225
																23.6	— 86.6 173.2	— 36 72	141.7 156.8 221.7	150 175 225
														10	28.0	—	— 86.6 173.2	— 36 72	131.0 143.3 208.2	150 150 225
																23.6	— 86.6 173.2	— 36 72	154.6 172.8 237.7	175 175 250
														15	42.0	—	— 86.6 173.2	— 36 72	148.5 160.8 225.7	175 175 250
																23.6	— 86.6 173.2	— 36 72	172.1 190.3 255.2	200 200 300
	380	342	418	16.7	123	16.7	123	16.7	123	—	—	2	3.6 (ea)	5	9.1	—	— 34.2 68.4	— 23 45	70.6 70.6 96.9	80 80 100
																14.8	— 34.2 68.4	— 23 45	85.4 85.4 115.4	100 100 125
														10	16.7	—	— 34.2 68.4	— 23 45	78.2 78.2 106.4	90 90 110
																14.8	— 34.2 68.4	— 23 45	93.0 93.0 124.9	100 100 125
														15	24.5	—	— 34.2 68.4	— 23 45	87.9 87.9 116.1	110 110 125
																14.8	— 34.2 68.4	— 23 45	102.7 102.7 134.6	125 125 150
	460	414	508	12.8	100	12.8	100	12.8	100	—	—	2	3.3 (ea)	5	7.6	—	— 43.3 86.6	— 36 72	55.8 63.6 96.1	60 70 110
																12.6	— 43.3 86.6	— 36 72	68.4 79.4 111.9	80 80 125
														10	14.0	—	— 43.3 86.6	— 36 72	62.5 71.6 104.1	70 80 110
																12.6	— 43.3 86.6	— 36 72	75.1 87.4 119.9	80 90 125
														15	21.0	—	— 43.3 86.6	— 36 72	71.3 80.4 112.9	90 90 125
																12.6	— 43.3 86.6	— 36 72	83.9 96.1 128.6	100 100 150
	575	518	632	12.2	80	12.2	80	12.2	80	—	—	2	2.6 (ea)	5	6.1	—	— 34.6 69.3	— 36 72	51.0 51.0 76.9	60 60 90
																9.6	— 34.6 69.3	— 36 72	60.6 62.9 88.9	70 70 100
														10	11.0	—	— 34.6 69.3	— 36 72	55.9 57.0 83.1	60 60 90
																9.6	— 34.6 69.3	— 36 72	65.5 69.0 95.1	70 70 100
														15	17.0	—	— 34.6 69.3	— 36 72	63.1 64.5 90.6	80 80 100
																9.6	— 34.6 69.3	— 36 72	72.7 76.5 102.6	80 80 110

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
027	208	187	229	27.6	191	27.6	191	27.6	191	—	—	2	6.5 (ea)	10	30.8	—	— 75.1 150.1	— 27 54	134.3 134.3 188.6	150 150 200
																23.6	— 75.1 150.1	— 27 54	157.9 161.9 218.1	175 175 225
														15	46.2	—	— 75.1 150.1	— 27 54	153.6 153.6 207.9	175 175 250
																23.6	— 75.1 150.1	— 27 54	177.2 181.1 237.4	200 200 250
														20	59.4	—	— 75.1 150.1	— 27 54	170.1 170.1 224.4	225 225 250
																23.6	— 75.1 150.1	— 27 54	193.7 197.6 253.9	250 250 300
	230	207	253	27.6	191	27.6	191	27.6	191	—	—	2	6.6 (ea)	10	28.0	—	— 86.6 173.2	— 36 72	131.0 143.3 208.2	150 150 225
																23.6	— 86.6 173.2	— 36 72	154.6 172.8 237.7	175 175 250
														15	42.0	—	— 86.6 173.2	— 36 72	148.5 160.8 225.7	175 175 250
																23.6	— 86.6 173.2	— 36 72	172.1 190.3 255.2	200 200 300
														20	54.0	—	— 86.6 173.2	— 36 72	163.5 175.8 240.7	200 200 250
																23.6	— 86.6 173.2	— 36 72	187.1 205.3 270.2	225 225 300
	380	342	418	16.7	123	16.7	123	16.7	123	—	—	2	3.6 (ea)	10	16.7	—	— 34.2 68.4	— 23 45	78.2 78.2 106.4	90 90 110
																14.8	— 34.2 68.4	— 23 45	93.0 93.0 124.9	100 100 125
														15	24.5	—	— 34.2 68.4	— 23 45	87.9 87.9 116.1	110 110 125
																14.8	— 34.2 68.4	— 23 45	102.7 102.7 134.6	125 125 150
														20	30.0	—	— 34.2 68.4	— 23 45	94.8 94.8 123.0	110 110 125
																14.8	— 34.2 68.4	— 23 45	109.6 109.6 141.5	125 125 150
	460	414	508	12.8	100	12.8	100	12.8	100	—	—	2	3.3 (ea)	10	14.0	—	— 43.3 86.6	— 36 72	62.5 71.6 104.1	70 80 110
																12.6	— 43.3 86.6	— 36 72	75.1 87.4 119.9	80 90 125
														15	21.0	—	— 43.3 86.6	— 36 72	71.3 80.4 112.9	90 90 125
																12.6	— 43.3 86.6	— 36 72	83.9 96.1 128.6	100 100 150
														20	27.0	—	— 43.3 86.6	— 36 72	78.8 87.9 120.4	100 100 125
																12.6	— 43.3 86.6	— 36 72	91.4 103.6 136.1	110 110 150
	575	518	632	12.2	80	12.2	80	12.2	80	—	—	2	2.6 (ea)	10	11.0	—	— 34.6 69.3	— 36 72	55.9 57.0 83.1	60 60 90
																9.6	— 34.6 69.3	— 36 72	65.5 69.0 95.1	70 70 100
														15	17.0	—	— 34.6 69.3	— 36 72	63.1 64.5 90.6	80 80 100
																9.6	— 34.6 69.3	— 36 72	72.7 76.5 102.6	80 80 110
														20	22.0	—	— 34.6 69.3	— 36 72	69.3 70.8 96.8	90 90 110
																9.6	— 34.6 69.3	— 36 72	78.9 82.8 108.8	100 100 125

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
030	208	187	229	23.2	164	23.2	164	23.2	164	23.2	164	2	6.5 (ea)	10	30.8	—	— 75.1 150.1	— 27 54	144.3 144.3 188.6	175 175 200
																23.6	— 75.1 150.1	— 27 54	167.9 167.9 218.1	175 175 225
														15	46.2	—	— 75.1 150.1	— 27 54	163.6 163.6 207.9	200 200 250
																23.6	— 75.1 150.1	— 27 54	187.2 187.2 237.4	225 225 250
														20	59.4	—	— 75.1 150.1	— 27 54	180.1 180.1 224.4	225 225 250
																23.6	— 75.1 150.1	— 27 54	203.7 203.7 253.9	250 250 300
	230	207	253	23.2	164	23.2	164	23.2	164	23.2	164	2	6.6 (ea)	10	28.0	—	— 86.6 173.2	— 36 72	141.0 143.3 208.2	150 150 225
																23.6	— 86.6 173.2	— 36 72	164.6 172.8 237.7	175 175 250
														15	42.0	—	— 86.6 173.2	— 36 72	158.5 160.8 225.7	200 200 250
																23.6	— 86.6 173.2	— 36 72	182.1 190.3 255.2	200 200 300
														20	54.0	—	— 86.6 173.2	— 36 72	173.5 175.8 240.7	225 225 250
																23.6	— 86.6 173.2	— 36 72	197.1 205.3 270.2	250 250 300
	380	342	418	12.2	73	12.2	73	12.2	73	12.2	73	2	3.6 (ea)	10	16.7	—	— 34.2 68.4	— 23 45	76.9 76.9 106.4	90 90 110
																14.8	— 34.2 68.4	— 23 45	91.7 91.7 124.9	100 100 125
														15	24.5	—	— 34.2 68.4	— 23 45	86.6 86.6 116.1	110 110 125
																14.8	— 34.2 68.4	— 23 45	101.4 101.4 134.6	125 125 150
														20	30.0	—	— 34.2 68.4	— 23 45	93.5 93.5 123.0	110 110 125
																14.8	— 34.2 68.4	— 23 45	108.3 108.3 141.5	125 125 150
	460	414	508	11.2	75	11.2	75	11.2	75	11.2	75	2	3.3 (ea)	10	14.0	—	— 43.3 86.6	— 36 72	68.9 71.6 104.1	80 80 110
																12.6	— 43.3 86.6	— 36 72	81.5 87.4 119.9	90 90 125
														15	21.0	—	— 43.3 86.6	— 36 72	77.7 80.4 112.9	90 90 125
																12.6	— 43.3 86.6	— 36 72	90.3 96.1 128.6	110 110 150
														20	27.0	—	— 43.3 86.6	— 36 72	85.2 87.9 120.4	110 110 125
																12.6	— 43.3 86.6	— 36 72	97.8 103.6 136.1	110 110 150
	575	518	632	7.9	54	7.9	54	7.9	54	7.9	54	2	2.6 (ea)	10	11.0	—	— 34.6 69.3	— 36 72	50.6 57.0 83.1	60 60 90
																9.6	— 34.6 69.3	— 36 72	60.2 69.0 95.1	70 70 100
														15	17.0	—	— 34.6 69.3	— 36 72	58.1 64.5 90.6	70 70 100
																9.6	— 34.6 69.3	— 36 72	67.7 76.5 102.6	80 80 110
														20	22.0	—	— 34.6 69.3	— 36 72	64.3 70.8 96.8	80 80 110
																9.6	— 34.6 69.3	— 36 72	73.9 82.8 108.8	90 90 125

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
035	208	187	229	22.4	149	22.4	149	28.2	239	28.2	239	2	6.5 (ea)	15	46.2	—	— 75.1 150.1	— 27 54	172.0 172.0 207.9	200 200 250
																23.6	— 75.1 150.1	— 27 54	195.6 195.6 237.4	225 225 250
														20	59.4	—	— 75.1 150.1	— 27 54	188.5 188.5 224.4	225 225 250
																23.6	— 75.1 150.1	— 27 54	212.1 212.1 253.9	250 250 300
														25	74.8	—	— 75.1 150.1	— 27 54	207.7 207.7 243.6	250 250 300
																23.6	— 75.1 150.1	— 27 54	231.3 231.3 273.1	300 300 300
	230	207	253	22.4	149	22.4	149	28.2	239	28.2	239	2	6.6 (ea)	15	42.0	—	— 86.6 173.2	— 36 72	166.9 166.9 225.7	200 200 250
																23.6	— 86.6 173.2	— 36 72	190.5 190.5 255.2	225 225 300
														20	54.0	—	— 86.6 173.2	— 36 72	181.9 181.9 240.7	225 225 250
																23.6	— 86.6 173.2	— 36 72	205.5 205.5 270.2	250 250 300
														25	68.0	—	— 86.6 173.2	— 36 72	199.4 199.4 258.2	250 250 300
																23.6	— 86.6 173.2	— 36 72	223.0 223.0 287.7	250 250 300
	380	342	418	11	88	11	88	16	135	16	135	2	3.6 (ea)	15	24.5	—	— 34.2 68.4	— 23 45	91.8 91.8 116.1	110 110 125
																14.8	— 34.2 68.4	— 23 45	106.6 106.6 134.6	125 125 150
														20	30.0	—	— 34.2 68.4	— 23 45	98.7 98.7 123.0	125 125 125
																14.8	— 34.2 68.4	— 23 45	113.5 113.5 141.5	125 125 150
														25	38.0	—	— 34.2 68.4	— 23 45	108.7 108.7 133.0	125 125 150
																14.8	— 34.2 68.4	— 23 45	123.5 123.5 151.5	150 150 175
	460	414	508	10.6	75	10.6	75	14.7	130	14.7	130	2	3.3 (ea)	15	21.0	—	— 43.3 86.6	— 36 72	83.5 83.5 112.9	100 100 125
																12.6	— 43.3 86.6	— 36 72	91.0 91.0 128.6	110 110 150
														20	27.0	—	— 43.3 86.6	— 36 72	91.0 91.0 120.4	110 110 125
																12.6	— 43.3 86.6	— 36 72	103.6 103.6 136.1	125 125 150
														25	34.0	—	— 43.3 86.6	— 36 72	99.7 99.7 129.1	125 125 150
																12.6	— 43.3 86.6	— 36 72	112.3 112.3 144.9	125 125 175
	575	518	632	7.7	54	7.7	54	11.3	93.7	11.3	93.7	2	2.6 (ea)	15	17.0	—	— 34.6 69.3	— 36 72	64.5 64.5 90.6	80 80 100
																9.6	— 34.6 69.3	— 36 72	74.1 76.5 102.6	90 90 110
														20	22.0	—	— 34.6 69.3	— 36 72	70.7 70.8 96.8	90 90 110
																9.6	— 34.6 69.3	— 36 72	80.3 82.8 108.8	100 100 125
														25	27.0	—	— 34.6 69.3	— 36 72	77.0 77.0 103.1	100 100 125
																9.6	— 34.6 69.3	— 36 72	86.6 89.0 115.1	110 110 125

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
040	208	187	229	28.2	239	28.2	239	28.2	239	28.2	239	4	6.5 (ea)	15	46.2	—	— 75.1 150.1	— 27 54	196.6 196.6 207.9	225 225 250
																23.6	— 75.1 150.1	— 27 54	220.2 220.2 237.4	250 250 250
														20	59.4	—	— 75.1 150.1	— 27 54	213.1 213.1 224.4	250 250 250
																23.6	— 75.1 150.1	— 27 54	236.7 236.7 253.9	250 250 300
														25	74.8	—	— 75.1 150.1	— 27 54	232.3 232.3 243.6	300 300 300
																23.6	— 75.1 150.1	— 27 54	255.9 255.9 273.1	300 300 300
	230	207	253	28.2	239	28.2	239	28.2	239	28.2	239	4	6.6 (ea)	15	42.0	—	— 86.6 173.2	— 36 72	191.7 191.7 225.7	225 225 250
																23.6	— 86.6 173.2	— 36 72	215.3 215.3 255.2	250 250 300
														20	54.0	—	— 86.6 173.2	— 36 72	206.7 206.7 240.7	250 250 250
																23.6	— 86.6 173.2	— 36 72	230.3 230.3 270.2	250 250 300
														25	68.0	—	— 86.6 173.2	— 36 72	224.2 224.2 258.2	250 250 300
																23.6	— 86.6 173.2	— 36 72	247.8 247.8 287.7	300 300 300
	380	342	418	16.0	135	16.0	135	16.0	135	16.0	135	4	3.6 (ea)	15	24.5	—	— 34.2 68.4	— 23 45	109.0 109.0 116.1	125 125 125
																14.8	— 34.2 68.4	— 23 45	123.8 123.8 134.6	125 125 150
														20	30.0	—	— 34.2 68.4	— 23 45	115.9 115.9 123.0	125 125 125
																14.8	— 34.2 68.4	— 23 45	130.7 130.7 141.5	150 150 150
														25	38.0	—	— 34.2 68.4	— 23 45	125.9 125.9 133.0	150 150 150
																14.8	— 34.2 68.4	— 23 45	140.7 140.7 151.5	175 175 175
	460	414	508	14.7	130	14.7	130	14.7	130	14.7	130	4	3.3 (ea)	15	21.0	—	— 43.3 86.6	— 36 72	98.3 98.3 112.9	110 110 125
																12.6	— 43.3 86.6	— 36 72	110.9 110.9 128.6	125 125 150
														20	27.0	—	— 43.3 86.6	— 36 72	105.8 105.8 120.4	125 125 125
																12.6	— 43.3 86.6	— 36 72	118.4 118.4 136.1	125 125 150
														25	34.0	—	— 43.3 86.6	— 36 72	114.5 114.5 129.1	125 125 150
																12.6	— 43.3 86.6	— 36 72	127.1 127.1 144.9	150 150 175
	575	518	632	11.3	93.7	11.3	93.7	11.3	93.7	11.3	93.7	4	2.6 (ea)	15	17.0	—	— 34.6 69.3	— 36 72	76.9 76.9 90.6	90 90 100
																9.6	— 34.6 69.3	— 36 72	86.5 86.5 102.6	100 100 110
														20	22.0	—	— 34.6 69.3	— 36 72	83.1 83.1 96.8	100 100 110
																9.6	— 34.6 69.3	— 36 72	92.7 92.7 108.8	110 110 125
														25	27.0	—	— 34.6 69.3	— 36 72	89.4 89.4 103.1	110 110 125
																9.6	— 34.6 69.3	— 36 72	99.0 99.0 115.1	125 125 125

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
050	208	187	229	34	240	34	240	34	240	34	240	4	6.5 (ea)	20	59.4	—	— 75.1 150.1	— 27 54	236.3 236.3 236.3	250 250 250
																23.6	— 75.1 150.1	— 27 54	259.9 259.9 259.9	300 300 300
														25	74.8	—	— 75.1 150.1	— 27 54	255.5 255.5 255.5	300 300 300
																23.6	— 75.1 150.1	— 27 54	279.1 279.1 279.1	350 350 350
														30	88.0	—	— 75.1 150.1	— 27 54	272.0 272.0 272.0	350 350 350
																23.6	— 75.1 150.1	— 27 54	295.6 295.6 295.6	350 350 350
	230	207	253	34	240	34	240	34	240	34	240	4	6.6 (ea)	20	54.0	—	— 86.6 173.2	— 36 72	229.9 229.9 240.7	250 250 250
																23.6	— 86.6 173.2	— 36 72	253.5 253.5 270.2	300 300 300
														25	68.0	—	— 86.6 173.2	— 36 72	247.4 247.4 258.2	300 300 300
																23.6	— 86.6 173.2	— 36 72	271.0 271.0 287.7	300 300 300
														30	80.0	—	— 86.6 173.2	— 36 72	262.4 262.4 273.2	300 300 350
																23.6	— 86.6 173.2	— 36 72	286.0 286.0 302.7	350 350 350
	380	342	418	21.2	152	21.2	152	21.2	152	21.2	152	4	3.6 (ea)	20	30.0	—	— 34.2 68.4	— 23 45	136.7 136.7 136.7	150 150 150
																14.8	— 34.2 68.4	— 23 45	151.5 151.5 151.5	175 175 175
														25	38.0	—	— 34.2 68.4	— 23 45	146.7 146.7 146.7	175 175 175
																14.8	— 34.2 68.4	— 23 45	161.5 161.5 161.5	175 175 175
														30	43.5	—	— 34.2 68.4	— 23 45	153.6 153.6 153.6	175 175 175
																14.8	— 34.2 68.4	— 23 45	168.4 168.4 168.4	200 200 200
	460	414	508	16	140	16	140	16	140	16	140	4	3.3 (ea)	20	27.0	—	— 43.3 86.6	— 36 72	111.0 111.0 120.4	125 125 125
																12.6	— 43.3 86.6	— 36 72	123.6 123.6 136.1	150 150 150
														25	34.0	—	— 43.3 86.6	— 36 72	119.7 119.7 129.1	150 150 150
																12.6	— 43.3 86.6	— 36 72	132.3 132.3 144.9	150 150 175
														30	40.0	—	— 43.3 86.6	— 36 72	127.2 127.2 136.6	150 150 175
																12.6	— 43.3 86.6	— 36 72	139.8 139.8 152.4	175 175 175
	575	518	632	12.9	108	12.9	108	12.9	108	12.9	108	4	2.6 (ea)	20	22.0	—	— 34.6 69.3	— 36 72	89.5 89.5 96.8	110 110 110
																9.6	— 34.6 69.3	— 36 72	99.1 99.1 108.8	110 110 125
														25	27.0	—	— 34.6 69.3	— 36 72	95.8 95.8 103.1	110 110 125
																9.6	— 34.6 69.3	— 36 72	105.4 105.4 115.1	125 125 125
														30	32.0	—	— 34.6 69.3	— 36 72	102.0 102.0 109.3	125 125 125
																9.6	— 34.6 69.3	— 36 72	111.6 111.6 121.3	125 125 150

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Optional Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
060 (MCHX)	208	187	229	51.3	300	51.3	300	51.3	300	51.3	300	4	5.5 (ea)	25	74.8	—	— 112.6 225.2	— 41 81	320.7 320.7 320.7	350 350 350
																35.4	— 112.6 225.2	— 41 81	356.1 356.1 363.0	400 400 400
														30	88.0	—	— 112.6 225.2	— 41 81	337.2 337.2 337.2	400 400 400
																35.4	— 112.6 225.2	— 41 81	372.6 372.6 379.5	450 450 450
														40	114.0	—	— 112.6 225.2	— 41 81	369.7 369.7 369.7	450 450 450
																35.4	— 112.6 225.2	— 41 81	405.1 405.1 412.0	500 500 500
	230	207	253	51.3	300	51.3	300	51.3	300	51.3	300	4	5.8 (ea)	25	68.0	—	— 129.9 259.8	— 54 108	313.4 313.4 344.8	350 350 400
																35.4	— 129.9 259.8	— 54 108	348.8 348.8 389.1	400 400 400
														30	80.0	—	— 129.9 259.8	— 54 108	328.4 328.4 359.8	400 400 400
																35.4	— 129.9 259.8	— 54 108	363.8 363.8 404.1	400 400 450
														40	104.0	—	— 129.9 259.8	— 54 108	358.4 358.4 389.8	450 450 450
																35.4	— 129.9 259.8	— 54 108	393.8 393.8 434.1	450 450 500
	380	342	418	26.9	139	26.9	139	26.9	139	26.9	139	4	3.7 (ea)	25	38.0	—	— 51.4 102.8	— 33.8 67.7	169.9 169.9 169.9	200 200 200
																22.2	— 51.4 102.8	— 33.8 67.7	192.1 192.1 192.1	225 225 225
														30	43.5	—	— 51.4 102.8	— 33.8 67.7	176.8 176.8 176.8	200 200 200
																22.2	— 51.4 102.8	— 33.8 67.7	199.0 199.0 199.0	225 225 225
														40	56.2	—	— 51.4 102.8	— 33.8 67.7	192.7 192.7 192.7	225 225 225
																22.2	— 51.4 102.8	— 33.8 67.7	214.9 214.9 214.9	250 250 250
	460	414	508	22.4	150	22.4	150	22.4	150	22.4	150	4	2.9 (ea)	25	34.0	—	— 65.0 129.9	— 54 108	143.7 143.7 172.4	175 175 200
																18.9	— 65.0 129.9	— 54 108	162.6 162.6 196.0	175 175 225
														30	40.0	—	— 65.0 129.9	— 54 108	151.2 151.2 179.9	175 175 200
																18.9	— 65.0 129.9	— 54 108	170.1 170.1 203.5	200 200 225
														40	52.0	—	— 65.0 129.9	— 54 108	166.2 166.2 194.9	200 200 225
																18.9	— 65.0 129.9	— 54 108	185.1 185.1 218.5	225 225 250
	575	518	632	19.9	109	19.9	190	19.9	109	19.9	109	4	2.3 (ea)	25	27.0	—	— 65.0 129.9	— 54 108	122.6 122.6 137.7	125 125 150
																14.4	— 65.0 129.9	— 54 108	137.0 137.0 155.7	150 150 175
														30	32.0	—	— 65.0 129.9	— 54 108	128.8 128.8 143.9	150 150 175
																14.4	— 65.0 129.9	— 54 108	143.2 143.2 161.9	175 175 175
														40	41.0	—	— 65.0 129.9	— 54 108	140.1 140.1 155.2	175 175 175
																14.4	— 65.0 129.9	— 54 108	154.5 154.5 173.2	175 175 200

See Legend and Notes on page 23.

Table 7 — Electrical Data — 50A2,A3,A4,A5 Units without Optional Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2										
		Min	Max	FLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	kW	MCA	MOCP*
060 (RTPF)	208	187	229	51.3	300	51.3	300	51.3	300	51.3	300	6	6.5 (ea)	25	74.8	—	—	—	333.7	400
																	112.6	41	333.7	400
																	225.2	81	333.7	400
																35.4	—	—	373.1	400
																	112.6	41	373.1	400
																	225.2	81	373.0	400
														30	88.0	—	—	—	354.2	400
																	112.6	41	354.2	400
																	225.2	81	354.2	400
																35.4	—	—	389.6	450
																	112.6	41	389.6	450
																	225.2	81	389.6	450
														40	114.0	—	—	—	386.7	500
																	112.6	41	386.7	500
																	225.2	81	386.7	500
																35.4	—	—	422.1	500
																	112.6	41	422.1	500
																	225.2	81	422.1	500
	230	207	253	51.3	300	51.3	300	51.3	300	51.3	300	6	6.6 (ea)	25	68.0	—	—	—	329.8	350
																	129.9	54	329.8	350
																	259.8	108	344.8	400
																35.4	—	—	365.2	400
																	129.9	54	365.2	400
																	259.8	108	389.1	400
														30	80.0	—	—	—	344.8	400
																	129.9	54	344.8	400
																	259.8	108	359.8	400
																35.4	—	—	380.2	450
																	129.9	54	380.2	450
																	259.8	108	404.1	450
														40	104.0	—	—	—	374.8	450
																	129.9	54	374.8	450
																	259.8	108	389.8	450
																35.4	—	—	410.2	500
																	129.9	54	410.2	500
																	259.8	108	434.1	500
	380	342	418	26.9	139	26.9	139	26.9	139	26.9	139	6	3.6 (ea)	25	38.0	—	—	—	151.9	175
																	51.4	33.8	151.9	175
																	102.8	67.7	172.4	200
																22.2	—	—	170.8	200
																	51.4	33.8	170.8	200
																	102.8	67.7	196.0	225
														30	43.5	—	—	—	159.4	175
																	51.4	33.8	159.4	175
																	102.8	67.7	179.9	200
																22.2	—	—	178.3	200
																	51.4	33.8	178.3	200
																	102.8	67.7	203.5	225
														40	56.2	—	—	—	174.4	225
																	51.4	33.8	174.4	225
																	102.8	67.7	194.9	225
																22.2	—	—	193.3	225
																	51.4	33.8	193.3	225
																	102.8	67.7	218.5	250
	460	414	508	22.4	150	22.4	150	22.4	150	22.4	150	6	3.3 (ea)	25	34.0	—	—	—	151.9	175
																	65.0	54	151.9	175
																	129.9	108	172.4	200
																18.9	—	—	170.8	200
																	65.0	54	170.8	200
																	129.9	108	196.0	225
														30	40.0	—	—	—	159.4	175
																	65.0	54	159.4	175
																	129.9	108	179.9	200
																18.9	—	—	178.3	200
																	65.0	54	178.3	200
																	129.9	108	203.5	225
														40	52.0	—	—	—	174.4	225
																	65.0	54	174.4	225
																	129.9	108	194.9	225
																18.9	—	—	193.3	225
																	65.0	54	193.3	225
																	129.9	108	218.5	250
	575	518	632	19.9	109	19.9	190	19.9	109	19.9	109	6	2.6 (ea)	25	27.0	—	—	—	129.0	150
																	52.0	54	129.0	150
																	103.9	108	137.7	150
																14.4	—	—	143.4	150
																	52.0	54	143.4	150
																	103.9	108	155.7	175
														30	32.0	—	—	—	135.2	150
																	52.0	54	135.2	150
																	103.9	108	143.9	175
																14.4	—	—	149.6	175
																	52.0	54	149.6	175
																	103.9	108	161.9	175
														40	41.0	—	—	—	146.5	175
																	52.0	54	146.5	175
																	103.9	108	155.2	175
																14.4	—	—	160.9	200
																	52.0	54	160.9	200
																	103.9	108	173.2	200

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
020	208	187	229	22.4	149	22.4	149	27.6	191	—	—	2	6.5 (ea)	5	16.7	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	116.0 123.5 179.7	125 125 200
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	139.6 153.0 209.2	150 175 225
														10	30.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	130.9 141.1 197.4	150 150 225
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	154.5 170.6 226.9	175 175 250
														15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	150.2 160.4 216.6	175 175 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	173.8 189.9 246.1	200 200 250
	230	207	253	22.4	149	22.4	149	27.6	191	—	—	2	6.6 (ea)	5	15.2	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	114.7 136.0 201.0	125 150 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	138.3 165.5 230.5	150 175 250
														10	28.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	127.6 152.0 217.0	150 175 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	151.2 181.5 246.5	175 200 250
														15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	145.1 169.5 234.5	175 175 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	168.7 199.0 264.0	200 200 300
	460	414	508	10.6	75	10.6	75	12.8	100	—	—	2	3.3 (ea)	5	7.6	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	54.9 68.0 100.5	60 70 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	67.5 83.8 116.2	80 90 125
														10	14.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	61.6 76.0 108.5	70 80 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	74.2 91.8 124.2	80 100 125
														15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	70.4 84.8 117.2	90 90 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	83.0 100.5 133.0	100 110 150
	575	518	632	7.7	54	7.7	54	12.2	80	—	—	2	2.6 (ea)	5	6.1	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	44.5 54.0 80.1	50 60 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	54.1 66.0 92.1	60 70 100
														10	11.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	49.4 60.1 86.2	60 70 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	59.0 72.1 98.2	70 80 100
														15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	56.6 67.6 93.7	70 70 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	66.2 79.6 105.7	80 80 110

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2											
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
025	208	187	229	27.6	191	27.6	191	27.6	191	—	—	2	6.5 (ea)	5	16.7	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	126.4 126.4 179.7	150 150 200
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	150.0 153.0 209.2	175 175 225
														10	30.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	141.3 141.3 197.4	150 150 225
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	164.9 170.6 226.9	175 175 250
														15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	160.6 160.6 216.6	200 200 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	184.2 189.9 246.1	225 225 250
	230	207	253	27.6	191	27.6	191	27.6	191	—	—	2	6.6 (ea)	5	15.2	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	125.1 136.0 201.0	150 150 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	148.7 165.5 230.5	175 175 250
														10	28.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	138.0 152.0 217.0	150 175 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	161.6 181.5 246.5	175 200 250
														15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	155.5 169.5 234.5	175 175 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	179.1 199.0 264.0	200 200 300
	460	414	508	12.8	100	12.8	100	12.8	100	—	—	2	3.3 (ea)	5	7.6	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	59.3 68.0 100.5	70 70 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	71.9 83.8 116.2	80 90 125
														10	14.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	66.0 76.0 108.5	80 80 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	78.6 91.8 124.2	90 100 125
														15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	74.8 84.8 117.2	90 90 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	87.4 100.5 133.0	100 110 150
	575	518	632	12.2	80	12.2	80	12.2	80	—	—	2	2.6 (ea)	5	6.1	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	53.5 54.0 80.1	60 60 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	63.1 66.0 92.1	70 70 100
														10	11.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	58.4 60.1 86.2	70 70 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	68.0 72.1 98.2	80 80 100
														15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	65.6 67.6 93.7	80 80 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	75.2 79.6 105.7	90 90 110

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2											
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
027	208	187	229	27.6	191	27.6	191	27.6	191	—	—	2	6.5 (ea)	10	30.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	141.3 141.3 197.4	150 150 225
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	164.9 170.6 226.9	175 175 250
														15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	160.6 160.6 216.6	200 200 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	184.2 189.9 246.1	225 225 250
														20	59.4	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	177.1 177.1 233.1	225 225 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	200.7 206.4 262.6	250 250 300
	230	207	253	27.6	191	27.6	191	27.6	191	—	—	2	6.6 (ea)	10	28.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	138.0 152.0 217.0	150 175 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	161.6 181.5 246.5	175 200 250
														15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	155.5 169.5 234.5	175 175 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	179.1 199.0 264.0	200 200 300
														20	54.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	170.5 184.5 249.5	200 200 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	194.1 214.0 279.0	225 225 300
	460	414	508	12.8	100	12.8	100	12.8	100	—	—	2	3.3 (ea)	10	14.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	66.0 76.0 108.5	80 80 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	78.6 91.8 124.2	90 100 125
														15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	74.8 84.8 117.2	90 90 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	87.4 100.5 133.0	100 110 150
														20	27.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	82.3 92.3 124.7	100 100 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	94.9 108.0 140.5	110 110 150
	575	518	632	12.2	80	12.2	80	12.2	80	—	—	2	2.6 (ea)	10	11.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	58.4 60.1 86.2	70 70 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	68.0 72.1 98.2	80 80 100
														15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	65.6 67.6 93.7	80 80 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	75.2 79.6 105.7	90 90 110
														20	22.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	71.8 73.9 99.9	90 90 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	81.4 85.9 111.9	100 100 125

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2											
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
030	208	187	229	23.2	164	23.2	164	23.2	164	23.2	164	2	6.5 (ea)	10	30.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	151.3 151.3 197.4	175 175 225
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	174.9 174.9 226.9	200 200 250
														15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	170.6 170.6 216.6	200 200 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	194.2 194.2 246.1	225 225 250
														20	59.4	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	187.1 187.1 233.1	225 225 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	210.7 210.7 262.6	250 250 300
	230	207	253	23.2	164	23.2	164	23.2	164	23.2	164	2	6.6 (ea)	10	28.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	148.0 152.0 217.0	175 175 225
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	171.6 181.5 246.5	175 200 250
														15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	165.5 169.5 234.5	200 200 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	189.1 199.0 264.0	225 225 300
														20	54.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	180.5 184.5 249.5	225 225 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	204.1 214.0 279.0	250 250 300
	460	414	508	11.2	75	11.2	75	11.2	75	11.2	75	2	3.3 (ea)	10	14.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	72.4 76.0 108.5	80 80 110
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	85.0 91.8 124.2	90 100 125
														15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	81.2 84.8 117.2	100 100 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	93.8 100.5 133.0	110 110 150
														20	27.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	88.7 92.3 124.7	110 110 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	101.3 108.0 140.5	125 125 150
	575	518	632	7.9	54	7.9	54	7.9	54	7.9	54	2	2.6 (ea)	10	11.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	53.1 60.1 86.2	60 70 90
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	62.7 72.1 98.2	70 80 100
														15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	60.6 67.6 93.7	70 70 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	70.2 79.6 105.7	80 80 110
														20	22.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	66.8 73.9 99.9	80 80 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	76.4 85.9 111.9	90 90 125

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2											
		Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	FLA	kW	MCA	MOCP*
035	208	187	229	22.4	149	22.4	149	28.2	239	28.2	239	2	6.5 (ea)	15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	179.0 179.0 216.6	225 225 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	202.6 202.6 246.1	225 225 250
														20	59.4	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	195.5 195.5 233.1	250 250 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	219.1 219.1 262.6	250 250 300
														25	74.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	214.7 214.7 252.4	250 250 300
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	238.3 238.3 281.9	300 300 300
	230	207	253	22.4	149	22.4	149	28.2	239	28.2	239	2	6.6 (ea)	15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	173.9 173.9 234.5	200 200 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	197.5 199.0 264.0	225 225 300
														20	54.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	188.9 188.9 249.5	225 225 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	212.5 214.0 279.0	250 250 300
														25	68.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	206.4 206.4 267.0	250 250 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	230.0 231.5 296.5	250 250 350
	460	414	508	10.6	75	10.6	75	14.7	130	14.7	130	2	3.3 (ea)	15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	87.0 87.0 117.2	100 100 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	99.6 100.5 133.0	110 110 150
														20	27.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	94.5 94.5 124.7	110 110 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	107.1 108.0 140.5	125 125 150
														25	34.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	103.2 103.2 133.5	125 125 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	115.8 116.8 149.2	125 125 175
	575	518	632	7.7	54	7.7	54	11.3	93.7	11.3	93.7	2	2.6 (ea)	15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	67.0 67.6 93.7	80 80 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	76.6 79.6 105.7	90 90 110
														20	22.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	73.2 73.9 99.9	90 90 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	82.8 85.9 111.9	100 100 125
														25	27.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	79.5 80.1 106.2	100 100 125
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	89.1 92.1 118.2	110 110 125

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 Hz	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				Cir A, No. 1		Cir A, No. 2		Cir B, No. 1		Cir B, No. 2											
		Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	Qty	FLA	Hp	FLA	FLA (total)	FLA	FLA	kW	MCA	MOCP*
040	208	187	229	28.2	239	28.2	239	28.2	239	28.2	239	4	6.5 (ea)	15	46.2	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	203.6 203.6 216.6	225 225 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	227.2 227.2 246.1	250 250 250
														20	59.4	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	220.1 220.1 233.1	250 250 250
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	243.7 243.7 262.6	300 300 300
														25	74.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	239.3 239.3 252.4	300 300 300
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	262.9 262.9 281.9	300 300 300
	230	207	253	28.2	239	28.2	239	28.2	239	28.2	239	4	6.6 (ea)	15	42.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	198.7 198.7 234.5	225 225 250
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	222.3 222.3 264.0	250 250 300
														20	54.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	213.7 213.7 249.5	250 250 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	237.3 237.3 279.0	250 250 300
														25	68.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	231.2 231.2 267.0	250 250 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	254.8 254.8 296.5	300 300 350
	460	414	508	14.7	130	14.7	130	14.7	130	14.7	130	4	3.3 (ea)	15	21.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	101.8 101.8 117.2	110 110 125
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	114.4 114.4 133.0	125 125 150
														20	27.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	109.3 109.3 124.7	125 125 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	121.9 121.9 140.5	125 125 150
														25	34.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	118.0 118.0 133.5	150 150 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	130.6 130.6 149.2	150 150 175
	575	518	632	11.3	93.7	11.3	93.7	11.3	93.7	11.3	93.7	4	2.6 (ea)	15	17.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	79.4 79.4 93.7	90 90 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	89.0 89.0 105.7	100 100 110
														20	22.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	85.6 85.6 99.9	100 100 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	95.2 95.2 111.9	110 110 125
														25	27.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	91.9 91.9 106.2	110 110 125
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	101.5 101.5 118.2	125 125 125

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
050	208	187	229	34	240	34	240	34	240	34	240	4	6.5 (ea)	20	59.0	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	243.3 243.3 243.3	300 300 300
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	266.9 266.9 266.9	300 300 300
														25	74.8	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	262.5 262.5 262.5	300 300 300
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	286.1 286.1 286.1	350 350 350
														30	88.0	—	7.0 7.0 7.0	— 75.1 150.1	— 27 54	279.0 279.0 279.0	350 350 350
																23.6	7.0 7.0 7.0	— 75.1 150.1	— 27 54	302.6 302.6 302.6	350 350 350
	230	207	253	34	240	34	240	34	240	34	240	4	6.6 (ea)	20	54.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	236.9 236.9 249.5	250 250 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	260.5 260.5 279.0	300 300 300
														25	68.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	254.4 254.4 267.0	300 300 300
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	278.0 278.0 296.5	300 300 350
														30	80.0	—	7.0 7.0 7.0	— 86.6 173.2	— 36 72	269.4 269.4 282.0	300 300 350
																23.6	7.0 7.0 7.0	— 86.6 173.2	— 36 72	293.0 293.0 311.5	350 350 350
	460	414	508	16	140	16	140	16	140	16	140	4	3.3 (ea)	20	27.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	114.5 114.5 124.7	125 125 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	127.1 127.1 140.5	150 150 150
														25	34.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	123.2 123.2 133.5	150 150 150
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	135.8 135.8 149.2	150 150 175
														30	40.0	—	3.5 3.5 3.5	— 43.3 86.6	— 36 72	130.7 130.7 141.0	150 150 175
																12.6	3.5 3.5 3.5	— 43.3 86.6	— 36 72	143.3 143.3 156.7	175 175 175
	575	518	632	12.9	108	12.9	108	12.9	108	12.9	108	4	2.6 (ea)	20	22.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	92.0 92.0 99.9	110 110 110
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	101.6 101.6 111.9	110 110 125
														25	27.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	98.3 98.2 106.2	125 125 125
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	107.9 107.9 118.2	125 125 125
														30	32.0	—	2.5 2.5 2.5	— 34.6 69.3	— 36 72	104.5 104.5 112.4	125 125 125
																9.6	2.5 2.5 2.5	— 34.6 69.3	— 36 72	114.1 114.1 124.4	125 125 150

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR								CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
				CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2											
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
060 (MCHX)	208	187	229	51.3	300	51.3	300	51.3	300	51.3	300	4	5.5 (ea)	25	75.0	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	327.7 327.7 327.7	400 400 400
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	363.1 363.1 371.7	400 400 400
														30	88.0	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	344.2 344.2 344.2	400 400 400
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	379.6 379.6 388.2	450 450 450
														40	114.0	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	376.7 376.7 376.7	450 450 450
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	412.1 412.1 420.7	500 500 500
	230	207	253	51.3	300	51.3	300	51.3	300	51.3	300	4	5.8 (ea)	25	68.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	320.4 320.4 353.6	350 350 400
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	355.8 355.8 397.8	400 400 450
														30	80.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	335.4 335.4 368.6	400 400 400
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	370.8 370.8 412.8	450 450 450
														40	104.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	365.4 365.4 398.6	450 450 500
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	400.8 400.8 442.8	500 500 500
	460	414	508	22.4	150	22.4	150	22.4	150	22.4	150	4	2.9 (ea)	25	34.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	147.2 147.2 176.8	175 175 200
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	166.1 166.1 200.4	200 200 225
														30	40.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	154.7 154.7 184.3	175 175 200
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	173.6 173.6 207.9	200 200 225
														40	52.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	169.7 169.7 199.3	200 200 250
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	188.6 188.6 222.9	225 225 250
	575	518	632	19.9	109	19.9	190	19.9	109	19.9	109	4	2.3 (ea)	25	27.0	—	2.5 2.5 2.5	— 65.0 129.9	— 54 108	125.1 125.1 140.8	150 150 150
																14.4	2.5 2.5 2.5	— 65.0 129.9	— 54 108	139.5 139.5 158.8	150 150 175
														30	32.0	—	2.5 2.5 2.5	— 52.0 103.9	— 54 108	131.3 131.3 147.0	150 150 175
																14.4	2.5 2.5 2.5	— 52.0 103.9	— 54 108	145.7 145.7 165.0	175 175 175
														40	41.0	—	2.5 2.5 2.5	— 52.0 103.9	— 54 108	142.6 142.6 158.3	175 175 175
																14.4	2.5 2.5 2.5	— 52.0 103.9	— 54 108	157.0 157.0 176.3	175 175 200

See Legend and Notes on page 23.

Table 8 — Electrical Data — 50A2,A3,A4,A5 Units with Convenience Outlet (cont)

UNIT SIZE 50A	VOLTAGE 3 PH, 60 HZ	VOLTAGE RANGE		COMPRESSOR CIR A, NO. 1		CIR A, NO. 2		CIR B, NO. 1		CIR B, NO. 2		CONDENSER FAN MOTOR		EVAPORATOR FAN MOTOR		POWER EXHAUST	CONVENIENCE OUTLET	OPTIONAL ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	QTY	FLA	HP	FLA	FLA (TOTAL)	FLA	FLA	kW	MCA	MOCP*
060 (RTPF)	208	187	229	51.3	300	51.3	300	51.3	300	51.3	300	6	6.5 (ea)	25	74.8	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	344.7 344.7 344.7	400 400 400
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	380.1 380.1 380.7	450 450 450
														30	88.0	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	361.2 361.2 361.2	400 400 400
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	396.6 396.6 396.6	450 450 450
														40	114.0	—	7.0 7.0 7.0	— 112.6 225.2	— 41 81	393.7 393.7 393.7	500 500 500
																35.4	7.0 7.0 7.0	— 112.6 225.2	— 41 81	429.1 429.1 429.1	500 500 500
	230	207	253	51.3	300	51.3	300	51.3	300	51.3	300	6	6.6 (ea)	25	68.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	336.8 336.8 353.6	400 400 400
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	372.2 372.2 397.8	400 400 450
														30	80.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	351.8 351.8 368.6	400 400 400
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	387.2 387.2 412.8	450 450 450
														40	104.0	—	7.0 7.0 7.0	— 129.9 259.8	— 54 108	381.8 381.8 398.6	450 450 500
																35.4	7.0 7.0 7.0	— 129.9 259.8	— 54 108	417.2 417.2 442.8	500 500 500
	460	414	508	22.4	150	22.4	150	22.4	150	22.4	150	6	3.3 (ea)	25	34.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	155.4 155.4 176.8	175 175 200
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	174.3 174.3 200.4	200 200 225
														30	40.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	162.9 162.9 184.3	200 200 200
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	181.8 181.8 207.9	200 200 225
														40	52.0	—	3.5 3.5 3.5	— 65.0 129.9	— 54 108	177.9 177.9 199.3	225 225 250
																18.9	3.5 3.5 3.5	— 65.0 129.9	— 54 108	196.8 196.8 222.9	225 225 250
	575	518	632	19.9	109	19.9	190	19.9	109	19.9	109	6	2.6 (ea)	25	27.0	—	2.5 2.5 2.5	— 52.0 103.9	— 54 108	131.5 131.5 140.8	150 150 150
																14.4	2.5 2.5 2.5	— 52.0 103.9	— 54 108	145.9 145.9 158.8	150 150 175
														30	32.0	—	2.5 2.5 2.5	— 52.0 103.9	— 54 108	137.7 137.7 147.0	150 150 175
																14.4	2.5 2.5 2.5	— 52.0 103.9	— 54 108	152.1 152.1 165.0	175 175 175
														40	41.0	—	2.5 2.5 2.5	— 52.0 103.9	— 54 108	149.0 149.0 158.3	175 175 175
																14.4	2.5 2.5 2.5	— 52.0 103.9	— 54 108	163.4 163.4 176.3	200 200 200

See Legend and Notes on page 23.

T-STAT (Conventional Thermostat) — 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 indoor fan control. It may also include time of day scheduling or use the scheduling routines built into the *Comfort*Link controls.

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

Route thermostat cable or equivalent single leads of colored wire from subbase terminals through conduit into unit to low voltage connection in the main control box, as shown in Fig. 20 and 21. For thermostat TB4 connections see Fig. 20.

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

UNIT SIZE 50A	STAGE 1 (W1) ON	STAGE 2 (W1 AND W2) ON
020-050	0.24	0.13
060	0.36	0.13

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

SPT (Space Temperature Sensor) — For constant volume applications the *Comfort*Link controls can also be used with T55 and T56 space temperature sensors that use a 10K thermistor. The T56 sensor also has the capability for a configurable temperature set point offset at the thermostat. For variable air volume applications only the T55 sensor can be used.

Install sensor according to the installation instructions included with accessory sensor. Locate sensor assembly on a solid interior wall in the conditioned space to sense average temperature.

Run wiring to the space sensor as shown in Fig. 21.

Note that when the remote sensor is used, the red jumper wires provided must be connected from TB4 terminal 4 to 5 and TB4 terminal 5 to 1.

Both the T55 and T56 have a CCN communications port and this should be wired to the CCN Communications TB3 board if it is desired to have access to the CCN system through the sensor. If more than one T55 sensor is being used and averaged, sensors must be wired in multiples of 4 or 9 as shown in Fig. 22.

T58 Communicating Thermostat — Carrier also has a fully communicating thermostat which, if used, will be wired to the CCN communication connections on TB3 as described in the Carrier Comfort Network® Interface section below.

Carrier Comfort Network (CCN) Interface — The rooftop units can be connected to the CCN system. The communication bus wiring is supplied and installed in the field. Wiring consists of shielded, 3-conductor cable with drain 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 CCN system should be made at the TB3 terminal block using the screw terminals. The TB3 board also contains an RJ14 CCN plug that can be used to connect a field service computer or other CCN device. There is also an RJ14 LEN (local equipment network) connection that is used to connect a Navigator™ display or download software.

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 F to 140 F is required. Table 9 lists cables that meet the requirements.

Table 9 — CCN Connection Approved Shield Cable

MANUFACTURER	CABLE PART NO.
ALPHA	2413 or 5463
AMERICAN	A22503
BELDEN	8772
COLUMBIA	02525

IMPORTANT: When connecting the CCN communication bus to system elements, use color coding system for the entire network to simplify installation and checkout. See Table 10.

Table 10 — Color Code Recommendations

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

If a cable with a different color scheme is selected, a similar color code should be adopted for the entire network. At each system element, the shields of the communication bus cables must be tied together. If the communication bus is entirely within one building, the resulting continuous shield 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:

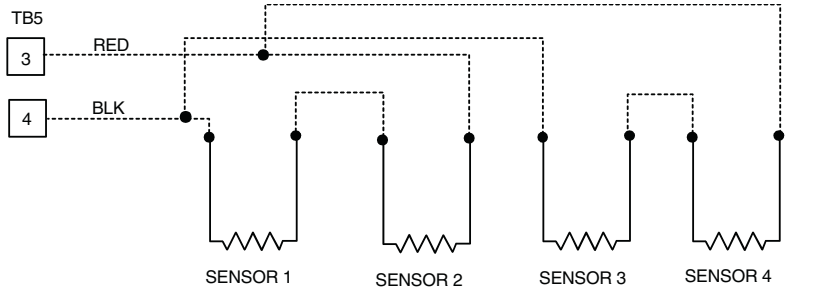
1. Turn off power to the control box.
2. Cut the CCN wire and strip the ends of the red (+), white (ground), and black (–) conductors. (If a different network color scheme is used, substitute appropriate colors.)
3. Remove the 3-pin male plug from the base control board in the main control box, and connect the wires as follows:
   a. Insert and secure the red (+) wire to terminal 1 of the 3-pin plug.
   b. Insert and secure the white (ground) wire to terminal 2 of the 3-pin plug.
   c. Insert and secure the black (–) wire to terminal 3 of the 3-pin plug.
4. Insert the plug into the existing 3-pin mating connector on the base module in the main control box.

VAV Units with Heat — For variable air volume units that will use heat, the variable air volume terminals should be interlocked with the unit at TB5 terminals 1 and 2 as shown on the wiring diagram.

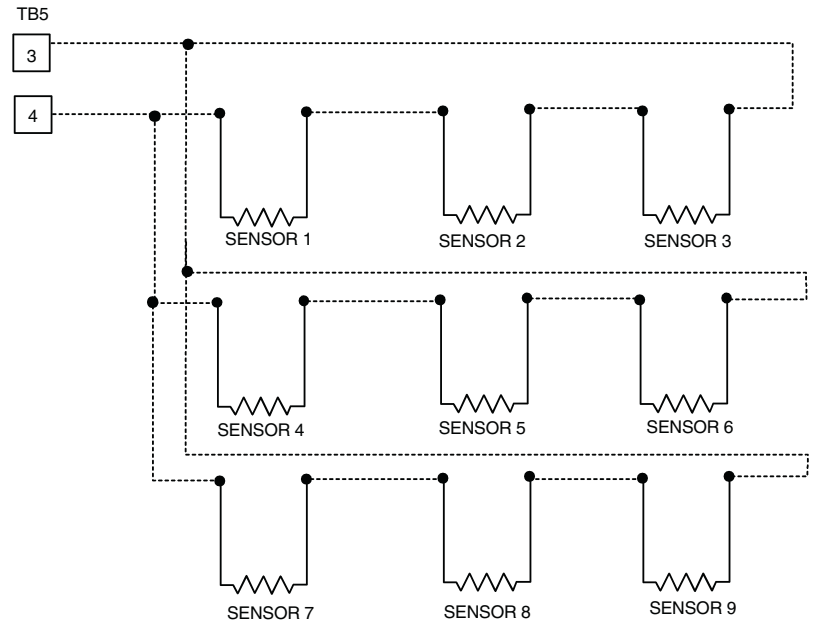
Demand Ventilation — The unit can be equipped with a CO_2 sensor for use in demand ventilation. This can be factory supplied and will be mounted in the return duct. It can also be field supplied and mounted in the return duct or in the space. Connect the field-installed 4 to 20 mA sensor to TB5 terminals 6 and 7. Do not remove the factory-installed 182-ohm resistor.

If an outdoor IAQ (indoor air quality) sensor is used then it should be wired to terminals 11 and 12 on TB6. This will require the use of the optional controls expansion module.

* Teflon is a registered trademark of DuPont.



SPACE TEMPERATURE AVERAGING (4 SENSOR APPLICATION)



SPACE TEMPERATURE AVERAGING (9 SENSOR APPLICATION)

NOTE: Use T55 sensor only.

Fig. 22 — Space Temperature Averaging Wiring

Remote IAQ Override — If the control is being used with non-Carrier building management system, it supports the use of the remote IAQ override switch. This should be connected to TB6 terminal 13 and 14. Use of this will require the optional controls expansion module.

Remote Economizer Position Control — The *Comfort*Link controller will normally control the position of the economizer, but it can also support field control of the economizer position through a 4 to 20 mA signal. If this is used it should be connected to TB5 terminal 6 and 7. If the signal is a 4 to 20 mA signal, then leave the 182-ohm resistor in place.

Remote Economizer Minimum Position Control — If the *Comfort*Link controller is controlling the economizer but a remote minimum position is required, then an external 100K potentiometer should be connected to TB5 terminal 6 and 7. Remove the factory-installed 182-ohm resistor.

Remote Economizer Enable — If the control is being used with other building management systems and the system will control the enabling and disabling of the economizer free cooling, this switch input can be connected to TB6 terminals 1 and 2. Note that the controls also support integrated economizer changeover using outdoor dry bulb, differential dry bulb, outdoor enthalpy, and differential enthalpy.

Remote Occupancy Switch — For interface to other building management systems the control also supports a switch input for remote occupancy signals. This wiring can be connected to terminal TB6 terminal 1 and 3.

Smoke Sensor Interface — The *Comfort*Link controls include an optional factory-installed return air smoke detector. Remote alarm circuits can be wired to TB5 terminal 8 and 9.

Fire Shutdown and Smoke Control — The control supports interface to fire and smoke control systems and allows for the following system overrides from remote switch inputs.

- Fire Shutdown — Connect to TB5 terminals 10 and 11.
- Smoke Pressurization — Connect to TB5 terminal 12 and 13. This requires the use of the optional controls expansion module.
- Smoke Evacuation — Connect to TB5 terminal 12 and 14. This requires the use of the optional controls expansion module.
- Smoke Purge — Connect to TB5 terminal 12 and 15. This requires the use of the optional controls expansion module.

Demand Limiting — The control can also be used with demand limiting control from remote building management systems. If a two-stage system is going to be used with redline limiting where the machine is not allowed to increase load and load shed where the load is decreased to a configurable limit in capacity then these can be connected to TB6 terminals 4 and 5 and 5 and 6. This requires use of the controls expansion module.

Step 7 — Make Outdoor-Air Inlet Adjustments

ECONOMIZER AND MIXED OUTDOOR AIR DAMPER — Hoods are used on all units with economizer or adjustable self-closing mixed outdoor air damper.

NOTE: If accessory power exhaust or barometric relief packages are being added to the unit, install power exhaust or barometric relief before installing economizer hoods.

Economizer Hood Assembly — The economizer hood is shipped in a package secured to the outside of the unit. The hood assemblies must be field-assembled. The 50A4,A5 units are side supply and side return. The return duct limits access to economizer filters from below.

The 50A2,A3,A4,A5020-050 units have two hoods on every unit. The 50A2,A3,A4,A5060 units have 3 hoods on every unit.

NOTE: Before assembly of the economizer hood, check along the outer edges of the economizer assembly for any seal strip protruding past the flanges. Trim the excess seal strip so that it is flush with the economizer assembly flanges.

Perform the following procedure to assemble the economizer hood.

1. Apply black seal strip (provided) to outside top-edge of hood sides. Wrap seal strip over edge to cover top flange (2 hood sides per hood assembly). Make sure seal strip covers screw holes. See Fig. 23.
2. Add gray foam strip (provided) to cross members on bottom tray. See Fig. 24.
3. Assemble hood sides, top, and cross member with gasketed screws provided. See Fig. 25.
4. Attach speed clips (provided) to hood top. Engagement section of the clip faces inside hood. See Fig. 26.
5. Apply black seal strip (provided) to mounting flanges of hood sides being sure to cover mounting holes. See Fig. 27.
6. Apply black seal strip (provided) to back of hood top mounting flange. Seal strip of hood top mounting flange must press tightly against seal strip of hood side mounting flanges. See Fig. 27.
7. Attach gray foam strip (provided) to block-off baffle on outer face of flange. See Fig. 28.
8. Remove the screws on each end and along top of the outdoor air opening of unit. Set hood assembly in place and attach to unit using gasketed screws. See Fig. 29.
9. Locate and mount block-off baffle using 3 screws. See Fig. 30.
10. Assemble bottom filter tracks side by side with the mounting angle together. The filter track assemblies must be installed with the flange and mounting angle pointing down. See Fig. 31-33.
11. Attach speed clips (provided) to hood side panels. Engagement section of clip faces up and towards the outside of the hood side panels. Attach mounting angles to hood with gasketed screws provided. See Fig. 34.

    NOTE: Be sure the filters are installed with the airflow in the correct direction.
12. Attach filter track under the hood assembly. See Fig. 35.
13. Attach black seal strip (provided) to filter cover. Seal strip should be applied centered over the holes of the one flange, making sure to fully cover holes and center over the other large flange. See Fig. 36.
14. Slide two 20 x 25-in. filters into cross members of hood assembly. Attach filter cover over filters with screws and speed clips provided. See Fig. 37.

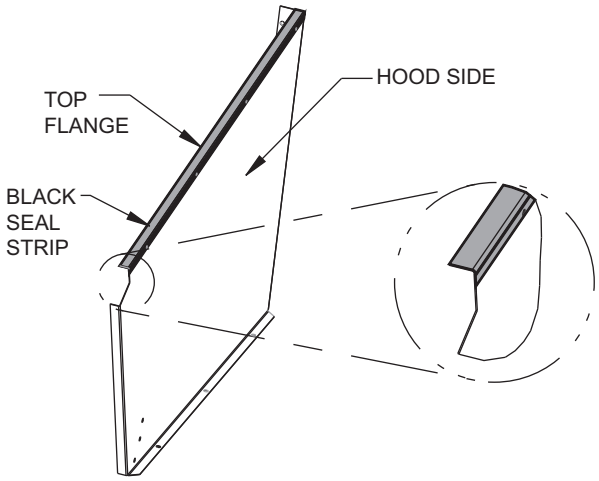


Fig. 23 — Adding Seal Strip to Top of Hood Sides

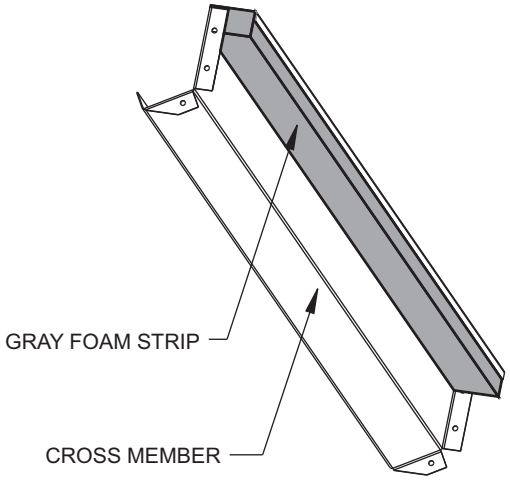


Fig. 24 — Adding Foam Strip to Cross Member

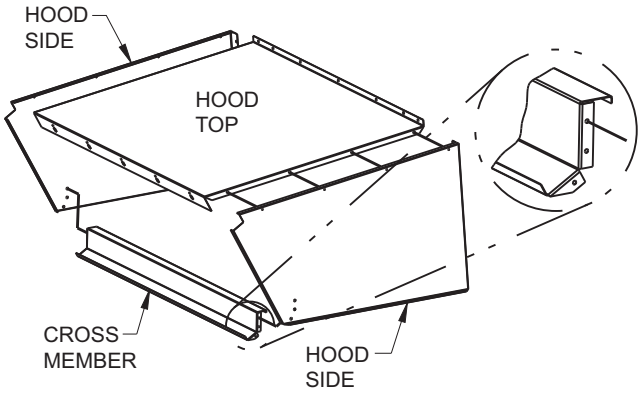


Fig. 25 — Economizer Hood Assembly

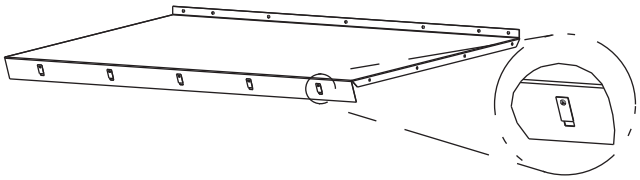


Fig. 26 — Top Hood with Speed Clips

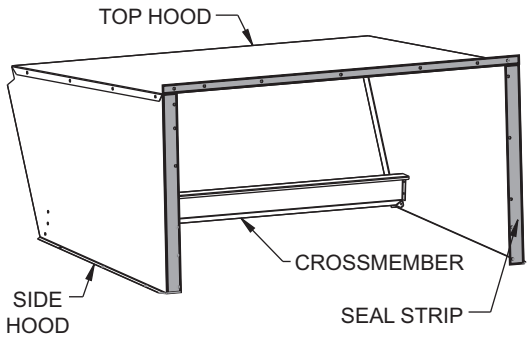


Fig. 27 — Adding Seal Strip to Hood Top and Side Hoods

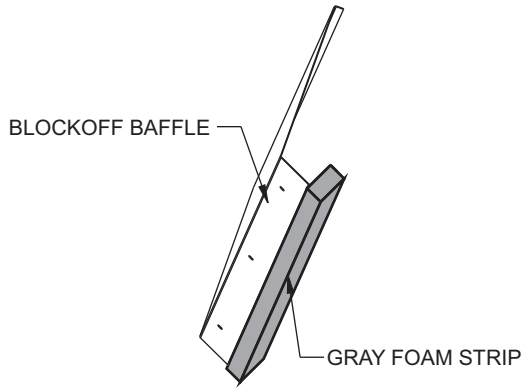


Fig. 28 — Adding Foam Strip to Block-Off Baffle

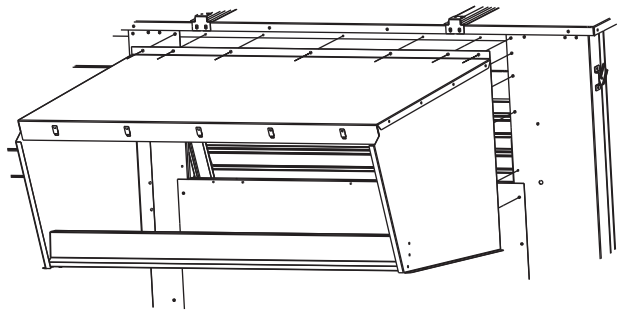


Fig. 29 — Removing Screws from the Outdoor Air Opening of Unit

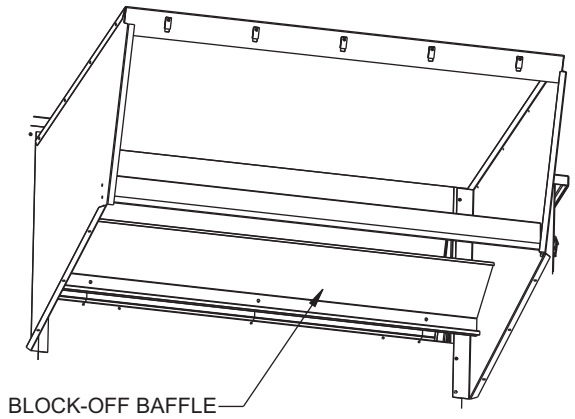


Fig. 30 — Mounting Block-Off Baffle to the Unit

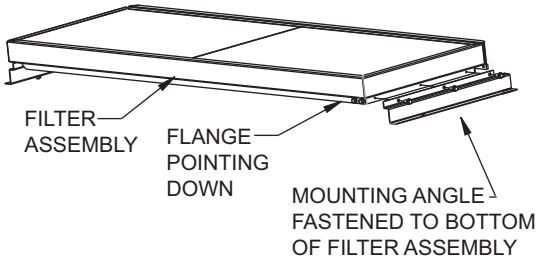


Fig. 31 — Correctly Assembled Bottom Filter Assembly, Sizes 020-035 Only

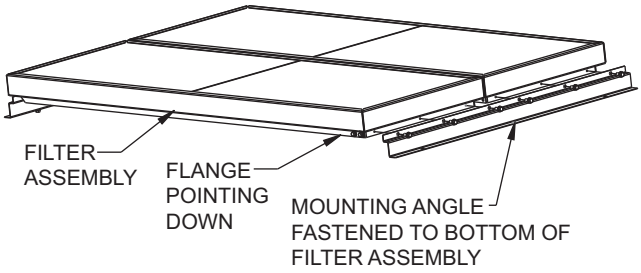


Fig. 32 — Correctly Assembled Bottom Filter Assembly, Sizes 040-060 Only

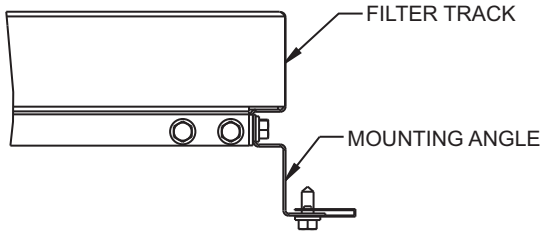


Fig. 33 — Flange and Mounting Angle Pointing Down

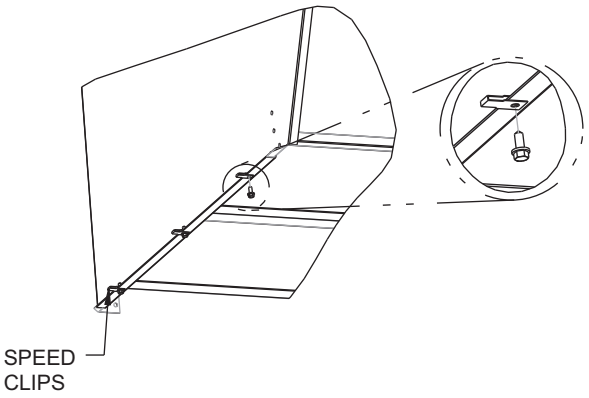


Fig. 34 — Bottom Filters Installed with Flange Pointing Down

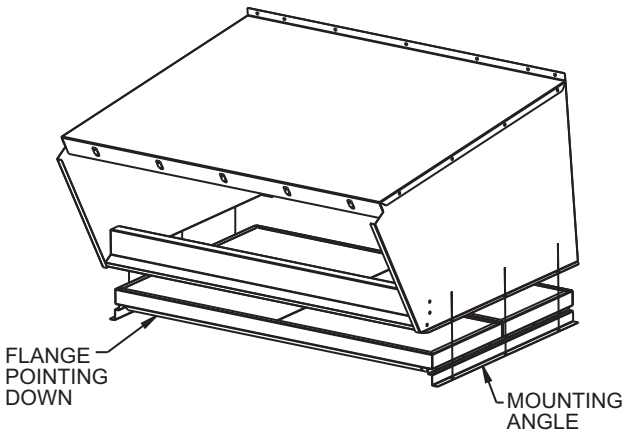


Fig. 35 — Bottom Filters Installed with Flange Pointing Down

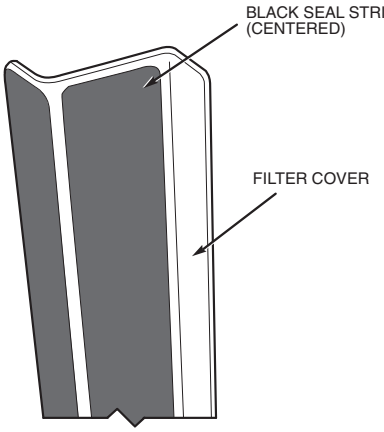


Fig. 36 — Attaching Seal Strip to Filter Cover

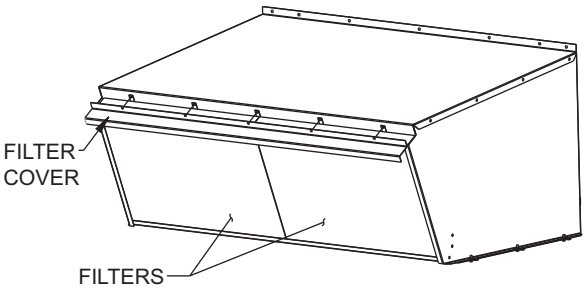


Fig. 37 — Slide Two Filters

Step 8 — Position Power Exhaust/Barometric Relief Damper Hood — All units are shipped with the hoods folded inside the unit in a shipping position. For 50A2 and A3 units the hood must be tilted out once the unit is installed. On 50A4 and A5 units (designed for horizontal supply and return), the assemblies will have to be relocated to return ductwork. See Fig. 38 for dimensions and details.

All electrical connections have been made and adjusted at the factory. The power exhaust blowers and barometric relief dampers are shipped assembled and tilted back into the unit for shipping. Brackets and extra screws are shipped in shrink wrap around the dampers. If ordered, each unit will have 4 (50A2,A3,A4,A5020-050 units) or 6 (50A2,A3,A4,A5060 units) power exhaust blowers and motors or barometric relief dampers.

1. Remove 9 screws holding each damper assembly in place. See Fig. 39. Each damper assembly is secured with 3 screws on each side and 3 screws along the bottom. Save screws.

⚠ CAUTION

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

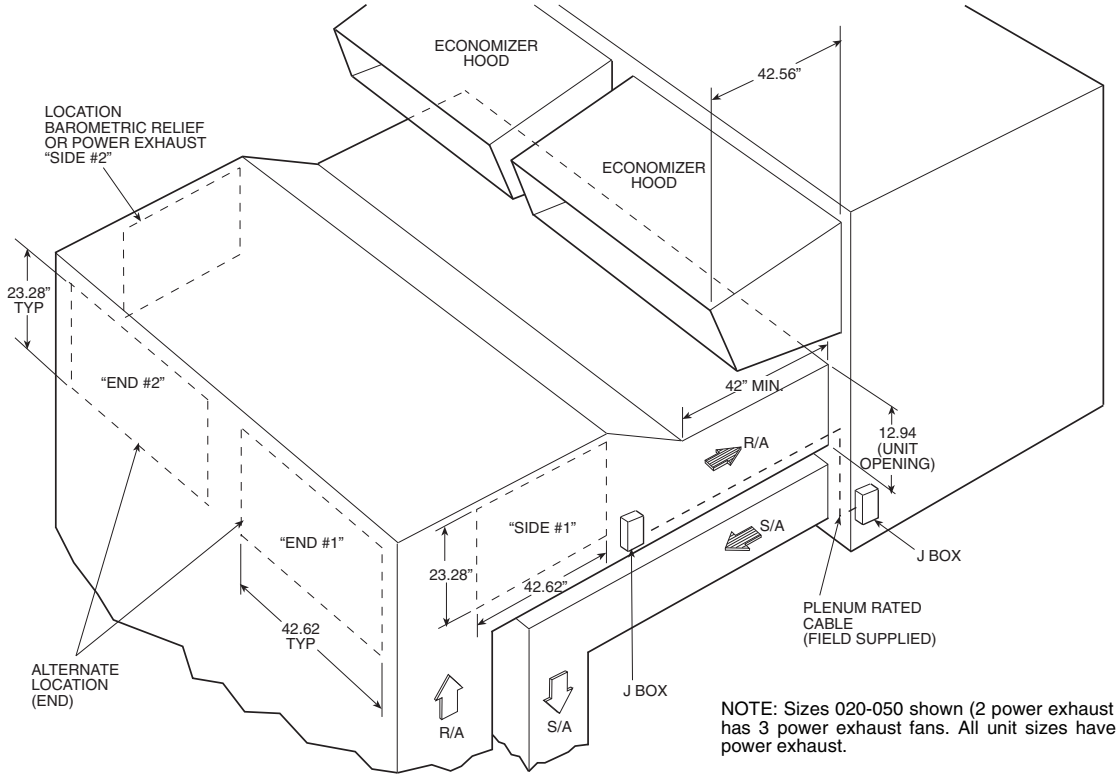
2. Pivot each damper assembly outward until edges of damper assembly rest against inside wall of unit.
3. Secure each damper assembly to unit with 6 screws across top (3 screws provided) and bottom (3 screws from Step 1) of damper.
4. With screws saved from Step 1, install brackets on each side of damper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

Step 9 — Route Static Pressure Sensors

VAV DUCT PRESSURE TRANSDUCER — The VAV duct pressure transducer (VAV inverter pressure transducer) is located behind the filter access door on the lower inner panel. See Fig. 40. A section of field-supplied 1/4-in. plastic tubing must be run from the high pressure tap on the differential pressure switch and connected to a field-supplied tap in the supply-air duct. The tap is usually located 2/3 of the way out on the main supply duct. Remove plug button in panel to route tubing.

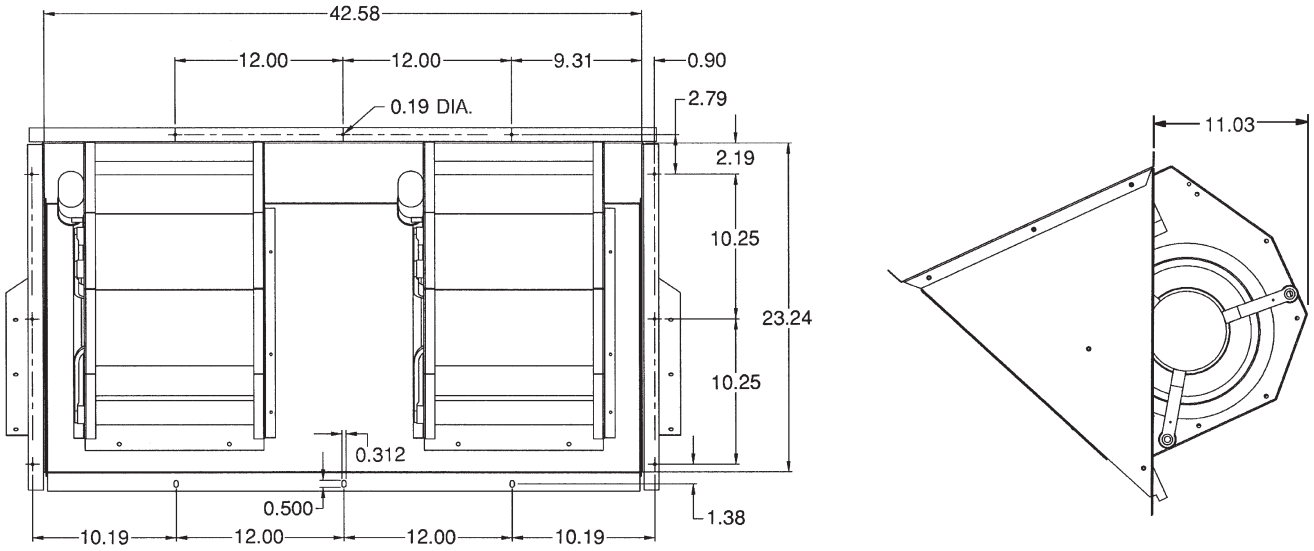
BUILDING PRESSURE TRANSDUCER — The building pressure transducer (modulating power exhaust pressure transducer) is located behind the filter access door on the lower inner panel. See Fig. 40. A section of field-supplied 1/4-in. plastic tubing must be run from the high-pressure tap on the differential pressure switch to the conditioned space. The pressure tube must be terminated in the conditioned space where a constant pressure is required. This location is usually in an entrance lobby so that the building exterior doors will open and close properly. Remove plug button in panel to route tubing.

The low pressure tap is factory-routed to the atmosphere. For a positive-pressure building, route the high tap to building air and low tap to atmosphere. For a negative-pressure building, route the high tap to atmosphere and the low tap to building air.



NOTE: Sizes 020-050 shown (2 power exhaust fans). Size 060 has 3 power exhaust fans. All unit sizes have the same size power exhaust.

Fig. 38 — Side Return Air Conversion (for CRPWREXH033A00, 034A00, 035A00, and 036A00)



NOTES:
1. Unless otherwise specified, all dimensions are to outside of part.
2. Dimensions are in inches.
3. On 50A4,A5 units, accessory barometric relief or power exhaust must be mounted in the field-supplied return ductwork.

Fig. 39 — Barometric Relief Damper and Power Exhaust Mounting Details (for CRPWREXH033A00, 034A00, 035A00, and 036A00)

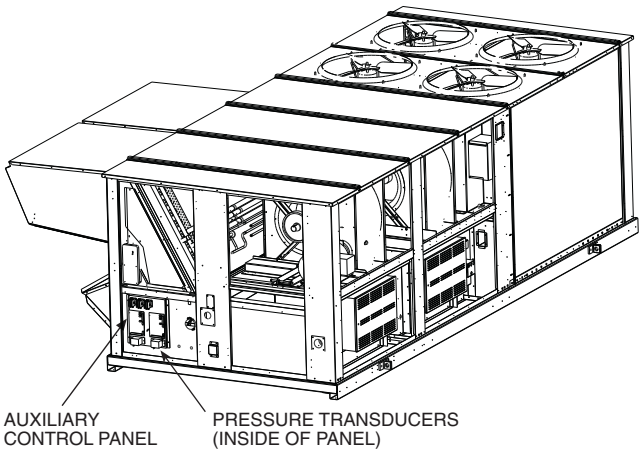


Fig. 40 — Pressure Transducer Locations

Step 10 — Install All Accessories/Options — After all the factory-installed options have been adjusted, install all field-installed accessories. Refer to the accessory installation instructions included with each accessory.

The 50A Series units have a large number of factory-installed options which were previously available only as accessories. Some of the available options can also be installed in the field if needed. In most cases the units have been pre-wired so that the accessories can be easily installed. Instructions are shipped with each accessory. Configuration of the controls for these accessories as well as the factory-installed options can be found in the Controls, Start-up, Operation, Service and Troubleshooting book. The following is a list of some of the common accessories:

- Thermostats and space temperature sensors
- Accessory barometric relief damper
- Accessory power exhaust
- Non-modulating to modulating power exhaust
- Condenser coil hail guards
- Outdoor humidity sensor (used for economizer enthalpy changeover)
- Return air humidity sensors (used for economizer differential enthalpy changeover, factory-installed with Humidi-MiZer option)
- Return air smoke detector
- Controls expansion module (used for interface to building management systems, not typically needed on system with Carrier Comfort Network® [CCN] devices)
- Plugged filter sensor
- Motormaster® V low ambient head pressure control

FIELD-FABRICATED WIND BAFFLES

IMPORTANT: Carrier recommends the installation of field-fabricated wind baffles on all vertically oriented condenser coils when operating in environments with prevailing winds of more than 5 mph and where temperatures drop below 32 F. See the Motormaster accessory installation guide for instructions.

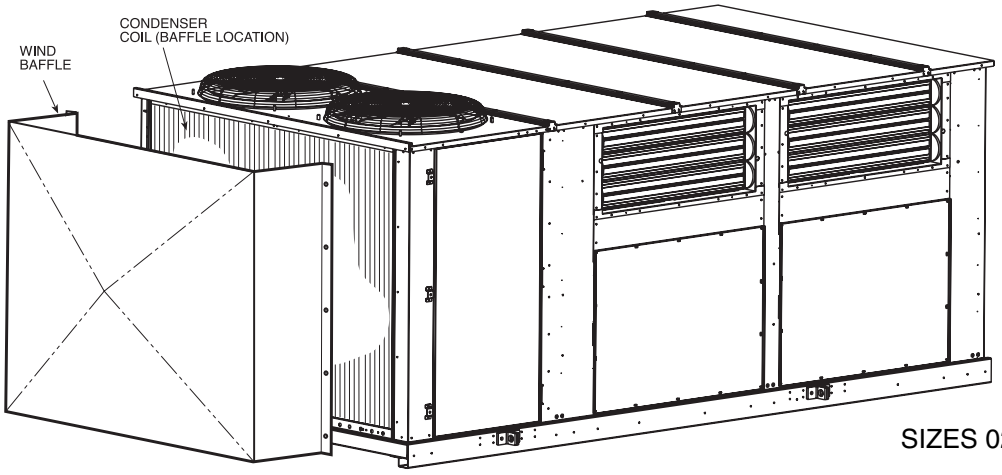
⚠ WARNING

To avoid the possibility of electrical shock, open all disconnects before installing or servicing this accessory.

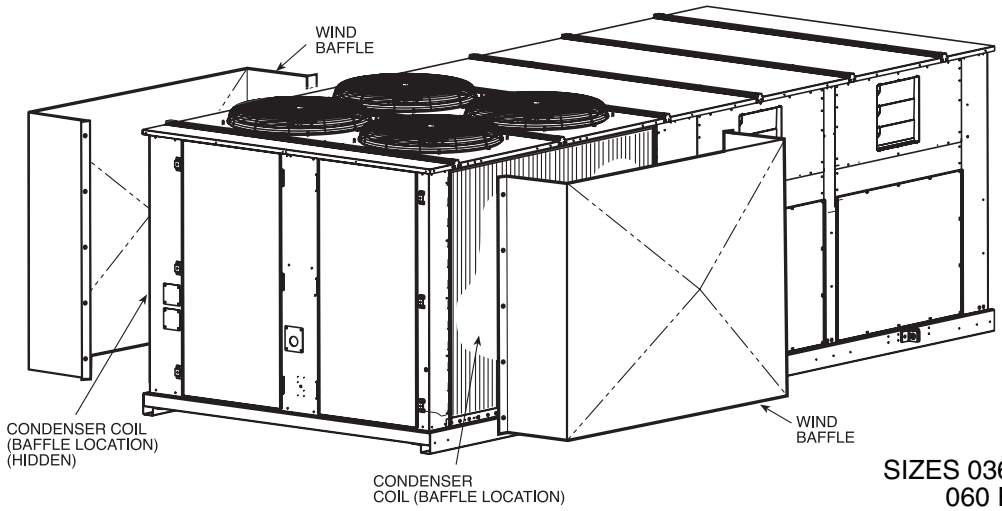
In areas with prevailing winds of more than 5 mph and where temperatures drop below 32 F, wind baffles must be field fabricated to ensure proper cooling cycle operation at low-ambient temperatures with Motormaster V controls. Baffles are not needed on size 060 units with MCHX (microchannel heat exchangers). See Fig. 41 for baffle details. Use 20-gage galvanized sheet metal, or similar corrosion-resistant material for the baffles. Use field-supplied screws to attach baffles to unit. Screws should be $^1/_4$-in. diameter or larger. Screws should not be more than $^1/_2$ inch in length. Drill required screw holes for mounting baffles.

⚠ CAUTION

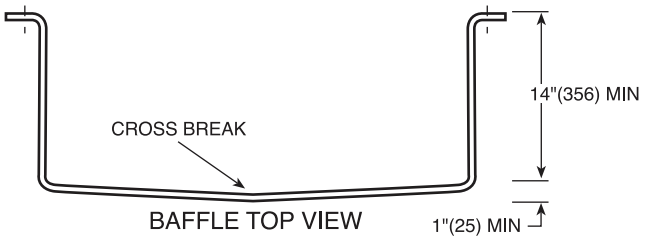
To avoid damage to refrigerant coils, electrical components, and wiring use extreme care when drilling screw holes and screwing in fasteners.



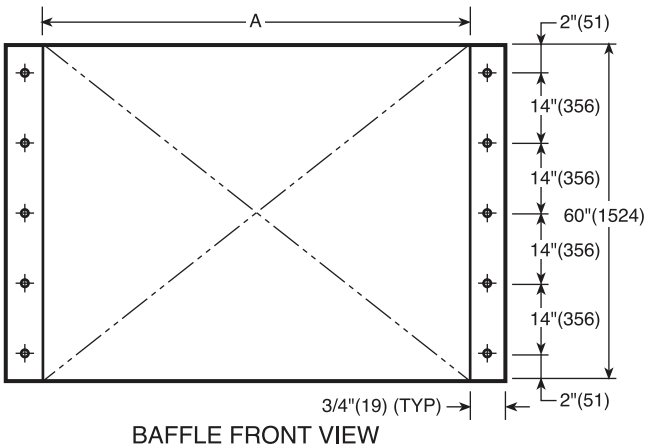
SIZES 020-035



SIZES 036-050 AND
060 RTPF



BAFFLE TOP VIEW



BAFFLE FRONT VIEW

UNIT SIZE 50A	QUANTITY	DIMENSION "A"	
		IN.	MM
020-035	1	78.125 ± 0.125	1984 ± 3
036-050	2	78.125 ± 0.125	1984 ± 3
060	2	118 ± 0.125	2997 ± 3

NOTE: 50A2,A3,A4,A5060 units with MCHX do not require baffles.

LEGEND

MCHX — Microchannel Heat Exchanger
RTPF — Round Tube Plate Fin Heat Exchanger

Fig. 41 — Wind Baffle Details

Step 11 — Perform Field Modifications

DUCTWORK

Bottom Return Units (50A2 and A3) Field-Modified for Side Return — The 50A2 and A3 units with bottom return air connections may be field-modified to accommodate side return air connections.

IMPORTANT: The following section is a guideline and not a comprehensive procedure to field modify the units. The installing contractor must provide some design initiative. Field conversion is complex and is not recommended. Units with electric heat must not be converted because of potential heating mode operating problems.

Conversion to horizontal return requires that the bottom return openings of the unit must be sealed with airtight panels capable of supporting the weight of a person. The return ductwork connection locations on the side of the unit are higher than normal (31 in. high). Unit-mounted power exhaust or barometric relief cannot be used because return air ductwork will cover the power exhaust or barometric relief installation locations. Power exhaust or barometric relief may be installed in the return air ductwork.

To convert the unit, perform the following:

1. Seal the bottom return openings of the unit with airtight panels capable of supporting the weight of a person.
2. Remove the panels located below the economizer outdoor-air dampers. These openings will be used for the return-air ductwork. There are 2 panels on 50A2,A3020-050 units. There are 3 panels on 50A2,A3060 units. These openings are normally used for power exhaust or barometric relief.
3. Run the return air ductwork up to the openings. One single duct is recommended to connect to the unit over the return air openings. See Fig. 42. The return duct must incorporate a minimum $^3/_4$-in. flange for connection to the unit cabinet. The unit does not have duct flanges for this conversion.

Side Supply and Return Units (50A4,A5) with Field-Installed Power Exhaust in Return Duct — Space must be available in the return duct to mount the power exhaust fan (gravity relief) modules. Dimensions and suggested locations are shown in Fig. 42. These instructions are a guideline and not a comprehensive procedure. The design contractor must provide some design initiative.

The wiring harness that is provided with the power exhaust accessory is not long enough for the fan modules to be mounted in the return air duct. Field-supplied wiring must be spliced into the harness. Use a junction box at each splice. The wiring may be run in the return duct as shown in Fig. 42 or externally in conduit. A service access panel will be needed near each power exhaust fan.

BACnet* Communication Option Wiring

WIRING THE UPC OPEN CONTROLLER TO THE MS/TP NETWORK — The UPC Open controller communicates using BACnet on an MS/TP network segment communications at 9600 bps, 19.2 kbps, 38.4 kbps, or 76.8 kbps.

Wire the controllers on an MS/TP network segment in a daisy-chain configuration. Wire specifications for the cable are 22 AWG (American Wire Gage) or 24 AWG, low-capacitance, twisted, stranded, shielded copper wire. The maximum length is 2000 ft.

Install a BT485 terminator on the first and last controller on a network segment to add bias and prevent signal distortions due to echoing. See Fig. 43-45.

To wire the UPC Open controller to the BAS network:

1. Pull the screw terminal connector from the controller's BAS Port.
2. Check the communications wiring for shorts and grounds.
3. Connect the communications wiring to the BAS port's screw terminals labeled Net +, Net -, and Shield.

NOTE: Use the same polarity throughout the network segment.

4. Insert the power screw terminal connector into the UPC Open controller's power terminals if they are not currently connected.
5. Verify communication with the network by viewing a module status report. To perform a module status report using the BACview† keypad/display unit, press and hold the "FN" key then press the "." key.

To install a BT485 terminator, push the BT485 terminator on to the BT485 connector located near the BACnet connector.

NOTE: The BT485 terminator has no polarity associated with it.

To order a BT485 terminator, consult Commercial Products i-Vu® Open Control System Master Prices.

MS/TP WIRING RECOMMENDATIONS — Recommendations are shown in Tables 11 and 12. The wire jacket and UL temperature rating specifications list two acceptable alternatives. The Halar** specification has a higher temperature rating and a tougher outer jacket than the SmokeGard†† specification, and it is appropriate for use in applications where the user is concerned about abrasion. The Halar jacket is also less likely to crack in extremely low temperatures.

NOTE: Use the specified type of wire and cable for maximum signal integrity.

*BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers).
†BACview is a registered trademark of Automated Logic Corporation.
**Halar is a registered trademark of Solvay Plastics.
††SmokeGard is a trademark of AlphaGary-Mexichem Corp.

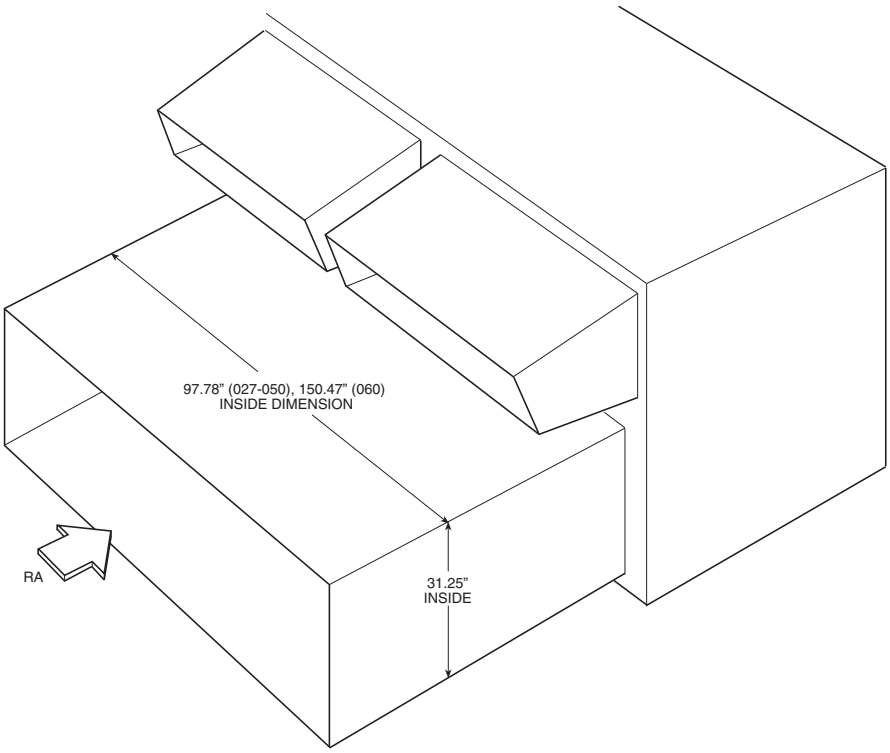


Fig. 42 — Side Return Duct Dimensions

Table 11 — Open System Wiring Specifications and Recommended Vendors

WIRING SPECIFICATIONS		RECOMMENDED VENDORS AND PART NUMBERS			
WIRE TYPE	DESCRIPTION	CONNECT AIR INTERNATIONAL	BELDEN	RMCORP	CONTRACTORS WIRE AND CABLE
MS/TP NETWORK (RS-485)	22 AWG, single twisted shielded pair, low capacitance, CL2P, TC foam FEP, plenum rated. See MS/TP Installation Guide for specifications.	W221P-22227	—	25160PV	CLP0520LC
	24 AWG, single twisted shielded pair, low capacitance, CL2P, TC foam FEP, plenum rated. See MS/TP Installation Guide for specifications.	W241P-2000F	82841	25120-OR	—
RNET	4 conductor, unshielded, CMP, 18 AWG, plenum rated.	W184C-2099BLB	6302UE	21450	CLP0442

LEGEND

AWG — American Wire Gage
CL2P — Class 2 Plenum Cable
CMP — Communications Plenum Rated
FEP — Fluorinated Ethylene Polymer
TC — Tinned Copper

Table 12 — MS/TP Wiring Recommendations

SPECIFICATION	RECOMMMENDATION
CABLE	Single twisted pair, low capacitance, CL2P, 22 AWG (7x30), TC foam FEP, plenum rated cable
CONDUCTOR	22 or 24 AWG stranded copper (tin plated)
INSULATION	Foamed FEP 0.015 in. (0.381 mm) wall 0.060 in. (1.524 mm) O.D.
COLOR CODE	Black/White
TWIST LAY	2 in. (50.8 mm) lay on pair 6 twists/foot (20 twists/meter) nominal
SHIELDING	Aluminum/Mylar shield with 24 AWG TC drain wire
JACKET	SmokeGard Jacket (SmokeGard PVC) 0.021 in. (0.5334 mm) wall 0.175 in. (4.445 mm) O.D. Halar Jacket (E-CTFE) 0.010 in. (0.254 mm) wall 0.144 in. (3.6576 mm) O.D.
DC RESISTANCE	15.2 Ohms/1000 feet (50 Ohms/km) nominal
CAPACITANCE	12.5 pF/ft (41 pF/meter) nominal conductor to conductor
CHARACTERISTIC IMPEDANCE	100 Ohms nominal
WEIGHT	12 lb/1000 feet (17.9 kg/km)
UL TEMPERATURE RATING	SmokeGard 167°F (75°C) Halar -40 to 302°F (-40 to 150°C)
VOLTAGE	300 Vac, power limited
LISTING	UL: NEC CL2P, or better

LEGEND

AWG — American Wire Gage
CL2P — Class 2 Plenum Cable
DC — Direct Current
FEP — Fluorinated Ethylene Polymer
NEC — National Electrical Code
O.D. — Outside Diameter
TC — Tinned Copper
UL — Underwriters Laboratories

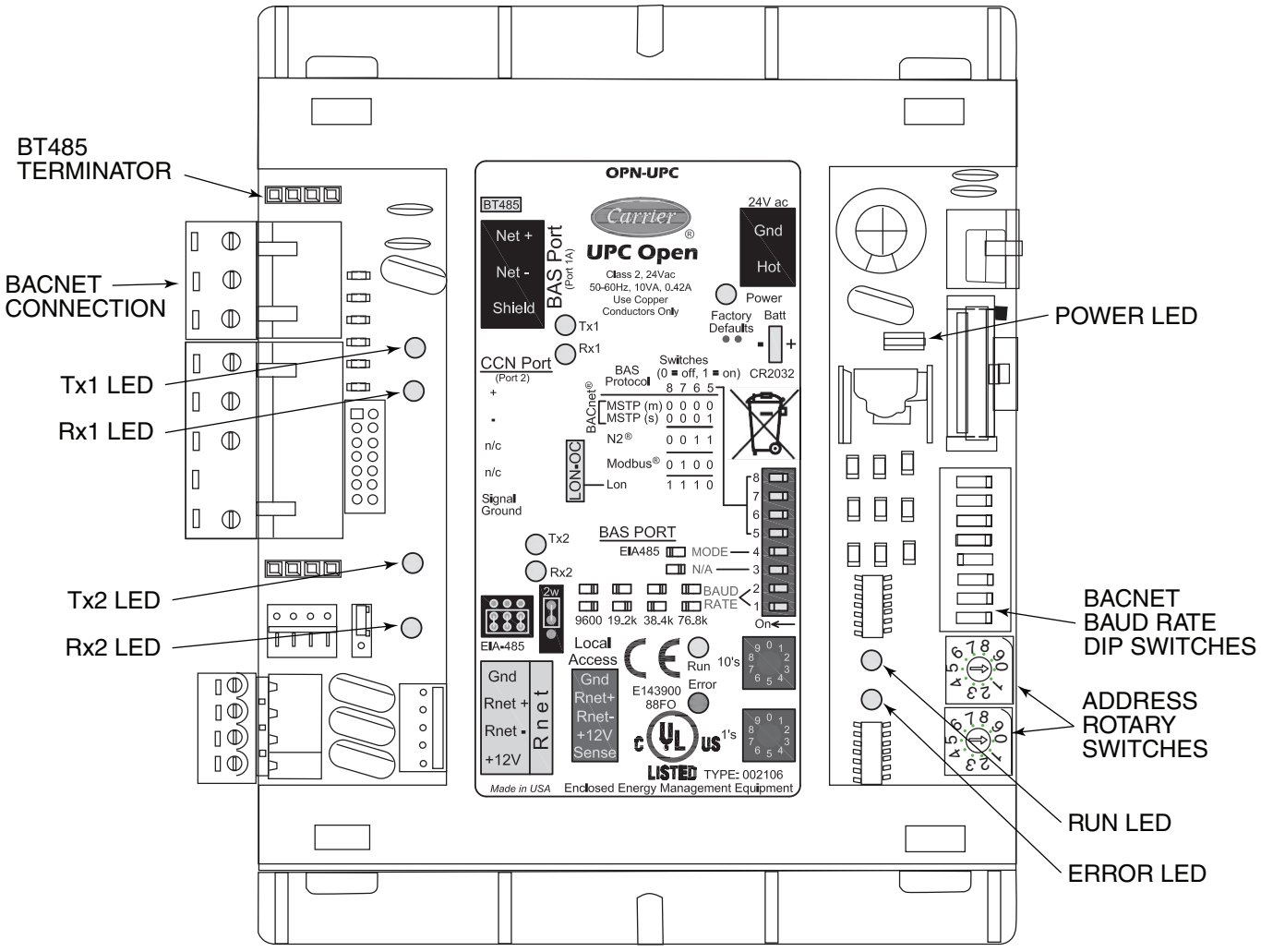


Fig. 43 — UPC Open Controller

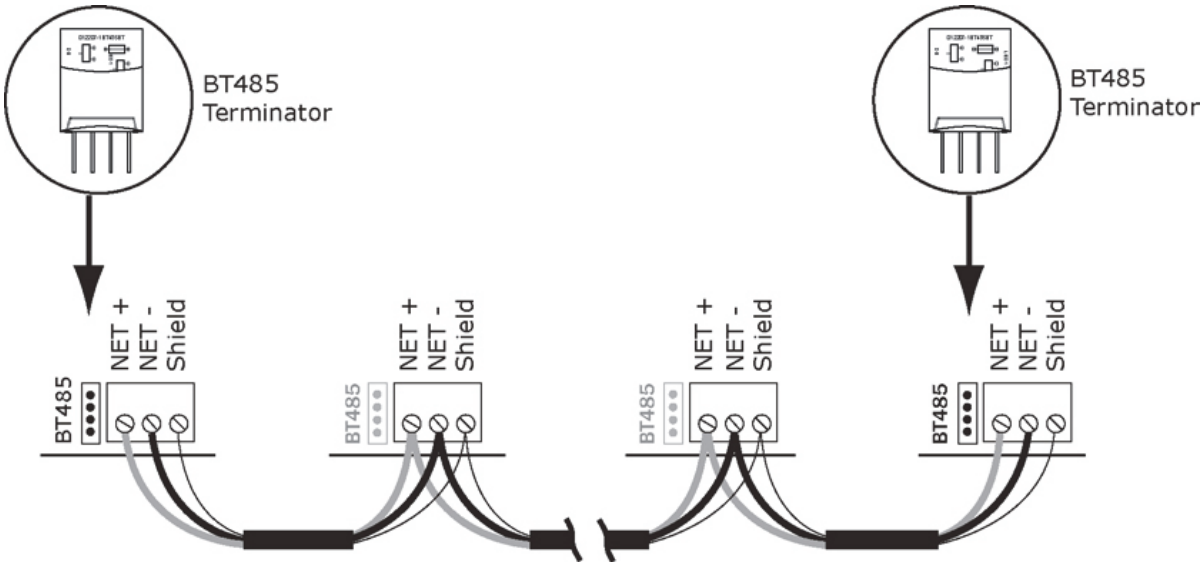


Fig. 44 — Open System Network Wiring

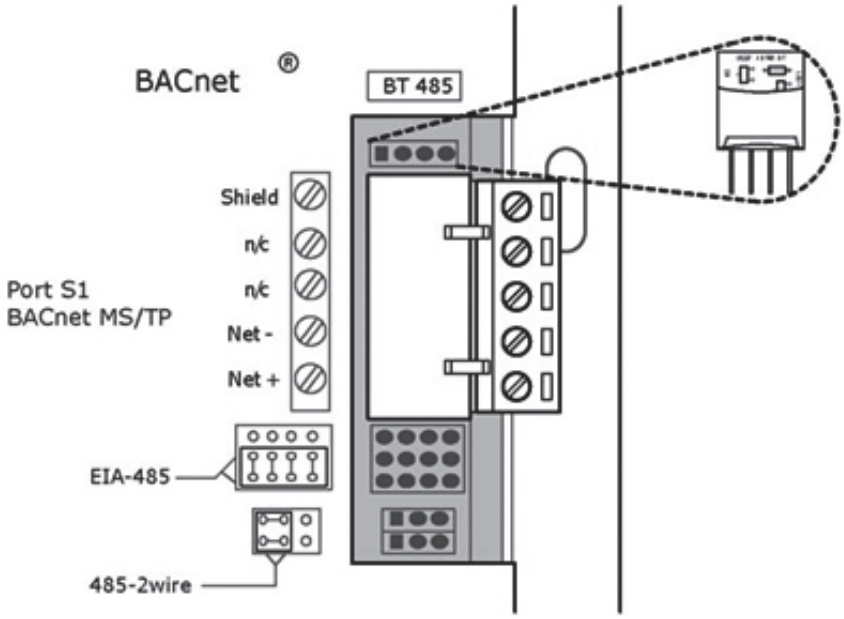


Fig. 45 — BT485 Terminator Installation