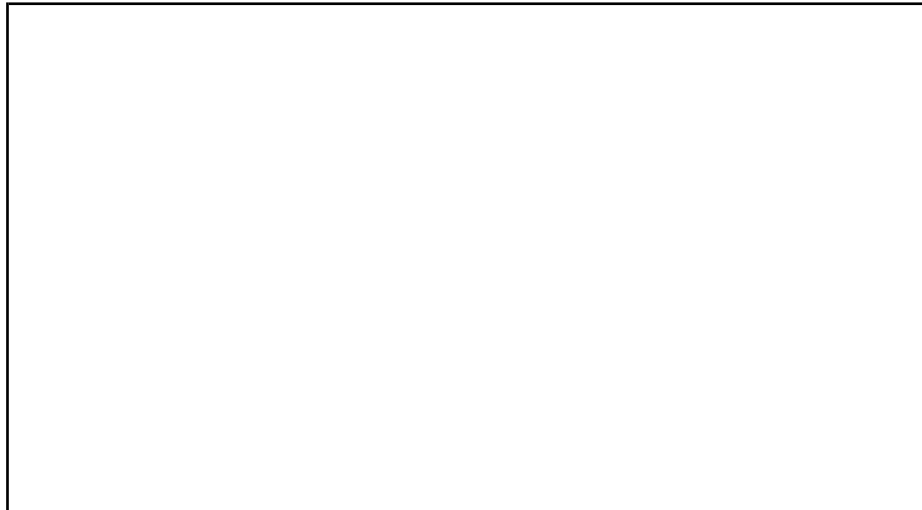




48/50EJ,EK,EW,EY054, 058, 064, 068
SINGLE-PACKAGE COOLING UNITS
VARIABLE VOLUME
CONSTANT VOLUME
FACTORY-INSTALLED OPTIONAL HEAT
GAS HEAT
ELECTRIC HEAT

- **PERFORMANCE DATA**
- **CERTIFIED DIMENSION PRINT**
- **CERTIFIED ROOF CURB DIMENSION PRINT**



Date:	Supersedes:	48/50EJ,EK,EW,EY054, 058, 064, 068 SINGLE-PACKAGE COOLING UNITS FACTORY-INSTALLED OPTIONAL HEAT GAS HEAT/ELECTRIC HEAT	48/50EJ,EK,EW,EY	Rev.: -8SB
JOB NAME:		LOCATION:		
BUYER:		BUYER P.O. #	CARRIER #	
UNIT NUMBER:		MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:			DATE:	



ARI STANDARD
360



ALL 208/230
460 VOLT UNITS



DESCRIPTION

The 48/50EJ,EK,EW,EY rooftops are Carrier's new industry leading single piece 50-65 ton roof-top units, intended for large Commercial/Industrial retrofit/replacement and new construction projects. These units are specifically engineered to facilitate the replacement of earlier Carrier rooftop models in this size range by eliminating any requirement to replace the current roof curb.

Both dedicated downshot and side supply/return models are offered. Roof curb mounted, down-shot supply/return models are designated 48/50EJ (constant volume [CV]), and 48/50EK (variable air volume [VAV]). Dedicated side supply/return models are 48/50EW (CV) and 48/50EY (VAV).

All 48/50EJ,EK,EW,EY models feature the E-SERIES' industry leading industrial grade cabinet construction with fully hinged tool-less entry access panels, gear drive low leak economizer and hood assembly, superior fan performance up to 3.5" of external static, TXV controlled dual independent refrigeration circuits with 06E semi-hermetic compressors and service valves, upgradeable Direct Digital Controls, variable frequency drives on all VAV models and available centrifugal fan power exhaust.

Unique duct design allows "drop on" retrofit of 50EJ,EK054-068 models for 50DL054 and 064 applications. Roof curb adapter kit is required for installation in the existing curb to form the framework for attaching the existing supply and return ductwork. The 48/50EJ,EK054-068 units may replace existing 48/50DD,DF054-064 units and utilize the existing roof curb with a roof curb adapter kit. These panels and channels provide connections within the curb for field-supplied duct transitions to the existing ductwork.

STANDARD UNIT FEATURES

Unit compatible with Carrier Comfort Network or stand-alone operation.

Self-diagnostic run test confirms control and component operation at unit commissioning.

Remote start/stop capability.

Supply air temperature reset (VAV only).

Remote monitoring of alarms using CCN.

Large hinged access doors.

Standard one-year warranty.

Standard unit as factory assembled is listed by ETL and ETL, Canada.

Units are rated in accordance with ARI Standard 360.

115-volt and 24-volt control circuit.

Two-inch disposable-type return air filters.

Dual semi-hermetic Carrier compressors with service valves and crankcase heaters.

Fixed blower drive.

Lifting lugs.

TXV controlled dual electrically and mechanically independent refrigeration circuits.

Circuit breaker protection for all power components.

Short-cycle compressor protection.

Sloped, aluminized steel condensate pan.

Stand-alone diagnostics.

Integrated economizer utilizing direct-coupled actuator and low leak gear driven dampers.

Single point electrical service entry.

Prepainted, galvanized steel cabinet.

Anti-microbial, Tuff Skin Rx cleanable insulation.

Compressor protection includes high- and low-pressure cutouts.

Evaporator-fan motor protected by circuit breakers.

Condenser-fan motors are totally enclosed, fan cooled with internal protection.

Low outdoor temperature cooling to 35° F as standard.

VFD (Variable Frequency Drive) on Variable Air Volume models.

Two-stage cooling on Constant Volume units.

Up to 6 stages of unloading for capacity control.

Compatible with 37H and 45 Series PIC terminals to form a Digital Air Volume System.

All standard indoor-fan motors meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

STANDARD HEATING FEATURES

Five-year non-prorated warranty on electric heater elements is standard when heater is factory installed.

Integrated Gas Unit Controller (IGC) with diagnostics.

Induced-draft combustion.

Two-stage gas valves with redundant 100% shutoff feature.

Direct spark gas ignition.

Aluminized steel tubular heat exchangers.

Five-year non-prorated warranty on heat exchanger.

Heat limit switches, flame roll-out switches, combustion air fan switches and time relay interlocks.

PERFORMANCE DATA

Unit Operating Weight _____ lb/kg

Curb Weight _____ lb/kg

COOLING

Gross Total Capacity _____ Btuh/kW

@ Condenser Air Temperature _____ °F/°C

Gross Sensible Capacity _____ Btuh/kW

Compressor Power Input _____ kW

Indoor Entering Air db _____ °F/°C wb _____ °F/°C

Cfm/L/s _____ External Static Pressure _____ in. wg/kPa

Indoor Fan Motor Size _____ Hp/kW

Exhaust Fan Motor Size _____ Hp/kW

HEATING

Heating Capacity:

Stage 1 _____ Btuh/kW

Stage 2 _____ Btuh/kW

Heating Capacity Total _____ Btuh/kW

Stage 1 _____ kW

Stage 2 _____ kW

Heating Capacity Total _____ kW

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____ Maximum Fuse Amps _____

FIELD-INSTALLED "ELECTRONIC EXPANSION BOARD" FEATURES

Building Purge Mode — flush building interior with outdoor air to remove contaminants before occupancy (CCN and Power Exhaust required).

Provides a discrete output with occupancy control for use as specified by the customer.

Smoke Control functions (Building Pressurization and Smoke Purge) are provided through software. Terminals are provided to interface with field supplied smoke/fire panel (Power Exhaust required).

Enthalpy control can be provided using field-installed accessory enthalpy controls.

Economizers control field configurable to: maintain a minimum economizer set point position OR maintain the minimum economizer position based on input from an IAQ sensor (field supplied 4 to 20 mA output).

FACTORY-INSTALLED OPTIONS

- ☐ Barometric Relief
- ☐ Non-Modulating Centrifugal Fan Power Exhaust (CV)
- ☐ Modulating Centrifugal Fan Power Exhaust (VAV)
- ☐ Electric Heaters
- ☐ Copper Tube/Copper Fin Condenser Coil
- ☐ Pre-Coated Aluminum Fin Condenser Coil
- ☐ Alternate Horsepower Supply Fan Motors
- ☐ Alternate Horsepower, High-Efficiency Supply Fan Motors

FIELD-INSTALLED ACCESSORIES

- ☐ Optional 4-Year Extended Compressor Warranty
- ☐ Roof Curb with Full Perimeter Support (48/50EJ,EK models only)
- ☐ Roof Curb with Full Perimeter Support and Supply Duct Reduction Panels (50EJ,EK only)
- ☐ Roof Curb Adapter Package (48/50DD,DF retrofits) with channels and panels to facilitate ductwork connections with curb and new unit to utilize existing curb
- ☐ Roof Curb Adapter Kit (50DL054,064 retrofits only) with channels and panels to facilitate ductwork connections within curb and new unit to utilize existing curb and ductwork
- ☐ Condenser Coil Hail Guard
- ☐ Compressor Suction Pressure Unloaders
- ☐ Motormaster® III Head Pressure Control
- ☐ Electronic Timeclock for Stand-Alone VAV Applications
- ☐ Thermostat and Subbase
- ☐ Non-Modulating to Modulating Power Exhaust Conversion Kit
- ☐ LP Gas Conversion Kit
- ☐ Space Temperature Sensor (T-55)
- ☐ Space Temperature Sensor with Offset (T-56)
- ☐ Electronic Expansion Board
- ☐ IAQ Sensor
- ☐ Enthalpy Control
- ☐ Differential Enthalpy Control
- ☐ LID-2B Hand Held Interface Device
- ☐ VFD Remote Display with 20-ft Harness
- ☐ Heat Interlock Relay (HIR) (VAV only)

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

CERTIFIED DIMENSION PRINT

NOTES:

- Weights include economizer (std).
-  Center of Gravity.
- Do not locate adjacent units with flue discharge facing economizer inlet. Min clearances to be:
Adjacent Units: 15'-0" [4572]
Top of Units: No overhang
Condenser Coil: 4'-0" [1219]
Economizer Side: 6'-0" [1829]
Heat Side: 4'-0" [1219]
Filter Access Side: 15'-0" [4572] (For removal of evaporator coil.)
- For smaller service and operational clearances, contact Carrier Application Engineering Department.
- Bottom ducts designed to be attached to accessory roof curb. If unit is mounted on dunnage, it is recommended the ducts must be supported by cross braces as done on accessory roof curb.
- Base unit weights include outdoor-air hoods and filters (indoor-fan motor is not included). Add indoor motor, FIOPs and accessories for total operating weight.
- VAV motor weights include indoor motor, VFD, compressor electric unloaders, VFD transducer and associated wiring.
- Dimensions in [] are in millimeters.
- 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.



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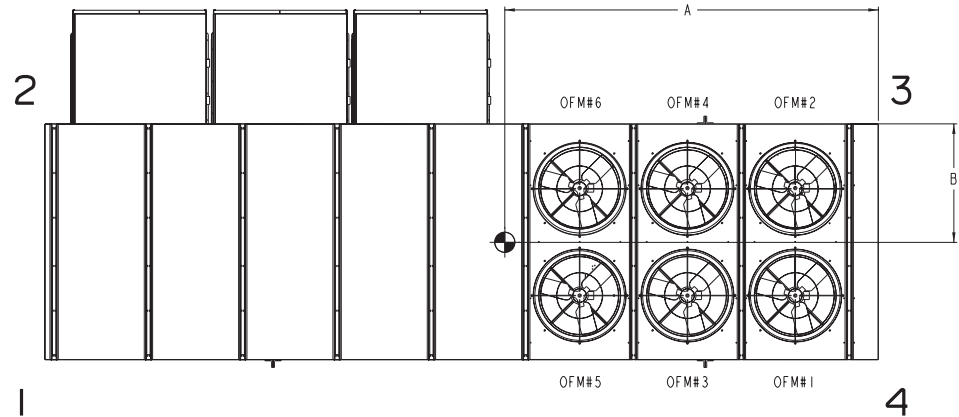
BASE UNIT WEIGHTS (See Note 6) Lb (Kg)				
	054	058	064	068
48EJD,EKD	6805 (3087)	7055 (3200)	7305 (3314)	7480 (3393)
48EJE	7045 (3196)	7295 (3309)	7545 (3422)	7720 (3502)
48EWD,EYD	6845 (3105)	7095 (3218)	7345 (3332)	7520 (3411)
48EWE	7085 (3214)	7335 (3327)	7585 (3441)	7760 (3520)
50EJ,EK	6565 (2978)	6815 (3091)	7065 (3205)	7240 (3284)
50EW,EY	6770 (3071)	7020 (3184)	7270 (3298)	7445 (3377)
OPTIONS/ACCESSORIES (See Note 6)				
BAROMETRIC RELIEF	450 (204)	450 (204)	450 (204)	450 (204)
POWER EXHAUST	675 (306)	675 (306)	675 (306)	675 (306)
MOD. POWER EXHAUST	725 (329)	725 (329)	725 (329)	725 (329)
ELECTRIC HEAT	165 (75)	165 (75)	165 (75)	165 (75)
CU FIN COND COIL	271 (123)	407 (185)	489 (222)	651 (295)
O.A. HOODS/FILTERS	255 (116)	255 (116)	255 (116)	255 (116)

UNIT SIZE	CENTER OF GRAVITY				% OF TOTAL WEIGHT AT EACH CORNER			
	in.		Millimeters					
	A	B	A	B	1	2	3	4
48EJD,EKD,EWD,EYD054	130.9	46.9	3325	1192	22.4	19.6	27.0	30.9
48EJE,EWE054	133.8	47.4	3397	1204	23.1	19.8	26.3	30.7
48EJD,EKD,EWD,EYD058	132.1	47.5	3354	1207	22.9	19.5	26.5	31.1
48EJE,EWE058	139.5	49.6	3544	1260	25.3	19.6	24.1	31.1
48EJD,EKD,EWD,EYD064	125.3	45.2	3181	1149	20.7	19.6	29.1	30.7
48EJE,EWE064	132.2	47.2	3359	1199	22.8	19.7	26.7	30.8
48EJD,EKD,EWD,EYD068	127.7	46.6	3242	1184	21.7	19.3	27.7	31.2
48EJE,EWE068	134.7	48.6	3422	1235	23.9	19.4	25.4	31.3
50EJ,EK,EW,EY054	128.1	46.1	3254	1171	21.6	19.6	28.0	30.8
50EJ,EK,EW,EY058	124.6	45.4	3164	1153	20.6	19.4	29.0	30.9
50EJ,EK,EW,EY064	122.2	44.7	3104	1135	19.9	19.3	29.9	30.8
50EJ,EK,EW,EY068	120.6	44.6	3063	1133	19.6	19.1	30.2	31.1

		CV MOTOR WEIGHTS LB (Kg)		VAV MOTOR WEIGHTS LB (Kg) (See Note 7)	
		Standard Efficiency IFM	High Efficiency IFM	Standard Efficiency IFM	High Efficiency IFM
15 HP (11.19 kW)	230/380/460	150 (68)	217 (98)	238 (108)	305 (138)
	575	150 (68)	220 (100)	240 (109)	310 (141)
20 HP (14.92 kW)	230/380/460	212 (96)	250 (113)	348 (158)	386 (175)
	575	212 (96)	258 (117)	304 (138)	350 (159)
25 HP (18.65 kW)	230/380/460	240 (109)	309 (140)	377 (171)	446 (202)
	575	240 (109)	319 (145)	375 (170)	454 (206)
30 HP (22.38 kW)	230/380/460	283 (128)	355 (161)	480 (218)	552 (250)
	575	283 (128)	359 (163)	418 (190)	494 (224)
40 HP (29.84 kW)	230/380/460	372 (169)	415 (188)	637 (289)	680 (308)
	575	372 (169)	410 (186)	587 (266)	625 (284)

LEGEND

- CV — Constant Volume
IFM — Indoor-Fan Motor
OFM — Outdoor-Fan Motor
VAV — Variable Air Volume
VFD — Variable Frequency Drive



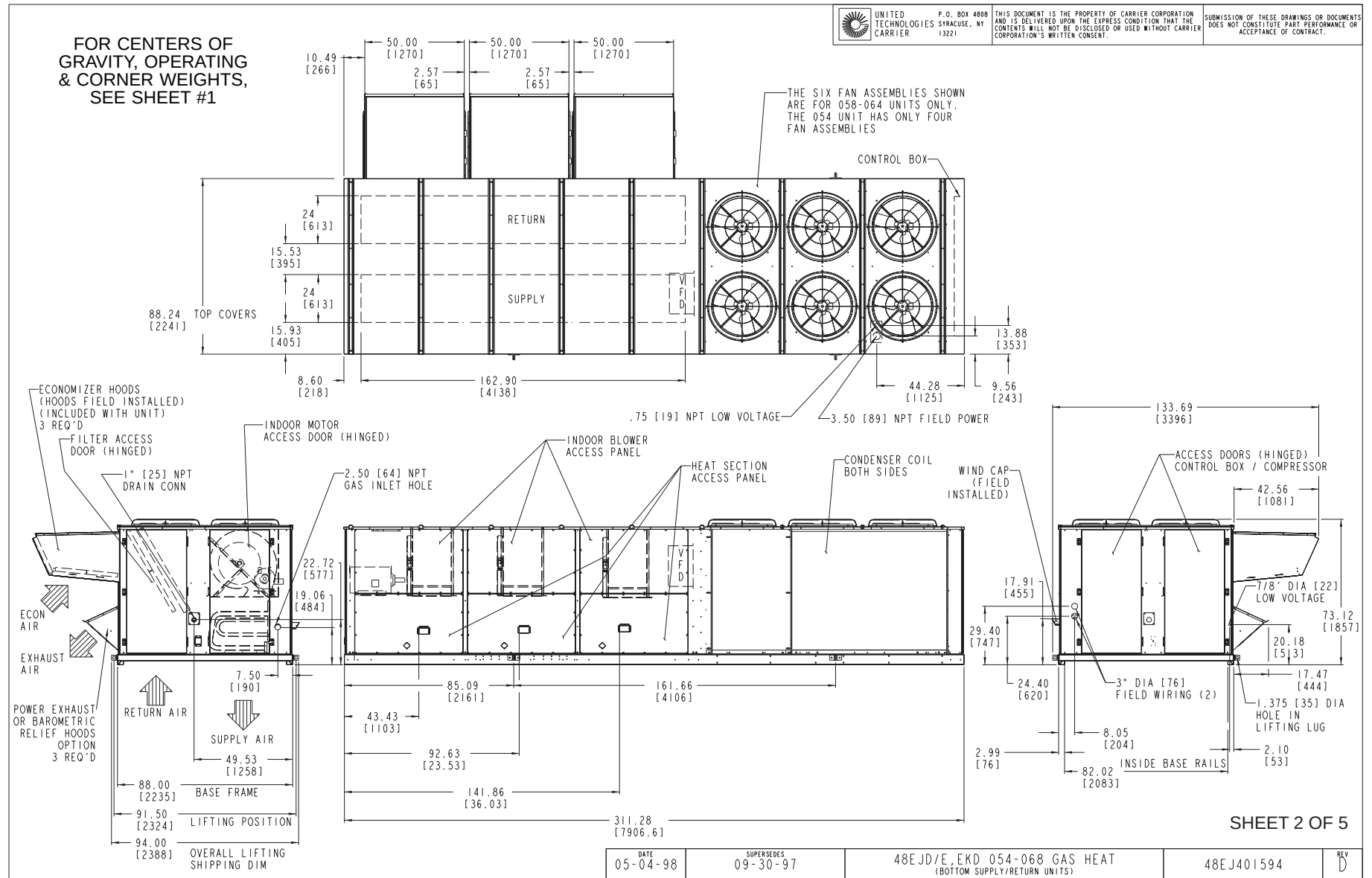
SHEET 1 OF 5

DATE 05-04-98	SUPERSEDES 09-30-97	48/50EJ,EK,EW,EY 054-068 ELECTRIC & GAS HEAT (BOTTOM & SIDE SUPPLY/RETURN UNITS)	48EJ401594	REV D
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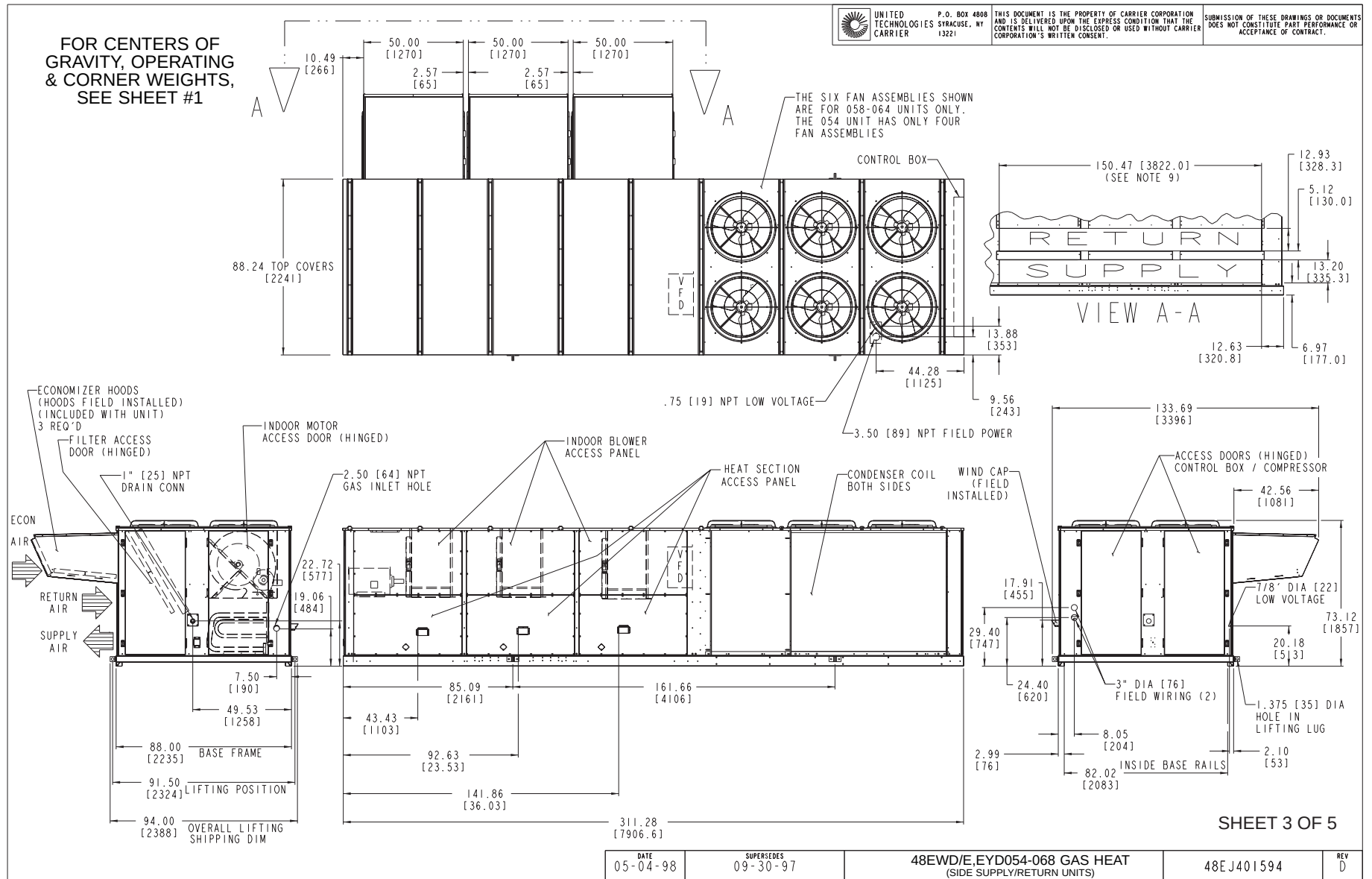
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CERTIFIED DIMENSION PRINT



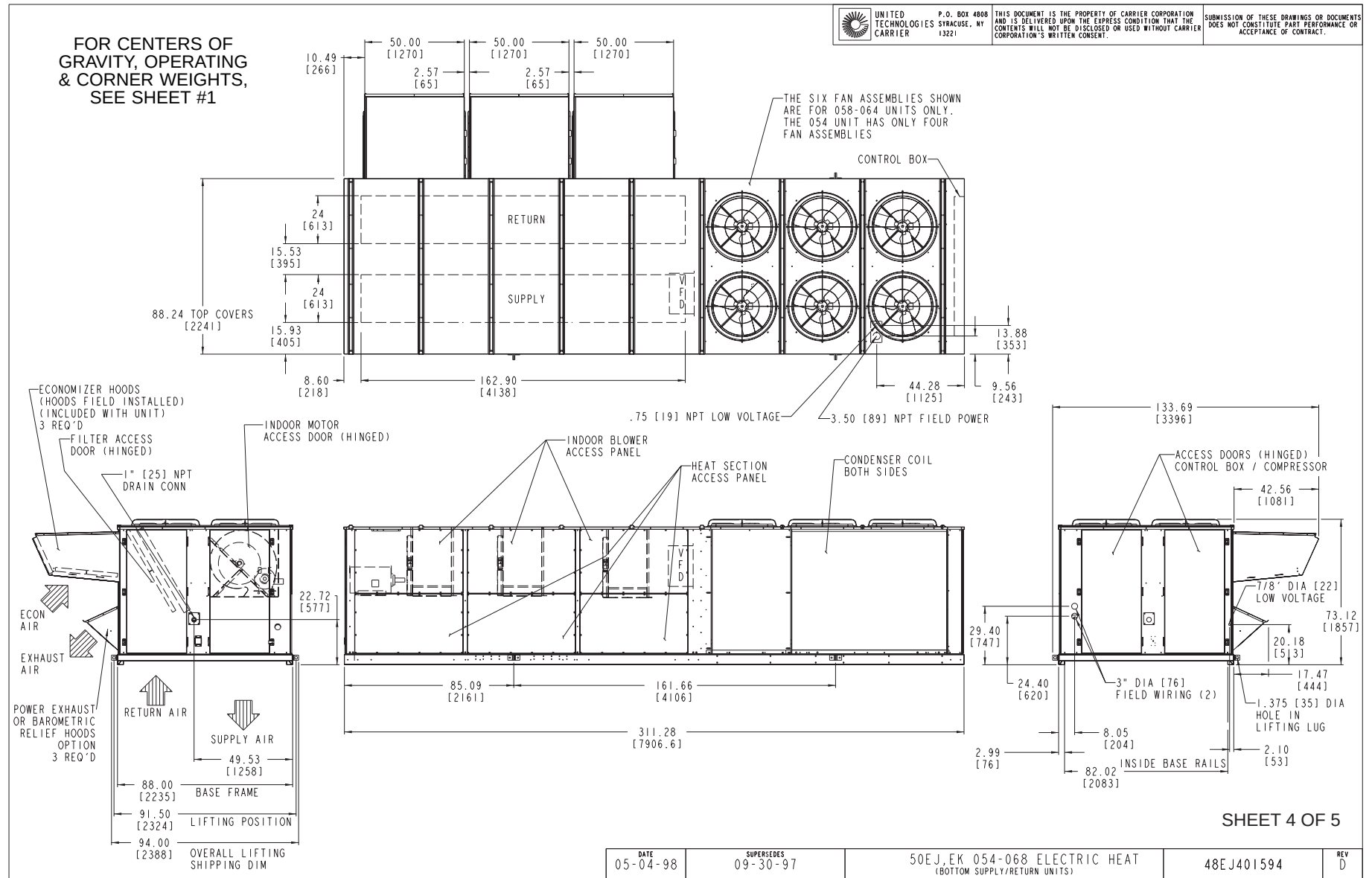
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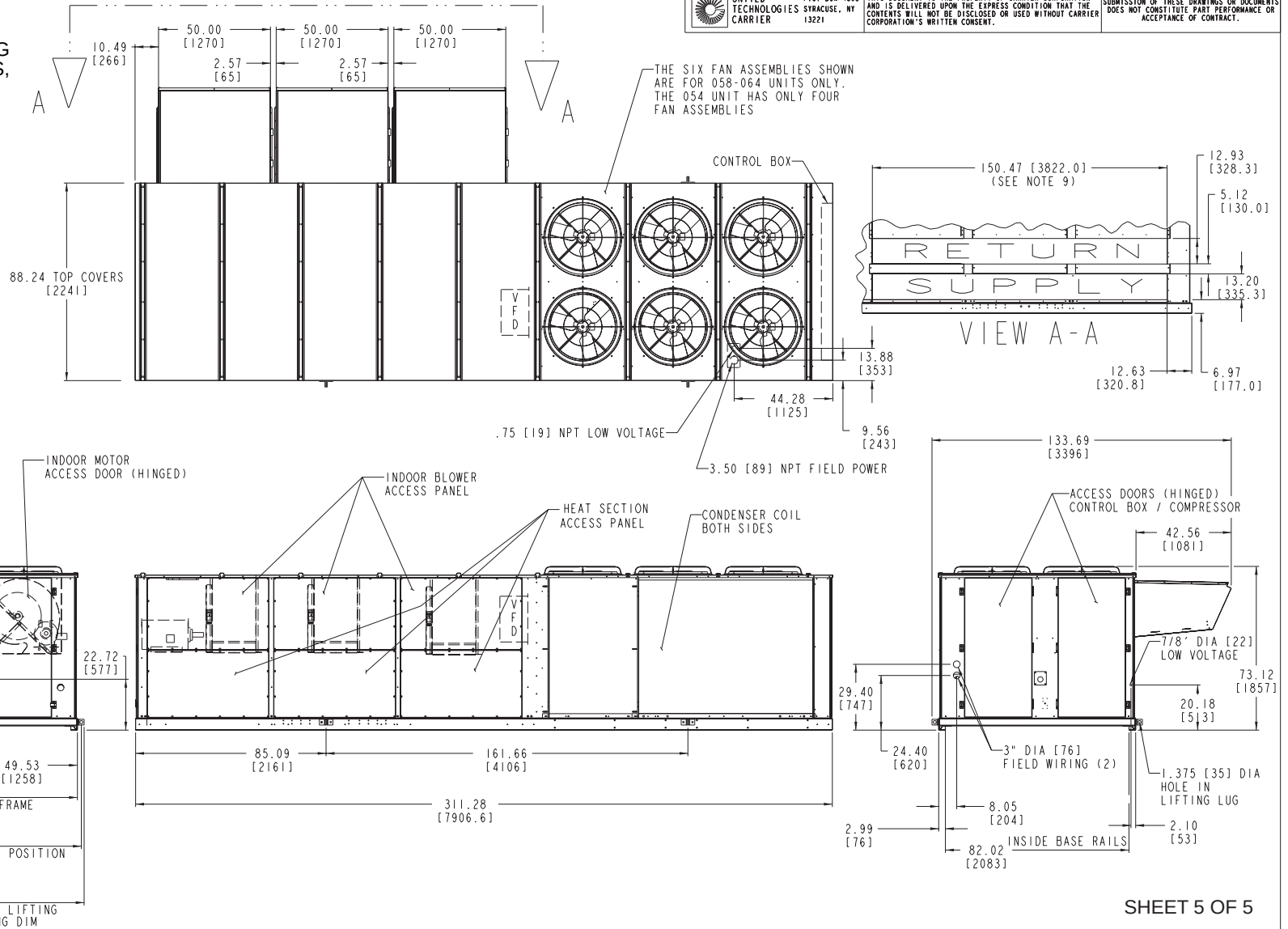
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FOR CENTERS OF
GRAVITY, OPERATING
& CORNER WEIGHTS,
SEE SHEET #1



SHEET 5 OF 5

DATE	SUPERSEDES	50EW,EY 054-068 ELECTRIC HEAT (SIDE SUPPLY/RETURN UNITS)	48EJ401594	REV D
05-04-98	09-30-97			

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

CERTIFIED ROOF CURB DIMENSION PRINT (50EJ,EK054-068 Only)



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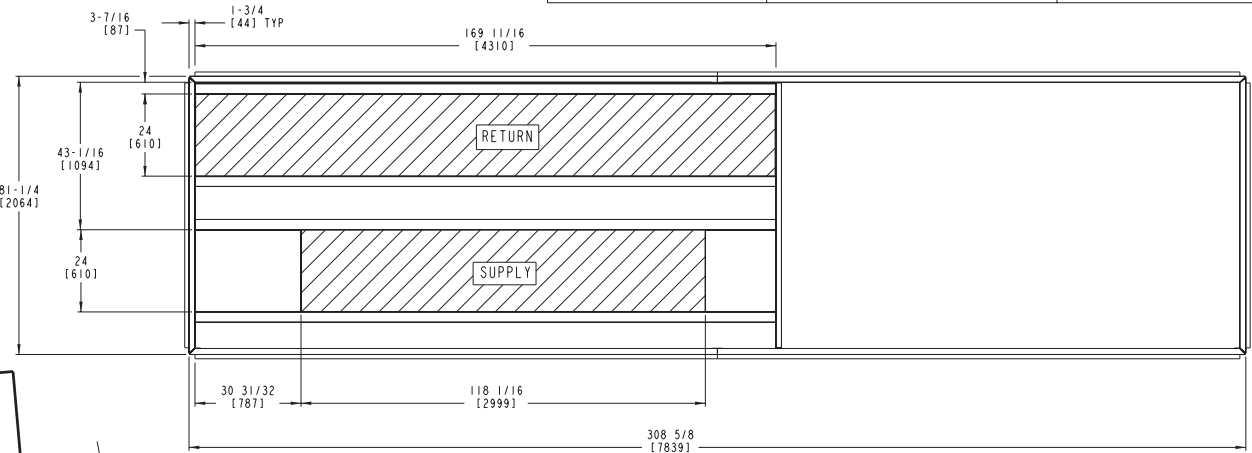
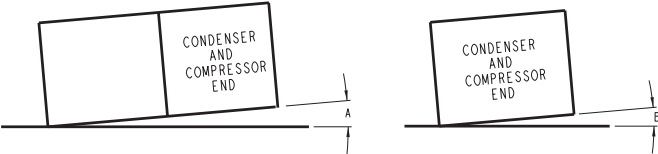
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- NOTES:
1. Unless otherwise specified all dimensions are to outside of part.
 2. Roof curb accessory CRRFCURB009A00 is shipped disassembled.
 3. All roof curb parts: 14 gage galvanized steel.
 4. Units with electric heat must be installed with 90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

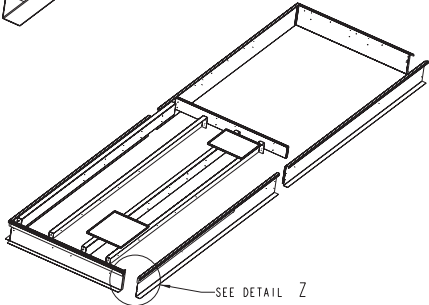
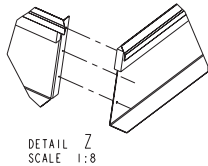
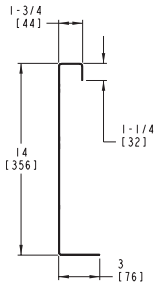
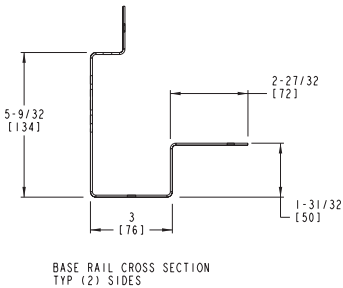
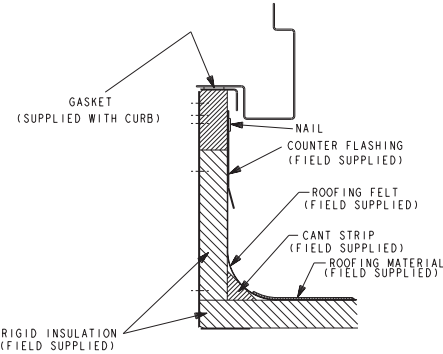
NOTE: To prevent standing water in the drain pan of the indoor section, and the heat exchangers **UNIT CAN ONLY BE PITCHED AS SHOWN.**



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.



DATE 11-03-97	SUPERSEDES 10-03-97	50EJ,EK 054-068 FOR NEW CONSTRUCTION FOR ACCESSORY ROOF CURB ADAPTER #CRRFCURB009A00	48EJ500084	REV C
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CERTIFIED ROOF CURB DIMENSION PRINT



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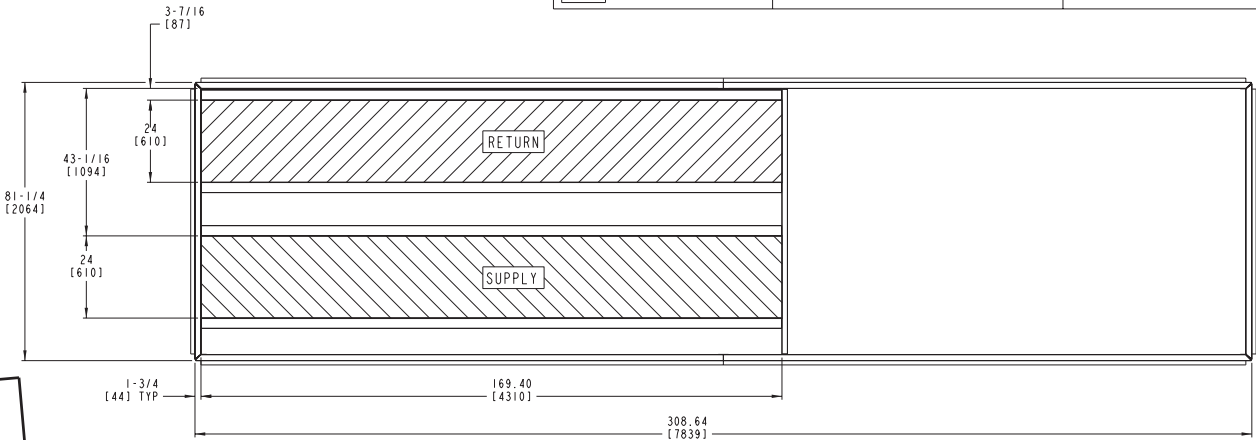
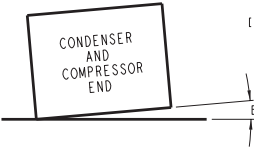
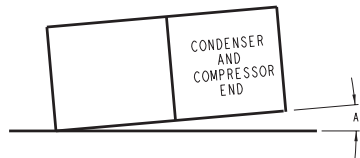
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- NOTES:
- 1. Unless otherwise specified all dimensions are to outside of part.
 - 2. Roof curb accessory CRRFCURB014A00 is shipped disassembled.
 - 3. All roof curb parts: 14 gage galvanized steel.
 - 4. Dimensions in [] are millimeters.

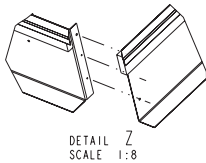
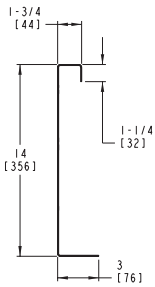
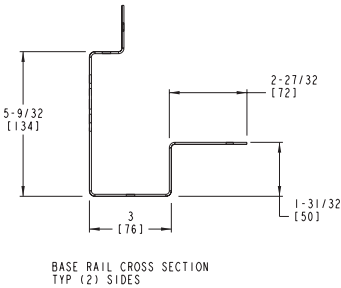
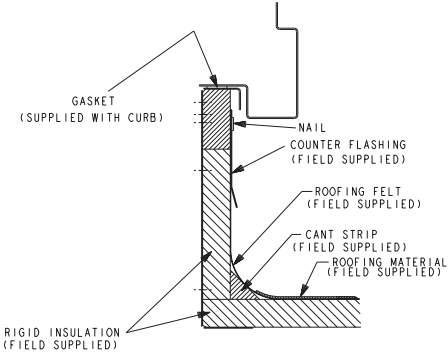
NOTE: To prevent standing water in the drain pan of the indoor section, and the heat exchangers **UNIT CAN ONLY BE PITCHED AS SHOWN.**



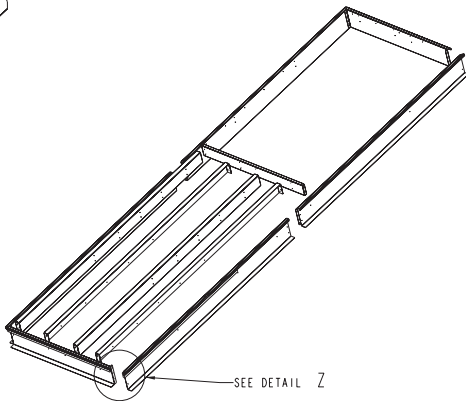
DIMENSIONS*
(Degrees and Inches)

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.



DETAIL Z
SCALE 1:8



DATE	SUPERSEDES	48/50EJ, EK 054-068 FOR NEW CONSTRUCTION FOR ACCESSORY ROOF CURB ADAPTER #CRRFCURB014A00	48EJ501698	REV
10-30-97	-			-

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

CERTIFIED ROOF CURB DIMENSION PRINT (50EJ,EK064-068 on 50DL054,064 Retrofits Only)

NOTES:

1. Unless otherwise specified all dimensions are to outside of part.
2. Seal strip to be placed covering reference holes.
3. Phantom lines represent seal strip. Total length required is 75 linear ft.
4. If existing seal strip around roof curb seems damaged, replace it. Total length required is 62 linear ft. At indoor motor end, remove existing seal strip on roof curb and place new seal strip as shown.
5. Five crossrails are field located per dimensions shown and secured using self-tapping screws.
6. 50E-Series units will overhang existing "DL" roof curbs by 9.97" at indoor motor end and 8.09" at compressor end.
7. Ductwork (field supplied) must be notched to clear two crossrails.
8. Dimensions in [] are millimeters.

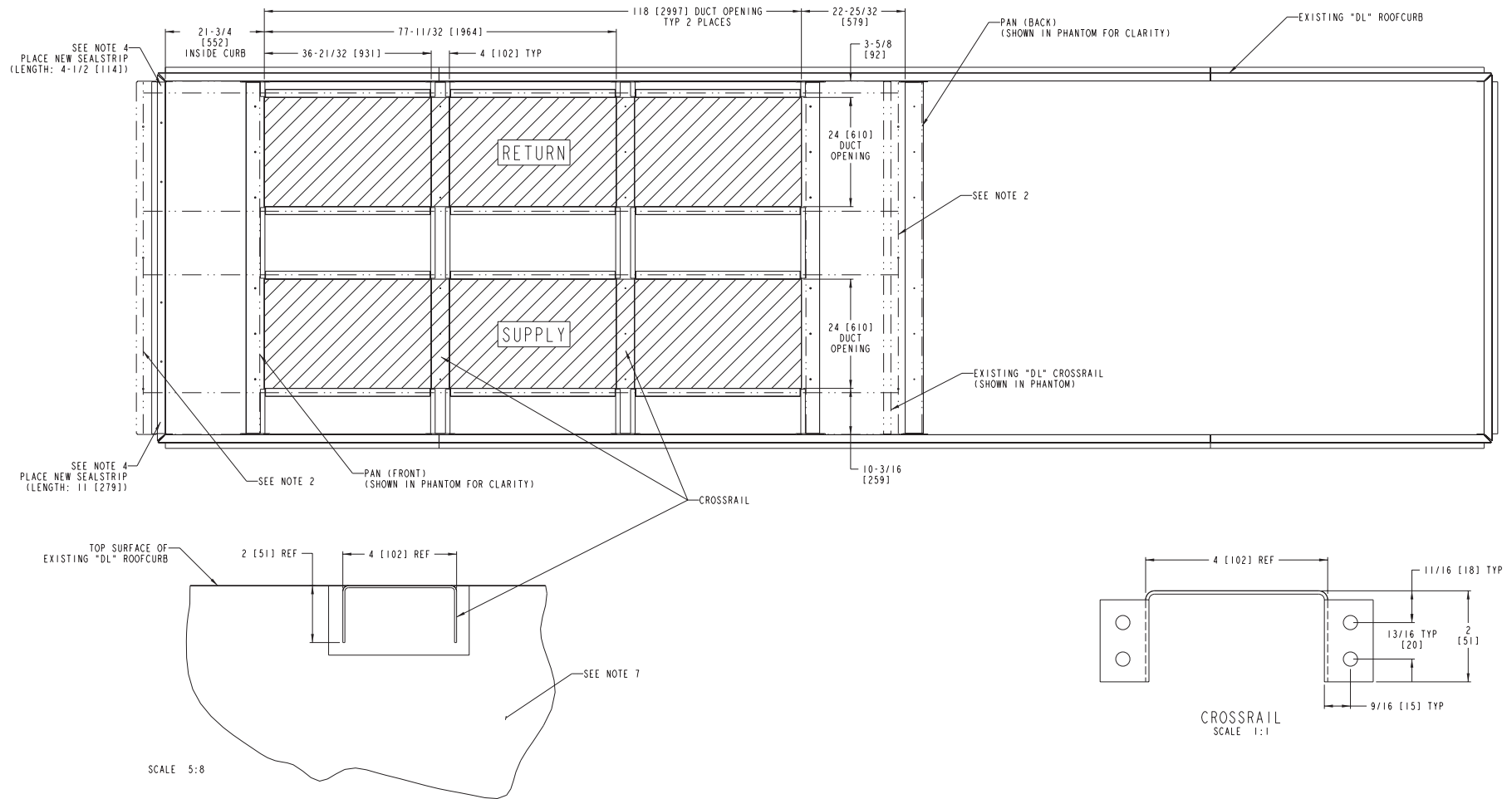


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DATE 12-09-97	SUPERSEDES -	50EJ, EK 054-068 FOR EXISTING CONSTRUCTION FOR ACCESSORY ROOF CURB ADAPTER #CRRCADPT004A00	48EJ501707	REV -
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CERTIFIED ROOF CURB DIMENSION PRINT
(48/50EJ,EK054-068 on 48/50DD,DF054,064 Retrofit)

NOTES:

- 1. Unless otherwise specified all dimensions are to outside of part.
- 2. Seal strip to be placed covering reference holes.
- 3. Phantom lines represent seal strip. Total length required is 75 linear ft.
- 4. If existing seal strip around roof curb seems damaged, replace it. Total length required is 62 linear ft.
- 5. Five crossrails are field located per dimensions shown and secured using self-tapping screws.
- 6. 50E-Series units will overhang existing "DF" roof curbs by 2.98" at indoor motor end and 15.08" at compressor end.
- 7. Ductwork (field supplied) must be notched to clear three crossrails.
- 8. Dimensions in [] are millimeters.

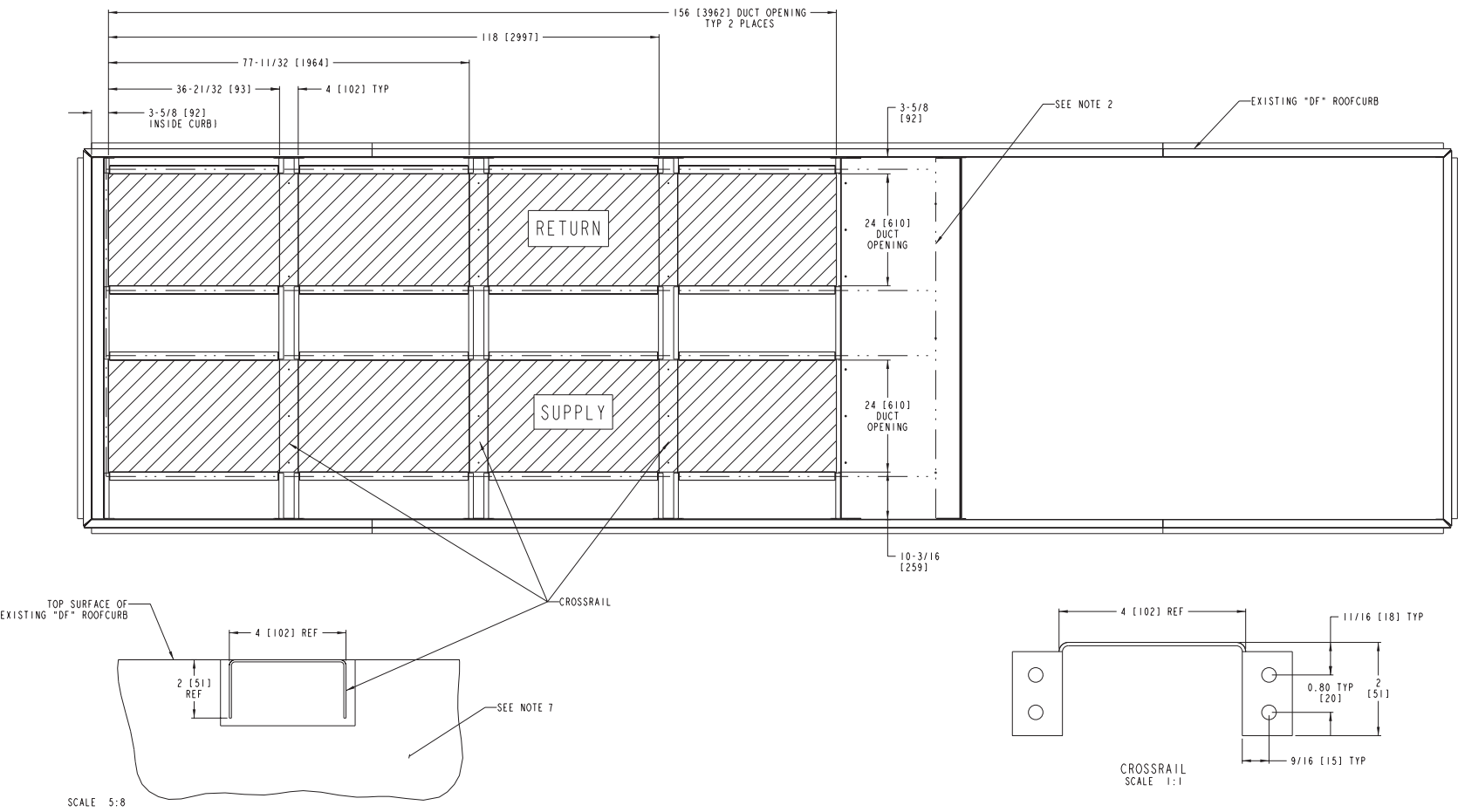


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DATE	SUPERSEDES	48/50EJ,EK 054-068 ACCESSORY ADAPTER KIT FOR 48/50DD,DF 054-064 ROOF CURB; PART #CRRCADPT005A00	48EJ501765 SHEET 1 OF 2	REV
04-09-98	-			-