



SINGLE PACKAGE UNITS — HORIZONTAL CHA10 SERIES AIR CONDITIONERS CHP10 SERIES HEAT PUMPS

Reliability And High Efficiency Featured In Compact Single Package Units

Lennox outdoor single package horizontal units are designed for residential or small commercial installations. Units can be installed with ducts extended through a wall in a crawl space, basement, utility room or attic. Installation on a slab at grade level or on a rooftop will save valuable interior floor space. Optional accessories available for rooftop installations include the RT9-65 or RD9-65 POWER SAVER® duct enclosure and RMF9 roof mounting frame. The mounting frame mates to the bottom of the unit and RT9 or RD9 and when flashed into the roof permits weatherproof duct connection and entry into the conditioned area. Optional POWER SAVER controls (RD9) reduce cooling operating costs and satisfy any local code fresh air requirements. Externally mounted optional minimum fresh air damper (manual) is also available. In addition, a supply and return plenum, fiberglass duct kit and choice of flush or step-down diffusers are available for a complete combination ceiling supply and return air distribution system. The units contain all refrigera-

tion components (indoor coil and outdoor unit), air movers, air filters and optional additive electric heat in one complete package. Optional electric heaters are available in several sizes for all season applications, space is provided in the unit for field installation. Indoor supply and return air openings are both at the same end of the cabinet. Powerful direct drive fan draws larger air volumes through the entire outdoor coil quietly and with low power consumption. Vertical discharge of air results in minimum air noise. Wrap-around "U" configuration of outdoor coil provides large surface area for maximum capacity. Multispeed indoor blower provides a choice of supply air flow. Large, efficient indoor coil ensures maximum air contact and heat transfer. Cabinet is constructed of heavy gauge galvanized steel with a baked-on enamel finish. Units are shipped completely assembled and ready to install. In addition, units are test operated at the factory. Installer has only to locate unit, connect duct work and power supply to complete the installation.

SPECIFICATIONS

Model No.	CHA10-411 CHA10-413	CHP10-411 CHP10-413	CHA10-651 CHA10-653	CHP10-651 CHP10-653	
★ARI Standard 270 SRN	19	19	22	22	
*ARI Certified Cooling Capacity	Cooling Capacity (Btuh)	34,500	35,500	†58,000	†55,000
	Total unit watts cooling	4450	5100	††8300	††82,000
	EER (Btuh/Watts)	7.8	7.0	7.0	6.7
	Dehumidifying capacity	29%	31%	28%	27%
*ARI Certified High Temperature Heating Capacity	Total capacity (Btuh)	---	38,000	---	†61,000
	Total unit watts	---	4600	---	††7200
	C.O.P.	---	2.4	---	2.5
*ARI Certified Low Temperature Heating Capacity	Total capacity (Btuh)	---	21,500	---	††34,500
	Total unit watts	---	3800	---	††5800
	C.O.P.	---	1.7	---	1.7
Opt. Electric Heat capacity range (Btuh)	19,500 — 56,300	19,500 — 56,300	28,300 — 112,700	28,300 — 112,700	
Refrigerant charge (R-22)	5 lbs. 4 oz.	5 lbs. 2 oz.	7 lbs. 12 oz.	8 lbs. 9 oz.	
Indoor Coil	Net face area (sq. ft.)	3.0	3.0	4.5	4.5
	Tube diameter (in.) & No. of rows	3/8 — 3	3/8 — 3	3/8 — 4	3/8 — 4
	Fins per inch	16	16	14	14
Indoor Coil Blower	Wheel nominal diam. x width (in.)	11 x 9	11 x 9	10 x 10	10 x 10
	Motor horsepower	1/2	1/2	1	1
	Air volume range (cfm)	925 — 1630	1050 — 1630	1480 — 2350	1480 — 2350
Outdoor Coil	Net face area (sq. ft.)	11.6	11.6	15.3	15.3
	Tube diameter (in.) & No. of rows	3/8 — 2	3/8 — 2	3/8 — 2	3/8 — 2
	Fins per inch	15	15	15	15
Outdoor Coil Fan	Diameter (in.) and No. of blades	20 — 4	20 — 4	24 — 4	24 — 4
	Air Volume (factory setting)	3200	3200	5400	5400
	Rpm (factory setting)	1040	1040	1060	1060
	Motor horsepower	1/4	1/4	1/2	1/2
	Motor watts (factory setting)	300	300	600	600
Condensate drain size mpt (in.)	3/4	3/4	3/4	3/4	
No. & size of filters (in.)	(1) 16 x 25 x 1	(1) 16 x 25 x 1	(2) 16 x 20 x 1	(2) 16 x 20 x 1	
Net weight (lbs.) (1 Package)	334	345	515	555	
Optional Supply & Return Fiberglass Duct Kit	BM-7820 (**36 lbs.)		BM-7820 (**36 lbs.)		
Optional Combination Ceiling Supply And Return Step-Down Diffuser	RTD-41 (**32 lbs.)		RTD-65 (**52 lbs.)		
Optional Combination Ceiling Supply And Return Flush Diffuser	FD-41(**24 lbs.), ***FD-41-D(**30 lbs.)		FD-65(**26 lbs.), ***FD-65-D(**33 lbs.)		
Optional Combination Supply & Return Plenum	SRP9-65 (**30 lbs.) (1 pkg.)				
Optional Roof Mounting Frame	RMF9-65 (**83 lbs.) (2 pkgs.)				
Optional Duct Enclosure	RT9-65 (**110 lbs.) (1 pkg.)				
Optional POWER SAVER	RD9-65 (**105 lbs.) (2 pkgs.)				
RT9/RD9 Adapter Kit for CHA10/CHP10-410-413	LB-29475B (**4 lbs.) (1 pkg.)				
Optional Minimum Fresh Air Damper	OAD3-65 (**7 lbs.) (1 pkg.)				

★Rated in accordance with ARI Standard 270.

*Rated in accordance with ARI Standards: At 450 cfm (maximum) indoor air volume per ton of cooling capacity.

Cooling Ratings — 95F outdoor air temperature and 80F db/67F wb entering indoor coil air.

High Temperature Heating Ratings — 47F db/15F wb outdoor air temperature and 70F db entering indoor coil air.

Low Temperature Heating Ratings — 17F db/15F wb outdoor air temperature and 70F db entering indoor coil air.

**Net weight.

***Flush diffuser with adjustable baffle blades.

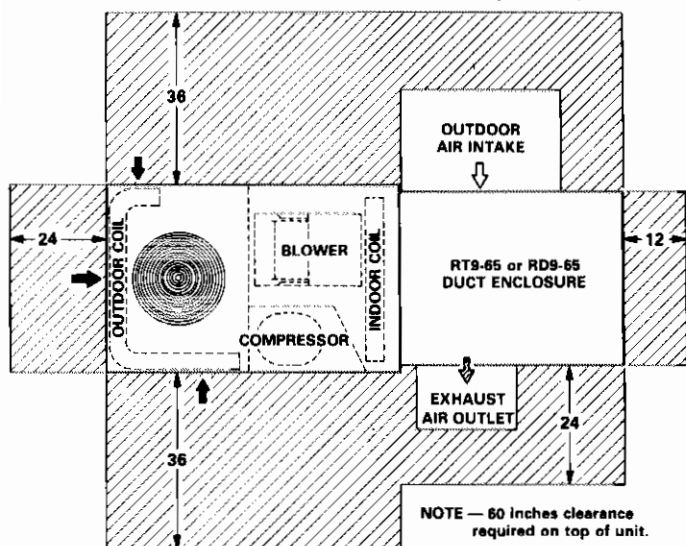
†Derate 1000 Btuh for 208 volt operation.

††Derate 1500 Btuh for 208 volt operation.

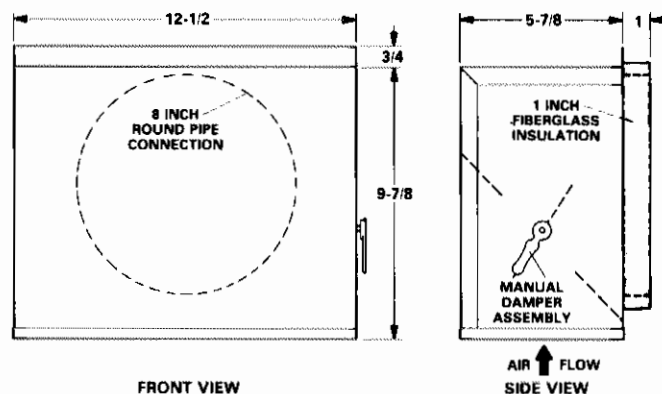
†††Deduct 200 watts for 208 volt operation.

NOTE — Specification, Ratings and Dimensions subject to change without notice.

INSTALLATION CLEARANCES (inches)



OPTIONAL OAD3-46/65 MINIMUM FRESH AIR DAMPER

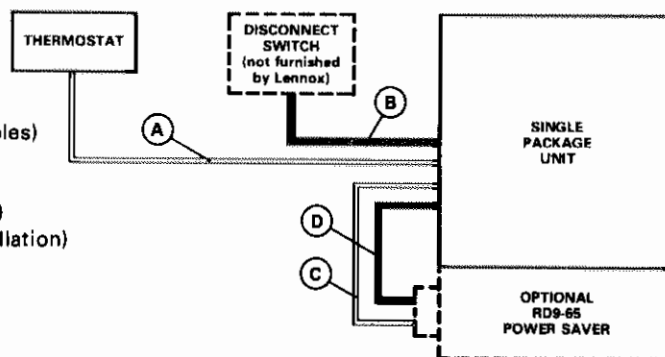


FIELD WIRING

- 1A — (CHA10) Three wire low voltage (Cooling only installation)
- (CHA10) Four wire low voltage (All season installation)
- (CHP10) Five wire low voltage (18 ga. minimum)
- B — (CHA10/CHP10) Two or Three wire power (See electrical data tables)
- C — (CHA10) Four wire low voltage (Power Saver installation)
- (CHP10) Five wire low voltage (Power Saver installation)
- D — (CHA10) Two wire power (Cooling only Power Saver installation)
- (CHA10/CHP10) Three wire power (All season Power Saver installation)

†If local code permits may be class 2 wiring.

NOTE — All wiring must conform to NEC and local electrical codes.



ELECTRICAL DATA

Model No.	CHA10-411	CHA10-413	CHA10-651	CHA10-653	
Line voltage data	208/230v 60hz — 1ph	208/230v 60hz — 3ph	208/230v 60hz — 1ph	208/230v 60hz — 3ph	460v 60hz — 3ph
Compressor	Rated load amps	17.2	11.4	31.4	19.5
	Power factor	.92	.85	.92	.85
	Locked rotor amps	97.0	78.0	175.0	132.0
Condenser Coil	Full load amps	1.4	1.4	3.0	3.0
	Fan	Locked rotor amps	3.25	3.25	6.2
Evaporator Coil	Full load amps	3.9	3.9	7.1	7.1
	Blower	Locked rotor amps	9.5	9.5	13.6
*Minimum circuit ampacity	26.8	19.6	49.4	34.5	17.9

*Refer to National Electric Code manual to determine wire, fuse and disconnect size requirements.

NOTE — Extremes of operating range are plus 10% and minus 5% of line voltage. 460v models are plus and minus 10% of line voltage.

†Motors are rated at 230 volts. FLA shown is for step-down transformer output.

Model No.	CHP10-411	CHP10-413	CHP10-651	CHP10-653	
Line voltage data	208/230v 60hz — 1ph	208/230v 60hz — 3ph	208/230v 60hz — 1ph	208/230v 60hz — 3ph	460v 60hz — 3ph
Compressor	Rated load amps	22.4	12.7	31.4	19.5
	Power factor	.92	.85	.92	.85
	Locked rotor amps	102.0	77.0	175.0	132.0
Outdoor Coil	Full load amps	1.4	1.4	3.0	3.0
	Fan	Locked rotor amps	3.25	3.25	6.2
Indoor Coil	Full load amps	3.9	3.9	7.1	7.1
	Blower	Locked rotor amps	9.5	9.5	13.6
*Minimum circuit ampacity	33.3	21.2	49.4	34.5	17.9

*Refer to National Electric Code manual to determine wire, fuse and disconnect size requirements.

NOTE — Extremes of operating range are plus 10% and minus 5% of line voltage. 460v models are plus and minus 10% of line voltage.

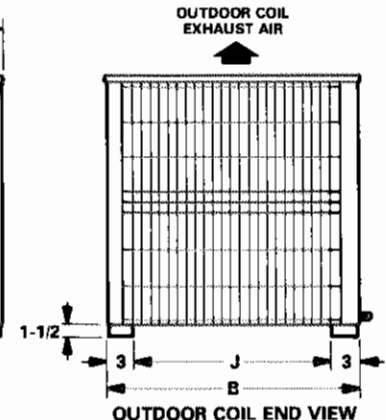
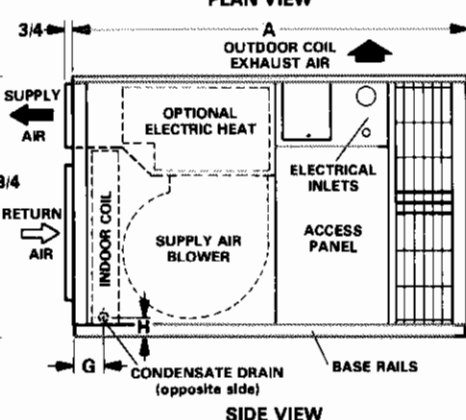
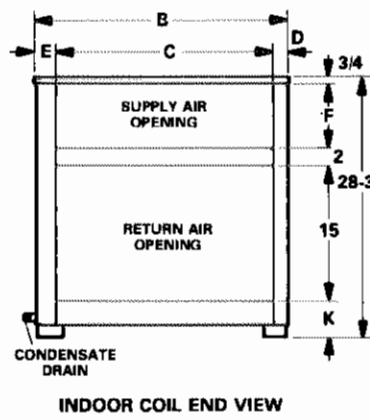
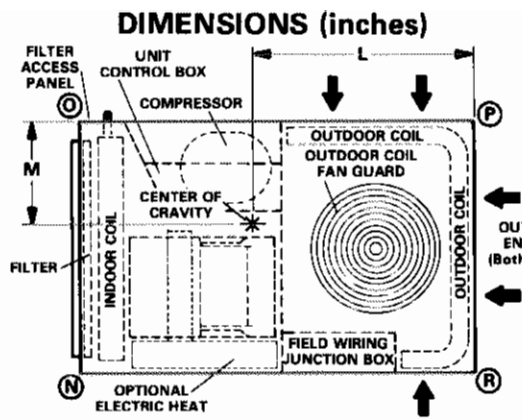
†Motors are rated at 230 volts. FLA shown is for step-down transformer output.

**CHA10 SERIES
CORNER WEIGHTS (lbs.)**

Model No.	N	O	P	R
CHA10-411	79	109	85	61
CHA10-413	79	109	85	61
CHA10-651	128	170	124	93
CHA10-653	128	170	124	93

**CHP10 SERIES
CORNER WEIGHTS (lbs.)**

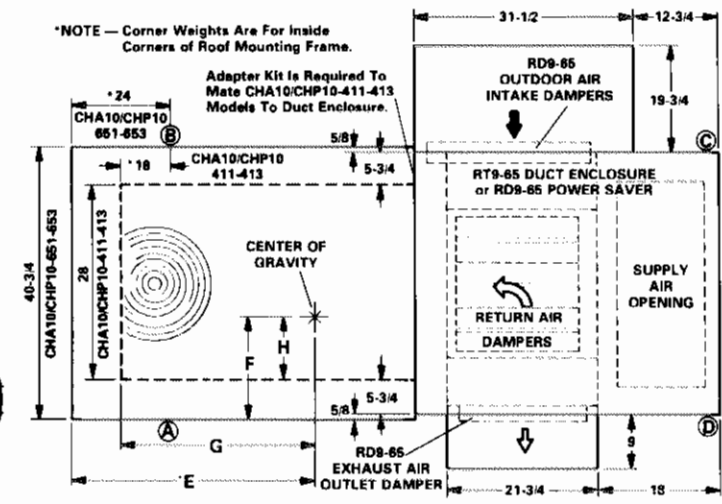
Model No.	N	O	P	R
CHP10-411	82	113	87	63
CHP10-413	82	113	87	63
CHP10-651	138	182	134	101
CHP10-653	138	182	134	101



Model No.	A	B	C	D	E	F	G	H	J	K	L	M
CHA10/CHP10-411-413	52-11/16	28	24	1-13/16	2-3/16	7	4-7/8	2-3/8	22	4	29-11/16	11-3/4
CHA10/CHP10-651-653	59-15/16	40-3/4	34	2-3/4	4	8	6	2-1/2	34-3/4	3	34-5/8	17-1/2

**OPTIONAL ROOFTOP ACCESSORIES — DIMENSIONS (inches)
DOUBLE DUCT AIR DISTRIBUTION SYSTEM**

*NOTE — Corner Weights Are For Inside Corners of Roof Mounting Frame.



**CORNER WEIGHTS (lbs.)
CHA10 Series**

Model No.	A	B	C	D
CHA10-410	230	212	114	124
CHA10-650	374	243	92	142

**CENTER OF GRAVITY (in.)
CHA10 Series**

Model No.	E	F	G	H
CHA10-410	---	---	45 3/4	13 1/4
CHA10-650	45 1/8	16 5/8	---	---

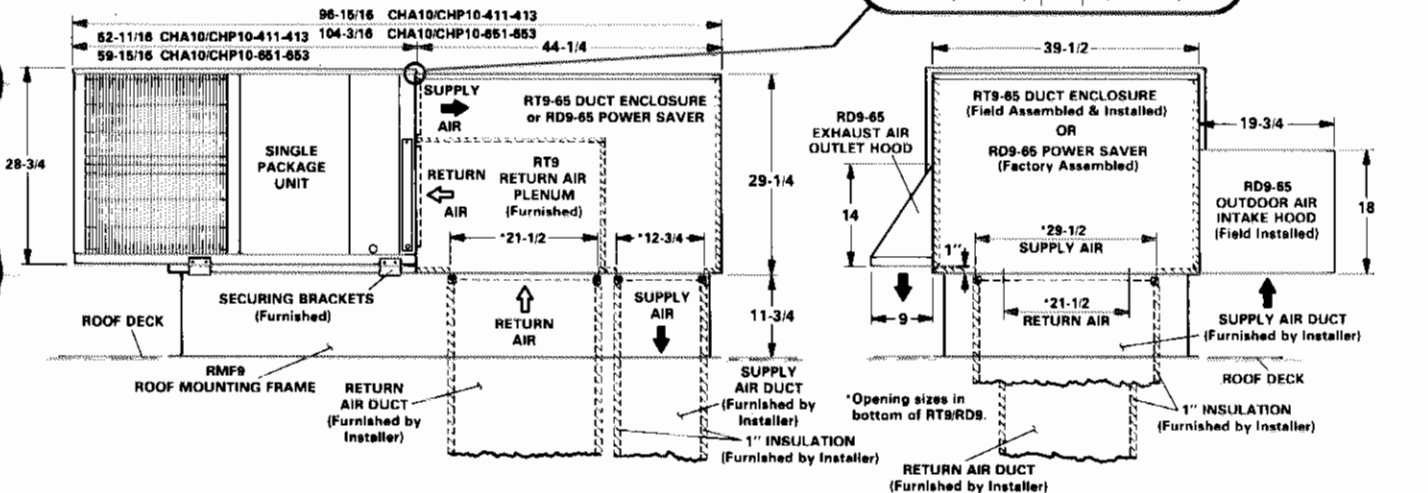
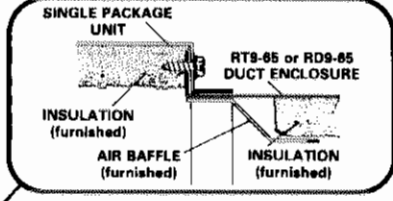
CHP10 Series

Model No.	A	B	C	D
CHP10-410	235	215	115	126
CHP10-650	392	254	94	148

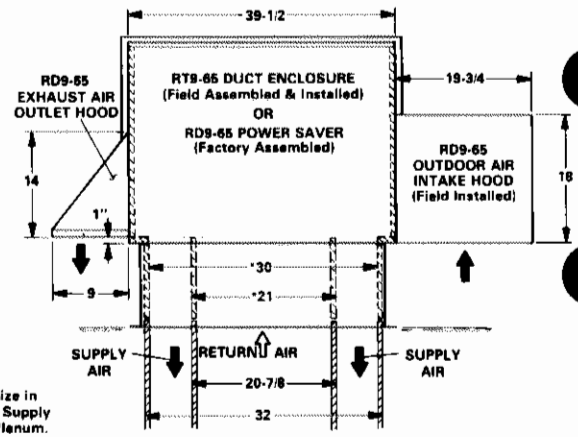
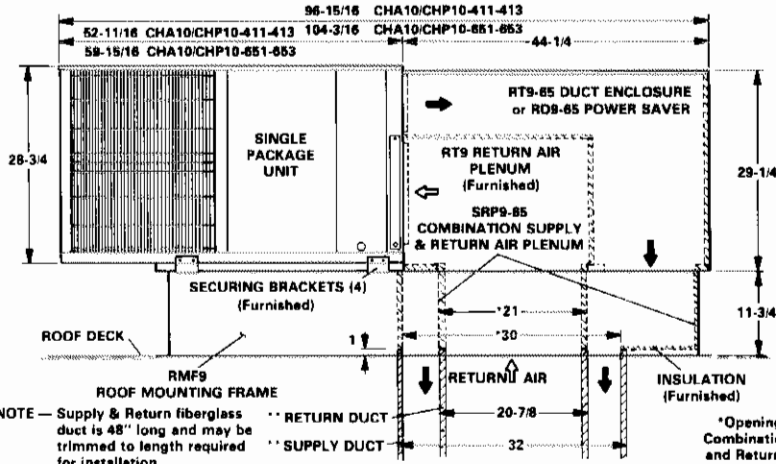
CHP10 Series

Model No.	E	F	G	H
CHP10-410	---	---	37 1/2	13 1/4
CHP10-650	45 1/8	16 5/8	---	---

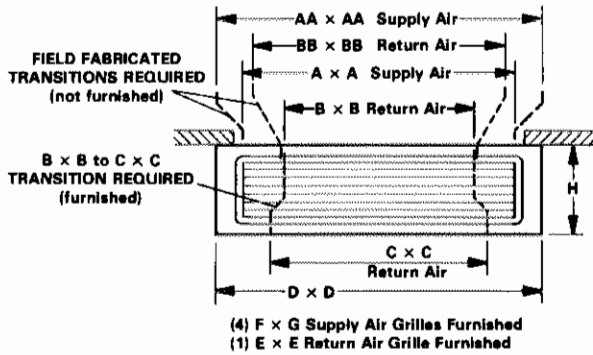
Duct Enclosure Mounting Detail



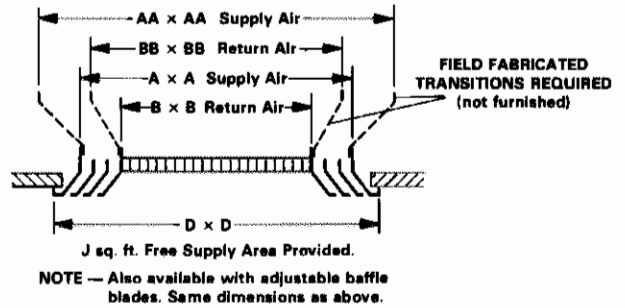
DIMENSIONS (inches) COMBINATION CEILING SUPPLY AND RETURN AIR DISTRIBUTION SYSTEM



RTD STEP-DOWN DIFFUSERS



FD FLUSH CEILING DIFFUSERS

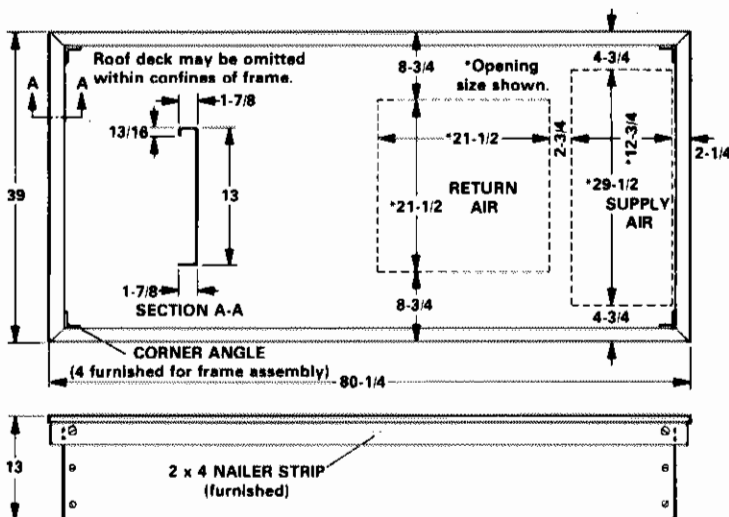


Unit Model No.	Supply & Return Air Grille Model No.	A	AA	B	BB	C	D	E	F	G	H	J
CHA10/CHP10 411-413	RTD-41 Step-down	22	30	16	21	20	24	20	5	20	8	---
	FD-41 Flush *FD-41-D Flush	24	30	18	21	---	29-3/4	---	---	---	---	1.75
CHA10/CHP10 651-653	RTD-65 Step-down	30	---	20	---	24	36	24	6	30	10	---
	FD-65 Flush *FD-65-D Flush	30	---	21	---	---	35-3/4	---	---	---	---	3.18

*Equipped with adjustable baffle blades.

RMF9-65 ROOF MOUNTING FRAME

With Double Duct Openings



With Combination Ceiling Supply & Return Openings

