

**13 SEER, R-410A  
PACKAGE AIR CONDITIONER FOR MANUFACTURED HOUSING,  
RESIDENTIAL, AND LIGHT COMMERCIAL APPLICATIONS  
2 – 5 TONS  
Single Phase, 208/230 V, 60 Hz**

**WJA3**



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahrirectory.org .



**UNIT PERFORMANCE DATA**

Model Number	COOLING			Unit Dimensions H x W x D in [mm ]	Operating Weight lbs [kg]
	Nom. Capacity BTU/h	SEER	EER		
WJA324000K000A WJA324000KTP0A	22,800	13.5	11.5	30 [765] x 51 [1295] x 32 [813]	237 [108]
WJA330000K000A WJA330000KTP0A	28,400	13.2	11.5	30 [765] x 51 [1295] x 32 [813]	249 [113]
WJA336000K000A WJA336000KTP0A	34,800	13.5	11.5	30 [765] x 51 [1295] x 32 [813]	279 [127]
WJA342000K000A WJA342000KTP0A	40,500	13.5	11.5	34 [867] x 51 [1295] x 32 [813]	303 [138]
WJA348000K000A WJA348000KTP0A	46,500	13.2	11.0	34 [867] x 51 [1295] x 32 [813]	305 [139]
WJA360000K000B WJA360000KTP0B	55,500	13.2	11.0	42 [1070] x 51 [1295] x 32 [813]	352 [160]

**BUILT TO LAST, EASY TO INSTALL AND SERVICE**

- Compact, fully self-contained, electric cooling unit with horizontal supply and return ducts
- Light weight, compact construction ideal for manufactured housing and residential applications
- Environmentally sound R-410A refrigerant
- Vibration isolation provides quiet operation. Compressors have internal over current protection
- Liquid refrigerant filter driers
- Hand holds built into the unit base pan
- Designed to be serviced from both the side and front
- Accessory electric heaters with single point connections
- Durable pre-painted steel cabinet
- No-rust base pan with integrated drain pan standard on all units
- Direct-drive ECM multi-speed, blower motor standard on all models
- Louvered coil enclosure for protection against vandalism and hail damage
- Aerodynamic fan blade design reduces the overall sound
- All models available with optional factory installed tin-coated copper evaporator coil. (These models are identified with letters TP in the 11th and 12th positions in the model numbers)

**LIMITED WARRANTY\***

- 1 year unit replacement limited warranty
  - 5 year parts limited warranty (including compressor and coils)  
–With timely registration, an additional 5 year parts limited warranty (including compressor and coils)
- \*Applies to original purchaser/homeowner, some limitations may apply. See warranty certificate for details.

**Product Specifications**

**MODEL NOMENCLATURE**

	1	2, 3	4	5,6	7,8,9	10	11,12	13	14
<b>MODEL SERIES</b>	<b>W</b>	<b>JA</b>	<b>3</b>	<b>36</b>	<b>000</b>	<b>K</b>	<b>00</b>	<b>0</b>	<b>A</b>
W = Package									
JA = Air Conditioner									
3 = 13			<b>SEER</b>						
24 = 2 Tons									
30 = 2.5 Tons									
36 = 3 Tons									
42 = 3.5 Tons									
48 = 4 Tons									
60 = 5 Tons			<b>NOMINAL COOLING CAPACITY</b>						
000 = no factory heat				<b>NOMINAL HEATING BTUH (input)</b>					
K = 208/230-1-60						<b>VOLTAGE</b>			
00 = No options									
TP - Tin Plated Evaporator Main Tubes						<b>FACTORY INSTALLED OPTIONS</b>			
0 = Standard								<b>FEATURE CODE</b>	
Sales Model Digit									

## AHRI CAPACITY RATINGS – COOLING CAPACITIES AND EFFICIENCIES

WJA3	NOMINAL TONS	STANDARD CFM	NET COOLING CAPACITY AT 95°F (35°C) (Btuh)	EER†	SEER**
24	2	800	22800	11.5	13.5
30	2.5	1000	28400	11.5	13.2
36	3	1200	34800	11.5	13.5
42	3.5	1400	40500	11.5	13.5
48	4	1600	46500	11	13.2
60	5	1750	55500	11	13.2

**LEGEND**

dB—Sound Levels (decibels)  
 db—Dry Bulb  
 SEER—Seasonal Energy Efficiency Ratio  
 wb—Wet Bulb  
 COP—Coefficient of Performance  
 \* Air Conditioning Heating & Refrigeration Institute  
 † At "A" conditions—80°F (26.7°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor db.  
 \*\* Rated in accordance with U.S. Government DOE Department of Energy) test procedures and/or AHRI Standards 210/240-08.

**Notes:**

1. Ratings are net values, reflecting the effects of circulating fan heat. Ratings are based on:  
 Cooling Standard: 80°F (26.7°C) db, 67°Fwb (19.4°C) indoor entering—air temperature and 95°F db (35°C) outdoor entering—air temperature.  
 2. Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

### A-Weighted Sound Power Level (dBA)

WJA3	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)							
		125	250	500	1000	2000	4000	8000	
24	72	58	66.5	63.5	64.5	60.5	57.5	51.5	
30	76	62.5	68	64.5	68	67.5	58.5	53	
36	77	67.5	70	70	70.5	66	60.5	55	
42	76	65	69	68.5	70	67.5	63	58.5	
48	77	68.5	68	71	70.5	65.5	61.5	55	
60	80	66.5	70	75.5	75.5	71.5	66.5	58	

### PHYSICAL DATA – WJA3

UNIT SIZE	24	30	36	42	48	60
NOMINAL CAPACITY (ton)	2	2.5	3	3.5	4	5
SHIPPING WEIGHT (lb)	286	298	329	352	354	402
(kg)	130	136	150	160	161	183
COMPRESSOR TYPE	RECIPROCATING			SCROLL		
REFRIGERANT	R-410A					
REFRIGERANT QUANTITY (lb)	3.3	4.0	5.3	5.9	5.0	6.1
QUANTITY (kg)	1.5	1.8	2.4	2.7	2.3	2.8
METERING DEVICE ID	Piston					TXV
ORIFICE OD (in.)	0.059	0.059	0.067	0.073	0.082	N/A
(mm)	1.50	1.50	1.70	1.85	2.08	
OUTDOOR COIL ROWS...FINS/in.	1...20	1...20	2...20	2...20	2...20	2...20
FACE AREA (sq. ft)	9.1	9.1	9.1	10.2	10.2	13.0
OUTDOOR FAN NOMINAL AIRFLOW (CFM)	2400	2400	2700	2700	2700	3000
DIAMETER (in.)	20	20	20	20	20	20
DIAMETER (mm)	508	508	508	508	508	508
MOTOR HP (RPM)	1/8 (800)	1/8 (800)	1/4 (1050)	1/4 (1050)	1/4 (1050)	1/3 (1100)
INDOOR COIL ROWS...FINS/in.	2...12	3...12	3...12	3...12	3...12	3...12
FACE AREA (sq. ft)	4.3	4.3	4.3	4.9	4.9	6.1
INDOOR BLOWER NOMINAL COOLING AIRFLOW (CFM)	800	1000	1200	1400	1600	1750
NOMINAL SIZE L x D (in.)	10 x 8	10 x 8	11 x 9	11 x 9	11 x 9	11 x 10
(mm)	254 x 203	254 x 203	279 x 229	279 x 229	279 x 229	279 x 254
MOTOR (HP)	1/3	1/3	1/2	1/2	3/4	1
HIGH-PRESSURE SWITCH (psig) CUTOUT	650 +/- 15					
RESET (AUTO)	420 +/- 25					
RETURN-AIR FILTERS THROWAWAY (in.)	20x20x1	20x24x1	24x30x1	24x36x1	24x36x1	
(mm)	508x508x25	508x610x25	610x762x25	610x914x25	610x914x25	

\*Required filter sizes shown are based on the AHRI (Air Conditioning, Heating and Refrigeration Institute) rated airflow at a velocity of 300 ft/min for throwaway type or 450 ft/min for high capacity type. Recommended filters are 1-in. (25.4 mm) thick.

# UNIT DIMENSIONS - WJA324-36

UNIT	ELECTRICAL CHARACTERISTICS		UNIT HEIGHT			CENTER OF GRAVITY IN [MM]		
	LBS.	KG.	A	X	Y	Z		
WJA324000K*OA	237	108	35-1/8 [765]	14 [356]	19 [483]	14 [356]		
WJA330000K*OA	249	113	35-1/8 [765]	14 [356]	19 [483]	14 [356]		
WJA336000K*OA	279	127	35-1/8 [765]	14 [356]	19 [483]	14 [356]		

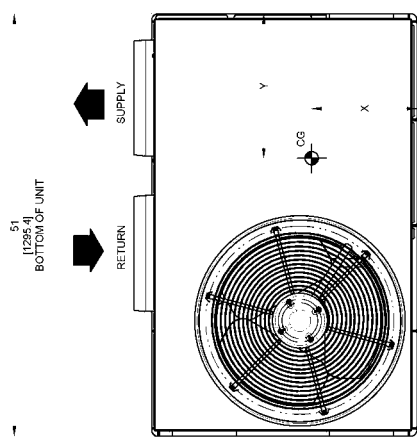
REQUIRED CLEARANCES TO COMBUSTIBLE MATL.  
 INCHES [MM]  
 TOP OF UNIT.....0  
 BOTTOM OF UNIT.....0  
 SIDE OF UNIT WITH DUCT OPENINGS.....0  
 SIDE OF UNIT OPPOSITE DUCT OPENINGS.....0

NEC REQUIRED CLEARANCES.  
 INCHES [MM]  
 BETWEEN UNITS, POWER ENTRY SIDE.....42.0 [1067]  
 UNIT AND BLOCK OF CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE.....42.0 [1067]

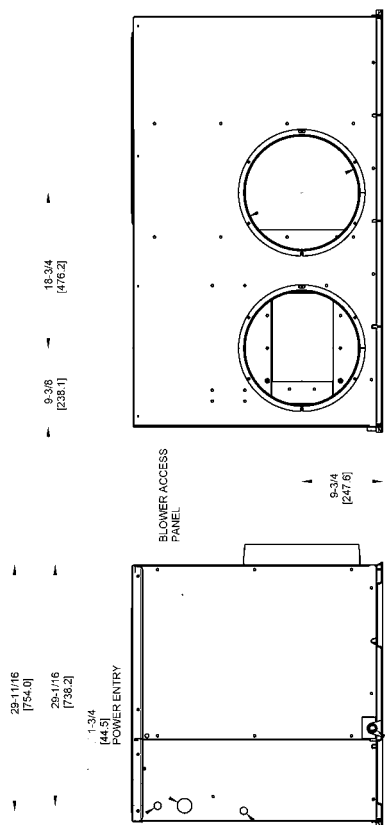
REQUIRED CLEARANCE FOR SERVICING INCHES [MM]  
 TOP OF UNIT.....36.0 [914]  
 SIDE OF UNIT OPPOSITE DUCT OPENINGS.....30.0 [762]  
 SIDE OF UNIT WITH POWER ENTRY (EXCEPT FOR NEC REQUIREMENTS).....30.0 [762]

NOTE: CLEARANCES MUST BE MAINTAINED TO PREVENT RECIRCULATION OF AIR FROM OUTDOOR FAN DISCHARGE. A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.

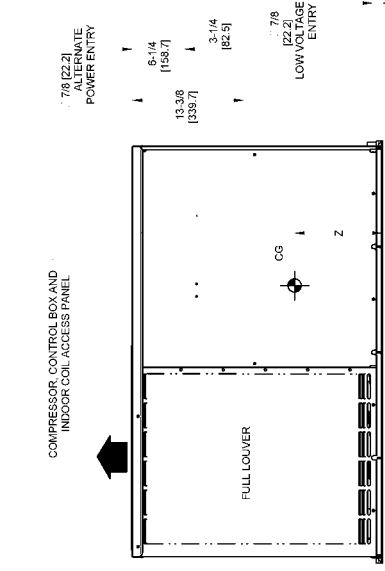
DIMENSIONS IN [ ] ARE IN MM



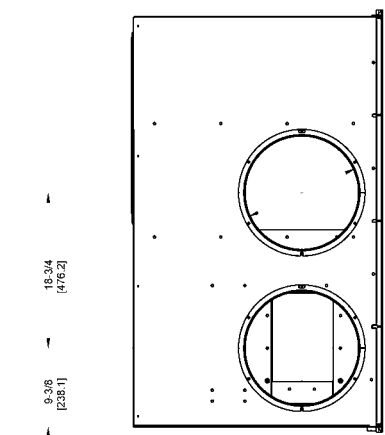
TOP VIEW



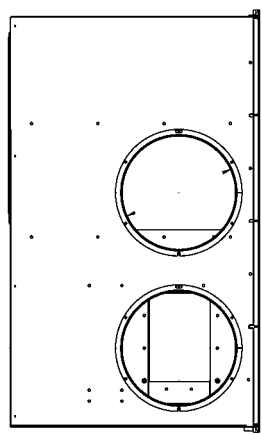
FRONT VIEW



RIGHT SIDE VIEW



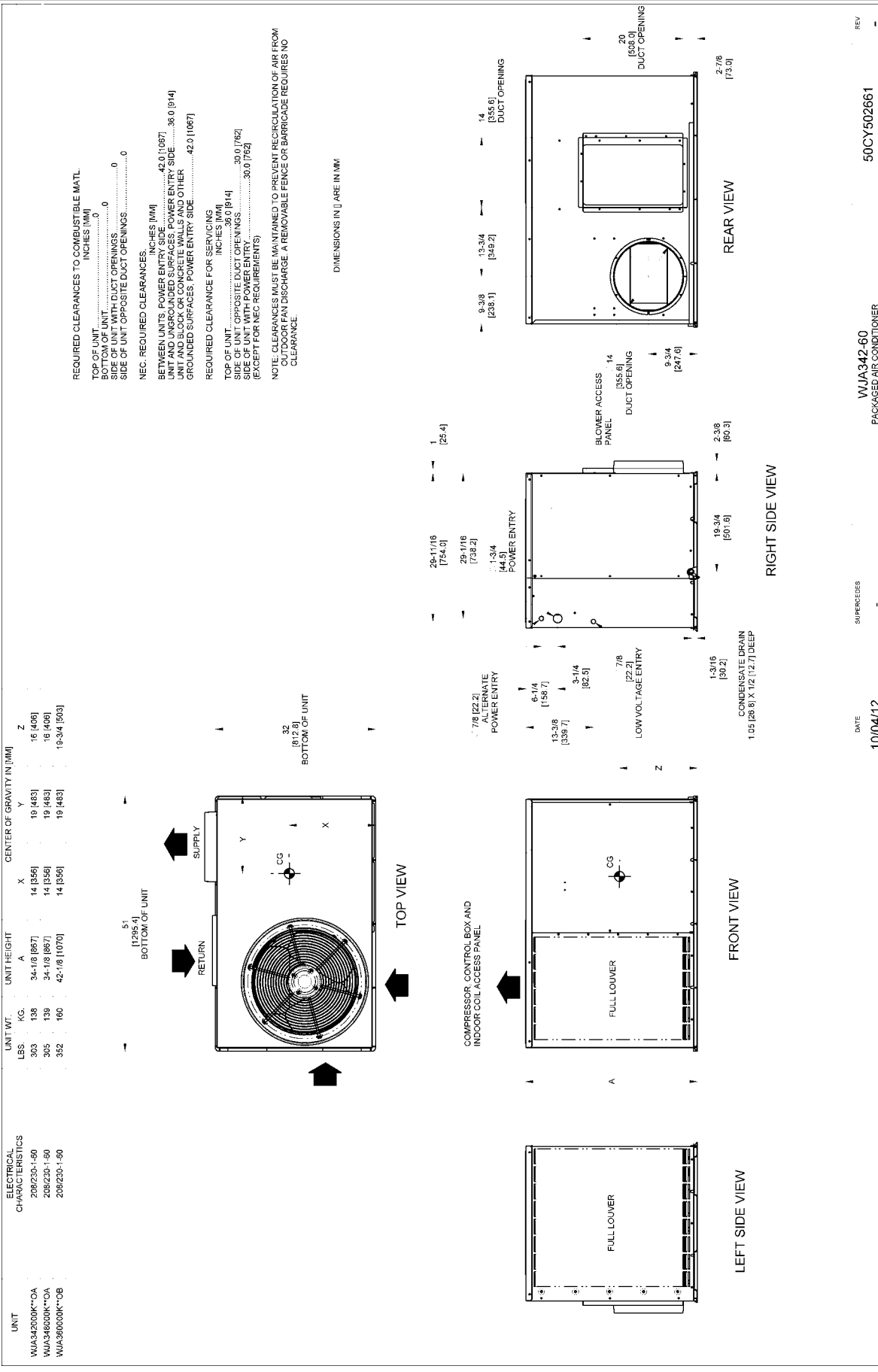
REAR VIEW



LEFT SIDE VIEW

DATE: 10/04/12  
 SUPERSEDES: WJA324-36  
 PACKAGED AIR CONDITIONER  
 REV: 50CY502660

# UNIT DIMENSIONS - WJA342-60



DATE 10/04/12 SUPERSEDES 50CY502661

REV -

## SELECTION PROCEDURE

### A. DETERMINE COOLING AND HEATING REQUIREMENTS AT DESIGN CONDITIONS.

Given:

Required Cooling Capacity (TC) . . . . . 34,000 Btuh  
Sensible Heat Capacity (SHC) . . . . . 25,000 Btuh  
Required Heating Capacity . . . . . 15,000 Btuh  
Outdoor Entering–Air Temperature . . . . . 95° F (35° C)  
Indoor Entering–Air Temperature 80° F edb (26.7° C);  
67° F (19.4° C) ewb  
Indoor–Air Quantity . . . . . 1200 CFM  
External Static Pressure . . . . . 0.20 IN. W.C.  
Electrical Characteristics (V–Ph–Hz) . . . . . 230–1–60

### B. SELECT UNIT BASED ON REQUIRED COOLING CAPACITY.

Enter Cooling Capacities table at condenser entering temperature of 95° F (35° C), indoor air entering at 1200 CFM and 67° F (19.4° C) ewb. The WJA336 unit provides a total cooling capacity of 34,500 Btuh and a sensible heat capacity of 26,040 Btuh.

For indoor–air temperature other than 80° F (26.7° C) edb, calculate sensible heat capacity correction, as required, using the formula found following the Cooling Capacities tables.

**NOTE:** Unit ratings are net capacities.

### C. SELECT ELECTRIC HEAT.

The required heating capacity is 15,000 Btuh (given). Determine the electric heat capacity in kW.

$$\frac{15,000 \text{ Btuh}}{3414 \text{ Btuh/kW}} = 3.8 \text{ kW of heat required}$$

Enter the Accessory Electric Heater table on page 4 for 208/230, single–phase, WJA336 unit. The 5–kW heater at 240v most closely satisfies the heating required. To calculate kW at 230 V, multiply the heater kW by multiplication factor 0.92 found in the Multiplication Factors table on page 4.

$$5 \text{ kW} \times 0.92 = 4.6 \text{ kW}$$

$$4.6 \text{ kW} \times 3414 \text{ Btuh/kW} = 15,704 \text{ Btuh}$$

### D. DETERMINE FAN SPEED AND POWER REQUIREMENTS AT DESIGN CONDITIONS.

Before entering the air delivery tables, calculate the total static pressure required. From the given, Filter Pressure Drop table, and the Accessory Electric Heat Pressure Drop table find:

External static pressure	0.20 IN. W.C.
Filter	0.10 IN. W.C.
Electric Heat	<u>0.04</u> IN. W.C.
Total static pressure	0.34 IN. W.C.

Enter the table for Dry Coil Air Delivery — Horizontal Discharge. At 0.4 IN. W.C. external static pressure and medium speed, the motor delivers 1236 CFM.

# PERFORMANCE DATA

## Cooling Capacities

### WJA324

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		
700 / 0.08	57 (14)	21.75	21.75	1.68	20.46	20.46	1.79	19.11	19.11	1.88	17.51	17.51	1.97	15.70	15.70	2.05	13.85	13.85	2.13
	62 (17)	22.93	20.43	1.69	21.23	19.61	1.80	19.52	18.78	1.89	17.54	17.54	1.97	15.73	15.73	2.05	13.87	13.87	2.13
	63* (17)	23.48	16.83	1.69	21.76	16.02	1.80	19.98	15.21	1.90	17.79	14.23	1.97	15.22	13.13	2.03	12.66	12.02	2.09
	67 (19)	25.82	17.68	1.72	24.03	16.90	1.84	22.20	16.11	1.95	20.19	15.27	2.04	17.47	14.17	2.10	14.80	13.11	2.16
	72 (22)	28.85	14.82	1.72	27.06	14.10	1.86	25.15	13.35	1.99	23.20	12.60	2.11	20.70	11.65	2.20	17.89	10.63	2.26
800 / 0.10	57 (14)	22.85	22.85	1.70	21.49	21.49	1.81	20.12	20.12	1.92	18.49	18.49	2.01	16.57	16.57	2.09	14.64	14.64	2.17
	62 (17)	23.61	21.88	1.71	21.90	21.04	1.82	20.21	20.15	1.92	18.52	18.52	2.01	16.60	16.60	2.09	14.67	14.67	2.17
	63* (17)	24.16	17.84	1.71	22.38	17.02	1.83	20.53	16.20	1.93	18.30	15.22	2.00	15.65	14.09	2.06	13.07	12.94	2.12
	67 (19)	26.56	18.75	1.73	24.70	17.97	1.86	22.80	17.17	1.98	20.74	16.32	2.07	17.96	15.21	2.13	15.23	14.13	2.19
	72 (22)	29.53	15.47	1.73	27.69	14.75	1.87	25.78	14.01	2.01	23.74	13.26	2.13	21.28	12.36	2.23	18.33	11.28	2.29
900 / 0.11	57 (14)	23.82	23.82	1.72	22.41	22.41	1.84	20.98	20.98	1.95	19.36	19.36	2.04	17.32	17.32	2.12	15.32	15.32	2.21
	62 (17)	24.21	23.22	1.73	22.54	22.34	1.84	21.01	21.01	1.95	19.39	19.39	2.05	17.35	17.35	2.12	15.34	15.34	2.21
	63* (17)	24.70	18.77	1.73	22.87	17.94	1.85	20.97	17.11	1.95	18.73	16.14	2.02	16.03	14.99	2.08	13.55	13.55	2.15
	67 (19)	27.13	19.72	1.74	25.23	18.95	1.88	23.28	18.14	2.00	21.15	17.29	2.10	18.35	16.19	2.15	15.60	15.06	2.21
	72 (22)	30.06	16.04	1.74	28.19	15.34	1.89	26.23	14.59	2.03	24.15	13.85	2.15	21.74	12.99	2.25	18.72	11.91	2.32

See Legend and Notes on page 11.

### WJA330

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		
875 / 0.08	57 (14)	27.70	27.70	2.10	26.09	26.09	2.24	24.54	24.54	2.39	22.86	22.86	2.53	20.94	20.94	2.68	18.67	18.67	2.78
	62 (17)	28.87	26.13	2.11	26.87	25.20	2.25	24.86	24.24	2.39	22.90	22.90	2.53	21.01	21.01	2.68	18.71	18.71	2.78
	63* (17)	29.43	21.34	2.12	27.40	20.44	2.26	25.31	19.50	2.40	23.09	18.54	2.53	20.46	17.41	2.65	17.35	16.07	2.71
	67 (19)	31.94	22.16	2.16	29.92	21.34	2.31	27.79	20.47	2.45	25.55	19.56	2.59	23.11	18.62	2.73	20.00	17.41	2.85
	72 (22)	34.89	18.05	2.22	32.92	17.29	2.37	30.78	16.48	2.52	28.49	15.63	2.66	26.08	14.75	2.81	23.50	13.86	2.94
1000 / 0.09	57 (14)	29.04	29.04	2.14	27.44	27.44	2.28	25.75	25.75	2.43	24.02	24.02	2.58	22.11	22.11	2.73	19.72	19.72	2.86
	62 (17)	29.67	28.01	2.15	27.71	27.09	2.29	25.79	25.79	2.43	24.06	24.06	2.58	22.15	22.15	2.73	19.75	19.75	2.86
	63* (17)	30.14	22.60	2.16	28.07	21.72	2.29	25.91	20.79	2.43	23.64	19.84	2.57	21.07	18.77	2.70	17.89	17.39	2.76
	67 (19)	32.62	23.42	2.20	30.57	22.64	2.34	28.40	21.80	2.49	26.09	20.91	2.63	23.63	19.99	2.76	20.57	18.84	2.89
	72 (22)	35.51	18.76	2.26	33.50	18.03	2.41	31.30	17.23	2.55	28.96	16.39	2.70	26.49	15.52	2.84	23.87	14.64	2.97
1125 / 0.10	57 (14)	30.14	30.14	2.18	28.51	28.51	2.33	26.77	26.77	2.48	24.95	24.95	2.63	22.98	22.98	2.77	20.62	20.62	2.91
	62 (17)	30.38	29.71	2.18	28.50	28.50	2.33	26.81	26.81	2.48	24.99	24.99	2.63	23.01	23.01	2.77	20.66	20.66	2.92
	63* (17)	30.67	23.75	2.19	28.57	22.91	2.33	26.36	22.00	2.47	24.07	21.06	2.60	21.58	20.02	2.74	18.42	18.42	2.82
	67 (19)	33.13	24.56	2.23	31.04	23.83	2.37	28.85	23.02	2.52	26.47	22.15	2.66	24.02	21.25	2.80	21.06	20.15	2.93
	72 (22)	35.96	19.38	2.29	33.93	18.68	2.44	31.69	17.89	2.59	29.29	17.07	2.73	26.79	16.21	2.88	24.15	15.34	3.01

See Legend and Notes on page 11.

# COOLING CAPACITIES (CONT)

## WJA336

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total
1050 / 0.07	57 (14)	33.50	33.50	2.56	31.67	31.67	2.73	29.79	29.79	2.90	27.87	27.87	3.09	25.50	25.50	3.24	22.74	22.74	3.38
	62 (17)	34.88	30.87	2.59	32.52	29.76	2.75	30.15	28.64	2.91	27.89	27.89	3.08	25.55	25.55	3.24	22.79	22.79	3.38
	63* (17)	35.66	25.30	2.59	33.23	24.20	2.76	30.72	23.10	2.93	28.18	22.01	3.10	24.88	20.62	3.21	21.13	19.06	3.31
	67 (19)	38.95	26.43	2.62	36.53	25.45	2.81	33.96	24.41	3.00	31.27	23.33	3.19	28.29	22.15	3.35	24.34	20.62	3.44
	72 (22)	42.84	21.73	2.66	40.56	20.88	2.86	38.04	19.94	3.05	35.31	18.94	3.25	32.43	17.90	3.44	29.05	16.73	3.63
1200 / 0.08	57 (14)	35.21	35.21	2.61	33.29	33.29	2.78	31.31	31.31	2.96	29.28	29.28	3.15	26.98	26.98	3.31	24.03	24.03	3.45
	62 (17)	35.96	33.14	2.61	33.61	32.04	2.79	31.34	31.34	2.96	29.33	29.33	3.15	27.03	27.03	3.32	24.07	24.07	3.45
	63* (17)	36.64	26.87	2.62	34.15	25.80	2.80	31.52	24.66	2.96	28.84	23.54	3.13	25.63	22.20	3.25	21.82	20.59	3.36
	67 (19)	39.91	28.02	2.64	37.47	27.09	2.83	34.80	26.04	3.03	32.03	24.96	3.21	29.00	23.82	3.39	25.04	22.28	3.49
	72 (22)	43.68	22.64	2.68	41.37	21.83	2.88	38.79	20.91	3.08	36.02	19.92	3.28	33.06	18.88	3.47	29.80	17.78	3.65
1350 / 0.10	57 (14)	36.67	36.67	2.63	34.69	34.69	2.82	32.64	32.64	3.01	30.51	30.51	3.21	28.17	28.17	3.38	25.11	25.11	3.51
	62 (17)	36.96	35.26	2.63	34.70	34.70	2.82	32.69	32.69	3.02	30.56	30.56	3.21	28.21	28.21	3.39	25.16	25.16	3.51
	63* (17)	37.41	28.32	2.64	34.86	27.26	2.82	32.18	26.14	3.00	29.45	25.01	3.17	26.27	23.68	3.29	22.47	22.36	3.40
	67 (19)	40.64	29.47	2.66	38.16	28.58	2.86	35.47	27.57	3.05	32.62	26.49	3.24	29.60	25.37	3.42	25.69	23.84	3.54
	72 (22)	44.28	23.43	2.70	41.98	22.67	2.90	39.36	21.78	3.10	36.54	20.81	3.30	33.54	19.78	3.50	30.27	18.71	3.68

See Legend and Notes on page 9.

## WJA342

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB °F (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total	Sens		Total
1225 / 0.11	57 (14)	39.06	39.06	2.87	36.97	36.97	3.13	34.88	34.88	3.38	32.62	32.62	3.61	29.51	29.51	3.81	26.60	26.60	4.02
	62 (17)	40.61	36.69	2.89	37.94	35.42	3.16	35.31	34.13	3.40	32.64	32.64	3.61	29.57	29.57	3.81	26.65	26.65	4.03
	63* (17)	41.47	29.95	2.89	38.74	28.71	3.17	35.92	27.45	3.41	32.91	26.13	3.62	28.69	24.32	3.77	24.73	22.64	3.93
	67 (19)	45.26	31.27	2.91	42.51	30.12	3.20	39.63	28.95	3.47	36.63	27.72	3.73	32.67	26.16	3.95	28.47	24.50	4.11
	72 (22)	49.83	25.62	2.94	47.14	24.58	3.25	44.25	23.48	3.55	41.16	22.35	3.82	37.98	21.16	4.08	33.92	19.76	4.34
1400 / 0.12	57 (14)	40.98	40.98	2.93	38.81	38.81	3.20	36.61	36.61	3.46	34.26	34.26	3.71	31.14	31.14	3.92	28.04	28.04	4.13
	62 (17)	41.80	39.32	2.93	39.17	38.04	3.20	36.62	36.62	3.46	34.32	34.32	3.72	31.20	31.20	3.92	28.07	28.07	4.13
	63* (17)	42.51	31.75	2.93	39.70	30.51	3.21	36.82	29.27	3.46	33.72	27.95	3.70	29.50	26.16	3.84	25.47	24.42	4.00
	67 (19)	46.29	33.08	2.95	43.47	31.98	3.24	40.50	30.80	3.52	37.43	29.59	3.78	33.59	28.17	4.02	29.26	26.44	4.19
	72 (22)	50.78	26.66	2.98	48.03	25.64	3.30	45.06	24.55	3.59	41.93	23.41	3.88	38.64	22.25	4.14	34.69	20.95	4.39
1575 / 0.14	57 (14)	42.58	42.58	2.96	40.34	40.34	3.25	38.02	38.02	3.52	35.62	35.62	3.78	32.52	32.52	4.02	29.27	29.27	4.23
	62 (17)	42.89	41.73	2.97	40.34	40.34	3.25	38.08	38.08	3.52	35.68	35.68	3.78	32.57	32.57	4.02	29.32	29.32	4.23
	63* (17)	43.33	33.41	2.97	40.45	32.19	3.25	37.48	30.93	3.51	34.40	29.65	3.75	30.18	27.87	3.91	26.18	25.96	4.07
	67 (19)	47.06	34.74	2.98	44.19	33.68	3.29	41.17	32.52	3.57	38.07	31.33	3.83	34.35	30.00	4.07	29.94	28.26	4.26
	72 (22)	51.47	27.57	3.02	48.69	26.59	3.34	45.66	25.51	3.64	42.47	24.38	3.92	39.14	23.21	4.19	35.27	22.02	4.44

See Legend and Notes on page 9



# COOLING CAPACITIES (CONT)

## WJA348

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES $t_{db}$ (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB $t_{db}$ (°C)	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens
1400 / 0.07	57 (14)	44.72	44.72	3.31	42.80	42.80	3.70	40.34	40.34	4.07	37.29	37.29	4.46	34.29	34.29	4.92	31.13	31.13	5.43
	62 (17)	46.27	41.01	3.32	43.87	39.88	3.71	40.95	38.51	4.09	37.32	37.32	4.46	34.35	34.35	4.92	31.18	31.18	5.44
	63* (17)	47.12	33.38	3.32	44.67	32.29	3.72	41.71	31.00	4.11	37.60	29.23	4.46	33.61	27.56	4.89	29.46	25.83	5.37
	67 (19)	50.88	34.65	3.33	48.33	33.60	3.75	45.63	32.52	4.17	41.64	30.97	4.60	37.50	29.34	5.02	33.25	27.70	5.51
	72 (22)	55.64	28.13	3.36	53.02	27.15	3.79	50.28	26.13	4.23	47.30	25.05	4.70	42.98	23.56	5.21	38.57	21.98	5.73
1600 / 0.08	57 (14)	46.63	46.63	3.36	44.60	44.60	3.76	42.36	42.36	4.19	39.06	39.06	4.56	35.87	35.87	5.02	32.58	32.58	5.54
	62 (17)	47.42	43.87	3.36	45.04	42.69	3.77	42.38	42.38	4.19	39.12	39.12	4.57	35.93	35.93	5.02	32.63	32.63	5.54
	63* (17)	48.12	35.36	3.37	45.58	34.25	3.77	42.75	33.07	4.19	38.49	31.28	4.54	34.37	29.56	4.96	30.14	27.76	5.45
	67 (19)	51.87	36.67	3.38	49.26	35.66	3.80	46.50	34.58	4.23	42.57	33.17	4.68	38.33	31.52	5.11	33.97	29.82	5.59
	72 (22)	56.59	29.32	3.41	53.87	28.35	3.85	51.04	27.32	4.29	48.05	26.26	4.76	43.83	24.90	5.27	39.27	23.31	5.81
1750 / 0.09	57 (14)	47.82	47.82	3.40	45.73	45.73	3.80	43.48	43.48	4.23	40.18	40.18	4.64	36.88	36.88	5.09	33.51	33.51	5.61
	62 (17)	48.19	45.84	3.40	45.87	45.51	3.80	43.54	43.54	4.23	40.24	40.24	4.64	36.93	36.93	5.09	33.56	33.56	5.61
	63* (17)	48.71	36.72	3.40	46.10	35.62	3.81	43.27	34.48	4.23	39.02	32.73	4.59	34.85	30.96	5.02	30.62	29.10	5.50
	67 (19)	52.45	38.10	3.42	49.79	37.10	3.84	47.00	36.04	4.27	43.18	34.75	4.73	38.83	33.05	5.16	34.44	31.30	5.65
	72 (22)	57.14	30.14	3.45	54.37	29.18	3.88	51.49	28.16	4.33	48.47	27.09	4.80	44.34	25.84	5.31	39.72	24.30	5.87

## WJA360

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES $t_{db}$ (°C)																	
		75 (24)			85 (29)			95 (35)			105 (41)			115 (46)			125 (52)		
		CFM / BF	EWB	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh		Total Sys KW	Capacity MBtuh
Total	Sens			Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens
1750 / 0.07	57 (14)	56.20	56.20	4.13	53.53	53.53	4.52	50.72	50.72	4.96	47.75	47.75	5.46	44.62	44.62	6.02	41.35	41.35	6.66
	62 (17)	57.67	52.85	4.15	54.51	50.86	4.54	51.26	48.81	4.97	47.91	46.63	5.46	44.67	44.67	6.03	41.40	41.40	6.66
	63* (17)	58.61	42.84	4.16	55.35	41.02	4.55	51.97	39.17	4.98	48.43	37.29	5.47	44.69	35.35	6.02	40.89	33.42	6.65
	67 (19)	62.66	44.31	4.22	59.12	42.46	4.61	55.50	40.60	5.05	51.67	38.69	5.53	47.68	36.74	6.09	43.60	34.80	6.71
	72 (22)	68.32	35.70	4.31	64.43	33.97	4.70	60.38	32.21	5.14	56.22	30.45	5.63	51.86	28.64	6.17	47.41	26.83	6.79
2000 / 0.08	57 (14)	58.21	58.21	4.22	55.39	55.39	4.61	52.41	52.41	5.05	49.26	49.26	5.55	45.94	45.94	6.11	42.49	42.49	6.74
	62 (17)	58.85	56.46	4.23	55.65	54.31	4.62	52.44	52.44	5.05	49.31	49.31	5.55	45.99	45.99	6.11	42.53	42.53	6.75
	63* (17)	59.63	45.33	4.24	56.22	43.45	4.62	52.72	41.55	5.06	49.04	39.60	5.54	45.22	37.62	6.09	41.33	35.63	6.72
	67 (19)	63.69	46.98	4.30	60.00	45.07	4.69	56.24	43.15	5.12	52.30	41.19	5.61	48.19	39.19	6.16	44.02	37.19	6.78
	72 (22)	69.39	37.33	4.39	65.35	35.56	4.78	61.19	33.77	5.21	56.82	31.93	5.70	52.39	30.10	6.25	47.82	28.26	6.86
2250 / 0.09	57 (14)	59.89	59.89	4.30	56.91	56.91	4.70	53.77	53.77	5.14	50.48	50.48	5.63	47.00	47.00	6.19	43.39	43.39	6.82
	62 (17)	59.90	59.90	4.30	56.97	56.97	4.70	53.84	53.84	5.14	50.53	50.53	5.64	47.05	47.05	6.19	43.43	43.43	6.82
	63* (17)	60.36	47.68	4.31	56.87	45.75	4.69	53.28	43.81	5.13	49.51	41.81	5.61	45.63	39.77	6.16	41.65	37.68	6.79
	67 (19)	64.44	49.52	4.37	60.65	47.55	4.76	56.80	45.59	5.19	52.76	43.58	5.68	48.58	41.52	6.23	44.33	39.42	6.84
	72 (22)	70.18	38.87	4.47	66.04	37.06	4.86	61.76	35.23	5.29	57.28	33.35	5.77	52.75	31.50	6.31	48.07	29.61	6.92

\* At 75° F entering dry bulb – Tennessee Valley Authority (TVA) rating conditions; all others at 80° F dry bulb.

### LEGEND

BF — Bypass Factor

Ewb — Entering Wet-Bulb

kW — Total Unit Power Input

SHC — Sensible Heat Capacity (1000 Btuh)

TC — Total Capacity (1000 Btuh) (net)

### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{Sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{wb} = \text{Wet-bulb temperature corresponding to enthalpy air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil. The SHC is based on 80° F (26.7°C) edb temperature of air entering indoor coil.

Below 80° F (26.7°C) edb, subtract (corr factor x cfm) from SHC.

Above 80° F (26.7°C) edb, add (corr factor x cfm) to SHC.

Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

Filter Pressure Drop (IN. W.C.)																			
UNIT SIZE WJA3	FILTER SIZE in. (mm)	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
24	20x20x1 (508x508 x25)	0.06	0.07	0.08	0.10	0.12	0.13	0.14	0.15	—	—	—	—	—	—	—	—	—	—
30	20x24x1 (508x610 x25)	—	—	—	0.08	0.09	0.10	0.11	0.13	0.14	0.15	0.16	—	—	—	—	—	—	—
36 – 42	24x30x1 (610x762 x25)	—	—	—	0.04	0.05	0.06	0.07	0.07	0.08	0.09	0.10	—	—	—	—	—	—	—
48 – 60	24x36x1 (610x914 x25)	—	—	—	—	—	—	—	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.14

Accessory Electric Heat Pressure Drop (IN. W.C.)								
HEATER kW	CFM							
	800	1000	1200	1400	1600	1800	2000	2200
5–20	0.033	0.037	0.042	0.047	0.052	0.060	0.067	0.075

Wet Coil Delivery*— (Deduct 10% for 208-Volt Operation)												
UNIT WJA3	SPEED TAP	AIR DELIVERY <sup>2</sup>	EXTERNAL STATIC PRESSURE (in. W.C.)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
24	1	CFM	965	818	777	731	670	617	563	489	451	391
	2	CFM	1003	921	890	850	809	756	700	659	597	539
	3	CFM	1103	1068	1034	996	962	930	892	821	791	742
30	1	CFM	1052	1018	984	943	914	879	833	795	732	678
	2	CFM	1141	1107	1069	1036	1006	974	932	899	856	784
	3	CFM	1246	1213	1181	1144	1108	1078	1043	1015	973	931
36	1	CFM	1281	1225	1178	1142	1098	1053	1008	935	878	840
	2	CFM	1359	1321	1278	1236	1201	1160	1109	1068	992	941
	3	CFM	1476	1441	1403	1366	1323	1289	1245	1201	1159	1117
42	1	CFM	1453	1408	1373	1337	1295	1255	1215	1177	1134	1068
	2	CFM	1544	1507	1475	1436	1397	1359	1326	1290	1246	1201
	3	CFM	1614	1575	1542	1509	1467	1430	1395	1358	1323	1267
48	1	CFM	1657	1625	1590	1554	1517	1486	1448	1417	1381	1340
	2	CFM	1707	1673	1644	1614	1586	1549	1515	1479	1449	1407
	3	CFM	1931	1900	1870	1840	1809	1778	1749	1714	1683	1646
60	1	CFM	1837	1798	1753	1716	1677	1637	1590	1549	1497	1445
	2	CFM	1910	1872	1835	1795	1748	1711	1673	1623	1568	1525
	3	CFM	2098	2065	2032	1996	1956	1917	1877	1839	1798	1753

\*Air delivery values are based on operating voltage of 230v, wet coil, without filter or electric heater. Deduct filter and electric heater pressure drops to obtain static pressure available for ducting.

NOTES:

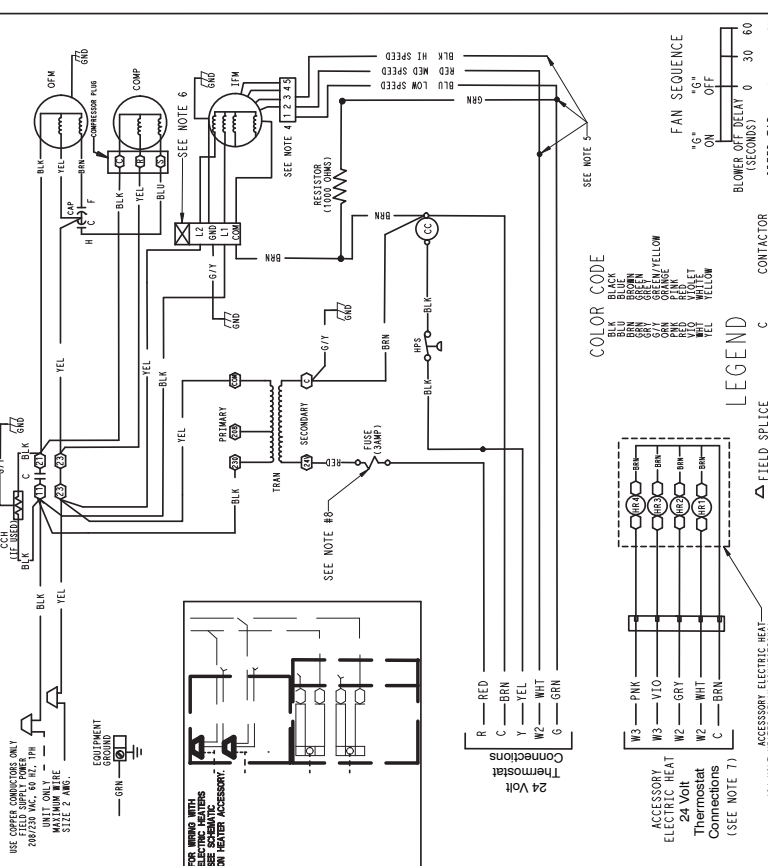
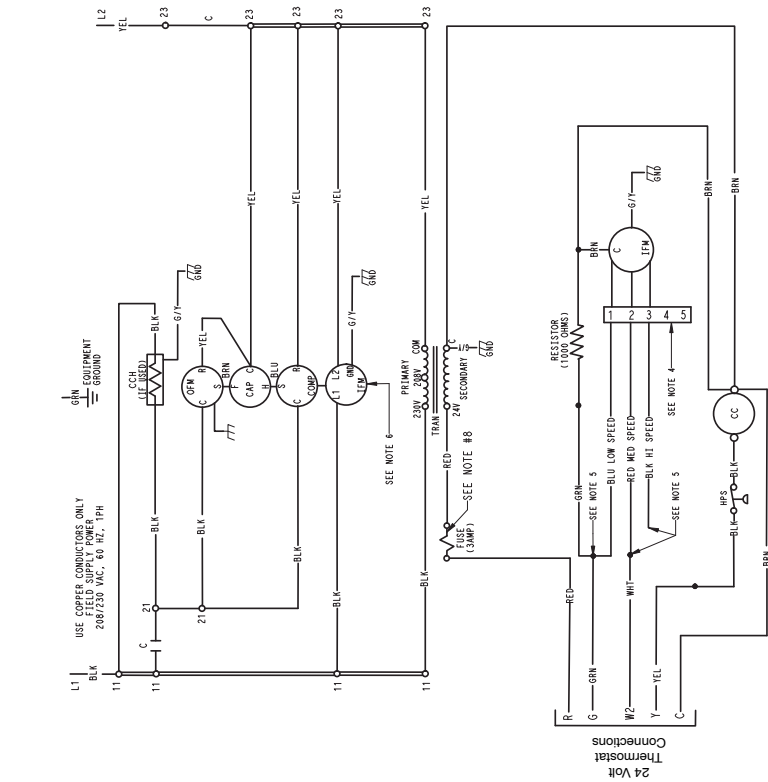
1. Do not operate the unit at a cooling airflow that is less than 350 cfm for each 12,000 Btuh of rated cooling capacity. Evaporator coil frosting may occur at airflows below this point.

2. Standard Cubic Feet per Minute.

# TYPICAL WIRING SCHEMATIC 208/230-1-60

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



**COLOR CODE**

- BLK BLACK
- BRN BROWN
- GRN GREEN
- ORN ORANGE
- GY GRAY
- WHT WHITE
- YK YELLOW
- RED RED
- BLU BLUE
- PNK PINK
- VIO VIOLET
- WLT WHEAT
- TRN TRANSPARENT

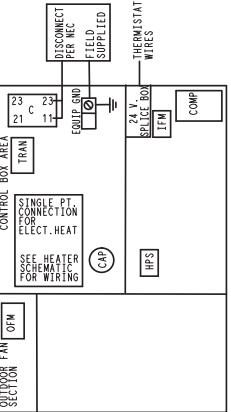
**LEGEND**

- △ FIELD SPLICE
- TERMINAL (UNMARKED)
- CONTACTOR
- CAP CAPACITOR
- CC CONTACTOR COIL
- COMP COMPRESSOR
- GND GROUND
- HPS HIGH PRESSURE SWITCH
- IFRM INDOOR FAN MOTOR
- OFM OUTDOOR FAN MOTOR
- TRN TRANSFORMER

**NOTES:**

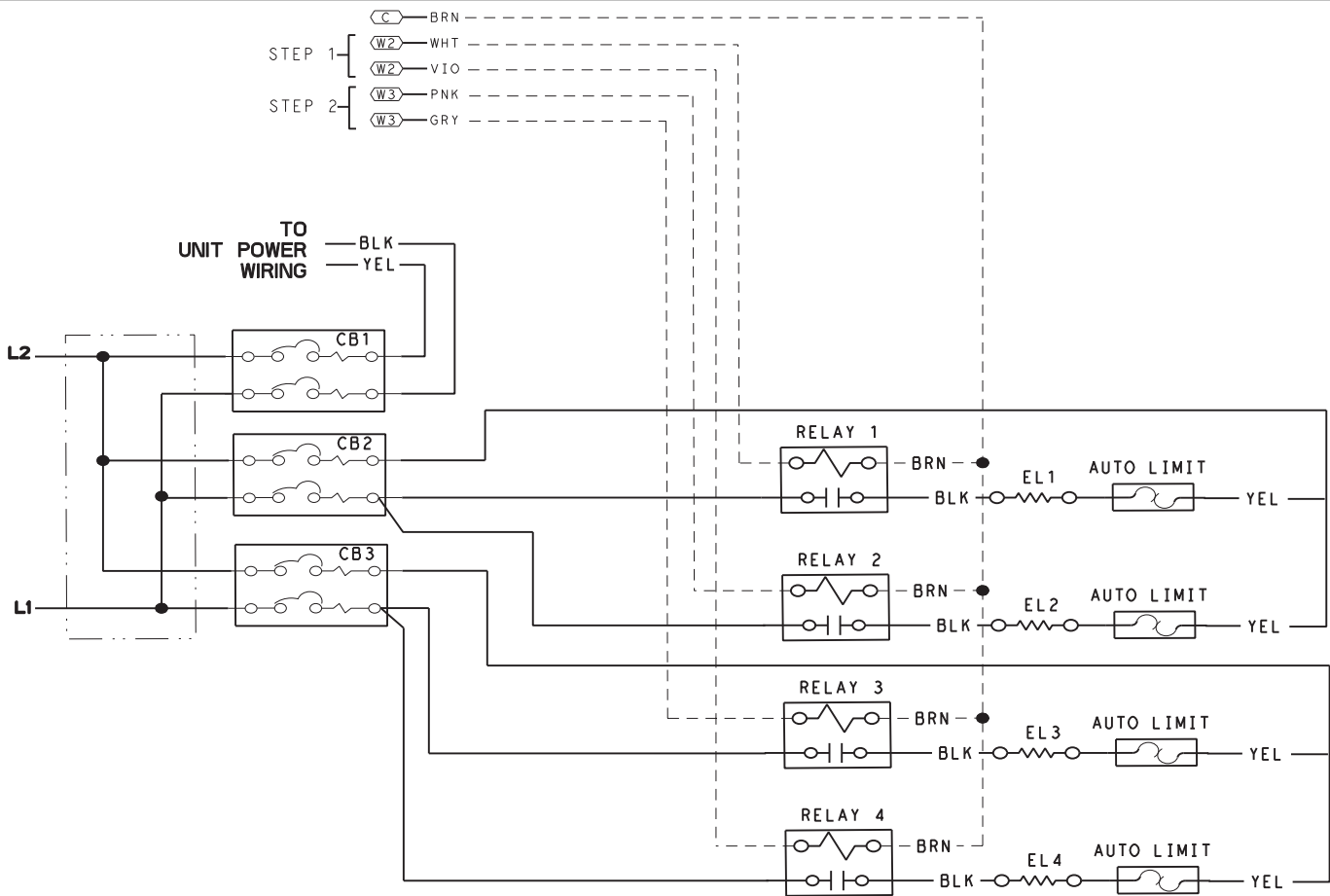
1. ANY OF THE ORIGINAL WIRES FINISHED ARE TO BE REPLACED WITH THE SAME TYPE OF WIRE OR IT'S EQUIVALENT.
2. USE CONDUCTORS SUITABLE FOR AT LEAST 75°C (167°F).
3. FOR FIELD INSTALLATION, SELECTOR PLUS CHANGING OF SPEED TAPS MAY BE REQUIRED.
4. WHEN USING FIELD INSTALLED ELECTRIC HEATERS, CONSULT INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED TAP SETTING.
5. SPEED TAP CHANGES SHOULD BE MADE IN SINGLE STAGE.
6. MULTI-STAGE HEATERS SHOW SINGLE STAGE.
7. HEATERS HAVE WHITE AND BROWN WIRES ONLY.
8. FUSE MANUFACTURED BY LITTELFUSE, P/N 257003.

**UNIT COMPONENT ARRANGEMENT**



5075-500775 A

# TYPICAL FIELD WIRING



Note: 20 kW shown. Smaller heater have fewer elements and controls.  
 Single-Phase Accessory Electric Heater Wiring

## Electrical Data

UNIT WJA3	V-PH-HZ	RANGE				OFM	IFM	NOMINAL	FLA		MCA		MOCP **
		MIN	MAX	RLA	LRA	FLA	FLA	kW *	208	240	208	230	
24	208/230-1-60	197	253	8.5	43.0	0.9	2.8	-/-	-	-	14.3	14.3	20
								3.8/5	18.0	20.8	26.0	29.5	30/30
								5.6/7.5	27.0	31.3	37.3	42.6	40/45
								7.5/10	36.1	41.7	48.6	55.6	50/60
30	208/230-1-60	197	253	10.9	54.0	0.9	2.8	-/-	-	-	17.4	17.4	25
								3.8/5	18.0	20.8	26.0	29.5	30/30
								5.6/7.5	27.0	31.3	37.3	42.6	40/45
								7.5/10	36.1	41.7	48.6	55.6	50/60
36	208/230-1-60	197	253	13.1	74.0	1.5	4.1	-/-	-	-	22.0	22.0	30
								3.8/5	18.0	20.8	27.6	31.1	30/35
								5.6/7.5	27.0	31.3	38.9	44.3	40/45
								7.5/10	36.1	41.7	50.3	57.3	60/60
42	208/230-1-60	197	253	15.7	88.0	1.5	4.1	-/-	-	-	25.2	25.2	40
								3.8/5	18.0	20.8	27.6	31.1	40
								5.6/7.5	27.0	31.3	38.9	44.3	40/45
								7.5/10	36.1	41.7	50.3	57.3	60/60
48	208/230-1-60	197	253	21.8	117.0	1.5	6.0	-/-	-	-	34.8	34.8	50
								3.8/5	18.0	20.8	34.8	34.8	50/50
								5.6/7.5	27.0	31.3	41.3	46.6	50/50
								7.5/10	36.1	41.7	52.6	59.6	60/60
60	208/230-1-60	197	253	26.4	134	1.9	7.6	-/-	-	-	42.5	42.5	60
								3.8/5	18.1	20.8	42.5	42.5	60/60
								5.4/7.2	25.9	30	42.5	47	60/60
								7.5/10	36.1	41.7	54.6	61.6	60/70
								11.3/15	54.2	62.5	77.3	87.6	80/90
								15/20	72.1	83.3	99.8	113.6	100/125

\* kW @ 208/240

\*\* HACR Type Circuit breaker

### LEGEND

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

MOCP – Maximum Overcurrent Protection

RLA – Rated Load Amps

### NOTES:

1. In compliance with NEC (National Electrical Code) requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be Power Supply fuse. The CGA (Canadian Gas Association) units may be fuse or circuit breaker.

2. Minimum wire size is based on 60°C copper wire. If other than 60°C wire is used, or if length exceeds wire length in table, determine size from NEC.

\*Heater capacity (kW) based on heater voltage of 208v & 240v. If power distribution voltage to unit varies from rated heater voltage, heater kW will vary accordingly.

## OPERATING SEQUENCE

### Cooling Operation

With a call for cooling (Y/G), the contactor is energized which brings on the compressor and outdoor fan. The indoor fan is also energized. When the cooling demand is met, Y and G are de-energized shutting off the contactor. The indoor fan stops after a 60 second delay.

### Heating Operation

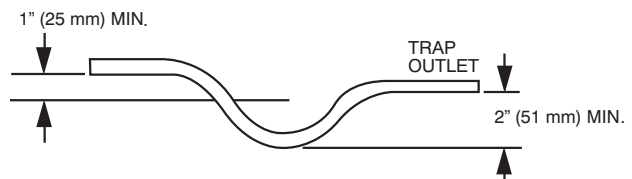
With a call for heating (W2), the auxiliary or electric heat energizes along with the indoor blower. In case of staged heating, W3 is energized if the demand is not met. The highest airflow selected is run while the electric heat is in operation. When heating demand is met, W3 and W2 sequentially de-energize shutting off the indoor fan and the electric heater.

### Continuous Fan

With the continuous indoor fan option selected on the thermostat, G is continuously energized keeping the indoor fan running at all times.

## APPLICATION DATA

Condensate trap — A 2-in. (51 mm) condensate trap must be field supplied.



A08001

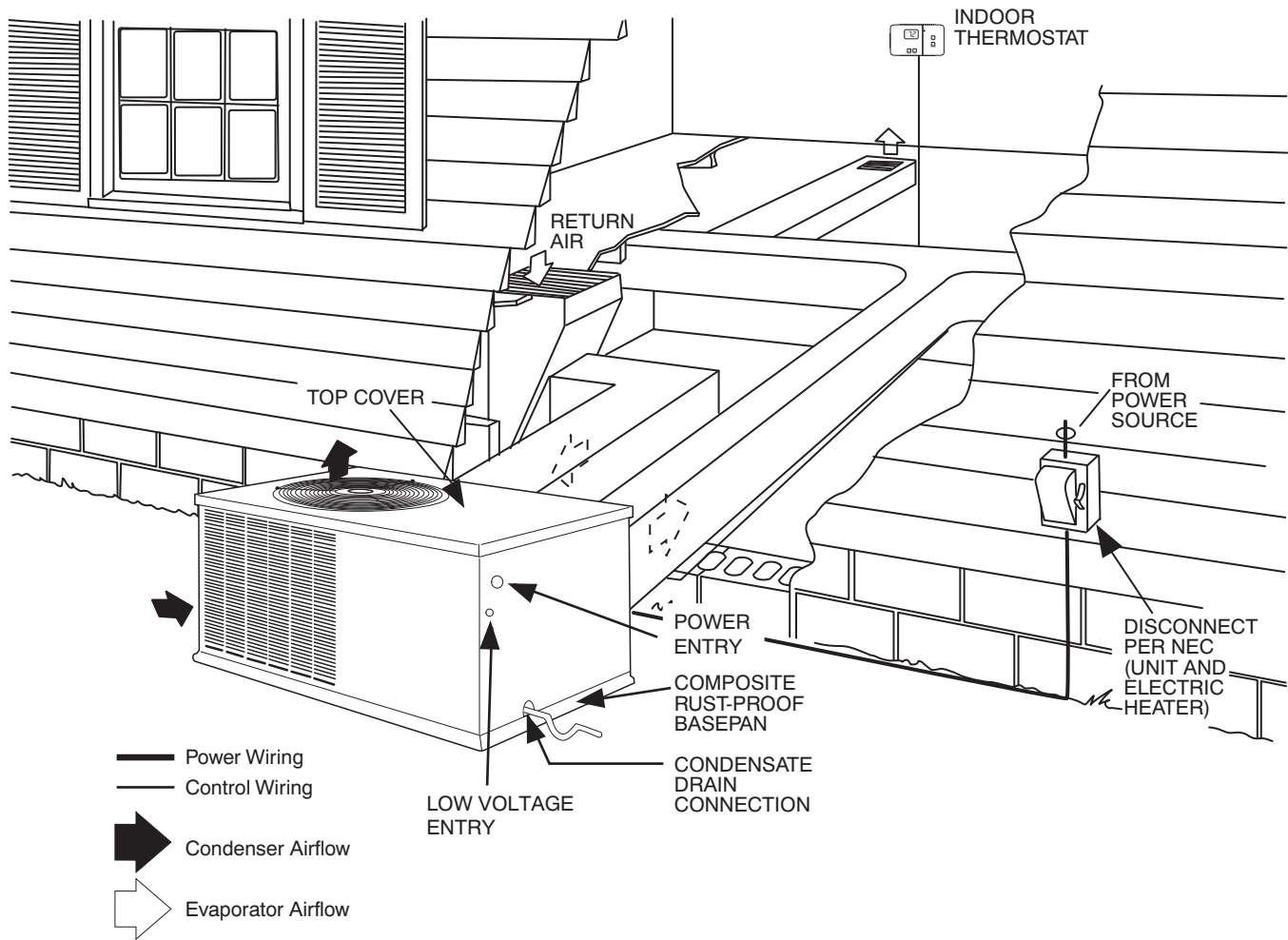
**Maximum cooling airflow** — To minimize the possibility of condensate blow-off from the evaporator, airflow through the units should not exceed 450 CFM/ton.

**Minimum cooling airflow** — The minimum cooling airflow is 350 cfm/ton.

**Minimum cooling operating outdoor air temperature** — All standard units have a minimum ambient operating temperature of 40°F (4.4°C). With accessory low ambient temperature kit, units can operate at temperatures down to 0°F (-17.8°C).

**Maximum operating outdoor air temperature** — Maximum outdoor operating air temperature for cooling is 125°F (51.7°C).

# TYPICAL INSTALLATION



WJA3 ACCESSORIES		
Accessory Model Number	Description	Use With
CPLOWAMB001A00	Motormaster® II Low Ambient Control	ALL
CPHSTART002A00	Compressor Start Kit	ALL
CPCRKHTR008A00	240V Crankcase Heater	24 – 42
NPCRKHTR004A00		48 – 60

ELECTRIC HEATERS									
Accessory Model Number	Nominal Capacity	Circuit Breaker	Stages	24	30	36	42	48	60
ELECTRIC HEATERS (208/230-SINGLE PHASE-60Hz)									
CPHEATER125A00	3.8 / 5.0	NO	1	X	X	X	X	X	X
CPHEATER126A00	3.8 / 5.0	YES	1	X	X	X	X	X	X
CPHEATER127A00	5.6 / 7.5	NO	2	X	X	X	X	X	X
CPHEATER128A00	5.6 / 7.5	YES	2	X	X	X	X	X	X
CPHEATER129A00	7.5 / 10.0	NO	2	X	X	X	X	X	
CPHEATER130A00	7.5 / 10.0	YES	2	X	X	X	X	X	X
CPHEATER131A00	11.3 / 15.0	YES	2			X	X	X	X
CPHEATER132A00	15.0 / 20.0	YES	2						X

X = Approved combination

Multiplication Factors		
HEATER kW RATING	VOLTAGE DISTRIBUTION	MULTIPLICATION FACTOR
240	200	.69
	208	.75
	230	.92
	240	1.00

Example: 15.0 kW (at 240v) heater on 208v  
= 15.0 (.75 mult factor)  
= 11.25 capacity at 208v

# ENGINEERS' SPECIFICATION GUIDE

## GENERAL

Furnish and install outdoor package, electrically controlled, air conditioner utilizing a reciprocating or scroll compressor for cooling duty. Unit shall discharge supply air horizontally as shown on contract drawings.

Nominal unit electrical characteristics shall be \_\_\_\_\_ v, \_\_\_\_\_ ph, 60 Hz. The unit shall be capable of satisfactory operation within voltage limits of \_\_\_\_\_ v to \_\_\_\_\_ v. Unit power wiring shall enter unit cabinet at a single location.

Separate power supply shall not be required for electric heat.

## COOLING CAPACITY

Total cooling capacity of the unit shall be \_\_\_\_\_ Btuh or greater, and sensible capacity shall be \_\_\_\_\_ Btuh or greater at conditions of \_\_\_\_\_ cfm indoor air entering unit at \_\_\_\_\_ °F dry bulb, \_\_\_\_\_ °F wet bulb and outdoor entering air of \_\_\_\_\_ °F dry bulb. Total design conditions shall be a minimum of \_\_\_\_\_ Btuh/Watt. The unit shall be capable of cooling operation down to 40°F (4.4°C) as shipped from the factory.

## CABINET

Unit cabinet shall be constructed of phosphated, bonderized, zinc-coated, prepainted steel. Basepan shall be made of a single-piece non-corrosive, composite material.

Evaporator-fan compartment interior cabinet surfaces shall be insulated with a minimum 1/2-in. (12.7 mm) thick, flexible fiberglass insulation, coated on the air side with aluminum foil.

Cabinet panels shall be easily removable for servicing.

Outdoor coil shall be protected by metal louvered panels.

## COMPRESSOR

Compressor shall be fully hermetic type with external vibration isolation.

## CONDENSER SECTION

Condenser fan shall be of the direct-driven propeller type blades, riveted to corrosion-resistant spiders, and shall be dynamically balanced and discharge air vertically upwards.

Condenser coils shall have aluminum-plate fins mechanically bonded to copper tubes with all joints brazed.

Tube sheet openings shall be belled to prevent tube wear.

## EVAPORATOR SECTION

Fan shall be multi-speed with direct drive motor as shown on the equipment drawings.

Fan wheel shall be made from steel, be double-inlet type with forward-curved blades with a corrosion-resistant finish and dynamically balanced.

Evaporator coils shall have aluminum-plate fins mechanically bonded to copper tubes with all joints brazed.

Tube sheet openings shall be belled to prevent tube wear.

## MOTORS

Compressor motors shall be of the refrigerant cooled type with line break thermal and current overload protection.

All fan motors shall have permanently lubricated bearings, and inherent automatic reset thermal overload protection.

Condenser fan motor shall be totally enclosed.

## REFRIGERANT SYSTEM

Refrigerant system shall include fixed orifice or TXV metering system.

## CONTROLS

Unit shall be complete with self-contained low voltage control circuit.

## APPROVALS

Unit shall be UL listed as a total package for safety requirements. All wiring shall be in accordance with NEC.

Unit shall be rated in accordance with AHRI Standards 210/240.

Cabinet insulation shall conform to ASHRAE Standard 62.2

Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

Unit shall have a sloped drain pan that conforms to ASHRAE Standard 62.2.

## ACCESSORIES

Field-installed accessories shall include solid-state compressor short-cycle device, outdoor thermostat, room thermostats, electric heaters with single-point connection, crankcase heater, and low-ambient kit.