COMMERCIAL

CAE

Product Specifications

SPLIT SYSTEM AIR CONDITIONER – 90 to 118 MBtuh

Meets Ashrae 90.1 Standards

REFRIGERATION CIRCUIT

- R–22 Refrigerant
- Single circuit Copeland SCROLL compressors.
- Copper tube / aluminum fin coil.
- High and Low pressure switches.
- Compressor overload protection.
- Crankcase heater for compressor protection in low ambient conditions.
- Anti–short cycle protection.

BUILT TO LAST

- Cabinets are constructed of prepainted galvanized steel.
- Copper tube–aluminum fin outdoor coil construction.
- PVC coated steel wire condenser fan guards.
- Heavy–gauge base rail with forklift slots and lifting holes.

EASY TO INSTALL AND SERVICE

- Easy Access service valves on all models.
- Liquid line and suction line service valves.
- Low voltage control wire terminal block.

WARRANTY

- 5 year compressor limited warranty.
- 1 year parts limited warranty.

ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Air Conditioners

c UL us LISTED

ASHRAE 90.1 COMPLIANT

UNIT PERFORMANCE DATA

Model Number	Voltage/ Phase/Hz	COOLING		Evaporator Rated Airflow	Unit Dimensions H x W x L	Ship Weight
		Nominal Capacity BTUH	E.E.R			
CAE091HA	208/230–3–60	90,000 [1]	10.6	3000	34–3/8" x 59–7/16" x 45–3/4"	390
CAE091LA	460–3–60	90,000 [1]	10.6	3000	34–3/8" x 59–7/16" x 45–3/4"	390
CAE091SA	575–3–60	90,000 [1]	10.6	3000	34–3/8" x 59–7/16" x 45–3/4"	390
CAE120HA	208/230–3–60	118,000 [2]	10.3	4000	34–3/8" x 59–7/16" x 45–3/4"	430
CAE120LA	460–3–60	118,000 [2]	10.3	4000	34–3/8" x 59–7/16" x 45–3/4"	430
CAE120SA	575–3–60	118,000 [2]	10.3	4000	34–3/8" x 59–7/16" x 45–3/4"	430

1 – Matched with BAC / ABC090 Air Handler
2 – Matched with BAC / ABC120 Air Handler

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11/14/07

	UNIT SPECIFICATIONS					
Electrical	**CAE091HA**	**CAE091LA**	**CAE091SA**	**CAE120HA**	**CAE120LA**	**CAE120SA**
Volts / Phase / Hertz	208-230/3/60	460/3/60	575/3/60	208-230/3/60	460/3/60	575/3/60
Voltage Min - Max	187-254	418-506	523-632	187-254	418-506	523-632
Total Unit Amps at Rated Load Amps	27.6	13.8	11.1	40.8	18.6	14.8
MCA	35.0	17.4	13.8	50.3	22.9	17.8
MOCP	60	30	20	60	30	25
Compressor						
RLA	25.6	12.8	10.2	37.8	17.2	13.4
LRA	190	95	76	239	125	80
Scroll Model	SR_94	SR_94	SR_94	ZR125	ZR125	ZR125
Oil Charge	90 oz.	90 oz.	90 oz.	110 oz.	110 oz.	110 oz.
Condenser Fan Data						
Quantity	2	2	2	2	2	2
Volts/Phase/Hertz	208-230/1/60	460/1/60	575/1/60	208-230/1/60	460/1/60	575/1/60
FLA (each)	1.5	0.7	0.7	1.5	0.7	0.7
LRA (each)	3.1	1.9	1.9	3.1	1.9	1.9
Blades/Diameter/Pitch	22	22	22	22	22	22
Hp - Rpm - Speeds	1/4 / 1100 / 1	1/4 / 1100 / 1	1/4 / 1100 / 1	1/4 / 1100 / 1	1/4 / 1100 / 1	1/4 / 1100 / 1
Bearing Type	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve
Rotation (Shaft End)	CW	CW	CW	CW	CW	CW
CFM Total	6500	6500	6500	6500	6500	6500
Condenser Coil						
Rows / Fins per Inch (each)	2...17	2...17	2...17	2...17	2...17	2...17
Total Face Area-Sq, ft. (each)	29.2	29.2	29.2	29.2	29.2	29.2
Tube Diameter (each)	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Refrigerant						
Type	R-22	R-22	R-22	R-22	R-22	R-22
Ounces	Units Shipped with 32 oz. Holding Charge					
Approximate Operating Charge Based on BAC/ABC Air Handler & 25' of Piping	20 lb.			22 lb.		
Line Size Liquid I.D. (in.)	3/8	3/8	3/8	1/2	1/2	1/2
Line Size Suction I.D. (in.)	1-1/8	1-1/8	1-1/8	1-3/8	1-3/8	1-3/8
Controls						
High Press. Switch Auto Reset - Open/Close psi	428-320	428-320	428-320	428-320	428-320	428-320
Low Press. Switch Auto Reset - Open/Close psi	27 - 44	27 - 44	27 - 44	27 - 44	27 - 44	27 - 44
Pressure Relief - Location / Temp. (F)	Suction Line / 200°			Suction Line / 200°		
Misc.						
Operating Weight (lbs)	383	383	383	430	430	430

PERFORMANCE DATA COOLING

Standard Outdoor Unit / Indoor Unit	Rated Net Capacity Btuh[1]	EER	Evaporator Rated Airflow
CAE091 / BAC/ABC090	90,000	10.6	3000
CAE120 / BAC/ABC120	118,000	10.3	4000

[1] Net Capacity Ratings based on ARI Test Standards, 95° F Amb. 80° F DB / 67° F WB.

SOUND LEVELS, dB

Unit	Sound Rating (60Hz) db (A)	Octave Bands							
		63	125	250	500	1000	2000	4000	8000
CAE091	84.0	84.1	84.5	80.4	78.6	77.2	76.9	78.8	72.5
CAE120	85.0	88.7	85.4	81.7	80.9	82.1	76.2	73.6	67.1

LEGEND

FLA - Full Load Amps **RLA** - Rated Load Amps
LRA - Locked Rotor Amps
MCA - Minimum Circuit Amps
MOCP - Maximum Overcurrent Protection
NEC - National Electrical Code

***** Units are suitable for use on electrical systems where voltage supplied to the unit terminals is not below or above the listed limits.

NOTES:

1. The MCA and MOCP values are calculated in accordance with NEC, Aritcle 440.
2. Motor RLA and LRA values are established in accordance with Underwriters Laboratories (UL), Standard 1995.
3. The 575-v units are UL, Canada-listed only.

EXPANDED PERFORMANCE DATA (COOLING) CAE091 WITH BAC / ABC090 (Gross Capacity)

Temp (F) Air Entering Condenser (Edb)		Evaporator Air - Cfm											
		2205				3000				3750			
		Evaporator Air - Ewb (F)											
		57	62	67	72	57	62	67	72	57	62	67	72
80	TC	81.7	85.9	93.2	101.0	89.0	90.8	97.5	105.0	91.6	92.6	98.8	106.0
	SHC	81.7	74.2	62.4	50.2	89.0	85.2	70.9	55.4	91.6	89.4	74.7	57.7
	kW	5.83	5.88	5.97	60.7	5.92	5.94	6.02	6.12	5.95	5.96	6.04	6.14
85	TC	80.6	84.5	91.6	99.2	87.7	89.3	95.8	103.0	90.2	91.1	97.1	105.0
	SHC	80.6	73.5	61.7	49.6	87.7	84.5	70.2	54.8	90.2	88.4	74.1	57.1
	kW	6.19	6.23	6.33	6.43	6.28	6.30	6.39	6.49	6.31	6.32	6.40	6.51
95	TC	78.3	81.7	88.5	95.9	85.2	86.3	92.5	99.9	87.6	88.2	93.8	101.0
	SHC	78.3	72.1	60.4	48.4	85.2	82.9	69.0	53.6	87.6	86.4	72.8	55.9
	kW	6.90	6.95	7.05	7.17	7.00	7.02	7.11	7.23	7.04	7.05	7.13	7.25
100	TC	77.0	80.1	86.9	94.2	83.7	84.7	90.7	98.0	86.1	86.6	91.9	99.1
	SHC	77.0	71.3	59.8	47.7	83.7	81.9	68.3	52.9	86.1	85.2	72.1	55.2
	kW	7.30	7.34	7.45	7.57	7.40	7.42	7.52	7.64	7.44	7.45	7.54	7.66
105	TC	75.7	78.6	85.2	92.4	82.3	83.0	88.9	96.1	84.6	85.0	90.1	97.2
	SHC	75.7	70.6	59.1	47.0	82.3	80.9	67.6	52.2	84.6	83.9	71.4	54.6
	kW	7.69	7.74	7.86	7.98	7.80	7.82	7.92	8.05	7.84	7.85	7.94	8.07
115	TC	73.2	75.4	81.9	88.8	79.5	79.8	85.3	92.3	81.7	81.8	86.4	93.3
	SHC	73.2	69.0	57.7	45.7	79.5	79.0	56.1	50.9	81.7	81.4	70.0	53.2
	kW	8.48	8.53	8.67	8.79	8.61	8.61	8.73	8.87	8.65	8.65	8.75	8.89

CAE091 CONDENSER ONLY TABLE

SST (F)		AIR TEMPERATURE ENTERING CONDENSER (F)					
		80	85	95	100	105	115
25	TC	73.9	71.7	67.0	64.6	62.1	57.0
	kW	5.81	6.14	6.84	7.21	7.58	8.36
	SDT	98.6	104.0	114.0	118.0	123.0	133.0
30	TC	82.0	79.7	74.9	72.4	69.9	64.7
	kW	5.88	6.21	6.90	7.28	7.65	8.46
	SDT	99.6	104.0	114.0	119.0	124.0	134.0
35	TC	90.4	88.0	83.0	80.4	77.8	72.4
	kW	5.98	6.31	7.02	7.40	7.78	8.59
	SDT	101.0	103.0	115.0	120.0	125.0	135.0
40	TC	99.2	96.7	91.4	88.7	85.9	80.3
	kW	6.09	6.43	7.14	7.53	7.82	8.74
	SDT	103.0	107.0	117.0	122.0	126.0	136.0
45	TC	109.0	106.0	100.0	97.4	94.5	88.6
	kW	6.22	6.56	7.28	7.68	8.07	8.92
	SDT	104.0	109.0	119.0	123.0	128.0	138.0
50	TC	118.0	116.0	110.0	107.0	104.0	97.2
	kW	6.36	6.70	7.43	7.83	8.23	9.09
	SDT	106.0	111.0	120.0	125.0	130.0	139.0

LEGEND

TC - Gross Cooling Capacity (1000 Btuh)
kW - Compressor Power
SDT - Saturated Discharge Temperature at Compressor (F)
SHC - Sensible Heat Capacity

EXPANDED PERFORMANCE DATA (COOLING) CAE120 WITH BAC / ABC120 (Gross Capacity)

	ID DB	80											
	ID CFM	3000				4000				5000			
OD DB	ID WB	57	62	67	72	57	62	67	72	57	62	67	72
80	TC	110.0	115.0	124.0	134.0	119.0	121.0	130.0	139.0	126.0	126.0	133.0	143.0
	SHC	110.0	99.4	83.3	66.8	119.0	114.0	94.6	73.6	126.0	125.0	105.0	79.9
	kW	8.19	8.32	8.55	8.82	8.41	8.48	8.70	8.96	8.59	8.60	8.80	9.06
85	TC	108.0	113.0	122.0	132.0	117.0	119.0	128.0	137.0	124.0	124.0	131.0	140.0
	SHC	108.0	98.4	82.4	66.0	117.0	113.0	93.7	72.8	124.0	123.0	104.0	79.0
	kW	8.57	8.70	8.93	9.20	8.80	8.85	9.08	9.35	8.97	8.98	9.17	9.44
95	TC	105.0	110.0	118.0	127.0	114.0	115.0	123.0	132.0	120.0	120.0	126.0	135.0
	SHC	105.0	96.6	80.7	64.3	114.0	111.0	91.9	71.1	120.0	120.0	102.0	77.3
	kW	9.34	9.45	9.69	9.96	9.57	9.61	9.83	10.10	9.73	9.74	9.93	10.20
100	TC	104.0	107.0	116.0	125.0	112.0	113.0	121.0	130.0	118.0	118.0	124.0	132.0
	SHC	104.0	95.5	79.7	63.4	112.0	109.0	90.9	70.2	118.0	118.0	101.0	76.4
	kW	9.76	9.86	10.10	10.40	9.98	10.00	10.20	10.50	10.10	10.10	10.30	10.60
105	TC	102.0	105.0	114.0	122.0	110.0	111.0	118.0	127.0	116.0	116.0	121.0	130.0
	SHC	102.0	94.4	78.7	62.4	110.0	108.0	89.9	69.2	116.0	116.0	100.0	75.5
	kW	10.20	10.30	10.50	10.80	10.40	10.40	10.60	10.90	10.60	10.60	10.70	11.00
115	TC	98.4	101.0	109.0	117.0	106.0	106.0	113.0	122.0	111.0	111.0	116.0	124.0
	SHC	98.4	92.2	76.7	60.5	106.0	105.0	87.8	67.3	111.0	111.0	97.9	73.6
	kW	11.00	11.10	11.30	11.60	11.20	11.20	11.40	11.70	11.40	11.40	11.50	11.80

CAE120 CONDENSER ONLY TABLE

Saturated Suction Temp. - (F)		Outdoor Temperature - (F)					
		80	**85**	**95**	**100**	**105**	**115**
25	TC	102.0	99.3	93.8	90.9	88.1	81.9
	kW	8.04	8.38	9.13	9.55	9.95	10.85
	SDT	101.0	106.0	116.0	121.0	126.0	136.0
30	TC	112.0	109.0	103.0	99.8	96.7	90.3
	kW	8.26	8.60	9.31	9.65	10.05	10.95
	SDT	103.0	107.0	117.0	120.2	127.0	136.0
35	TC	122.0	119.0	113.0	109.0	106.0	99.0
	kW	8.52	8.85	9.55	9.95	10.35	11.15
	SDT	104.0	109.0	118.0	123.0	128.0	137.0
40	TC	133.0	130.0	123.0	119.0	115.0	108.0
	kW	8.81	9.15	9.85	10.25	10.55	11.35
	SDT	106.0	110.0	120.0	125.0	129.0	139.0
45	TC	144.0	141.0	133.0	130.0	126.0	118.0
	kW	9.12	9.45	10.15	10.55	10.85	11.65
	SDT	108.0	112.0	122.0	126.0	131.0	140.0
50	TC	156.0	152.0	145.0	141.0	137.0	128.0
	kW	9.45	9.85	10.55	10.85	11.25	12.05
	SDT	109.0	114.0	123.0	128.0	133.0	142.0

LEGEND

TC - Gross Cooling Capacity (1000 Btuh)
kW - Compressor Power
SDT - Saturated Discharge Temperature at Compressor (F)
SHC - Sensible Heat Capacity

ACCESSORIES

DESCRIPTION	MODEL NO.	USED ON
Coil Guard	AXB070CGA	All
Hail Guard	AXB070HGA	All
-20 Low Ambient Control	AXB175LAA*	All 208/230 Volt
-20 Low Ambient Control	AXB275LAA**	All 460 Volt
Low Ambient Pressure Switch (Adjustable Head Pressure Fan Cycling Control)	Johnson # P70AA118***	All

* Requires two condenser fan motors to be changed (Fast part # 1171974).

** Requires two condenser fan motors to be changed (Fast part # 1171975).

*** Purchase from your local supplier.

MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	C	A	E	120	H	A	

PRODUCT FAMILY
C = Condenser

PRODUCT TYPE
A = Air Conditioner

SERIES
E =Ashrae Compliant Series

CAPACITY BTUH 120 = 120,000
091 = 90,000

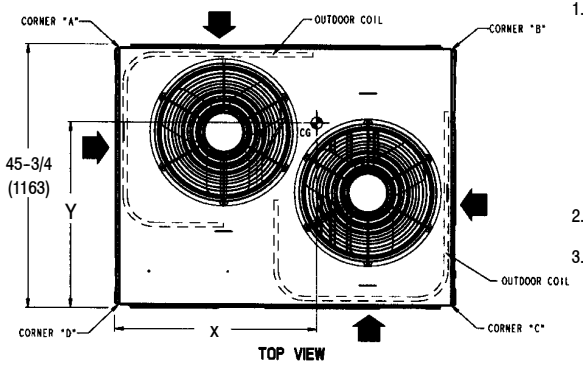
ELECTRICAL

CODE	VOLTS	PHASE	CYCLE
H	208/230	3	60
L	460	3	60
S	575	3	60

SALES CODE

Dimensions & Weight

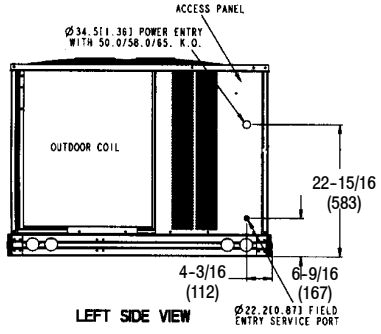
Center of Gravity - In. (mm)		
Unit	Y	X
CAE091	32.4 (822)	25.0 (635)
CAE120	32.0 (813)	26.6 (676)



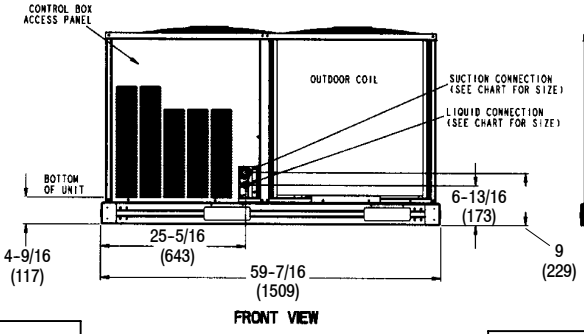
TOP VIEW

Notes:
1. Minimum clearance (Local Codes or jurisdidtion may prevail).
   A. Bottom to combustible surfaces: 0 inches
   B. Outdoor Coil: For proper airflow: 36 inches (914)
      Side: 12 inches (305)
   C. Overhead: 60 inches (1524) for proper outdoor fan operation.
   D. Between Units: 42 inches (1067) per NEC.
   E. Between unit and ungrounded surfaces: contol box side:
      36 inches (914) per NEC.
   F. Between unit and block or concrete walls and other grounded
      surfaces: control box side, 42 inches (1067) per NEC.
2. With exception of the clearance for the outdoor coil as stated in note 1B, a removable fence or barricade requires no clearance.
3. Units may be installed on combustible floors made from wood or class A, B, or C roof covering material.

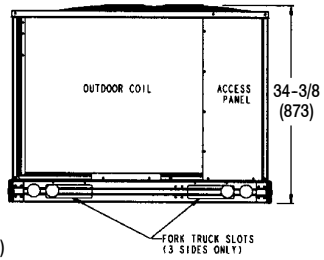
CG CENTER OF GRAVITY
DIRECTION OF AIR FLOW
DIMENSIONS IN [ ] ARE IN INCHES



LEFT SIDE VIEW

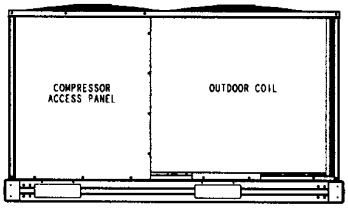


FRONT VIEW



RIGHT SIDE VIEW

Weights - Lbs (kg)					
Unit	Weight	Corner A	Corner B	Corner C	Corner D
CAE091	383 (174)	86 (39)	123 (56)	85 (39)	89 (40)
CAE120	430 (195)	84 (38)	166 (75)	66 (30)	114 (52)



REAR VIEW

Service Valve Connections - In. (mm)		
Unit	Suction	Liquid
CAE091	1-1/8 (28.6)	3/8 (9.5)
CAE120	1-3/8 (34.9)	1/2 (12.7)