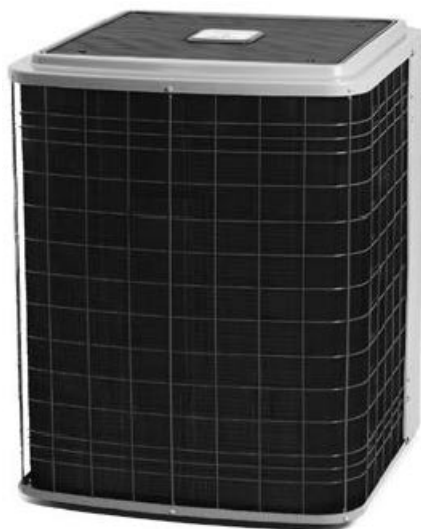


CAC Series 10 TON



Representative photo only, some models may vary in appearance.



Rated in accordance with ARI Standard 210. Certification applies only when used with proper components as listed with ARI.

COMMERCIAL SPLIT SYSTEM AIR CONDITIONERS

STANDARD FEATURES

- Standard scroll compressors on all models (Compressor has one refrigerant circuit).
- Two-stage cooling provides efficient operation during non-peak periods.
- Triple-coated steel, consisting of a polyester top coat, a urethane primer coat preceded by an oxide pretreatment.
- Coil Guard
- Enhanced aluminum fins mechanically bonded to copper tubes for improved heat transfer
- High and low pressure switches to provide compressor protection.
- Anti-cycle timer to protect compressor.
- 0° F Low ambient fan control device.
- Crankcase heaters for compressor protection in low ambient conditions.
- Externally mounted gauge ports allow for easy, accurate reading of operating conditions while servicing.
- Top Discharge Condensor Fan.
- 24 Volt control circuit.
- One (1) year limited warranty on parts and a five (5) year limited warranty on the compressor.

RESIDENTIAL AND COMMERCIAL SYSTEMS • SPLIT SYSTEMS • PACKAGED AIR CONDITIONERS
• COMBINATION GAS / ELECTRIC UNITS • HEAT PUMPS • AIR HANDLERS • MANUFACTURED
HOME AIR CONDITIONERS • GAS, OIL AND ELECTRIC FURNACES

International Comfort Products
650 Heil-Quaker Avenue, Lewisburg, TN 37091

501 71 1803 00
5/7/04

	UNIT SPECIFICATIONS		
Electrical	CAC120HB	CAC120LB	CAC120SB
Volts / Phase / Hertz	230/3/60	460/3/60	575/3/60
Voltage Min - Max	197-253	414-506	517-633
Total Unit Amps	40.1	20.9	16.4
Min. Circuit Amp.	44.4	23.2	18.2
Minimum Fuse Size	50	30	20
Max. Fuse	60	30	25
Compressor - PER COMPRESSOR			
FLA	17.3	8.97	7.05
LRA	137	62	50
Type	Tandem Scroll	Tandem Scroll	Tandem Scroll
Condenser Fan Data			
Quantity	1	1	1
Volts/Phase/Hertz	230/1/60	460/1/60	575/1/60
FLA	5.5	3.0	2.3
LRA	13.0	6.6	6.9
Blades/Diameter/Pitch	4/26/32	4/26/32	4/26/32
Hp - Rpm - Speeds	1-1100-1	1-1100-1	1-1100-1
Bearing Type	Sleeve	Sleeve	Sleeve
Rotation (Shaft End)	CW	CW	CW
Max. CFM	7500	7500	7500
Condenser Coil			
Rows / Fins per Inch	22 / 2	22 / 2	22 / 2
Total Face Area-Sq. ft.	26.62	26.62	26.62
Tube Diameter	3/8	3/8	3/8
Refrigerant			
Type	R-22	R-22	R-22
Ounces	Units Shipped with Holding Charge		
Approximate Operating Charge - Ounces, Based On BAC Series Air Handler	384		
Line Size Liquid I.D. (in.)	5/8	5/8	5/8
Line Size Suction I.D. (in.)	1-1/8	1-1/8	1-1/8
Controls			
Compressor IPR Valve (psi) Average	500	500	500
High Press. Switch Auto Reset - Open / Close psi	420-300	420-300	420-300
Low Press. Switch Auto Reset - Open- Close psi	5 - 20	5 - 20	5 - 20
Contactor Amps. (Qty. 2)	30 x 2	30 x 2	30 x 2
Low Ambient Control - Actuation / Release	250 / 115	250 / 115	250 / 115
Crankcase Heater Type	Strap On	Strap On	Strap On
Misc.			
Shipping Weight	471	471	471

PERFORMANCE DATA COOLING						
UNIT SIZE	Rated Capacity Btuh 1st /2nd Stage ¹	S/T	EER	I.P.L.V.	Capacity Stages % Cooling	Evaporator Rated Airflow
10 TON	60,000 / 120,000	.78	9.1	11.0	50 / 100	4000 SCFM

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

SATURATED SUCTION TEMP. - °F	10 TON OUTDOOR TEMPERATURE °F								
	75	80	85	90	95	100	105	110	115
	GROSS CONDENSER CAPACITY (MBTU/HR)								
35	116	113	110	107	104	101	98	95	91
40	127	124	121	118	115	112	108	104	100
45	140	136	133	129	126	122	118	114	110
50	153	149	145	141	138	133	129	125	120

EXPANDED PERFORMANCE DATA (COOLING)-10 Ton WITH BAC120 - (GROSS CAPACITY, See Notes on bottom page 4)

Airflow IDB*CFM			Outdoor Ambient Temperature - Degrees F. Dry Bulb																							
			65				75				85				95				105				115			
			Entering Indoor Temperature - Degrees F. Wet Bulb																							
			59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
70	4256	MBh	122.3	126.8	138.9	-	119.4	123.8	135.6	-	116.6	120.9	132.4	-	113.8	117.9	129.2	-	108.1	112.0	122.7	-	100.1	103.8	113.7	-
		S/T	0.78	0.65	0.45	-	0.81	0.68	0.47	-	0.83	0.70	0.48	-	0.86	0.72	0.50	-	0.89	0.74	0.52	-	0.90	0.75	0.52	-
		KW	9.27	9.47	9.78	-	10.01	10.24	10.58	-	10.67	10.91	11.28	-	11.25	11.50	11.89	-	11.74	12.01	12.42	-	12.16	12.44	12.87	-
	3800	MBh	118.7	123.1	134.8	-	116.0	120.2	131.7	-	113.2	117.3	128.6	-	110.4	114.5	125.4	-	104.9	108.8	119.2	-	97.2	100.7	110.4	-
		S/T	0.75	0.62	0.43	-	0.77	0.65	0.45	-	0.79	0.66	0.46	-	0.82	0.68	0.47	-	0.85	0.71	0.49	-	0.86	0.72	0.50	-
		KW	9.19	9.39	9.70	-	9.93	10.15	10.49	-	10.58	10.82	11.18	-	11.15	11.40	11.79	-	11.64	11.90	12.31	-	12.06	12.34	12.76	-
75	3344	MBh	112.8	116.9	128.1	-	110.2	114.2	125.1	-	107.5	111.5	122.1	-	104.9	108.8	119.2	-	99.7	103.3	113.2	-	92.3	95.7	104.9	-
		S/T	0.72	0.60	0.41	-	0.74	0.62	0.43	-	0.76	0.64	0.44	-	0.79	0.66	0.45	-	0.81	0.68	0.47	-	0.82	0.69	0.48	-
		KW	9.04	9.24	9.54	-	9.76	9.98	10.31	-	10.40	10.63	10.99	-	10.96	11.21	11.59	-	11.44	11.70	12.10	-	11.85	12.12	12.54	-
	4256	MBh	124.4	128.0	138.6	148.8	121.5	125.1	135.4	145.3	118.6	122.1	132.2	141.8	115.7	119.1	128.9	138.4	109.9	113.2	122.5	131.5	101.8	104.8	113.5	121.8
		S/T	0.89	0.80	0.60	0.39	0.92	0.83	0.62	0.40	0.95	0.85	0.64	0.41	0.98	0.87	0.66	0.43	1.00	0.91	0.69	0.44	1.00	0.91	0.69	0.45
		KW	9.35	9.55	9.87	10.20	10.10	10.32	10.67	11.03	10.76	11.00	11.38	11.77	11.34	11.60	12.00	12.41	11.84	12.11	12.53	12.97	12.27	12.55	12.99	13.44
80	3800	MBh	120.7	124.3	134.6	144.4	117.9	121.4	131.4	141.1	115.1	118.5	128.3	137.7	112.3	115.6	125.2	134.3	106.7	109.9	118.9	127.6	98.8	101.8	110.2	118.2
		S/T	0.85	0.76	0.57	0.37	0.88	0.79	0.60	0.38	0.90	0.81	0.61	0.39	0.93	0.83	0.63	0.41	0.97	0.86	0.65	0.42	0.98	0.87	0.66	0.42
		KW	9.27	9.47	9.79	10.11	10.01	10.24	10.58	10.94	10.67	10.91	11.28	11.67	11.25	11.50	11.90	12.31	11.74	12.01	12.42	12.85	12.16	12.45	12.87	13.33
	3344	MBh	114.7	118.1	127.8	137.2	112.0	115.4	124.9	134.0	109.4	112.6	121.9	130.8	106.7	109.9	118.9	127.6	101.4	104.4	113.0	121.2	93.9	96.7	104.6	112.3
		S/T	0.81	0.73	0.55	0.35	0.84	0.75	0.57	0.37	0.86	0.77	0.59	0.38	0.89	0.80	0.60	0.39	0.93	0.83	0.63	0.40	0.93	0.84	0.63	0.41
		KW	9.12	9.32	9.62	9.94	9.84	10.06	10.40	10.75	10.49	10.72	11.08	11.46	11.05	11.31	11.69	12.09	11.54	11.80	12.20	12.63	11.95	12.23	12.65	13.09
85	4256	MBh	126.6	129.3	138.2	147.7	123.6	126.3	135.0	144.3	120.7	123.3	131.8	140.8	117.7	120.3	128.5	137.4	111.9	114.3	122.1	130.5	103.6	105.9	113.1	120.9
		S/T	1.00	0.92	0.75	0.56	1.00	0.95	0.77	0.58	1.00	1.00	0.79	0.59	1.00	1.00	0.82	0.61	1.00	1.00	0.85	0.63	1.00	1.00	0.86	0.64
		KW	9.42	9.63	9.95	10.28	10.18	10.41	10.76	11.13	10.85	11.10	11.47	11.87	11.44	11.70	12.10	12.52	11.94	12.22	12.64	13.08	12.38	12.66	13.10	13.56
	3800	MBh	122.9	125.6	134.2	143.4	120.0	122.7	131.0	140.1	117.2	119.7	127.9	136.7	114.3	116.8	124.8	133.4	108.6	111.0	118.6	126.7	100.6	102.8	109.8	117.4
		S/T	0.93	0.87	0.71	0.53	0.97	0.91	0.74	0.55	0.99	0.93	0.76	0.56	1.00	0.96	0.78	0.58	1.00	0.99	0.81	0.61	1.00	1.00	0.82	0.61
		KW	9.35	9.55	9.87	10.20	10.10	10.32	10.67	11.03	10.76	11.00	11.38	11.77	11.34	11.60	12.00	12.42	11.84	12.12	12.53	12.97	12.27	12.56	12.99	13.44
85	3344	MBh	116.7	119.3	127.5	136.2	114.0	116.5	124.5	133.1	111.3	113.7	121.5	129.9	108.6	111.0	118.6	126.7	103.2	105.4	112.6	120.4	95.6	97.7	104.3	111.5
		S/T	0.89	0.84	0.68	0.51	0.92	0.87	0.71	0.53	0.95	0.89	0.72	0.54	0.98	0.92	0.75	0.56	1.02	0.95	0.78	0.58	1.02	0.96	0.78	0.58
		KW	9.19	9.39	9.70	10.03	9.93	10.15	10.49	10.84	10.58	10.82	11.18	11.56	11.15	11.40	11.79	12.20	11.64	11.90	12.31	12.74	12.06	12.34	12.76	13.21
	4256	MBh	128.8	131.3	137.5	146.7	125.8	128.2	134.3	143.3	122.8	125.2	131.1	139.9	119.8	122.1	127.9	136.5	113.8	116.0	121.5	129.6	105.4	107.5	112.6	120.1
		S/T	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.75	1.00	1.00	0.95	0.77	1.00	1.00	0.98	0.79	1.00	1.00	1.00	0.82	1.00	1.00	1.00	0.83
		KW	9.50	9.71	10.03	10.37	10.27	10.50	10.85	11.22	10.94	11.19	11.57	11.97	11.54	11.81	12.21	12.63	12.05	12.33	12.75	13.20	12.49	12.78	13.22	13.68
3800	MBh	125.0	127.5	133.5	142.4	122.1	124.5	130.4	139.1	119.2	121.5	127.3	135.8	116.3	118.6	124.2	132.5	110.5	112.6	118.0	125.9	102.4	104.3	109.3	116.6	
	S/T	0.98	0.94	0.85	0.69	1.00	0.98	0.88	0.72	1.00	1.00	0.90	0.73	1.00	1.00	0.93	0.76	1.00	1.00	0.97	0.79	1.00	1.00	0.98	0.79	
	KW	9.42	9.63	9.95	10.28	10.18	10.41	10.76	11.13	10.85	11.10	11.47	11.87	11.44	11.70	12.10	12.52	11.94	12.22	12.64	13.08	12.38	12.66	13.10	13.56	
3344	MBh	118.8	121.1	126.8	135.3	116.0	118.3	123.9	132.1	113.3	115.5	120.9	129.0	110.5	112.6	118.0	125.9	105.0	107.0	112.1	119.6	97.2	99.1	103.8	110.8	
	S/T	0.94	0.90	0.81	0.66	0.97	0.94	0.84	0.68	0.99	0.96	0.87	0.70	1.00	0.99	0.89	0.72	1.00	1.00	0.93	0.75	1.00	1.00	0.94	0.76	
	KW	9.27	9.47	9.78	10.11	10.01	10.24	10.58	10.94	10.67	10.91	11.28	11.66	11.25	11.50	11.89	12.31	11.74	12.01	12.42	12.85	12.16	12.44	12.87	13.32	

*Entering Indoor Temperature - Degrees F. Dry Bulb



Standard Rating

MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	C	A	C	120	H	B	
PRODUCT FAMILY							SALES CODE
C = Condenser							ELECTRICAL
PRODUCT TYPE							CODE VOLTS PHASE CYCLE
A = Air Conditioning							H 208/230 3 60
H = Heat Pump							L 460 3 60
C = Cabinet							S 575 3 60
SERIES							CAPACITY MBTUH
C = Series							120 = 120,000

EXTENDED REFRIGERANT LINE CORRECTION FACTORS

Varying Line Length in Feet (m) vs. Total Capacity Multiplier					
25 (8)	50 (15)	75 (23)	100 (30)	125 (38)	150 (46)
1.00	.99	.98	.96	.94	.92

VOLTAGE CORRECTION FACTORS

Volts	Capacity	Watts
208	.98	.99

MAXIMUM ALLOWABLE TONNAGE FOR EQUIVALENT LINE LENGTH

O. D. (Inches)	Equivalent Line Length (Line + Valves + Fittings) - Type L Copper Tube			
	25' (7.6m)	50' (15.2m)	75' (22.9m)	100' (30.5m)
Liquid 5/8"	13.7 Ton	9.4 Ton	7.4 Ton	n/a
Suction 1-1/8"	12.5 Ton	8.5 Ton	n/a	n/a
Suction 1-3/8"	12.4 Ton	14.6 Ton	11.6 Ton	10.0 Ton

NOTE: Equivalent suction line length is designed for a pressure drop due to friction equivalent to 2° F (1.1° C)

NOTES AND FORMULAS FOR USING EXPANDED PERFORMANCE DATA

To find leaving wet bulb and dry bulb from the expanded performance charts on the next two pages, use the following formulas. Direct interpolation is permissible. Do not extrapolate.

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

t_{wb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{wb}).

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

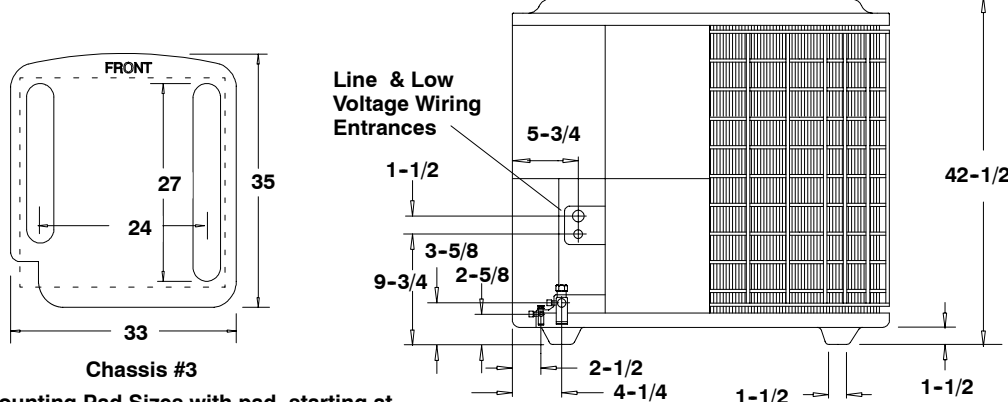
Where: h_{ewb} = Enthalpy of air entering evaporator coil.

LEGEND

MBh = Total Capacity (Gross) **S/T** = Sensible to Total Ratio
KW = Unit Operating Watts **IDB** = Indoor Dry Bulb
 t_{db} = Leaving Dry Bulb **t_{wb}** = Leaving Wet Bulb
edb = Entering Dry Bulb **ewb** = Entering Wet Bulb
 h_{wb} = Enthalpy of leaving wet bulb

DIMENSIONS

ALL DIMENSIONS IN INCHES



Chassis #3

Minimum Mounting Pad Sizes with pad starting at 9" from structure for minimum clearance of 6".

Chassis #3 27" W X 28" D