

### SPLIT SYSTEM HEAT PUMP - 6 to 10 Ton

#### 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.
- Electronic defrost control insures fast, efficient defrost cycle
- Suction accumulator standard
- 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.



# PRELIMINARY

#### UNIT PERFORMANCE DATA (3 Phase - 60 Hz)

Model Number	Voltage/Phase/Hz	COOLING *		HEATING *		Unit Dimensions H x W x L	Ship Weight
		Nominal Capacity BTUH	E.E.R	High Heat Capacity BTUH	COP		
CHE072HA	208/230-3-60	80,000 <sup>1</sup>	10.5	74,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	470
CHE072LA	460-3-60	80,000 <sup>1</sup>	10.5	74,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	470
CHE091HA	208/230-3-60	88,000 <sup>1</sup>	10.4	93,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	480
CHE091LA	460-3-60	88,000 <sup>1</sup>	10.4	93,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	480
CHE120HA	208/230-3-60	105,000 <sup>2</sup>	10.1	100,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	550
CHE120LA	460-3-60	105,000 <sup>2</sup>	10.1	100,000	3.2	34-3/8" x 59-7/16" x 45-3/4"	550

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

1 - Matched with BHC / HBC090 Air Handler  
2 - Matched with BHC / HBC120 Air Handler

UNIT SPECIFICATIONS						
Electrical	CHE072HA	CHE072LA	CHE091HA	CHE091LA	CHE120HA	CHE120LA
Volts / 3 Phase / 60 Hertz	208-230	460	208-230	460	208-230	460
Voltage Min - Max	187-253	414-506	187-253	414-506	187-253	414-506
Total Unit Amps	20.2	12.3	31	17	37	18.5
MCA	30.5	17.6	39	19.8	45	23
MOCP	50	25	60	30	60	30
Compressor						
RLA	19.2	10.3	29.0	15.0	34.0	17.0
LRA	146.0	73.0	190.0	95.0	225.0	114.0
Model (All Single Scroll)	HC...075	HC...075	ZR94	ZR94	ZR108	ZR108
Condenser Fan Data						
Quantity	2	2	2	2	2	2
Volts/ 1 Phase/ 60 Hertz	208-230	460	208-230	460	208-230	460
FLA	1.5	0.7	1.5	0.7	1.5	0.7
LRA	3.1	1.9	3.1	1.9	3.1	1.9
Blades/Diameter	3/22"	3/22"	3/22"	3/22"	3/22"	3/22"
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)	CCW	CCW	CCW	CCW	CCW	CCW
Max. CFM	6500	6500	6500	6500	6500	6500
Condenser Coil						
Rows / Fins per Inch	2/17	2/17	2/17	2/17	2/17	2/17
Total Face Area-Sq. ft.	29.2	29.2	29.2	29.2	29.2	29.2
Tube Diameter	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 144 oz. Holding Charge					
Approximate Operating Charge Based On BHC/HBC Series Air Handler & 25' of Piping	20 lb.		20 lb.		22 lb.	
Line Size Liquid I.D. (in.)	1/2	1/2	1/2	1/2	1/2	1/2
Line Size Suction I.D. (in.)	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	1-3/8
Controls						
High Press. Switch Auto Reset - Open / Close psi	428 (+/-10) / 320 (+/-20)	428 (+/-10) / 320 (+/-20)	428 (+/-10) / 320 (+/-20)	428 (+/-10) / 320 (+/-20)	428 (+/-10) / 320 (+/-20)	428 (+/-10) / 320 (+/-20)
Low Press. Switch Auto Reset - Open / Close psi	7 (+/-3) / 22 (+/-5)	7 (+/-3) / 22 (+/-5)	7 (+/-3) / 22 (+/-5)	7 (+/-3) / 22 (+/-5)	7 (+/-3) / 22 (+/-5)	7 (+/-3) / 22 (+/-5)

PERFORMANCE DATA								
Standard Outdoor Unit / Indoor Unit	COOLING			HEATING				Evaporator Rated Airflow
	Rated Net Capacity Btuh*	S/T	EER	High Heat Capacity Btuh*	Low Heat Capacity Btuh*	High Heat COP	Low Heat COP	
CHE072 / BHC/HBC090	80,000	.74	10.5	74,000	45,800	3.2	2.2	2400
CHE091 / BHC/HBC090	88,000	.74	10.4	93,000	57,000	3.2	2.2	3000
CHE120 / BHC/HBC120	105,000	.74	10.1	105,000	105,000	3.2	2.2	4000

\* 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
CHE072	85.0	83.0	82.3	82.6	80.6	81.2	78.0	72.0	67.0
CHE091	86.0	83.1	82.3	82.6	80.9	81.2	78.1	72.8	67.3
CHE120	86.0	88.7	82.3	82.6	81.2	81.2	79.2	73.8	67.8

<b>LEGEND</b> <b>FLA</b> - Full Load Amps <b>RLA</b> - Rated Load Amps <b>LRA</b> - Locked Rotor Amps <b>MCA</b> - Minimum Circuit Amps <b>MOCP</b> - Maximum Overcurrent Protection <b>NEC</b> - 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. <b>NOTES:</b> 1. The MCA and MOCP values are calculated in accordance with NEC, Article 440. 2. Motor RLA and LRA values are established in accordance with Underwriters Laboratories (UL), Standard 1995.
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**EXPANDED PERFORMANCE DATA (COOLING) CHE072 WITH BHC / HBC090 (Gross Capacity)**

Temp (F) Air Entering Outdoor Coil EDB		Indoor Entering Air - CFM/BF											
		1800 / 0.07				2400 / 0.09				3000 / 0.11			
		Indoor Entering Air - EWB (F)											
		57	63	67	71	59	63	67	71	59	63	67	71
65	TC	72.3	76.7	81.8	87.2	77.9	80.9	85.8	91.1	82.6	83.8	88.3	93.6
	SHC	68.8	61.4	53.5	45.3	77.3	70.8	60.7	50.4	82.6	78.7	67.4	54.9
	KW	4.32	4.39	4.48	4.56	4.42	4.46	4.54	4.63	4.44	4.46	4.54	4.63
75	TC	70.4	74.5	79.5	84.8	76.1	78.5	83.3	88.5	80.5	81.5	85.8	90.9
	SHC	67.6	60.4	52.5	44.4	75.4	69.8	59.8	49.4	80.5	77.5	66.5	54.1
	KW	4.84	4.91	5.01	5.09	4.94	4.98	5.07	5.16	4.97	4.99	5.06	5.15
85	TC	68.3	72.2	77.1	82.2	73.9	75.9	80.6	85.8	78.3	78.9	82.9	88.1
	SHC	66.3	59.4	51.5	43.4	73.5	68.6	58.8	48.4	78.3	76.2	65.5	53.1
	KW	5.41	5.48	5.57	5.68	5.52	5.56	5.65	5.75	5.54	5.56	5.64	5.74
95	TC	66.1	69.6	74.4	79.4	71.6	73.3	77.8	82.8	75.8	76.3	80.1	84.9
	SHC	64.9	58.2	50.4	42.3	71.6	67.3	57.7	47.4	75.8	74.5	64.4	52.1
	KW	6.01	6.09	6.2	6.32	6.14	6.18	6.27	6.38	6.18	6.18	6.22	6.36
105	TC	63.7	66.9	70.6	76.5	69.3	70.4	74.6	79.6	73.3	73.4	76.8	81.6
	SHC	63.1	57.1	49.2	41.2	69.3	65.9	56.6	46.3	73.3	72.5	63.3	51.1
	KW	6.68	6.75	6.87	7.01	6.82	6.85	6.96	7.08	6.93	6.93	7.01	7.13
115	TC	61.2	64.1	68.4	73.2	60.5	67.4	71.3	76.1	70.5	70.5	75.1	78.1
	SHC	61.2	55.6	47.9	40.1	60.5	64.4	55.3	45.1	70.5	70.5	59.4	49.8
	KW	7.41	7.48	7.61	7.74	7.56	7.58	7.69	7.83	7.66	7.66	7.77	7.87
125	TC	58.6	60.8	65.1	69.8	63.9	64.3	67.7	72.5	67.4	67.4	69.7	74.1
	SHC	58.6	54.2	46.7	38.8	63.9	62.6	54.1	43.9	67.4	67.4	60.5	48.6
	KW	8.21	8.24	8.38	8.52	8.34	8.35	8.47	8.61	8.46	8.46	8.52	8.67

LEGEND: BF - Bypass Factor      Ewb - Entering Dry Bulb      SHC - Sensible Heat Total  
 Edb - Entering Dry Bulb      kW - Total Compressor Motor Power Input      TC - Total Capacity, Gross (1000 Btuh)

**EXPANDED PERFORMANCE DATA (HEATING) CHE072 WITH BHC / HBC090 (NET Capacity)**

Temp (F) Air Ent Indoor coil	Indoor Airflow (CFM)		Air Temp Entering Outdoor Coil (F)									
			-10	0	10	17	20	30	40	47	50	60
60	1800	TH	31.8	37.9	44.6	49.3	51.3	58.4	66.8	73.2	75.7	84.2
		THI	29.3	34.8	40.8	44.9	46.4	51.1	63.9	73.2	75.7	84.2
		KW	3.52	3.79	4.09	4.31	4.39	4.71	5.09	5.52	5.65	6.04
	2400	TH	32.67	38.77	45.6	50.3	52.5	59.5	68.3	74.9	77.5	86.4
		THI	30.1	35.6	41.6	45.9	47.3	52.2	65.3	74.9	77.5	86.4
		KW	3.44	3.67	3.92	4.09	4.16	4.41	4.73	5.11	5.19	5.52
3000	TH	33.4	39.5	46.4	51.1	53.3	60.5	69.4	76.1	78.8	87.8	
	THI	30.7	36.4	42.4	46.6	48.1	52.9	66.1	76.1	78.8	87.8	
	KW	3.38	3.59	3.81	3.95	4.02	4.22	4.5	4.84	4.92	5.21	
65	1800	TH	31.4	37.4	44.1	48.8	50.8	57.8	66.3	72.6	75.1	83.5
		THI	28.8	34.4	40.3	44.5	45.9	50.6	64.2	72.6	75.1	83.5
		KW	3.68	3.98	4.31	4.52	4.62	4.95	5.36	5.81	5.95	6.37
	2400	TH	32.2	38.3	45.1	49.8	52.1	59.4	67.7	74.2	76.8	85.4
		THI	29.6	35.2	41.2	45.5	46.9	51.7	64.7	74.2	76.8	85.4
		KW	3.61	3.86	4.12	4.31	4.39	4.66	4.99	5.39	5.49	5.83
3000	TH	32.9	39.1	45.9	50.7	52.8	59.9	68.7	75.4	78.1	86.9	
	THI	30.2	35.9	41.9	46.2	47.6	52.5	65.7	75.4	78.1	86.9	
	KW	3.55	3.78	4.01	4.18	4.25	4.47	4.76	5.12	5.21	5.51	
70	1800	TH	30.89	36.9	43.6	48.2	50.3	57.2	65.6	71.8	74.3	82.7
		THI	28.4	34.1	39.9	44.1	45.5	50.1	62.6	71.8	74.3	82.7
		KW	3.85	4.17	4.51	4.75	4.85	5.21	5.63	6.11	6.25	6.69
	2400	TH	31.7	37.8	44.6	49.4	51.4	58.5	67.1	73.4	76.1	84.6
		THI	29.2	34.8	40.8	45.1	46.4	51.3	64.1	73.4	76.1	84.6
		KW	3.76	4.04	4.33	4.53	4.72	4.9	5.25	5.67	5.78	6.15
3000	TH	32.4	38.5	45.4	50.2	52.4	59.4	67.1	74.6	77.3	86.1	
	THI	29.8	35.5	41.5	45.8	47.2	52.1	65.1	74.6	77.3	86.1	
	KW	3.71	3.97	4.23	4.41	4.47	4.72	5.02	5.39	5.49	5.79	
75	1800	TH	30.4	36.4	43.1	47.7	49.8	56.6	68.1	71.1	73.5	81.8
		THI	27.9	33.5	39.3	43.5	44.9	49.6	62.1	71.1	73.5	81.8
		KW	4.01	4.35	4.72	4.98	5.09	5.46	5.91	6.42	6.56	7.04
	2400	TH	31.2	37.3	44.1	48.8	50.9	57.9	66.4	72.9	75.5	84.1
		THI	28.7	34.3	40.3	44.5	46.1	50.7	63.4	72.9	75.5	84.1
		KW	3.92	4.23	4.55	4.76	4.85	5.16	5.54	5.98	6.09	6.49
3000	TH	31.9	38.1	44.9	49.7	51.8	58.8	67.5	74.1	76.6	85.3	
	THI	29.3	35.1	41.1	45.2	46.7	51.5	64.5	74.1	76.6	85.3	
	KW	3.88	4.15	4.43	4.63	4.71	4.98	5.29	5.69	5.79	6.13	

LEGEND: TH - Total Heating Capacity      kW - Total Compressor Motor Power Input  
 THI - Integrated Heating Capacity (1000 Btuh)

**EXPANDED PERFORMANCE DATA (COOLING) CHE091 WITH BHC / HBC090 (Gross Capacity)**

Temp (F) Air Entering Condenser (Edb)		Indoor Entering Air - Cfm/BF											
		2250/0.08				3000/0.11				3750/0.13			
		Indoor Entering Air - Ewb (F)											
		57	62	67	72	57	62	67	72	57	62	67	72
85	TC	79.2	82.8	89.8	97.4	86.3	87.5	93.9	101.0	91.1	91.3	96.5	104.0
	SHC	79.2	72.9	61.1	49.0	86.3	83.8	69.8	54.3	91.1	91.2	77.7	59.2
	kW	6.18	6.23	6.35	6.47	6.29	6.31	6.41	6.53	6.37	6.37	6.46	6.58
95	TC	76.8	79.8	86.5	93.9	83.5	84.3	90.3	97.7	88.2	88.2	92.8	100.0
	SHC	76.8	71.4	59.8	47.7	83.5	82.0	68.4	53.0	88.2	88.2	76.3	57.9
	kW	6.89	6.95	7.07	7.20	7.01	7.04	7.14	7.28	7.10	7.10	7.19	7.33
100	TC	75.5	78.2	84.8	92.1	82.0	82.7	88.5	95.8	86.6	86.7	90.9	98.1
	SHC	75.5	70.6	59.0	47.0	82.0	80.9	67.7	52.3	86.6	86.7	75.5	57.2
	kW	7.28	7.33	7.46	7.60	7.40	7.42	7.54	7.67	7.49	7.50	7.58	7.72
105	TC	74.2	76.6	83.1	90.2	80.6	81.0	86.6	93.8	85.0	85.1	89.0	95.4
	SHC	74.2	69.8	58.3	46.3	80.6	79.9	67.0	51.6	85.0	85.1	74.7	56.2
	kW	7.68	7.73	7.86	9.01	7.81	7.82	7.94	8.09	7.91	7.91	7.99	8.11
115	TC	71.4	72.8	78.9	85.8	77.5	77.2	82.2	89.0	81.6	81.3	84.4	91.1
	SHC	71.4	67.9	56.6	44.7	77.5	77.1	65.2	50.0	81.6	81.3	72.9	54.9
	kW	8.53	8.55	8.70	8.86	8.67	8.65	8.78	8.94	8.77	8.76	8.83	8.99
125	TC	68.1	69.2	74.5	81.0	73.7	73.8	77.4	83.9	77.6	77.7	79.5	85.8
	SHC	68.1	66.0	54.9	43.0	73.7	73.8	63.3	48.2	77.6	77.7	70.8	53.2
	kW	9.42	9.45	9.60	9.78	9.58	9.59	9.68	9.86	9.69	9.69	9.74	9.91

LEGEND: BF - Bypass Factor      Ewb - Entering Dry Bulb      SHC - Sensible Heat Total  
 Edb - Entering Dry Bulb      kW - Total Compressor Motor Power Input      TC - Total Capacity, Gross (1000 Btuh)

**EXPANDED PERFORMANCE DATA (HEATING) CHE091 WITH BHC / HBC090 (NET Capacity)**

Temp (F) Air Entering Coil		Indoor Airflow (Cfm)		Air Temp Entering Outdoor Coil (F)								
				-20	-10	0	10	17	30	40	47	50
60	2250	TH	35.2	44.0	52.8	59.6	62.5	72.6	85.8	92.8	99.1	120.0
		THI	32.4	40.5	48.5	54.3	56.7	63.6	85.8	92.8	99.1	120.0
		kW	4.44	4.82	5.19	5.8	5.60	6.10	6.80	7.21	7.56	8.71
	3000	TH	36.5	45.4	54.4	61.1	64.1	74.3	88.0	94.1	100.0	120.0
		THI	33.6	41.8	49.9	55.7	58.1	65.1	88.0	94.1	100.0	120.0
		kW	4.33	4.65	4.95	5.18	5.30	5.72	6.34	6.60	6.89	7.89
	3750	TH	37.5	46.4	55.5	62.2	65.2	75.5	88.8	93.9	99.1	117.0
		THI	34.5	42.7	50.9	56.7	59.1	66.2	88.8	93.9	99.1	117.0
		kW	4.26	4.53	4.80	5.02	5.12	5.50	6.02	6.21	6.44	7.19
65	2250	TH	33.9	42.8	51.7	58.5	61.4	71.7	84.6	91.6	98.4	121.0
		THI	31.2	39.4	47.5	53.4	55.7	62.8	84.6	91.6	98.4	121.0
		kW	4.62	5.04	5.44	5.76	5.89	6.40	7.13	7.55	7.96	9.31
	3000	TH	35.2	44.3	53.3	60.2	63.2	73.4	86.9	93.4	99.2	118.0
		THI	32.4	40.7	49.0	54.9	57.3	64.3	86.9	93.4	99.2	118.0
		kW	4.52	4.87	5.21	5.45	5.56	6.01	6.65	6.95	7.23	8.19
	3750	TH	36.2	45.4	54.5	61.4	64.4	74.6	88.5	94.2	100.0	120.0
		THI	33.3	41.7	50.0	56.0	58.4	65.4	88.5	94.2	100.0	120.0
		kW	4.45	4.77	5.06	5.27	5.38	5.78	6.37	6.59	6.86	7.78
70	2250	TH	32.4	41.5	50.6	57.4	60.3	70.7	83.4	90.4	97.4	121.0
		THI	29.9	38.2	46.4	52.4	54.7	61.9	83.4	90.4	97.4	121.0
		kW	4.80	5.26	5.70	6.04	6.18	6.71	7.46	6.59	8.38	9.97
	3000	TH	33.8	43.0	52.2	59.2	62.1	72.5	85.8	92.9	99.2	120.0
		THI	31.1	39.6	47.9	54.0	56.4	63.5	85.8	92.9	99.2	120.0
		kW	4.71	5.10	5.47	5.74	5.85	6.31	6.97	7.35	7.66	8.71
	3750	TH	34.8	44.1	53.4	60.4	63.4	73.8	87.2	93.9	99.1	116.0
		THI	32.1	40.6	49.0	55.1	57.5	64.6	87.2	93.9	99.1	116.0
		kW	4.65	5.00	5.32	5.55	5.65	6.07	6.68	6.96	7.20	8.00
75	2250	TH	30.8	40.1	49.3	56.2	59.2	69.5	82.3	89.1	96.1	119.0
		THI	28.3	36.9	45.2	51.3	53.7	60.9	82.3	89.1	96.1	119.0
		kW	4.97	5.47	5.95	6.32	6.47	7.03	7.81	8.27	8.76	10.40
	3000	TH	32.2	41.7	51.0	56.0	61.0	71.5	84.6	91.7	98.5	121.0
		THI	29.6	38.3	46.8	52.9	55.3	62.7	84.6	91.7	98.5	121.0
		kW	4.88	5.32	5.73	6.02	6.15	6.61	7.29	7.69	8.06	9.30
	3750	TH	33.3	42.8	52.2	59.3	62.3	72.9	86.1	93.3	99.5	120.0
		THI	30.6	39.4	47.9	54.1	56.5	63.9	86.1	93.3	99.5	120.0
		kW	4.83	5.23	5.58	5.84	5.95	6.38	6.99	7.36	7.63	8.55

LEGEND: TH - Total Heating Capacity      kW - Total Compressor Motor Power Input  
 THI - Integrated Heating Capacity (1000 Btuh)

**EXPANDED PERFORMANCE DATA (COOLING) CHE120 WITH BHC / HBC120 (Gross Capacity)**

Temp (F) Air Entering Con- denser (Edb)		Indoor Entering Air - Cfm/BF								
		3000/0.05			4000/0.07			5000/0.08		
		Indoor Entering Air - Ewb (F)								
		62	67	72	62	67	72	62	67	72
80	TCG	106.0	113.0	122.0	111.0	117.0	126.0	116.0	120.0	128.0
	SHG	96.6	80.2	63.1	110.0	92.3	70.4	116.0	103.0	77.4
	CMP	7.61	7.85	8.12	7.79	7.98	8.25	7.95	8.07	8.33
85	TCG	104.0	111.0	120.0	109.0	115.0	124.0	115.0	118.0	126.0
	SHG	95.7	79.4	62.3	109.0	91.4	69.7	115.0	102.0	76.7
	CMP	7.93	8.16	8.44	8.11	8.29	8.56	8.27	8.38	8.64
95	TCG	100.0	107.0	115.0	106.0	111.0	119.0	111.0	114.0	121.0
	SHG	93.8	77.7	60.8	106.0	89.7	68.1	111.0	101.0	75.2
	CMP	8.57	8.79	9.07	8.75	8.92	8.20	8.91	9.01	9.28
100	TCG	98.0	105.0	113.0	104.0	109.0	116.0	109.0	111.0	119.0
	SHG	82.7	76.8	59.9	104.0	88.8	67.3	109.0	99.4	74.3
	CMP	8.93	9.14	9.42	9.11	9.27	9.54	9.27	9.36	9.62
105	TCG	96.0	103.0	110.0	102.0	106.0	114.0	106.0	109.0	116.0
	SHG	91.6	75.9	59.0	102.0	87.8	66.4	106.0	98.4	73.4
	CMP	9.29	9.50	9.77	9.47	9.62	9.88	9.63	9.70	9.96
115	TCG	91.8	97.9	105.0	97.6	101.0	109.0	102.0	104.0	110.0
	SHG	89.3	74.0	57.3	97.6	85.9	64.6	102.0	96.2	71.7
	CMP	10.00	10.20	10.50	10.20	10.30	10.60	10.30	10.40	10.60
125	TCG	87.5	92.9	100.0	93.3	96.0	103.0	97.4	98.3	104.0
	SHG	86.7	72.1	55.3	93.3	83.8	62.8	97.4	93.7	69.8
	CMP	10.80	11.0	11.20	11.00	11.10	11.30	11.10	11.10	11.40

LEGEND: TCG - Total Capacity, Gross (1000 Btuh) SHG - Gross Sensible Capacity CMP - Compressor Power kW

**EXPANDED PERFORMANCE DATA (HEATING) CHE120 WITH BHC / HBC120 (NET Capacity)**

Temp (F) Air Entering Coil		Indoor Airflow (Cfm)	Air Temp Entering Outdoor Coil (F)									
			-10	0	10	17	20	30	40	47	50	60
60	3000	TH	44.8	54.0	63.1	69.5	72.5	82.4	94.3	103.0	106.0	118.0
		THI	41.2	49.7	57.7	63.4	65.4	72.2	90.1	103.0	106.0	118.0
		CMP	5.29	5.62	5.89	6.08	6.18	6.52	7.02	7.37	7.52	8.03
	4000	TH	46.7	55.7	64.9	71.3	74.4	84.6	96.9	105.0	109.0	121.0
		THI	43.0	51.3	59.4	65.0	67.1	74.1	92.5	105.0	109.0	121.0
		CMP	5.20	5.45	5.67	5.82	5.91	6.20	6.67	7.00	7.14	7.60
	5000	TH	48.1	56.9	66.2	72.7	75.8	86.1	98.5	107.0	111.0	123.0
		THI	44.3	52.4	60.6	66.3	68.4	75.4	94.1	107.0	111.0	123.0
		CMP	5.13	5.34	5.52	5.65	5.73	6.01	6.46	6.77	6.90	7.35
65	3000	TH	42.0	52.5	61.8	68.4	71.3	81.1	93.0	101.0	105.0	117.0
		THI	39.0	48.3	56.6	62.3	64.4	71.1	88.8	101.0	105.0	117.0
		CMP	5.43	5.86	6.17	6.38	6.48	6.82	7.32	7.66	7.81	8.31
	4000	TH	44.6	54.5	63.8	70.2	73.3	83.4	95.6	104.0	108.0	120.0
		THI	41.0	50.1	58.3	64.0	66.1	73.1	91.4	104.0	108.0	120.0
		CMP	5.37	5.72	5.95	6.12	6.21	6.50	6.96	7.28	7.42	7.87
	5000	TH	46.2	55.9	65.1	71.6	74.7	85.0	97.4	106.0	110.0	122.0
		THI	42.5	51.4	59.6	65.3	67.4	74.5	93.0	106.0	110.0	122.0
		CMP	5.32	5.61	5.81	5.95	6.03	6.30	6.74	7.05	7.18	7.62
70	3000	TH	39.7	50.5	60.2	67.0	69.9	79.7	91.4	99.6	103.0	115.0
		THI	36.5	46.4	55.0	61.0	63.1	69.8	87.4	99.6	103.0	115.0
		CMP	5.53	6.07	6.43	6.68	6.78	7.13	7.62	7.96	8.10	8.59
	4000	TH	41.9	52.7	62.3	69.1	72.1	82.1	94.2	103.0	106.0	119.0
		THI	38.6	48.5	57.0	63.0	65.0	71.9	90.0	103.0	106.0	119.0
		CMP	5.49	5.95	6.23	6.43	6.51	6.81	7.26	7.57	7.71	8.16
	5000	TH	43.5	54.2	63.8	70.6	73.6	83.7	96.0	105.0	108.0	121.0
		THI	40.1	49.9	58.4	64.3	66.4	73.4	91.7	105.0	108.0	121.0
		CMP	5.46	5.86	6.10	6.26	6.34	6.60	7.03	7.33	7.46	7.88
75	3000	TH	36.4	48.0	58.2	65.4	68.3	78.1	89.7	97.8	101.0	113.0
		THI	33.4	44.2	53.2	59.6	61.6	68.4	85.7	97.8	101.0	113.0
		CMP	5.58	6.23	6.66	6.97	7.08	7.44	7.93	8.27	8.41	8.90
	4000	TH	38.6	50.3	60.5	67.6	70.6	80.7	92.7	101.0	105.0	117.0
		THI	35.5	46.3	55.3	61.6	63.7	70.7	88.6	101.0	105.0	117.0
		CMP	5.56	6.14	6.49	6.73	6.82	7.13	7.56	7.86	7.99	8.42
	5000	TH	40.3	51.9	62.0	69.1	72.2	82.4	94.6	103.0	107.0	119.0
		THI	37.0	47.8	56.7	63.0	65.1	72.2	90.4	103.0	107.0	119.0
		CMP	5.54	6.07	6.36	6.57	6.65	6.92	7.33	7.61	7.74	8.15

LEGEND: TH - Total Heating Capacity kW, THI - Integrated Heating Capacity kW, CMP - Compressor Power kW

# MODEL NUMBER IDENTIFICATION GUIDE

<b>MODEL NUMBER</b>	<b>C</b>	<b>H</b>	<b>E</b>	<b>120</b>	<b>H</b>	<b>A</b>					
<b>PRODUCT FAMILY</b>							<b>SALES CODE</b>				
C = Condensor							<b>ELECTRICAL</b>				
<b>PRODUCT TYPE</b>							<b>CODE</b>	<b>VOLTS</b>	<b>PHASE</b>	<b>CYCLE</b>	
H = Heat Pump							H	208/230	3	60	
<b>SERIES</b>							L	460	3	60	
E = Ashrae Compliant Series							<b>CAPACITY BTUH</b>				
							072 = 74,000	091 = 90,000	120 = 120,000		

## NOTES AND FORMULAS FOR USING EXPANDED PERFORMANCE DATA

To find leaving wet bulb and dry bulb from the expanded performance charts on the previous page, 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 ( $h_{wb}$ ).

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

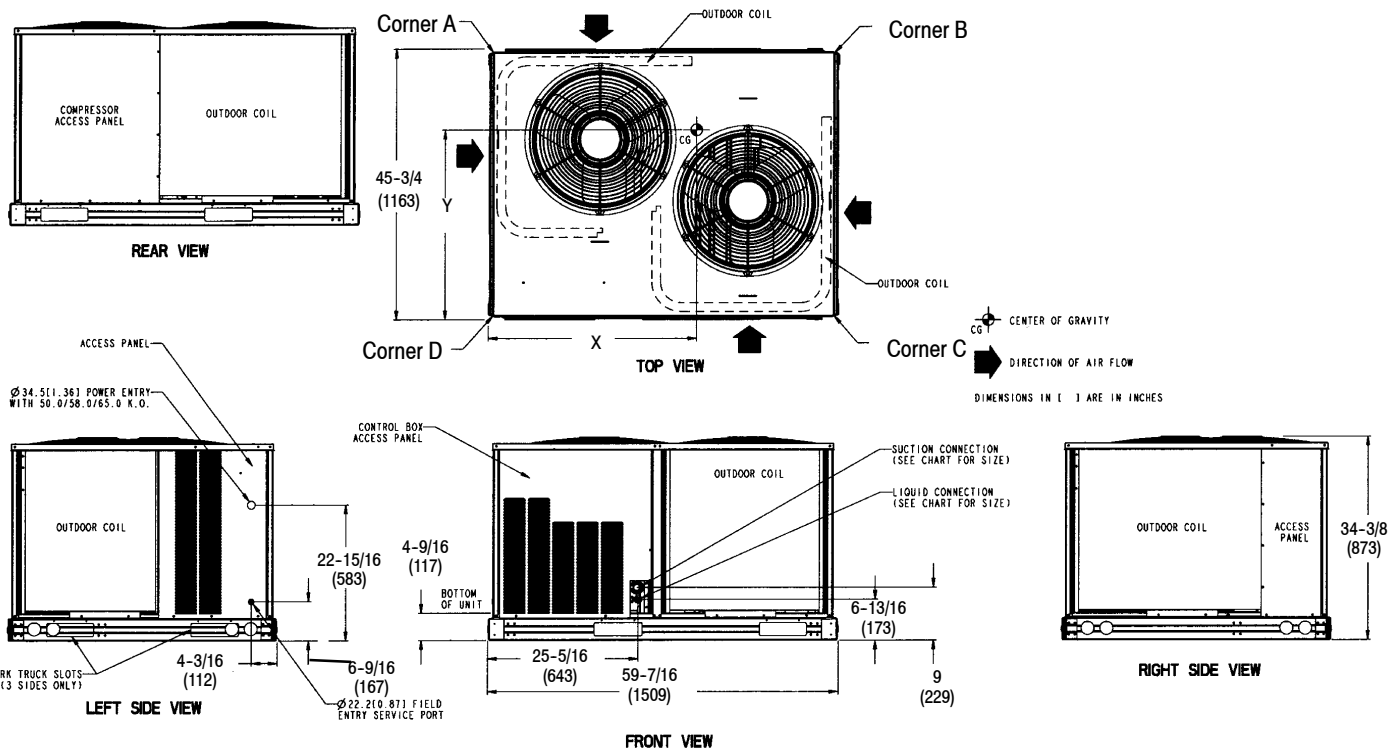
Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

### LEGEND

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

## DIMENSIONS & WEIGHT

Unit	Weights, lb. (kg)				Center of Gravity, in. (mm)		Service Valve Connections		
	Weight	Corner A	Corner B	Corner C	Corner D	X	Y	Vapor	Liquid
CHE072	454 (206)	118(53)	136(62)	108(49)	94(43)	32(813)	26(660)	1-1/8	1/2
CHE091	464(210)	120(54)	142(64)	108(49)	94(43)	32(813)	26(660)	1-1/8	1/2
CHE120	506(230)	120(54)	168(76)	127(58)	91(42)	35(889)	26(667)	1-3/8	1/2



## 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.