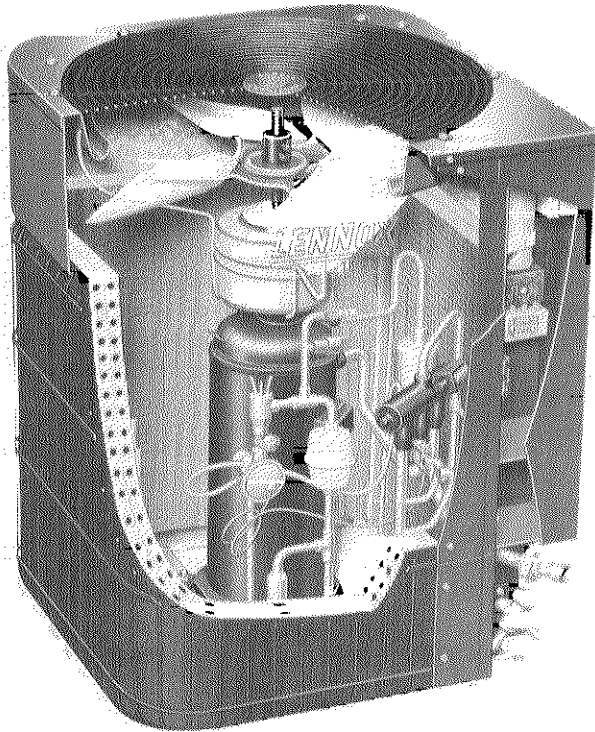




HP20 SERIES HEAT PUMP OUTDOOR UNITS

*18,000 to 43,500 Btuh Cooling Capacity
*17,000 to 40,000 Btuh Heating Capacity
*ARI Standard 210/240 and DOE Certified Ratings

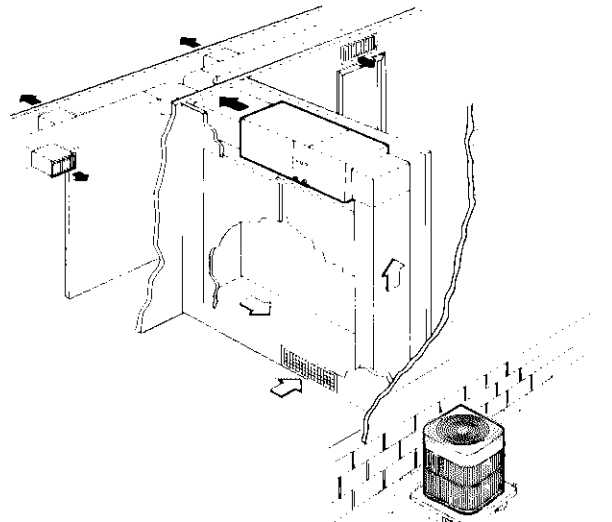
ENGINEERING DATA
HEAT PUMPS
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SYSTEMS
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Supersedes December 1989



CERTIFICATION APPLIES ONLY
WHEN USED WITH PROPER
COMPONENTS AS LISTED
WITH ARI



Typical Application

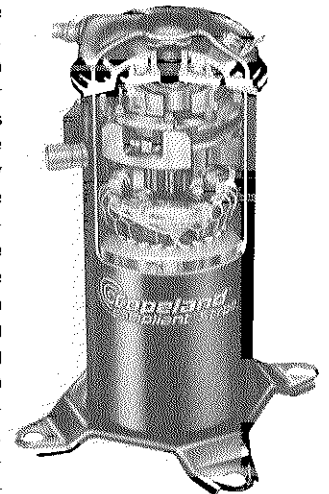


Application — The HP20 series outdoor units with matching indoor units are designed for applications in apartments, hotels, motels, condominiums, new single family housing or retrofits. HP20 units have SEER's of up to 11.60 with a cooling capacity range of 18,000 to 43,500 Btuh and a COP rating of up to 3.38 with a heating capacity range of 17,000 to 40,000 Btuh. Matching blower-powered indoor units with optional supplemental electric heat are available to provide selective sizing and installation versatility. See ARI Ratings table. For complete data on Fuelmaster + ¹M systems and indoor units see individual bulletins indexed in this tab section. Outdoor units are shipped factory assembled, piped and wired. Each unit is test operated at the factory to ensure proper operation. The installer has only to set outdoor unit in the desired location, connect refrigerant lines and make electrical connections.

Approvals — Units have been tested with matching indoor units in the Lennox Research Laboratory and rated according to U.S. Department of Energy (DOE) test procedures and in accordance with ARI Standard 210/240-89. In addition, units are U.L. Listed and have been sound rated in the Lennox reverberant sound test room in accordance with ARI Standard 270-84. Units and components within are bonded for grounding to meet safety standards for servicing required by U.L. and N.E.C.

Copper Tube Outdoor Coil — Lennox designed and fabricated coil is constructed of precisely spaced ripple-edge aluminum fins machine fitted to seamless copper tubes. Precise coil circuiting gives uniform refrigerant distribution for high efficiency. Extra large four sided wraparound coil configuration provides extra large surface area for excellent heat transfer with minimum air resistance. Fins are equipped with collars that grip tubing for maximum contact area. Inverted coil circuiting prevents ice buildup at coil base in low ambients. Discharge gas enters bottom of coil during defrost and heat of refrigerant flows counter to water drainage resulting in extremely clean and unobstructed fins and tubes. Fin spacing allows rapid and complete water drainage. Flared tubing connections and silver soldering provide tight, leakproof joints. Long life copper tubing is corrosion-resistant and easy to service. Coil is factory tested under high pressure to insure leakproof construction. Corrosion resistant PVC coated coil guard is furnished as standard. Entire coil is accessible for cleaning.

Copeland™ Compliant Scroll™ Compressor — High efficiency compressor features durability, steady uniform suction flow, constant discharge flow, high volumetric efficiency, quiet operation and the ability to start under any system load. Use of the scroll compressor eliminates the need for accumulator, crankcase heater, start capacitor and start relay. The compliant scroll type compressor is a simple compression concept design consisting of two involute spiral scrolls matched together to generate a series of crescent-shaped gas pockets between them. During compression, one scroll is stationary while the other is allowed to orbit, not rotate, around the fixed one. As this motion occurs, gas is drawn into the outer pocket sealing off the open passage. As the spiral movement continues, the pockets between the scrolls are slowly pushed to the center of the scrolls while simultaneously being reduced in volume. When the pocket reaches the center, the gas is now at high pressure and is forced out of a port located in the center of the fixed scroll. During compression, several pockets are being compressed simultaneously resulting in a smooth, nearly continuous compression cycle. Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency. The scroll compressor is tolerant to the effects of liquid slugging and contaminants. Should this occur, the scrolls separate and allow the liquid or contaminants to be worked to the center and discharged. Low gas pulses during compression minimize operational sound level. Factory installed muffler in discharge line, external to the compressor, provides additional sound reduction. Motor is internally protected from excessive current and temperature. Discharge temperature thermostat protects compressor from high discharge temperature. Compressor is installed in the unit on resilient rubber mounts, assuring vibration free operation.



FEATURES

Equipment Warranty — The compressor has a limited warranty for a full five years. All other components have a limited warranty for one year. Refer to Lennox Equipment Limited Warranty included with the unit for details.

Weather Resistant Cabinet — Heavy gauge galvanized steel cabinet is subject to a five station metal wash process. This preparation process results in a perfect bonding surface for the finish coat of baked-on enamel. The outdoor enamel paint finish gives the cabinet long lasting protection from the weather. Drainage holes are furnished in the base and base channels for moisture removal. Heavy duty channels under the base raise the unit off the mounting surface away from the damaging moisture. Control box is conveniently located for easy access with all controls installed and pre-wired at the factory.

Powerful Outdoor Fan — Efficient direct drive fan moves large volumes of air uniformly through the entire outdoor coil resulting in high refrigerant cooling capacity. Vertical discharge of air minimizes operating sounds and eliminates hot air damage to lawn and shrubs. Fan motor is totally enclosed for maximum protection from weather, dust and corrosion. A rain shield on the motor provides additional protection from moisture. Fan service access is accomplished by removal of fan guard. Corrosion resistant PVC coated steel wire fan guard is furnished as standard.

Refrigerant Line Connections, Electrical Inlets and Service Valves — Vapor and liquid line connections are located outside of the cabinet and are made with sweat connections. Brass service valves prevent corrosion and provide access to refrigerant system. Drier with internal check valve and strainer are factory installed in the liquid line. One-shot vapor valve, liquid line service valve and gauge ports are accessible outside of the cabinet. A field installed thermometer well is furnished. Refrigerant line connections, valve and field wiring inlets are all conveniently located in one central area of the cabinet. See dimension drawing.

Defrost Control — A factory installed clock timer defrost control is furnished as standard equipment. It gives a defrost cycle for every 45 or 90 minutes (adjustable) of compressor "on" time at outdoor temperature below 35°F. A sensing element mounted on the outdoor coil determines when the defrost cycle is required. Defrost pressure switch on the liquid line terminates cycle.

Expansion Valve — Designed and sized specifically for use in heat pump system. Sensor is located on the suction line between reversing valve and compressor thus sensing suction temperature in any cycle. Factory installed.

Reversing Valve — 4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa. Valve operates on pressure differential between outdoor unit and indoor unit of the system. Factory installed.

Timed-Off Control — Furnished and factory installed. Provides low voltage protection and prevents compressor short-cycling. Automatic reset control provides a time delay between compressor shutoff and start-up.

Thermostat (Optional) — Thermostat is not furnished with the unit and must be ordered extra. See Accessories Section, Page 13 and Lennox Price Book.

Refrigerant Line Kits (Optional) — Lines are available in several lengths and must be ordered extra. See Refrigerant Line Kit table for selection. The refrigerant lines (vapor and liquid) are shipped refrigeration clean. Lines are cleaned, dried, pressurized and sealed at the factory. Vapor line is fully insulated. Lines are furnished with a flare fitting (Indoor unit connection) on one end and less any fitting (stubbed) on the opposite end for connection to the outdoor unit. Refrigerant line length should not exceed 50 ft. in any installation. If longer length lines are required, contact your Lennox Division Service Manager.

Mounting Base (Optional) — Rugged mounting base provides permanent foundation for outdoor units. High density polyethylene structural material is lightweight, sturdy, sound absorbing and will withstand the rigors of the sun, heat, cold, moisture, oil and refrigerant. Will not mildew or rot. Can be shipped singly or in packages of 6 to a carton. HP20-211, HP20-261, HP20-311 and HP20-411 models use the MB1-22 base (99C78) 22-1/4" x 22-1/4" x 3" shipping weight 10 lbs. HP20-461 model uses the MB1-32 base (83C83) 32" x 34" x 3" shipping weight 15 lbs.

Outdoor Thermostat Kit (Optional) — An outdoor thermostat can be used to lock out some of the electric heating elements on indoor units where two stage control is applicable. Outdoor thermostat maintains the heating load on the low power input as long as possible before allowing the full power load to come on the line. Thermostat kit (LB-29740BA) and mounting box (M-1595) must be ordered extra.

Check and Expansion Valve Kits (Optional) — Must be ordered extra and field installed on indoor units. See ARI Ratings table.

SPECIFICATIONS

Model No.		HP20-211	HP20-261	HP20-311	HP20-411	HP20-461
Outdoor Coil	Net face area (sq. ft.)	9.24	7.39	7.39	9.24	11.39
	Tube diameter (in.)	3/8	3/8	3/8	3/8	3/8
	No. of rows	1	2	2	2	2
	Fins per inch	20	20	20	20	18
Outdoor Fan	Diameter (in.)	18	18	18	18	22
	No. of blades	4	4	4	4	4
	Motor hp	1/6	1/6	1/6	1/6	1/3
	Cfm	1900	2400	2400	2600	3800
	Rpm	1170	1040	1040	1060	1060
	Watts	150	250	250	260	400
Refrigerant-22 (charge furnished)		4 lbs. 5 oz.	6 lbs. 1 oz.	6 lbs. 1 oz.	6 lbs. 15 oz.	8 lbs. 5oz.
Liquid line connection (sweat)		5/16	5/16	3/8	3/8	3/8
Vapor line connection (sweat)		5/8	5/8	3/4	3/4	7/8
Shipping weight (lbs.)		138	148	148	170	217
Number of packages in shipment		1	1	1	1	1

ARI RATINGS

Outdoor Unit Model No. ★ARI Std. 270 SRN (Bels)	†ARI Standard 210/240 Ratings											Indoor Unit	•Check and Expansion Valve Kit
	Cooling Capacity (Btuh)	High Temp. Htg. Cap. (Btuh)	Low Temp. Htg. Cap. (Btuh)	Total Unit Cooling Watts	SEER (Btuh/Watt)	EER (Btuh/Watt)	Total Unit High Temp. Htg. Watts	*HSPF	High Temp. Htg. C.O.P.	Total Unit Low Temp. Htg. Watts	Low Temp. Htg. C.O.P.		
HP20-211 (7.4)	18,000	17,000	10,600	1830	11.00	9.85	1615	6.90	3.08	1470	2.10	CB18-21 CBS18-21	LB-34792BE
HP20-261 (7.6)	23,600	22,600	13,400	2355	10.80	10.00	2135	7.00	3.10	1965	2.00	CB18-26 CBS18-26	LB-34792BE
	23,800	22,600	13,200	2325	11.00	10.20	2040	7.10	3.24	1870	2.06	CB19-26 CBH19-26	
HP20-311 (7.6)	27,800	26,400	15,900	2866	10.90	9.70	2512	6.85	3.08	2284	2.04	CB19-26 CBH19-26	LB-34792BG
	28,200	27,800	17,000	3095	10.05	9.10	2720	6.80	3.00	2430	2.04	CB18-31 CBS18-31	
	28,800	28,000	17,000	3075	10.25	9.35	2685	6.90	3.06	2405	2.08	CB18-41 CBS18-41	
HP20-411 (7.8)	33,000	32,800	20,200	3575	10.25	9.25	3195	6.85	3.00	2890	2.04	CB18-41 CBS18-41	LB-34792BG
	33,400	31,800	19,500	3479	10.90	9.60	3025	6.95	3.08	2747	2.08	CB19-41 CBH19-41	
	34,600	33,000	20,400	3655	10.45	9.45	3150	6.90	3.06	2880	2.08	CB18-51 CBS18-51	
	35,000	32,200	19,500	3425	10.90	10.20	2955	6.80	3.20	2660	2.16	CB21-41 CBH21-41	
HP20-461 (8.2)	38,800	39,500	22,400	4041	10.90	9.60	3640	7.20	3.18	3218	2.04	CB19-41 CBH19-41	LB-34792BG
	39,000	39,000	24,400	3980	11.00	9.80	3790	6.90	3.02	3305	2.18	CB21-41 CBH21-41	
	40,000	40,000	25,200	4270	10.30	9.35	3840	7.15	3.06	3465	2.14	CB18-51 CBS18-51	
	43,000	40,000	23,000	4095	11.60	10.50	3552	7.20	3.30	3209	2.10	CB19-51 CBH19-51	
	43,500	40,000	24,800	4305	11.05	10.10	3690	7.70	3.38	3330	2.18	CB21-51 CBH21-51	

★ Sound Rating Number in accordance with ARI Standard 270.

† Rated in accordance with ARI Standard 210/240 and DOE; with 25 ft. of connecting refrigerant lines.

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

High Temperature Heating Ratings — 47°F db/43°F wb outdoor air temperature and 70°F db entering indoor coil air.

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

* Heating Seasonal Performance Factor.

• Kit must be ordered extra and field installed.

REFRIGERANT LINE KITS

Outdoor Unit Model No.	Line Set Model No.	Length of Lines (ft.)	Liquid Line (o.d. in.)	Vapor Line (o.d. in.)
HP20-211 HP20-261	L10-21-20	20	5/16	5/8
	L10-21-25	25		
	L10-21-35	35		
	L10-21-50	50		
HP20-311 HP20-411	L10-41-20	20	3/8	3/4
	L10-41-30	30		
	L10-41-40	40		
	L10-41-50	50		
HP20-461	L10-65-30	30	3/8	7/8
	L10-65-40	40		
	L10-65-50	50		

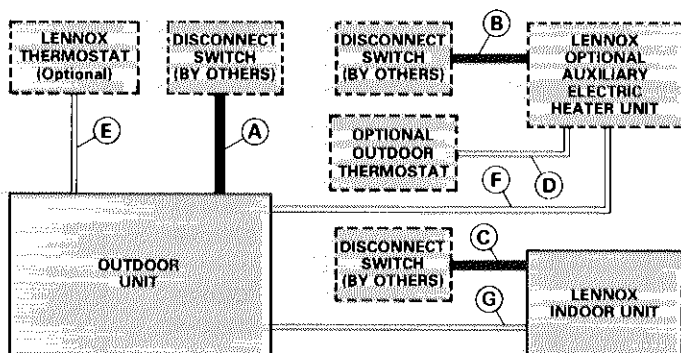
NOTE - Refrigerant lines must not exceed 50 ft. in any installations. If longer length lines are required, contact your Lennox Division Service Manager.

ELECTRICAL DATA

Model Number	HP20-211	HP20-261	HP20-311	HP20-411	HP20-461	
Line voltage data — 60 hz/1 phase	208/230V	208/230V	208/230V	208/230V	208/230V	
Compressor	Rated load amps	9.7	11.6	13.5	18.0	20.0
	Power factor	.96	.97	.96	.96	.97
	Locked rotor amps	50.0	62.5	76.0	90.5	107.0
Outdoor Coil Fan Motor	Full load amps	1.2	1.2	1.2	1.2	2.0
	Locked rotor amps	2.2	2.2	2.2	2.2	4.5
Recommended maximum fuse or circuit breaker size (amps)	20	25	30	40	45	
*Minimum circuit ampacity	13.4	15.7	18.1	23.7	27.0	

*Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.
NOTE — Extremes of operating range are plus 10% and minus 5% of line voltage.

FIELD WIRING

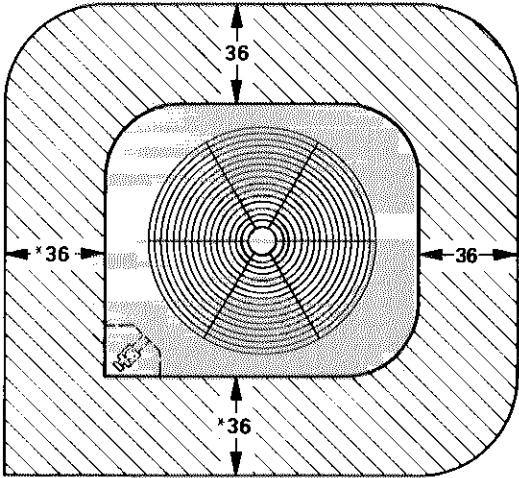


- A — Two wire power (see Electrical Table)
- B — Two or Three wire power (size to heater capacity)
- C — Two wire power (size to indoor coil blower motor)
- D — Two wire low voltage (18 ga. minimum)
- E — Six wire low voltage (18 ga. minimum) with Electric Heat
Eight wire low voltage with Optional Outdoor Thermostat
- F — Four wire low voltage (18 ga. minimum)
- G — Three wire low voltage (18 ga. minimum)

Field wiring not furnished —

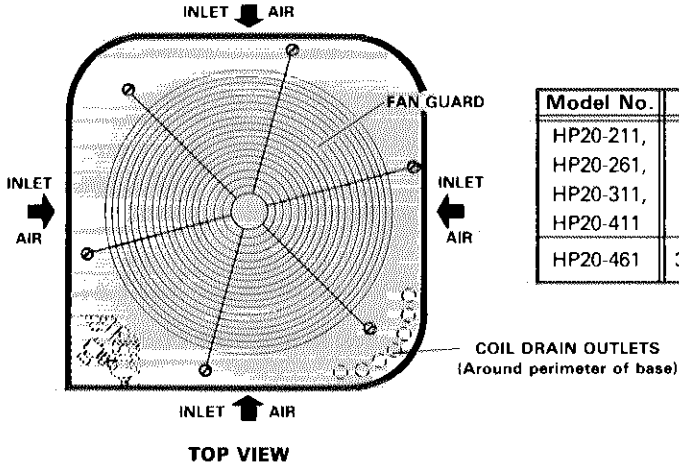
NOTE — All wiring to conform to NEC and local electrical codes.

INSTALLATION CLEARANCES (inches)

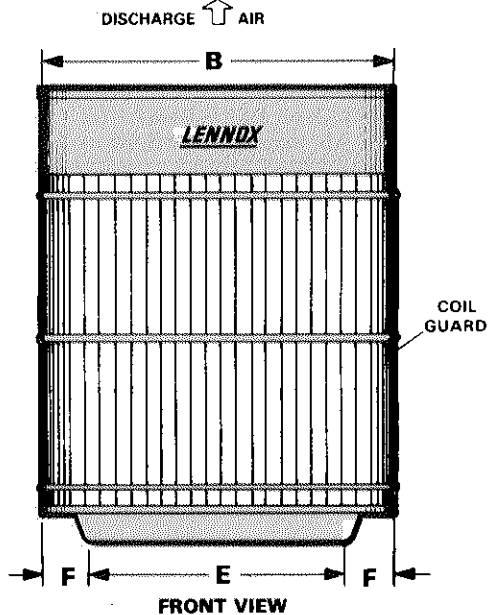
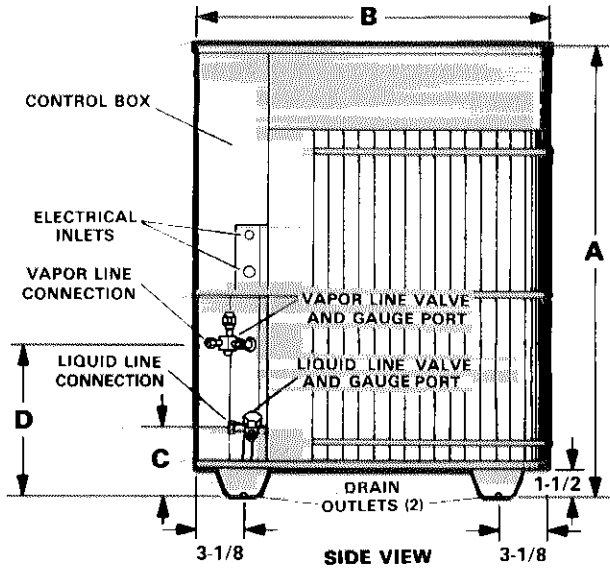


NOTE — 48 inch clearance required on top of unit.
 *NOTE — One side must be 36 inches for service.
 Two of the remaining sides may be 12 inches.

DIMENSIONS (inches)



Model No.	A	B	C	D	E	F
HP20-211, HP20-261, HP20-311, HP20-411	28-3/4	22-1/4	3-13/16	7-1/2	15	3-5/8
HP20-461	33-9/16	28-13/16	4-9/16	9-5/16	18-1/16	5-3/8



RATINGS

NOTE - To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-211 COOLING CAPACITY WITH CB18-21 OR CBS18-21 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85							
63	600	18,200	1300	.77	.91	1.00	17,400	1450	.78	.93	1.00	16,800	1640	.80	.95	1.00	16,000	1880	.81	.97	1.00
	675	18,600	1310	.79	.94	1.00	17,900	1460	.81	.96	1.00	17,200	1650	.82	.98	1.00	16,400	1890	.84	.99	1.00
	750	19,000	1310	.82	.97	1.00	18,300	1470	.83	.99	1.00	17,500	1660	.85	1.00	1.00	16,800	1910	.87	1.00	1.00
67	600	19,100	1320	.60	.74	.88	18,400	1470	.61	.76	.90	17,700	1660	.62	.77	.92	16,800	1910	.63	.79	.94
	675	19,600	1320	.62	.77	.92	18,800	1480	.63	.78	.93	18,000	1670	.64	.80	.95	17,200	1920	.65	.82	.97
	750	19,900	1330	.63	.79	.94	19,200	1480	.64	.81	.96	18,400	1680	.66	.83	.98	17,500	1930	.67	.85	1.00
71	600	20,000	1330	.45	.59	.72	19,300	1490	.45	.60	.73	18,500	1680	.46	.61	.75	17,700	1930	.46	.62	.77
	675	20,500	1340	.46	.61	.75	19,700	1490	.46	.61	.76	18,900	1690	.47	.63	.78	18,100	1950	.47	.64	.80
	750	20,900	1340	.46	.62	.77	20,100	1500	.47	.63	.79	19,300	1700	.48	.64	.81	18,400	1960	.48	.66	.83

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-261 COOLING CAPACITY WITH CB18-26 OR CBS18-26 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85							
63	800	23,900	1580	.78	.93	1.00	23,000	1770	.79	.95	1.00	22,100	1970	.81	.97	1.00	21,100	2160	.83	.98	1.00
	900	24,500	1580	.81	.96	1.00	23,600	1780	.82	.98	1.00	22,600	1970	.84	.99	1.00	21,700	2170	.86	1.00	1.00
	1000	25,000	1590	.84	.99	1.00	24,100	1780	.85	1.00	1.00	23,100	1980	.87	1.00	1.00	22,300	2180	.89	1.00	1.00
67	800	25,300	1590	.61	.75	.89	24,300	1780	.61	.77	.91	23,400	1980	.62	.78	.93	22,300	2180	.63	.80	.95
	900	25,900	1600	.62	.78	.93	24,900	1790	.63	.80	.95	23,800	1990	.64	.82	.97	22,700	2190	.66	.84	.99
	1000	26,300	1610	.64	.81	.97	25,300	1800	.65	.83	.98	24,200	2000	.66	.85	1.00	23,200	2200	.68	.87	1.00
71	800	26,700	1610	.45	.59	.73	25,800	1810	.45	.60	.74	24,700	2010	.46	.61	.76	23,600	2210	.46	.62	.77
	900	27,300	1620	.46	.61	.76	26,300	1810	.46	.62	.77	25,200	2020	.47	.63	.79	24,100	2220	.47	.64	.81
	1000	27,800	1630	.47	.63	.79	26,800	1820	.47	.64	.80	25,700	2030	.47	.65	.82	24,500	2230	.48	.67	.85

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-211 HEATING CAPACITY WITH CB18-21 OR CBS18-21 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
600	20,800	1400	16,000	1305	11,100	1205	8000	1025	4000	785
675	21,000	1345	16,200	1250	11,300	1150	8200	970	4200	730
750	21,200	1305	16,400	1210	11,500	1110	8400	930	4400	690

NOTE -- Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-261 HEATING CAPACITY WITH CB18-26 OR CBS18-26 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
800	27,800	1720	21,100	1595	14,200	1460	10,000	1250	4900	955
900	28,200	1655	21,500	1530	14,600	1395	10,400	1185	5300	890
1000	28,500	1600	21,800	1475	14,900	1340	10,700	1130	5600	835

NOTE -- Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-261 HEATING PERFORMANCE

at 900 cfm Indoor Coil Air Volume (CB18-26 or CBS18-26)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	1655	28,200
60	1625	26,600
55	1595	25,100
50	1565	23,500
47	1545	22,600
45	1530	21,500
40	1485	18,900
35	1445	16,200
30	1420	15,400
25	1395	14,600
20	1375	13,900
17	1360	13,400
15	1330	12,900
10	1255	11,600
5	1185	10,400
0	1110	9100
-5	1035	7800
-10	965	6600
-15	890	5300
-20	815	4000

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

HP20-211 HEATING PERFORMANCE

at 675 cfm Indoor Coil Air Volume (CB18-21 or CBS18-21)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	1345	21,000
60	1320	19,900
55	1295	18,800
50	1275	17,700
47	1260	17,000
45	1250	16,200
40	1225	14,200
35	1200	12,200
30	1175	11,800
25	1150	11,300
20	1130	10,900
17	1115	10,600
15	1090	10,200
10	1030	9200
5	970	8200
0	910	7200
-5	850	6200
-10	790	5200
-15	730	4200
-20	670	3200

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-261 COOLING CAPACITY WITH CB19-26 OR CBH19-26 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85								
63	800	23,700	1630	.79	.94	1.00	22,700	1820	.80	.96	1.00	21,800	2020	.82	.98	1.00	20,900	2230	.84	1.00	1.00				
	900	24,200	1630	.82	.98	1.00	23,300	1830	.84	.99	1.00	22,500	2030	.86	1.00	1.00	21,500	2240	.88	1.00	1.00				
	1000	24,800	1640	.85	1.00	1.00	23,900	1840	.87	1.00	1.00	23,100	2040	.89	1.00	1.00	22,200	2250	.91	1.00	1.00				
67	800	25,000	1640	.61	.77	.91	24,100	1840	.62	.78	.93	23,000	2040	.63	.80	.95	22,000	2250	.64	.82	.97				
	900	25,500	1650	.63	.80	.95	24,500	1850	.64	.81	.97	23,400	2050	.65	.83	.99	22,400	2260	.67	.85	1.00				
	1000	26,000	1650	.65	.83	.98	25,000	1850	.66	.85	1.00	23,900	2060	.67	.87	1.00	22,800	2270	.69	.89	1.00				
71	800	26,400	1660	.45	.60	.74	25,400	1860	.45	.61	.75	24,400	2070	.46	.62	.77	23,300	2280	.46	.63	.79				
	900	27,000	1670	.46	.62	.77	25,900	1870	.46	.63	.79	24,900	2080	.47	.64	.81	23,800	2290	.47	.65	.83				
	1000	27,400	1670	.47	.64	.80	26,400	1880	.47	.65	.82	25,300	2090	.48	.66	.84	24,200	2300	.49	.68	.86				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-311 COOLING CAPACITY WITH CB19-26 OR CBH19-26 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85								
63	800	26,900	2120	.74	.88	1.00	25,900	2350	.75	.90	1.00	24,700	2630	.77	.92	1.00	23,500	2980	.79	.95	1.00				
	900	27,700	2130	.76	.92	1.00	26,500	2360	.78	.94	1.00	25,300	2650	.80	.96	1.00	24,100	3000	.82	.98	1.00				
	1000	28,200	2140	.79	.95	1.00	27,000	2370	.81	.97	1.00	25,800	2660	.83	.99	1.00	24,600	3020	.85	1.00	1.00				
67	800	28,500	2140	.58	.71	.85	27,300	2380	.59	.73	.87	26,200	2670	.60	.74	.89	24,900	3030	.61	.76	.91				
	900	29,100	2160	.60	.74	.89	28,000	2390	.61	.76	.91	26,700	2690	.62	.77	.93	25,400	3050	.63	.79	.95				
	1000	29,700	2170	.61	.77	.92	28,500	2410	.62	.79	.94	27,200	2700	.63	.81	.96	25,800	3060	.65	.83	.99				
71	800	30,000	2180	.44	.57	.69	28,800	2410	.44	.57	.70	27,600	2710	.44	.58	.72	26,400	3070	.45	.59	.74				
	900	30,700	2190	.44	.58	.72	29,500	2430	.45	.59	.73	28,300	2730	.45	.60	.75	27,000	3090	.45	.61	.77				
	1000	31,300	2200	.45	.60	.74	30,100	2450	.45	.61	.76	28,800	2740	.46	.62	.78	27,400	3110	.46	.63	.80				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-261 HEATING CAPACITY WITH CB19-26 OR CBH19-26 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
800	27,900	1720	21,200	1590	14,100	1465	9900	1240	4900	945
900	28,200	1655	21,500	1525	14,400	1400	10,200	1175	5200	880
1000	28,400	1605	21,700	1475	14,600	1350	10,400	1125	5400	830

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-311 HEATING CAPACITY WITH CB19-26 OR CBH19-26 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
800	32,500	2295	24,900	2100	16,900	1900	12,100	1600	6000	1225
900	32,700	2205	25,200	2010	17,200	1810	12,400	1510	6300	1135
1000	33,000	2140	25,500	1945	17,500	1745	12,700	1445	6600	1070

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-261 HEATING PERFORMANCE

at 900 cfm Indoor Coil Air Volume (CB19-26 or CBH19-26)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	1655	28,200
60	1625	26,600
55	1590	25,100
50	1560	23,500
47	1540	22,600
45	1525	21,500
40	1495	18,800
35	1460	16,000
30	1430	15,200
25	1400	14,400
20	1370	13,700
17	1350	13,200
15	1320	12,700
10	1245	11,500
5	1175	10,200
0	1100	9000
-5	1030	7700
-10	955	6500
-15	880	5200
-20	810	4000

HP20-311 HEATING PERFORMANCE

at 900 cfm Indoor Coil Air Volume (CB19-26 or CBH19-26)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2205	32,700
60	2155	31,000
55	2105	29,200
50	2060	27,500
47	2030	26,400
45	2010	25,200
40	1960	21,900
35	1910	18,700
30	1860	18,000
25	1810	17,200
20	1765	16,400
17	1735	16,000
15	1695	15,400
10	1600	13,900
5	1510	12,400
0	1415	10,800
-5	1320	9300
-10	1225	7800
-15	1135	6300
-20	1040	4800

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE - To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-311 COOLING CAPACITY WITH CB18-31 OR CBS18-31 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)						
				75	80	85			75	80	85			75	80	85			75	80	85				
63	875	28,100	2180	.75	.88	1.00	26,900	2400	.76	.90	1.00	25,800	2690	.77	.92	1.00	24,600	3040	.79	.94	1.00				
	1000	28,800	2190	.77	.92	1.00	27,800	2420	.79	.94	1.00	26,500	2710	.81	.96	1.00	25,200	3070	.83	.98	1.00				
	1125	29,500	2200	.80	.96	1.00	28,200	2440	.82	.98	1.00	27,100	2730	.84	.99	1.00	25,900	3090	.86	1.00	1.00				
67	875	29,600	2210	.59	.72	.85	28,500	2440	.60	.74	.87	27,300	2740	.61	.75	.89	26,100	3090	.62	.77	.91				
	1000	30,400	2220	.61	.75	.89	29,200	2460	.62	.77	.91	28,000	2760	.63	.78	.93	26,700	3110	.64	.80	.95				
	1125	31,000	2240	.62	.78	.93	29,800	2480	.63	.80	.94	28,600	2770	.65	.81	.97	27,200	3130	.66	.84	.99				
71	875	31,200	2240	.45	.58	.70	30,000	2480	.45	.58	.71	28,800	2780	.45	.59	.73	27,600	3140	.46	.60	.74				
	1000	32,000	2260	.45	.59	.73	30,800	2500	.46	.60	.74	29,600	2800	.46	.61	.76	28,200	3170	.47	.63	.78				
	1125	32,700	2280	.46	.61	.76	31,400	2520	.47	.62	.77	30,100	2820	.47	.63	.79	28,800	3180	.48	.65	.81				

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-311 COOLING CAPACITY WITH CB18-41 OR CBS18-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T) Dry Bulb (°F)						
				75	80	85			75	80	85			75	80	85			75	80	85				
63	875	28,600	2160	.75	.89	1.00	27,500	2390	.76	.91	1.00	26,300	2670	.78	.93	1.00	25,100	3020	.79	.95	1.00				
	1000	29,400	2180	.78	.93	1.00	28,300	2410	.79	.94	1.00	26,500	2930	.81	.96	1.00	25,700	3050	.83	.99	1.00				
	1125	30,100	2190	.81	.96	1.00	28,700	2420	.82	.98	1.00	27,600	2710	.84	1.00	1.00	26,400	3070	.87	1.00	1.00				
67	875	30,200	2190	.59	.73	.86	29,000	2430	.60	.74	.87	27,800	2720	.61	.75	.89	26,500	3070	.62	.77	.91				
	1000	30,900	2210	.61	.76	.90	29,800	2450	.62	.77	.91	28,500	2740	.63	.79	.93	27,200	3090	.64	.81	.96				
	1125	31,600	2220	.63	.78	.93	30,300	2460	.64	.80	.95	29,000	2750	.65	.82	.97	27,600	3110	.66	.84	.99				
71	875	31,800	2230	.45	.58	.70	30,600	2470	.45	.58	.71	29,400	2760	.45	.59	.73	28,100	3120	.46	.60	.75				
	1000	32,700	2250	.45	.60	.73	31,400	2490	.46	.60	.75	30,100	2780	.46	.62	.76	28,800	3150	.47	.63	.78				
	1125	33,300	2260	.46	.61	.76	32,100	2500	.47	.62	.78	30,700	2800	.47	.64	.80	29,300	3160	.48	.65	.82				

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-311 HEATING CAPACITY WITH CB18-31 OR CBS18-31 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
875	33,800	2360	26,100	2155	17,900	1950	12,700	1640	6300	1255
1000	34,200	2260	26,500	2055	18,300	1850	13,100	1540	6700	1155
1125	34,500	2185	26,800	1980	18,600	1775	13,400	1465	7000	1080

NOTE - Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-311 HEATING CAPACITY WITH CB18-41 OR CBS18-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
875	34,200	2320	26,200	2120	17,700	1920	12,700	1620	6300	1240
1000	34,600	2220	26,600	2020	18,100	1820	13,100	1520	6700	1140
1125	34,900	2145	26,900	1945	18,400	1745	13,400	1445	7000	1065

NOTE - Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-311 HEATING PERFORMANCE

at 1000 cfm Indoor Coil Air Volume (CB18-31 or CBS18-31)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2260	34,200
60	2210	32,400
55	2155	30,600
50	2105	28,900
47	2075	27,800
45	2055	26,500
40	2005	23,300
35	1955	20,000
30	1905	19,200
25	1850	18,300
20	1800	17,500
17	1770	17,000
15	1730	16,400
10	1635	14,700
5	1540	13,100
0	1445	11,500
-5	1350	9900
-10	1255	8300
-15	1155	6700
-20	1060	5100

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

HP20-311 HEATING PERFORMANCE

at 1000 cfm Indoor Coil Air Volume (CB18-41 or CBS18-41)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2220	34,600
60	2170	32,800
55	2120	30,900
50	2070	29,100
47	2040	28,000
45	2020	26,600
40	1970	23,000
35	1920	19,500
30	1870	18,800
25	1820	18,100
20	1775	17,400
17	1745	17,000
15	1705	16,400
10	1610	14,700
5	1520	13,100
0	1425	11,500
-5	1330	9900
-10	1235	8300
-15	1140	6700
-20	1045	5100

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-411 COOLING CAPACITY WITH CB18-41 OR CBS18-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85											
63	1050	33,000	2560	.75	.89	1.00	31,800	2820	.76	.91	1.00	30,500	3150	.78	.93	1.00	29,200	3560	.79	.95	1.00				
	1200	33,900	2580	.78	.93	1.00	32,600	2850	.79	.94	1.00	31,300	3180	.81	.97	1.00	29,800	3580	.83	.98	1.00				
	1350	34,700	2590	.81	.96	1.00	33,200	2860	.82	.98	1.00	31,900	3200	.84	.99	1.00	30,500	3610	.86	1.00	1.00				
67	1050	34,900	2600	.59	.73	.86	33,500	2870	.60	.74	.87	32,200	3200	.61	.75	.89	30,700	3620	.62	.77	.91				
	1200	35,700	2610	.61	.76	.90	34,400	2890	.62	.77	.91	32,900	3230	.63	.79	.93	31,400	3640	.64	.81	.96				
	1350	36,400	2630	.63	.78	.93	35,000	2910	.64	.80	.95	33,500	3250	.65	.82	.97	32,000	3660	.66	.84	.99				
71	1050	36,600	2640	.45	.58	.70	35,400	2920	.45	.59	.72	33,900	3260	.46	.60	.73	32,400	3670	.46	.61	.75				
	1200	37,600	2660	.46	.60	.73	36,200	2940	.46	.61	.75	34,700	3280	.46	.62	.76	33,100	3700	.47	.63	.78				
	1350	38,300	2680	.46	.62	.76	36,900	2960	.47	.63	.78	35,300	3300	.47	.64	.80	33,700	3720	.48	.65	.82				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-411 COOLING CAPACITY WITH CB19-41 OR CBH19-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85											
63	1050	33,600	2560	.77	.91	1.00	32,200	2830	.78	.93	1.00	30,800	3160	.80	.95	1.00	29,500	3580	.81	.97	1.00				
	1200	34,300	2570	.80	.95	1.00	33,100	2850	.82	.97	1.00	31,800	3190	.83	.98	1.00	30,500	3610	.85	1.00	1.00				
	1350	35,300	2590	.83	.98	1.00	34,000	2870	.85	1.00	1.00	32,600	3220	.87	1.00	1.00	31,300	3640	.89	1.00	1.00				
67	1050	35,300	2590	.60	.74	.88	34,000	2870	.61	.76	.90	32,600	3210	.62	.77	.92	31,000	3630	.63	.79	.94				
	1200	36,100	2610	.62	.78	.92	34,800	2890	.63	.79	.94	33,300	3230	.64	.81	.96	31,700	3660	.65	.83	.98				
	1350	36,800	2630	.64	.81	.96	35,400	2910	.65	.83	.97	33,900	3250	.66	.85	.99	32,200	3670	.68	.87	1.00				
71	1050	37,100	2640	.44	.59	.72	35,800	2920	.45	.59	.73	34,300	3260	.45	.60	.75	32,800	3690	.46	.61	.77				
	1200	38,000	2660	.45	.61	.75	36,600	2940	.46	.62	.77	35,100	3290	.46	.63	.79	33,500	3710	.47	.64	.81				
	1350	38,800	2670	.46	.63	.79	37,300	2960	.47	.64	.81	35,700	3310	.47	.65	.83	34,100	3730	.48	.67	.85				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-411 HEATING CAPACITY WITH CB18-41 OR CBS18-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
1050	39,900	2770	30,800	2560	21,200	2350	15,100	1985	7500	1515
1200	40,400	2670	31,300	2460	21,700	2250	15,600	1885	8000	1415
1350	40,800	2595	31,700	2385	22,100	2175	16,000	1810	8400	1340

NOTE Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-411 HEATING CAPACITY WITH CB19-41 OR CBH19-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm)	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
1050	38,900	2650	29,900	2460	20,400	2270	14,600	1920	7300	1460
1200	39,300	2585	30,300	2395	20,800	2205	15,100	1855	7700	1395
1350	39,800	2515	30,800	2325	21,300	2135	15,500	1790	8100	1325

NOTE Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-411 HEATING PERFORMANCE

at 1200 cfm Indoor Coil Air Volume (CB18-41 or CBS18-41)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2670	40,400
60	2615	38,300
55	2565	36,200
50	2510	34,100
47	2480	32,800
45	2460	31,300
40	2405	27,400
35	2355	23,600
30	2300	22,700
25	2250	21,700
20	2195	20,800
17	2165	20,200
15	2120	19,400
10	2000	17,500
5	1885	15,600
0	1765	13,700
-5	1650	11,800
-10	1535	9900
-15	1415	8000
20	1300	6100

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

HP20-411 HEATING PERFORMANCE

at 1200 cfm Indoor Coil Air Volume (CB19-41 or CBH19-41)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2585	39,300
60	2535	37,300
55	2490	35,200
50	2440	33,100
47	2415	31,900
45	2395	30,300
40	2345	26,400
35	2295	22,500
30	2250	21,700
25	2205	20,800
20	2160	20,000
17	2130	19,500
15	2085	18,800
10	1970	16,900
5	1855	15,100
0	1740	13,200
-5	1625	11,400
-10	1510	9500
-15	1395	7700
20	1280	5900

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-411 COOLING CAPACITY WITH CB18-51 OR CBS18-51 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85				
63	1050	34,500	2580	.76	.90	1.00	33,100	2850	.77	.92	1.00	31,700	3180	.79	.94	1.00	30,200	3590	.80	.96	1.00
	1200	35,400	2600	.79	.94	1.00	34,000	2870	.80	.96	1.00	32,400	3210	.82	.98	1.00	31,100	3620	.84	1.00	1.00
	1350	36,000	2620	.82	.98	1.00	34,700	2890	.84	.99	1.00	33,300	3230	.86	1.00	1.00	31,900	3650	.88	1.00	1.00
67	1050	36,400	2620	.60	.73	.87	35,000	2900	.60	.75	.89	33,600	3240	.61	.76	.91	32,100	3650	.62	.78	.93
	1200	37,200	2640	.61	.77	.91	35,800	2920	.62	.78	.93	34,200	3260	.63	.80	.95	32,600	3670	.64	.82	.97
	1350	37,900	2660	.63	.80	.95	36,400	2940	.64	.82	.97	34,900	3280	.66	.84	.99	33,300	3690	.67	.86	1.00
71	1050	38,500	2670	.45	.58	.71	37,000	2950	.45	.59	.72	35,500	3290	.45	.60	.74	33,900	3710	.46	.61	.76
	1200	39,300	2690	.45	.60	.74	37,800	2970	.46	.61	.76	36,300	3320	.46	.62	.78	34,600	3740	.47	.63	.80
	1350	40,000	2710	.46	.62	.78	38,500	2990	.47	.63	.79	36,900	3330	.47	.65	.81	35,200	3750	.48	.66	.84

NOTE All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-411 HEATING CAPACITY WITH CB18-51 OR CBS18-51 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		15	
	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input
1050	40,100	2645	31,000	2460	21,400	2280	15,300	1930	7500	1475
1200	40,600	2545	31,500	2360	21,900	2180	15,800	1830	8000	1375
1350	41,000	2470	31,900	2285	22,300	2105	16,200	1755	8400	1300

NOTE Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-411 HEATING PERFORMANCE at 1200 cfm Indoor Coil Air Volume (CB18-51 or CBS18-51)

*Outdoor Temperature (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2545	40,600
60	2500	38,500
55	2455	36,400
50	2405	34,300
47	2380	33,000
45	2360	31,500
40	2315	27,600
35	2270	23,800
30	2225	22,900
25	2180	21,900
20	2130	21,000
17	2105	20,400
15	2060	19,600
10	1945	17,700
5	1830	15,800
0	1720	13,800
-5	1605	11,900
-10	1490	10,000
-15	1375	8000
20	1265	6100

*Outdoor temperature at 70% relative humidity.
Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-411 COOLING CAPACITY WITH CB21-41 OR CBH21-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
		75	80	85			75	80	85			75	80	85			75	80	85		
63	900	33,700	2540	.73	.86	.98	32,400	2840	.74	.88	.99	31,000	3210	.75	.90	1.00	29,700	3670	.77	.92	1.00
	1100	35,100	2570	.77	.92	1.00	33,800	2870	.78	.94	1.00	32,500	3250	.80	.96	1.00	31,100	3730	.82	.98	1.00
	1300	36,400	2590	.81	.97	1.00	35,100	2900	.83	.98	1.00	33,800	3280	.85	1.00	1.00	32,400	3770	.87	1.00	1.00
67	900	35,600	2570	.58	.70	.83	34,300	2880	.58	.71	.84	32,900	3260	.59	.73	.86	31,600	3740	.60	.74	.88
	1100	37,100	2600	.60	.75	.89	35,800	2910	.61	.76	.90	34,300	3300	.62	.78	.92	32,800	3790	.63	.79	.95
	1300	38,300	2620	.63	.79	.94	36,900	2940	.64	.81	.96	35,400	3340	.65	.82	.97	33,800	3840	.66	.85	.99
71	900	37,400	2610	.43	.56	.68	36,200	2920	.44	.57	.69	34,800	3320	.44	.57	.70	33,400	3820	.44	.58	.71
	1100	39,000	2640	.44	.59	.72	37,700	2960	.45	.60	.73	36,300	3370	.45	.60	.75	34,800	3880	.46	.62	.77
	1300	40,300	2660	.45	.61	.77	38,800	2990	.46	.62	.78	37,300	3400	.46	.64	.80	35,900	3920	.47	.65	.82

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-411 HEATING CAPACITY WITH CB21-41 OR CBH21-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
900	39,000	2770	29,600	2565	19,400	2330	14,400	1985	7000	1525
1050	39,700	2640	30,300	2435	20,100	2195	15,100	1850	7700	1390
1200	40,200	2545	30,800	2340	20,600	2105	15,600	1760	8200	1300

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-411 HEATING PERFORMANCE at 1050 cfm Indoor Coil Air Volume (CB21-41 OR CBH21-41)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2640	39,700
60	2590	37,600
55	2540	35,500
50	2490	33,500
47	2465	32,200
45	2435	30,300
40	2360	25,600
35	2285	20,800
30	2240	20,400
25	2195	20,100
20	2155	19,700
17	2130	19,500
15	2080	18,800
10	1965	16,900
5	1850	15,100
0	1735	13,200
-5	1620	11,400
-10	1505	9500
15	1390	7700
-20	1275	5900

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-461 COOLING CAPACITY WITH CB19-41 OR CBH19-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85								
63	1200	39,100	2960	.76	.90	1.00	37,600	3260	.77	.91	1.00	36,000	3630	.78	.93	1.00	34,400	4080	.80	.95	1.00				
	1325	40,000	2970	.78	.92	1.00	38,300	3270	.79	.94	1.00	36,700	3650	.81	.96	1.00	35,200	4110	.83	.98	1.00				
	1450	40,500	2980	.80	.95	1.00	39,000	3280	.82	.97	1.00	37,600	3660	.84	.98	1.00	35,900	4130	.86	1.00	1.00				
67	1200	41,200	2990	.59	.73	.87	39,700	3290	.60	.74	.88	38,100	3670	.61	.76	.90	36,300	4140	.62	.78	.92				
	1325	42,000	3000	.61	.75	.89	40,400	3300	.62	.77	.91	38,700	3690	.63	.79	.93	36,900	4150	.64	.81	.95				
	1450	42,700	3010	.62	.78	.92	41,000	3320	.63	.79	.94	39,400	3700	.64	.81	.96	37,400	4170	.65	.84	.98				
71	1200	43,300	3020	.44	.58	.71	41,800	3340	.45	.59	.72	40,200	3720	.45	.59	.74	38,300	4190	.45	.61	.75				
	1325	44,200	3040	.45	.59	.73	42,500	3350	.45	.60	.75	40,900	3740	.46	.61	.76	39,000	4210	.46	.62	.78				
	1450	44,900	3050	.45	.61	.75	43,200	3370	.46	.62	.77	41,500	3760	.46	.63	.79	39,600	4220	.47	.64	.81				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-461 HEATING CAPACITY WITH CB19-41 OR CBH19-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input	Total Heating Capacity (Btuh)	Comp. Motor Watts Input
1200	48,800	3240	37,300	2940	24,700	2635	16,900	2200	8400	1670
1325	49,200	3170	37,700	2870	25,100	2565	17,300	2130	8800	1600
1450	49,700	3100	38,200	2800	25,600	2495	17,800	2060	9300	1530

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-461 HEATING PERFORMANCE at 1325 cfm Indoor Coil Air Volume (CB19-41 or CBH19-41)

*Outdoor Temperature (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	3170	49,200
60	3095	46,500
55	3020	43,900
50	2945	41,200
47	2900	39,600
45	2870	37,700
40	2795	33,100
35	2720	28,500
30	2640	26,800
25	2565	25,100
20	2490	23,400
17	2445	22,400
15	2395	21,600
10	2260	19,400
5	2130	17,300
0	1995	15,200
5	1865	13,100
10	1730	11,000
15	1600	8800
-- 20	1465	6700

*Outdoor temperature at 70% relative humidity.
Indoor temperature at 70°F.

RATINGS

NOTE — To determine sensible capacity, leaving wet bulb and dry bulb temperatures not shown in the tables, see Miscellaneous Engineering Data, page 9.

HP20-461 COOLING CAPACITY WITH CB21-41 OR CBH21-41 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85								
63	900	37,400	2950	.70	.82	.93	36,000	3280	.71	.83	.95	34,500	3690	.72	.84	.96	33,000	4200	.73	.86	.98				
	1075	39,000	2970	.73	.86	.98	37,500	3310	.74	.88	.99	36,000	3720	.75	.89	1.00	34,400	4240	.77	.91	1.00				
	1250	40,300	2990	.76	.90	1.00	38,800	3330	.77	.92	1.00	37,200	3750	.79	.94	1.00	35,500	4270	.80	.96	1.00				
67	900	39,500	2980	.56	.67	.78	38,100	3320	.56	.68	.79	36,600	3730	.57	.69	.81	35,100	4250	.57	.70	.83				
	1075	41,300	3010	.58	.70	.83	39,800	3350	.58	.71	.84	38,200	3770	.59	.73	.86	36,500	4290	.60	.74	.88				
	1250	42,600	3030	.59	.73	.87	41,100	3370	.60	.75	.89	39,400	3800	.61	.76	.91	37,600	4330	.62	.78	.93				
71	900	41,600	3010	.43	.54	.64	40,200	3360	.43	.54	.65	38,700	3780	.43	.55	.66	37,100	4310	.44	.56	.68				
	1075	43,500	3050	.43	.56	.68	41,900	3390	.44	.56	.69	40,300	3820	.44	.57	.70	38,600	4350	.44	.58	.71				
	1250	44,900	3070	.44	.58	.71	43,200	3420	.45	.59	.72	41,600	3850	.45	.59	.74	39,900	4390	.45	.60	.75				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-461 HEATING CAPACITY WITH CB21-41 OR CBH21-41 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
900	47,200	3685	35,900	3325	23,700	2945	18,300	2565	9000	1990
1075	47,800	3430	36,500	3070	24,300	2690	18,900	2310	9600	1735
1250	48,400	3265	37,100	2910	24,900	2525	19,500	2145	10,200	1575

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-461 HEATING PERFORMANCE at 1075 cfm Indoor Coil Air Volume (CB21-41 OR CBH21-41)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	3430	47,800
60	3345	45,400
55	3265	42,900
50	3185	40,500
47	3135	39,000
45	3070	36,500
40	2905	30,300
35	2735	24,100
30	2710	24,200
25	2690	24,300
20	2665	24300
17	2655	24,400
15	2595	23,500
10	2450	21,200
5	2310	18,900
0	2165	16,600
-5	2020	14,200
-10	1880	11,900
-15	1735	9600
20	1590	7300

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE - To determine Sensible Capacity, Leaving Wet Bulb and Dry Bulb temperatures not shown in the tables, see Miscellaneous Engineering Data section, page 9.

HP20-461 COOLING CAPACITY WITH CB18-51 OR CBS18-51 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
				75	80	85			75	80	85			75	80	85			75	80	85
63	1225	39,500	2940	.73	.88	1.00	37,900	3230	.75	.90	1.00	36,400	3590	.76	.92	1.00	34,600	4030	.78	.95	1.00
	1400	40,500	2950	.76	.92	1.00	38,800	3250	.79	.94	1.00	37,300	3610	.80	.96	1.00	35,700	4050	.82	.98	1.00
	1575	41,400	2970	.80	.96	1.00	39,600	3260	.81	.98	1.00	38,100	3630	.83	.99	1.00	36,500	4080	.85	1.00	1.00
67	1225	41,800	2970	.58	.71	.85	40,200	3270	.59	.72	.86	38,500	3640	.59	.74	.89	36,800	4090	.60	.75	.91
	1400	42,800	2990	.60	.74	.89	41,200	3300	.60	.75	.91	39,500	3660	.61	.77	.93	37,600	4110	.63	.79	.96
	1575	43,700	3010	.61	.78	.93	41,900	3310	.62	.79	.95	40,100	3680	.64	.81	.97	38,200	4130	.65	.83	.99
71	1225	44,200	3020	.44	.56	.69	42,500	3330	.44	.57	.70	40,800	3700	.44	.58	.71	39,000	4150	.45	.59	.73
	1400	45,400	3050	.44	.58	.72	43,600	3350	.45	.59	.73	41,800	3720	.45	.60	.75	39,800	4180	.46	.61	.77
	1575	46,200	3060	.45	.60	.75	44,400	3370	.46	.61	.77	42,500	3740	.46	.62	.79	40,500	4190	.47	.64	.81

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-461 COOLING CAPACITY WITH CB19-51 OR CBH19-51 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																			
		85					95					105					115				
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)		
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)		
				75	80	85			75	80	85			75	80	85			75	80	85
63	1225	41,400	2900	.75	.90	1.00	39,900	3190	.77	.92	1.00	38,200	3560	.78	.94	1.00	36,600	4010	.80	.96	1.00
	1400	42,500	2910	.79	.94	1.00	41,000	3210	.80	.96	1.00	39,400	3580	.82	.98	1.00	37,800	4040	.84	1.00	1.00
	1575	43,600	2930	.82	.98	1.00	42,000	3230	.84	1.00	1.00	40,400	3610	.86	1.00	1.00	38,700	4070	.88	1.00	1.00
67	1225	43,600	2930	.59	.73	.87	42,000	3230	.60	.74	.89	40,300	3600	.61	.76	.91	38,500	4060	.62	.77	.93
	1400	44,600	2950	.61	.76	.91	43,000	3250	.62	.78	.93	41,200	3630	.63	.80	.95	39,300	4080	.64	.82	.98
	1575	45,600	2970	.63	.80	.95	43,900	3270	.64	.81	.97	41,900	3650	.65	.83	.99	40,100	4100	.66	.86	1.00
71	1225	45,900	2970	.44	.57	.70	44,200	3280	.44	.58	.72	42,500	3660	.44	.59	.73	40,600	4110	.45	.60	.75
	1400	47,000	2990	.44	.59	.74	45,300	3300	.45	.61	.75	43,500	3680	.45	.62	.77	41,600	4140	.46	.63	.79
	1575	47,900	3010	.45	.62	.77	46,100	3320	.46	.63	.79	44,200	3690	.47	.64	.81	42,300	4150	.47	.65	.83

NOTE - All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-461 HEATING CAPACITY WITH CB18-51 OR CBS18-51 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
1225	48,200	3170	37,600	2925	26,300	2680	18,900	2265	9300	1730
1400	48,800	3050	38,200	2805	26,900	2560	19,500	2145	9900	1610
1575	49,400	2960	38,800	2715	27,500	2470	20,100	2055	10,500	1520

NOTE - Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-461 HEATING CAPACITY WITH CB19-51 OR CBH19-51 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
1225	48,900	2935	37,700	2700	24,900	2425	17,400	2025	8600	1535
1400	49,400	2885	38,200	2650	25,400	2375	17,900	1975	9100	1485
1575	49,800	2840	38,600	2605	25,800	2335	18,300	1930	9500	1440

NOTE - Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-461 HEATING PERFORMANCE

at 1400 cfm Indoor Coil Air Volume (CB18-51 or CBS18-51)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	3050	48,800
60	2990	46,400
55	2925	43,900
50	2865	41,500
47	2830	40,000
45	2805	38,200
40	2745	33,600
35	2685	29,000
30	2625	27,900
25	2560	26,900
20	2500	25,800
17	2465	25,200
15	2410	24,200
10	2280	21,900
5	2145	19,500
0	2010	17,100
-5	1880	14,700
-10	1745	12,300
-15	1610	9,900
-20	1480	7,600

HP20-461 HEATING PERFORMANCE

at 1400 cfm Indoor Coil Air Volume (CB19-51 or CBH19-51)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	2885	49,400
60	2825	46,800
55	2770	44,200
50	2710	41,700
47	2680	40,100
45	2650	38,200
40	2580	33,200
35	2515	28,300
30	2445	26,900
25	2375	25,400
20	2310	24,000
17	2270	23,100
15	2220	22,200
10	2095	20,000
5	1975	17,900
0	1850	15,700
-5	1730	13,500
-10	1605	11,300
-15	1485	9,100
-20	1360	6,900

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.

RATINGS

NOTE — To determine Sensible Capacity, Leaving Wet Bulb and Dry Bulb temperatures not shown in the tables, see Miscellaneous Engineering Data section, page 9.

HP20-461 COOLING CAPACITY WITH CB21-51 OR CBH21-51 INDOOR COIL UNIT

Enter. Wet Bulb (°F)	Total Air Vol. (cfm)	Outdoor Air Temperature Entering Outdoor Coil (°F)																							
		85						95						105						115					
		Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)			Total Cool Cap. (Btuh)	Comp. Motor Watts Input	Sensible To Total Ratio (S/T)						
				Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)					Dry Bulb (°F)						
75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85								
63	1450	43,300	3040	.79	.95	1.00	41,600	3390	.81	.97	1.00	40,000	3810	.82	.99	1.00	38,300	4350	.84	1.00	1.00				
	1600	44,400	3060	.82	.98	1.00	42,700	3400	.83	1.00	1.00	41,000	3840	.85	1.00	1.00	39,400	4380	.88	1.00	1.00				
	1750	45,100	3070	.84	1.00	1.00	43,400	3420	.86	1.00	1.00	42,000	3860	.88	1.00	1.00	40,400	4410	.91	1.00	1.00				
67	1450	45,800	3090	.61	.77	.92	44,100	3430	.62	.78	.93	42,200	3870	.63	.80	.96	40,400	4410	.64	.82	.98				
	1600	46,700	3100	.63	.79	.95	44,800	3450	.64	.81	.97	43,000	3890	.65	.83	.99	41,000	4430	.66	.85	1.00				
	1750	47,200	3120	.64	.82	.98	45,400	3470	.66	.84	1.00	43,700	3900	.67	.86	1.00	41,700	4450	.68	.88	1.00				
71	1450	48,100	3130	.45	.60	.74	46,400	3490	.45	.61	.76	44,600	3930	.46	.62	.77	42,700	4490	.46	.63	.79				
	1600	49,100	3150	.46	.62	.77	47,200	3510	.46	.63	.79	45,400	3950	.47	.64	.81	43,400	4510	.47	.65	.83				
	1750	49,900	3160	.47	.63	.80	47,900	3520	.47	.65	.82	46,000	3970	.47	.66	.84	44,000	4530	.48	.67	.86				

NOTE — All values are gross capacities and do not include indoor coil blower motor heat deduction.

HP20-461 HEATING CAPACITY WITH CB21-51 OR CBH21-51 INDOOR COIL UNIT

Indoor Coil Air Volume (cfm) 70°F db	Air Temperature Entering Outdoor Coil (°F)									
	65		45		25		5		-15	
	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)	Total Htg. Cap. (Btuh)	Comp. Mtr. Input (W)
1550	48,600	3205	37,800	2940	26,400	2665	18,800	2270	9400	1720
1700	49,000	3145	38,200	2880	26,800	2605	19,200	2210	9800	1660
1850	49,800	3090	39,000	2825	27,600	2550	20,000	2155	10,600	1605

NOTE — Heating capacities include the effect of defrost cycles in the temperature range where they occur.

HP20-461 HEATING PERFORMANCE at 1700 cfm Indoor Coil Air Volume (CB21-51 OR CBH21-51)

*Outdoor Temp. (Degree F)	Compressor Motor Watts Input	Total Output (Btuh)
65	3145	49,000
60	3080	46,500
55	3015	44,000
50	2955	41,500
47	2915	40,000
45	2880	38,200
40	2780	33,800
35	2685	29,300
30	2645	28,100
25	2605	26,800
20	2565	25,600
17	2540	24,800
15	2485	23,900
10	2350	21,500
5	2210	19,200
0	2075	16,800
-5	1935	14,500
-10	1800	12,100
-15	1660	9800
-20	1525	7400

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F.