MODEL: RACL
Condenser

FORM NO. ARR-331 REV. 3

Russell™ By Rheem Condenser

RACL

- **Nominal Sizes: 6.5, 7.5, 10, 12.5 & 20 Ton [22.9, 26.4, 35.2, 44.0 & 70.3 kW]**

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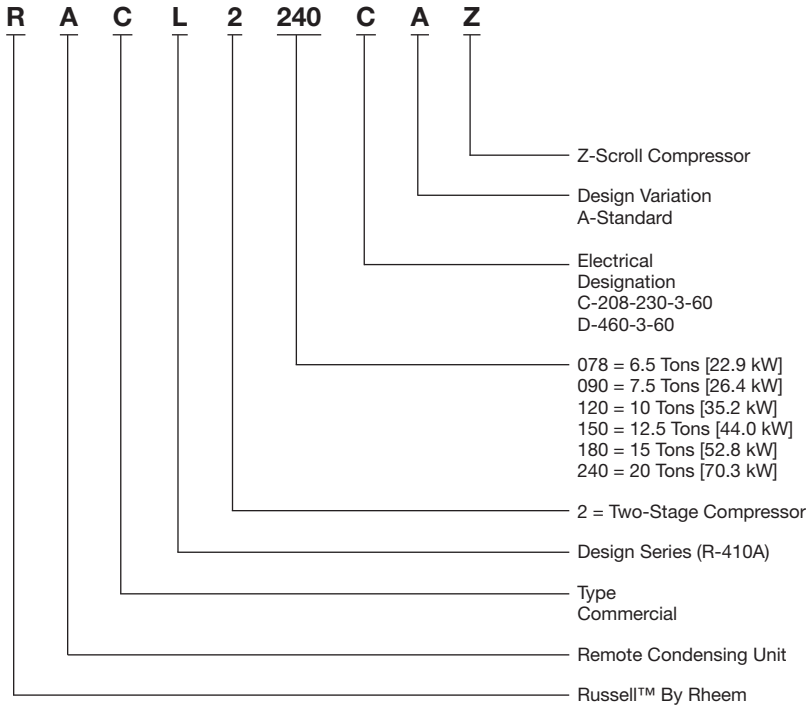
WHY USE AN AIR COOLED CONDENSING UNIT?

- The size ranges offered by Russell™ By Rheem allow you to mix or match components to meet actual job requirements, thus eliminating the need to use oversized or undersized equipment. Equipment sized to meet the actual load will provide better operating economy, better humidity control, and longer equipment life.
- With an air cooled system, you have no water or sewer connections to make, and no troublesome and costly water treatment problems.
- Since the condensing unit is located outside the building, and the low profile air handling unit can be installed in the drop ceiling or in the conditioned space, you will not need a separate equipment room which takes up valuable building space.
- Remote mounting of the already quiet condensing unit keeps the compressor and condenser fan noise outside, and the vertical discharge fans carry the sound up and away from the surrounding area.
- Because of the simple design of the Russell™ By Rheem remote condensing unit, installation is quick and simple, and very little maintenance is required.

FEATURES AND BENEFITS

1. **CABINET—**All access panels can be opened or removed without affecting the structural strength of the unit. Stamped louvered panels offer 100% protection for the condenser coil.
2. **EQUIPMENT GROUND—**Lug for field connection of ground wire.
3. **CONTACTOR—**The contactor is an electrical switch which operates the compressor and outdoor fans. Its 24 volt coil is activated on a call for cooling or heating.
4. **TRANSFORMER—**75 VA step-down type, from Line to 24 volts with resetable circuit breaker.
5. **AUTO-RESET HIGH PRESSURE CONTROL, AND AUTO-RESET LOW PRESSURE CONTROL—**To provide compressor protection under abnormally high head pressure conditions (outdoor fan failure, restriction, dirty coil, etc.) or abnormally low suction pressure conditions (restrictions, TEV failure, loss of charge, indoor blower failure, etc.) while eliminating nuisance tripping sometimes experienced with conventional control systems.
6. **COIL—**Constructed with copper tubes and aluminum fins mechanically bonded to tubes for maximum heat transfer capabilities. All coil assemblies are leak tested up to 550 PSIG (3792 kPa) internal pressure.
7. **SERVICE ACCESS—**Control box with separate line and control voltages, as well as compressor and other refrigerant controls are accessible through access panels. An electrical access cover may be opened or removed without affecting normal operation of the unit. Condenser fan motors are equipped with molded plugs for easy removal. Louver panels and end access panel can be removed for coil cleaning.
8. **BASE PAN—**Galvanized steel with weather-resistant baked enamel finish.
9. **COMPRESSOR—**The Scroll Compressor is hermetically sealed with internal high temperature protection, and durable insulation on motor windings. The entire compressor is mounted on rubber grommets to reduce vibration and noise.
10. **SUCTION LINE ACCUMULATOR—**To prevent liquid slugging of compressor.
11. **REFRIGERANT CONNECTIONS—**All field sweat joints are made external of the unit and are located close to the ground for a neat looking installation
12. **SERVICE VALVES—**Standard on liquid line and vapor line.

MODEL IDENTIFICATION



[ ] Designates Metric Conversions

SELECTION PROCEDURE

To select an RACL Remote Condensing unit to meet a job requirement, follow this procedure.

1. DETERMINE COOLING AND HEATING REQUIREMENTS AND SPECIFIC OPERATING CONDITIONS FROM PLANS AND SPECS.

Example:	Total cooling capacity—	84,000 BTUH [24.61 kW]
	Sensible cooling capacity—	68,000 BTUH [19.92 kW]
	Heating capacity—	120,000 BTUH [35.16 kW]
	*Condenser Entering Air—	95°F [35°C] DB
	*Evaporator Mixed Air Entering	78°F [26°C] DB; 65°F [18°C] WB
	*Indoor Air Flow (vertical)	3000 CFM [1416 L/s]
	*External Static Pressure	.5 in. WG
	Available Power	240 V, 3 PH

2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

Since total cooling is within the range of a nominal 7.5 ton [26.4 kW] unit, enter cooling performance table at 95°F [35°C] DB condenser inlet air. Interpolate between 63°F [2°C] and 67°F [19°C] to determine total and sensible capacity and power input for 65°F [18°C] WB evap inlet air at 3200 CFM [1510 L/s] indoor air flow (table basis):

Total Capacity = 85,150 BTUH [25.0 kW]
Sensible Capacity = 73,850 BTUH [23.0 kW]
Power Input (Compressor and Cond. Fans) = 6,750 Watts

Use formula in note ① on the cooling performance table to determine sensible capacity at 78°F [26°C] DB evaporator entering air:

Sensible Capacity = 67,250 BTUH [19.7 kW]

3. CORRECT CAPACITIES OF STEP 2 FOR ACTUAL AIR FLOW.

Select factors from airflow correction table at 3000 CFM [1416 L/s] and apply to data obtained in step 2 to obtain gross capacity:

Total Capacity = 85,450 x .99 = 84,595 BTUH [24.8 kW]
Sensible Capacity = 73,850 x .97 = 716.34 BTUH [21.0 kW]
Power Input = 6,750 x 1.00 = 6,750 Watts

These are Gross Capacities, not corrected for blower motor heat or power.

4. DETERMINE BLOWER SPEED AND WATTS TO MEET SYSTEM DESIGN.

In the “Commercial Air Handler Specification Sheet” follow the bold line example on the “Blower Performance Curve – 10 ton (wet coil)”. Enter the graph at 3000 CFM [1416 L/s]. Determine which “number of turns” line is closest to the intersection of 0.5 IN [.12 kPa] static and 3000 CFM [1416 L/s]. In this case 4 turns is the closest. Continue following the 3000 CFM line to the next intersection of 4 turns. From this intersection draw a line to the right to determine the watts.

WATTS = 950

5. CALCULATE INDOOR BLOWER BTUH HEAT EFFECT FROM MOTOR WATTS, STEP 4.

HEAT = 950 x 3.412 = 3,240 BTUH

6. CALCULATE NET COOLING CAPACITIES, EQUAL TO GROSS CAPACITY, STEP 3, MINUS INDOOR BLOWER MOTOR HEAT.

Net Total Capacity = 85,430 – 3,240 = 82,190 BTUH [24.14 kW]
Net Sensible Capacity = 71,634 – 3,240 = 68,394 BTUH [20.00 kW]

7. CALCULATE UNIT INPUT AND JOB EER.

Total Power Input = 7,750 (step 3) + 950 (step 4) = 8,700 Watts

$$\text{EER} = \frac{\text{Net Total BTUH [kW] (step 6)}}{\text{Power Input, Watts (above)}} = \frac{81{,}355}{7700} = 10.6$$

8. SELECT UNIT HEATING CAPACITY.

In the “Commercial Air Handler Specification Sheet” turn to the “electrical heater kit characteristics table,” find a heater kit that is compatible and has minimum of 120,000 BTUH. The RXHE-DE040CA [40 kW] has a capacity of 136,500 BTUH at 240 V.

*NOTE: These operating conditions are typical of a commercial application in a 95°F/79°F [35°C/26°C] design area with indoor design of 76°F [24°C] DB and 50% RH and 10% ventilation air, with the unit mounted and centered on the zone it conditions by ducts.

[ ] Designates Metric Conversions

UNIT DIMENSIONS AND WEIGHTS
6.5 & 7.5 TON [22.9 & 26.4 kW]

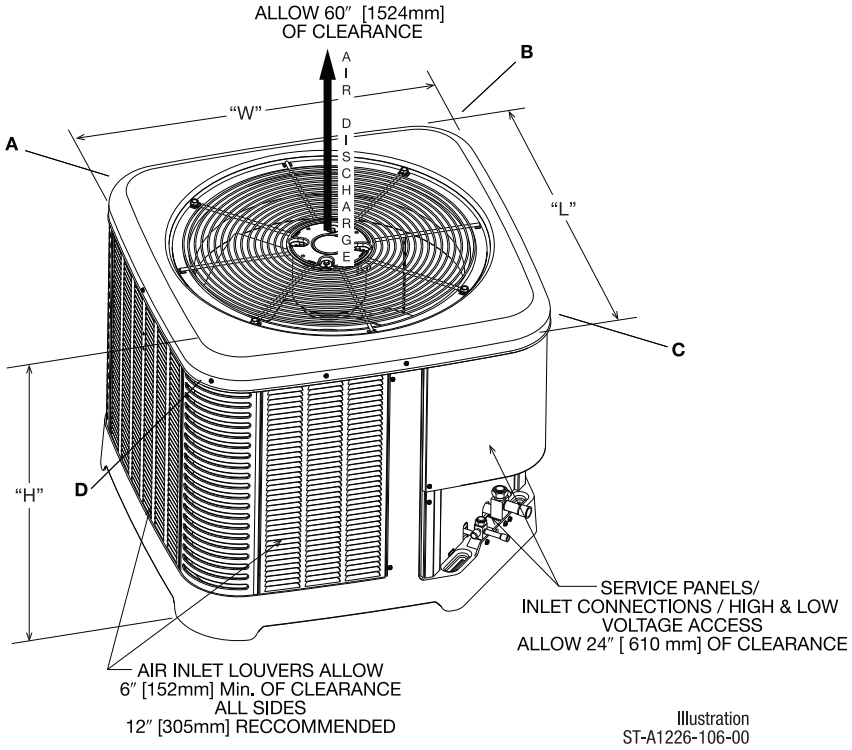


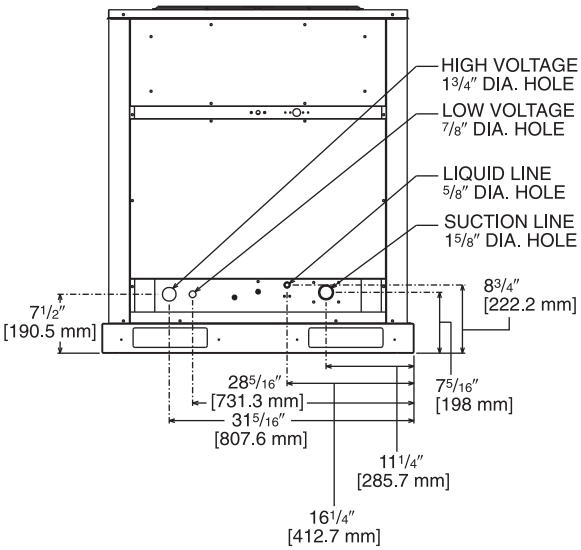
Illustration
ST-A1226-106-00

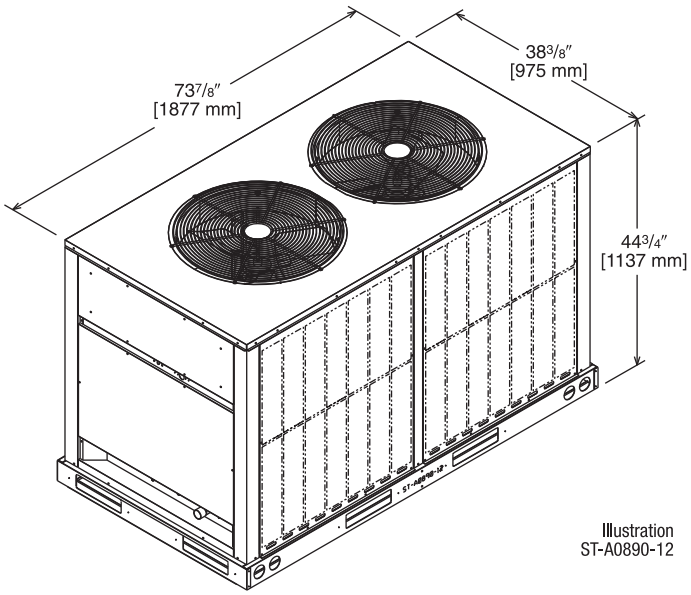
6.5 & 7.5 TON [22.9 & 26.4 kW]

UNIT DIMENSIONS, IN. [mm]		
(-)ACL	**2078**	**2090**
Height "H"	51.00 [1295]	51.00 [1295]
Length "L"	35.75 [908]	35.73 [908]
Width "W"	35.75 [908]	35.75 [908]

[ ] Designates Metric Conversions

UNIT DIMENSIONS AND WEIGHTS
10 & 12.5 TON [35.2 & 44.0 kW]





Illustration
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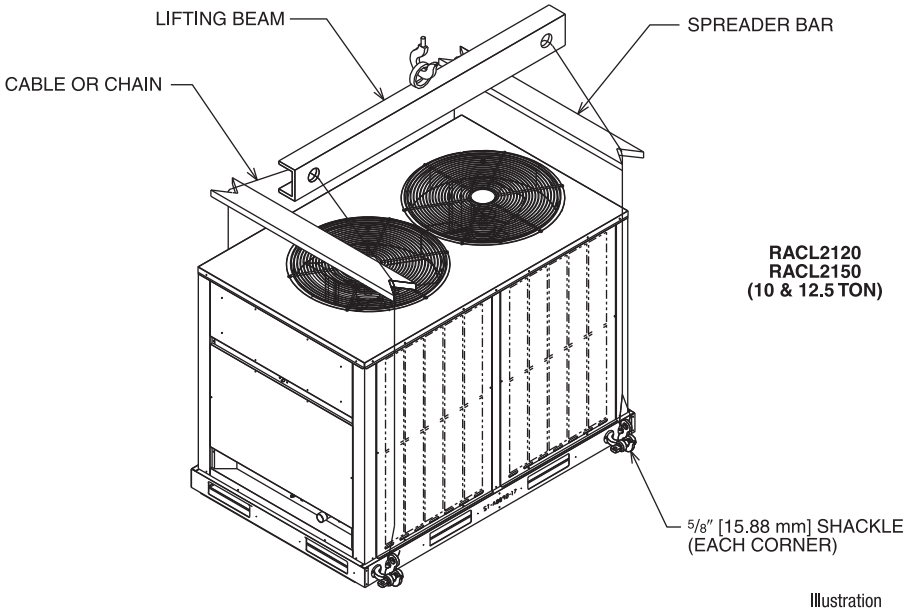


RACL2120
RACL2150
(10 & 12.5 TON)

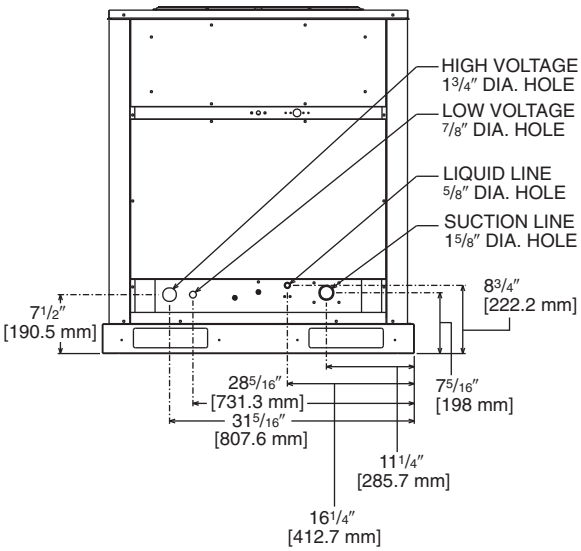
Illustration
ST-A0890-17

10 & 12.5 TON [35.2 & 44.0 kW]

MODEL	TOTAL WEIGHT LBS. [kg]	CORNER WEIGHTS, LBS. [kg]			
		A	B	C	D
(-)ACL2120	565 [256]	97 [44]	181 [82]	215 [98]	73 [33]
(-)ACL2150	647 [293]	189 [86]	157 [71]	161 [73]	139 [63]

[ ] Designates Metric Conversions

UNIT DIMENSIONS AND WEIGHTS 15 & 20 TON [52.8 & 70.3 kW]



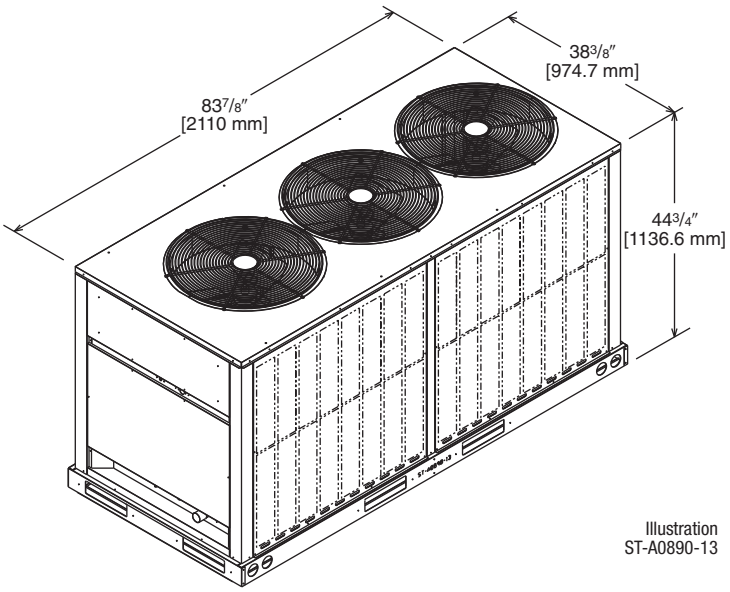
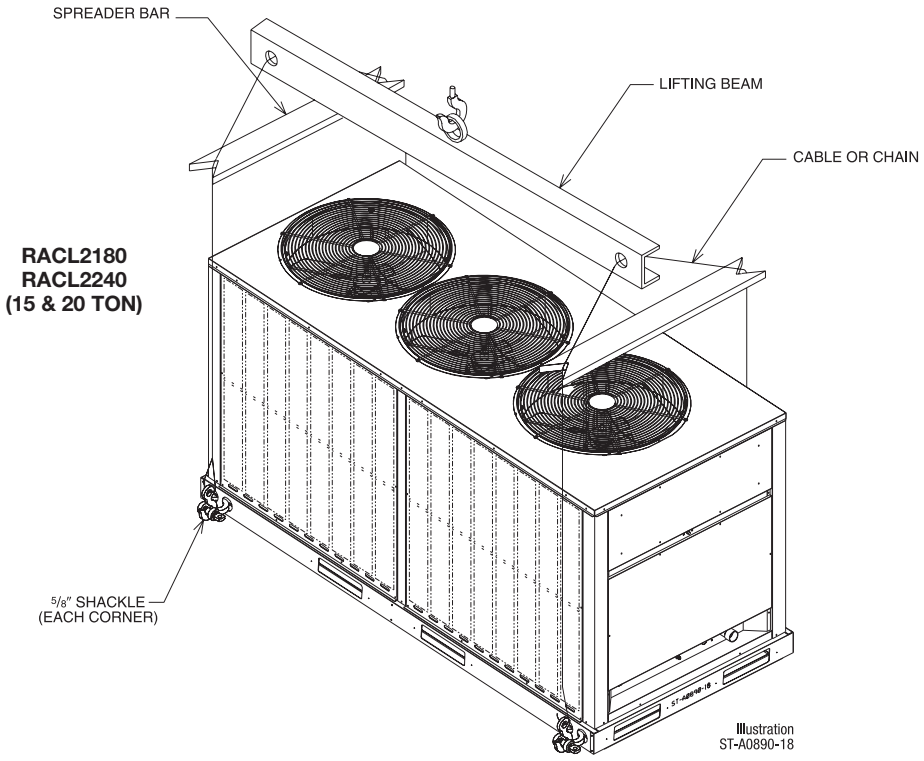


Illustration
ST-A0890-13



RACL2180
RACL2240
(15 & 20 TON)

Illustration
ST-A0890-18

20 TON [70.3 kW]

CORNER WEIGHTS (LBS.) [kg]

MODEL	TOTAL WEIGHT LBS. [kg]	CORNER WEIGHTS, LBS. [kg]			
		A	B	C	D
[-]ACL2180	377 [831]	92 [204]	99 [218]	89 [197]	96 [211]
[-]ACL2240	926 [420]	308 [140]	128 [58]	161 [73]	328 [149]

[ ] Designates Metric Conversions

Electrical and Physical Data

Model Number (-)ACL2	ELECTRICAL									PHYSICAL			
	Phase Frequency (Hz) Voltage (Volts)	Number of Compressors	Compressor		Number of Fans	Fan Motor Full Load Amperes (FLA) Combined	Minimum Circuit Ampacity Amperes	Fuse or HACR Circuit Breaker		Outdoor Coil			Refrig. Per Circuit Oz.
			Rated Load Amperes (RLA) Combined	Locked Rotor Amperes (LRA) Combined				Minimum Amperes	Maximum Amperes	Face Area Sq. Ft.	No. Rows	CFM	
078CAZ	3-60-208/230	1	28.5	164	1	4	38	45	60	32.44	2	5700	344
078DAZ	3-60-460	1	12	94	1	2.5	18	25	25	32.44	2	5700	344
090CAZ	3-60-208/230	1	28.5	164	1	4	38	45	60	32.44	2	5700	344
090DAZ	3-60-460	1	12	94	1	2.5	18	25	25	32.44	2	5700	344
120CAZ	3-60-208/230	1	34.8	240	2	7.8	49	60	80	32.88	2	8000	422
120DAZ	3-60-460	1	14.8	130	2	5	24	30	35	32.88	2	8000	422
150CAZ	3-60-208/230	2*	34.5	274	2	9.4	53	70	80	40.38	2	11400	414
150DAZ	3-60-460	2*	19.4	152	2	5	30	35	45	40.38	2	11400	414
180CAZ	3-60-208/230	2*	41	376	3	15.9	68	80	100	40.38	3	12000	582
180DAZ	3-60-460	2*	23.2	196	3	15.9	37	45	50	40.38	3	12000	582
240CAZ	3-60-208/230	2*	34.1	480	3	15.9	59	70	90	40.38	3	12000	650
240DAZ	3-60-460	2*	32.1	280	3	7.5	48	60	70	40.38	3	12000	650

*Tandem

[ ] Designates Metric Conversions

PERFORMANCE DATA @ AHRI STANDARD CONDITIONS

MODEL NUMBERS		80°F [26.5°C] DB 67°F [19.5°C] WB INDOOR AIR 95°F [35°C] DB OUTDOOR AIR					RATED INDOOR CFM [L/s]
OUTDOOR UNIT RACL-	INDOOR COIL AND/OR AIR HANDLER	TOTAL CAPACITY BTU/H [kW]	NET SENSIBLE BTU/H [kW]	NET LATENT BTU/H [kW]	EER	IEER	
RACL2078	RHCLA2090	78000 [22.8]	54400 [15.9]	23600 [6.9]	11.2	12.9	2800
RACL2090	RHCLA2090	88000 [25.8]	62000 [18.2]	26000 [7.6]	11.2	12.9	2800
RACL2120	RHCLA2120	114000 [33.4]	83600 [24.5]	30400 [8.9]	11.2	12.9	3660
RACL2150	RHCLA2150	142000 [41.6]	108800 [31.9]	33200 [9.7]	11.0	12.4	4780
RACL2240	RHCLA2240	240000 [70.3]	163500 [47.9]	76500 [22.4]	10.0	11.6	7200

COOLING PERFORMANCE DATA—RACL2078+RHCLA2090

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			3150 [1487]	2700 [1274]	2100 [991]	3150 [1487]	2700 [1274]	2100 [991]	3150 [1487]	2700 [1274]	2100 [991]	3150 [1487]	2700 [1274]	2100 [991]	3150 [1487]	2700 [1274]	2100 [991]
DR ①			0.16	0.13	0.08	0.16	0.13	0.08	0.16	0.13	0.08	0.16	0.13	0.08	0.16	0.13	0.08
OUTDOOR DRY BULB TEMPERATURE	75°F [23.9]°C	Total BTUH [kW]	98.1 [28.7]	95.2 [27.9]	91.3 [26.8]	92.2 [27.0]	89.5 [26.2]	85.9 [25.2]	86.2 [25.3]	83.6 [24.5]	80.3 [23.5]	83.2 [24.4]	80.7 [23.7]	77.5 [22.7]	80.2 [23.5]	77.8 [22.8]	74.7 [21.9]
		Sens BTUH [kW]	61.1 [17.9]	56.7 [16.6]	50.8 [14.9]	73.5 [21.5]	68.2 [20.0]	61.1 [17.9]	84.1 [24.6]	78.0 [22.9]	69.9 [20.5]	83.2 [24.4]	80.7 [23.7]	73.5 [21.5]	80.2 [23.5]	77.8 [22.8]	74.7 [21.9]
		Power	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	80°F [26.7]°C	Total BTUH [kW]	95.9 [28.1]	93.1 [27.3]	89.3 [26.2]	90.0 [26.4]	87.3 [25.6]	83.8 [24.6]	84.0 [24.6]	81.5 [23.9]	78.2 [22.9]	81.0 [23.7]	78.6 [23.0]	75.4 [22.1]	78.0 [22.9]	75.7 [22.2]	72.6 [21.3]
		Sens BTUH [kW]	60.2 [17.6]	55.8 [16.4]	50.0 [14.7]	72.5 [21.2]	67.3 [19.7]	60.3 [17.7]	83.1 [24.3]	77.1 [22.6]	69.1 [20.2]	81.0 [23.7]	78.6 [23.0]	72.7 [21.3]	78.0 [22.9]	75.7 [22.2]	72.6 [21.3]
		Power	6.3	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	85°F [29.4]°C	Total BTUH [kW]	93.5 [27.4]	90.8 [26.6]	87.1 [25.5]	87.6 [25.7]	85.1 [24.9]	81.6 [23.9]	81.6 [23.9]	79.2 [23.2]	76.0 [22.3]	78.6 [23.0]	76.3 [22.4]	73.2 [21.5]	75.6 [22.2]	73.4 [21.5]	70.5 [20.6]
		Sens BTUH [kW]	58.5 [17.1]	54.3 [15.9]	48.6 [14.2]	70.8 [20.8]	65.7 [19.3]	58.9 [17.3]	81.4 [23.8]	75.5 [22.1]	67.7 [19.8]	78.6 [23.0]	76.3 [22.4]	71.3 [20.9]	75.6 [22.2]	73.4 [21.5]	70.5 [20.6]
		Power	6.3	6.3	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	90°F [32.2]°C	Total BTUH [kW]	91.0 [26.7]	88.4 [25.9]	84.8 [24.8]	85.2 [25.0]	82.7 [24.2]	79.3 [23.2]	79.2 [23.2]	76.8 [22.5]	73.7 [21.6]	76.1 [22.3]	73.9 [21.7]	70.9 [20.8]	73.2 [21.4]	71.0 [20.8]	68.1 [20.0]
		Sens BTUH [kW]	56.1 [16.4]	52.1 [15.3]	46.7 [13.7]	68.4 [20.1]	63.5 [18.6]	56.9 [16.7]	79.0 [23.2]	73.3 [21.5]	65.7 [19.3]	76.1 [22.3]	73.9 [21.7]	69.3 [20.3]	73.2 [21.4]	71.0 [20.8]	68.1 [20.0]
		Power	6.3	6.3	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	95°F [35]°C	Total BTUH [kW]	88.4 [25.9]	85.8 [25.1]	82.3 [24.1]	82.5 [24.2]	80.1 [23.5]	76.8 [22.5]	76.5 [22.4]	74.3 [21.8]	71.3 [20.9]	73.5 [21.5]	71.3 [20.9]	68.5 [20.1]	70.5 [20.7]	68.4 [20.1]	65.7 [19.2]
		Sens BTUH [kW]	53.1 [15.6]	49.2 [14.4]	44.1 [12.9]	65.4 [19.2]	60.7 [17.8]	54.4 [15.9]	76.0 [22.3]	70.5 [20.7]	63.2 [18.5]	73.5 [21.5]	71.3 [20.9]	66.8 [19.6]	70.5 [20.7]	68.4 [20.1]	65.7 [19.2]
		Power	6.3	6.2	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	100°F [37.8]°C	Total BTUH [kW]	85.6 [25.1]	83.1 [24.3]	79.7 [23.4]	79.7 [23.4]	77.4 [22.7]	74.2 [21.8]	73.7 [21.6]	71.5 [21.0]	68.6 [20.1]	70.7 [20.7]	68.6 [20.1]	65.8 [19.3]	67.7 [19.8]	65.7 [19.3]	63.1 [18.5]
		Sens BTUH [kW]	49.3 [14.5]	45.8 [13.4]	41.0 [12.0]	61.7 [18.1]	57.2 [16.8]	51.3 [15.0]	72.2 [21.2]	67.0 [19.6]	60.1 [17.6]	70.7 [20.7]	68.6 [20.1]	63.7 [18.7]	67.7 [19.8]	65.7 [19.3]	63.1 [18.5]
		Power	6.3	6.2	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	105°F [40.6]°C	Total BTUH [kW]	82.6 [24.2]	80.2 [23.5]	77.0 [22.6]	76.8 [22.5]	74.5 [21.8]	71.5 [20.9]	70.7 [20.7]	68.7 [20.1]	65.9 [19.3]	67.7 [19.9]	65.7 [19.3]	63.1 [18.5]	64.7 [19.0]	62.8 [18.4]	60.3 [17.7]
		Sens BTUH [kW]	44.9 [13.2]	41.7 [12.2]	37.4 [10.9]	57.3 [16.8]	53.1 [15.6]	47.6 [14.0]	67.8 [19.9]	62.9 [18.4]	56.4 [16.5]	67.7 [19.9]	65.7 [19.3]	60.0 [17.6]	64.7 [19.0]	62.8 [18.4]	60.3 [17.7]
		Power	6.3	6.2	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	110°F [43.3]°C	Total BTUH [kW]	79.5 [23.3]	77.2 [22.6]	74.1 [21.7]	73.6 [21.6]	71.5 [20.9]	68.6 [20.1]	67.6 [19.8]	65.7 [19.2]	63.0 [18.5]	64.6 [18.9]	62.7 [18.4]	60.2 [17.6]	61.6 [18.1]	59.8 [17.5]	57.4 [16.8]
		Sens BTUH [kW]	39.8 [11.7]	36.9 [10.8]	33.1 [9.7]	52.2 [15.3]	48.4 [14.2]	43.4 [12.7]	62.7 [18.4]	58.2 [17.1]	52.2 [15.3]	64.6 [18.9]	62.2 [18.2]	55.8 [16.3]	61.6 [18.1]	59.8 [17.5]	57.4 [16.8]
		Power	6.3	6.2	6.1	6.3	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2	6.4	6.3	6.2
	115°F [46.1]°C	Total BTUH [kW]	76.3 [22.3]	74.0 [21.7]	71.0 [20.8]	70.4 [20.6]	68.3 [20.0]	65.5 [19.2]	64.4 [18.9]	62.5 [18.3]	60.0 [17.6]	61.4 [18.0]	59.6 [17.5]	57.2 [16.7]	58.4 [17.1]	56.7 [16.6]	54.4 [15.9]
		Sens BTUH [kW]	34.0 [10.0]	31.6 [9.3]	28.3 [8.3]	46.4 [13.6]	43.0 [12.6]	38.6 [11.3]	57.0 [16.7]	52.8 [15.5]	47.4 [13.9]	61.3 [18.0]	56.8 [16.7]	50.9 [14.9]	58.4 [17.1]	56.7 [16.6]	53.8 [15.8]
		Power	6.3	6.2	6.1	6.3	6.3	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2
	120°F [48.9]°C	Total BTUH [kW]	72.9 [21.3]	70.7 [20.7]	67.9 [19.9]	67.0 [19.6]	65.0 [19.0]	62.4 [18.3]	61.0 [17.9]	59.2 [17.3]	56.8 [16.6]	57.9 [17.0]	56.2 [16.5]	54.0 [15.8]	55.0 [16.1]	53.3 [15.6]	51.2 [15.0]
		Sens BTUH [kW]	27.6 [8.1]	25.6 [7.5]	22.9 [6.7]	39.9 [11.7]	37.0 [10.8]	33.2 [9.7]	50.5 [14.8]	46.8 [13.7]	42.0 [12.3]	54.8 [16.1]	50.8 [14.9]	45.6 [13.4]	55.0 [16.1]	53.3 [15.6]	48.4 [14.2]
		Power	6.3	6.2	6.1	6.3	6.3	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2
	125°F [51.7]°C	Total BTUH [kW]	69.3 [20.3]	67.2 [19.7]	64.5 [18.9]	63.4 [18.6]	61.5 [18.0]	59.0 [17.3]	57.4 [16.8]	55.7 [16.3]	53.5 [15.7]	54.4 [15.9]	52.8 [15.5]	50.6 [14.8]	51.4 [15.1]	49.9 [14.6]	47.9 [14.0]
		Sens BTUH [kW]	20.4 [6.0]	18.9 [5.6]	17.0 [5.0]	32.8 [9.6]	30.4 [8.9]	27.2 [8.0]	43.3 [12.7]	40.2 [11.8]	36.0 [10.6]	47.6 [14.0]	44.2 [13.0]	39.6 [11.6]	51.1 [15.0]	47.4 [13.9]	42.5 [12.4]
		Power	6.3	6.2	6.1	6.3	6.2	6.1	6.4	6.3	6.1	6.4	6.3	6.2	6.4	6.3	6.2

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:

① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—RACL2090+RHCLA2090

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			3240 [1529]	2700 [1274]	2160 [1019]	3240 [1529]	2700 [1274]	2160 [1019]	3240 [1529]	2700 [1274]	2160 [1019]	3240 [1529]	2700 [1274]	2160 [1019]	3240 [1529]	2700 [1274]	2160 [1019]
DR ①			0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02
OUTDOOR DRY BULB TEMPERATURE	75°F [23.9]°C	Total BTUH [kW]	109.6 [32.1]	105.8 [31.0]	101.9 [29.9]	103.6 [30.3]	99.9 [29.3]	96.3 [28.2]	97.4 [28.5]	94.0 [27.5]	90.6 [26.5]	94.3 [27.6]	91.0 [26.7]	87.7 [25.7]	91.2 [26.7]	88.0 [25.8]	84.8 [24.9]
		Sens BTUH [kW]	70.3 [20.6]	64.3 [18.8]	58.3 [17.1]	83.1 [24.4]	76.0 [22.3]	68.9 [20.2]	94.0 [27.6]	86.0 [25.2]	78.0 [22.9]	94.3 [27.6]	90.1 [26.4]	81.7 [23.9]	91.2 [26.7]	88.0 [25.8]	84.6 [24.8]
		Power	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.3	7.5	7.4	7.3
	80°F [26.7]°C	Total BTUH [kW]	107.4 [31.5]	103.6 [30.4]	99.8 [29.3]	101.3 [29.7]	97.8 [28.6]	94.2 [27.6]	95.2 [27.9]	91.8 [26.9]	88.5 [25.9]	92.1 [27.0]	88.8 [26.0]	85.6 [25.1]	89.0 [26.1]	85.9 [25.2]	82.8 [24.3]
		Sens BTUH [kW]	69.3 [20.3]	63.4 [18.6]	57.5 [16.8]	82.1 [24.0]	75.1 [22.0]	68.1 [19.9]	93.0 [27.3]	85.1 [24.9]	77.1 [22.6]	92.1 [27.0]	88.8 [26.0]	80.8 [23.7]	89.0 [26.1]	85.9 [25.2]	82.8 [24.3]
		Power	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.3	7.5	7.4	7.3
	85°F [29.4]°C	Total BTUH [kW]	105.0 [30.8]	101.3 [29.7]	97.6 [28.6]	98.9 [29.0]	95.4 [28.0]	92.0 [27.0]	92.8 [27.2]	89.5 [26.2]	86.2 [25.3]	89.7 [26.3]	86.5 [25.4]	83.4 [24.4]	86.6 [25.4]	83.6 [24.5]	80.5 [23.6]
		Sens BTUH [kW]	67.6 [19.8]	61.8 [18.1]	56.0 [16.4]	80.3 [23.5]	73.5 [21.5]	66.6 [19.5]	91.3 [26.7]	83.5 [24.5]	75.7 [22.2]	89.7 [26.3]	86.5 [25.4]	79.4 [23.3]	86.6 [25.4]	83.6 [24.5]	80.5 [23.6]
		Power	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.3
	90°F [32.2]°C	Total BTUH [kW]	102.4 [30.0]	98.8 [29.0]	95.2 [27.9]	96.4 [28.2]	93.0 [27.2]	89.6 [26.3]	90.2 [26.4]	87.0 [25.5]	83.9 [24.6]	87.1 [25.5]	84.1 [24.6]	81.0 [23.7]	84.0 [24.6]	81.1 [23.8]	78.1 [22.9]
		Sens BTUH [kW]	65.1 [19.1]	59.6 [17.5]	54.0 [15.8]	77.9 [22.8]	71.2 [20.9]	64.6 [18.9]	88.8 [26.0]	81.3 [23.8]	73.7 [21.6]	87.1 [25.5]	84.1 [24.6]	77.4 [22.7]	84.0 [24.6]	81.1 [23.8]	78.1 [22.9]
		Power	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.3
	95°F [35]°C	Total BTUH [kW]	99.7 [29.2]	96.2 [28.2]	92.7 [27.2]	93.6 [27.4]	90.4 [26.5]	87.1 [25.5]	87.5 [25.6]	84.4 [24.7]	81.3 [23.8]	84.4 [24.7]	81.4 [23.9]	78.5 [23.0]	81.3 [23.8]	78.5 [23.0]	75.6 [22.2]
		Sens BTUH [kW]	62.0 [18.2]	56.7 [16.6]	51.4 [15.1]	74.7 [21.9]	68.4 [20.0]	62.0 [18.2]	85.7 [25.1]	78.4 [23.0]	71.1 [20.8]	84.4 [24.7]	81.4 [23.9]	74.8 [21.9]	81.3 [23.8]	78.5 [23.0]	75.6 [22.2]
		Power	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.3
	100°F [37.8]°C	Total BTUH [kW]	96.8 [28.4]	93.4 [27.4]	90.0 [26.4]	90.8 [26.6]	87.6 [25.7]	84.4 [24.7]	84.6 [24.8]	81.6 [23.9]	78.7 [23.1]	81.5 [23.9]	78.7 [23.0]	75.8 [22.2]	78.4 [23.0]	75.7 [22.2]	72.9 [21.4]
		Sens BTUH [kW]	58.1 [17.0]	53.1 [15.6]	48.2 [14.1]	70.9 [20.8]	64.8 [19.0]	58.8 [17.2]	81.8 [24.0]	74.8 [21.9]	67.9 [19.9]	81.5 [23.9]	78.7 [23.0]	71.6 [21.0]	78.4 [23.0]	75.7 [22.2]	72.9 [21.4]
		Power	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.2
	105°F [40.6]°C	Total BTUH [kW]	93.8 [27.5]	90.5 [26.5]	87.2 [25.6]	87.7 [25.7]	84.7 [24.8]	81.6 [23.9]	81.6 [23.9]	78.7 [23.1]	75.8 [22.2]	78.5 [23.0]	75.7 [22.2]	73.0 [21.4]	75.4 [22.1]	72.8 [21.3]	70.1 [20.5]
		Sens BTUH [kW]	53.5 [15.7]	49.0 [14.3]	44.4 [13.0]	66.3 [19.4]	60.6 [17.8]	55.0 [16.1]	77.3 [22.6]	70.7 [20.7]	64.1 [18.8]	78.5 [23.0]	74.7 [21.9]	67.8 [19.9]	75.4 [22.1]	72.8 [21.3]	70.1 [20.5]
		Power	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.2
	110°F [43.3]°C	Total BTUH [kW]	90.6 [26.5]	87.4 [25.6]	84.2 [24.7]	84.5 [24.8]	81.6 [23.9]	78.6 [23.0]	78.4 [23.0]	75.6 [22.2]	72.9 [21.4]	75.3 [22.1]	72.6 [21.3]	70.0 [20.5]	72.2 [21.2]	69.7 [20.4]	67.2 [19.7]
		Sens BTUH [kW]	48.3 [14.1]	44.1 [12.9]	40.0 [11.7]	61.0 [17.9]	55.8 [16.4]	50.6 [14.8]	72.0 [21.1]	65.8 [19.3]	59.7 [17.5]	75.3 [22.1]	69.9 [20.5]	63.4 [18.6]	72.2 [21.2]	69.7 [20.4]	66.3 [19.4]
		Power	7.4	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.2
	115°F [46.1]°C	Total BTUH [kW]	87.2 [25.6]	84.2 [24.7]	81.1 [23.8]	81.2 [23.8]	78.3 [23.0]	75.5 [22.1]	75.0 [22.0]	72.4 [21.2]	69.8 [20.4]	71.9 [21.1]	69.4 [20.3]	66.9 [19.6]	68.9 [20.2]	66.5 [19.5]	64.0 [18.8]
		Sens BTUH [kW]	42.3 [12.4]	38.7 [11.3]	35.1 [10.3]	55.0 [16.1]	50.3 [14.8]	45.6 [13.4]	66.0 [19.3]	60.4 [17.7]	54.7 [16.0]	70.4 [20.6]	64.4 [18.9]	58.4 [17.1]	68.9 [20.2]	66.5 [19.5]	61.4 [18.0]
		Power	7.4	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2	7.5	7.4	7.2
	120°F [48.9]°C	Total BTUH [kW]	83.7 [24.5]	80.8 [23.7]	77.9 [22.8]	77.7 [22.8]	75.0 [22.0]	72.2 [21.2]	71.5 [21.0]	69.0 [20.2]	66.5 [19.5]	68.4 [20.1]	66.0 [19.4]	63.6 [18.6]	65.4 [19.2]	63.1 [18.5]	60.8 [17.8]
		Sens BTUH [kW]	35.6 [10.4]	32.5 [9.5]	29.5 [8.6]	48.3 [14.2]	44.2 [13.0]	40.1 [11.7]	59.3 [17.4]	54.2 [15.9]	49.2 [14.4]	63.8 [18.7]	58.3 [17.1]	52.9 [15.5]	65.4 [19.2]	61.6 [18.0]	55.8 [16.4]
		Power	7.4	7.3	7.2	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2
	125°F [51.7]°C	Total BTUH [kW]	80.1 [23.5]	77.3 [22.6]	74.4 [21.8]	74.0 [21.7]	71.4 [20.9]	68.8 [20.2]	67.9 [19.9]	65.5 [19.2]	63.1 [18.5]	64.8 [19.0]	62.5 [18.3]	60.2 [17.6]	61.7 [18.1]	59.5 [17.4]	57.4 [16.8]
		Sens BTUH [kW]	28.2 [8.3]	25.8 [7.6]	23.4 [6.8]	40.9 [12.0]	37.4 [11.0]	33.9 [9.9]	51.9 [15.2]	47.5 [13.9]	43.0 [12.6]	56.3 [16.5]	51.5 [15.1]	46.7 [13.7]	59.9 [17.6]	54.8 [16.1]	49.7 [14.6]
		Power	7.4	7.3	7.2	7.5	7.3	7.2	7.5	7.3	7.2	7.5	7.4	7.2	7.5	7.4	7.2

DR —Depression ratio
dbE —Entering air dry bulb
wbE —Entering air wet bulb

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:
① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—RACL2120+RHCLA2120

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			4560 [2152]	3400 [1605]	3040 [1435]	4560 [2152]	3400 [1605]	3040 [1435]	4560 [2152]	3400 [1605]	3040 [1435]	4560 [2152]	3400 [1605]	3040 [1435]	4560 [2152]	3400 [1605]	3040 [1435]
DR ①			0.08	0.02	-0.01	0.08	0.02	-0.01	0.08	0.02	-0.01	0.08	0.02	-0.01	0.08	0.02	-0.01
OUTDOOR DRY BULB TEMPERATURE	75°F [23.9]°C	Total BTUH [kW]	145.0 [42.5]	136.5 [40.0]	133.9 [39.2]	135.1 [39.6]	127.2 [37.3]	124.8 [36.6]	124.8 [36.6]	117.5 [34.4]	115.3 [33.8]	119.6 [35.0]	112.6 [33.0]	110.4 [32.4]	114.2 [33.5]	107.6 [31.5]	105.5 [30.9]
		Sens BTUH [kW]	90.4 [26.5]	78.0 [22.9]	74.1 [21.7]	106.6 [31.2]	92.0 [27.0]	87.4 [25.6]	117.8 [34.5]	101.6 [29.8]	96.6 [28.3]	119.6 [35.0]	104.0 [30.5]	98.9 [29.0]	114.2 [33.5]	104.4 [30.6]	99.3 [29.1]
		Power	8.0	7.8	7.7	8.0	7.7	7.6	7.9	7.7	7.6	7.8	7.6	7.5	7.8	7.6	7.5
	80°F [26.7]°C	Total BTUH [kW]	142.6 [41.8]	134.3 [39.4]	131.7 [38.6]	132.7 [38.9]	125.0 [36.6]	122.6 [35.9]	122.5 [35.9]	115.3 [33.8]	113.1 [33.1]	117.2 [34.3]	110.4 [32.3]	108.2 [31.7]	111.9 [32.8]	105.3 [30.9]	103.3 [30.3]
		Sens BTUH [kW]	89.4 [26.2]	77.1 [22.6]	73.3 [21.5]	105.6 [31.0]	91.1 [26.7]	86.6 [25.4]	116.8 [34.2]	100.7 [29.5]	95.7 [28.1]	117.2 [34.3]	103.2 [30.2]	98.1 [28.7]	111.9 [32.8]	103.6 [30.3]	98.4 [28.8]
		Power	8.4	8.1	8.1	8.3	8.1	8.0	8.2	8.0	7.9	8.2	8.0	7.9	8.2	7.9	7.9
	85°F [29.4]°C	Total BTUH [kW]	140.0 [41.0]	131.8 [38.6]	129.3 [37.9]	130.1 [38.1]	122.5 [35.9]	120.1 [35.2]	119.8 [35.1]	112.8 [33.1]	110.7 [32.4]	114.6 [33.6]	107.9 [31.6]	105.8 [31.0]	109.2 [32.0]	102.8 [30.1]	100.9 [29.6]
		Sens BTUH [kW]	88.3 [25.9]	76.2 [22.3]	72.4 [21.2]	104.5 [30.6]	90.2 [26.4]	85.7 [25.1]	115.6 [33.9]	99.8 [29.2]	94.8 [27.8]	114.6 [33.6]	102.2 [30.0]	97.2 [28.5]	109.2 [32.0]	102.6 [30.1]	97.5 [28.6]
		Power	8.8	8.5	8.4	8.7	8.5	8.4	8.6	8.4	8.3	8.6	8.4	8.3	8.6	8.3	8.2
	90°F [32.2]°C	Total BTUH [kW]	137.1 [40.2]	129.1 [37.8]	126.6 [37.1]	127.2 [37.3]	119.8 [35.1]	117.5 [34.4]	116.9 [34.3]	110.1 [32.3]	108.0 [31.6]	111.7 [32.7]	105.2 [30.8]	103.1 [30.2]	106.3 [31.2]	100.1 [29.3]	98.2 [28.8]
		Sens BTUH [kW]	87.1 [25.5]	75.1 [22.0]	71.4 [20.9]	103.3 [30.3]	89.1 [26.1]	84.7 [24.8]	114.4 [33.5]	98.7 [28.9]	93.8 [27.5]	111.7 [32.7]	101.1 [29.6]	96.1 [28.2]	106.3 [31.2]	100.1 [29.3]	96.5 [28.3]
		Power	9.2	8.9	8.9	9.1	8.9	8.8	9.1	8.8	8.7	9.0	8.8	8.7	9.0	8.7	8.7
	95°F [35]°C	Total BTUH [kW]	134.0 [39.3]	126.2 [37.0]	123.7 [36.3]	124.1 [36.4]	116.8 [34.2]	114.6 [33.6]	113.8 [33.4]	107.2 [31.4]	105.1 [30.8]	108.5 [31.8]	102.2 [30.0]	100.2 [29.4]	103.2 [30.2]	97.2 [28.5]	95.3 [27.9]
		Sens BTUH [kW]	85.7 [25.1]	73.9 [21.7]	70.3 [20.6]	101.9 [29.9]	87.9 [25.8]	83.6 [24.5]	113.0 [33.1]	97.5 [28.6]	92.7 [27.2]	108.5 [31.8]	100.0 [29.3]	95.0 [27.8]	103.2 [30.2]	97.2 [28.5]	95.3 [27.9]
		Power	9.7	9.4	9.3	9.6	9.3	9.2	9.5	9.3	9.2	9.5	9.2	9.1	9.5	9.2	9.1
	100°F [37.8]°C	Total BTUH [kW]	130.6 [38.3]	123.0 [36.0]	120.6 [35.3]	120.7 [35.4]	113.6 [33.3]	111.4 [32.7]	110.4 [32.4]	104.0 [30.5]	102.0 [29.9]	105.2 [30.8]	99.0 [29.0]	97.1 [28.5]	99.8 [29.2]	94.0 [27.5]	92.2 [27.0]
		Sens BTUH [kW]	84.2 [24.7]	72.6 [21.3]	69.0 [20.2]	100.4 [29.4]	86.6 [25.4]	82.4 [24.1]	110.4 [32.4]	96.2 [28.2]	91.5 [26.8]	105.2 [30.8]	98.7 [28.9]	93.8 [27.5]	99.8 [29.2]	94.0 [27.5]	92.2 [27.0]
		Power	10.2	9.9	9.8	10.1	9.8	9.7	10.0	9.7	9.6	10.0	9.7	9.6	10.0	9.7	9.6
	105°F [40.6]°C	Total BTUH [kW]	126.9 [37.2]	119.5 [35.0]	117.2 [34.4]	117.0 [34.3]	110.2 [32.3]	108.1 [31.7]	106.8 [31.3]	100.5 [29.5]	98.6 [28.9]	101.5 [29.7]	95.6 [28.0]	93.7 [27.5]	96.2 [28.2]	90.5 [26.5]	88.8 [26.0]
		Sens BTUH [kW]	82.6 [24.2]	71.2 [20.9]	67.7 [19.8]	98.8 [29.0]	85.2 [25.0]	81.0 [23.7]	106.8 [31.3]	94.8 [27.8]	90.2 [26.4]	101.5 [29.7]	95.6 [28.0]	92.5 [27.1]	96.2 [28.2]	90.5 [26.5]	88.8 [26.0]
		Power	10.7	10.4	10.3	10.6	10.3	10.2	10.6	10.3	10.2	10.5	10.2	10.1	10.5	10.2	10.1
	110°F [43.3]°C	Total BTUH [kW]	123.0 [36.1]	115.9 [33.9]	113.6 [33.3]	113.1 [33.2]	106.5 [31.2]	104.5 [30.6]	102.9 [30.1]	96.9 [28.4]	95.0 [27.8]	97.6 [28.6]	91.9 [26.9]	90.1 [26.4]	92.3 [27.0]	86.9 [25.5]	85.2 [25.0]
		Sens BTUH [kW]	80.8 [23.7]	69.7 [20.4]	66.3 [19.4]	97.1 [28.4]	83.7 [24.5]	79.6 [23.3]	102.9 [30.1]	93.3 [27.4]	88.7 [26.0]	97.6 [28.6]	91.9 [26.9]	90.1 [26.4]	92.3 [27.0]	86.9 [25.5]	85.2 [25.0]
		Power	11.3	10.9	10.8	11.2	10.9	10.8	11.1	10.8	10.7	11.1	10.8	10.7	11.1	10.7	10.6
	115°F [46.1]°C	Total BTUH [kW]	118.9 [34.8]	111.9 [32.8]	109.8 [32.2]	109.0 [31.9]	102.6 [30.1]	100.6 [29.5]	98.7 [28.9]	92.9 [27.2]	91.2 [26.7]	93.5 [27.4]	88.0 [25.8]	86.3 [25.3]	88.1 [25.8]	83.0 [24.3]	81.4 [23.8]
		Sens BTUH [kW]	79.0 [23.1]	68.1 [20.0]	64.8 [19.0]	95.2 [27.9]	82.1 [24.1]	78.1 [22.9]	98.7 [28.9]	91.7 [26.9]	87.2 [25.6]	93.5 [27.4]	88.0 [25.8]	86.3 [25.3]	88.1 [25.8]	83.0 [24.3]	81.4 [23.8]
		Power	11.9	11.5	11.4	11.8	11.4	11.3	11.7	11.4	11.3	11.7	11.3	11.2	11.6	11.3	11.2
	120°F [48.9]°C	Total BTUH [kW]	114.5 [33.5]	107.8 [31.6]	105.7 [31.0]	104.6 [30.6]	98.5 [28.9]	96.6 [28.3]	94.3 [27.6]	88.8 [26.0]	87.1 [25.5]	89.0 [26.1]	83.8 [24.6]	82.2 [24.1]	83.7 [24.5]	78.8 [23.1]	77.3 [22.6]
		Sens BTUH [kW]	77.0 [22.6]	66.4 [19.5]	63.1 [18.5]	93.2 [27.3]	80.4 [23.6]	76.5 [22.4]	94.3 [27.6]	88.8 [26.0]	85.6 [25.1]	89.0 [26.1]	83.8 [24.6]	82.2 [24.1]	83.7 [24.5]	78.8 [23.1]	77.3 [22.6]
		Power	12.5	12.1	12.0	12.4	12.0	11.9	12.3	12.0	11.9	12.3	11.9	11.8	12.3	11.9	11.8
	125°F [51.7]°C	Total BTUH [kW]	109.8 [32.2]	103.4 [30.3]	101.4 [29.7]	99.9 [29.3]	94.1 [27.6]	92.3 [27.0]	89.6 [26.3]	84.4 [24.7]	82.8 [24.3]	84.4 [24.7]	79.5 [23.3]	77.9 [22.8]	79.0 [23.2]	74.4 [21.8]	73.0 [21.4]
		Sens BTUH [kW]	74.9 [21.9]	64.6 [18.9]	61.4 [18.0]	91.1 [26.7]	78.6 [23.0]	74.7 [21.9]	89.6 [26.3]	84.4 [24.7]	82.8 [24.3]	84.4 [24.7]	79.5 [23.3]	77.9 [22.8]	79.0 [23.2]	74.4 [21.8]	73.0 [21.4]
		Power	13.1	12.8	12.6	13.1	12.7	12.6	13.0	12.6	12.5	13.0	12.6	12.5	12.9	12.6	12.4

DR —Depression ratio
dbE —Entering air dry bulb
wbE —Entering air wet bulb
Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:

① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—RACL2150+RHCLA2150

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			6000 [2832]	5000 [2360]	4000 [1888]	6000 [2832]	5000 [2360]	4000 [1888]	6000 [2832]	5000 [2360]	4000 [1888]	6000 [2832]	5000 [2360]	4000 [1888]	6000 [2832]	5000 [2360]	4000 [1888]
DR ①			0.07	0.02	-0.04	0.07	0.02	-0.04	0.07	0.02	-0.04	0.07	0.02	-0.04	0.07	0.02	-0.04
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75°F [23.9]°C	Total BTUH [kW]	175.3 [51.4]	169.2 [49.6]	163.0 [47.8]	167.1 [49.0]	161.2 [47.2]	155.3 [45.5]	164.5 [48.2]	158.7 [46.5]	152.9 [44.8]	166.1 [48.7]	160.3 [47.0]	154.5 [45.3]	170.2 [49.9]	164.3 [48.1]	158.3 [46.4]
		Sens BTUH [kW]	113.6 [33.3]	103.9 [30.4]	94.2 [27.6]	134.3 [39.3]	122.8 [36.0]	111.3 [32.6]	149.8 [43.9]	137.0 [40.1]	124.2 [36.4]	156.4 [45.8]	143.1 [41.9]	129.7 [38.0]	163.0 [47.8]	149.0 [43.7]	135.1 [39.6]
		Power	10.0	9.8	9.6	9.9	9.7	9.5	9.8	9.6	9.4	9.7	9.5	9.4	9.6	9.5	9.3
	80°F [26.7]°C	Total BTUH [kW]	172.5 [50.6]	166.5 [48.8]	160.4 [47.0]	164.2 [48.1]	158.5 [46.4]	152.7 [44.7]	161.6 [47.4]	156.0 [45.7]	150.3 [44.0]	163.3 [47.8]	157.5 [46.2]	151.8 [44.5]	167.4 [49.1]	161.5 [47.3]	155.7 [45.6]
		Sens BTUH [kW]	114.2 [33.5]	104.5 [30.6]	94.7 [27.8]	134.9 [39.5]	123.4 [36.1]	111.8 [32.8]	150.4 [44.1]	137.6 [40.3]	124.7 [36.6]	157.1 [46.0]	143.7 [42.1]	130.3 [38.2]	163.6 [47.9]	149.6 [43.8]	135.7 [39.8]
		Power	10.5	10.3	10.1	10.3	10.2	10.0	10.2	10.0	9.9	10.2	10.0	9.8	10.1	9.9	9.8
	85°F [29.4]°C	Total BTUH [kW]	169.3 [49.6]	163.4 [47.9]	157.4 [46.1]	161.0 [47.2]	155.4 [45.5]	149.7 [43.9]	158.4 [46.4]	152.9 [44.8]	147.3 [43.2]	160.1 [46.9]	154.5 [45.3]	148.8 [43.6]	164.2 [48.1]	158.4 [46.4]	152.7 [44.7]
		Sens BTUH [kW]	113.9 [33.4]	104.2 [30.5]	94.5 [27.7]	134.6 [39.4]	123.1 [36.1]	111.6 [32.7]	150.1 [44.0]	137.3 [40.2]	124.5 [36.5]	156.8 [45.9]	143.4 [42.0]	130.0 [38.1]	163.3 [47.8]	149.3 [43.8]	135.4 [39.7]
		Power	11.0	10.8	10.6	10.8	10.7	10.5	10.7	10.5	10.4	10.7	10.5	10.3	10.6	10.4	10.2
	90°F [32.2]°C	Total BTUH [kW]	165.8 [48.6]	159.9 [46.9]	154.1 [45.2]	157.5 [46.1]	151.9 [44.5]	146.4 [42.9]	154.9 [45.4]	149.4 [43.8]	144.0 [42.2]	156.5 [45.9]	151.0 [44.3]	145.5 [42.6]	160.6 [47.1]	155.0 [45.4]	149.4 [43.8]
		Sens BTUH [kW]	112.7 [33.0]	103.0 [30.2]	93.4 [27.4]	133.3 [39.1]	121.9 [35.7]	110.6 [32.4]	148.9 [43.6]	136.2 [39.9]	123.4 [36.2]	155.5 [45.6]	142.3 [41.7]	129.0 [37.8]	160.6 [47.1]	148.2 [43.4]	134.4 [39.4]
		Power	11.5	11.3	11.1	11.4	11.2	11.0	11.3	11.1	10.9	11.2	11.0	10.8	11.2	11.0	10.8
	95°F [35]°C	Total BTUH [kW]	161.8 [47.4]	156.2 [45.8]	150.5 [44.1]	153.6 [45.0]	148.2 [43.4]	142.8 [41.8]	151.0 [44.2]	145.7 [42.7]	140.4 [41.1]	152.6 [44.7]	147.2 [43.1]	141.9 [41.6]	156.7 [45.9]	151.2 [44.3]	145.7 [42.7]
		Sens BTUH [kW]	110.5 [32.4]	101.1 [29.6]	91.6 [26.8]	131.2 [38.4]	120.0 [35.2]	108.8 [31.9]	146.7 [43.0]	134.2 [39.3]	121.6 [35.6]	152.6 [44.7]	140.3 [41.1]	127.2 [37.3]	156.7 [45.9]	146.2 [42.8]	132.6 [38.8]
		Power	12.1	11.9	11.7	12.0	11.8	11.6	11.9	11.7	11.5	11.8	11.6	11.4	11.8	11.6	11.3
	100°F [37.8]°C	Total BTUH [kW]	157.6 [46.2]	152.0 [44.6]	146.5 [42.9]	149.3 [43.7]	144.0 [42.2]	138.8 [40.7]	146.7 [43.0]	141.6 [41.5]	136.4 [40.0]	148.3 [43.5]	143.1 [41.9]	137.9 [40.4]	152.5 [44.7]	147.1 [43.1]	141.8 [41.5]
		Sens BTUH [kW]	107.4 [31.5]	98.2 [28.8]	89.1 [26.1]	128.1 [37.5]	117.1 [34.3]	106.2 [31.1]	143.6 [42.1]	131.3 [38.5]	119.1 [34.9]	148.3 [43.5]	137.4 [40.3]	124.6 [36.5]	152.5 [44.7]	143.4 [42.0]	130.0 [38.1]
		Power	12.7	12.5	12.3	12.6	12.4	12.2	12.5	12.3	12.1	12.4	12.2	12.0	12.4	12.2	12.0
	105°F [40.6]°C	Total BTUH [kW]	152.9 [44.8]	147.6 [43.2]	142.2 [41.7]	144.7 [42.4]	139.6 [40.9]	134.5 [39.4]	142.1 [41.6]	137.1 [40.2]	132.1 [38.7]	143.7 [42.1]	138.7 [40.6]	133.6 [39.2]	147.8 [43.3]	142.6 [41.8]	137.5 [40.3]
		Sens BTUH [kW]	103.4 [30.3]	94.5 [27.7]	85.7 [25.1]	124.0 [36.3]	113.4 [33.2]	102.8 [30.1]	139.6 [40.9]	127.6 [37.4]	115.7 [33.9]	143.7 [42.1]	133.7 [39.2]	121.3 [35.5]	147.8 [43.3]	139.7 [40.9]	126.7 [37.1]
		Power	13.4	13.2	12.9	13.3	13.1	12.8	13.2	12.9	12.7	13.1	12.9	12.7	13.1	12.8	12.6
	110°F [43.3]°C	Total BTUH [kW]	148.0 [43.4]	142.8 [41.8]	137.6 [40.3]	139.7 [40.9]	134.8 [39.5]	129.9 [38.1]	137.1 [40.2]	132.3 [38.8]	127.5 [37.4]	138.7 [40.6]	133.8 [39.2]	129.0 [37.8]	142.8 [41.9]	137.8 [40.4]	132.8 [38.9]
		Sens BTUH [kW]	98.4 [28.8]	90.0 [26.4]	81.6 [23.9]	119.1 [34.9]	108.9 [31.9]	98.7 [28.9]	134.6 [39.4]	123.1 [36.1]	111.6 [32.7]	138.7 [40.6]	129.2 [37.9]	117.1 [34.3]	142.8 [41.9]	135.2 [39.6]	122.5 [35.9]
		Power	14.1	13.9	13.6	14.0	13.8	13.5	13.9	13.6	13.4	13.8	13.6	13.3	13.8	13.5	13.3
	115°F [46.1]°C	Total BTUH [kW]	142.6 [41.8]	137.6 [40.3]	132.6 [38.9]	134.3 [39.4]	129.6 [38.0]	124.9 [36.6]	131.7 [38.6]	127.1 [37.3]	122.5 [35.9]	133.4 [39.1]	128.7 [37.7]	124.0 [36.3]	137.5 [40.3]	132.7 [38.9]	127.9 [37.5]
		Sens BTUH [kW]	92.5 [27.1]	84.6 [24.8]	76.7 [22.5]	113.2 [33.2]	103.5 [30.3]	93.8 [27.5]	128.7 [37.7]	117.7 [34.5]	106.7 [31.3]	133.4 [39.1]	123.8 [36.3]	112.2 [32.9]	137.5 [40.3]	129.8 [38.0]	117.6 [34.5]
		Power	14.9	14.6	14.3	14.7	14.5	14.2	14.6	14.4	14.1	14.6	14.3	14.1	14.5	14.3	14.0
	120°F [48.9]°C	Total BTUH [kW]	136.9 [40.1]	132.1 [38.7]	127.3 [37.3]	128.6 [37.7]	124.1 [36.4]	119.6 [35.0]	126.0 [36.9]	121.6 [35.6]	117.2 [34.3]	127.7 [37.4]	123.2 [36.1]	118.7 [34.8]	131.8 [38.6]	127.2 [37.3]	122.6 [35.9]
		Sens BTUH [kW]	85.7 [25.1]	78.3 [23.0]	71.0 [20.8]	106.3 [31.2]	97.3 [28.5]	88.2 [25.8]	121.9 [35.7]	111.5 [32.7]	101.1 [29.6]	127.7 [37.4]	117.6 [34.4]	106.6 [31.2]	131.8 [38.6]	123.5 [36.2]	112.0 [32.8]
		Power	15.7	15.4	15.1	15.5	15.3	15.0	15.4	15.2	14.9	15.4	15.1	14.8	15.3	15.0	14.8
	125°F [51.7]°C	Total BTUH [kW]	130.9 [38.3]	126.3 [37.0]	121.7 [35.7]	122.6 [35.9]	118.3 [34.7]	114.0 [33.4]	120.0 [35.2]	115.8 [33.9]	111.6 [32.7]	121.6 [35.6]	117.3 [34.4]	113.1 [33.1]	125.7 [36.8]	121.3 [35.6]	116.9 [34.3]
		Sens BTUH [kW]	77.9 [22.8]	71.2 [20.9]	64.6 [18.9]	98.6 [28.9]	90.2 [26.4]	81.7 [24.0]	114.1 [33.4]	104.4 [30.6]	94.6 [27.7]	120.8 [35.4]	110.5 [32.4]	100.1 [29.3]	125.7 [36.8]	116.4 [34.1]	105.5 [30.9]
		Power	16.5	16.2	15.9	16.4	16.1	15.8	16.2	15.9	15.6	16.2	15.9	15.6	16.1	15.9	15.6

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:
① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—RACL2180CAR+RHCLA2180C

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			6600 [3115]	5500 [2596]	4400 [2077]	6600 [3115]	5500 [2596]	4400 [2077]	6600 [3115]	5500 [2596]	4400 [2077]	6600 [3115]	5500 [2596]	4400 [2077]	6600 [3115]	5500 [2596]	4400 [2077]
DR ①			0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02	0.07	0.03	-0.02
OUTDOOR DRY BULB TEMPERATURE	75°F [23.9]°C	Total BTUH [kW]	153.5 [45.0]	148.1 [43.4]	142.7 [41.8]	141.5 [41.5]	136.5 [40.0]	131.6 [38.6]	105.7 [31.0]	102.0 [29.9]	98.3 [28.8]	78.9 [23.1]	76.2 [22.3]	73.4 [21.5]	46.2 [13.5]	44.6 [13.1]	42.9 [12.6]
		Sens BTUH [kW]	80.0 [23.4]	73.1 [21.4]	66.3 [19.4]	105.6 [31.0]	96.6 [28.3]	87.6 [25.7]	97.9 [28.7]	89.6 [26.2]	81.2 [23.8]	78.9 [23.1]	73.4 [21.5]	66.5 [19.5]	46.2 [13.5]	44.6 [13.1]	42.9 [12.6]
		Power	11.6	11.4	11.2	11.6	11.4	11.2	11.5	11.3	11.1	11.5	11.3	11.1	11.4	11.2	11.0
	80°F [26.7]°C	Total BTUH [kW]	173.1 [50.7]	167.1 [49.0]	161.0 [47.2]	161.1 [47.2]	155.5 [45.6]	149.8 [43.9]	125.4 [36.7]	121.0 [35.5]	116.6 [34.2]	98.6 [28.9]	95.1 [27.9]	91.7 [26.9]	65.8 [19.3]	63.5 [18.6]	61.2 [17.9]
		Sens BTUH [kW]	99.7 [29.2]	91.2 [26.7]	82.7 [24.2]	125.4 [36.8]	114.7 [33.6]	104.0 [30.5]	117.7 [34.5]	107.7 [31.6]	97.6 [28.6]	98.6 [28.9]	91.5 [26.8]	82.9 [24.3]	65.8 [19.3]	63.5 [18.6]	59.8 [17.5]
		Power	12.2	12.0	11.8	12.1	11.9	11.7	12.1	11.9	11.7	12.1	11.8	11.6	12.0	11.8	11.6
	85°F [29.4]°C	Total BTUH [kW]	186.8 [54.7]	180.3 [52.8]	173.7 [50.9]	174.8 [51.2]	168.7 [49.4]	162.6 [47.6]	139.1 [40.8]	134.2 [39.3]	129.3 [37.9]	112.3 [32.9]	108.3 [31.7]	104.4 [30.6]	79.5 [23.3]	76.7 [22.5]	73.9 [21.7]
		Sens BTUH [kW]	113.6 [33.3]	103.9 [30.5]	94.2 [27.6]	139.3 [40.8]	127.4 [37.3]	115.5 [33.9]	131.6 [38.6]	120.4 [35.3]	109.1 [32.0]	112.3 [32.9]	104.2 [30.5]	94.5 [27.7]	79.5 [23.3]	76.7 [22.5]	71.3 [20.9]
		Power	12.8	12.6	12.4	12.8	12.6	12.3	12.7	12.5	12.3	12.7	12.5	12.2	12.6	12.4	12.2
	90°F [32.2]°C	Total BTUH [kW]	194.5 [57.0]	187.7 [55.0]	180.9 [53.0]	182.5 [53.5]	176.1 [51.6]	169.7 [49.7]	146.8 [43.0]	141.6 [41.5]	136.5 [40.0]	120.0 [35.2]	115.7 [33.9]	111.5 [32.7]	87.2 [25.6]	84.1 [24.7]	81.1 [23.8]
		Sens BTUH [kW]	121.6 [35.6]	111.3 [32.6]	100.9 [29.6]	147.3 [43.2]	134.7 [39.5]	122.2 [35.8]	139.6 [40.9]	127.7 [37.4]	115.8 [33.9]	120.0 [35.2]	111.5 [32.7]	101.1 [29.6]	87.2 [25.6]	84.1 [24.7]	78.0 [22.8]
		Power	13.5	13.3	13.0	13.5	13.2	13.0	13.4	13.2	12.9	13.4	13.1	12.9	13.3	13.1	12.9
	95°F [35]°C	Total BTUH [kW]	196.2 [57.5]	189.3 [55.5]	182.4 [53.5]	184.2 [54.0]	177.8 [52.1]	171.3 [50.2]	148.5 [43.5]	143.3 [42.0]	138.1 [40.5]	121.7 [35.7]	117.4 [34.4]	113.1 [33.2]	88.9 [26.1]	85.8 [25.1]	82.7 [24.2]
		Sens BTUH [kW]	123.8 [36.3]	113.2 [33.2]	102.6 [30.1]	149.4 [43.8]	136.7 [40.0]	123.9 [36.3]	141.7 [41.5]	129.6 [38.0]	117.5 [34.4]	121.7 [35.7]	113.4 [33.2]	102.9 [30.1]	88.9 [26.1]	85.8 [25.1]	79.7 [23.4]
		Power	14.3	14.0	13.8	14.2	13.9	13.7	14.1	13.9	13.6	14.1	13.9	13.6	14.1	13.8	13.6
	100°F [37.8]°C	Total BTUH [kW]	192.0 [56.2]	185.2 [54.3]	178.5 [52.3]	180.0 [52.7]	173.7 [50.9]	167.3 [49.0]	144.2 [42.3]	139.1 [40.8]	134.1 [39.3]	117.4 [34.4]	113.3 [33.2]	109.2 [32.0]	84.7 [24.8]	81.7 [23.9]	78.7 [23.1]
		Sens BTUH [kW]	120.0 [35.2]	109.7 [32.2]	99.5 [29.2]	145.7 [42.7]	133.2 [39.0]	120.8 [35.4]	138.0 [40.4]	126.2 [37.0]	114.4 [33.5]	117.4 [34.4]	110.0 [32.2]	99.7 [29.2]	84.7 [24.8]	81.7 [23.9]	76.6 [22.4]
		Power	15.0	14.8	14.5	15.0	14.7	14.5	14.9	14.7	14.4	14.9	14.6	14.4	14.9	14.6	14.3
	105°F [40.6]°C	Total BTUH [kW]	181.7 [53.2]	175.3 [51.4]	169.0 [49.5]	169.7 [49.7]	163.8 [48.0]	157.8 [46.2]	134.0 [39.3]	129.3 [37.9]	124.6 [36.5]	107.2 [31.4]	103.4 [30.3]	99.6 [29.2]	74.4 [21.8]	71.8 [21.0]	69.2 [20.3]
		Sens BTUH [kW]	110.3 [32.3]	100.9 [29.6]	91.5 [26.8]	136.0 [39.8]	124.4 [36.4]	112.8 [33.0]	128.3 [37.6]	117.3 [34.4]	106.4 [31.2]	107.2 [31.4]	101.1 [29.6]	91.7 [26.9]	74.4 [21.8]	71.8 [21.0]	68.6 [20.1]
		Power	15.9	15.6	15.3	15.8	15.5	15.3	15.8	15.5	15.2	15.7	15.5	15.2	15.7	15.4	15.2
	110°F [43.3]°C	Total BTUH [kW]	165.5 [48.5]	159.7 [46.8]	153.9 [45.1]	153.5 [45.0]	148.1 [43.4]	142.7 [41.8]	117.7 [34.5]	113.6 [33.3]	109.5 [32.1]	90.9 [26.6]	87.7 [25.7]	84.6 [24.8]	58.2 [17.1]	56.2 [16.5]	54.1 [15.9]
		Sens BTUH [kW]	94.8 [27.8]	86.7 [25.4]	78.6 [23.0]	120.4 [35.3]	110.1 [32.3]	99.9 [29.3]	112.7 [33.0]	103.1 [30.2]	93.5 [27.4]	90.9 [26.6]	86.9 [25.5]	78.8 [23.1]	58.2 [17.1]	56.2 [16.5]	54.1 [15.9]
		Power	16.8	16.5	16.2	16.7	16.4	16.1	16.7	16.4	16.1	16.6	16.3	16.1	16.6	16.3	16.0
	115°F [46.1]°C	Total BTUH [kW]	143.3 [42.0]	138.3 [40.5]	133.2 [39.0]	131.3 [38.5]	126.7 [37.1]	122.1 [35.8]	95.5 [28.0]	92.2 [27.0]	88.8 [26.0]	68.7 [20.1]	66.3 [19.4]	63.9 [18.7]	36.0 [10.5]	34.7 [10.2]	33.5 [9.8]
		Sens BTUH [kW]	73.3 [21.5]	67.0 [19.6]	60.8 [17.8]	99.0 [29.0]	90.5 [26.5]	82.1 [24.1]	91.3 [26.8]	83.5 [24.5]	75.7 [22.2]	68.7 [20.1]	66.3 [19.4]	61.0 [17.9]	36.0 [10.5]	34.7 [10.2]	33.5 [9.8]
		Power	17.7	17.4	17.1	17.7	17.4	17.1	17.6	17.3	17.0	17.6	17.3	17	17.5	17.2	16.9
	120°F [48.9]°C	Total BTUH [kW]	115.1 [33.7]	111.1 [32.5]	107.0 [31.4]	103.1 [30.2]	99.5 [29.2]	95.9 [28.1]	67.4 [19.7]	65.0 [19.0]	62.6 [18.4]	40.6 [11.9]	39.1 [11.5]	37.7 [11.1]	7.8 [2.3]	7.5 [2.2]	7.3 [2.1]
		Sens BTUH [kW]	46.0 [13.5]	42.0 [12.3]	38.1 [11.2]	71.6 [21.0]	65.5 [19.2]	59.4 [17.4]	64.0 [18.7]	58.5 [17.1]	53.0 [15.5]	40.6 [11.9]	39.1 [11.5]	37.7 [11.1]	7.8 [2.3]	7.5 [2.2]	7.3 [2.1]
		Power	18.7	18.4	18.1	18.7	18.4	18.0	18.6	18.3	18.0	18.6	18.3	17.9	18.6	18.2	17.9
	125°F [51.7]°C	Total BTUH [kW]	80.9 [23.7]	78.1 [22.9]	75.3 [22.1]	69.0 [20.2]	66.5 [19.5]	64.1 [18.8]	33.2 [9.7]	32.0 [9.4]	30.9 [9.0]	6.4 [1.9]	6.2 [1.8]	5.9 [1.7]	-26.4 [-7.7]	-25.4 [-7.5]	-24.5 [-7.2]
		Sens BTUH [kW]	12.7 [3.7]	11.7 [3.4]	10.6 [3.1]	38.4 [11.3]	35.1 [10.3]	31.9 [9.3]	30.7 [9.0]	28.1 [8.2]	25.5 [7.5]	6.4 [1.9]	6.2 [1.8]	5.9 [1.7]	-26.4 [-7.7]	-25.4 [-7.5]	-24.5 [-7.2]
		Power	19.8	19.5	19.1	19.7	19.4	19.0	19.7	19.3	19.0	19.6	19.3	19.0	19.6	19.3	18.9

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb
Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:

① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—RACL2240+RHCLA2240

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①																		
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
CFM [L/s]			8640 [4078]	7200 [3398]	5760 [2718]	8640 [4078]	7200 [3398]	5760 [2718]	8640 [4078]	7200 [3398]	5760 [2718]	8640 [4078]	7200 [3398]	5760 [2718]	8640 [4078]	7200 [3398]	5760 [2718]
DR ①			0.11	0.08	0.04	0.11	0.08	0.04	0.11	0.08	0.04	0.11	0.08	0.04	0.11	0.08	0.04
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75°F [23.9]°C	Total BTUH [kW]	329.1 [96.4]	317.5 [93.0]	306.0 [89.7]	308.1 [90.3]	297.3 [87.1]	286.5 [84.0]	289.6 [84.9]	279.4 [81.9]	269.3 [78.9]	281.7 [82.6]	271.8 [79.7]	262.0 [76.8]	275.1 [80.6]	265.5 [77.8]	255.8 [75.0]
		Sens BTUH [kW]	195.9 [57.4]	179.2 [52.5]	162.5 [47.6]	227.9 [66.8]	208.5 [61.1]	189.0 [55.4]	253.3 [74.2]	231.6 [67.9]	210.0 [61.5]	262.3 [76.9]	239.9 [70.3]	217.5 [63.7]	268.2 [78.6]	245.3 [71.9]	222.4 [65.2]
		Power	238.6	234.5	230.4	238.3	234.1	230.0	237.9	233.8	229.7	237.7	233.6	229.5	237.6	233.4	229.3
	80°F [26.7]°C	Total BTUH [kW]	314.8 [92.3]	303.8 [89.0]	292.7 [85.8]	293.9 [86.1]	283.6 [83.1]	273.3 [80.1]	275.4 [80.7]	265.7 [77.9]	256.0 [75.0]	267.5 [78.4]	258.1 [75.6]	248.7 [72.9]	260.9 [76.4]	251.7 [73.8]	242.6 [71.1]
		Sens BTUH [kW]	187.0 [54.8]	171.0 [50.1]	155.1 [45.4]	219.0 [64.2]	200.3 [58.7]	181.6 [53.2]	244.3 [71.6]	223.5 [65.5]	202.6 [59.4]	253.4 [74.3]	231.8 [67.9]	210.1 [61.6]	259.2 [76.0]	237.1 [69.5]	215.0 [63.0]
		Power	239.3	235.2	231.0	239.0	234.8	230.7	238.6	234.5	230.3	238.4	234.3	230.2	238.3	234.1	230.0
	85°F [29.4]°C	Total BTUH [kW]	301.7 [88.4]	291.1 [85.3]	280.5 [82.2]	280.7 [82.3]	270.9 [79.4]	261.0 [76.5]	262.2 [76.8]	253.0 [74.1]	243.8 [71.4]	254.3 [74.5]	245.4 [71.9]	236.5 [69.3]	247.7 [72.6]	239.0 [70.0]	230.3 [67.5]
		Sens BTUH [kW]	178.9 [52.4]	163.6 [47.9]	148.3 [43.5]	210.9 [61.8]	192.9 [56.5]	174.9 [51.3]	236.2 [69.2]	216.1 [63.3]	195.9 [57.4]	245.3 [71.9]	224.3 [65.7]	203.4 [59.6]	247.7 [72.6]	229.7 [67.3]	208.3 [61.0]
		Power	240.1	236.0	231.8	239.8	235.6	231.5	239.4	235.3	231.1	239.2	235.1	230.9	239.1	234.9	230.8
	90°F [32.2]°C	Total BTUH [kW]	289.5 [84.8]	279.4 [81.9]	269.2 [78.9]	268.6 [78.7]	259.2 [75.9]	249.8 [73.2]	250.1 [73.3]	241.3 [70.7]	232.5 [68.1]	242.2 [71.0]	233.7 [68.5]	225.2 [66.0]	235.6 [69.0]	227.3 [66.6]	219.1 [64.2]
		Sens BTUH [kW]	171.6 [50.3]	156.9 [46.0]	142.3 [41.7]	203.6 [59.7]	186.2 [54.6]	168.9 [49.5]	228.9 [67.1]	209.4 [61.4]	189.8 [55.6]	238.0 [69.7]	217.7 [63.8]	197.4 [57.8]	235.6 [69.0]	223.0 [65.4]	202.2 [59.3]
		Power	241.0	236.9	232.7	240.7	236.5	232.3	240.3	236.2	232.0	240.1	236.0	231.8	240.0	235.8	231.6
	95°F [35]°C	Total BTUH [kW]	278.5 [81.6]	268.7 [78.7]	259.0 [75.9]	257.6 [75.5]	248.5 [72.8]	239.5 [70.2]	239.0 [70.0]	230.6 [67.6]	222.3 [65.1]	231.2 [67.7]	223.0 [65.4]	214.9 [63.0]	224.5 [65.8]	216.7 [63.5]	208.8 [61.2]
		Sens BTUH [kW]	165.1 [48.4]	151.0 [44.3]	136.9 [40.1]	197.1 [57.8]	180.3 [52.8]	163.5 [47.9]	222.5 [65.2]	203.5 [59.6]	184.5 [54.1]	231.2 [67.7]	211.7 [62.1]	192.0 [56.3]	224.5 [65.8]	216.7 [63.5]	196.8 [57.7]
		Power	242.1	237.9	233.7	241.7	237.5	233.3	241.3	237.2	233.0	241.2	237.0	232.8	241.0	236.8	232.6
	100°F [37.8]°C	Total BTUH [kW]	268.5 [78.7]	259.1 [75.9]	249.7 [73.2]	247.6 [72.5]	238.9 [70.0]	230.2 [67.5]	229.0 [67.1]	221.0 [64.8]	213.0 [62.4]	221.2 [64.8]	213.4 [62.5]	205.6 [60.3]	214.5 [62.9]	207.0 [60.7]	199.5 [58.5]
		Sens BTUH [kW]	159.5 [46.7]	145.8 [42.7]	132.2 [38.7]	191.5 [56.1]	175.1 [51.3]	158.8 [46.5]	216.8 [63.5]	198.3 [58.1]	179.8 [52.7]	221.2 [64.8]	206.6 [60.5]	187.3 [54.9]	214.5 [62.9]	207.0 [60.7]	192.2 [56.3]
		Power	243.2	239.0	234.7	242.8	238.6	234.4	242.5	238.3	234.1	242.3	238.1	233.9	242.1	237.9	233.7
	105°F [40.6]°C	Total BTUH [kW]	259.6 [76.1]	250.5 [73.4]	241.4 [70.7]	238.6 [69.9]	230.3 [67.5]	221.9 [65.0]	220.1 [64.5]	212.4 [62.2]	204.7 [60.0]	212.2 [62.2]	204.8 [60.0]	197.4 [57.8]	205.6 [60.3]	198.4 [58.1]	191.2 [56.0]
		Sens BTUH [kW]	154.6 [45.3]	141.4 [41.4]	128.2 [37.6]	186.6 [54.7]	170.7 [50.0]	154.8 [45.4]	212.0 [62.1]	193.9 [56.8]	175.8 [51.5]	212.2 [62.2]	202.1 [59.2]	183.3 [53.7]	205.6 [60.3]	198.4 [58.1]	188.1 [55.1]
		Power	244.4	240.2	235.9	244.1	239.8	235.6	243.7	239.5	235.2	243.5	239.3	235.1	243.3	239.1	234.9
	110°F [43.3]°C	Total BTUH [kW]	251.7 [73.8]	242.9 [71.2]	234.1 [68.6]	230.8 [67.6]	222.7 [65.3]	214.6 [62.9]	212.3 [62.2]	204.8 [60.0]	197.4 [57.8]	204.4 [59.9]	197.2 [57.8]	190.0 [55.7]	197.8 [58.0]	190.8 [55.9]	183.9 [53.9]
		Sens BTUH [kW]	150.6 [44.1]	137.7 [40.4]	124.9 [36.6]	182.6 [53.5]	167.0 [48.9]	151.4 [44.4]	207.9 [60.9]	190.2 [55.7]	172.4 [50.5]	204.4 [59.9]	197.2 [57.8]	179.9 [52.7]	197.8 [58.0]	190.8 [55.9]	183.9 [53.9]
		Power	245.8	241.5	237.2	245.4	241.1	236.9	245.0	240.8	236.5	244.9	240.6	236.4	244.7	240.4	236.2
	115°F [46.1]°C	Total BTUH [kW]	244.9 [71.8]	236.3 [69.3]	227.7 [66.7]	224.0 [65.6]	216.1 [63.3]	208.3 [61.0]	205.5 [60.2]	198.3 [58.1]	191.0 [56.0]	197.6 [57.9]	190.7 [55.9]	183.7 [53.8]	191.0 [56.0]	184.3 [54.0]	177.6 [52.0]
		Sens BTUH [kW]	147.4 [43.2]	134.8 [39.5]	122.2 [35.8]	179.4 [52.6]	164.1 [48.1]	148.8 [43.6]	204.7 [60.0]	187.2 [54.9]	169.8 [49.7]	197.6 [57.9]	190.7 [55.9]	177.3 [51.9]	191.0 [56.0]	184.3 [54.0]	177.6 [52.0]
		Power	247.2	242.9	238.6	246.8	242.6	238.3	246.5	242.2	237.9	246.3	242.0	237.8	246.1	241.9	237.6
	120°F [48.9]°C	Total BTUH [kW]	239.2 [70.1]	230.8 [67.6]	222.4 [65.2]	218.2 [64.0]	210.6 [61.7]	202.9 [59.5]	199.7 [58.5]	192.7 [56.5]	185.7 [54.4]	191.8 [56.2]	185.1 [54.2]	178.4 [52.3]	185.2 [54.3]	178.7 [52.4]	172.2 [50.5]
		Sens BTUH [kW]	145.0 [42.5]	132.6 [38.9]	120.2 [35.2]	177.0 [51.9]	161.9 [47.4]	146.8 [43.0]	199.7 [58.5]	185.0 [54.2]	167.8 [49.2]	191.8 [56.2]	185.1 [54.2]	175.3 [51.4]	185.2 [54.3]	178.7 [52.4]	172.2 [50.5]
		Power	248.8	244.4	240.1	248.4	244.1	239.8	248.0	243.7	239.4	247.9	243.6	239.3	247.7	243.4	239.1
	125°F [51.7]°C	Total BTUH [kW]	234.5 [68.7]	226.3 [66.3]	218.1 [63.9]	213.6 [62.6]	206.1 [60.4]	198.6 [58.2]	195.1 [57.2]	188.2 [55.2]	181.4 [53.1]	187.2 [54.9]	180.6 [52.9]	174.0 [51.0]	180.6 [52.9]	174.2 [51.1]	167.9 [49.2]
		Sens BTUH [kW]	143.4 [42.0]	131.1 [38.4]	118.9 [34.8]	175.4 [51.4]	160.4 [47.0]	145.5 [42.6]	195.1 [57.2]	183.6 [53.8]	166.5 [48.8]	187.2 [54.9]	180.6 [52.9]	174.0 [51.0]	180.6 [52.9]	174.2 [51.1]	167.9 [49.2]
		Power	250.4	246.1	241.7	250.1	245.7	241.4	249.7	245.4	241.0	249.5	245.2	240.9	249.4	245.0	240.7

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

NOTES:

① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 – DR) x (dbE – 80)].

[ ] Designates Metric Conversions

GENERAL INSTALLATION

The Remote Condensing unit must be installed outdoors. It should be located as near as possible to the indoor section to keep connecting refrigerant tubing lengths to a minimum. The unit must be installed to allow a free air flow to the outdoor coils.

If several units are installed adjacent to each other, care must be taken to avoid recirculation of air from one remote condenser to another. In all installations, adequate space must be provided for installation and servicing.

The outdoor unit must not be connected to any duct work. Do not locate unit under a roof drip; if necessary, install gutters, etc., to prevent water run-off from hitting the unit. To prevent air recirculation, it is recommended that the unit not be installed under an overhang, but if necessary **allow a minimum of 60 inches [1524 mm] above the unit for air discharge.**

[ ] Designates Metric Conversions

SLAB INSTALLATION

Remote Condensing units should be set on a solid level foundation. When installed at ground level, the unit should be placed on a 6 inch [152.4 mm] cement slab. If the pad is formed at the installation site, do not pour the pad tight against the structure, otherwise vibration will be transmitted from the unit through the pad.

ROOFTOP INSTALLATION

If rooftop installation is required, make certain that the building construction is adequate for the weight of the unit. (Refer to physical data chart.) Before placing the unit on the roof, make certain that the nylon rigging slings are of sufficient length to maintain equilibrium of the unit when lifting. Under no circumstances should the unit be lifted by only one corner for rooftop installation.

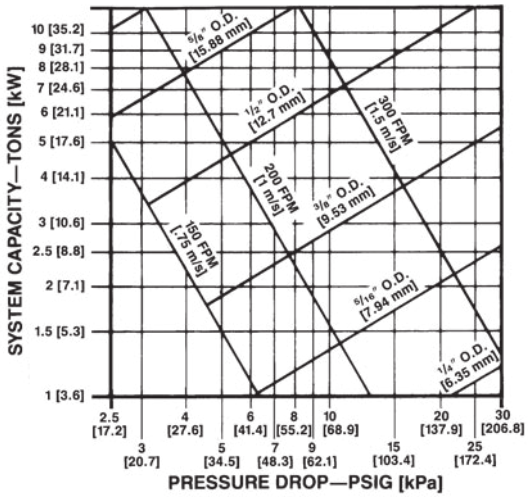
TYPICAL REFRIGERANT PIPING RECOMMENDATIONS

General Notes:

1. Vertical risers not to exceed 60 feet [18.29 m].
2. Locate the remote condensing unit and indoor air handler as close together as possible to minimize piping runs.
3. Remote condensing units are shipped with a nitrogen holding charge. Evacuate remote condensing unit before charging with refrigerant.
4. Runs between remote condensing and indoor air handler are not to exceed 90' [27.43 m] linear length.

EQUIVALENT LENGTH (FT.) [m] OF STRAIGHT TYPE "L" TUBING FOR NON-FERROUS VALVES AND FITTINGS (BRAZED)				
TUBE SIZE INCHES [mm] O.D.	ANGLE VALVE	SHORT RADIUS ELL	LONG RADIUS ELL	TEE LINE FLOW
1/2 [12.7]	24 [7.32]	4.7 [1.43]	3.2 [0.98]	1.7 [0.52]
5/8 [15.88]	25 [7.62]	5.7 [1.74]	3.9 [1.19]	2.3 [0.70]
3/4 [19.05]	25 [7.62]	6.5 [1.98]	4.5 [1.37]	2.9 [0.88]
7/8 [22.23]	28 [8.53]	7.8 [2.38]	5.3 [1.62]	3.7 [1.13]
1 1/8 [28.58]	29 [8.84]	2.7 [0.82]	1.9 [0.58]	5.2 [1.59]
1 3/8 [34.93]	33 [10.06]	3.2 [0.98]	2.2 [0.67]	6.9 [2.10]

LIQUID LINE PRESSURE DROP PER 100 FEET [30.48 m] EQUIVALENT LENGTH (TYPE L COPPER TUBING)



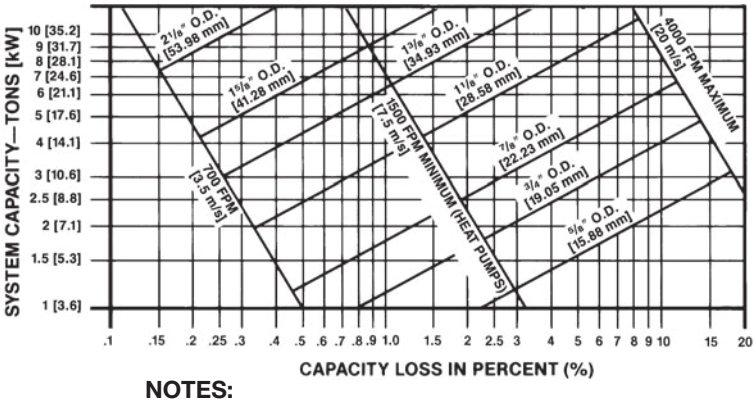
NOTES:

1) The pressure drop due to vertical lift (.5 PSIG per foot of lift) [22.62 kPa per meter] **must** be added to the pressure drop derived from this curve.
2) Size liquid line for **no more** than 10°F [–12.2°C] loss (approximately 50 PSIG [344.8 kPa] total pressure drop).
3) **Do not oversize liquid line.** Oversized liquid lines add significantly to the amount of refrigerant required to charge the system.

WARNING

Do not use oxygen to purge lines or pressure system for leak test. Oxygen reacts violently with oil, which can cause an explosion resulting in severe personal injury or death.

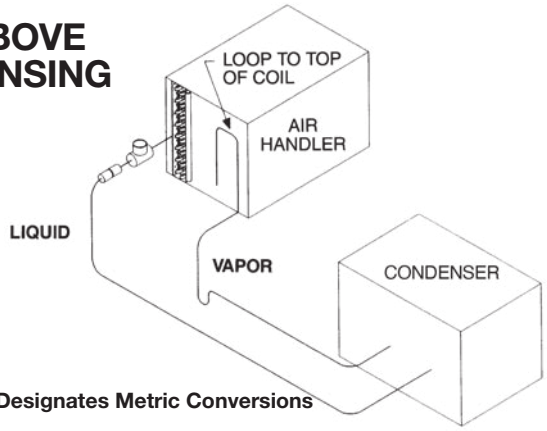
VAPOR LINE SYSTEM CAPACITY LOSS IN PERCENT PER 100 FEET [30.48 m] EQUIVALENT LENGTH (TYPE L COPPER TUBING)



NOTES:

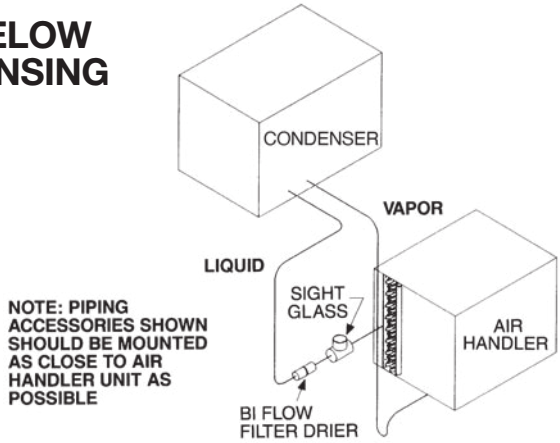
1) The minimum velocity line (1500 FPM) [7.5 m/s] is recommended.
2) With the outdoor unit located below the indoor air handler, all vertical vapor lines must not exceed 1 1/8" [28.58 mm] O.D.
3) For suction pressure drop (PSIG) [6.9 kPa], multiply percent (%) loss by 1.18.
4) Size vapor lines for no more than a 5 PSIG [34.5 kPa] pressure drop (2.54% capacity loss) which corresponds to approximately 2°F [–16.7°C] loss.
5) All vertical vapor lines, 3 feet [.91 m] or more in length, must have a short radius oil trap at the bottom of the riser.
6) All vertical vapor lines, 30 feet [9.14 m] or more in length, must have short radius oil traps every 15 to 20 feet [4.57 to 6.10 m] of run.

COIL ABOVE CONDENSING UNIT



[ ] Designates Metric Conversions

COIL BELOW CONDENSING UNIT



NOTE: PIPING ACCESSORIES SHOWN SHOULD BE MOUNTED AS CLOSE TO AIR HANDLER UNIT AS POSSIBLE

TYPICAL REFRIGERANT PIPING RECOMMENDATIONS (con't.)

REQUIRED OZS. R-410A CHARGE PER FT. [m] OF TUBING

TUBE SIZE O.D. (IN.) [mm]	LIQUID (OZ.) [g]	VAPOR (OZ.) [g]
1/2 [12.7]	1.06 [30.0]	.04 [1.13]
5/8 [15.88]	1.65 [46.7]	.07 [1.98]
3/4 [19.05]	2.46 [69.7]	.10 [2.83]
7/8 [22.23]	3.28 [92.9]	.13 [3.68]
1 1/8 [28.58]		.22 [6.23]
1 3/8 [34.93]		.34 [9.63]
1 5/8 [41.28]		.48 [13.60]
2 1/8 [53.98]		.84 [23.81]

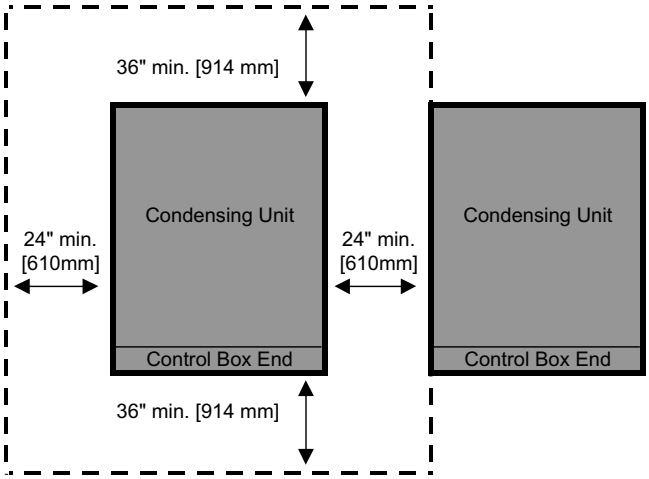
Quantities based on 110°F liquid and 45°F vapor.

GENERAL INSTALLATION

The condensing unit should be installed outdoors. It should be located as near as possible to the evaporator section to keep connecting refrigerant tubing lengths to a minimum. The unit must be installed to allow a free air flow to the condenser coils.

If several units are installed adjacent to each other, care must be taken to avoid recirculation of air from one condenser to another. In all installations, adequate space must be provided for installation and servicing.

CLEARANCES



The unit must not be connected to any duct work. Do not locate unit under a roof drip; if necessary, install gutters, etc., to prevent water run-off from hitting the unit. To prevent air recirculation, it is recommended that the unit not be installed under an overhang, but if necessary **allow a minimum of 60 inches [1524 mm] above the unit for air discharge.**

ROOFTOP INSTALLATION

If rooftop installation is required, make certain that the building construction is adequate for the weight of the unit. (Refer to physical data chart.) Before placing the unit on the roof, make certain that the nylon rigging slings are of sufficient length to maintain equilibrium of the unit when lifting. Under no circumstances should the unit be lifted by only one corner for rooftop installation.

[ ] Designates Metric Conversions

SEQUENCE OF OPERATION

1. When the room thermostat is set on “Cool”, “Fan Auto”, and the temperature is higher than the thermostat setting, the thermostat “Y1” circuit closes and energizes the number one compressor contactor (CC1) through the closed cooling relay (R) contacts. Power to the crankcase heater (CCH1) will be de-energized by the auxiliary contacts (AUX-1).
2. Simultaneously, the “G” circuit provides power to the indoor blower motor circuit and starts indoor air circulation through the evaporator coil.
3. When the discharge pressure increases to 450 psig, the contacts on the low ambient control (LAC) (if installed) will allow supply power to start the outdoor fan motors (ODF) which begin to pull air through the condenser coils. The system is now in first stage cooling, operating at near fifty percent of full load capacity.
4. If the temperature at the thermostat continues to increase, the thermostat “Y2” circuit closes and after a full 30 second delay, power passes through the time delay control (TDC) and energizes the number two compressor contactor (CC2) through the second set of closed cooling relay (R) contacts. Power to the crankcase heater (CCH2) will be de-energized by the auxiliary contacts (AUX-2).
5. The system will continue cooling at maximum capacity, as long as the room thermostat is demanding full load and all safety device contacts are closed. The low ambient control (LAC) (if installed) will open and close, allowing the outdoor fans to maintain discharge pressure between 250 and 450 psig.
6. As the temperature at the thermostat drops enough to satisfy “Y2”, the circuit will open and de-energize the compressor contactor (CC2), stopping compressor operation and closing the auxiliary contacts (AUX-2), which energizes the crankcase heater (CCH2).
7. When continued cooling satisfies the “Y1” circuit, it will open and de-energize the compressor contactor (CC1), stopping compressor operation and closing the auxiliary contacts (AUX-1), which energizes the crankcase heater (CCH1).
8. The thermostat “G” circuit will stop blower operation.

GENERAL TERMS OF LIMITED WARRANTY*

Rheem® will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

Compressor .....Five (5) Years
Any Other Part .....One (1) Year

***For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.**

Russell™ By Rheem
5600 Old Greenwood Road, Fort Smith, AR 72908

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

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