



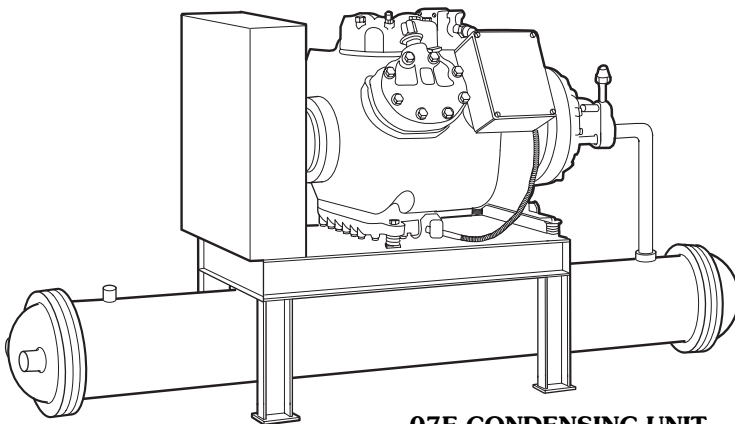
Product Data

07DA, DB 07EA, EB, ED Condensing Units

3 to 40 Nominal Tons



06D, 06E Compressors



07E CONDENSING UNIT

An excellent choice for your built-up system — Carrier 07 Series condensing units — built for the engineer who writes a spec that provides the most for the money. Compare the features you prefer in a condensing unit with those offered by the 07 Series, and you'll see the advantages in choosing Carrier.

Features/Benefits

Wide application range

Model 07 condensing units are designed for a wide range of commercial and industrial air conditioning and refrigeration applications. They give the engineer great design flexibility, since an 07 unit can be combined with a wide variety of coils or chillers to provide a cooling system that closely matches actual load requirements. This results in an energy-saving system that operates efficiently at maximum load conditions.

There are many standard units to choose from, in addition to special orders available by calling your Carlyle representative. Thus, you are assured of the economy, capacity, and distribution voltage your application requires.

Factory assembled

Rugged and versatile 07 Series units are factory assembled, ready to be piped into your system. Matched up with the condenser are a serviceable compressor, compact control center, and all interconnecting piping and wiring. The units are designed for use with most refrigerants.

Features/Benefits (cont)



The benefits are many

- fully assembled units
- capacities to 40 tons
- system design flexibility
- commercial and industrial application
- for use with most refrigerants
- special-order combinations available on request

Accurate system design

Broad range of sizes allows selection of evaporator coil or chiller to form a well-balanced system. Capacity will closely match the system load requirements, and provide efficient, energy-saving, economical operation at maximum load conditions.

A unit for all load conditions is offered, from refrigeration to air conditioning duty. Units have shell-and-tube condensers. All are compactly designed to take minimum floor space. The 07 Series units are built and tested to comply with ASME (American Society of Mechanical Engineers) Code for unfired pressure vessels, and ANSI/ASHRAE 15 (American National Standards Institute/American Society of Heating, Refrigeration and Air Conditioning Engineers) latest revision safety standard.

Economical operation

Capacity control valves are provided in all 07 Series units, except 07DA203 models, giving a built-in system for conserving power and water and assuring accurate control. When only partial load operation is needed, capacity control valves automatically step down compressor capacity. Refrigeration output can be reduced to about one third of full load in direct response to suction pressure changes. When system load is reduced, power and water usage are also reduced. Suction cutoff unloading further reduces energy usage during unloaded operation. Valve body shuts off passage from suction manifold, preventing charge from unnecessarily being pulled into the cylinder. This results in an EER (Energy Efficiency Ratio) improvement of as much as 39.5% at 33% load.

Built-in reliability

Condenser includes a pressure relief device which protects the system against overpressure.

Compressor has motor overtemperature protection. On 07E models, manually reset 3-phase circuit breakers protect against power irregularities. High- and low-pressure switches are standard. Oil-pressure switch is standard on 07D and 07E models. An automatically reversible oil pump with automatic pressure regulator keeps

bearings properly lubricated. Crankcase heater keeps oil warm and prevents dilution of oil by refrigerant during shutdown. Time Guard circuit prevents short cycling by compressor. After shutdown, the timing device delays compressor start-up for approximately 5 minutes. This reduces wear and extends compressor life. Compressor motor is sealed against dirt and moisture and is cooled by suction gas. It eliminates drive shaft alignment and shaft seal problems.

Noise and vibration control

Muffler in discharge line minimizes sound level.

Compressor is mounted on spring isolators to minimize transfer of vibration from compressor to base structure.

Low-cost maintenance

Condenser heads are removable for tube maintenance or replacement. An oil level sight glass allows easy inspection of compressor oil level. Liquid line shut-off valve allows evaporator or chiller to be serviced without loss of refrigerant. The condenser serves as a reservoir for holding liquid refrigerant when the system is not in operation, keeping downtime to a minimum since refrigerant need not be replaced for start-up.

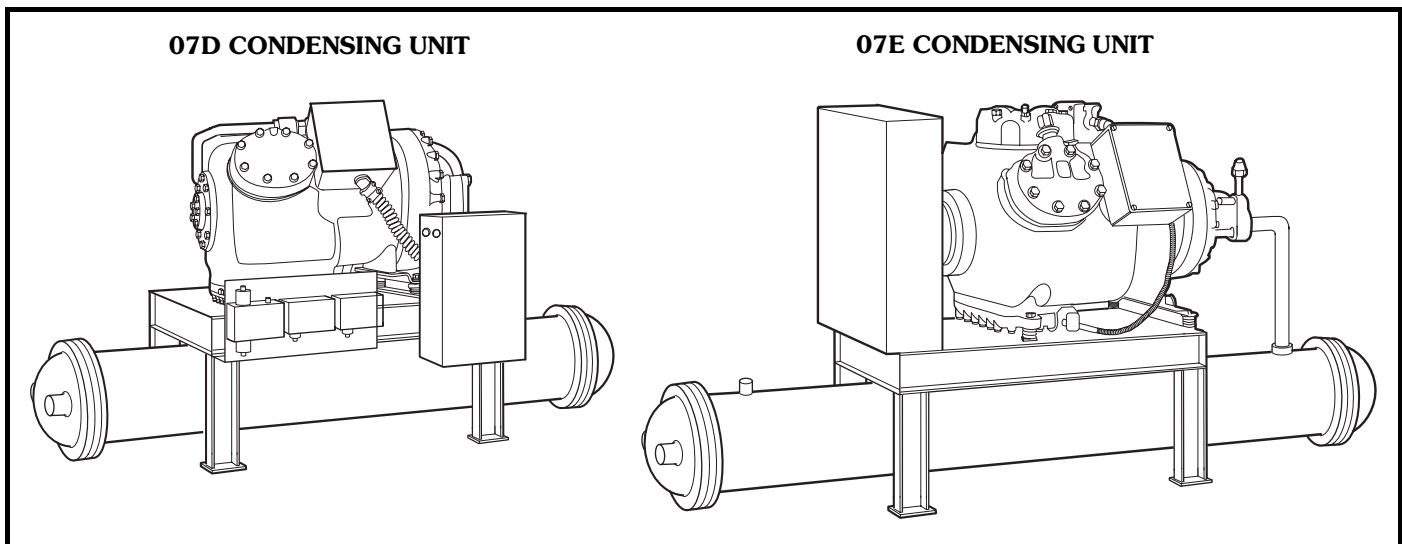
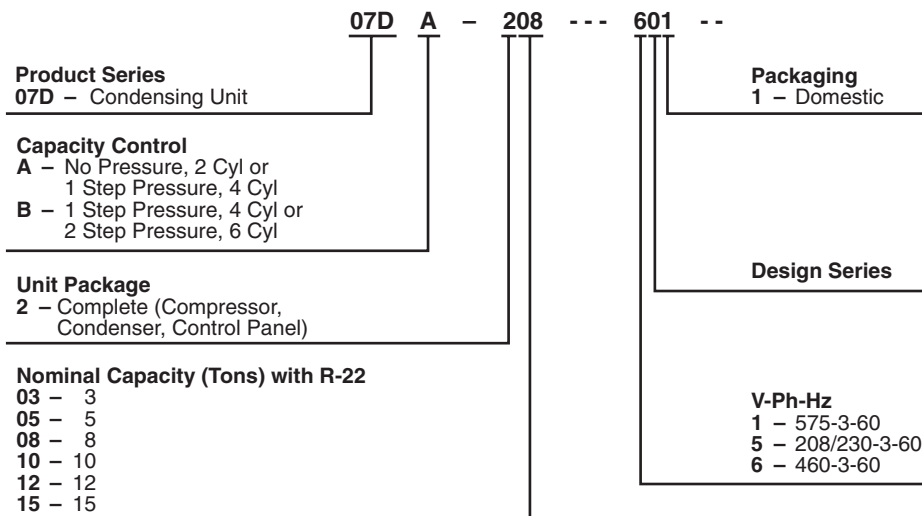


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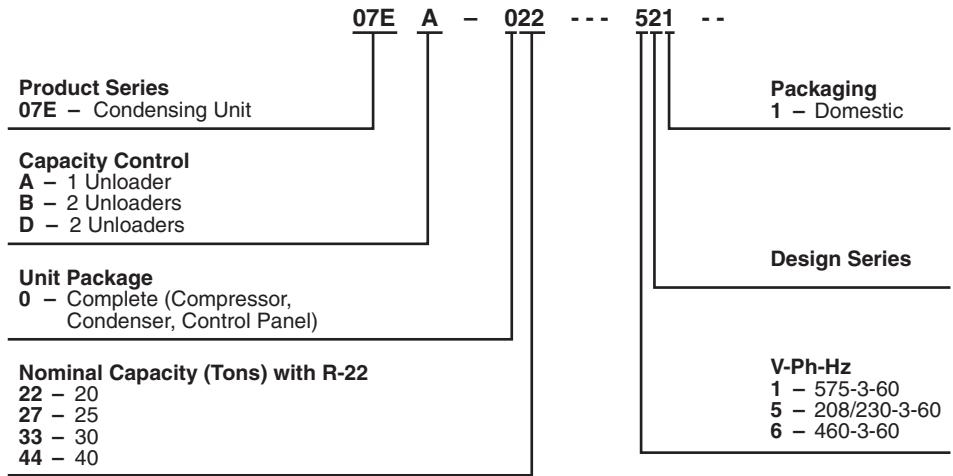


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Model number nomenclature



Model number nomenclature (cont)



Physical data



| UNIT 07D | | A203 | B205 | A208 | B210 | B212 | B215 |
|---|--------|--------------------------|------------------|-------------------|------------------|--------------------|--------------------|
| OPERATING WEIGHT (lb) | | 270 | 395 | 420 | 545 | 595 | 620 |
| REFRIGERANT | | R-134a, R-22, R-507/404A | | | | | |
| COMPRESSOR — 06D* | | M808 | M313 | A818 | A825 | A328 | A537 |
| Cylinders | | 2 | 4 | 4 | 6 | 6 | 6 |
| Bore (in.) | | 2 | 2 | 2 | 2 | 2 | 2 |
| Stroke (in.) | | 1 ^{1/4} | 1 | 1 ^{7/16} | 1 ^{1/4} | 1 ^{15/32} | 1 ^{15/16} |
| Displacement (cfm at 1750 rpm) | | 8 | 13 | 18.3 | 23.9 | 28 | 37.1 |
| Oil Charge (pt) | | 3 | 4.5 | 5.5 | 8 | 8 | 8 |
| High Side Maximum Pressure | | 450 PSIG | | | | | |
| Low Side Maximum Pressure | | 245 PSIG | | | | | |
| CONDENSER (Shell and Tube)† Part Number | | P701-0605CX | P701-0607CX | P701-0610CX | P701-0615CX | P701-0620CX | P701-0625AX |
| Refrigerant Storage Capacity (lb) | R-134a | 17.20 | 15.90 | 24.40 | 31.60 | 27.40 | 39.80 |
| | | 2.86 | 3.16 | 5.00 | 7.55 | 8.47 | 9.18 |
| Min Refrigerant Operating Charge (lb) | R-22 | 17.00 | 15.70 | 24.10 | 31.20 | 27.10 | 39.30 |
| | | 2.80 | 3.10 | 4.90 | 7.40 | 8.30 | 9.00 |
| R-507/404A | | 14.70 | 13.60 | 20.90 | 27.10 | 23.50 | 34.10 |
| | | 2.80 | 3.10 | 4.90 | 7.40 | 8.30 | 9.00 |
| REFRIGERANT CONNECTION (in. ODF) | | | | | | | |
| Inlet | | 1 ^{5/8} | 1 ^{5/8} | 1 ^{5/8} | 1 ^{5/8} | 1 ^{5/8} | 1 ^{5/8} |
| Outlet | | 1 ^{1/8} | 1 ^{1/8} | 1 ^{1/8} | 1 ^{1/8} | 1 ^{1/8} | 1 ^{1/8} |
| WATER CONNECTION (in. FPT) | | | | | | | |
| Inlet/Outlet | | 1 | 1 | 1 ^{1/4} | 1 ^{1/4} | 1 ^{1/4} | 2 |

LEGEND

FPT — Female Pipe Thread
 ODF — Outside Diameter, Female

*Compressor listed is the standard compressor for R-22, air conditioning duty. An 06DR compressor is standard equipment for low temperature (R-507/404A) or medium temperature (R-134a) applications. Factory substitutions may be made. Contact Carrier Sales Representative.

†The condenser listed is for R-22, air conditioning duty and may change based on the application. Maximum condenser operating pressure: 350 psi refrigerant side, 300 psi water side ("CX" models); 350 psi refrigerant side, 150 psi water side ("AX" models).

NOTE: The 07DB210 with the 06DA825 compressor replaces the 07DB210 with the 06DA824 once the compressor inventory is depleted.

| UNIT 07E | | A022 | B027 | B033 | D044 |
|---|--------|--------------------------|--------------------|--------------------|--------------------|
| OPERATING WEIGHT (lb) | | 1090 | 1200 | 1250 | 1410 |
| REFRIGERANT | | R-134a, R-22, R-507/404A | | | |
| COMPRESSOR — 06E* | | A250 | A265 | A275 | A299 |
| Cylinders | | 4 | 6 | 6 | 6 |
| Bore (in.) | | 2 ^{11/16} | 2 ^{11/16} | 2 ^{11/16} | 2 ^{11/16} |
| Stroke (in.) | | 2 ^{3/16} | 2 | 2 ^{3/16} | 2 ^{7/8} |
| Displacement (cfm at 1750 rpm) | | 50 | 68 | 75 | 99 |
| Oil Charge (pt) | | 14 | 19 | 19 | 19 |
| High Side Maximum Pressure | | 450 PSIG | | | |
| Low Side Maximum Pressure | | 245 PSIG | | | |
| CONDENSER (Shell and Tube)† Part Number | | P701-0840AX | P701-0850AX | P701-0850AX | P701-1065AX |
| Refrigerant Storage Capacity (lb) | R-134a | 71.3 | 85.90 | 85.90 | 112.70 |
| | | 15.4 | 18.67 | 18.67 | 23.77 |
| Min Refrigerant Operating Charge (lb) | R-22 | 70.4 | 84.80 | 84.80 | 111.20 |
| | | 15.1 | 18.30 | 18.30 | 23.30 |
| R-507/404A | | 61.1 | 73.60 | 73.60 | 96.50 |
| | | 15.1 | 18.30 | 18.30 | 23.30 |
| REFRIGERANT CONNECTION (in. ODF) | | | | | |
| Inlet | | 2 ^{1/8} | 2 ^{1/8} | 2 ^{1/8} | 2 ^{5/8} |
| Outlet | | 1 ^{3/8} | 1 ^{3/8} | 1 ^{3/8} | 1 ^{5/8} |
| WATER CONNECTION (in. FPT) | | | | | |
| Inlet/Outlet | | 2 ^{1/2} | 2 ^{1/2} | 2 ^{1/2} | 3 |

LEGEND

FPT — Female Pipe Thread
 ODF — Outside Diameter, Female

*Compressor listed is the standard compressor for R-22, air conditioning duty. An 06ER compressor is standard equipment for low temperature (R-507/404A) applications. For medium temperature (R-134a) applications, an 06EM compressor is standard. Factory substitutions may be made. Contact Carrier Sales Representative.

†The condenser listed is for R-22, air conditioning duty and may change based on the application. Maximum condenser operating pressure: 350 psi refrigerant side, 150 psi water side.

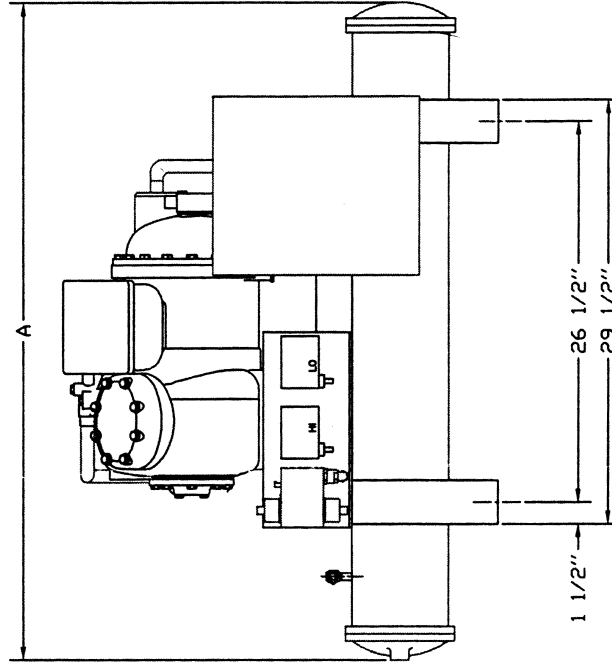
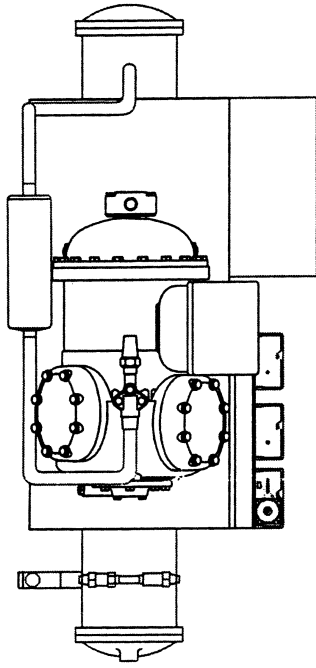
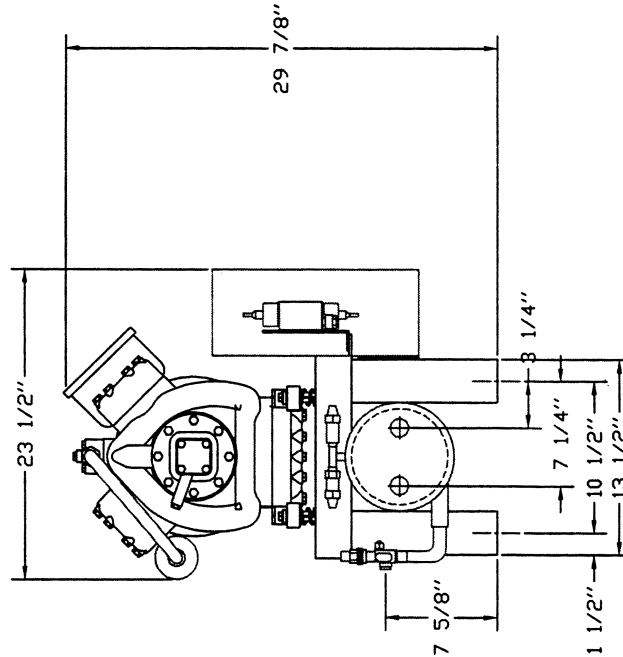
Base unit dimensions



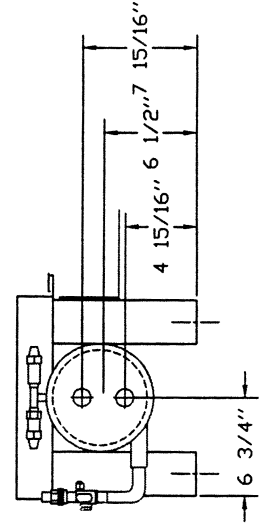
07D CONDENSING UNIT

DIMENSIONS (in.)

| UNIT 07D | WIDTH A |
|----------|----------------------------------|
| A203 | 30 |
| B205 | 30 |
| A208 | 39 ⁹ / ₁₆ |
| B210 | 51 ⁹ / ₁₆ |
| B212 | 51 ⁹ / ₁₆ |
| B215 | 63 ¹³ / ₁₆ |



NOTE: Water connections for 07DB215 unit only.



NOTES:

1. For standard service practices, such as troubleshooting and refrigerant charging, allow a minimum 2'-6" clearance around the unit.
2. Recommended service space for condenser tube removal is one condenser length at either end.
3. For compressor removal, allow a minimum 3' wide access aisle to and from the unit.
4. Local codes or jurisdiction may prevail for unit clearances.

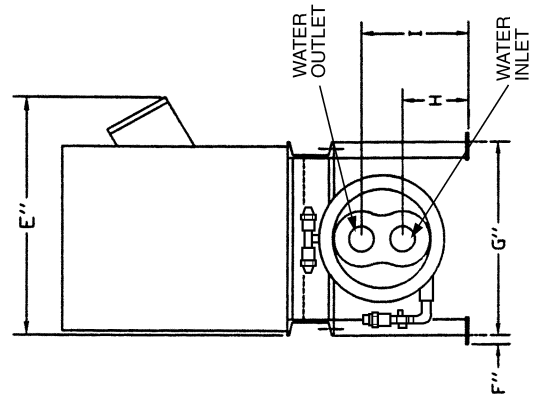
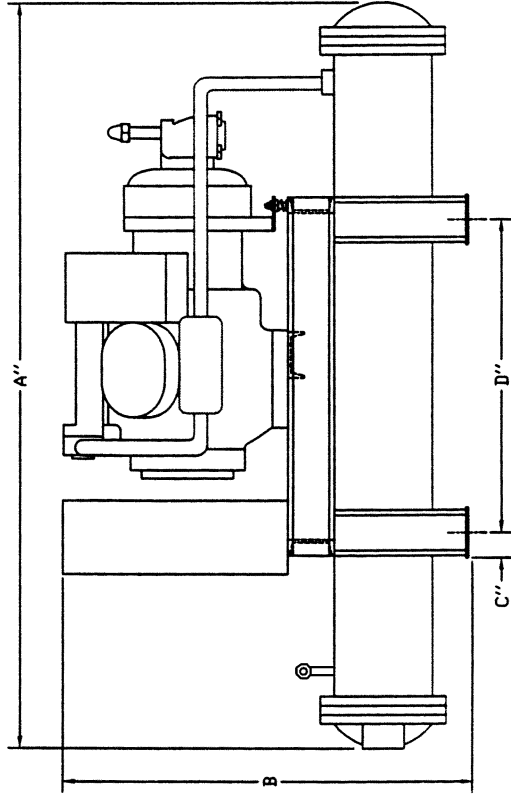
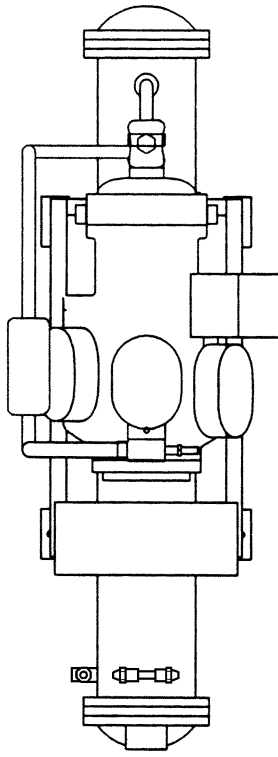
07E CONDENSING UNIT

DIMENSIONS (in.)

| UNIT 07E | VOLTS | A | B | C | D | E | F | G | H | I |
|----------|----------|--------------------------------|--------------------------------|-------------------------------|----|--------------------------------|---|----|--------------------------------|--------------------------------|
| A022 | 208/230 | 66 | 49 ³ / ₄ | 2 ³ / ₄ | 34 | 27 ¹ / ₂ | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| | 460, 575 | 66 | 43 ³ / ₄ | 2 ³ / ₄ | 34 | 26 | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| B027 | 208/230 | 78 | 49 ³ / ₄ | 2 ³ / ₄ | 34 | 27 ¹ / ₂ | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| | 460, 575 | 78 | 43 ³ / ₄ | 2 ³ / ₄ | 34 | 26 | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| B033 | 208/230 | 78 | 49 ³ / ₄ | 2 ³ / ₄ | 34 | 27 ¹ / ₂ | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| | 460, 575 | 78 | 43 ³ / ₄ | 2 ³ / ₄ | 34 | 26 | 1 | 21 | 5 ⁹ / ₁₆ | 9 ⁵ / ₁₆ |
| D044 | 208/230 | 69 ¹ / ₂ | 49 ³ / ₄ | 2 ³ / ₄ | 34 | 27 ¹ / ₂ | 1 | 21 | 4 ¹ / ₈ | 8 ⁵ / ₈ |
| | 460, 575 | 69 ¹ / ₂ | 49 ³ / ₄ | 2 ³ / ₄ | 34 | 27 ¹ / ₂ | 1 | 21 | 4 ¹ / ₈ | 8 ⁵ / ₈ |

NOTES:

1. For standard service practices, such as troubleshooting and refrigerant charging, allow a minimum 2'-6" clearance around the unit.
2. Recommended service space for condenser tube removal is one condenser length at either end.
3. For compressor removal, allow a minimum 3' wide access aisle to and from the unit.
4. Local codes or jurisdiction may prevail for unit clearances.



Field-installed accessories



Sizes 3 through 40 tons

Control circuit transformer eliminates need for external control power source.

Sizes 10 through 40 tons

Electric solenoid unloader converts unloader operation from suction pressure operation to electrical operation.

Sizes 20 through 40 tons

Gage panel located on control center for easy, at-a-glance monitoring of suction, discharge, and oil pressure.

Selection procedure (with example)

I Determine refrigerant, load, saturated suction temperature, and entering condenser water temperature.

Given

| | |
|---|---------|
| Refrigerant | R-22 |
| Cooling Load | 30 Tons |
| Saturated Suction Temperature | 40 F |
| Entering Condenser Water Temperature | 85 F |
| Greatest Temperature Difference (GTD) | 20 F |

III Determine gpm and water pressure drop through condenser.

Enter Condenser Capacity and Flow Rates table at P701-0850AX Condenser (for 07EB033 condensing unit) with a 20 GTD (greatest temperature difference). The GTD is the difference between the entering water temperature and saturated condensing temperature. The THR (total heat of rejection) required is 38.12 tons or 457,440 Btuh. The required gpm for the THR falls between 50 and 70 gpm. Through interpolation the required gpm is 62.25 and the pressure drop (PD) is 1.59 psi.

NOTE: The capacities listed in the Condenser Capacity and Flow Rate tables are based on 105 SCT. When operating at SCT between 90 F and 120 F, the change in condenser capacity is minimal. All data points available in hard copy format for R-22 are not available for R-134a and R-507/404A. Interpolation may be necessary. Contact Carrier Sales Representative for more information.

II Determine condensing unit selection saturated condensing temperature, compressor power input, total heat rejection. Use direct interpolation when job requirements fall between values shown.

Enter the 07E Condensing Unit Capacities table for R-22 at 40 F saturated suction temperature. An 07EB033 unit with 30.56 tons capacity is closest to meeting the 30-ton cooling load requirement. Saturated condensing temperature is 105 F, compressor power input is 26.5 kW and the total heat rejection is 38.12 tons.

Performance data

GENERAL NOTES FOR 07D,E CAPACITIES TABLES

1. Condensing unit capacities are based on liquid subcooling of 2 F with 1750 rpm compressor speed.
2. Condenser water quantities are based on a .0005 fouling factor.
3. Refrigerant temperatures shown are saturated temperatures corresponding to pressure indicated at compressor. Actual gas temperature is higher because of superheat.
4. Capacities are based on actual suction gas temperatures to the compressor: 65 F for R-134a and R-507/404A. This assumes superheat is obtained from liquid suction interchanger or in evaporator. Capacity corrections for other than rated suction gas temperatures may be obtained from Rating Basis and Capacity Multipliers table. R-22 suction gas superheat (15 F) normally

occurs because of expansion valve operation and line losses. Therefore, R-22 ratings can be used without adjustment.

5. Condenser leaving water temperature (t_{lw}) is calculated as follows (temperature in degrees F):

$$t_{lw} = \text{Entering water temp } (t_{ew}) + \frac{\text{total heat rejection (tons)} \times 24}{\text{condensing water flow (gpm)}}$$

$$t_{lw} = t_{ew} + \frac{\text{THR (tons)} \times 24}{\text{gpm}}$$

Performance data (cont)



STANDARD RATINGS — AIR CONDITIONING DUTY

| UNIT 07 | REFRIG | SST (F) | SCT (F) | CAP. | kW | THR | GPM | LWT | PD |
|---------|--------|---------|---------|-------|-------|-------|------|-------|------|
| DA203 | 22 | 40 | 105 | 3.35 | 2.63 | 4.10 | 6.3 | 100.9 | 0.98 |
| DB205 | | | | 5.30 | 4.19 | 6.49 | 11.0 | 99.4 | 2.00 |
| DA208 | | | | 7.64 | 5.99 | 9.35 | 15.0 | 100.1 | 1.40 |
| DB210 | | | | 9.88 | 7.70 | 12.07 | 17.3 | 101.9 | 2.00 |
| DB212 | | | | 11.78 | 9.22 | 14.41 | 20.5 | 102.1 | 1.90 |
| DB215 | | | | 16.02 | 13.35 | 19.83 | 34.6 | 98.9 | 1.20 |
| EA022 | | | | 21.38 | 17.60 | 26.40 | 42.0 | 100.3 | 0.70 |
| EB027 | | | | 28.18 | 23.40 | 34.85 | 54.6 | 100.5 | 1.20 |
| EB033 | | | | 30.56 | 26.50 | 38.12 | 62.1 | 99.9 | 1.50 |
| ED044 | | | | 40.10 | 37.31 | 50.73 | 89.5 | 98.8 | 1.30 |

LEGEND

- CAP.** — Capacity (tons)
- EWT** — Entering Water Temperature
- GPM** — Gallons Per Minute
- kW** — Compressor Power Input
- LWT** — Leaving Water Temperature (F)
- PD** — Pressure Drop (psi)*
- RGT** — Return Gas Temperature
- SCT** — Saturated Condensing Temperature (F)
- SST** — Saturated Suction Temperature (F)
- THR** — Total Heat Rejection (tons)

*To convert psi to feet multiply by 2.31.

NOTE: Unit ratings are at the following conditions — SST 40 F, RGT 65 F, EWT 85 F, SCT 105 F, 2 F subcooling.

07D CONDENSING UNIT CAPACITIES (Tons)*

R-22

| SST | SCT | 07DA203 | | | 07DB205 | | | 07DA208 | | | 07DB210 | | | 07DB212 | | | 07DB215 | | |
|-----|-----|---------|------|------|---------|------|------|---------|------|-------|---------|------|-------|---------|-------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| 0 | 90 | 1.39 | 1.90 | 1.93 | 2.12 | 3.02 | 2.98 | 3.15 | 4.16 | 4.34 | 3.97 | 5.27 | 5.47 | 4.93 | 6.55 | 6.80 | 6.85 | 9.17 | 9.46 |
| | 100 | 1.26 | 1.98 | 1.82 | 1.89 | 3.11 | 2.78 | 2.84 | 4.32 | 4.07 | 3.58 | 5.54 | 5.16 | 4.52 | 6.90 | 6.48 | 6.32 | 9.67 | 9.07 |
| | 105 | 1.19 | 2.01 | 1.76 | 1.78 | 3.14 | 2.68 | 2.68 | 4.37 | 3.93 | 3.39 | 5.65 | 5.00 | 4.32 | 7.06 | 6.33 | 6.06 | 9.89 | 8.88 |
| | 110 | 1.12 | 2.04 | 1.71 | 1.67 | 3.16 | 2.57 | 2.53 | 4.42 | 3.79 | 3.20 | 5.75 | 4.84 | 4.12 | 7.21 | 6.17 | 5.80 | 10.11 | 8.68 |
| 10 | 120 | 0.99 | 2.10 | 1.59 | 1.45 | 3.20 | 2.36 | 2.22 | 4.45 | 3.49 | 2.83 | 5.90 | 4.51 | 3.73 | 7.47 | 5.86 | 5.30 | 10.48 | 8.29 |
| | 90 | 1.84 | 2.05 | 2.42 | 2.84 | 3.29 | 3.78 | 4.17 | 4.57 | 5.47 | 5.29 | 5.76 | 6.93 | 6.44 | 7.10 | 8.47 | 8.87 | 10.03 | 11.73 |
| | 100 | 1.68 | 2.19 | 2.31 | 2.58 | 3.46 | 3.56 | 3.81 | 4.85 | 5.19 | 4.81 | 6.15 | 6.56 | 5.93 | 7.58 | 8.09 | 8.21 | 10.74 | 11.28 |
| | 105 | 1.60 | 2.25 | 2.24 | 2.44 | 3.53 | 3.45 | 3.63 | 4.96 | 5.04 | 4.58 | 6.32 | 6.38 | 5.68 | 7.80 | 7.91 | 7.90 | 11.06 | 11.05 |
| 20 | 110 | 1.53 | 2.30 | 2.18 | 2.31 | 3.59 | 3.33 | 3.45 | 5.07 | 4.89 | 4.35 | 6.49 | 6.19 | 5.44 | 8.02 | 7.72 | 7.58 | 11.37 | 10.82 |
| | 120 | 1.37 | 2.39 | 2.05 | 2.05 | 3.68 | 3.10 | 3.09 | 5.22 | 4.57 | 3.90 | 6.77 | 5.83 | 4.96 | 8.40 | 7.35 | 6.96 | 11.93 | 10.36 |
| | 90 | 2.37 | 2.16 | 2.98 | 3.71 | 3.47 | 4.69 | 5.38 | 4.86 | 6.77 | 6.89 | 6.15 | 8.64 | 8.29 | 7.50 | 10.43 | 11.33 | 10.69 | 14.38 |
| | 100 | 2.19 | 2.35 | 2.86 | 3.39 | 3.73 | 4.46 | 4.96 | 5.26 | 6.46 | 6.31 | 6.67 | 8.21 | 7.66 | 8.14 | 9.98 | 10.52 | 11.65 | 13.84 |
| 30 | 105 | 2.10 | 2.44 | 2.79 | 3.24 | 3.84 | 4.33 | 4.75 | 5.44 | 6.30 | 6.03 | 6.91 | 8.00 | 7.35 | 8.44 | 9.76 | 10.13 | 12.09 | 13.57 |
| | 110 | 2.00 | 2.52 | 2.72 | 3.08 | 3.95 | 4.21 | 4.54 | 5.61 | 6.14 | 5.75 | 7.14 | 7.78 | 7.05 | 8.73 | 9.54 | 9.73 | 12.52 | 13.30 |
| | 120 | 1.82 | 2.66 | 2.58 | 2.78 | 4.13 | 3.95 | 4.12 | 5.90 | 5.80 | 5.20 | 7.56 | 7.35 | 6.46 | 9.27 | 9.10 | 8.97 | 13.29 | 12.76 |
| | 90 | 2.99 | 2.20 | 3.62 | 4.73 | 3.56 | 5.75 | 6.82 | 5.01 | 8.25 | 8.82 | 6.41 | 10.65 | 10.51 | 7.72 | 12.71 | 14.28 | 11.05 | 17.43 |
| 40 | 100 | 2.78 | 2.45 | 3.48 | 4.37 | 3.91 | 5.48 | 6.33 | 5.55 | 7.91 | 8.12 | 7.07 | 10.14 | 9.74 | 8.55 | 12.18 | 13.30 | 12.30 | 16.80 |
| | 105 | 2.68 | 2.56 | 3.40 | 4.18 | 4.07 | 5.34 | 6.09 | 5.79 | 7.74 | 7.78 | 7.38 | 9.88 | 9.37 | 8.93 | 11.92 | 12.82 | 12.87 | 16.49 |
| | 110 | 2.57 | 2.67 | 3.33 | 4.00 | 4.23 | 5.21 | 5.84 | 6.03 | 7.56 | 7.44 | 7.68 | 9.63 | 9.00 | 9.31 | 11.65 | 12.34 | 13.44 | 16.17 |
| | 120 | 2.36 | 2.87 | 3.18 | 3.64 | 4.50 | 4.92 | 5.35 | 6.46 | 7.19 | 6.78 | 8.24 | 9.13 | 8.27 | 10.01 | 11.13 | 11.40 | 14.49 | 15.53 |
| 50 | 90 | 3.72 | 2.18 | 4.34 | 5.94 | 3.52 | 6.94 | 8.49 | 4.99 | 9.91 | 11.11 | 6.50 | 12.97 | 13.16 | 7.71 | 15.36 | 17.78 | 11.02 | 20.93 |
| | 100 | 3.48 | 2.48 | 4.18 | 5.51 | 3.98 | 6.64 | 7.93 | 5.67 | 9.54 | 10.28 | 7.31 | 12.37 | 12.24 | 8.74 | 14.73 | 16.60 | 12.61 | 20.20 |
| | 105 | 3.35 | 2.63 | 4.10 | 5.30 | 4.19 | 6.49 | 7.64 | 5.99 | 9.35 | 9.88 | 7.70 | 12.07 | 11.78 | 9.22 | 14.41 | 16.02 | 13.35 | 19.83 |
| | 110 | 3.23 | 2.77 | 4.02 | 5.09 | 4.39 | 6.34 | 7.36 | 6.30 | 9.16 | 9.47 | 8.08 | 11.77 | 11.33 | 9.70 | 14.10 | 15.44 | 14.08 | 19.46 |
| 50 | 120 | 2.99 | 3.03 | 3.85 | 4.66 | 4.77 | 6.02 | 6.79 | 6.88 | 8.75 | 8.67 | 8.79 | 11.18 | 10.45 | 10.60 | 13.48 | 14.31 | 15.43 | 18.71 |
| | 90 | 4.50 | 2.10 | 5.10 | 7.23 | 3.30 | 8.17 | 10.29 | 4.80 | 11.66 | 13.62 | 6.40 | 15.45 | 16.06 | 7.40 | 18.17 | 21.60 | 10.50 | 24.59 |
| | 100 | 4.24 | 2.40 | 4.92 | 6.77 | 3.90 | 7.89 | 9.69 | 5.60 | 11.28 | 12.69 | 7.40 | 14.80 | 15.02 | 8.70 | 17.50 | 20.28 | 12.50 | 23.85 |
| | 105 | 4.11 | 2.60 | 4.85 | 6.54 | 4.15 | 7.73 | 9.38 | 6.00 | 11.09 | 12.24 | 7.85 | 14.48 | 14.52 | 9.30 | 17.17 | 19.64 | 13.40 | 23.46 |
| 50 | 110 | 3.97 | 2.80 | 4.77 | 6.31 | 4.40 | 7.57 | 9.08 | 6.40 | 10.90 | 11.79 | 8.30 | 14.16 | 14.02 | 9.90 | 16.84 | 19.00 | 14.30 | 23.07 |
| | 120 | 3.71 | 3.10 | 4.59 | 5.85 | 4.90 | 7.25 | 8.46 | 7.10 | 10.48 | 10.91 | 9.20 | 13.53 | 13.03 | 11.00 | 16.17 | 17.74 | 16.00 | 22.30 |

LEGEND

- Cap.** — Capacity (tons)
- kW** — Compressor Power Input
- SCT** — Saturated Condensing Temperature (F)
- SST** — Saturated Suction Temperature (F)
- THR** — Total Heat Rejection (tons)

*Refer to capacity notes, page 8.

NOTE: To ensure proper motor cooling, it is required that all 6-cylinder compressors operating with R-22 at 20 F SST or below have one of the 2 unloaders disconnected. Cylinder head fan required at SST of 0° F and below for R-22 for all compressors.

Performance data (cont)



07D CONDENSING UNIT CAPACITIES (Tons)* (cont) R-134a

| SST | SCT | 07DB205 | | | 07DA208 | | | 07DA210 | | | 07DB212 | | | 07DB215 | | |
|-----|-----|---------|------|------|---------|------|------|---------|------|-------|---------|------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| 0 | 90 | 1.27 | 1.78 | 1.78 | 2.09 | 2.70 | 2.86 | 2.61 | 3.29 | 3.55 | 3.22 | 4.22 | 4.42 | 4.44 | 5.76 | 6.08 |
| | 100 | 1.12 | 1.83 | 1.64 | 1.91 | 2.83 | 2.72 | 2.33 | 3.40 | 3.30 | 2.96 | 4.42 | 4.21 | 4.11 | 6.08 | 5.84 |
| | 105 | 1.05 | 1.84 | 1.57 | 1.82 | 2.88 | 2.64 | 2.19 | 3.44 | 3.17 | 2.82 | 4.50 | 4.10 | 3.94 | 6.22 | 5.71 |
| | 110 | 0.98 | 1.84 | 1.50 | 1.74 | 2.93 | 2.57 | 2.05 | 3.48 | 3.04 | 2.69 | 4.58 | 3.99 | 3.76 | 6.35 | 5.57 |
| | 120 | 0.84 | 1.83 | 1.36 | 1.57 | 3.01 | 2.43 | 1.78 | 3.50 | 2.78 | 2.42 | 4.69 | 3.75 | 3.41 | 6.57 | 5.28 |
| 10 | 90 | 1.76 | 2.02 | 2.34 | 2.79 | 3.03 | 3.65 | 3.58 | 3.78 | 4.66 | 4.26 | 4.69 | 5.59 | 5.79 | 6.33 | 7.59 |
| | 100 | 1.58 | 2.12 | 2.18 | 2.56 | 3.22 | 3.48 | 3.23 | 3.98 | 4.37 | 3.94 | 4.99 | 5.36 | 5.40 | 6.76 | 7.33 |
| | 105 | 1.49 | 2.16 | 2.10 | 2.45 | 3.30 | 3.39 | 3.06 | 4.06 | 4.22 | 3.78 | 5.12 | 5.23 | 5.20 | 6.97 | 7.19 |
| | 110 | 1.40 | 2.19 | 2.02 | 2.34 | 3.38 | 3.30 | 2.89 | 4.13 | 4.07 | 3.61 | 5.25 | 5.11 | 5.00 | 7.17 | 7.04 |
| | 120 | 1.23 | 2.23 | 1.86 | 2.12 | 3.52 | 3.13 | 2.56 | 4.25 | 3.77 | 3.29 | 5.47 | 4.85 | 4.59 | 7.52 | 6.74 |
| 20 | 90 | 2.37 | 2.22 | 3.00 | 3.66 | 3.30 | 4.60 | 4.78 | 4.25 | 5.99 | 5.50 | 5.10 | 6.96 | 7.41 | 6.85 | 9.36 |
| | 100 | 2.14 | 2.38 | 2.82 | 3.37 | 3.57 | 4.38 | 4.35 | 4.53 | 5.64 | 5.12 | 5.51 | 6.69 | 6.94 | 7.40 | 9.05 |
| | 105 | 2.03 | 2.45 | 2.73 | 3.23 | 3.69 | 4.28 | 4.14 | 4.65 | 5.47 | 4.93 | 5.70 | 6.55 | 6.71 | 7.66 | 8.89 |
| | 110 | 1.93 | 2.51 | 2.64 | 3.09 | 3.81 | 4.17 | 3.93 | 4.77 | 5.29 | 4.73 | 5.88 | 6.41 | 6.48 | 7.92 | 8.73 |
| | 120 | 1.71 | 2.62 | 2.46 | 2.81 | 4.02 | 3.96 | 3.52 | 4.98 | 4.94 | 4.34 | 6.21 | 6.11 | 5.98 | 8.41 | 8.38 |
| 30 | 90 | 3.10 | 2.36 | 3.78 | 4.73 | 3.48 | 5.72 | 6.24 | 4.69 | 7.57 | 7.00 | 5.41 | 8.54 | 9.32 | 7.31 | 11.40 |
| | 100 | 2.83 | 2.59 | 3.57 | 4.36 | 3.85 | 5.46 | 5.72 | 5.05 | 7.16 | 6.54 | 5.94 | 8.23 | 8.77 | 7.96 | 11.04 |
| | 105 | 2.70 | 2.69 | 3.47 | 4.18 | 4.02 | 5.33 | 5.46 | 5.22 | 6.95 | 6.31 | 6.19 | 8.07 | 8.49 | 8.29 | 10.85 |
| | 110 | 2.57 | 2.79 | 3.36 | 4.01 | 4.19 | 5.20 | 5.21 | 5.38 | 6.74 | 6.07 | 6.43 | 7.91 | 8.21 | 8.61 | 10.66 |
| | 120 | 2.31 | 2.96 | 3.15 | 3.66 | 4.48 | 4.94 | 4.70 | 5.68 | 6.32 | 5.60 | 6.88 | 7.56 | 7.63 | 9.23 | 10.26 |
| 40 | 90 | 4.00 | 2.42 | 4.69 | 6.03 | 3.54 | 7.04 | 8.00 | 5.08 | 9.45 | 8.78 | 5.62 | 10.38 | 11.60 | 7.69 | 13.79 |
| | 100 | 3.67 | 2.72 | 4.45 | 5.58 | 4.03 | 6.72 | 7.37 | 5.53 | 8.94 | 8.23 | 6.27 | 10.02 | 10.94 | 8.46 | 13.35 |
| | 105 | 3.51 | 2.86 | 4.32 | 5.35 | 4.26 | 6.57 | 7.06 | 5.74 | 8.69 | 7.95 | 6.58 | 9.82 | 10.60 | 8.84 | 13.12 |
| | 110 | 3.35 | 3.00 | 4.20 | 5.13 | 4.48 | 6.41 | 6.75 | 5.95 | 8.44 | 7.67 | 6.89 | 9.63 | 10.26 | 9.22 | 12.89 |
| | 120 | 3.03 | 3.25 | 3.96 | 4.70 | 4.88 | 6.09 | 6.13 | 6.35 | 7.94 | 7.10 | 7.47 | 9.23 | 9.57 | 9.97 | 12.41 |
| 50 | 90 | 5.07 | 2.44 | 5.77 | 7.61 | 3.60 | 8.64 | 10.11 | 5.42 | 11.66 | 10.89 | 5.67 | 12.51 | 14.28 | 7.99 | 16.56 |
| | 100 | 4.68 | 2.77 | 5.47 | 7.05 | 4.06 | 8.20 | 9.35 | 5.96 | 11.05 | 10.23 | 6.46 | 12.07 | 13.49 | 8.87 | 16.02 |
| | 105 | 4.48 | 2.95 | 5.32 | 6.77 | 4.35 | 8.01 | 8.97 | 6.22 | 10.75 | 9.89 | 6.85 | 11.84 | 13.09 | 9.32 | 15.74 |
| | 110 | 4.29 | 3.13 | 5.18 | 6.50 | 4.64 | 7.82 | 8.60 | 6.48 | 10.44 | 9.55 | 7.23 | 11.62 | 12.68 | 9.76 | 15.46 |
| | 120 | 3.90 | 3.46 | 4.89 | 5.96 | 5.17 | 7.44 | 7.85 | 6.98 | 9.84 | 8.87 | 7.95 | 11.14 | 11.85 | 10.64 | 14.88 |

LEGEND

*Refer to capacity notes, page 8.

- Cap. — Capacity (tons)
- kW — Compressor Power Input
- SCT — Saturated Condensing Temperature (F)
- SST — Saturated Suction Temperature (F)
- THR — Total Heat Rejection (tons)



07D CONDENSING UNIT CAPACITIES (Tons)* (cont)
R-507/404A

| SST | SCT | 07DB205 | | | 07DA208 | | | 07DB210 | | | 07DB212 | | | 07DB215 | | |
|-----|-----|---------|------|------|---------|------|------|---------|------|-------|---------|-------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| -30 | 90 | 0.99 | 2.11 | 1.59 | 1.81 | 3.68 | 2.86 | 2.13 | 4.34 | 3.37 | 2.78 | 5.52 | 4.35 | 3.79 | 7.37 | 5.89 |
| | 100 | 0.86 | 2.09 | 1.45 | 1.64 | 3.78 | 2.72 | 1.89 | 4.36 | 3.13 | 2.50 | 5.61 | 4.10 | 3.42 | 7.59 | 5.59 |
| | 105 | 0.79 | 2.07 | 1.38 | 1.55 | 3.81 | 2.64 | 1.77 | 4.35 | 3.01 | 2.35 | 5.61 | 3.95 | 3.24 | 7.68 | 5.43 |
| | 110 | 0.73 | 2.05 | 1.31 | 1.46 | 3.84 | 2.56 | 1.64 | 4.34 | 2.88 | 2.20 | 5.61 | 3.80 | 3.06 | 7.77 | 5.28 |
| | 120 | 0.61 | 1.99 | 1.18 | 1.28 | 3.86 | 2.38 | 1.39 | 4.25 | 2.60 | 1.89 | 5.51 | 3.46 | 2.71 | 7.92 | 4.97 |
| -20 | 90 | 1.43 | 2.59 | 2.17 | 2.43 | 4.27 | 3.65 | 2.96 | 5.14 | 4.43 | 3.75 | 6.42 | 5.58 | 5.01 | 8.60 | 7.46 |
| | 100 | 1.26 | 2.62 | 2.00 | 2.22 | 4.44 | 3.49 | 2.67 | 5.27 | 4.17 | 3.43 | 6.67 | 5.33 | 4.54 | 8.92 | 7.08 |
| | 105 | 1.17 | 2.63 | 1.92 | 2.12 | 4.51 | 3.40 | 2.51 | 5.31 | 4.03 | 3.26 | 6.76 | 5.18 | 4.30 | 9.06 | 6.88 |
| | 110 | 1.09 | 2.63 | 1.84 | 2.01 | 4.58 | 3.32 | 2.36 | 5.34 | 3.88 | 3.08 | 6.84 | 5.03 | 4.07 | 9.20 | 6.69 |
| | 120 | 0.93 | 2.60 | 1.67 | 1.79 | 4.68 | 3.12 | 2.05 | 5.36 | 3.58 | 2.72 | 6.93 | 4.70 | 3.61 | 9.44 | 6.30 |
| -10 | 90 | 1.99 | 3.07 | 2.86 | 3.17 | 4.82 | 4.54 | 3.91 | 5.93 | 5.60 | 4.89 | 7.20 | 6.94 | 6.52 | 9.85 | 9.33 |
| | 100 | 1.76 | 3.16 | 2.67 | 2.92 | 5.07 | 4.37 | 3.60 | 6.15 | 5.35 | 4.51 | 7.62 | 6.68 | 5.91 | 10.30 | 8.85 |
| | 105 | 1.66 | 3.19 | 2.57 | 2.79 | 5.18 | 4.27 | 3.41 | 6.24 | 5.19 | 4.31 | 7.80 | 6.53 | 5.61 | 10.50 | 8.61 |
| | 110 | 1.55 | 3.22 | 2.46 | 2.66 | 5.29 | 4.17 | 3.23 | 6.33 | 5.03 | 4.11 | 7.97 | 6.38 | 5.31 | 10.70 | 8.36 |
| | 120 | 1.33 | 3.24 | 2.26 | 2.39 | 5.48 | 3.95 | 2.85 | 6.46 | 4.69 | 3.68 | 8.24 | 6.03 | 4.72 | 11.10 | 7.89 |
| 0 | 90 | 2.68 | 3.53 | 3.69 | 4.04 | 5.33 | 5.56 | 5.14 | 6.68 | 7.05 | 6.23 | 7.83 | 8.46 | 8.37 | 11.10 | 11.54 |
| | 100 | 2.40 | 3.68 | 3.45 | 3.74 | 5.66 | 5.36 | 4.71 | 7.00 | 6.70 | 5.78 | 8.43 | 8.18 | 7.60 | 11.70 | 10.94 |
| | 105 | 2.26 | 3.74 | 3.32 | 3.59 | 5.82 | 5.25 | 4.48 | 7.15 | 6.52 | 5.54 | 8.70 | 8.02 | 7.22 | 11.95 | 10.63 |
| | 110 | 2.12 | 3.80 | 3.20 | 3.43 | 5.97 | 5.13 | 4.26 | 7.29 | 6.34 | 5.30 | 8.96 | 7.86 | 6.84 | 12.20 | 10.32 |
| | 120 | 1.84 | 3.89 | 2.95 | 3.10 | 6.25 | 4.88 | 3.80 | 7.53 | 5.94 | 4.79 | 9.42 | 7.48 | 6.09 | 12.70 | 9.70 |
| 10 | 90 | 3.53 | 4.00 | 4.67 | 5.07 | 5.80 | 6.72 | 6.71 | 7.37 | 8.81 | 7.77 | 8.30 | 10.14 | 10.59 | 12.20 | 14.07 |
| | 100 | 3.17 | 4.20 | 4.37 | 4.71 | 6.20 | 6.47 | 6.12 | 7.84 | 8.35 | 7.24 | 9.10 | 9.83 | 9.64 | 13.00 | 13.34 |
| | 105 | 2.99 | 4.30 | 4.22 | 4.52 | 6.40 | 6.34 | 5.82 | 8.05 | 8.11 | 6.95 | 9.45 | 9.65 | 9.17 | 13.35 | 12.97 |
| | 110 | 2.82 | 4.40 | 4.07 | 4.33 | 6.60 | 6.21 | 5.52 | 8.26 | 7.88 | 6.67 | 9.80 | 9.46 | 8.69 | 13.70 | 12.60 |
| | 120 | 2.48 | 4.50 | 3.76 | 3.94 | 7.00 | 5.94 | 4.92 | 8.60 | 7.37 | 6.07 | 10.40 | 9.04 | 7.76 | 14.40 | 11.86 |
| 20 | 90 | 4.54 | 4.30 | 5.76 | 6.25 | 6.20 | 8.02 | 8.50 | 7.85 | 10.74 | 9.55 | 8.50 | 11.97 | 13.24 | 13.20 | 17.00 |
| | 100 | 4.10 | 4.70 | 5.44 | 5.82 | 6.70 | 7.73 | 7.77 | 8.51 | 10.20 | 8.92 | 9.50 | 11.62 | 12.08 | 14.20 | 16.12 |
| | 105 | 3.88 | 4.80 | 5.25 | 5.60 | 6.95 | 7.58 | 7.41 | 8.80 | 9.91 | 8.58 | 9.95 | 11.42 | 11.50 | 14.70 | 15.69 |
| | 110 | 3.67 | 4.90 | 5.07 | 5.38 | 7.20 | 7.43 | 7.04 | 9.09 | 9.63 | 8.25 | 10.40 | 11.22 | 10.92 | 15.20 | 15.25 |
| | 120 | 3.25 | 5.20 | 4.73 | 4.92 | 7.60 | 7.08 | 6.29 | 9.61 | 9.03 | 7.55 | 11.30 | 10.77 | 9.78 | 16.00 | 14.34 |

LEGEND

- Cap.** — Capacity (tons)
- kW** — Compressor Power Input
- SCT** — Saturated Condensing Temperature (F)
- SST** — Saturated Suction Temperature (F)
- THR** — Total Heat Rejection (tons)

*Refer to capacity notes, page 8.

NOTE: To ensure proper motor cooling, it is required that all 6-cylinder compressors operating with R-507/404A at -10 F SST or below have one of the 2 unloaders disconnected. Cylinder head fan required at SST of -20 F and below for R-507/404A for all compressors.

Performance data (cont)



07E CONDENSING UNIT CAPACITIES (Tons)* R-22

| SST | SCT | 07EA022 | | | 07EB027 | | | 07EB033 | | | 07ED044 | | |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| 0 | 90 | 9.26 | 12.30 | 12.76 | 11.52 | 15.45 | 15.92 | 12.84 | 17.76 | 17.90 | 17.36 | 24.40 | 24.32 |
| | 100 | 8.46 | 12.90 | 12.14 | 10.47 | 16.08 | 15.05 | 11.62 | 18.28 | 16.83 | 16.06 | 25.27 | 23.26 |
| | 105 | 8.09 | 13.15 | 11.83 | 9.96 | 16.34 | 14.62 | 11.01 | 18.42 | 16.26 | 15.42 | 25.63 | 22.73 |
| | 110 | 7.71 | 13.40 | 11.53 | 9.46 | 16.59 | 14.19 | 10.40 | 18.55 | 15.68 | 14.78 | 25.99 | 22.19 |
| | 120 | 6.97 | 13.90 | 10.93 | 8.50 | 16.97 | 13.34 | 9.16 | 18.55 | 14.45 | 13.54 | 26.55 | 21.11 |
| 10 | 90 | 12.01 | 13.40 | 15.83 | 15.20 | 17.15 | 20.09 | 16.88 | 19.70 | 22.49 | 22.39 | 27.11 | 30.12 |
| | 100 | 11.04 | 14.20 | 15.09 | 13.90 | 18.12 | 19.06 | 15.49 | 20.69 | 21.39 | 20.79 | 28.42 | 28.89 |
| | 105 | 10.58 | 14.55 | 14.73 | 13.27 | 18.54 | 18.56 | 14.78 | 21.07 | 20.79 | 20.01 | 28.98 | 28.27 |
| | 110 | 10.12 | 14.90 | 14.36 | 12.65 | 18.96 | 18.05 | 14.08 | 21.44 | 20.19 | 19.23 | 29.53 | 27.65 |
| | 120 | 9.21 | 15.60 | 13.66 | 11.45 | 19.64 | 17.04 | 12.66 | 21.92 | 18.90 | 17.70 | 30.47 | 26.38 |
| 20 | 90 | 15.32 | 14.30 | 19.40 | 19.71 | 18.53 | 24.99 | 21.65 | 21.24 | 27.70 | 28.47 | 29.50 | 36.88 |
| | 100 | 14.14 | 15.40 | 18.53 | 18.11 | 19.92 | 23.79 | 20.06 | 22.73 | 26.53 | 26.52 | 31.34 | 35.45 |
| | 105 | 13.58 | 15.85 | 18.10 | 17.34 | 20.54 | 23.19 | 19.24 | 23.36 | 25.90 | 25.57 | 32.15 | 34.73 |
| | 110 | 13.02 | 16.30 | 17.66 | 16.56 | 21.15 | 22.59 | 18.43 | 23.99 | 25.27 | 24.61 | 32.96 | 34.00 |
| | 120 | 11.91 | 17.20 | 16.81 | 15.08 | 22.20 | 21.40 | 16.79 | 24.99 | 23.91 | 22.73 | 34.35 | 32.52 |
| 30 | 90 | 19.26 | 14.80 | 23.48 | 25.16 | 19.49 | 30.72 | 27.24 | 22.26 | 33.59 | 35.72 | 31.40 | 44.67 |
| | 100 | 17.84 | 16.20 | 22.46 | 23.21 | 21.35 | 29.30 | 25.41 | 24.30 | 32.33 | 33.37 | 33.87 | 43.03 |
| | 105 | 17.16 | 16.85 | 21.96 | 22.27 | 22.20 | 28.59 | 24.48 | 25.21 | 31.66 | 32.22 | 34.98 | 42.19 |
| | 110 | 16.47 | 17.50 | 21.46 | 21.32 | 23.04 | 27.89 | 23.54 | 26.11 | 30.98 | 31.06 | 36.09 | 41.35 |
| | 120 | 15.14 | 18.70 | 20.47 | 19.50 | 24.53 | 26.49 | 21.65 | 27.67 | 29.54 | 28.78 | 38.05 | 39.63 |
| 40 | 90 | 23.89 | 15.00 | 28.17 | 31.67 | 19.88 | 37.34 | 33.74 | 22.68 | 40.20 | 44.29 | 32.64 | 53.59 |
| | 100 | 22.20 | 16.80 | 26.99 | 29.32 | 22.29 | 35.67 | 31.64 | 25.30 | 38.85 | 41.48 | 35.85 | 51.70 |
| | 105 | 21.38 | 17.60 | 26.40 | 28.18 | 23.40 | 34.85 | 30.56 | 26.50 | 38.12 | 40.10 | 37.31 | 50.73 |
| | 110 | 20.56 | 18.40 | 25.81 | 27.04 | 24.50 | 34.02 | 29.49 | 27.70 | 37.39 | 38.71 | 38.76 | 49.76 |
| | 120 | 18.96 | 19.90 | 24.64 | 24.82 | 26.50 | 32.38 | 27.32 | 29.85 | 35.83 | 35.98 | 41.38 | 47.78 |
| 50 | 90 | 29.30 | 14.80 | 33.52 | 39.34 | 19.60 | 44.93 | 41.22 | 22.40 | 47.61 | 54.30 | 33.10 | 63.73 |
| | 100 | 27.30 | 16.90 | 32.11 | 36.54 | 22.60 | 42.98 | 38.82 | 25.60 | 46.12 | 50.98 | 37.10 | 61.56 |
| | 105 | 26.33 | 17.90 | 31.43 | 35.18 | 24.00 | 42.02 | 37.60 | 27.15 | 45.33 | 49.34 | 38.95 | 60.44 |
| | 110 | 25.36 | 18.90 | 30.75 | 33.82 | 25.40 | 41.06 | 36.37 | 28.70 | 44.55 | 47.70 | 40.80 | 59.33 |
| | 120 | 23.46 | 20.80 | 29.39 | 31.17 | 28.00 | 39.15 | 33.88 | 31.40 | 42.83 | 44.46 | 44.20 | 57.06 |

LEGEND

- Cap.** — Capacity (tons)
- kW** — Compressor Power Input
- SCT** — Saturated Condensing Temperature (F)
- SST** — Saturated Suction Temperature (F)
- THR** — Total Heat Rejection (tons)

*Refer to capacity notes, page 8.

NOTE: To ensure proper motor cooling, it is required that all 6-cylinder compressors operating with R-22 at 20 F SST or below have one of the 2 unloaders disconnected. Cylinder head fan required at SST of 0° F and below for R-22 for all compressors.



07E CONDENSING UNIT CAPACITIES (Tons)* (cont)
R-134a

| SST | SCT | 07EA022 | | | 07EB027 | | | 07EB033 | | | 07ED044 | | |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| 0 | 90 | 4.75 | 6.83 | 6.69 | 6.17 | 8.52 | 8.60 | 7.55 | 10.30 | 10.49 | 10.14 | 14.70 | 14.33 |
| | 100 | 4.22 | 6.88 | 6.18 | 5.32 | 8.39 | 7.71 | 6.73 | 10.40 | 9.69 | 9.13 | 14.90 | 13.38 |
| | 105 | 3.96 | 6.87 | 5.92 | 4.89 | 8.24 | 7.24 | 6.31 | 10.40 | 9.28 | 8.64 | 14.95 | 12.91 |
| | 110 | 3.71 | 6.85 | 5.66 | 4.47 | 8.08 | 6.78 | 5.90 | 10.40 | 8.86 | 8.16 | 15.00 | 12.43 |
| | 120 | 3.21 | 6.73 | 5.13 | 3.64 | 7.56 | 5.80 | 5.06 | 10.10 | 7.94 | 7.21 | 14.90 | 11.46 |
| 10 | 90 | 6.52 | 7.84 | 8.76 | 8.73 | 10.10 | 11.61 | 10.29 | 11.90 | 13.68 | 13.75 | 17.00 | 18.60 |
| | 100 | 5.88 | 8.04 | 8.17 | 7.73 | 10.30 | 10.66 | 9.33 | 12.30 | 12.84 | 12.50 | 17.40 | 17.46 |
| | 105 | 5.56 | 8.10 | 7.87 | 7.23 | 10.25 | 10.15 | 8.85 | 12.40 | 12.38 | 11.89 | 17.55 | 16.89 |
| | 110 | 5.25 | 8.15 | 7.57 | 6.73 | 10.20 | 9.64 | 8.36 | 12.50 | 11.92 | 11.28 | 17.70 | 16.32 |
| | 120 | 4.63 | 8.17 | 6.96 | 5.74 | 10.00 | 8.59 | 7.38 | 12.60 | 10.97 | 10.09 | 17.90 | 15.19 |
| 20 | 90 | 8.72 | 8.78 | 11.22 | 11.86 | 11.55 | 15.15 | 13.59 | 13.20 | 17.36 | 18.21 | 19.10 | 23.66 |
| | 100 | 7.93 | 9.17 | 10.54 | 10.67 | 12.04 | 14.10 | 12.47 | 13.97 | 16.45 | 16.66 | 19.90 | 22.34 |
| | 105 | 7.54 | 9.31 | 10.20 | 10.08 | 12.19 | 13.55 | 11.90 | 14.27 | 15.96 | 15.91 | 20.25 | 21.68 |
| | 110 | 7.15 | 9.45 | 9.85 | 9.49 | 12.33 | 13.00 | 11.33 | 14.56 | 15.48 | 15.15 | 20.60 | 21.02 |
| | 120 | 6.40 | 9.63 | 9.14 | 8.32 | 12.40 | 11.85 | 10.18 | 14.96 | 14.44 | 13.67 | 21.00 | 19.65 |
| 30 | 90 | 11.40 | 9.57 | 14.13 | 15.64 | 12.69 | 19.25 | 17.54 | 14.25 | 21.61 | 23.67 | 21.10 | 29.68 |
| | 100 | 10.44 | 10.20 | 13.34 | 14.23 | 13.57 | 18.10 | 16.22 | 15.40 | 20.61 | 21.76 | 22.30 | 28.12 |
| | 105 | 9.96 | 10.45 | 12.94 | 13.53 | 13.91 | 17.49 | 15.55 | 15.89 | 20.07 | 20.83 | 22.80 | 27.32 |
| | 110 | 9.49 | 10.70 | 12.54 | 12.83 | 14.24 | 16.89 | 14.87 | 16.37 | 19.54 | 19.89 | 23.30 | 26.53 |
| | 120 | 8.56 | 11.10 | 11.72 | 11.44 | 14.68 | 15.62 | 13.52 | 17.15 | 18.40 | 18.06 | 24.20 | 24.96 |
| 40 | 90 | 14.64 | 10.10 | 17.52 | 20.17 | 13.40 | 23.99 | 22.24 | 14.90 | 26.49 | 30.28 | 22.70 | 36.75 |
| | 100 | 13.47 | 11.00 | 16.61 | 18.50 | 14.80 | 22.72 | 20.67 | 16.50 | 25.38 | 27.94 | 24.50 | 34.93 |
| | 105 | 12.90 | 11.40 | 16.14 | 17.67 | 15.35 | 22.05 | 19.88 | 17.20 | 24.78 | 26.80 | 25.25 | 33.99 |
| | 110 | 12.32 | 11.80 | 15.68 | 16.84 | 15.90 | 21.37 | 19.08 | 17.90 | 24.19 | 25.65 | 26.00 | 33.06 |
| | 120 | 11.19 | 12.40 | 14.72 | 15.18 | 16.70 | 19.94 | 17.48 | 19.10 | 22.92 | 23.40 | 27.20 | 31.15 |
| 50 | 90 | 18.53 | 10.40 | 21.50 | 25.57 | 13.64 | 29.46 | 27.81 | 15.07 | 32.11 | 38.23 | 23.90 | 45.04 |
| | 100 | 17.12 | 11.61 | 20.43 | 23.60 | 15.49 | 28.01 | 25.95 | 17.13 | 30.83 | 35.39 | 26.20 | 42.85 |
| | 105 | 16.42 | 12.14 | 19.88 | 22.61 | 16.29 | 27.25 | 25.01 | 18.07 | 30.16 | 33.98 | 27.25 | 41.75 |
| | 110 | 15.72 | 12.67 | 19.33 | 21.62 | 17.09 | 26.49 | 24.06 | 19.00 | 29.48 | 32.58 | 28.30 | 40.65 |
| | 120 | 14.34 | 13.58 | 18.21 | 19.64 | 18.44 | 24.90 | 22.15 | 20.67 | 28.05 | 29.83 | 30.10 | 38.40 |

LEGEND

*Refer to capacity notes, page 8.

- Cap. — Capacity (tons)
- kW — Compressor Power Input
- SCT — Saturated Condensing Temperature (F)
- SST — Saturated Suction Temperature (F)
- THR — Total Heat Rejection (tons)

Performance data (cont)



07E CONDENSING UNIT CAPACITIES (Tons)* (cont) R-507/404A

| SST | SCT | 07EA022 | | | 07EB027 | | | 07EB033 | | | 07ED044 | | |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| | | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR | Cap. | kW | THR |
| -30 | 90 | 5.01 | 11.00 | 8.15 | 6.31 | 12.80 | 9.96 | 7.12 | 15.30 | 11.48 | 9.37 | 20.60 | 15.24 |
| | 100 | 4.45 | 10.90 | 7.56 | 5.51 | 12.70 | 9.13 | 6.30 | 15.10 | 10.60 | 8.34 | 20.60 | 14.21 |
| | 105 | 4.16 | 10.80 | 7.23 | 5.13 | 12.60 | 8.72 | 5.89 | 14.95 | 10.15 | 7.81 | 20.50 | 13.65 |
| | 110 | 3.86 | 10.70 | 6.91 | 4.74 | 12.50 | 8.30 | 5.47 | 14.80 | 9.69 | 7.29 | 20.40 | 13.10 |
| | 120 | 3.23 | 10.30 | 6.17 | 3.99 | 12.10 | 7.44 | 4.63 | 14.30 | 8.70 | 6.25 | 20.00 | 11.95 |
| -20 | 90 | 6.87 | 13.00 | 10.58 | 8.68 | 15.40 | 13.07 | 9.85 | 18.30 | 15.07 | 12.53 | 24.30 | 19.46 |
| | 100 | 6.23 | 13.20 | 10.00 | 7.68 | 15.50 | 12.10 | 8.88 | 18.40 | 14.12 | 11.28 | 24.60 | 18.29 |
| | 105 | 5.89 | 13.25 | 9.67 | 7.20 | 15.45 | 11.60 | 8.38 | 18.35 | 13.61 | 10.65 | 24.65 | 17.67 |
| | 110 | 5.56 | 13.30 | 9.35 | 6.71 | 15.40 | 11.10 | 7.88 | 18.30 | 13.09 | 10.02 | 24.70 | 17.06 |
| | 120 | 4.84 | 13.20 | 8.60 | 5.76 | 15.20 | 10.09 | 6.85 | 18.10 | 12.00 | 8.74 | 24.70 | 15.78 |
| -10 | 90 | 9.04 | 14.90 | 13.29 | 11.57 | 18.00 | 16.70 | 13.12 | 21.20 | 19.16 | 16.31 | 28.10 | 24.31 |
| | 100 | 8.30 | 15.40 | 12.69 | 10.34 | 18.30 | 15.56 | 11.95 | 21.70 | 18.14 | 14.80 | 28.80 | 23.00 |
| | 105 | 7.91 | 15.60 | 12.36 | 9.74 | 18.40 | 14.98 | 11.35 | 21.80 | 17.56 | 14.03 | 29.05 | 22.31 |
| | 110 | 7.52 | 15.80 | 12.02 | 9.13 | 18.50 | 14.40 | 10.74 | 21.90 | 16.98 | 13.26 | 29.30 | 21.61 |
| | 120 | 6.68 | 16.00 | 11.24 | 7.94 | 18.50 | 13.21 | 9.50 | 22.00 | 15.77 | 11.71 | 29.60 | 20.15 |
| 0 | 90 | 11.57 | 16.70 | 16.33 | 15.09 | 20.70 | 20.98 | 16.99 | 24.20 | 23.89 | 20.79 | 32.10 | 29.94 |
| | 100 | 10.70 | 17.50 | 15.69 | 13.57 | 21.30 | 19.64 | 15.59 | 24.90 | 22.69 | 18.97 | 33.10 | 28.40 |
| | 105 | 10.24 | 17.85 | 15.33 | 12.82 | 21.55 | 18.96 | 14.86 | 25.25 | 22.06 | 18.04 | 33.55 | 27.60 |
| | 110 | 9.78 | 18.20 | 14.97 | 12.06 | 21.80 | 18.28 | 14.14 | 25.60 | 21.44 | 17.11 | 34.00 | 26.80 |
| | 120 | 8.80 | 18.70 | 14.13 | 10.58 | 22.00 | 16.85 | 12.63 | 26.00 | 20.04 | 15.22 | 34.70 | 25.11 |
| 10 | 90 | 14.49 | 18.40 | 19.74 | 19.26 | 23.40 | 25.93 | 21.54 | 26.80 | 29.17 | 26.05 | 35.80 | 36.25 |
| | 100 | 13.46 | 19.50 | 19.02 | 17.42 | 24.30 | 24.35 | 19.93 | 28.20 | 27.97 | 23.87 | 37.50 | 34.55 |
| | 105 | 12.92 | 20.00 | 18.62 | 16.51 | 24.70 | 23.55 | 19.02 | 28.75 | 27.21 | 22.75 | 38.20 | 33.64 |
| | 110 | 12.37 | 20.50 | 18.22 | 15.59 | 25.10 | 22.74 | 18.11 | 29.30 | 26.46 | 21.64 | 38.90 | 32.73 |
| | 120 | 11.23 | 21.20 | 17.27 | 13.78 | 25.70 | 21.10 | 16.30 | 30.00 | 24.85 | 19.38 | 39.90 | 30.75 |
| 20 | 90 | 17.85 | 19.90 | 23.52 | 24.19 | 26.10 | 31.63 | 26.82 | 29.40 | 35.20 | 32.19 | 39.60 | 43.47 |
| | 100 | 16.64 | 21.30 | 22.71 | 21.98 | 27.40 | 29.79 | 24.82 | 31.30 | 33.74 | 29.59 | 41.80 | 41.51 |
| | 105 | 16.00 | 21.90 | 22.24 | 20.88 | 27.95 | 28.85 | 23.79 | 32.05 | 32.92 | 28.27 | 42.75 | 40.45 |
| | 110 | 15.36 | 22.50 | 21.78 | 19.78 | 28.50 | 27.91 | 22.76 | 32.80 | 32.10 | 26.95 | 43.70 | 39.40 |
| | 120 | 14.02 | 23.50 | 20.72 | 17.60 | 29.50 | 26.01 | 20.62 | 34.00 | 30.31 | 24.26 | 45.10 | 37.11 |

LEGEND

- Cap. — Capacity (tons)
- kW — Compressor Power Input
- SCT — Saturated Condensing Temperature (F)
- SST — Saturated Suction Temperature (F)
- THR — Total Heat Rejection (tons)

*Refer to capacity notes, page 8.

NOTE: To ensure proper motor cooling, it is required that all 6-cylinder compressors operating with R-507/404A at -10 F SST or below have one of the 2 unloaders disconnected. Cylinder head fan required at SST of -20 F and below for R-507/404A for all compressors.



CONDENSER CAPACITY AND FLOW RATES

R-22 (at 105 F) CONDENSING TEMPERATURE WITH .0005 TOTAL FOULING FACTOR

| CONDENSER PART NUMBER | GPM | ΔP | TOTAL HEAT OF REJECTION (Btuh) AT SPECIFIED GTD (F) | | | | | |
|-----------------------|-----|------|---|---------|-----------|-----------|-----------|-----------|
| | | | 15° GTD | 20° GTD | 25° GTD | 30° GTD | 35° GTD | 40° GTD |
| P701-0605CX | 4 | 0.4 | 25,876 | 34,346 | 42,623 | 50,894 | 59,047 | 67,175 |
| | 7 | 1.2 | 40,573 | 53,575 | 66,384 | 79,002 | 91,433 | 103,691 |
| | 10 | 2.3 | 52,268 | 68,835 | 85,046 | 100,906 | 116,676 | 131,981 |
| | 13 | 3.7 | 61,854 | 80,982 | 100,018 | 118,330 | 136,385 | 154,717 |
| | 16 | 5.5 | 69,544 | 91,211 | 112,212 | 132,917 | 153,006 | 172,113 |
| | 19 | 7.5 | 76,284 | 99,334 | 122,457 | 144,354 | 165,956 | 187,291 |
| | 22 | 9.9 | 81,725 | 106,541 | 130,963 | 153,913 | 177,705 | 200,067 |
| P701-0607CX | 8 | 1.1 | 47,149 | 62,256 | 77,174 | 91,893 | 106,399 | 120,699 |
| | 11 | 2.0 | 59,478 | 78,384 | 96,924 | 115,096 | 133,011 | 150,692 |
| | 14 | 3.1 | 69,930 | 91,849 | 113,217 | 134,266 | 155,035 | 175,071 |
| | 17 | 4.4 | 78,722 | 103,175 | 126,925 | 150,325 | 173,419 | 195,531 |
| | 20 | 6.0 | 86,329 | 112,806 | 138,858 | 164,108 | 189,023 | 213,636 |
| | 23 | 7.8 | 92,626 | 121,152 | 148,694 | 176,400 | 202,651 | 228,576 |
| | 26 | 9.7 | 98,283 | 128,605 | 157,814 | 186,617 | 213,715 | 240,462 |
| P701-0610CX | 10 | 0.7 | 62,373 | 82,660 | 102,457 | 122,287 | 141,818 | 160,973 |
| | 15 | 1.5 | 85,363 | 112,618 | 139,447 | 165,852 | 191,893 | 217,417 |
| | 20 | 2.5 | 104,246 | 137,064 | 169,356 | 201,201 | 232,648 | 263,167 |
| | 25 | 3.7 | 120,229 | 157,722 | 194,628 | 230,151 | 265,167 | 299,727 |
| | 30 | 5.2 | 133,498 | 174,765 | 215,383 | 254,191 | 292,454 | 330,227 |
| | 35 | 6.9 | 144,917 | 189,123 | 232,616 | 274,693 | 317,053 | 357,244 |
| | 40 | 8.8 | 154,191 | 202,443 | 248,020 | 292,947 | 337,309 | 379,093 |
| P701-0615CX | 15 | 1.5 | 97,523 | 129,183 | 160,807 | 191,540 | 222,649 | 252,631 |
| | 20 | 2.6 | 122,585 | 161,948 | 200,943 | 239,541 | 277,305 | 314,905 |
| | 25 | 3.8 | 144,524 | 190,575 | 235,938 | 280,611 | 324,664 | 368,164 |
| | 30 | 5.4 | 163,696 | 215,528 | 266,356 | 316,465 | 365,659 | 414,241 |
| | 35 | 7.1 | 180,523 | 237,619 | 293,047 | 347,672 | 401,108 | 453,874 |
| | 40 | 9.0 | 195,650 | 256,985 | 316,774 | 374,406 | 432,610 | 488,748 |
| | 45 | 11.2 | 208,992 | 273,709 | 336,575 | 398,539 | 459,727 | 520,228 |
| P701-0620CX | 15 | 1.1 | 101,136 | 134,027 | 166,805 | 199,111 | 231,647 | 263,717 |
| | 20 | 1.8 | 128,374 | 170,328 | 211,585 | 252,256 | 292,405 | 332,450 |
| | 25 | 2.8 | 153,231 | 202,435 | 251,179 | 299,427 | 346,631 | 393,631 |
| | 30 | 3.8 | 175,497 | 231,510 | 286,665 | 341,092 | 394,800 | 447,790 |
| | 35 | 5.1 | 195,393 | 257,457 | 318,265 | 378,366 | 437,215 | 495,867 |
| | 40 | 6.5 | 213,379 | 280,670 | 346,918 | 411,868 | 475,987 | 538,365 |
| | 45 | 8.1 | 229,519 | 301,699 | 372,792 | 441,714 | 509,707 | 576,875 |
| P701-0625AX | 25 | 0.7 | 143,279 | 189,183 | 234,342 | 278,853 | 322,685 | 365,918 |
| | 35 | 1.2 | 182,367 | 239,870 | 296,448 | 352,230 | 407,298 | 460,716 |
| | 45 | 1.9 | 214,674 | 281,873 | 347,257 | 412,496 | 475,260 | 537,191 |
| | 55 | 2.7 | 241,762 | 316,860 | 389,648 | 462,572 | 532,195 | 600,918 |
| | 65 | 3.7 | 265,014 | 346,304 | 426,315 | 502,128 | 580,044 | 650,648 |
| | 75 | 4.8 | 283,919 | 371,578 | 456,014 | 539,267 | 617,577 | 694,849 |
| | 85 | 6.0 | 300,803 | 391,753 | 483,509 | 569,523 | 654,414 | 738,299 |
| P701-0840AX | 40 | 0.6 | 231,569 | 305,830 | 378,918 | 450,965 | 521,942 | 591,910 |
| | 60 | 1.3 | 309,640 | 408,013 | 504,258 | 597,595 | 689,529 | 780,189 |
| | 80 | 2.2 | 372,012 | 487,692 | 603,017 | 713,803 | 819,900 | 927,725 |
| | 100 | 3.3 | 422,189 | 552,832 | 681,449 | 806,061 | 924,384 | 1,045,822 |
| | 120 | 4.5 | 463,073 | 608,148 | 745,178 | 880,222 | 1,013,523 | 1,139,022 |
| | 140 | 6.0 | 500,930 | 651,392 | 799,425 | 941,663 | 1,082,025 | 1,220,703 |
| P701-0850AX | 50 | 1.1 | 296,824 | 392,331 | 486,264 | 578,850 | 670,228 | 760,485 |
| | 70 | 1.9 | 378,460 | 498,635 | 616,474 | 731,993 | 845,905 | 958,367 |
| | 90 | 3.0 | 445,812 | 585,635 | 723,306 | 857,721 | 987,383 | 1,118,374 |
| | 110 | 4.4 | 502,450 | 656,782 | 808,565 | 958,209 | 1,105,984 | 1,247,414 |
| | 130 | 5.9 | 548,504 | 717,949 | 884,783 | 1,046,464 | 1,200,062 | 1,357,777 |
| | 150 | 7.6 | 587,833 | 770,641 | 947,107 | 1,117,473 | 1,285,647 | 1,451,868 |
| P701-1065AX | 100 | 1.6 | 497,687 | 655,475 | 808,070 | 958,376 | 1,106,650 | 1,249,634 |
| | 120 | 2.2 | 558,019 | 731,538 | 904,525 | 1,070,705 | 1,229,850 | 1,391,588 |
| | 140 | 2.9 | 609,337 | 799,341 | 986,472 | 1,165,035 | 1,341,130 | 1,514,993 |
| | 160 | 3.7 | 655,460 | 856,550 | 1,054,440 | 1,249,623 | 1,434,672 | 1,617,293 |
| | 180 | 4.6 | 694,609 | 912,222 | 1,117,768 | 1,320,333 | 1,520,285 | 1,708,533 |
| | 200 | 5.6 | 731,968 | 955,731 | 1,170,825 | 1,388,102 | 1,592,145 | 1,793,632 |
| | 220 | 6.6 | 764,169 | 996,751 | 1,225,710 | 1,445,627 | 1,650,631 | 1,865,118 |

LEGEND

- GPM** — Gallons Per Minute
- GTD** — Greatest Temperature Difference (F)
- ΔP** — Change In Pressure (psi)

NOTE: GTD is the difference between the condensing temperature and the inlet water temperature.

Performance data (cont)



CONDENSER CAPACITY AND FLOW RATES (cont)

R-134a (at 105 F) CONDENSING TEMPERATURE WITH .0005 TOTAL FOULING FACTOR

| CONDENSER PART NUMBER | GPM | TOTAL HEAT OF REJECTION (Btuh) AT SPECIFIED GTD (F) | | | |
|-----------------------|-----|---|---------|---------|-----------|
| | | 15° GTD | | 40° GTD | |
| | | ΔP | THR | ΔP | THR |
| P701-0605CX | 4 | 0.43 | 25,765 | 0.44 | 66,796 |
| | 22 | 9.69 | 80,103 | 10.06 | 194,621 |
| P701-0607CX | 8 | 1.08 | 46,790 | 1.12 | 119,453 |
| | 26 | 9.55 | 96,365 | 9.90 | 234,015 |
| P701-0610CX | 10 | 0.69 | 62,074 | 0.71 | 159,840 |
| | 40 | 8.57 | 151,198 | 8.93 | 369,084 |
| P701-0615CX | 15 | 1.50 | 96,870 | 1.56 | 251,118 |
| | 42 | 9.64 | 197,657 | 10.04 | 490,954 |
| P701-0620CX | 15 | 1.07 | 100,679 | 1.11 | 262,189 |
| | 45 | 7.88 | 226,118 | 8.18 | 565,547 |
| P701-0625AX | 25 | 0.65 | 142,136 | 0.68 | 361,781 |
| | 85 | 5.83 | 294,664 | 6.12 | 717,671 |
| P701-0630AX | 30 | 0.71 | 169,332 | 0.74 | 430,974 |
| | 90 | 5.16 | 328,979 | 5.41 | 804,474 |
| P701-0840AX | 40 | 0.61 | 229,741 | 0.64 | 585,906 |
| | 140 | 5.83 | 487,215 | 6.10 | 1,186,682 |
| P701-0850AX | 50 | 1.04 | 294,477 | 1.08 | 752,237 |
| | 150 | 7.41 | 576,477 | 7.77 | 1,414,060 |
| P701-1065AX | 100 | 1.55 | 491,308 | 1.62 | 1,231,276 |
| | 220 | 6.44 | 748,299 | 6.75 | 1,811,718 |

LEGEND

- GPM — Gallons Per Minute
- GTD — Greatest Temperature Difference (F)
- THR — Total Heat of Rejection
- ΔP — Change In Pressure (psi)

NOTE: GTD is the difference between the condensing temperature and the inlet water temperature.

R-507/404A (at 105 F) CONDENSING TEMPERATURE WITH .0005 TOTAL FOULING FACTOR

| CONDENSER PART NUMBER | GPM | TOTAL HEAT OF REJECTION (Btuh) AT SPECIFIED GTD (F) | | | |
|-----------------------|-----|---|---------|---------|-----------|
| | | 15° GTD | | 40° GTD | |
| | | ΔP | THR | ΔP | THR |
| P701-0605CX | 4 | 0.43 | 25,582 | 0.44 | 66,021 |
| | 22 | 9.69 | 76,649 | 10.07 | 186,012 |
| P701-0607CX | 8 | 1.08 | 46,132 | 1.12 | 117,295 |
| | 26 | 9.56 | 92,293 | 9.91 | 223,811 |
| P701-0610CX | 10 | 0.69 | 61,395 | 0.71 | 157,440 |
| | 40 | 8.57 | 145,885 | 8.93 | 353,223 |
| P701-0615CX | 15 | 1.50 | 96,015 | 1.56 | 247,451 |
| | 42 | 9.64 | 191,905 | 10.05 | 471,557 |
| P701-0620CX | 15 | 1.07 | 99,591 | 1.11 | 258,740 |
| | 45 | 7.88 | 220,172 | 8.19 | 547,035 |
| P701-0625AX | 25 | 0.65 | 140,108 | 0.68 | 355,018 |
| | 85 | 5.83 | 283,698 | 6.13 | 680,343 |
| P701-0630AX | 30 | 0.71 | 166,854 | 0.74 | 422,296 |
| | 90 | 5.17 | 317,371 | 5.41 | 764,927 |
| P701-0840AX | 40 | 0.61 | 226,617 | 0.64 | 575,438 |
| | 140 | 5.83 | 469,123 | 6.12 | 1,133,013 |
| P701-0850AX | 50 | 1.04 | 290,154 | 1.08 | 737,603 |
| | 150 | 7.41 | 556,359 | 7.78 | 1,346,139 |
| P701-1065AX | 100 | 1.55 | 481,415 | 1.62 | 1,195,454 |
| | 220 | 6.44 | 719,947 | 6.75 | 1,727,631 |

LEGEND

- GPM — Gallons Per Minute
- GTD — Greatest Temperature Difference (F)
- THR — Total Heat of Rejection
- ΔP — Change In Pressure (psi)

NOTE: GTD is the difference between the condensing temperature and the inlet water temperature.



RATING BASIS AND CAPACITY MULTIPLIERS

| SST | RATED SUCTION GAS TEMP | ACTUAL SUCTION GAS TEMP TO COMPR (F) | | | | | | | | | | |
|-----|------------------------|--------------------------------------|------|------|------|------|------|------|------|------|-------|-------|
| | | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 65 |
| -30 | 65 | .810 | .830 | .850 | .870 | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| -20 | | | .830 | .850 | .870 | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| -10 | | | | .850 | .870 | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| | | | | .930 | .939 | .949 | .958 | .967 | .977 | .986 | .995 | 1.000 |
| 0 | | | | | .870 | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| | | | | | .940 | .949 | .958 | .968 | .977 | .986 | .995 | 1.000 |
| 10 | | | | | | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| | | | | | | .950 | .959 | .968 | .977 | .986 | .995 | 1.000 |
| 20 | | | | | | | .910 | .930 | .950 | .970 | .990 | 1.000 |
| | | | | | | | .960 | .969 | .978 | .987 | .996 | 1.000 |
| 30 | | | | | | | | .930 | .950 | .970 | .990 | 1.000 |
| | | | | | | | .970 | .979 | .987 | .996 | 1.000 | |
| 40 | | | | | | | | .950 | .970 | .990 | 1.000 | |
| | | | | | | | | .987 | .992 | .997 | 1.000 | |
| 50 | | | | | | | | | .970 | .990 | 1.000 | |
| | | | | | | | | | .997 | .999 | 1.000 | |

LEGEND

□ R-507/404A

■ R-134a

SST — Saturated Suction Temperature (F)

COMPRESSOR CAPACITY CONTROL REDUCTION STEPS* AND PART-LOAD PERFORMANCE

| COMPRESSOR 06D, 06E | NO. OF CONTR CYL | % Full Load Capacity | | | |
|----------------------------|------------------------|----------------------|----|----|----|
| | | 100 | 67 | 49 | 32 |
| | | % Full Load kW | | | |
| | | 100 | 73 | 57 | 46 |
| Number of Active Cylinders | | | | | |
| ALL 4 CYLINDER MODELS | 2 | 4 | — | 2 | — |
| ALL 6 CYLINDER MODELS | 4 | 6 | 4 | — | 2 |

*Compressor cylinders unload in response to a self-contained suction-pressure controlled unloader valve(s) for 06D and 06E compressors. When suction pressure drops below unloader set point, cylinders unload. When suction pressure rises above cylinder load set point pressure, cylinders return to operation. Capacity control unloader set points and differential (load point – unload point) are adjustable.

Electrical data



COMPRESSOR MOTOR*

| COMPRESSOR PART NUMBER 06D | | VOLTAGE (3 Ph-60 Hz) | HP | MCC | RLA | LRA | MOTOR WINDING RESISTANCE (Ohms) |
|----------------------------|-----|----------------------|-----|------|------|------|---------------------------------|
| M | 808 | 575 | 3 | 7 | 5 | 28.4 | 5.0 |
| | | 208/230 | | 17.4 | 12.4 | 71 | 0.78 |
| | | 460 | | 8.7 | 6.2 | 35.5 | 3.1 |
| | 313 | 575 | 5 | 10.8 | 7.7 | 40 | 3.3 |
| | | 208/230 | | 27 | 19.3 | 100 | 0.5 |
| | | 460 | | 13.5 | 9.6 | 50 | 2.1 |
| | 818 | 575 | 6.5 | 17.6 | 12.6 | 64 | 2.6 |
| | | 208/230 | | 44 | 31.4 | 160 | 0.42 |
| | | 460 | | 22 | 15.7 | 80 | 1.7 |
| A | 825 | 575 | 7.5 | 22.2 | 15.9 | 79 | 2.0 |
| | | 208/230 | | 55.5 | 39.6 | 198 | 0.31 |
| | | 460 | | 27.8 | 19.8 | 99 | 1.3 |
| | 328 | 575 | 10 | 25 | 17.9 | 91 | 1.7 |
| | | 208/230 | | 62 | 44.3 | 228 | 0.26 |
| | | 460 | | 31 | 22.1 | 114 | 1.0 |
| | 537 | 575 | 15 | 32 | 22.9 | 96 | 1.2 |
| | | 208/230 | | 89 | 63.6 | 266 | 0.18 |
| | | 460 | | 40 | 28.6 | 120 | 0.72 |

LEGEND

LRA — Locked Rotor Amps
MCC — Maximum Continuous Current
RLA — Rated Load Amps

*Refer to physical data table to match compressor with correct water-cooled condensing unit.

NOTES:

1. RLA (rated load amps) value shown is: $MCC \div 1.40 = RLA$.
2. For minimum contactor sizing, use RLA value determined by: $MCC \div 1.40 = RLA$.

3. For wiring sizing, the RLA value can be determined by: $MCC \div 1.56 = RLA$.
4. Compressor operating amps at any specific conditions can only be determined from a performance curve.
5. RLA values for 06D compressor protected by a calibrated circuit breaker will depend on must-trip value of circuit breaker.
6. Ohm values shown for resistance are approximate and shown for reference only. Motors from different vendors and motors of different efficiencies can differ up to 15% from data shown.
7. Electrical data for compressor part numbers 06DR and 50 Hz models (not shown) are available from Carrier Sales Representative.

ALLOWABLE OPERATING RANGES

| NOMINAL VOLTAGE | MAXIMUM | MINIMUM |
|-----------------|---------|---------|
| 208/230 | 254 | 187 |
| 460 | 529 | 414 |
| 575 | 661 | 518 |



COMPRESSOR MOTOR WITH CIRCUIT BREAKER*

| COMPRESSOR MOTOR DATA | | | | | | | | | CIRCUIT BREAKER | | | | |
|----------------------------|------------------------|---------|------------------------|-------------|--------|------------------------|---------------------------------|--------------------------------------|-----------------------------|-----|-----|-----------------|-------|
| Compressor Part Number 06E | Voltage (3 Ph - 60 Hz) | Hp | Maximum Must Trip Amps | Maximum RLA | LRA-XL | LRA-PW (first winding) | Motor Winding Resistance (Ohms) | Recommended Circuit Breaker Part No. | MHA | MTA | LRA | Recommended RLA | |
| A | 250 | 208/230 | 20 | 108 | 87 | 345 | 207 | 0.32 | HH83XB336 XA461 XA424 | 91 | 104 | 350 | 74.3 |
| | | 575 | | 45 | 36 | 120 | 72 | 2.2 | | 33 | 38 | 124 | 27.1 |
| | | 460 | | 54 | 44 | 173 | 104 | 1.3 | | 42 | 49 | 175 | 35 |
| | 265 | 208/230 | 25 | 140 | 112 | 446 | 268 | 0.27 | HH83XC509 XA469 XA426 | 110 | 127 | 420 | 90.7 |
| | | 575 | | 57 | 46 | 164 | 98 | 1.6 | | 46 | 53 | 164 | 37.9 |
| | | 460 | | 70 | 56 | 223 | 134 | 1.1 | | 55 | 643 | 210 | 45.7 |
| | 275 | 208/230 | 30 | 168 | 135 | 506 | 304 | 0.22 | HH83XC539 XA430 XA425 | 142 | 163 | 507 | 116.4 |
| | | 575 | | 65 | 52 | 176 | 106 | 1.3 | | 50 | 58 | 168 | 41.4 |
| | | 460 | | 84 | 68 | 253 | 152 | 0.9 | | 63 | 73 | 210 | 52.1 |
| | 299 | 208/230 | 40 | 236 | 189 | 690 | 414 | 0.15 | HH83XC537 XA551 XA550 | 187 | 215 | 636 | 153.6 |
| | | 575 | | 94 | 75 | 276 | 165 | 1.0 | | 74 | 85 | 236 | 60.7 |
| | | 460 | | 118 | 95 | 345 | 207 | 0.58 | | 92 | 106 | 295 | 75.7 |

LEGEND

- LRA** — Locked Rotor Amps
- MHA** — Must Hold Amps
- MTA** — Must-Trip Amps
- PW** — Part-Winding (Start)
- RLA** — Rated Load Amps
- XL** — Across-the-Line (Start)

*Refer to physical data table to match compressor with correct water-cooled condensing unit.

NOTES:

1. Compressor MTA and RLA values are maximum figures.
2. LRA values for PW second winding = 1/2 the LRA – XL value.
3. 3-Pole XL circuit breakers shown, other 3-Pole XL alternates and 6-Pole PW breakers available. Terminal lugs for circuit breakers available in package 06EA660152 (not shown).

4. Recommended RLA value shown is determined by: circuit breaker must trip value ÷ 1.40. Use this recommended (and minimum) RLA value to determine nameplate stamping, minimum contactor sizing, and wire sizing. **RECOMMENDED RLA FOR 06E COMPRESSORS EQUALS: MUST-TRIP (MTA) OF CARLYLE APPROVED OVERCURRENT DEVICE BEING USED ÷ 1.40**
5. Compressor operating amps at any specific condition can only be determined from a performance curve.
6. Ohm values for resistance are approximate and shown for reference purposes only. Motors from different vendors and motors of different efficiencies can differ up to 15% from data shown.
7. Electrical data for compressor part numbers 06ER, 06EM and 50 Hz models (not shown) are available from Carrier Sales Representative.

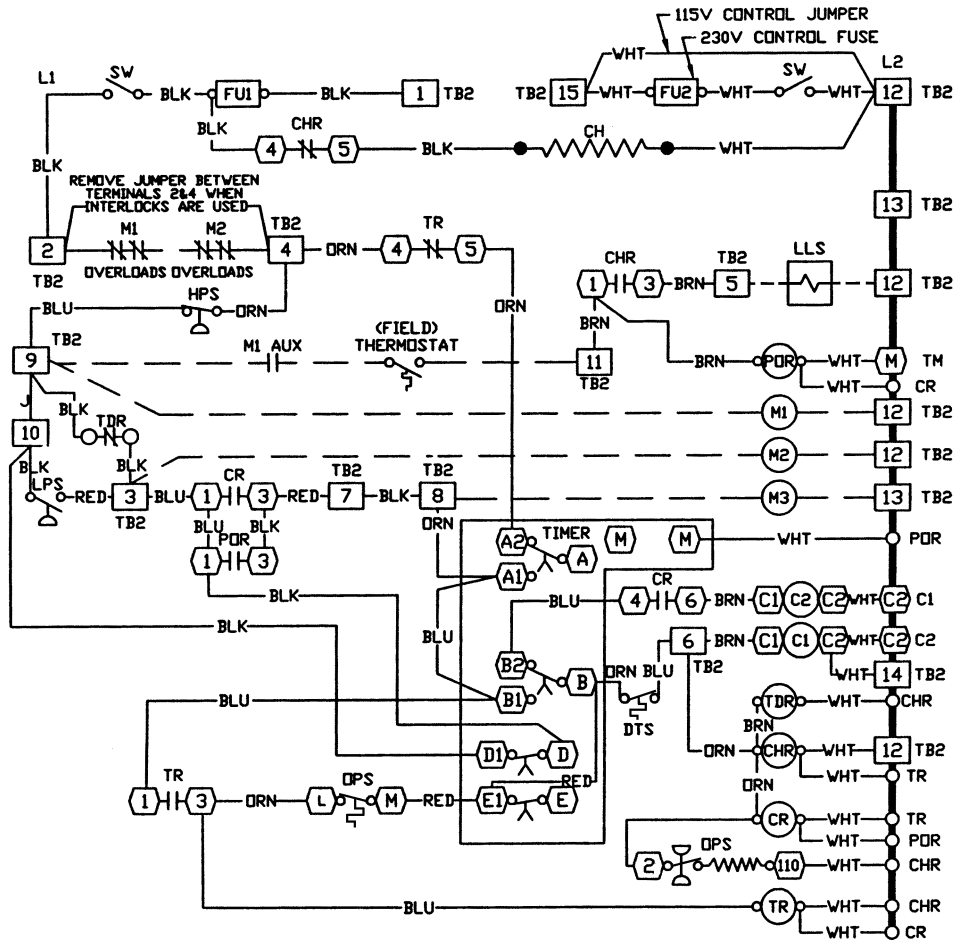
ALLOWABLE OPERATING RANGES

| NOMINAL VOLTAGE | MAXIMUM | MINIMUM |
|-----------------|---------|---------|
| 208/230 | 254 | 187 |
| 460 | 529 | 414 |
| 575 | 661 | 518 |

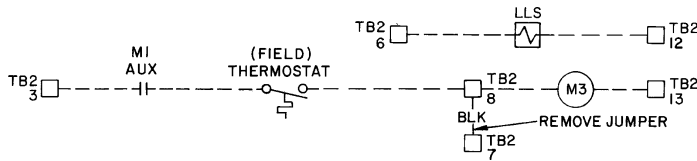
07E WIRING SCHEMATIC

Single pumpout control is standard on 07E condensing units. This method of control incorporates a liquid line solenoid valve and prevents refrigerant migration to the compressor by allowing the unit to shut off only after all refrigerant has been removed from the evaporator (compressor shuts off on low-pressure switch). Single pumpout

control should not be used on direct-expansion cooler applications. For these applications, rewire as shown in the schematic wiring diagram. This provides minimum protection (stops compressor, closes liquid line solenoid valve, and energizes crankcase heaters simultaneously).



FIELD CONNECTION WHEN APPLIED WITH DX COOLER










Typical wiring schematics (cont)



LEGEND AND NOTES FOR TYPICAL WIRING SCHEMATICS 07D AND 07E



LEGEND

| | | |
|--------------|---|--|
| AUX | — | Auxiliary |
| C | — | Compressor Contactor |
| C1 | — | Compressor Contactor (XL start and first step of PW start) |
| C2 | — | Compressor Contactor (PW second step) |
| CH | — | Crankcase Heater |
| CHR | — | Crankcase Heater Relay |
| CR | — | Control Relay |
| DTS | — | Discharge Temperature Sensor |
| DX | — | Direct Expansion |
| EQUIP | — | Equipment |
| FU | — | Fuse |
| GND | — | Ground |
| HPS | — | High-Pressure Switch |
| IP | — | Internal Protector |
| LLS | — | Liquid Line Solenoid Valve |
| LPS | — | Low-Pressure Switch |
| M1 | — | Evaporator Fan or Chilled Water Pump |
| M2 | — | Cooling Tower Pump |
| M3 | — | Cooling Tower Fan |
| NEC | — | National Electrical Code |
| OL | — | Overload |
| OPS | — | Oil-Pressure Switch |

| | | |
|---|---|---|
| POR | — | Pumpout Relay |
| PW | — | Part Winding |
| SW | — | Start-Stop-Reset Switch |
| TB | — | Terminal Block |
| TDR | — | Time Delay Relay |
| TM | — | Timer Motor |
| TR | — | Timer Relay |
| XL | — | Across-the-Line |
|  | | Terminal Block Connector |
|  | | Unmarked Terminal |
|  | | Marked Terminal |
|  | | Factory Wiring |
|  | | Field Control Wiring |
|  | | To indicate common potential only; not to represent wiring. |
|  | | Splice |

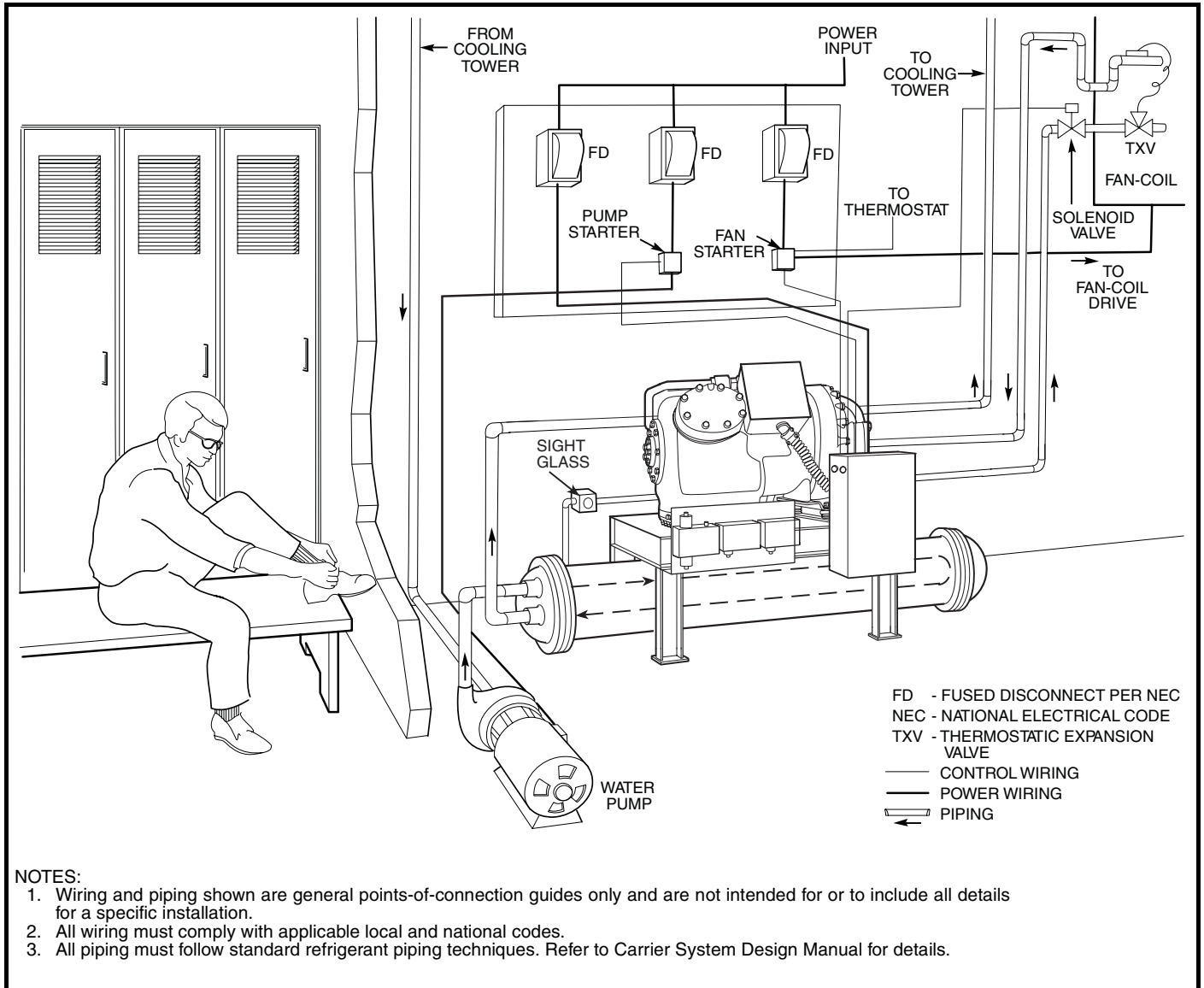
NOTES:

1. Factory wiring is in compliance with NEC. Any field modifications or additions must be in compliance with all applicable codes. Use copper, copper-clad aluminum for field power supply only.
2. Field power supply wiring must be 75 C minimum.
3. Compressor thermally protected. Three-phase motors are protected against primary single-phasing condition.
4. Pilot duty control must be field supplied. Minimum contact rating must be 25 va.
5. 60 Hz units have 120 volt control circuit. 50 Hz units have 230 volt control circuit. A separate source of supply at the correct voltage must be field supplied through a fused disconnect device with a

maximum rating of 15 A to TB2 connections  (Hot Side) and  (Neutral).

6. Open control circuit disconnect switch for servicing only. Disconnect must remain closed for crankcase heater to operate.
7. A transformer of the following rating may be field supplied for 60 Hz units: 350 va.
8. Transformer must be fused and grounded per applicable codes.
9. If any of the original wiring furnished must be replaced, it must be replaced with 90 C wire or its equivalent.

Typical piping and wiring



NOTES:

1. Wiring and piping shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
2. All wiring must comply with applicable local and national codes.
3. All piping must follow standard refrigerant piping techniques. Refer to Carrier System Design Manual for details.

Application data



Adequate lubrication depends on proper oil return to compressor (especially during unloaded operation) and keeping liquid refrigerant out of crankcase (refrigerant dilutes oil).

Correct system piping design prevents gravity flow of refrigerant to compressor while permitting oil return. Refer to Carrier System Design Manual for correct refrigerant piping techniques.

Crankcase heater energized and **liquid line solenoid** closed during shutdown periods restrict refrigerant migration to compressor and absorption of refrigerant by the oil (minimum protection). A discharge line check valve prevents refrigerant migration from condenser to compressor and should be installed on air-cooled applications where condenser or receiver ambient temperature is at or above compressor ambient temperature.

Single pumpout control incorporates a liquid line solenoid valve and prevents refrigerant migration by allowing unit to shut off only after all refrigerant has been removed from evaporator. (Compressor shuts off on low-pressure cutout.)

Automatic pumpdown control allows compressor to cycle on for short intervals during normally "off" periods. This periodically removes any refrigerant from evaporator which may have accumulated.

This control should not be used with 06D or 06E compressors having cylinder head unloaders.

Direct-expansion cooler applications (excluding brine) should not incorporate single pumpout or automatic pump-down control. Crankcase heater and liquid line solenoid (minimum protection) are recommended for these applications.

Compressors located in a space subject to low-ambient temperatures require special provision for proper operation during start-up. (Low-ambient temperatures cause compressor to operate at abnormally low suction pressures during start-up.)

Proper operation can be maintained by:

1. Heating the space,
2. A time-delay relay installed to bypass the low-pressure control during start-up, or
3. Use of a suction temperature control to operate compressor, instead of low-pressure control.

Condensers are shell-and-tube type with replaceable seamless integral finned copper tubes. They include a pressure relief device, purge connection, liquid line shutoff valve, and an angle valve with pressure connection for water regulating valve.

Guide specifications — 07D



07D Semi-Hermetic Reciprocating Water-Cooled Condensing Unit

HVAC Guide Specifications

Size Range: **3 to 15 tons**

Carrier Model Number: **07D**

Part 1 — General

1.01 SYSTEM DESCRIPTION

Condensing unit utilizing reciprocating type refrigerant compressor and water-cooled condenser.

1.02 QUALITY ASSURANCE

- A. Unit shall comply with ANSI/ASHRAE 15 Safety Code, NEC, and ASME Code.
- B. Unit will be factory run tested to ensure proper performance.

1.03 DELIVERY, STORAGE AND HANDLING

Unit will be stored and handled according to manufacturer's instructions.

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory assembled, single piece, refrigerant condensing unit. Contained within the package shall be a semi-hermetic reciprocating compressor, condenser control panel, and all wiring, piping, controls, and necessary safeties prior to field start-up.

B. Compressor:

Reciprocating semi-hermetic type only, with shutoff valves, automatically reversible positive displacement oil pump, oil charge, crankcase heater with relay, and suction pressure actuated cylinder unloaders. Compressor and control panel to be factory mounted.

C. Condenser:

Condenser shall be of shell-and-tube type with water connections for either maximum or minimum pass. It shall be equipped with a pressure relief device, purge cock, liquid level test valve, and liquid line shut-off valve with back seating port.

D. Discharge Muffler:

Unit shall be equipped with a discharge line muffler for noise reduction.

E. Controls and Safeties:

1. Included in the control panel are power and control terminal blocks, contactors, control relays, on/off switch, and unit designed to start with controlled cylinders unloaded.
2. Safeties in the control box include high- and low-pressure switches, timer to prevent compressor short cycling, overload relays or circuit breakers, and control circuit fuse.

F. Special Features:

Certain standard features are removed and replaced by those features designated by *. Consult your local Carrier sales office for amending specifications.

* 1. Electric Actuated Unloaders:

Includes all necessary hardware to allow field conversion from suction pressure actuated to electric solenoid actuated unloaders.

2. Control Circuit Transformer:

Eliminate need for external control power source.



07E Semi-Hermetic Reciprocating Water-Cooled Condensing Unit

HVAC Guide Specifications

Size Range: **20 to 40 tons**

Carrier Model Number: **07E**

Part 1 — General

1.01 SYSTEM DESCRIPTION

Condensing unit utilizing reciprocating-type refrigerant compressor and water-cooled condenser.

1.02 QUALITY ASSURANCE

- A. Unit shall comply with ANSI/ASHRAE 15 Safety Code, NEC, and ASME Code.
- B. Unit shall be factory run tested to ensure proper performance.

1.03 DELIVERY, STORAGE AND HANDLING

Unit will be stored and handled according to manufacturer's instructions.

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory assembled, single piece, refrigerant condensing unit. Contained within the package shall be a semi-hermetic reciprocating compressor, condenser, control panel, all wiring, piping, controls and necessary safeties. Unit shall be mounted on a common structural steel base prior to field start-up.

B. Compressor:

Reciprocating semi-hermetic type only, with shutoff valves, automatically reversible positive displacement oil pump, oil charge, crankcase heater with relay, and suction pressure actuated cylinder unloaders. Compressor and control panel to be factory mounted.

C. Condenser:

Shell-and-tube, multi-pass with integral finned copper tubes. Shall be factory tested to comply with ASME Code for unfired pressure vessels, ARI Standard 450 for condensers, and ANSI/ASHRAE 15 Safety Code. Equipped with pressure relief, liquid line shutoff, and connection for water regulating valve.

D. Discharge Muffler:

Unit shall be equipped with a discharge line muffler for noise reduction.

E. Controls and Safeties:

1. Included in the control panel are power and control terminal blocks, contactors, control relays, on/off switch, and unit designed to start with controlled cylinders unloaded.
2. Safeties in the control box include high- and low-pressure switches, timer to prevent compressor short cycling, overload relays or circuit breakers, and control circuit fuse.

F. Electrical Requirements:

All control and power wiring between the compressor and control panel shall be completed prior to delivery.

G. Special Features:

Certain standard features are removed and replaced by those features designated by *. Consult your local Carrier sales office for amending specifications.

* 1. Electric Actuated Unloaders:

Includes all necessary hardware to allow field conversion from suction pressure actuated to electric solenoid actuated unloaders.

2. Control Circuit Transformer:

Eliminates need for external control power source.

3. Gage Panel Assembly:

Includes discharge, suction, and oil pressure gages. Panel is for field installation.



Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.