



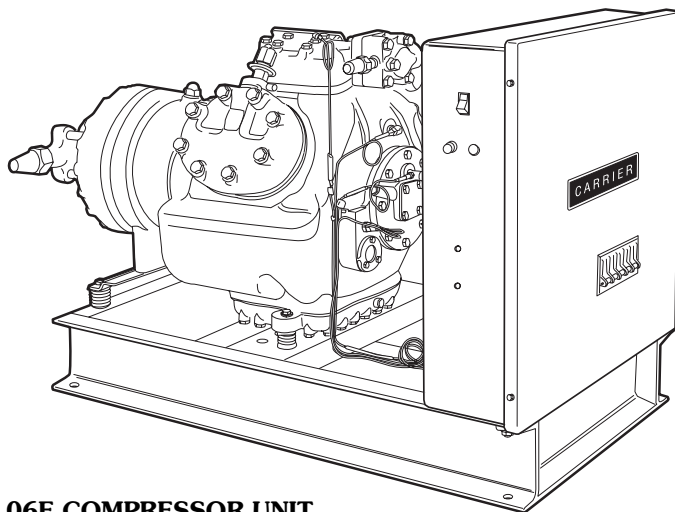
# Product Data

# 06DA,DE,DH 06EV,EW Compressor Units

3 to 40 Nominal Tons



## 06D,06E Compressors



**06E COMPRESSOR UNIT**

### A quality compressor for the right application

The Carlyle line of 06D, 06E semi-hermetic compressors is designed for light, medium, or heavy duty applications from 3 through 40 tons. Use them with complete confidence for air conditioning or refrigeration, with either water-cooled, air-cooled, or evaporative condensers.

### Features/Benefits

#### System dependability

Reliable trouble-free operation and long unit life is assured with this motor-compressor. The hermetically sealed unit eliminates dirt, air, and moisture contamination in the refrigeration system, and also eliminates shaft seal and alignment problems. Compressor wear is minimized by the positive pressure lubrication provided with a built-in oil pressure regulator and an automatically reversible oil pump.

#### Operating efficiency

Power conserving capacity control valves on Carlyle compressors provide the most efficient operation at the lowest cost. These valves automatically match the compressor capacity to system load variations.

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 cylinder. This results in an EER (Energy Efficiency Ratio) improvement of as much as 39.5% at 33% load.

Rely with confidence on the overall protection devices built into these fine compressors. The Time Guard® circuit prevents rapid compressor cycling. High- and low-pressure switches protect against excessive motor loads due to refrigeration system problems.

A lightweight crankcase, made of fine grain cast iron, meets all code pressure requirements. Large refrigerant gas passages guarantee low pressure losses and higher compression efficiency as well as providing for motor cooling.

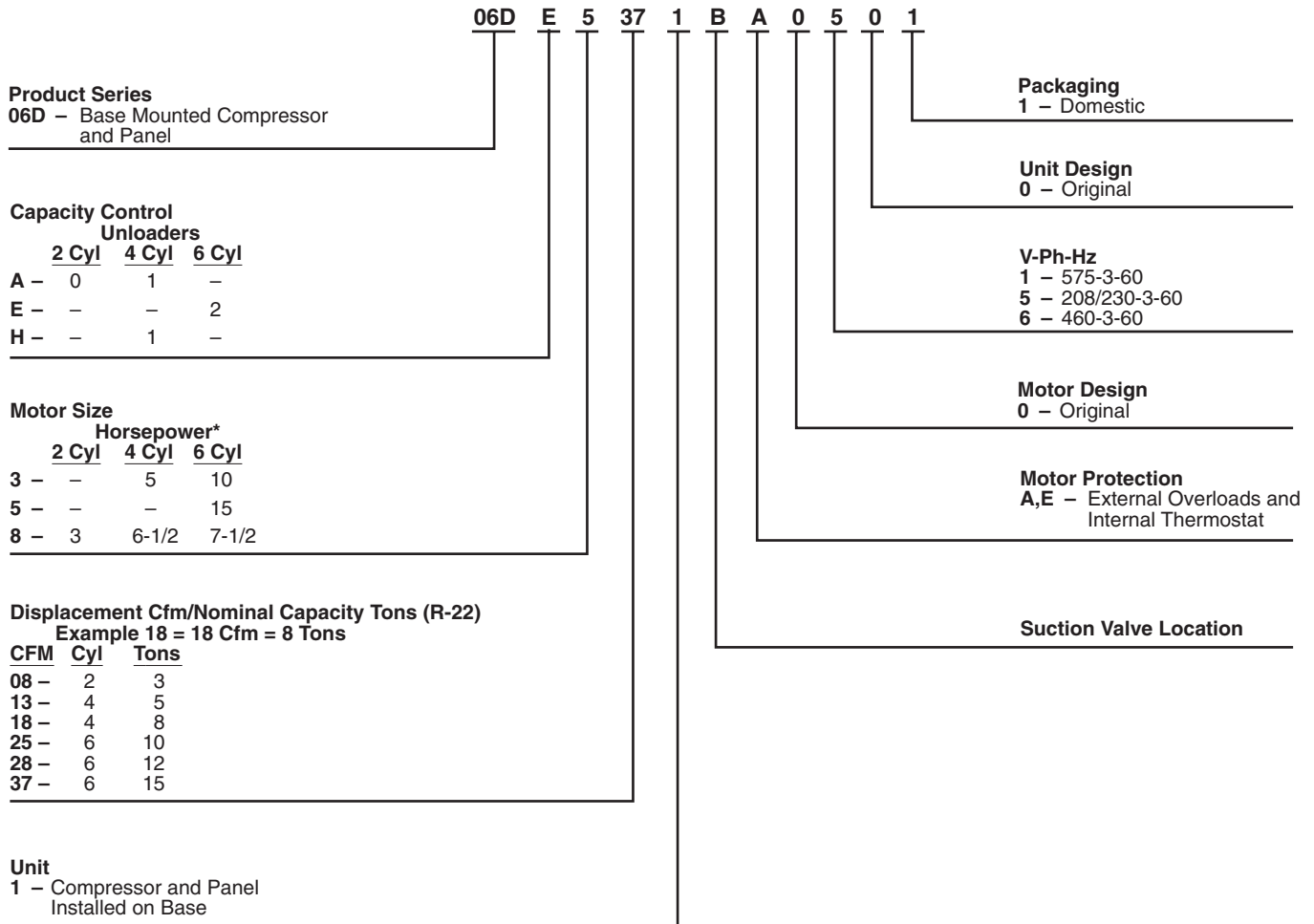
Sound level is kept at a minimum with a discharge line muffler. This muffler is an accessory for the 06D and 06E compressors.

# Table of contents



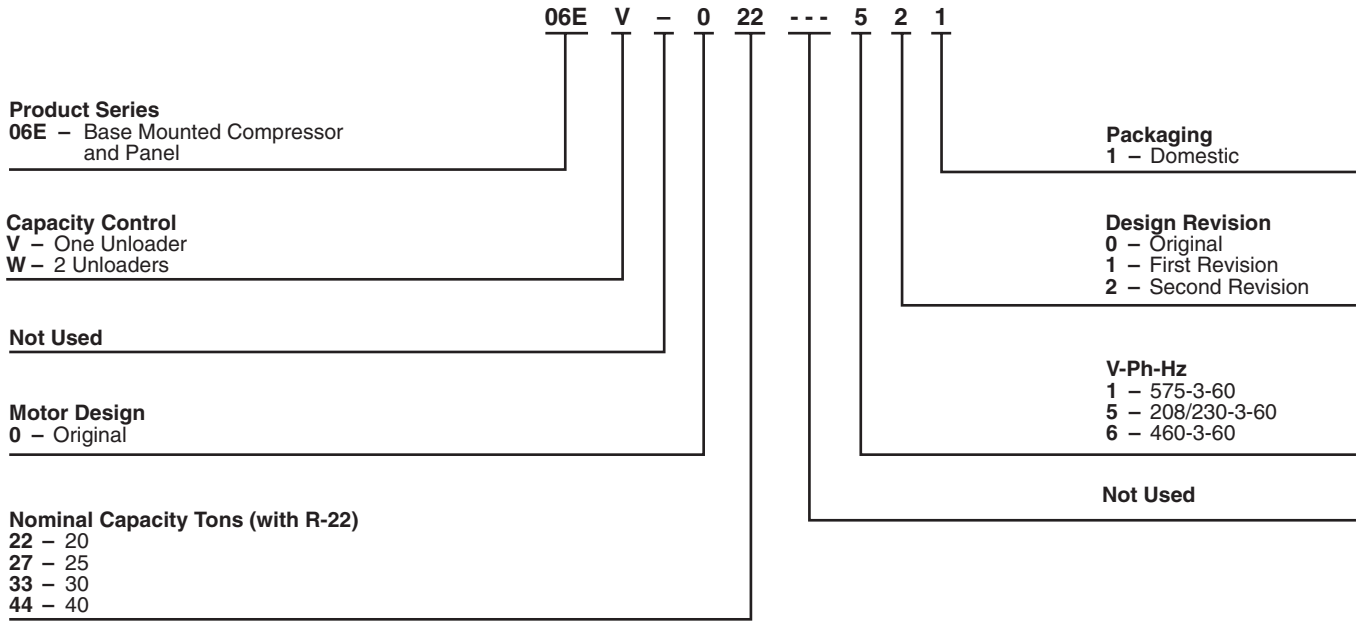
|                                     |       |
|-------------------------------------|-------|
|                                     | Page  |
| Features/Benefits . . . . .         | 1     |
| Model Number Nomenclature . . . . . | 2,3   |
| Physical Data . . . . .             | 3     |
| Base Unit Dimensions . . . . .      | 4,5   |
| Selection Procedure . . . . .       | 6     |
| Performance Data . . . . .          | 6-15  |
| Electrical Data . . . . .           | 16,17 |
| Typical Wiring Schematics . . . . . | 18-20 |
| Typical Piping and Wiring . . . . . | 21    |
| Application Data . . . . .          | 22    |
| Guide Specifications . . . . .      | 23    |

## Model number nomenclature



\*Standard hp ratings for R-22 units. Consult Carrier Sales Representative for other refrigerant ratings.

# Model number nomenclature (cont)



## Physical data

| UNIT 06D                              | A8081                         | H3131                    | A8181                          | E8251                         | E3281                           | E5371                           |
|---------------------------------------|-------------------------------|--------------------------|--------------------------------|-------------------------------|---------------------------------|---------------------------------|
| <b>OPERATING WEIGHT (lb)</b>          | 180                           | 250                      | 265                            | 325                           | 325                             | 330                             |
| <b>REFRIGERANT</b>                    | R-22                          | R-134a, R-22, R-507/404A |                                |                               |                                 |                                 |
| <b>COMPRESSOR — 06D*</b>              | M808                          | M313                     | A818                           | A825                          | A328                            | A537                            |
| <b>Cylinders</b>                      | 2                             | 4                        | 4                              | 6                             | 6                               | 6                               |
| <b>Bore (in.)</b>                     | 2                             | 2                        | 2                              | 2                             | 2                               | 2                               |
| <b>Stroke (in.)</b>                   | 1 <sup>1</sup> / <sub>4</sub> | 1                        | 1 <sup>7</sup> / <sub>16</sub> | 1 <sup>1</sup> / <sub>4</sub> | 1 <sup>15</sup> / <sub>32</sub> | 1 <sup>15</sup> / <sub>16</sub> |
| <b>Displacement (cfm at 1750 rpm)</b> | 8                             | 13                       | 18.3                           | 23.9                          | 28                              | 37.1                            |
| <b>Maximum Rpm</b>                    | 1750                          |                          |                                |                               |                                 |                                 |
| <b>Oil Charge (pt)</b>                | 3                             | 4.5                      | 5.5                            | 8                             | 8                               | 8                               |
| <b>High Side Maximum Pressure</b>     | 450 PSIG                      |                          |                                |                               |                                 |                                 |
| <b>Low Side Maximum Pressure</b>      | 245 PSIG                      |                          |                                |                               |                                 |                                 |
| <b>CONNECTIONS (in.)</b>              |                               |                          |                                |                               |                                 |                                 |
| <b>Suction Valve (ODF)</b>            | 7/8                           | 7/8                      | 1 <sup>1</sup> / <sub>8</sub>  | 1 <sup>3</sup> / <sub>8</sub> | 1 <sup>3</sup> / <sub>8</sub>   | 1 <sup>3</sup> / <sub>8</sub>   |
| <b>Discharge Valve (ODF)</b>          | 5/8                           | 5/8                      | 7/8                            | 7/8                           | 7/8                             | 1 <sup>1</sup> / <sub>8</sub>   |

\*Compressors listed are for R-22 applications. For R-134a and R-507/404A an 06DR compressor is standard. Factory compressor substitutes may be made. Contact Carrier Sales Representative.

NOTE: The 06DE8251 compressor unit with the 06DA825 compressor replaces the 06DE8241 once inventory of the 06DA824 compressor is depleted.

| UNIT 06E                              | V022                            | W027                            | W033                            | W044                            |
|---------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>OPERATING WEIGHT (lb)</b>          | 600                             | 640                             | 650                             | 670                             |
| <b>REFRIGERANT</b>                    | R-134a, R-22, R-507/404A        |                                 |                                 |                                 |
| <b>COMPRESSOR — 06E*</b>              | A250                            | A265                            | A275                            | A299                            |
| <b>Cylinders</b>                      | 4                               | 6                               | 6                               | 6                               |
| <b>Bore (in.)</b>                     | 2 <sup>11</sup> / <sub>16</sub> | 2 <sup>11</sup> / <sub>16</sub> | 2 <sup>11</sup> / <sub>16</sub> | 2 <sup>11</sup> / <sub>16</sub> |
| <b>Stroke (in.)</b>                   | 2 <sup>3</sup> / <sub>16</sub>  | 2                               | 2 <sup>3</sup> / <sub>16</sub>  | 2 <sup>7</sup> / <sub>8</sub>   |
| <b>Displacement (cfm at 1750 rpm)</b> | 50                              | 68                              | 75                              | 99                              |
| <b>Maximum Rpm</b>                    | 1750                            |                                 |                                 |                                 |
| <b>Oil Charge (pt)</b>                | 14                              | 19                              | 19                              | 19                              |
| <b>High Side Maximum Pressure</b>     | 450 PSIG                        |                                 |                                 |                                 |
| <b>Low Side Maximum Pressure</b>      | 245 PSIG                        |                                 |                                 |                                 |
| <b>CONNECTIONS (in.)</b>              |                                 |                                 |                                 |                                 |
| <b>Suction Valve (ODF)</b>            | 1 <sup>5</sup> / <sub>8</sub>   | 1 <sup>5</sup> / <sub>8</sub>   | 2 <sup>1</sup> / <sub>8</sub>   | 2 <sup>1</sup> / <sub>8</sub>   |
| <b>Discharge Valve (ODF)</b>          | 1 <sup>1</sup> / <sub>8</sub>   | 1 <sup>3</sup> / <sub>8</sub>   | 1 <sup>3</sup> / <sub>8</sub>   | 1 <sup>5</sup> / <sub>8</sub>   |

### LEGEND

**ODF** — Outside Diameter Female

\*Compressors listed are for R-22 applications. For R-134A an 06EM compressor is standard offering; an 06ER compressor is standard for R-507/404A. Factory compressor substitutes may be made. Contact Carrier Sales Representative.

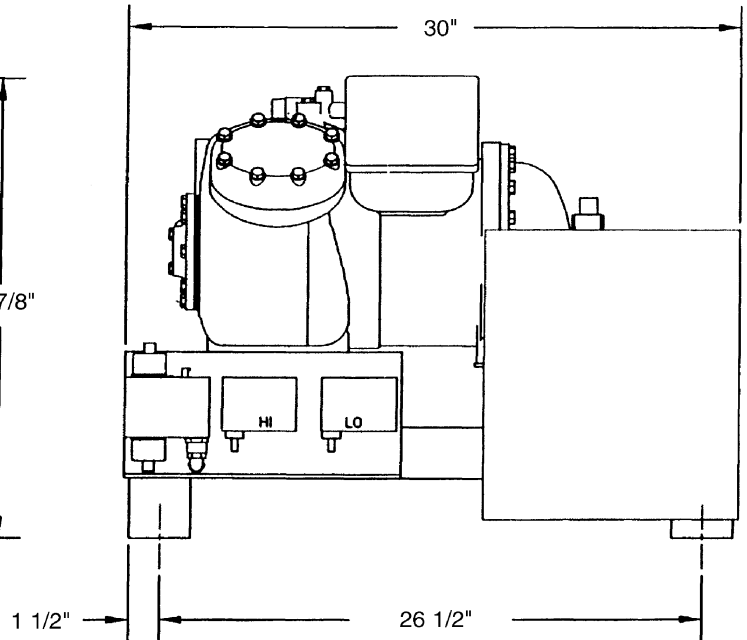
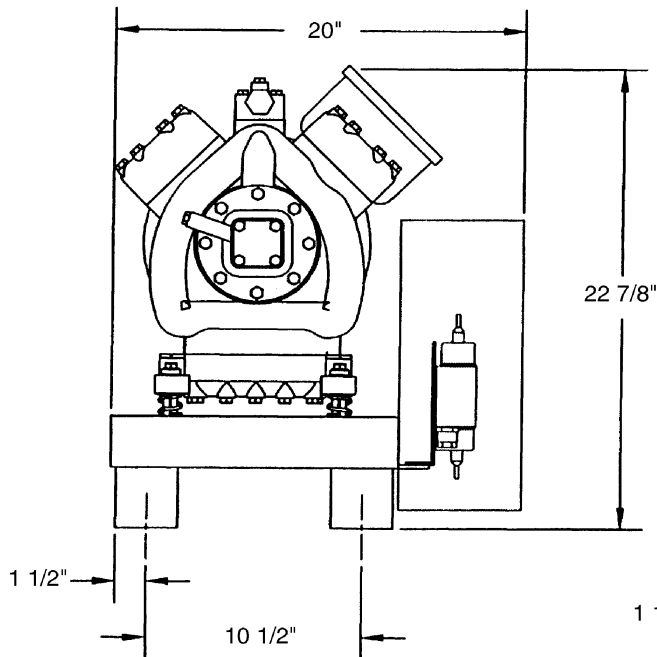
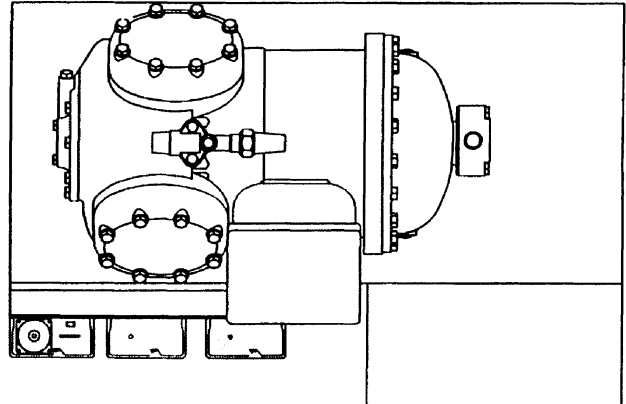
# Base unit dimensions



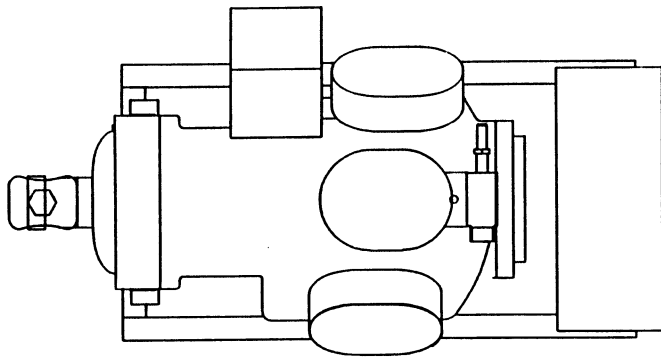
## 06D COMPRESSOR UNIT

### NOTES:

1. For standard service practices, such as troubleshooting and refrigerant charging, allow a minimum 2'-6" clearance around the unit.
2. For compressor removal, allow a minimum 3' wide access aisle to and from the unit.
3. Local codes or jurisdiction may prevail for unit clearances.

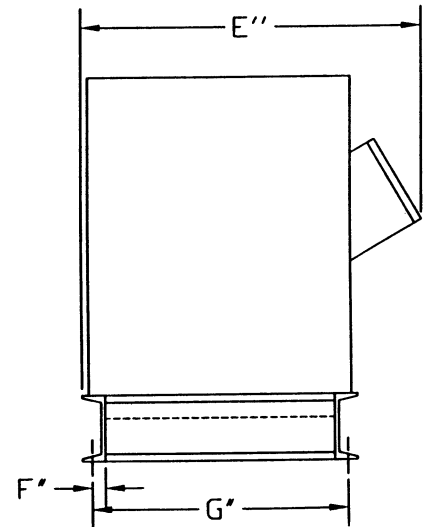
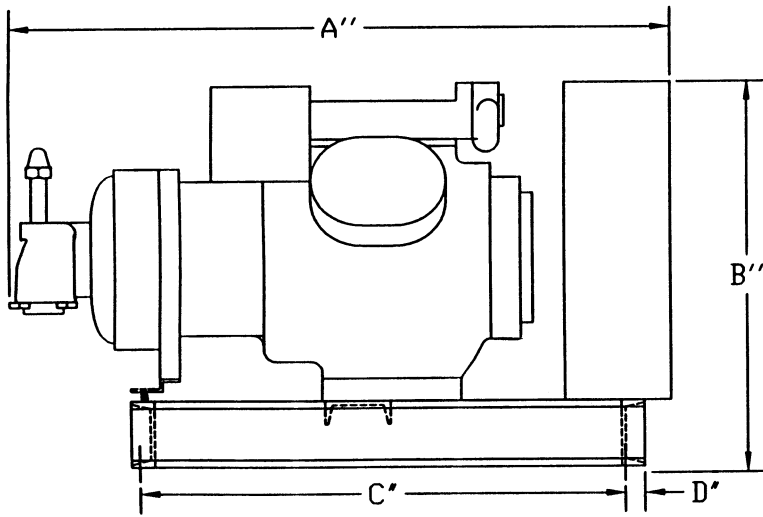


### 06E COMPRESSOR UNIT



**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.



**DIMENSIONS (in.)**

| 06E UNIT | VOLTAGE | A                              | B  | C                              | D                             | E                              | F | G                              |
|----------|---------|--------------------------------|----|--------------------------------|-------------------------------|--------------------------------|---|--------------------------------|
| V022     | 208/230 | 48 <sup>1</sup> / <sub>4</sub> | 35 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | 1 | 19 <sup>1</sup> / <sub>2</sub> |
|          | 460,575 | 48 <sup>1</sup> / <sub>4</sub> | 29 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 26                             | 1 | 19 <sup>1</sup> / <sub>2</sub> |
| W027     | 208/230 | 50 <sup>1</sup> / <sub>4</sub> | 35 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | 1 | 19 <sup>1</sup> / <sub>2</sub> |
|          | 460,575 | 50 <sup>1</sup> / <sub>4</sub> | 29 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 26                             | 1 | 19 <sup>1</sup> / <sub>2</sub> |
| W033     | 208/230 | 50 <sup>1</sup> / <sub>4</sub> | 35 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | 1 | 19 <sup>1</sup> / <sub>2</sub> |
|          | 460,575 | 50 <sup>1</sup> / <sub>4</sub> | 29 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 26                             | 1 | 19 <sup>1</sup> / <sub>2</sub> |
| W044     | 208/230 | 50 <sup>1</sup> / <sub>4</sub> | 35 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | 1 | 19 <sup>1</sup> / <sub>2</sub> |
|          | 460,575 | 50 <sup>1</sup> / <sub>4</sub> | 35 | 36 <sup>7</sup> / <sub>8</sub> | 1 <sup>1</sup> / <sub>2</sub> | 27 <sup>1</sup> / <sub>2</sub> | 1 | 19 <sup>1</sup> / <sub>2</sub> |

# Selection procedure



## I Determine refrigerant, load, saturated suction temperature, and saturated discharge temperature.

Given:

Refrigerant . . . . . R-22  
 Cooling Load . . . . . 40 Tons  
 Saturated Suction Temperature . . . . . 40 F  
 Saturated Discharge Temperature . . . . . 105 F

## II Enter Compressor Capacities table for correct refrigerant at required suction and discharge temperatures. Read across until a suitable capacity is found. Determine motor-compressor

selection, power input (kW) requirements, and total heat rejection (THR). (Use direct interpolation where job requirements fall between values shown. Do not extrapolate.)

Select an 06EW044 which has a cooling capacity of 42.7 tons at a saturated suction temperature of 40 F and saturated discharge temperature of 105 F. Motor-compressor power input is 37.3 kW and total heat rejection is 53.3 tons.

Refer to Compressor Capacities notes for information concerning basis for compressor ratings and capacity corrections due to refrigerant superheat or subcooling.

# Performance data

COMPRESSOR CAPACITIES (Tons)\*  
 R-134a

| SST | SDT | 06DH3131 |      |      | 06DA8181 |      |      | 06DE8251 |      |       |
|-----|-----|----------|------|------|----------|------|------|----------|------|-------|
|     |     | Cap.     | kW   | THR  | Cap.     | kW   | THR  | Cap.     | kW   | THR   |
| 0   | 90  | 1.37     | 1.78 | 1.88 | 2.25     | 2.70 | 3.02 | 2.81     | 3.29 | 3.75  |
|     | 100 | 1.21     | 1.83 | 1.73 | 2.06     | 2.83 | 2.86 | 2.51     | 3.40 | 3.48  |
|     | 110 | 1.05     | 1.84 | 1.58 | 1.87     | 2.93 | 2.71 | 2.21     | 3.48 | 3.20  |
|     | 120 | 0.90     | 1.83 | 1.42 | 1.69     | 3.01 | 2.55 | 1.92     | 3.50 | 2.91  |
|     | 130 | 0.76     | 1.78 | 1.27 | 1.52     | 3.08 | 2.40 | 1.64     | 3.48 | 2.63  |
|     | 140 | 0.62     | 1.70 | 1.10 | 1.36     | 3.12 | 2.25 | 1.37     | 3.39 | 2.33  |
|     | 145 | 0.55     | 1.64 | 1.02 | 1.28     | 3.13 | 2.17 | 1.25     | 3.30 | 2.19  |
| 10  | 90  | 1.90     | 2.02 | 2.47 | 3.00     | 3.03 | 3.87 | 3.86     | 3.78 | 4.94  |
|     | 100 | 1.70     | 2.12 | 2.30 | 2.76     | 3.22 | 3.67 | 3.48     | 3.98 | 4.62  |
|     | 110 | 1.51     | 2.19 | 2.13 | 2.52     | 3.38 | 3.48 | 3.11     | 4.13 | 4.29  |
|     | 120 | 1.32     | 2.23 | 1.96 | 2.29     | 3.52 | 3.29 | 2.75     | 4.25 | 3.96  |
|     | 130 | 1.14     | 2.24 | 1.78 | 2.07     | 3.63 | 3.10 | 2.40     | 4.32 | 3.64  |
|     | 140 | 0.97     | 2.21 | 1.60 | 1.85     | 3.72 | 2.91 | 2.07     | 4.33 | 3.30  |
|     | 145 | 0.89     | 2.18 | 1.51 | 1.75     | 3.76 | 2.82 | 1.90     | 4.31 | 3.13  |
| 20  | 90  | 2.55     | 2.22 | 3.18 | 3.94     | 3.30 | 4.88 | 5.15     | 4.25 | 6.36  |
|     | 100 | 2.31     | 2.38 | 2.99 | 3.63     | 3.57 | 4.64 | 4.69     | 4.53 | 5.98  |
|     | 110 | 2.07     | 2.51 | 2.79 | 3.32     | 3.81 | 4.41 | 4.24     | 4.77 | 5.60  |
|     | 120 | 1.84     | 2.62 | 2.59 | 3.03     | 4.02 | 4.18 | 3.79     | 4.98 | 5.21  |
|     | 130 | 1.62     | 2.68 | 2.39 | 2.75     | 4.20 | 3.94 | 3.36     | 5.14 | 4.83  |
|     | 140 | 1.41     | 2.71 | 2.18 | 2.47     | 4.35 | 3.71 | 2.94     | 5.26 | 4.44  |
|     | 145 | 1.30     | 2.71 | 2.08 | 2.34     | 4.41 | 3.60 | 2.74     | 5.30 | 4.25  |
| 30  | 90  | 3.34     | 2.36 | 4.02 | 5.09     | 3.48 | 6.08 | 6.72     | 4.69 | 8.05  |
|     | 100 | 3.05     | 2.59 | 3.79 | 4.70     | 3.85 | 5.79 | 6.16     | 5.05 | 7.60  |
|     | 110 | 2.77     | 2.79 | 3.56 | 4.32     | 4.19 | 5.51 | 5.61     | 5.38 | 7.14  |
|     | 120 | 2.49     | 2.96 | 3.33 | 3.95     | 4.48 | 5.22 | 5.07     | 5.68 | 6.68  |
|     | 130 | 2.21     | 3.10 | 3.10 | 3.59     | 4.74 | 4.94 | 4.53     | 5.95 | 6.23  |
|     | 140 | 1.95     | 3.19 | 2.86 | 3.24     | 4.97 | 4.66 | 4.02     | 6.17 | 5.78  |
|     | 145 | 1.82     | 3.23 | 2.74 | 3.07     | 5.07 | 4.52 | 3.76     | 6.26 | 5.55  |
| 40  | 90  | 4.31     | 2.42 | 5.00 | 6.50     | 3.54 | 7.50 | 8.61     | 5.08 | 10.06 |
|     | 100 | 3.95     | 2.72 | 4.73 | 6.01     | 4.03 | 7.15 | 7.94     | 5.53 | 9.51  |
|     | 110 | 3.61     | 3.00 | 4.46 | 5.53     | 4.48 | 6.81 | 7.27     | 5.95 | 8.96  |
|     | 120 | 3.26     | 3.25 | 4.19 | 5.07     | 4.88 | 6.46 | 6.61     | 6.35 | 8.42  |
|     | 130 | 2.93     | 3.46 | 3.92 | 4.62     | 5.24 | 6.11 | 5.96     | 6.72 | 7.87  |
|     | 140 | 2.60     | 3.64 | 3.64 | 4.18     | 5.56 | 5.76 | 5.32     | 7.04 | 7.33  |
|     | 145 | 2.44     | 3.71 | 3.50 | 3.96     | 5.71 | 5.59 | 5.01     | 7.19 | 7.06  |
| 50  | 90  | 5.46     | 2.44 | 6.16 | 8.20     | 3.60 | 9.22 | 10.89    | 5.42 | 12.43 |
|     | 100 | 5.04     | 2.77 | 5.83 | 7.59     | 4.06 | 8.75 | 10.07    | 5.96 | 11.77 |
|     | 110 | 4.62     | 3.13 | 5.51 | 7.00     | 4.64 | 8.32 | 9.26     | 6.48 | 11.11 |
|     | 120 | 4.20     | 3.46 | 5.19 | 6.42     | 5.17 | 7.90 | 8.46     | 6.98 | 10.45 |
|     | 130 | 3.79     | 3.76 | 4.87 | 5.86     | 5.65 | 7.47 | 7.67     | 7.45 | 9.79  |
|     | 140 | 3.40     | 4.02 | 4.54 | 5.31     | 6.09 | 7.05 | 6.89     | 7.89 | 9.14  |
|     | 145 | 3.20     | 4.14 | 4.38 | 5.16     | 6.30 | 6.95 | 6.51     | 8.09 | 8.81  |

LEGEND

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

\*Refer to compressor capacity notes, page 14.

# Performance data (cont)



## COMPRESSOR CAPACITIES (Tons)\* (cont) R-134a (cont)

| SST | SDT | 06DE3281 |      |       | 06DE5371 |       |       |
|-----|-----|----------|------|-------|----------|-------|-------|
|     |     | Cap.     | kW   | THR   | Cap.     | kW    | THR   |
| 0   | 90  | 3.47     | 4.22 | 4.67  | 4.79     | 5.76  | 6.43  |
|     | 100 | 3.18     | 4.42 | 4.44  | 4.43     | 6.08  | 6.16  |
|     | 110 | 2.89     | 4.58 | 4.20  | 4.05     | 6.35  | 5.86  |
|     | 120 | 2.60     | 4.69 | 3.94  | 3.67     | 6.57  | 5.55  |
|     | 130 | 2.31     | 4.75 | 3.66  | 3.28     | 6.72  | 5.20  |
|     | 140 | 2.02     | 4.75 | 3.37  | 2.88     | 6.78  | 4.81  |
|     | 145 | 1.88     | 4.73 | 3.23  | 2.68     | 6.77  | 4.61  |
| 10  | 90  | 4.58     | 4.69 | 5.92  | 6.23     | 6.33  | 8.04  |
|     | 100 | 4.24     | 4.99 | 5.66  | 5.82     | 6.76  | 7.75  |
|     | 110 | 3.89     | 5.25 | 5.39  | 5.38     | 7.17  | 7.43  |
|     | 120 | 3.54     | 5.47 | 5.10  | 4.95     | 7.52  | 7.09  |
|     | 130 | 3.19     | 5.64 | 4.80  | 4.49     | 7.83  | 6.72  |
|     | 140 | 2.84     | 5.75 | 4.48  | 4.02     | 8.06  | 6.32  |
|     | 145 | 2.67     | 5.79 | 4.32  | 3.78     | 8.15  | 6.11  |
| 20  | 90  | 5.93     | 5.10 | 7.38  | 7.98     | 6.85  | 9.93  |
|     | 100 | 5.52     | 5.51 | 7.09  | 7.48     | 7.40  | 9.59  |
|     | 110 | 5.10     | 5.88 | 6.77  | 6.98     | 7.92  | 9.23  |
|     | 120 | 4.68     | 6.21 | 6.45  | 6.44     | 8.41  | 8.84  |
|     | 130 | 4.25     | 6.49 | 6.10  | 5.91     | 8.86  | 8.43  |
|     | 140 | 3.83     | 6.73 | 5.75  | 5.36     | 9.26  | 8.00  |
|     | 145 | 3.62     | 6.82 | 5.56  | 5.08     | 9.43  | 7.77  |
| 30  | 90  | 7.54     | 5.41 | 9.08  | 10.04    | 7.31  | 12.12 |
|     | 100 | 7.04     | 5.94 | 8.74  | 9.45     | 7.96  | 11.72 |
|     | 110 | 6.54     | 6.43 | 8.37  | 8.84     | 8.61  | 11.29 |
|     | 120 | 6.03     | 6.88 | 7.99  | 8.22     | 9.23  | 10.85 |
|     | 130 | 5.52     | 7.29 | 7.60  | 7.59     | 9.82  | 10.39 |
|     | 140 | 5.01     | 7.66 | 7.19  | 6.93     | 10.40 | 9.90  |
|     | 145 | 4.75     | 7.82 | 6.98  | 6.61     | 10.60 | 9.63  |
| 40  | 90  | 9.46     | 5.62 | 11.06 | 12.49    | 7.69  | 14.68 |
|     | 100 | 8.86     | 6.27 | 10.65 | 11.78    | 8.46  | 14.19 |
|     | 110 | 8.26     | 6.89 | 10.22 | 11.05    | 9.22  | 13.68 |
|     | 120 | 7.65     | 7.47 | 9.78  | 10.31    | 9.97  | 13.15 |
|     | 130 | 7.03     | 8.02 | 9.32  | 9.55     | 10.70 | 12.60 |
|     | 140 | 6.41     | 8.52 | 8.84  | 8.77     | 11.40 | 12.02 |
|     | 145 | 6.10     | 8.75 | 8.59  | 8.38     | 11.70 | 11.72 |
| 50  | 90  | 11.73    | 5.67 | 13.35 | 15.38    | 7.99  | 17.66 |
|     | 100 | 11.02    | 6.46 | 12.86 | 14.53    | 8.87  | 17.06 |
|     | 110 | 10.29    | 7.23 | 12.35 | 13.66    | 9.76  | 16.44 |
|     | 120 | 9.56     | 7.95 | 11.82 | 12.76    | 10.64 | 15.80 |
|     | 130 | 8.81     | 8.64 | 11.28 | 11.85    | 11.51 | 15.13 |
|     | 140 | 8.07     | 9.29 | 10.71 | 10.92    | 12.36 | 14.44 |
|     | 145 | 7.69     | 9.59 | 10.42 | 10.44    | 12.78 | 14.08 |

### LEGEND

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

\*Refer to compressor capacity notes, page 14.

# Performance data (cont)



## COMPRESSOR CAPACITIES (Tons)\* (cont) R-134a (cont)

| SST | SDT | 06EV022 |       |       | 06EW027 |       |       | 06EW033 |       |       | 06EW044 |       |       |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
|     |     | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   |
| 0   | 90  | 5.11    | 6.83  | 7.06  | 6.64    | 8.52  | 9.07  | 8.13    | 10.30 | 11.07 | 10.92   | 14.70 | 15.11 |
|     | 100 | 4.55    | 6.88  | 6.51  | 5.73    | 8.39  | 8.12  | 7.25    | 10.40 | 10.21 | 9.84    | 14.90 | 14.08 |
|     | 110 | 3.99    | 6.85  | 5.95  | 4.82    | 8.08  | 7.12  | 6.35    | 10.40 | 9.31  | 8.78    | 15.00 | 13.06 |
|     | 120 | 3.46    | 6.73  | 5.38  | 3.92    | 7.56  | 6.08  | 5.45    | 10.10 | 8.33  | 7.77    | 14.90 | 12.01 |
|     | 130 | 2.95    | 6.53  | 4.81  | 3.05    | 6.83  | 4.99  | 4.55    | 9.68  | 7.31  | 6.79    | 14.70 | 10.98 |
|     | 140 | 2.22    | 6.07  | 3.95  | 1.75    | 5.20  | 3.22  | 3.22    | 8.55  | 5.66  | 5.40    | 14.10 | 9.42  |
|     | 145 | 1.77    | 5.80  | 3.41  | 0.96    | 4.20  | 2.17  | 2.36    | 7.48  | 4.50  | 4.53    | 13.60 | 8.41  |
| 10  | 90  | 7.03    | 7.84  | 9.26  | 9.40    | 10.10 | 12.28 | 11.09   | 11.90 | 14.48 | 14.81   | 17.00 | 19.66 |
|     | 100 | 6.33    | 8.04  | 8.62  | 8.32    | 10.30 | 11.26 | 10.05   | 12.30 | 13.56 | 13.46   | 17.40 | 18.42 |
|     | 110 | 5.65    | 8.15  | 7.97  | 7.25    | 10.20 | 10.15 | 9.01    | 12.50 | 12.57 | 12.14   | 17.70 | 17.19 |
|     | 120 | 4.99    | 8.17  | 7.32  | 6.18    | 10.00 | 9.03  | 7.95    | 12.60 | 11.54 | 10.87   | 17.90 | 15.97 |
|     | 130 | 4.35    | 8.09  | 6.65  | 5.14    | 9.53  | 7.86  | 6.84    | 12.40 | 10.37 | 9.63    | 17.90 | 14.73 |
|     | 140 | 3.44    | 7.80  | 5.66  | 3.64    | 8.40  | 6.03  | 5.33    | 11.80 | 8.69  | 7.86    | 17.60 | 12.88 |
|     | 145 | 2.86    | 7.49  | 5.00  | 2.69    | 7.33  | 4.78  | 4.31    | 11.00 | 7.45  | 6.74    | 17.20 | 11.65 |
| 20  | 90  | 9.39    | 8.78  | 11.89 | 12.77   | 11.55 | 16.07 | 14.64   | 13.20 | 18.40 | 19.62   | 19.10 | 25.06 |
|     | 100 | 8.54    | 9.17  | 11.15 | 11.50   | 12.04 | 14.93 | 13.43   | 13.97 | 17.41 | 17.95   | 19.90 | 23.62 |
|     | 110 | 7.71    | 9.45  | 10.40 | 10.22   | 12.33 | 13.73 | 12.20   | 14.56 | 16.35 | 16.31   | 20.60 | 22.19 |
|     | 120 | 6.89    | 9.63  | 9.63  | 8.96    | 12.40 | 12.49 | 10.96   | 14.96 | 15.23 | 14.72   | 21.00 | 20.71 |
|     | 130 | 6.10    | 9.71  | 8.86  | 7.71    | 12.24 | 11.20 | 9.72    | 15.15 | 14.04 | 13.17   | 21.30 | 19.24 |
|     | 140 | 4.96    | 9.63  | 7.70  | 5.90    | 11.55 | 9.20  | 7.87    | 15.02 | 12.15 | 10.94   | 21.40 | 17.04 |
|     | 145 | 4.23    | 9.44  | 6.92  | 4.75    | 10.78 | 7.82  | 6.65    | 14.62 | 10.82 | 9.52    | 21.20 | 15.56 |
| 30  | 90  | 12.28   | 9.57  | 15.01 | 16.84   | 12.69 | 20.46 | 18.90   | 14.25 | 22.96 | 25.49   | 21.10 | 31.51 |
|     | 100 | 11.24   | 10.20 | 14.15 | 15.33   | 13.57 | 19.20 | 17.47   | 15.40 | 21.86 | 23.44   | 22.30 | 29.80 |
|     | 110 | 10.22   | 10.70 | 13.27 | 13.82   | 14.24 | 17.88 | 16.02   | 16.37 | 20.69 | 21.42   | 23.30 | 28.06 |
|     | 120 | 9.22    | 11.10 | 12.38 | 12.32   | 14.68 | 16.50 | 14.56   | 17.15 | 19.45 | 19.45   | 24.20 | 26.35 |
|     | 130 | 8.24    | 11.30 | 11.46 | 10.83   | 14.88 | 15.07 | 13.09   | 17.72 | 18.14 | 17.53   | 24.80 | 24.60 |
|     | 140 | 6.83    | 11.50 | 10.11 | 8.66    | 14.71 | 12.85 | 10.89   | 18.16 | 16.06 | 14.74   | 25.30 | 21.95 |
|     | 145 | 5.92    | 5.70  | 7.55  | 7.26    | 14.28 | 11.33 | 9.43    | 18.16 | 14.60 | 12.95   | 25.50 | 20.22 |
| 40  | 90  | 15.77   | 10.10 | 18.65 | 21.72   | 13.40 | 25.54 | 23.96   | 14.90 | 28.20 | 32.61   | 22.70 | 39.08 |
|     | 100 | 14.51   | 11.00 | 17.65 | 19.93   | 14.80 | 24.15 | 22.27   | 16.50 | 26.97 | 30.10   | 24.50 | 37.08 |
|     | 110 | 13.27   | 11.80 | 16.63 | 18.14   | 15.90 | 22.67 | 20.56   | 17.90 | 25.66 | 27.63   | 26.00 | 35.04 |
|     | 120 | 12.05   | 12.40 | 15.58 | 16.35   | 16.70 | 21.11 | 18.82   | 19.10 | 24.27 | 25.20   | 27.20 | 32.95 |
|     | 130 | 10.85   | 12.90 | 14.53 | 14.58   | 17.30 | 19.51 | 17.08   | 20.10 | 22.81 | 22.82   | 28.30 | 30.89 |
|     | 140 | 9.11    | 13.40 | 12.92 | 11.96   | 17.80 | 17.04 | 14.46   | 21.20 | 20.50 | 19.36   | 29.40 | 27.74 |
|     | 145 | 7.98    | 13.60 | 11.86 | 10.27   | 17.70 | 15.31 | 12.71   | 21.60 | 18.87 | 17.12   | 29.90 | 25.64 |
| 50  | 90  | 19.96   | 10.40 | 22.92 | 27.54   | 13.64 | 31.43 | 29.95   | 15.07 | 34.25 | 41.17   | 23.90 | 47.98 |
|     | 100 | 18.44   | 11.61 | 21.75 | 25.42   | 15.49 | 29.83 | 27.95   | 17.13 | 32.83 | 38.11   | 26.20 | 45.58 |
|     | 110 | 16.93   | 12.67 | 20.54 | 23.28   | 17.09 | 28.15 | 25.92   | 19.00 | 31.33 | 35.09   | 28.30 | 43.16 |
|     | 120 | 15.45   | 13.58 | 19.32 | 21.15   | 18.44 | 26.41 | 23.86   | 20.67 | 29.75 | 32.12   | 30.10 | 40.70 |
|     | 130 | 13.99   | 14.36 | 18.08 | 19.04   | 19.54 | 24.61 | 21.79   | 22.14 | 28.10 | 29.21   | 31.60 | 38.21 |
|     | 140 | 11.85   | 15.25 | 16.19 | 15.90   | 20.67 | 21.79 | 18.66   | 23.91 | 25.47 | 24.93   | 33.50 | 34.48 |
|     | 145 | 10.46   | 15.67 | 14.92 | 13.85   | 21.07 | 19.86 | 16.56   | 24.80 | 23.63 | 22.15   | 34.40 | 31.95 |

### LEGEND

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

\*Refer to compressor capacity notes, page 14.





**COMPRESSOR CAPACITIES (Tons)\* (cont)**  
**R-22**

| SST | SDT | 06DA8081 |      |      | 06DH3131 |      |      | 06DA8181 |      |       |
|-----|-----|----------|------|------|----------|------|------|----------|------|-------|
|     |     | Cap.     | kW   | THR  | Cap.     | kW   | THR  | Cap.     | kW   | THR   |
| 0   | 90  | 1.48     | 1.90 | 2.02 | 2.26     | 3.02 | 3.12 | 3.35     | 4.16 | 4.54  |
|     | 100 | 1.34     | 1.98 | 1.90 | 2.02     | 3.11 | 2.90 | 3.02     | 4.32 | 4.25  |
|     | 110 | 1.20     | 2.04 | 1.78 | 1.78     | 3.16 | 2.68 | 2.69     | 4.42 | 3.95  |
|     | 120 | 1.05     | 2.10 | 1.64 | 1.54     | 3.20 | 2.44 | 2.36     | 4.45 | 3.63  |
|     | 130 | 0.92     | 2.10 | 1.50 | 1.32     | 3.10 | 2.21 | 2.04     | 4.40 | 3.29  |
|     | 140 | 0.78     | 2.00 | 1.36 | 1.11     | 3.00 | 1.96 | 1.73     | 4.30 | 2.95  |
|     | 145 | 0.72     | 2.00 | 1.29 | 1.00     | 2.90 | 1.84 | 1.58     | 4.20 | 2.78  |
| 10  | 90  | 1.96     | 2.05 | 2.54 | 3.02     | 3.29 | 3.96 | 4.44     | 4.57 | 5.74  |
|     | 100 | 1.79     | 2.19 | 2.41 | 2.74     | 3.46 | 3.73 | 4.05     | 4.85 | 5.44  |
|     | 110 | 1.62     | 2.30 | 2.28 | 2.46     | 3.59 | 3.48 | 3.67     | 5.07 | 5.11  |
|     | 120 | 1.46     | 2.39 | 2.14 | 2.18     | 3.68 | 3.23 | 3.28     | 5.22 | 4.77  |
|     | 130 | 1.29     | 2.44 | 1.99 | 1.91     | 3.71 | 2.97 | 2.90     | 5.30 | 4.41  |
|     | 140 | 1.14     | 2.50 | 1.84 | 1.66     | 3.70 | 2.71 | 2.55     | 5.30 | 4.06  |
|     | 145 | 1.06     | 2.50 | 1.76 | 1.54     | 3.70 | 2.58 | 2.37     | 5.30 | 3.87  |
| 20  | 90  | 2.52     | 2.16 | 3.13 | 3.94     | 3.47 | 4.93 | 5.73     | 4.86 | 7.12  |
|     | 100 | 2.33     | 2.35 | 3.00 | 3.61     | 3.73 | 4.67 | 5.28     | 5.26 | 6.78  |
|     | 110 | 2.13     | 2.52 | 2.85 | 3.28     | 3.95 | 4.41 | 4.84     | 5.61 | 6.43  |
|     | 120 | 1.94     | 2.66 | 2.70 | 2.95     | 4.13 | 4.13 | 4.39     | 5.90 | 6.07  |
|     | 130 | 1.75     | 2.77 | 2.54 | 2.63     | 4.25 | 3.84 | 3.94     | 6.12 | 5.68  |
|     | 140 | 1.57     | 2.90 | 2.38 | 2.33     | 4.30 | 3.57 | 3.52     | 6.30 | 5.30  |
|     | 145 | 1.48     | 2.90 | 2.30 | 2.18     | 4.30 | 3.42 | 3.31     | 6.30 | 5.11  |
| 30  | 90  | 3.18     | 2.20 | 3.81 | 5.04     | 3.56 | 6.05 | 7.26     | 5.01 | 8.68  |
|     | 100 | 2.96     | 2.45 | 3.66 | 4.65     | 3.91 | 5.76 | 6.74     | 5.55 | 8.32  |
|     | 110 | 2.73     | 2.67 | 3.50 | 4.26     | 4.23 | 5.46 | 6.22     | 6.03 | 7.93  |
|     | 120 | 2.51     | 2.87 | 3.33 | 3.87     | 4.50 | 5.16 | 5.69     | 6.46 | 7.53  |
|     | 130 | 2.28     | 3.05 | 3.15 | 3.49     | 4.72 | 4.84 | 5.17     | 6.82 | 7.11  |
|     | 140 | 2.08     | 3.20 | 2.99 | 3.15     | 4.90 | 4.54 | 4.69     | 7.10 | 6.71  |
|     | 145 | 1.97     | 3.30 | 2.90 | 2.97     | 5.00 | 4.38 | 4.44     | 7.20 | 6.50  |
| 40  | 90  | 3.96     | 2.18 | 4.58 | 6.32     | 3.52 | 7.32 | 9.04     | 4.99 | 10.46 |
|     | 100 | 3.70     | 2.48 | 4.41 | 5.87     | 3.98 | 7.00 | 8.44     | 5.67 | 10.05 |
|     | 110 | 3.44     | 2.77 | 4.23 | 5.41     | 4.39 | 6.66 | 7.83     | 6.30 | 9.63  |
|     | 120 | 3.18     | 3.03 | 4.04 | 4.96     | 4.77 | 6.32 | 7.23     | 6.88 | 9.19  |
|     | 130 | 2.91     | 3.27 | 3.85 | 4.52     | 5.10 | 5.97 | 6.62     | 7.40 | 8.72  |
|     | 140 | 2.68     | 3.50 | 3.67 | 4.12     | 5.40 | 5.65 | 6.07     | 7.80 | 8.30  |
|     | 145 | 2.55     | 3.60 | 3.57 | 3.91     | 5.50 | 5.47 | 5.78     | 8.00 | 8.07  |
| 50  | 90  | 4.79     | 2.10 | 5.38 | 7.70     | 3.30 | 8.65 | 10.95    | 4.80 | 12.31 |
|     | 100 | 4.51     | 2.40 | 5.21 | 7.21     | 3.90 | 8.32 | 10.31    | 5.60 | 11.90 |
|     | 110 | 4.23     | 2.80 | 5.03 | 6.72     | 4.40 | 7.98 | 9.66     | 6.40 | 11.48 |
|     | 120 | 3.95     | 3.10 | 4.84 | 6.23     | 4.90 | 7.63 | 9.00     | 7.10 | 11.03 |
|     | 130 | 3.67     | 3.40 | 4.64 | 5.75     | 5.40 | 7.27 | 8.35     | 7.80 | 10.57 |
|     | 140 | 3.38     | 3.70 | 4.44 | 5.26     | 5.80 | 6.90 | 7.69     | 8.40 | 10.08 |
|     | 145 | 3.24     | 3.80 | 4.33 | 5.02     | 5.90 | 6.71 | 7.36     | 8.70 | 9.83  |

**LEGEND**

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

\*Refer to compressor capacity notes, page 14.

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)



## COMPRESSOR CAPACITIES (Tons)\* (cont) R-22 (cont)

| SST | SDT | 06DE8251 |       |       | 06DE3281 |       |       | 06DE5371 |       |       |
|-----|-----|----------|-------|-------|----------|-------|-------|----------|-------|-------|
|     |     | Cap.     | kW    | THR   | Cap.     | kW    | THR   | Cap.     | kW    | THR   |
| 0   | 90  | 4.23     | 5.27  | 5.73  | 5.25     | 6.55  | 7.11  | 7.29     | 9.17  | 9.90  |
|     | 100 | 3.81     | 5.54  | 5.39  | 4.81     | 6.90  | 6.77  | 6.72     | 9.67  | 9.48  |
|     | 110 | 3.40     | 5.75  | 5.04  | 4.38     | 7.21  | 6.44  | 6.17     | 10.11 | 9.06  |
|     | 120 | 3.01     | 5.90  | 4.70  | 3.97     | 7.47  | 6.10  | 5.64     | 10.48 | 8.63  |
|     | 130 | 2.64     | 5.99  | 4.35  | 3.58     | 7.68  | 5.77  | 5.13     | 10.79 | 8.20  |
|     | 140 | 2.30     | 6.00  | 4.01  | 3.22     | 7.90  | 5.45  | 4.66     | 11.00 | 7.80  |
|     | 145 | 2.13     | 6.00  | 3.84  | 3.04     | 7.90  | 5.29  | 4.43     | 11.20 | 7.62  |
| 10  | 90  | 5.63     | 5.76  | 7.27  | 6.86     | 7.10  | 8.88  | 9.44     | 10.03 | 12.30 |
|     | 100 | 5.12     | 6.15  | 6.87  | 6.31     | 7.58  | 8.47  | 8.74     | 10.74 | 11.80 |
|     | 110 | 4.62     | 6.49  | 6.47  | 5.79     | 8.02  | 8.07  | 8.06     | 11.37 | 11.30 |
|     | 120 | 4.15     | 6.77  | 6.08  | 5.28     | 8.40  | 7.67  | 7.40     | 11.93 | 10.80 |
|     | 130 | 3.69     | 6.99  | 5.68  | 4.78     | 8.74  | 7.27  | 6.76     | 12.41 | 10.30 |
|     | 140 | 3.27     | 7.10  | 5.30  | 4.34     | 9.90  | 6.91  | 6.18     | 12.80 | 9.83  |
|     | 145 | 3.06     | 7.20  | 5.11  | 4.12     | 9.10  | 6.72  | 5.89     | 13.00 | 9.60  |
| 20  | 90  | 7.34     | 6.15  | 9.09  | 8.82     | 7.50  | 10.96 | 12.06    | 10.69 | 15.11 |
|     | 100 | 6.72     | 6.67  | 8.62  | 8.15     | 8.14  | 10.47 | 11.20    | 11.65 | 14.52 |
|     | 110 | 6.12     | 7.14  | 8.15  | 7.50     | 8.73  | 9.99  | 10.36    | 12.52 | 13.93 |
|     | 120 | 5.53     | 7.56  | 7.69  | 6.87     | 9.27  | 9.51  | 9.55     | 13.29 | 13.33 |
|     | 130 | 4.97     | 7.91  | 7.22  | 6.26     | 9.74  | 9.04  | 8.75     | 13.98 | 12.73 |
|     | 140 | 4.46     | 8.20  | 6.79  | 5.71     | 10.20 | 8.60  | 8.04     | 14.60 | 12.20 |
|     | 145 | 4.20     | 8.30  | 6.57  | 5.44     | 10.40 | 8.39  | 7.68     | 14.90 | 11.93 |
| 30  | 90  | 9.39     | 6.41  | 11.22 | 11.19    | 7.72  | 13.39 | 15.20    | 11.05 | 18.35 |
|     | 100 | 8.65     | 7.07  | 10.66 | 10.37    | 8.55  | 12.81 | 14.15    | 12.30 | 17.66 |
|     | 110 | 7.92     | 7.68  | 10.11 | 9.58     | 9.31  | 12.23 | 13.13    | 13.44 | 16.96 |
|     | 120 | 7.21     | 8.24  | 9.56  | 8.81     | 10.01 | 11.66 | 12.13    | 14.49 | 16.26 |
|     | 130 | 6.53     | 8.75  | 9.02  | 8.05     | 10.65 | 11.09 | 11.16    | 15.42 | 15.55 |
|     | 140 | 5.91     | 9.20  | 8.53  | 7.39     | 11.20 | 10.59 | 10.30    | 16.30 | 14.95 |
|     | 145 | 5.60     | 9.40  | 8.27  | 7.05     | 11.50 | 10.33 | 9.86     | 16.60 | 14.59 |
| 40  | 90  | 11.83    | 6.50  | 13.68 | 14.01    | 7.71  | 16.20 | 18.93    | 11.02 | 22.07 |
|     | 100 | 10.94    | 7.31  | 13.03 | 13.02    | 8.74  | 15.51 | 17.67    | 12.61 | 21.26 |
|     | 110 | 10.08    | 8.08  | 12.38 | 12.06    | 9.70  | 14.83 | 16.44    | 14.08 | 20.45 |
|     | 120 | 9.23     | 8.79  | 11.74 | 11.13    | 10.60 | 14.15 | 15.23    | 15.43 | 19.63 |
|     | 130 | 8.40     | 9.46  | 11.10 | 10.21    | 11.42 | 13.47 | 14.05    | 16.66 | 18.80 |
|     | 140 | 7.67     | 10.10 | 10.54 | 9.42     | 12.20 | 12.89 | 13.02    | 17.80 | 18.09 |
|     | 145 | 7.30     | 10.30 | 10.24 | 9.01     | 12.50 | 12.58 | 12.49    | 18.30 | 17.71 |
| 50  | 90  | 14.50    | 6.40  | 16.32 | 17.09    | 7.40  | 19.20 | 22.99    | 10.50 | 25.98 |
|     | 100 | 13.51    | 7.40  | 15.61 | 15.99    | 8.70  | 18.47 | 21.59    | 12.50 | 25.15 |
|     | 110 | 12.55    | 8.30  | 14.92 | 14.92    | 9.90  | 17.74 | 20.22    | 14.30 | 24.30 |
|     | 120 | 11.61    | 9.20  | 14.22 | 13.87    | 11.00 | 17.01 | 18.88    | 16.00 | 23.44 |
|     | 130 | 10.69    | 10.00 | 13.54 | 12.85    | 12.00 | 16.27 | 17.56    | 17.60 | 22.58 |
|     | 140 | 9.79     | 10.80 | 12.86 | 11.86    | 13.00 | 15.57 | 16.28    | 19.00 | 21.70 |
|     | 145 | 9.34     | 11.20 | 12.52 | 11.37    | 13.40 | 15.19 | 15.65    | 19.70 | 21.26 |

### LEGEND

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

\*Refer to compressor capacity notes, page 14.

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.



**COMPRESSOR CAPACITIES (Tons)\* (cont)**  
**R-22 (cont)**

| SST | SDT | 06EV022 |       |       | 06EW027 |       |       | 06EW033 |       |       | 06EW044 |       |       |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
|     |     | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   |
| 0   | 90  | 9.85    | 12.30 | 13.36 | 12.26   | 15.45 | 16.66 | 13.66   | 17.76 | 18.72 | 18.48   | 24.40 | 25.44 |
|     | 100 | 9.01    | 12.90 | 12.68 | 11.14   | 16.08 | 15.72 | 12.37   | 18.28 | 17.58 | 17.09   | 25.27 | 24.29 |
|     | 110 | 8.20    | 13.40 | 12.02 | 10.07   | 16.59 | 14.80 | 11.06   | 18.55 | 16.35 | 15.74   | 25.99 | 23.14 |
|     | 120 | 7.41    | 13.90 | 11.38 | 9.05    | 16.97 | 13.88 | 9.75    | 18.55 | 15.04 | 14.42   | 26.55 | 21.98 |
|     | 130 | 6.61    | 14.30 | 10.68 | 8.07    | 17.20 | 12.97 | 8.44    | 18.30 | 13.66 | 13.13   | 27.00 | 20.82 |
|     | 140 | 5.75    | 14.70 | 9.94  | 7.13    | 17.30 | 12.06 | 7.14    | 17.60 | 12.16 | 11.87   | 27.30 | 19.65 |
|     | 145 | 5.30    | 14.90 | 9.55  | 6.67    | 17.30 | 11.60 | 6.50    | 17.20 | 11.40 | 11.26   | 27.40 | 19.06 |
| 10  | 90  | 12.78   | 13.40 | 16.60 | 16.18   | 17.15 | 21.07 | 17.96   | 19.70 | 23.58 | 23.83   | 27.11 | 31.56 |
|     | 100 | 11.75   | 14.20 | 15.80 | 14.79   | 18.12 | 19.96 | 16.49   | 20.69 | 22.38 | 22.13   | 28.42 | 30.23 |
|     | 110 | 10.77   | 14.90 | 15.02 | 13.46   | 18.96 | 18.87 | 14.99   | 21.44 | 21.10 | 20.47   | 29.53 | 28.88 |
|     | 120 | 9.80    | 15.60 | 14.25 | 12.18   | 19.64 | 17.78 | 13.47   | 21.92 | 19.72 | 18.84   | 30.47 | 27.52 |
|     | 130 | 8.83    | 16.20 | 13.44 | 10.95   | 20.17 | 16.70 | 11.95   | 22.11 | 18.26 | 17.24   | 31.22 | 26.14 |
|     | 140 | 7.81    | 16.80 | 12.60 | 9.77    | 20.50 | 15.61 | 10.44   | 22.00 | 16.71 | 15.68   | 31.80 | 24.74 |
|     | 145 | 7.28    | 17.10 | 12.15 | 9.20    | 20.60 | 15.07 | 9.69    | 21.80 | 15.90 | 14.91   | 32.00 | 24.03 |
| 20  | 90  | 16.31   | 14.30 | 20.38 | 20.98   | 18.53 | 26.26 | 23.04   | 21.24 | 29.10 | 30.30   | 29.50 | 38.71 |
|     | 100 | 15.05   | 15.40 | 19.44 | 19.28   | 19.92 | 24.95 | 21.35   | 22.73 | 27.82 | 28.23   | 31.34 | 37.16 |
|     | 110 | 13.85   | 16.30 | 18.50 | 17.63   | 21.15 | 23.66 | 19.62   | 23.99 | 26.46 | 26.19   | 32.96 | 35.59 |
|     | 120 | 12.68   | 17.20 | 17.58 | 16.05   | 22.20 | 22.37 | 17.87   | 24.99 | 24.99 | 24.20   | 34.35 | 33.99 |
|     | 130 | 11.50   | 18.10 | 16.65 | 14.52   | 23.08 | 21.09 | 16.11   | 25.70 | 23.44 | 22.23   | 35.54 | 32.36 |
|     | 140 | 10.28   | 18.90 | 15.67 | 13.04   | 23.80 | 19.82 | 14.35   | 26.10 | 21.79 | 20.31   | 36.50 | 30.71 |
|     | 145 | 9.65    | 19.30 | 15.15 | 12.32   | 24.00 | 19.16 | 13.48   | 26.20 | 20.94 | 19.35   | 36.90 | 29.87 |
| 30  | 90  | 20.50   | 14.80 | 24.71 | 26.78   | 19.49 | 32.34 | 28.99   | 22.26 | 35.34 | 38.02   | 31.40 | 46.97 |
|     | 100 | 18.99   | 16.20 | 23.60 | 24.71   | 21.35 | 30.79 | 27.04   | 24.30 | 33.97 | 35.52   | 33.87 | 45.17 |
|     | 110 | 17.53   | 17.50 | 22.52 | 22.70   | 23.04 | 29.26 | 25.06   | 26.11 | 32.50 | 33.06   | 36.09 | 43.35 |
|     | 120 | 16.11   | 18.70 | 21.44 | 20.75   | 24.53 | 27.74 | 23.04   | 27.67 | 30.93 | 30.64   | 38.05 | 41.48 |
|     | 130 | 14.69   | 19.80 | 20.33 | 18.87   | 25.82 | 26.23 | 21.01   | 28.94 | 29.26 | 28.25   | 39.76 | 39.58 |
|     | 140 | 13.24   | 20.90 | 19.20 | 17.04   | 26.90 | 24.71 | 18.97   | 29.90 | 27.49 | 25.90   | 41.20 | 37.64 |
|     | 145 | 12.49   | 21.50 | 18.62 | 16.15   | 27.40 | 23.96 | 17.95   | 30.30 | 26.58 | 24.73   | 41.90 | 36.68 |
| 40  | 90  | 25.43   | 15.00 | 29.71 | 33.71   | 19.88 | 39.37 | 35.91   | 22.68 | 42.37 | 47.14   | 32.64 | 56.44 |
|     | 100 | 23.63   | 16.80 | 28.42 | 31.21   | 22.29 | 37.56 | 33.67   | 25.30 | 40.88 | 44.15   | 35.85 | 54.37 |
|     | 110 | 21.89   | 18.40 | 27.13 | 28.78   | 24.50 | 35.76 | 31.39   | 27.70 | 39.29 | 41.21   | 38.76 | 52.25 |
|     | 120 | 20.18   | 19.90 | 25.86 | 26.42   | 26.50 | 33.98 | 29.08   | 29.85 | 37.58 | 38.30   | 41.38 | 50.09 |
|     | 130 | 18.49   | 21.30 | 24.56 | 24.13   | 28.27 | 32.19 | 26.74   | 31.73 | 35.78 | 35.43   | 43.72 | 47.89 |
|     | 140 | 16.76   | 22.80 | 23.26 | 21.91   | 29.80 | 30.40 | 24.38   | 33.30 | 33.87 | 32.59   | 45.80 | 45.65 |
|     | 145 | 15.89   | 23.50 | 22.58 | 20.82   | 30.50 | 29.51 | 23.20   | 34.00 | 32.89 | 31.19   | 46.70 | 44.50 |
| 50  | 90  | 31.19   | 14.80 | 35.40 | 41.87   | 19.60 | 47.46 | 43.87   | 22.40 | 50.26 | 57.80   | 33.10 | 67.23 |
|     | 100 | 29.05   | 16.90 | 33.87 | 38.89   | 22.60 | 45.34 | 41.32   | 25.60 | 48.61 | 54.26   | 37.10 | 64.84 |
|     | 110 | 26.99   | 18.90 | 32.38 | 36.00   | 25.40 | 43.24 | 38.71   | 28.70 | 46.89 | 50.77   | 40.80 | 62.40 |
|     | 120 | 24.97   | 20.80 | 30.90 | 33.18   | 28.00 | 41.16 | 36.06   | 31.40 | 45.01 | 47.32   | 44.20 | 59.92 |
|     | 130 | 22.96   | 22.60 | 29.40 | 30.43   | 30.30 | 39.07 | 33.38   | 34.00 | 43.07 | 43.91   | 47.30 | 57.39 |
|     | 140 | 20.93   | 24.30 | 27.86 | 27.76   | 32.40 | 36.99 | 30.68   | 36.20 | 41.00 | 40.54   | 50.00 | 54.79 |
|     | 145 | 19.90   | 25.20 | 27.08 | 26.45   | 33.30 | 35.94 | 29.32   | 37.20 | 39.93 | 38.87   | 51.30 | 53.49 |

LEGEND

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

\*Refer to compressor capacity notes, page 14.

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)



## COMPRESSOR CAPACITIES (Tons)\* (cont) R-507/404A

| SST | SDT | 06DH3131 |      |      | 06DA8181 |      |      | 06DE8251 |       |       |
|-----|-----|----------|------|------|----------|------|------|----------|-------|-------|
|     |     | Cap.     | kW   | THR  | Cap.     | kW   | THR  | Cap.     | kW    | THR   |
| -30 | 90  | 1.07     | 2.11 | 1.67 | 1.95     | 3.68 | 3.00 | 2.30     | 4.34  | 3.54  |
|     | 100 | 0.92     | 2.09 | 1.52 | 1.76     | 3.78 | 2.84 | 2.04     | 4.36  | 3.28  |
|     | 110 | 0.79     | 2.05 | 1.37 | 1.58     | 3.84 | 2.67 | 1.77     | 4.34  | 3.01  |
|     | 120 | 0.65     | 1.99 | 1.22 | 1.38     | 3.86 | 2.48 | 1.50     | 4.25  | 2.71  |
|     | 130 | 0.53     | 1.90 | 1.07 | 1.18     | 3.84 | 2.27 | 1.23     | 4.09  | 2.39  |
| -20 | 90  | 1.54     | 2.59 | 2.28 | 2.62     | 4.27 | 3.83 | 3.19     | 5.14  | 4.66  |
|     | 100 | 1.35     | 2.62 | 2.10 | 2.40     | 4.44 | 3.66 | 2.87     | 5.27  | 4.37  |
|     | 110 | 1.17     | 2.63 | 1.92 | 2.17     | 4.58 | 3.47 | 2.54     | 5.34  | 4.07  |
|     | 120 | 1.00     | 2.60 | 1.74 | 1.93     | 4.68 | 3.26 | 2.21     | 5.36  | 3.74  |
|     | 130 | 0.83     | 2.55 | 1.56 | 1.68     | 4.75 | 3.03 | 1.87     | 5.31  | 3.38  |
| -10 | 90  | 2.14     | 3.07 | 3.02 | 3.41     | 4.82 | 4.79 | 4.21     | 5.93  | 5.90  |
|     | 100 | 1.90     | 3.16 | 2.80 | 3.15     | 5.07 | 4.59 | 3.88     | 6.15  | 5.63  |
|     | 110 | 1.67     | 3.22 | 2.58 | 2.87     | 5.29 | 4.38 | 3.48     | 6.33  | 5.28  |
|     | 120 | 1.44     | 3.24 | 2.36 | 2.58     | 5.48 | 4.14 | 3.07     | 6.46  | 4.91  |
|     | 130 | 1.21     | 3.24 | 2.14 | 2.27     | 5.64 | 3.88 | 2.65     | 6.53  | 4.51  |
| 0   | 90  | 2.89     | 3.53 | 3.90 | 4.35     | 5.33 | 5.87 | 5.54     | 6.68  | 7.44  |
|     | 100 | 2.58     | 3.68 | 3.63 | 4.03     | 5.66 | 5.65 | 5.07     | 7.00  | 7.07  |
|     | 110 | 2.28     | 3.80 | 3.36 | 3.70     | 5.97 | 5.40 | 4.59     | 7.29  | 6.67  |
|     | 120 | 1.99     | 3.89 | 3.10 | 3.34     | 6.25 | 5.12 | 4.09     | 7.53  | 6.24  |
|     | 130 | 1.69     | 3.95 | 2.82 | 2.97     | 6.50 | 4.83 | 3.57     | 7.72  | 5.77  |
| 10  | 90  | 3.80     | 4.00 | 4.94 | 5.46     | 5.80 | 7.11 | 7.23     | 7.37  | 9.33  |
|     | 100 | 3.41     | 4.20 | 4.61 | 5.07     | 6.20 | 6.84 | 6.59     | 7.84  | 8.82  |
|     | 110 | 3.04     | 4.40 | 4.29 | 4.67     | 6.60 | 6.55 | 5.95     | 8.26  | 8.30  |
|     | 120 | 2.67     | 4.50 | 3.95 | 4.25     | 7.00 | 6.24 | 5.30     | 8.60  | 7.75  |
|     | 130 | 2.30     | 4.70 | 3.64 | 3.80     | 7.30 | 5.89 | 4.63     | 8.88  | 7.16  |
| 20  | 90  | 4.89     | 4.30 | 6.11 | 6.73     | 6.20 | 8.50 | 9.16     | 7.85  | 11.39 |
|     | 100 | 4.41     | 4.70 | 5.75 | 6.27     | 6.70 | 8.18 | 8.37     | 8.51  | 10.80 |
|     | 110 | 3.95     | 4.90 | 5.35 | 5.79     | 7.20 | 7.85 | 7.58     | 9.09  | 10.17 |
|     | 120 | 3.50     | 5.20 | 4.98 | 5.30     | 7.60 | 7.46 | 6.77     | 9.61  | 9.51  |
|     | 130 | 3.05     | 5.40 | 4.59 | 4.78     | 8.10 | 7.09 | 5.98     | 10.00 | 8.83  |

### LEGEND

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

\*Refer to compressor capacity notes, page 14.

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.



**COMPRESSOR CAPACITIES (Tons)\* (cont)**  
**R-507/404A (cont)**

| SST | SDT | 06DE3281 |       |       | 06DE5371 |       |       |
|-----|-----|----------|-------|-------|----------|-------|-------|
|     |     | Cap.     | kW    | THR   | Cap.     | kW    | THR   |
| -30 | 90  | 2.99     | 5.52  | 4.56  | 4.09     | 7.37  | 6.19  |
|     | 100 | 2.69     | 5.61  | 4.29  | 3.69     | 7.59  | 5.85  |
|     | 110 | 2.37     | 5.61  | 3.97  | 3.30     | 7.77  | 5.51  |
|     | 120 | 2.04     | 5.51  | 3.61  | 2.92     | 7.92  | 5.18  |
|     | 130 | 1.69     | 5.30  | 3.20  | 2.55     | 8.04  | 4.84  |
| -20 | 90  | 4.04     | 6.42  | 5.87  | 5.40     | 8.60  | 7.85  |
|     | 100 | 3.69     | 6.67  | 5.59  | 4.89     | 8.92  | 7.43  |
|     | 110 | 3.32     | 6.84  | 5.27  | 4.38     | 9.20  | 7.00  |
|     | 120 | 2.93     | 6.93  | 4.91  | 3.89     | 9.44  | 6.58  |
|     | 130 | 2.52     | 6.91  | 4.49  | 3.40     | 9.64  | 6.15  |
| -10 | 90  | 5.27     | 7.20  | 7.32  | 7.03     | 9.85  | 9.83  |
|     | 100 | 4.86     | 7.62  | 7.03  | 6.37     | 10.30 | 9.31  |
|     | 110 | 4.43     | 7.97  | 6.70  | 5.72     | 10.70 | 8.77  |
|     | 120 | 3.97     | 8.24  | 6.32  | 5.09     | 11.10 | 8.25  |
|     | 130 | 3.47     | 8.41  | 5.87  | 4.46     | 11.40 | 7.71  |
| 0   | 90  | 6.71     | 7.83  | 8.94  | 9.02     | 11.10 | 12.18 |
|     | 100 | 6.22     | 8.43  | 8.62  | 8.19     | 11.70 | 11.52 |
|     | 110 | 5.71     | 8.96  | 8.26  | 7.37     | 12.20 | 10.84 |
|     | 120 | 5.16     | 9.42  | 7.85  | 6.55     | 12.70 | 10.17 |
|     | 130 | 4.57     | 9.80  | 7.36  | 5.75     | 13.20 | 9.51  |
| 10  | 90  | 8.37     | 8.30  | 10.74 | 11.41    | 12.20 | 14.89 |
|     | 100 | 7.79     | 9.10  | 10.39 | 10.38    | 13.00 | 14.09 |
|     | 110 | 7.18     | 9.80  | 9.98  | 9.36     | 13.70 | 13.27 |
|     | 120 | 6.54     | 10.40 | 9.50  | 8.36     | 14.40 | 12.46 |
|     | 130 | 5.86     | 11.00 | 8.99  | 7.36     | 15.00 | 11.64 |
| 20  | 90  | 10.29    | 8.50  | 12.71 | 14.26    | 13.20 | 18.02 |
|     | 100 | 9.60     | 9.50  | 12.31 | 13.01    | 14.20 | 17.05 |
|     | 110 | 8.89     | 10.40 | 11.85 | 11.76    | 15.20 | 16.09 |
|     | 120 | 8.13     | 11.30 | 11.35 | 10.53    | 16.00 | 15.09 |
|     | 130 | 7.33     | 12.10 | 10.78 | 9.31     | 16.80 | 14.10 |

LEGEND

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

\*Refer to compressor capacity notes, page 14.

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)



## COMPRESSOR CAPACITIES (Tons)\* (cont) R-507/404A (cont)

| SST | SDT | 06EV022 |       |       | 06EW027 |       |       | 06EW033 |       |       | 06EW044 |       |       |
|-----|-----|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|
|     |     | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.    | kW    | THR   |
| -30 | 90  | 5.40    | 11.00 | 8.54  | 6.80    | 12.80 | 10.45 | 7.66    | 15.30 | 12.02 | 10.10   | 20.60 | 15.97 |
|     | 100 | 4.80    | 10.90 | 7.90  | 5.94    | 12.70 | 9.56  | 6.79    | 15.10 | 11.09 | 8.98    | 20.60 | 14.85 |
|     | 110 | 4.16    | 10.70 | 7.21  | 5.11    | 12.50 | 8.67  | 5.89    | 14.80 | 10.11 | 7.85    | 20.40 | 13.66 |
|     | 120 | 3.48    | 10.30 | 6.42  | 4.30    | 12.10 | 7.75  | 4.98    | 14.30 | 9.06  | 6.73    | 20.00 | 12.43 |
|     | 130 | 2.78    | 9.57  | 5.50  | 3.54    | 11.70 | 6.87  | 4.06    | 13.50 | 7.91  | 5.62    | 19.40 | 11.15 |
| -20 | 90  | 7.40    | 13.00 | 11.11 | 9.35    | 15.40 | 13.73 | 10.61   | 18.30 | 15.83 | 13.50   | 24.30 | 20.42 |
|     | 100 | 6.71    | 13.20 | 10.48 | 8.28    | 15.50 | 12.69 | 9.56    | 18.40 | 14.80 | 12.15   | 24.60 | 19.16 |
|     | 110 | 5.98    | 13.30 | 9.77  | 7.23    | 15.40 | 11.62 | 8.48    | 18.30 | 13.70 | 10.79   | 24.70 | 17.83 |
|     | 120 | 5.21    | 13.20 | 8.97  | 6.21    | 15.20 | 10.54 | 7.37    | 18.10 | 12.53 | 9.42    | 24.70 | 16.46 |
|     | 130 | 4.39    | 12.90 | 8.07  | 5.22    | 14.90 | 9.47  | 6.23    | 17.60 | 11.25 | 8.05    | 24.40 | 15.01 |
| -10 | 90  | 9.74    | 14.90 | 13.99 | 12.47   | 18.00 | 17.60 | 14.13   | 21.20 | 20.17 | 17.56   | 28.10 | 25.57 |
|     | 100 | 8.94    | 15.40 | 13.33 | 11.14   | 18.30 | 16.36 | 12.87   | 21.70 | 19.06 | 15.94   | 28.80 | 24.15 |
|     | 110 | 8.10    | 15.80 | 12.60 | 9.83    | 18.50 | 15.10 | 11.57   | 21.90 | 17.81 | 14.28   | 29.30 | 22.64 |
|     | 120 | 7.20    | 16.00 | 11.76 | 8.55    | 18.50 | 13.82 | 10.23   | 22.00 | 16.50 | 12.61   | 29.60 | 21.05 |
|     | 130 | 6.23    | 16.10 | 10.82 | 7.30    | 18.40 | 12.54 | 8.82    | 21.80 | 15.04 | 10.94   | 29.70 | 19.40 |
| 0   | 90  | 12.46   | 16.70 | 17.22 | 16.25   | 20.70 | 22.15 | 18.30   | 24.20 | 25.20 | 22.40   | 32.10 | 31.54 |
|     | 100 | 11.53   | 17.50 | 16.51 | 14.62   | 21.30 | 20.69 | 16.79   | 24.90 | 23.89 | 20.43   | 33.10 | 29.87 |
|     | 110 | 10.54   | 18.20 | 15.72 | 12.99   | 21.80 | 19.21 | 15.23   | 25.60 | 22.53 | 18.43   | 34.00 | 28.12 |
|     | 120 | 9.48    | 18.70 | 14.80 | 11.39   | 22.00 | 17.66 | 13.60   | 26.00 | 21.01 | 16.39   | 34.70 | 26.28 |
|     | 130 | 8.33    | 19.10 | 13.77 | 9.82    | 22.20 | 16.14 | 11.88   | 26.20 | 19.35 | 14.34   | 35.20 | 24.37 |
| 10  | 90  | 15.61   | 18.40 | 20.85 | 20.74   | 23.40 | 27.41 | 23.20   | 26.80 | 30.83 | 28.06   | 35.80 | 38.26 |
|     | 100 | 14.50   | 19.50 | 20.06 | 18.76   | 24.30 | 25.69 | 21.47   | 28.20 | 29.51 | 25.71   | 37.50 | 36.39 |
|     | 110 | 13.33   | 20.50 | 19.17 | 16.79   | 25.10 | 23.95 | 19.50   | 29.30 | 27.85 | 23.31   | 38.90 | 34.39 |
|     | 120 | 12.09   | 21.20 | 18.13 | 14.84   | 25.70 | 22.17 | 17.56   | 30.00 | 26.11 | 20.87   | 39.90 | 32.24 |
|     | 130 | 10.78   | 21.90 | 17.02 | 12.92   | 26.20 | 20.38 | 15.55   | 30.60 | 24.27 | 18.41   | 40.70 | 30.01 |
| 20  | 90  | 19.23   | 19.90 | 24.90 | 26.05   | 26.10 | 33.49 | 28.89   | 29.40 | 37.27 | 34.67   | 39.60 | 45.96 |
|     | 100 | 17.92   | 21.30 | 23.99 | 23.68   | 27.40 | 31.49 | 26.73   | 31.30 | 35.65 | 31.87   | 41.80 | 43.79 |
|     | 110 | 16.55   | 22.50 | 22.96 | 21.31   | 28.50 | 29.43 | 24.51   | 32.80 | 33.86 | 29.02   | 43.70 | 41.48 |
|     | 120 | 15.10   | 23.50 | 21.80 | 18.96   | 29.50 | 27.37 | 22.21   | 34.00 | 31.90 | 26.13   | 45.10 | 38.98 |
|     | 130 | 13.58   | 24.50 | 20.56 | 16.63   | 30.30 | 25.26 | 19.83   | 35.00 | 29.81 | 23.19   | 46.40 | 36.42 |

### LEGEND

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

\*Refer to compressor capacity notes.

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.

## COMPRESSOR CAPACITY NOTES

- Compressor capacities are based on 1750 rpm and 15 F subcooling.
- Liquid subcooling, greater than (less than) the 15 F incorporated in the ratings, increases (decreases) system capacity by 1/2 of 1% for each degree of subcooling for R-22 and increases (decreases) system capacity by 6/10 of 1% for R-134A and R-507/404A. When correcting for subcooling, power input does not change. Adjusted total heat rejection (tons) equals adjusted capacity + .285 x kW input.
- Refrigerant temperatures shown are saturation temperatures corresponding to pressure indicated at compressor. Actual gas temperatures are higher because of superheat.
- Capacities are based on actual suction gas temperatures to the compressor of 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 ratings can be used without adjustment.



### RATING BASIS AND CAPACITY MULTIPLIERS

| SST (F) | RATED SUCTION GAS TEMP (F) | ACTUAL SUCTION GAS TEMPERATURE TO COMPRESSOR (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 |
| 0       |                            |  |      |      | .870 | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| 10      |                            |  |      |      |      | .890 | .910 | .930 | .950 | .970 | .990 | 1.000 |
| 20      |                            |  |      |      |      |      | .910 | .930 | .950 | .970 | .990 | 1.000 |
| 30      |                            |  |      |      |      |      |      | .930 | .950 | .970 | .990 | 1.000 |
| 40      |                            |  |      |      |      |      |      |      | .950 | .970 | .990 | 1.000 |
| 50      |                            |  |      |      |      |      |      |      |      | .970 | .990 | 1.000 |
|         |                            |  |      |      |      |      |      |      |      | .997 | .999 | 1.000 |

R-507/404A

R-134a

SST — Saturated Suction Temperature

#### CAPACITY CONTROL REDUCTION STEPS\* AND PART-LOAD PERFORMANCE

| UNIT 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.

#### ARI STANDARD RATING CONDITIONS

| GROUP          | SST (F) | SDT (F) | RGT (F) | SUBCOOLING (F) |
|----------------|---------|---------|---------|----------------|
| A (R-22)       | 45      | 130     | 65      | 15             |
| C (R-134a)     | 20      | 120     | 65      | 15             |
| E (R-507/404A) | -10     | 105     | 65      | 5              |

#### LEGEND

ARI — Air Conditioning and Refrigeration Institute  
 RGT — Return Gas Temperature  
 SDT — Saturated Discharge Temperature  
 SST — Saturated Suction Temperature

NOTE: Ratings are in accordance with ARI Standard 520.

#### ARI STANDARD RATINGS

| COMPR 06 |       | GROUP A |       |       | GROUP C |       |       | GROUP E    |       |       |
|----------|-------|---------|-------|-------|---------|-------|-------|------------|-------|-------|
|          |       | R-22    |       |       | R-134A  |       |       | R-507/404A |       |       |
|          |       | Cap.    | kW    | THR   | Cap.    | kW    | THR   | Cap.       | kW    | THR   |
| D        | A8081 | 3.28    | 3.40  | 4.23  | —       | —     | —     | —          | —     | —     |
|          | H3131 | 5.12    | 5.20  | 6.61  | 1.84    | 2.60  | 2.58  | 1.69       | 3.20  | 2.60  |
|          | A8181 | 7.46    | 7.60  | 9.63  | 3.02    | 4.00  | 4.17  | 2.86       | 5.20  | 4.33  |
|          | E8251 | 9.51    | 9.80  | 12.29 | 3.79    | 5.00  | 5.20  | 3.49       | 6.20  | 5.27  |
|          | E3281 | 11.49   | 11.70 | 14.83 | 4.67    | 6.20  | 6.43  | 4.41       | 7.80  | 6.63  |
|          | E5371 | 15.76   | 17.20 | 20.64 | 6.43    | 8.40  | 8.83  | 5.74       | 10.50 | 8.73  |
| E        | V022  | 20.72   | 22.00 | 26.97 | 6.95    | 9.60  | 9.68  | 8.09       | 15.70 | 12.56 |
|          | W027  | 27.26   | 29.30 | 35.60 | 9.05    | 12.40 | 12.58 | 9.95       | 18.40 | 15.20 |
|          | W033  | 30.06   | 32.90 | 39.43 | 11.05   | 15.00 | 15.30 | 11.61      | 21.90 | 17.83 |
|          | W044  | 39.66   | 45.60 | 52.61 | 14.82   | 21.00 | 20.79 | 14.35      | 29.10 | 22.64 |

#### LEGEND

Cap. — Capacity (tons)  
 kW — Power Input  
 THR — Total Heat Rejection (tons)

NOTE: Ratings are in accordance with ARI Standard 520.

# 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 motor with correct compressor 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 motor part numbers 06DR and 50 Hz units (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<br>XA461<br>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<br>XA469<br>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<br>XA430<br>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<br>XA551<br>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 motor with correct compressor 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).

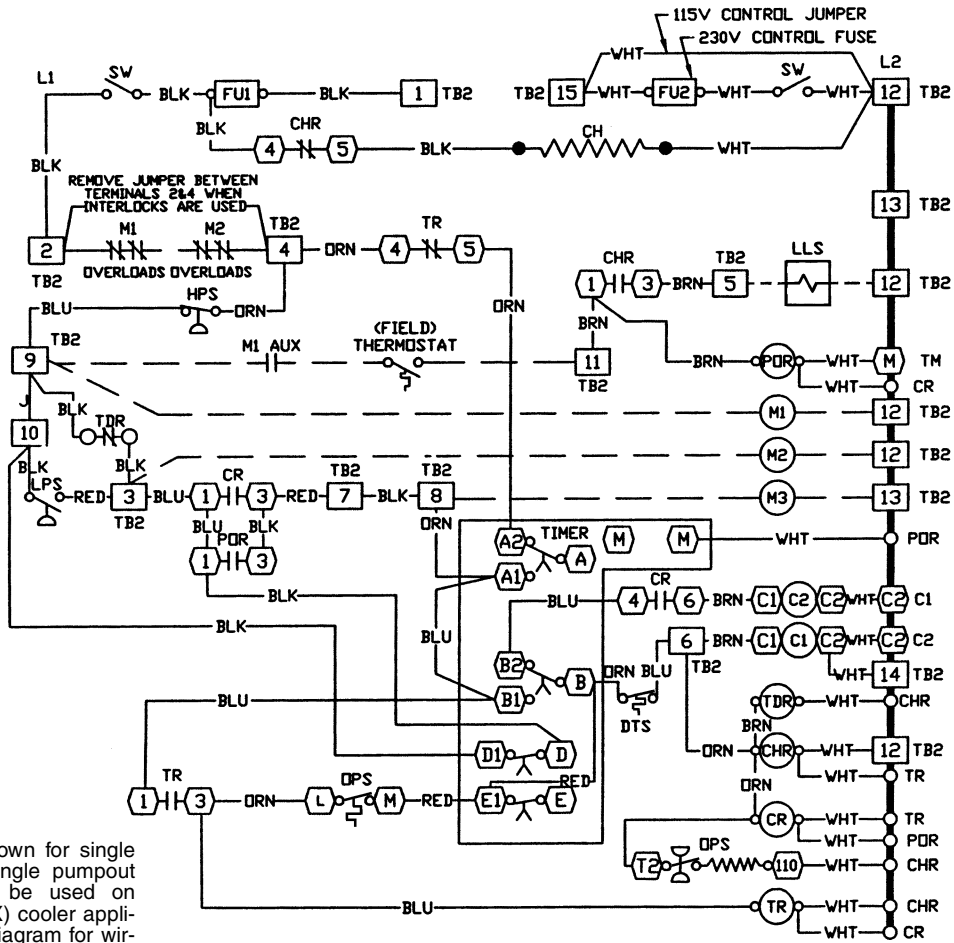
4. Recommended RLA value shown is determined by: circuit breaker must trip value ÷ 1.40. Use this recommended (and minimum) RLA value to determine nameplate stamping, minimum contactor sizing, and wire sizing. **RECOMMENDED RLA FOR 06E COMPRESSORS EQUALS: MUST-TRIP (MTA) OF CARLYLE APPROVED OVERCURRENT 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 motor part numbers 06ER, 06EM and 50 Hz units (not shown) are available from Carrier Sales Representative.

**ALLOWABLE OPERATING RANGES**

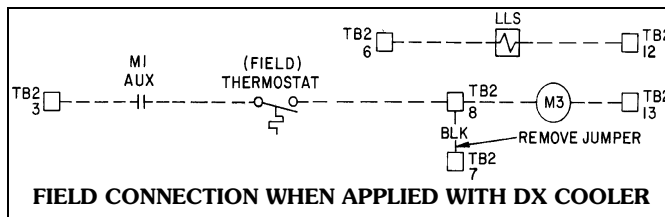
| NOMINAL VOLTAGE | MAXIMUM | MINIMUM |
|-----------------|---------|---------|
| 208/230         | 254     | 187     |
| 460             | 529     | 414     |
| 575             | 661     | 518     |



### CONTROL CIRCUIT WIRING FOR 06E UNITS



NOTE: Wiring is shown for single pumpout control. Single pumpout control should not be used on direct expansion (DX) cooler applications (see lower diagram for wiring when applied with DX cooler).










# Typical wiring schematics (cont)



## LEGEND AND NOTES FOR TYPICAL WIRING SCHEMATICS 06D AND 06E

### LEGEND

|              |  |   |   |
|--------------|--|---|---|
| <b>AUX</b>   | — Auxiliary  | <b>POR</b>  | — Pumpout Relay   |
| <b>C</b>     | — Compressor Contactor                                       | <b>PW</b>   | — Part Winding  |
| <b>C1</b>    | — Compressor Contactor (XL start and first step of PW start) | <b>SW</b>   | — Start-Stop-Reset Switch                                   |
| <b>C2</b>    | — Compressor Contactor (PW second step)                      | <b>TB</b>   | — Terminal Block  |
| <b>CH</b>    | — Crankcase Heater   | <b>TDR</b>  | — Time Delay Relay  |
| <b>CHR</b>   | — Crankcase Heater Relay                                     | <b>TM</b>   | — Timer Motor   |
| <b>CR</b>    | — Control Relay  | <b>TR</b>   | — Timer Relay   |
| <b>DTS</b>   | — Discharge Temperature Sensor                               | <b>XL</b>   | — Across the Line   |
| <b>DX</b>    | — Direct Expansion   |  | Terminal Block Connector                                    |
| <b>EQUIP</b> | — Equipment  |  | Unmarked Terminal   |
| <b>FU</b>    | — Fuse   |  | Marked Terminal   |
| <b>GND</b>   | — Ground   |  | Factory Wiring  |
| <b>HPS</b>   | — High-Pressure Switch                                       |  | Field Control Wiring  |
| <b>IP</b>    | — Internal Protector   |  | To indicate common potential only; not to represent wiring. |
| <b>LLS</b>   | — Liquid Line Solenoid Valve                                 |  | Splice  |
| <b>LPS</b>   | — Low-Pressure Switch  |   |   |
| <b>M1</b>    | — Evaporator Fan or Chilled Water Pump                       |   |   |
| <b>M2</b>    | — Cooling Tower pump   |   |   |
| <b>M3</b>    | — Cooling Tower Fan  |   |   |
| <b>NEC</b>   | — National Electrical Code                                   |   |   |
| <b>OL</b>    | — Overload   |   |   |
| <b>OPS</b>   | — Oil-Pressure Switch  |   |   |

### NOTES:

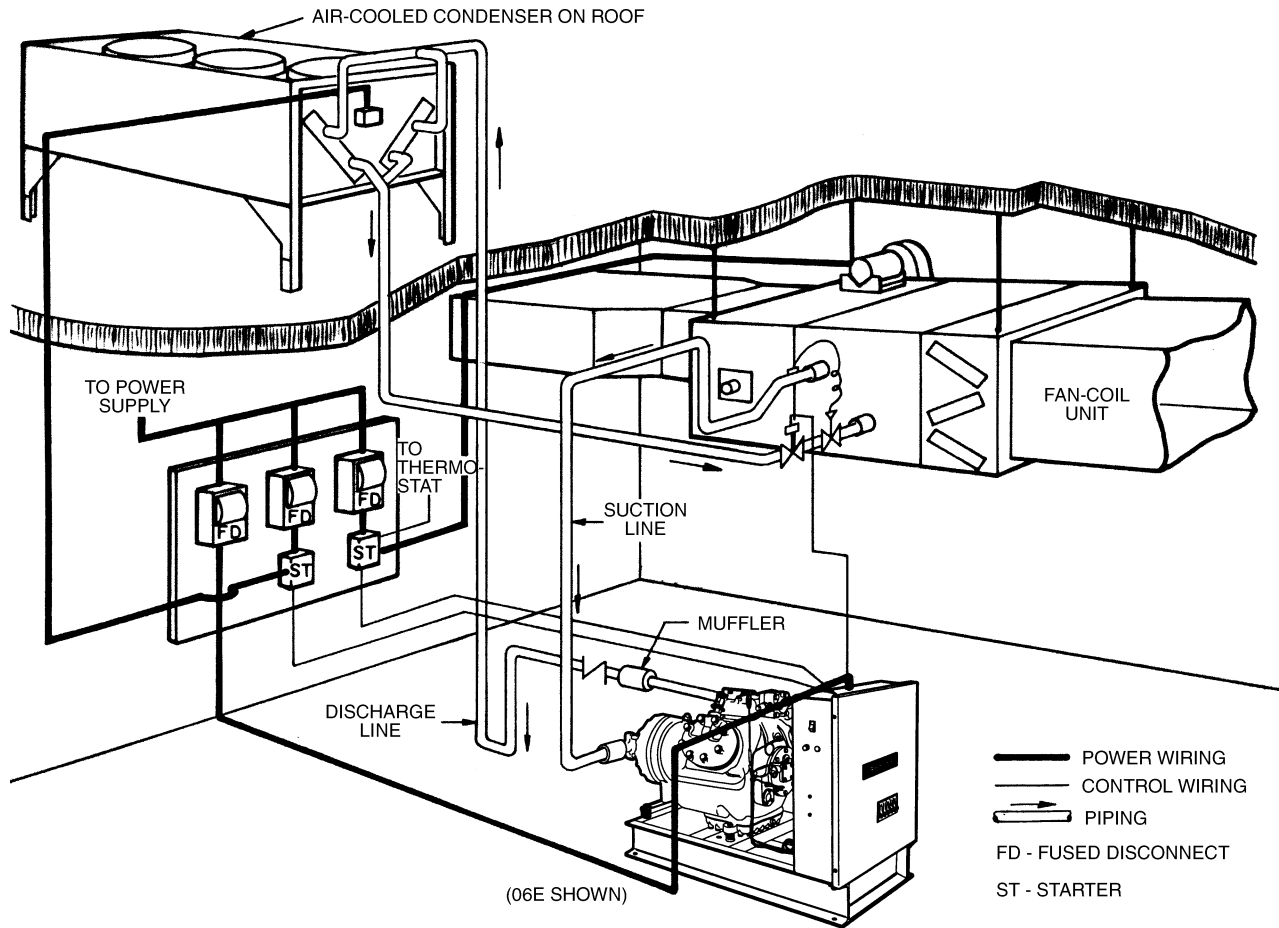
1. Factory wiring is in compliance with NEC. Any field modifications or additions must be in compliance with all applicable codes. Use copper, copper-clad aluminum for field power supply only.
2. Field power supply wiring must be 75 C minimum.
3. Compressor thermally protected. Three-phase motors are 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 L1 (Hot Side) and

L2 (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 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.
4. On all remote condenser units, a discharge line check valve is required and located after the muffler, as close to the compressor as possible.

# 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.

# Guide specifications



## 06D and 06E Semi-Hermetic Reciprocating Compressor Unit

### HVAC Guide Specifications

Size Range: **3 to 15 tons**

Carrier Part Number: **06D**

Size Range: **20 to 40 tons**

Carrier Part Number: **06E**

#### Part 1 — General

##### 1.01 SYSTEM DESCRIPTION

Reciprocating type, semi-hermetic refrigerant compressor for use with refrigerants R-22, R134a, or R-507/404A.

##### 1.02 QUALITY ASSURANCE

- A. A. Unit performance shall be rated according to ARI 520 latest edition and comply with ANSI/ASHRAE 15 safety code, NEC, and ASME Code.
- B. Compressors 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 compressor unit. Contained within the package shall be a semi-hermetic reciprocating compressor, structural steel base, control panel, power terminal box, wiring, piping, and controls required prior to field start-up.

###### B. Compressors:

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. Unit mounted on vibration isolators.

##### C. 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. Factory assembled control box to be tested and mounted on structural base.
- 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.

##### D. Electrical Requirements:

All control and power wiring between control box and compressor shall be factory assembled.

##### E. Special Features:

Certain standard features are removed and replaced by those features designated by \* below. 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. Water-Cooled Condenser:

Multipass shell and tube with integral finned copper tubes for field installation. Shall be factory tested to comply with ASME Code for unfired pressure vessels, ARI Standard 450 for condensers, and ANSI/ASHRAE safety code. Equipped with pressure relief, liquid line shutoff, and connection for water regulating valve.

###### \* 3. Discharge Muffler:

Field installed discharge line muffler for noise reduction.



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