

# 500RB SOLENOID VALVES

## APPLICATION

- ☆ Pilot-operated, 2-way, normally open valves
- ☆ Ideal for liquid or discharge gas refrigerant service

## FEATURES AND SPECIFICATIONS

- ☆ One coil fits all valve sizes
- ☆ Extended ends for easy installation
- ☆ Low pressure differential required for full opening
- ☆ Connection sizes to fit your system
- ☆ Maximum fluid temp: 250°F
- ☆ Maximum working pressure: 500 psig
- ☆ MOPD: 300 psig
- ☆ UL file number: MP604
- ☆ CSA file number: LR44912
- ☆ CRN file number: OC0824.9 (see page A)



*NOTE: Coil sold separately - see page 36 of Catalogue. See Nomenclature for ordering information.*

**NOTE: This valve requires an ASC2 style coil assembly.**

*NOTE: Mounting enclosing tube more than 90° off vertical up position is not recommended.*

## NOMENCLATURE

Example: 500RB 4T3 VLC

**FOR EXTENDED CAPACITY TABLES OF 500RB VALVES REFER TO 200RB CAPACITIES BEGINNING ON PAGE 2.**

| <b>500R</b>  | <b>B</b>      | <b>4</b>             | <b>T</b>  | <b>3</b>                  | <b>VLC</b> |
|--------------|---------------|----------------------|---|---------------------------|------------|
| Valve Series | Design Series | Port Size (in 1/16") | Connection Type<br>F = SAE<br>T = ODF (Extended Copper Fittings)<br>P = FPT<br>S = ODF inlet/ODM outlet | Connection Size (in 1/8") | Coil*      |

# SOLENOID SUCTION GAS CAPACITIES

| TONS   |                            |     |     |     |     |
|--|----------------------------|-----|-----|-----|-----|
| SUCTION GAS CAPACITIES @ 2 PSI PRESSURE DROP |                            |     |     |     |     |
| VALVE SERIES                                 | Evaporator Temperature - F |     |     |     |     |
|  | 40                         | 20  | 0   | -20 | -40 |
| <b>R-12</b>                                  |                            |     |     |     |     |
| 240/540RA8                                   | 1.0                        | 0.8 | 0.6 | 0.5 | 0.4 |
| 240/540RA9T5                                 | 1.3                        | 1.1 | 0.9 | 0.7 | 0.5 |
| 240/540RA9                                   | 1.6                        | 1.3 | 1.0 | 0.8 | 0.6 |
| 240/540RA12                                  | 2.0                        | 1.6 | 1.2 | 1.0 | 0.7 |
| 240/540RA16                                  | 3.9                        | 3.2 | 2.5 | 1.9 | 1.5 |
| 240/540RA20                                  | 5.5                        | 4.5 | 3.5 | 2.7 | 2.1 |
| <b>R-22/R-407C</b>                           |                            |     |     |     |     |
| 240/540RA8                                   | 1.5                        | 1.2 | 1.0 | 0.8 | 0.6 |
| 240/540RA9T5                                 | 2.0                        | 1.6 | 1.3 | 1.0 | 0.8 |
| 240/540RA9                                   | 2.4                        | 2.0 | 1.6 | 1.2 | 1.0 |
| 240/540RA12                                  | 2.9                        | 2.4 | 1.9 | 1.5 | 1.2 |
| 240/540RA16                                  | 5.8                        | 4.7 | 3.8 | 3.0 | 2.3 |
| 240/540RA20                                  | 8.2                        | 6.7 | 5.4 | 4.2 | 3.3 |

| TONS   |                            |     |     |     |     |
|--|----------------------------|-----|-----|-----|-----|
| SUCTION GAS CAPACITIES @ 2 PSI PRESSURE DROP |                            |     |     |     |     |
| VALVE SERIES                                 | Evaporator Temperature - F |     |     |     |     |
|  | 40                         | 20  | 0   | -20 | -40 |
| <b>R-134a</b>                                |                            |     |     |     |     |
| 240/540RA8                                   | 0.8                        | 0.6 | 0.5 | 0.4 | 0.3 |
| 240/540RA9T5                                 | 1.4                        | 1.1 | 0.8 | 0.6 | 0.4 |
| 240/540RA9                                   | 1.7                        | 1.4 | 1.1 | 0.8 | 0.5 |
| 240/540RA12                                  | 1.9                        | 1.5 | 1.2 | 0.9 | 0.6 |
| 240/540RA16                                  | 3.2                        | 2.5 | 1.9 | 1.4 | 1.0 |
| 240/540RA20                                  | 4.4                        | 3.5 | 2.7 | 2.0 | 1.6 |
| <b>R-404A/R-507</b>                          |                            |     |     |     |     |
| 240/540RA8                                   | 0.9                        | 0.7 | 0.5 | 0.4 | 0.3 |
| 240/540RA9T5                                 | 1.5                        | 1.2 | 0.9 | 0.7 | 0.5 |
| 240/540RA9                                   | 1.9                        | 1.5 | 1.2 | 0.9 | 0.6 |
| 240/540RA12                                  | 2.2                        | 1.8 | 1.4 | 1.0 | 0.8 |
| 240/540RA16                                  | 3.4                        | 2.7 | 2.1 | 1.6 | 1.2 |
| 240/540RA20                                  | 4.8                        | 3.8 | 2.9 | 2.2 | 1.6 |

# LIQUID CORRECTION FACTORS FOR SOLENOIDS

## EVAPORATOR TEMPERATURE CORRECTION FACTORS FOR LIQUID, DISCHARGE AND SUCTION SERVICE REFRIGERATION ONLY

| LIQUID SERVICE            |    |      |     |     |     |     |     |     |     |     |
|---------------------------|----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| EVAPORATOR TEMPERATURE °F | 40 | 30   | 20  | 10  | 0   | -10 | -20 | -30 | -40 |     |
| MULTIPLIER                |    | 1.00 | .96 | .92 | .88 | .84 | .80 | .77 | .74 | .71 |

# SOLENOID LIQUID CAPACITIES

| TONS                             |      |      |       |       |
|----------------------------------|------|------|-------|-------|
| LIQUID CAPACITIES                |      |      |       |       |
| Pressure Drop Across Valve - psi |      |      |       |       |
| VALVE SERIES                     | 1    | 2    | 3     | 4     |
| <b>R-12</b>                      |      |      |       |       |
| 710RA/713RA12                    | 13.1 | 19.7 | 25.3  | 33.2  |
| 710RA/713RA16                    | 19.9 | 24.9 | 34.9  | 44.8  |
| 710RA/713RA20                    | 27.7 | 43.2 | 53.1  | 68.9  |
| 710RA24                          | 44.0 | 62.3 | 76.4  | 99.6  |
| <b>R-22</b>                      |      |      |       |       |
| 710RA/713RA12                    | 17.2 | 25.8 | 32.9  | 43.6  |
| 710RA/713RA16                    | 25.7 | 36.8 | 45.4  | 58.3  |
| 710RA/713RA20                    | 36.3 | 56.7 | 69.6  | 89.8  |
| 710RA24                          | 56.7 | 80.8 | 100.0 | 133.3 |
| <b>R-134a</b>                    |      |      |       |       |
| 710RA/713RA12                    | 15.8 | 23.8 | 3.4   | 40.0  |
| 710RA/713RA16                    | 24.0 | 30.0 | 42.0  | 54.0  |
| 710RA/713RA20                    | 33.4 | 52.0 | 64.0  | 83.0  |
| 710RA24                          | 53.0 | 75.0 | 92.0  | 120.0 |
| <b>R-404A/R-507</b>              |      |      |       |       |
| 710RA/713RA12                    | 11.5 | 17.2 | 21.9  | 29.1  |
| 710RA/713RA16                    | 17.2 | 24.6 | 30.3  | 38.9  |
| 710RA/713RA20                    | 24.3 | 37.9 | 46.5  | 60.0  |
| 710RA24                          | 38.3 | 54.2 | 66.7  | 87.5  |
| <b>R-407C</b>                    |      |      |       |       |
| 710RA/713RA12                    | 16.4 | 24.5 | 31.3  | 41.5  |
| 710RA/713RA16                    | 24.4 | 35.0 | 43.2  | 55.5  |
| 710RA/713RA20                    | 34.5 | 54.0 | 66.3  | 84.4  |
| 710RA24                          | 54.0 | 76.9 | 95.2  | 126.9 |

| TONS                             |      |      |       |       |
|----------------------------------|------|------|-------|-------|
| LIQUID CAPACITIES                |      |      |       |       |
| Pressure Drop Across Valve - psi |      |      |       |       |
| VALVE SERIES                     | 2    | 3    | 4     | 5     |
| <b>R-22</b>                      |      |      |       |       |
| 50RB                             | 0.44 | 0.54 | 0.62  | 0.69  |
| 100RB                            | 1.04 | 1.27 | 1.47  | 1.64  |
| 200RB2                           | 2.5  | 3.1  | 3.6   | 4.0   |
| 200RB3                           | 3.9  | 4.8  | 5.5   | 6.2   |
| 200/500RB4                       | 4.6  | 5.6  | 6.5   | 7.2   |
| 200/500RB5                       | 6.7  | 8.2  | 9.5   | 10.6  |
| 200/500RB6                       | 8.2  | 10.0 | 11.5  | 12.9  |
| 200/500RB7                       | 12.7 | 15.6 | 18.0  | 20.1  |
| 200RB9 (5/8)                     | 19.0 | 23.3 | 26.9  | 30.1  |
| 200RB9 (7/8, 1 1/2)              | 24.9 | 30.5 | 35.2  | 39.4  |
| 200RB12                          | 28.5 | 34.9 | 40.3  | 45.1  |
| 240/540RA8                       | 12.7 | 15.6 | 18.0  | 20.1  |
| 240/540RA9T (5/8)                | 19.0 | 23.3 | 26.9  | 30.1  |
| 240/540RA9T (7/8, 1 1/2)         | 24.9 | 30.5 | 35.2  | 39.4  |
| 240/540RA12                      | 28.5 | 34.9 | 40.3  | 45.1  |
| 240/540RA16                      | 47.4 | 58.0 | 67.0  | 74.9  |
| 240/540RA20                      | 77.9 | 95.4 | 110.2 | 123.2 |

All liquid capacities are based on a 40°F Evaporator Temperature and 100°F Liquid Temperature.

# SOLENOID LIQUID CAPACITIES CONTINUED

## TONS

| LIQUID CAPACITIES                |      |      |       |       |
|----------------------------------|------|------|-------|-------|
| Pressure Drop Across Valve - psi |      |      |       |       |
| VALVE SERIES                     | 2    | 3    | 4     | 5     |
| <b>R-134a</b>                    |      |      |       |       |
| 50RB                             | 0.41 | 0.5  | 0.6   | 0.6   |
| 100RB                            | 0.96 | 1.2  | 1.4   | 1.5   |
| 200RB2                           | 2.4  | 2.9  | 3.4   | 3.8   |
| 200RB3                           | 3.6  | 4.4  | 5.1   | 5.7   |
| 200/500RB4                       | 4.3  | 5.3  | 6.1   | 6.8   |
| 200/500RB5                       | 6.4  | 7.8  | 9.1   | 10.1  |
| 200/500RB6                       | 7.7  | 9.4  | 10.9  | 12.2  |
| 200/500RB7                       | 12.1 | 14.8 | 17.1  | 19.1  |
| 200RB9 (5/8)                     | 18.0 | 22.0 | 25.5  | 28.5  |
| 200RB9 (7/8, 1 1/2)              | 23.6 | 28.9 | 33.4  | 37.3  |
| 200RB12                          | 27.1 | 33.2 | 38.3  | 42.8  |
| 240/540RA8                       | 12.1 | 14.8 | 17.1  | 19.1  |
| 240/540RA9T (5/8)                | 18.0 | 22.0 | 25.5  | 28.5  |
| 240/540RA9T (7/8, 1 1/2)         | 23.6 | 28.9 | 33.4  | 37.3  |
| 240/540RA12                      | 27.1 | 33.2 | 38.3  | 42.8  |
| 240/540RA16                      | 45.0 | 55.1 | 63.6  | 71.2  |
| 240/540RA20                      | 70.9 | 86.8 | 100.3 | 112.1 |

## TONS

| LIQUID CAPACITIES                |      |      |      |      |
|----------------------------------|------|------|------|------|
| Pressure Drop Across Valve - psi |      |      |      |      |
| VALVE SERIES                     | 2    | 3    | 4    | 5    |
| <b>R-404A/R-507</b>              |      |      |      |      |
| 50RB                             | 0.3  | 0.34 | 0.4  | 0.4  |
| 100RB                            | 0.7  | 0.85 | 1.0  | 1.1  |
| 200RB2                           | 1.7  | 2.1  | 2.4  | 2.7  |
| 200RB3                           | 2.6  | 3.2  | 3.7  | 4.1  |
| 200/500RB4                       | 3.0  | 3.7  | 4.3  | 4.8  |
| 200/500RB5                       | 4.4  | 5.4  | 6.2  | 7.0  |
| 200/500RB6                       | 5.3  | 6.5  | 7.5  | 8.4  |
| 200/500RB7                       | 8.4  | 10.3 | 11.9 | 13.3 |
| 200RB9 (5/8)                     | 12.5 | 15.3 | 17.7 | 19.8 |
| 200RB9 (7/8, 1 1/2)              | 16.4 | 20.1 | 23.2 | 25.9 |
| 200RB12                          | 18.8 | 23.0 | 26.6 | 29.7 |
| 240/540RA8                       | 8.4  | 10.3 | 11.9 | 13.3 |
| 240/540RA9T (5/8)                | 12.5 | 15.3 | 17.7 | 19.8 |
| 240/540RA9T (7/8, 1 1/2)         | 16.4 | 20.1 | 23.2 | 25.9 |
| 240/540RA12                      | 18.8 | 23.0 | 26.6 | 29.7 |
| 240/540RA16                      | 31.3 | 38.3 | 44.2 | 49.4 |
| 240/540RA20                      | 53.6 | 65.7 | 75.9 | 84.8 |

## TONS

| LIQUID CAPACITIES                |      |      |       |       |
|----------------------------------|------|------|-------|-------|
| Pressure Drop Across Valve - psi |      |      |       |       |
| VALVE SERIES                     | 2    | 3    | 4     | 5     |
| <b>R-407C</b>                    |      |      |       |       |
| 50RB                             | 0.4  | 0.51 | 0.6   | 0.7   |
| 100RB                            | 1.0  | 1.21 | 1.4   | 1.6   |
| 200RB2                           | 2.4  | 2.9  | 3.3   | 3.7   |
| 200RB3                           | 3.7  | 4.5  | 5.2   | 5.8   |
| 200/500RB4                       | 4.3  | 5.3  | 6.1   | 6.8   |
| 200/500RB5                       | 6.4  | 7.8  | 9.0   | 10.1  |
| 200/500RB6                       | 7.8  | 9.5  | 11.0  | 12.3  |
| 200/500RB7                       | 12.1 | 14.8 | 17.1  | 19.1  |
| 200RB9 (5/8)                     | 18.1 | 22.2 | 25.6  | 28.7  |
| 200RB9 (7/8, 1 1/2)              | 23.7 | 29.0 | 33.5  | 37.4  |
| 200RB12                          | 27.1 | 33.2 | 38.3  | 42.9  |
| 240/540RA8                       | 12.1 | 14.8 | 17.1  | 19.1  |
| 240/540RA9T (5/8)                | 18.0 | 22.1 | 25.5  | 28.5  |
| 240/540RA9T (7/8, 1 1/2)         | 23.7 | 29.0 | 33.5  | 37.4  |
| 240/540RA12                      | 27.1 | 33.2 | 38.3  | 42.9  |
| 240/540RA16                      | 45.1 | 55.2 | 63.7  | 71.3  |
| 240/540RA20                      | 74.1 | 90.8 | 104.8 | 117.2 |

## TONS

| LIQUID CAPACITIES                |      |      |      |      |
|----------------------------------|------|------|------|------|
| Pressure Drop Across Valve - psi |      |      |      |      |
| VALVE SERIES                     | 2    | 3    | 4    | 5    |
| <b>R-12</b>                      |      |      |      |      |
| 50RB                             | 0.34 | 0.42 | 0.48 | 0.54 |
| 100RB                            | 0.8  | 1    | 1.16 | 1.2  |
| 200RB2                           | 2.0  | 2.4  | 2.8  | 3.2  |
| 200RB3                           | 3.0  | 3.7  | 4.2  | 4.7  |
| 200/500RB4                       | 3.6  | 4.4  | 5.1  | 5.7  |
| 200/500RB5                       | 5.3  | 6.5  | 7.5  | 8.4  |
| 200/500RB6                       | 6.4  | 7.8  | 9.1  | 10.1 |
| 200/500RB7                       | 10.0 | 12.2 | 14.1 | 15.8 |
| 200RB9 (5/8)                     | 14.9 | 18.2 | 21.1 | 23.6 |
| 200RB9 (7/8, 1 1/2)              | 19.6 | 24.0 | 27.7 | 31.0 |
| 200RB12                          | 22.5 | 27.6 | 31.8 | 35.6 |
| 240/540RA8                       | 10.0 | 12.2 | 14.1 | 15.8 |
| 240/540RA9T (5/8)                | 14.9 | 18.2 | 21.1 | 23.6 |
| 240/540RA9T (7/8, 1 1/2)         | 19.6 | 24.0 | 27.7 | 31.0 |
| 240/540RA12                      | 22.5 | 27.6 | 31.8 | 35.6 |
| 240/540RA16                      | 37.4 | 45.7 | 52.8 | 59.1 |
| 240/540RA20                      | 58.8 | 72.0 | 83.3 | 93.0 |

# SOLENOID DISCHARGE CAPACITIES

## 50RB DISCHARGE GAS CAPACITIES

|                   | PRESSURE DROP ACROSS VALVE (PSI) |      |      |      |      |      |      |      |      |      |
|-------------------|----------------------------------|------|------|------|------|------|------|------|------|------|
|                   | 1                                | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| <b>R134a</b>      | 0.05                             | 0.07 | 0.09 | 0.10 | 0.11 | 0.12 | 0.13 | 0.14 | 0.15 | 0.16 |
| <b>R22</b>        | 0.06                             | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 |
| <b>R404A/R507</b> | 0.05                             | 0.07 | 0.09 | 0.10 | 0.12 | 0.13 | 0.14 | 0.15 | 0.15 | 0.16 |

All capacities and factors shown are based on normal condensing temperatures (100°F), isentropic compression plus 50°, 40°F evaporator, 65°F suction gas and saturated liquid entering an expansion device per ARI Standard 760-80.

For capacities at other operating conditions, use the appropriate correction factor given in above table.

# SOLENOID DISCHARGE CAPACITIES CONTINUED

| TONS                             |      |      |      |      |      |      |
|----------------------------------|------|------|------|------|------|------|
| DISCHARGE GAS CAPACITIES         |      |      |      |      |      |      |
| Pressure Drop Across Valve - psi |      |      |      |      |      |      |
| VALVE SERIES                     | 2    | 5    | 10   | 25   | 50   | 100  |
| <b>R-12</b>                      |      |      |      |      |      |      |
| 100RB                            | 0.1  | 0.2  | 0.3  | 0.5  | 0.5  | 0.5  |
| 200/500RB2                       | 0.4  | 0.6  | 0.8  | 1.3  | 1.5  | 1.3  |
| 200/500RB3                       | 0.5  | 0.8  | 1.2  | 1.7  | 2.0  | 1.6  |
| 200/500RB4                       | 0.7  | 1.1  | 1.5  | 2.2  | 2.9  | 3.3  |
| 200/500RB5                       | 1.0  | 1.6  | 2.2  | 3.2  | 4.1  | 4.3  |
| 200/500RB6                       | 1.1  | 1.7  | 2.4  | 3.5  | 4.6  | 5.4  |
| 200/500RB7                       | 1.5  | 2.4  | 3.3  | 5.2  | 6.6  | 7.2  |
| 200RB9 (5/8)                     | 2.5  | 4.0  | 5.6  | 8.3  | 10.4 | 11.2 |
| 200RB9 (7/8, 1 1/2)              | 3.2  | 5.0  | 7.1  | 10.1 | 12.1 | 11.1 |
| 200RB12                          | 3.5  | 5.5  | 7.8  | 11.7 | 14.0 | 12.4 |
| 240/540RA8                       | 1.5  | 2.4  | 3.3  | 5.2  | 6.6  | 7.2  |
| 240/540RA9T5                     | 2.5  | 4.0  | 5.6  | 8.3  | 10.4 | 11.2 |
| 240/540RA9                       | 3.2  | 5.0  | 7.1  | 10.1 | 12.1 | 11.1 |
| 240/540RA12                      | 3.5  | 5.5  | 7.8  | 11.7 | 14.0 | 12.4 |
| 240/540RA16                      | 5.8  | 9.1  | 12.9 | 18.9 | 23.6 | 24.3 |
| 240/540RA20                      | 8.1  | 12.8 | 18.1 | 28.2 | 34.4 | 33.1 |
| <b>R-22</b>                      |      |      |      |      |      |      |
| 100RB                            | 0.2  | 0.3  | 0.4  | 0.6  | 0.8  | 1.0  |
| 200/500RB2                       | 0.5  | 0.9  | 1.2  | 1.9  | 2.5  | 2.8  |
| 200/500RB3                       | 0.8  | 1.2  | 1.7  | 2.6  | 3.4  | 3.4  |
| 200/500RB4                       | 1.0  | 1.6  | 2.2  | 3.4  | 4.5  | 5.7  |
| 200/500RB5                       | 1.4  | 2.3  | 3.2  | 4.9  | 6.5  | 7.9  |
| 200/500RB6                       | 1.6  | 2.5  | 3.5  | 5.3  | 7.1  | 9.1  |
| 200/500RB7                       | 2.1  | 3.4  | 4.8  | 7.8  | 10.4 | 12.8 |
| 200RB9 (5/8)                     | 3.6  | 5.7  | 8.1  | 12.5 | 16.6 | 20.4 |
| 200RB9 (7/8, 1 1/2)              | 4.6  | 7.2  | 10.2 | 15.4 | 20.0 | 23.1 |
| 200RB12                          | 5.1  | 8.0  | 11.3 | 18.1 | 23.4 | 26.6 |
| 240/540RA8                       | 2.1  | 3.4  | 4.8  | 7.8  | 10.4 | 12.8 |
| 240/540RA9T5                     | 3.6  | 5.7  | 8.1  | 12.5 | 16.6 | 20.4 |
| 240/540RA9                       | 4.6  | 7.2  | 10.2 | 15.4 | 20.0 | 23.1 |
| 240/540RA12                      | 5.1  | 8.0  | 11.3 | 18.1 | 23.4 | 26.6 |
| 240/540RA16                      | 8.3  | 13.2 | 18.7 | 28.6 | 37.8 | 45.6 |
| 240/540RA20                      | 11.7 | 18.4 | 26.1 | 43.0 | 56.1 | 66.0 |
| <b>R-407C</b>                    |      |      |      |      |      |      |
| 100RB                            | 0.2  | 0.3  | 0.4  | 0.6  | 0.8  | 1.0  |
| 200/500RB2                       | 0.5  | 0.9  | 1.2  | 1.9  | 2.5  | 2.9  |
| 200/500RB3                       | 0.8  | 1.2  | 1.7  | 2.6  | 3.4  | 3.8  |
| 200/500RB4                       | 1.0  | 1.6  | 2.2  | 3.3  | 4.5  | 5.7  |
| 200/500RB5                       | 1.4  | 2.2  | 3.2  | 4.9  | 6.5  | 8.0  |
| 200/500RB6                       | 1.5  | 2.4  | 3.5  | 5.2  | 7.1  | 9.1  |
| 200/500RB7                       | 2.1  | 3.3  | 4.7  | 7.7  | 10.3 | 13.0 |
| 200RB9 (5/8)                     | 3.6  | 5.6  | 8.0  | 12.4 | 16.5 | 20.6 |
| 200RB9 (7/8, 1 1/2)              | 4.5  | 7.1  | 10.1 | 15.3 | 20.0 | 22.5 |
| 200RB12                          | 6.0  | 9.5  | 13.4 | 21.2 | 29.6 | 37.1 |
| 240/540RA8                       | 2.1  | 3.3  | 4.7  | 7.7  | 10.3 | 13.0 |
| 240/540RA9T5                     | 3.6  | 5.6  | 8.0  | 12.4 | 16.5 | 20.6 |
| 240/540RA9                       | 4.5  | 7.1  | 10.1 | 15.3 | 20.0 | 22.5 |
| 240/540RA12                      | 6.0  | 9.5  | 13.4 | 21.2 | 29.6 | 37.1 |
| 240/540RA16                      | 8.2  | 13.0 | 18.4 | 28.4 | 37.7 | 46.2 |
| 240/540RA20                      | 11.5 | 18.2 | 25.7 | 42.7 | 56.1 | 67.2 |

| TONS                             |     |      |      |      |      |      |
|----------------------------------|-----|------|------|------|------|------|
| DISCHARGE GAS CAPACITIES         |     |      |      |      |      |      |
| Pressure Drop Across Valve - psi |     |      |      |      |      |      |
| VALVE SERIES                     | 2   | 5    | 10   | 25   | 50   | 100  |
| <b>R-134a</b>                    |     |      |      |      |      |      |
| 100RB                            | 0.2 | 0.2  | 0.3  | 0.5  | 0.6  | 0.6  |
| 200/500RB2                       | 0.5 | 0.7  | 1.0  | 1.5  | 1.8  | 1.7  |
| 200/500RB3                       | 0.6 | 1.0  | 1.4  | 2.1  | 2.4  | 2.1  |
| 200/500RB4                       | 0.8 | 1.3  | 1.8  | 2.7  | 3.5  | 4.1  |
| 200/500RB5                       | 1.2 | 1.9  | 2.6  | 3.9  | 4.9  | 5.3  |
| 200/500RB6                       | 1.3 | 2.1  | 2.9  | 4.3  | 5.6  | 6.6  |
| 200/500RB7                       | 1.8 | 2.8  | 4.0  | 6.2  | 8.0  | 8.9  |
| 200RB9 (5/8)                     | 3.0 | 4.7  | 6.7  | 10.0 | 12.7 | 13.9 |
| 200RB9 (7/8, 1 1/2)              | 3.8 | 6.0  | 8.5  | 12.2 | 14.8 | 14.2 |
| 200RB12                          | 4.2 | 6.6  | 9.4  | 14.2 | 17.1 | 15.9 |
| 240/540RA8                       | 1.8 | 2.8  | 4.0  | 6.2  | 8.0  | 8.9  |
| 240/540RA9T5                     | 3.0 | 4.7  | 6.7  | 10.0 | 12.7 | 13.9 |
| 240/540RA9                       | 3.8 | 6.0  | 8.5  | 12.2 | 14.8 | 14.2 |
| 240/540RA12                      | 4.2 | 6.6  | 9.4  | 14.2 | 17.1 | 15.9 |
| 240/540RA16                      | 6.9 | 10.9 | 15.4 | 22.8 | 28.6 | 30.4 |
| 240/540RA20                      | 9.7 | 15.3 | 21.6 | 34.0 | 41.9 | 41.9 |
| <b>R-404A/R-507</b>              |     |      |      |      |      |      |
| 100RB                            | 0.2 | 0.3  | 0.4  | 0.6  | 0.7  | 0.9  |
| 200/500RB2                       | 0.5 | 0.7  | 1.0  | 1.7  | 2.2  | 2.5  |
| 200/500RB3                       | 0.7 | 1.0  | 1.5  | 2.3  | 2.9  | 3.4  |
| 200/500RB4                       | 0.9 | 1.3  | 1.9  | 2.9  | 3.9  | 5.0  |
| 200/500RB5                       | 1.2 | 1.9  | 2.7  | 4.2  | 5.6  | 7.0  |
| 200/500RB6                       | 1.3 | 2.1  | 3.0  | 4.5  | 6.1  | 7.9  |
| 200/500RB7                       | 1.8 | 2.9  | 4.1  | 5.7  | 8.9  | 11.3 |
| 200RB9 (5/8)                     | 3.1 | 4.9  | 6.9  | 10.7 | 14.3 | 17.9 |
| 200RB9 (7/8, 1 1/2)              | 3.9 | 6.2  | 8.7  | 13.3 | 17.4 | 20.2 |
| 200RB12                          | 4.3 | 6.8  | 9.6  | 15.5 | 20.3 | 23.9 |
| 240/540RA8                       | 1.8 | 2.9  | 4.1  | 6.7  | 8.9  | 11.3 |
| 240/540RA9T5                     | 3.1 | 4.9  | 6.9  | 10.7 | 14.3 | 17.9 |
| 240/540RA9                       | 3.9 | 6.2  | 8.7  | 13.3 | 17.4 | 20.2 |
| 240/540RA12                      | 4.3 | 6.8  | 9.6  | 15.5 | 20.3 | 23.9 |
| 240/540RA16                      | 7.1 | 11.3 | 16.0 | 23.6 | 30.8 | 36.2 |
| 240/540RA20                      | 9.9 | 15.7 | 22.2 | 36.9 | 48.7 | 58.9 |

# DISCHARGE CORRECTION FACTORS FOR SOLENOIDS

| DISCHARGE GAS SERVICE     |      |      |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|------|------|
| EVAPORATOR TEMPERATURE °F |      |      |      |      |      |      |      |      |      |
| REFRIGERANT               | 40   | 30   | 20   | 10   | 0    | -10  | -20  | -30  | -40  |
| R-12                      | 1.00 | 0.98 | 0.96 | 0.93 | 0.91 | 0.88 | 0.86 | 0.83 | 0.81 |
| R-22                      | 1.00 | 0.98 | 0.96 | 0.94 | 0.92 | 0.9  | 0.88 | 0.87 | 0.83 |
| R-134a                    | 1.00 | 0.98 | 0.95 | 0.93 | 0.90 | 0.88 | 0.85 | 0.82 | 0.80 |
| R-404A                    | 1.00 | 0.97 | 0.94 | 0.91 | 0.88 | 0.85 | 0.81 | 0.78 | 0.75 |
| R-407C                    | 1.00 | 0.98 | 0.95 | 0.93 | 0.90 | 0.88 | 0.85 | 0.82 | 0.80 |
| R-410A                    | 1.00 | 0.98 | 0.97 | 0.95 | 0.93 | 0.91 | 0.89 | 0.85 | 0.84 |

All capacities and factors shown are based on normal condensing temperatures (100°F), isentropic compression plus 50°, 40°F evaporator, 65°F suction gas and saturated liquid entering an expansion device per ARI Standard 760-80. For capacities at other operating conditions, use the appropriate correction factor given in above table.