



**Product Specifications for H73A543DBE**

|                            |                  |                                 |       |           |                              |
|----------------------------|------------------|---------------------------------|-------|-----------|------------------------------|
| Measurement System: Metric | Revision: 4      | <b>Technical Specifications</b> |       |           |                              |
| Refrigerant: R407C         | Series Family: A | Voltage                         | Phase | Frequency | Evaporator Temperature Range |
|                            |                  | 380/415                         | 3     | 50        | -30°C to 10°C                |

| Performance         | 1      | 2      | 3      | 4       | 5      | 6        | 7      |
|---------------------|--------|--------|--------|---------|--------|----------|--------|
|                     | ARI    | ARI    | ASRET  | B-POINT | CHEER  | HEATPUMP | ARI*   |
|                     | (380v) | (415v) | (380v) | (380v)  | (380v) | (380v)   | (380v) |
| Capacity (Watts)    | 12 000 |        | 12 600 | 14 900  | 16 400 | 9 900    | 12 800 |
| Motor Input (Watt)  | 4 040  |        | 4 010  | 3 750   | 3 470  | 3 130    | 4 250  |
| Current (Amp)       | 6.3    | 0.0    | 6.3    | 5.9     | 5.5    | 5.2      | 7.2    |
| COP                 | 3.0    | NaN    | 3.1    | 4.0     | 4.7    | 3.2      | 3.0    |
| Efficiency (%)      |        |        | 66.0   |         |        |          | 64.0   |
| Evaporating Temp.°C | 7.2    | 7.2    | 7.2    | 7.2     | 7.2    | -1.1     | 7.2    |
| Condensing Temp.°C  | 54.4   | 54.4   | 54.4   | 43.3    | 37.8   | 43.3     | 54.4   |
| Ambient Temp.°C     | 35     | 35     | 35     | 35      | 35     | 35       | 35     |
| Liquid Temp.°C      | 41.7   | 41.7   | 41.7   | 30      | 24.4   | 30       | 43.9   |
| Return Gas Temp.°C  | 18.3   | 18.3   | 35     | 18.3    | 18.3   | 10       | 20.6   |

Nominal Performance Data @ 50 Hz (±5) based upon 72hr run-in

\* "Average" method (others use the "Dew Point" method).

The "Dew Point" method values were updated July 2010 to conform to AHRI 540.

**Mechanical Data**

|               |                         |                          |                 |
|---------------|-------------------------|--------------------------|-----------------|
| Bore X Stroke | 5.080 X 2.286 cm        | Speed                    | 2950 rpm        |
| Displacement  | 16.4 m <sup>3</sup> /hr | IPRV Setting             | 28 - 34 ΔP(bar) |
| Displacement  | 92.7 cc/rev             | Refrigerant Charge Limit | 3 kg            |

**Electrical Data**

|                             |                                      |                  |
|-----------------------------|--------------------------------------|------------------|
| RLA: 7.2                    | LRA: 53                              | MCC: 12.5        |
| Voltage Range: 342 - 457    | Protection Type: Internal Line Break |                  |
| U.L. File: SA5470           | CE Approval: Yes                     | CCC Approval: No |
| Motor Res. in Ohms (Ω) ± 5% |                                      |                  |
| T1-T3<br>(C-R)              | T1-T2<br>(C-S)                       | T2-T3<br>(S-R)   |
| 3.200                       | 3.200                                | 6.400            |

**Electrical Accessories**

|   |  |
|---|--|
| Start Relay: ()                           |  |
| Start Cap: N/A μF/volts                   |  |
| Run Cap: N/A μF/volts                     | (Parenthesis Denote Med.Torque Components) |
| PTCR Start Device: Ceramite P/N: N/A      | PTCR Start Device: AC Ohms: N/A            |
| Crankcase Heater Vendor P/N: Sensata 9HT5 |  |
| Type-Watts: PCTR - 47                     |  |

**Other Technical Info**

|                             |                         |                      |                        |
|-----------------------------|-------------------------|----------------------|------------------------|
| Oil Name: Polyolester 32BCE | Oil Charge              | Internal Free Volume | 9 701 cc               |
| Oil Spec: 581857            | Initial Charge: 1627 cc | Recharge: 1538 cc    | Max. Compressor Height |
| Viscosity: 30.0 cSt @ 40°C  |                         |                      | 40.958 cm              |
|                             |                         | Weight Net           | 36.1 kg                |
|                             |                         | Weight Shipped       | 38.1 kg                |

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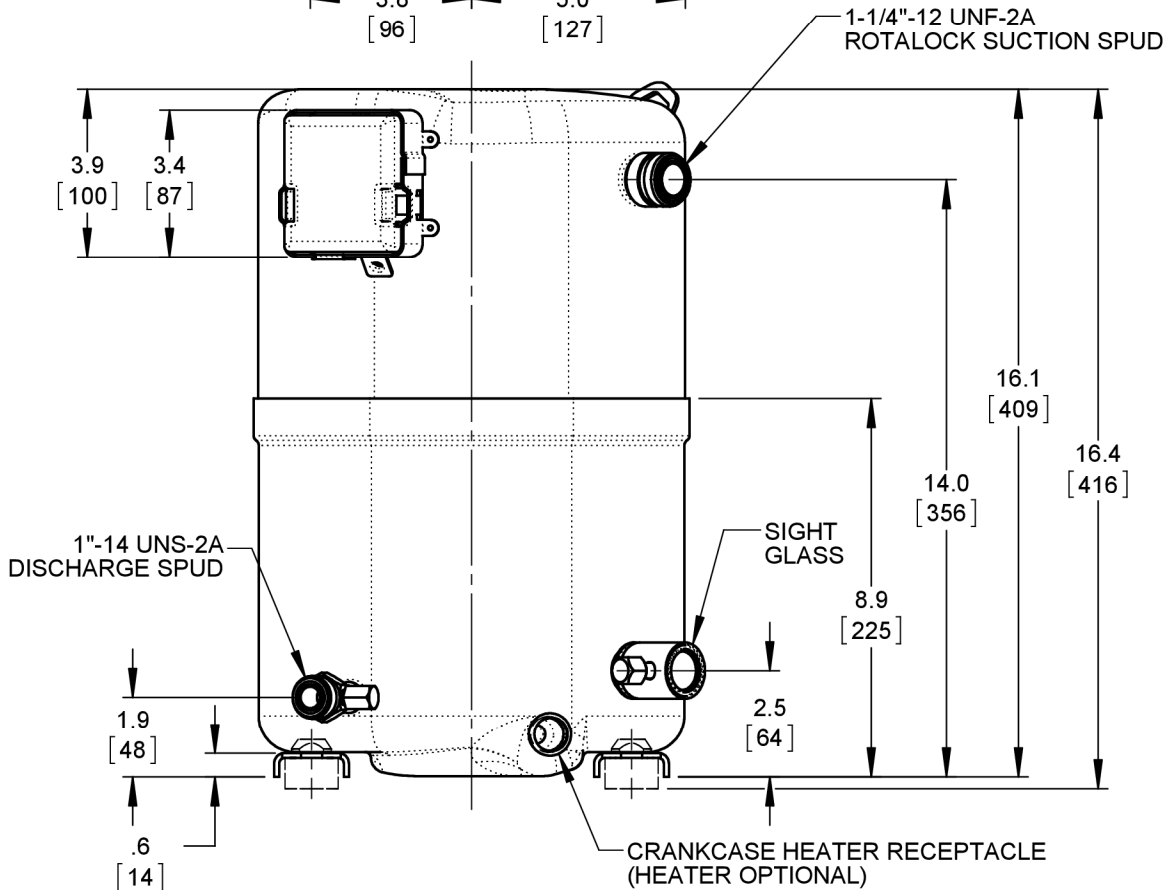
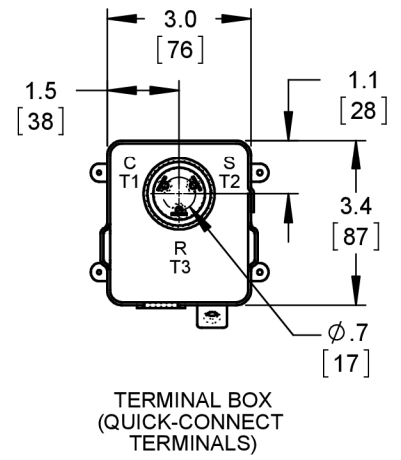
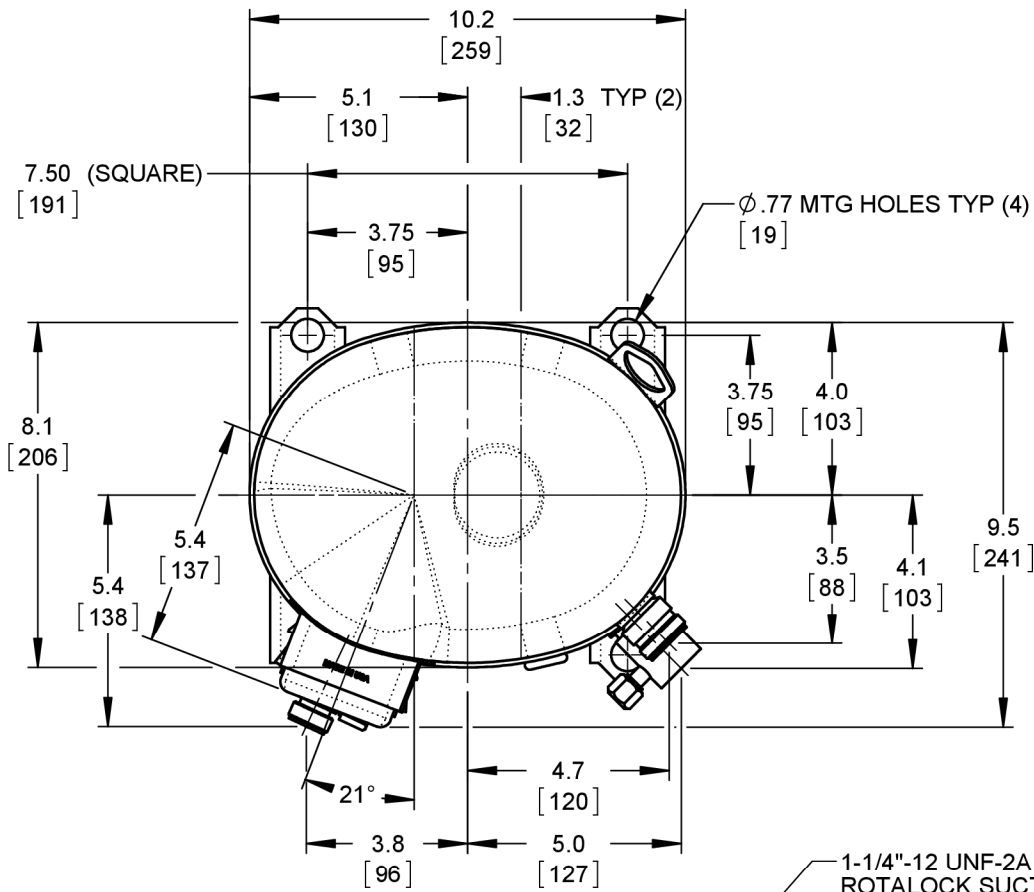
**Performance Table for H73A543DBE**

380/415-3-50Hz  
R407C -Dew Point  
11°K Superheat  
8°K Subcooling  
35°C Ambient  
@380-3-50

| Cond. Temp. |            | Nominal performance ±5% based on 72 hr run-in |       |       |       |       |       |       |       | Evap. Temp. |
|-------------|------------|---|-------|-------|-------|-------|-------|-------|-------|-------------|
|             |            | -30°C   | -25°C | -20°C | -15°C | -10°C | -5°C  | 0°C   | 5°C   |             |
| 25°C        | Capacity   | 2482  | 3325  | 4572  | 6248  | 8382  | 11001 | 14133 | 17805 | 22045       |
|             | Power      | 1383  | 1529  | 1712  | 1905  | 2080  | 2210  | 2265  | 2220  | 2044        |
|             | Current    | 3.2   | 3.3   | 3.6   | 3.8   | 4.1   | 4.3   | 4.4   | 4.3   | 4.0         |
|             | MassFlow   | 48.2  | 64.1  | 86.5  | 115.9 | 152.7 | 197.1 | 249.5 | 310.3 | 379.7       |
|             | COP        | 1.79  | 2.18  | 2.67  | 3.28  | 4.03  | 4.98  | 6.24  | 8.02  | 10.78       |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 30°C        | Capacity   | 2065  | 2877  | 4067  | 5661  | 7687  | 10173 | 13145 | 16632 | 20661       |
|             | Power      | 1382  | 1544  | 1766  | 2020  | 2277  | 2511  | 2692  | 2794  | 2788        |
|             | Current    | 3.2   | 3.3   | 3.6   | 3.9   | 4.2   | 4.5   | 4.8   | 4.8   | 4.8         |
|             | MassFlow   | 41.1  | 57.1  | 79.7  | 109.0 | 145.5 | 189.5 | 241.4 | 301.4 | 370.0       |
|             | COP        | 1.49  | 1.86  | 2.30  | 2.80  | 3.38  | 4.05  | 4.88  | 5.95  | 7.41        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 35°C        | Capacity   | 1697  | 2469  | 3593  | 5095  | 7004  | 9346  | 12150 | 15443 | 19252       |
|             | Power      | 1380  | 1535  | 1772  | 2062  | 2378  | 2692  | 2976  | 3201  | 3341        |
|             | Current    | 3.2   | 3.3   | 3.6   | 3.9   | 4.3   | 4.7   | 5.0   | 5.3   | 5.4         |
|             | MassFlow   | 34.9  | 50.9  | 73.2  | 102.2 | 138.1 | 181.4 | 232.4 | 291.4 | 358.8       |
|             | COP        | 1.23  | 1.61  | 2.03  | 2.47  | 2.94  | 3.47  | 4.08  | 4.82  | 5.76        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 40°C        | Capacity   | 1385  | 2108  | 3156  | 4558  | 6340  | 8530  | 11156 | 14245 | 17825       |
|             | Power      | 1409  | 1534  | 1762  | 2066  | 2417  | 2787  | 3149  | 3475  | 3737        |
|             | Current    | 3.3   | 3.3   | 3.5   | 3.9   | 4.3   | 4.8   | 5.2   | 5.6   | 5.8         |
|             | MassFlow   | 29.8  | 45.5  | 67.3  | 95.5  | 130.7 | 172.9 | 222.7 | 280.4 | 346.3       |
|             | COP        | 0.98  | 1.37  | 1.79  | 2.21  | 2.62  | 3.06  | 3.54  | 4.10  | 4.77        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 45°C        | Capacity   |   | 1801  | 2765  | 4056  | 5702  | 7731  | 10170 | 13046 | 16387       |
|             | Power      |   | 1575  | 1771  | 2064  | 2426  | 2829  | 3246  | 3648  | 4009        |
|             | Current    |   | 3.4   | 3.5   | 3.9   | 4.3   | 4.8   | 5.3   | 5.8   | 6.2         |
|             | MassFlow   |   | 41.0  | 62.0  | 89.2  | 123.2 | 164.2 | 212.5 | 268.5 | 332.5       |
|             | COP        |   | 1.14  | 1.56  | 1.97  | 2.35  | 2.73  | 3.13  | 3.58  | 4.09        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 50°C        | Capacity   |   |       | 2426  | 3597  | 5098  | 6956  | 9198  | 11852 | 14946       |
|             | Power      |   |       | 1832  | 2090  | 2440  | 2852  | 3300  | 3755  | 4190        |
|             | Current    |   |       | 3.6   | 3.9   | 4.3   | 4.8   | 5.4   | 5.9   | 6.4         |
|             | MassFlow   |   |       | 57.4  | 83.4  | 115.9 | 155.3 | 201.8 | 255.8 | 317.8       |
|             | COP        |   |       | 1.32  | 1.72  | 2.09  | 2.44  | 2.79  | 3.16  | 3.57        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 55°C        | Capacity   |   |       |       | 3189  | 4535  | 6213  | 8249  | 10672 | 13508       |
|             | Power      |   |       |       | 2179  | 2492  | 2890  | 3345  | 3830  | 4315        |
|             | Current    |   |       |       | 4.0   | 4.3   | 4.9   | 5.5   | 6.1   | 6.7         |
|             | MassFlow   |   |       |       | 78.1  | 108.9 | 146.3 | 190.7 | 242.5 | 302.0       |
|             | COP        |   |       |       | 1.46  | 1.82  | 2.15  | 2.47  | 2.79  | 3.13        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 60°C        | Capacity   |   |       |       |       | 4021  | 5509  | 7330  | 9512  | 12081       |
|             | Power      |   |       |       |       | 2617  | 2976  | 3415  | 3905  | 4417        |
|             | Current    |   |       |       |       | 4.5   | 4.9   | 5.6   | 6.2   | 6.9         |
|             | MassFlow   |   |       |       |       | 102.3 | 137.4 | 179.5 | 228.7 | 285.5       |
|             | COP        |   |       |       |       | 1.54  | 1.85  | 2.15  | 2.44  | 2.73        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |
| 65°C        | Capacity   |   |       |       |       |       | 3561  | 4851  | 6447  | 8379        |
|             | Power      |   |       |       |       |       | 2847  | 3144  | 3543  | 4014        |
|             | Current    |   |       |       |       |       | 4.7   | 5.1   | 5.7   | 6.4         |
|             | MassFlow   |   |       |       |       |       | 96.2  | 128.8 | 168.2 | 214.5       |
|             | COP        |   |       |       |       |       | 1.25  | 1.54  | 1.82  | 2.09        |
|             | Efficiency |   |       |       |       |       |       |       |       |             |

Units: Capacity (Watt), Power(Watt), Current (Amp), Mass Flow(kg/hr), COP, Efficiency(%)

**H73A543DBE** Revision: 4



MODEL: **H73A543DBEA**

VOLTAGE: **460** PH: **3** Hz: **60** LRA: **53**  
**380/415** **3** **50** **53**

E/N RELEASE: **G02502**

REVISIONS

|   |        |     |
|---|--------|-----|
| B | V06701 | BAM |
| C | V28003 | BAM |



**TOLERANCES UNLESS SPECIFIED**

ONE PLACE DECIMAL:  $\pm .125$  (3.158mm)  
TWO PLACE DECIMAL:  $\pm .06$  (1.5mm)  
ANGULAR:  $\pm 5^\circ$

MARKETING REQ:

|           |         |
|-----------|---------|
| CHKD: RDD | 7/26/11 |
| DRWN: JLH | 4/13/11 |

B/M NO:

**702657**