

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**KCN463HAG-BXXX**

BILL OF MATERIALS

**B330, B331**

**Emerson Climate Technologies (India) Limited**

Karad-Dhebewadi Road

Karad - 415 110

INDIA

Note – Sales compressor drawing number and compressor model name are the same.

|             |            |             |             |             |                                 |                  |
|-------------|------------|-------------|-------------|-------------|---------------------------------|------------------|
|             |            |             |             | 01          | F25-1206-0591<br>Current EN No. | A2<br>09.12.2006 |
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**PRODUCT SPECIFICATION****MODEL – KCN463HAG-BXXX****A ) MODEL DESCRIPTION**

|                               |                                       |
|-------------------------------|---------------------------------------|
| <b>Model Name</b>             | <b>KCN463HAG-BXXX</b>                 |
| Compressor Type               | Reciprocating ,Connecting Rod Type    |
| Application Group             | High / Medium temperature (HBP / CBP) |
| Evaporating Temperature Range | -6.7°C To 12.8°C (20 °F To 55°F)      |
| Refrigerant                   | R-134a                                |
| Rated Voltage                 | 230V, 1Phase, 50Hz                    |
| Compressor Cooling            | FAN : 350 ft <sup>3</sup> / minute    |
| Typical Application           | Water Cooler / Bottle cooler          |
| Certifications & Approvals    | EN60335-2-34                          |

**B ) PERFORMANCE SPECIFICATION @ RATED CONDITION**

| Specification  | Unit       | HBP  | CBP  |
|--|------------|------|------|
| Cooling Capacity   | Btu / h    | 5250 | 3130 |
|  | Kcal / h   | 1323 | 789  |
|  | W          | 1538 | 917  |
|  | Nominal HP | 0.53 | 0.31 |
| Input Power  | W          | 615  | 505  |
| Input Current  | A          | 2.7  | 2.2  |
| EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$ | Btu / W-h  | 8.54 | 6.20 |
|  | Kcal / W-h | 2.15 | 1.56 |
|  | W / W      | 2.50 | 1.82 |

Note – Above performance parameters are nominal values & subject to  $\pm 5\%$  variation

**C ) RATING CONDITIONS**

| Parameter               | Unit      | HBP @<br>ASHRAE-T | CBP @<br>ASHRAE-T |
|-------------------------|-----------|-------------------|-------------------|
| Evaporating Temperature | °C ( °F ) | 7.2 ( 45 )        | - 6.7 (20)        |
| Condensing Temperature  | °C ( °F ) | 54.4 (130)        | 54.4 (130)        |
| Ambient Temperature     | °C ( °F ) | 35 ( 95 )         | 35 (95)           |
| Sub cooled Liquid Temp. | °C ( °F ) | 46.1 (115)        | 46.1 (115)        |
| Return Gas Temperature  | °C ( °F ) | 35 ( 95 )         | 35 (95)           |
| Test Voltage            | V         | 230               | 230               |

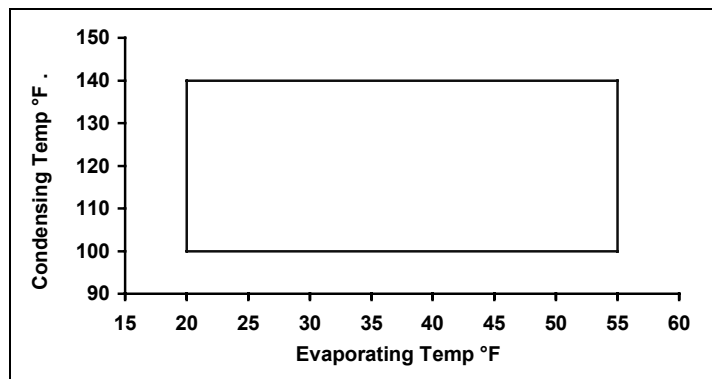
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|-------------|------------|-------------|-------------|-------------|---------------------------------|------------------|
|             |            |             |             | 02          | F25-1206-0591<br>Current EN No. | A2<br>09.12.2006 |
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**PRODUCT SPECIFICATION****MODEL – KCN463HAG-BXXX****D) MECHANICAL SPECIFICATION**

| Parameter                      | Unit  | Value             |
|--------------------------------|---|-------------------|
| Number of Cylinders            | No.   | One (1)           |
| Displacement                   | cm <sup>3</sup> ( inch <sup>3</sup> ) / rev | 15.33 (0.935)     |
| Net Weight                     | Kg  | 11.5              |
| Approximate Shipping Weight    | Kg  | ----              |
| Oil Charge                     | cm <sup>3</sup> ( Oz )                      | 380 (13)          |
| Oil Type                       | Refrigeration Grade                         | Polyolester (POE) |
| IPRV ( Pressure Differential ) | kg / cm <sup>2</sup> ( psig )               | N / A             |
| Crank Case Heater              | W / V                                       | N / A             |

**E) ELECTRICAL SPECIFICATION**

| Parameter                          | Unit             | Value          |
|------------------------------------|------------------|----------------|
| Operating Voltage Range            | V                | 180 To 260     |
| Motor Circuit                      | ---              | CSCR           |
| Electrical Accessories             | ---              |                |
| ➤ Start Capacitor                  | μF @ V AC        | 80-100 @ 275   |
| ➤ Run Capacitor                    | μF @ V AC        | 15 @ 440       |
| ➤ Relay                            | ---              | LT85002        |
| ➤ Over Load Protector              | ---              | KAT0463/B2     |
| Lock Rotor Ampere ( LRA )          | A                | 14             |
| Maximum Continuous Current ( MCC ) | A                | 4.5            |
| Motor Insulation                   | ---              | B Class        |
| High Potential Test                | (KV / Sec. / mA) | 1.85 / 1 / 5.5 |

**F) OPERATING ENVELOP**

|             |            |             |             |             |                                 |                  |
|-------------|------------|-------------|-------------|-------------|---------------------------------|------------------|
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**PRODUCT SPECIFICATION****MODEL – KCN463HAG-BXXX****PERFORMANCE TABLES**

|                           |              |                           |                              |
|---------------------------|--------------|---------------------------|------------------------------|
| Return Gas Temp           | 35°C (95°F)  | <b>Voltage</b>            | 230V, 1Ph, 50Hz              |
| <b>Liquid Sub cooling</b> | 8.3°C (15°F) | <b>Compressor cooling</b> | 350 ft <sup>3</sup> / minute |
| <b>Ambient temp.</b>      | 35°C (95°F)  |                           |                              |

**A ) COOLING CAPACITY ( Btu / h )**

| Condensing Temperature |      | Evaporating Temperature |      |      |      |      |      |
|------------------------|------|-------------------------|------|------|------|------|------|
|                        |      | -6.7                    | -1.1 | 4.4  | 7.2  | 10   | 12.8 |
| °C                     | (°F) | 20                      | 30   | 40   | 45   | 50   | 55   |
| 37.8                   | 100  | 3778                    | 4640 | 5860 | 6620 | 7580 | 8670 |
| 43.3                   | 110  | 3480                    | 4290 | 5390 | 6050 | 6918 | 7860 |
| 48.9                   | 120  | 3310                    | 4080 | 5070 | 5650 | 6410 | 7250 |
| 54.4                   | 130  | 3130                    | 3880 | 4780 | 5250 | 5970 | 6710 |
| 60.0                   | 140  | 2820                    | 3570 | 4410 | 4910 | 5470 | 6110 |

**B ) INPUT POWER ( W )**

| Condensing Temperature |      | Evaporating Temperature |      |     |     |     |      |
|------------------------|------|-------------------------|------|-----|-----|-----|------|
|                        |      | -6.7                    | -1.1 | 4.4 | 7.2 | 10  | 12.8 |
| °C                     | (°F) | 20                      | 30   | 40  | 45  | 50  | 55   |
| 37.8                   | 100  | 455                     | 480  | 511 | 537 | 546 | 553  |
| 43.3                   | 110  | 470                     | 500  | 535 | 563 | 572 | 579  |
| 48.9                   | 120  | 488                     | 521  | 561 | 589 | 596 | 605  |
| 54.4                   | 130  | 505                     | 542  | 587 | 615 | 622 | 625  |
| 60.0                   | 140  | 524                     | 566  | 610 | 637 | 645 | 650  |

**C ) INPUT CURRENT ( A )**

| Condensing Temperature |      | Evaporating Temperature |      |      |      |      |      |
|------------------------|------|-------------------------|------|------|------|------|------|
|                        |      | -6.7                    | -1.1 | 4.4  | 7.2  | 10   | 12.8 |
| °C                     | (°F) | 20                      | 30   | 40   | 45   | 50   | 55   |
| 37.8                   | 100  | 1.98                    | 2.10 | 2.22 | 2.34 | 2.44 | 2.59 |
| 43.3                   | 110  | 2.04                    | 2.20 | 2.32 | 2.45 | 2.56 | 2.73 |
| 48.9                   | 120  | 2.11                    | 2.30 | 2.45 | 2.57 | 2.68 | 2.85 |
| 54.4                   | 130  | 2.20                    | 2.38 | 2.56 | 2.70 | 2.80 | 2.95 |
| 60.0                   | 140  | 2.27                    | 2.48 | 2.67 | 2.80 | 2.92 | 3.08 |

- Note – 1. Nominal performance values ( $\pm 5\%$ ) based on 24 hours running. Subject to change without notice.  
 2. Compressor is intended to be operated in the range of condensing & evaporating temp. where performance values are specified in above tables.

|             |            |             |             |          |                                 |                  |
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