

# Product Data Sheet

## HTK70AA K3

### Revision 1

(Variant Code 3)

## 1 Application

| Application | Refrigerant | Expansion Device | Cooling Type |
|-------------|-------------|------------------|--------------|
| LBP         | R600a       | Capillary        | Static       |

### 1.1 Application Conditions

|   |      |     |
|---|------|-----|
| Max. Ambient temp. <sup>1</sup>           | [°C] | 43  |
| Max. Steady discharge temp. <sup>2</sup>  | [°C] | 120 |
| Max. Peak discharge temp. <sup>2,5</sup>  | [°C] | 135 |
| Max. Steady condensing temp. <sup>3</sup> | [°C] | 60  |
| Max. Peak condensing temp. <sup>3,5</sup> | [°C] | 70  |
| Max. Winding temp. <sup>4</sup>           | [°C] | 130 |

<sup>1</sup>...static

<sup>2</sup>...measured on discharge tube, 50 mm from the shell

<sup>3</sup>...measured in the middle of condenser

<sup>4</sup>...calculated out of the measured difference of resistance

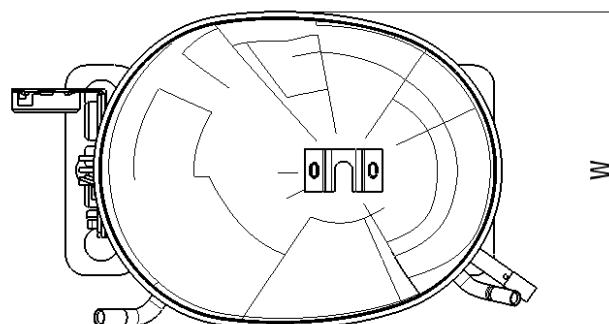
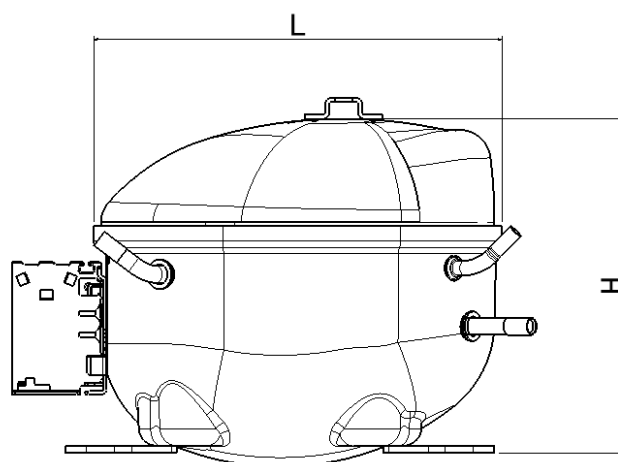
<sup>5</sup>...max 5% of lifetime

Variant code according to Label; see General Product Documentation

## 2 Mechanical Data

|                               |                         |             |
|-------------------------------|-------------------------|-------------|
| <b>Displacement</b>           | <b>[cm<sup>3</sup>]</b> | 6.6         |
| <b>Net Weight<sup>1</sup></b> | <b>[kg]</b>             | 7,8         |
| <b>Oil Type</b>               |                         | mineral     |
| <b>Oil Charge</b>             | <b>[ml]</b>             | 165         |
| <b>Oil Viscosity</b>          | <b>[cst]</b>            | 5           |
| <b>Suction muffler</b>        |                         | Semi direct |
| <b>Free Gas Volume</b>        | <b>[cm<sup>3</sup>]</b> | 1500        |
| <b>Length L</b>               | <b>[mm]</b>             | 237,5       |
| <b>Width W</b>                | <b>[mm]</b>             | 151,5       |
| <b>Height H</b>               | <b>[mm]</b>             | 159         |

<sup>1</sup>...Compressor without accessories



### 3 Electrical Data

|  |      |            |
|--|------|------------|
| Power supply                                     | [V]  | 220 - 240  |
| Voltage range <sup>1</sup>                       | [V]  | 187 - 264  |
| Frequency  | [Hz] | 50         |
| Phase  | [ph] | 1          |
| Motor type                                       |      | RSIR/RSCR  |
| Locked rotor current @ steady state              | [A]  | 2,92       |
| Max. Locked rotor current / measured after 4 sec | [A]  | 10,9 / 3,4 |
| Main wind. Resistance @ 25°C                     | [Ω]  | 35,3       |
| Start wind. Resistance @ 25°C                    | [Ω]  | 16,3       |

<sup>1</sup>...Operating and starting (starting condition @ +43°C windings temperature, 3,5 barA equalized pressure)

All data measured according to EN 60335

#### 3.1 Electrical Component Data

|                 |      |           |
|-----------------|------|-----------|
| Terminal board  |      | ECC       |
| Starting device | Code | K100      |
| PTC             | Type | A         |
| Run Capacitor   | [μF] | 2,5; 3: 4 |

#### 3.2 Motor Protector

|                 |          |           |
|-----------------|----------|-----------|
| Motor Protector | BDG      | Wanbao    |
| Type            | AE37FJ x | B59 115 x |
| Code            | F7       | MF        |

### 4 Performance Data

#### 4.1 Cooling Capacity, COP and Input Power

Performance Table Cooling Capacity @ ASHRAE / EN12900 (CECOMAF); 220V, 50Hz; [W]:

| Evap. temp. [°C]   |                        | -35 | -30  | -25  | -23,3 | -20   | -15   | -10   |       |
|--------------------|------------------------|-----|------|------|-------|-------|-------|-------|-------|
| Condensing temp. @ | ASHRAE [°C]            | 40  | 61,9 | 84,5 | 112,5 | 123,2 | 145,9 | 184,7 | 229,0 |
|                    |                        | 45  | 59,2 | 82,0 | 110,3 | 121,2 | 144,1 | 183,3 | 228,0 |
|                    |                        | 50  | 56,4 | 79,5 | 108,1 | 119,1 | 142,2 | 181,8 | 227,0 |
|                    |                        | 55  | 53,7 | 77,0 | 105,9 | 117,0 | 140,4 | 180,4 | 226,0 |
|                    |                        | 60  | 50,9 | 74,5 | 103,7 | 114,9 | 138,5 | 179,0 | 225,0 |
|                    | EN12900 (CECOMAF) [°C] | C55 | 44,0 | 63,0 | 87,0  | 96,0  | 115,0 | 148,0 | 185,0 |

Performance Table COP without/with RC @ ASHRAE / EN12900 (CECOMAF); 220V, 50Hz; [W/W]:

| Evap. temp. [°C]   |                        | -35 | -30         | -25         | -23,3       | -20         | -15         | -10         |             |
|--------------------|------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Condensing temp. @ | ASHRAE [°C]            | 40  | 1,13 / 1,19 | 1,46 / 1,52 | 1,78 / 1,84 | 1,89 / 1,96 | 2,11 / 2,17 | 2,44 / 2,50 | 2,76 / 2,83 |
|                    |                        | 45  | 1,10 / 1,16 | 1,40 / 1,46 | 1,70 / 1,76 | 1,80 / 1,86 | 1,99 / 2,05 | 2,29 / 2,35 | 2,59 / 2,65 |
|                    |                        | 50  | 1,07 / 1,14 | 1,34 / 1,40 | 1,61 / 1,67 | 1,70 / 1,76 | 1,88 / 1,94 | 2,15 / 2,21 | 2,42 / 2,47 |
|                    |                        | 55  | 1,04 / 1,11 | 1,29 / 1,35 | 1,53 / 1,58 | 1,61 / 1,66 | 1,77 / 1,82 | 2,01 / 2,06 | 2,25 / 2,30 |
|                    |                        | 60  | 1,02 / 1,08 | 1,23 / 1,29 | 1,44 / 1,50 | 1,51 / 1,57 | 1,65 / 1,71 | 1,86 / 1,91 | 2,08 / 2,12 |
|                    | EN12900 (CECOMAF) [°C] | C55 | 0,86 / 0,91 | 1,07 / 1,11 | 1,25 / 1,30 | 1,32 / 1,37 | 1,45 / 1,49 | 1,65 / 1,69 | 1,85 / 1,89 |

Performance Table Input Power without/with RC @ ASHRAE / EN12900 (CECOMAF); 220V, 50Hz; [W]:

| Evap. temp. [°C]   |                        | -35 | -30         | -25         | -23,3       | -20         | -15         | -10         |               |
|--------------------|------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| Condensing temp. @ | ASHRAE [°C]            | 40  | 53,2 / 52,1 | 57,0 / 55,7 | 62,4 / 61,0 | 64,5 / 63,0 | 68,8 / 67,2 | 75,6 / 73,9 | 82,9 / 81,0   |
|                    |                        | 45  | 52,6 / 50,9 | 57,9 / 56,2 | 64,5 / 62,8 | 67,0 / 65,2 | 71,9 / 70,1 | 79,8 / 77,9 | 88,0 / 86,0   |
|                    |                        | 50  | 52,0 / 49,7 | 58,8 / 56,7 | 66,8 / 64,7 | 69,7 / 67,6 | 75,5 / 73,4 | 84,5 / 82,4 | 93,8 / 91,8   |
|                    |                        | 55  | 51,3 / 48,4 | 59,0 / 57,2 | 69,4 / 66,8 | 72,8 / 70,3 | 79,5 / 77,0 | 89,9 / 87,6 | 100,6 / 98,3  |
|                    |                        | 60  | 50,7 / 47,1 | 61,1 / 57,8 | 72,3 / 69,2 | 76,2 / 73,3 | 84,0 / 81,2 | 96,1 / 93,5 | 108,5 / 106,0 |
|                    | EN12900 (CECOMAF) [°C] | C55 | 51,3 / 48,4 | 59,0 / 57,2 | 69,4 / 66,8 | 72,8 / 70,3 | 79,5 / 77,0 | 89,9 / 87,6 | 100,6 / 98,3  |

| Test Conditions @ 220V/50Hz |      | ASHRAE | EN12900 (CECOMAF) |
|-----------------------------|------|--------|-------------------|
| Evaporating temp.           | [°C] | -23,3  | -25               |
| Condensing temp.            | [°C] | 55     | 55                |
| Sub cooling temp.           | [°C] | 32     | 55                |
| Suction temp.               | [°C] | 32     | 32                |
| Ambient temp.               | [°C] | 32     | 32                |

Tolerance Range:

COP ± 5%

Cooling Capacity ± 5%

#### **4.2 Rated current @ 55°C condensing temperature**

|                          |      |      |       |      |
|--------------------------|------|------|-------|------|
| Evaporating temperature  | [°C] | -30  | -23,3 | -10  |
| Rated current with RC    | [A]  | 0,25 | 0,31  | 0,43 |
| Rated current without RC | [A]  | 0,38 | 0,42  | 0,52 |

### **5 Reliability Tests**

|                                    |        |
|------------------------------------|--------|
| High Temperature CECOMAF GT4 – 002 | passed |
| Wear CECOMAF GT4 – 003             | passed |
| On – Off CECOMAF GT4 – 004         | passed |
| Transport test ASTM D4728          | passed |