# Product Data Sheet
# HMK80AA

## 1 Application

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

### *1.1 Application Conditions*

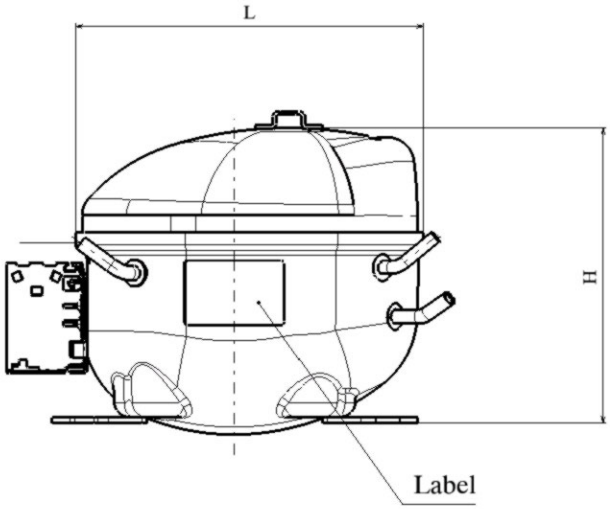
| | | |
|---|---|---|
| **Max. Ambient temp.[1]** | **[°C]** | 43 |
| **Max. Steady discharge temp.[2]** | **[°C]** | 120 |
| **Max. Peak discharge temp.[2]** | **[°C]** | 135 |
| **Max. Steady condensing temp.[3]** | **[°C]** | 60 |
| **Max. Peak condensing temp.[3]** | **[°C]** | 70 |
| **Max. Winding temp.[4]** | **[°C]** | 130 |

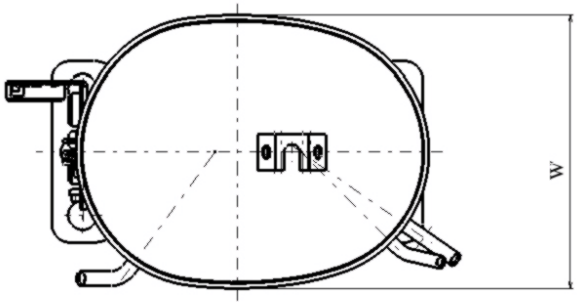
**[1]…static**
**[2]…measured on discharge tube, 50 mm from the shell**
**[3]…measured in the middle of condenser**
**[4]…calculated out of the measured difference of resistance**

## 2 Mechanical Data

| | | |
|---|---|---|
| **Displacement** | **[cm³]** | 8,1 |
| **Net Weight**[1] | **[kg]** | 7,6 |
| **Oil Type** | | mineral |
| **Oil Charge** | **[ml]** | 170 |
| **Oil Viscosity** | **[cst]** | 7 |
| **Suction muffler** | | Semi direct |
| **Free Gas Volume** | **[cm³]** | 1520 |
| **Length L** | **[mm]** | 237,5 |
| **Width W** | **[mm]** | 151,5 |
| **Height H** | **[mm]** | 159 |

[1]**...Compressor without accessories**



# 3 Electrical Data

| | | |
|---|---|---|
| **Power supply** | **[V]** | 220 - 240 |
| **Voltage range**[1] | | 187 – 264 |
| **Frequency** | **[Hz]** | 50 |
| **Phase** | **[ph]** | 1 |
| **Motor type** | | RSIR |
| **Rated current / Locked rotor current @ steady state** | **[A]** | 0,75 / 3,5 |
| **Max. Locked rotor current measured after 4 sec** | **[A]** | 12.8 / 4.6 |
| **Main wind. Resistance @ 25°C** | **[Ω]** | 29,5 |
| **Start wind. Resistance @ 25°C** | **[Ω]** | 18,6 |

**[1]...@ +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]** | - |

## *3.2 Motor Protector*

| | | | |
|---|---|---|---|
| **Motor Protector** | BDG | Wanbao | Sensata |
| **Type** | AE18FU x | B62-110 x | 4TM222NFBYY x |
| **Code** | F5 | M3 | 6C |

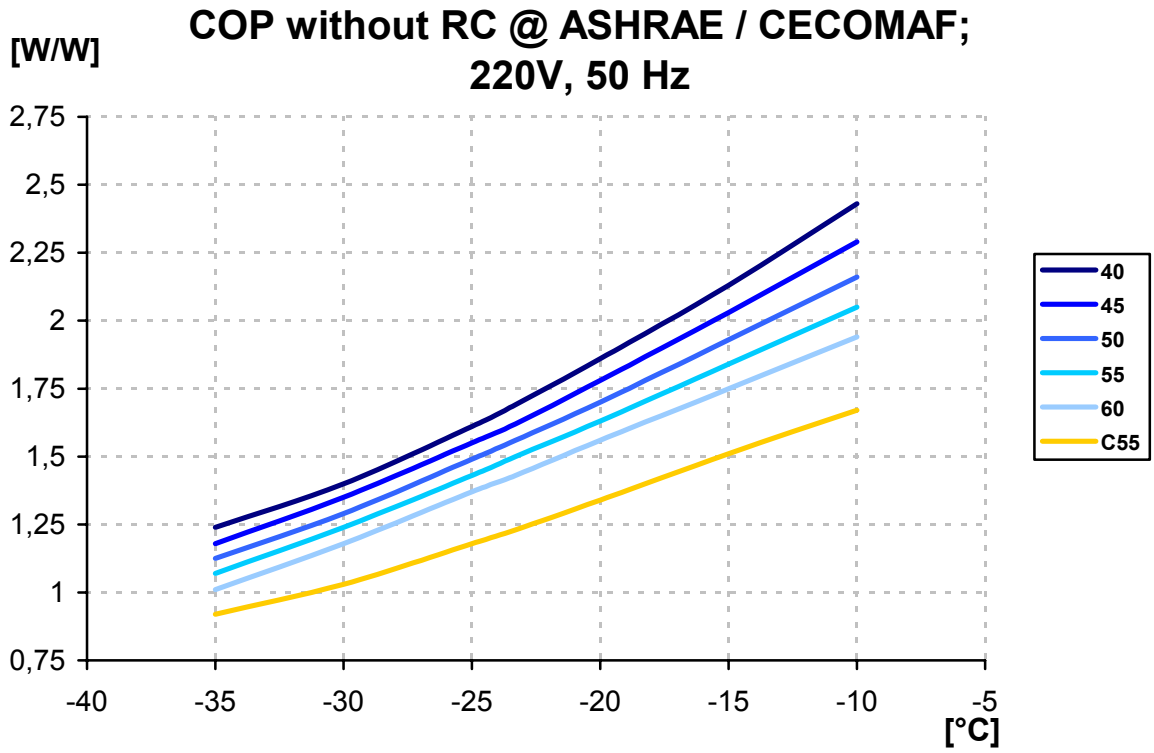
# 4 Performance Data

## *4.1 COP, Cooling Capacity and Input Power according to EN 12900*

**Performance Table COP without RC @ ASHRAE / CECOMAF; 220V, 50Hz; [W/W]:**

| Evap. temp. [°C] | | | -35 | -30 | -25 | -23,3 | -20 | -15 | -10 |
|---|---|---|---|---|---|---|---|---|---|
| Condensing temp. @ | ASHRAE [°C] | 40 | 1,24 | 1,40 | 1,61 | 1,69 | 1,86 | 2,13 | 2,43 |
| | | 45 | 1,18 | 1,35 | 1,55 | 1,62 | 1,78 | 2,03 | 2,29 |
| | | 50 | 1,13 | 1,29 | 1,49 | 1,56 | 1,70 | 1,93 | 2,16 |
| | | 55 | 1,07 | 1,24 | 1,43 | 1,50 | 1,63 | 1,84 | 2,05 |
| | | 60 | 1,01 | 1,18 | 1,37 | 1,43 | 1,56 | 1,75 | 1,94 |
| | CECOMAF [°C] | C55 | 0,92 | 1,03 | 1,18 | 1,23 | 1,34 | 1,51 | 1,67 |

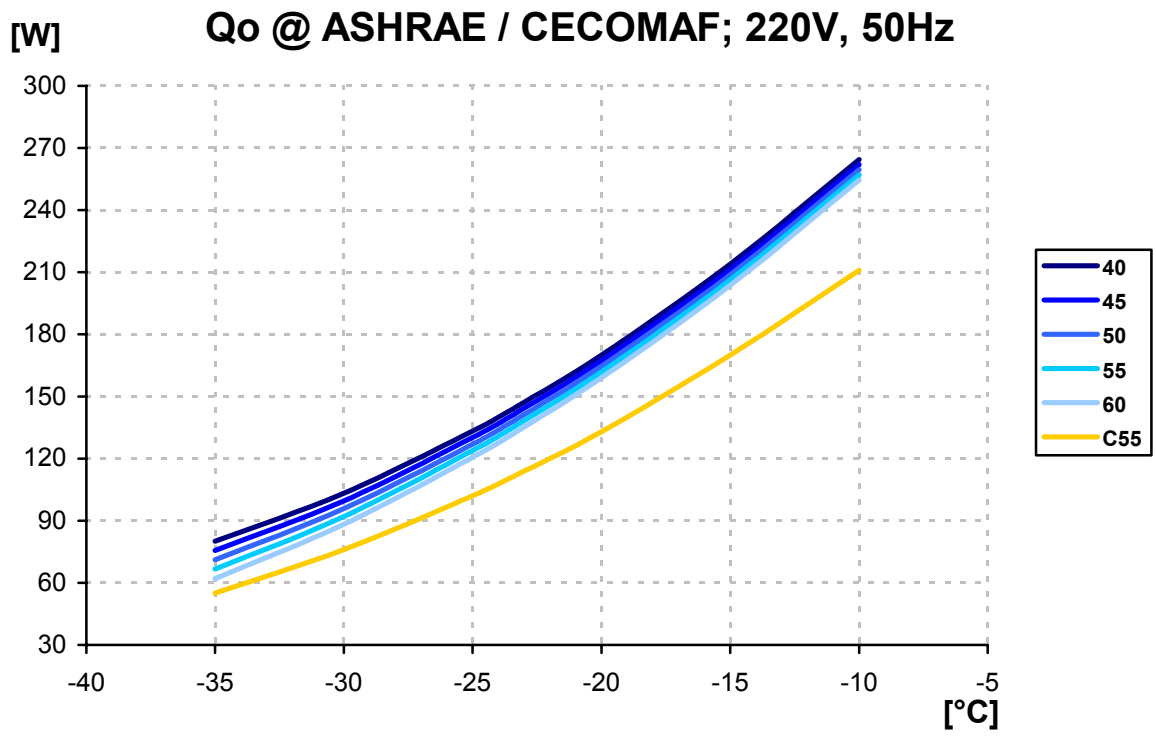
**Performance Graph COP without RC:**



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

| Evap. temp. [°C] | | | -35 | -30 | -25 | -23,3 | -20 | -15 | -10 |
|---|---|---|---|---|---|---|---|---|---|
| Condensing temp. @ | ASHRAE [°C] | 40 | 80,1 | 103,3 | 133,2 | 145,0 | 170,1 | 213,9 | 264,5 |
| | | 45 | 75,6 | 99,5 | 130,1 | 142,0 | 167,4 | 211,3 | 262,0 |
| | | 50 | 71,1 | 95,8 | 126,9 | 139,0 | 164,6 | 208,8 | 259,5 |
| | | 55 | 66,6 | 92,0 | 123,8 | 136,0 | 161,8 | 206,3 | 257,0 |
| | | 60 | 62,0 | 88,2 | 120,6 | 133,0 | 159,1 | 203,7 | 254,5 |
| | CECOMAF [°C] | C55 | 55,0 | 76,0 | 102,0 | 112,0 | 133,0 | 170,0 | 211,0 |

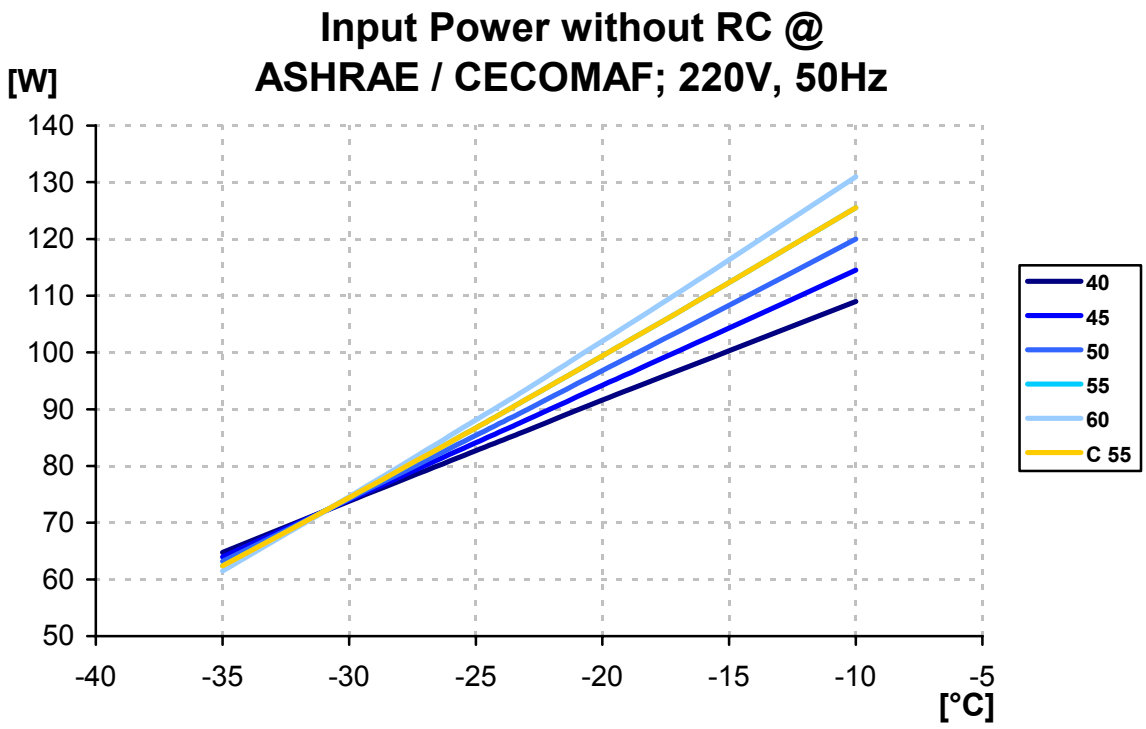
**Performance Graph Cooling Capacity:**



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

| Evap. temp. [°C] | | | -35 | -30 | -25 | -23,3 | -20 | -15 | -10 |
|---|---|---|---|---|---|---|---|---|---|
| Condensing temp. @ | ASHRAE [°C] | 40 | 64,8 | 73,8 | 82,7 | 85,7 | 91,6 | 100,3 | 109,0 |
| | | 45 | 64,0 | 74,0 | 84,1 | 87,5 | 94,2 | 104,3 | 114,5 |
| | | 50 | 63,2 | 74,2 | 85,4 | 89,2 | 96,8 | 108,3 | 120,0 |
| | | 55 | 62,4 | 74,4 | 86,7 | 91,0 | 99,4 | 112,3 | 125,5 |
| | | 60 | 61,5 | 74,6 | 88,1 | 92,7 | 102,0 | 116,3 | 131,0 |
| | CECOMAF [°C] | C55 | 62,4 | 74,4 | 86,7 | 91,0 | 99,4 | 112,3 | 125,5 |

**Performance Graph Input Power without RC:**



| Test Conditions @ 220V/50Hz | | ASHRAE | 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** **+/-7%**
**Cooling Capacity** **+/-5%**

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

| Evaporating temperature | [°C] | -30 | -23,3 | -10 |
|---|---|---|---|---|
| Rated current without RC | [A] | 0,57 | 0,62 | 0,74 |