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# **Product Data Sheet**

## **HKK12AN K2**

### **Revision 1**

(Variant Code 2)

## **1 Application**

<b>Application</b>	<b>Refrigerant</b>	<b>Expansion Device</b>	<b>Cooling Type</b>
LBP	R600a	Capillary	Static

### **1.1 Application Conditions**

<b>Max. Ambient temp.<sup>1</sup></b>	<b>[°C]</b>	43
<b>Max. Steady discharge temp.<sup>2</sup></b>	<b>[°C]</b>	120
<b>Max. Peak discharge temp.<sup>2, 5</sup></b>	<b>[°C]</b>	135
<b>Max. Steady condensing temp.<sup>3</sup></b>	<b>[°C]</b>	60
<b>Max. Peak condensing temp.<sup>3, 5</sup></b>	<b>[°C]</b>	70
<b>Max. Winding temp.<sup>4</sup></b>	<b>[°C]</b>	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>...measured by 4 wire resistance technique

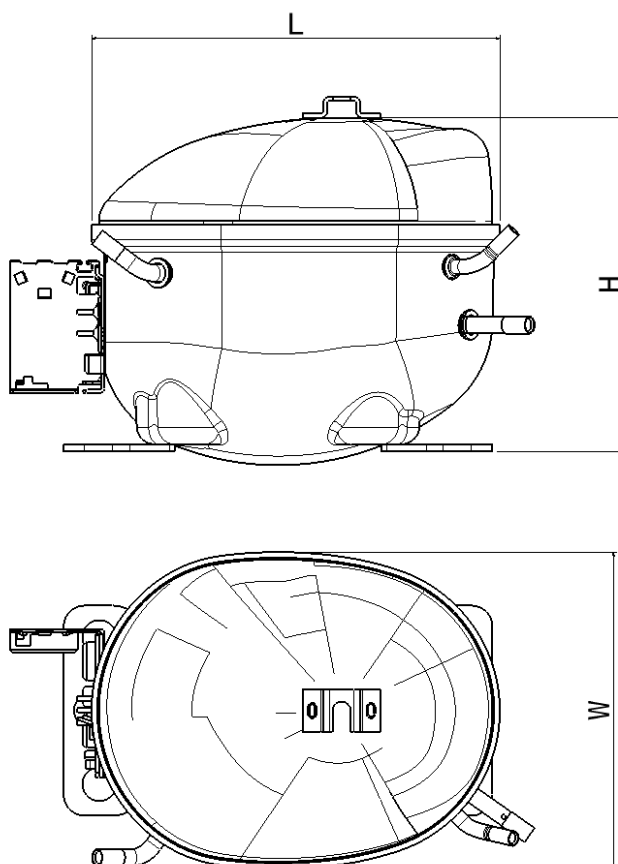
<sup>5</sup>...max 5% of lifetime

Variant code according to Label; see General Product Documentation

## 2 Mechanical Data

Displacement	[cm <sup>3</sup> ]	11,1
Net Weight <sup>1</sup>	[kg]	9,3
Oil Type		mineral
Oil Charge	[ml]	165
Oil Viscosity	[cst]	5
Suction		Semi direct
Free Gas Volume	[cm <sup>3</sup> ]	1560
Length L	[mm]	194,2
Width W	[mm]	151,5
Height H	[mm]	167

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



### 3 Electrical Data

Power supply	[V]	200 - 240 / 220 - 230
Voltage range <sup>1</sup>	[V]	170 - 264 / 187 - 253
Frequency	[Hz]	50 / 60
Phase	[ph]	1
Motor type		RSCR
Locked rotor current @ steady state	[A]	6,2
Max. Locked rotor current / measured after 4 sec	[A]	15,7 / 7,5
Main wind. Resistance @ 25°C	[Ω]	11,4
Start wind. Resistance @ 25°C	[Ω]	9,6

<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]	4

#### 3.2 Motor Protector

Motor Protector	BDG
Type	AE 11 FQ
Code	FV

### 4 Performance Data

#### 4.1 Cooling Capacity, COP and Input Power @50Hz

**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	111	148	192	209	244	304	370
		45	107	144	189	206	241	301	369
		50	103	141	185	202	238	299	367
		55	100	137	182	199	235	296	365
		60	96	133	179	196	232	294	363
	EN12900 (CECOMAF) [°C]	C55	82	113	150	164	193	244	300

**Performance Table COP with RC @ ASHRAE / (CECOMAF); 220V, 50Hz; [W/W]:**

Evap. temp. [°C]		-35	-30	-25	-23,3	-20	-15	-10	
Condensing temp. @	ASHRAE [°C]	40	1,35	1,57	1,81	1,92	2,10	2,43	2,78
		45	1,29	1,50	1,75	1,84	2,01	2,30	2,60
		50	1,24	1,45	1,68	1,76	1,92	2,18	2,45
		55	1,20	1,40	1,61	1,69	1,84	2,07	2,30
		60	1,14	1,34	1,56	1,62	1,76	1,96	2,16
	EN12900 (CECOMAF) [°C]	C55	0,99	1,15	1,33	1,39	1,51	1,71	1,89

**Performance Table Input Power with RC @ ASHRAE / (CECOMAF); 220V, 50Hz; [W]:**

Evap. temp. [°C]		-35	-30	-25	-23,3	-20	-15	-10	
Condensing temp. @	ASHRAE [°C]	40	82	94	106	109	116	125	133
		45	83	96	108	112	120	131	142
		50	83	97	110	115	124	137	150
		55	83	98	113	118	128	143	159
		60	84	99	115	121	132	150	168
	EN12900 (CECOMAF) [°C]	C55	83	98	113	118	128	143	159

### 4.2 Cooling Capacity, COP and Input Power @60Hz

**Performance Table Cooling Capacity @ ASHRAE / (CECOMAF); 220V, 60Hz; [W]:**

Evap. temp. [°C]		-35	-30	-25	-23,3	-20	-15	-10	
Condensing temp. @	ASHRAE [°C]	40	132	178	231	250	289	353	423
		45	126	172	225	244	284	349	420
		50	119	166	220	239	279	345	417
		55	113	160	214	234	274	341	414
		60	107	154	208	228	269	337	411
	EN12900 (CECOMAF) [°C]	C55	93	132	176	192	226	280	340

**Performance Table COP with RC @ ASHRAE / (CECOMAF); 220V, 60Hz; [W/W]:**

Evap. temp. [°C]		-35	-30	-25	-23,3	-20	-15	-10	
Condensing temp. @	ASHRAE [°C]	40	1,47	1,66	1,89	1,98	2,16	2,43	2,76
		45	1,38	1,59	1,81	1,89	2,04	2,31	2,58
		50	1,31	1,51	1,73	1,80	1,95	2,18	2,42
		55	1,24	1,44	1,65	1,72	1,85	2,07	2,29
		60	1,16	1,38	1,58	1,64	1,77	1,96	2,15
	EN12900 (CECOMAF) [°C]	C55	1,02	1,19	1,35	1,41	1,53	1,70	1,88

**Performance Table Input Power with RC @ ASHRAE / (CECOMAF); 220V, 60Hz; [W]:**

Evap. temp. [°C]		-35	-30	-25	-23,3	-20	-15	-10	
Condensing temp. @	ASHRAE [°C]	40	90	107	122	126	134	145	153
		45	91	108	124	129	139	151	163
		50	91	110	127	133	143	158	172
		55	91	111	130	136	148	165	181
		60	92	112	132	139	152	172	191
	EN12900 (CECOMAF) [°C]	C55	91	111	130	136	148	165	181

Test Conditions @ 220V 50Hz/60Hz		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                               ± 5%  
Cooling Capacity               ± 5%

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

Evaporating temperature	[°C]	-30	-23,3	-10
Rated current with RC @50 Hz	[A]	0,46	0,54	0,72
Rated current with RC @60 Hz	[A]	0,55	0,66	0,82

## **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