

## ERP Information

### KMF-80 DVR5 Q4

Name or trademark		Factory
Indoor model		1x MIH28Q4N18+1x MIH45Q4N18
Outdoor model		KMF-80 DVR5
Harmonized standards		(EU)206/2012+(EU)2016/2282; (EU)No 626/2011+(EU)2017/254; EN 14825:2016; EN 14511-3:2013; EN 12102-1:2017
Specifics precautions		None
Testing conditions		According to harmonized standards
Sound power level at standard rating conditions (indoor/outdoor)	[dB]	56/66
Refrigerant type		R32
GWP	[kg CO <sub>2</sub> , equivalents]	675
SEER		5.70
Energy efficiency class in cooling		A
Annual electricity consumption in cooling QCE	[kWh/a]	442
Design load in cooling mode (P <sub>designc</sub> )	[kW]	7.20
SCOP (heating average season)		4.00
Energy efficiency class in heating (average season)		A
Annual electricity consumption in heating QHE (average season)	[kWh/a]	1821
Design load in heating mode (P <sub>designh</sub> )	[kW]	5.20
Declared capacity at reference design condition (heating average season)	[kW]	7.20
Back up heating capacity at reference design condition (heating average season)	[kW]	0
<p>Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a Refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a Refrigerant fluid with a GWP equal to [675]. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [675] times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.</p>		

**KMF-100 DVR5 Q4**

Name or trademark		Factory
Indoor model		2x MIH45Q4N18
Outdoor model		KMF-100 DVR5
Harmonized standards		(EU)206/2012+(EU)2016/2282; (EU)No 626/201+(EU)2017/254; EN 14825:2016; EN 14511-3:2013; EN 12102-1:2017
Specifics precautions		None
Testing conditions		According to harmonized standards
Sound power level at standard rating conditions (indoor/outdoor)	[dB]	60/68
Refrigerant type		R32
GWP	[kg CO <sub>2</sub> , equivalents]	675
SEER		5.70
Energy efficiency class in cooling		A
Annual electricity consumption in cooling QCE	[kWh/a]	553
Design load in cooling mode (P <sub>designc</sub> )	[kW]	9.00
SCOP (heating average season)		3.95
Energy efficiency class in heating (average season)		A
Annual electricity consumption in heating QHE (average season)	[kWh/a]	1984
Design load in heating mode (P <sub>designh</sub> )	[kW]	5.60
Declared capacity at reference design condition (heating average season)	[kW]	9.00
Back up heating capacity at reference design condition (heating average season)	[kW]	0
<p>Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a Refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a Refrigerant fluid with a GWP equal to [675]. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [675] times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.</p>		

## Cooling mode:

[illegible]

Heating mode:

## Cooling mode:

(\*) If  $C_{dc}$  is not determined by measurement, then the default degradation coefficient of heat pumps shall be 0.25.

Where information relates to multi-split air conditioners, the test result and performance data may be obtained on the basis of performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.

Heating mode:

Year	2010	2011	2012	2013	2014
1	10	10	10	10	10
2	10	10	10	10	10
3	10	10	10	10	10
4	10	10	10	10	10
5	10	10	10	10	10
6	10	10	10	10	10
7	10	10	10	10	10
8	10	10	10	10	10
9	10	10	10	10	10
10	10	10	10	10	10
11	10	10	10	10	10
12	10	10	10	10	10
13	10	10	10	10	10
14	10	10	10	10	10
15	10	10	10	10	10
16	10	10	10	10	10
17	10	10	10	10	10
18	10	10	10	10	10
19	10	10	10	10	10
20	10	10	10	10	10
21	10	10	10	10	10
22	10	10	10	10	10
23	10	10	10	10	10
24	10	10	10	10	10
25	10	10	10	10	10
26	10	10	10	10	10
27	10	10	10	10	10
28	10	10	10	10	10
29	10	10	10	10	10
30	10	10	10	10	10
31	10	10	10	10	10
32	10	10	10	10	10
33	10	10	10	10	10
34	10	10	10	10	10
35	10	10	10	10	10
36	10	10	10	10	10
37	10	10	10	10	10
38	10	10	10	10	10
39	10	10	10	10	10
40	10	10	10	10	10
41	10	10	10	10	10
42	10	10	10	10	10
43	10	10	10	10	10
44	10	10	10	10	10
45	10	10	10	10	10
46	10	10	10	10	10
47	10	10	10	10	10
48	10	10	10	10	10
49	10	10	10	10	10
50	10	10	10	10	10
51	10	10	10	10	10
52	10	10	10	10	10
53	10	10	10	10	10
54	10	10	10	10	10
55	10	10	10	10	10
56	10	10	10	10	10
57	10	10	10	10	10
58	10	10	10	10	10
59	10	10	10	10	10
60	10	10	10	10	10
61	10	10	10	10	10
62	10	10	10	10	10
63	10	10	10	10	10
64	10	10	10	10	10
65	10	10	10	10	10
66	10	10	10	10	10
67	10	10	10	10	10
68	10	10	10	10	10
69	10	10	10	10	10
70	10	10	10	10	10
71	10	10	10	10	10
72	10	10	10	10	10
73	10	10	10	10	10
74	10	10	10	10	10
75	10	10	10	10	10
76	10	10	10	10	10
77	10	10	10	10	10
78	10	10	10	10	10
79	10	10	10	10	10
80	10	10	10	10	10
81	10	10	10	10	10
82	10	10	10	10	10
83	10	10	10	10	10
84	10	10	10	10	10
85	10	10	10	10	10
86	10	10	10	10	10
87	10	10	10	10	10
88	10	10	10	10	10
89	10	10	10	10	10
90	10	10	10	10	10
91	10	10	10	10	10
92	10	10	10	10	10
93	10	10	10	10	10
94	10	10	10	10	10
95	10	10	10	10	10
96	10	10	10	10	10
97	10	10	10	10	10
98	10	10	10	10	10
99	10	10	10	10	10
100	10	10	10	10	10

## Cooling mode:

(\*) If  $C_{dc}$  is not determined by measurement, then the default degradation coefficient of heat pumps shall be 0.25.

Where information relates to multi-split air conditioners, the test result and performance data may be obtained on the basis of performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.

Heating mode:



## Cooling mode:

Where information relates to multi-split air conditioners, the test result and performance data may be obtained on the basis of performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.

Heating mode:

[illegible]

## Cooling mode:

Information requirements for air-to-air conditioners								
Model(s): KMF-160 DVR5								
Test matching indoor units form,no-duct: 2x MIH36Q4N18+2x MIH45Q4N18								
Outdoor side heat exchanger of air conditioner: air								
Indoor side heat exchanger of air conditioner: air								
Type: compressor driven								
Driver of compressor: electric motor								
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated cooling capacity	P <sub>rated,c</sub>	15.50	kW		Seasonal space cooling energy efficiency	η <sub>s,c</sub>	261.0	%
Declared cooling capacity for part load at given outdoor temperatures T <sub>j</sub> and indoor 27/19°C (dry/wet bulb)					Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T <sub>j</sub>			
T <sub>j</sub> =+35°C	P <sub>dc</sub>	15.50	kW		T <sub>j</sub> =+35°C	EER <sub>d</sub>	3.02	--
T <sub>j</sub> =+30°C	P <sub>dc</sub>	11.40	kW		T <sub>j</sub> =+30°C	EER <sub>d</sub>	4.60	--
T <sub>j</sub> =+25°C	P <sub>dc</sub>	7.30	kW		T <sub>j</sub> =+25°C	EER <sub>d</sub>	8.60	--
T <sub>j</sub> =+20°C	P <sub>dc</sub>	5.20	kW		T <sub>j</sub> =+20°C	EER <sub>d</sub>	12.00	--
Degradation co-efficient for air conditioners(*)	C <sub>dc</sub>	0.25	--					
Power consumption in modes other than "active mode"								
Off mode	P <sub>OFF</sub>	0.028	kW		Crankcase heater mode	P <sub>CK</sub>	0.002	kW
Thermosat-off mode	P <sub>TO</sub>	0.005	kW		Standby mode	P <sub>SB</sub>	0.028	kW
Other items								
Capacity control	variable				For air-to-air air conditioner: air flow rate, outdoor measured	--	5000	m³/h
Sound power level, outdoor	L <sub>WA</sub>	70	dB					
GWP of the refrigerant		675	kg CO <sub>2</sub> eq (100years)					
Contact details								
(*)If C <sub>dc</sub> is not determined by measurement, then the default degradation coefficient of heat pumps shall be 0.25.								
Where information relates to multi-split air conditioners, the test result and performance data may be obtained on the basis of performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.								

## Q4

Heating mode:

Information requirements for heat pumps									
Model(s): KMF-160 DVR5									
Test matching indoor units form,no-duct: 2x MIH36Q4N18+2x MIH45Q4N18									
Outdoor side heat exchanger of air conditioner: air									
Indoor side heat exchanger of air conditioner: air									
If the heater is equipped with a supplementary heater: no									
Driver of compressor: electric motor									
Parameters shall be declared for the average heating season, parameters for the warmer and colder heating seasons are optional.									
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit	
Rated heating capacity	P <sub>rated,h</sub>	15.50	kW		Seasonal space heating energy efficiency	η <sub>s,h</sub>	173.0	%	
Declared heating capacity for part load at indoor temperature 20°C and outdoor temperatures T <sub>j</sub>					Declared coefficient of performance or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T <sub>j</sub>				
T <sub>j</sub> =-7°C	P <sub>dh</sub>	9.73	kW		T <sub>j</sub> =-7°C	COP <sub>d</sub>	2.90	--	
T <sub>j</sub> =+2°C	P <sub>dh</sub>	5.92	kW		T <sub>j</sub> =+2°C	COP <sub>d</sub>	3.85	--	
T <sub>j</sub> =+7°C	P <sub>dh</sub>	3.81	kW		T <sub>j</sub> =+7°C	COP <sub>d</sub>	6.65	--	
T <sub>j</sub> =+12°C	P <sub>dh</sub>	1.69	kW		T <sub>j</sub> =+12°C	COP <sub>d</sub>	8.50	--	
T <sub>biv</sub> =bivalent temperature	P <sub>dh</sub>	11.00	kW		T <sub>biv</sub> =bivalent temperature	COP <sub>d</sub>	2.20	--	
T <sub>OL</sub> =operation temperature	P <sub>dh</sub>	11.00	kW		T <sub>OL</sub> =operation temperature	COP <sub>d</sub>	2.20	--	
Bivalent temperature	T <sub>biv</sub>	-10	°C						
Degradation co-efficient for heat pumps(**)	C <sub>dh</sub>	0.25	--						
Power consumption in modes other than "active mode"					Supplementary heater				
Off mode	P <sub>OFF</sub>	0.028	kW		Back-up heating capacity(*)	elbu	0	kW	
Thermosat-off mode	P <sub>TO</sub>	0.028	kW		Type of energy input				
Crankcase heater mode	P <sub>CK</sub>	0.002	kW		Standby mode	P <sub>SB</sub>	0.028	kW	
Other items									
Capacity control	variable				For air-to-air heat pump: air flow rate, outdoor measured	--	5000	m³/h	
Sound power level, outdoor	L <sub>WA</sub>	72	dB						
GWP of the refrigerant		675	kg CO <sub>2</sub> eq (100years)						
Contact details									
(*)									
(**)If C <sub>dh</sub> is not determined by measurement, then the default degradation coefficient of heat pumps shall be 0.25.									
Where information relates to multi-split heat pumps, the test result and performance data may be obtained on the basis of performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.									

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	ZKSN-200-10-4L+ZL-580*200*12-3N	Rev.	
Prepare by			

**Specified Information of Fan:**

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	29.41%
2	Overall efficiency ( $\eta_e$ ) =	33.44%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =42.6
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.211
10.2	Flow rate(s) at optimum energy efficiency (m <sup>3</sup> /h)	4891
10.3	Pressure(s) at optimum energy efficiency (Pa)	50
11	Rotations per minute (R.P.M) at the optimum energy efficiency point	800r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency, such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	GUANGDONG WELLING MOTOR MANUFACTURING CO.,LTD.

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	ZKSN-200-10-4L+ZL-580*200*12-3N	Rev.	
Prepare by			

**Specified Information of Fan:**

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	29.23%
2	Overall efficiency ( $\eta_e$ ) =	36.14%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =45.3
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.198
10.2	Flow rate(s) at optimum energy efficiency (m³/h)	4886
10.3	Pressure(s) at optimum energy efficiency (Pa)	50
11	Rotations per minute (R.P.M) at the optimum energy efficiency point	800r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency, such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	Jiangsu Shangqi Group Co., Ltd.

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	ZKSN-200-10-3L+ZL-580*200*12-3N	Rev.	
Prepare by			

**Specified Information of Fan:**

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	30.26%
2	Overall efficiency ( $\eta_e$ ) =	33.39%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =42.1
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.288
10.2	Flow rate(s) at optimum energy efficiency (m³/h)	5615
10.3	Pressure(s) at optimum energy efficiency (Pa)	60
11	Rotations per minute (R.P.M) at the optimum energy efficiency point	900r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency, such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	GUANGDONG WELLING MOTOR MANUFACTURING CO.,LTD.

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	ZKSN-200-10-3L+ZL-580*200*12-3N	Rev.	
Prepare by			

**Specified Information of Fan:**

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	30.32%
2	Overall efficiency ( $\eta_e$ ) =	35.31%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =43.3
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.294
10.2	Flow rate(s) at optimum energy efficiency (m³/h)	5448
10.3	Pressure(s) at optimum energy efficiency (Pa)	65
11	Rotations per minute (R.P.M) at the optimum energy efficiency point	900r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency, such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	Jiangsu Shangqi Group Co., Ltd.