

PRODUCT CATALOGUE



R410A



**AIRCOOLED CONDENSING UNITS AND REVERSIBLE
CONDENSING UNIT WITH AXIAL FANS
AND ROTARY/ SCROLL COMPRESSOR**
FROM 4 TO 45 kW (FROM 1.5 TON TO 12.75 TON)

GENERAL DESCRIPTION

Condensing unit and reversible aircooled condensing units, with axial fans for outdoor installation. The range consists of 14 models covering a cooling capacity from 4 to 45 kW.

VERSIONS:

IKM MHA/K - Cooling Only

IKM MHA/K/WP - Reversible Heat Pump

TECHNICAL FEATURES:

Farm. With supporting frame, in peraluman and galvanized sheet. Stainless-steel screws.

Compressors. Rotary 1-phase (4.5kw-5.5kw), 1-phase Scroll hermetic compressor (9kw-11kw) and 3-phase Scroll hermetic compressor (13kw-45kw), complete with overload protection (klixon) embedded in the motor and crankcase, if needed, installed on rubber vibrations absorbing.

Fans. Axial fan type low ventilation and special wing profile, they are directly coupled to external with protection grade IP54, and a safety fan guard

Condenser. Copper tubes and aluminium finned.

Electrical board. Includes main switch with door lock device; fuses; compressor remote control switch and electronic card for the control of the main functions of the unit (WP only).

IKM MHA/K Version: Refrigerant circuit The circuit, in copper tubing, includes: manual reset high pressure switch and automatic reset low

pressure switch; automatic reset low pressure switch and flare connections with valve (4.5-21) or connections to be brazed (26.5-45).

IKM MHA/K/WP Version: Refrigerant circuit. The circuit, in copper tubing, includes: 2-ways dryer filter; expansion valve; check valve; 4-ways reverse valve; manual reset high pressure switch; automatic reset low pressure switch; liquid and humidity indicator and flare connections with valve (4.5-21) or connections to be brazed (26.5 - 45).

FACTORY FITTED ACCESSORIES:

RL - Liquid receiver to guarantee the liquid phase of the cooling fluid (included WP).

VS - Solenoid valve on the liquid side to avoid liquid reflux (excluded WP).

LOOSE ACCESSORIES:

CC-Condensation control. Obtained by means of continuous adjustment of the fan rotation speed up to outside air temperatures of -20° C.

RP - Coil protection guards. In steel with cathoresis treatment and painting.

FP - Coil protection guards. In steel with nest metal filter. (not advisable in heat pump versions).

AG-Rubber vibration dampers to be inserted at the bottom of the unit to dampen possible vibrations due to the type of floor where the machine is installed.

OPERATING RANGE	COOLING		HEATING	
	min	max	min	max
Evaporator temperature	-2 °C	10 °C	---	---
Average condensing temperature	---	---	35 °C	60 °C
Ambient air temperature	10°C *	46 °C	-10 °C	20 °C

*This value can be reduced until -20°C with an optional accessory supplied prefabricated (CC).

TECHNICAL DATA

MODEL		4.5	5.5	7	8	9	11	13
Cooling:								
Cooling Capacity	kW	4.5	5.6	6.8	8.0	9.2	10.8	13.2
Heating:								
Heating capacity	kW	4.8	5.9	7.3	8.4	9.7	11.3	13.7
Compressor	n°	1	1	1	1	1	1	1
Type	kW	<----- Rotary ----->				<----- Scroll ----->		
Cooling power input	kW	1.3	1.7	2.0	2.4	2.8	3.6	3.8
Heating power input	kW	1.4	1.8	2.2	2.5	2.9	3.7	3.9
Fans:								
Air flow	m ³ /s	0.86	0.86	0.81	0.81	0.76	0.76	1.61
N° x nominal input	n°x kW	1x0.14	1x0.14	1x0.14	1x0.14	1x0.14	1x0.14	2x0.14
Oil charge	Kg	0.4	0.4	0.6	0.6	0.7	1.0	1.6
Sound pressure - DIN (1)	dB(A)	56	56	56	56	58	59	59
Sound pressure - ISO (2)	dB(A)	49	49	49	49	51	52	52
Connections:								
Suction line	Ø "	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	3/4"
	Ø mm	16	16	16	16	16	16	18
Liquid line	Ø "	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"
	Ø mm	10	10	10	10	10	10	12
Weight *								
Transport weight	kg	81	83	83	87	90	92	109

ELECTRICAL DATA

MODEL		4.5	5.5	7	8	9	11	13	
Maximum absorbed power	kW	1.8	2.4	2.7	2.9	3.6	4.3	4.9	
Maximum starting current	A	37	43	62	62	79	86	58	
Full load current	A	6.8	8.8	11	11	15	18	7.5	
Power supply	V/~ /Hz	<----- 230/1/50 ±5% ----->					400/3+N/50 ±5%		
Control power supply	V/~ /Hz	<----- 230-24/1/50 ±5% ----->							

Cooling: Evaporating temperatur 5 °C, ambient air temperature 35 °C.

Heating: Condensing temperatur 40 °C, ambient air temperature 7 °C d.b. /6 °C w.b.

- (1) Sound pressure level measured in free field conditions at 1 m from the unit and at 1,5 m from the ground. According to DIN 45635.
- (2) Average sound pressure level measured in free field conditions at 1 m,

Weights: for heat pump unit increase the weight 10%.

TECHNICAL DATA

MODEL		16	19	21	26.5	31	36.5	45
Cooling:								
Cooling Capacity	kW	15.8	19.1	21.2	26.4	30.9	36.6	45.3
Heating:								
Heating capacity	kW	16.8	19.9	22.0	27.4	33.2	40.9	51.9
Compressor	n°	1	1	1	1	1	1	1
Type	kW	<----- Scroll ----->						
Cooling power input	kW	4.8	5.9	6.8	8.1	8.2	10.5	13.2
Heating power input	kW	5.0	6.1	7.0	8.3	8.8	10.9	14.2
Fans:								
Air flow	m³/s	1.53	1.53	1.53	2.25	4.61	4.61	4.61
N° x nominal input	n°x kW	2 X0.14	2 x0.14	2 x0.14	1x0.49	2 x0.49	2 x0.49	2x0.49
Oil charge	Kg	1.6	1.6	1.6	3.3	3.3	3.3	3.6
Sound pressure - DIN (1)	dB(A)	59	59	59	60	61	61	6
Sound pressure - ISO (2)	dB(A)	52	52	52	53	54	55	56
Connections:								
Suction line	∅ "	3/4"	7/8"	7/8"	1" 1/8"	1" 1/8"	1" 1/8"	1" 1/8"
	∅ mm	18	22	22	28	28	28	28
Liquid line	∅ "	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"
	∅ mm	12	12	12	12	12	12	16
Weight *								
Transport weight	kg	111	113	115	218	232	252	266

ELECTRICAL DATA

MODEL		16	19	21	26.5	31	36.5	45
Maximum absorbed power	kW	5.7	6.8	7.9	10.1	10.1	12.6	17.0
Maximum starting current	A	61	58	74	142	147	142	167
Full load current	A	10	10	12	23	29	30	39
Power supply	V/~ /Hz	<----- 400/3+N/50 ±5% ----->						
Control power supply	V/~ /Hz	<----- 230-24/1/50 ±5% ----->						

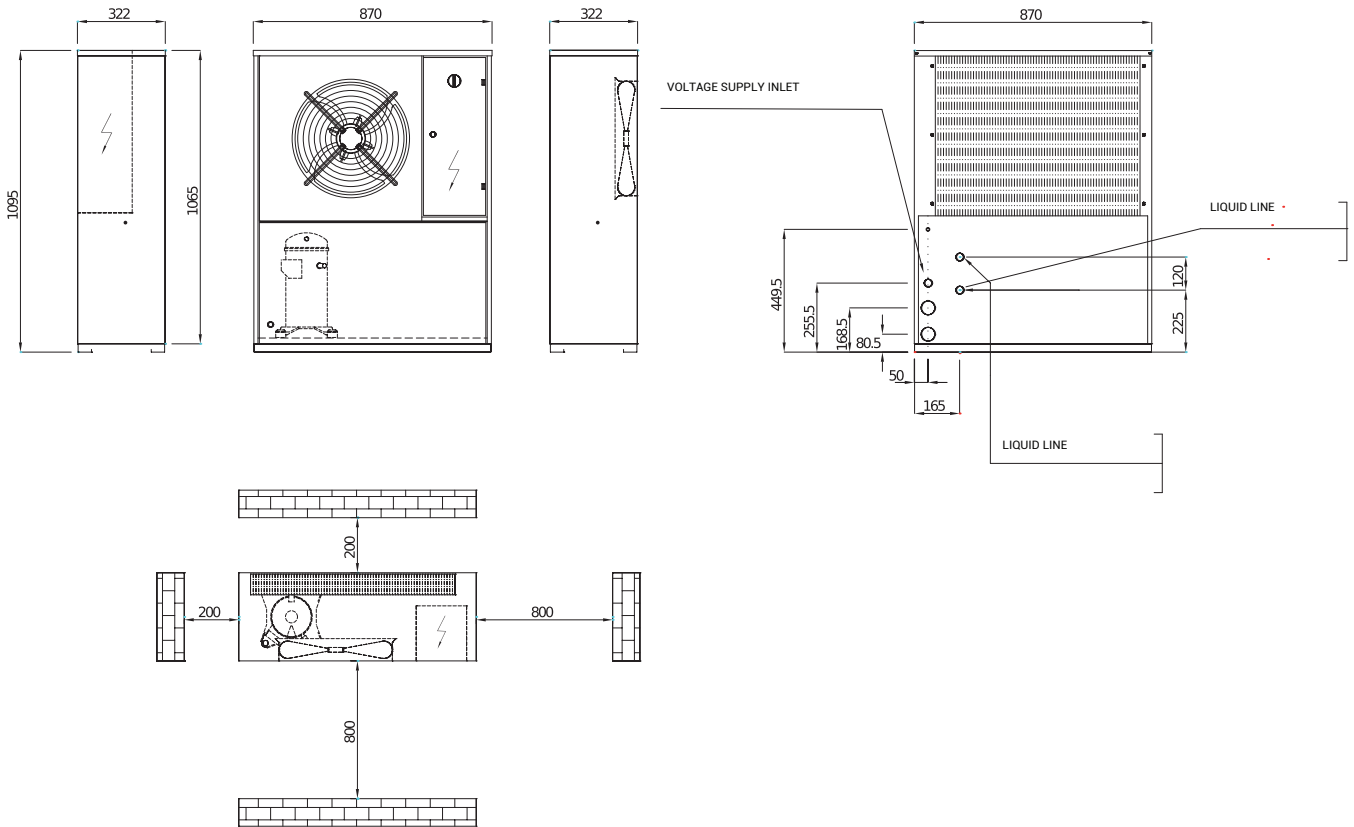
Cooling: Evaporating temperatur 5 °C, ambient air temperature 35 °C.

Heating: Condensing temperatur 40 °C, ambient air temperature 7 °C d.b. /6 °C w.b.

- (1) Sound pressure level measured in free field conditions at 1 m from the unit and at 1,5 m from the ground. According to DIN 45635.
- (2) Average sound pressure level measured in free field conditions at 1 m,

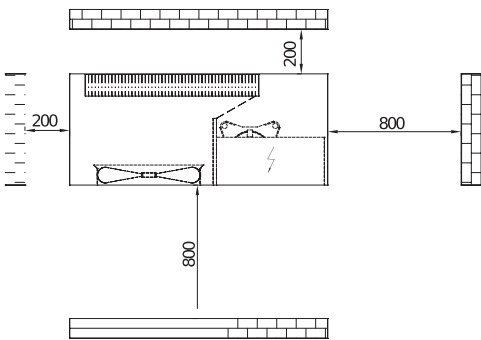
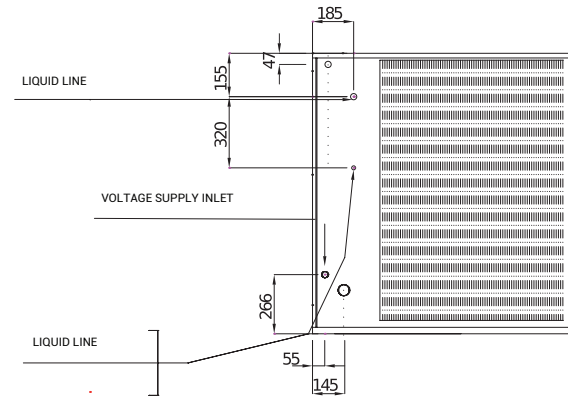
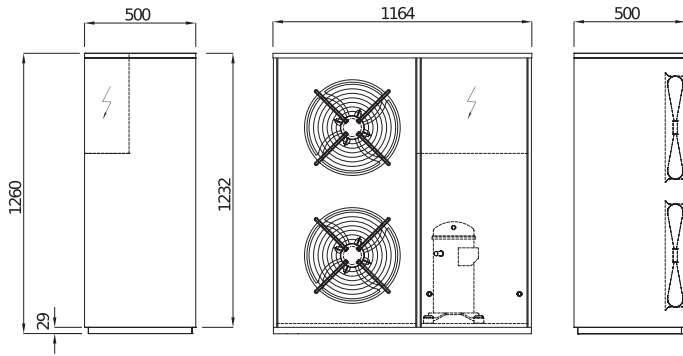
Weights: for heat pump unit increase the weight 10%.

DIMENSIONS, CLEARANCES AND REFRIGERATION CONNECTIONS



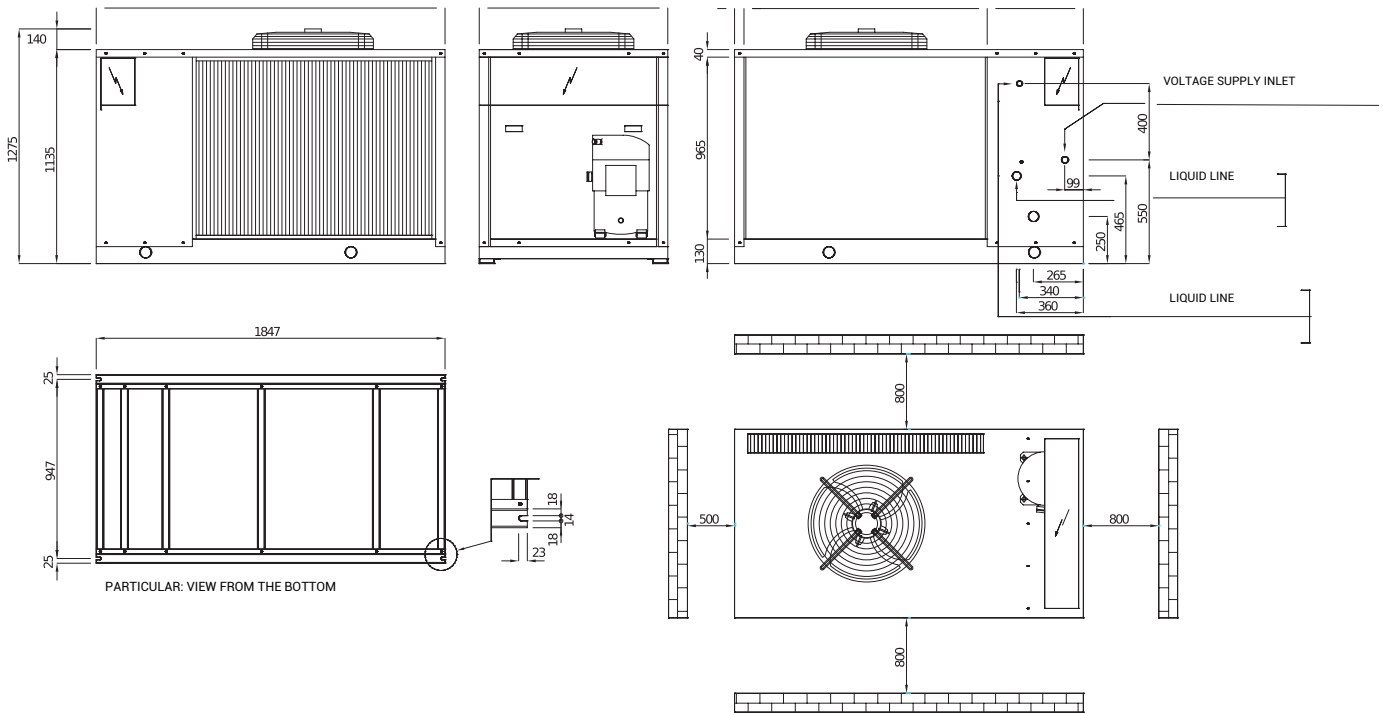
MODEL		4.5	5.5	7	8	9	11
Suction line	Ø mm	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Liquid line	Ø mm	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"

DIMENSIONS, CLEARANCES AND REFRIGERATION CONNECTIONS



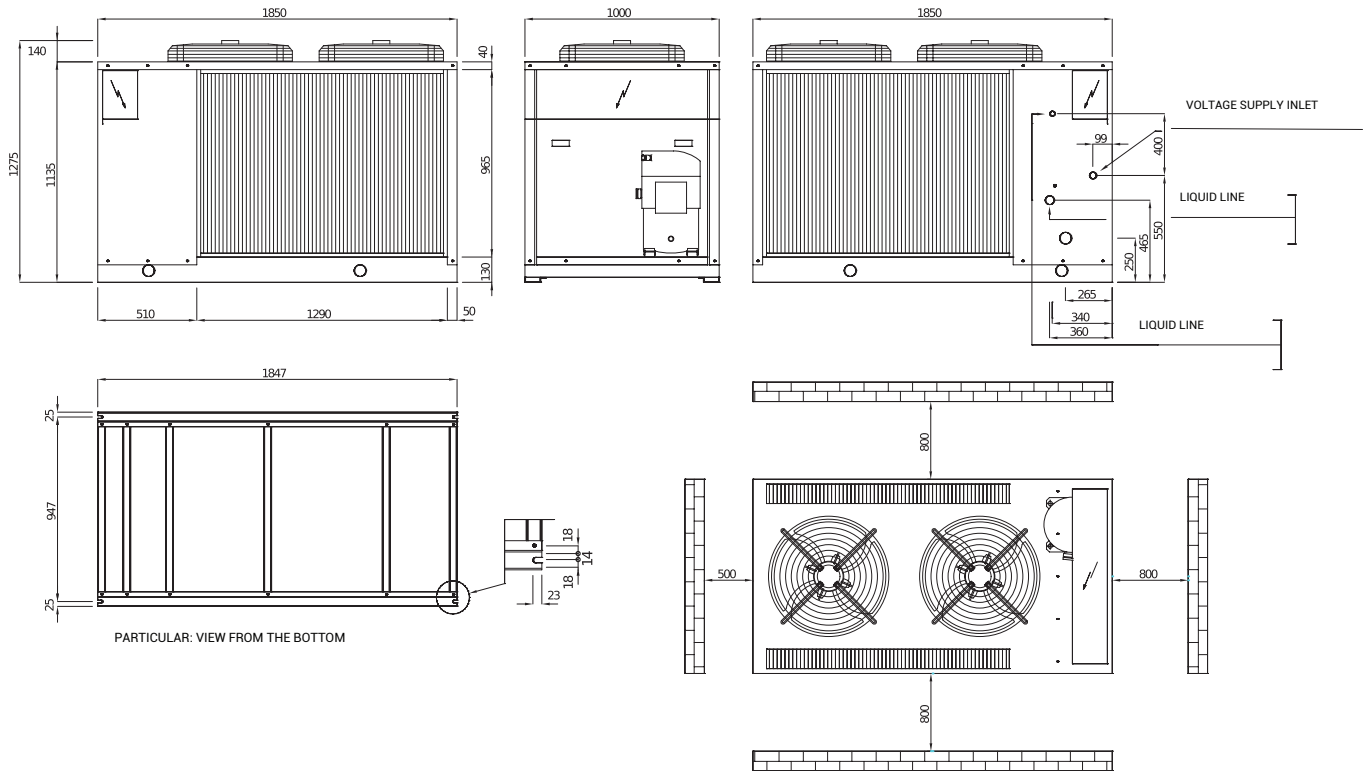
MODEL		13	16	19	21
Suction line	Ø mm	3/4"	3/4"	7/8"	7/8"
Liquid line	Ø mm	1/2"	1/2"	1/2"	1/2"

DIMENSIONS, CLEARANCES AND REFRIGERATION CONNECTIONS



MODEL	26.5	
Suction line	Ø mm	1 1/8"
Liquid line	Ø mm	1/2"

DIMENSIONS, CLEARANCES AND REFRIGERATION CONNECTIONS



MODEL		31	36.5	45
Suction line	Ø mm	1 1/8"	1 1/8"	1 1/8"
Liquid line	Ø mm	1/2"	1/2"	5/8"