IKM HVAC AS

Series
IKM RTAXT/K 50-250

EC XT UP TO 55°C R410A

R410A

DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS AND RADIAL FANS OR EC INVERTER PLUG-FANS

FROM 50 kw to 250 kW (FROM 16 TON TO 79 TON)

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GENERAL DESCRIPTION

The double skin packaged Roof Top units are the ideal solution for air conditioning of wide surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres. Those units feature Scroll compressors with R410A refrigerant and radial fans or EC Inverter Plug-Fans. The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.

Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in Cooling only and Reversible Heat Pump version. The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS:

IKM RTAXT/K - Cooling only with radial fans

IKM RTAXT/K/EC - Cooling only with EC Inverter Plug-Fans

IKM RTAXT/K/MS - Cooling only with radial fans and Mixing Box

IKM RTAXT/K/EC/MS - Cooling only with EC Inverter Plug-Fans and Mixing Box

IKM RTAXT/K/WP - Reversible Heat Pump with radial fans

IKM RTAXT/K/EC/WP - Reversible Heat Pump with EC Inverter Plug-Fans

IKM RTAXT/K/WP/MS - Reversible Heat Pump with radial fans and Mixing Box

IKM RTAXT/K/EC/WP/MS - Reversible Heat Pump with EC Inverter Plug-Fans and Mixing Box

FEATURES:

Structure of base perimeter made of steel sheet elements galvanised. Frame made of extruded aluminium alloy profiles connected by 3 way joints. Assembling of the base to the frame is of dual support and grants the walking on the base panels installation without sticking out screws. 50mm thick sandwich panels made of prepainted steel sheet; water proofing granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.

Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.

Condenser and evaporator with copper tube and aluminium finned coil.

Delivery radial fans coupled to 3-phase motors by V belt and variable pulley.

High efficiency delivery reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.

R410A refrigerant.

Electrical board includes: door interlocking isolator, fuses, thermal protection relays on compressors, thermocontacts for the fans of the condensing unit and contactors for the fan motors of the air handling unit.

Electrical board with dedicated components sizing and ventilation system for unit operation at high outdoor ambient temperature.

Microprocessor for the automatic control of the unit.

Operating outdoor ambient air temperature up to 55°C.

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ACCESSORIES

FACTORY FITTED ACCESSORIES:

IM	**Automatic circuit** breakers
SL	**Unit** silencement
RFM	**Cooling circuit** shut-off valve on discharge line
RFL	**Cooling circuit** shut-off valve on liquid line
CT	**Condensing control** down to 0°C
CC	**Condensing control** down to -20°C
TXC	**Condensing coil** with pre-coated fins
TXE	**Evaporating coil** with pre-coated fins
FT/M	**Soft bag filters** efficiency M6-F7-F8
FT/R	**Rigid bag filters** efficiency M6-F7-F8
FS	**Anti-sand** filter
AT	**Constant air** flow regulation control
AT/P	**Constant available** static pressure regulation control
EHG	**Electrical heater** with step regulation
SQ	**Air quality** sensor
PF	**Filter differential** pressure switch
IS	**Modbus RTU protocol**, RS485 serial interface
ISB	**BACnet MSTP protocol**, RS485 serial interface
ISBT	**BACnet TCP/IP** protocol, Ethernet port
ISL	**LonWorks protocol**, FTT-10 serial interface
CP	**Potential free** contacts
RP	**Coils protection** metallic guards

LOOSE ACCESSORIES:

MN	**High and low** pressure gauges
CR	**Remote control** panel
AG	**Rubber shock** absorbers

MIXING BOX:

MS. Mixing Box - Further to components of the basic section, includes two wing profile aluminium dampers with spring return servomotors (dampers with opposite movement).

COMPLEMENTARY SECTIONS:

UM	**Section with preparation** for Humidifier
UM/EN	**Section Humidifier** with electrodes immersed

Cooling & Heating

Scroll

Radial

EC Inverter Plug-Fan

XT upto 55ºC

R410A

Series IKM RTAXT/K 50-250

IKM HVAC AS

IKM RTAXT/K 50 - 250

MODEL			50	60	70	75	90	100	110	125	150	175	250
Cooling	Cooling Capacity (1)	kW	49.5	58.5	67	76.2	88.5	100	112	126	149	176	243
		TON	14.0	6.6	19.1	21.7	25.2	28.5	31.9	35.7	42.4	50.1	69
	Absorbed power (1), (2)	kW	21.4	24.2	27.7	30.6	36.4	40.7	45	52.4	63.1	72.9	90.2
	Cooling Capacity (3)	kW	56.5	67.3	79.1	86.2	100	115	130	142	169	198	276
		TON	16.1	19.1	21.6	24.5	28.4	32.7	37	40.4	48.1	56.3	78.6
	Absorbed power (2), (3)	kW	18.1	22.8	26.1	28.7	34.2	37.9	42.1	48.8	52.3	68.5	72.6
Heating	Heating Capacity (4)	kW	58.7	68.7	75.3	87.4	102	117	134	148	174	204	288
		TON	16.7	19.5	21.4	24.9	29.1	33.2	38.1	42.1	49.4	58	81.8
	Absorbed power (2), (4)	kW	15.7	18.7	22	25	28	32.3	35.4	45.1	43.8	56.1	60.1
Air treatment section	Airflow	m^3/s	2.67	3.3	4.05	4.05	4.84	5.49	6.32	6.32	8.2	9.79	12.31
		cfm	5657	6992	8581	8581	10255	11633	13391	13391	17375	20744	26083
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
		in WG	1	1	1	1	1	1	1	1	1	1	1
	Fans	nº	1	1	1	1	1	1	1	1	1	1	1
	Filtter	type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Airflow	m^3/s	2.67	3.3	4.05	4.05	4.84	5.49	6.32	6.32	8.2	9.79	12.31
		cfm	5657	6992	8581	8581	10255	11633	13391	13391	17375	20744	26083
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
		in WG	1	1	1	1	1	1	1	1	1	1	1
	Fans	nº	1	1	2	2	2	2	2	2	2	4	4
	Filtter	type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	nº	2	2	2	2	4	4	4	4	4	4	4
	Refrigerant circuits	nº	1	1	1	1	2	2	2	2	2	2	2
	Capacity steps	nº			2						4		
Electrical heater	Power supply	V/Ph/Hz							400/3/50				
	Heating capacity	kW	15	21	27	27	28	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	nº	2	2	2	2	2	4	4	4	4	4	4
Electrical characteristics	Power supply	V/Ph/Hz							400/3/50				
	Max. running current	A	48	55	63	72	81	94	10	117	131	160	218
	Max. starting current	A	142	152	158	186	161	188	206	231	227	304	392
Electrical characteristics (EC version)	Power supply	V/Ph/Hz							400/3/50				
	Max. running current	A	44	49	56	65	74	88	3	110	124	158	215
	Max. starting current	A	138	146	151	179	154	182	199	224	220	302	389
Sound pressure	STD/MS versions (5)	dB(A)	58	58	58	59	59	59	60	60	61	61	61
Sound pressure (EC version)	STD/MS versions (5)	dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weight	Transport weight	Kg	1050	1105	1210	1310	1430	1610	2020	2080	2350	2510	3420
	Operating weight	Kg	1035	1090	1195	1295	1415	1590	2000	2060	2330	2490	2400
Weight (EC version)	Transport weight	Kg	1010	1070	1180	1280	1390	1520	1930	1990	2310	2430	3280
	Operating weight	Kg	995	1055	1165	1265	1375	1500	1910	1970	2290	2410	3260

NOTE : Continued for details on page 4

1. Evaporator inlet air temperature 27°C d.b./19°C w.b.; ambient air temperature 46°C.

2. Excluded the power absorbed by fans of air treatment section.

3. Evaporator inlet air temperature 27°C d.b./19°C w.b.; ambient air temperature 35°C.

4. Condenser inlet air temperature 20°C, ambient air temperature 7°C d.b./6°C w.b.

5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

N.B. Weights of WP versions are specified on technical brochure.

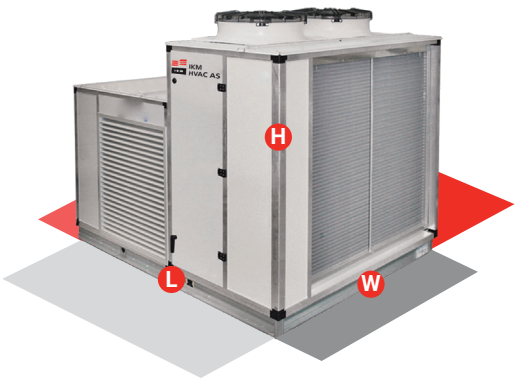
DIMENSIONS

DIMENSIONS			50	60	70	75	90	100	110	125	150	175	250
L	STD/MS	mm	2980	3080	3190	3190	3290	3770	4500	4500	5150	5300	7370
W	STD/MS	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/MS	mm	2340	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

DIMENSIONS & CLEARANCE AREA

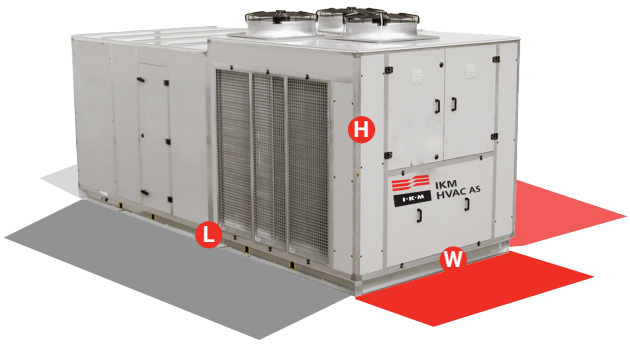
IKM RTAXT/K 50-100

800 | 1700 | 800 | 1700



IKM RTAXT/K 100-250

1000 | 1700 | 1000 | 1700



Electrical board side

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