

# CHAPTER 5

## PACKAGED ROOFTOP UNITS

Unit	Page
<a href="#">RTA/TK/EC/WP 182-R÷453-R</a>	188 - 189
<a href="#">RTA/K/EC/WP 182-R÷453-R</a>	190 - 191
<a href="#">RTA/IK/EC 172÷724</a>	192 - 193
<a href="#">RTA/IK/EC/MS 172÷724</a>	194 - 195
<a href="#">RTA/IK/EC/ECO 172÷724</a>	196 - 197
<a href="#">RTA/IK/EC/ECO/REC-FX 172÷724</a>	198 - 199
<a href="#">RTA/IK/EC/ECO/REC-WH 172÷724</a>	200 - 201
<a href="#">RTA/K 182÷804</a>	202 - 203
<a href="#">RTA/K/MS 182÷804</a>	204 - 205
<a href="#">RTA/K/ECO 182÷804</a>	206 - 207
<a href="#">RTA/K/ECO/REC-FX 182÷804</a>	208 - 209
<a href="#">RTA/K/ECO/REC-WH 182÷804</a>	210 - 211

FROM 63 KW TO 162 KW.

# RTA/TK/EC/WP 182-R÷453-R

**SINGLE SKIN PACKAGED ROOFTOP UNITS WITH DIGITAL SCROLL COMPRESSORS AND EC INVERTER PLUG-FANS.**

**NEW**



The single skin packaged Roof Top units of the **AIRPLUS** series are the ideal solution for air conditioning of medium-wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. The units are equipped with **Digital Scroll** compressors with R410A refrigerant, and are available in Reversible Heat Pump version also with **Free-Cooling** with 2 or 3 dampers. A better efficiency at partial loads is guaranteed by the Digital Scroll technology on compressor since its power is varied according to the requested thermal load. AIRPLUS is equipped with **EC Inverter Plug-Fans** with high energy efficiency backward blades both for intake as well as delivery, managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity. The unit can easily adapt to diverse engineering needs thanks to the possibility of selecting onsite the airflow direction, choosing among 8 positions of both intake and output air direction. The unit's structure is made of a frame with extruded aluminium profiles and prepainted panels, and features flat type filters with varying efficiency levels, maintaining high air quality and high comfort.



## DIGITAL SCROLL

## EC INVERTER PLUG FANS

### VERSION

#### RTA/TK/EC/WP

Reversible Heat Pump

#### RTA/TK/EC/WP/MS

Reversible Heat Pump with Free-Cooling section (2 dampers)

#### RTA/TK/EC/WP/ECO

Reversible Heat Pump with Economizer (Free-Cooling section with 3 dampers)

### FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. The perimeter panels are realised in prepainted sheet steel, they can be easily removed and allow access inside the unit for maintenance and repair operations.
- DIGITAL Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- The air treatment section has removable panels allow selection of intake and output configurations that adapt to the specific needs of the system.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers	AT/P	Constant available static pressure regulation control	ISB	BACnet MSTP protocol, RS485 serial interface
SL	Unit silencement	WS2	2-Row hot water coil with 3-Way valve	ISBT	BACnet TCP/IP protocol, Ethernet port
RFM	Cooling circuit shut-off valve on discharge line	EHG	Electrical heating coil with step regulation	ISL	LonWorks protocol, FFT-10 serial interface
RFL	Cooling circuit shut-off valve on liquid line	CH	Enthalpic control (ECO only)	CP	Potential free contacts
TXC	Condensing coil with pre-coated fins	EX	External air intake damper (STD only)	<b>LOOSE ACCESSORIES</b>	
TXE	Evaporating coil with pre-coated fins	SQ	Air quality sensor	MN	High and low pressure gauges
FT	Plate filters efficiency M6-F7-F8	PF	Filter differential pressure switch	CS	Dampers rain hood
AT	Constant air flow regulation control	IS	Modbus RTU protocol, RS485 serial interface	CR	Remote control panel
				RP	Coil protection metallic guards
				AG	Rubber shock absorbers

## RTA/TK/EC/WP 182-R÷453-R

MODEL			182-R	202-R	242-R	262-R	302-R	363-R	393-R	453-R	
Heating	Heating capacity (1)	kW	62.9	71.1	81.2	92.9	107	123	142	162	
	Absorbed power (1),(2)	kW	18.6	21.7	25.2	28.1	31.0	38.1	42.6	50.1	
Cooling	Cooling capacity (3)	kW	64.9	73.8	85.6	96.8	111	128	147	171	
	Absorbed power (2),(3)	kW	20.9	24.2	27.2	30.0	35.4	41.1	45.9	54.1	
Air treatment section	Air flow	m³/s	2.50	2.78	3.34	3.61	4.44	4.44	5.83	6.67	
	Available static pressure	Pa	200	200	200	200	200	200	200	200	
	Fan	n°	1	1	1	1	1	1	2	2	
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	
Air intake section	Air flow	m³/s	2.00	2.22	2.67	2.89	3.55	3.55	4.72	5.33	
	Available static pressure	Pa	100	100	100	100	100	100	100	100	
	Fan	n°	1	1	1	1	1	1	1	1	
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3	
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	
	Capacity steps	n°	2			2			3		
Hot water coil	Heating capacity (4)	kW	65.4	68.6	74.9	78.9	84.9	84.9	103	110	
	Air pressure drops	Pa	16	19	26	30	43	43	68	86	
	Water flow (4)	l/s	1.56	1.64	1.79	1.89	2.03	2.03	2.46	2.62	
	Water pressure drops	kPa	12	14	15	17	18	18	24	28	
	Water connections	"G	2	2	2	2	2	2	2	2	
Electric heating	Power supply	V/Ph/Hz	400/3/50								
	Heating capacity	kW	21	27	27	27	40	40	40	48	
	Max. absorbed current	A	30	39	39	39	59	59	59	69	
	Steps	n°	2	2	2	2	4	4	4	4	
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50								
	Max. running current	A	53	56	65	69	79	91	110	131	
	Max. starting current	A	190	165	188	201	208	215	242	260	
Sound pressure	STD/MS/ECO versions (5)	dB(A)	56	56	60	60	60	60	61	61	
Weights	Transport weight	Kg	1280	1315	1370	1380	1475	1570	1920	2020	
	Operating weight	Kg	1265	1300	1355	1365	1460	1555	1900	2000	

### MS - ECO

MS - Free-Cooling section with 2 dampers - Further to components of the basic version, includes two wing profile aluminium dampers with spring return servomotors.

ECO - Free-Cooling section with 3 dampers - Further to components of the basic version, includes return air EC INVERTER PLUG-FANS; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.

DIMENSIONS			182-R	202-R	242-R	262-R	302-R	363-R	393-R	453-R
L	STD/MS/ECO	mm	2930	2930	2930	2930	2930	2930	3930	3930
W	STD/MS/ECO	mm	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/MS/ECO	mm	2370	2370	2370	2370	2370	2370	2370	2370

### CLEARANCE AREA

RTA/TK/EC/WP 182-R÷453-R

1000	1800	1000	1000
------	------	------	------



### NOTES

1. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  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. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of MS and ECO versions are specified on technical brochure.

FROM 63 KW TO 162 KW.

# RTA/K/EC/WP 182-R÷453-R

**SINGLE-SKIN PACKAGED ROOFTOP UNITS WITH SCROLL COMPRESSORS AND EC INVERTER PLUG-FANS.**

**NEW**



The single skin packaged Roof Top units of the **AIRPLUS** series are the ideal solution for air conditioning of medium-wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. The units are equipped with Scroll compressors with R410A refrigerant, and are available in Reversible Heat Pump version also with **Free-Cooling** with 2 or 3 dampers. AIRPLUS is equipped with **EC Inverter Plug-Fans** with high energy efficiency backward blades both for intake as well as delivery, managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity. The unit can easily adapt to diverse engineering needs thanks to the possibility of selecting onsite the airflow direction, choosing among 8 positions of both intake and output air direction. The unit's structure is made of a frame with extruded aluminium profiles and prepainted panels, and features flat type filters with varying efficiency levels, maintaining high air quality and high comfort.



## EC INVERTER PLUG FANS

### VERSION

RTA/K/EC/WP	RTA/K/EC/WP/MS	RTA/K/EC/WP/ECO
Reversible Heat Pump	Reversible Heat Pump with Free-Cooling section (2 dampers)	Reversible Heat Pump with Economizer (Free-Cooling section with 3 dampers)

### FEATURES

- Structure of base perimeter made of galvanised steel sheet elements. The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. The perimeter panels are realised in prepainted sheet steel, they can be easily removed and allow access inside the unit for maintenance and repair operations.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- The air treatment section has removable panels allow selection of intake and output configurations that adapt to the specific needs of the system.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### 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	Plate filters efficiency M6-F7-F8
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil with step regulation
CH	Enthalpic control (ECO only)
EX	External air intake damper (STD only)
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, FFT-10 serial interface
CP	Potential free contacts

#### LOOSE ACCESSORIES

MN	High and low pressure gauges
CS	Dampers rain hood
CR	Remote control panel
RP	Coil protection metallic guards
AG	Rubber shock absorbers

## RTA/K/EC/WP 182-R÷453-R

MODEL			182-R	202-R	242-R	262-R	302-R	363-R	393-R	453-R
Heating	Heating capacity (1)	kW	62.9	71.1	81.2	92.9	107	123	142	162
	Absorbed power (1),(2)	kW	18.6	21.7	25.2	28.1	31.0	38.1	42.6	50.1
Cooling	Cooling capacity (3)	kW	64.9	73.8	85.6	96.8	111	128	147	171
	Absorbed power (2),(3)	kW	20.9	24.2	27.2	30.0	35.4	41.1	45.9	54.1
Air treatment section	Air flow	m³/s	2.50	2.78	3.34	3.61	4.44	4.44	5.83	6.67
	Available static pressure	Pa	200	200	200	200	200	200	200	200
	Fan	n°	1	1	1	1	1	1	2	2
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	m³/s	2.00	2.22	2.67	2.89	3.55	3.55	4.72	5.33
	Available static pressure	Pa	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	1	1	1	1
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1
	Capacity steps	n°				2				3
Hot water coil	Heating capacity (4)	kW	65.4	68.6	74.9	78.9	84.9	84.9	103	110
	Air pressure drops	Pa	16	19	26	30	43	43	68	86
	Water flow (4)	l/s	1.56	1.64	1.79	1.89	2.03	2.03	2.46	2.62
	Water connections	"G	2	2	2	2	2	2	2	2
Electric heating	Power supply	V/Ph/Hz	400/3/50							
	Heating capacity	kW	21	27	27	27	40	40	40	48
	Max. absorbed current	A	30	39	39	39	59	59	59	69
	Steps	n°	2	2	2	2	4	4	4	4
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50							
	Max. running current	A	53	56	65	69	79	91	110	131
	Max. starting current	A	190	165	188	201	208	215	242	260
Sound pressure	STD/MS/ECO versions (5)	dB(A)	56	56	60	60	60	60	61	61
Weights	Transport weight	Kg	1280	1315	1370	1380	1475	1570	1920	2020
	Operating weight	Kg	1265	1300	1355	1365	1460	1555	1900	2000

### MS - ECO

MS - Free-Cooling section with 2 dampers - Further to components of the basic version, includes two wing profile aluminium dampers with spring return servomotors.

ECO - Free-Cooling section with 3 dampers - Further to components of the basic version, includes return air EC INVERTER PLUG-FANS; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.

DIMENSIONS			182-R	202-R	242-R	262-R	302-R	363-R	393-R	453-R
L	STD/MS/ECO	mm	2930	2930	2930	2930	2930	2930	3930	3930
W	STD/MS/ECO	mm	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/MS/ECO	mm	2370	2370	2370	2370	2370	2370	2370	2370

### CLEARANCE AREA

RTA/K/EC/WP 182-R÷453-R

1000	1800	1000	1000
------	------	------	------



### NOTES

1. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  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. Inlet air temperature 20 °C, water temperature 70/60 °C.
  5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of MS and ECO versions are specified on technical brochure.

# RTA/IK/EC 172÷724

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

**NEW**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/IK/EC units feature **Inverter Scroll** compressor with R410A refrigerant and **EC Inverter Plug-Fans**. The highest efficiency at partial loads is guaranteed by the Inverter Scroll technology on compressor since its power is varied proportionally to the requested thermal load. Furthermore, the EC Inverter Plug-Fans with high energy efficiency backward blades 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.



## INVERTER SCROLL

## EC INVERTER PLUG FANS

### VERSION

#### RTA/IK/EC

Cooling only with EC Inverter Plug-Fans

#### RTA/IK/EC/WP

Reversible Heat Pump with EC Inverter Plug-Fans

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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.
- INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### 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
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
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil 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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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

## RTA/IK/EC 172÷724

MODEL			172	192	212	232	272	302	352	372	484	574	724
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Condensing section	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Compressor	n°	2	2	2	2	2	2	2	2	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	Stepless										
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	990	1050	1150	1250	1260	1450	1810	1860	2230	2400	3180
	Operating weight	Kg	975	1035	1135	1235	1245	1430	1790	1840	2210	2380	3150

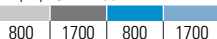
## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			172	192	212	232	272	302	352	372	484	574	724
L	STD	mm	2980	3080	3190	3190	3290	3770	4500	4500	5150	5300	7370
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/IK/EC 172÷302



RTA/IK/EC 352÷724



### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
2. Excluded the power absorbed by fans of air treatment section
3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
4. Inlet air temperature 20 °C, water temperature 70/60 °C.
5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.

# RTA/IK/EC/MS 172÷724

DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH INVERTER SCROLL COMPRESSORS, EC INVERTER PLUG-FANS AND MIXING BOX.

**NEW**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/IK/EC units feature **Inverter Scroll** compressor with R410A refrigerant and **EC Inverter Plug-Fans**. The highest efficiency at partial loads is guaranteed by the Inverter Scroll technology on compressor since its power is varied proportionally to the requested thermal load. Furthermore, the EC Inverter Plug-Fans with high energy efficiency backward blades 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.

The MS units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, a **MIXING BOX**.



## INVERTER SCROLL

## EC INVERTER PLUG FANS

### VERSION

#### RTA/IK/EC/MS

Cooling only with EC Inverter Plug-Fans and Mixing Box

#### RTA/IK/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, passive treated and mould folded (3mm thick). 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.
- INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### 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
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
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil 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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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



## RTA/IK/EC/MS 172÷724

MODEL			172	192	212	232	272	302	352	372	484	574	724
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Condensing section	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Compressor	n°	2	2	2	2	2	2	2	2	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	Stepless										
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	1070	1135	1245	1340	1360	1560	1940	1990	2300	2520	3465
	Operating weight	Kg	1055	1120	1225	1320	1340	1540	1920	1970	2280	2500	3435

### MIXING BOX

MS - Mixing Box. Further to components of the basic section, includes two wing profile aluminium dampers with spring return servomotors; the opposite movement is ensured by transmission of nylon gear.

### COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			172	192	212	232	272	302	352	372	484	574	724
L	STD	mm	3430	3530	3640	3640	3740	4220	4950	4950	5600	5750	7850
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/IK/EC/MS 172÷302



RTA/IK/EC/MS 352÷724



### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
2. Excluded the power absorbed by fans of air treatment section
3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
4. Inlet air temperature 20 °C, water temperature 70/60 °C.
5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.

# RTA/IK/EC/ECO 172÷724

DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH INVERTER SCROLL COMPRESSORS, EC INVERTER PLUG-FANS AND ECONOMIZER.

**NEW**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/IK/EC units feature **Inverter Scroll** compressor with R410A refrigerant and **EC Inverter Plug-Fans**. The highest efficiency at partial loads is guaranteed by the Inverter Scroll technology on compressor since its power is varied proportionally to the requested thermal load. Furthermore, the EC Inverter Plug-Fans with high energy efficiency backward blades 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. The ECO units have a high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING.



## INVERTER SCROLL

## EC INVERTER PLUG FANS

### VERSION

#### RTA/IK/EC/ECO

Cooling only with EC Inverter Plug-Fans and Economizer

#### RTA/IK/EC/WP/ECO

Reversible Heat Pump with EC Inverter Plug-Fans and Economizer

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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.
- INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### 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
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
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil with step regulation
CH	Enthalpic control (ECO only)
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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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

## RTA/IK/EC/ECO 172÷724

MODEL			172	192	212	232	272	302	352	372	484	574	724
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Air intake section	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
Condensing section	Fan	n°	1	1	1	1	2	2	2	2	2	4	4
	Compressor	n°	2	2	2	2	2	2	2	2	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
Hot water coil	Capacity steps	n°	Stepless										
	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	31	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1½	1½	1½	1½	1½	2"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)	dB(A)	57	57	57	57	57	58	59	59	60	60	61	
Weights	Transport weight	Kg	1500	1610	1740	1840	1860	2000	2400	2450	3020	3370	4190
	Operating weight	Kg	1480	1590	1720	1820	1840	1975	2375	2425	2990	3335	4150

## ECO

ECO - Economizer. Further to components of the basic section, includes: return air fan with electrical motor, complete of adjustable transmission, mounted on elastic supports; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.

## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			172	192	212	232	272	302	352	372	484	574	724
L	STD	mm	5260	5480	5570	5570	5650	6170	6900	6900	8080	8470	11020
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/IK/EC/ECO 172÷302

800	1700	800	1700
-----	------	-----	------

RTA/IK/EC/ECO 352÷724

1000	1700	1000	1700
------	------	------	------



### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
2. Excluded the power absorbed by fans of air treatment section
3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
4. Inlet air temperature 20 °C, water temperature 70/60 °C.
5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.

# RTA/IK/EC/ECO/REC-FX 172÷724

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH INVERTER SCROLL COMPRESSORS, EC INVERTER PLUG-FANS, ECONOMIZER AND CROSS-FLOW HEAT RECOVERY.**

**NEW**



The double skin packaged Roof Top units of the **AIRMIXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/IK/EC units feature **Inverter Scroll** compressor with R410A refrigerant and **EC Inverter Plug-Fans**. The highest efficiency at partial loads is guaranteed by the Inverter Scroll technology on compressor since its power is varied proportionally to the requested thermal load. Furthermore, the EC Inverter Plug-Fans with high energy efficiency backward blades 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. The ECO/REC-FX units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING and a **CROSS-FLOW HEAT RECOVERY**.



## INVERTER SCROLL

## EC INVERTER PLUG FANS

### VERSION

#### RTA/IK/EC/ECO/REC-FX

Cooling only with EC Inverter Plug-Fans, Economizer and Cross Flow Heat Recovery

#### RTA/IK/EC/WP/ECO/REC-FX

Reversible Heat Pump with EC Inverter Plug-Fans, Economizer and Cross Flow Heat Recovery

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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.
- INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers	AT/P	Constant available static pressure regulation control	ISBT	BACnet TCP/IP protocol, Ethernet port
SL	Unit silencement	WS2	2-Row hot water coil with 3-Way valve	ISL	LonWorks protocol, FFT-10 serial interface
RFM	Cooling circuit shut-off valve on discharge line	EHG	Electrical heating coil with step regulation	CP	Potential free contacts
RFL	Cooling circuit shut-off valve on liquid line	CH	Enthalpic control (ECO only)	RP	Coil protection metallic guards
TXC	Condensing coil with pre-coated fins	SQ	Air quality sensor	<b>LOOSE ACCESSORIES</b>	
TXE	Evaporating coil with pre-coated fins	PF	Filter differential pressure switch	MN	High and low pressure gauges
FT/M	Soft bag filters efficiency M6-F7-F8	IS	Modbus RTU protocol, RS485 serial interface	CR	Remote control panel
FT/R	Rigid bag filters efficiency M6-F7-F8	ISB	BACnet MSTP protocol, RS485 serial interface	AG	Rubber shock absorbers
AT	Constant air flow regulation control				

## RTA/IK/EC/ECO/REC-FX 172÷724

MODEL			172	192	212	232	272	302	352	372	484	574	724
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Air intake section	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
Condensing section	Fan	n°	1	1	1	1	2	2	2	2	2	4	4
	Compressor	n°	2	2	2	2	2	2	2	2	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
Hot water coil	Capacity steps	n°	Stepless										
	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	1645	1720	1910	2020	2040	2210	2640	2690	3260	3590	4390
	Operating weight	Kg	1620	1695	1885	1995	2015	2185	2610	2660	3225	3555	4350

### ECO/REC-FX

ECO/REC-FX - Economizer and Cross Flow Heat Recovery. Further to components of the basic section, includes: static recovery device made of aluminium with moisture drain pan, flat filters with inspection possible through hinged door with spring return (external air damper + supply air damper + 2 free-cooling dampers).

### COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			172	192	212	232	272	302	352	372	484	574	724
L	STD	mm	6060	6060	6270	6270	6450	7050	7870	7870	9120	9380	11650
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

#### CLEARANCE AREA

RTA/IK/EC/ECO/REC-FX 172÷302

800	1700	800	1700
-----	------	-----	------

RTA/IK/EC/ECO/REC-FX 352÷724

1000	1700	1000	1700
------	------	------	------



#### NOTES

1. Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
2. Excluded the power absorbed by fans of air treatment section
3. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
4. Inlet air temperature 20 °C, water temperature 70/60 °C.
5. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.

# RTA/IK/EC/ECO/REC-WH 172÷724

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH INVERTER SCROLL COMPRESSORS, EC INVERTER PLUG-FANS, ECONOMIZER AND WHEEL HEAT RECOVERY.**

**NEW**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/IK/EC units feature **Inverter Scroll** compressor with R410A refrigerant and **EC Inverter Plug-Fans**. The highest efficiency at partial loads is guaranteed by the **Inverter Scroll** technology on compressor since its power is varied proportionally to the requested thermal load. Furthermore, the EC Inverter Plug-Fans with high energy efficiency backward blades 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.

The ECO/REC-WH units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING and a **WHEEL HEAT RECOVERY** with efficiency from 50% to 80% depending on operating conditions, able to treat up to 100% of total air flow.



**INVERTER SCROLL**

**EC INVERTER PLUG FANS**

## VERSION

### RTA/IK/EC/ECO/REC-WH

Cooling only with EC Inverter Plug-Fans, Economizer and Wheel Heat Recovery

### RTA/IK/EC/WP/ECO/REC-WH

Reversible Heat Pump with EC Inverter Plug-Fans, Economizer and Wheel Heat Recovery

## FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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.
- INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser and evaporator with copper tube and aluminium finned coil.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers	AT/P	Constant available static pressure regulation control	ISBT	BACnet TCP/IP protocol, Ethernet port
SL	Unit silencement	WS2	2-Row hot water coil with 3-Way valve	ISL	LonWorks protocol, FFT-10 serial interface
RFM	Cooling circuit shut-off valve on discharge line	EHG	Electrical heating coil with step regulation	CP	Potential free contacts
RFL	Cooling circuit shut-off valve on liquid line	CH	Enthalpic control (ECO only)	RP	Coil protection metallic guards
TXC	Condensing coil with pre-coated fins	SQ	Air quality sensor	<b>LOOSE ACCESSORIES</b>	
TXE	Evaporating coil with pre-coated fins	PF	Filter differential pressure switch	MN	High and low pressure gauges
FT/M	Soft bag filters efficiency M6-F7-F8	IS	Modbus RTU protocol, RS485 serial interface	CR	Remote control panel
FT/R	Rigid bag filters efficiency M6-F7-F8	ISB	BACnet MSTP protocol, RS485 serial interface	AG	Rubber shock absorbers
AT	Constant air flow regulation control				

## RTA/IK/EC/ECO/REC-WH 172÷724

MODEL			172	192	212	232	272	302	352	372	484	574	724
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m <sup>3</sup> /s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Air intake section	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Air flow	m <sup>3</sup> /s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
Condensing section	Fan	n°	1	1	1	1	2	2	2	2	4	4	4
	Compressor	n°	2	2	2	2	2	2	2	2	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
Hot water coil	Capacity steps	n°	Stepless										
	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	1645	1720	1910	2020	2040	2210	2640	2690	3260	3590	4390
	Operating weight	Kg	1620	1695	1885	1995	2015	2185	2610	2660	3225	3555	4350

### ECO/REC-WH

ECO/REC-WH - Economizer and Wheel Heat Recovery. Further to components of the basic section, includes: high efficiency wheel-type recovery device made of aluminium with hygroscopic treatment, managed by a constant-speed electric motor, with moisture drain pan, flat filters with inspection possible through hinged door with spring return (external air damper + supply air damper + 2 free-cooling dampers). Also the adjustment of this section is included into the unit control.

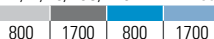
### COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			172	192	212	232	272	302	352	372	484	574	724
L	STD	mm	6060	6060	6270	6270	6450	7050	7870	7870	9120	9380	11650
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

#### CLEARANCE AREA

RTA/IK/EC/ECO/REC-WH 172÷302



RTA/IK/EC/ECO/REC-WH 352÷724



#### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
- Excluded the power absorbed by fans of air treatment section
- Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
- Inlet air temperature 20 °C, water temperature 70/60 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.



FROM 58 KW TO 252 KW.

# RTA/K 182÷804

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



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/K 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.



## EC INVERTER PLUG FANS

### VERSION

#### RTA/K

Cooling only with radial fans

#### RTA/K/WP

Reversible Heat Pump with radial fans

#### RTA/K/EC

Cooling only with EC Inverter Plug-Fans

#### RTA/K/EC/WP

Reversible Heat Pump with EC Inverter Plug-Fans

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### 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
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil 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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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



# RTA/K 182÷804

MODEL			182	202	242	262	302	363	393	453	524	604	804
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
Air treatment section (EC version)	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
Condensing section	Filter	Tipo	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Compressor	n°	2	2	2	2	2	3	3	3	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
Hot water coil	Capacity steps	n°	2			3			4				
	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
Electric heating	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
Electrical characteristics	Steps	n°	2	2	2	2	2	4	4	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50										
	Max. running current	A	50	53	63	67	76	94	100	109	133	150	173
Electrical characteristics (EC version)	Max. starting current	A	173	175	186	199	243	218	232	276	265	317	347
	Power supply	V/Ph/Hz	400/3/50										
	Max. running current	A	46	47	56	60	69	88	93	102	126	148	170
Sound pressure (5)	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
	Sound pressure (5)	dB(A)	58	58	58	58	58	59	60	60	61	61	62
Weights	Sound pressure (EC version) (5)	dB(A)	57	57	57	57	57	58	59	59	60	60	61
	Transport weight	Kg	1030	1085	1180	1280	1300	1540	1900	1950	2270	2480	3320
Weights (EC version)	Operating weight	Kg	1015	1070	1165	1265	1285	1520	1880	1930	2250	2460	3290
	Transport weight	Kg	990	1050	1150	1250	1260	1450	1810	1860	2230	2400	3180
Weights (EC version)	Operating weight	Kg	975	1035	1135	1235	1245	1430	1790	1840	2210	2380	3150

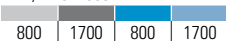
## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

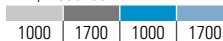
DIMENSIONS			182	202	242	262	302	363	393	453	524	604	804
L	STD/EC	mm	2980	3080	3190	3190	3290	3770	4500	4500	5150	5300	7370
W	STD/EC	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/EC	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/K 182÷363



RTA/K 393÷804



### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
  - Excluded the power absorbed by fans of air treatment section
  - Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  - Inlet air temperature 20 °C, water temperature 70/60 °C.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP and EC versions are specified on technical brochure.

# RTA/K/MS 182÷804

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS, RADIAL FANS OR EC INVERTER PLUG-FANS AND MIXING BOX.**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/K 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. The MS units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, a **MIXING BOX**.



## EC INVERTER PLUG FANS

### VERSION

#### RTA/K/MS

Cooling only with radial fans and Mixing Box

#### RTA/K/MS/MS

Reversible Heat Pump with radial fans and Mixing Box

#### RTA/K/EC/MS

Cooling only with EC Inverter Plug-Fans and Mixing Box

#### RTA/K/EC/MS/MS

Reversible Heat Pump with EC Inverter Plug-Fans and Mixing Box

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### 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
AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control

WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil 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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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

# RTA/K/MS 182÷804

MODEL			182	202	242	262	302	363	393	453	524	604	804
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2			3			4				
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1½"	1½"	1½"	1½"	1½"	2"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	50	53	63	67	76	94	100	109	133	150	173
	Max. starting current	A	173	175	186	199	243	218	232	276	265	317	347
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400/3/50										
	Max. running current	A	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)		dB(A)	58	58	58	58	58	59	60	60	61	61	62
Sound pressure (EC version) (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	1110	1170	1285	1380	1400	1610	2000	2050	2370	2600	3570
	Operating weight	Kg	1095	1155	1265	1360	1380	1590	1980	2030	2350	2580	3540
Weights (EC version)	Transport weight	Kg	1070	1135	1245	1340	1360	1560	1940	1990	2300	2520	3465
	Operating weight	Kg	1055	1120	1225	1320	1340	1540	1920	1970	2280	2500	3435

## MIXING BOX

MS - Mixing Box. Further to components of the basic section, includes two wing profile aluminium dampers with spring return servomotors; the opposite movement is ensured by transmission of nylon gear.

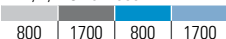
## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			182	202	242	262	302	363	393	453	524	604	804
L	STD/EC	mm	3430	3530	3640	3640	3740	4220	4950	4950	5600	5750	7850
W	STD/EC	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/EC	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/K/MS 182÷363



RTA/K/MS 393÷804



### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
  - Excluded the power absorbed by fans of air treatment section
  - Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  - Inlet air temperature 20 °C, water temperature 70/60 °C.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP and EC versions are specified on technical brochure.

# RTA/K/ECO 182÷804

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



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/K 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. The ECO units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING.



## EC INVERTER PLUG FANS

### VERSION

#### RTA/K/ECO

Cooling only with radial fans and Economizer

#### RTA/K/WP/ECO

Reversible Heat Pump with radial fans and Economizer

#### RTA/K/EC/ECO

Cooling only with EC Inverter Plug-Fans and Economizer

#### RTA/K/EC/WP/ECO

Reversible Heat Pump with EC Inverter Plug-Fans and Economizer

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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 & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery & intake 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; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers	AT/P	Constant available static pressure regulation control	ISL	LonWorks protocol, FFT-10 serial interface
SL	Unit silencement	WS2	2-Row hot water coil with 3-Way valve	CP	Potential free contacts
RFM	Cooling circuit shut-off valve on discharge line	EHG	Electrical heating coil with step regulation	RP	Coil protection metallic guards
RFL	Cooling circuit shut-off valve on liquid line	CH	Enthalpic control (ECO only)	<b>LOOSE ACCESSORIES</b>	
CT	Condensing control down to 0 °C	SQ	Air quality sensor	MN	High and low pressure gauges
CC	Condensing control down to -20 °C	PF	Filter differential pressure switch	CR	Remote control panel
TXC	Condensing coil with pre-coated fins	IS	Modbus RTU protocol, RS485 serial interface	AG	Rubber shock absorbers
TXE	Evaporating coil with pre-coated fins	ISB	BACnet MSTP protocol, RS485 serial interface		
FT/M	Soft bag filters efficiency M6-F7-F8	ISBT	BACnet TCP/IP protocol, Ethernet port		
FT/R	Rigid bag filters efficiency M6-F7-F8				
AT	Constant air flow regulation control				

# RTA/K/ECO 182÷804

MODEL			182	202	242	262	302	363	393	453	524	604	804
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
Air intake section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	2	2	2	2	2	4	4
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2			3			4				
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
Electric heating	Power supply	V/Ph/Hz	400/3/50										
	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	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	50	53	63	67	76	94	100	109	133	150	173
Max. starting current		A	173	175	186	199	243	218	232	276	265	317	347
Electrical characteristics (EC version)	Power supply	V/Ph/Hz	400/3/50										
	Max. running current	A	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
Sound pressure (5)													
Sound pressure (EC version) (5)	dB(A)	58	58	58	58	58	58	59	60	60	61	61	62
Weights	Transport weight	Kg	1570	1690	1810	1910	1930	2160	2560	2610	3130	3500	4520
	Operating weight	Kg	1550	1670	1790	1890	1910	2135	2535	2585	3100	3465	4480
Weights (EC version)	Transport weight	Kg	1500	1610	1740	1840	1860	2000	2400	2450	3020	3370	4190
	Operating weight	Kg	1480	1590	1720	1820	1840	1975	2375	2425	2990	3335	4150

## ECO

ECO - Economizer. Further to components of the basic section, includes: return air fan with electrical motor, complete of adjustable transmission, mounted on elastic supports; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.

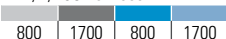
## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

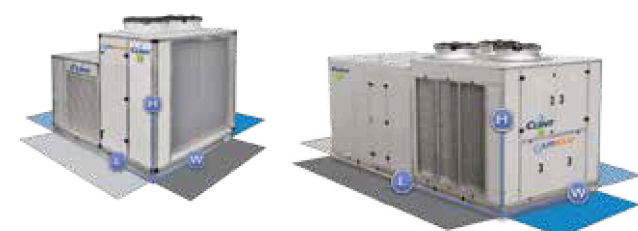
DIMENSIONS			182	202	242	262	302	363	393	453	524	604	804
L	STD/EC	mm	5260	5480	5570	5570	5650	6170	6900	6900	8080	8470	11020
W	STD/EC	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/EC	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/K/ECO 182÷363



RTA/K/ECO 393÷804



### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
- Excluded the power absorbed by fans of air treatment section
- Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
- Inlet air temperature 20 °C, water temperature 70/60 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP and EC versions are specified on technical brochure.

# RTA/K/ECO/REC-FX 182÷804

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS, RADIAL FANS OR EC INVERTER PLUG-FANS, ECONOMIZER AND CROSS-FLOW HEAT RECOVERY.**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/K 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.

The ECO/REC-FX units have an high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING and a **CROSS-FLOW HEAT RECOVERY**.



## EC INVERTER PLUG FANS

### VERSION

#### RTA/K/ECO/REC-FX

Cooling only with radial fans, Economizer and Cross Flow Heat Recovery

#### RTA/K/WP/ECO/REC-FX

Reversible Heat Pump with radial fans, Economizer and Cross Flow Heat Recovery

#### RTA/K/EC/ECO/REC-FX

Cooling only with EC Inverter Plug-Fans, Economizer and Cross Flow Heat Recovery

#### RTA/K/EC/WP/ECO/REC-FX

Reversible Heat Pump with EC Inverter Plug-Fans, Economizer and Cross Flow Heat Recovery

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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 & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery & intake 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; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers	AT/P	Constant available static pressure regulation control	ISBT	BACnet TCP/IP protocol, Ethernet port
SL	Unit silencement	WS2	2-Row hot water coil with 3-Way valve	ISL	LonWorks protocol, FFT-10 serial interface
RFM	Cooling circuit shut-off valve on discharge line	EHG	Electrical heating coil with step regulation	CP	Potential free contacts
RFL	Cooling circuit shut-off valve on liquid line	CH	Enthalpic control (ECO only)	RP	Coil protection metallic guards
CT	Condensing control down to 0 °C	SQ	Air quality sensor	<b>LOOSE ACCESSORIES</b>	
CC	Condensing control down to -20 °C	PF	Filter differential pressure switch	MN	High and low pressure gauges
TXC	Condensing coil with pre-coated fins	IS	Modbus RTU protocol, RS485 serial interface	CR	Remote control panel
TXE	Evaporating coil with pre-coated fins	ISB	BACnet MSTP protocol, RS485 serial interface	AG	Rubber shock absorbers
FT/M	Soft bag filters efficiency M6-F7-F8				
FT/R	Rigid bag filters efficiency M6-F7-F8				
AT	Constant air flow regulation control				

# RTA/K/ECO/REC-FX 182÷804

MODEL			182	202	242	262	302	363	393	453	524	604	804
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
Air intake section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	2	2	2	2	2	4	4
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2					3			4		
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1"½	1"½	1"½	1"½	1"½	2"	2"	2"	2"	2 ½"	2 ½"
	Power supply	V/Ph/Hz	400/3/50										
Electric heating	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	2	2	2	2	2	4	4	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50										
Electrical characteristics	Max. running current	A	50	53	63	67	76	94	100	109	133	150	173
	Max. starting current	A	173	175	186	199	243	218	232	276	265	317	347
	Power supply	V/Ph/Hz	400/3/50										
Electrical characteristics (EC version)	Max. running current	A	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
	Sound pressure (5)	dB(A)	58	58	58	58	58	59	60	60	61	61	62
Sound pressure (EC version) (5)	dB(A)	57	57	57	57	57	58	59	59	60	60	61	
Weights	Transport weight	Kg	1715	1800	1980	2090	2110	2370	2800	2850	3370	3720	4720
	Operating weight	Kg	1690	1775	1955	2065	2085	2345	2770	2820	3335	3685	4680
Weights (EC version)	Transport weight	Kg	1645	1720	1910	2020	2040	2210	2640	2690	3260	3590	4390
	Operating weight	Kg	1620	1695	1885	1995	2015	2185	2610	2660	3225	3555	4350

## ECO/REC-FX

ECO/REC-FX - Economizer and Cross Flow Heat Recovery. Further to components of the basic section, includes: static recovery device made of aluminium with moisture drain pan, flat filters with inspection possible through hinged door with spring return (external air damper + supply air damper + 2 free-cooling dampers).

## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			182	202	242	262	302	363	393	453	524	604	804
L	STD/EC	mm	6060	6060	6270	6270	6450	7050	7870	7870	9120	9380	11650
W	STD/EC	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/EC	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/K/ECO/REC-FX 182÷363



RTA/K/ECO/REC-FX 393÷804



### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
- Excluded the power absorbed by fans of air treatment section
- Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
- Inlet air temperature 20 °C, water temperature 70/60 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP and EC versions are specified on technical brochure.

# RTA/K/ECO/REC-WH 182÷804

**DOUBLE SKIN PACKAGED ROOF TOP UNITS WITH SCROLL COMPRESSORS, RADIAL FANS OR EC INVERTER PLUG-FANS, ECONOMIZER AND WHEEL HEAT RECOVERY.**



The double skin packaged Roof Top units of the **AIRMAXI** series are the ideal solution for air conditioning of wide surfaces such as shopping malls and restaurants, canteens or for industrial areas. RTA/K 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.

The ECO/REC-WH units have a high level of modularity and adaptability to every plant-engineering need: these units feature, in addition to the basic sections, an **ECONOMIZER** automatically controlled both in FREE-COOLING or FREE-HEATING and a **WHEEL HEAT RECOVERY** with efficiency from 50% to 80% depending on operating conditions, able to treat up to 100% of total air flow.



## EC INVERTER PLUG FANS

### VERSION

#### RTA/K/ECO/REC-WH

Cooling only with radial fans, Economizer and Wheel Heat Recovery

#### RTA/K/WP/ECO/REC-WH

Reversible Heat Pump with radial fans, Economizer and Wheel Heat Recovery

#### RTA/K/EC/ECO/REC-WH

Cooling only with EC Inverter Plug-Fans, Economizer and Wheel Heat Recovery

#### RTA/K/EC/WP/ECO/REC-WH

Reversible Heat Pump with EC Inverter Plug-Fans, Economizer and Wheel Heat Recovery

### FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3mm thick). 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 & intake radial fans coupled to 3-phase motors by V belt and variable pulley.
- High efficiency delivery & intake reverse blade EC INVERTER PLUG-FANS, with electronic speed control to easily adapt to the system characteristics.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor for the automatic control of the unit.

### 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

AT	Constant air flow regulation control
AT/P	Constant available static pressure regulation control
WS2	2-Row hot water coil with 3-Way valve
EHG	Electrical heating coil with step regulation
CH	Enthalpic control (ECO only)
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, FFT-10 serial interface
CP	Potential free contacts
RP	Coil protection metallic guards

#### LOOSE ACCESSORIES

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



# RTA/K/ECO/REC-WH 182÷804

MODEL			182	202	242	262	302	363	393	453	524	604	804
Cooling	Cooling capacity (1)	kW	57.9	65.8	77.6	87.4	98.6	113	129	145	168	198	252
	Absorbed power (1),(2)	kW	19.4	21.8	24.6	26.2	30.8	37.8	40.4	43.3	54.6	61.5	85.1
Heating	Heating capacity (3)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(3)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Air treatment section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air treatment section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250	250	250
	Fan	n°	1	1	2	2	2	2	2	2	4	4	4
	Filter	Type	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
Air intake section	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	1	1	1	1	1	1	1
Air intake section (EC version)	Air flow	m³/s	2.67	3.30	4.05	4.05	4.84	5.49	6.32	6.32	8.20	9.79	12.31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100	100	100
	Fan	n°	1	1	1	1	2	2	2	2	2	4	4
Condensing section	Compressor	n°	2	2	2	2	2	3	3	3	4	4	4
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°				2				3			
Hot water coil	Heating capacity (4)	kW	85	100	125	125	150	175	200	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	31	30	36	36	35	35	57
	Water flow (4)	l/s	2.03	2.39	2.99	2.99	3.58	4.18	4.78	4.78	5.97	7.17	8.36
	Water pressure drops	kPa	45	47	48	48	49	44	51	51	53	57	45
	Water connections	"G	1½"	1½"	1½"	1½"	1½"	2"	2"	2"	2"	2½"	2½"
	Power supply	V/Ph/Hz	400/3/50										
Electric heating	Heating capacity	kW	15	21	27	27	27	41	41	41	41	48	55
	Max. absorbed current	A	22	30	39	39	39	59	59	59	59	69	79
	Steps	n°	2	2	2	2	2	4	4	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50										
Electrical characteristics	Max. running current	A	50	53	63	67	76	94	100	109	133	150	173
	Max. starting current	A	173	175	186	199	243	218	232	276	265	317	347
	Power supply	V/Ph/Hz	400/3/50										
Electrical characteristics (EC version)	Max. running current	A	46	47	56	60	69	88	93	102	126	148	170
	Max. starting current	A	169	169	179	192	236	212	225	269	258	315	344
	Power supply	V/Ph/Hz	400/3/50										
Sound pressure (5)		dB(A)	58	58	58	58	58	59	60	60	61	61	62
Sound pressure (EC version) (5)		dB(A)	57	57	57	57	57	58	59	59	60	60	61
Weights	Transport weight	Kg	1715	1800	1980	2090	2110	2370	2800	2850	3370	3720	4720
	Operating weight	Kg	1690	1775	1955	2065	2085	2345	2770	2820	3335	3685	4680
Weights (EC version)	Transport weight	Kg	1645	1720	1910	2020	2040	2210	2640	2690	3260	3590	4390
	Operating weight	Kg	1620	1695	1885	1995	2015	2185	2610	2660	3225	3555	4350

## ECO/REC-WH

ECO/REC-WH - Economizer and Wheel Heat Recovery. Further to components of the basic section, includes: high efficiency wheel-type recovery device made of aluminium with hygroscopic treatment, managed by a constant-speed electric motor, with moisture drain pan, flat filters with inspection possible through hinged door with spring return (external air damper + supply air damper + 2 free-cooling dampers). Also the adjustment of this section is included into the unit control.

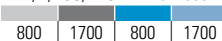
## COMPLEMENTARY SECTIONS

- UMI Section with preparation for Humidifier
- UMI/EN Section Humidifier with electrodes immersed
- F/CD Condensation endothermic hot air generator with modulating gas burner

DIMENSIONS			182	202	242	262	302	363	393	453	524	604	804
L	STD/EC	mm	6060	6060	6270	6270	6450	7050	7870	7870	9120	9380	11650
W	STD/EC	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD/EC	mm	2100	2340	2340	2340	2340	2340	2340	2340	2340	2510	2510

### CLEARANCE AREA

RTA/K/ECO/REC-WH 182÷363



RTA/K/ECO/REC-WH 393÷804



### NOTES

- Evaporator inlet air temperature 27 °C d.b./19 °C w.b.; ambient air temperature 35 °C.
- Excluded the power absorbed by fans of air treatment section
- Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
- Inlet air temperature 20 °C, water temperature 70/60 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP and EC versions are specified on technical brochure.