URT/ECO/REC-WH 051÷212 S/K

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

The packaged Roof Top air conditioning units of the **AIRMAXI** series are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres. Those units feature Scroll compressors with R410A refrigerant and radial fans or **EC Inverter Plug-Fans.** The EC Inverter Plug-Fans with high energy efficiency backward blades both for intake as well as delivery are managed by an electronic control adjusting fans' rotational speed to adapt the air flow to the system capacity.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in Cooling only and Reversible Heat Pump version.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.
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,** able to treat up to 100% of total air flow.

FROM 58 KW TO 252 KW.

VERSION

URT/ECO/REC-WH
Cooling only with radial fans, Economizer and Wheel Heat Recovery

URT/WP/ECO/REC-WH
Reversible Heat Pump with radial fans, Economizer and Wheel Heat Recovery

URT/EC/ECO/REC-WH
Cooling only with EC Inverter Plug-Fans, Economizer and Wheel Heat Recovery

URT/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. 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 expansion valve.
- R410A refrigerant.
- Electrical board includes: door interlocking isolator, fuses, thermal protection relays on compressors, thermocontacts for the fans of the condensing section and contactors for the fan motors of the air handling section.
- 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	Hot water coil with 3-Way valve
EHG	Electrical heater 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, FTT-10 serial interface
CP	Potential free contacts
RP	Coils protection metallic guards

LOOSE ACCESSORIES:

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

ErP SEER ErP SCOP

TECHNICAL DATA - URT/ECO/REC-WH 051÷212 S/K

MODEL			051	061	071	081	091	101	111	131	152	172	212
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
Cooling (EN14511)	SEER (3)		3.26	3.32	3.49	3.65	3.54	3.28	3.51	3.70	3.39	3.57	3.33
	Energy Efficiency (3)	%	127	130	137	143	139	128	137	145	133	140	130
Heating	Heating capacity (4)	kW	60.2	67.2	76.8	88.6	101	115	133	151	173	204	262
	Absorbed power (2),(4)	kW	16.8	17.9	20.2	22.8	25.2	32.2	34.0	40.0	45.7	50.4	70.5
Heating (EN14511)	SCOP (5)		3.09	3.21	3.21	3.24	3.41	3.09	3.40	3.25	3.20	3.40	3.11
	Energy Efficiency (5)	%	121	125	125	127	133	121	133	127	125	133	121
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	Tipo	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	2	4	4
	Filter	Tipo	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	2	2	2	2	2	2	2	4	4
Condensing section	Air flow	m³/s	6.9	7.1	6.9	6.7	6.7	9.8	14.0	13.9	13.9	13.4	20.0
	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	3		4		
Hot water coil	Heating capacity (6)	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 (6)	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"
Electrical heater	Power supply	V/Ph/Hz	400/3/50						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						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						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	STD version (7)	dB(A)	58	58	58	58	58	59	60	60	61	61	62
	EC version (7)	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

COMPLEMENTARY SECTIONS

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

ECONOMIZER AND WHEEL HEAT RECOVERY

ECO/REC-WH. Further to the components of the ECO section, includes: high efficiency wheel-type heat recovery device made of aluminium with hygroscopic treatment, managed by a constant-speed electric motor, with moisture drain pan and dampers with spring return (fresh air damper + air recirculation damper + exhaust air damper). Also the adjustment of this section is included into the unit control.

DIMENSIONS

MODEL			051	061	071	081	091	101	111	131	152	172	212
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

URT/ECO/REC-WH 051÷101 S/K

800 | 1700 | 800 | 1700

URT/ECO/REC-WH 111÷212 S/K

1000 | 1700 | 1000 | 1700

Electrical board side

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. Seasonal energy efficiency of cooling. According to EU Regulation n. 2016/2281.
4. Condenser inlet air temperature 20 °C, ambient air temperature 7 °C d.b./6 °C w.b.
5. Seasonal energy efficiency of heating with average climatic conditions. According to EU Regulation n. 2016/2281.
6. Inlet air temperature 20 °C, water temperature 70/60 °C.
7. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

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