ROOFTOP UNITS

WRX-T 0162 - 0804

Reversible air cooled fully configurable high efficiency Rooftop units
50,8-240 kW

Autonomous reversible air-to-air Rooftop unit, for the thermo-hygrometric treatment, filtration and air renovation, in medium-large surface and volume ambient, such as supermarkets, shopping or exhibition centres.
Hermetic rotary scroll compressors with R410A refrigerant; double refrigerant circuit fitted with Electronic Expansion Valves; EC plug fans are standard on these units.
The structure is specific for outdoor installation, with base and supporting structure made of hot galvanized sheet metal profiles of adequate thickness. The vertical structure and outer panelling are also painted with polyester powders RAL 7035. The air treatment section is insulated internally with a double layer high tech material. The insulation is fixed with specific adhesives to the sheet metal together with mechanical fastenings that guarantee maximum hold over time.
According to the selected version, the unit allows for the management of free cooling, with supply and return fans with motorized dampers for return, expulsion and fresh air.
The unit can be supplied with 4 types of heat recovery: thermodynamic recovery, Refrigerant Booster (an additional refrigerant coil placed on exhaust air flow), air-to air Plate or Rotary, to recover the energy from the exhaust air, increasing unit capacity and the global efficiency.

Configurations

AR	Air recirculation function
MF	Mixing and Free cooling function
AX	Mixing and Free cooling function with Exhaust air Axial fan
HR-F	Heat Recovery Free: air extractor fan(s), free cooling function and thermodynamic heat recovery from exhaust air flow
HR-B	Heat Recovery Refrigerant Booster function: air extractor fan(s), free cooling function and heat recovery from exhaust air flow thanks to Refrigerant Booster coil
HR-P	Heat Recovery Plate function: air extractor fan(s), free cooling function and heat recovery from exhaust air flow thanks to Plate heat Exchanger.
HR-E	Heat Recovery Enthalpy function: air extractor fan(s), free cooling function and heat recovery from exhaust air flow thanks to Rotary Enthalpic Wheel.

Features

HIGH RELIABILITY

The wide working range, the double refrigerant circuit and the accurate design of the components ensure optimum performance and comfort, with a continuous and constant operation also during heavy thermoigrometric conditions.

FLEXIBILITY

Climaveneta's units offer the opportunity to choose different supply and return airflows directions.

VERSATILITY

Different possibilities for the air treatment chambers; from total recirculation only to mixing with fresh air and extraction from the ambient with heat recovery. Each different configuration can be further customized thanks to a wide range of accessories.

HEAT RECOVERY FROM EXHAUST AIR FLOW

Units can be equipped with 4 different heat recovery systems, to address a wide range of needs.

PLUG-FAN VENTILATION

The supply and return plug fans combine the high efficiency of the ventilation section with an easy and fast installation of the unit, both electrical and aeraulic.

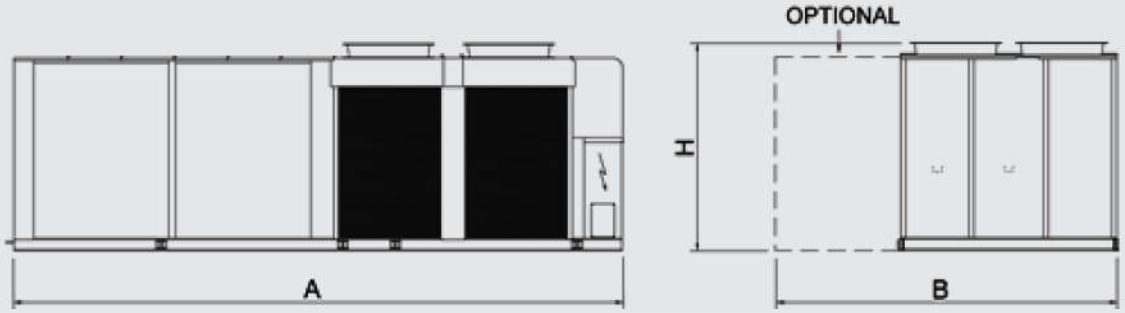
Accessory

- Enthalpy free-cooling
- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Air flow regulation with CO2 or CO2+VOC probe
- Integration or substitution heating resources: hot water heating coil, electrical heaters, gas heating module

Controls

AIR3000TE

The AIR3000 TE controller offers advanced functions and algorithms. It is made up by two control boards, dedicated to the air side and the refrigerant side respectively. The keypad features functional controls and a complete LCD display that allows for unit monitoring and intervention by means of a multilevel menu with a selectable user language. Temperature control is based on PID logic according to the supply temperature set point. It is possible to have set point compensation according to outdoor temperature, both in winter and summer. The operating mode of the unit, cooling/heating/free cooling, is managed automatically. Constant air volume ventilation control is standard: as pressure drop varies, the fans change speed to maintain flow-rate at the design value for the system, according to how dirty the filters are. As an option the air flow can be managed according to a CO2 or CO2 + VOC probe. The controller can also integrate and automatically manage different optional devices: pre-treatment coil, electric heater, gas-fired heating module, humidifier. Unloading modulation function is available for part-load refrigerant circuit operation in critical conditions. Supervision is available with different options, using proprietary
devices or by integration with third party systems using ModBus, BACnet, BACnet-over-IP and Echelon LonWorks protocols. Compatible with remote keypad (management of up to 8 units). The timer can be used to create an operating profile with up to 4 typical days and 10 different time bands.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