

**Autonomous fresh air unit  
13,2-76,3 kW****Features****HIGH ENERGY EFFICIENCY**

The combination of both an active and a static heat recovery system ensures the extraction of all the energy contained in the exhaust air. The smart management of both the free cooling system and the by-pass of the static heat recovery eliminates all the unnecessary energy waste and optimizes the unit function.

**PLUG & PLAY APPROACH**

Everything needed for the air renewal is inside a single and compact structure, where all the spaces are utilized to ensure easy access to internal components. Transportation and installation is greatly simplified, operation times are halved and the calibration phase is completely eliminated.

**HIGHLY PRECISE CONTINUOUS REGULATION**

Advanced control logics and technical components with high-capacity adjustment, such as EC plug fans and inverter driven compressors, perfectly answer the various thermal and renewal air requirements. The continuous and precise modulation of all of the resources provide perfect ambient comfort and a drastic drop in energy consumption.

**PLANT SIMPLIFICATION**

The plant is simplified with the use of the autonomous WTA units. The ambient air conditioning system is no longer in charge of treating fresh air. Cooling and heating units can be resized, expensive duct and fluids distribution works can be eliminated and plant lay-out simplified.

**Accessory**

- High efficiency filters: electronic or rigid pocket F7
- Air flow regulation with CO<sub>2</sub> or CO<sub>2</sub>+VOC probe
- Pre-treatment water coil to extend the working limits
- Compressor box insulation
- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Remote control keyboard (distance to 200m and to 500m)

WTA units are autonomous fresh air units that treat external air and supply it into the environment at neutral conditions. They are suitable both for internal and external installation. WTA units can be combined with different air conditioning systems, like hydronic or direct expansion, and in different applications, like offices, schools, hospitals and shops. Hermetic inverter driven scroll compressor, with R410A refrigerant, single refrigerant circuit, aluminum structure and coated galvanized steel base. Air treatment section with sandwich panel, plug fans and double heat recovery, both static and thermodynamic, to recover the exhaust air energy and increase the unit's efficiency.

**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 CO<sub>2</sub> or CO<sub>2</sub> + 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.



WTA			0021	0026	0033	0041	0051	0064	0080	0100	0126
<b>COOLING</b>											
Total cooling capacity	(1)	kW	13,2	16,2	20,9	27,2	32,4	39,7	51,1	64,6	76,3
Total sensible capacity	(1)	kW	3,00	3,70	4,70	6,20	7,70	9,70	12,0	15,0	18,9
Heat recovery cooling capacity	(1)	kW	3,70	5,40	7,00	8,60	10,8	13,9	16,7	20,5	20,4
Compressors power input	(1)	kW	12,7	14,0	19,7	23,2	27,9	32,3	41,0	51,9	66,2
<b>HEATING</b>											
Total heating capacity	(2)	kW	2100	2600	3300	4100	5100	6400	8000	10000	12600
Heat recovery heating capacity	(2)	kW	250	250	250	250	250	250	250	250	250
Compressors power input	(2)	kW	2100	2600	3300	4100	5100	6400	8000	10000	12600
<b>SUPPLY FANS</b>											
Supply air flow rate		m <sup>3</sup> /h	1	1	1	1	2	2	2	3	4
External static pressure	(3)	Pa	0	0	0	0	0	0	0	0	0
Total power input		kW	84,0	86,0	89,0	87,0	92,0	90,0	90,0	90,0	92,0
<b>RETURN/EXPULSION FAN</b>											
Return air flow rate		m <sup>3</sup> /h	1260	1260	1260	1500	1500	1500	2300	2300	2300
External static pressure	(3)	Pa	0	0	0	0	0	0	0	0	0
Total power input		kW	84,0	86,0	89,0	87,0	92,0	90,0	90,0	90,0	92,0
<b>REFRIGERANT CIRCUIT</b>											
No. Compressors/No. Circuits		N°	1700	1700	1700	2250	2250	2250	2250	2250	2250
Refrigerant charge		kg	1260	1260	1260	1500	1500	1500	2300	2300	2300
<b>NOISE LEVEL</b>											
Sound Power	(4)	dB(A)	84	86	89	87	92	90	90	90	92
<b>SIZE</b>											
Length A		mm	3220	3220	3220	3520	3520	3520	3520	3520	3520
Width B		mm	1700	1700	1700	2250	2250	2250	2250	2250	2250
Height H		mm	1260	1260	1260	1500	1500	1500	2300	2300	2300
Operating weight	(5)	kg	Non un numero	Non un numero	Non un numero	Non un numero	Non un numero	Non un numero	Non un numero	Non un numero	Non un numero

**Notes:**

- 1 Cooling: Outdoor: 0°C 0% U.R. / Indoor: 0°C 0% U.R. / Supply: 0°C.
  - 2 Heating: Outdoor 0°C 0% U.R. / Indoor 0°C 0% U.R. / Supply 0°C.
  - 3 ESP for standard configuration (optional accessories not included/calculated).
  - 4 Sound power on the basis of measurements made in compliance with ISO 9614.
  - 5 Unit in AR configuration and standard execution, without optional accessories.
- The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

