TELECOMMUNICATIONS

NTW-NTWD

OUTDOOR MONOBLOC UNIT WITH MODULATING COMPRESSORS FOR SHELTERS DESIGNED FOR IT EQUIPMENT

8–20 kW

MULTI-PROTOCOL COMMUNICATION INTERFACE

EC RADIAL FANS

INVERTER DRIVEN COMPRESSORS

CORROSION RESISTANT MATERIAL

NTW NTWD

The conditioners of the NTW-NTWD series are monobloc units designed for the air conditioning of small- and medium-sized telephone exchange centres. Designed for **external wall mounting**, they are suitable for conditioning control centres with limited internal space or space entirely taken up by technological equipment. The rational layout of the components, combined with the wide range of accessories available, make the units **easy to install** and **suitable for different shelter configurations**; the **accurate thermodynamic and aeraulic design enhances energy efficiency**.

Maximised shelter internal space

The NTW-NTWD series units are designed to be installed **outside the shelter.** In this way it is possible to make **the most of the internal space** which can thus be used entirely for IT equipment installation.

Simple and fast installation

The monobloc construction ensures **fast installation** with no need to provide on-site refrigeration connecting piping. Thanks to the **Plug&Play** configuration, wall mounting and electrical connection of the unit **are considerably simplified.** Rain shields are available on request for installation on the external wall.

- Refrigerant R410A.
- Version available with dual power supply for emergencies: 230/400V network and 24/48VDC backup supply
- Stainless steel condensate drain pan
- Condensing side fans available with EC motor
- Modulating brushless DC compressors
- Fans on evaporating side with standard EC motor
- Evaporating coils with hydrophilic coating supplied as standard equipment
- Epoxy powder painted structural metalwork supplied as standard on NTWD. Peraluman 5005 aluminium alloy metalwork supplied as standard with NTW
- Dehumidification function on request
- Electric lamination valve with optional electronic control
- Electric heating function (on request)
- Temperature control through heating and post-heating systems with electric heaters (on request)

Easier scheduled maintenance

The unit has been accurately designed to ensure **frontal access to components- even with the units running.** This aspect, combined with full extractability of filters and Free-Cooling damper (if any), **facilitates routine maintenance operations.**

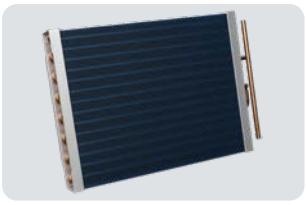
Maximised energy saving with direct Free-Cooling

The units can, on request, be equipped with a **direct Free-Cooling** module. This system, which can also be retrofitted on site to a unit already in operation, reduces compressor work requirements (partial Free-Cooling) and, under full Free-Cooling conditions, allows the compressor to be turned off, **with major benefits for the system's PUE (Power Usage Effectiveness).**

Unit suitable for any kind of climate and environment

Different configurations and layouts are available, suitable for the setting in which the unit is to be installed.

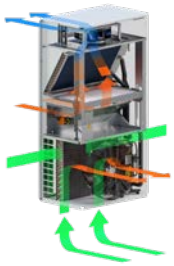
- In the case of extremely cold climates (down to -40°C) **a version for low external temperatures is available.** In this option, the unit is equipped with special condensing fans to be able to operate at low temperatures, an electrically heated switchboard, double compressor casing heaters, and condenser coil flooding system. The Free-Cooling damper heated by electric heaters and equipped with a specific servomotor is also available.
- In case of exposure to aggressive atmospheric agents such as sand or sunlight, dedicated **external metalwork can be ordered with double 160 µm paint finishing layer or in AISI 304 stainless steel alloy.** An epoxy powder painted condensing coil is also available.



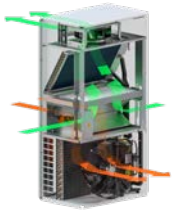
Shelter safety

All models in the NTG range feature evaporating coils with hydrophilic coating. This special coating - together with adequate adjustment of air through-flow speeds - **helps condensate collection during the dehumidification process, preventing any dripping on the inside and outside of the unit.**

NTW
UPFLOW



Mechanical cooling

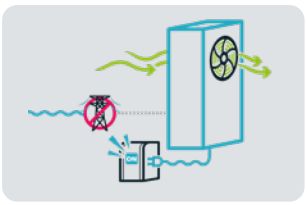


Free-Cooling

NTWD
DOWNFLOW

Mechanical cooling

Free-Cooling

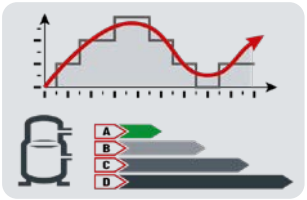


Maximised Redundancy

If **dual power supply** (mains + DC UPS) is provided, unit control and ventilation always remain active, **even in the event of a mains failure.** If the unit is configured as a Free-Cooling version (upon request), the damper will continue to operate, too, and this guarantees **operational continuity for the conditioning system.**

NTW-NTWD		0851	1101	1451	2001
R410A - Indoor air 27°C - 40% / Outdoor air 35°C					
Cooling capacity	kW	8.2	9.4	15.2	19.4
Total absorbed power	kW	2.8	3.4	5.8	7.1
EER		4.17	3.63	3.08	3.24
SHR		1	0.94	0.96	0.99
R410A - Indoor air 30°C - 35% / Outdoor air 35°C					
Cooling capacity	kW	8.8	9.8	15.8	20.4
Total absorbed power	kW	2.8	3.4	5.9	7.2
EER		4.41	3.76	3.17	3.36
SHR		1	1	0.99	1
Rated air flow	m^3/h	2300		3020	4400
Power supply	V/ph/Hz	230/1/50		400/3+N/50	
Dimensions [LxHxD]	mm	847x1580x500		1047x1840x605	1150x2250x655

Performance data relating to Upflow versions. | Also available with 60 Hz power supply. | Units also available in Downflow models except size 2001.



Efficiency and precision

As the thermal load changes, the integrated microprocessor allows for combined modulation of the air flow - via standard EC fans and cooling capacity control, by adjusting the speed of the DC inverter compressors supplied as standard. This ensures **accurate adjustment of environmental hygrothermal parameters and maximised energy savings at partial loads.**

HiRef S.p.A. · Viale Spagna 31/33 35020 Tribano (PD) – IT · Tel. +39 0499588511 · info@hiref.it
hiref@pec.it · CF/P.IVA: 02191431200 · REA: PD – 327685