

TELECOMMUNICATIONS

# NTR

## ROOFTOP AIR CONDITIONING UNIT WITH MODULATING COMPRESSORS FOR CONTAINERS

31-41 kW



NTR rooftops are direct expansion air-cooled units developed and designed for container air conditioning. **They represent the simplest solution for the air conditioning of CEDs inside containers;** this is thanks to the **external positioning of the shelter and the easy installation typical of single-block versions.** The internal design and the careful choice of components are designed to provide the unit with **maximum energy efficiency, so as to obtain the highest savings in terms of operating costs of the cooling system.**

### 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  $-40^{\circ}\text{C}$ ) **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.
- In case of exposure to aggressive atmospheric agents such as sand or sunlight, **the outdoor unit metalwork can be ordered with double 160  $\mu\text{m}$  paint finishing layer or in AISI 304 stainless steel alloy.** An epoxy powder painted condensing coil is also available.



- Refrigerant R410A
- Configurable with side intake and delivery
- Version for low outdoor temperatures ( $-40^{\circ}\text{C}$ ) available
- Modulating brushless DC compressors
- Temperature control through heating and post-heating systems with electric heaters (on request)
- Evaporating coils with hydrophilic coating supplied as standard equipment
- Fans on evaporating side with standard EC motor
- Electrical panel in overpressure for the utmost safety
- Epoxy powder painted structural metalwork supplied as standard
- Condensing side fans available with EC motor
- Dehumidification function (on request)
- Electric lamination valve with optional electronic control



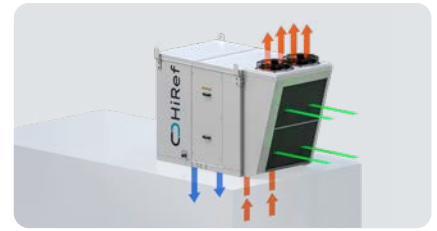
## Maximum efficiency at partial loads

The use of EC electronic switching fans (as part of the standard equipment) in the evaporating section **minimises ventilation costs, helping boost the unit energy efficiency, particularly at partial loads.**



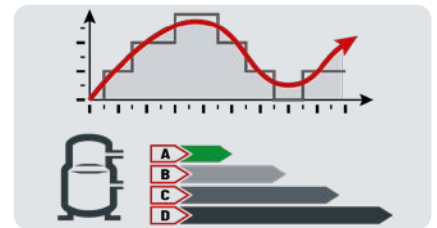
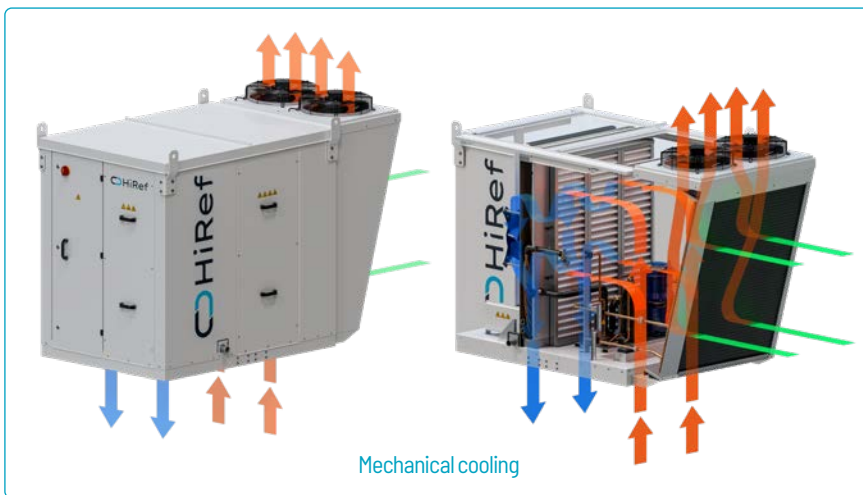
## Complete accessibility

All Rooftop NTR components are easily accessible by removing the unit's removable side panels. This solution greatly **facilitates all scheduled and unscheduled maintenance operations.**



## Maximised shelter internal space

NTR Rooftop units are designed to be installed **outside shelters**. This translates into **optimisation of internal space** that can be used exclusively for installation of the server racks.



## 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.**



| NTR  |         | 2501           | 3201 |
|--|---------|----------------|------|
| R410A - Indoor air 27°C - 40% / Outdoor air 35°C |         |                |      |
| Cooling capacity                                 | kW      | 31.2           | 39.6 |
| Total absorbed power                             | kW      | 12.7           | 15.6 |
| EER  |         | 2.86           | 2.95 |
| SHR  |         | 0.94           | 0.95 |
| R410A - Indoor air 30°C - 35% / Outdoor air 35°C |         |                |      |
| Cooling capacity                                 | kW      | 32.9           | 41.3 |
| Total absorbed power                             | kW      | 12.9           | 15.8 |
| EER  |         | 2.97           | 3.03 |
| SHR  |         | 1              | 1    |
| Rated air flow                                   | m³/h    | 8000           | 9000 |
| Power supply                                     | V/ph/Hz | 400/3+N/50     |      |
| Dimensions [LxHxD]                               | mm      | 1200x1630x2300 |      |

Also available with 60 Hz power supply.