



## Nordic Blue

Free cooling units



# Major savings and reliable operation at perfect temperature levels

Nordic Blue free cooling units are designed especially for reliable and cost-effective removal of excess heat in telecom base stations hosting GSM and UMTS networks. In a highly competitive telecom market, Nordic Blue units keep expenses to minimum from purchase and installation to operation and maintenance.

Nordic Blue maintains preset temperature levels to achieve optimum performance and to maximize component lifetime.

## Plug-and-play installation

With plug-and-play installation, an electrician is all you need to mount and commission a Nordic Blue unit. No cooling engineers are needed. The unit is self-contained and has an extensive filter area. Once the unit is up and running it needs only one service check a year.

## Fresh air, perfect flow

The units use nothing but fresh air to remove excessive heat. The optimum airflow is easily achieved with correct mounting of air intake and dampers. The fresh air is filtered and the units create a positive pressure, so only clean air is circulated in the shelter. Depending on the outside temperatures, the air inside the

base station is recirculated and mixed with fresh air to maintain the desired temperature levels.

## Low consumption

Every component in a Nordic Blue unit has been chosen carefully for its ability to reduce energy consumption. As a result, energy consumption is less than 10% compared to active cooling units.

## Low noise

Especially with the advance of UMTS networks, many telecom shelters are installed inside residential or commercial buildings. Low noise has therefore been another important requirement in the design of Nordic Blue.

## Unique control system

Nordic Blue features a unique control unit. This control unit allows you to choose the features that are critical for

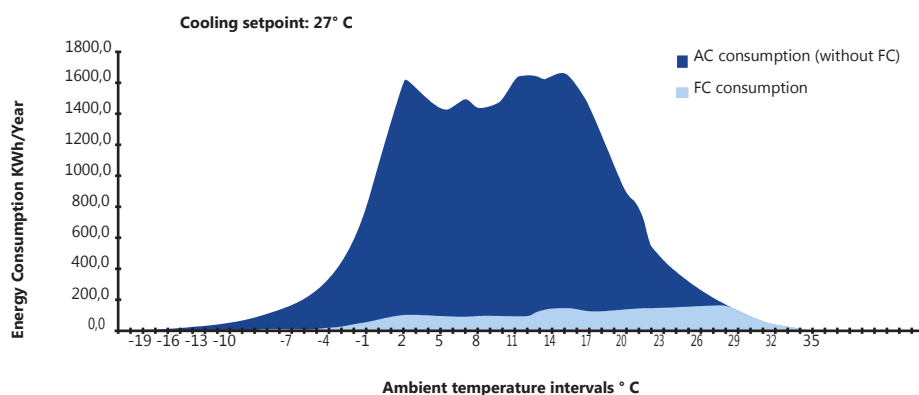
your daily operation. The control unit communicates smoothly with third-party software such as overall surveillance systems that manage alarms and warnings from several base stations.

## Emergency cooling

During power failures the units switch to 24V or 48V DC operation using the base station's battery packs – regardless of their voltage. Emergency cooling is vital for the operation of the telecommunication equipment. If cooling fails, the equipment will reach a critical heat load within a very short time frame. The use of emergency cooling will therefore ensure prolonged emergency operation of the telecommunication equipment.

## Light construction

The units are built of aluminium profiles and have a sandwich construction with double-walled sheet panels with 25 mm





thermal insulation. The cabinets are light, strong and weatherproof, but indoor mounting offers the best protection against weather and vandalism. The units use through-wall air intake and can be wall, floor or roof-top mounted.

### Customized solutions

In our experience, no two telecom projects are quite the same. Climates and demands on network infrastructure vary all over the world. Nordic Blue is therefore based on a flexible design and a modular technology that facilitate the manufacture of tailored solutions. They meet each customer's exact cooling specifications at competitive prices – no one pays for unnecessary features. From initial specifications and purchase to installation and after sales service, the employees at Dantherm Air Handling are

ready to advise customers individually to ensure reliable and cost-effective operation adapted to each customer's needs and specifications.

### Nordic Blue in Mediterranean climates

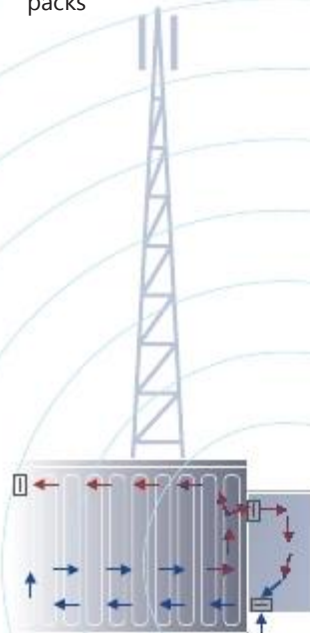
Nordic Blue is a market-leading brand in Scandinavia due to its competitive cooling capabilities. Moreover, Nordic Blue can deliver sufficient cooling for UMTS networks all over Europe. UMTS networks produce considerably more excessive heat than GSM networks. Therefore, energy consumption will skyrocket if active cooling units alone are used in UMTS base stations. For GSM base stations in Mediterranean climates, Nordic Blue can cover the major part of the cooling demand. In addition, Nordic Blue can be set up to control a base

station's active cooling unit, which can be needed to cover the remaining cooling demand of the GSM networks. The result? An enormous reduction of energy consumption.

### Nordic Blue benefits

- Energy consumption is 90-95% less compared to active cooling units
- Modular design - stable and light construction
- Plug-and-play installation
- Service friendly - only one service check a year
- Long lifetime
- Silent operation
- DC operation during power failure using the base station's own battery packs

*Nordic Blue delivers perfect airflow and positive pressure to ensure efficient and clean cooling. This prolongs the lifetime of sensitive electronic equipment.*





## Comfortable surroundings in any climate



Since 1958 Dantherm Air Handling has developed and produced climate control and air handling solutions that ensure optimum conditions for people and sensitive equipment alike. No climate is too extreme for us to handle – from the bitter cold at the North and South Poles to the searing heat of the Sahara.

Our core business areas are dehumidification, heating, air conditioning, heat recovery and electronics cooling. Innovative, durable and cost-efficient products have secured us a position as a leading global manufacturer of stationary and mobile climate control units. And we are forever pursuing new techniques that will improve our solutions and ultimately your projects.

Dantherm Air Handling's headquarters are situated in Denmark with subsidiaries in Norway, Sweden, the United Kingdom, the United States and China – and an extensive European dealer network.

Dantherm Air Handling is a wholly-owned subsidiary of Dantherm A/S.

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