

TOPAZ NEO

Adiabatic cooler
Certified coils performance

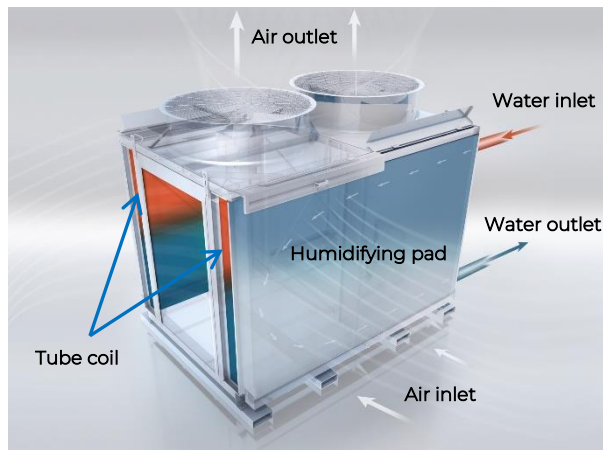


- No water spray in the airflow
- No water treatment required
- Very low water consumption
- Easy maintenance: internal access through complete opening
- Optimized power consumption EC technology motors
- Cooling at lower temperature than dry bulb
- ErP 202x compliant



Commercial Documentation

Adiabatic cooler: TOPAZ NEO



The TOPAZ NEO range is robust thanks to its designed and choice of materials, and especially developed for both urban and industrial environments

Tube coil

In standard, the coils are made of copper and the aluminium fins are epoxy coated. Tubes are expanded through the fins to ensure both **optimized mechanical resistance and thermal conductivity**.

The coils have been tested for thermal performance, sealing and pressure according to PED.

The options of drainable coils by gravity and integrated automatic power and flow regulations in addition are also available.

Intelligent and safe access

The "H" orientation of the tube coils offers an ideal geometry for complete access to the motors, fans and the internal finned tube coils, over the whole height and width of the cooler. **Accessibility is complete and safe for maintenance**: a full safety switch accessibility door without doorstep offers an immediate and easy access to the motor fan set for maintenance. Indeed, motor fan set is removable and can be extracted from the inside of the cooler for safe maintenance. The floor of the inside of the equipment is made of non-slip aluminium tread plate, also removable for control under the unit as an option. This design avoids extra costs for lifting equipment, safety guards or outside walkways.

Motor fan sets

The motor fan sets draw air through the pads, then through the tube coils. Equipped with EC technology motors (Electronically Commutated) as a standard, **especially**

designed to reduce power consumption with **very low sound level**: efficiency higher than IE5. EC motors are directly couple to a low-speed axial fan. This combination offers both **power efficiency and optimized sound level**.

The motor fan coupling is direct, and requires **no maintenance**. Technology in compliance with eco-conception (UE) 327/2011 concerning Directive 2009/125/CE application (ErP) for minimum efficiency thresholds after 202x.

Pre-cooling by evaporation

The evaporation section is used to pre-cool the ambient inlet air before it comes in contact with the tube coils: the cooling/humidifying pad covers the whole air inlet section, on both sides of the unit. **Designed for easy cleaning**, the water distribution channels and water recirculation system are made of Z-STEEL stainless-steel.

The water distribution channels are located above the pads, outside the air flow. The water recirculation pump is serviced externally by an access hatch provided for this purpose and this, remains accessible when the cooler is in operation. This complete system is factory pre-assembled.

The pre-cooling circuit is activated when the fluid outlet temperature is higher than the set point. This wet/dry set point is around 23°C in continental climate, with a fluid outlet temperature of 27°C. The collected water from the pads recirculates **without bacteriological risk, and reduces drastically the water consumption: until 70% in wet mode**.

Control panel with automaton

The TOPAZ NEO range is **totally « Plug and Play »**: the Schneider automaton equipped with HMI (Human Machine Interaction) as a standard, allows frequency drive and pre-cooling operation and EC motors controls in full safe maintenance.

Communication modes are optional: Ethernet, Modbus, BACnet as well as web or LonWorks.

Options

Drainable and non-freezing coils, POP-SCREEN filter, backup modes on the pump(s) and motor fan set, master-slave regulation for several unit's installation, maintenance table equipped with a telescopic foot especially designed to disassemble the motor-fan units from the inside of the device.