

Certified coils performances



## TOPAZ NEO Adiabatic Cooler

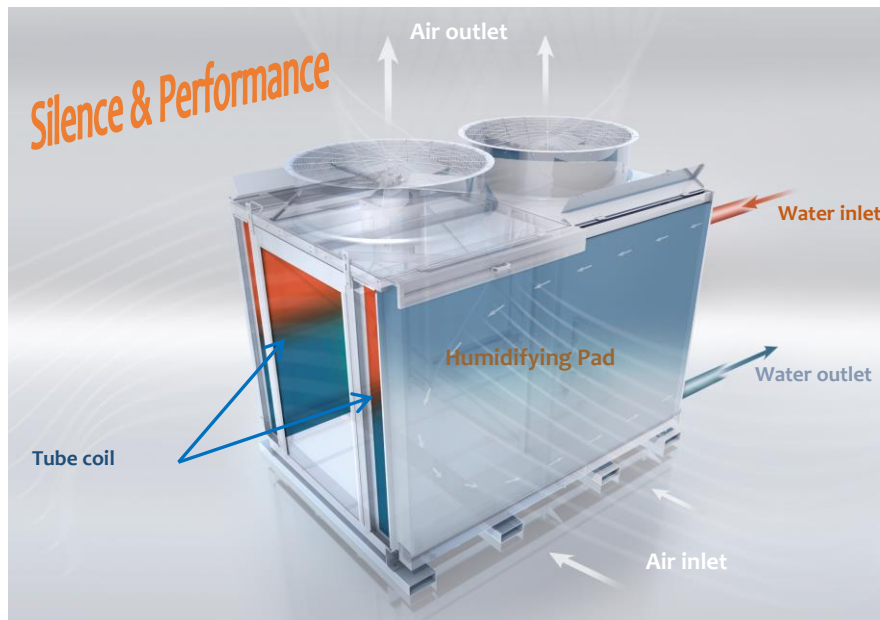
COMMERCIAL DOCUMENTATION



- 💧 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



# Adiabatic Cooler TOPAZ NEO



## 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 DESP.

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 fans set is removable and can be extracted from the inside of the cooler for safe maintenance. The floor of the inside equipment is made of non-slip aluminum 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 the air through the pads, then through the tube coils. Equipped with EC technology motors (Electronically Commutated) as a standard, **specially designed to reduce power consumption with very low sound level**: efficiency near IE4. EC motors are directly coupled 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**.

## 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 media 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 thus remains accessible when the cooler is in operation. This complete system is factory pre-assembled.

The precooling 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: till 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 LonWorks.

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