



## HEATING FOR INDOOR SWIMMING POOLS

One of the significant concerns to the long-term quality, safety, and viability of swimming pools (and their surrounding structures), is excessive humidity, and far too many indoor pools have been gradually ruined over the years by mould. Indoor swimming areas generally are maintained at about 10 to 15°C (18-27°F) higher than outdoor ambient for various reasons, the most crucial being to reduce condensation.

Relative humidity of 50-60% is advised to minimize indoor pool humidity concerns. The fundamental guideline for pool dehumidification systems is to keep the air temperature 2 degrees higher than the water temperature. It is critical to maintaining this 2-degree differential. Lowering the air temperature by merely 2 degrees raises the humidity load by 35%, which might surpass the dehumidifier's capability and produce indoor pool humidity problems.

A sufficiently cold surface will cause water vapour that has escaped from the pool to condense there. Water that is present continuously can seep into building materials over time, generating germs, rust, mould, and other problems that can compromise structural strength. The presence of chlorine in the pool water aggravates the problem. The corrosive quality of chlorine destroys building materials even more aggressively than water, causing wood rot, metal rust, and mould growth.

With these issues in mind, which can jeopardize both the sustainability of the pool area and the well-being of people who use it daily, it is critical to have a dehumidification system in place to avoid these issues in the long run.

When the humidity level in an indoor pool becomes uncontrollable, it can cause an unpleasant atmosphere for users, health problems due to mildew and air quality issues, and degradation of the surrounding building.

### Benefits of an electric duct heater:

- Made with corrosion-resistant materials
- Precise temperature controls
- Saves energy with SSR Modulating Vernier Technology
- Tempers incoming air temperature efficiently
- Prevents costly equipment corrosion
- Enhances occupant comfort
- [BACnet MS/TP or Modbus compatible](#)

High humidity levels, for example, increase the wetness of the surroundings and the danger of airborne particles and mould on surfaces. Dampness and mould have been related to various health concerns, including headaches and skin irritation, allergic responses, asthma, and other significant respiratory disorders.

Proper dehumidification aids in the prevention of indoor pool humidity issues, safeguarding the building while making the atmosphere more pleasant and safe for all users.

Neptronic can build the required heaters according to your PDU's specifications while using [corrosion-resistant](#) materials and innovative designs to fit your application. We also offer corrosion-resistant designs with stainless steel ([SS316 or 304](#)) frames, and control panels as options when required. Due to the addition of molybdenum in its composition, SS316 has an increased resistance against chlorides when compared to SS304. Additionally, [tubular Incoloy](#) elements are resistant to chloride cracking according to studies. Maintaining the right conditions help protect costly infrastructure and equipment from corrosion.