

DXAIR INDOOR POOL DESIGN GUIDELINES HEATING THE SPACE WITH THE POOL WATER



A NICE HOT BATH!

Turning up the temperature of your pool water to heat the pool room is never recommended due to the myriad of problems this causes.

Design conditions are generally 80-84 Degrees F Water Temperature with 82-86 Degrees F Air Temperature. When pool water is heated up past design temperatures it causes an increase in humidity levels and accelerates the evaporation of your water. Any time air temperature falls below pool water temperature— the air above the pool now begins “pulling” the water out of the pool at a much faster rate.

An easy example to understand is a lake in the fall. Let’s say the lake is still at 78 degrees. At night the air temperature dropped to 50 degrees— and is 50 degrees at 6:00 a.m. You wake up and see “fog”. Because the air is colder than the water—the fog you are seeing is nothing more than the water being pulled out of the lake at a high rate of evaporation—in this case it is a “misty fog” type of condensation.

The same premise occurs in a pool room when you turn up pool water temperature to heat the room. The evaporation rate of your water is accelerated and can almost double; the humidity levels are raised in the pool room, and the dehumidification system will either continually run to try and keep up with the added levels or fall short as it may not be designed to handle this additional load. Over the long term, this excessive humidity and moisture can create mold, mildew, glass and frames dripping, damage to drywall and other surface areas; as well as cause corrosion and rust within the structure and to the dehumidification system.

A primary heat source is provided by with each DXAir™ system we build. This can be an inline natural gas or propane duct furnace, a hot water coil (if you have a high temperature boiler), a steam coil, electric heat, or geothermal. These heat sources are built into the supply duct coming off your dehumidifier that moves air to the pool room. The primary heat source is always required with your packaged heat recovery dehumidification system to maintain design temperatures and conditions, comfort levels, and to ensure warm air is circulated through your air delivery system to keep glass and other surfaces dry and free of condensation.

Do not purchase free standing furnaces or other heat sources for your room until you have discussed your requirements with us as you may not be able to use them with this system due to non-compatibility with these installations.

Note: where Physical Therapy, Rehab, Swimming & Diving Schools and other elderly facilities may use warmer water (water warmer than air temperature)— this is taken into consideration and each system is sized according to their unique requirements. A pool cover is always recommended for all indoor pools when feasible to do so.