DXAIR INDOOR POOL DESIGN GUIDELINES
TEMPERATURE SETTINGS FOR NATATORIUMS

Temperature and relative humidity (RH) settings play a big part in how dehumidification systems are sized and the "end" operating costs. Maintaining an indoor pool outside of the ASHRAE, SPA, or Veri-Dry information manuals can increase evaporation rates, cause moisture problems, and damage to the equipment and structure. Fluctuating temperatures of water and air are not recommended.

Additional recommendations can also be found in the ASHRAE HVAC APPLICATIONS MANUAL and SPS Manuals. Partial information has been included below.

Generally the average pool is kept at 80-84 degrees and the room at 82-86 degrees with 50-60% RH. This varies by project and usage, from elderly to rehab, and from Olympic swimming to water parks. Contact Veri-Dry to discuss your settings.

ASHRAE 2007 HVAC Applications Manual Guidelines

Actual operating temperatures and relative humidity conditions should be established before design. Regardless of operating temperatures, RH should be maintained at 50-60%. Here are some typical design conditions:

Type/Use of Pool	Air Temperature	Water Temperature
Recreational	**75 to 85 degrees F**	**75 to 85 degrees F**
Therapeutic	**80 to 85 degrees F**	**85 to 95 degrees F**
Competition	**78 to 85 degrees F**	**76 to 82 degrees F**
Diving	**80 to 85 degrees F**	**80 to 90 degrees F**
Elderly Swimmers	**84 to 90 degrees F**	**85 to 90 degrees F**
Hotel	**82 to 85 degrees F**	**80 to 86 degrees F**
Whirlpool/Spa	**80 to 85 degrees F**	**97 to 104 degrees F**

ASHRAE recommends air temperatures in public and institutional pools should be maintained 2 to 4° F above the water temperature (but not above the comfort threshold of 86°F) to reduce the evaporation rates and avoid chill effects on swimmers.

Note #1: The higher the temperatures, the more the operating costs for the facility, and dehumidification system may be upsized to accommodate the higher temperatures of air and water. Generally we recommend that you do not exceed 86 degree air temperature in an swimming pool environment.

Note #2: Do not turn up pool temperature to heat the room; this severely increases the evaporation rate of the water and increases operating costs.