DXAIR INDOOR POOL DESIGN GUIDELINES
TEMPERATURE SETTINGS FOR NATATORIUMS

Temperature and relative humidity settings play a big part in how dehumidification systems are sized and the "end" operating costs. Maintaining and indoor pool outside of the ASHRAE, SPA or Veri-Dry information manuals can increase evaporation rates, cause moisture problems and damage to the 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 EPS to discuss your settings.

ASHRAE 2007 HVAC Applications Manual
Actual operating temperatures and relative humidity conditions should be established before design.

Table 1 Typical Natatorium Design Conditions

Type of Pool	Air Temperature, °F	Water Temperature, °F	Relative Humidity,%
Recreational	75 to 85	75 to 85	50 to 60%RH
Therapeutic	80 to 85	85 to 95	50 to 60% RH
Competition	78 to 85	76 to 82	50 to 60%RH
Diving	80 to 85	80 to 90	50 to 60%RH
Elderly swimmers	84 to 90	85 to 90	50 to 60% RH
Hotel	82 to 85	82 to 86	50 to 60%RH
Whirlpool/spa	80 to 85	97 to 104	50 to 60%RH

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 rate 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.