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ANSI/ASHRAE Standard 190-2020
Method of Testing for Rating Indoor Pool Dehumidifiers

NOTE

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FOREWORD

This standard was prepared under the auspices of ASHRAE. It may be used, in whole or in part, by an association or government agency with due credit to ASHRAE. Adherence is strictly on a voluntary basis and merely in the interests of obtaining uniform standards throughout the industry.

1. PURPOSE

The purpose of this standard is to prescribe test methods for determining the moisture removal capacity and efficiency, pool heating capacity, and sensible and total cooling capacity for indoor pool dehumidifiers.

2. SCOPE

2.1 This standard applies to indoor pool dehumidifiers using electrically driven, mechanical vapor-compression refrigeration systems consisting of one or more factory-made assemblies that dehumidify and circulate air and may include pool water heating, air reheating, cooling, filtering, and heat recovery.

2.2 Systems other than those stated in Section 2.1 (e.g., cooling-only equipment) are excluded.

3. INSTRUMENTS

3.1 Temperature Measuring Instruments

3.1.1 All temperature measurements shall be made in accordance with ANSI/ASHRAE Standard 41.1, *Standard Method for Temperature Measurement* [1].

3.2 Pressure Measuring Instruments

3.2.1 Pressure measurements shall be made in accordance with ANSI/ASHRAE Standard 41.3, *Standard Method for Pressure Measurement* [2].

3.3 Air Velocity and Airflow Measurements

3.3.1 The static pressure difference across nozzles and velocity pressures at nozzle throats shall be measured according to ANSI/ASHRAE Standard 41.2, *Standard Method for Air Velocity and Airflow Measurement* [3].

3.4 Power Measurements

3.4.1 Power measurements shall be made in accordance with ANSI/ASHRAE Standard 41.11 *Standard Methods for Power Measurements* [4].

3.5 Liquid Flow Measurement

3.5.1 Water flow rates shall be measured with a liquid flowmeter or quantity meter having an accuracy of ±1.0% of the indicated value in accordance with ANSI/ASHRAE Standard 41.8 *Standard Methods of Measurement for Liquid Flow Measurements* [5].

3.5.2 Condensate collection rates shall be determined using a liquid quantity meter having an accuracy of ±1.0% of the indicated value in accordance with ASHRAE Standard 41.8.

3.6 Time and Mass Measurements

3.6.1 Time interval measurements shall be made with an instrument having an accuracy of ±0.2% of the indicated value.

3.6.2 Mass measurements shall be made with an instrument having an accuracy of ±1.0% of the indicated value.

3.7 Humidity Measurements

3.7.1 Humidity measurements shall be made in accordance with ANSI/ASHRAE Standard 41.6 *Standard for Humidity Measurement* [6].