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ANSI/ASHRAE Standard 200-2024
Methods of Testing Chilled Beams

NOTE

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FOREWORD

ASHRAE Standard 200 was written at the request of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) to provide test instrumentation and facilities, installation methods, and procedures for determining the capacity and related performance of chilled beams. Procedures provided in this standard apply to active chilled beams.

This standard was prepared in cooperation with the AHRI Chilled Beams Section, and it is referenced in AHRI Standards 1240 (I-P) and 1241 (SI), Performance Rating of Active Chilled Beams*, as the method of test for the AHRI Active Chilled Beam (ACB) certification program.*

The 2024 edition of Standard 200 updates normative and informative references. 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 guidelines throughout the industry.

1. PURPOSE

1.1 To define laboratory methods of testing chilled beams to determine performance.

2. SCOPE

2.1 Defines laboratory methods of testing chilled beams to determine performance.

2.2 Specifies test instrumentation, facilities, installation methods, and procedures for determining the performance of chilled beams.

3. DEFINITIONS AND SYMBOLS

3.1 Definitions

active chilled beam: an air induction and diffusion device that introduces and conditions air for the purpose of temperature and/or humidity control. Primary air is delivered through a series of nozzles, which induces and conditions secondary air through a unit-mounted coil.

induced air: the flow of secondary air into a chilled beam resulting from a pressure differential within the beam, distributed and circulating through the coil.

octave band: a frequency band of sound with an upper limit that is twice the frequency of the lowest limit. The center frequency of an octave band is the geometric mean of its upper and lower limits. Table 1 shows octave bands 1 through 8.

passive chilled beam: a cooled element or coil fixed in, above, or below a ceiling that sensibly cools through natural convection using buoyancy-driven airflow. The cooling media in the coil is water.

radiation shielded sensor: resistive temperature devices (RTDs) designed to measure dry-bulb air temperatures are susceptible to radiation heat transfer, and therefore the total temperature measured is the sum of the

Table 1 Octave Band Center Frequencies

Octave Band	Center Frequency, Hz
1	63
2	125
3	250
4	500
5	1000
6	2000
7	4000
8	8000