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CONTENTS

ANSI/ASHRAE Standard 130-2025
Laboratory Methods of Testing Air Terminal Units

SECTION **PAGE**

Foreword 2
1 Purpose 2
2 Scope 2
3 Definitions and Symbols 3
4 Instrumentation 7
5 Test Methods 8
6 References 24
Normative Appendix A: Rotating Vane Anemometer Flow Measuring System 34
Normative Appendix B: Airflow and Air Velocity Equations 36
Informative Appendix C: Example: Terminal Unit Loss Coefficient Calculations 37
Informative Appendix D: Example: Supply Terminal Unit Leakage Test 40
Informative Appendix E: Effect of Partially Closed Control Damper on Airflow Sensor Performance 44
Informative Appendix F: Example: Mixing Test 45
Informative Appendix G: Example: Stratification Test 47
Informative Appendix H: Acoustically Isolated Duct 48
Informative Appendix I: Reflection of Airborne Noise at Duct Determinations 49
Normative Appendix J: Time Averaging and Air Density Calculations 50
Informative Appendix K: Derivation of Moist Air Density Equation 52
Informative Appendix L: Derivation of Air Density Corrections for Airflows Determined Using an Orifice Plate 54
Normative Appendix M: Determining Terminal-Unit Casing Leakage Parameters 56
Informative Appendix N: Example: Pressure-Compensating Volume Controller Performance Test 57
Normative Appendix O: Test Setup Diagrams for Determining Background Noise for Comparison with Unit Sound Test 58

Preview

NOTE

Approved addenda, errata, or interpretations for this standard can be downloaded free of charge from the ASHRAE website at www.ashrae.org/technology.

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

First published in 1996 and reaffirmed in 2006, Standard 130 specifies instrumentation, test installation methods, and procedures for determining the capacity and related performance in a laboratory-controlled environment of constant-volume and variable-volume air terminal units. The standard is classified as an ASHRAE standard method of measurement. This standard is required for compliance with AHRI Standards 880 (I-P) and 881 (SI) "Performance Rating of Air Terminals."

The 2016 revision of the standard included updates and revisions to all parts of the standard, including its title, purpose, and scope. It updated definitions, redefined airflow sensor performance testing, and added a method to determine terminal-unit total pressure loss coefficients and the relationship between terminal-unit casing leakage and pressure.

The 2025 revision of the standard again includes updates and revisions to all parts of the standard. Key updates include the following:

- *Relative humidity measurements, rather than wet-bulb temperature measurements, are used to determine air densities.*
- *The test in Section 5.6 has been redefined to more accurately determine the casing leakage of terminal units, based in part on airflow adjustments and regression calculations in CAN/CGSB 149.10-2019, "Determination of the Airtightness of Building Envelopes by the Fan Depressurization Method."*
- *The casing leakage test has been expanded to determine leakage with and without the back draft damper sealed for parallel-flow fan-powered terminal units.*
- *Informative appendices have been added to explain equation derivations for air density and leakage parameter calculations.*
- *The sound test section now refers to AHRI 220 for determining sound power and adds corresponding definitions and language to describe the various test configurations required, including a new appendix with examples.*
- *The modulating diffuser sound test setup has been eliminated and now refers to ANSI/ASHRAE Standard 70.*

1. PURPOSE

The standard specifies instrumentation, test installation methods, and procedures for measuring the capacity and related performance of constant-volume, variable-volume, and modulating integral diffuser air terminals.

2. SCOPE

2.1 The methods of test in this standard apply to air control devices used in air distribution systems. These devices provide control of air volume with or without temperature change by one or more of the following means and with or without a fan:

a. Fixed or adjustable directional vanes (i.e., bypass terminal)
b. Pressure-dependent volume dampers or valves (including air induction nozzles and dampers)
c. Pressure-independent volume dampers or valves (including air induction nozzles and dampers)
d. Integral heat exchanger
e. On/off fan control
f. Variable-speed fan control
g. Modulating integral diffuser terminals

2.2 This standard covers test methods for use in determining the following performance characteristics:

a. Sound
b. Temperature mixing and stratification
c. Minimum operating pressure
d. Air leakage
e. Induced airflow
f. Fan performance
g. Condensation
h. Airflow sensor performance
i. Pressure independence

2.3 This standard shall not be used for field testing.

Preview