

STANDARD

BSR/ASHRAE/ASHE Addendum i to ANSI/ASHRAE/ASHE Standard 170-2017

Public Review Draft

Proposed Addendum i to Standard 170-2017, Ventilation of Health Care Facilities

First Public Review (June 2019)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed addendum changes Section 6.6 to clarify requirements for water in humidification systems.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum i to 170-2017

Revise Paragraph 6.6, as follows:

6.6 Humidifiers. When outdoor humidity and internal moisture sources are not sufficient to meet the requirements of Table 7.1, 8.1, or 9.1 humidification shall be provided by means of the facility air-handling systems. Steam or adiabatic high-pressure water-atomizing humidifiers shall be used.

6.6.1 General Requirements

- a. Locate humidifiers within air-handling units or ductwork to avoid moisture accumulation in downstream components, including filters and insulation.
- b. A humidity sensor shall be provided, located at a suitable distance downstream from the steam injection source.
- c. Controls shall be provided to limit duct humidity to a maximum value of 90% rh when the humidifier is operating.
- d. Duct takeoffs shall not be located within the humidifier's absorption distance.
- e. Humidifier-control valves shall be designed so that they remain off whenever the AHU unit is not in operation.
- f. Water for adiabatic high-pressure humidifiers shall comply with Section 6.6.3.

6.6.2 Steam Humidifier Requirements. Chemical additives used in the steam systems that serve humidifiers shall comply with FDA requirements.³

6.6.3 Adiabatic Atomizing Humidifier Requirements

- a. Humidifier water shall be treated with a reverse osmosis process, a UV-C sterilization light source, and a submicron filter. **Informative Note:** For more information, see ASTM (2011) in Appendix B.
- b. Treated humidifier water shall be continuously circulated from the source to the humidifier valves. All valves, headers, and piping not part of the recirculation loop shall drain completely when not in use. Water temperature shall be maintained within the control limits in the legionellosis risk management plan.

Informative Note: for more information, reference ASHRAE Guideline 12-2000 and ASHRAE Standard 188-2018

- c. Ports suitable for testing water quality shall be provided in the treated humidifier water piping system.
- d. Moisture eliminators shall be provided as required to prevent moisture accumulation in ductwork.
- e. Water purity shall meet or exceed potable water standards at the point where it enters the ventilation system, space, or water-vapor generator.