



**BSR/ASHRAE Addendum k
to ANSI/ASHRAE Standard 62.1-2019**

Advisory Public Review Draft

Proposed Addendum k to Standard 62.1-2019, Ventilation and Acceptable Indoor Air Quality

First **Advisory Public Review (June 2022)
(Draft shows Proposed Changes to Current Standard)**

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FOREWORD

This proposed addendum further clarifies the language of Section 5.10 in response to several continuous maintenance proposals. The revised language utilizes ASHRAE terminology to make the requirements succinct and breaks the requirements into clearly defined components for the limit, the analysis, and the controls.

The inclusion of a relative humidity limit has been restored to align with a 75°F dry bulb temperature upper limit. The committee has noted that unoccupied setbacks and international design conventions will include higher temperatures and are seeking input from the public on what relative humidity limit is appropriate for their typical designs keeping consistent with the already established 60°F dew point temperature.

The controls requirement have been intentionally left vague to allow designs that limit humidity without direct measurement of humidity, such as discharge air temperature control, may be utilized to meet the standard.

An exception has been added to exclude buildings in zones where the local climate does not regularly exceed dew point temperatures above 60°F, and thus are unlikely to cause condensation within building materials as a result of operating the cooling system. The working group has noted that this exclusion does not cover several temperate climates and is seeking additional project history or case studies in such climates that can inform an appropriate climate exception.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (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.]

Note to Reviewers: This draft is available for comment according to ASHRAE procedures for an Advisory Public Review (APR). The purpose of an APR is to seek suggestions for new, unusual, or potentially controversial elements of the proposed standard that the project committee believes would benefit from increased public scrutiny prior to finalizing the draft for its first formal public review.

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Addendum k to 62.1-2019

Revise Section 5.10 as shown below. Refer to Addendum f to 62.1-2019 for current version of Section 5.10. Published addenda to 62.1-2019 are posted for free on the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda>.

5.10 Mechanically or Indirectly Evaporatively Cooled Buildings. Systems that cool by mechanical means or indirect evaporation shall be designed and documented in accordance with the following sections:

5.10.1 Humidity Limit. ~~to limit the~~ The indoor humidity to a maximum air dew point temperature shall be limited to a maximum of 60°F (15°C) or the indoor air relative humidity limited to 60% during both occupied and unoccupied hours in each HVAC zone, whenever the outdoor air dew point is above 60°F (15°C). The dew point limit shall not be exceeded when system performance is analyzed with outdoor air at the dehumidification design condition (that is, design dew point and mean coincident dry-bulb temperatures) and with the space interior loads (both sensible and latent) at cooling design values and space solar loads at zero.

5.10.2 Analysis. The designer shall calculate the dew point temperature or relative humidity in the HVAC zone with the lowest sensible heat ratio, when outdoor air is entering the ventilation system at the dehumidification design condition. The HVAC zone design condition and resulting dew point temperature or relative humidity shall be included in the design documents to confirm that the design complies with the humidity limit defined in section 5.10.1.

5.10.3 Controls. Devices and controls shall be provided to maintain the humidity in the HVAC zone at or below the limit defined in section 5.10.1.

Exceptions to 5.10:

- Buildings in locations where the outdoor dew point temperature is below 60°F (15°C) at the ASHRAE 2% annual dehumidification design condition.
- Spaces-Ventilation zones equipped with materials, assemblies, coatings, and furnishings, and contents that resist microbial growth and that are not damaged by continuously high indoor air humidity.
- ~~During overnight unoccupied periods not exceeding 12 hours, the 60°F (15°C) dewpoint limit shall not apply, provided that indoor relative humidity does not exceed 65% at any time during those hours.~~

Informative Notes:

- ASHRAE publishes design dehumidification conditions in the Climatic Design Information Chapter of the ASHRAE Handbook—Fundamentals.
- Examples of spaces that are potentially HVAC zones exempted by Exception 12 are shower rooms, swimming pool enclosures, kitchens, spa rooms, or semi-cooled warehouse spaces that contain stored contents that are not damaged by continuously high indoor air humidity or microbial growth.
- ~~This requirement reduces the risk of microbial growth in buildings and their interstitial spaces because it limits the mass of indoor water vapor that can condense or be absorbed into mechanically cooled surfaces. The dew point limit is explicitly extended to unoccupied hours because of the extensive public record of mold growth in schools, apartments, dormitories, and public buildings that are intermittently cooled during unoccupied hours when the outdoor air dew point is above 60°F (15°C).~~