

ADDENDA

**ANSI/ASHRAE/IES Addendum cf to
ANSI/ASHRAE/IES Standard 90.1-2019**

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on April 29, 2022, and by the Illuminating Engineering Society on April 27, 2022.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (<https://www.ashrae.org/continuous-maintenance>).

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ISSN 1041-2336



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FOREWORD

Addendum cf improves elevator fan, lighting, and movement efficiency. Changes have been made to each subsection of Section 10.4.3 "Elevators," and the documentation requirements have been moved to a new subsection of Section 10.9.

10.4.3.1 Cab Lighting Power

- *Lighting efficacy has been increased from 35 to 50 lm/W.*
- *Lighting for air cleaning is no longer included in the limit.*
- *An exception has been added for elevators in essential facilities where there are special lighting requirements.*

10.4.3.2 Ventilation Power Limitation

- *The existing fan power metric (W/cfm) has been changed to fan efficacy (cfm/W) and reduced by 24%*
- *Air cleaning systems employing filters with a rating of MERV 13 or higher are not required to meet the efficacy.*

10.4.3.3 Standby Mode

- *Coordinated with the requirements in ASME A17.1/CSA B44 to prevent hazardous conditions to passengers that could occur if de-energized.*

10.4.3.4 Energy Use

- *Established a minimum energy efficiency target of E or better. In some low-use applications, the energy efficiency may be lower, but overall energy consumption is still very low.*
- *Updated the title to be more appropriate for the subject of the requirement.*
- *Moved the documentation requirements to Section 10.9.*

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strike through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum cf to Standard 90.1-2019

Modify the standard as shown (I-P and SI).

10.4 Mandatory Provisions

[. . .]

10.4.3 Elevators. Elevator systems shall comply with the requirements of this section.

10.4.3.1 Cab Lighting Power. For the luminaires in each elevator cab, not including power for germicidal function, signals, and displays, the sum of the lumens divided by the sum of the watts (as described in Section 9.1.4) shall be no less than 3550 lm/W.

Exception to 10.4.3.1: This requirement does not apply to elevators in an essential facility where special lighting needs are required.

10.4.3.2 Ventilation Efficacy-Power Limitation. Cab ventilation fans for elevators, ~~without~~ except elevators with air conditioning or MERV 13 or greater filters, shall ~~not consume over 0.33 W/cfm (0.7 W-s/L)~~ have an efficacy of at least 4.0 cfm/W (1.9 L/s/W) at maximum fan speed.

10.4.3.3 Standby Mode. The elevator cab lighting shall be automatically de-energized in accordance with ASME A17.1/CSA B44 Requirement 2.14.7.2.2. Cab ventilation fans for elevators without air conditioning shall also be de-energized.

When stopped and unoccupied with *doors* closed for over 15 minutes, cab interior lighting and *ventilation* shall be de-energized until required for operation.

Exception to 10.4.3.3: Forced *ventilation* shall meet the requirements of ASME A17.1/CSA B44 Requirement 2.14.2.3.3

10.4.3.4 Design Documents Energy Use. Design documents shall list the following for ~~n~~New elevators shall meet the following requirements:

- a. Usage category as defined in ISO 25745-2 between 1 and 6. The usage category shall be in accordance with Annex B.
- b. The ~~Energy~~ efficiency classes shall ~~A through G~~ be E or better per ISO 25745-2, Table 7.

10.9 Verification, Testing, ~~and~~ Commissioning, and Documentation

10.9.1 Verification and Testing. Service water pressure-booster *system* controls, elevator standby mode and whole-building *energy* monitoring shall be *commissioned* or verified and tested to verify that *control* elements and monitoring *systems* are configured and operating in accordance with Sections 10.4.2, 10.4.3.3, 10.4.5, and 4.2.5.2. *FPT* documentation shall comply with Section 4.2.5.1.2.

10.9.2 Commissioning. The *energy* performance of the other *equipment systems* shall be *commissioned* in accordance with Section 4.2.5.2 and reporting shall comply with Section 4.2.5.2.2.

Informative Note: See Informative Appendix E and Informative Appendix H for commissioning resources.

10.9.3 Documentation. Design documents shall list the following for new elevators:

- a. The usage category as defined in ISO 25745-2 between 1 and 6. The usage category shall be in accordance with Annex B.
- b. The *energy efficiency* class per ISO 25745-2, Table 7.

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ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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