



**BSR/ASHRAE/IES Addendum cf
to ANSI/ASHRAE/IES Standard 90.1-2016**

Public Review Draft

Proposed Addendum cf to Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings

**First Public Review (February 2019)
(Draft Shows Proposed Changes to Current Standard)**

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

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FOREWORD

This proposed addendum adds vacuum insulating glazing to the list of options for reach-in doors in walk-in coolers and freezers. Vacuum insulating glazing products have been recently commercialized by multiple manufacturers and are already being used in display doors for walk-in coolers, walk-in freezers, and stand-alone refrigerated display cases. The thermal resistance of vacuum insulating glazing is at least twice that of other options (e.g. R10 for vacuum insulating glazing vs. R3-5 for the other options). Items g and h of Section 6.4.5 have specific limited options for reach-in doors which could be misinterpreted as not including vacuum insulating glazing, so vacuum insulated glazing is specifically added.

This addendum does not affect the energy use of the standard and has no economic impact. While vacuum insulating glazing is more expensive than tradition glazing options for display doors, this is not a requirement to use vacuum insulating glazing. This proposal simply removes a barrier so that vacuum insulating glazing may be considered as an option.

[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 cf to 90.1-2016

Modify the standard as follows (IP and SI Units)

6.4.5 Walk-In Coolers and Walk-In Freezers

Site-assembled or site-constructed *walk-in coolers* and *walk-in freezers* shall conform to the following requirements:

...

- g. Transparent reach-in *doors* for *walk-in freezers*, and windows in *walk-in freezer doors*, shall be of triple-pane glass, either filled with inert gas or with heat-reflective treated glass, or vacuum insulating glazing.
- h. Transparent reach-in *doors* for *walk-in coolers*, and windows in *walk-in cooler doors*, shall be double-pane glass with heat-reflective treated glass and gas filled, or ~~they shall be~~ triple-pane glass, either filled with inert gas or with heat-reflective treated glass, or vacuum insulating glazing.

(other portions of section not shown are unchanged)

