ADDENDA

ANSI/ASHRAE/IES Addendum aj to
ANSI/ASHRAE/IES Standard 90.1-2013

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by the ASHRAE Standards Committee on January 23, 2016; by the ASHRAE Board of Directors on January 27, 2016; by the IES Board of Directors on December 31, 2015; and by the American National Standards Institute on January 28, 2016.

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. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE website (www.ashrae.org) or in paper form from the Senior Manager of Standards.

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FOREWORD

Relief and return fans are not well addressed by the standard. It is possible to have fans that have on/off cycling control, which results in very poor building pressure control: before the fan comes on, building pressure can be excessive, and once it comes on the building can be pulled negative. This can cause building operators to disable the economizer to avoid these problems. The cost of adding modulating building pressure control is relatively small: the motor can be an ECM or have a VFD, and a building pressure sensor is inexpensive. The ½ hp exception is intended to exempt small systems (e.g., less than 5 tons) for which cycling relief fans is less problematic and might be cost prohibitive.

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

Addendum aj to 90.1-2013

Modify the standard as follows (IP and SI Units)

6.5.3.2.1 Supply Fan Airflow Control. Each cooling system listed in Table 6.5.3.2.1 shall be designed to vary the ~~indoor~~ supply fan airflow as a function of load and shall comply with the following requirements:

Add the following new new section:

6.5.3.2.4 Return and Relief Fan Control. Return and relief fans used to meet Section 6.5.1.1.5 shall comply with all of the following:

a. Relief air rate shall be controlled to maintain building pressure either directly, or indirectly through differential supply-return airflow tracking. Systems with constant speed or multispeed supply fans shall also be allowed to control the relief system based on outdoor air damper position.
b. Fans shall have variable-speed control or other devices that will result in total return/relief fan system demand of no more than 30% of total design power at 50% of total design fan flow.
Exceptions:
1. Return or relief fans with total motor size less than or equal to 0.5 hp (0.37 kW)
2. Staged relief fans with a minimum of four stages

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

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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