High Performance Sequences of Operation for HVAC Systems

Approved by ASHRAE on February 24, 2021.

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FOREWORD

Addendum w resolves inconsistencies between variable names used in Section 3.1.6.2 (Information Provided by Designer) and Section 5.2.1.4 for Single Zone Air Handling Units. This addendum also fixes a reference to MinOA-P* in Section 5.18.8.3 to ensure the sequence works regardless of minimum outdoor airflow control approach (with or without an airflow monitoring station) and adds an option for direct building pressure control with actuated relief dampers without fans.

Note: In this addendum, changes to the current guideline 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 w to Guideline 36-2018

Revise Paragraph 5.2.1.4.d.3.vi as shown (I-P and SI Units).

vi. For SZAV AHUs:

(a) The minimum outdoor air set point MinOAsp shall be reset based on the zone CO2 control-loop signal from Zone-Abs-OA-minMinOA at 0% signal to Zone-Des-OA-minDesOA at 100% signal. See Figure 5.2.1.4-3.

Revise Section 5.18.8 as follows:

5.18.8 Control of Actuated Relief Dampers without Fans
The engineer must specify whether a building pressure sensor is utilized.

If a building pressure sensor is used, keep subsection (1) and delete subsection (2) for direct building pressure control.

If a building pressure is not used, keep subsection (2) and delete subsection (1) for passive building pressure control.

Delete this flag note after selection has been made.

5.18.8.1 Direct Building Pressure Control

Control logic for actuated relief dampers without fans is incorporated by reference in Section 5.18.8.1. If the project includes both single-zone and multiple-zone AHUs, then no change is required. However, if the project includes only single-zone AHUs, we recommend deleting Section 5.18.8.1 and copying the full text of Section 5.16.8 in its place.

a. Refer to Section 5.16.8, “Control of Actuated Relief Dampers without Fans” for multiple zone air handlers

5.18.8.2 Passive Building Pressure Control

a. See Section 3.2.2.3 for relief-damper position set points.

b. 5.18.8.3 Relief-damper position shall be reset linearly from MinRelief to MaxRelief as the commanded economizer damper position goes from MinPos* to 100% open. Minimum outdoor airflow setpoint, MinOAsp is reset from MinOA to DesOA.
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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