



ADDENDA

**ASHRAE Addendum h to
ASHRAE Guideline 36-2021**

High-Performance Sequences of Operation for HVAC Systems

Approved by ASHRAE and the American National Standards Institute on February 29, 2024.

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(This foreword is not part of this guideline. It is merely informative and does not contain requirements necessary for conformance to the guideline.)

FOREWORD

This addendum addresses an issue with the request logic structure which can cause requests to be generated without its associated loop or valve above 95%.

For example, in warm-up mode, the AHU supply air temperature setpoint is set to 95°F. The reheat VAV discharge air temperature setpoints are reset from the AHU supply air temperature setpoint up to 95°F. In warm-up mode, the discharge air temperature setpoint for all reheat VAVs will be 95°F regardless of if the zone temperature is below the heating setpoint. If a zone's temperature is within the heating and cooling setpoints (deadband), the hot water valve will be closed, but since the VAV discharge air temperature is more than 30°F less than the discharge air temperature setpoint, 3 hot-water reset requests will be generated.

This addendum also adds instructional text to delete request paragraph sections if they do not apply.

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 h to Guideline 36-2021

(IP and SI Units)

Revise Section 5.5.8.1 as follows:

5.5.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

Revise Section 5.6.8 as follows:

5.6.8. System Requests

5.6.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.6.8.2. Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.6.8.3 and 5.6.8.4. Delete otherwise.

5.6.8.3. ~~If There Is a Hot Water Coil,~~ Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the DAT is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the DAT is 8°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.6.8.4. ~~If There Is a Hot Water Coil and Heating Hot Water Plant,~~ Heating Hot-Water Plant Requests: ~~Send the heating hot water plant that serves the zone a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.7.8 as follows:

5.7.8. System Requests

5.7.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.7.8.2. Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.7.8.3 and 5.7.8.4. Delete otherwise.

5.7.8.3. ~~If There Is a Hot Water Coil,~~ Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the DAT is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the DAT is 8.3°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.7.8.4. ~~If There Is a Hot Water Coil and a Heating Hot Water Plant,~~ Heating Hot-Water Plant Requests- ~~Send the heating hot water plant that serves the zone a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.8.8 as follows:

5.8.8. System Requests

5.8.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.8.8.2. Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.8.8.3 and 5.8.8.4. Delete otherwise.

5.8.8.3. ~~If There Is a Hot Water Coil,~~ Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the DAT is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the DAT is 8.3°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.8.8.4. ~~If There Is a Hot Water Coil and a Heating Hot Water Plant,~~ Heating-Hot Water Plant Requests- ~~Send the heating hot water plant that serves the zone a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.9.8 as follows:

5.9.8. System Requests

5.9.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.9.8.2. Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.9.8.3 and 5.9.8.4. Delete otherwise.

5.9.8.3. ~~If There Is a Hot Water Coil,~~ Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the DAT is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the DAT is 8.3°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.9.8.4. ~~If There Is a Hot Water Coil and a Heating Hot Water Plant,~~ Heating Hot-Water Plant Requests- ~~Send the heating hot water plant that serves the zone a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.10.8 as follows:

5.10.8. System Requests

5.10.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.10.8.2. Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.10.8.3 and 5.10.8.4. Delete otherwise.

5.10.8.3. ~~If There Is a Hot Water Coil,~~ Hot Water Reset Requests

- a. If the HW valve position is greater than 95% and the DAT is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the DAT is 8.3°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.10.8.4. ~~If There Is a Hot Water Coil and a Heating Hot Water Plant,~~ Heating Hot-Water Plant Requests- ~~Send the heating hot water plant that serves the zone a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.11.8 as follows:

5.11.8. System Requests

5.11.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.

- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.11.8.2. Cold-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.11.8.3. Heating SAT Reset Requests

- a. If the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Heating Loop is greater than 95%, send 1 request until the Heating Loop is less than 85%.
- d. Else if the Heating Loop is less than 95%, send 0 requests.

5.11.8.4. Hot-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.11.8.5. Heating-Fan Requests. ~~Send the heating fan that serves the zone a heating fan request as follows:~~

- a. If the Heating Loop is greater than 15%, send 1 request until the Heating Loop is less than 1%.
- b. Else if the Heating Loop is less than 15%, send 0 requests.

Revise Section 5.12.8 as follows:

5.12.8. System Requests

5.12.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.12.8.2. Cold-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.12.8.3. Heating SAT Reset Requests

- a. If the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Heating Loop is greater than 95%, send 1 request until the Heating Loop is less than 85%.
- d. Else if the Heating Loop is less than 95%, send 0 requests.

5.12.8.4. Hot-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.

d. Else if the damper position is less than 95%, send 0 requests.

5.12.8.5. Heating-Fan Requests. ~~Send the heating fan that serves the zone a heating fan request as follows:~~

- a. If the Heating Loop is greater than 15%, send 1 request until the Heating Loop is less than 1%.
- b. Else if the Heating Loop is less than 15%, send 0 requests.

Revise Section 5.13.8 as follows:

5.13.8. System Requests

5.13.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.13.8.2. Cold-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.13.8.3. Heating SAT Reset Requests

- a. If the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Heating Loop is greater than 95%, send 1 request until the Heating Loop is less than 85%.
- d. Else if the Heating Loop is less than 95%, send 0 requests.

5.13.8.4. Hot-Duct Static Pressure Reset Requests

- a. If the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- b. Else if the damper position is less than 95%, send 0 requests.

5.13.8.5. Heating-Fan Requests. ~~Send the heating fan that serves the zone a heating fan request as follows:~~

- a. If the Heating Loop is greater than 15%, send 1 request until the Heating Loop is less than 1%
- b. Else if the Heating Loop is less than 15%, send 0 requests.

Revise Section 5.14.8 as follows:

5.14.8. System Requests

5.14.8.1. Cooling SAT Reset Requests

- a. If the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Cooling Loop is greater than 95% and the zone temperature exceeds the zone's cooling setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Cooling Loop is greater than 95%, send 1 request until the Cooling Loop is less than 85%.
- d. Else if the Cooling Loop is less than 95%, send 0 requests.

5.14.8.2. Cold-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero and the damper position is greater than 95% for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.14.8.3. Heating SAT Reset Requests

- a. If the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 3°C (5°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 3 requests.
- b. Else if the Heating Loop is greater than 95% and the zone temperature is below the zone's heating setpoint by 2°C (3°F) for 2 minutes and after suppression period due to setpoint change per Section 5.1.20, send 2 requests.
- c. Else if the Heating Loop is greater than 95%, send 1 request until the Heating Loop is less than 85%.
- d. Else if the Heating Loop is less than 95%, send 0 requests.

5.14.8.4. Hot-Duct Static Pressure Reset Requests

- a. If the measured airflow is less than 50% of setpoint while setpoint is greater than zero for 1 minute, send 3 requests.
- b. Else if the measured airflow is less than 70% of setpoint while setpoint is greater than zero for 1 minute, send 2 requests.
- c. Else if the damper position is greater than 95%, send 1 request until the damper position is less than 85%.
- d. Else if the damper position is less than 95%, send 0 requests.

5.14.8.5. Heating-Fan Requests. ~~Send the heating fan that serves the zone a heating fan request as follows:~~

- a. If the Heating Loop is greater than 15%, send 1 request until the Heating Loop is less than 1%.
- b. Else if the Heating Loop is less than 15%, send 0 requests.

Revise Section 5.16.16 as follows:

5.16.16. Plant Requests

5.16.16.1. Chilled-Water Reset Requests

- a. If the CHW valve position is greater than 95% and the supply air temperature exceeds the supply air temperature setpoint by 3°C (5°F) for 2 minutes, send 3 requests.
- b. Else if the CHW valve position is greater than 95% and the supply air temperature exceeds the supply air temperature setpoint by 2°C (3°F) for 2 minutes, send 2 requests.
- c. Else if the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 85%.
- d. Else if the CHW valve position is less than 95%, send 0 requests.

5.16.16.2. Chiller Plant Requests. ~~Send the chiller plant that serves the system a chiller plant request as follows:~~

- a. If the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 10%.
- b. Else if the CHW valve position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.16.16.3 and 5.16.16.4. Delete otherwise.

5.16.16.3. ~~If There Is a Hot Water Coil,~~ Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the supply air temperature is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the supply air temperature is 8°C (15°F) less than setpoint for 5 minutes, send 2 requests.

- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.16.16.4. ~~If There Is a Hot Water Coil, Heating Hot Water Plant Requests. Send the heating hot-water plant that serves the AHU a heating hot-water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.17.6 as follows:

5.17.6. Plant Requests

5.17.6.1. Hot-Water Reset Requests

- a. If the HW valve position is greater than 95% and the supply air temperature is 17°C (30°F) less than setpoint for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the supply air temperature is 8°C (15°F) less than setpoint for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.17.6.2. ~~Heating Hot-Water Plant Requests. Send the heating hot-water plant that serves the AHU a heating hot-water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.18.15 as follows:

5.18.15. Plant Requests

5.18.15.1. Chilled-Water Reset Requests

- a. If the CHW valve position is greater than 95% and the supply air temperature exceeds SATsp-C by 3°C (5°F) for 2 minutes, send 3 requests.
- b. Else if the CHW valve position is greater than 95% and the supply air temperature exceeds SATsp-C by 2°C (3°F) for 2 minutes, send 2 requests.
- c. Else if the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 85%.
- d. Else if the CHW valve position is less than 95%, send 0 requests.

5.18.15.2. ~~Chiller Plant Requests. Send the chiller plant that serves the system a chiller plant request as follows:~~

- a. If the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 10%.
- b. Else if the CHW valve position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.18.15.3 and 5.18.15.4. Delete otherwise.

5.18.15.3. ~~If There Is a Hot Water Coil, Hot-Water Reset Requests~~

- a. If the HW valve position is greater than 95% and the supply air temperature is 17°C (30°F) less than SATsp for 5 minutes, send 3 requests.
- b. Else if the HW valve position is greater than 95% and the supply air temperature is 8°C (15°F) less than SATsp for 5 minutes, send 2 requests.
- c. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- d. Else if the HW valve position is less than 95%, send 0 requests.

5.18.15.4. ~~If There Is a Hot Water Coil, Heating Hot-Water Plant Requests. Send the heating hot-water plant that serves the AHU a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

Revise Section 5.22.8 as follows:

5.22.8. Plant Requests

If there is a chilled water coil, keep Sections 5.22.8.1 and 5.22.8.2. Delete otherwise

5.22.8.1. ~~If There Is a Chilled Water Coil, Chilled-Water Reset Requests~~

- a. All requests shall be suppressed (send 0 requests) if fan is not at MaxCoolSpeed.

The previous sequence is to prevent CHWST reset until fan is at full speed since chiller plant energy is much larger than FC fan energy.

- b. If the CHW valve position is greater than 95% and the supply air temperature is 6°C (10°F) greater than setpoint for 5 minutes, send 3 requests,
- c. Else if the CHW valve position is greater than 95% and the supply air temperature is 3°C (5°F) greater than setpoint for 5 minutes, send 2 requests,
- d. Else if the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 85%.
- e. Else if the CHW valve position is less than 95%, send 0 requests.

~~5.22.8.2. If There Is a Chilled Water Coil, Chiller Plant Requests. Send the chiller plant that serves the system a chiller plant request as follows:~~

- a. If the CHW valve position is greater than 95%, send 1 request until the CHW valve position is less than 10%.
- b. Else if the CHW valve position is less than 95%, send 0 requests.

If there is a hot water coil, keep Sections 5.22.8.3 and 5.22.8.4. Delete otherwise

~~5.22.8.3. If There Is a Hot Water Coil, Hot-Water Reset Requests~~

- a. All requests shall be suppressed (send 0 requests) if fan is not at MaxHeatSpeed.

The previous sequence is to prevent HWST reset until fan is at full speed since heating plant energy is much larger than FC fan energy.

- b. If the HW valve position is greater than 95% and the supply air temperature is 17°C (30°F) less than SATsp for 5 minutes, send 3 requests.
- c. Else if the HW valve position is greater than 95% and the supply air temperature is 8°C (15°F) less than SATsp for 5 minutes, send 2 requests.
- d. Else if HW valve position is greater than 95%, send 1 request until the HW valve position is less than 85%.
- e. Else if the HW valve position is less than 95%, send 0 requests.

~~5.22.8.4. If There Is a Hot Water Coil, Heating Hot-Water Plant Requests. Send the heating hot water plant that serves the FCU a heating hot water plant request as follows:~~

- a. If the HW valve position is greater than 95%, send 1 request until the HW valve position is less than 10%.
- b. Else if the HW valve position is less than 95%, send 0 requests.

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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About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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