

ADDENDA

**ANSI/ASHRAE/ASHE Addendum k to
ANSI/ASHRAE/ASHE Standard 170-2021**

Ventilation of Health Care Facilities

Approved by ASHRAE and the American National Standards Institute on November 29, 2024, and by the American Society for Health Care Engineering on November 9, 2024.

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FOREWORD

Addendum k updates the heading of Section 6.1.2 to clarify the section applies to the central systems that provide cooling or heating. The addendum also adds requirement for cooling reserve capacity in addition to the heating reserve capacity for spaces already listed in Section 6.1.2. This provides guidance to designers to a minimum reserve capacity required to start with and engage with the facility on what their operational needs are. The addendum also removes the onsite fuel requirement from Section 6.1.2.1 so that the exception to 6.1.2.1 does not apply to it anymore. The requirement is added back to Section 6.1.2.2. The addendum removes the lower limit of 400 ton cooling load as the starting point for considering any reserve capacity for cooling in inpatient and residential health care facilities.

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

Addendum k to Standard 170-2021

Revise Section 3 as shown below.

~~**essential accessories:** those components of a system, required to allow proper operation of that system, that are reasonably subject to mechanical failure (e.g., pumps, fans, control air compressors). Humidifiers, controls, and tanks are not included in this definition.~~

heating and cooling central systems: systems that provide heating or cooling fluid for distribution via pumps or pressure to more than a single air-distribution system in the facility.

Revise Section 6.1.2 as shown.

6.1.2 Heating and Cooling ~~Sources~~ Central Systems

6.1.2.1 For facilities that have spaces listed in Sections 7.1, 8.1 and 9.1 of this standard, design the heating and cooling central systems ~~Provide heat sources and essential accessories~~ in number and arrangement sufficient to accommodate the facility needs (reserve capacity), even when any one of the ~~heat sources or essential accessories~~ is not operating due to a ~~breakdown failure~~ or routine maintenance. ~~The capacity of the remaining source or sources shall be sufficient to provide for domestic hot water, sterilization, dietary purposes, and to provide heating for operating, delivery, birthing, labor, recovery, emergency, intensive care, nursery, and resident care areas, and inpatient/resident rooms. Fuel sufficient to support the owner's facility operation plan upon loss of fuel service shall be provided on-site. The reserve capacity shall be a minimum of 50% of the peak heating and cooling design loads, or as required by owner's project requirements (OPR) or operational plan.~~

Informative Note: The 50% reserve capacity is not intended to indicate individual equipment quantity and size but rather that when the largest piece of equipment fails, what remains can satisfy the 50% of the design cooling or heating load.

Exception to 6.1.2.1: Reserve capacity for heating is not required if the ASHRAE 99% heating dry-bulb temperature for the facility is greater than or equal to 25°F (-4°C).

~~**6.1.2.2 Inpatient and Residential Health Care Spaces.** For central cooling systems greater than 400 tons (1407 kW) peak cooling load, the number and arrangement of cooling sources and essential accessories shall be sufficient to support the owner's facility operation plan upon a breakdown or routine maintenance of any one of the cooling sources.~~

6.1.2.2 For facilities that have spaces listed in Sections 7.1 and 9.1 of this standard, provide fuel/energy storage to ensure facility heating and cooling operation for a minimum of 24 hours for the reserve design capacity upon loss of primary energy source.

Informative Notes:

1. Refer to NFPA-99 for emergency power requirements.
2. Facilities should evaluate water storage capacity for heating and cooling systems based on their operational needs.

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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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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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