ASHRAE Standard 170 - 2021, Ventilation and Acceptable Indoor Air Quality for Hospitals

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What is the purpose of the ASHRAE 170-2021 Standard?

The purpose of this standard is to provide ventilation system design requirements that allow environmental control in healthcare facilities. Standard 170 does this by offering guidance, regulation, and mandates to designers, engineers, and operators of healthcare facilities. In all, this standard provides the necessities as to how to properly handle and distribute the airflow in a healthcare facility for the safety of humans.

What does the standard cover?

This standard's ventilation system design requirements provide environmental control for healthcare facilities. The requirements within this standard address air temperature, humidity, odor, and other factors that could affect air quality. Additionally, a multitude of these factors, discussed within the requirements of standard 170, could indicate chemical, physical, or biological contaminants. These requirements go further in-depth on potentially harmful contaminants caused by faulty ventilation systems and how dire they can be in a medical facility. Furthermore, this standard is applicable to new buildings and extensions to existing buildings. Also, the requirements apply to patient care areas, resident care areas, and related support areas within healthcare facilities.

How it affects the Healthcare Industry.

Healthcare facilities are a large system of networks, technology, medicine and machines that support the well-being of humans. These critical facilities could face various threats without acceptable indoor air quality. Because of this, healthcare facilities are at higher risk of hosting airborne illnesses or even other biological contaminants that could worsen the condition of a patient.

However, with the proper ventilation system in place, this can be prevented. In all, ventilation and indoor air quality for healthcare facilities is critical. To ensure that healthcare facilities have acceptable indoor air quality, ASHRAE created standard 170. To learn more about this standard, information can be found on the **ASHRAE website** or if you are interested in downloading the standard 170 for yourself, **click here**.

What does this topic have to do with Energy & Sustainability?

In a facility, there are different measurements that can be used to check a facility's ventilation and indoor air quality. Measurements such as outdoor air consumption and air changes per hour can affect the overall quality of an indoor facility's air. These measurements can be read and calibrated on various ventilation devices. Where we often see energy savings within ventilation and indoor air quality is when these measurements are over the required measurements in ASHRAE 170. If these measurements are not equivalent to the regulated measurements suggested by standard 170, that means that your ventilation and indoor air quality devices may be working harder than needed to provide quality air and utilize more energy. So, just as proper ventilation systems and indoor air quality are important to health care facilities, as is ASHRAE standard 170-2021 important for achieving energy savings.

To learn more about how to achieve energy savings and what that process looks like. American Society for Healthcare Engineering (ASHE) offers a handful of resources to help facilities achieve this goal. A helpful resource to utilize is **"Should Evaluate and Implement Operating Room Airflow Setback"**. This file walks through sample scenarios utilizing the process of reducing or setbacks for energy savings.