

Temperature and humidity requirements for the hot aisle of the computer room



Overview

ASHRAE recommends a temperature range of 18°C to 27°C (64°F to 80°F) and humidity levels between 40% and 60%. Proper control of these factors prevents overheating, condensation, corrosion, and static electricity, which can damage equipment. Strategies orient the IT racks in what is called a hot aisle/cold aisle layout. Cold aisles are formed by the space between the front faces of two rows of IT equipment racks. A1 class equipment, which includes most enterprise servers. If you're worried about your PC or data center operating at the right temperature, you're on the right track: The combination of ambient temperature and relative humidity (RH) directly affects reliability hardware performance and lifespan. This range helps prevent overheating, reduces thermal stress on. This document initially develops a list of generalized thermal best-practice recommendations as a first step towards temperature management and measurements in data centers, ultimately saving infrastructure energy as well as protecting the electronic equipment.



Article Content

Hot

Maximum Server Room Temperature: What You Need

Server room temperature is one of the most important metrics in any data center environment. Keeping the equipment inside at a consistent

Nov 22, 2025 Hot

ASHRAE: Best Practices for Environmental Monitoring

Install Temperature Sensors Today To Effectively Monitor Humidity And Temperature
Implementing ASHRAE best practices is made easier with the

Mar 31, 2026 Hot

What are the ASHRAE guidelines for data center temperature levels ...

ASHRAE's most recent guidelines classify data center environments into different classes with varying temperature and humidity requirements: Class A1 (Enterprise Servers): Recommended range of 18

Nov 26, 2025 Hot

What is Ambient Temperature?

Ambient temperature is an important factor in maintaining computer hardware. Learn how to measure it and why it is critical in the data center.

Nov 02, 2025 Hot

Hot and Cold Aisle Containment: What You Need to Know

Hot aisle containment systems isolate the hot aisle using a similar enclosure system to that of a cold aisle with a sealed door for access. This

Jun 01, 2026 Hot

Ideal temperature and humidity for computers and data

Therefore, in data centers, it is recommended to measure temperatures in aisles at various heights, as well as monitoring the top of the rack, where hot air tends to

Feb 08, 2026 Hot

ASHRAE Data Center Temperature & Humidity

Understanding ASHRAE data center temperature and humidity guidelines is crucial. Learn what these are and why they are important.

Aug 14, 2025 Hot

Data Center Monitoring

The datacenter temperature and humidity guidelines set by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) has created a widely accepted set of

Feb 28, 2026 Hot

Data center temperature and humidity guidelines

In each case, ASHRAE provides guidance for both the relative humidity -- the amount of moisture in the air -- and the dew point or temperature

Mar 10, 2026 Hot

Data center temperature and humidity guidelines

ASHRAE's data center temperature and humidity standards help admins determine what the environment of the facility should be for optimal

Mar 31, 2026 Hot

ASHRAE Data Center Temperature & Humidity

They house computer systems and associated components such as telecommunications and storage systems. Therefore, understanding ASHRAE

Feb 06, 2026 Hot

ASHRAE Recommended Data Center Temperature

Our Digital Temperature & Humidity Sensor is the perfect sensor for accurately monitoring temperature, humidity, heat index and dew point. With the proper

Apr 17, 2026 Hot

What are the key ASHRAE guidelines for data center cooling systems ...

These ASHRAE guidelines help data center operators balance reliability, efficiency, and cost while ensuring proper thermal conditions for sensitive computing equipment.

Jun 28, 2026 Hot

Thermal Guidelines and Temperature Measurements in Data Centers

Air management is important for achieving proper intake air temperatures, and accurate temperature measurements are necessary for the success of air management. The goal of air

Dec 22, 2025 Hot

Data Center Temperature & Humidity Best Practices: A

Data center temperature and humidity best practices so you can meet device guidelines while saving money and optimizing performance.

Jul 09, 2025 Hot

Temperature and humidity guidelines for data centers

Temperature and humidity guidelines provide a framework for the ideal environmental conditions necessary to support data center operations. These standards focus on maintaining

May 28, 2026 Hot

Temperature and humidity design criteria

Use these temperature and humidity design criteria to ensure that your data center environment provides optimal conditions for your server operation.

Aug 17, 2025 Hot

Hot Aisle Containment (HAC) for Data Centers Explained

Looking for a way to reduce energy expenses for your data center? According to Energy Star, data centers with hot/cold aisle arrangements can

Apr 03, 2026 Hot

Ideal temperature and humidity for computers and data

Optimal ambient temperature and recommended relative humidity For general-purpose computer rooms and data centers, maintain an environment between 20

Apr 23, 2026 Hot

How to Design and Build a Data Center

Racks also play a vital role in data center cooling schemes. Racks of gear are commonly organized to create hot and cold aisles that can improve

Aug 03, 2025 Hot

Temperature & Humidity: Data Centre & Server Rooms

A3 (High Temperature, Moderate Humidity): 23°C to 27°C (73°F to 80°F) temperature range, with 20% to 80% humidity. This classification helps maximise

Dec 22, 2025 Hot

The Ideal Server Room Temperature | DataSpan, Inc.

Maintaining the ideal server room humidity level and temperature is critical to keeping your equipment in optimal condition. If your space is too hot,

Jul 07, 2025 Hot

What are the ASHRAE guidelines for data center temperature and humidity ...

Recommended air supply temperature differential of $\leq 20^{\circ}\text{F}$ (11°C) Emphasis on proper air distribution to prevent hot spots Guidance on containment strategies for hot aisle/cold aisle configurations Energy

Jun 14, 2026 Hot

Recommended Data Center Temperature & Humidity

Relative humidity (RH) is defined as the amount of moisture in the air at a given temperature in relation to the maximum amount of moisture the air could hold at the same

May 03, 2026 Hot

Thermal Guidelines and Temperature Measurements in Data Centers

The ASHRAE Thermal Guidelines and NEBS GR-63/3028 provide important guidance on temperature and humidity in equipment spaces. These industry documents are briefly reviewed to

Mar 17, 2026 Hot

ASHRAE Recommended Data Center Temperature

In this article, we'll be taking a look at the updated ASHRAE recommended data center temperature and humidity ranges, and how environment monitoring with

May 01, 2026 Hot

The Ideal Temperature and Humidity for your Server

Ensuring the right temperature and humidity in server rooms and data centres is crucial to protect IT equipment and maintain reliable operations.

Jun 11, 2026

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://eedenmarketing.co.za>

Email: info@moletenare-ew.co.za

Phone: +86 138 1658 3346

Address: Ningbo, China

This document is for informational purposes only. Specifications subject to change without notice.

