



CONNECT AND PROTECT

Enclosure Cooling Solutions


nvent

HOFFMAN

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Introduction

nVent HOFFMAN cooling solutions help create optimal conditions for the reliable operation of electronic and electrical components in a variety of industrial, data center and commercial applications. With a broad portfolio that includes filter fans, air conditioners, heat exchangers and integrated cooling enclosures, nVent HOFFMAN helps ensure maximum productivity and uptime, while protecting the life cycle of controls and equipment.

As a premier global provider with decades of experience in cooling industrial automation and electrical components, nVent HOFFMAN has an industry-leading portfolio of proven products, as well as pre- and post-sale support.

Reasons to choose nVent HOFFMAN cooling solutions

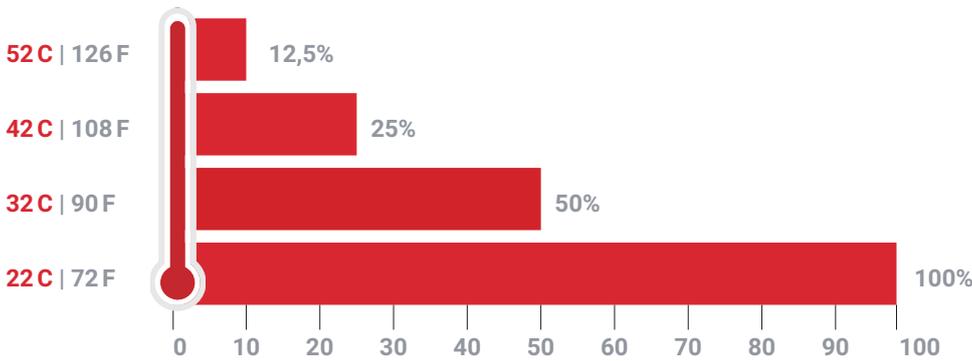
- A broad portfolio of UL® and CE® certified standard cooling, heating and climate-control products for reliable operation and longer life of protected components
- Cooling specification is easier with our [Cooling Selection Tool](#) that helps you find the ideal cooling solution from 1,000+ standard cooling configurations
- State-of-the-art, in-house laboratory testing, validation and global agency certification services

Key advantages of combining nVent HOFFMAN enclosures and cooling solutions

- Helps ensure complete solution is engineered to maintain rating and certification
- Single-source accountability for support and service
- Ease of specification, ordering and purchasing

For more information, contact your local nVent HOFFMAN sales representative.

Reasons to cool



The life expectancy of electronics is cut in half every 10 C/ 18 F they operate above room temperature. (Source: Digital Equipment Corporation study)

Heat damages and reduces the life of your electronics

Keeping your electronics cool is essential to maximizing the life cycle of your electronic devices, reducing capital expenses, and keeping your business running. Heat can have a significant impact on electronics, including reducing performance, causing damage and affecting manufacturer warranties.

Heat can be generated internally by electronic components and intensified by external sources. Inside a cabinet, uncooled components can generate as much trapped heat as a home furnace.

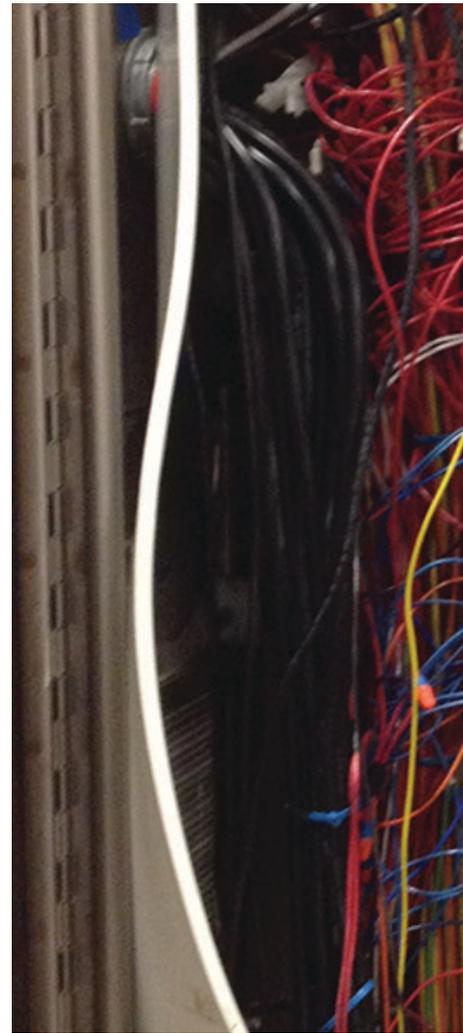
- Power supplies
- Controllers, drives and servos
- Transformers and rectifiers
- Processors and server racks
- Radio equipment

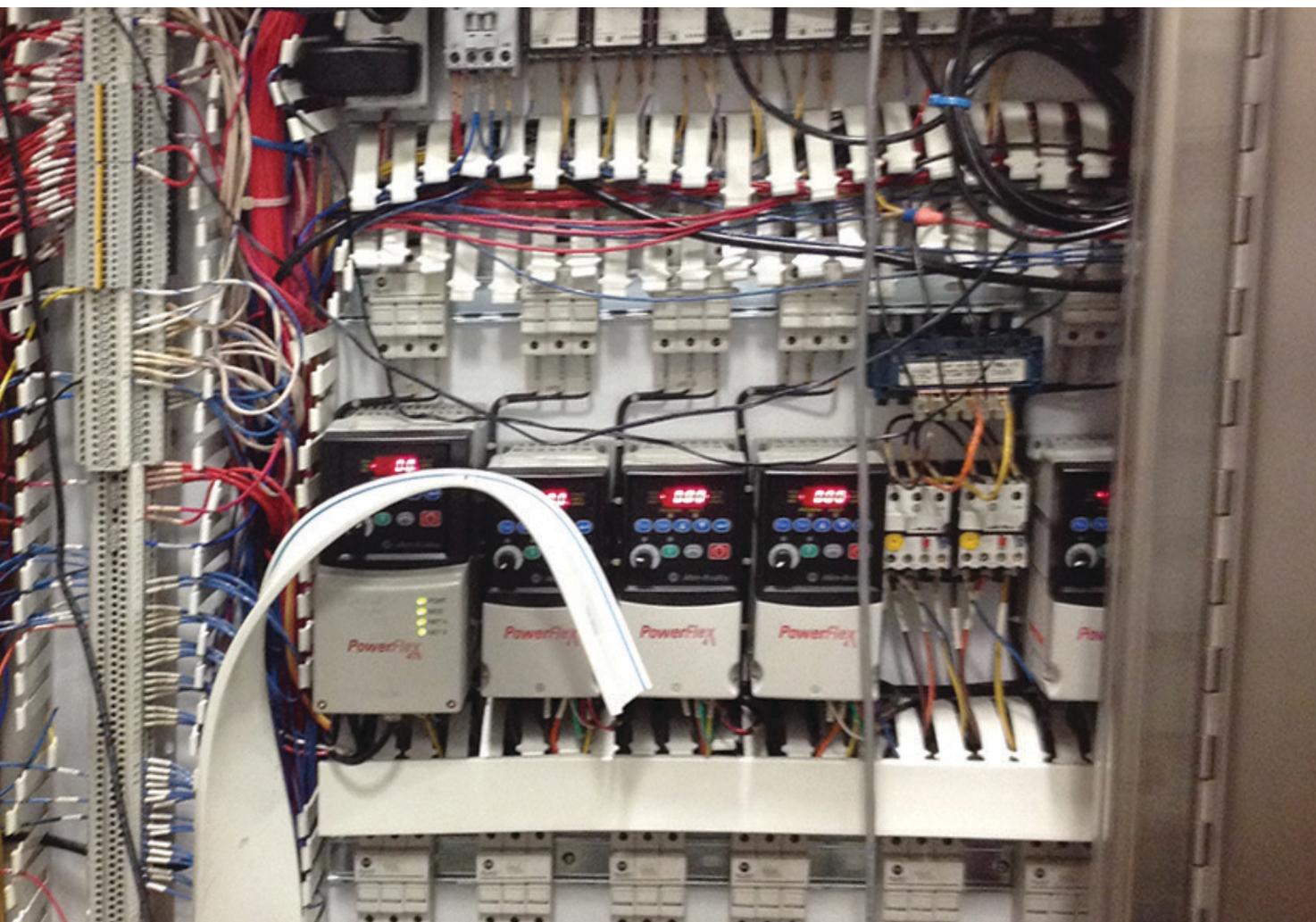
Heat is also generated from sources outside the enclosure, such as:

- Solar heat gain
- High ambient temperature
- Welding processes
- Paint oven
- Blast furnace

Electronics' life expectancy is cut in half every 10 C/ 18 F they operate above room temperature

With expanding deployment of smaller, more powerful and more portable mission-critical electronics into increasingly harsh environments and conditions, cooling and thermal management is now a primary engineering consideration. The density of modern electronics in smaller cabinets intensifies heat issues that can compromise component performance.





WARNING

Photo does not show proper functionality.

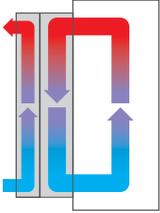
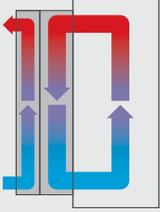
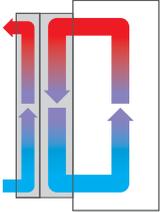
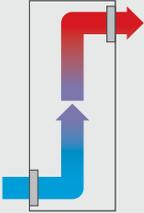
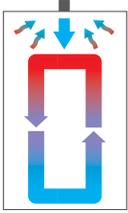
Consequences of heat

Heat build-up can adversely affect industrial controls creating the potential for:

- Derated drive performance
- Catastrophic component failure
- Warranty revocation
- Component replacement costs
- Late shipments
- Customer dissatisfaction
- Lost revenue
- Service outages
- Hours of factory downtime

Cooling strategies

nVent HOFFMAN standard cooling solution characteristics

	Cooling system type	Technology description	Heat removal range	Environment type
	Air conditioners	Closed-loop cooling Refrigerant-based	High	Ambient air is higher compared to required inside enclosure temperature Dirty or corrosive air Harsh/humid environments Hazardous locations
	Thermoelectric coolers	Closed-loop cooling Peltier effect No moving parts or liquids	Low	Small enclosures Remote/DC-powered applications
	Air-to-water heat exchangers	Closed-loop cooling No moving parts exposed to environment	High	Hot environments Extremely dirty/dusty air
	Filter fans	Open-loop cooling	Low to moderate	Cool, clean air environment
	Vortex coolers	Powered by compressed air No liquids or moving parts	Moderate	Hot environments Dirty or corrosive air Harsh/humid environments Hazardous locations
	Conductive (no cooling unit)	Passive Heat radiates through enclosure walls	Very low	Cool air environment

Choosing a solution to maximize the operational life of your electronics

Typical applications	Cools below ambient	Cools above ambient	Closed loop
Indoor or outdoor Industrial enclosures Telecommunications Wastewater treatment Metal working Oil & Gas operations	✓		✓
Indoor or outdoor Telecommunications Battery cabinets Industrial enclosures Security systems	✓		✓
Extreme conditions where air conditioners would be subject to failure Automotive manufacturing Machine tool Packaging Paper mill Oil & Gas operations	✓		✓
Industrial manufacturing Outdoor telecom Data networking		✓	
Heavy manufacturing Metal working Oil rig/refinery Paper mill Foundry Oil & Gas operations	✓		✓
Where enclosed components operate within recommended temperature range		✓	Per enclosure rating

Cooling range

A wide range of thermal management solutions for critical applications

Air conditioners

Delivering reliable enclosure cooling in the most extreme indoor and outdoor environments, nVent HOFFMAN air conditioners are available in multiple configurations that offer a broad range of cooling capacities, power inputs and mounting options.

Features:

- Models with 300W-17000W cooling power for indoor, outdoor and harsh environments
- Dust-resistant coil design supports filterless operation in most environments
- Built-in flanges for easy installation
- Upgrade to an nVent HOFFMAN Remote Access Control unit to monitor and manage an entire network of nVent HOFFMAN air conditioners

Filter fans

nVent HOFFMAN filter fans are available with an IP54 or IP55 protection degree. They are easy to install thanks to the click-in feature. Unnecessary downtime is avoided, since water and dust are prevented from entering the enclosure through the filter, and the reliable fan motor helps ensure constant ventilation.

Features:

- Airflows ranging from 12 m³/h to 682 m³/h
- IP54/IP55 protection degree
- Easy click installation feature

Thermoelectric coolers

nVent HOFFMAN Thermoelectric Coolers provide refrigerant-free, filterless design without a compressor and virtually eliminate maintenance.

Features:

- Cooling capacities from 60 to 200 Watts (nominal)
- DC powered operation for 24V and 48V applications
- Optional temperature controller and condensate manager





Local service and local availability

An unparalleled strategic partnership for the most responsive local service

Coverage you can count on

With nVent HOFFMAN, you can take advantage of the complete maintenance and service offerings. That means reduced downtime, higher levels of overall system performance and maximum operational life for your protected equipment. Our product quality and complete aftermarket care helps keep your equipment up and running.

Through partnership with Johnson-Northwest (JNW), nVent HOFFMAN offers superior service with expertise that reaches worldwide. JNW delivers full-service capabilities and complete service for nVent HOFFMAN cooling products that are in or out of warranty.

Through JNW, nVent HOFFMAN offers:

- 24/7/365 service availability
- Online service requests
- In-stock availability for selected cooling parts
- Global coordination of service and maintenance programs
- Expedited service and parts availability
- Extensive reporting capabilities, including up-to-date status monitoring

Local availability means you get parts faster

In each global region, our local distributors have access to large inventories of service parts. Repair technicians worldwide can place parts orders regionally, streamlining communication and ordering. Many nVent HOFFMAN parts are available in-stock or shipped within hours.

We offer:

- Technical assistance
- Service and warranty support
- Online resources
- Specifications and drawings

For technical support, contact: cooling.support@nvent.com or contact your local nVent HOFFMAN representative

Cooling solutions for a variety of verticals



Vertical

Machine builders
Automotive
Material handling
Machine tooling

Pharma
Food & Beverage
Agriculture
Pulp and Paper

Oil & Gas
Petro chemical
Power plants
Alternative energy

Transportation
Water & Waste Water
Desalination
Telecommunication
Datacom
Government/security

Product family

- SpectraCool Slim Fit
- SpectraCool Indoor/Outdoor
- SpectraCool Stainless Steel
- SpectraCool Advanced Corrosion Protection
- SpectraCool Advanced Corrosion Protection
- T-series

Features and benefits

- IP54
- Active condensate management
- High optimized airflow
- Dust resistant coil
- Smart controller
- 3 mounting options in one model
- IP56
- Indoor and outdoor
- Designed for harsh corrosive environments
- Reliable mechanical thermostat
- Easy-mount flanges for simple installation
- Active condensate management
- IP56
- Built-in heater
- Compact footprint
- Reliable mechanical thermostat
- Designed for rugged environments



Our powerful portfolio of brands:

CADDY

ERICO

HOFFMAN

RAYCHEM

SCHROFF

TRACER



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