"Our humidification system has lived up to all our expectations. Now, we rarely think about dry air and static electricity. There really aren't issues anymore."

– Paul Anders
Facilities and Operation Manager, Itron Inc.

Why humidify?... For Electronics

Ensuring proper humidification in your facility will improve production output, elevate product quality and ultimately, boost ROI

- Control ESD
- Reducing de-soldering occurrences
- Minimizing brittle components

Electronic devices, printed circuit boards, components and data are highly sensitive to humidity levels. Insufficient, excessive and inconsistent humidity levels cause damage and defects in electronic components and pose safety concerns due to electrostatic discharge, de-soldering occurrences and brittle components.

Control Electrostatic Discharge (ESD)

Electrostatic discharge (ESD) occurs with the sudden flow of electricity between two electrically charged objects coming into contact with one another. When objects holding different charges come into contact, or when the dielectric between them breaks down, a visible spark can be triggered, which can damage electronics and pose safety concerns for facility operations.

Eliminate ESD with Humidity Control

Humidifiers add hydration to the air, which forms a thin protective film on surfaces that serves as a natural conductor to dissipate electric charges. When humidity levels drop below 40% RH, this protection disappears and routine employee activities lead to objects being charged with static electricity, posing a safety risk of serious shock for employees and increasing the possibility of damage or defects within electronic components and devices.
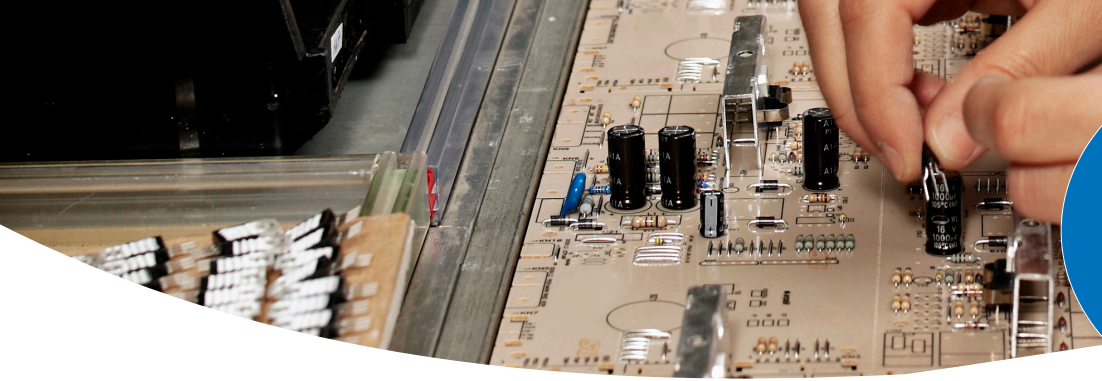
Humidification and Evaporative Cooling

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Reduce De-Soldering Occurrences

Proper humidity levels contribute to the effectiveness of wave soldering and surface-mount technology (SMT) processes. Without sufficient humidity, solder paste can dry out resulting in insufficient solder joints and product defects.

In low humidity, solder paste solvent evaporates too quickly. This causes the paste to dry out, making the soldering process less effective.

In high humidity, solder paste absorbs water, becoming less effective and may begin to slump, posing bridging defects. High humidity levels can also cause damage or defects in moisture-sensitive components in storage and processing.

Ensuring a consistent humidity level of 50% RH in electronics manufacturing and storage facilities will lower the occurrences of damage and defects due to ineffective soldering and de-soldering occurrences.

Minimize Brittle Components

Insufficient humidity can cause the components within electronics to become brittle and varients in humidity throughout your facility can cause damage or defects due to condensation. When an electronic product or component is transferred from a cooler area (with lower humidity) to a warmer area of the facility (with higher humidity), the change in humidity can cause condensation to occur within the device or product. When trapped moisture expands or contracts during manufacturing, it can cause delamination of plastic parts from the sub frames, poor wiring bonding and internal cracking.

Ensuring a consistent humidity level of 50% RH throughout your facility is integral to preventing moisture and condensation, which can cause brittle components within a device and lead to short circuiting events.

Nortec EL-Series Electrode steam humidi ication   Nortec LS-Series Pressure steam humidi ication   DR-Series Direct Room humidification   ME-Series Media Evaporative cooling & humidification

Condair manufactures a comprehensive range of humidifier and evaporative cooling systems across all humidification technologies. Whether for manufacturing or storage facilities, Condair's humidification engineers are able to provide the right solution to meet the needs of every environment.

Effective humidity control poses a long list of benefits for electronics manufacturing and storage including Increase production output and productivity, boost ROI of facility production and operations, maintain and improve product quality, decrease waste from damaged components, improve indoor air quality for employee health.

Contact us today and ensure you have the best humidification solution for your electronics facility.

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