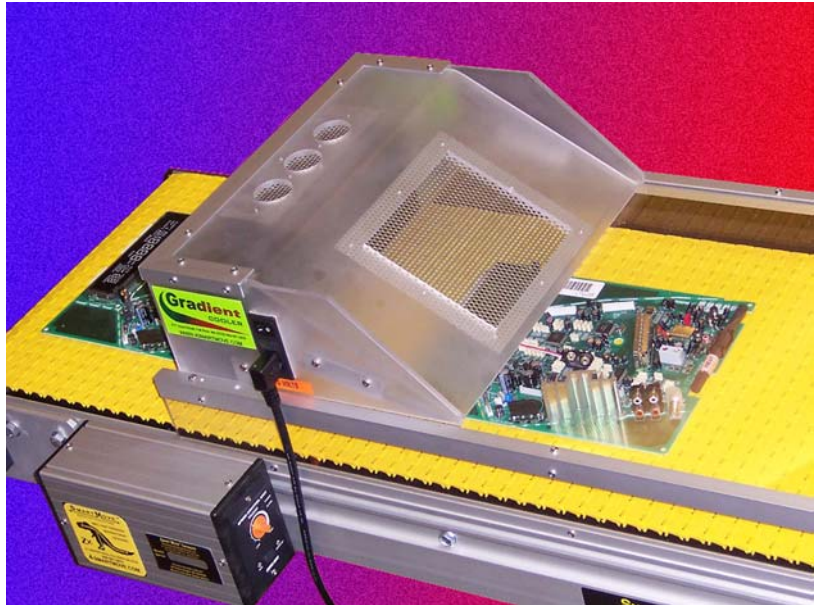
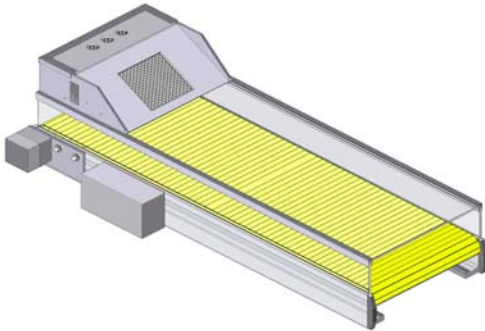


Gradient Cooler



Improve your product cooling.



Benefits.

Contact Us

The Gradient Cooling Tunnel

Here's how it works

The Gradient Cooler mounts on the hood assembly above the conveyor belt to create a **cooling tunnel**. Hot parts are moved down the tunnel toward the Gradient Cooler which supplies a constant flow of air through the tunnel. As parts move down the tunnel, they transfer heat to the air flowing past them. The air moving down the tunnel is eventually heated as it passes over each part such that items leaving the tunnel are receiving the coolest air, while items entering the tunnel receive pre-heated air. This creates a temperature **gradient** that can be expressed in terms of the temperature changes versus the time or distance the product moves across the tunnel.

Advantages of using the Gradient Cooling Tunnel

Reduce Stress. Most materials that have been heated during processing can be adversely affected by uncontrolled cooling systems that immediately introduce inconsistent ambient airflow. Rapid and uneven cooling can induce material stresses that may result in warping, cracking and uneven shrinkage. Electronic devices subject to uncontrolled cooling can be permanently damaged.

Gradient Cooler versus side cooling with fans.

Other companies use cross cooling methods that can create hot and cold zones that allow component surfaces to cycle from cooling to core reheating. Cyclic re-heating of product surfaces can cause material fatigue. Uncontrolled cooling cycles can also induce stresses that may result in distorting materials which may lead to product malfunctions.

Specifications

Use the Gradient Cooler at the exit of :

- Wave soldering circuit boards,
- Pad printing systems
- Shrink wrapping tunnels
- UV curing systems
- Injection molding equipment
- Heated food processing

Available for SmartMove® conveyors with belt widths from 12"-24".

