

Can-End Induction Sterilizer

Compact, energy-efficient sterilizing system for steel can ends.



Features and Benefits

- **Induction heating process heats only the ends, not the air around them**, for fast, energy-efficient heating.
- **Air-cooled, medium-frequency induction process** provides a simple, safe and reliable sterilization system.
- **Temperature sensor** guards against under-temperature ends.
- **Instant on/off operation** saves energy.
- **Temperature and power control** for consistent performance.
- **Solid-state components** for reliable operation.
- **Automatic frequency tuning.**

The Nordson can-end sterilizer utilizes patented medium-frequency induction heating to sterilize steel can ends simply, safely and efficiently with minimum operator intervention. The system requires less space, energy and maintenance than conventional sterilization systems.

Innovative Induction Technology

With medium-frequency induction heating, power is supplied to a series of coils, creating a fluctuating magnetic field. Steel can ends that pass through the coils are heated directly by the eddy currents produced within the steel. The system provides fast, controllable heating with less energy consumption than other heating methods.

The induction coils are wrapped completely around a Pyrex* transport tube, through which the ends are conveyed. The transport tube isolates the ends from the induction coil, and protects the coil from direct contact with the parts. Energy requirements for these induction-heating systems are typically 70 percent less than conventional gas heating systems. In addition, the instant on/off heating also contributes to energy savings.



The system's solid-state, power-generating components convert approximately 90 percent of the energy consumed into usable heating. In addition, the end sterilizer also has a low-power standby feature that keeps ends at their proper temperature during line stoppages, reducing energy waste substantially by not operating at full power.

Medium-frequency (5-15 kHz) power generator and control components are located directly under sterilizer coil tray in a 30 x 42" enclosure. A base-mounted blower cools all electronic components. Exhaust air from the generator is directed through the coil enclosure to cool the induction coil. No water cooling is required.

Each power generator can deliver up to 30 kilowatts of energy, depending on the line voltage.



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System Components

The can-end sterilizer is a compact system that includes a control panel with medium-frequency power generator and an enclosed coil assembly. The system is approximately 1.37 meters in length and can sterilize 600 ends per minute in a single channel. An EST 6 system can sterilize 800 ends per min in apx 1.8 m in length.

System Operation

Ends are conveyed in-stick into the sterilizer using existing conveyors or optional Nordson-provided conveyors. The frequency range needed to heat the ends typically ranges from 5 kHz to 15 kHz, which creates a deep heating effect that reaches uniformly to the center of the ends.



A temperature sensor mounted at the exit of the sterilizer monitors the temperature of each end as it exits. The system is controlled by a microprocessor, which automatically adjusts the power level of the sterilizer to produce ends at the operator pre-set temperature.

The temperature of ends exiting the sterilizer is typically maintained at 160° Celsius (320° Fahrenheit). The temperature sensor guards against under-temperature ends, and an optional brush-off gate mounted on a horizontal section of a following conveyor removes the under-temperature ends for re-processing.

Ends exiting the sterilizer are conveyed into the clean-room filling area using existing conveyors or new conveyors custom manufactured for the system.

A base-mounted blower supplies cooling air to all electronic components. Exhaust air from the power generator is directed through the enclosed coil assembly to cool the induction coil. No air is needed for sterilization.

System Components

- Over/under-temperature alarm if ends are not within operator-adjustable temperature range
- Fully CE mark compliant
- Over-voltage and over-current protection
- Line-voltage and spike protection
- Protected for blower fault conditions
- All doors fully interlock protected
- Message display for alarm conditions

Technical Specifications

Can-End Sterilizer		
Dimensions: Length	Model 4S	54.1 in (1.37 m)
	Model 6S	69.8 in (1.77 m)
	Width	30 in (76 cm)
Height	Adjustable	
Input Power Requirements	50 amp service required Actual power usage varies per end size and line speed	

Options

Feed conveyors, magnetic separator, brush-off gate

Nordson reserves the right to make design changes to products and components to improve their function. These changes may occur between printings.

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In highly competitive manufacturing markets, productivity is vital and performance is essential. That's why we apply both to everything we do, whether it's our products, expertise or outstanding customer service. We'll always be there to help maintain the new standards you've set, with expert service and support delivered through our teams working across the globe.

This unique Nordson approach helps you reach new levels of production, while working more accurately, efficiently and competitively than ever. Precisely why manufacturers who demand quality, can rely on Nordson.

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