



Infrared Oven helps more efficient in-line pasteurization at Premier Foods

A custom-designed, carbon infrared oven is helping Premier Foods to achieve efficiency gains of more than 10% over a former hot rinse system on its cooking sauce production line at its Bury St Edmunds plant. The new oven has also allowed significant improvements in the working environment around the production line as well as energy savings compared with the steam-fed, hot jar rinsing unit.

Premier Foods manufactures a wide portfolio of food products, soups, custard, pickles and sauces like a range of Loyd Grossman sauces. After cooking, the sauce is pasteurized in-line and delivered to the jar filler at a temperature of +94°C. The new set up saves a great amount of space and time by eliminating the need for a flat bed pasteuriser post bottling. There is always a danger of thermal shock, cracking or breakage, when filling glass containers, if the temperature difference between fluid and glass is too great. Previously, the cooking sauce jars were pre-heated in a rotary hot water rinse system. The jars were injected with very hot rinse water, emptied and then fed to the filler machine. However, dwell times varied, thermal shock and breakages occurred and the line had repeated stoppages and delays.

Premier approached specialist conveyor system manufacturers, SFT-UK, and after tests, a 124kW infrared oven was installed on the production line. SFT-UK modified the existing line by removing the hot water jar rinser and installing a new Paxona SFT sidegrip Jar inverter/Filtered air cleaner. The Infrared oven was installed immediately after the air cleaner. An optical pyrometer measures the temperature of the jars as they leave the oven, manual or automatic control can be selected. If the line needs to be stopped for any reason, the carbon emitters switch off virtually instantaneously to prevent overheating of any jars in the oven.

Since installation, the new oven has proved a great success not only with production management in terms of less downtime, greater reliability and the 10% increase in line speed, but also with the workforce. As Stephen Ward, Project Manager at Premier, explains, "We have a notice board on the production line for comments, both negative and positive. With the new infrared oven, all the old complaints have been resolved and the workforce are now happy that, with the drastically reduced downtime, they can now consistently meet production targets, in a more comfortable environment."



Features

- pre-heating glass jars prior to filling with hot sauces to avoid thermal shock
- medium wave infrared heating glass jars efficiently and effectively

Technical Data

- medium wave Carbon infrared emitters
- stainless steel oven
- two sections, one with four 24kW zones and one with two 13.8kW zones
- manual control by means of a potentiometer
- automatic control maintains a pre-set jar exit temperature.
- failure detection shuts down the line in case of emitter failure

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