



## Infrared system automates disinfection of Twist-Off lids

By installing an Infrared-Station from Heraeus Noblelight, TR-Automation GmbH, based in Graz, Austria, was able to automate the disinfection of lids. The company for automation projects developed a new filling plant. It fills about 700 yogurt jars per day at a temperature of 4 to 20 °C and then closes them with a metal twist-off lid. These lids are supplied in bulk containers and fed into the filling plant. In the past, they were cleaned by hand with sanitizer, but today the disinfection of the lids is automated using infrared heat. The use of infrared emitters in the food sector is now widespread. Infrared emitters target heat and minimize fungus and mold growth even on porous surfaces. The disinfection step was precisely fitted into the time window of the plant and the process. Due to the filling time, the cycle feed in the system takes 10 seconds. A heating cycle lasts about two seconds, and the target temperature is then maintained over a further cycle. The short-wave IR emitters receive a signal from the PLC control system for this process, and the temperature is measured inside the lid using an optical pyrometer. By timed on and off switching, the temperature inside the lid is kept at the required target temperature and the housing around the IR station is kept below 50°C. This arrangement efficiently disinfects the lids within the time window. David Taucher, COO at TR-Automation, reports: "The infrared station has been working reliably in continuous operation since it was installed in June 2022. The cycle operation ensures that disinfection and energy use are optimally coordinated."



### Features

- Efficient disinfection of twist-off lids
- Process automation
- Quality improvement

### Technical Data

- Short-wave infrared emitters
- With reaction times in the range of seconds
- PLC control
- Timed on and off switching
- IR station housing remains below 50°C

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