

APPLICATION NOTE



FOOD-INDUSTRY

TEMPERATURE MEASUREMENT FOR HIGH SPEED APPLICATIONS

FAST MEASUREMENT. SMALL MEASURING SPOT. FAVORABLE PRICE.



Highspeed-Processes



Packaging Industry



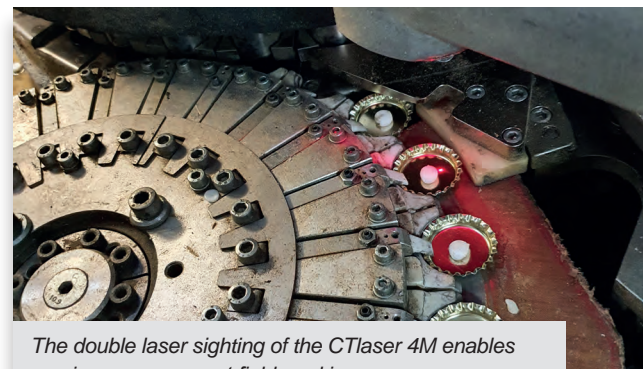
High quantities

Customer requests

The seals of crown caps are glued in place in a high-speed process up to **5,000 caps** can pass through the corresponding system per minute. Induction heating activates the adhesive coating and the sealing compound can then be pressed on.

Uniform heating of the crown corks is essential to ensure that the seal is applied to the entire surface of the crown cork and a correct sealing of the bottles is possible later in the filling lines.

For this purpose, a **high speed temperature measurement** is necessary, which correctly determines the temperature on a small measuring spot.



The double laser sighting of the CTlaser 4M enables precise measurement field marking. (image: Optris)

Solution: High speed pyrometer from Optris

To measure the temperature correctly – and most importantly, quickly – Optris has developed the high speed pyrometer **CTlaser 4M** for ultra-fast manufacturing processes.

It can measure the temperature within just **90 µs**.

In this application, the temperature of the crown corks is measured at the rim – so the uniform heating can be controlled.

Details:

- Temperature range: 0 °C to 500 °C
- System accuracy: $\pm (0,3 \% T_{\text{Mess}} + 2 \text{ }^{\circ}\text{C})$
- Ambient temperature: 0 °C ... 70 °C
- Optical resolution (90 % energy): 30:1
- Spectral range: 2.2 µm – 6.0 µm
- Protection class: IP 65 (NEMA-4)
- Acquisition time: 90 µs (90 %)

Further advantages

The ultrafast **CTlaser 4M** is ideal for fast, high-volume production and packaging processes (e. g. PET preform temperature monitoring) and high-speed applications in the field of traffic safety (e. g. overheating detection on railroads).

It is the ideal pyrometer for **high speed, low temperature measurements** on non metallic and also metallic surfaces.



5000
Measurements
per minute!

In action: The optris high-speed pyrometer measures 83 crown corks per second! (image: Optris)



*Optimal for high-speed processes and applications:
The Optris pyrometers
CTlaser 4M and CT 4M*

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