

## Reliable temperature measurement in metallurgy from 250 °C – New quotient pyrometer optris CTratio 1M and 2M

In metallurgy, a high emission of dust, vapors and similar problematic elements which negatively affect contactless temperature measurement often cannot be avoided. In order to ensure a reliable temperature measurement of melts or metallic surfaces even under these adverse conditions, Optris has developed a new **quotient pyrometer**. Compared to **single-channel pyrometers**, quotient pyrometers provide constant measurement results even with a dirty lens or for objects that move within the measurement area (e.g. metal rods or wires).

The concept is based on the previous **CTratio**, which has been proven in many installations, with fiber optic lens and separate processing electronics.

The addition of a new model with spectral sensitivity at **1.45-1.75** µm (2M) now allows measurements to be made from as low as 250° C. The models were also expanded upwards by new calibration methods – a maximum of **3000 °C** can now be measured.

The accuracy with which the new quotient pyrometer operates is particularly impressive. The measurement error is only **0.5 percent**. Due to the short adjusting time of **1 ms**, very fast processes can also be monitored.

### Optimized laser for exact measurement field marking

A highlight of the new CTratio is the targeting laser used now, with a wavelength of 520 nm. “The integrated green target laser works at a wavelength where the human eye has the greatest sensitivity. This results in more than eight times better visibility than the previous traditional red targeting lasers. In addition, a green laser can be seen substantially better on a metal surface or melt glowing red. Thanks to a glass fiber cable and a separate electronic box, our quotient pyrometer can be operated even at an ambient temperature of up to 315 °C without cooling” explained Dipl.-Ing. Torsten Czech, Head of Product Management at Optris GmbH. For temperature

analysis, Optris supplies the software Ratio Connect as standard, which can reliably detect and evaluate temperature measurement data. The user can set also parameters for the device easily in-situ, or via the standard USB interface and the free Android app IRmobile.

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## About Optris GmbH

Optris GmbH was founded in 2003 and has established itself as one of the leading manufacturers of non-contact temperature measurement devices. Its product portfolio consists of both wearable and stationary infrared thermometers and online infrared cameras for thermographic real-time analyses. Optris develops and produces in Germany to ensure the highest standard in quality as a key component of its company policy.

## Images

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BU: CTratio 2M

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BU: the new green laser

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