

Technical Note

Calibration with Thermo Gauge under inert gas atmosphere

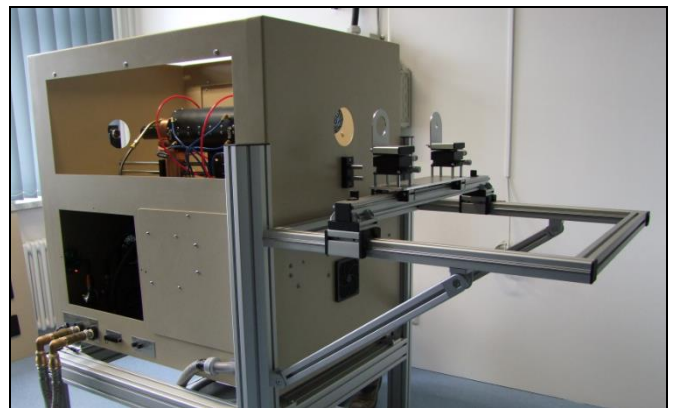
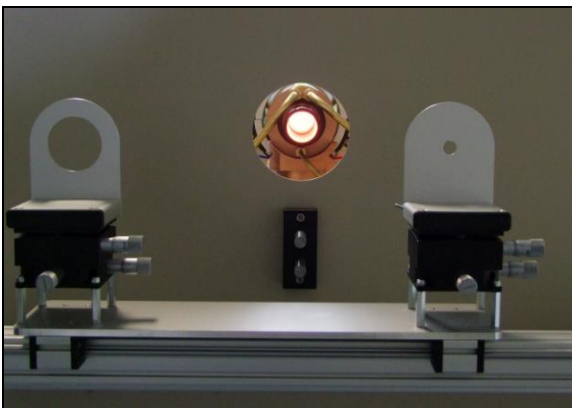
For an accurate temperature measurement of the flame gases CO and CO₂ Optris is producing special spectral versions of the CTlaser series:

CTlaser F2 (spectral response: 4,24 μm)

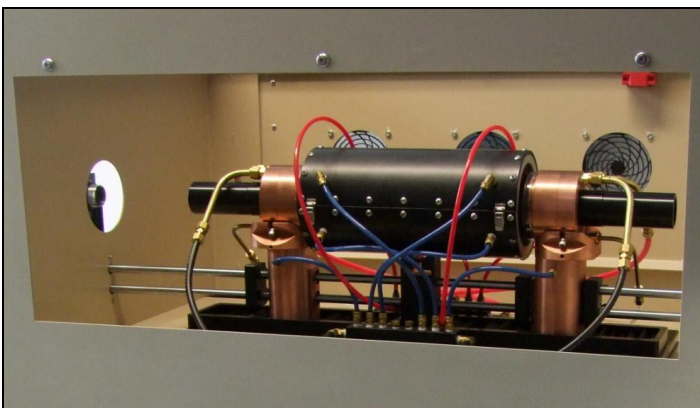
CTlaser F6 (spectral response: 4,64 μm).

The narrow band filter integrated in these sensors ensures that only the specific absorption bands of CO (4,64 μm) or CO₂ (4,24 μm) are visible for them. This physical effect allows an infrared temperature measurement of gases which otherwise won't be possible.

In order to achieve a high accuracy and reliability of a non-contact measurement of gases which are part of our standard atmosphere we designed a dedicated calibration procedure where we use a Thermo Gauge high temperature calibration source and a constant flow of an inert gas (Argon). With this combination the F2 and F6 models can now be calibrated without any influence of atmospheric conditions.



The Thermo Gauge calibration source creates stable temperatures up to 3000 °C with 48 kW electrical power



Thermo Gauge cavity with cooling enclosure



Inert gas (Argon) connection