

**D-FS2 IR****Furnace Sensor IR**

Thermography and Live-IR-Video  
out of the combustion chamber



Identify temperatures above 250 °C

- ▶ Temperature measurement range of 250 °C up to 1200 °C
- ▶ Special IR-Endoscope for high sensitivity and high resolution
- ▶ Compatible to the Thermography and Analysis System (D-VTA 200)
- ▶ Water or air cooled versions are available

## NEW

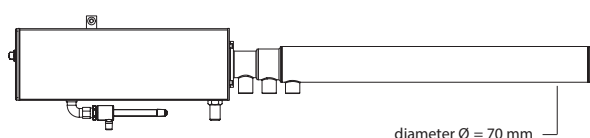
- ▶ The IR endoscope specially developed for this Furnace Sensor is highly sensitive and transfers the radiation nearly lossless with high resolution out of the combustion chamber
- ▶ The uncooled InGaAs CCD-camera used in the D-FS2 IR delivers digital infrared images
- ▶ The temperature measurement range is 250 °C up to 1200 °C

## Other features

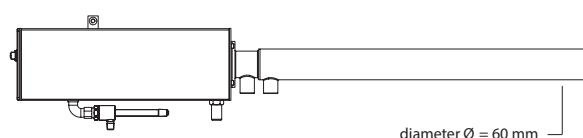
- ▶ The air or water cooled versions of the D-FS2 are developed for continuous operation (24/7) and enters the combustion chamber for a wide field of view (FOV)
- ▶ With different lenses the FOV of the D-FS2 can be optimized for the application
- ▶ The D-FS2 can be expanded to a Thermography- and Analysis System with the System Control Unit (D-VTA 200)
- ▶ An optional Retraction Unit with a dedicated Sensor Control Unit is available

## Variations of D-FS2

Furnace Sensor IR water cooled



Furnace Sensor IR air cooled



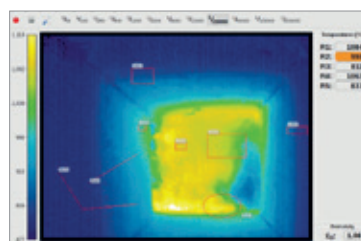
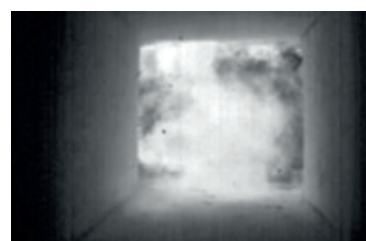
## Variable Options

<b>Spectral range</b>	VIS IR
<b>Field of view</b>	90: 90°, 72°, 54° (diag., horiz., vert.) 60: 60°, 48°, 36° 30: 35°, 28°, 21°
<b>Video standard</b>	PAL: Analogue (PAL-Signal) IP: Digital over Ethernet
<b>Camera Type</b>	Definition of camera
<b>Cooling</b>	W70: Water (Ø cooling jacket = 70 mm) A60: Air (Ø cooling jacket = 60 mm)
<b>Length cooling jacket</b>	700 (usable length with RU* 430 mm) 1100 (usable length with RU* 830 mm) 1500 (usable length with RU* 1230 mm)
<b>Special version</b>	MOBILE

\* Retraction Unit

## Technical data

<b>Video System</b>	Resolution Ethernet	320 x 240 @30 frames/sec.
<b>Measurement range with D-VTA 200 Software</b>	250 up to 1200 °C (1472 – 3632 °F)	
<b>Weight</b>	D-FS2 ... W70 – 700 D-FS2 ... A60 – 700	app. 12 kg (24 lbs.) app. 10 kg (22 lbs.)
<b>Max. temperature in combustion chamber</b>	D-FS2 ... W70 – xxxx D-FS2 ... A60 – xxxx	up to 2000°C (3632°F) up to 1400°C (2552°F)
<b>Temperature monitoring at endoscope tip</b>	PT100	
<b>Maximum ambient temperature with Vortex cooler</b>	–30 up to +60°C (–22 up to 140°F)	
<b>Maximum pressure in the furnace</b>	–100 up to +100 mbar	
<b>Cooling media (water cooled)</b>	Amount of cooling water Amount of purge air Amount for Vortex cooler	> 500 l/h > 15 Nm <sup>3</sup> /h 15 Nm <sup>3</sup> /h
<b>Cooling media (air cooled)</b>	Amount of cooling water Amount of purge air Amount for Vortex cooler	> 35 Nm <sup>3</sup> /h > 15 Nm <sup>3</sup> /h 15 Nm <sup>3</sup> /h



Pict. left:  
Waste incinerator – view of the grate

Pict. right:  
Waste incinerator – thermography image of the grate