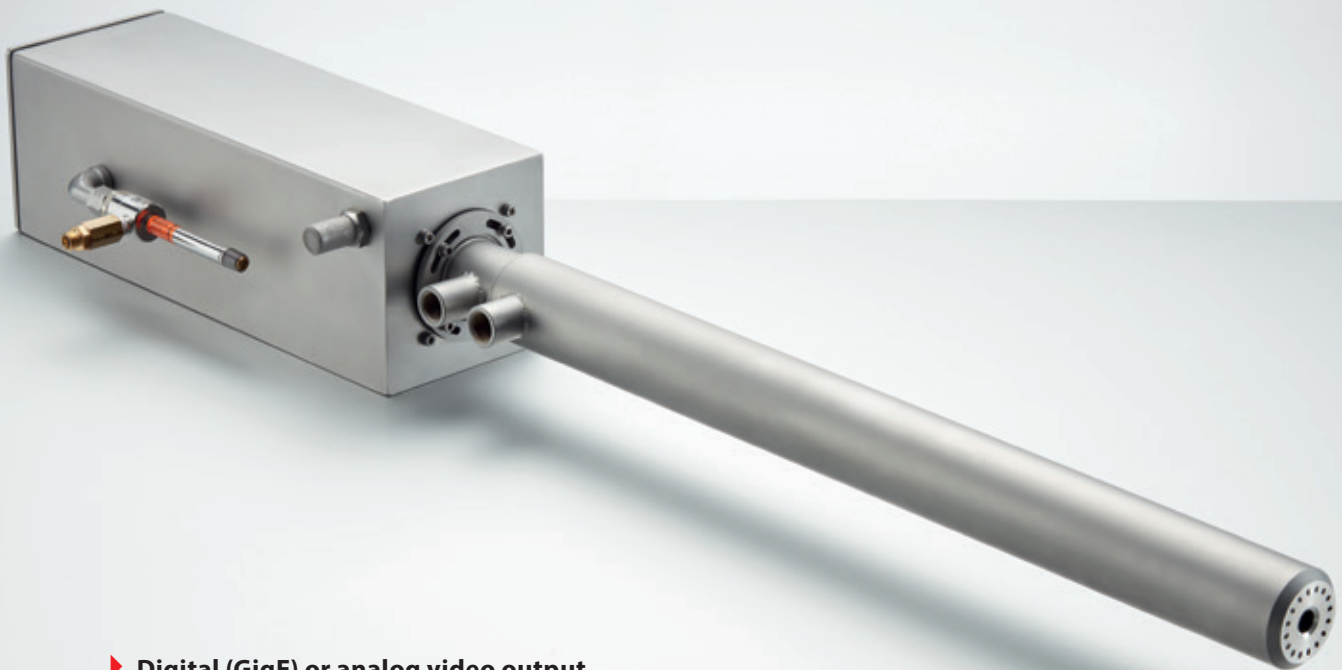


D-FS2 VIS**Furnace Sensor VIS**

Thermography and Live-Video
out of the combustion chamber



- ▶ Digital (GigE) or analog video output
- ▶ Water or air cooled up to 2000 °C in the combustion chamber
- ▶ For integration in the D-VTA 200 Thermography System with a temperature measurement range of 800 °C up to 2000 °C
- ▶ Special endoscope with high optical resolution and different camera models (e. g. 1280 x 960 pixel or 200 frames/sec.)

NEW

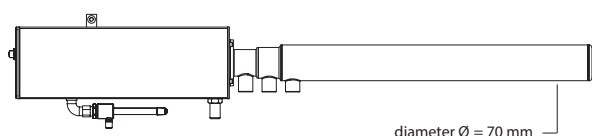
- ▶ The special endoscope transfers the image in high resolution out of the combustion chamber and allows the use of new different camera modules
- ▶ D-FS2 VIS is available with analog (PAL) or digital (GigE) video output
- ▶ Digital versions with 1280 x 960 pixel or with up to 200 frames/sec. are available

Other features

- ▶ Air or water cooled versions of the D-FS2 are developed for continuous operation (24/7) and enter 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

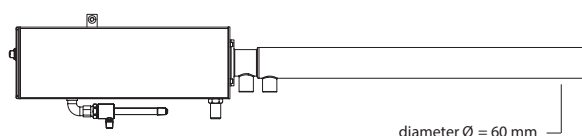
Variations of D-FS2

Furnace Sensor VIS water cooled



diameter Ø = 70 mm

Furnace Sensor VIS air cooled



diameter Ø = 60 mm

Variable Optionen

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

* Retraction Unit

Technical data

Video System	Resolution PAL Resolution GigE (Standard)	768 x 582 1280 x 960@30f/sec.
Measurement range with D-VTA 200 Software	800 up to 2000 °C (1472 up to 3632 °F)	
Weight	D-FS2 ... W70 – 700 D-FS2 ... A60 – 700	app. 12 kg (24 lbs.) app. 10 kg (22 lbs.)
Max. temperature in combustion chamber	D-FS2 ... W70 – xxxx D-FS2 ... A60 – xxxx	up to 2000 °C (3632 °F) up to 1400 °C (2552 °F)
Temperature monitoring at endoscope tip	PT100	
Maximum ambient temperature with optional Vortex cooler	–30 up to +60 °C (–22 up to 140 °F) –30 up to +80 °C (–22 up to 176 °F)	
Maximum pressure in the furnace	–100 up to +100 mbar	
Cooling media (water cooled)	Amount of cooling water Amount of purge air	> 500 l/h > 15 Nm ³ /h
Cooling media (air cooled)	Amount of cooling water Amount of purge air	> 35 Nm ³ /h > 15 Nm ³ /h

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Pict. left:
Molten glass bed

Pict. center:
Hard coal burner – Image shows a bad combustion

Pict. right:
Cement clinker cooler