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D-FS2
Furnace Sensor VIS

Thermography and Live-Video out of the combustion chamber

- Digital 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

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Features

- **Digital colour camera**
  High resolution with 1280 x 960 pixel
- **Application up to 2000 °C**
  Air and water cooled versions for use inside the combustion chamber
- **Different field of views (FOV)**
  Adaption of endoscope to the application
- **Lengths up to 1500 mm**
  For adaption to wall thickness and installation position
- **High availability**
  Technology developed for continuous (24/7) operation

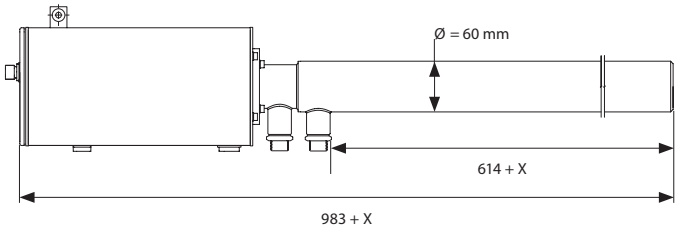
Benefits

- **Brilliant live images**
  High resolution endoscope combined with modern digital camera: live video in real time
- **Flexible system**
  Optional upgrades with thermography and analysis modules, adaption to application possible
- **Wide view**
  Installation with protection tube in the furnace wall, no protection window necessary
- **Reliable and available**
  Automatic retraction from the combustion chamber with optional retraction unit

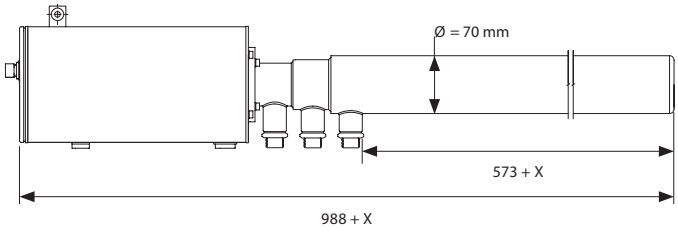
Technial data

Spectral range	In the optically visible range of light (400 … 700 nm)	
Field of view	90: 90°, 72°, 54° (diag., horiz., vert.) 60: 60°, 48°, 36° 30: 35°, 28°, 21° 6060: 60°, 48°, 36° (angled)	
Video signal	Resolution 1280 x 960 pixel Digital GigE Vision signal (IP)	
Cooling	W70: Water (Ø cooling jacket = 70 mm) A60: Air (Ø cooling jacket = 60 mm)	
Length of cooling jacket	700 mm 1100 mm 1500 mm	
Special version	Mobile	
Measurement range with D-VTA 200 Software	800 … 2000 °C	
Weight	D-FS2 VIS … W70 – 700 D-FS2 VIS … A60 – 700	app. 12 kg app. 10 kg
Max. temperature in combustion chamber	D-FS2 VIS … W70 – xxxx D-FS2 VIS … A60 – xxxx	up to 2000 °C up to 1400 °C
Temperature monitoring at endoscope tip	PT100	
Max. ambient temperature	–30 … +60 °C (optionally expandable)	
Max. pressure in combustion chamber	–100 … +100 mbar	
Cooling media (water cooled)	Amount of cooling water Amount of purge air	>500 l/h >15 Nm3/h
Cooling media (air cooled)	Amount of cooling air Amount of purge air	>35 Nm3/h >15 Nm3/h

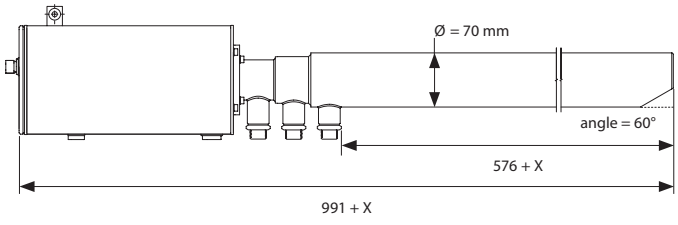
D-FS2 furnace sensor VIS | air cooled

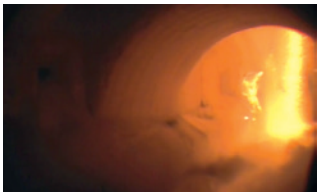


D-FS2 furnace sensor VIS | water cooled



D-FS2 furnace sensor VIS | water cooled, angled





Pictures: hard coal burner (left) cement clinker cooler (right)

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DURAG GmbH
Kollaustrasse 105 | 22453 Hamburg, Germany | Tel. +49 40 554 218-0 | Fax +49 40 584 154 | info@durag.com