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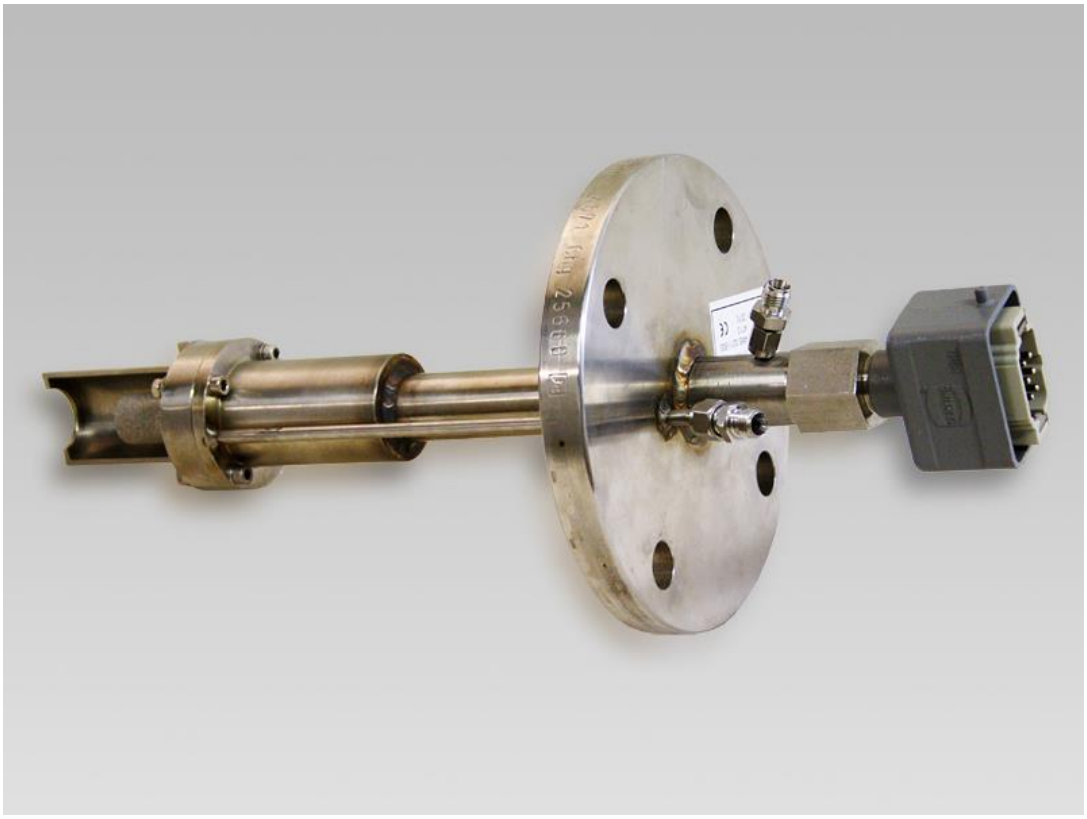
Standard In-Line Flue gas probe
AMS 3211-500



The Application:

The Standard In-Line Flue gas probe AMS 3211-500 is equipped with a Zircon dioxide sensor located in the tip of the probe. The Flue gas probe AMS 3211-500 can be used for the measurement of Oxygen in flue gases from gaseous, liquid and solid fuels and biomass. In Applications with solid fuels and biomass the Standard In-Line Flue gas probe AMS 3211-500 is equipped with an additional Stainless steel tube to protect the probe against abrasion.

The Measuring Principle:

All AMS Flue gas probes are equipped with Zircon dioxide sensors with Platinum electrodes which distinguish themselves by a long lifetime in the process. The location of the Zircon dioxide sensor at the tip of the probe guarantee extremely fast responses of the Standard In-Line Flue gas probe AMS 3211-500. The Transmitters AMS 3220 and AMS 5200 supply the current for the heater in the Zircon dioxide sensor. To increase the stability of the measuring values, the sensor temperature is regulated within low limits. Simultaneously the Transmitters AMS 3220 and AMS 5200 monitor continuously all functions and readings of the Standard In-Line Flue gas probe AMS 3211-500.

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The Measuring System:

Typically continuous Oxygen measuring systems are consisting of a Flue gas probe with built in Zircon dioxide sensor, a Transmitter and a Pneumatic unit. The Pneumatic unit supplies continuously instrument air to the Zircon dioxide sensor which serves as Reference air. Via a second gas inlet port at the probe flange the Zircon dioxide sensor can be supplied with calibration gas to verify and correct the calibration of the sensor in regular intervals. The Pneumatic unit and the Flue gas probe are connected by two high pressure pneumatic hoses. A multi wire, protected cable connects the Transmitter to the Flue gas probe electronically. Due to the modular construction of the Oxygen measuring systems of AMS the Transmitter can be installed inside the housing of the Pneumatic unit. This reduces the required length of both high pressure pneumatic hose and protected cable. The power supply for the Transmitter and the Flue gas probe is also installed in the GRP-housing of the Pneumatic unit. The flue gas probe, the Transmitter and the Pneumatic unit are manufactured according to the protection class IP 65 for General Applications. The Standard In-Line Flue gas probe AMS 3211-500 is for universal use. For applications with corrosive flue gases all gas wetted parts of the probe are manufactured from Inconel 600. To replace an already existing continuous oxygen measuring system the Standard In-Line Flue gas probe AMS 3211-500 can be fitted with all flange sizes both in DIN and ANSI dimensions.
Optional the Standard In-Line Flue gas probe AMS 3211-500 can be equipped with time controlled back purge for high dust applications and with Auto-calibration for the automatic, time controlled calibration.

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Technical Data

ZrO2 probe	**AMS 3211-500**
Measuring principle	ZrO2 probe with Pt-electrodes
Application	Residual oxygen in flue gas
Construction	ZrO2 sensor installed in the tip of the probe with stainless steel sintermetalfilter screwed on
Flue gas temp., max.	≤ 500 °C, shorttime to 550 °C
Dust content (flue gas)	up to 5 Gram/Nm3, if higher shield to protect against abrasion or separate protecting tube / blow back
Flue gas velocity	max. 20 m/Sec., if higher shield to protect against abrasion or separate protecting tube
Time for pre-heating	~ 10 Minutes
T90-Time	< 20 Seconds
Reaction time	< 2 Seconds
Probe length	150 – 3000 mm
Connecting flanges	DN 65 PN 16, DN 80 PN 16 (larger on request)
Material	Stainless steel 1.4541, Option: Inconel 600
Installation in the stack	pointing downward
Protection	IP 65
Reference air supply	by separate pneumatic unit
Calibration gas supply	by separate pneumatic unit
Weight	ca. 6,5 kg
Accessories Transmitter Pneumatic unit	 AMS 5200 in housing IP 65 GRP housing, Dimensions: 600 x 600 x 200 mm Back-purge, Auto-calibration
Version: AMS 3211-500 E V-2021-08	

Specifications subject to change

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