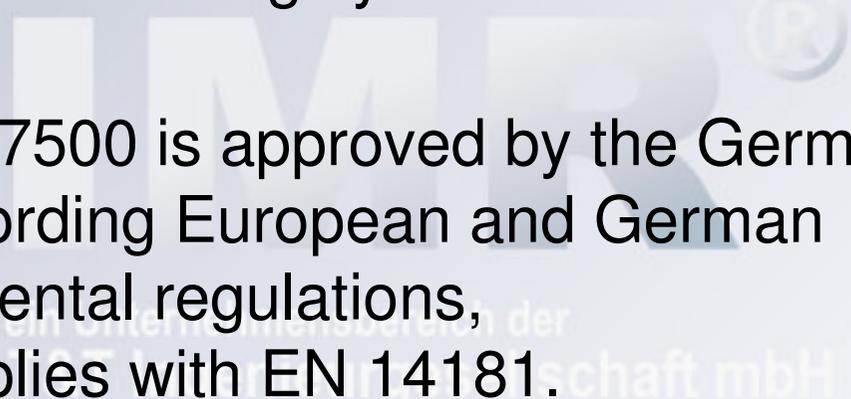


Continuous emission monitoring system IMR 7500



The background features a large, light blue circular watermark logo for IMR. The logo consists of the letters 'IMR' in a bold, sans-serif font, with a registered trademark symbol (®) to the right. Below the letters, there is smaller, faint text that reads 'Ein Unternehmen der... mbH'.

IMR 7500 is the continuous
emission monitoring system of IMR®.

The IMR 7500 is approved by the German
TÜV according European and German
environmental regulations,
and complies with EN 14181.

TÜV report: 936/21200089/A

TÜV approval is recognized by US EPA.

TÜV approved are the components:

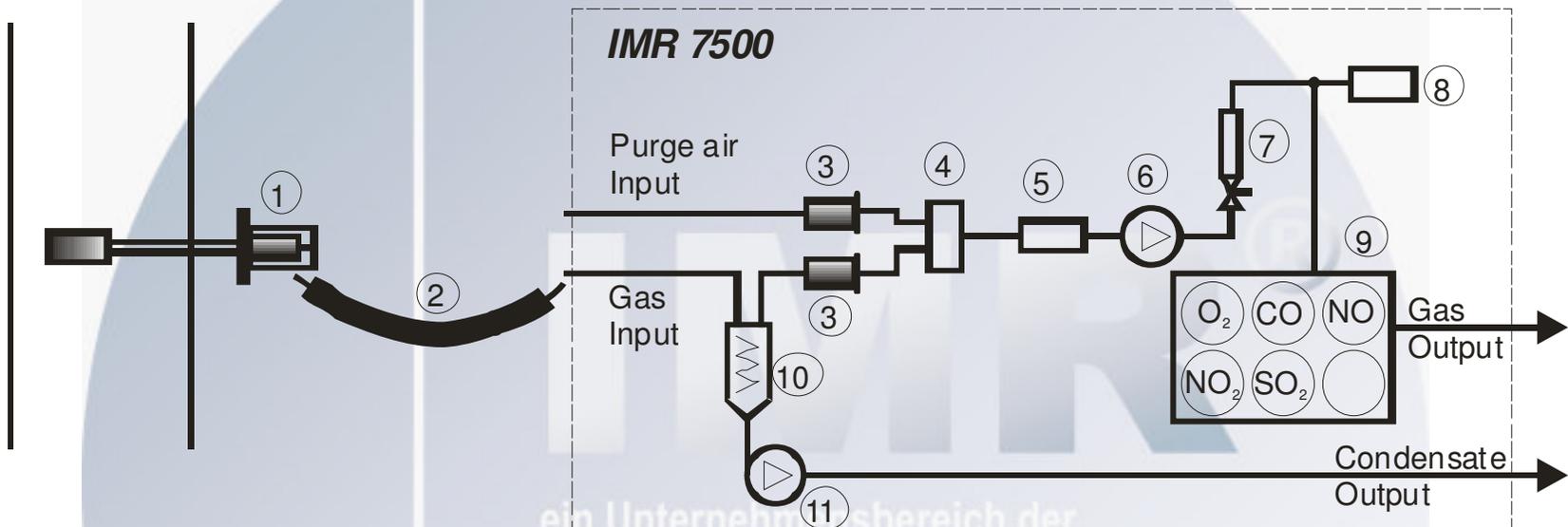
- Oxygen O_2
- Carbon monoxide CO
- Nitric oxide NO
- Nitric dioxide NO_2
- Sulphur dioxide SO_2
- Flue gas temp. T_{gas}

Typical applications for IMR 7500 are:

1. Emission monitoring for process control
i. g. cement plants, glass factories
2. Emission monitoring in power stations
to comply with local environmental regulations
3. Emission monitoring in incinerator plants
to comply with local environmental regulations

Depending on the application the system can be adopted.

System outline:



- ① Sampling probe
- ② Heated sampling line
- ③ Filter
- ④ Solenoid valve
- ⑤ Condensate circuit breaker
- ⑥ Gas pump
- ⑦ Gas flow meter with regulator valve
- ⑧ Pump pressure control
- ⑨ Sensor chamber
- ⑩ Gas conditioner
- ⑪ Peristaltic pump

Analyser operating software

- Gas conditioner regulation
- Heated sampling line regulation
- Solenoid valve management
- Calculation to reference values

5,5 " TFT - Display

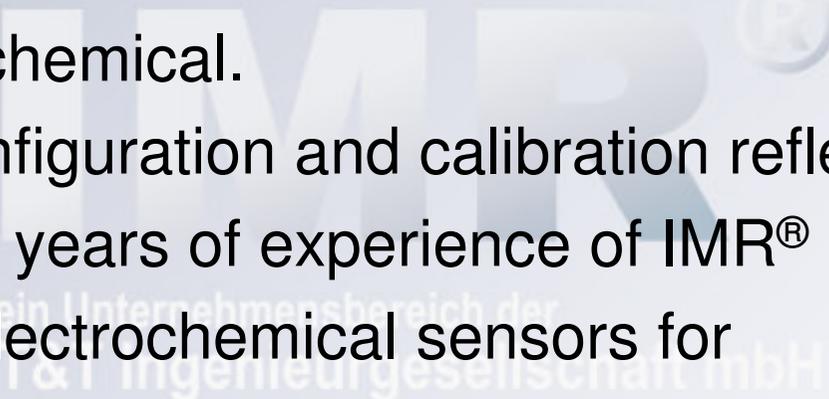
Signal output

Analog output
(0)4...20 mA

RS 232 / RS 485

Status signal
Online/Service/Error

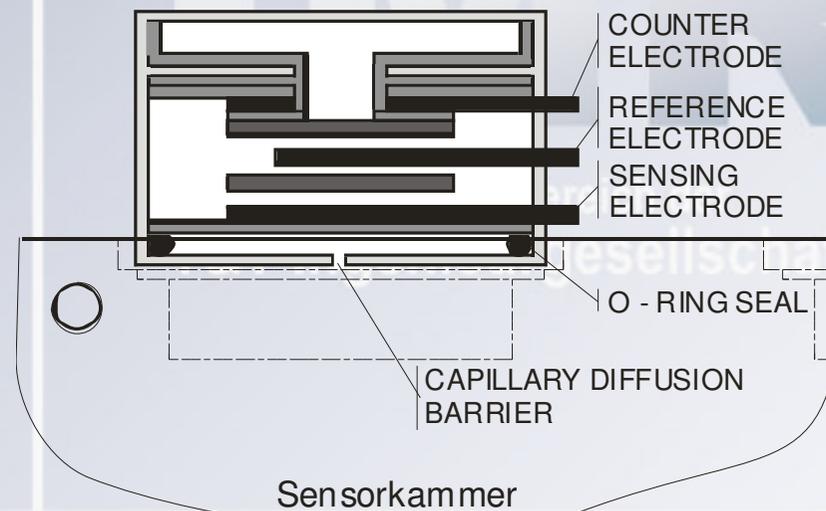


The background features a large, light blue circular graphic divided into four quadrants by a white cross. A large, semi-transparent watermark of the letters 'IMR' is centered behind the text. Below the 'IMR' watermark, there is smaller, faint text that reads 'ein Unternehmensbereich der' and 'I&T Ingenieurgesellschaft mbH'.

The sensors in the IMR 7500 are all electrochemical.

The configuration and calibration reflect over 20 years of experience of IMR[®] using electrochemical sensors for emission monitoring.

Electrochemical sensor for toxic gases



By definition electrochemical sensors are micro fuel-cells. Mounted on the IMR[®] sensor chamber the flue gas is introduced to the sensors through the capillary diffusion barrier.

The electrolyte in the sensors is reacting. The sensor reaction is detected by the sensing electrode embedded in the electrolyte. The sensor reaction in mV is proportional to the concentration of the gas. The reference electrode is used to calibrate the sensor at 0.

Complete CEM systems

Depending on application and customer request IMR[®] can provide complete CEM systems consisting of i.e.:

- Gas analyzer
- Flue gas volume and velocity measurement
- Dust or particles

ein Unternehmensbereich der
T&T Ingenieurgesellschaft mbH

Installations

Depending on the application CEM system can be installed in air conditioned cabinets or full container houses.

The installation in a container house allows the design of a fully independent system.



Maintenance plan Continuous emission monitoring system

Stand 01/2005

Model	Chapter in user manual	works	daily	weekly	3 months	6 months	annual
IMR 7500	14.1.	General inspection, check of status signals					
	14.2.	Check gas flow meter					
	14.3.	Check filter on analyzer back, replace if visibly dirty					
	14.3.	Check filter in flue gas probe, clean and/or replace					
	14.4.	Check condensate circuit breaker					
	14.4.	Check solenoid valve					
	14.5.	Check peristaltic pump, replace hose			Check	replace	
	14.6.	Check gas pump, clean replace diaphragm			Check	clean	replace
	14.7.	Check flue gas probe and gas sampling line					
	14.8.	Check gas conditioner and ventilator			Ventilator	gas cond.	
	14.8.	Clean gas conditioner					
	14.9.	Calibrate sensors					
	Aircon. (if installed)		Check function				
		Clean filters					