

TECHNICAL DATA

Wöhler A 550 INDUSTRIAL



Intended uses

Use the Wöhler A 550 INDUSTRIAL to perform emissions analysis in industrial applications including boiler and burner testing, heat processes, engine and turbine testing. The logger function allows user configurable longterm operation

Applications and functionality

The robust Wöhler A 550 Flue Gas Analyser offers a variety of measurements:

- Efficiency testing
- Emission testing
- Supply Air testing
- CO Ambient testing
- Wood Moisture testing

Scope of delivery in the basic version

- O₂, NO, COHigh, NO₂, SO₂ sensor
- Probe and hose assembly with 3,000 mm hose
- Modular Flue Gas Probe 1,000 mm with sinter filter
- Ambient Temperature Probe (plug) USB-Charger with micro-USB-cable
- 1 Water stop filter
- 1 Coarse Filter
- 25 Wadding filters

Technical Data	Oxygen (O ₂) concentration in flue gas	Display	volume % referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0.0 to 21.0 %
		Accuracy	± 0.3 Vol. -%
	Carbon monoxide in flue gas (CO 100,000 ppm)	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0 to 100,000 vol. ppm, resolution 1 vol.-ppm
		Accuracy	± 100 Vol. ppm (< 1,000 ppm), otherwise 10% of reading (when H ₂ < 5 % of reading)
	Carbon monoxide in flue gas (CO 10,000 ppm) H ₂ compensated	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor, H ₂ -compensated
		Range	0 to 10,000 Vol. ppm, resolution 1 Vol.-ppm
		Accuracy	± 20 Vol. ppm (< 4,000 ppm), otherwise 5% of reading
	Carbon dioxide concentration (CO ₂) in flue gas, NDIR	Display	Carbon dioxide concentration
		Measurement principle	NDIR
		Range	0 ...40 Vol. %
		Accuracy	0...6 Vol. %: ±0,3 Vol. % 6...40 Vol. %: ±5 % of reading
	Hydrogen sulfide concentration H ₂ S in flue gas	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0 ...350 ppm
		Accuracy	0...40 ppm: ±2 ppm 40...350 ppm: ±5 % of reading
	Nitric oxide concentration (NO) in flue gas	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0 to 3,000 vol. ppm (continuously up to 1,000); resolution 0.1 vol. ppm (<1,000 vol. ppm), otherwise 1 vol. ppm
		Accuracy	Resolution 0.1 ppm, ±5 vol. ppm (<100 vol. ppm), otherwise 5 % of reading
	Nitrogen dioxide concentration (NO ₂) in flue gas	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0 to 1,000 Vol. ppm (continuously up to 200 vol. ppm); resolution 0.1 vol. ppm
		Accuracy	±5 vol. ppm (<100ppm), otherwise 5 % of reading
	Sulfur dioxide (SO ₂) in flue gas (option)	Display	volume ppm referenced to dry flue gas
		Measurement principle	electrochemical sensor
		Range	0 to 5,000 vol. ppm resolution 0.1 vol. ppm (< 1,000 vol. ppm), otherwise 1 vol. ppm
		Accuracy	± 10 vol. ppm (< 200 ppm), otherwise 5 % of reading
	Differential pressure (P _D)	Display	Pascal
		Measurement principle	Semi conductor diaphragm
		Range	0.00 to ± 110.00 hPa, resolution 0.1 Pa (<1000,0 Pa), otherwise 1 Pa
		Accuracy	0.3 Pa (<10 Pa), otherwise 3% of reading Drift < 0.2 Pa in 5 minutes

Technical Data	Flue gas temperature (T_g)	Display	°C
		Measurement principle	Thermocouple (NiCr-Ni)
		Range	-20.0 °C to 800.0 °C, resolution 0.1 °C
		Accuracy	0 - 133 °C $\pm$ 2 °C; 133 to 800 °C: 1.5% of reading
	Flue gas temperature (T_g) High Temperature Probe	Display	°C / °F
		Measurement principle	Thermocouple Type K (NiCr-Ni)
		Range	-20.0 °C to +C50 1.200 °C, resolution 0.1 C
		Accuracy	$\pm$ 1°C
	Combustion air temperature (T_A)	Display	°C
		Measurement principle	Thermocouple (NiCr-Ni)
		Range	-20.0 °C to 100 °C, resolution 0.1 °C
		Accuracy	$\pm$ 1°C
	Wood moisture	Reading	water mass related to the absolute dry fuel mass
		Measurement principle	resistance measurement
		Range	10.0 to 40.0 %, resolution 0.1 %
		Accuracy	40 % of reading
		wood temperature	5 to 25° C
		lifetime of the electrodes	Depending on the frequency of utilization The electrodes will work correctly, if there is no surface damage or bending.
	Power supply	Lithium-Ion, rechargeable battery 3.7 V, 6700 mAh, charges via USB	
	Battery Operation time	Approx. 7 h (depends on operation status and display illumination)	
	Charging cycles of the batteries	After 500 charging cycles, at least 70% of the capacity are still available	
	Storage Temperature	-20 °C to 50 °C	
	Operation temperature	+5 °C to 40 °C to maintain stated accuracy	
	Relative humidity	30% to 70 %	
	Weight	1,250 g	
	Dimensions	220 x 160 x 55 mm (without probe)	
	Length of cable hose	3 m	
	Degree of protection	IP 40	