KIGAZ 200
COMBUSTION GAS
ANALYSER

Interchangeable O_2, COH_2, NO et CH_4 sensors

Supplied with magnetic protective cover

KEY POINTS

CO sensor protection by solenoid valve

Autozeroing in the flue

- CO sensor protection by solenoid valve
- LED on probe handle to light dark areas
- Single connector

- Step-by-step procedure (gas flow...)
- Integrated printer
- Interchangeable duct
- 2 Go of memory (100 000 measurements)

INSTRUMENT FEATURES

GAS	- Autozero in the flue - CO sensor protection by solenoid valve	Flue gas CO and ambient CO max	Interchangeable sensors : O_2 and $CO\text{-}H_2$ and NO and CH_4 (optional)	Excess air Losses	Efficiency > 100%
PRESSURE	Differential pressure measurement	Draft measurement			
TEMPERATURE	Ambient temperature	Flue gas temperature	Delta Temperature	DHW temperature 2 thermocouples	Dew point temperature
OTHERS FUNCTIONS	15 programmed combustible[1]	Adding 5 combustibles by the user	Automatic measurement	Opacity index	

[1]**Combustibles :** Sahara/Fos-sur-Mer Natural Gas, Groningen Natural Gas, Russia/North Sea Natural Gas, Propane, LPG, Butane, Light Oil, Heavy Oil, Bituminous coal, Hard coal, Coke gas, Bio fuel 5%, Wood 20%, Wood-chip 21%, Pellet 8%

MEASUREMENT RANGES

Parameter	Sensor	Measuring range	Resolution	Accuracy*
O_2	Electro-chemical	From 0% to 21%	0.1% vol.	±0.2% vol.
CO (with H_2 compensation)	Electro-chemical	From 0 to 8000 ppm	1 ppm	From 0 to 200 ppm : ±10 ppm From 201 to 2000 ppm : ±5% of measured value From 2001 to 8000 ppm : ±10% of measured value
NO	Electro-chemical	From 0 to 5000 ppm	1 ppm	From 0 to 100 ppm : ±5 ppm. From 101 to 5000 ppm : ±5% of measured value
NOx	Calculated**	From 0 to 5155 ppm	1 ppm	
CO_2	Calculated**	From 0 to 99% vol	0.1% vol	
CH_4	Semiconductor	From 0 to 10000 ppm From 0 to 1% Vol From 0 to 20 %LEL	1 ppm 0.0001% Vol 0.002%LEL	±20% of full scale
Flue gas temperature	K thermocouple	From -100 to +1250°C	0.1°C	±1.1°C or ±0.4% of measured value
Ambient temperature	Internal NTC	From -20 to +120°C	0.1°C	±0.5°C
Ambient temperature	Pt100 (1/3 Din external probe)	From -50 to +250°C	0.1°C	±0.3% of measured value ±0,25°C
Dew point temperature	Calculated**	From 0 to +99°Ctd	0.1°C	
DHW temperature	TcK (external probe)	From -200 to +1300 °C	0.1°C	±1.1°C or ±0.4% of measured value
Differential pressure Draft	Piezoelectric	From -200 to +200 hPa	0.01 hPa	From -200.00 to -1.00 hPa : ±(0,5% of measured value +0,045 hPa) From -1.00 to -0.40 hPa : ±5% of measured value From -0.40 to 0.40 hPa : ±0.02 hPa From 0.40 to 1.00 hPa : ±5% of measured value From 1.00 to 200.00 hPa : ±(0,5% of measured value + 0.045 hPa)
Losses	Calculated**	From 0 to 100%	0.1%	
Flue gas velocity		From 0 to 99.9 m/s	0.1 m/s	
Excess air (λ)	Calculated**	From 1 to 9.99	0.01	
Efficiency (ηs)	Calculated**	From 0 to 100%	0.1 %	
Efficiency (ηt) (condensation)	Calculated**	From 0 to 120%	0.1%	
Opacity index	External instrument	From 0 to 9		

All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.
**Calculation is made based on the measured values by the analyzer.*

TECHNICAL FEATURES

	Features
Dimensions	Instrument : 331 x 112 x 86 mm Flue gas probe : 300 mm Cable length : 2.50 m
Weight (with battery)	1160 g
Display	Grey scale 3.5'' display
Keypad	Rotating button 3 function keys + OK key Backlighted keypad
Material	Housing and probe : ABS Probe cable : neoprene
Protection	IP40
PC interface	Bluetooth® (optional) USB
Power supply	Li-Ion battery 3.6 V 4400 mA
Battery life	10 h in continuous operating
Use temperature	From -5 to +50°C
Storage temperature	From -10 to +50°C

Analyser menus

Example of analysis

DHW network temperature

Ambient CO checking

INSTRUMENT DESCRIPTION

➢ **Overview**

- Built-in printer
- Grey scale 3,5" display
- Backlighted keypad
- External water trap
- Differential pressure plug
- Handle
- Button for LED
- LED
- Fixing cone
- Single connector for flue gas probe (TcK+gas sampling) and draft
- Flue gas probe

➢ **Connections**

External probes connection (Pt100 temperature, CH_4...)

Thermocouple connections

Top view

Flue gas connection

P- pressure plug

P+ pressure plug

Bottom view

Power supply connection

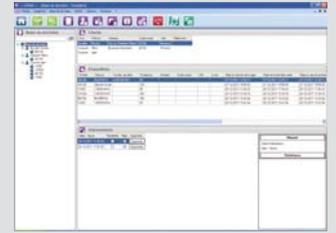USB connection

Right side view

SUPPLIED WITH

Model Supplied with	KIGAZ 200 STD	KIGAZ 200 PRO
Number of interchangeable sensors	2 (O_2 and CO-H_2)	3 (O_2, CO-H_2 and NO)
Scalable	yes : NO or CH_4	Yes : CH_4
Calibration certificate	yes	yes
Transport bag	yes	yes
Flue gas probe and its water trap	yes	yes
Magnetic protective cover	yes	yes
Differential pressure kit	yes	yes

Transport bag

SOFTWARE

Analysers are supplied with LIGAZ software allowing database creation (Customers, Boilers, inspections), downloading and printing inspections and analyser configuration.

ACCESSORIES*

SCOT : Ambient CO probe

SCO2T : Ambient CO_2 probe

SPA 150SP : Ambient Pt100 probe

SKCL 150 : Thermocouple probe with lamella

SCI : Ionisation current measurement probe

SDFG : Gas leak detection probe (CH_4)

PSK180 : Flue gas probe with interchangeable contact duct, **180 mm** length, up to **500 °C**

PSK300 : Flue gas probe with interchangeable contact duct, **300 mm** length, up to **500 °C**

PSL750 : Flue gas probe with interchangeable contact tip in INCONEL, **750 mm** length, use up to **1000 °C**

KEG : Gas network tightness kit

PMO : Opacity pump

Bluetooth® module : Data downloading and instrument configuration

LOGAZ : Software allowing database creation (customers, boilers and inspections), inspections downloading and printing, customizable procedure reports creation, inspection planning, on-site service contracts management (operator planning, customer care) and real-time measurements visualization and recording

Ionisation current probe

Gas leak probe

Gas network tightness kit

[1]Please see the technical datasheet of accessories for kigaz for further details

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