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Technical Data Sheet

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level



KIGAZ 200 COMBUSTION GAS ANALYSER



Interchangeable O₂, COH₂,
NO et CH₄ sensors



Supplied with magnetic
protective cover



KEY POINTS



CO sensor protection by
solenoid valve

- CO sensor protection by solenoid
valve



Autozeroing in the flue

- 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-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 | |

¹Combustibles : 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* | T ₉₀ response time |
|--|--------------------------------|--|-----------------------------------|---|-------------------------------|
| O ₂ | Electro-chemical | From 0% to 21% | 0.1% vol. | ±0.2% vol. | 30 s |
| 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 | 30 s |
| 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 | 30 s |
| 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 | 40 s |
| Flue gas temperature | K thermocouple | From -100 to +1250°C | 0.1°C | ±1 °C | 45 s |
| 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 | 30 s |
| 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 °C | |
| Differential pressure Draft | Piezoelectric | From -20 000 to +20 000 Pa | 1 Pa | From -20 000 to -751 Pa : ±(-0.5% of measured value +4.5 Pa) From 750 to -61 Pa : ±(-0.9% of measured value +1.5 Pa) From -60 to 60 Pa : ±2 Pa From 61 to 750 Pa : ±(0.9% of measured value +1.5 Pa) From 751 to 20 000 Pa : ±(0.5% of measured value + 4.5 Pa) | |
| 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 (η _s) | Calculated** | From 0 to 100% | 0.1 % | | |
| Efficiency (η _t) (condensation) | Calculated** | From 0 to 120% | 0.1% | | |
| Opacity index | External instrument | From 0 to 9 | | | |

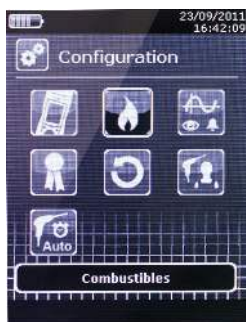
*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.

**Calculation is made based on the measured values by the analyzer.

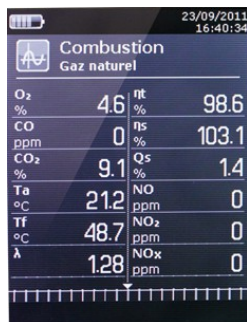
TECHNICAL FEATURES

| | 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 -20 to +50°C |

MENUS / ACTIVE VIEWS / APPLICATION



Analyser menus



Example of analysis



DHW network temperature



Ambient CO checking

INSTRUMENT DESCRIPTION

> Overview



> Connections

External probes connection (Pt100 temperature, CH₄...)



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

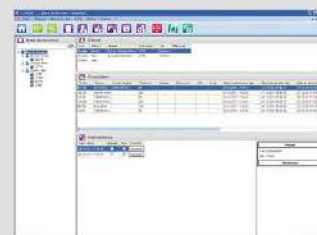
| Model | KIGAZ 200 STD | KIGAZ 200 PRO |
|-----------------------------------|---|---|
| Supplied with | | |
| Number of interchangeable sensors | 2 (O ₂ and CO-H ₂) | 3 (O ₂ , CO-H ₂ and NO) |
| Scalable | yes : NO or CH ₄ | Yes : CH ₄ |
| Calibration certificate | yes | yes |
| Transport bag | yes | 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 CO₂ probe

SPA 150SP : Ambient Pt100 probe

SKCL 150 : Thermocouple probe with lamella

SCI : Ionisation current measurement probe

SDFG : Gas leak detection probe (CH₄)

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**

PSK750 : 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

*Please see the technical datasheet of accessories for kigaz for further details



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