

# COMBUSTION GAS ANALYZERS

**A new degree of efficiency**



# Combustion gas analyzers

A new degree of efficiency



Our combustion gas analyzers are ideal for maintaining combustion equipment, covering the full range of operations in residential, commercial and industrial applications.

## Sauermann offers a range of compact and intuitive analyzers to enhance your performance.

Sauermann's combustion gas analyzers feature the latest digital and metrology technologies, making measurements more reliable and cutting the amount of time heating engineers need to spend on-site. A user experience like no other!

### Applications

- Boilers
- Burners
- Water heaters
- Gas and diesel engines
- Furnaces
- Industrial kilns
- Industrial heating systems
- Incinerators



Residential



Commercial



Industrial

# Features

Add a digital edge to your combustion analysis



**Auto pump cut-off for high CO levels (adjustable)**



**Predictive maintenance with estimated sensor life & calibration reminders**



**Draft & differential pressure measurements**



**Mobile phone app for real-time remote display & control**



**Calculations for Combustion Efficiency, Excess Air, & CO<sub>2</sub>%**



**Data management with automatic logging & report creation**



**Si-CA 030**



**Si-CA 130**



**Si-CA 230**

LCD display size	2.8 inches	4.3 inches	4.3 inches
Display resolution	320 x 240 pixels	480 x 272 pixels	480 x 272 pixels
Touch-screen display	No (5 buttons)	Yes (+ on/off button)	Yes (+ on/off button)
Dimensions (H x W x D)	9,9 x 19,4 x 4,9 cm 7.5 x 3.5 x 1.6"	9,9 x 19,4 x 4,9 cm 7.5 x 3.5 x 1.6"	11,2 x 28 x 5,5 cm 11 x 4.3 x 2"
Weight	350 g - 12 oz	350 g - 12 oz	825 g - 30 oz
No. of cells	Up to 3 (O <sub>2</sub> , CO, NO)	Up to 3 (O <sub>2</sub> , CO, NO, Low NO)	Up to 6 (O <sub>2</sub> , CO, NO, Low NO, NO <sub>2</sub> , Low NO <sub>2</sub> , SO <sub>2</sub> , Low SO <sub>2</sub> , CxHy, H <sub>2</sub> S)
Max. CO measurement	8,000 ppm	8,000 ppm	50,000 ppm (with dilution)
CO dilution	-	-	✓
Field replaceable pre-calibrated sensors	-	✓	✓
Flue gas velocity with Pitot tube	-	✓	✓
Measurement storage	Smartphone	Internal: 2,000 data points + Smartphone and PC	Internal: 2,000 data points + Smartphone and PC
PC software (wireless & USB)	-	✓	✓
Smartphone app (wireless)	✓	✓	✓
Combustion Applications	Residential, Commercial	Residential, Commercial	Commercial, Industrial



To see our extensive range of other measurement instruments for heating applications, go to [www.sauer mann group.com](http://www.sauer mann group.com)

# Si-CA 030

## All the essentials for combustion gas analysis

The Si-CA 030 offers everything heating engineers need to inspect and maintain residential and commercial boilers, with wireless connection to our smartphone app and automatic generation of servicing reports and certificates.



Up to three gas sensors:  
O<sub>2</sub>, CO and NO (for NOx)



Auto pump cut-off  
for high CO levels

- NOx capable with NO sensor
- Quick and easy pump On/Off control
- CO safety monitoring in ambient air

  
**LIGHTWEIGHT**  
**350 g**



NATURAL GAS	
O2	4.51 %
CO	80 ppm
Eff. (η)	91.4 %
CO2	12.5 %
T flue	170.3 °C
NO	78 ppm
NOx	82 ppm
Draft	1.094 mbar



### Common features Si-CA 030 / Si-CA 130

- Predictive maintenance with estimated sensor life & calibration reminders
- Draft & differential pressure measurements
- Calculated CO<sub>2</sub>% value
- CO safety monitoring in ambient air



**CO measurement up to  
8,000 ppm**



**Color display**

# Si-CA 130

## Comprehensive, versatile analyzer with touch-screen display

The Si-CA 130 features a touch-screen display and comes with PC-based management software (in addition to the smartphone app) for more in-depth combustion gas analysis. The three field-replaceable cells and sensors offer expanded measurement capability.



Up to three gas sensors O<sub>2</sub>, CO, and NO or Low NO (for NO<sub>x</sub>)



Field replaceable precalibrated sensors

- Auto pump cut-off for high CO levels (user-adjustable)
- NO<sub>x</sub> capable with NO sensor (optional)
- One Touch Pump On/Off with Purge
- PC software with wireless and USB connectivity
- Graphical data display
- Customisable gas analysis screen

- Combustion efficiency and excess air calculations
- Protective rubber casing
- Maintenance agreements and extended warranties available
- Emissions values adjusted for reference O<sub>2</sub>

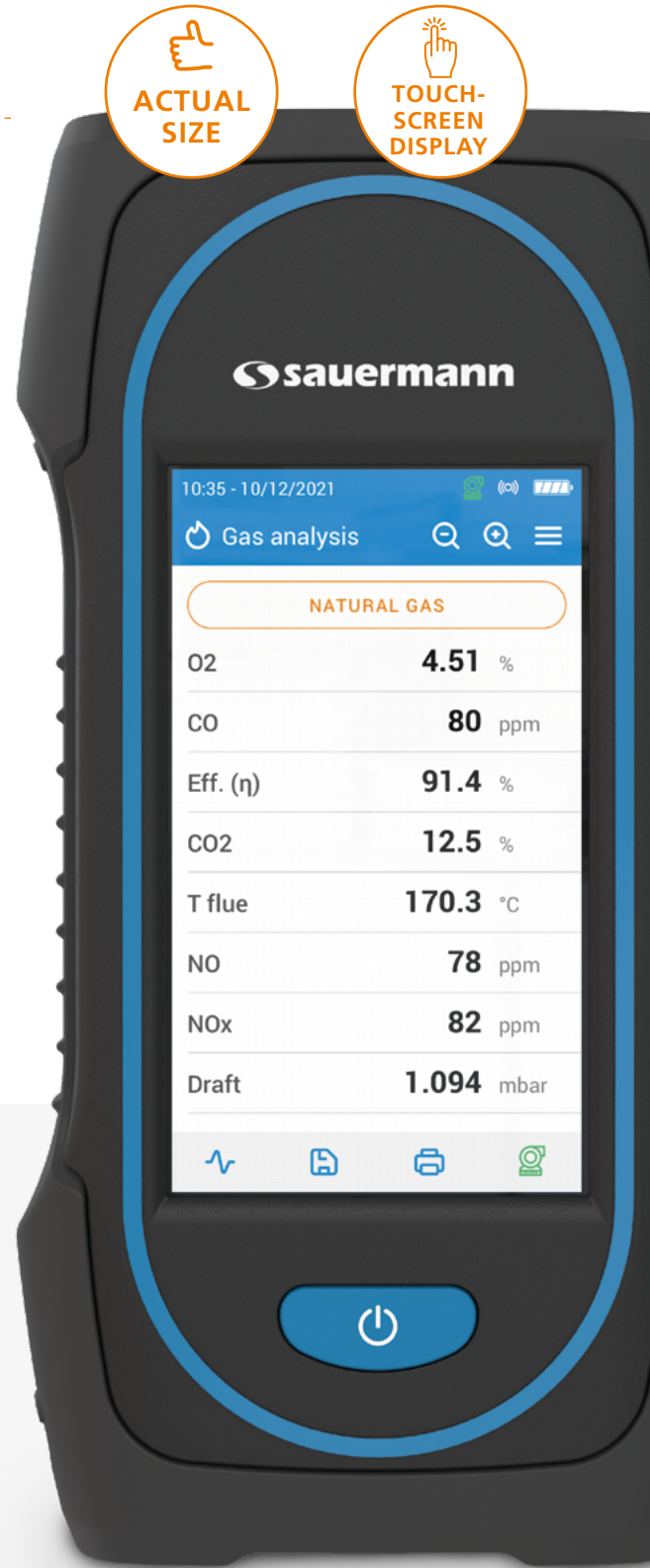


Data management with automatic logging & report creation through app/PC software



Lightweight, only 350 g (12 oz)

19.4 cm - 7.5"



# Si-CA 230

## State-of-the-art, industrial emissions analyzer



With up to six gas sensors and expanded measurement capabilities, the Si-CA 230 is well suited for boilers, burners, engines, and other industrial combustion applications. And with support for more gases and a high CO tolerance threshold, its versatility makes it the ideal choice across commercial and industrial applications.



**Up to Six Gas Sensors. Can include**  
O<sub>2</sub>, CO, NO, Low NO, NO<sub>2</sub>, Low NO<sub>2</sub>,  
SO<sub>2</sub>, Low SO<sub>2</sub>, H<sub>2</sub>S, and CxHy



**CO Dilution auto-range**  
with measurements to  
50,000 ppm



**Total NOx & Low NOx**  
Capable



**Field Replaceable**  
Pre-Calibrated Sensors



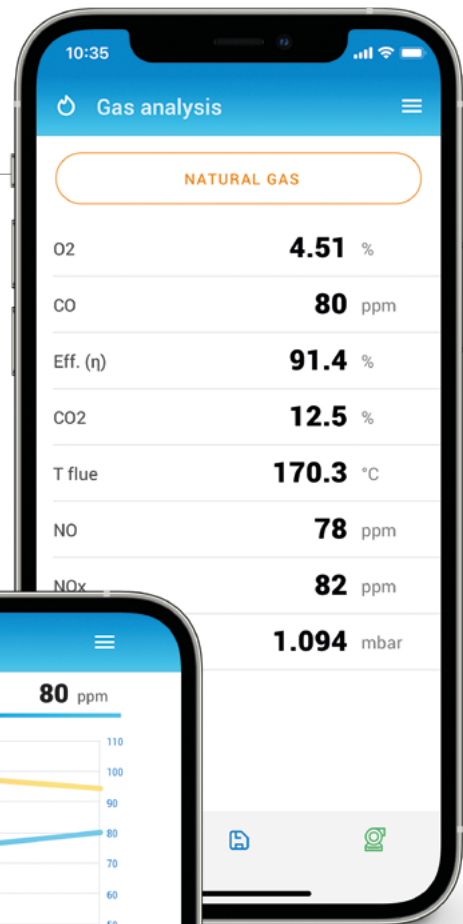
### Features: Si-CA 230

- Ergonomic, light weight, & durable design
- Data management with automatic logging & report creation
- Predictive maintenance with estimated sensor life & calibration reminders
- One touch pump On/Off with purge
- PC software with wireless and USB connectivity
- Auto pump cut-off for high CO levels
- Graphical data display
- Customisable gas analysis screen
- Stack gas velocity with Pitot tube
- Draft and differential pressure measurements
- Emissions values adjusted for reference O<sub>2</sub>
- CO safety monitoring in ambient air
- Protective rubber holster
- Maintenance contracts and extended warranties available

# Mobile app

## Sauermann Combustion

The Sauermann Combustion app lets you control your Si-CA analyzer remotely, view measurement results in real time, and customise them before exporting in the format of your choice.



- Free apps for iOS & Android mobile devices
- PC software with USB & wireless connectivity
- Fast, easy wireless connection
- Remote live view of combustion analysis data as list or graph
- Remote control to change settings
- Data saving, including automatic logging
- Report creation in PDF, CSV (for Excel) and XML formats
- Databases for customers, operators, & equipment

## Download Sauermann Combustion app



# Warranty

All devices come with a two-year warranty against manufacturing defects (subject to assessment by our after-sales department).

To find out more about our extended warranties and maintenance plans, please visit our website, or contact our Customer Service Department.



# Selection guide

## Technical information





Si-CA 030

Si-CA 130

Si-CA 230

Parameter	Measuring range	Si-CA 030	Si-CA 130	Si-CA 230
# of Gas Sensors		2 - 3	2 - 3	2 - 6
O <sub>2</sub>	0 to 25%	✓	✓	✓
CO	0 to 8000 ppm	✓	✓	-
CO (H <sub>2</sub> comp.)	0 to 10,000 ppm	-	-	✓
CO (with dilution)	100 to 50,000 ppm	-	-	✓
CO <sub>2</sub> (calculated)	0 to 99.9%	✓	✓	✓
NO	0 to 5000 ppm	✓	✓	✓
Low NO	0 to 300 ppm	-	✓	✓
NO <sub>2</sub>	0 to 1000 ppm	-	-	✓
Low NO <sub>2</sub>	0 to 100 ppm	-	-	✓
NOx (calculated)	0 to 7500 ppm	✓	✓	✓
Low NOx (calculated)	0 to 450 ppm	-	✓	✓
SO <sub>2</sub>	0 to 5000 ppm	-	-	✓
Low SO <sub>2</sub>	0 to 100 ppm	-	-	✓
CxHy (HC)	0 to 5%	-	-	✓
H <sub>2</sub> S	0 to 500 ppm	-	-	✓
Flue temperature	-20 to +1250 °C / -4 to +2282 °F	✓	✓	✓
Air temperature	-40 to 250 °C / -40 to 482 °F	✓	✓	✓
Differential temperature	0 to 1250 °C / 0 to 2282 °F	✓	✓	✓
Pressure/Draft	-200 to 200 mbar / -80 to 80 inH <sub>2</sub> O	✓	✓	✓
High accuracy draft	-500 to +500 Pa	-	✓	✓
Excess air	0 to 999%	✓	✓	✓
Efficiency	0 to 100% (Gross/HHV)	✓	✓	✓
Efficiency (condensation)	0 to 125% (Net/LHV)	✓	✓	✓
Stack Gas velocity	0 to 99 m/s / 0 to 19,500 fpm	-	✓	✓
Application		Residential/ Light Commercial	Residential/ Commercial	Commercial/ Industrial

### Features

Wireless Printer	Optional	Optional	Optional
Field-Replaceable Pre-Calibrated Sensors	-	✓	✓
Real time display of data on the smartphone	 	✓	✓
PC Software	-	✓	✓
Automatic Data Logging	✓	✓	✓
Rechargeable Battery w/ AC Charger	✓	✓	✓



# Combustion essentials

## The extra tools you need



### Gas leak detector

#### Si-CD3

The Si-CD3 gas leak detector is perfect for quickly and easily detecting even the slightest leaks of various combustible gases (methane, propane, isobutane, LPG and other hydrocarbons).



**Adjustable alarm**



**LCD screen with adjustable backlight**



**30 cm flexible probe**



**Battery life: 20 hours (4 x AAA batteries)**

### Manometer

#### MP 115

This advanced portable manometer features two high-precision piezoresistive sensors, meaning it can be used to take standard and differential pressure measurements – all with a battery life of 180 hours.



**Large LCD display**



**Hold function and min-max values**



### CO meter

#### CO 50/110

The portable CO 50 and CO 110 instruments make it easy to measure CO concentrations in the ambient air, as well as temperature. The CO 110 model comes with a wire probe, two adjustable alarms and a large, backlit LCD display.



**Calibration certificate**



**Hold function**

# Accessories

## Customize your own analyzer

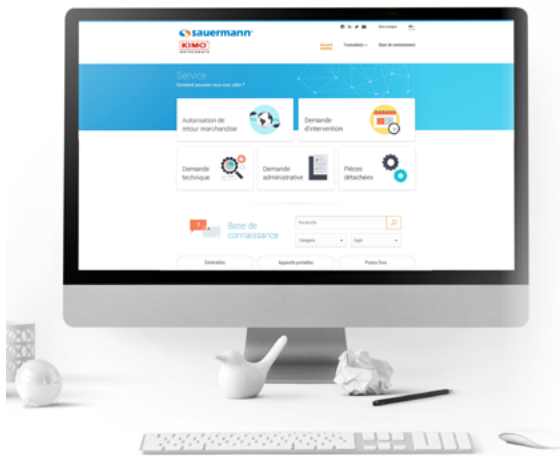
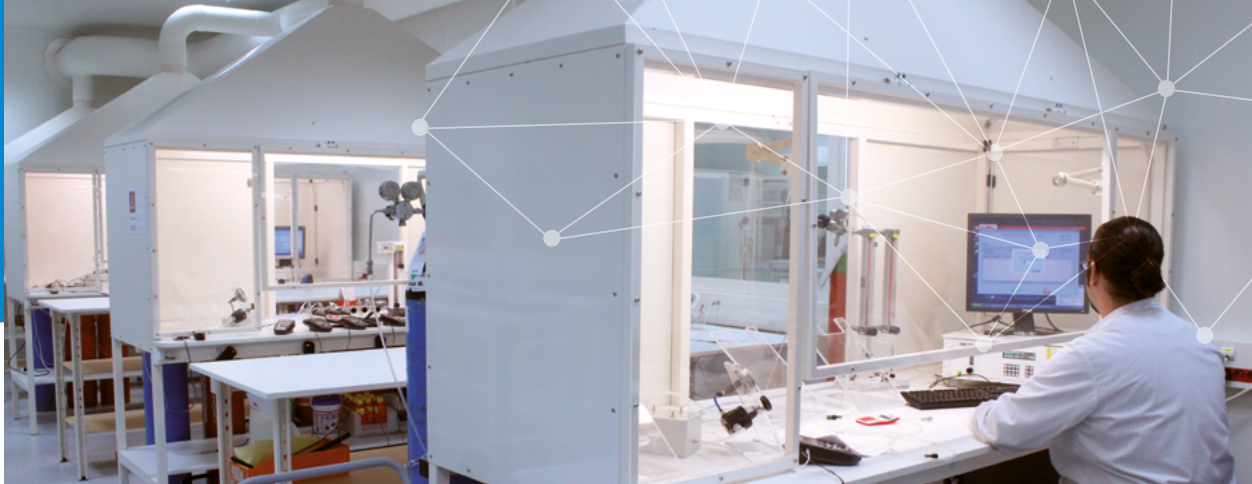


Our combustion gas analysers are available in many different configurations, with a wide range of accessories to choose from. Contact our Customer Services team for more information about our kits and accessories, and for guidance on choosing the right options for your needs.

Part number	Description	Si-CA 030	Si-CA 130	Si-CA 230	
27544	Draft probe	✓	✓	✓	
27532 (180 mm) 27533 (300 mm) 27534 (750 mm) 27535 (1 m) 27536 (1.5 m)	Probe sizes: 180 mm, 300 mm & 750 mm, and 1 m & 1.5 m	✓	✓	✓	
27546	Wireless printer	✓	✓	✓	
27537	Double tube extension, 3 m	✓	✓	✓	
27538	Differential pressure kit	✓	✓	✓	
24646	Smart air temperature probe with 2 m cable	✓	✓	✓	
11994	Smoke pump	✓	✓	✓	
SC0110B	Ambient CO probe	✓	✓	✓	
SC0112B	Ambient CO <sub>2</sub> probe	✓	✓	✓	
27865	Pt100 temperature probe	✓	✓	✓	
26811	SCU for condensate removal	✓	✓	✓	

# Services

Expert metrology laboratories at your service



## Customer Service Portal

For all repair, return and calibration requests, sign in to our Customer Service Portal.



Accessible 24/7



Quick and simple



Real-time tracking

[www.sauermann.site/help](http://www.sauermann.site/help)

Our combustion gas analyzers are backed by experts at our metrology laboratories at every stage of their life cycle: from design through to maintenance.

Working from a dedicated combustion gas analysis room, our specialists offer a broad range of services: servicing and repairs on the same sites as our production lines, cell replacement and calibration, plus a hotline, on-premise services and training.



Hotline



After-sales services



Calibration and adjustments



Training

**Our experts, based in 800 sq m of laboratory space, provide adjustment and calibration services for all types of measurement instrument:**

- Pressure
- Temperature
- Humidity
- Air velocity
- Air flow
- Gas analysis
- Weighing
- Radiometry
- Tachometry
- Light measurement
- Electrical current
- Acoustics

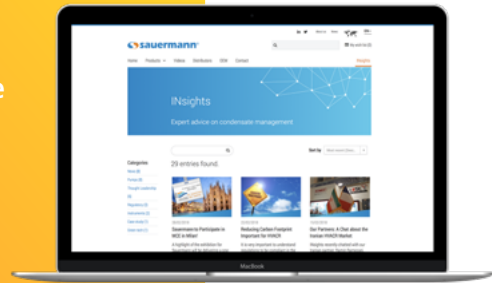


Manufacturer of innovative solutions  
for the measurement and control  
of indoor air quality.

## INsights

Case studies, useful information and practical advice  
for HVACR and indoor air quality professionals.

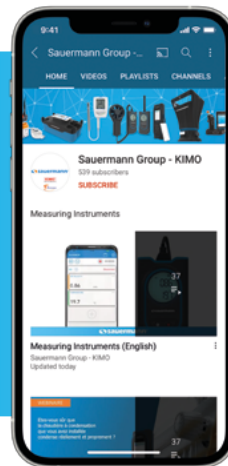
[sauermanngroup.com/insights](http://sauermanngroup.com/insights)



## Sauermann on YouTube

Head to our YouTube channel for  
tutorials, webinars and product guides.

[youtube.com/sauermanngroup](https://youtube.com/sauermanngroup)



More information [sauermanngroup.com](http://sauermanngroup.com)



View this catalogue  
online



Sauermann Industrie S.A.S  
Route de Férolles  
77173 Chevry-Cossigny - France

+33 (0)1 60 06 69 25  
[services@sauermanngroup.com](mailto:services@sauermanngroup.com)