Series CA-6100 CA-CALC™ Combustion Analyzers

TSI's Series CA-6100 CA-CALC portable combustion analyzers are ideal for light commercial to residential applications. Boiler service professionals are provided flue gas data to tune burners on furnaces, boilers and other heating appliances for safe, efficient operation. Models with O2, stack temperature and ambient temperature have user-selectable fuels, calculated CO2, efficiency and excess air. Options measure CO and draft pressure.

Features

- Industry-leading service
- Large display and intuitive operation
- Real-time data provides quick tuning feedback
- 10-hour battery life lowers operating costs
- Automatic baseline calibration of sensors
- Recalibrates easily for critical safety checks
- Quick new sensor installation
- Heavy-duty pump designed for field service

Applications

- Tune boilers, furnaces and appliances for optimum efficiency and safety
- Check building combustion ventilation
- Check CO safety of appliances
- Monitor burner performance
- Supplement preventative maintenance

Models available for:

- Boiler/Burner Service and Repair Contractors
- Boiler/Furnace Maintenance Companies
- Building Contractors
- Commercial Boiler Owners
- Boiler Manufacturers
- Plant Engineers
- School and Office Maintenance Staff
- Utility Companies

Series CA-6100 CA-Calc Combustion Analyzers Specifications

Sensors:

Oxygen (O_2)*:
- **Range:** 0 to 25%
- **Resolution:** 0.1% O_2

Carbon Monoxide (CO)*:
- **Range:** 0 to 2,000 ppm
- **Resolution:** 1 ppm

Flue Gas Temperature Probe:
- **Range:** 32 to 1,292°F (0 to 700°C)
- **Resolution:** 1°F (1°C)

Draft Pressure:
- **Range:** ±30 in. H_2O (±80 mBar)
- **Resolution:** 0.01 in. H_2O (0.01 mBar)

Supply Air Temperature Probe (Optional):**
- **Range:** -40 to 392°F (-40 to 150°C)
- **Resolution:** 1°F (1°C)

Calculated Data:

Carbon Dioxide (CO_2)—Calculated from O_2 and fuel type:
- **Range:** 0 to CO_2 Max

Excess Air (EA):
- **Range:** 0 to 1,000%

Loss ASME:
- **Range:** -25 to 100%

Efficiency ASME (net):
- **Range:** 0 to 125%

Loss qA (Siegert):
- **Range:** -25 to 100%

Efficiency (η) based on qA:
- **Range:** 0 to 125%

Lambda (λ):
- **Range:** 0 to 11

CO Air Free:
- **Range:** 0 to 20% (10,000 ppm=1%)

CO/CO_2 Index:
- **Range:** 0 to 1.000

* Electrochemical sensor
** P/N 3013033

Specifications are subject to change without notice.

Operating Conditions:

Instrument Temperature Range:
- **Operating Range:** 32 to 113°F (0 to 45°C)
- **Storage Range:** -20 to 122°F (-30 to 50°C)

Instrument Humidity Range:
- **Continuous:** 15 to 90% non-condensing
- **Intermittent:** 0 to 99%

Maximum Flue Gas Probe Temperature:
- **Continuous:** 1,292°F (700°C) (handle shielded)

General Data:

Instrument:
- **External Dimensions:** 4.5 × 7.5 × 2.5 in. (11.4 × 19.1 × 6.4 cm)
- **Weight:** 1.2 lbs/1.4 lbs with probe (0.54/0.64 kg)
- **Display:** LCD

Pump:
- **Flow Rate:** Nominal 0.8 lpm
- **Maximum Flue Pressure:** ±30 in. H_2O (±80 mBar)

Standard Flue Gas Sampling Probe:
- **Probe/Hose Material:** Stainless steel/rubber
- **Probe Length:** 12 in. std (30 cm)
- **Hose Length:** 7 ft (2.13 m)
- **Probe Diameter:** 3/16 in. (0.48 cm)

Communication Interface:
- **Type:** Serial
- **Baud Rate:** 1,200 to 19,200 selectable

Power Requirements:
- **Batteries:** 4 size AA alkaline batteries
- **Battery Life:** >10 hours (pump on)
- **AC Adapter (optional):** P/N 2613033
- **Backup Battery:** Lithium
- **Backup Battery Life:** 3 yrs

Ordering Information

Model	Oxygen (O_2)	Carbon Monoxide (CO)	Draft Differential Pressure	Ambient, Stack Temp. (ΔT)	Carbon Dioxide (CO_2)*	Efficiency (Loss) (qA)	Excess Air (λ)	CO/CO_2 Index	CO Air Free (Undiluted)	Water Trap and Filter	Data Storage/Review/Print	7 Factory-Default and 1 User-Defined Fuel
CA-6110		•	•							•	•	
CA-6120	•			•	•	•	•		•	•	•	•
CA-6130	•	•		•	•	•	•	•	•	•	•	•
CA-6140	•	•	•	•	•	•	•	•	•	•	•	•

* Calculated from fuel type and O_2

TSI Incorporated
500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 651 490 2711 **Toll Free:** 1 800 777 8356 **Fax:** 651 490 2874 **E-mail:** answers@tsi.com
TSI Germany—Tel: +49-241-523030 **Fax:** +49-241-5230349 **E-mail:** tsigmbh@tsi.com
TSI Sweden—Tel: +46-18-52-70-00 **Fax:** +46-18-52-70-70 **E-mail:** tsi@tsi.se

For current information www.tsi.com

CERTIFIED ISO 9001

P/N 2980190 4/02

Printed in U.S.A.