

CA-CALC™ Combustion Test Kit for Oil Burners Model CA-6120-OH

The CA-CALC Combustion Test Kit for Oil Burners provides fast, accurate flue gas data to tune burners on furnaces, boilers and other oil heating appliances for safe, efficient operation. Suitable for light commercial and residential applications, the kit includes a Model CA-6120 combustion analyzer and a smoke soot pump. The analyzer has user-selectable fuels and supplies CO₂, O₂, stack and ambient temperatures, as well as efficiency and excess air. Other useful features include real-time display of CO₂ during burner adjustment and electronic design that eliminates the need for messy, potentially hazardous chemicals.

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
- Hard-sided carrying case
- 1-hour recharge kit (optional)



Applications

- Tune boilers, furnaces and appliances for optimum efficiency and safety
- Monitor burner performance
- Supplement preventative maintenance

Suitable 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

Model CA-6120-OH Combustion Test Kit for Oil Burners

Specifications

Sensors:

Oxygen (O₂)*:

Range: 0 to 25%
Resolution: 0.1% O₂

Flue Gas Temperature Probe:

Range: 32 to 1,292°F (0 to 700°C)
Resolution: 1°F (1°C)

Supply Air Temperature Probe (Optional)**:

Range: -40 to 392°F (-40 to 150°C)
Resolution: 1°F (1°C)

Calculated Data:

Carbon Dioxide (CO₂)—Calculated from O₂ and fuel type:

Range: 0 to CO₂ 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

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)

* Electrochemical sensor

** P/N 3013033

Specifications are subject to change without notice.

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. H₂O (±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)

Smoke Soot Pump:

Includes smoke gage pump, awl, filter paper, instructions and case (P/N 1702076)

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)
1-hour Recharge
Kit (optional): P/N 801093
AC Adapter (optional): P/N 2613033
Backup Battery: Lithium
Backup Battery Life: 3 yrs

Additional Combustion Test Instruments from TSI

Model	Oxygen (O ₂)	Carbon Monoxide (CO)	Draft Differential Pressure	Ambient, Stack Temp. (T)	Carbon Dioxide (CO ₂)*	Efficiency (Loss) (qA)	Excess Air (λ)	CO/CO ₂ Index	CO Air Free (Uninflated)	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 O₂



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