E INSTRUMENTS

E Instruments International 2013 HVAC Analyzers Catalog

www.E-Inst.com

P: 215-750-1212   F: 215-750-1399

A: 402 Middletown Blvd, Ste 216   Langhorne, PA 19047

BTU900

NEW

Economical Residential Combustion Analyzer

Providing the latest and most innovative Combustion Gas Analyzers for COMPLETE Boiler & Burners Set-Ups, Servicing & Maintenance

NEW **High Efficiency Kits for ALL 90%+ Systems Included**

- 2 or 3 Gas Models
- Upgradeable to **NO/NOx**
- CO Sensor w/ NOx Filter
- Draft & Differential Pressure Manometer
- 2 Channel Thermometer
- Ambient CO Monitor
- Magnetic Rubber Boot
- SIMPLE to Use
- Li-Ion Rechargeable Battery
- ZOOM Function
- Immediate Response Time
- 600 Test Internal Memory
- **Wireless Bluetooth Communcation** **NEW**
- PC Software Included

NEW **Unbreakable Metal Probe Connections**

NEW **Field Replaceable Pre-Calibrated Sensors**

NEW **Prints to Any Existing IR Printer (Save $, Use Your Printer!)**

O_2

CO_2

CO

NO

NO_x

Efficiency

Excess Air

Tair Tgas

DRAFT

Diff. Press

Ambient CO & NO

Accuracy • Emissions • Indoor Air Quality • Efficiency

BTU 900 Features

E INSTRUMENTS

Internal Memory & PC Software Included

Store ALL your data and email to your customer **BLUE TOOTH INCLUDED**

IR Printer Interface: Easily communicate to your **EXISTING** Printer, **save $$$**

BIG Bright BLUE Back light w/ ZOOM Feature

Unbreakable **Metal** Connections

Pre-Calibrated Gas Sensors

The **Field-Replaceable, Pre-Calibrated** gas sensors provide an easy way to minimize costly downtime!

10' Dual Hose, 12" Probe Gas, Draft, Temp = All-at-once

Durable "**Boiler Room**" Design

10 Fuel / Oil Types Including **Bio-Heat 5%**

Parameter	Sensor	Range	Resolution	Accuracy
O_2	Electrochemical	0 - 25%	0.1%	±0.2% vol
CO w/ Built-in NO_x Filter	Electrochemical	0 - 8000 ppm	1 ppm	±10 ppm <400ppm ±5% rdg up to 2000 ppm
CO_2	Calculated	0 - 99.9%	0.1%	
NO	Electrochemical	0 - 4000 ppm	1 ppm	±5 ppm <100ppm ±5% rdg up to 1000 ppm ±10% rdg for >4000 ppm
NOx	Calculated	0 - 5000 ppm	1 ppm	
Tair	Pt100	-10 to 212°F	0.1°F	± 1°F
Tgas	Tc K	-10 to 1830°F	0.1°F	± 2°F
Differential Temp.	Calculated	-10 to 1830°F	0.1°F	
Pressure/Draft	Semiconductor	± 0 - 80 inH_2O	0.001 inH_2O	±1% (-4.014 - 0.806 inH2O) ±0.008 (-0.802 - 0.802 inH2O) ±1% (0.806 - 0.292 inH2O)
Excess Air	Calculated	0 - 850%	1%	
Efficiency	Calculated	0 - 100%	0.1% (also condensing boilers w/ auto detection)	
Warranty	2 years: Analyzer + Sensors			

Pre-Calibrated Gas Sensors

All BTU900 Kits Include: O2, CO, CO2, **Upgradeable to NO/NOx,** Efficiency, Draft, Differential Pressure manometer, Temperatures, Excess Air, Li-Ion rechargeable batteries & AC charger, gas sampling probe & hoses, water trap with filter cartridge, magnetic protective rubber holster, 600 Test Internal Memory, **BLUETOOTH,** PC software package with USB cable INCLUDED, operating manual, calibration certificate, carrying case, One-Page Operating Cheat Sheet, **IR Port that Prints to ANY HP-type competitors existing IR Printers.**

Ordering Information

Model No. Description

900 - HE High Efficiency Kit = O2, CO, CO2, Upgradeable to NO/NOx, Draft, Diff. Pressure, Temp, Efficiency, Excess Air, 600 Internal Test Memory, **PC Software Included + Differential Pressure Kit + SMART Primary Air Temp Probe for ALL 90%+ Systems & Condensing Systems**

900 - OIL Oil Kit = O2, CO, CO2, Upgradeable to NO/NOx, Draft, Diff. Pressure, Temp, Efficiency, Excess Air, 600 Internal Test Memory, **PC Software Included + Oil Smoke Pump, Smoke Filter Papers and Comparison Chart**

900 - NOx NOx Kit = O2, CO, CO2, **NO/NOx Included**, Draft, Diff. Pressure, Temp, Efficiency, Excess Air, 600 Internal Test Memory, **PC Software Included + Differential Manometer Pressure Kit**

900 - NOx-HE High Efficiency NOx Kit = O2, CO, CO2, **NO/NOx Included**, Draft, Diff. Pressure, Temp, Efficiency, Excess Air, 600 Internal Test Memory, **PC Software Included + Differential Pressure Kit + SMART Primary Air Temp Probe for ALL 90%+ Systems & Condensing Systems**

BTU1100

Residential & Commercial Combustion Analyzer

Providing the latest and most innovative "ALL-IN-ONE" Combustion Gas Analyzers for COMPLETE Boiler & Burners Set-Ups, Servicing & Maintenance

E INSTRUMENTS

- **BUILT-IN** NON-THERMAL Printer
- CO Sensor w/ NOx Filter
- Draft & Differential Pressure Manometer
- 2 Channel Thermometer
- Ambient CO Monitor
- Easy One Button Operation
- Magnetic Rubber Boot
- Li-Ion Rechargeable Battery
- ZOOM Function
- Immediate Response Time
- External Condensation Trap
- 900 Test Internal Memory
- Wireless BlueTooth Communication **NEW**
- PC Software & USB Kit Included

Display readout:
O₂ 4.2%
CO₂ 9.3%
Xair 25%
▶RefO₂

Measurements:
- O_2
- CO_2
- CO
- Efficiency
- Excess Air
- Tair Tgas
- DRAFT
- Diff. Press
- Ambient CO

Emissions • Indoor Air Quality • Efficiency • Accuracy

NEW Unbreakable Metal Probe Connections

NEW Field Replaceable Pre-Calibrated Sensors

NEW High Efficiency Kits for ALL 90%+ Systems Included

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BTU 1100 Features

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Internal Impact Printer

A **BUILT-IN** impact printer uses **NON-THERMAL, NON-FADING** paper for easy printing.

BLUETOOTH INCLUDED

NEW BIG Bright BLUE Backlight w/ ZOOM Feature

NEW Unbreakable **Metal** Connections

10' Dual Hose, 12" Probe Gas, Draft, Temp = All-at-once

NEW

Pre-Calibrated Gas Sensors

The **Field-Replaceable, Pre-Calibrated** gas sensors provide an easy way to minimize costly downtime!

Magnetic Rubber Boot "Hands-Free"

Durable "**Boiler Room**" Design

10 Fuel / Oil Types Including **Bio-Heat 5%** **NEW**

Parameter	Sensor	Range	Resolution	Accuracy
O_2	Electrochemical	0 - 25%	0.1%	±0.2% vol
CO H_2 Compensated w/ Built-in NOx Filter	Electrochemical	0 - 8000 ppm	1 ppm	±10 ppm <400ppm ±5% rdg up to 2000 ppm ±10% rdg for >2000 ppm
CO_2	Calculated	0 - 99.9%	0.1%	
Tair	Pt100	-10 to 212°F	0.1°F	± 1°F
Tgas	Tc K	-10 to 1830°F	0.1°F	± 2°F
Differential Temp.	Calculated	-10 to 1830°F	0.1°F	
Pressure/Draft	Semiconductor	± 0 - 80 inH_2O	0.001 inH_2O	±1% (-4.014 - 0.806 inH2O) ±0.008 (-0.802 - 0.802 inH2O) ±1% (0.806 - 0.292 inH2O)
Excess Air	Calculated	0 - 850%	1%	
Efficiency	Calculated	0 - 100%	0.1%(also for condensing boilers w/ auto detection)	
Warranty	2 years: Analyzer + Sensors			

Pre-Calibrated Gas Sensors

Unbreakable Metal Connections

Ordering Information

Model No.	Description
1100-1	BTU1100 Base Kit = Analyzer w/ O2, CO, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 10' Dual Hose, 12" Probe, Vinyl Case, Calibration Certificate, Operating Manual, Cheat Sheet, Water Trap, Paper Roll, 900 Test Memory & Built-In Printer
1100-Oil	Standard 1100-1 Kit **PLUS** Oil Smoke Pump, Smoke Filter Papers and Comparison Chart + Built-In Printer
1100-HE High Efficiency Kit **NEW**	Standard 1100-1 Kit **PLUS** SMART Incoming Air Temp Probe + Differential Pressure Kit for ALL **90%**+ Systems & Condensing Systems + Built-In Printer

BTU4400

Industrial Combustion Analyzer

Providing the latest in Combustion Gas & Emissions Analyzers for Boiler, Engine, Furnace, and other Combustion Applications

- Up To FOUR Gas Sensors
- LOW NOx and True NOx Capable
- **BUILT-IN** NON-THERMAL Printer
- CO Sensor w/ NOx Filter
- Draft & Differential Pressure Manometer
- 2 Channel Thermometer
- Magnetic Rubber Boot
- Rechargeable Li-Ion Battery
- ZOOM Function
- Immediate Response Time
- External Condensation Trap
- 900 Test Internal Memory
- PC Software With USB Communications Cable
- Wireless Bluetooth Communcation **NEW**
- Unbreakable Metal Probe & Hose Connections

NEW LOW NOx Sensors Available

NEW Dilution Pump For CO Auto-Range Measurements Up To 50,000 ppm

NEW Field Replaceable Pre-Calibrated Sensors

O_2

CO_2

CO

NO

NO_x

NO_2

SO_2

Efficiency

Excess Air

Tair Tgas

Draft & Pressure

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BTU4400 Features

Internal Impact Printer

Built-In impact printer uses **NON-THERMAL** paper rolls for easy printing of data without extra parts or communications needed.

PC Software Package For Unlimited Data Storage **BLUETOOTH INCLUDED**

BIG Bright BLUE Backlight LCD with ZOOM Feature

Pre-Calibrated Gas Sensors

The **Field-Replaceable, Pre-Calibrated** gas sensors can easily provide a convenient way to minimize costly downtime!

Magnetic Rubber Boot For "Hands-Free" Operations

10 Selectable Fuel/Oil Types Including **Bio-Heat 5%**

Parameter	Sensor	Range	Resolution	Accuracy
O_2	Electrochemical	0 - 25%	0.1%	±0.2% vol
CO H_2 Compensated w/ Built-in NO_x Filter	Electrochemical	0 - 8000 ppm	1 ppm	±10 ppm (0-200ppm) ±5% rdg (201-2000ppm) ±10% rdg (2001-8000ppm)
CO DILUTED	Electrochemical	0.8% - 5.00%	0.01%	±10% rdg
CO_2	Calculated	0 - 99.9%	0.1%	
NO	Electrochemical	0 - 5000 ppm	1 ppm	±5 ppm (0-100ppm) ±5% rdg (101-5000ppm)
NO_2	Electrochemical	0 - 1000 ppm	1 ppm	±5 ppm (0-100ppm) ±5% rdg (101-1000ppm)
Low NO_x and/or Low NO_2	Electrochemical	0 - 500 ppm	0.1 ppm	±2 ppm (0.0-40.0ppm) ±5% rdg (40.1-500.0ppm)
NO_x	Calculated	0 - 5000 ppm	1 ppm	
SO_2	Electrochemical	0 - 5000 ppm	1 ppm	±5 ppm (0-100ppm) ±5% rdg (101-5000ppm)
Tair	Pt100	-10 to 212°F -10 to 100°C	0.1°F 0.1°C	± 1°F ± 1°C
Tgas	Tc K	-4 to 2280°F -20 to 1250°C	0.1°F 0.1°C	±0.5°C (-20 to 100°C) ±0.5% rdg (101 to 1250°C)
Pressure/Draft	Semiconductor	± 0 - 80 inH₂O	0.001 inH₂O	±1.0% rdg
Excess Air	Calculated	0 - 850%	1%	
Efficiency	Calculated	0 - 100%	0.1%	
Warranty	2 Years: Analyzer + All Sensors			

Probes & Hoses

Standard: 12"/300mm Probe, 1470°F/800°C max, with 10'/3m Dual Hose

Long: 30"/750mm Probe, 1470°F/800°C max, with 10'/3m Dual Hose

Long & High Temp: 40"/1m Probe, 2190°F/1200°C max, with 10'/3m Hose

Hose Extensions: 10'/3m Length Available

Unbreakable Metal Connections

All 4400 Kits Include: Built-In impact printer, Draft, Differential Pressure, Temperature measurements, calculations for CO2, efficiency & excess air, Li-Ion rechargeable batteries & AC charger, gas sampling probe & hoses, water trap with filter cartridge, protective rubber holster with magnetic supports, internal memory, PC software package with USB cable, BLUETOOTH, operating manual, calibration certificate, & ABS hard plastic carrying case

Ordering Information

Model No.	Description
BTU4400-2	4400 with O2, CO, **Upgradeable** to NO/NOx gas sensors
BTU4400-3	4400 with O2, CO, NO/NOx gas sensors Installed, **Upgradeable** to 4th Gas Sensor
BTU4400-N	4400 with O2, CO, NO/NOx, **NO2** gas sensors and CO Dilution Auto-Range to 50,000 ppm
BTU4400-S	4400 with O2, CO, NO/NOx, **SO2** gas sensors and CO Dilution Auto-Range to 50,000 ppm

Combustible Gas Leak Detector

- **Auto Zero-Drift Adjustment**
- **Visual and Audible Alarms**
- **LCD and Bar Graph Display**

Batteries:	9V, 6 x1.6V AAA
Battery life:	4 hours minimum
Measurement range:	0.0 - 10,000 ppm CH4
	0.0 - 1% VOL CH4
	0.0 - 20% LEL CH4
	0.0 - 1,800ppm LPG (isoC4H10)
Resolution:	1 ppm
Accuracy:	± 20% f.s. @ 20°C ± 1°C
Measurement units:	ppm, % vol, % L.E.L.
Sensor type:	Semiconductor
Pre-heating time:	Max. 45 seconds fixed
Auto-shut-off time:	OFF, 1 - 30 minutes
Display:	LCD TN
Operating temperature:	32° to 104°F (0° to 40°C)
Storage temperature:	14° to 122°F (-10° to +50°C)
Humidity limits:	20% - 80% RH non-condensating
Enclosure:	ABS HB self-extinguishing
Dimensions:	2.8" x 6" x 1.5" (W x H x D)
Weight:	0.7 lbs. (0.3 kg)
Flexible Probe Length:	11" (270 mm)

CE

Accuracy • Emissions • Indoor Air Quality • Efficiency

Why Should You Use E Instruments Analyzers?

EASY Combustion Efficiency Analysis

Within seconds, plug in your Combustion Analyzer to easily monitor any **GAS / PROPANE / OIL** furnace, boiler, or water heater's efficiency.

CO Leak Detector (SAFETY)

Carbon Monoxide is a DEADLY toxic gas that you can **NOT** see, smell or detect without an instrument. The analyzer has a BUILT-IN ambient/room CO leak detector for your personal SAFETY and the SAFETY of the building's occupants! **Failure to Test = Disregard for Human Life**!

Diff. Pressure & Draft Testing

Quickly & easily monitor your incoming gas pressures, static duct pressures, static pressure drop across coils (AC), pressure drop across air filters, pressure leak testing, compressors, vacuum equipment, gas cylinders and more!

MAKE $$$ Using Analyzer EVERYDAY

Be ahead of the curve and your competition! Using an analyzer when you walk in to home gives you INSTANT CREDIBILITY. Immediately able to prove Homeowner's Efficiency & Losses. Easy to Up sale to New Systems! One Replacement system = PAYS for Analyzer!

NEW Field Replaceable Pre-Cal Sensors

No more costly Downtime! Unit uses Pre-Calibrated, Field-Replaceable Sensors O_2, CO **and** NO/NOx !

"TRUE" CO Measurement w/ NOx Filter

In the combustion process, there is **always** NO & NOx present and without the proper NOx filtration your CO readings are inaccurate & sensors will have a shorter life!

Greatest CO Range (0 – 8000 ppm) w/ Pump SHUT OFF to SAVE Sensors!

The higher range is ideal for the Boiler/Burner engineer allowing for proper installations & set-ups while saving the contractor from constantly having to purge or replace their lower range, inaccurate CO Sensors!

BUILT-IN, Non-Thermal Printer

These are the **ONLY** multifunctional analyzers with the printer built-in to the tool itself using **NON-THERMAL** paper rolls (inexpensive & easy to find). Printer is also field-replaceable if needed, simple plug in feature

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THE ONLY TRUE "ALL-IN-ONE" ANALYZERS:

O_2, CO, CO_2, Efficiency, Excess Air, Draft, Diff. Pressure, Ambient & Flue Temperatures, CO Leak Detector, & More!

BTU1100

Residential & Commercial Combustion Analyzer*

- O_2, CO, CO_2, Excess Air, Efficiency Analyzer
- CO Sensor: **0 - 8000 ppm**
- CO Sensor **w/ Built-In NOx Filter**
- CO Air Free (Ambient CO Monitor Included)
- **BUILT-IN Non-Thermal PRINTER**
- Unbreakable METAL Connections (no plastic!)
- 10 Fuels & Oils (Natural, #2, #4, Propane, etc)
- Draft & Differential Pressure KIT Included
- Ambient & Flue Temperature
- EASY User Sensor Diagnostics
- External Water Trap for Easy Detection
- Li-Ion Rechargeable Batteries
- Memory: up to 600 Tests & Software Included
- BLUETOOTH INCLUDED
- Magnetic Support Included

* Smart Temperature Probe INCLUDED For HIGH EFF, CONDENSING BOILERS for COMBUSTION AIR TEMP!!

NEW BTU900 - NOx

The Advanced Combustion Analyzer
- Everything Listed in the BTU1100 **PLUS**.....
- High Range, High Accuracy **NO/NOx Included**
- Carrying Case Included
- PC Software & Cable Included
- BLUETOOTH INCLUDED