E INSTRUMENTS

Built With Quality In Mind

HVAC Combustion Analyzer Catalog

BTU1500

The Latest in Combustion Analysis Technology

E INSTRUMENTS

Built with Quality in Mind

Residential & Commercial COMBUSTION ANALYZER

Accurate

Reliable

Robust

Fast

CO_2

CO

O_2

IDEAL FOR HIGH EFFICIENCY & CONDENSING SYSTEMS

HSE

- 5 Tools-In-One
- Draft & Differential Pressure
- Flue & Ambient Temp
- Ambient CO Monitor
- Built-In Manometer
- Combustion Efficiency
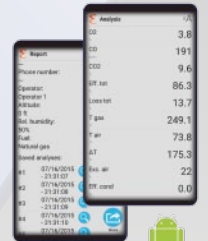- PC Software w/ Auto Saving
- Unbreakable Metal Connections

NEW! **Automatic, TRUE High-Efficiency Calculations for ALL Condensing Systems**

Accuracy · Emissions · Indoor Air Quality · Efficiency

NEW!

Smart App For

Phones & Tablets

ANDROID APP ON Google play

Bluetooth

BUILT-IN Printer

Full COLOR Graphic Display

Field Replaceable Sensors

E Instruments International   **www.E-Inst.com**

P: 215-750-1212 F: 215-750-1399 A: 402 Middletown Blvd, Ste 216 Langhorne, PA 19047

BTU1500 Features

E INSTRUMENTS

Built with Quality in Mind

BUILT-IN PRINTER (NON-Fading Paper)

Simple Menu Interface

Full COLOR Graphic Display

Smart App For

Bluetooth

Phones & Tablets

ANDROID APP ON Google play

NEW!

Magnetic Rubber Holster
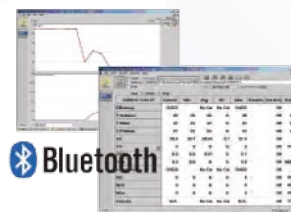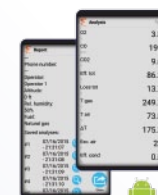
Automatic Outdoor Air Temp. & High-Efficiency Calculations (Condensing Systems)

PC Software, Bluetooth, & App Included

Pre-Calibrated Field Replaceable Sensors

Unbreakable Metal Connections

Large Color Graphic Display

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 <400 ppm ±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$_2$O	0.001 inH$_2$O	±1 % (-4.014 - 0.806 inH$_2$O) ±0.008 (-0.802 - 0.802 inH$_2$O) ±1 % (0.806 - 0.292 inH$_2$O)
Excess Air	Calculated	0 - 850%	1 %	
Efficiency	Calculated	0 - 100%	0.1 %	
Warranty	2 years: Analyzer + Sensors			

Ordering Information

Model No.	Description
1500-1	BTU1500 Base Kit = Analyzer w/ O$_2$, CO, CO$_2$, 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, 2000 Internal Data Storage, PC Software, Bluetooth™ Connectivity, **Automatic Outdoor Air Temperature Saving for ALL 90%+ Systems & Condensing Systems for TRUE Efficiency Calculations + Built-In Printer + New Android App Included**
1500-Oil	Standard 1500-1 Kit PLUS: **Oil Smoke Pump,** Smoke Filter Papers, and Comparison Chart

All BTU1500 Kits Include:

- **New Android App**
- **New Auto Outdoor Air Temp.**
- Built-In Printer
- Large Color Display
- O₂, CO, CO₂
- Combustion Efficiency, Losses, Excess Air
- CO Air Free
- Draft & Differential Pressure
- Temperature Measurements
- 2000 Test Internal Memory
- Bluetooth Connectivity
- Li-Ion Rechargeable Battery & AC Charger
- Gas Sampling Probe & Hose
- Water Trap with Filter Cartridge
- Magnetic Rubber Holster
- PC Software & USB Cable
- Operating Manual
- Calibration Certificate
- Carrying Case

CE

E Instruments International

www.E-Inst.com

BTU900

The Latest in Combustion Analysis Technology

E INSTRUMENTS

Built with Quality in Mind

Economical Combustion & Emissions Analyzer

Accurate

Reliable

Robust

Fast

NOx

CO₂

CO

O₂

NEW! Now With Wireless Bluetooth™ Printer

- 5 Tools-In-One
- Combustion Efficiency
- Upgradeable to NO/NOx
- Flue & Ambient Temp
- Ambient CO Monitor
- Built-In Manometer
- Draft & Differential Pressure
- PC Software w/ Auto Saving
- Unbreakable Metal Connections

NEW! **Automatic, TRUE High-Efficiency Calculations for ALL Condensing Systems**

Bluetooth

NOx UPGRADEABLE

IDEAL FOR HIGH EFFICIENCY & CONDENSING SYSTEMS
H/E

ℰ **Wireless Bluetooth™ Printer**

ℰ **Field Replaceable Sensors**

ℰ **Upgradeable to NO/NOx**

Accuracy • Emissions • Indoor Air Quality • Efficiency

BTU900 Features

E INSTRUMENTS

Built with Quality in Mind

NEW!

Automatic Outdoor Air Temp. & High Efficiency Calculations (Condensing Systems)

Internal Memory & PC Software Included

10 Fuel / Oil Types Including Bio-Heat 5%

Pre-Calibrated Field Replaceable Sensors

Unbreakable Metal Connections

NEW!

Bluetooth

Optional Wireless Bluetooth™ Printer
(No More Lining Up Infrared Printers!)

Parameter	Sensor	Range	Resolution	Accuracy
O_2	Electrochemical	0 - 25%	0.1%	±0.2% vol
CO H₂ Compensated w/ Built-In NOx Filter	Electrochemical	**0 - 8000 ppm**	1 ppm	±10 ppm <400 ppm ±5% rdg up to 2000 ppm ±10 % rdg for >2000 ppm
CO_2	Calculated	0 - 99.9%	0.1%	
NO	Electrochemical	0 - 4000 ppm	1 ppm	±5 ppm <100 ppm ±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 inH₂0	0.001 inH₂0	±1% (-4.014 - 0.806 inH₂0) ±0.008 (-0.802 - 0.802 inH₂0) ±1% (0.806 - 0.292 inH₂0)
Excess Air	Calculated	0 - 850%	1%	
Efficiency	Calculated	0 - 100%	0.1%	
Warranty	2 years: Analyzer + Sensors			

All BTU900 Kits Include:

- **New Auto Outdoor Air Temp**
- O₂, CO, CO₂
- **Upgradeable to NO/NOx**
- Combustion Efficiency, Losses, & Excess Air
- CO Air Free
- Draft & Differential Pressure
- Temperature Measurements
- 600 Test Internal Memory
- Bluetooth Connectivity
- Li-Ion Rechargeable Battery & AC Charger
- Gas Sampling Probe & Hoses
- Water Trap with Filter Cartridge
- Magnetic Rubber Holster
- PC Software & USB Cable
- Operating Manual
- Calibration Certification
- Vinyl Carrying Case
- Optional Wireless Bluetooth™ Printer

Ordering Information

Model No.	Description
900 - 2	**Base Kit** = O₂, CO, CO₂, Upgradeable to NO/NOx, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**
900 - 2P	**Base Kit w/ Printer** = O₂, CO, CO₂, Upgradeable to NO/NOx, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **Wireless Bluetooth™ Printer** + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**
900 - 3	**NOx Base Kit** = O₂, CO, CO₂, **NO/NOx Included**, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**
900 - 3P	**NOx Kit w/ Printer** = O₂, CO, CO₂, **NO/NOx Included**, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **Wireless Bluetooth™ Printer** + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**

E Instruments International

www.E-Inst.com

CE

BTU900-C

The Latest in Combustion Analysis Technology

E INSTRUMENTS

Built with Quality in Mind

Combustion & Safety Analyzer

Accurate

Reliable

Robust

Fast

CxHy

CO

O₂

CO₂

NEW!

- 5 Tools-In-One
- Combustion Efficiency
- Burner/Boiler Safety
- Flue & Ambient Temp
- Ambient CO Monitor
- Built-In Manometer
- Draft & Differential Pressure
- PC Software w/ Auto Saving
- Unbreakable Metal Connections

Ideal for Maintaining & Troubleshooting Residential Commercial Burners

Bluetooth

IDEAL FOR HIGH EFFICIENCY & CONDENSING SYSTEMS

HSE

Accuracy • Emissions • Indoor Air Quality • Efficiency

Ɛ **Wireless Bluetooth™ Printer**

Ɛ **Field Replaceable Sensors**

Ɛ **Measure CxHy Hydrocarbons for Safety**

E Instruments International   **www.E-Inst.com**

P: 215-750-1212 F: 215-750-1399 A: 402 Middletown Blvd, Ste 216 Langhorne, PA 19047

BTU900-C Features

E INSTRUMENTS

Built with Quality in Mind

NEW!

Automatic Outdoor Air Temp. & High **Efficiency** Calculations (Condensing Systems)

NEW!

Bluetooth

Optional Wireless Bluetooth™ Printer

Pre-Calibrated Field Replaceable Sensors

10 Fuel / Oil Types Including Bio-Heat 5%

Unbreakable Metal Connections

Troubleshoot Burner Defects

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 <400 ppm ±5% rdg up to 2000 ppm ±10 % rdg for >2000 ppm
CO_2	Calculated	0 - 99.9%	0.1%	
CxHy (HC)	Pellistor	0 - 5%	0.01%	±5% Full Scale
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 in$H_2$0	0.001 in$H_2$0	±1% (-4.014 - 0.806 in$H_2$0) ±0.008 (-0.802 - 0.802 in$H_2$0) ±1% (0.806 - 0.292 in$H_2$0)
Excess Air	Calculated	0 - 850%	1%	
Efficiency	Calculated	0 - 100%	0.1%	
Warranty	2 years: Analyzer + Sensors			

Draft/Air Supply Malfunction

Damaged or Clogged Burner Tip

Ordering Information

Model No.	Description
900 - C	**CxHy Base Kit** = O_2, CO, CO_2, **CxHy Included**, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**
900 - CP	**CxHy Kit w/ Printer** = O_2, CO, CO_2, **CxHy Included**, Draft, Diff. Pressure, Flue/Air Temperature, Efficiency, Excess Air, 600 Internal Test Memory, PC Software Included + **Wireless Bluetooth™ Printer** + **New Auto Outdoor Air Temp. Saving for TRUE Efficiency Calculations**

E Instruments International

www.E-Inst.com

BTU4500

E INSTRUMENTS

Built with Quality in Mind

The Latest in Combustion Analysis Technology

Industrial & Commercial Combustion Analyzer

Accurate

Reliable

Robust

Fast

CO_2

CO

O_2

NEW!

- Up To FOUR Gas Sensors
- Combustion Efficiency
- Low NOx & Total NOx
- CO Sensor w/ NOx Filter
- Draft & Differential Pressure
- 2 Channel Thermometer
- 2000 Test Internal Memory
- PC Software w/ Auto Saving
- Zoom Feature
- **Dilution Pump For CO Auto-Range Measurements Up To 50,000 ppm**

NO

NOₓ

NO_2

SO_2

Bluetooth

BUILT-IN Printer

Full COLOR Graphic Display

Field Replaceable Sensors

Accuracy · Emissions · Indoor Air Quality · Efficiency

E Instruments International   www.E-Inst.com

BTU4500 Features

E INSTRUMENTS

Built with Quality in Mind

Pre-Calibrated Field Replaceable Sensors

BUILT-IN Printer

Full COLOR Graphic Display

Simple Menu Interface

Magnetic Rubber Holster

Unbreakable Metal Connections

Incoming Air Temperature Probe (Condensing Boilers)

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 (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 - 100 ppm) ±5% rdg (101 - 5000ppm)
NO_2	Electrochemical	0 - 1000 ppm	1 ppm	±5 ppm (0 - 100 ppm) ±5% rdg (101 - 1000ppm)
Low NO and/or Low NO_2	Electrochemical	0 - 500 ppm	0.1 ppm	±2 ppm (0.0 - 40.0ppm) ±5% rdg (40.1 - 500.0ppm)
NOx	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 inH_2O	0.001 inH_2O	±1.0% rdg
Excess Air	Calculated	0 - 850%	1 %	
Efficiency	Calculated	0 - 100%	0.1 %	
Warranty	2 Years: Analyzer + All Sensors			

New Auto-Save Feature

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 Dual Hose

Hose Extensions: 10'/3m Length Available

All 4500 Kits Include:

- Built-In Printer
- Draft & Differential Pressure
- Temperature Measurements
- Calculation for CO_2, Efficiency & Excess Air
- Li-Ion Rechargeable Batteries & AC Charger
- Gas Sampling Probe & Hoses
- Water Trap with Filter Cartridge
- Magnetic Rubber Holster
- 2000 Test Internal Memory
- PC Software & USB Cable
- Bluetooth Connectivity
- Operating Manual
- Calibration Certificate
- ABS Hard Plastic Carrying Case

Ordering Information

Model No.	Description
BTU4500-2	4500 with O_2, CO, **Upgradeable** to NO/NOx Gas Sensors
BTU4500-3	4500 with O_2, CO, NO/NOx Gas Sensors Installed, **Upgradeable** to 4th Gas Sensor
BTU4500-N	4500 with O_2, CO, NO/NOx, **NO_2** Gas Sensors & CO Dilution Auto-Range to 50,000 ppm
BTU4500-S	4500 with O_2, CO, NO/NOx, **SO_2** Gas Sensors & CO Dilution Auto-Range to 50,000 ppm

E Instruments International

www.E-Inst.com

CE

P: 215-750-1212 F: 215-750-1399 A: 402 Middletown Blvd, Ste 216 Langhorne, PA 19047

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

E Instruments International   **www.E-Inst.com**
P:215-750-1212   F:215-750-1399   A: 402 Middletown Blvd, Ste 216 Langhorne, PA 19047

Bulletin: 7899.01