

## KANE455 ANALYSER SPECIFICATION (NOTE: MAY BE SUBJECT TO CHANGE)

Parameter	Range	Resolution	Accuracy
<b>Temp Measurement</b>			
Flue Temperature	0-600°C (0-1200°C with special probe)	0.1°C	±1.5°C or ±1% reading
<b>Inlet Temperature</b>			
(Internal sensor)	0-50°C	0.1°C	±1.0°C
(External sensor)	0-600°C	0.1°C	±1.5°C or ±1% reading
<b>Gas Measurement</b>			
Oxygen <sup>1</sup>	0-21%	0.1%	±0.3%
Carbon Dioxide	0-20%	0.1%	±0.2% <sup>2</sup>
Carbon monoxide	0-2,000ppm nom 4,000ppm max for 15 mins	1ppm	±5ppm <100ppm <sup>1</sup> ±5% reading >100 ppm
<b>Calculated values <sup>3</sup></b>			
Efficiency	0-99.9%	0.1%	
Excess Air	0-250%	0.1%	
CO/CO <sub>2</sub> ratio	0-0.9999	0.0001	
<b>Pressure (differential)</b>			
Nominal range ±80 mbar (Maximum over range without damage to sensor is ±400 mbar)	±0.2 mbar ±1 mbar ±80 mbar	0.001 mbar to 24.999 bar then 0.01 mbar	±0.005 mbar ±0.03 mbar ±3% of reading

<sup>1</sup> Derived from CO<sub>2</sub> measurement

<sup>2</sup> Derived from O<sub>2</sub> measurement

<sup>3</sup> All calculations in accordance with BS EN50379 approval.

<b>Pre-programmed Fuels</b>	Natural gas, Propane, Butane, LPG, Light Oils (28/35 sec), Wood Pellets.
<b>Storage Capacity</b>	99 Combustion tests 20 Pressure tests 20 Tightness tests 20 Temperature tests 20 Room CO tests
<b>Ambient Operating Range</b>	0°C to +45°C 10% to 90% RH non-condensing Atmospheric Pressure: 850 to 1100 mbar
<b>Battery Type / Life</b>	4 AA cells >8 hours using Alkaline AA cells
<b>Chargers (optional)</b>	220v charger, for NiMH batteries only 12v in vehicle charger, for NiMH batteries only
<b>Dimensions</b>	
Weight:	0.8kg handset with protective cover
Handset:	200 x 45 x 90mm
Standard Probe:	300mm long including handle. 6mm diameter x 240mm long stainless steel shaft with 3m long neoprene hose. Type K thermocouple.

Each KANE455 is supplied with:  
Flue probe, protective rubber sleeve with integral magnet, 2 pressure connectors, 4 x AA NiMH batteries with fast charger and instruction manual.

**KANE455 options include:**  
Soft protective carry case, infra-red printer, plug-in gas leak detector, 12v in-vehicle charger and a range of probes for air, liquid and surface temperatures. A Bluetooth™ wireless module can be factory fitted. Data can be added to xml compatible Service Management software programs eg: Cognito.

**KANE455 Kits:**  
Various KANE455 Kits are available offering extra value. Contact your distributor or Kane International for more details.

### 5 year Warranty Offer.

All flue gas analysers should be checked and recalibrated annually. Kane's unique fixed price service system includes the following benefits...

- Another 12 months warranty each time the analyser is returned\*
- Equivalent to a 5 year Extended Warranty if returned annually
- Free software upgrades if applicable
- New traceable calibration certificate as required by BS7967
- Return carriage via courier to a UK address
- Very competitive fixed prices - makes budgeting much easier
- Recalibration reminders can be sent
- See [www.kane.co.uk](http://www.kane.co.uk) for full details

\*Applies to all Kane analysers up to 5 years old



Your distributor



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Ref: KA455IT308

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# KANE455 Infra-Red Analyser

*it's easy with Kane*

Direct Measurement of  
CO<sub>2</sub> using Infra-Red  
Technology



455

O<sub>2</sub>  
CO  
CO<sub>2</sub>  
CO/CO<sub>2</sub>  
Efficiency  
Diff. Temp  
Diff. Pressure

### Optional Extras

- Plug-in gas leak detector
- Bluetooth™ module with xml compatible data transfer
- KMIRP infra-red thermal paper printer
- KANE ImPrint infra-red plain paper printer
- 12v in-vehicle charger
- Range of temperature probes

Colours shown may differ from those received.

### Features

- Long Life CO Sensor (>5 years expected life)
- Long Life IR based CO<sub>2</sub> Sensor (>5 years expected life)
- Low Annual Service Costs
- Easy to use rotary switch
- Protective rubber sleeve with magnet for "hands free" use
- Multi-fuel: Natural Gas, Propane, Butane, LPG, Light Oils (28/35 sec), and Wood Pellets
- High accuracy manometer
- Differential thermometer
- Separate reports for:  
Combustion Pressure  
Let-by and Tightness  
Temperature  
CO build up
- Designed to meet BS7967
- Easy transfer of test results
- 5 year extended warranty if serviced annually by Kane



Infra-red printer emitter



# The most user friendly "6 in 1" analyser available

6

## Combustion Analyser (#1)

- Select "Ratio" on the rotary switch to view current fuel, CO/CO<sub>2</sub> ratio, CO, and CO<sub>2</sub>
- Select "O<sub>2</sub>/EH" to view O<sub>2</sub>, temperatures and efficiency
- Select "Aux" to view any 4 parameters, user selectable
- Measures CO<sub>2</sub>, CO, inlet and flue temperatures
- Calculates O<sub>2</sub>, CO/CO<sub>2</sub> ratio, excess air, losses and combustion efficiency, (nett, gross or condensing)
- Multi fuel - Natural gas, Propane, Butane, LPG, Light Oils (28/35 sec) and Wood Pellets
- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™
- Memory stores up to 99 combustion tests

## CO Meter (#4)

Calibrate the analyser in fresh air to set the CO sensor to zero

- Select "Ratio" or "Aux" to check the ambient CO level in a room
- Select "Room CO" to perform a 15 minute CO test
- The CO level is logged at 1 minute intervals
- "Room CO" tests are automatically stored in the memory
- Tests can be sent via an infra-red printer or by Bluetooth™
- Memory stores up to 20 "Room CO" tests

## Gas Leak Detector (#5), optional

- Plug-in, handheld unit with the sensor at the tip of a flexible shaft
- LED's and a variable buzzer enable the user to pinpoint a gas leak
- Can detect leaks down to 50ppm of methane / natural gas



## Differential Pressure Meter (#2)

- Select "Prs" on the rotary switch for high accuracy single or differential pressure readings
- Range ± 80mBar, maximum resolution 0.001mBar  
Ideal for difficult applications such as flue draught
- Readings can be smoothed to damp out pressure pulsing  
Ideal for setting air/gas ratio valves
- Display includes a clock for manual timing
- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™
- Memory stores up to 20 pressure tests
- Select "Tightness" to perform a let-by test and stabilisation/tightness test
- The let-by period defaults to 1 minute  
The stabilisation period defaults to 1 minute  
The tightness test period defaults to 2 minutes  
All 3 times can be adjusted by the user
- Tests are automatically stored in the memory
- Tests can be printed via an infra-red printer, (see printout example)
- Memory stores up to 20 "Tightness" tests

## Differential Thermometer (#3)

- Select "Diff Temp" to view flow (T1), return (T2) and differential (ΔT) temperatures
- Temperature probes are available to measure air, liquid and surface (pipe) temperatures
- Ideal for Benchmark log book
- Readings can be sent via an infra-red printer, (see printout example) or by Bluetooth™
- Memory stores up to 20 differential temperature tests

## Torch Light (#6)

- Never got a torch when you need one? You have now!
- The KANE455 has a backlit display and an inbuilt LED torch

K455 1.0  
YOUR COMPANY NAME &  
PHONE NUMBER HERE

TEST 10  
DATE 12/07/07  
TIME 12:00:00

### COMBUSTION

FUEL	NAT	GAS
O2 %	5.4	
CO2 %	8.8	
FLUE ppm	55.1	
INLET °C	17.2	
NETT °C	37.9	
EFF (C)	98.3	
LOSSES	1.7	
XAIR %	34.8	
CO/CO2	0.0001	
PRS mBAR	0.00	

Customer  
Appliance  
Ref.

K455 1.0  
YOUR COMPANY NAME &  
PHONE NUMBER HERE

ROOM CO TEST  
LOG TIME 12:50 01  
12/07/07

TEST	CO ppm
0	00
1	00
2	04
3	04
4	01
5	00
6	00
7	10
8	03
9	00
10	00
11	00
12	07
13	11
14	02
15	00
MAXIMUM CO	11

Customer  
Appliance  
Ref.

K455 1.0  
YOUR COMPANY NAME &  
PHONE NUMBER HERE

PRESSURE  
TIME 12:56 12/07/07  
PRS mBAR -0.037  
Customer  
Appliance  
Ref.

K455 1.0  
YOUR COMPANY NAME &  
PHONE NUMBER HERE

LOG TIME 11:53 04  
12/07/07  
Let By Test  
PRS\_1 mBAR 10.12  
PRS\_2 mBAR 10.11  
LET BY MINS 1:00  
Tightness Test  
PRS\_1 mBAR 20.12  
PRS\_2 mBAR 20.10  
APRS mBAR -0.02  
STABIL'N MINS 1:00  
TIGHTN'S MINS 2:00

Customer  
Appliance  
Ref.

K455 1.0  
YOUR COMPANY NAME &  
PHONE NUMBER HERE

DIFF TEMP  
LOG TIME 12:10 03  
12/07/07  
T1 °C 60.1  
T2 °C 47.0  
ΔT °C 13.1

Customer  
Appliance  
Ref.

