



## Flue Gas Analyser

# Tempest 100

Tempest 100 is one of the most powerful portable combustion analysers you can buy. The combination of multi gas emission analysis, differential pressure and temperature measurement reduces service costs and ensures the safe operation of appliances.

Tempest 100 is rugged, portable, reliable and flexible. By choosing up to 6 out of a choice of 7 gas sensors, it can be configured to meet specific monitoring requirements. Data logging can be enabled for remote analysis of emissions, with user configurable time periods.

### Features

#### Measures

- Carbon Monoxide, Oxygen and Nitric Oxide as standard
- Option of Three from Nitrogen Dioxide, Sulphur Dioxide, Hydrogen Sulphide and Hydrogen Chloride
- Calculates Carbon Dioxide and Nitrous Oxides
- Calculate CO/CO<sub>2</sub> Ratio and Efficiency
- Selectable Fuel Types
- Gross or Net Efficiency Selection
- Optional High Capacity (100,000ppm) Carbon Monoxide Sensor in Lieu of Standard

#### Temperature

- Differential Thermocouple with Two Thermocouples
- Outlet, Net and Inlet Temperature Displays
- Both Centigrade and Fahrenheit measurements

### Construction

- Robust Design
- Splash Proof
- Easy to use Menu
- Back Lit Display
- High Quality Stainless Steel Probe
- Soft Carry Case

### Pressure

- Positive & Negative Pressure with Differential Measurement
- Pressure Measurement Zero Facility
- mbar & inWG options
- User Selectable Scales

### Reporting

- Logging of 75 Flue Gas Analysis Reports
- Automatic Periodical Analysis Measurement
- Built-in Fade Resistant Impact Printer
- Factory Set Personalised Report Heading
- Real Time Clock
- RS232 and Parallel Data Ports



# Tempest 100



## Specification

### Instrument

Operating temperature range	-5°C to 50°C (23°F to 122°F)
Battery	Rechargeable Ni-Cd. Life 4-5 hours, charge time 2 hours
Charger input voltage	115V or 230V; 50/60Hz AC
Fuels	Natural gas, light oil, heavy oil, propane, butane, coal, coke
Display	Backlit LCD, 4 lines, 20 characters per line.
Data logging/printing	User configurable, 75 set of readings, through RS232 or parallel port
Time and date	24 hour real time clock
Dimensions	280 x 120 x 112mm (11"x 4.7"x 4.4")
Weight	1.3kg (2.86lbs)
Printer	Impact with a replaceable ribbon. 16 characters per line, 45mm (1.8") paper
Certification	Designed to meet BS7927 British Standard for portable flue gas analysers
Options	User defined header, user defined fuel, aluminium case, stack loss calculation, surface/air temperature probe

### Probes

Construction	Pistol grip; 250mm (10") stainless steel probe length; depth gauge; 2500mm (10') hose length
K-type thermocouple	Accuracy +/- 0.3%; +/- 1°C (+/- 1.8°F)
Maximum temperature	800°C (1,472°F)
Options	High temperature to 1,100°C (2,012°F), 1m insertion length



Gases	range	resolution	accuracy
Oxygen	0 - 25%	0.1%	+/- 0.3%
Carbon Monoxide	0 - 10,000ppm	+/- 1ppm	<100ppm; +/- 5ppm >100ppm; +/- 5%
Nitric Oxide	0 - 1,000ppm	+/- 1ppm	<100ppm; +/- 5ppm >100ppm; +/- 5%
Carbon Dioxide (calculated)	0 - 25%		
CO/CO <sub>2</sub> ratio	0 - 0.9999		
Combustion efficiency	0 - 100%		

### Optional Sensors

Nitrogen Dioxide	0 - 200ppm	+/- 1ppm	<20ppm; +/- 2ppm >20ppm; +/- 5%
Sulphur Dioxide	0 - 2,000ppm	+/- 1ppm	<100ppm; +/- 5ppm >100ppm; +/- 5%
Hydrogen Sulphide	0 - 200ppm	+/- 1ppm	<40ppm; +/- 2ppm >40ppm; +/- 5%
Hydrogen Chloride	0 - 50ppm	+/- 1ppm	<40ppm; +/- 5ppm >40ppm; +/- 5%
High Capacity Carbon Monoxide (in lieu of standard)	0 - 100,000ppm	+/- 1ppm	<100ppm; +/- 5ppm >100ppm; +/- 5%

### Draught/pressure measurement

Range	+/- 150mbar (+/-61 inWG)
Resolution	0.01mbar (0.4 inWG)
Accuracy	+/- 0.5% fsd measured at 50mbar (20 inWG)
K-Type thermocouple	Accuracy +/- 0.3%; +/- 1°C (+/- 33°F)



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### Telegan Gas Monitoring

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