



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/CO₂ 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



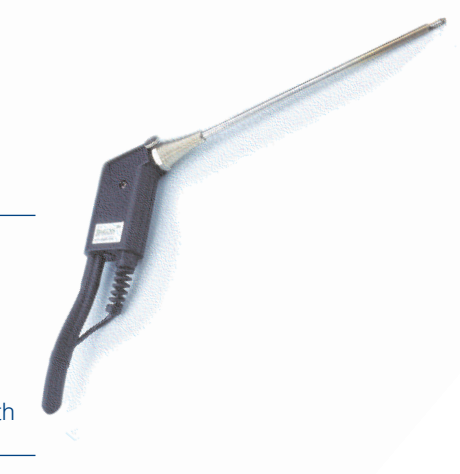
Specification

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 ₂ 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) |



P01104 Issue 4 07/04

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