



New! Fast Response [HC] Analyzer

- Engine exhaust sampling of cold start and transient catalyst performance
- Fast response industrial applications e.g. leak detection, process control

- Fast [HC] analyser
- Time response from **7ms T_{10-90%}**
- H₂/He, H₂/N₂ or H₂ fuelling options
- Filtered 3m sample line as standard
- Concentration range: up to 150,000ppm C
- Portable / "PEMS" (16kg / 46 × 39 × 19 cm)
- Built-in 10Hz data logger
- Data output: 100Hz and 10Hz analogue



- Wind tunnel HC tracer gas
- Pipeline leaks
- Cold Start gasoline and diesel
- Transient fuelling control

The new FID50 Fast FID is designed for both engine and non-engine applications where a 10 millisecond T_{10-90%} response time is sufficient.

The design differs from the other Cambustion fast gas analyzers in two significant ways:

- It is a single channel analyzer
- Its detector is housed within a small control box with a heated or unheated sample line delivering gas from the sample point

Typically, the sample line length is 3 metres and with the option of sample filtration where contaminated sample may deposit within the control box.

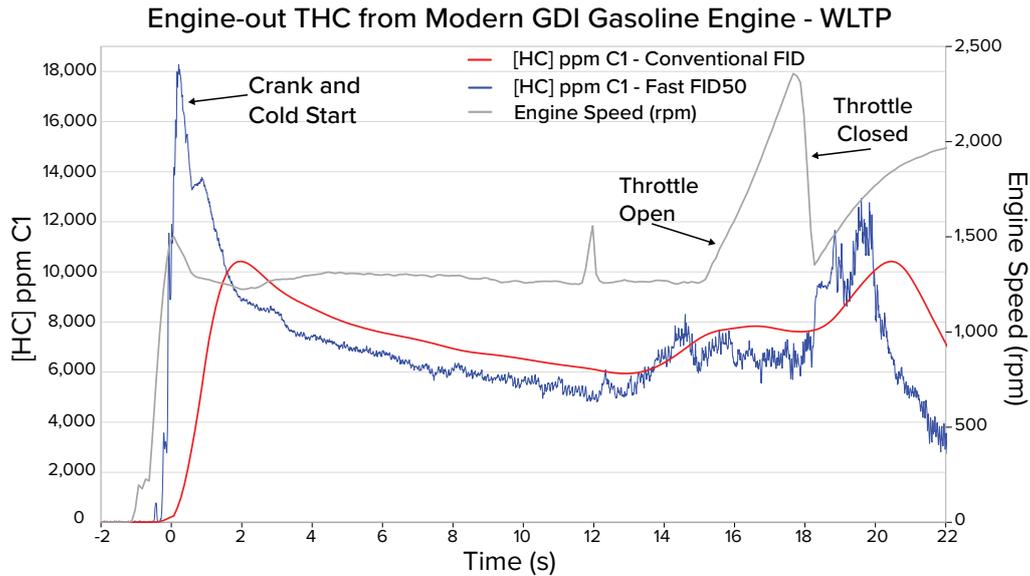
Like our other fast FIDs, the detection method is still using the trusted Flame Ionisation Detector principle.

Typical applications include pre- or post-catalyst engine exhaust THC measurement, transient catalyst performance, cold start engine calibration, rapid catalyst light-off studies and engine-out HC dosing for DPF regeneration.

The FID50 is a lower cost option compared with Cambustion's other fast FID product, (HFR500), which can be dual channel and capable of broader sampling conditions.

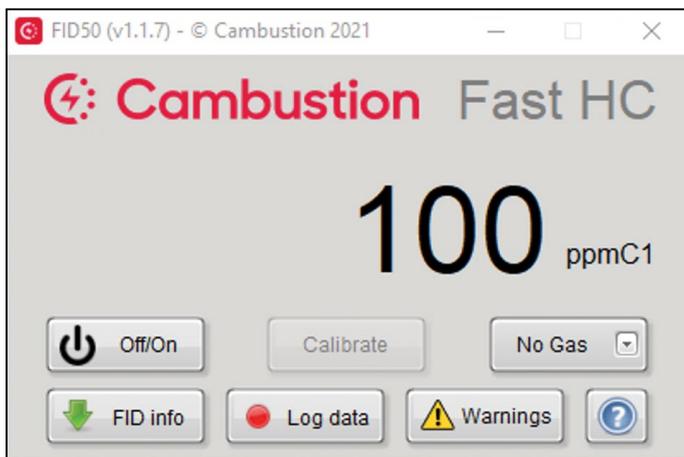
Contact Cambustion directly for application advice.

Comparison of FID50 vs Conventional Analyser - Cold Start Engine Data:



A new digital data platform

For ultra-fast applications requiring millisecond response or where the sample pressure is not close to atmospheric pressure (e.g. pre-turbocharger exhaust sampling), see our other fast FID product, the HFR500. In addition to automotive exhaust measurements, the FID50 can be used with a flexible unheated sample capillary for wind tunnel measurement of HC tracer gas, rapid leak detection from



HC-carrying pipelines and other process control applications where speed of response is a major advantage. Leak detection video:

<https://youtu.be/7IsMTzA6WMQ>

Specifications:

Measurement principle	Flame Ionisation Detection (FID)
Channels	One: 3m heated sample line as standard, 2m unheated sample line option
Time response	7ms (2m unheated line) 14ms (3m heated line, no filter) 19ms (3m heated line with filter)
Data rate	500Hz & 10Hz 10V analogue outputs
Sample pressure range	0.9–1.4 bar absolute
Sample flow extracted	3 lpm sample + 3 lpm bypass
Sample probe temp.	191 °C / 375 °F
Concentration ranges	8 ranges up to 150,000 ppm C (=50,000ppm C ₃)
RMS zero noise	<1ppm C ₃
Dimensions (mm)	46 x 39 x 19cm
Weight	16kg
User interface	Labview via RS485 from lap-top
Gases required	40% H ₂ /He fuel (H ₂ /N ₂ and pure H ₂ options), HC span gas, N ₂
Calibration gas flow rate	7 litres / min
Electrical supply	90–240 V 50/60 Hz 350 W max
All specifications subject to change without notice	

View general FID50 introduction video here: <https://youtu.be/T3dFlpEUmE>

Cambustion (founded 1987) is an independent, privately owned company with headquarters in Cambridge, UK and customers in more than 35 countries worldwide.

Cambustion continue to research & develop novel instrumentation, and now also offer Measurement Consultancy; helping our global clients to solve a wide range of particle and gas measurement issues.



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