

InterScience

*Flexible solutions in gas-analysis*

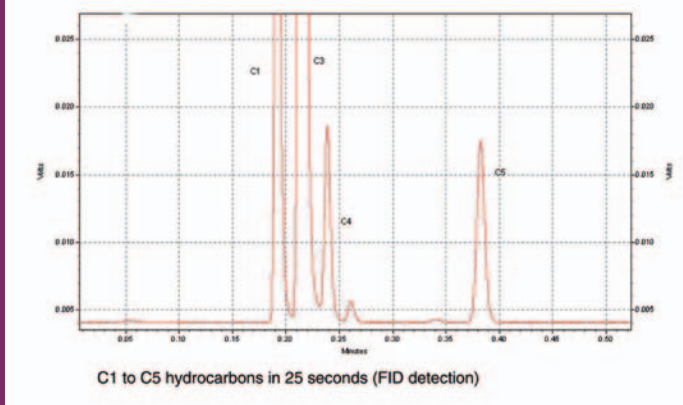
# CompactGC™

a fast, sensitive, flexible  
and robust microGC





## Fast



- Results in seconds.
- Runtime equals cycle time.

## Flexible



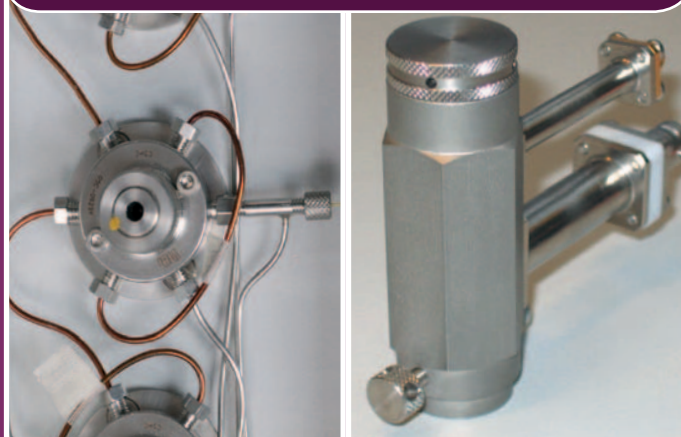
- Interchangeable columns.
- Several detectors.
- PC programmable parameters.

## Compact



- Compact 19" industrial standard enclosure.

## Robust and Reliable



- Proven GC technology.

# Applications

## Fast & Flexible

### High Throughput Experimentation: Catalyst Screening Nanoscale / Pilot Plants Fuel Cell Research

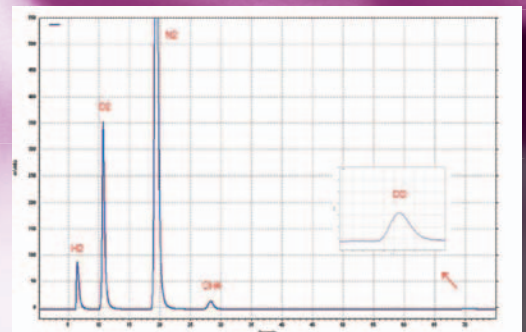
Fast and robust analysis, with high flexibility in a compact instrument, are properties that are highly appreciated in these application fields. Analytical columns can be changed easily and different detectors are available, facilitating simple reconfiguration by the user.

### Natural gas Refining On-line (EX proof) analysis

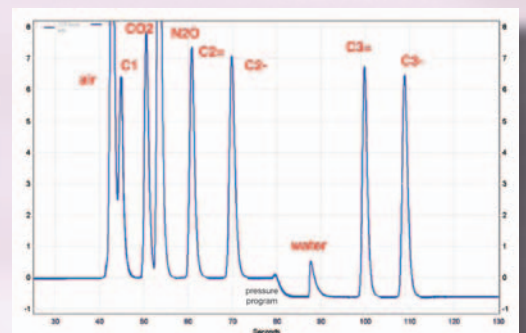
The CompactGC™ is a highly reliable instrument that delivers very accurate and stable results. Optimized parallel analysis channels provide full information of your samples. Thanks to the transparent design, the instrument is easy serviceable. In combination with a purged housing, the CompactGC™ is also suitable for EX-proof area's.

### Trace gas analysis Fermentor headspace analysis

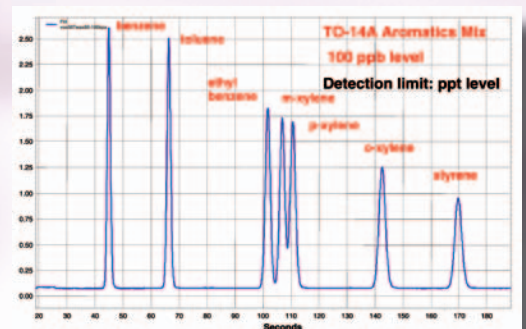
The CompactGC™ is a very sensitive analyser. The instrument measures samples down to 20 ppb, without pre-concentration, and ppt's with the Thermo Desorption Module.



Permanent gases (TCD)

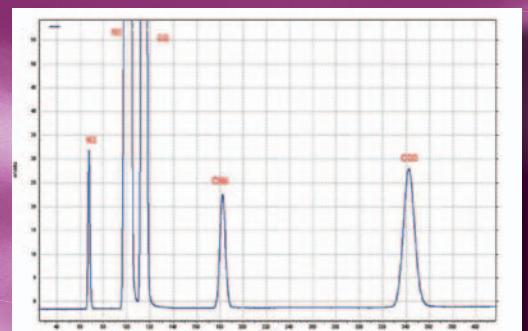


Permanent gases and light hydrocarbons (TCD)

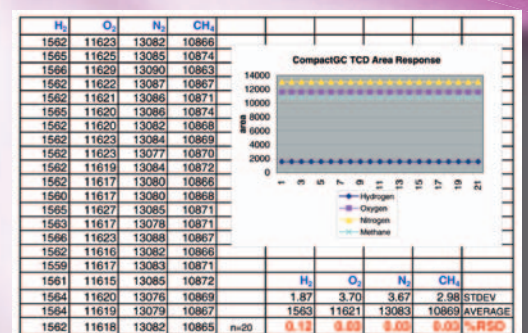


Sensitive analysis (FID)

# Sensitive & Robust



Permanent gases on micro-packed column (TCD)



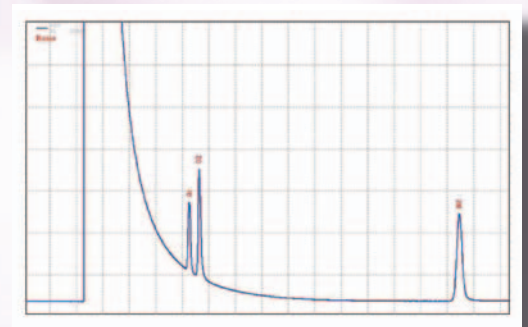
Highly reproducible results

## Mobile measuring

The CompactGC™ is the perfect choice for mobile and remote unattended measuring. Several applications are available like the analysis of permanent gases, hydrocarbons, sulfur components and VOC's.

## Special gases

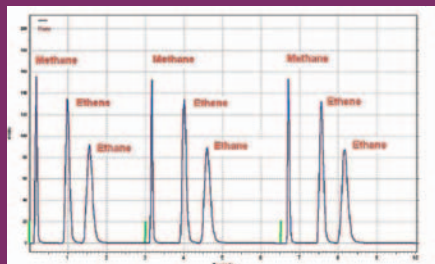
As the instrument can be configured with several detectors like TCD and PDD (Pulsed Discharge Detector), all kinds of gas mixtures from % to ppb range are analysed.



5 ppm Ar, O<sub>2</sub>, N<sub>2</sub> in H<sub>2</sub> (PDD)

# Flexible solutions in gas-analysis

The 19" CompactGC™ represents a new concept for fast gas analysis in seconds. The GC has 3 independent analysis channels for maximal efficiency. Since proven GC technology is used like Valco® valves, standard GC detectors and capillary columns, the instrument is robust, flexible and reliable.



3 successive analysis of Methane, Ethene and Ethane in 9 seconds (3 seconds runtime for 3 components)

## Fast analysis

The use of capillary columns for gas analysis reduces the analysis time enormously; the typical runtime is 2-120 seconds. The cycle time is equal to the runtime because no additional flush or conditioning steps are necessary.

## Flexible

The modular concept of the CompactGC™ offers 3 independent analysis channels. The instrument has a very transparent 'injector-column-detector' configuration with optimal GC parameter settings for each channel.



Example of a 2 channel CompactGC™ (FID and TCD detection)

Several detectors for best linearity, sensitivity and selectivity are available. FID, TCD, PID, PDD and PFPD are covering a broad range of components and concentration levels. The instrument can also be coupled to Mass Spectrometers.

All GC parameters are programmable during the analysis using the 'run-time-table'. Maximum flexibility is offered in this way, like multiple injections during one analysis run, or sample conditioning during the preceding run.

Due to the widely accepted 19" industrial standard, the CompactGC™ can be installed in an existing 19" instrument rack configuration.

## Easy column replacement

The user can install standard available columns:

- capillary narrow bore columns
- wide-bore columns
- (micro) packed columns

Finger-tight couplings are used for easy column installation.



Standard capillary columns

## Reliable, rigid and cost-effective

The CompactGC™ uses proven GC technology like:

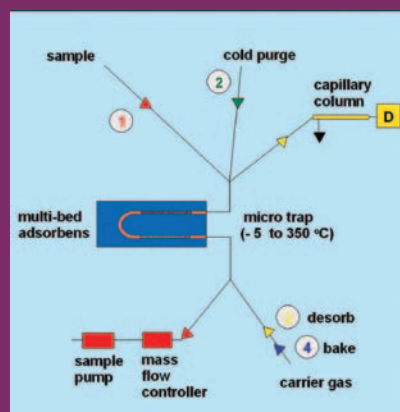
- Valco® valves
- standard GC detectors
- standard available columns
- highly reliable digital gas supply.

This results in:

- low operational costs
- extremely accurate and stable results

## Inert

The system is very inert due to the use of Sulfinert® and Silcosteel® surface inactivation. Important when polar components are analysed.



CompactGC™ with TD option (schematic diagram)

## Sensitive

PPB to % - concentration levels are analysed by sample-loop injection. With the Thermal Desorption Module, ppt 's are detected. The Peltier cooled micro trap is loaded with sample using a Mass Flow Controller, resulting in high accurate results. The trap is loaded during the preceding analysis, and the heating of the trap (injection) takes only a couple of seconds.

## Simplicity

All GC parameters are controlled by convenient arranged PC software. Each analysis channel has a separate tab-page with all relevant parameters for a clear overview.



## Also available: tailor made solutions

- column switching configurations like backflush and heart-cut
- stream selection for 1-16 sample streams
- sample pump, integrated and time programmable
- stop-flow valves (pressure controlled injection)
- 4-20 mA analogue output for process industry applications

# CompactGC™



[www.compactgc.com](http://www.compactgc.com)

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