

DPS Companion 4 GC

DPS Instruments is pleased to present the new Portable Companion 4 Gas Chromatograph, with up to 4 Micro-TCD Channels. Each Channel contains a Column Oven, Pre-Column, Analytical Column and 2 Micro-TCD detectors. The Companion 4 is designed to "Go with you Anywhere!" Complete with built-in carrier and calibration gases, and a rechargeable battery. The small, rugged, and versatile DPS Companion 4 is perfect for many applications.

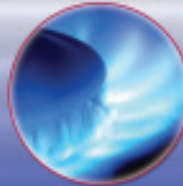
In addition, each Channel also connects Injection and Backflush valves offering unattended operation and super-fast analysis times. A built-in Stream Selector automatically loads each sample stream, or calibration gas. Most analyses are completed in seconds and one sample can be injected right after another for Continuous Monitoring applications.

The DPS Companion 4 GC Systems are a new kind of Portable GC. Offering great compound separation power in an ultra-small package. And with 4 Channel capability, even complex analyses can be performed in seconds.

The DPS Companion 4 GC specifications are in a league of their own. And all DPS GC Systems are smaller, lighter, faster, more intelligent, and have delightful pricing.



Permanent Gases



Natural Gas



Mine Safety



Mud Logging

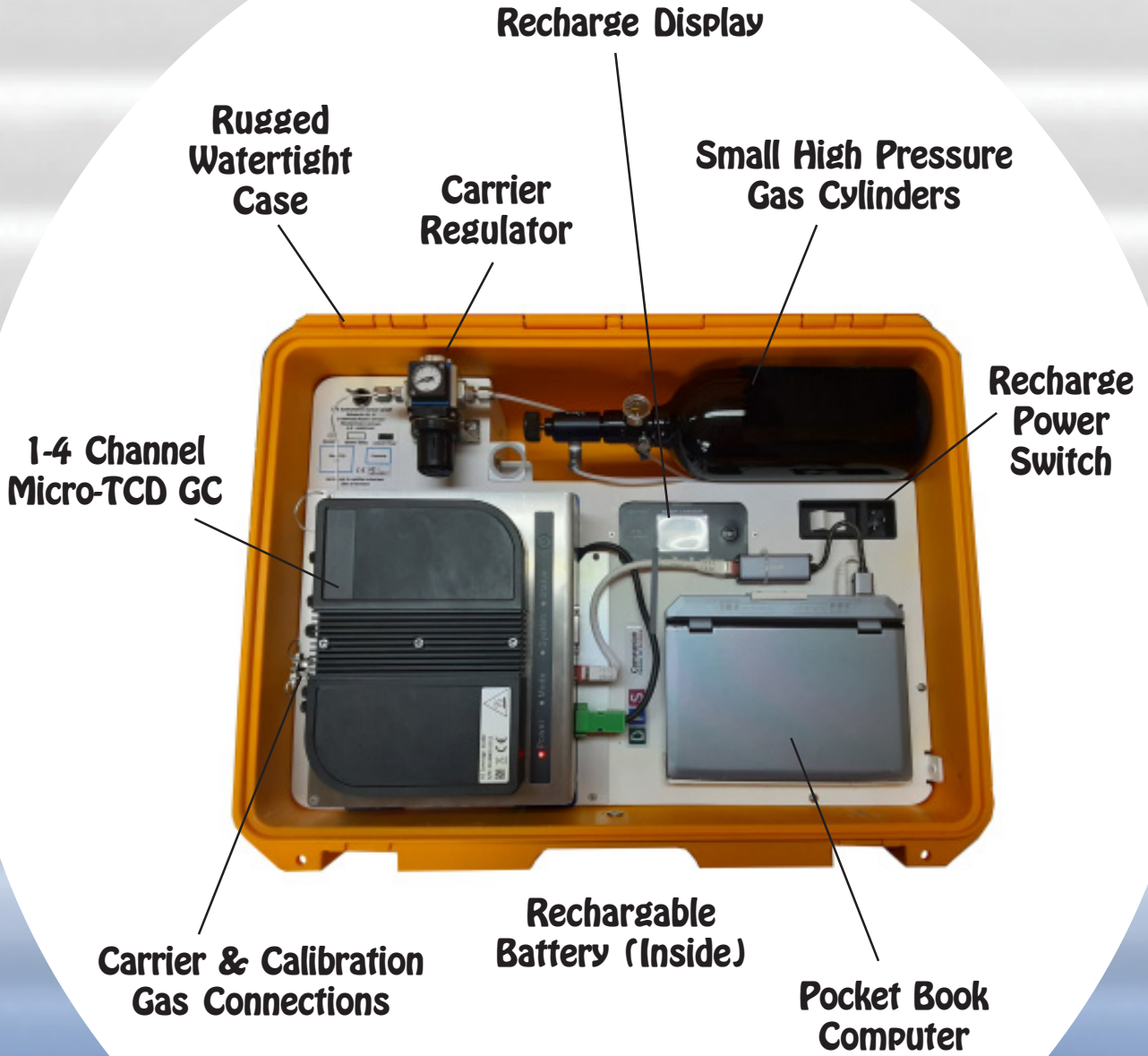
Portable Micro-TCD GC
"It Goes with you Anywhere!"

General Specifications:

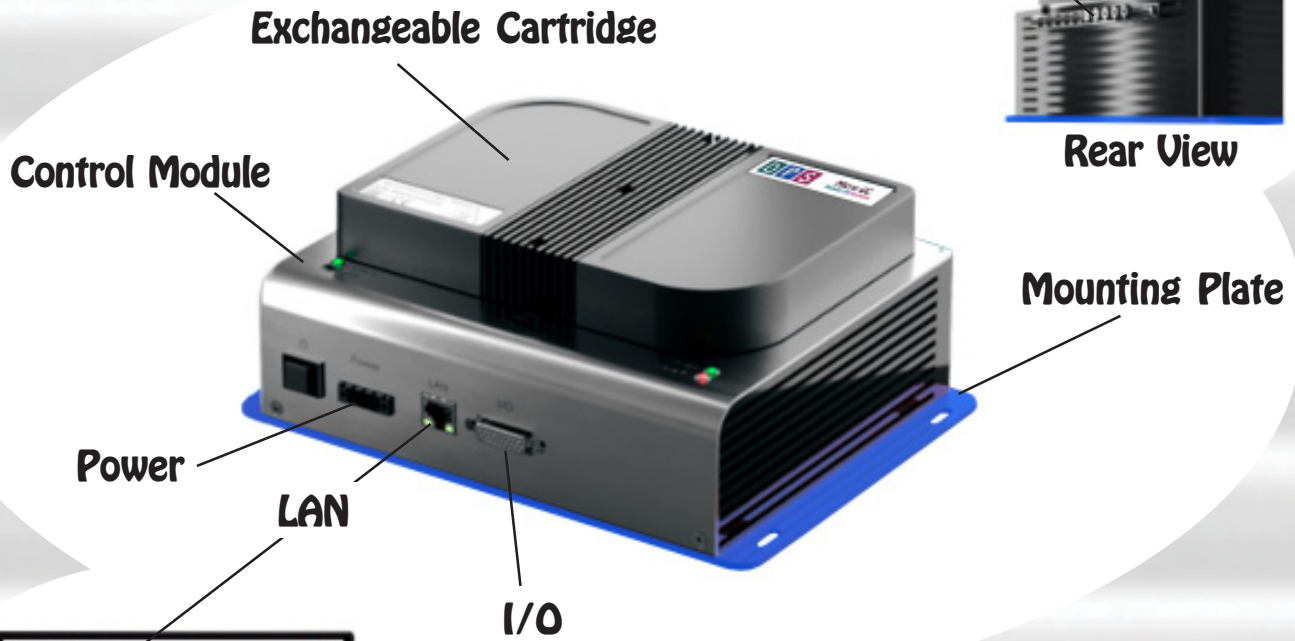
- Rugged Portable Micro-TCD Gas Chromatograph
- Designed for Unattended Continuous Operation
- Most analyses in less than 1 min
- 1 to 4 GC Column Oven/Micro-TCD Channels
- Integrated 3-Stream Selector
- Automated Calibrations
- Fast & Accurate with Low Maintenance
- Built-in Instrument Diagnostics
- Easy Chromatography Data System
- Temperature Control to 0.001 °C
- Pressure Control to 0.001 kPa
- Ultra Compact and Lightweight
- Water-tight Carrying Case (52 x 40 x 21 cm)
- Approximately 15 kg



DPS Companion 4 Layout



DPS Micro-TCD GC Layout



Gas/Sample Connections

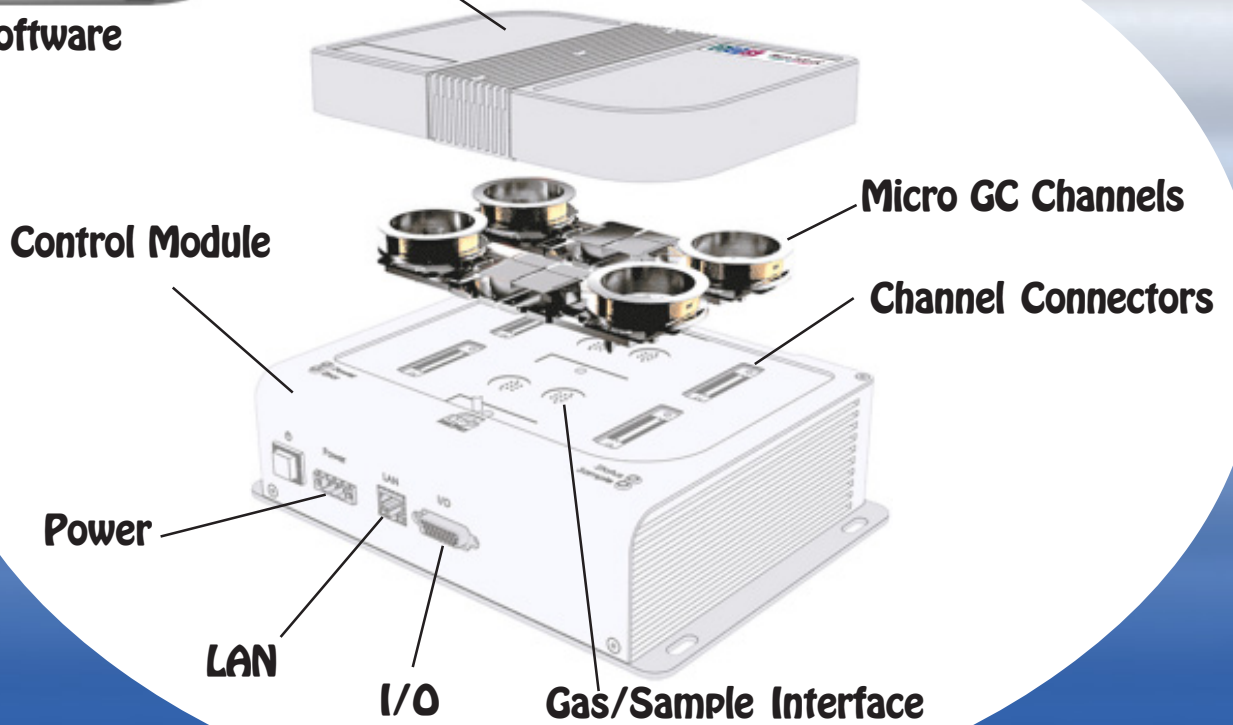


Rear View



Control Software

4 Channel GC Cartridge



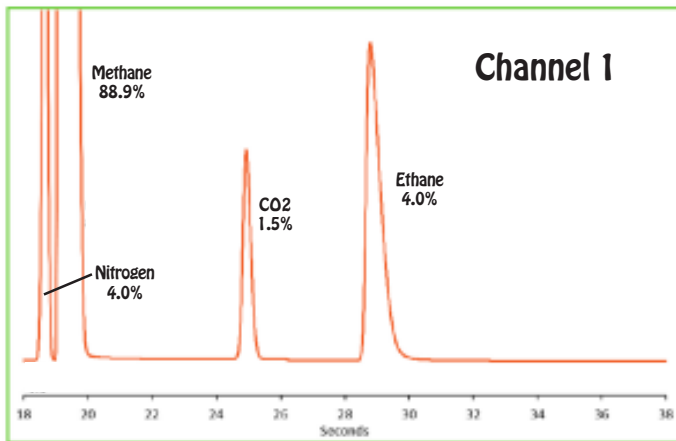
Application Example

Natural Gas Analyzer

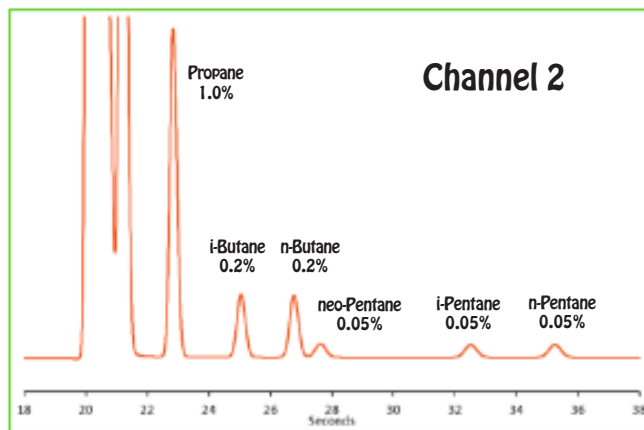
2 Channel Micro-TCD GC - Typically, a 3 Channel Micro GC is needed for a Natural Gas analysis. However, with our unique detector configuration, we only need a 2 Channel GC System.

Every GC Channel includes 2 TCD detectors, one for the Analytical Column and the other for the Pre-column backflush. Using this to our advantage we backflush the C6+ compounds from the 2nd Channel to the Pre-column TCD detector giving us 3 chromatograms of data from a 2 Channel Micro-TCD GC.

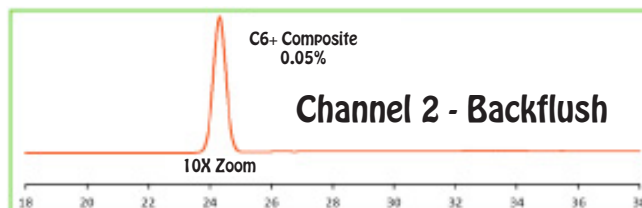
This is just one example of how we reduce Analysis complexity, which saves money and reduces maintenance Costs.



C1 - C2 Hydrocarbons



C3 - C5 Hydrocarbons



C6+ Hydrocarbons

Companion 4 Micro-TCD GC Specifications:

Portable:

- Water-tight Carrying Case (52 x 40 x 21 cm)
- Approximately 15Kg
- Carrier Gas Tanks
- Calibration Gas Tank
- Rechargeable Battery
- Built-in Computer

Micro GC Channels:

- 1- 4 Micro GC Channels in an Exchangeable Cartridge
- Each GC Channel contains GC Oven, Analytical Column, Pre-Column, 2 Micro-TCD Detectors, Electronic & Gas Connectors.

Software/GC Control Interface:

- Enter and store GC Methods via Computer connection
- GC Methods run without Computer connection
- Safety Limits on all user entered parameters
- Communications: RS232, RS485, Ethernet, Digital I/O
- Protocols: Modbus, TCP
- Sequencing for Sampling, Injection, Backflush, etc.
- Memory Storage - up to 256Gb
- Control for Carrier Gas(s)
- Control for Valves (Injection, Backflush, Sample)
- Schedule Auto-calibration
- Control for Stream Selection
- Digital Signal Outputs for each Detector
- Universal voltage input (85 – 240 Vac, 50-60Hz)
- Power Supply - (20 – 28 Vdc)
- Power Consumption - 75 Watts maximum

Detectors:

- 1 - 4 Micro-TCD Detectors Installed
- 2 Micro-TCD's per Channel (8 total)
- Detection Limit (500ppb - 100%)
- 150 °C Temperature Limit
with 0.1 °C set-point resolution

Injectors:

- 1 Micro-machined Injector per Channel
- Sequence Controlled Injection Time

Columns:

- 1 Pre-Column with Backflush per Channel
- 1 Analytical Column
- Isothermal Operation
- Repeatability - < 0.05% RSD
- Cycle Time (Typical) - 15 - 60 sec
- Optional Temperature Program

Control Module:

- Moisture - (5 to 95 %)
- Operating Temperature - (5 to 55 °C)
- Storage Temperature - (-20 to 60 °C)
- Dimensions - 20 X 15 X 10 cm
- Weight - 8 Kg

Gas/Sampling:

- Gas Ports - 1/16"
- Carrier - Helium, Argon, Nitrogen, or Hydrogen
- Carrier Input Pressure - 450 kPa
- Carrier Consumption (Typical) - 15 mls/min
- Sampling - Pressurized or by internal Vacuum Pump
- 3 Sample Streams (more optional)



Portable Micro-TCD GC
It Goes with you Anywhere!