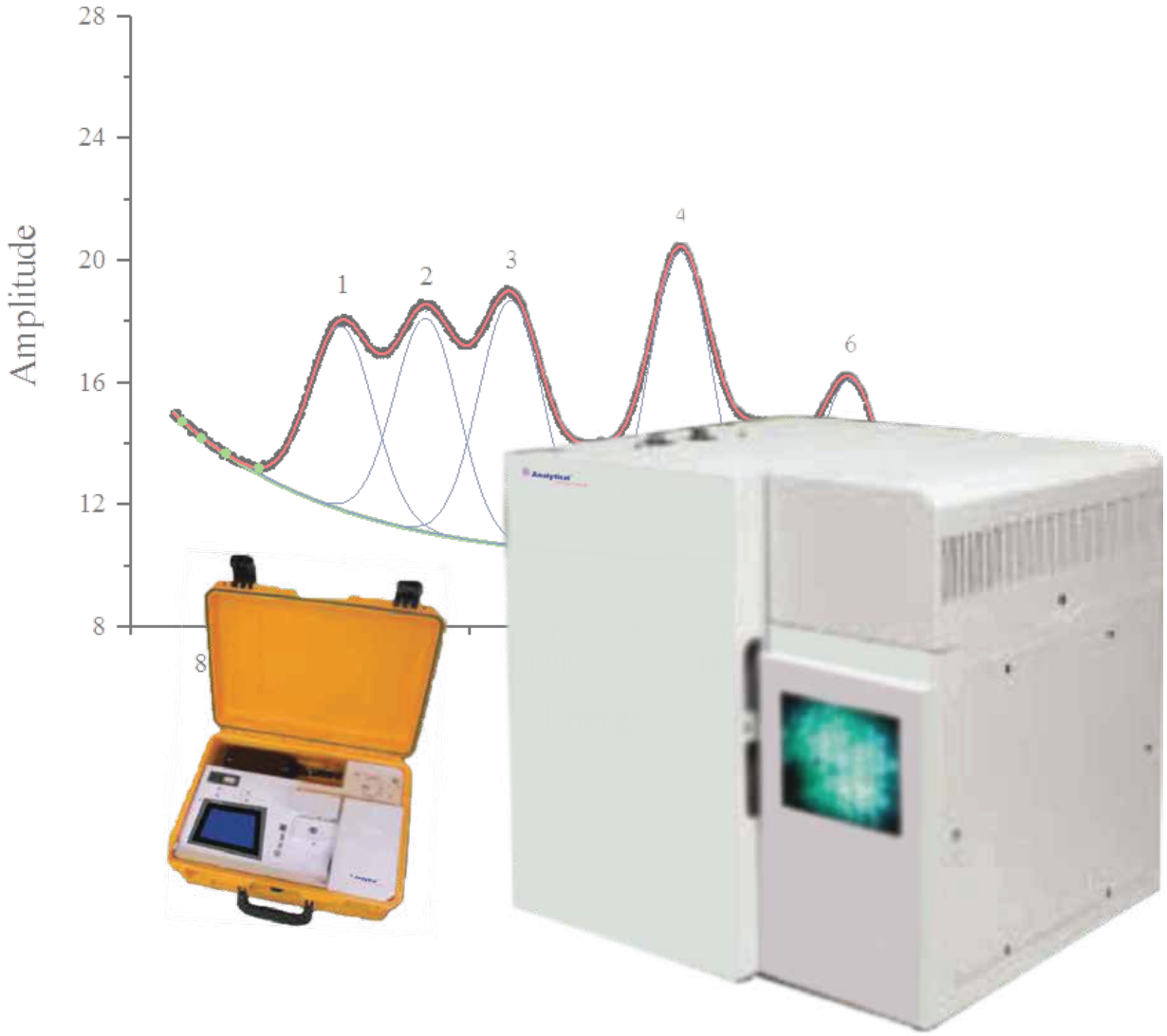
Multiplelabs™
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

Online GC-3000 Series

Online Gas Chromatography



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Petrochemical Permanent Gases & Natural Gas

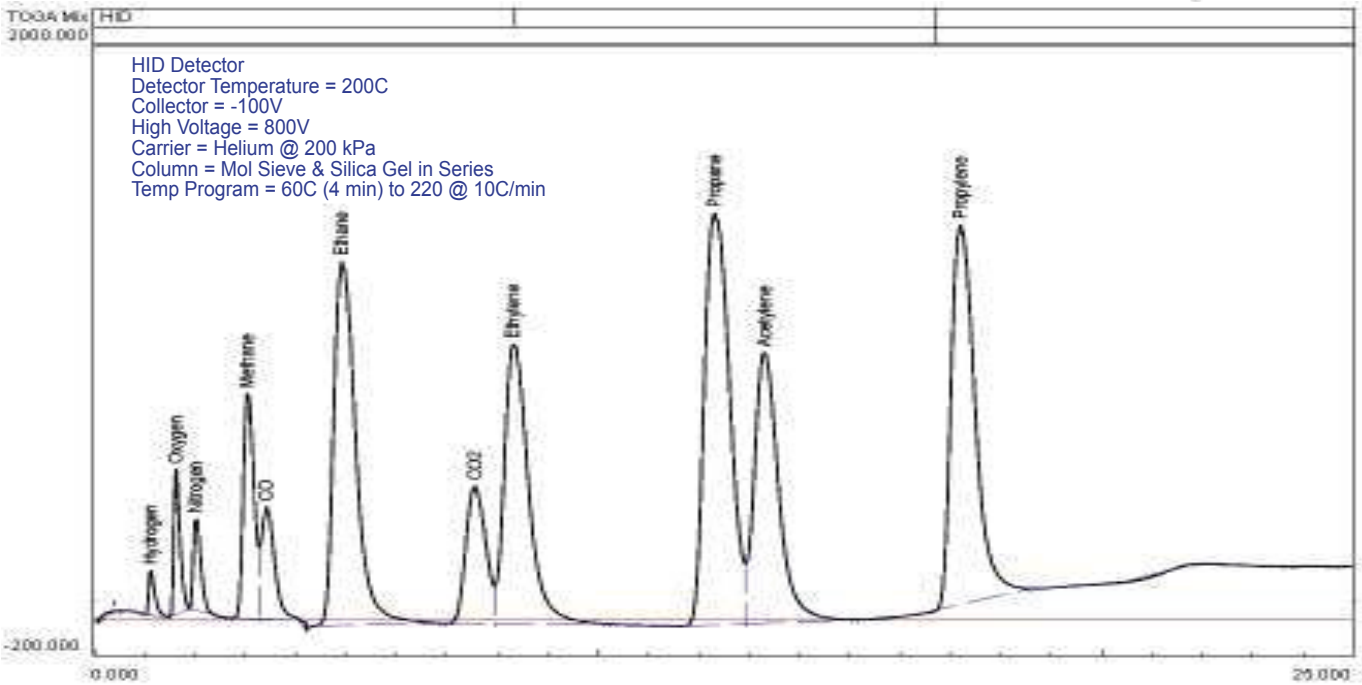
The ATL OnlineGC System is ideal for separating the whole gas components Hydrogen, Oxygen, Nitrogen, Methane, Carbon Monoxide and Carbon Dioxide with one injection. Additionally, C2 through C6 hydrocarbons are easily separated in the same analysis. The sensitive and universal Helium Ionization Detector (HID) from ATL and our innovative 2 column and valve configuration simplifies this analysis. The ATL OnlineGC Systems are ideal for ppm level measurements in your high percentage gas samples. OnlineGC Systems can be built into our Series 600 Lab GC, or the Portable Companion 2, allowing you to take the analyzer with you into the field. Only a small tank of Helium is need to operate the GC System. The fast heating and rapid cooling column oven in every ATL GC assures quick sample turnaround. The fully integrated OnlineGC Analyzer Systems are small and lightweight and all ATL systems are modular for expandability, upgrades, and easy service.

Available Configurations Include:

600-C-075 - Series 600 OnlineGC Analyzer (HID, Valve, 2 Columns) 500-C2-075 - Companion 2 Portable OnlineGC Analyzer (HID, Valve, 2 Columns)

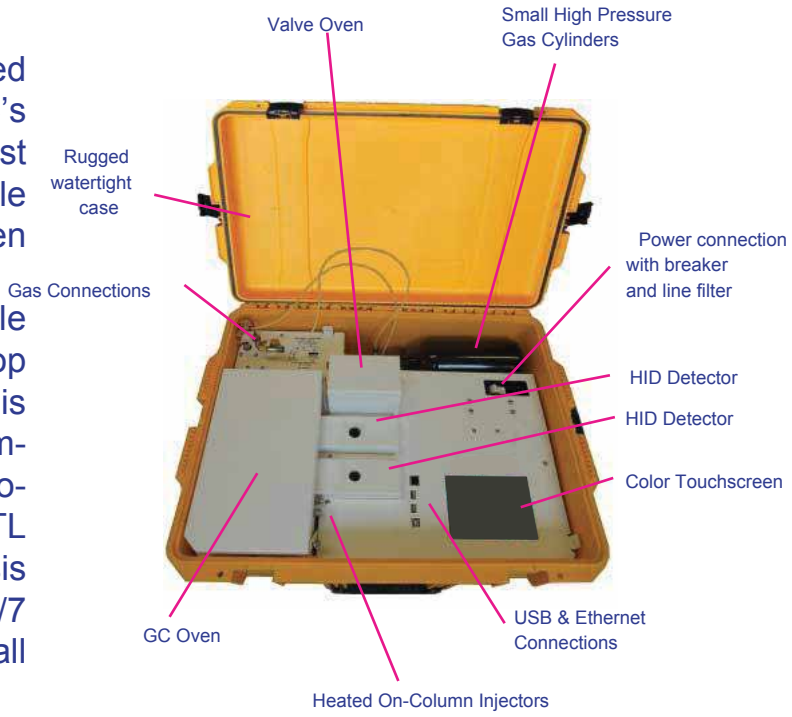
Permanent Gas Standard - 1000 ppm

Component	Area	PPM
Hydrogen	831.2	1000
Oxygen	2722.6	1000
Nitrigen	2147.6	1000
Methane	7037.0	1000
CO	3685.5	1000
Ethane	24484.2	1000
CO_2	7996.0	1000
Ethylene	19515.4	1000
Propane	30906.7	1000
Acetylene	18363.6	1000
Propylene	27521.3	1000



Plumbing Diagram
Sample Analysis

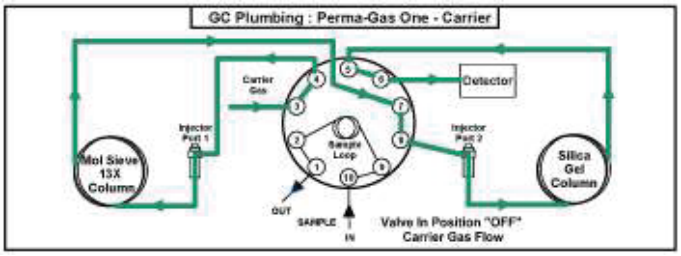
The Gas Sample Valve and heated Valve Oven for the Companion GC's are built right in to provide the shortest possible sample path. The Sample Line is connected to the Valve Oven and from there all of there the entire sample path is heated to limit possible carry over. A fixed Sample Loop ensures reproducible sampling and is Flushed between analyses. The sampling and analysis sequence is automated through the Timeline of the ATL GC Control Software. The analysis can be set up to run unattended 24/7 collecting, processing, and storing all of the data.

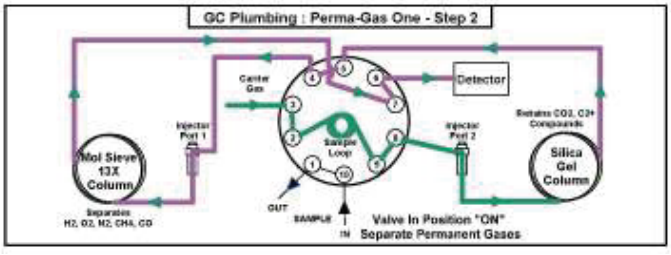


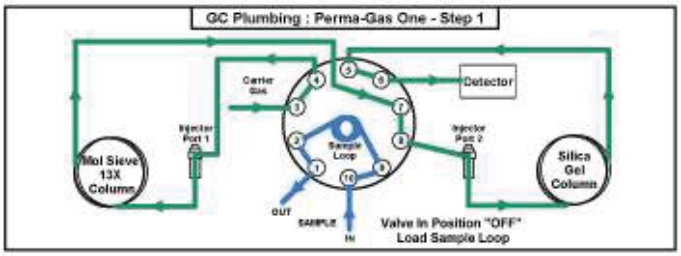
The unique 2 column configuration simplifies the compound separation and analysis. The columns are plumbed in series through the heated Sample Valve.

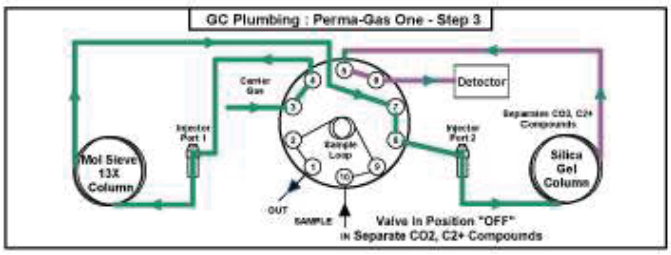
Plumbing Diagram

In the 1st Step the sample is loaded on the Sample Loop with the built-in vacuum pump. During Step 2 the Sample Valve is rotated to Inject the sample. onto the analytical columns. The Silica Gel column retains CO2 & the C2+ hydrocarbons, while the lighter compounds (H2, O2, N2, CH4, & CO) pass through and are further separated on the Molecular Sieve column. Once the lighter compounds have been separated the valve is rotated back in Step 3 and the heavier compounds (CO2 & C2+ hydrocarbons) are separated on the Silica Gel column.









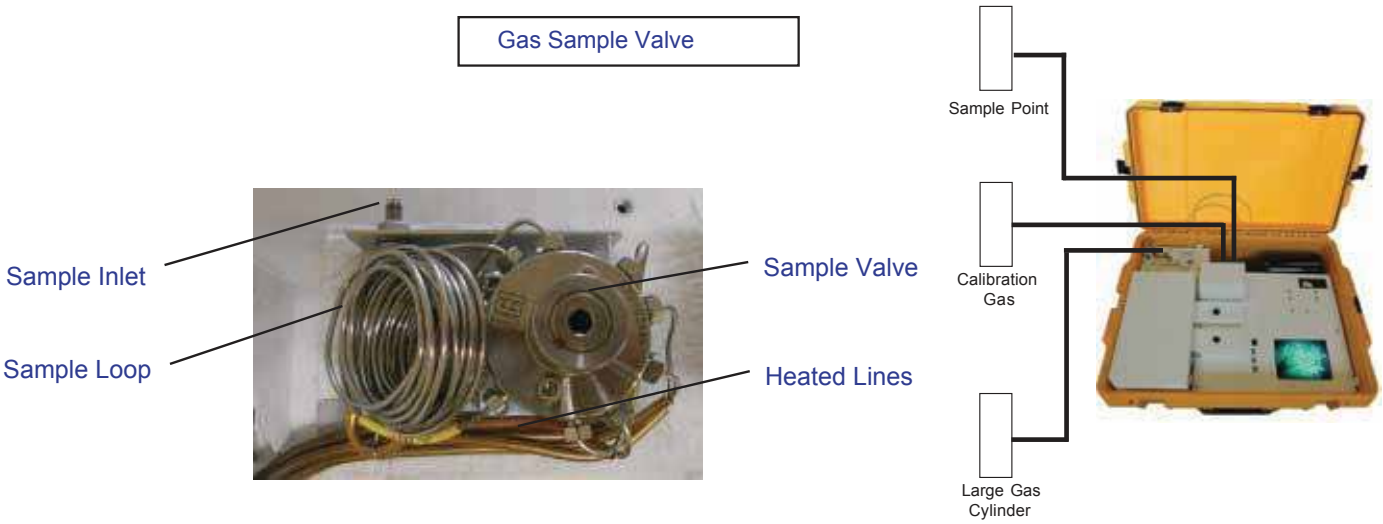
Results, Data & Connectivity

Results	The results and chromatogram are stored on the hard drive. Additionally, for each channel a log file summary of the compounds detected is a convenient way of looking at large amounts of data collected over time.
Data and Connectivity	The built-in computer is used to collect and store the data. Data can also be copied to a USB Stick to transfer to another computer. Data can be transferred from the built-in computer to another computer on the LAN through the Ethernet port using standard Windows protocols. Or, we can use a USB cable to connect the GC to the remote computer where the data can be collected and stored on that hard drive.

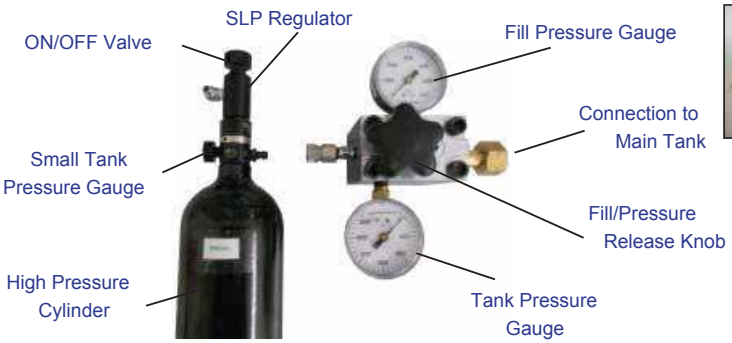
Plumbing Connection Summary

Sample Point	The vacuum pump is strong enough to transfer the sample from the source to the GC as far away as 20 meters using a flexible and inert tube.
Calibration Gas	The pressurized gas flowing through a transfer tube can be 100 meters, or more from the GC. A solenoid inside the GC opens to let the calibration gas flow through the Sample Loop. When the solenoid closes the gas equilibrates to ambient pressure before injection.
Carrier Gas	The small high pressure tank fits right inside the GC. Or a large cylinder can be connected for a longer lasting carrier gas supply. There is no limit on the distance from the cylinder to the GC.

ATL Companion Accessories



Small High Pressure Refill Kit



Accessory Kits

GC Maintenance Kit
Tools, Keyboard, Mouse, Voltmeter

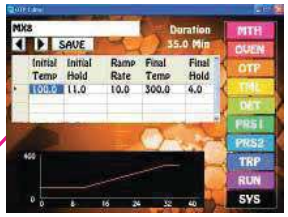
Gas Line Kit
Regulator, Tubing, Cutters, Fittings

Shipping Kit
Syringes, Power Cord, Nuts, Ferrules, Screws (Included with each GC)

ATL GC Control Software

Easy to learn and master using a Graphical User Interface (GUI) and Color Touch Screen.

Editors let you customize the files associated with the GC Method.



Oven Temp Program Editor

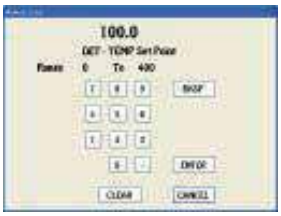
Method Name

Save the current name or create a new one

Timeline Editor

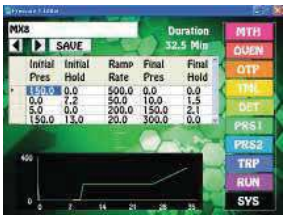
Keyboard to Enter Filenames

File Selection Arrows



Number Pad for entering Values

Navigation Buttons to Quickly jump from one screen to another. Most pages are one button away!



Carrier Pressure 1 Editor

GC Status pages display the parameters in the method, both graphically and as text and values.

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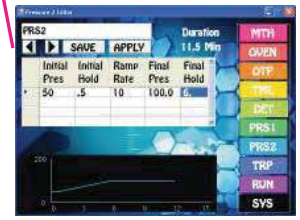
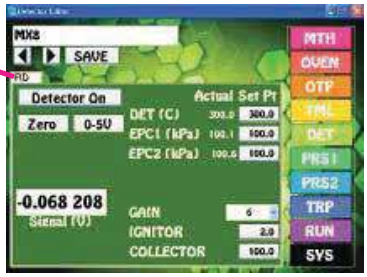


Carrier Pressure 2 Editor

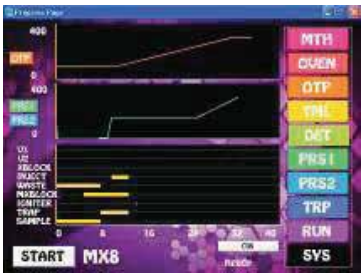
Method Editor

Oven Status

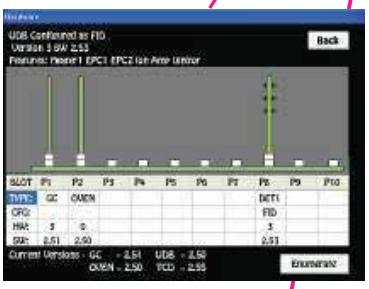


Detector Status

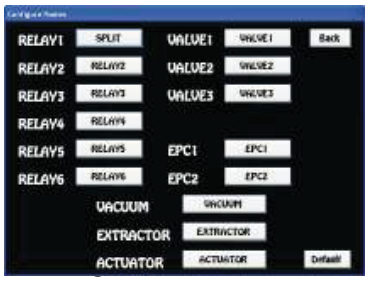
System Status



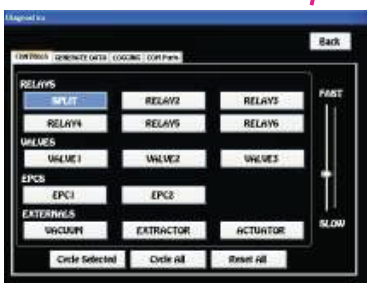
Run Status



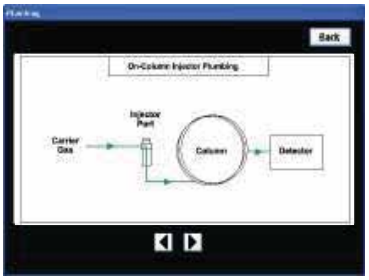
Hardware



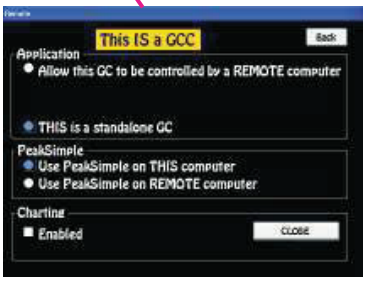
System status pages display the health and viability of the GC instrument.



Diagnostics



Plumbing



Remote Control

Results, Data & Connectivity

Electronics Module:	• Enter and store GC Methods via Color Touch Screen • Actual and set-point display of all GC parameters • Safety Limits on all user entered parameters • Oven Temperature Programs (OTP) with Multiple Ramps • Pressure Programs for Carrier Gases with Multiple Ramps • Timeline for sequencing Relays and Valve • Detector Control of all Parameters on one page • Electronic Pressure Controllers (EPC's): • Atmospheric Pressure & Temperature Compensation • EPC Pressure Control with 0.1 kPa set-point resolution • Plug and Play GC Control, Oven, and Detector Board • Microprocessor Controlled • Proprietary Digital Signal Processing • Digital Signal Outputs for each Detector • Universal voltage input (85 – 240 Vac) with line filter and breaker.
Detector:	• HID – Helium Ionization Detector (10 ppm detection limit dependent on Sample loop size) • 400 oC Temperature Limit with 0.1 oC set-point resolution • 24-bit Digital Outputs for the detector via USB • EPC Pressure Control with 0.1 kPa set-point resolution
Columns	• 1m Molecular Sieve • 2m Silica Gel
Results	• Automatically calibration corrected and reported in % or ppm
Series 600 Oven Module:	• Ambient to 400oC Column Oven • Up to 100 oC per/min Oven Ramp • Fast Cooldown 300 oC to 50 oC in 3.5 min • 1000 watt total Heater Elements • Temperature Ramps with 0.1 oC set-point resolution • 23 x 23 x 20 cm area for Glass, SS, or Capillary Columns
Companion 2 Oven Module:	• Ambient to 325 oC Column Oven • Up to 80 oC per/min Oven Ramp • Fast Cooldown 300 oC to 50 oC < 4 min • 200 watt Heater Element • Temperature Ramps with 0.1 oC set-point resolution • 12.5 x 10.5 x 12.5 cm area for Packed, or Capillary Columns
FCO Oven Module:	• Sub-Ambient to 450 oC "Fluidless" Column Oven
Built-In Accessories:	• Sample Valve - Electronically Actuated • Heated Valve Oven
Injector:	• Heated On-column Injector • Multiple Pressure Ramps with 0.1 kPa set-point resolution

Data Communications:	• Bi-directional communication with popular Data System Network Connectivity: • Enterprise Compatible Network GC running Windows XPe • Ethernet Connection using Windows Network Protocol • On Board ETX Computer for GC Control and Data Acquisition • Remote Control of GC and Data Acquisition over LAN

Servicing, Validation, Trainings and Preventive Maintenance :

Servicing	: We have team of service engineers who can attend to any make of instrument promptly @the most affordable cost.
Trainings	:We also take up preventive maintenance to reduce downtime of instrument's Trainings.
AMC's/CMC	: We offer user training both in-House and at customer sites on instrument principles, operations, troubleshooting.
Validations	: We have protocols for carrying out periodic Validations as per GLP/ GMP/USFDA norms.
Instruments	: We offer instruments/Renting Services Modules like pumps, detector etc. on Rent.

About Analytical Technologies

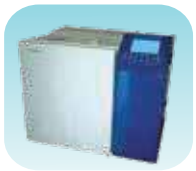
Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the globe. Analytical Technologies Limited is an ISO :9001 Certified Company engaged in Designing, Manufaturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies

UV/VIS Spectro 2080+ Double Beam

Infra FTIR

Optima Gas Chromatograph 3007



Optima Gas Chromatograph 2979 Plus

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid Partical Counter

Optical Emission Spectrophotometer

DSC/TGA

Semi Auto Bio Chemistry Analyzer

HEMA 2062 Hematology Analyzer

Micro Plate Reader/Washer

URINOVA 2800 Urine Analyzer

Total Organic Carbon 3800

Fully Automated CLIA

NOVA-2100 Chemistry Analyzer

PCR/Gradient PCR/ RTPCR

TOC Analyzer

Laser Particle Size Analyzer

Ion Chromatograph

Water purification system

Regulatory compliances

Corporate Social Responsibility

Analytical Foundation

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at **info@analyticalfoundation.org**

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @

Analytical® Technologies Limited

HPLC Solutions | MultipleLabs | Analytical Bio-Med | Analytical Distributors | Analytical Foundation (Trust)

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E: info@hplctechnologies.com
info@multiplelabs.com
info@analyticalgroup.net
info@analyticalbiomed.com

W. www.ais-india.com
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