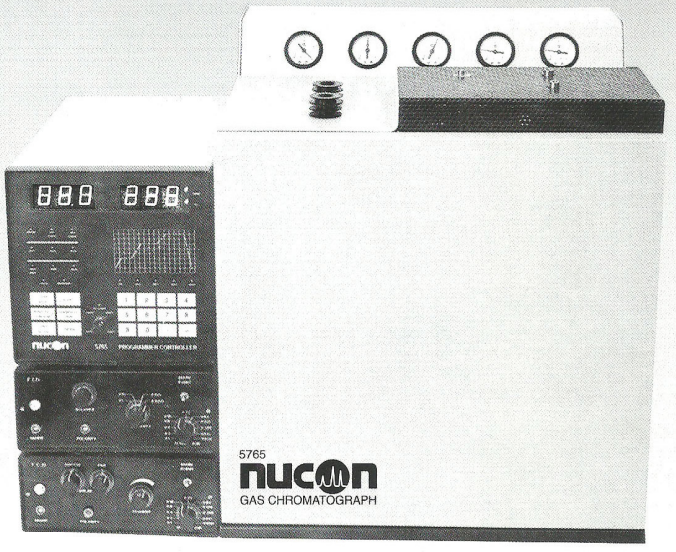
nucon

SERIES II 5700/ 5765

DIGITAL / MICROPROCESSOR BASED

A Unique Proven
GAS CHROMATOGRAPH

WITH OPTION OF ALL DETECTORS AND AUTOMATION



"Superior Chromatography, ease of use and reliability" describe the system GC. Join the thousands of chromatographers who have already recognised its performance, versatility and quality.

5765/ 5700 Gas Chromatographs are standard with Dual Column and are unique because they bring together all the major chromatographic breakthroughs plus new applications oriented design concepts.

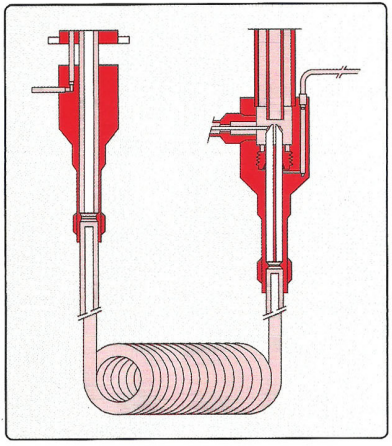
MODULAR FLEXIBILITY

Series II is modular. You can easily choose a chromatograph for your specific application. All components- injectors, detectors, temperature programmers, flow controllers are upgradeable and interchangeable. You can begin with a basic dual column unit and add capability as you need it, or you can start right now with the most powerful, versatile GC system.

THE NUCON ADVANTAGE

All Glass System

Labile compounds which are readily absorbed or react with hot metal surfaces require a completely integral all-glass analysis path. In the Series II 5700 / 5765 GCs, the injection ports use glass inserts, the FIDs have quartz jets. Therefore, together with glass columns true all glass, highly inert separation systems are formed.



MICROPROCESSOR GAS CHROMATOGRAPH 5765 SERIES II

5765 uses State-of-Art Microprocessor Technology to offer to the chromatographer a very powerful system capable of Multichannel and Multifunction control with Accuracy and Ease of operation.

Methods/ Programmes can be developed, stored, recalled and run with simple keyboard operation, Upto nine methods can be stored at a time and are retained in Memory when Mains is switched off. Event Controls, Stop Watch/ Chronometer, Autodiagnostics and R S 2 3 2 interface for Data Communications are provided.

Oven: Ambient to 400ºC or with cryogenics attachment – 50ºC to 400ºC. Auto cooling without door operating.

Prog. Times : 0 to 99.9 mts.

Auto Repeat Runs : 0 to 999

Prog. Rates : 0 to 29.9ºC min. in 0.1ºC steps.

Injector : Ambient to 400ºC and with cryogenics attachment – 150ºC to 400ºC

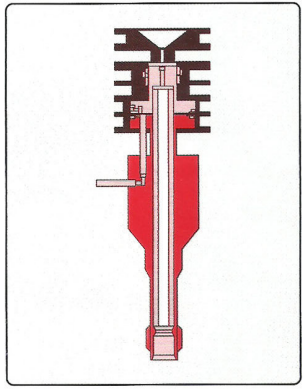
Detector Auxiliary 1 and Auxiliary 2 Ambient to 400ºC Event Control 1, 2 and 3 : 0.1 to 999 mts.

INJECTOR PORTS

The new 5700/ 5765 injector system consists of a stainless steel body which fits into a universal base and accepts a **Removable Glass Insert.** For particular samples this glass insert may be packed with material, which acts as a pre-column chiefly to protect expensive main column against dirt and high boiling components.

5700/ 5765 injectors can accept **Glass** or **Metal Packed Columns or Wide Bore Fused Silica Columns** or **Capillary Columns.** There is a heated universal injector base and it has two injectors.

Liquid injection requires a **Liquid Microlitre Syringe** while Gas injection requires a **Gas Tight Syringe** or **Gas Sampling Value.**



DIGITAL GAS CHROMATOGRAPH 5700 SERIES-II

5700 is the forerunner of our range of Gas Chromatographs. It offers all features of a standard uptodate system.

Digital Controls : Separate Independent Proportional Temperature Controllers for Oven, Injector and Detector.

Positive pushbuttons and thumbwheel switches let you set all chromatographic conditions in a few seconds. The settings are completely reproducible.

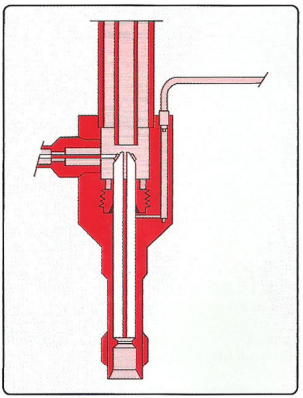
Oven : Ambient to 399ºC in 1ºC steps set by Thumbwheel switches.

Injector/ Detector Temperature: Ambient to 390ºC in 10ºC steps set by Thumbwheel switches.

Temperature Programming : Microprocessor based programmer with rates from 0.1ºC to 29.9ºC per min. with initial time hold upto 99 min.

DETECTORS

The **Flame Ionization Detector** yields excellent sensitivity and a wide linear dynamic range. The quartz jet permits the use of a total all-glass separation system and minimizes degradation and absorption of samples. Consequently sensitivity and reproducibility in the analysis of drugs, hormones, steroids and other labile substances are increased.



Sensitivity : Better than 2 x $10^{-12g/sec}$

Output Attenuator : In 12 Binary steps of x1, x2, x4, x8, x16, x32, x64, x128, x256, x512, x1024 and $\propto$

FID Amplifier : Dual Differential Type.

Amp. Sensitivity : 2 x 10^{-12} A/mv. Linearity : 10^{7}

The **Thermal Conductivity Detector is** a non destructive universal detector. It is widely used in gas chromatography for its high reliability, simplicity and ease of operation. Tungsten – Rhenium **Gow Mac U.S.A.** Filaments in 2 or 4 filament configurations offered. Bridge current variable upto 300 mA. Flow Through Type for high sensitivity. Internal volume less than 300 microlitre.

The **Nitrogen/ Phosphorus Detector** offers high sensitivity and selectivity to Nitrogen and Phosphorous containing organic compounds. The detector contains an alkali metal source which is electrically heated by a system which, once set by operator, maintains constant temperature, thus giving the detector high degree of insensitivity to flow change as well as protecting the alkali metal source from overheating.

The **Electron Capture Detector** is based on the ability of certain types of molecules to absorb electrons, such as halogens, carbonyls, certain condensed ring aromatics etc. This is a selective and high sensitivity detector. The source for ionization is **Nickel 63 10mC** capable of upto 350°C operation. It is used for Pesticide Residue, Pollution, Drug and other analysis.

The Photoionization Detector is a universal concentration detector for low level detection of aromatic, unsaturated hydrocarbons and other compounds that get ionized by UV radiation of Photoionization Lamp $R + hv - R^{+} + e^{-}$

The Flame Photometric Detector is useful for low level detection of S and P compounds. Nucon offers both Single and Dual Detectors which have relative advantages for Gas and Pesticide residue work respectively.

APPLICATION LABORATORY

An excellent facility to assist our users. We also offer a complete range of Packed, Wide Bore and Capillary column as well as High Grade Septa, Calibration Gases, Valves etc.

CAPILLARY CHROMATOGRAPHY

The split / splitless capillary injector provides a system with top performance for capillary chromatography. Carrier Gas is provided to this injector inlet by an additional pressure regulated carrier gas stream. Changing the pressure head setting changes the flow rate in the capillary column which is continuously variable. Split ratio is adjusted by means of a valve. Make up gas to detector is provided from the port in the oven.

Fused Silica or S.S. Capillary columns can be used.

SAMPLING VALVES

A convenient method of reproducibly introducing gas samples from sample stream. An **Automatic Timer Controlled** valve is also available.

If the sample is in vapour phase, condensation can be avoided by **Heating Assembly with Temperature Controller.**

A Liquid Sampling Valve for injecting liquids / condensable Vapours like LPG is available.

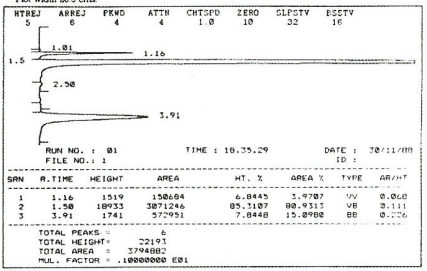
Valves can also be used for **Column Switching** and Back-Flushing making it possible to carry out **Multi-Dimensional gas chromatography.**

Catalyst, Absorption, Reaction Chambers and other similar requirements precolumn or post-column available. A typical application is **Methanizer** conversion of very low levels of CO and CO_2 to CH_4 for detection on F.I.D.

Plot And Report On Ordinary Paper

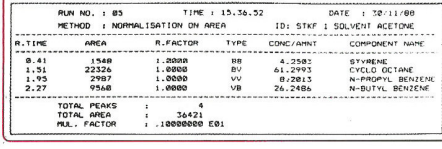
Plot and report is given on a 9 inch wide ordinary paper to keep the running cost to a minimum. The cost of this paper is fraction of the thermal paper.

- Chart speed selection from 0.1 cms/min to 10 cms/min in steps of 0.1 cms/min.
- High density plot upto 2 cms/min.
- Retention time printout at every detected peak.
- Time scale printing at bottom.
- Different tick marks to indicate start and stop of peaks.
- Plot width 20.5 cms.



Report

- Typewriter mode allows user to egter GC conditions, column, type, pressure, flow or any other data.
- Header prints date time, run no., id. and method.
- Component names are printed against identified peaks.
- AR/HT printing (optional) to guide in selection of peak width.
- Optional printing of retention times upto third decimal.
- Very small peaks can be suppressed by print tolerance.



RESULTS

Chromatography results are obtained generally on Potentiometric Strip Chart Recorder or Integrator or PC based Data Station. The Recorder simply gives a concentration vs Time plot in the form of peaks. Integrator gives the option of obtaining only plot or also tabulated results giving Time, Height, Area percentage or amounts in desired units. Different options can be programmed by users. Data Station in addition presents plot results on the screen; these can also be stored in memory.

SALIENT FEATURES

• All Glass system • Quartz FID • Proven System • Imported Cartridge Heaters for Base Body Heating • Platinum Temperature Sensors • Microprocessor option • State-of-Art Modular Chromatography • Wide Range of Detectors • Automation Capability • Auto oven Cooling for Model 5765 Series II • Glass / SS Packed or Capillary Column Operation • Multidimensional Chromatography * Full line of Valves • TCD with Gow Mac USA Elements • Digital Temperature Monitoring for injector, Oven, Detector and Auxiliary Channel if any • Swagelok Type International Standard Stainless Steel Connectors • Output on Terminals for Recorder, Integrator and Data Station Provided.

OPTIONAL FACILITIES

• Purge and Trap • Head Space • Auto Zero • Volatile Sampler • Thermal Desorber • Methanizer • Pyrolyser • Cryogenic Attachment • Digital readout for Pressure & Flow • Digital Differential Mass Flow Controllers • Special Application Packages e.g. Natural Gas, Transformer Oil, Essential Oils, Pesticides, Industrial and City Hygiene etc. • High Temperature oven and multiple Ramp Programming

Manufactured by :

NUCON ENGINEERS

S-18, OKHLA INDUSTRIAL AREA PHASE II, NEW DELHI - 110 020 INDIA
TELEPHONE : 011-26383818, 26384013, 26383604,
FAX : 011-26383440 EMAIL: nucon@nda.vsnl.net.in

503, SOLARIS -II, OPP. L & T GATE NO. 6, SAKI VIHAR ROAD, POWAI, MUMBAI - 400 072
TELEPHONE : 022-28573796, 285737965