

NUCON GAS CHROMATOGRAPH

MODEL: NUCON 5775

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

5775 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

NUCON GC 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 your need it, or you can start right now with the most powerful, versatile GC system.

MAINFRAME

The NUCON GC Model 5775 is fully microprocessor based and has faster analysis capability to increase productivity with an excellent sensitivity.

Nucon GC has modular design of system components allowing quick change or upgrade GC configurations with ease. It has complete accessibility of the entire system for simpler maintenance and an effective cost reduction.

The NUCON GC has an interface to control the GC with an ultimate simplicity. It has provision to upgrade with auto gas and liquid samplers, head space samplers.

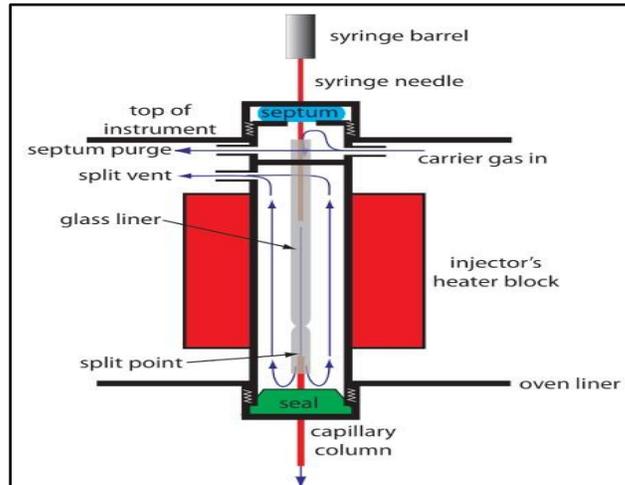
The NUCON GC supports a complete range of injectors. It has Electronic pressure / Flow Control combined with a digital control of oven temperature, to assure an unsurpassed and verified repeatability even in the Fast GC analysis.

The detectors data acquisition rate is good enough for a better reproducibility and accuracy of chromatographic signals.



NUCON GC MODEL 5775

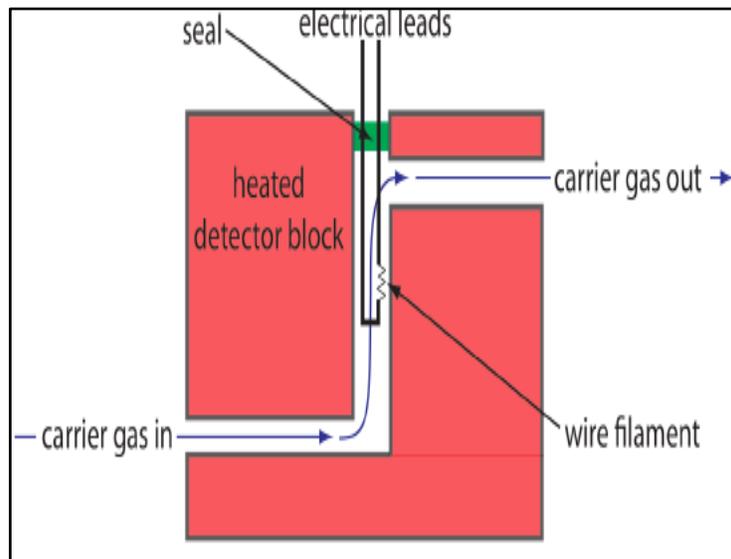
INJECTION SYSTEM



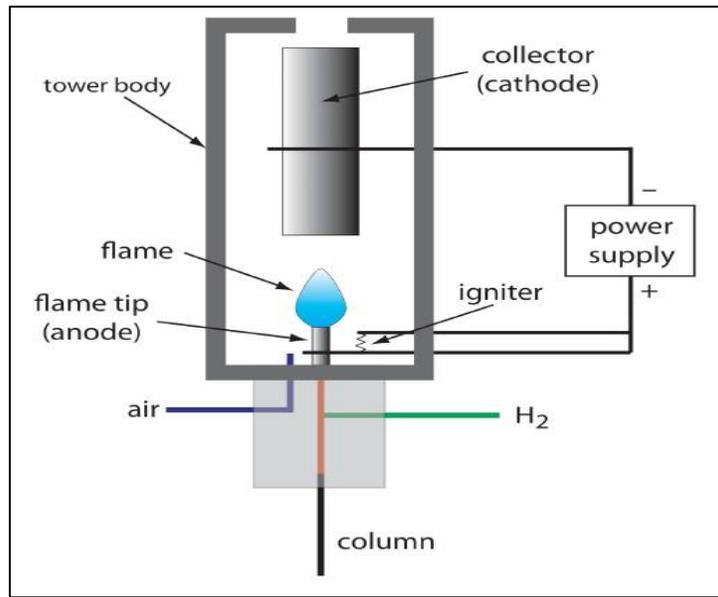
The GC system can be equipped with three injectors with electronic pressure and flow controllers. Customer can order for pack or capillary injector as per analysis requirement. Capillary Injector comes with split less facility with settable split ratio. Injectors have operating temperature up to 450°C. Injectors have capability to attach an automated gas sampling valve & suitable sample loop for sample introduction.

DETECTION SYSTEM

The GC system can be equipped up to four Detectors. Customer can order for FID, TCD, TID, PID, and NPD as per analysis requirement. All detectors are configured using required pressure regulators, electrometer and auxiliary gas lines as per requirement. The data acquisition rate is good enough for a better reproducibility and accuracy of chromatographic signals.



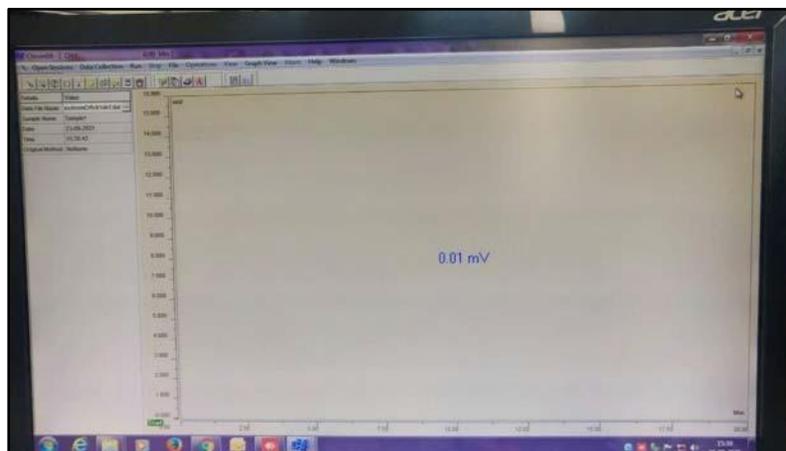
Thermal conductivity Detector



Flame Ionization Detector

Data Acquisition system

Chromatography Station consisting of USB based interface and MS Windows based minimum Chromatography software, which is capable of data integration and calculation, automatic batch reprocessing of the analysis, customized report. During data acquisition, it should be possible to visualize and reprocess previous analyses, prepare the methods for subsequent analyses and run other programs. It has synchronization of start and end of analysis to allow to control data acquisition. It is being supplied with relevant qualification documents. Special

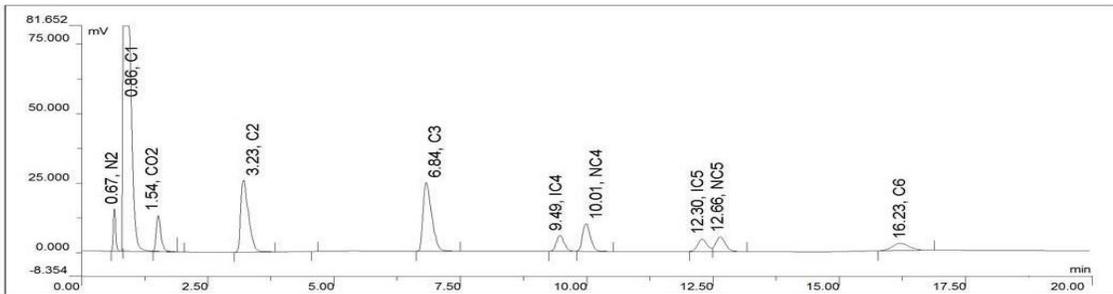


software modules such as NG and LPG physical parameters calculations as per ASTM are also provided as per requirement.

RESULTS

Data File : C:\nucon\2022\JULY22\STANDARDGASNEW.Dat
Method File : C:\nucon\2022\JULY22\STANDARDGASJULY.MET
Sample Name : STANDARD GAS NEW **Analysis Type :** Normalisation Method
Detector : TCD **Time :** 14:38:56
System : GC **Chan No. :** Chan 1
Run Date : 29-07-2022

Peak Width	Peak Threshold	Area Reject	Height Reject
32	60	250	100



AREA STANDARD(with amount RE):

Sr. No.	Component Name	Ret. Time.	Area μ Volt Sec	Amount	Response Factor	Peak Type	ID Type
1	N2	0.67	38273.7109	0.2081	3.107E-07	BV	
2	C1	0.86	1782765.7808	79.8916	2.561E-06	VB	
3	CO2	1.54	81725.0286	2.5097	1.755E-06	TTT	
4	C2	3.23	277627.1429	7.7749	1.600E-06	BB	
5	C3	6.84	292070.4571	6.0315	1.180E-06	BB	
6	IC4	9.49	63416.3314	1.0079	9.082E-07	BV	
7	NC4	10.01	108510.8768	1.4069	7.409E-07	VB	
8	IC5	12.30	56872.6563	0.4832	4.855E-07	BV	
9	NC5	12.66	71400.6585	0.4910	3.930E-07	VB	
10	C6	16.23	60247.5429	0.1952	1.851E-07	BB	
			2832910.1862	100.0000			

Real Chromatogram of Natural Gas done on Nucon GC Model 5775

Technical Sheet:

A. GENERIC

- Power Supply – 230V AC +/- 10%
- Connectivity interface - USB
- Provision to split the sample from single injection to two different detectors and get results for two detectors simultaneously - YES
- Overall Size(Dimensions) (mm x mm x mm) -510x490x480
- Weight - 60 kilogram

B. GC OVEN

- Number of Oven Ramps / Plateaus for Temperature programming – 10
- Temperature Ramp Rate – Maximum-30 Deg. C/minute
- Maximum Operating Temperature (GC Oven) – up to 400 deg. C
- Oven cool down time from Max operating temperature to 50 Deg c --5 minute
- Gas sampling valve (heated / non heated) for gas analysis - Yes, as per requirement.
- Retention time repeatability - 0.01 minute
- Temperature set point resolution (\pm) - 1 degree Celsius

C. INLET PORTS

- Number of Inlets GC can Simultaneously Support – 3
- Number of Injection Ports 3
- Maximum Injection Port heating Temperature up to 450 deg. C (1)
- Type of Sample Injection Port – Pack & split / Splitless
- Split Ratio - 1:6000

D. GC DETECTORS

- Flame Ionization Detector (FID) Number of FID in the System - 0/1/2
- FID Detector Minimum Detection Level (MDL) < 1.4 pg C/s for FID
- FID Linearity better than 10^{-7}
- Compound used for obtaining the declared sensitivity for FID: BENZENE
- Thermal Conductivity Detector Number of TCD in the System - 0/1/2
- TCD Detector Minimum Detection Level (MDL) < 10 microgram /ml for TCD
- TCD Linearity better than 10^{-5}
- Compound used for obtaining the declared sensitivity for TCD : HYDROGEN

E. CAPILLARY COLUMN :

- Number of Capillary Columns provided in GC – 0/1/2
- Type of Capillary Column – Polar/Semi-Polar/ Non Polar
- GC Capillary Column Length - 30 meter

F. PACK COLUMN

- Number of pack column provided in GC – 0/1/2
- General / special purpose column

G. ENVIRONMENTAL

- Minimum Operating Temperature - 8 degree Celsius
- Maximum Operating Temperature - 45 degree Celsius
- Operating Humidity (RH) (%) at 40 degree C - 85 percent

H. GC SOFTWARE

- GC Software - inclusive in the scope of supply
- Perpetual License
- Compatible with Windows 7 or higher version operating system
- All Chromatographic attributes of Integration

I. ACCESSORIES

- Gas Supply is not in the scope of supply. Gas required is ARGON , / NITROGEN, ZERO AIR, HYDROGEN. Capacity of Gas cylinder - 47 LITER WATER CAPACITY
- Number of Cylinders required each – 1
- Gas cylinders certified by PESO- YES
- Cylinder Regulator – Not in scope : Dual Stage Pressure Regulators with S .S. Diaphragm
- PC, / Printer : not in scope: PC required : I Core / 4 GB/ HDD/SSD/ MONITOR/ USB/MOUSE/ KEYBOARD, MS WINDOWS 7.0 / above
- Printer : All compatible
- Power Conditioner: ON LINE UPS/ CVT Not in scope : CAPACITY REQUIRED : 3 KVA

J. INSTALLATION & COMMISSIONING / WARRANTY / AVAILABILITY OF SPARES / TRAINING

- Installation & Commissioning - Inclusive in the scope of supply
- Warranty on equipment - 1 year
- Number of days onsite training provided - 1 day

MANUFACTURED BY:

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