

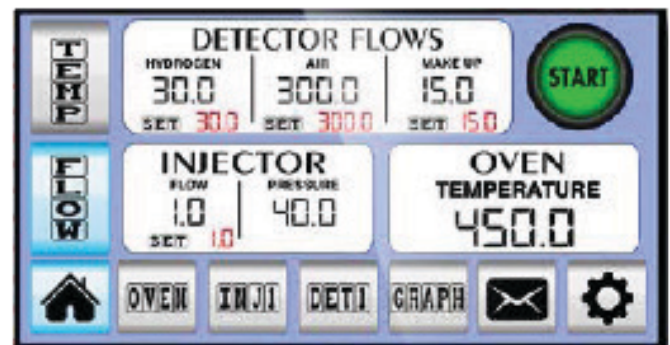
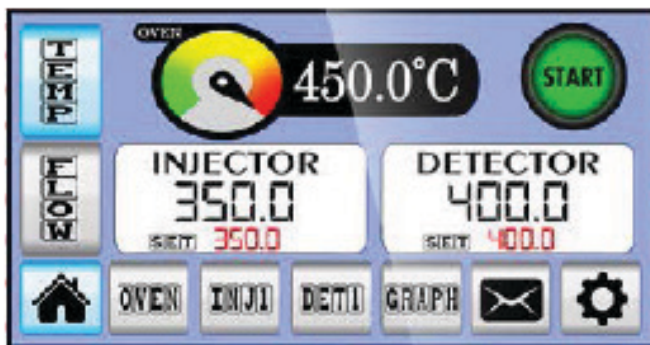
# High Resolution Fast Gas Chromatograph

## Model : GBB - GC6800



### A Digital Chromatography Experience

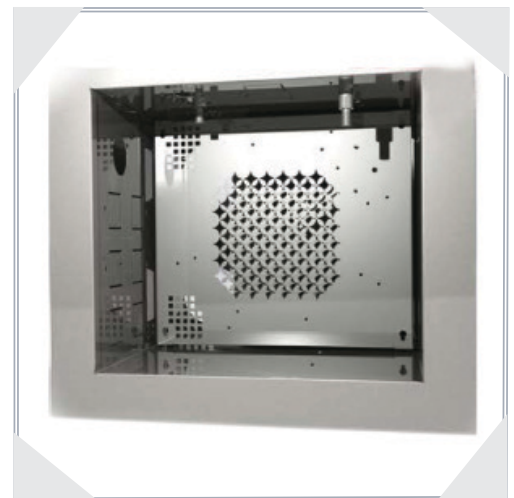
There is a global demand for reliable gas chromatograph's. Most of the currently available devices are far more complex than many customer requirements and doesn't fit the budget. Chem Bioteck 2010 series Gas Chromatograph's fit in this gap. Being economical, but offering fully digital models with reliable, accurate and fast performance catering the need of variety of industries and applications such as food and beverage, environmental, agriculture, flavor and fragrance, petrochemical, pharmaceuticals etc.



### OVEN

A low thermal inertia oven helps to heat and cool fast with an additional cooling fans for better temperature control and minimum cooling time.

- ◇ Column oven (H x W x D): 28 x 28 x 20 cm; 15.6 L
- ◇ Operating temperature range: ambient +3 C to 450 C
- ◇ Cryogenic option minimum temperature: -100 C with liquid nitrogen; -50 with liquid CO<sub>2</sub>
- ◇ Temperature set point resolution: 0.1 C
- ◇ Number of ramps/plateaus: 24/25
- ◇ Maximum heating rate: 140 C/min
- ◇ Oven cool down (22 C ambient): 450 C to 50 C in less than 4 minutes.



## GAS CONTROL



IDPC(Intelgent Digital Pneumatic Controler): Integrated both pressure and flow sensors with choice of true flow or pressure for carrier gas. Upto 24 channels for injection and detection systems or auxiliary gases.

Gas selection(helium, hydrogen, nitrogen, Argon-Methane) for carrier and detectors make up gases. User has the option to select either constant flow or constant pressure or constant velocity through touch interface or through Crystal software and both simultaneously displayed for each device. UP to 7 pressure and/or flow ramps can be programmed for injectors.

Pressure can be adjusted up to 145psi in 0.01psi steps. Inbuilt Atmospheric pressure variation compensation. Optimized gas saver mode allows user to put the instrument in standby thus save valuable resources.

- ◇ Up to 24 channels of integrated electronics gas control
- ◇ split ratio: upto 12500:1
- ◇ Pressure range: 0 - 1000 kpa (0 - 145 psi)
- ◇ Modes: Constant and programmed pressures and flows with gas saver function split flow can be OFF or from 10 to 1250 ML/Min

## Split Splitless Injector

Mono block purge-free injector with intelligent Digital Pneumatic Controller(iDPC). Split/ Splitless time adjustable with 0.1 ml increments through touch screen interface or through Crystal software . Allows digital programming and control of column head pressure from 0.01 psi up to 145 psi with pressure resolution of 0.003psi programming of split ratio from 10 to 1250 with 0-200ml/min total flow for N2 and up to 1250 ml/min for H2/He.

Different operatzion modes: spilt, splitless, split/splitless, pulsed split/splitless, large volume injections [LVI), Packed column simulation. Also compatible wltH Head Space and Online Purge & Trap can work at constant flow or constant pressure and allows programming up to 7 ramps of flow and/or pressure, independent ot the column size and carrier gas. Compatible with 1/8" packed columns, 0.53 mm I.D. semicapllary and capillary columns upto 0.1mm I.D. Maximum temperature programming up to 450C

**All Accessories Are Available At Extra Cost**



### **Packed 1/8" Injector with iDPC**

Packed 1/8" Mono block purge-free Injector with intelligent Digital Pneumatic Controller (iDPC). Allows digital programming and control of column head pressure from 0.01 psi up to 145 psi with pressure resolution of 0.003 psi. Can work at of constant flow or constant pressure and allows programming up to 7 ramps of flow and/or pressure, independent of the column size and carrier gas, Compatible with 1/8" packed columns as well as 0.53 mm I.D. semicapillary columns. Maximum temperature programming up to 450°C



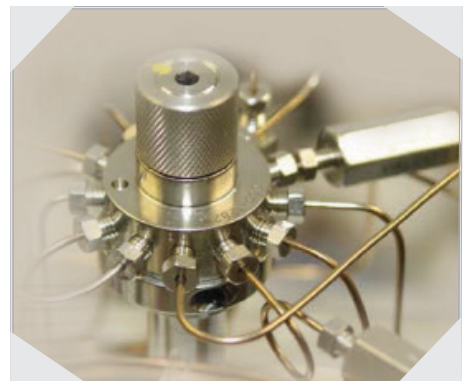
### **Programmable Temperature vaporizer(PTV) Injector with iDPC**

Allows the injection of a large sample volume without concentration. Time savings. Temperature programming from -50 C up to 450 °C at a heating rate up to 10 C/sec. Injection volume up to 5ml. Different packing liners are available. Allows splitless time and cooling time programming. iDPC for carrier gas. Purge-free injector.



### **6 ports automatic gas sampling Injection Valves with iDPC**

Automatic, temperature controlled 6-port Gas Sampling Valve. Includes a 316 stainless steel body and graphite rotor. Maximum working temperature: 350 C. 1/16 in Connections. Exchangeable external loops of different volumes: 0.1, 0.2, 0.5, 1.0 or 2.0 ml. Allows control and temperature programming of the injection valve through the touchscreen and/or software. It makes the injection valve cycles automatic and controls the injection time through the GC microprocessor and/or software. Includes a standard iDPC pneumatic control that allows to use



## Flame Ionization Detector with iDPC

Flame Ionization Detector system with quartz jet and intelligent Digital Pneumatic Control (iDPC) for all gases with excellent response to most organic compounds. Compatible with packed and capillary columns. High sensitivity, high linearity and wide dynamic linear range. Allows digital programming and control for make up and flame gases through the touchscreen and/or software. Automatic flame switch on. Flameout detection and automatic re-ignition. High stability and excellent linear range digital electrometer amplifier. Four working ranges and ten attenuation settings. Autozero. Allows automatic flame switch on from touchscreen and /or software as well as automatic shut off of flame gases if flow stops.

Tested as per ASTM E594 – 96.

Minimum detectable level:  $<1.4$  C/s(Tridecane)

Linear Dynamic range:  $10^7$

Max flow rate of H<sub>2</sub>: 100ml/min

Max flow rate of Air:1000 ml/min

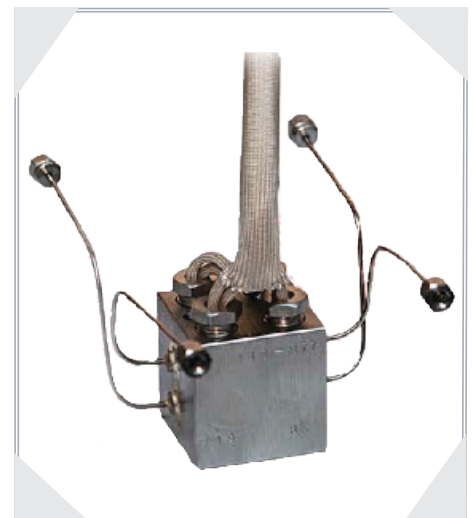


## Thermal Conductivity Detector TCD detector with iDP

Thermal Conductivity Detector with intelligent Digital Pneumatic Controller (iDPC). High sensitivity hot wire, with four filaments Re/W detection technique. Compatible with other filaments and/or high sensitivity thermistors. It allows connection of two columns. High stability continuous intensity source, Digital electrometer/amplifier. In case flow stops, the TCD will shutoff automatically to protect filament. Autozero.

Filament current 0-300 mA.

Tested as per ASTM E516 – 95a.



## Peak Processing Parameters

Automatic time program;  
Manual integral function;  
Automatic identification of complex peak form and accurate division;  
Automatic tracking and correct baseline;  
Negative influence peak eliminates;  
Accordance with GMP regulations;  
Identify methods of spectrum peak qualitative:  
Keep time method;  
Component identification method

## Specification

Input Channel Count	2
Input Voltage Range	-2.5V~+2.5V
Integral Sensitivity	1UVS
Input impedance	10 MΩ
Maximum Peak Number	> 1000
Smallest signal Resolution	1UVS
Dynamic Range	10 <sup>7</sup>
Minimum Time Resolution	0.01min
Linear Degrees	±0.01%
Minumum Peak Width	0.1 s

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At Extra Cost**

## Integral Parameters

Peak area or peak high;  
Quantitative calculation method:  
Normalization method;  
Internal standard method;  
Dividing group method;  
Internal standard method;  
External standard method.

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Laboratory Science



\*Design & specification are subject to change without any prior notice.  
\*OEM option available

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