



500 SERIES GAS CHROMATOGRAPH

Introduction

The 500 Series Gas Chromatograph is an exciting new concept in Gas chromatography. The instrument has the ability to perform conventional and fast gas chromatography with an air blown oven, but also the ability to perform Ultra-Fast Gas Chromatography with directly heated columns.



Control

The 500 Series GC features a 5" 800 x 480 resolution full colour touch screen, which relays the status and vital information about the GC and the analysis. Full GC control and method download is included as standard with Ellution Chromatography Data Station.

Detectors

Initially the 500 Series GC will launch with an FID (Flame Ionisation Detector). This will be followed shortly after with other detector options such as a ECD (Electron Capture Detector), FPD (Flame Photometric Detector) and Heated Transfer lines to other Detectors such as a TOF-MS (Time of Flight Mass Spectrometer).

Column Oven

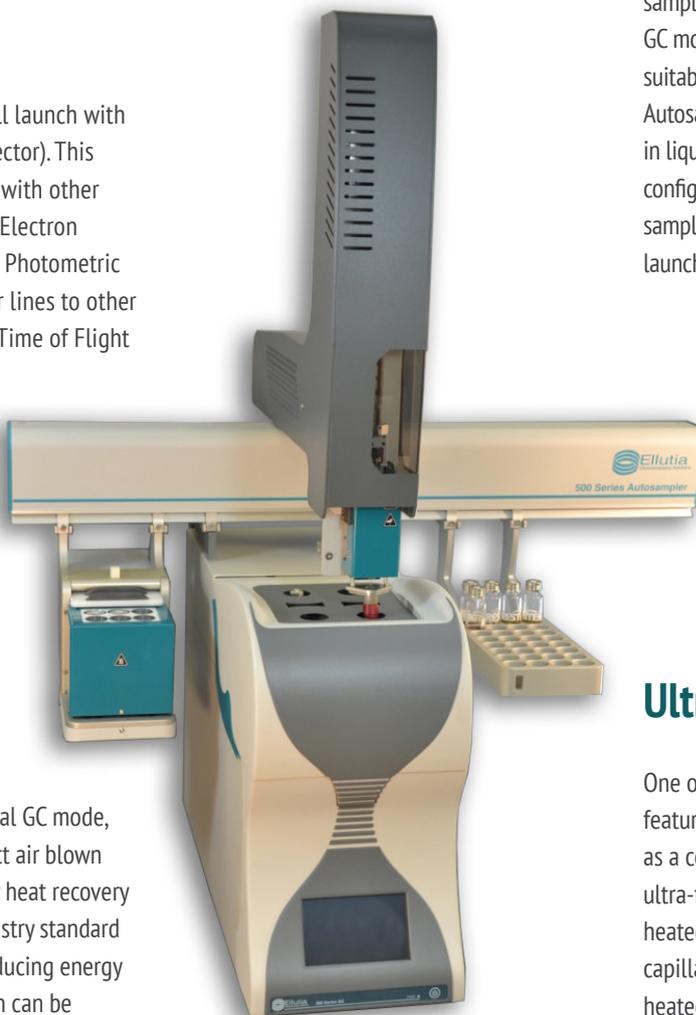
When operating in conventional GC mode, the 500 series uses its compact air blown oven and patented low energy heat recovery heating system to deliver industry standard performance whilst greatly reducing energy consumption. The column oven can be heated up to temperatures of 380°C at ramp rates of up to 60°C/min up to 150°C, 40°C/min up to 300°C 20°C/min up to 380°C.

Injector

The 500 Series Gas chromatograph comes as standard with a unique temperature programmable injector. This can be used as a conventional split / split-less injector with operating temperatures up to 400°C. It also features a number of other operating modes such as Column Oven Tracking, Large Volume Injection plus other PTV modes with temperature ramping up to 600°C at ramp rates of up to 750°C/Min.

500 Series Auto Sampler

Because of the potential large number of samples the GC can run when in Ultra-Fast GC mode, the GC needs an autosampler with suitable capacity to keep up. The 500 Series Autosampler can hold up to 420 samples in liquid sampling mode, and can be also configured for dynamic headspace and SPME sampling. The 500 series autosampler will be launched at the same time as the GC.



Ultra-Fast GC

One of the 500 Series GC's most unique features is that in addition to being operated as a conventional GC, it can also perform ultra-fast chromatography using directly heated columns. In ultra-fast mode metal capillary columns are directly resistively heated. This allows a number of benefits, greatly increased ramp rates and upper temperature limits, greatly decreased cool down times and greatly reduced energy consumption. All of this combines to reduce cycle times by up to 10 times, whilst only using a fraction of the energy a conventional GC would require.

Thanks to the unique design of the 500 series - also having a conventional air blown oven - this can be used in the calibration of the directly heated columns.



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