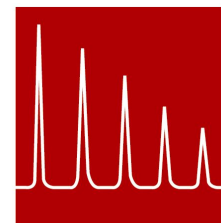


Series 100 DID Gas Chromatograph

AGC
INSTRUMENTS

Gas Chromatography since 1965



..... Analysis of Impurities to ppb levels

Features:

- Sensitivity to low ppb levels
- Uses Discharge Ionisation Detector (DID)
- Accuracy to $\pm 1\%$ of scale
- Proven reliability & Stability
- Fully Automatic
- Minimum Operator involvement
- Proven Instrument Design
- Guaranteed Application
- Turnkey Solutions
- Specifically Designed to Customers requirement

Target Market:

- Air Separation Units
- Industrial Gas Producers
- N5, N6 & N7 Grade Gas Production
- Aerospace and Aviation Industry
- Semiconductor Industry
- Light Source Industry
- Electronic Gases



Applications:

Impurities in Industrial Gases

e.g. He, H₂, Ar, O₂, N₂, CO₂

Impurities in Rare/Noble Gases

Ne, Ar, Kr, Xe

Impurities in Inert Gases

N₂O, SF₆, NF₃

Impurities in Electronic Gases

Impurities in Halocarbon Gases

e.g. CF₄, C₂F₆, C₃F₈

Impurities in Corrosive Gases

e.g. HCl, HBr, Cl₂, BF₃, BCl₃

Impurities measured include:

H₂, Ar, O₂, N₂, CH₄, CO, CO₂,

N₂O, SF₆, C₂H₂, C₂H₆, C₂H₄, Kr, N₂, Xe

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Our Gas Chromatograph:

The AGC Series 100 DID GC has many different systems each specifically engineered to meet the high specifications required by the customer to measure trace impurities in many applications. Each configuration has unique valve and column selections in order to apply different chromatography techniques from Heart Cut to Backflush to Oxygen Removal. All components are manufactured to the highest standards and are stringently tested to ensure perfection. Our valves are precision made, and are located in Helium purged enclosures to eliminate possible system contamination and produce the utmost in detector sensitivity. Background noise and detector limits are very dependent upon the use of an ultra pure helium carrier gas and the entire instrument being clean and leak-tight.

Our Detector:

The AGC Discharge Ionisation Detector (DID) is unrivalled with superb stability and performance giving low ppb measurements. Based on using a non radioactive, universal and concentration dependent design. The detector generates high energy photons through an electrical discharge in Helium. The metastable Helium then ionises all components except Helium.

Our Solution:

We work closely with each client in order to ensure that all aspects of the application are understood. Then our applications design team will design a solution specifically with the application in mind. All our systems can be designed for corrosive applications and are manufactured with corrosion resistance materials.

Our After Sale Support:

Installation and Commissioning support is essential to providing a total Turnkey solution. Through our dedicated Distribution Network we are able to provide local support and back-up, in both native language and in English. All our Distribution partners have been selected having the technical skills required to provide an excellent support. Ongoing training is provided with specific training focused on Industrial and Specialty Gas applications.

Specifications:

Detector

Name: Discharge Ionisation Detector
Linearity: $> 10^6$
Temp Range: Ambient to 300°C
Sensitivity: < 1 ppb of CH₄
Dynamic Range: < 5 ppb to 1%
Response Time: < 0.5 seconds

Power Requirements

110/220/240V , 50/60 Hz, noise and spike free

Dimensions

W = 19" ; D = 400mm ; H = 10U (450mm)

Operating Conditions

Temperature Range: $+10^{\circ}\text{C}$ to 40°C

Output Signal

0-1 V output

Gases Required

Carrier Gas: Ultra Pure He N6.0 ; 20-50ml/min
Discharge Gas: Ultra Pure He N6.0 ; 20-50ml/min
Actuator Gas: Clean dry air @ 3 bar

Please ask about our Helium Purifier Option

Note: Special Dual Changeover Cylinder System is recommended

Gas Connections

1/16" stainless steel with VCR compression fittings

Impurity	H ₂	Ar	O ₂	N ₂	CH ₄	CO	CO ₂	N ₂ O	Ne	Kr	Xe
Sensitivity (ppb)	< 15	<10	<10	<10	<5	<20	<10	<10	<20	<10	<10

How to Order:

Each AGC Series 100 DID GC is manufactured specific to a particular application. Please contact AGC Instruments direct or our local Distributor. We will discuss each aspect of your application to understand your exact requirements. Through this close development we can build and design a configuration for you.

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