



Series AR710 Gas Chromatograph

Analysis of Impurities in Argon



The GOW-MAC Series AR710 GC has been engineered and optimized specifically for the analysis of trace impurities in argon. Two configurations are available depending upon the impurities being measured.

Principle

The argon gas passing through the detector is subjected to a high electromagnetic field. This causes the gas to illuminate. A light dependent resistor (LDR) monitors the resulting luminance. The light intensity is altered as the sample component elutes from the column. The output from the LDR is converted to a mV signal and is measured on a data reduction system. The area count is proportional to the concentration of each component in the sample.

Features

- ▶ Laminar low volume flow system
- ▶ Hands-free operation in auto-mode
- ▶ High quality VCR fittings ensure perfect seals
- ▶ Mass spec leak tested valve in argon purged housing
- ▶ Pre-installed, pre-tested analytical column(s) with chromatogram
- ▶ Rapid start-up with factory supplied documentation
- ▶ Accuracy of $\pm 1\%$
- ▶ Application guaranteed

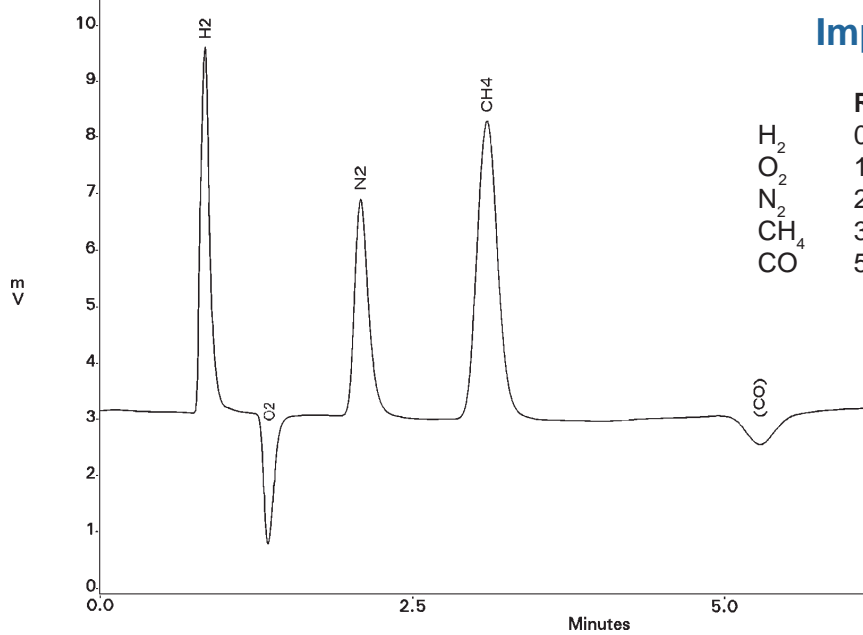
Applications

- ▶ Specialty gas manufacturers
- ▶ Industrial processes requiring inert argon
- ▶ The electronics industry
- ▶ Gas separation plants
- ▶ Nuclear industry
- ▶ Certification of argon purity
- ▶ Semiconductor industry
- ▶ Air separation plants

Sensitivity	
H ₂	< 15 ppb
O ₂	< 75 ppb
N ₂	< 100 ppb
CH ₄	< 30 ppb
CO	< 100 ppb
CO ₂	< 100 ppb

SB-AR710

Impurities in Argon



	RT	Area	ppm
H ₂	0.84	33611	2.10
O ₂	1.24	12896	2.03
N ₂	2.08	30576	2.30
CH ₄	3.09	62875	2.00
CO	5.87	9654	2.02

Specifications

Detector

Type discharge luminosity
 Sensitivity 30 ppb CH₄
 Temperature Range ambient to 400 °C
 Linearity > 10³
 Carrier Gas UHP argon with UHP 2-stage argon regulator*
 *note: if the carrier gas is not as pure as the sample gas, reverse peaks can occur for gases which are in lower concentration in the sample gas.

Column Oven

Temp. Range ambient +4 °C
 Temp. Readout digital, LCD
 Temp. Control
 Accuracy ± 1% of rates, ± 1% of setting
 Stability < ± 0.05 °C/hr, 30 min warm up

Gas Flow

pressure regulator for flow control through columns

Connections

Inlets: 1/8" VCR Swagelok®
 Outlets: 1/8" Swagelok®

High Voltage Power Supply

Output continuous adjustment by means of external potentiometer

Output Signal 0 - 100 mV

Operating Temp 50 °F to 104 °F (10 °C to 40 °C)

Overall Dimensions 19" W x 18" H x 18" D
 (48.26 x 45.72 x 45.72 cm)

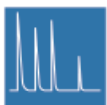
Weight Net: 150 lbs. (68 kg)

Ordering Information

115 V Series **230 V Series**

AR710	AR712	Gas Chromatograph w/ High Frequency Argon Discharge Detector (HFADD) for the determination of impurities in argon. Single valve/ single column instrument for H ₂ , O ₂ , N ₂ , CH ₄ , & CO (automated 6-port GSV with appropriate column)
AR720	AR722	Gas Chromatograph w/ High Frequency Argon Discharge determination of impurities in argon. Dual valve/dual column instrument for H ₂ , O ₂ , N ₂ , CH ₄ , CO, & CO ₂ (automated 10 & 4-port GSVs with appropriate columns)
59-575	59-575-230	Complete Accessory Package for Series AR710/AR720 GC (REQUIRED to install & operate a Series AR710/AR720 GC System)
A05-0003-002-VCR		High Purity, Two Cylinder, Carrier Gas Changeover Manifold System with 580 CGA fittings, purge/vent valves, wall mounted. (HIGHLY recommended)
21-070	21-072	Mini Gas Leak Detector
180-567	180-567	Hand-held Digital Flowmeter (for non-corrosive gases)

Note: Specifications are subject to change without notice. Specifications may vary depending upon the application.



GOW-MAC
 INSTRUMENT CO.

Analytical instruments since 1935

Global Headquarters
 GOW-MAC Instrument Co.
 277 Brodhead Road
 Bethlehem, PA 18017 U.S.A.
 Tel: (610) 954-9000
 Fax: (610) 954-0599
 E-mail: sales@gow-mac.com
 URL: www.gow-mac.com

Asian-Pacific Office
 GOW-MAC Instrument Co. - Taiwan
 3Fl. No. 33, Lane 92, Beida Road
 Hsinchu City 300, Taiwan ROC
 Tel: +886-3-5422845
 Fax: +886-3-5422045
 E-mail: jclo@gow-mac.com

China Office
 GOW-MAC Instrument Co. - China
 West Gate District, Court 31, NanWei Road
 Xichang, Beijing China 100052
 Tel: + 86-13-501010846
 Fax: +86-10-83813136
 E-mail: sales@gow-mac.com.cn
 URL: www.gow-mac.com.cn



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