



A div. of VICI Metronics, Inc.

STATIONARY GAS CALIBRATION SYSTEMS SERIES GC9300 AND GC9500



FEATURES:

- Uses G-CAL Permeation Devices to generate calibration gases for chemicals such as H₂S, CO, CO₂, ammonia, etc.
- Capable of utilizing up to 10 separate G-CAL Permeation Devices
- Ideal for on-line analyzers and chromatographs
- Protected by rugged stainless steel enclosures
- Long operating life

Series GC9300 and GC9500 have been designed as stationary systems to provide mixtures of calibration or "span" gases using our patented G-CAL Permeation Devices. GC Industries has over 200 G-CAL Devices that, when used in conjunction with a stationary system, are capable of generating ppm and ppb levels of calibration gases.

The GC9300/9500 are housed in a rugged NEMA 4X stainless steel enclosure. These systems will accept up to ten separate G-CAL Devices connected in series. For added control, the devices are kept heated at a constant temperature (typically 50°C) by an internal heater block.

The combination of the Series GC9300/9500 and G-CAL Permeation Devices offers the easiest method of calibrating on-line gas analyzers and chromatographs.

G-CAL PERMEATION DEVICES (PARTIAL LISTING)

Acetaldehyde
Acetic Acid
Acetone
Acetonitrile
Acrylonitrile
Ammonia
Arsine
Benzene
Boron Trichloride
Boron Trifluoride
1,3-Butadiene
n-Butane
t-Butyl Mercaptan
sec-Butyl Mercaptan
Butyl Mercaptan
Carbon Dioxide
Carbon Disulfide
Carbon Monoxide
Carbonyl Sulfide
Chlorine
Chloroform
Di Iso Propyl Methyl Phosphonate

Di-Methyl Methyl Phosphonate
Diethyl Sulfide
Dimethyl Disulfide
Dimethyl Sulfide
Ethanol
Ethyl Mercaptan
Ethylene Oxide
Formaldehyde (Para)
Freon-11
Freon-21
Hydrazine
Hydrogen Chloride
Hydrogen Fluoride
Hydrogen Sulfide
Iodine
Methane
Methanol
Methyl Chloride
Methyl Mercaptan
Methylene Chloride
Nitric Oxide
Nitrogen Dioxide
Nitrogen Trifluoride

Nitrous Oxide
Oxygen
Phosgene
Phosphine
Propane
Propyl Mercaptan
Propylene Oxide
Silane
Silicon Tetrachloride
Silicon Tetrafluoride
Styrene
Sulfur Dioxide
Thiophene
Toluene
Vinyl Acetate
Vinyl Chloride
Water
m-Xylene
o-Xylene
p-Xylene



Other G-CAL Permeation Devices are Available -
Please contact the factory

Series GC9300 and GC9500 Stationary Gas Calibration Systems are intended to be used with G-CAL Permeation Devices. These patented Devices, developed by GC Industries, operate on the principle of permeation through two separate phases of G-CAL Polymer layers. The liquid or gas inside the G-CAL Device permeates through the first polymer layer and takes on a gaseous form which permeates through the second polymer layer at a controlled rate. The use of these two G-CAL

Polymer layers results in lower temperature dependency, rigid construction and increased stability with time. Each G-CAL Permeation Device is individually calibrated and certified. Most G-CAL Devices are guaranteed for 12 months of operating life.

For optimum performance, the carrier gas pressure and flow rates must be monitored. We recommended a pressure range of 20 to 50 psig and a flow rate of 50 to 1000 cc/minute.

The various G-CAL Devices are

then connected in series to generate the "span" mixture. For example, different sulfur G-CAL Devices, such as H₂S, SO₂, COS, and Ethyl Mercaptan may be used simultaneously.

Please note that highly corrosive gases, such as Cl₂ and HCl should not be used with the GC9300/9500 Series Systems. These compounds are likely to corrode the stainless steel tubing and fittings. Contact the factory for other compatible systems.

SPECIFICATIONS

MODEL NUMBER	MAXIMUM NUMBER OF G-CAL DEVICES ACCEPTED	ACCURACY	POWER	INTERNAL HEATER TEMPERATURE	ENCLOSURE MATERIAL	SYSTEM SIZE IN INCHES
GC9300	10 Devices Five - 1.0" diameter Five - 1.5" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	20 x 16 x 10
GC9310	10 Devices Ten - 1.0" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	20 x 16 x 10
GC9320	10 Devices Ten - 1.5" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	20 x 16 x 10
GC9500	6 Devices Three - 1.0" diameter Three - 1.5" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	16 x 12 x 8
GC9510	6 Devices Six - 1.0" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	16 x 12 x 8
GC9520	6 Devices Six - 1.5" diameter	± 3 %	115 VAC, 10 amps (220 VAC optional)	Typically set at 50°C (may be adjusted between 40°C & 80°C)	NEMA 4X Stainless Steel	16 x 12 x 8


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