

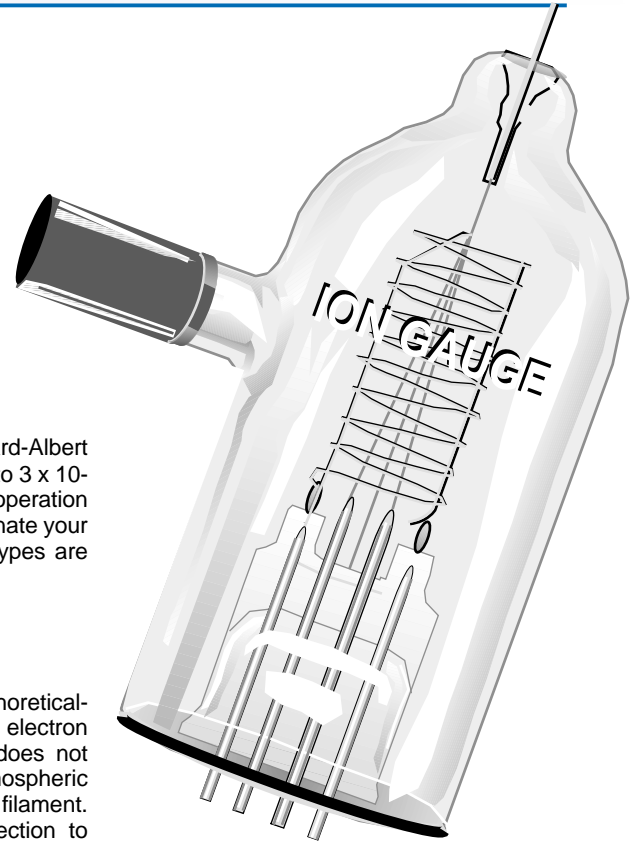
F2 Ionization Gauge Tubes

- Bayard-Alpert Design
- Dual Tungsten or Burn-out Resistant Iridium
- Non-sag Bifilar Grid
- Linear Response
- 3/4" or 1" Pyrex™ or Kovar Tubulation
- Response from 10^{-10} to 10^{-3} torr

Series G Ionization Gauge Tubes are hot cathode gauges of the Bayard-Alpert Type intended for pressure (density) measurement from 10^{-3} Torr down to 3×10^{-10} Torr. These tubes have been designed to provide long trouble-free operation and are carefully cleaned, assembled and packaged so that they will not contaminate your clean system. Both the burn-out-resistant iridium type and the dual tungsten types are interchangeable.

Burn-Out Resistant Iridium Filament (G Series)

The burn-out-resistant filament is made of iridium with a layer of thoria cataphoretically coated on it. This provides long filament life and stable, easily controlled electron emission at relatively low filament operating temperatures. Because iridium does not oxidize rapidly, even at high temperature, occasional accidental exposure to atmospheric pressure while hot will not appreciably damage or shorten the active life of the filament. The burn-out resistant model is designed for convenient and reliable connection to standard connectors.



Dual Tungsten Filament (T Series)

The dual tungsten filament model is also designed for use with the same gauge cables. By connecting control unit filament leads to contacts "C" or "D" of the connector, either filament may be used by merely reversing the connector 180° on the tube base. Because the two filaments are independently connected, one may be used to operate the gauge and the other operated as a desorption filament.

The bifilar design supports the grid at its midpoint so that the unsupported length of grid wire is only half that in conventionally wound grids. Thus the tendency to sag during outgassing is greatly reduced.

► **Tech Tip** Bayard-Alpert Ion Gauge can measure vacuum from 10^{-10} to 10^{-3} torr.

Physical Data

Filament Voltage	3 to 5 Volts AC
Filament Current	4 to 6 Amps AC
Grid Voltage	+150 Volts
Grid Outgas	6.3 to 7.5 Volts@ approx. 10 Amps.
Collector Voltage	-20 to -50 Volts
Sensitivity	Tungsten Filament: $100\mu\text{a}/\mu$ @8 ma grid current (Nitrogen) Iridium Coated Filament: $100\mu\text{a}/\mu$ @10 ma grid current (Nitrogen)
Linearity	10^{-4} to 10^{-10} Torr @ 10 Ma 10^{-3} to 10^{-4} Torr @ 1 Ma grid current

Electrical Data

Bulb Material	Nonex 7720 Glass
Tube Diameter	2 1/4" max. O.D.
Tube Length	6 3/4" Maximum
Tubulation	See Chart
Mounting Position	For best results, it is recommended that tube be mounted vertically
Recommended Socket	Either Winchester Electronics Connector P/N A7SH or Continental Connector P/N 7-16SH