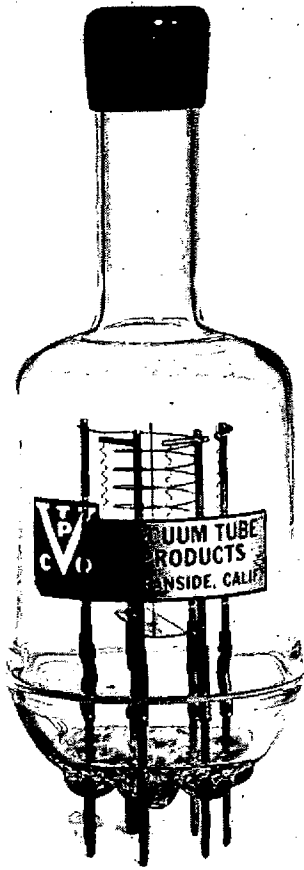


# PRODUCT DATA SHEET



## VTP-7169 — VTP Ionization Gauge Tube

The VTP-7169 Ionization Gauge Tube is an all glass gauge tube designed for the maximum of reliability and reproduction of accurate readings. This tube type utilizes the recognized superior design of the metal version—VTP Type 6578—but is now available in this type suitable for attachment to all glass vacuum systems. Attachment may also be made to tubular connectors on metal systems by means of VTP portcouples.

The VTP-7169 employs a grid surrounding the collector with dual grid connections allowing for easy outgassing of the grid and other elements of the gauge by merely passing heater current directly through the grid structure. The VTP-7169 is provided with three separately connected filaments providing the maximum in gauge reliability when used on large systems and where a shutdown for gauge tube replacement is costly.

### GENERAL CHARACTERISTICS

Filaments (use filaments individually for maximum life) .....Three.  
Filament Voltage ..... 5.0 Max. Volts  
Filament Current ..... 6.0 Max. Amps  
Grid Voltage (Referenced to Filament) .....500 Max. Volts  
Grid Current (Emission Current) ..... 15 Max Ma  
Grid Voltage (Pin #3 to Pin #5).....5 Max. Volts  
Grid Current (Pin #3 through pin #5 circuit).....4 1/4 Max. Amps  
Collector Voltage (Referenced to Filament)..... 500 Max. Volts  
Collector Current—Varies directly with gas pressure and directly with grid current.

When Filament is hot do not exceed following pressures:

Pressure Maximum (Corrosive gases or Nitrogen) ..... 5 Microns  
Pressure Maximum (Noble gases or Hydrogen).....1.2 Atmospheres

Base .....Medium Moulded flare Septar 7 pin—RETMA E7-2  
Basing: Pin No. 1 2 3 4 5 6 7  
Element F1F2 F1 G C G F3 F2F3  
Mounting (Mechanical) ..... Portcouple or glass seal  
Mounting Position ..... Any  
Bulb Glass (Type) ..... Nonex 7720

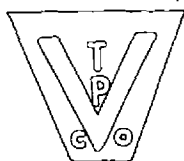
### TYPICAL OPERATION

Filament Voltage—Single Filament.

(Adjust to provide 5 ma Emission to grid).....Approx. 3.0 Volts  
Filament Current (When obtaining Emission from one Filament) Approx. 4.0 Amps  
Grid Voltage (use regulated supply) .....+ 150 Volts  
Grid Current (adjust filament voltage to obtain this value) .....5 Ma  
Collector Voltage .....—30 Volts  
Collector Current (Depends on gas and gas pressure).....60 Microamps/micron for dry air.

Grid Outgassing Operation—Apply 5 volts at approx. 4 amps between pins #3 and #5 until gas pressure measured is stable.

Note: Neither the bulb or the collector of the VTP-7169 require separate outgassing due to the efficient radiation heating from the grid outgas operation.

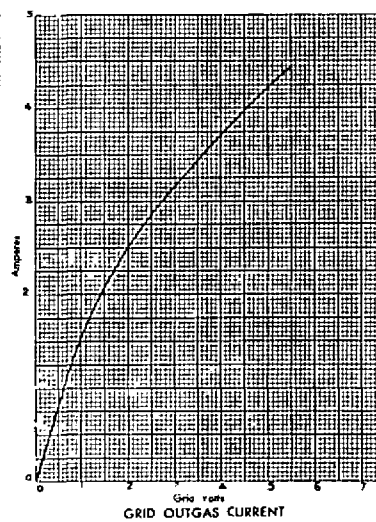
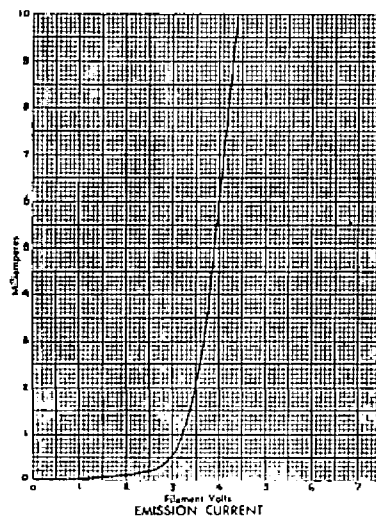
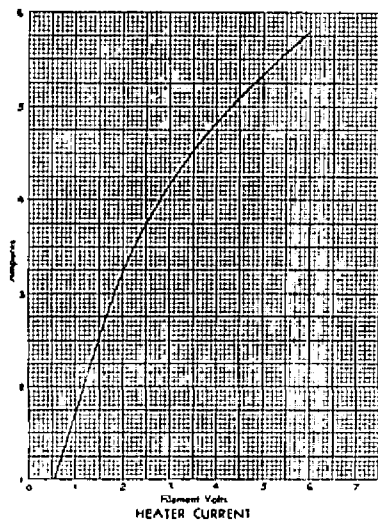
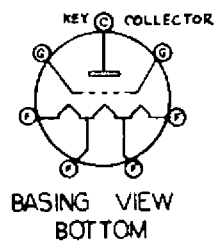
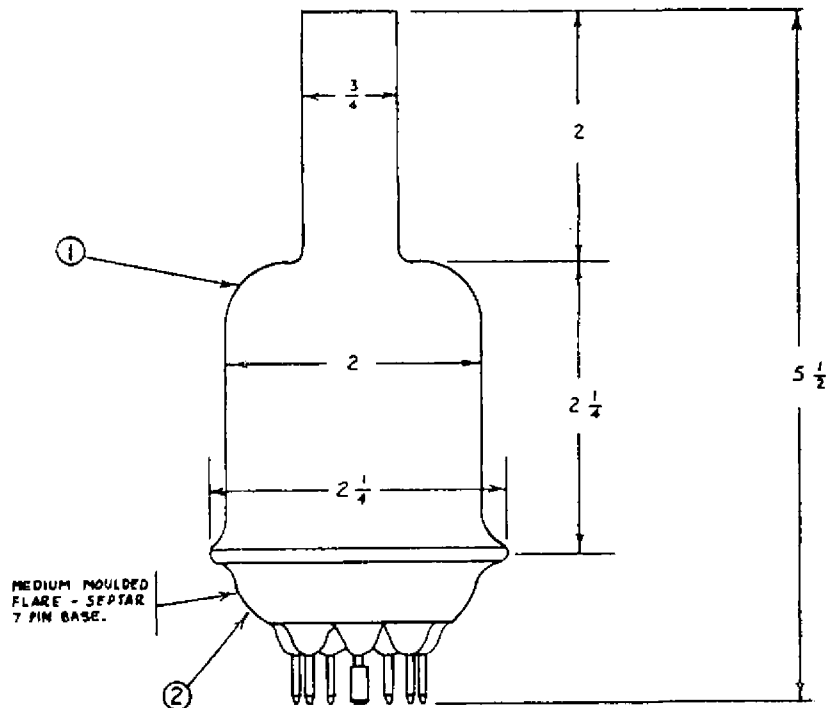


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