

7F COLD CATHODE SENSOR

Double Inverted Magnetron Technology

Range: 1×10^{-2} to 1×10^{-11} Torr

PRODUCT FEATURES

Wide range of measurement to ultra high vacuum of 1×10^{-11} Torr

Double inverted magnetron provides improved sensitivity and is not affected by X-Ray errors

Rugged all stainless steel construction ideal for most industrial applications

Small compact size and can be used in any orientation

Reduced external magnetic field compared to other inverted magnetron sensors

UHV Knife edge seals



7F Cold Cathode Part# 2-2144-052

PRODUCT DESCRIPTION

The Televac model 7F employs patented Double Inverted Magnetron sensor technology to create a rugged and robust wide range vacuum sensor with proven accuracy and unmatched durability in high vacuums.

As part of the unique Double Inverted Magnetron design, opposing magnets maintain two separate inverted magnetron cells increasing the probability of ionization. Electron currents are essentially double those produced by single inverted magnetrons, providing an improved signal to noise ratio and improved sensitivity over other types of cold cathodes.

Unlike hot filament ion sensors that won't tolerate large pressure bursts without compromising its filament, the 7F is impervious to accidental inrushes of gas.

PRODUCT APPLICATIONS

- Deposition of Optical & Functional Films
- Distillation of Low Vapor Pressure Chemicals
- Electron Microscopes
- Freeze Drying
- Helium Mass Spec. Leak Detectors
- High Energy Physics
- Lamp, Lighting & Laser Products Mfg.
- Mass Spectrometers
- Metallurgical Processes
- Night Vision / Electro-Optical Detector Mfg.
- Plasma Enhanced Deposition
- Sterilization

7F Cold Cathode Sensor

PRODUCT SPECIFICATIONS

Range: 1×10^{-2} to 1×10^{-11} Torr

Overpressure Tolerance: 150 PSIG

Wetted Materials: Type 304 Stainless Steel

Operating Temperature Range: +15 C to +50C

Maximum Continuous Bake Temperature:
+200 C (with magnets removed)
+150 C (with magnets)

Calibrated Medium: Dry Nitrogen per AVS
Recommended Practice No. 6.4.1969

Vacuum Interface: 2.75" Conflat

Dimensions: Height 4.72 inches (11.98 cm)
Width 2.73 inches (6.93 cm)

ORDERING INFORMATION

Sensors:

7F Cold Cathode with 2.75" Conflat, Part# 2-2144-052

Controllers & Gauge:

MM200 Part # 2-7900-20 (base unit)

2-6200-245 (7F module)

MC300 Part # 2-4502-303 (2A with 7F Combination)

2-4502-304 (4A with 7F Combination)

MP7FR Vacuum Gauge - Part# Series 2-7970-XXX

Cables:

Standard cables for use with MM200 or MC300 Instruments

10 ft - Part #: 2-9841-010

20 ft - Part #: 2-9841-020

35 ft - Part #: 2-9841-035

50 ft - Part #: 2-841-050

High Temperature Cables (200 C)

10 ft- Part #: 2-9842-010

20 ft- Part #: 2-9842-020

35 ft - Part #: 2-9842-035

50 ft - Part #: 2-9842-050

Triaxial cables for 10^{-11} Torr readings and electrical noise immunity

10 ft- Part #: 2-9835-010

20 ft- Part #: 2-9835-020

35 ft - Part #: 2-9835-035

50 ft - Part #: 2-9835-050

CONTROLLERS AND GAUGES for use with 7F Cold Cathode Sensor



MM200 Controller



MP7FR Vacuum Gauge



MC300 Controller