

## 2A VacuMini Thermocouple Vacuum Gauge

Part Number: **2-2100-XXX**



### Operating Specifications

Operating Range	1*10 <sup>-3</sup> Torr to 20 Torr
Analog Output	Controller-dependent
Supply Voltage	Controller-dependent
Maximum Voltage	5 V
Maximum Power	55 mW
Maximum Filament Temperature	250 °C
Mounting Orientation	Any
Calibration Medium	Dry air or nitrogen
Overpressure	100 PSIG
Analog Output Resolution	Controller-dependent
Operating Temperature	-20 °C to 50 °C
Storage Temperature	-40 °C to 60 °C
Bakeout Temperature	60 °C
Response Time	≤ 1 s
Accuracy	
1 to 10 mTorr	±1 mTorr
10 to 100 mTorr	±10% of reading
100 mTorr to 1 Torr	±20% of reading
1 to 20 Torr	Indication only
Analog Output	±10 mV

### Physical Characteristics

Electrical Connections	4-Pin; Mates w/Bendix PC-06A-8-4S SR
Weight	28 g (0.062 lbs) (without tether)
Dimensions	See dimensional drawings

### Key Features and Benefits

- Competitively priced
- Compact, robust design
- Excellent resolution and repeatability
- Minimal sensor to sensor output variation
- Excellent customer support

### Applications and Industries

- Liquefied Natural Gas (LNG), Industrial Gas, Cryogenics
- National labs, research and development

### Ordering Information

Part Number	Description
2-2100-102	1/8" NPT Stainless Steel with Cap and Chain
2-2100-102-01	1/8" NPT Stainless Steel without Cap and Chain
2-2100-045	4 VCR-F Stainless Steel without Cap and Chain

### Compatible Vacuum Controllers

Part Number	Description
2-7900-034	MX200 Vacuum Controller RS-232/RS-485/USB
2-7900-037	MX200 Vacuum Controller EthernetIP/USB
2-7900-038	MX200 Vacuum Controller PROFINET/USB
2-7900-071	MV2A Vacuum Controller
2-3014-042	Compact 2A Vacuum Controller
2-3001-10X	VacuGuard™ Portable Vacuum Controller
2-3001-10X	B2A Portable Vacuum Controller

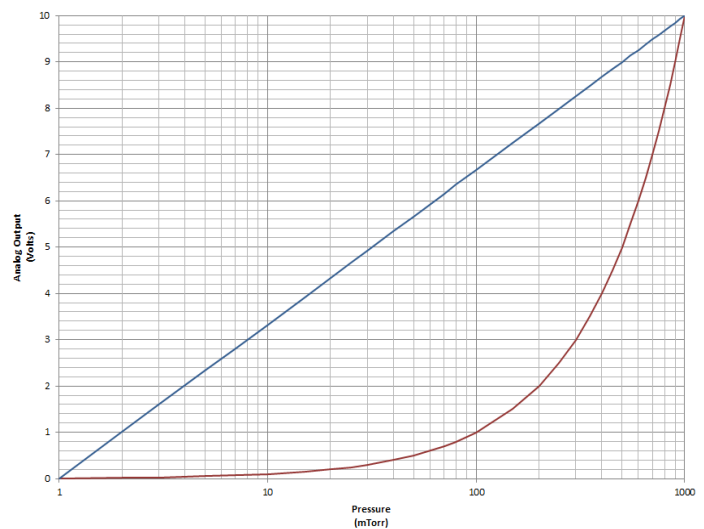
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### Description

The **2A VacuMini Thermocouple Vacuum Gauge** is a commercial version of the Televac® **2A NASA Mini Thermocouple Vacuum Gauge**. This vacuum gauge has a measurement range from 1\*10<sup>-3</sup> up to 20 Torr. It indirectly measures absolute pressure by detecting the thermal conductivity of a filament. It includes a tethered cap that provides IP67 protection for the recessed electrical pins. It also has less than 25% of the internal volume of the standard Televac® **2A Thermocouple Vacuum Gauge**.

The 2A VacuMini can be operated by several Televac® vacuum controllers, including the **MX200**, **MX200 EthernetIP**, **MX200 PROFINET**, **MV2A**, **Compact 2A**, **VacuGuard™**, and **B2A Portable**.

### Analog Output Behavior



### Materials Exposed to Vacuum

Gold  
Glass  
304L/316L Stainless Steel  
Tophet  
Cupron

### Ratings and Compliance

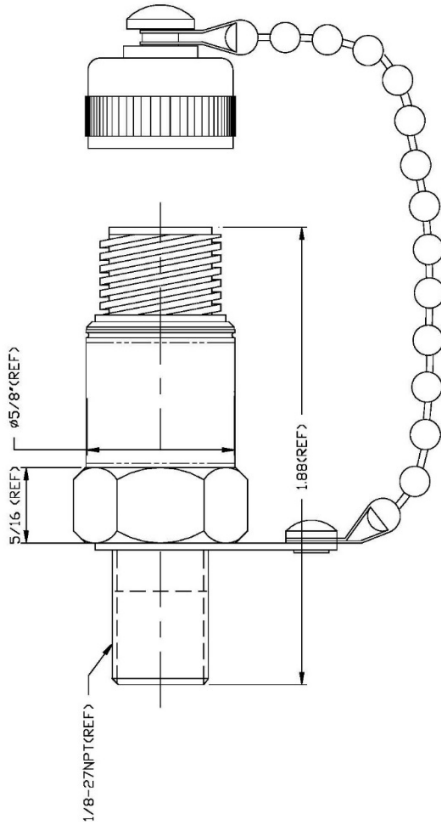
- RoHS compliant

## 2A VacuMini Thermocouple Vacuum Gauge

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### Dimensional Drawing



### Additional Documentation

AN3010	<a href="#">Torr Scientific/Torr Decimal/mTorr/Micron Conversions</a>
AN3015	<a href="#">Recommended Practices for Vacuum Calibration</a>
AN3020	<a href="#">Vacuum Terminology Reference</a>
Resource	<a href="#">Televac® Tolerances</a>

### Company Information

#### Specialty manufacturing services that promise precision -

Since 1935, Fredericks has specialized exclusively in tilt and vacuum measurement products. Today, our precise manufacturing processes produce the most accurate and advanced products on the market, ensuring perfection every time. A true specialty service provider, we are willing and eager to put our experience and capabilities to good use, helping OEMs achieve even the most complex designs.

#### High performance products designed and manufactured with pride -

Fredericks is a global provider and U.S. manufacturer and designer of high-performance tilt and vacuum measurement products. Built to last, our products are made with state-of-the-art sensing technology, proven processes, and an intrinsic passion for the trade. Offering simple integration and quality and safety benchmarks, our customers benefit not just from standard-setting reliability, but from our commitment to competitive pricing and performance.

#### A partnership that prioritizes uptime, lead time, and service -

Fredericks guarantees customer satisfaction and our 'not too big, not too small' operation is what enables us to offer a true partnership experience. Our dedicated representatives and engineers offer exceptionally responsive service and some of the fastest lead times in the industry, knowing that uptime is the key to your success. With anytime-access to our leadership team and solutions that enhance your products, you will feel the Fredericks difference.

#### Vacuum measurement tools built for the toughest jobs -

Fredericks' world-class vacuum sensors, gauges, and control instrumentation are engineered for the most demanding applications and environments. Our patented Televac® and ETI vacuum brands feature cold-cathode technology, thermocouple and convection gauges, and precision-manufactured hot ionization gauges. Dedicated solely to vacuum gauging and calibration services, we provide industrial heating, national laboratories, cryogenics, and industrial gas applications, among many others, with fast lead times and industry-leading performance. Covering the entire practical vacuum range, our products deliver rapid response vacuum readings and sensitivity.

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