

# PIEZOVAC PV 201 THERMOVAC TM 201

 **Leybold**

## Handheld Gauges for Vacuum Measurements



# PV201 and TM201 Series

## Your Go-To Solution for Accurate Vacuum Measurement

The Leybold PV201 and TM201 Series are advanced handheld gauges designed for precise vacuum measurement across a wide range of applications. These versatile handheld gauges combine high accuracy with user-friendly features, making them essential tools for professionals using vacuum.

Whether you need to monitor vacuum systems, check industrial processes, or conduct research and development, the PV201 and TM201 provide reliable and consistent performance you can trust.

### General benefits

The Leybold PV201 and TM201 Series are designed to provide precise and reliable vacuum measurements for a wide range of applications. These handheld gauges are equipped with advanced sensors and robust data management features, ensuring accurate readings and efficient data handling by taking advantage of the latest technologies.



**Wide Measurement Range:**  
Capable of measuring absolute pressures from 2000 to  $5 \times 10^{-5}$  mbar and relative pressures from -1060 to +1200 mbar.



**High Accuracy:**  
Temperature-compensated sensors and advanced electronics ensure precise and consistent measurements.



**User-Friendly Interface:**  
High-resolution graphic display with intuitive navigation for easy operation.



**Durable Design:**  
Constructed with high-quality materials including stainless steel and ceramic for long-lasting performance.



**Data Logging:**  
Built-in data logger with USB-C and optional Bluetooth® LE for efficient data management and transfer.



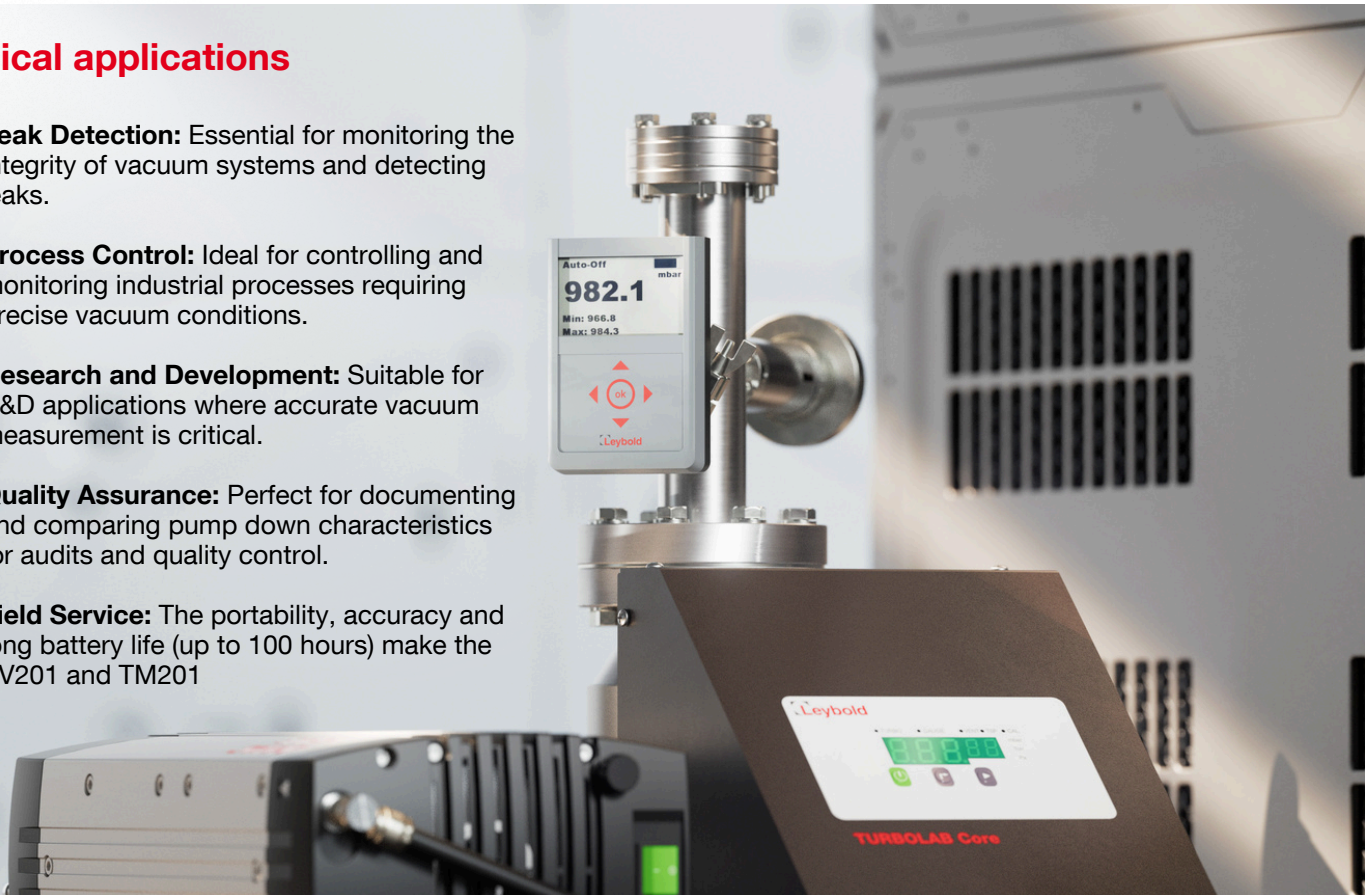
**Versatile Connectivity:**  
USB-C interface and optional Bluetooth® LE for flexible data transfer options.





## Typical applications

- **Leak Detection:** Essential for monitoring the integrity of vacuum systems and detecting leaks.
- **Process Control:** Ideal for controlling and monitoring industrial processes requiring precise vacuum conditions.
- **Research and Development:** Suitable for R&D applications where accurate vacuum measurement is critical.
- **Quality Assurance:** Perfect for documenting and comparing pump down characteristics for audits and quality control.
- **Field Service:** The portability, accuracy and long battery life (up to 100 hours) make the PV201 and TM201



## Accessories and Compatibility

**Protective Case:** Ensures the safety and organization of all components, safeguarding the gauges and accessories from damage during transport and storage.

**Optional:** Charging kit and USB-C interface

**VacuGraph™ Compatibility:** Compatible with VacuGraph™ software, which facilitates data visualization and analysis. This compatibility is especially beneficial for applications requiring data documentation, such as saving and comparing pumpdown characteristics for audits and quality assurance.

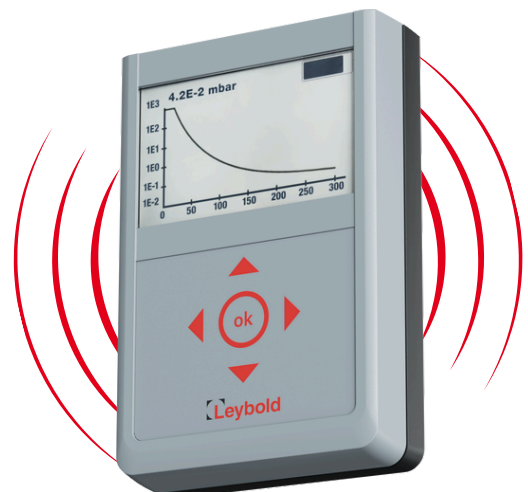
## Measurement Principle

### PIEZOVAC PV 201

The PV201 utilizes a piezoresistive sensor for high-pressure measurements. This sensor operates by detecting changes in electrical resistance as pressure is applied, providing highly accurate readings for absolute pressures up to 2000 mbar.

### THERMOVAC TM 201

The TM201 combines a piezoresistive sensor for high-pressure measurements with a heat conducting Pirani sensor for low-pressure measurements. The Pirani sensor works by measuring the thermal conductivity of the gas, which varies with pressure, allowing for precise measurements down to  $5 \times 10^{-5}$  mbar.



Technical Data	PV201 (Bluetooth)	TM201 (Bluetooth)
Measurement Principle	Piezoresistive (independent on gas type)	Piezoresistive / Heat conducting Pirani (depending on gas type)
Measurement Range	Abs. 2000 - 1 mbar (1500 - 1 Torr) Rel. -1060 bis +1200 mbar (-795 ... +900 Torr)	Abs. 1200 - 5 x10 <sup>-5</sup> mbar (900 - 5 x10 <sup>-5</sup> Torr) Rel. -1060 bis +340 mbar (-795 ... +255 Torr)
Max. Overload	4 bar abs.	10 bar abs.
Accuracy	Absolute pressure: 0.25% of scaled value Relative pressure: 0.3% of span	Absolute pressure: 1200 - 40 mbar: 0.3% of scaled value 40 - 1 x10 <sup>-3</sup> mbar: 10% of measured value Relative pressure: 0.25% of span
Resolution	1 mbar	1200 ... 1000 mbar: 1 mbar 1000 ... 2.0 mbar: 0.1 mbar 2.0 ... 10-2 mbar: 3 digits 10-2... 10-4 mbar: 2 digits 10-4... 5 x 10 <sup>-3</sup> mbar: 1 digit
Repeatability	0.1% of scaled value + 1 digit	1200 - 40 mbar: 0.1 % of scaled value 40 - 1 x10 <sup>-2</sup> mbar: 2 % of measured value
Materials with Vac. Contact	Stainless steel 1.4305, Al2 O3 ceramic, FKM	Stainless steel 1.4307, nickel, tungsten 2 3 SiO2, glass, SnAg Lot, 2 Polyimid, Epoxid
Logging Rate	20 ms ... 60 s	
<b>Environment</b>		
Operating Temperature	+5...+50 °C	
Storage Temperature	-20...+60 °C	
Power Supply	5 VDC via USB-C	
Operating Time	>100 hours	>48 hours
Interfaces	USB 2.0 optional Bluetooth® LE	
Vacuum Connection	DN 16 ISO-KF, G1/4	DN 16 ISO-KF
Display	Graphical display, resolution 400 x 240	
On board graphing	YES	
Protection Class	IP40	
Weight	250 g	
Dimensions	70 x 105 x 46,4 mm	

Ordering info	Order Number
PV201 Gauge (Bluetooth) – DN16KF	2300815RN
PV201 Gauge – DN16KF	2300810RN
TM201 Gauge (Bluetooth) – DN16KF	2300825RN
TM201 Gauge – DN16KF	2300820RN
<b>Accessories</b>	
PV201/ TM201 - Protective case only	2300811RN
PV201/ TM201 - USB C – Interface cable	2300812RN
PV201/ TM201 - Charger Kit	2300813RN



Pioneering products. Passionately applied.