

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 5×10^{-5} mbar and relative pressures from -1060 to +1200 mbar.



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



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



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.



VacuGraph™ Included: The gauges ship with a full license for VacuGraph™, our advanced desktop software for real-time pressure visualisation, data logging, and export.



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 ideal for on-site applications.



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.

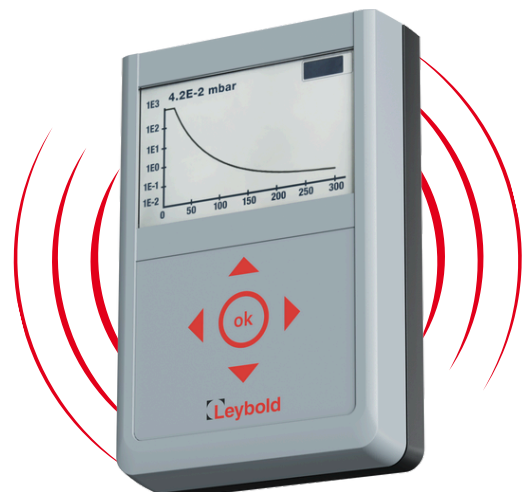
Measurement Principle

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 5×10^{-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 ⁻⁵ mbar (900 - 5 x10 ⁻⁵ 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 ⁻³ 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 ⁻³ mbar: 1 digit
Repeatability	0.1% of scaled value + 1 digit		1200 - 40 mbar: 0.1 % of scaled value 40 - 1 x10 ⁻² 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		
Environment			
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
TM201Gauge – DN16KF		2300820RN
Accessories		
PV201/ TM201 - Protective case only		2300811RN
PV201/ TM201 - USB C – Interface cable		2300812RN
PV201/ TM201 - Charger Kit		2300813RN