

P4 and P5 (Bluetooth LE) Handheld Gauges

edwardsvacuum.com

Innovative Vacuum Measurement at Your Fingertips.

The P4 and P5 Series represent the pinnacle of handheld vacuum measurement technology, combining precision, reliability, and advanced connectivity.

Designed to excel in diverse industrial environments, these gauges deliver unparalleled performance and data management.

Engineered for professionals, the P4 and P5 ensure accurate pressure readings and seamless integration, empowering you to meet the challenges of modern vacuum applications with confidence.



FEATURES AND BENEFITS

1 Wide Measurement Range:

Capable of measuring absolute pressures from 2000 to 5×10^{-5} mbar and relative pressures from -1060 to +1200 mbar.

2 High Precision:

Advanced piezoresistive and heat conducting Pirani sensors provide accurate and reproducible measurements.

3 User-Friendly Interface:

Large graphic display with intuitive menu navigation for easy operation.

4 Data Logging:

Integrated data logger with USB-C and optional Bluetooth® LE for seamless data transfer and analysis.

5 Durable Construction:

Built with high-quality materials including stainless steel and ceramic for long-lasting performance.

6 Versatile Connectivity:

USB-C interface and optional Bluetooth® LE for flexible data management.

Measurement Principle

The Edwards P4 and P5 Handheld Gauges are precision instruments designed for monitoring vacuum pressures and are the ideal tools for spot-checking equipment across a wide range of applications. Their advanced sensor technology ensures reliable performance, making them essential for technicians conducting quick diagnostics and maintenance in the field.

The Edwards P4 utilizes a piezoresistive sensor for high-pressure measurements, operating by detecting changes in electrical resistance as pressure is applied. This provides highly accurate readings for absolute pressures up to 2000 mbar.

The Edwards P5 takes this a step further by combining a piezoresistive sensor for high-pressure measurements with a heat-conducting Pirani sensor for low-pressure measurements. The Pirani sensor measures the thermal conductivity of the gas, which varies with pressure, allowing for precise measurements down to 5×10^{-5} mbar.

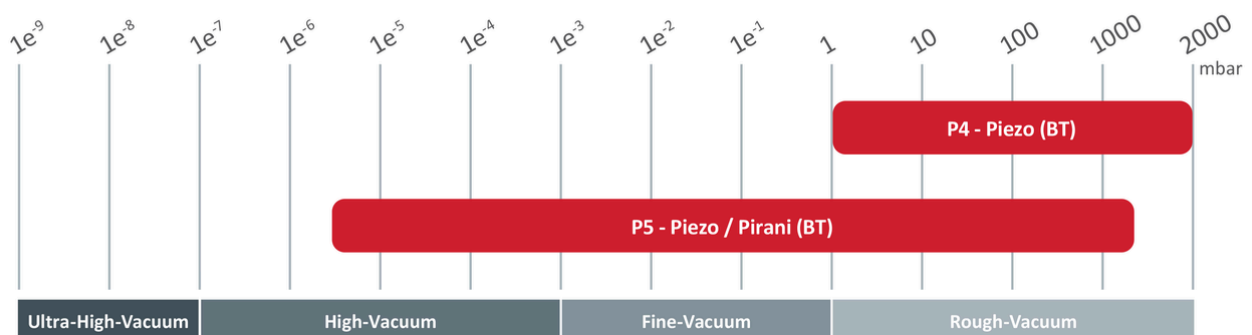
TYPICAL APPLICATIONS

- **Vacuum Systems Monitoring:**
Ideal for continuous monitoring of vacuum chambers and systems to ensure optimal performance and tightness.
- **Industrial Processes:**
Suitable for controlling and monitoring processes in manufacturing and research environments.
- **Quality Assurance:**
Essential for documenting and comparing pump down characteristics for audits and quality control.
- **Leak Detection:**
Effective for identifying and addressing leaks in vacuum systems.





Edwards P4 | P5 pressure range



TECHNICAL SPECIFICATIONS

| | P4 (Bluetooth) | P5 (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 x 10 ⁻⁵ mbar (900 - 5 x 10 ⁻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 - 10 ⁻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 ⁻⁵ mbar: 1 digit |
| Repeatability | 0.1% of scaled value + 1 digit | 1200 - 40 mbar: 0.1 % of scaled value 40 - 10 ⁻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 | 20 ms ... 60 s |
| Operating Temperature | +5...+50 °C | +5...+50 °C |
| Storage Temperature | -20...+60 °C | -20...+60 °C |
| Power Supply | 5 VDC via USB-C | 5 VDC via USB-C |
| Operating Time | > 1000 h | > 48 h |
| Interfaces | USB 2.0 optional Bluetooth® LE | USB 2.0 optional Bluetooth® LE |
| Vacuum Connection | DN 16 ISO-KF, G1/4 | DN 16 ISO-KF |
| Weight | 250 g | 250 g |
| Dimensions | 70 x 105 x 46,4 mm | 70 x 105 x 46,4 mm |
| IP rating | IP40, not certified | IP40, not certified |
| Display size | 2.75" | 2.75" |

Order Information

| | Order Number |
|---------------------------------------|--------------|
| P4 Gauge (Bluetooth) – NW16 | D03000550 |
| P4 Gauge – NW16 | D03000500 |
| P5 Gauge (Bluetooth) – NW16 | D03000650 |
| P5 Gauge – NW16 | D03000600 |
| Protective case only – P4 P5 Gauge | D03000500-A |
| USB C – Interface cable - P4 P5 Gauge | D03000500-B |
| Charger Kit - P4 P5 Gauge | D03000500-C |

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