

P4K

W Gauging System



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The P4K is the world's fastest and most accurate profile metrology system available for long or multiple short parts. From titanium fasteners to medical guidewires, the P4K system has you covered.

The P4K represents the culmination of years of experience in understanding the unique challenges and requirements in measuring long cylindrical shapes in a manufacturing environment. Capable of scanning geometric profiles accurately at up to 3 inches per second (75mm/sec), the P4K was designed to eliminate the production bottleneck caused by inspection on the floor. By employing a simple user interface, inspectors can quickly determine product quality on the manufacturing floor, providing quality managers enough analysis data and traceability to comply with the most stringent quality requirements.

The P4K utilizes the latest in high-speed, high-accuracy optical micrometer technology, combined with a unique linear motor design and a high speed real-time data acquisition setup.

THE GLEBAR ADVANTAGE

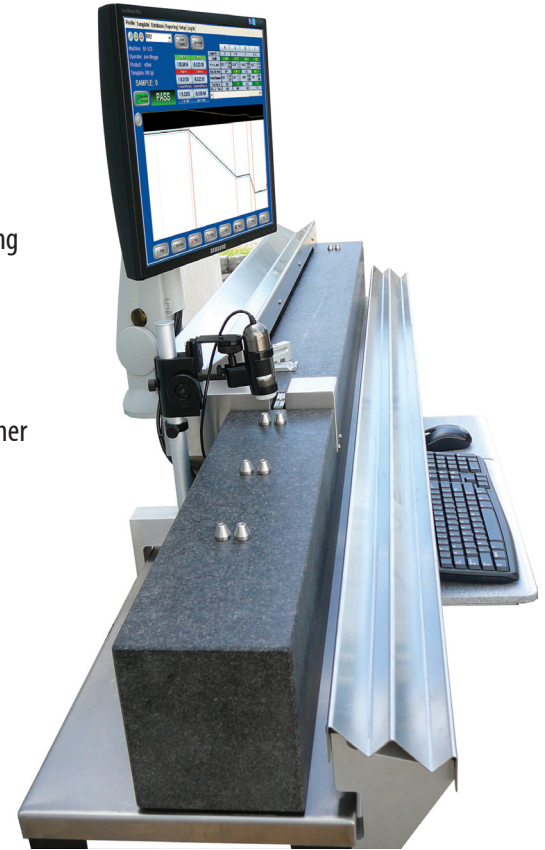
Conventional methods measuring long components to a high degree of precision require high magnification vision systems and precision stages that require a fair amount of programming, and are not suited for the factory floor.

On the P4K, parts are simply clamped in a fixture and scanned using one mouse click. The P4K has the ability of scanning multiple single parts or one long part in one operation. By pulling the product through a laser gauge using a high precision linear stage, and matching diameter and length readings in real time at a rate of 10,000 readings per second, we are able to produce an astounding data set, where we gather a diameter and length reading every 30 millionths of an inch.

Using an optical micrometer with no moving parts insures stable calibration and no deterioration of diameter readings over time. It is designed for long-term, worry-free operation! Designing a template for inspection is as simple as picking points on a graph. The GO/NO GO result is derived automatically as the system locates transition points on the scan. Reporting, lot control, and data aggregation for SPC analysis are standard features. However, the P4K's strongest feature is the ease of use by line operators. To learn more about how Glebar customers have significantly improved their grinding of guidewires and other component process improvements, visit the Case Study page on our website. The best way to determine that the P4K will meet and exceed your measurement needs is to have us perform a Gauge R&R study using your actual parts!

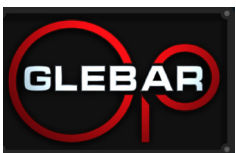
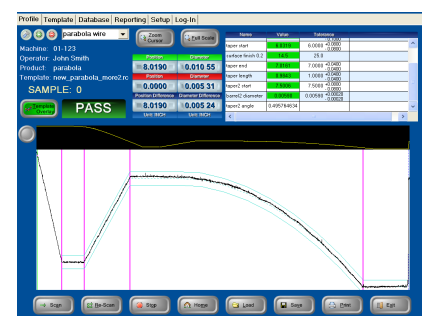
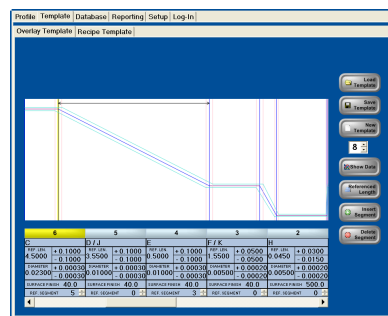
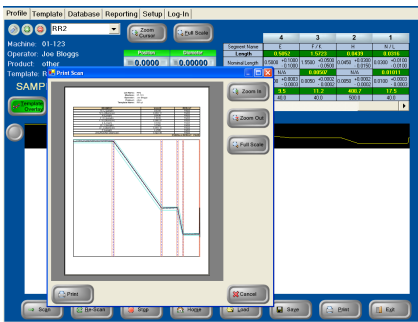
KEY FEATURES

- The P4K metrology device scans and provides feedback of the entire component geometry for all parts in a cycle to automatically correct the grinding wheel dress shape (correcting the wheel dress shape from any measurement device is patent-pending). This is done in a matter of seconds, drastically reducing setup time and improving quality control.
- Simple and easy-to-use software
- Results are presented to operators as a clear GO/NO GO
- Fast scanning - even minute defects are clearly visible and measurable!
- Templates can be specified as easily as length/diameter, nominal, and tolerance.
- Measurement is automatic, free of any operation influence
- Point-to-point dimensioning by simply clicking on the part features, with unlimited zooming
- Software includes powerful tools, multiple filter types, and customizable macros
- Mounted on precision lapped granite for a qualified and thermally stable surface
- Ability to set warning tolerances to alert operator before a part goes out of tolerance
- All data, including template, result, and raw scan information are stored for easy product traceability. Result data can easily be imported into Excel, Minitab, or SPC programs for further analysis
- Three levels of password protection, customizable to a fine level of granularity, prevent unauthorized access to the system.
- Supports multiple languages: English, French, German -- more languages possible.
- Supports any combination of English and Metric units (inch, cm, mm).
- Size compensation feedback to the CAM.2, GT-9AC, and GT-610 CNC
- SQL version available to centralize data measurements and templates across plants



SPECIFICATIONS

- Diameter Accuracy : 0.5 μ m accuracy (0.000 02")
- Machine Weight : 1300 lbs.
- Diameter Resolution : 0.01 μ m (0.000 000 4")
- Diameter Repeatability : 0.06 μ m (0.000 002")
- Motor : Ultra smooth linear motor with 0.1 μ m (0.000004") resolution glass scale feedback
- Data Rate : 40" (1 m) of measurement travel in a single scan. High speed, hard real-time data acquisition better than 10 kHz.



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Glebar is an ISO 9001 certified company

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