

PROFILAB.X40



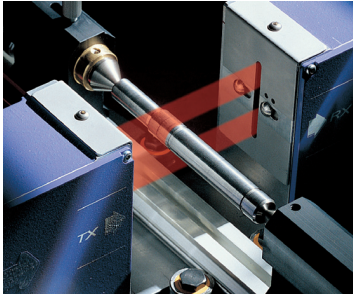
The PROFILAB.X40 System is an automatic laser measuring station, useful to check a wide range of turned or ground parts, as

- Motor shafts
- Hard metal blanks
- Drill bits
- Cutting tools

It measures diameters, lengths, roundness, taper and run-out of cylindrical sections, effective cutting diameter of fluted cutting tools, straightness of hard metal blanks.



The Profilab.X40



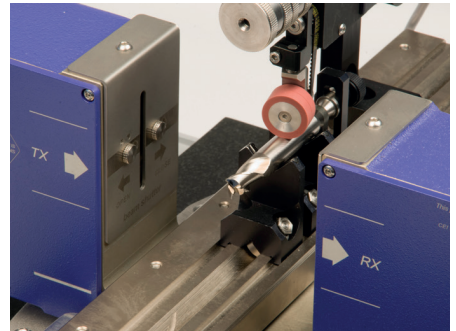
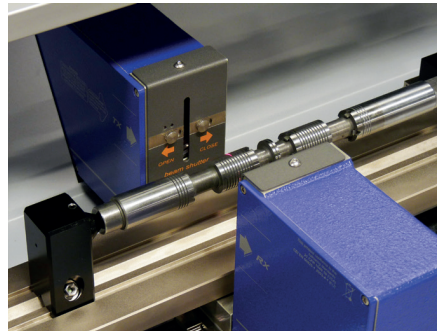
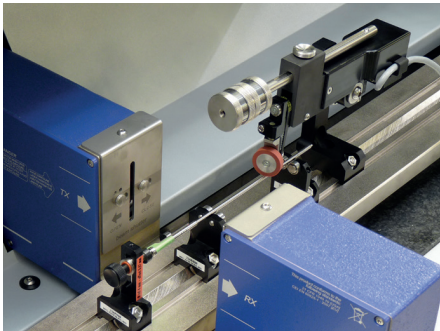
The Profilab systems uses an Xactum high speed, high accuracy Laser Micrometer to measure the diameter and the edge positions of the part, which is mounted on a motor driven slide and moved by a linear motor; the slide is fit with a digital linear scale to read out the longitudinal position of the sample. To assure maximum accuracy and stiffness, the slide is aligned and mounted on a flat granite basement. The part is translated to the measuring positions, following a pre-set "measuring program" stored in the computer memory. It is also possible to rotate the part, in order to get roundness or run-out, at any given position. By using suitable fixtures and by processing the diameter, the edge positions and the longitudinal displacement information it is possible to check several dimensions, on a number of different parts. The measured data are processed by a PC with integrated touch sensitive 19" TFT screen; the Aeroel software provides an extremely friendly user interface. The software is "locked" and self-starting so the operator will have the program running immediately (no starting from Windows!)

- Programming and storing of several "measurement programs"
- Selection of different measurement types and modes, at each measuring position.
- Multi language menu and inch/mm display
- Multiple tolerance check
- Part library for easy set-up and quick part change-over
- On line statistics and report print out
- Data recording and exporting
- Multiple-point user re-mastering capability

Performance

- Wide measuring field: 40 mm
- Measurable diameters from 0.3 to 30 mm
- Linear range of the slide: 300 mm
- Linearity: diameter $\pm 0.5 \mu\text{m}$
length $\pm 5 \mu\text{m}$
- Repeatability: diameter $\pm 0.1 \mu\text{m}$
length $\pm 3 \mu\text{m}$
- High scan frequency: 1500 Hz
- Longitudinal displacement resolution: $\pm 1 \mu\text{m}$
- Maximum displacement speed: 500 mm/s
- Permanent self-calibration
- Self compensation of the thermal drift due to changes in the ambient temperature

Several accessories and fixtures are available to hold and position the parts being measured, such as two V blocks, two dead centers or cones, two couples of precision free rollers, motor driven center + live center, etc. all adjustable in position along the slide table and following the specific application requirement.



Benefits

- **Automatic work and highly reproducible results:** no matter about the operators' skillness.
- **Extremely easy and quick to use:** reduce inspection time and improve measurement capability.
- **Highly flexible:** different components and sizes can be measured without system pre-setting or re-mastering.
- **Ultra accurate:** measure to an accuracy that before you could have got only in a metrology room, using much more expensive equipment and specialized personnel.

Specifications subject to change without notice. For additional details and complete specifications please see the gauge data sheet.

