

PSC – Portable SpindleControl
THE MOBILE SOLUTION FOR SPINDLE MONITORING

BLUM
focus on productivity



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THE MOBILE SOLUTION FOR SPINDLE MONITORING

Portable SpindleControl (PSC) is a high-precision, portable system for flexible testing and monitoring of motor spindles in machine tools. With the set consisting of LC50-DIGILOG, the "LC-VISION PSC" software and additional accessories, the most important spindle parameters can be recorded and evaluated quickly and easily. The test is not carried out using standard vibration transducers, but by means of a laser measurement system at the tool centre point, which makes unprecedented analyses possible.



YOUR BENEFITS:

- Portable system, perfect for mobile use
- Spindle monitoring at the tool centre point and over the entire speed range
- Plug & play solution without PLC adjustments
- No connection to the machine control required
- Enables predictive maintenance and prevents unplanned machine downtime
- Graphical representation, logging and statistical evaluation of the results
- Monitoring of the motor spindle quality throughout the entire life cycle



FUNCTIONALITY ANALYSES AND MORE

PSC gives you a comprehensive picture of the current condition of the machine spindle. The following functions are available for assessing the spindle quality:

1. Run-out analysis

– Speed-dependent measurement and visualisation of the radial and axial run-out behaviour

2. Stability analysis

– Inspection of the thermal change behaviour of the spindle

3. Vibration analysis*

– Vibration measurement and analysis at different speeds
– Evaluation of the spindle bearing condition through FFT analysis

4. Spindle parameter analysis*

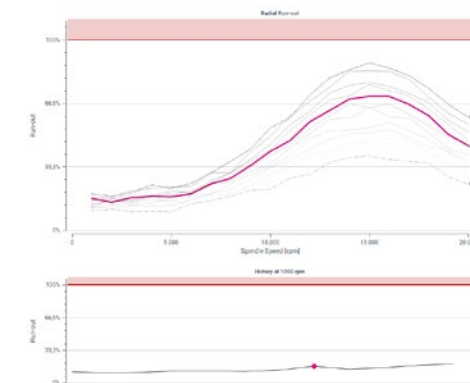
– Evaluation of the typical spindle parameters (ITSH, STSH, run-out, peak to peak) based on ISO/TR 17243

* Assessment of the probability of failure and the degree of spindle wear possible (expert knowledge required)

EVALUATION AND VISUALISATION ALL IMPORTANT INFORMATION AT A GLANCE

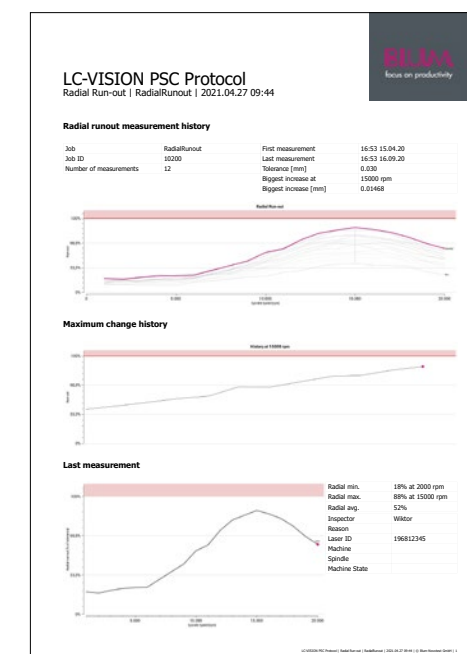
The supplied “LC-VISION PSC” software provides extensive assessment and visualisation options for evaluation and documentation of the generated data.

- Logging of measuring results
- Statistical evaluation of individual measurements depending on spindle speed
- Graphical visualisation of the recorded data
- Freely-definable warning and tolerance limits



Statistical evaluation of a run-out analysis

MEASUREMENT PROTOCOL

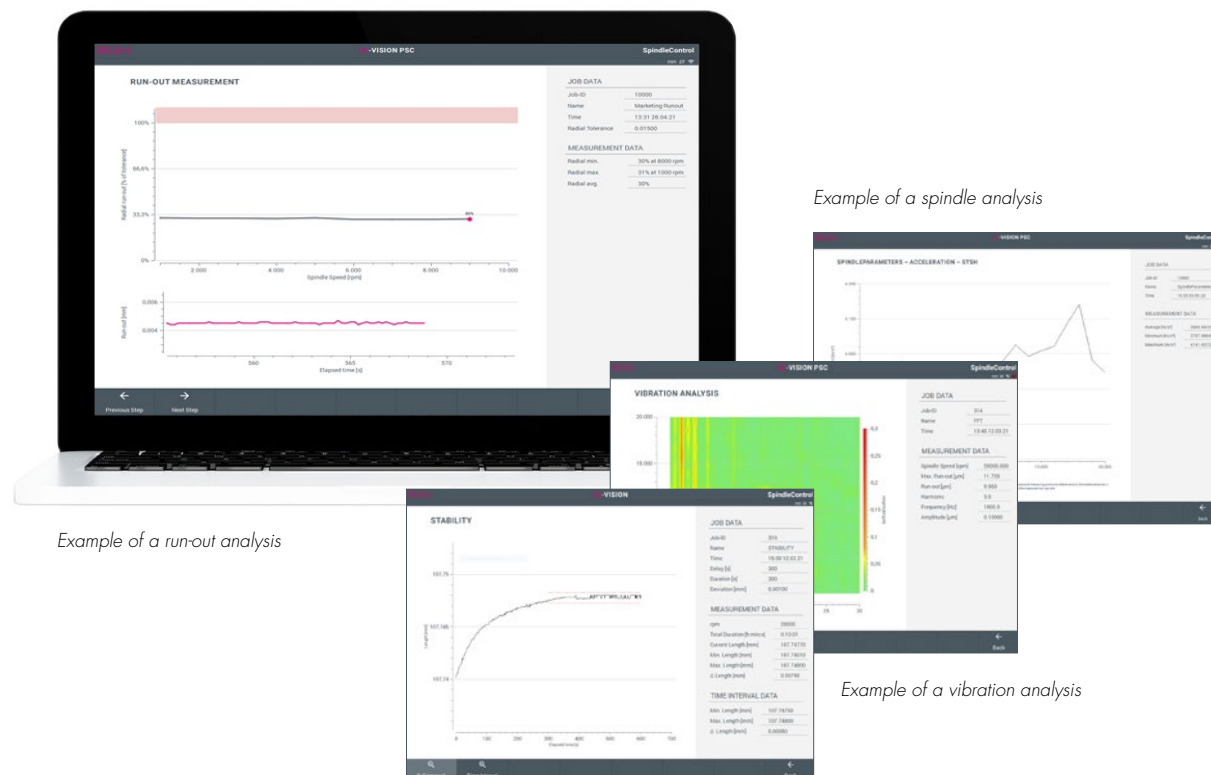


Example of a measurement protocol

For documentation purposes, LC-VISION PSC can be used to generate a meaningful measurement protocol.

Output of measurement protocols for

- Radial run-out
- Axial run-out
- Vibration
- Stability
- Spindle parameters



Example of a run-out analysis

Example of a spindle analysis

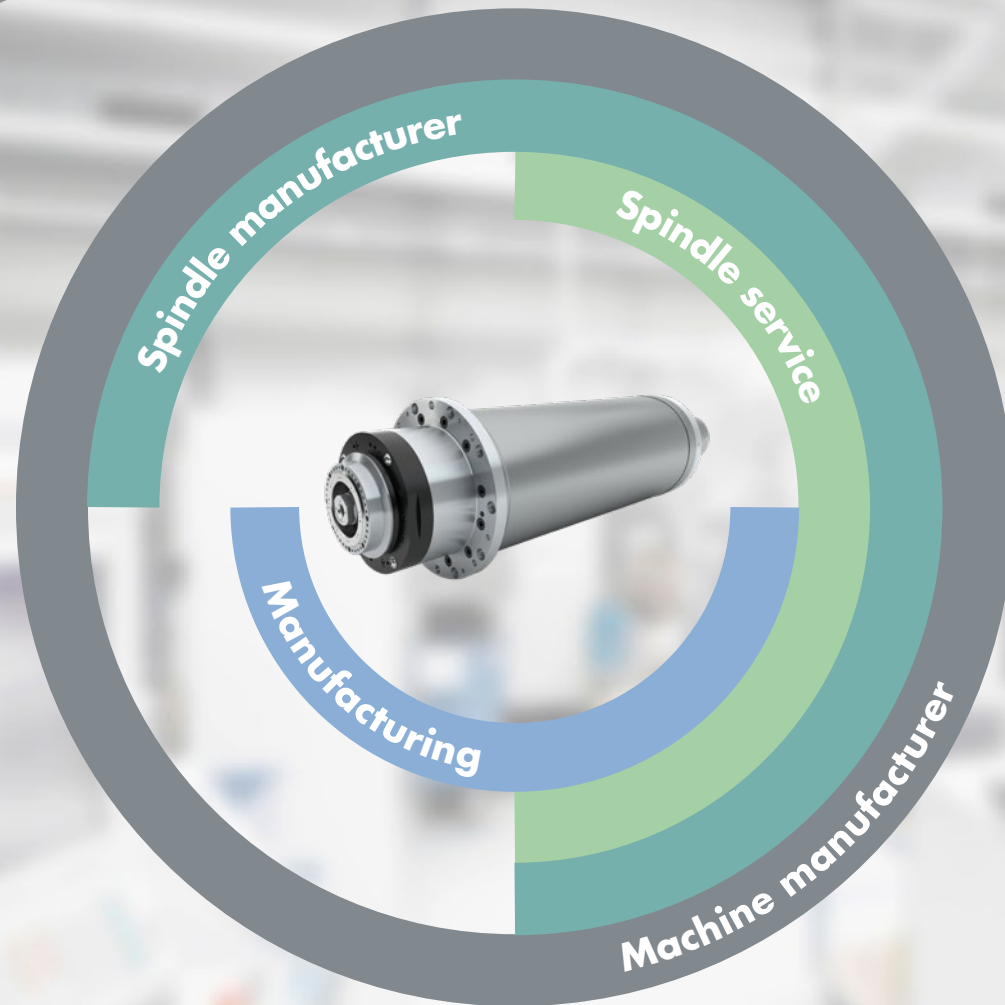
Example of a vibration analysis

Example of a stability analysis



SL100 - Spindle development

- Spindle manufacturer
- Machine manufacturer



OUR PRODUCT RANGE FOR MOTOR SPINDLES IN MACHINE TOOLS

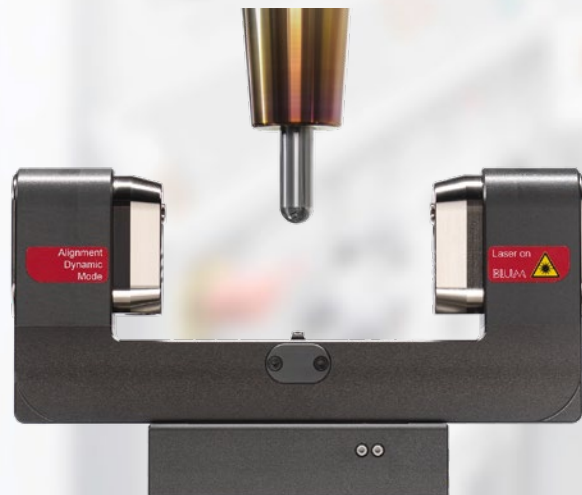
EXPERTISE FROM THREE BUSINESS UNITS

In addition to the PSC system, Blum-Novotest offers other solutions for documenting the condition of motor spindles throughout their life cycle: The products range from laboratory test stands for spindle development and end-of-line test stands for spindle production to machine-integrated solutions in the form of our LC50-DIGILOG laser measurement systems.



SE100 - Spindle assembly

- Spindle manufacturer
- Machine manufacturer
- Spindle service



SpindleControl - Manufacturing process

- Manufacturing
- Machine manufacturer



PSC - Service, maintenance, repair

- Spindle manufacturer
- Machine manufacturer
- Manufacturing
- Spindle service
- Maintenance/Repair Department

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