wylerSPEC

Smart - Powerful - Exact - Comprehensive

Intuitive - Flexible - Modular - Multifaceted

Software by WYLER AG - developed for you!

WYLER AG
Inclination measuring systems

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www.wyler.com
The software wylerSPEC stands out through ...

- User friendliness
- Support for various languages
- Straight interpretation of results
- Adaptability to your measuring tasks
- Modular design
- Efficiency - time can be saved thanks to simultaneous measurements of multiple axis and parameters
- Integration of laser interferometers and autocollimators

Efficient measurement of machine tools ...

- For increasing quality requirements
- For high-precision machines

Since the early 1980's WYLER AG has been supplying software to execute this very task easily, quickly and precisely.

Thanks to the user-friendliness and informative display of readings, it is easy to set up, calibrate, and measure machines.

The integration of laser interferometers and autocollimators makes it possible to record all the desired parameters of a machine with a single software solution.

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wylerSPEC - fingerprint

The ideal software for assessing your machines

Machine beds
Guide ways

Shafts
Rotating machine elements

PITCH, ROLL and YAW.

Straightness, parallelism and flatness

Circular horizontal paths

Coplanarity, flatness of surfaces

Universal
wylerSPEC makes it possible to input measurement readings not only from WYLER inclination measuring instruments, but also from laser interferometers and autocollimators.

Fingerprint
wylerSPEC is superbly suited to create a fingerprint of your machines. Any errors are detected and eliminated in a timely fashion.
wylerSPEC - the right software for your application

Main target group and applications

**wyler ELEMENTS**

- Calibration laboratories
- Simple machines

**wyler PROFESSIONAL**

- Service technicians
- Moving machines tools
- Maintenance

**wyler SPEC**

- Manufacturer of machine bases
- Manufacturer of machine tools
- Retro fit of machine tools
- Repair of machine tools

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wylerSPEC - the right software for your application

The wylerCONNECT manages the software license and features the interface between PC software and measuring instruments.

The wylerTRIGGER triggers via IR connection each measuring point towards any measuring instrument or the wylerCONNECT. All measuring instruments transmit their measuring values via Bluetooth to the wylerCONNECT.
Module 1 - Lines / Parallelism
Measurement of straightness and parallelism

Alignment method - Endpoints

Module 2 - Lines / Parallelism with twist
Measurement of straightness and parallelism with twist

Alignment method of reference line P1 and first twist line in P1 - Endpoints

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Module 2 - Lines / Parallelism with twist
Measurement of straight edges

Measurement of a straight edge on its Bessel points
Alignment method - ISO 1101

Results of parallelism side A and side B towards the common reference

Module 3 - Perpendicularity
Measurement of perpendicularity on machines or a granite square

Alignment method - Endpoints
Module 4 - Flatness
Measurement of flatness on granite tables with U-Jack method

U-Jack or Moody method
Alignment method - Endpoints of the diagonals

Flatness
Measurement of flatness on granite tables or machine tool tables with grid method

Grid method
Alignment method - ISO 1101

Measurement with reference
Flatness 2.54 μm
Module 4 - Flatness
Measurement of flatness on granite tables with grid method

Grid method
Alignment method - ISO 1101

Red/Blue grid shows measurement with reference
Yellow grid shows measurement without reference
Black grid shows only reference

Black grid shows only reference
Movement of the object detected by the reference
Influence of flatness by 4.49 μm

Yellow grid shows measurement without reference
Influenced by the movement of the object results in flatness by 4.08 μm
Module 5 - Circular paths
Measurement of ring-shaped overlays consisting of one or two rings

Circle with twist measured with global (X- and Y-) reference
Alignment method - ISO 1101

Red/Blue pattern shows measurement with reference
Flatness 1.97 μm

Yellow pattern shows measurement without reference
Flatness 1.97 μm

Measurement of 2 ring measurements with 1 connection measurement
Alignment method - ISO 1101

Reference C1
Parallelism
C2 -> C1 1.55 μm

Reference C2
Parallelism
C1->C2 1.85 μm

C1 connected with C2
Flatness 1.55 μm

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Module 6 - Guide ways
Measurement of horizontal and vertical guide ways

Horizontal guide ways - evaluation by flatness
Alignment method - ISO 1101

Flatness 18.63 μm

Horizontal guide ways - evaluation by line
Alignment method - ISO 1101

Straightness L1 18.63 μm
Straightness L1(Y) 16.54 μm
Straightness L2 11.19 μm

Max. deviation over the sweeping window of 520 mm 4.32 μm
Parallelism L2 -> L1 14.37 μm
Module 7 - Rotation vertical axis
Measurement of perpendicularity of a vertical spindle to the machine table

Module 8 - Rotation PITCH - ROLL - YAW
Rotation measurement with WYLER instruments in conjunction with a laser or autocollimator

Measurement of ...
Module 8 - Rotation PITCH - ROLL - YAW
Rotation measurement with WYLER instruments in conjunction with a laser or autocollimator

Display result as surfaces

Display result as Lollipops

Display result as 3D

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Module 9 - Flatness - Parallelism and coplanarity of surfaces
Measurement of flatness, parallelism and coplanarity of separately measured areas of a machine

Measurement of 3 rectangular areas with 2 connection measurements
Alignment method - ISO 1101

Parallelism of areas

Coplanarity of areas
Module 10 - Own measurements

Measurement of flatness, parallelism and coplanarity of separately measured areas of a machine, with a flexible measurement layout

Measurement of 3 areas with 2 connection measurements
Alignment method - ISO 1101

Parallelism of areas

Coplanarity of areas
Comparison of two identical measurements

Comparison of 2 measurements of the same area. In this example we compare measurements of a granite table before and after lapping.

Alignment method of first (Red/Blue) measurement - ISO 1101

Alignment method of second (Yellow) measurement - ISO 1101

Alignment method of second (Yellow) measurement - connected by 3 points (corners), which are chosen by the user

Alignment method of second (Yellow) measurement - connected by 3 points (inside), which are chosen by the user

Maximum deviation 4.4 μm

Maximum deviation 4.02 μm

Maximum deviation 4.4 μm
Module 12 - Combination

Combination of two measurements to reach information of parallelism or rectangularity

Combination of two measurements
Alignment method - ISO 1101

Horizontal guide ways - combined for evaluation of parallelism. Chosen reference L1(1)

<table>
<thead>
<tr>
<th>Evaluation (Measurement device) - ISO1101</th>
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<tbody>
<tr>
<td>// L2 (1) \rightarrow L1 (1)</td>
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Vertical opposite guide ways - combined for evaluation of parallelism. Chosen reference L2(1)

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Module 12 - Combination
Combination of two measurements to reach information of parallelism or rectangularity

Horizontal and on left side vertical guide ways - combined for evaluation of angularity. Chosen reference L1(2)
Alignment method - ISO 1101

Horizontal and on right side vertical guide ways - combined for evaluation of angularity. Chosen reference L2(2)
Alignment method - ISO 1101
To print reports, you can choose from pre-configured standard reports, or you create your own customized reports with the help of the integrated protocol editor.

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**Standard report**

**Customized report with two pages**
For your geometric applications you choose wylerSPEC

The wylerSPEC software seamlessly joins the line of successful wylerSOFT products.