Improvements
Metro*soft QUARTIS* ® R14

Improvements Metrosoft QUARTIS R14

At a glance

Metrosoft QUARTIS R14 offers a wide range of improvements for all users and significantly contributes to optimize daily metrology work.

Metrosoft QUARTIS R14 offers an advantageous and unified operation for the evaluation of further standardized inspection features. Results are already displayed in the graphics via the live preview during the evaluation. The tolerance graphics of the position features shows the form, position and extension of the tolerance zone together with the tolerated element directly in the context of the CAD model.

Metrosoft QUARTIS R14 offers users that measure sheet and plastic parts decisive advantages when displaying the results on graphical measurement reports. Connection lines between features are drawn in a selectable mode. Elements without a data label can be hidden.

Metrosoft QUARTIS R14 exports the measurement results for the data exchange into the BMWIpp format. As a result of the text based data format the exported data can be processed according to the individual needs.

Metrosoft QUARTIS R14 optimizes the measurements with the optical PHOENIX II 3D sensor. So curves can now also be measured optically.

Metrosoft QUARTIS R14 contains new interfaces for machines and integrates further peripheral machines. The Hexagon RDS interface allows the operation with portable measuring arms. With the Renishaw REVO RSP3-6 scanning sensor extensions up to 800 mm can be used.

Metrosoft QUARTIS R14 offers, besides the updated CAD interfaces, many additional improvements and extensions. You find more information on the following pages.

Note:

Some improvements are not included in the standard product Metrosoft QUARTIS R14 and require additional, chargeable modules. These are described in the document "Products and Modules Metrosoft QUARTIS R14".

Standardized feature evaluation

Advantageous, unified operation within the ribbon with live preview

Eight additional features are now evaluated via the ribbon, resulting in significant advantages when measuring, programming and editing.
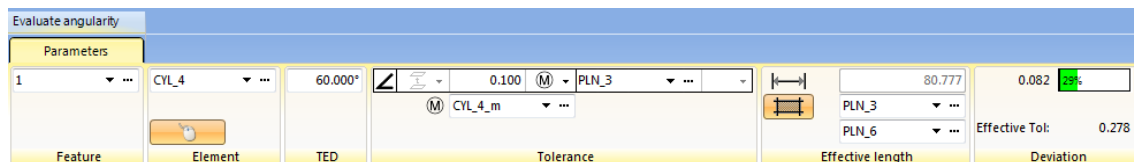

When evaluating distances and position features a live preview is displayed in the graphics. This illustrates if the evaluation corresponds to the tolerance indications on the drawing.

The tolerance graphics of the position features shows the form, position and dimension of the tolerance zone together with the tolerated element directly in the context of the CAD model.
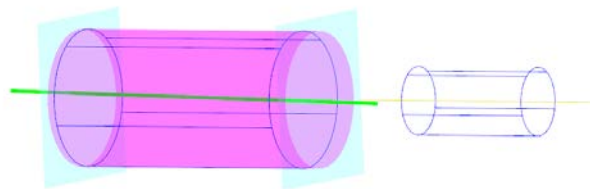
Parallelism and angularity of planes taking into account the form deviation

For the features "parallelism" and "angularity" the form deviation can now be considered as well when the reference is an axis (cylinder, line etc.).
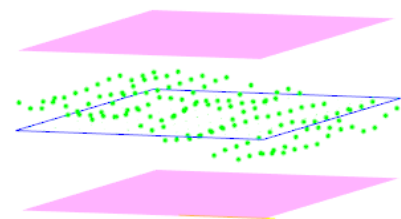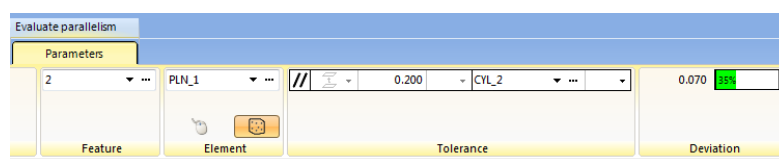

■ Highlights

- Comfortable evaluation of the features input, coaxiality, symmetry, angularity, parallelism, perpendicularity, run-out and total run-out by a uniform handling in the ribbon

- Live preview of evaluated distances ensures correct application

- Tolerance graphics for coaxiality, parallelism, perpendicularity and angularity illustrates the position of the tolerated elements in the defined tolerance zone in the context of the CAD model. Therefore the assessment of the features is easier.

- Systematic consideration of the form deviation of the parallelism and angularity ensures a standard-compliant evaluation

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Descriptive measurement report and data transfer

Display connection lines between elements

For feature labels and data labels with two tolerated elements now the connection line to both elements is shown. For different applications the graphical representation of the connection line can be specified.
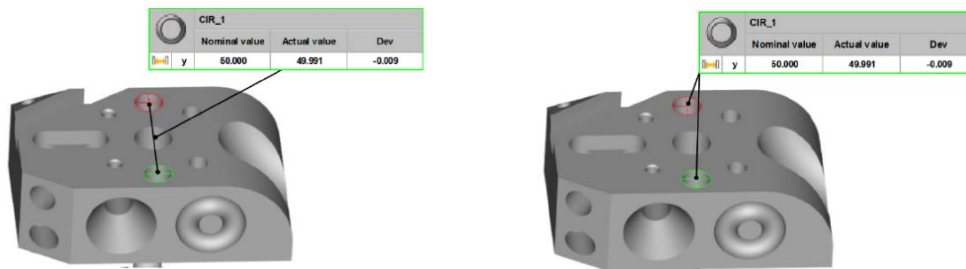
Hide elements without data labels

You measure many points in comparison to CAD and would like to create clear reports. In the graphics view of the report now the option "Hide elements without data label" is available.

Export measurement data in BMWIpp format

For data transfer you would like to output measurement results in BMWIpp (BMW Inspection plan and protocol) format. QUARTIS has the specific export function. The data of the selected elements is written to a CVS file. As a result of the text based data format the exported data can be processed accordingly to the individual needs.

■ Highlights

- Connection lines to all involved elements of a feature increase the significance of graphical measurement reports
- Customizable display of the connection lines allows individually designed measurement reports
- Hiding elements without data labels provides clarity
- Export of measuring data into a CSV file (BMWIpp format) ensures the data transfer to higher-level evaluation systems

PHOENIX sensor and peripheral devices

WENZEL PHOENIX Sensor measures curves

The optical PHOENIX II 3D sensor now also records curve elements in one operation. For optically recorded curves, all construction functions and evaluation functions are available.

More improvements, like the automatically measuring window (ROI) and optimized calculation algorithms, increase the accuracy and enhance the usability.

Definition of the limitation points

Measurement finishing

Element graphics

Renishaw ACR1 via RS-232 interface

The active ACR1 probe, controlled via RS-232 interface, allows among other things stylus change with reduced speed.

Control measuring arm via RDS interface

For operating portable measuring arms the Hexagon RDS interface is available. The following arms are amongst others supported: Romer Absolut, Cimcore C7, Tesa Multigage.

Use Renishaw REVO RSP3-6 scanning sensor

You measure large assembly parts and need long scanning sensor. With the Renishaw REVO RSP3-6 scanning sensor extensions up to 800 mm can be used.

Renishaw REVO SFP1 roughness sensor

You measure roughness with the REVO SFP1 sensor and would like to use the existing evaluation software. For this, you can transfer the roughness raw data in x3p format.

The adjustable alignment tolerance of the C axis avoids unnecessary rotations and thus optimizes the use.

■ Highlights

- Measure curves contact-free with the PHOENIX II sensor
- Use Renishaw ACR1 in active mode
- Control portable measuring arm via Hexagon RDS interface
- Configure and use Renishaw REVO RSP3-6 with the five RSH3 stylus holder
- Transfer roughness raw data from Renishaw REVO SFP1 sensor in x3P format to an evaluation software
- Adjustable alignment tolerance for C axis of Renishaw REVO SFP1 with a warning dialog reduces the C axis rotations

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Additional improvements

The following useful functions have been added in Metrosoft QUARTIS R14:

- The following **CAD interfaces** have been updated to the current version:
  - CATIA V5   (R8 up to R25 and 6R2016)
  - CATIA V6   (R2016)

 The IGES interface was revised and improved.

- You would like to work on a duplex measuring system with a shared SQL server measurement database in **multiple machine network.** QUARTIS and DMIS programs of different types can be executed.
  Synchronizing the machines at relevant places ensures a secure run.

- You work on a duplex measuring system and use **"collision control of machine"**. Swiveling the articulating probing system only the actual way of the stylus (sphere sector) is monitored. So unnecessary waiting time is eliminated.

- **Portuguese** can be selected as dialog and report language. Thus 15 languages are available for the user interface.

- In the measuring program, you would like to add more information about the **measurement properties** before the report is generated. With the function "Properties" you can edit the information of the measurement.
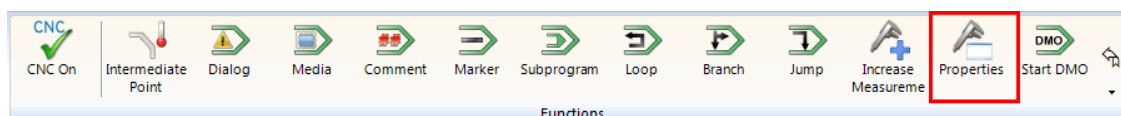
- With the checkbox "CM compatible export", you can influence the compatibility to Metrosoft CM for the **Q-DAS export**.

  The following fields are affected:

  - K2001 Characteristic number
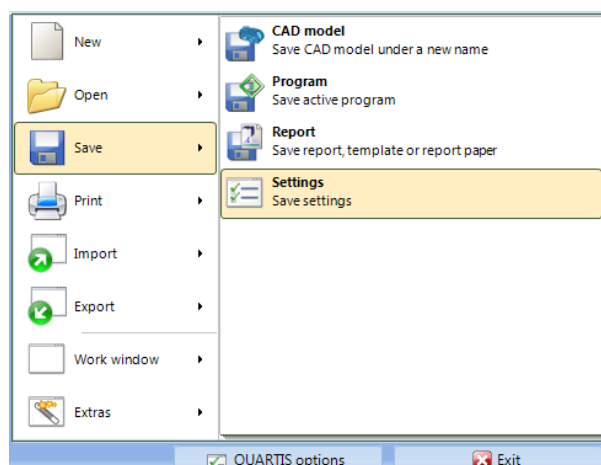
  - K2002 Characteristic description
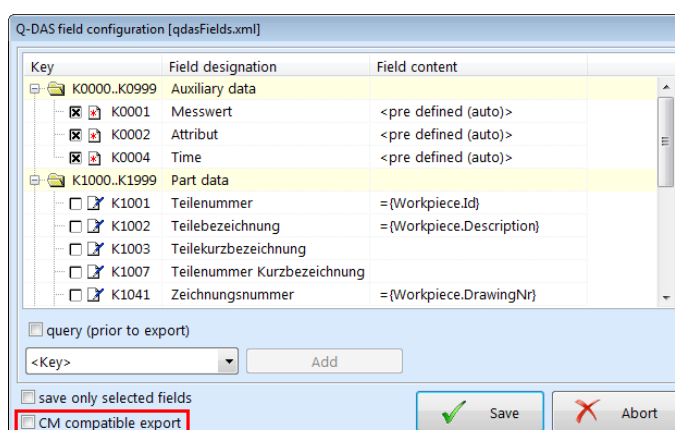
- More **WENZEL machine models** and dimensions for displaying in 3D graphics can be configured. Following machine models were added:
    - WENZEL LH 1210 (2000)
    - WENZEL LH 87 (3000)
    - WENZEL RA 1625 (6500, 7000, 7500, 8000)
    - WENZEL RSplus 1825 (4000)

- In **DMIS programs** the function "CONST/POINT,F(label),TR,FA(label1)" is realized according to the DMIS standard. With FA(label1), all to a point reducible elements can be used.

- In **DMIS programs** the assignment of BOOL to INTEGER variables is allowed. So the compatibility of existing, automatically generated DMIS programs is ensured.

- The element ID is displayed in the **element window** in an own line. Thus long IDs are completely readable and can be copied.
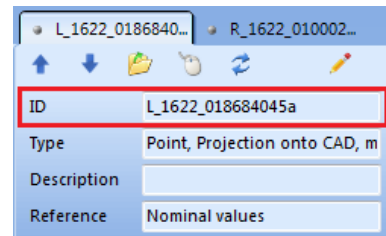
- When measuring **circle, rectangle or slot** as an outside element now the reference points can automatically probed outside as well. Therefor a negative value can be entered for the reference point distance.

- For saving and exporting file names, defined with the **expression editor**, now the tab "functions" is usable. This allows, for example, to use a part out of a measurement property with SUBSTR().

- The function **"save settings"** saves the settings without having to close QUARTIS. This is useful, for example, when customizing QUARTIS Company Settings.