

# Improvements

## WM | Quartis R2018-1

Update Information

# WM | Quartis



# Improvements WM | Quartis R2018-1

## At a glance

WM | Quartis R2018-1 offers a wide range of improvements for all users and significantly contributes to optimize daily metrology work.

WM | Quartis R2018-1 has a new, modern user interface. The appearance impresses with a harmoniously interacting color scheme. By avoiding separation lines and color gradients, the user works target-oriented and focused.

WM | Quartis R2018-1 evaluates diameters of circles and cylinders according to standards using different calculation methods. The user simply selects the corresponding modification symbol. In addition to Gauss, Chebyshev, Minimum circumscribed and Maximum inscribed, Two-point size and Envelope requirement are available now.

WM | Quartis R2018-1 automatically generates a measuring program from an inspection plan. Names (ID), nominal values and tolerances are directly transferred from element and feature lists into the measuring program. This speeds up and simplifies daily work. It also improves quality by preventing transcription errors.

WM | Quartis R2018-1 uses measurement programs to generate customized reports in the desired language with defined number of decimal places and deviation colors.

WM | Quartis R2018-1 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 WM | Quartis R2018-1 and require additional, chargeable modules. These are described in the document "Products and Modules WM | Quartis R2018-1".

## New product name and modernized user interface

### Uniform product and version designation

In order to make it easier for users to learn and use all software products of the WENZEL Group, they receive a new appearance with uniform designations and logos.



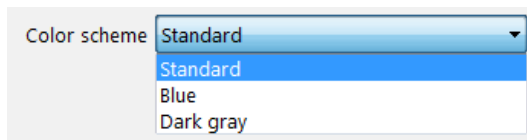
Metrosoft QUARTIS R17 (64-Bit) became WM | Quartis R2018-1. The 64-Bit version is standard.

### New appearance through face-lifting

The user interface has been modernized with a facelift. The new color scheme is eye-catching. Only a few, harmoniously interacting basic colors are used without color gradients. Control elements such as buttons, input fields and checkboxes are flat, without a 3D effect. Separation lines are avoided as far as possible, which brings calm to the user interface.

### Color scheme

There are three color schemes to choose from "Standard", "Blue" and "Dark gray".



With the "Standard" color scheme, the user interface is bright and has a friendly beige color scheme. "Blue" was the previous standard color of Metrosoft Quartis. "Dark gray" is based on the similar named Microsoft Office 2016 design.

### ■ Highlights

- Modern user interface based on Microsoft Office 2016 and Windows 10
- Harmonious colors make working easier
- 64-Bit is standard
- Version number with year simplifies identification

## Evaluate two-point size, envelope requirement and cam profile

### Evaluation of circle and cylinder diameter with different calculation methods

You want to evaluate the diameter of a bore or shaft in accordance with the standard. The calculation method can now be selected directly during evaluation. This is independent of the calculation method used to measure the circle or cylinder.

Ø	Element
LP	Two-point size
GG	Least squares
GC	Chebyshev
GN	Minimum circumscribed
GX	Maximum inscribed
E	Envelope requirement

In addition to the calculations according to Gauss, Chebyshev, Minimum circumscribed and Maximum inscribed, Two-point size and Envelope requirement are also available.

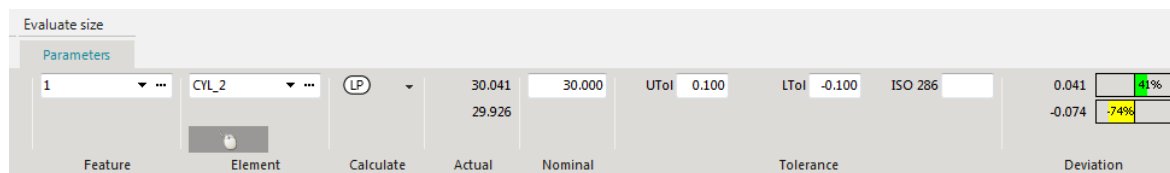
On the measurement report, the selected calculation method is indicated by the corresponding modifier (LP, GG, GC, GN, GX, E).

The new calculation methods "Two-point size" and "Envelope requirement" provide two actual values and two deviations as result.

# Improvements WM | Quartis R2018-1

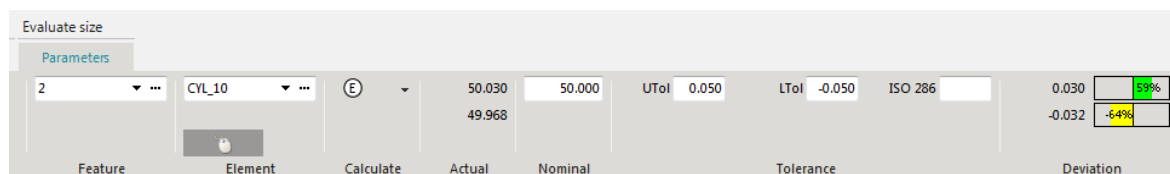
## Evaluate circle and cylinder diameter as Two-point size (LP)

With the calculation method "Two-point size (LP)" the largest and smallest diameter is output. The two actual values are determined out of all local distances between two opposite points.



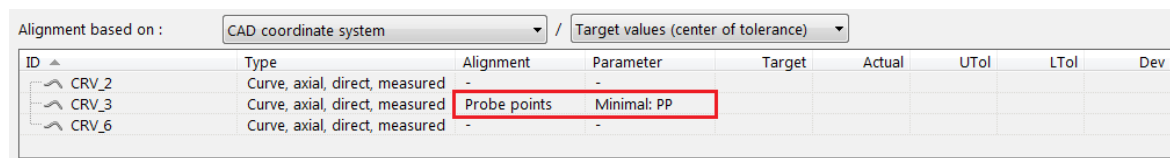
## Evaluate circle and cylinder diameter with Envelope requirement (E)

With the calculation method "Envelope requirement (E)", a combination of Two-point size and Minimum circumscribed or Maximum inscribed is evaluated. The correct combination is selected automatically, depending on whether an inside or outside element is evaluated.

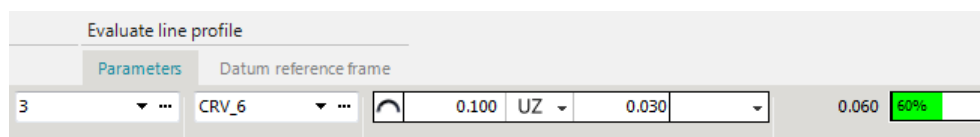


## Applying align / bestfit and line profile tolerance on cam profiles

The curve axial, direct can be used for alignment. As with other curve types, the residuals of the points are minimized.



The line profile tolerance of a curve axial, direct can be evaluated and output in the report. The usual tolerance zones and references are available.



## ■ Highlights

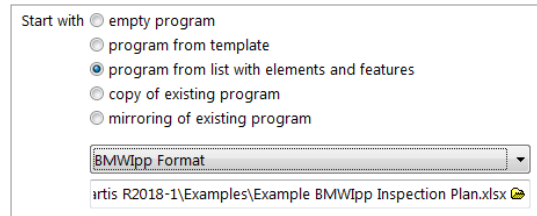
- Evaluate circle and cylinder diameter with requested calculation method, regardless of how the element was calculated
- Evaluate circle and cylinder diameter as a local two point size (LP)
- Evaluate circle and cylinder diameter according to envelope requirement (E)
- Align / Bestfit with cam profile curves of type axial, direct
- Evaluate cam profile curves of type axial, direct as line profile tolerance

## Automatic program generation and further improvements

### Generate measuring program automatically from BMWIpp inspection plan

You want to create measuring programs automatically from inspection plans.

With WM | Quartis R2018-1, the BMWIpp format is also supported for generating programs from element and feature lists in addition to the Daimler/Audi Inspection Feature ASCII format.



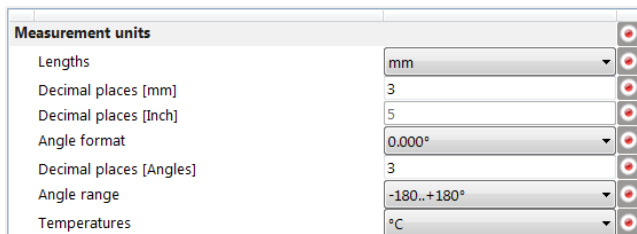
Newly, program sentences of type "Measurement (Edge point)" are also generated. In addition, the reference "Measuring" is supported.

Names (ID), nominal values and tolerances of the measuring elements are automatically transferred to the measuring program. This speeds up and simplifies daily work. It also improves quality by preventing transcription errors.

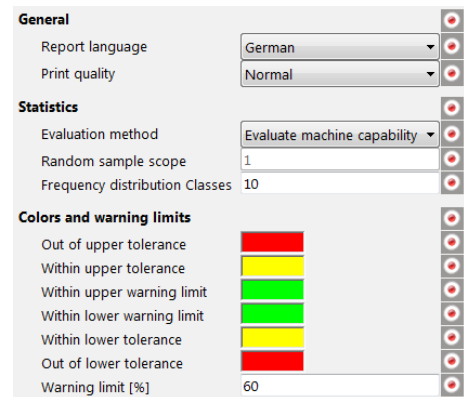
A program that is automatically generated from an element and feature list can be completed offline or directly on the coordinate measuring machine with alignment, report, etc. If necessary, the measuring strategies of single elements can be adapted easily with "Execute program with parameter modification".

### Record decimal places, report language and other parameters

You want to be able to influence the language used in the report and the number of decimal places displayed via the measuring program.



Now all parameters of the measurement units group and the report settings can be recorded in a measuring program. This allows the reports to be reproducibly generated with the selected settings.



The system settings can be opened and changed quickly and easily by clicking on the status window.

### ■ Highlights

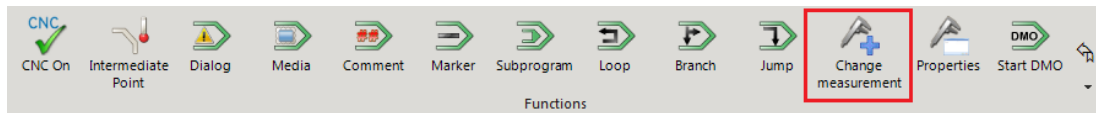
- Automatically generate a new measuring program from a list of elements and features – great assistance, simplifies work and saves time during programming
- Names (ID), nominal values and tolerances of measuring elements are automatically transferred from inspection plan to Quartis measuring program - transcription errors are prevented
- Widespread, common data formats (\*. csv, \*. xls, \*. xlsx)
- Measurement programs generate customized reports in the desired language with defined number of decimal places and deviation colors
- Change units and number of decimal places conveniently by quick access

# Improvements WM | Quartis R2018-1

## More improvements

In WM | Quartis R2018-1 are numerous additional helpful functions available:

- Following **CAD interfaces** were updated to the newest version:
  - Pro/ENGINEER, Creo (16 to Creo4.0)
- You want to write efficient measuring programs to measure a series of clamped workpieces with as few, time-consuming probe system changes or swivels as possible. The new function "Change measurement" helps you to **program with loops**. This function allows the active measurement to be increased or decreased by a certain value.



- The "**Execute program**" icon clearly indicates whether a program is being executed with parameter modification. Instead of the normal Execute icon, the corresponding parameter modification icon is displayed.

Parameter modification Off | Standard | Selective:

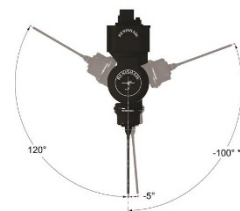


- You are working on WENZEL measuring machines and want to measure gears. The **rotary table** as positioning axis can now also be used with the **WENZEL WMC controller**.

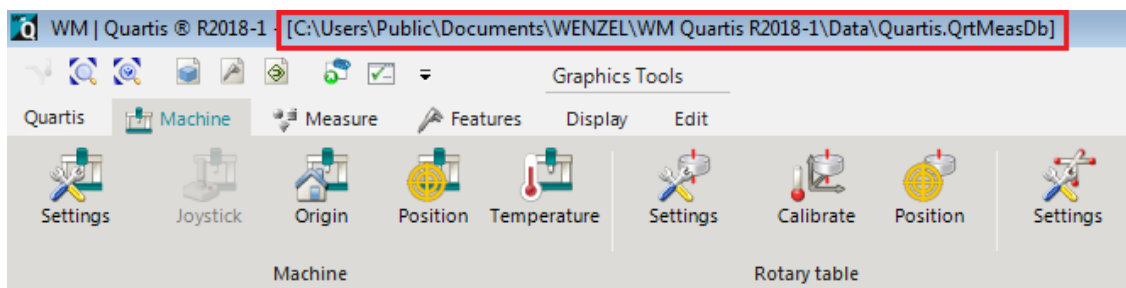


- The new **FARO USB measuring arms QUANTUM S and M** can be used. This requires the new FARO USB FaroArm driver version 6.0.2.3.

- The Renishaw **REVO** and **REVO-2** heads have different angular ranges in the A axis. This is taken into account in the configuration, which eliminates the need for manual adjustment.

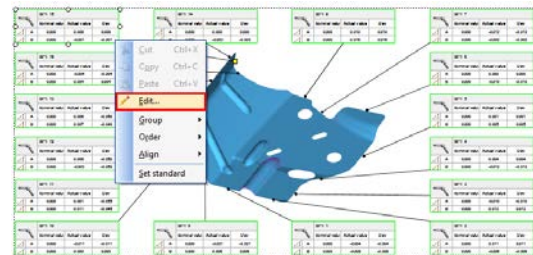


- You want to see at any time which database you are currently working in. The **file path** of the currently opened **measurement database** is now also displayed in the title bar of WM | Quartis.



- More **WENZEL machine models** and dimensions can be configured for display in 3D graphics. Following machine models were added:
  - WENZEL LH (3G) 1210 (1600, 2500, 3000)

- You create individual **reports** with graphics and tables. Editing graphical views with many data boxes has been simplified. In addition to double-clicking, "Edit..." can now also be activated via the context menu (right mouse button).



- When exporting **Q-DAS**, the fields K2092 (characteristic text, type of characteristic) and K2095 (element code, element ID) are automatically filled with the corresponding content and output.
- The **automation interface** has been extended with additional event messages:
  - Event «Dialogue closed»
  - Events «Quartis started», «Quartis closed», «Quartis disappeared»
  - Event «Quick selection code entered»

Das SDK for the MQTT automation interface can be obtained from WENZEL Metromec if required.

- You want to see in the system database when which **reference sphere** was calibrated. This information is now displayed in a column called "Date/Time".

Grafik Datenbank

Referenzkugeln

ID	Beschreib...	φ	Winke...	X	Y	Z	Datum/Zeit
1	Masterkugel	29.369	160.000°	0.000	0.000	0.000	25.02.2009 10:00:27
2	PHOENIX	25.000	180.000°	28.254	18.344	-8.721	13.02.2018 16:56:43

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Subject to technical modification and to changes in scope and design.