

**WENZEL**

 **Metromec**

Improvements  
Metro**soft** ***QUARTIS***<sup>®</sup> R4

# Improvements Metrosoft QUARTIS R4

## At a glance

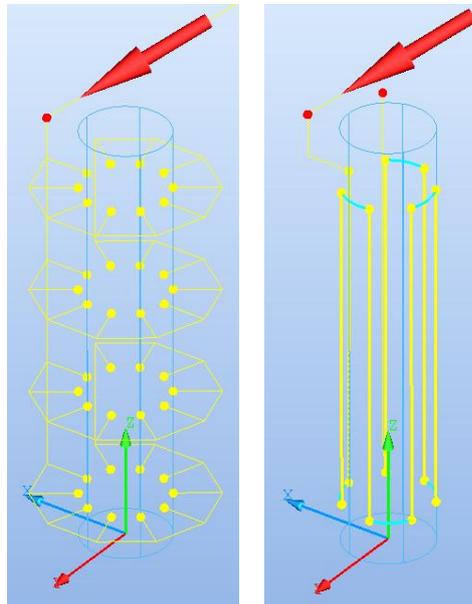
Metrosoft QUARTIS R4 offers the functionality for the measurement and evaluation of curves. This is the first step of the seamless integration of free-form measurement into the successful QUARTIS conception of operation.

Metrosoft QUARTIS R4 enhances the productivity of your coordinate measuring machine by fast scanning with high point density with the new WENZEL WPC 2040 controller.

Metrosoft QUARTIS R4 also offers in other areas interesting improvements and enhancements. Learn more about this in the following remarks.

## Automatic element measurement without CAD model

You want to measure elements with several probe points either in triggered or scanning mode but do not have a CAD model available for it. The new option for pre-probing nominal values allows executing this task fast and easy. Define the geometry of the element by probing several points on the work piece. Configure the desired probe point distribution or the scan paths and check them in the graphics. Now the actual measurement can be executed in CNC mode. Pre-probing is available for the elements circle, line, plane, cone, sphere, cylinder and point.



### ■ Highlights

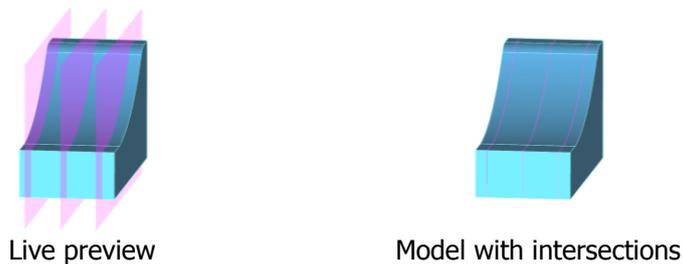
- Display of motion paths for visual control
- Automatic evaluation of the features of an element
- Comfortable editing of motion paths and features recorded in a program
- Direct measurement without time consuming search motions

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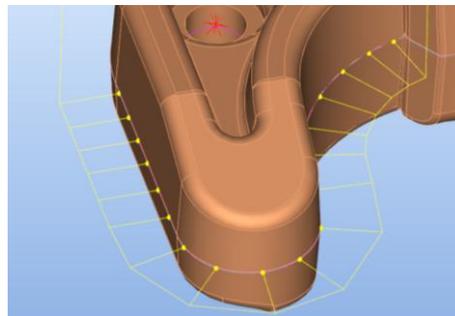
## Measure and evaluate curves

You want to measure a curve either in triggered or scanning mode and evaluate the profile tolerance numerically as well as graphically. To do so, we have created the element "Curve" and the feature "Line Profile". The curve functions are available with the new module "CURVE".

First you create intersection curves on the CAD model. The live preview will help you to correctly place the intersection planes.



Subsequently distribute the probe points either manually or automatically on the curve. Needless to say, scanning is possible too. Probe points are always distributed on the nominal curve by default. Using edge distance and limitation points, individual segments of a curve can be measured.

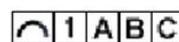
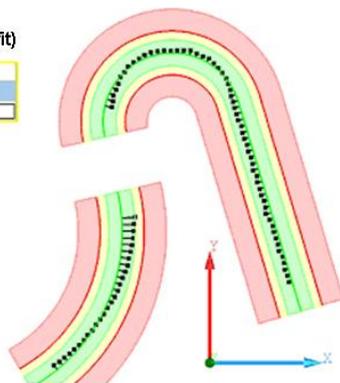


Using the line profile, evaluate the curve with the desired reference and then record it including tolerance band and deviation in a report.



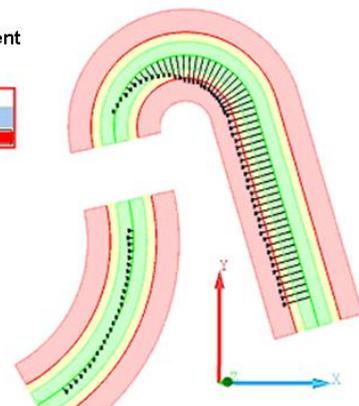
Without reference (Bestfit)

Line profile equilateral		
UTol	Dev	Graphics
0.300	0.186	

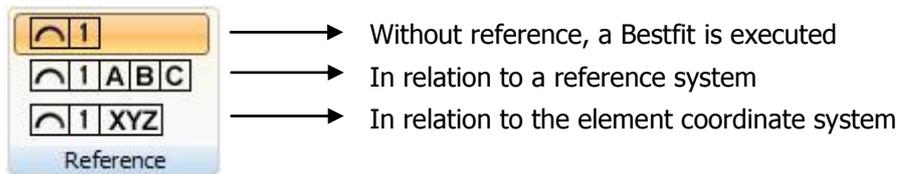


With reference (in current coordinate system)

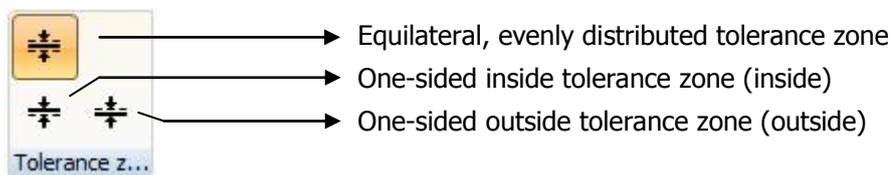
Line profile equilateral		
UTol	Dev	Graphics
0.300	0.406	



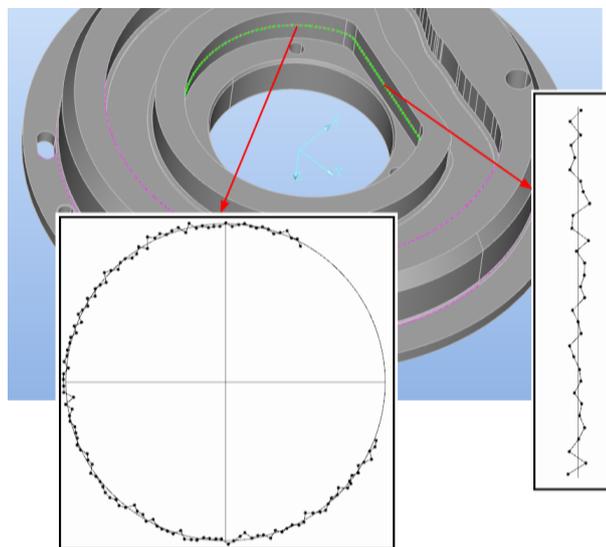
The line profile can be evaluated with or without reference.



Further, three types of tolerance zones can be selected. Beside the commonly used tolerance zone (equilateral, evenly distributed tolerance zone) the deviation from the target curve in direction inside or outside the material can also be evaluated.



By using the construction function "Extract", one can extract circles and lines from measured curves.



## ■ Highlights

- Intersect CAD models with live preview
- Combination of curve and geometrical elements in graphics and report
- Measure curve with adaptive or standardized Gaussian filter and outlier elimination
- Line profile with three options for selection of reference and tolerance zone

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## Scan elements fast with high point density

You want to scan parts fast but still get a high point density. The new WENZEL WPC 2040 controller is accessed over a fast Ethernet connection in Metrosoft QUARTIS R4. Thus up to 2'000 points per second can be transferred. QUARTIS reduces this large amount of points to the predefined number of points and compresses and saves them immediately into the database.

### ■ Highlights

- High point density with fast scanning. Ideal for form evaluations
- Scanning point reduction to predefined number of points
- Efficient processing and storage in database

## Additional improvements and enhancements

The following additional functions were added in Metrosoft QUARTIS R4:

- SP25 module SM25-5 from Renishaw is supported
- Disc and cylindrical styli can be used for triggered and scanning probe systems
- The quality of the graphical display of CAD models (faceting) has been improved
- The useable memory has been increased to 4GB RAM
- The following CAD converters have been updated to the current version:
  - Pro Engineer Wildfire 5
  - Siemens NX 7.5
  - CATIA V5 R20

**Notice:**

Some improvements are not included in the standard product Metrosoft QUARTIS R4 and require additional modules.  
For example, the measurement of curves requires the module CURVE.

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