Improvements
WM | Quartis R2026-1

Update Information

Improvements WM | Quartis R2026-1

At a Glance

WM | Quartis R2026-1 offers new functions for **more efficient, standard-compliant evaluation**. **Perpendicularity** can be evaluated using an **orientation indicator** (two references). **Curves** can be **unrolled into a straight representation**.

WM | Quartis R2026-1 offers new **programming** options. **Program loops** can be defined with **variables** or **expressions** for start value, end value, and step size. With the new "**Automatic probe focusing**" function, the probe system **always** remains **centered** in the graphics window, even during the measuring device's traverse movements.

WM | Quartis R2026-1 makes **data maintenance** easier. The "**last**" option can now be used when copying workpieces to transfer **only the last measurement per workpiece**, thus creating specifically **reduced database copies** for direct further processing.

WM | Quartis R2026-1 increases **efficiency** and **quality** in **optical measurement**. In addition to numerous detailed improvements in the **extraction** of elements, **curve elements** can now also be extracted from **point clouds**. The **normal directions** of the **point clouds** are calculated reliably and correctly, even at **high scanning speeds**.

WM | Quartis R2026-1 offers greater **performance**, **safety**, and **flexibility** for **measurements** with a **rotary table**. **Collision detection** now also includes **fixed probe heads** and the **rotary table**, **reducing the risk of collisions**. The rotary table also allows **highly eccentric elements** to be measured and **point clouds** to be captured more quickly.

WM | Quartis R2026-1 includes new **CAD models** for **measuring devices** and **accessories**. This allows machines, workpieces, and accessories to be displayed **realistically**, which greatly facilitates **orientation**, **simulation**, and **collision monitoring**.

WM | Quartis R2026-1 improves interaction with **WM | Gear** when measuring gears. This ensures **smoother** and **more productive measurement processes**.

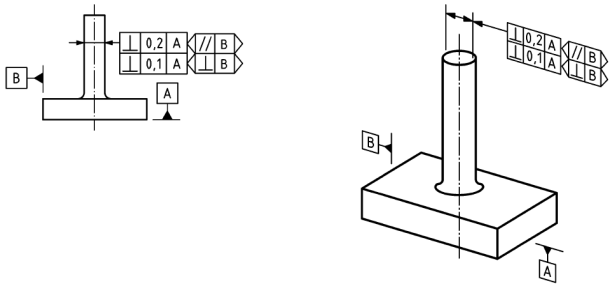
WM | Quartis R2026-1 offers **further useful improvements** and enhancements. You can find out more on the following pages.

> **Note:**
>
> Some improvements are not included in the standard product WM | Quartis R2026-1 and require additional, chargeable modules. These are described in the document "**Products and Modules WM | Quartis R2026-1**".

New functions for more efficient evaluation and programming

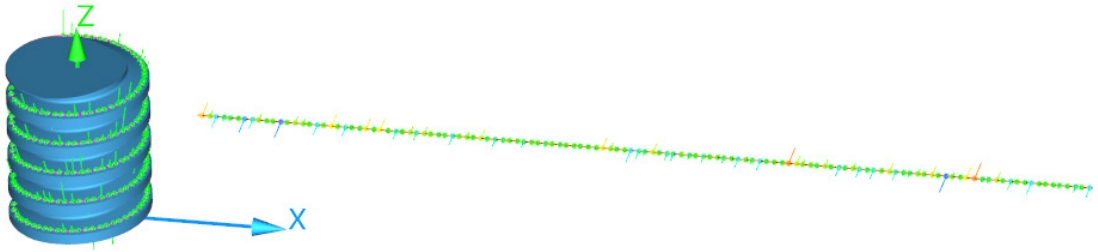
Evaluate perpendicularity with orientation indicator (two references)

The **orientation plane indicator** according to **ISO GPS** is now available for the **perpendicularity** feature. The orientation indicator **replaces** the **second reference** previously used.

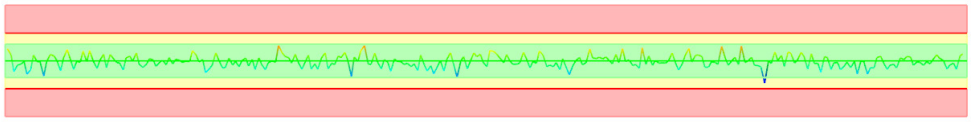


Roll-out function for graphical curve evaluation

With the new **unrolling** function, **any curves** – including **axial** and **3D curves** – can be rolled out into a **stretched representation**.



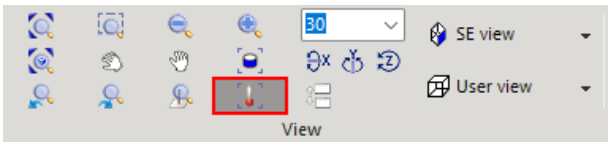
This makes **graphical profile evaluation with tolerance zones** possible for **non-planar curves** for the first time. **Form deviations can be visualized clearly and uniformly**.



Automatic centering of the probe in the graphics window

With the new "**Automatic Probe Focusing**" function, the **probe system** is automatically **centered** in the **graphics window**.

This means that the **probe position** always remains in focus, even during **movements of the measuring device**.



This makes it much easier to **orientate** and **monitor the measuring process** and ensures a **clear**, **stable display** – regardless of whether **tactile** or **optical sensor systems** are used.

Copying workpieces for a reduced database with only the last measurement

The "**last**" option is now available for **workpiece copying**. Only the **last measurement** (highest measurement ID) per workpiece is transferred. This allows you to create **reduced database copies** that contain all workpieces and programs, but only the **most recent measurement**, so that you can continue measuring immediately.

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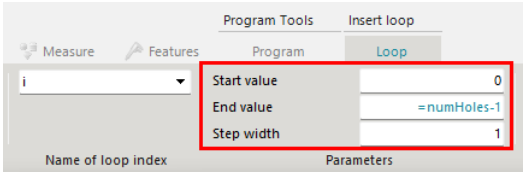
Program loops with variable start, end, and step values

Program loops in WM | Quartis can now be defined with **variables** or **expressions** for **start value**, **end value**, and **step size**.

This allows loops to be **dynamically adapted to part parameters, measurement strategies, or user inputs**.

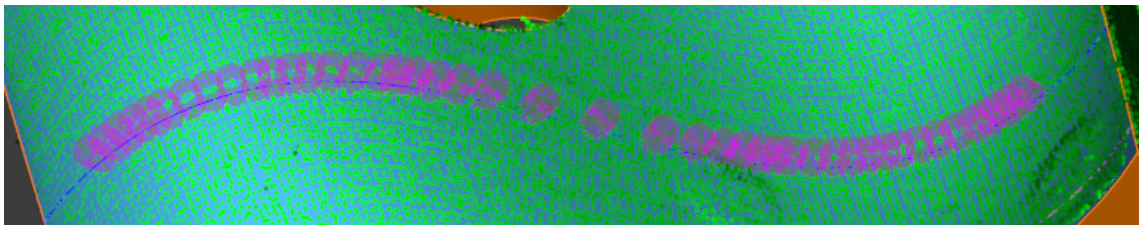
The benefits include **greater flexibility**, **fewer hard-coded programs**, and **easier reusability** of measurement programs.



Greater efficiency and quality for extract elements and point clouds

Extracting curve elements from point clouds

Curve elements can now be extracted directly from a **point cloud**. Curve extraction is based on a large number of **single-point extractions** and supports **common distribution methods**. Depending on the application, **planar**, **axial**, and **3D curve types** are available. This allows **curve geometries** to be derived from **point clouds** in a **targeted**, **flexible**, and **evaluable manner**.

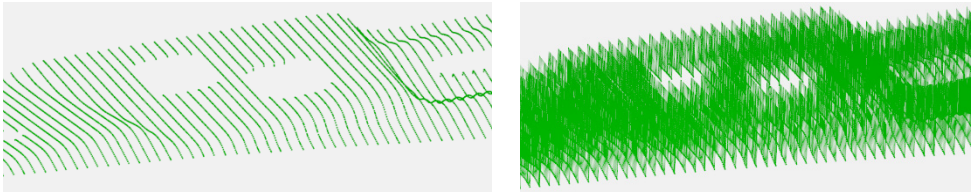


Useful improvements when extracting elements from point clouds

- **Calculating extract elements during program sentence editing**
  Elements can be calculated directly and displayed as a preview. Parameter adjustments can be checked and evaluated immediately before the changes are applied to the program sentence.
- **More stable cylinder extraction with the "Automatic" calculation option**
  The compensation calculation now delivers more reliable results, especially for larger part deviations or when the ROI is partially outside the point cloud.
- **Persistent ROI values instead of ROI values from extract settings**
  Defined ROI values are retained, reducing the need for manual adjustments during repeated extractions.
- **Consideration of material thickness when generating extract programs from measurement plans**
  The material thickness defined in the measurement plan is now automatically adopted and considered in the program sentence.
- **Automatic program generation for BK (trim contour) measuring principle**
  When generating a program from the measurement plan, the BK measuring principle is now also supported, which automatically creates a measurement macro with all the necessary elements and operations for trim contour measurements.
- **Simultaneous editing of multiple extract program sentences**
  Multiple extract program sentences of the same element type can now be adjusted in one step, making editing significantly more efficient.

Improved calculation of point cloud normal directions

With **high scanning speeds**, larger distances between scan lines can occur, which previously led to **incorrect normal directions** in isolated cases. Thanks to an **optimized calculation algorithm**, the normal directions are **now calculated correctly even with larger point distances**, resulting in **more precise point clouds and more reliable evaluations**.

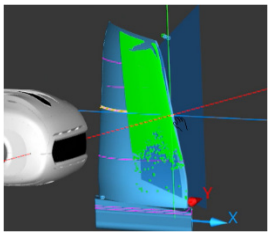


Improved performance with large number of point clouds

The display, hiding, and editing of point clouds have been optimized. **Even with large quantities (>200 scans)**, the display is now **smooth and efficient**, which makes working with large amount of data much easier.

Greater safety and flexibility when measuring with a rotary table

Capture point clouds faster with a rotary table



For optical measurements with a rotary table as the fourth axis, the **set scanning speeds** are now reliably achieved. Even with the "**curve**" or "**curve tangent**" distributions, capture runs **smoothly**, which significantly **increases the efficiency of the measurements**.

Measurement of eccentric elements with rotary table

With the rotary table as the measuring fourth axis, it is now also possible to measure **highly eccentric, rotationally symmetrical elements** such as **circles**, **cylinders**, or **spheres**. This enables measurement tasks that were previously impossible – such as **measuring eccentric connecting rod bearings on crankshafts** – and **significantly expands the range of applications** for the rotary table.

Collision detection for fixed probe heads and rotary tables

Detailed collision detection has been further expanded. In addition to measuring devices with **swivel probe heads**, systems with **fixed probe heads** are now also supported. In addition, **rotary table movements** are included in collision detection, so that the part placed on the rotary table is reliably monitored during rotation. This increases **safety**, ensures **greater transparency** in complex motion sequences, and **reduces the risk of collisions** during demanding measurement tasks.

Individual display and collision detection for accessories

The **mounting status** and **attachment location** can now be defined for accessories and reference spheres. This allows the **display and collision detection for each accessory to be controlled specifically**, which improves the overview and **makes collision monitoring more** precise and **reliable**.

Optimized alignment to the rotary table axis when calibrating the probe system

The alignment of the **probe tip position with the rotary table axis** has been optimized, ensuring **even greater accuracy** when measuring with the rotary table.

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Enhancements to CAD models and CAD interfaces

Extended CAD models for measuring devices and accessories

WM | Quartis now offers **over 250 measuring device models** for 3D graphics display, supplemented by additional **CAD accessory models**.

The **53 new measuring device models** include the **WENZEL GT series**.

Also newly available are **rotary table models** (300 mm, 400 mm, 600 mm), **reference spheres** (with mounting on centering tip), and a **6-jaw quick-action chuck**. This allows **realistic representation** of the **machine**, **workpiece**, and **accessories**, which significantly facilitates and improves **orientation**, **simulation**, and **collision monitoring**.

New and Actualized CAD Interfaces

WM | Quartis R2026-1 supports the following **CAD interface formats**:

- CATIA V4 (4.1.9 to 4.2.4)
- CATIA V5 (R8 to **R2026**)
- CATIA V6 (up to **R2026**)
- DXF (2000/2002 and R12)
- IGES (up to 5.3)
- Inventor (V11 to **2026**)
- Parasolid (9 to **37**)
- Creo, ProEngineer (16 to Creo **12**)
- Siemens NX (NX1 to **NX2506**)
- Solid Edge (18 to SE **2025**)
- SolidWorks (2003 to **2026**)
- STEP (AP203, AP214, AP242)
- VDA (1.0 and 2.0)

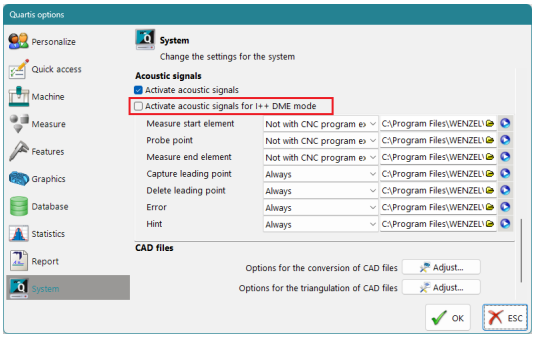
The **formats** that have been **changed** compared to WM | Quartis R2025-2 are shown in **bold** in the list above.

Additionally, the CAD interfaces have been further developed through **general improvements**, **optimizations**, and **error corrections**.

Additional highlights for maximum productivity

Acoustic signals for probe points in I++ DME Server mode

In I++ DME Server mode, **probe points can now be signaled acoustically**. This provides operators with **immediate feedback when capturing points**, which increases **safety and efficiency** during the measurement process.

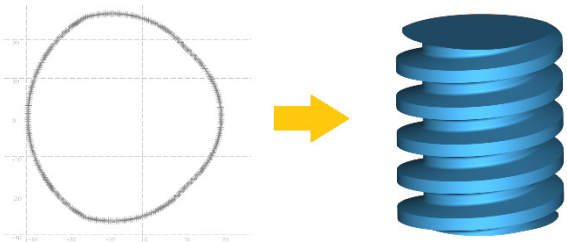


PHS rotation/swivel speed and acceleration adjustable

The **speed** and **acceleration** of the **PHS rotation/swivel system** can now be **adjusted individually**. This allows the movements to be adapted to different requirements, e.g., for **heavy optical sensors** or **long probe systems**.

Create CAD models by extruding a 2D profile

CAD models can now be **extruded from 2D profiles**. Extrusion takes place along a straight line and can optionally be combined with **rotation (helix extrusion)**. This allows **complete 3D models** to be quickly generated **from 2D sections**, which can be used to derive **nominal measurement curves** such as cross-sections or spiral pitches.



Automatic switch to high-performance graphics card

WM | Quartis now **automatically uses the powerful, dedicated graphics card** to display CAD models correctly and ensure error-free clicking. This allows users to benefit from stable, smooth, and reliable 3D graphics.

Improvements when working with WM | Gear

The **interaction between WM | Gear and WM | Quartis** has been **optimized** in several areas to make measurements faster and more efficient.

- **Automatically save probe deflection setting**
  The probe deflection defined when calibrating a probe system is **saved** directly **in the probe system** and automatically restored when loading. This simplifies the measurement of **small gears with delicate stylus tips** in particular.
- **Performance optimizations**
  Communication between WM | Gear and WM | Quartis has been **improved**. Measurements start faster, points are transferred more efficiently, and waiting times have been reduced. This ensures **smoother and more productive measurement processes**.

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