WENZEL Metromec

Products and Modules
Metro*soft QUARTIS* ® **R8**

Products – the extensive standard equipment

Metrosoft QUARTIS products contain an extensive collection of functions for the coordinate measuring technology. For extended and customized functionality the products are completed with modules.

■ Metrosoft QUARTIS

Metrosoft QUARTIS is the standard product for measurement and evaluation on coordinate measuring machines. Measurement and programming can be executed online or offline. The 3D graphics displays measuring machine, work piece (CAD models in ACIS format) and measuring results.

Elements can be calculated and evaluated with a free choice of measurement strategies, different regression calculations (least squares, Chebychev, minimum circumscribed, maximum inscribed, tangential) and normalized filters.

The collision detection detects and warns of collisions with the work piece (CAD model).

The geometry and temperature compensation guarantee best possible measuring results.

For the alignment, a powerful Bestfit for free-form and geometry as well as a RPS alignment are available besides the basic functions "primary direction, secondary direction and origin".

Form and position evaluations according to ISO 1101 / ASME Y14.5M, statistical functions with machine and process capability (SPC) as well as flexible creation of reports are also included.

The quick selection table and user management offer easy user guidance for the execution of measurement programs.

Measuring results and programs are stored and managed in the integrated relational database. The database can be individually expanded with user defined properties.

The language of the user interface and the measurement reports can be set separately.
The following languages are available: German, English, French, Italian, Dutch, Polnish, Swedish, Simplified Chinese, Slovak, Spanish, Czech, Hungarian.

The following devices can be operated: WENZEL WPC 2030, WENZEL WPC 2040, WENZEL WPZ 50, WENZEL WPZ 100, WENZEL PointMaster, WENZEL exact Analysis and I++ DME Server.

■ Metrosoft QUARTIS Offline

Metrosoft QUARTIS Offline is the product for pure offline programming. It is not possible to connect to a measuring machine. Besides this restriction, the same functions as in the product Metrosoft QUARTIS are included.

Notice:
The same modules are required on a Metrosoft QUARTIS Offline license as on the license for the measuring machine. For example, in order to program a probe rotation offline, the module IPH has to be available.

PH20 and REVO movements cannot be simulated with Metrosoft QUARTIS offline. In order to do so, the product Metrosoft QUARTIS in connection with an offline UCC Server Software is required.

Application modules – expand the basis functionality

Application modules expand the basis functionality of Metrosoft QUARTIS products with powerful functionality for specific applications.

■ CURVE

The module CURVE allows CNC measurement of curves against nominal curves in the CAD model as well as the measurement of unknown curves without CAD model. The probe radius correction is carried out two dimensional in the plane of the curve. The evaluation of the profile tolerance "Line profile" can either be carried out with or without reference, as well as with unilateral or bilateral tolerance zone. The curve is displayed with the tolerance zone in the element graphics. Curves can be divided in lines and circles using the extract function.

■ SURF

The module SURF allows CNC measurement of surfaces as well as points and edge points with projection onto the CAD model. The probe radius correction is carried out perpendicular to the CAD surface. The evaluation of the profile tolerance "Surface profile" can be carried out with or without references as well as with unilateral or bilateral tolerance zone.

■ Q-DAS

The module Q-DAS allows the export of measuring results using the Q-DAS ASCII transfer format. The K fields to be exported can be configured at will.

■ IMPEX-ELEM

The module IMPEX-ELEM allows importing and exporting element data in the following formats: VDA-FS, IGES and ACIS.

Alignments can be transferred as transformation matrix (TMAT) to WENZEL exaCT Analysis or WENZEL PointMaster.

■ DMIS

The module DMIS allows the direct execution (interpreting) of DMIS programs. Supported are DMIS standard 5.2 functions for the measurement of geometry with triggered probe systems, all in Metrosoft QUARTIS available constructions and evaluations as well as high language construct such as variables, conditions, jumps and loops. DMIS programs are displayed in an comfortable editor where they can be edited, checked and saved.

Device modules – for optional machine components

Device modules expand Metrosoft QUARTIS products for certain measuring machine components and their application.

■ IPH (Indexing Probe Head)

The IPH module supports the calibration and operation of the following indexed articulating probing systems from Renishaw: PH10M, PH10MQ, PH10T, MH8, MIH, MH20i.

A generic indexed probe head is available if the measuring machine is controlled via an I++ DME Server.

■ CPH (Continuous Probe Head)

The module CPH allows calibrating and operating a continuously variable probe head that can be positioned in any direction. Once calibrated, one can directly measure with any angle position.

The module CPH supports the PH20 , REVO and PHS1 from Renishaw.

A generic continuously variable probe head is available if the measuring machine is controlled via an I++ DME Server.

■ PRC (Probe Changer)

The PRC module allows calibration and use of the following stylus changing systems and changing rack ports from Renishaw: ACR3, FCR25, MCR20, SCR200, SCP80, ACR2.

■ SCAN

The module SCAN allows scanning of the elements line, plane, circle, cylinder, cone, sphere and curve with scanning probe systems. Normalized filters and outlier elimination guarantee optimal results. Scanning is carried out on known or unknown scan paths. Exceptional fast scanning is possible using a WENZEL WPC 2040 controller with Ethernet connection.

The module SCAN allows the self centered measurement of points in center bores, cones, V grooves, gearings, etc.

The following scanning probes from Renishaw are supported: SP25, SP600, SP80 and REVO.

CAD interface modules – the basis for efficient measurements

CAD interface modules allow importing CAD models in different formats. Metrosoft QUARTIS internally uses the ACIS format from Spatial Corporation. Data sets in ACIS format (up to version 21) can be imported without a specific module.

■ VDA-FS
Import of CAD data in VDA-FS format (version 1.0 + 2.0)

■ IGES
Import of CAD data in IGES format (up to version 5.3)

■ STEP
Import of CAD data in STEP format (version AP203 + AP214)

■ DXF
Import of 2D CAD data (curves) in DXF (AutoCAD) format (version 2000/2002 + R12)

■ CATIA-4
Import of CAD data in CATIA V4 native format (version 4.1.9 + 4.2.4)

■ CATIA-5
Import of CAD data in CATIA V5 native format (version R6 - R22)

■ PRO-E
Import of CAD data in Pro/ENGINEER, Creo native format (version 16 - Creo 2.0)

■ NX
Import of CAD data in Siemens NX (former Unigraphics) native format (version NX 1 - NX 8)

■ PS
Import of CAD data in Parasolid native format (version 14 - 24)

■ SW
Import of CAD data in SolidWorks native format (versions 2003 - 2012)

■ INV
Import of CAD data in Autodesk Inventor native format (version V11 - 2012)

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