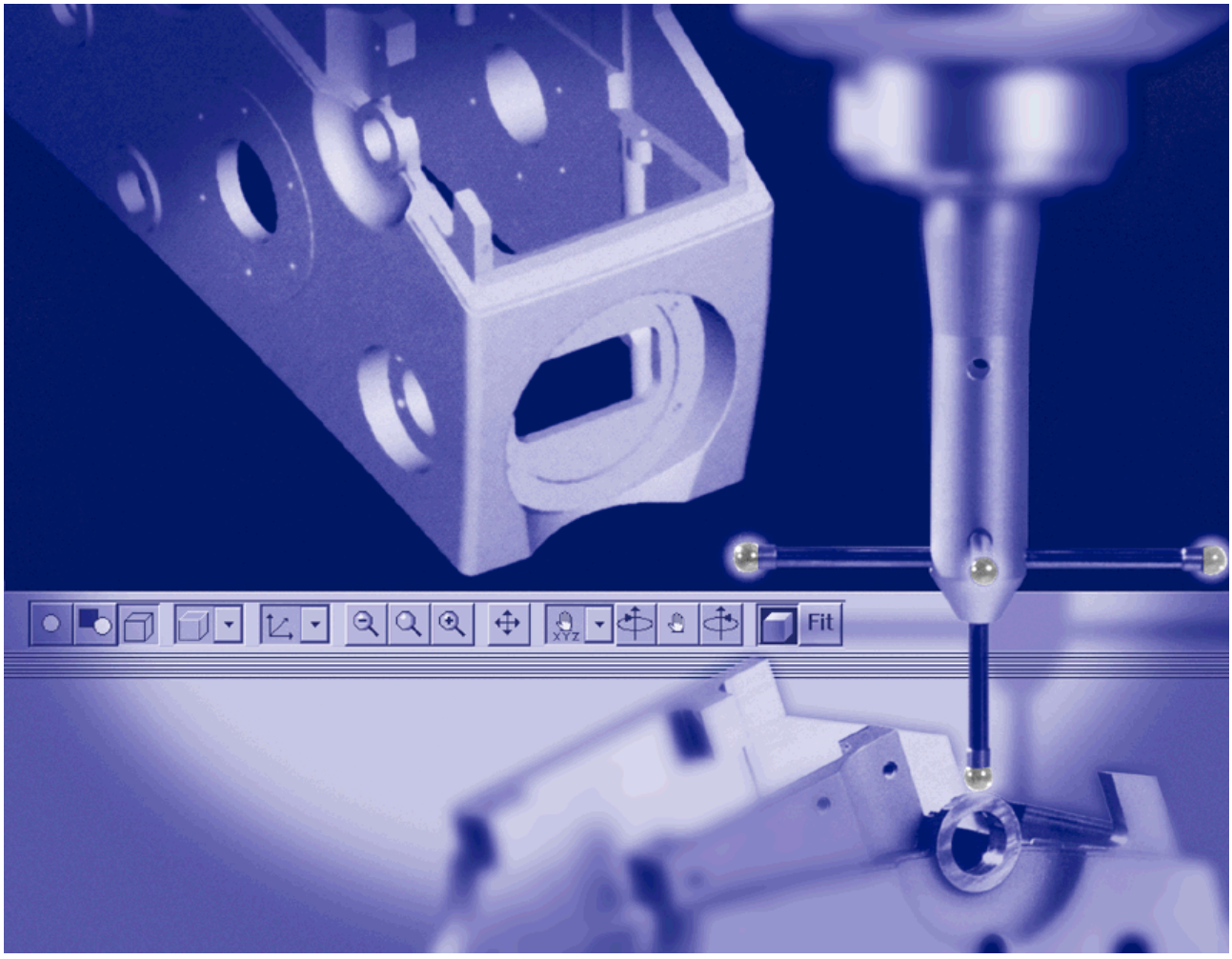


CALYPSO

Release Information
CALYPSO 2020

Documentation for Version 7.0.00

The design and delivered components of the CMM, its options, the program packages, and the relevant documentation are subject to change.

This manual must not be circulated or copied, or its contents utilized and disseminated, without our express written permission. Persons misusing this manual are subject to prosecution.

This manual is subject to modification. All rights pertaining to changes in the CMM and its options reserved.

All product names are registered trademarks or trademarks of the corresponding proprietors.

Although utmost care has been taken in preparing the information given in this manual, we cannot assume any liability for its completeness and correctness, except in case of willful intent.

CALYPSO
Version 7.0.00
Documentation for Version 7.0.00
2020-08-17

Table of Contents

Chapter 1 Notes

1 Notes

This chapter contains:

Pre-installation notes

Note

Be sure to observe the following notes before installing this software!

Requirements for upgrading to CALYPSO 2020

CALYPSO version 6.0 and a Windows 10 operating system are the minimum requirements for upgrading to CALYPSO 2020.

CALYPSO preset / CALYPSO preset exchange – change in functionality from CALYPSO 2019

ZEISS PCM programming language is used for communication between CALYPSO preset / CALYPSO preset exchange and CALYPSO Basic.

For this purpose, the software license for CALYPSO PCM has been activated in addition to CALYPSO preset. Previously, CALYPSO preset exchange required additional activation of the licenses for CALYPSO FACS®, CALYPSO DMIS-IN, and CALYPSO PCM.

With CALYPSO 2019 or higher, these three options are no longer required for standard applications in »preset«, since communication between the CMM and process control systems from CERTA takes place via XML files. These files can be read in with the standard functionalities of CALYPSO. FACS® and DMIS functionalities are no longer required. The required PCM commands have been permanently integrated into CALYPSO preset.

Options up to CALYPSO 2019	New option from CALYPSO 2019
CALYPSO preset	CALYPSO preset
CALYPSO preset exchange	

Changes in product structure and effect on existing systems:

CALYPSO preset exchange is removed from the price list. For CALYPSO preset exchange customers: the amount for your current software maintenance agreement will automatically be reduced in the next billing cycle. When retrieving your license, you will receive the current version of the option named »CALYPSO preset«. In case of updates or upgrades, your CERTA process control system may need to be adjusted. For more information, please contact your CERTA representative.

When updating or upgrading to CALYPSO 2019 or higher, FACS, DMIS, and the PCM programming functionality will no longer be activated. The PCM read permission remains enabled. Existing systems and measurement plans that contain PCM commands thus remain functional even after an update or upgrade.

NOTE

If you have previously used the programming functionality and want to continue to use it, you will be assisted from CALYPSO 2019 by ZEISS when updating, upgrading, or acquiring a system. If you have any questions, please do not hesitate to contact your ZEISS representative.

Microsoft® SQL Server 2017

With this version of CALYPSO 2020, the stylus database is automatically converted to Microsoft SQL Server 2017. Please see the requirements in the release notes for CALYPSO 2020. For customers who want to switch sooner, the SQL Server 2017 setup will be provided separately (in the SDP).

Information on use

Using floating point numbers

Microsoft has changed the way that floating point numbers are used. This can result in minimal changes to the measurement results.

Deviation during output in additional coordinate system

The use of a section of skewed 3D lines with projected results can result in an offset in alignments. This occurred more often if the coordinate system was inclined to the base system. This behavior was corrected with the introduction of CALYPSO 7.0.00 and can lead to changes in the measurement results.

New switch in QDASCONV.CON

MaskNaN = [INT5]

- Value = 0: Not active
- Value > 0: active
- Value is on [INT5] (s. Q-DAS ASCII transfer format, V12 / 2015 German)

If MaskNaN is activated, the following behavior will be used:

- CHR file: the "actual" column contains exactly the character string "NaN"
- DFX file: K0001 is written "0"; K0002 becomes the value "MaskNaN" (e.g. 90)

The switch works with:

- useKnotation = 0 | 1 | 2

Temperature sensor and workpiece temperature sensor

Simultaneous use of the temperature sensor and workpiece temperature sensor is not possible!

Possible discrepancies between documented error and actual error

The way in which CALYPSO calculates errors for the report was changed starting with the 2019 version.

This can result in discrepancies between documented error and actual error.

No Xcelera support as of CALYPSO 2019

Xcelera is no longer supported as an image input device as of CALYPSO version 6.8.04.

PC-DMIS Import in CALYPSO 6.8

To use PC-DMIS Import, the PC-DMIS Import license version number must correspond to the CALYPSO version number.

CALYPSO 7.0.00 thus requires PC-DMIS import license 7.0.00.

Correction of the “Caliper Distance” and “Polar Caliper Distance” characteristics

The “Caliper Distance” and “Polar Caliper Distance” characteristics were not calculated with filtered points.

The correction may lead to changed results.

Template for O-INSPECT: switch the grid via ALT+g

If there are any problems while switching the grid via **ALT+g**, it could be because this key combination is already being used in a function bar.

To eliminate this problem, the existing use of **ALT+g** must be changed. The function required for this can be found under **Resources → Function call → Numbers and shortcuts definition**.

Alternatively, a new default list can be created. This automatically generates the **ALT+g** combination. The **Create default list** function required for this can be opened via **Numbers and shortcuts definition** in the **Edit** menu.

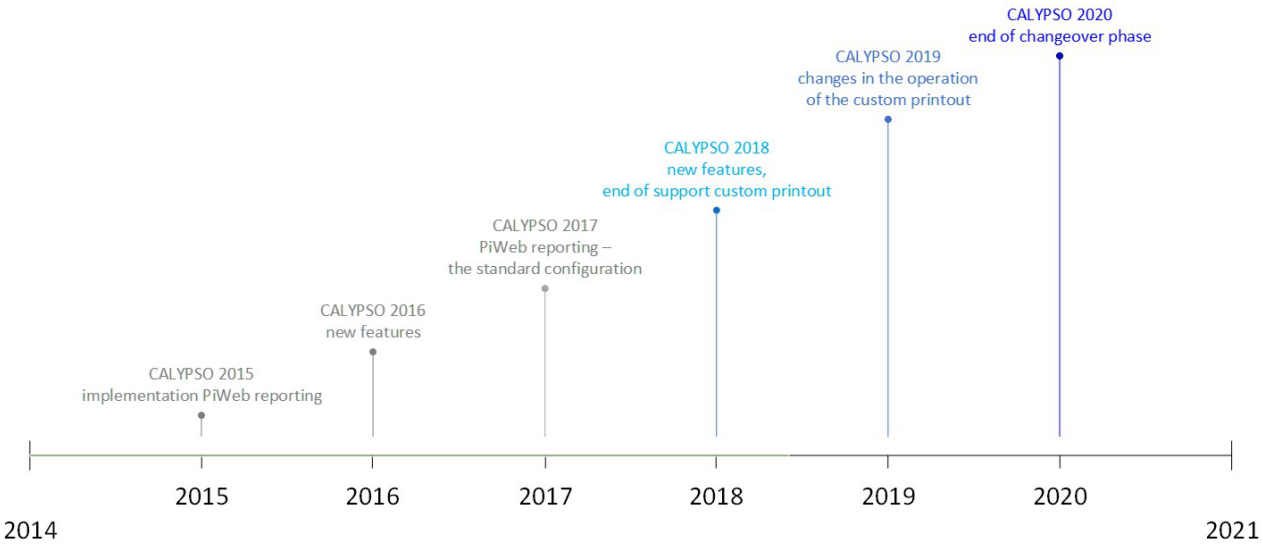
Discontinued report templates: behavior from CALYPSO 2020

PiWeb reporting: timeline for the switchover phase from 2014 to 2020

A new reporting system was integrated into CALYPSO 2015. PiWeb reporting joins PiWeb reporting plus, PiWeb sbs (sbs= small business solution) and PiWeb enterprise as part of the new PiWeb family.

PiWeb reporting is now the standard for reporting at ZEISS. Other reporting methods will no longer be enhanced.

CALYPSO 2019 features many new beneficial functions for PiWeb reporting. Detailed descriptions can be found in the following chapters.



Discontinued report templates

1. **Custom report, user-defined report**

   Latest version: CALYPSO 5.8

   Replacement: PiWeb reporting

2. **Graphic element, Basic reporter (PiWeb 5.0)**

   Latest version: CALYPSO 5.0

   Discontinuation of development 8 March 2013

   Replacement: PiWeb reporting

3. **Flex reporter option (PiWeb 5.0)**

   Latest version: CALYPSO 5.0 with PiWeb 5.0

   Discontinuation of development 8 March 2013

Replacement: PiWeb reporting plus

SMA customers with Flex reporter receive a free license upgrade to PiWeb reporting plus.

What happens from CALYPSO 2020?

– **CALYPSO measurement plans created prior to CALYPSO 2020:**

  Older measurement plans that were programmed before CALYPSO 2020 and use the custom report, graphic elements or the Basic reporter, can also still be used with the old reports. There will be no troubleshooting for old reports.

– **CALYPSO measurement plans created from CALYPSO 2020:**

  The custom report, the graphic element and the Basic reporter can be opened. There will be no new functions and no troubleshooting for old reports.

All other reports and printouts will remain active.

Automatic repetition of potentially flawed scanning paths with LineScan and CFS sensor systems

From CALYPSO 6.6.16, an automatic correction run is provided for measurements with CFS and LineScan sensor systems. If potentially flawed scanning data is detected, CALYPSO automatically repeats the affected scanning path via the previously used travel path. This enables you to more efficiently ensure the quality of the measurement and to considerably improve overall system robustness.

Conversion of the autofocus

From CALYPSO 6.6.12, there will only be one autofocus system (fast & accurate). If necessary, the light settings must be changed for this.

Calculation of angularity: changed results

The algorithm to calculate angularity has been changed. For angularity of planes with respect to a single datum, this possibly results in somewhat smaller tolerance zones, which represent the actual minimum.

Measurement of surfaces under a transparent surface

The measurement of surfaces under a transparent surface can result in problems with DotScan. If necessary, travel paths and/or probing strategies must be adjusted.

Terminology changes for datums in German

The names of the datums were changed in German in version 6.6.12 to optimize operation and avoid errors:

- **Old:** Primär (Raum)

  New: Raumdrehung
- **Old:** Sekundär (Ebene)

  New: Ebenendrehung
- **Old:** Tertiär (Nullpunkt X/Y/Z)

  New: Nullpunkt X/Y/Z

LineScan 2-8

Installation of LineScan 2-8 (first-time installation)

1. Run *Carl Zeiss Optical Components LineScan 1.22.1 Setup* as administrator.

Installing LineScan 2-8 with already existing LineScan sensor systems

1. Uninstall the existing LineScan installation via the Control Panel: *Carl Zeiss Optical Components LineScan X.XX.X (Setup < 1.22.1)*.
2. Run *Carl Zeiss Optical Components LineScan 1.22.1 Setup* as administrator.
3. Install the existing LineScan sensors and LineScan 2-8 via the *ToolSetup* on the enclosed CD.
4. Requalify all existing LineScan stylus systems.

Installing LineScan 2-25, -50, -100 with already existing LineScan sensor systems

1. Run the *Carl Zeiss Optical Components LineScan 1.22.1* software update as administrator.

LineScan operation

To use LineScan 2-8, WBScan must be uninstalled before installing CALYPSO 6.6.00.

ROTOS

In the ROTOS alignment windows and in the management of the roughness standards, it is possible to change the measurement direction. Changing the measurement direction leads to malfunctions that can result in damage to the equipment! Therefore, the measurement direction must *not* be changed!

CAD view in the AutoRun mode

The CAD view must remain open in the AutoRun mode. Closing the CAD view may lead to measurement abort or unexpected results.

VDA_25_PPF_Protocol_compact.ptx

With CALYPSO 2018/PiWeb reporting rev 6.6, only the "VDA_25_PPF_Protocol_compact.ptx" template is being further developed. As soon as the webshop is available, the old template will be available for download. The old "VDA_25_PPF_Protocol.ptx" template, however, is no longer being developed.

Using space points

The use of space points with non-axis-parallel directions for the creation of the base alignment, which is also created with a rotation, could lead to a flawed calculation of the base alignment.

Simulation – supplement to the operating instructions

CALYPSO supports the following CMMs in the simulation:

ACCURA	1600 2400 1400
	1600 3000 1400

ACCURA II	1200 1800 1000
	1200 2400 1000
	1200 2400 800
	1200 3000 1000
	1200 4200 1000
	1600 2400 1000
	1600 2400 1500
	1600 3000 1500
	1600 4200 1500
	2000 2400 1500
	2000 3000 1000
	2000 3000 1500
	2000 4200 1000
	2000 4200 1500
	900 1400 800
	900 1600 800
	900 1800 800
	900 1200 800
CARMET 2	6000 1600 2500
CenterMax	CenterMax
CONTURA G2	1000 1200 600
	1000 1600 600
	1000 2100 600
	700 1000 600
	700 700 600
DuraMax	DuraMax
GageMax	GageMax
MICURA	500 500 500
MMZ B	5000 16000 2500

MMZ E	2000 7000 1800
MMZ G	2000 5000 2000
	2500 5000 2000
	3000 4000 1600
	3000 6000 2000
MMZ M	3000 4500 1600
	3000 4500 2000
MMZ T	2100 3200 1200
PRISMO	1600 2400 1000
	1200 1800 1000
	1200 3000 1000
	1200 4200 1000
	700 900 500
	900 1200 700
	900 1500 700
	900 1800 700
PRISMO fortis with U-shaped granite base plate	1200 1800 1000
PRO	3000 1600 2100
	6000 1600 2100
SVA	1000 1500 800
	1200 2000 1000
	850 1000 600
SVA Fusion	1000 1500 800
	1200 2000 1000
	850 1000 600

Position tolerances with the “2D Line” feature

The use of different styli for measurement of angularity, perpendicularity, and parallelism based on a 2D Line feature may have led to incorrect results in previous CALYPSO versions due to adding the difference between the stylus radii.

Base alignment definition via “Point Recall”

If a feature created via the Point Recall option has not only been used to define the base alignment, but also as an additional constraint, reopening the feature could possibly change the characteristic's actual values.

XTR

When using the XTR probe, the “Optimized navigation for Rotating Carriers” option must be set to **Off** in the CALYPSO Compatibility Settings.

Optimized curve best fit for blade root profile

The curve best fit for blade root profiles has been optimized.

Notes from previous CALYPSO versions

Rotary table operation

Using the RT-AB rotary table

If you use the RT-AB rotary table, which can be lifted and lowered for loading, the subsequent measurement must be run in the same condition as when the base alignment was defined. Otherwise, the subsequent measurement will not relate exactly to the previously defined base alignment!

Using the RT-AB rotary table

The lowered state of the RT-AB is only intended for loading the rotary table and is not suitable for measurements! Make sure that base alignment definition and subsequent measurement take place in the lifted state of the RT-AB.

RT-AB displacement on CMM

Operation of the RT-AB rotary table requires the reference mark to be requalified after any displacement of the rotary table. To do so, select “Qualify RT Alignment Mark” under “Other” in the stoplight window or, when qualifying the rotary table axis, select “Feature for rough pos. of RT axis” in the RT menu.

RT location for the RT-AB rotary table

When performing a rough qualification of the RT-AB rotary table angle in CALYPSO “RT location”, the user is prompted to probe the reference point within the RT location function. **The rotary table must be positioned at 0 degrees**. Observe the 0 degree information.

“Missing Bore” function

When using the “Missing Bore” function in connection with measuring probes (e.g. VAST, etc.), a measuring force of at least **100 mN or higher** is required to qualify the stylus used. Otherwise the function cannot be guaranteed. This also applies to the “Search distance after nominal position” function.

Probes, stylus systems and qualification

RC list qualification using LineScan and LineScan II

List qualification is a special type of CNC qualification. The set limit values are monitored during this process and the stylus will be marked as invalid if a limit value is exceeded. In the standard CALYPSO installation, limit value monitoring for Sigma is set to 0.01 mm. This limit value is too low for a LineScan sensor and may have to be corrected or disabled.

ROTOS light

If more than ten active Bluetooth devices are in the vicinity of a ROTOS sensor used with CALYPSO 2020, the ROTOS sensor may not be detected automatically when a stylus system is created for the first time. In such cases, users can enter the Bluetooth ID manually.

The Bluetooth ID is specified on the sensor. Any existing leading company number (e.g. 0080e1) must NOT be entered, otherwise the ID will not be accepted and the connection not established.

Once the stylus system has been successfully added, neighboring Bluetooth devices will no longer cause interference.

Scanning optimization for passive sensors

If features deviate significantly from their nominal positions, **air scanning** may occur during high-speed scanning with passive sensors (XXT) because the sensor lifts off the surface of the material. If such cases, there is an automatic remeasurement at half speed for new measurement plans created with CALYPSO 5.6 which takes into account the actual location of the feature. This behavior can also be enabled via the compatibility settings for measurement plans created with previous versions. (**Resources → Compatibility Settings …**)

Canceling a list qualification

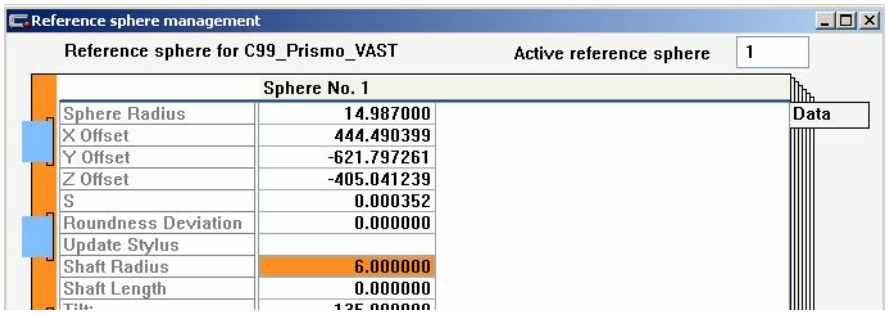
If a list qualification process is canceled, the articulating system may stop in an undefined position and the stylus system name changes to not_defined. In this case, you must reject the prompt (Probe in direction of the stylus shaft) and reinsert the stylus system before restarting the qualification. If not, a collision may occur

Air scanning with XXT TL2

The air scanning function is no longer supported for the XXT TL2 probe type.

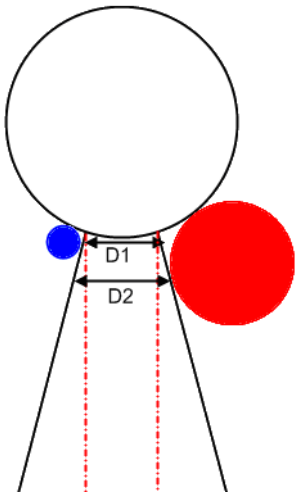
Shaft radius of the reference sphere

The shaft radius of the reference sphere entered on the Reference sphere management page must be large enough for any stylus radius:



To avoid collisions during stylus qualification, the shaft radius entered must be increased to a value that takes into account the largest stylus tip radius (see D2 for the red sphere in the sketch).

However, if you select a shaft radius that is too big, the number of possible qualifiable angular positions (RDS, DSE, etc.) is limited. To avoid this problem, the same reference sphere can be created several times, each time with a different shaft radius which can be selected for stylus qualification as required.



Results and presentation

Profile of a freeform surface - fewer deviations

The calculation of the profile was adapted as of CALYPSO Version 6.4.0400. Points located on edges are now eliminated earlier by an enhanced point projection. This may cause minor deviations in comparison to previous results.

Single point in freeform surface – Point list and banner presentation

The output of the single point was adapted to accommodate a best fit of the freeform surface element. This affects the single point position and single point deviation values within the point list export file. In the banner presentation, the values for the position are affected. This may result in differences in comparison to the values obtained with previous CALYPSO versions. No changes have resulted regarding the total evaluation of the best fit, since these are independent of the adaptations in this version.

Optical systems

O-INSPECT: control console potentiometer

⚠ CAUTION

The potentiometer on the control console of the O-INSPECT has no influence on the rotary table movement.

GigE camera installation

The use of a GigE camera (OI 322) requires adjustments to the firewall of the CALYPSO computer. Please observe the enclosed information sheet or the notes in the **600061-4107.010_Konfiguration_Firewall_Kurzversion.pdf** file stored in the Tools\GigE Sensor Tools directory of the DVD.

ViScan – manual CNC mode

In the manual CNC mode, the probing method must be selected again manually after focusing.

CMM controller, Windows system, and software

METROTOM Measuring Module

An existing CALYPSO version must be uninstalled before installing CALYPSO with the METROTOM Measuring Module! Parallel installation of several CALYPSO versions in combination with the METROTOM Measuring Module is not permitted.

FACS automation – individual adjustment required

The FACS automation interface is tailored to each customer's needs and must be adjusted individually. Before operating CALYPSO with your FACS application, you should first contact our support team.

64-bit Ghostscript version is incompatible

Installation of the 64-bit Ghostscript version is not possible with CALYPSO. If you want to use Ghostscript, install the **32-bit version**.

.pdf output – cumulative function

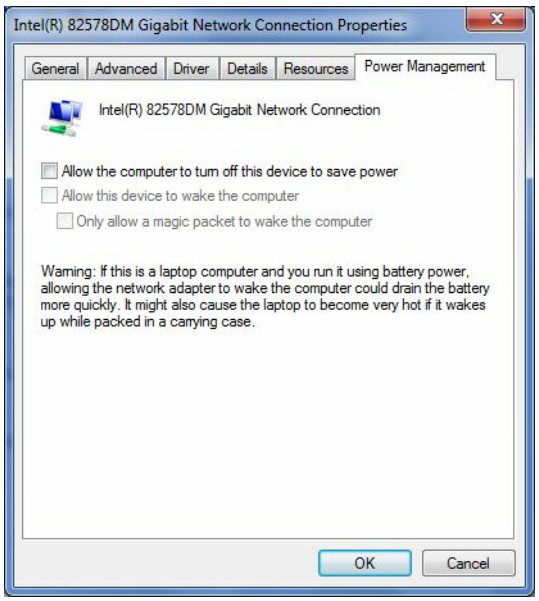
Ghostscript is required for cumulative output in .pdf format. At least version 8.56 is required for error-free application.

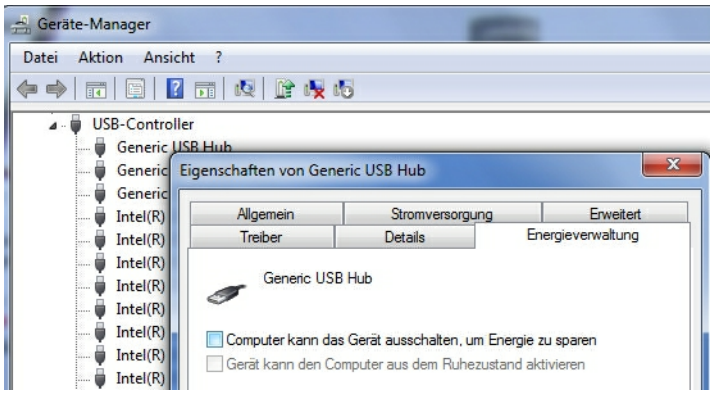
Aero mode

It may happen that the CAD representation is not shown in the custom report if the Aero mode has been selected in Windows. To avoid this, disable the Aero mode. The TeamViewer application may also be affected by an active Aero mode.

Setting power management for network cards and USB hubs

In Windows systems, the power management of the network cards must be set so that it cannot be switched off by the operating system. For this purpose, make the following setting in the Device Manager of the respective network cards or USB hubs:





Untick “Computer can switch off the device to save energy”.

Recommendation: In addition, set the power mode to “Never” and the power to “High Performance” in the system power management.

Manipulation of installed files

Installed CALYPSO files must not be modified! Renaming or removing files (including measurement plans!) that are stored in the CALYPSO directory during installation can lead to malfunction when applying the graphic element. The automatic repair installation triggered by this event is usually unsuccessful. Manual insertion of program files (e.g. using Windows Explorer) can also lead to malfunctions.

2 New Features

This chapter contains:

New features in CALYPSO 2020

Easy programming of camera position combined with patterns

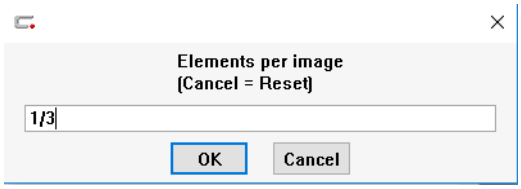
Since CALYPSO 2019 users have the possibility to assign a single camera position for multiple features. A further development step was now implemented in CALYPSO 2020: measurement elements programmed by pattern are from this version on compatible with the camera position assignment. Consequently, CMM's motion during the CNC-run can be reduced, together with the overall programming and measurement time.

Benefit

Faster assignment of camera positions and improved workflow. Also, overall programming and measurement time are reduced.

Details

After right-clicking on a feature containing a pattern, select the option *update camera measurement position*. CALYPSO will, then, display an input window, in which users can define the number of features to be captured or a grid size (X and Y expansion), in case of a 2D linear pattern.



The maximum number of features that can be measured using a single position depends on the feature's size and the magnification chosen. If number entered in the field exceeds this limit, CALYPSO will automatically adapt the camera position to ensure maximum fitting.

Please bear in mind that optical effects might influence measurement results and must be considered when using this function.

O-INSPECT productivity: 3 modi for a shorter CNC runtime

The runtime of O-INSPECT's measurement plans already running for quality control (e.g. using AutoRun environment) can now be reduced by selecting one of the 3 newly introduced CNC modi. CALYPSO will omit the display of CAD elements that are not required during a CNC-run for which the supervision of an operator is not necessary anymore.

Benefit

Increased measurement speed for a shorter CNC runtime and, consequently, higher productivity of O-INSPECT systems.

Details

The new modi can be set under **Resources → Features Settings Editor → Camera → Cycle time performance** and is valid for the measurement plan.

Please be aware that this function is available for O-INSPECT CMMs only.

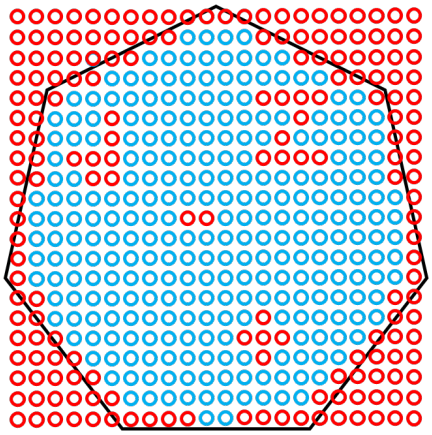
Automatic masking of the missing graduation indices

Features can be partially imaged using a graduation. However, not all graduation indices are always available in the nominal data (e.g. CAD model). Up to CALYPSO 2019, users had to identify the missing indices while programing a graduation and manually mask them. In CALYPSO 2020, such positions are detected as nominal data and hidden.

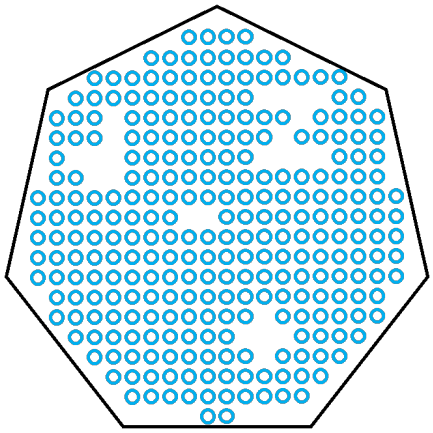
Benefit

Users are supported through automation and the workflow is more convenient and faster.

Details

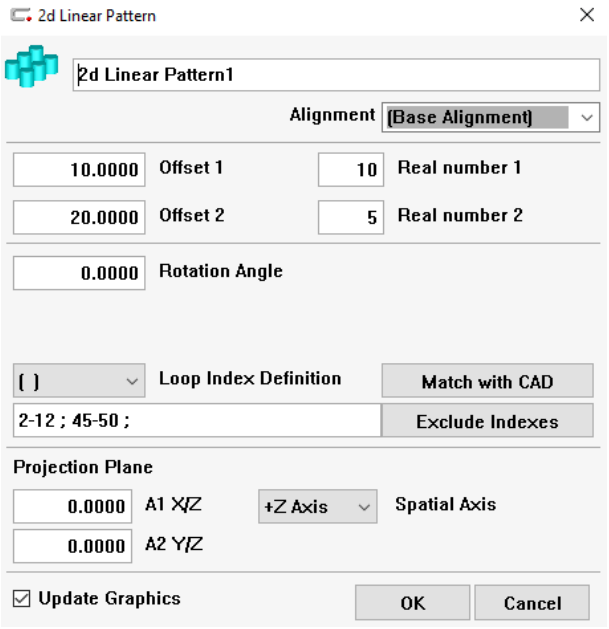


Up to CALYPSO 2019, features marked in *red* had to be masked manually.



CALYPSO 2020 with automated sample alignment of nominal data (e.g. from the CAD model). This enables very easy and fast sample creation.

The *Compare with CAD* function is also entered in the configuration of the graduation. If nominal data is available, CALYPSO compares the programed graduation with the nominal data information and hides the missing graduation indices.



CALYPSO curve optimized

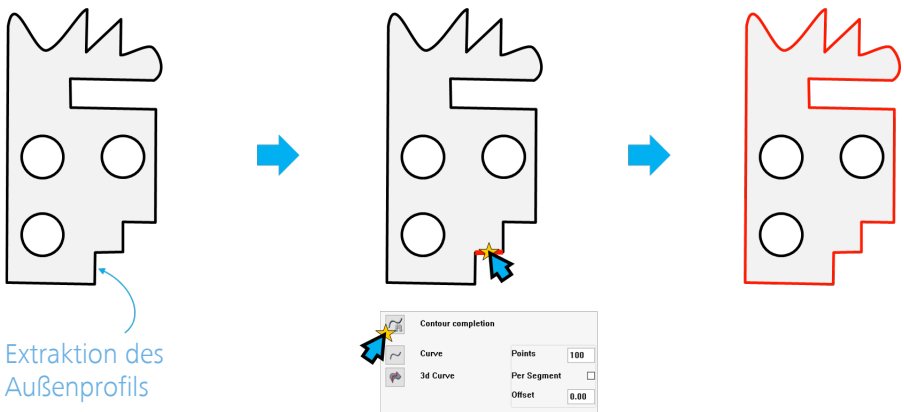
From CALYPSO 2020, closed contours can be extracted from a CAD model with just a few clicks. Instead of manually selecting each segment, users can now use the *Contour completion* function. CALYPSO searches a closed curve from the desired starting segment in the CAD which only has to be confirmed by the user.

Benefit

Creating curves from a CAD model is easier and can be quickly and conveniently completed.

Details

The *Contour completion* function can be found under **CAD → Create feature**. Click **Contour completion** after you have selected a segment in the CAD model. A closed contour will be recommended in the CAD window. You can then continue configuring the curve for extraction a before.



Cookbook strategy

This function enables a subsequent assignment of measurement strategies to features. Classifications and conditions which lead to predefined strategies for features can be defined via a catalog.

There are two topics here:

– An editor for creating/editing a catalog

– A dialog for using a catalog for an active measurement plan and thus executing the strategy assignment.

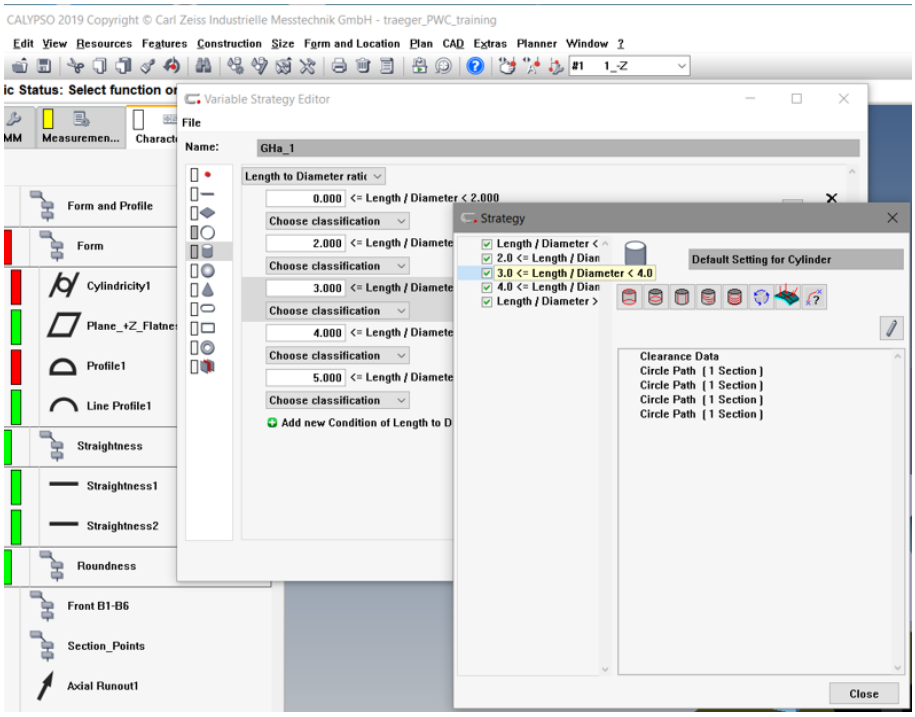
Benefit

The user can define his own rules for measurement strategies. These rules are then very easy to apply to existing measurement plans.

Details

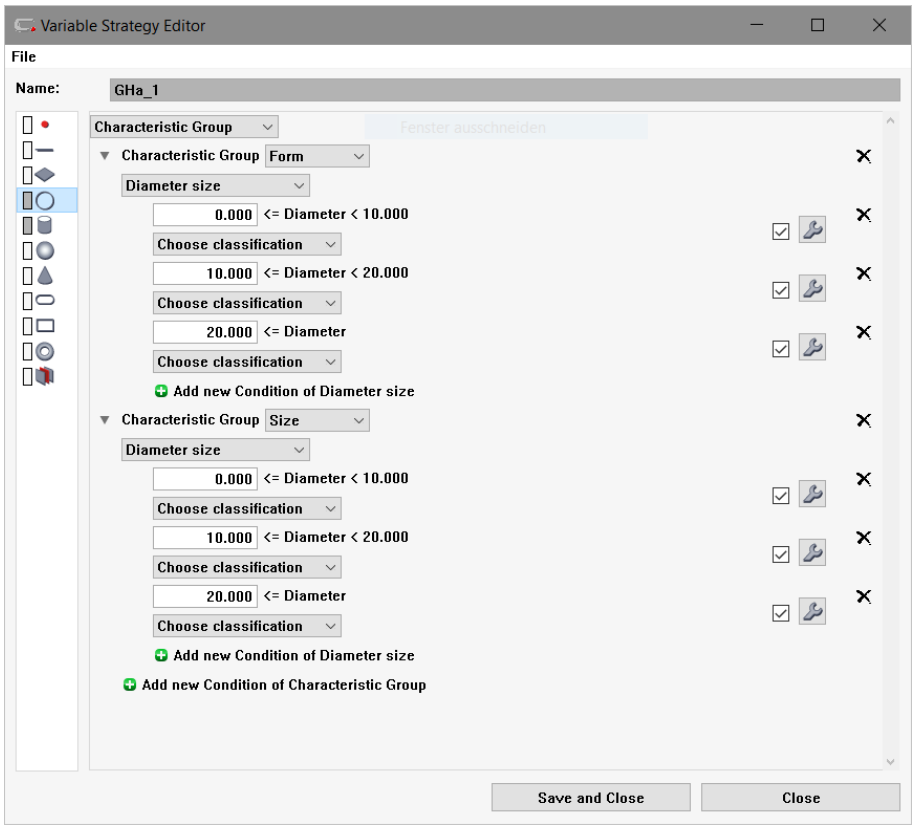
The strategies are arranged in a tree structure. There is a classification with an aspect to be checked at each level. The user can define a list with conditions for a classification. A fulfilled condition leads either to a new subclassification or to a default technology. In case of non-fulfillment, the processing of the list of conditions is continued.

Menu call: **Extras → Settings → Variable Strategy Editor**



File path: *%Public%\Documents\Zeiss\CALYPSO\data\cookbook C:\Users\Public\Documents\Zeiss\CALYPSO 7.0\data\cookbook*

Principle:



Strategy allocator with ZEISS standards

Measurement strategies can be assigned to features in ZEISS CALYPSO. The measurement strategy data verified by ZEISS are available in a catalog.

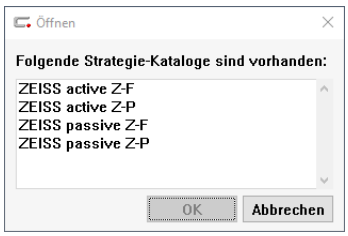
Benefit

The use of verified measurement strategies increases the comparability of measurements. The selection of measurement strategies is simplified and accelerated.

Details

Strategy XXX is opened via **Prerequisites → Strategy XXX**.

ZEISS provides four files in a catalog.

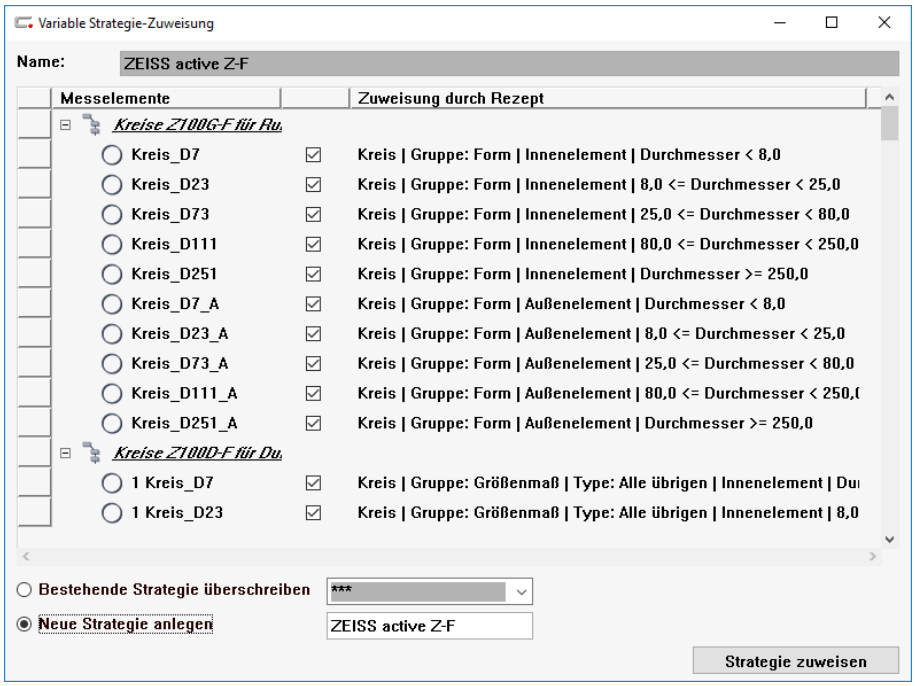


Acquisition strategies for:

Function check with active sensors	ZEISS active Z-F
Function check with passive sensors	ZEISS passive Z-F
Process control with active sensors	ZEISS active Z-P
Process control with passive sensors	ZEISS passive Z-P

The files can be selected and transferred to existing features.

The strategy assignment preview window shows which acquisition strategies of the individual groups will be applied. A recommended strategy also can be deselected here. Features to which no strategy can be assigned also can be recognized. **Assign strategy** transfers the measurement strategies. The user can select whether existing strategies will be overwritten or a new, additional strategy will be created.



Comparing a measurement plan: copying, merging, deleting

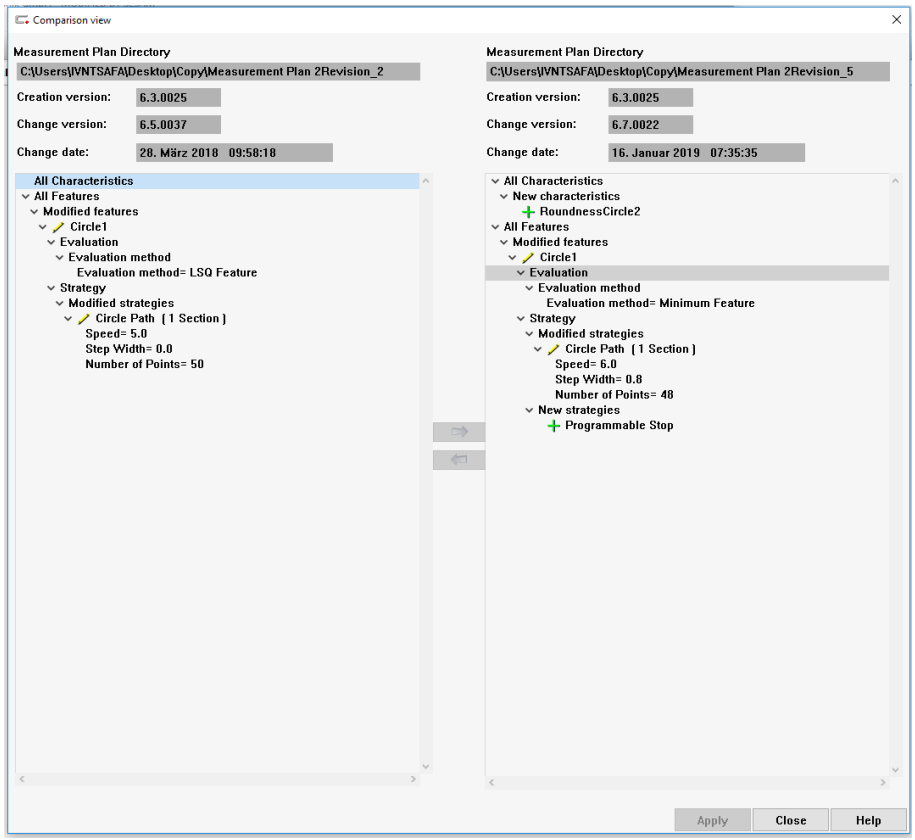
Properties of changed or added elements (characteristics, features, datums) can be transferred from one measurement plan to another in both directions.

Benefit

In case of differences between the two measurement plans, adaptations can be made directly in the comparison dialog.

Details

The dialog for comparing the measurement plans was extended.



The following functions were added:

– **Arrow** from left to right:

  Properties of changed or added elements (characteristics, features, datums) are transferred from the measurement plan on the left to the measurement plan on the right. This function can be executed only if an element of the measurement plan on the left has been selected.

– **Arrow** from right to left:

  Properties of changed or added elements (characteristics, features, datums) are transferred from the measurement plan on the right to the measurement plan on the left. This function can be executed only if an element of the measurement plan on the right has been selected.

– **Delete** menu in the context menu:

  Added elements can be deleted within a measurement plan.

– **Apply** button

  The changes made within a measurement plan are applied finally.

Editability of CALYPSO characteristic names for simple distance and roughness

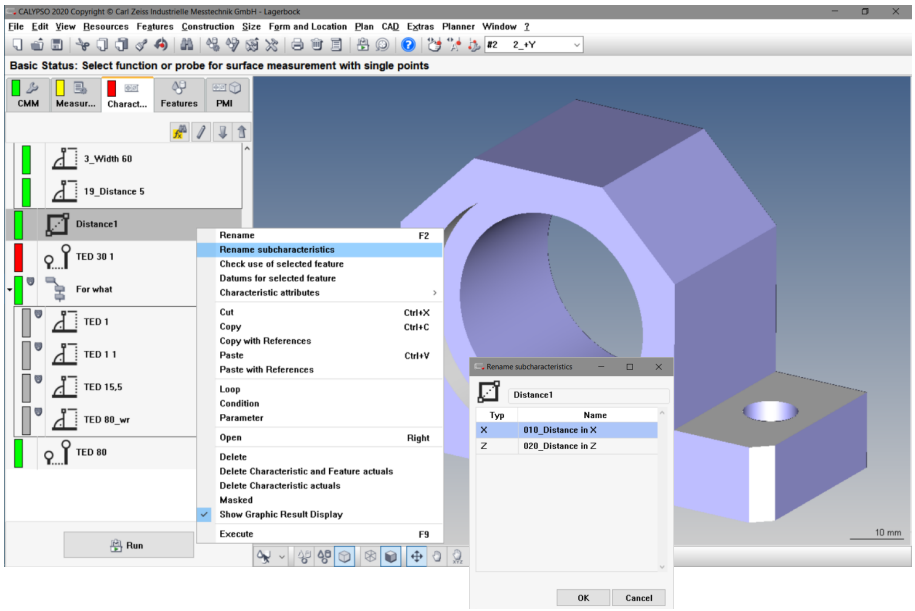
The characteristics "simple distance" and "roughness" have subcharacteristics. Using this new function, each subcharacteristic can now be assigned its own name.

Benefit

Subcharacteristics of distance and roughness now have their own names.

Details

1. Select a characteristic.
2. Right-click above the selected characteristic.
3. Click **Rename subcharacteristics**.



Subcharacteristics for distance and roughness with their own names in the report.

010_Distance in X	0.002	0.000	0.050	-0.050	0.002
020_Distance in Z	0.002	0.000	0.050	-0.050	0.002

Axial runout and radial runout with more than one datum

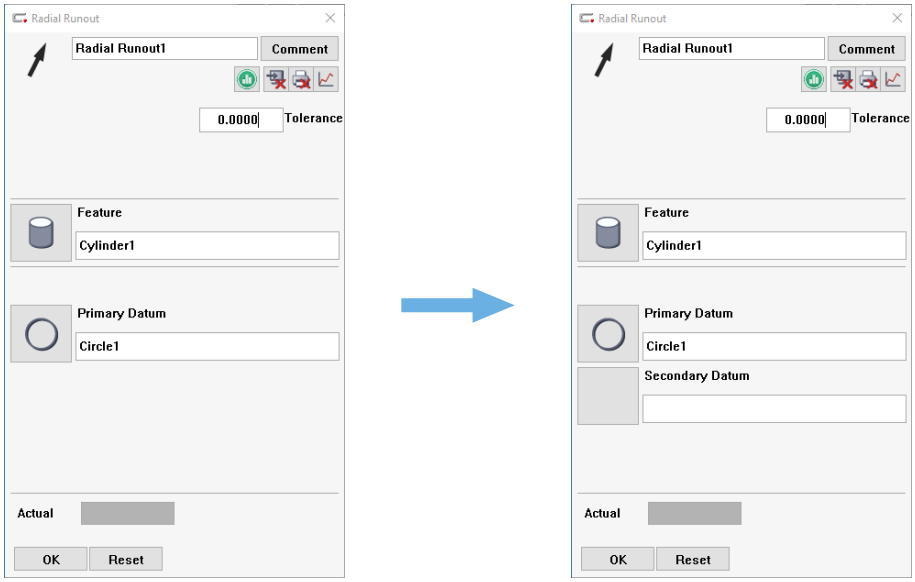
Run tolerances can be defined with two datums according to DIN EN ISO 1101. Users can insert a second datum in the characteristics radial runout, total radial runout, axial runout and total axial runout. The second datum also will be recognized when importing PMIs.

Benefit

Run tolerances can be created with two datums in compliance with drawings and standards. The scope of the PMI functionality was thus also extended to enhance performance and comfort.

Details

It is possible to specify two datums in the characteristics radial runout, total radial runout, axial runout, and total axial runout (see the figure on the right). Previously, it was only possible to assign one datum (see figure on the left).



CALYPSO 2019 CALYPSO 2020

Backing up and restoring all user settings without CMM-specific data

The backup and restore functionality in CALYPSO has been improved. The user create a backup of all user data for a backup on the same computer.

Principle of a "master configuration": The user can back up CMM-specific data and all other user data that are not CMM-specific separately. This makes new computers very easy to configure.

To do this, proceed as follows:

1. Install CALYPSO on the new computer and perform the complete (master) configuration.
2. Save the CMM-specific data from the "master configuration".
3. Save the data that are not CMM-specific:

   Extras → Settings → Miscellaneous → System → Restore

Advantages:

- The CALYPSO user can see which settings or data must be backed up or restored.
- The CALYPSO user can select or deselect settings for the backup.
- The CALYPSO user can select or deselect settings for data restoration.
- Now the templates for PiWeb reporting also can be backed up or restored.

Benefit

The user has an enhanced overview of the settings or data that can be backed up or restored. The "master configuration" principle makes it very easy for the user to install new computers.

Details

Principle of a "master configuration"

1. Configuring the reference computer:

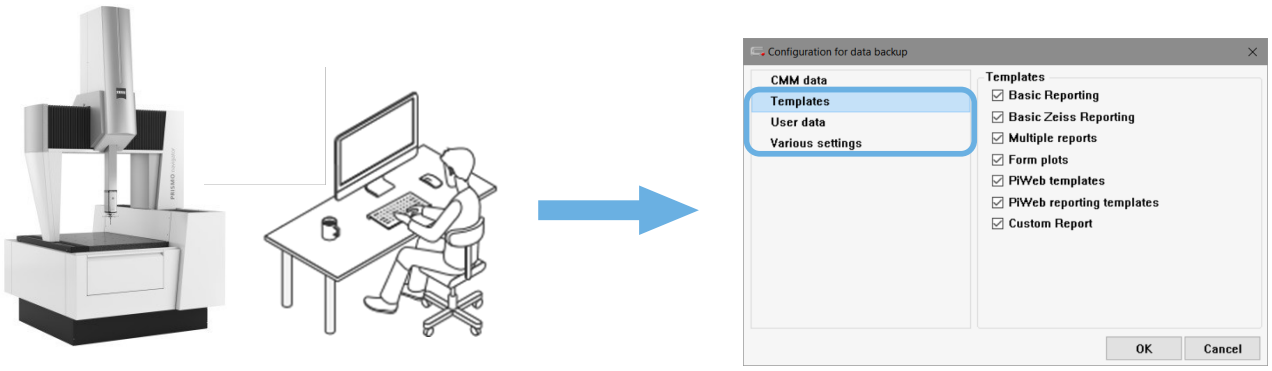
   Install CALYPSO on the computer and perform the complete (master) configuration.

2. Saving the reference computer configuration:

   Save the CMM-specific data from the "master configuration".

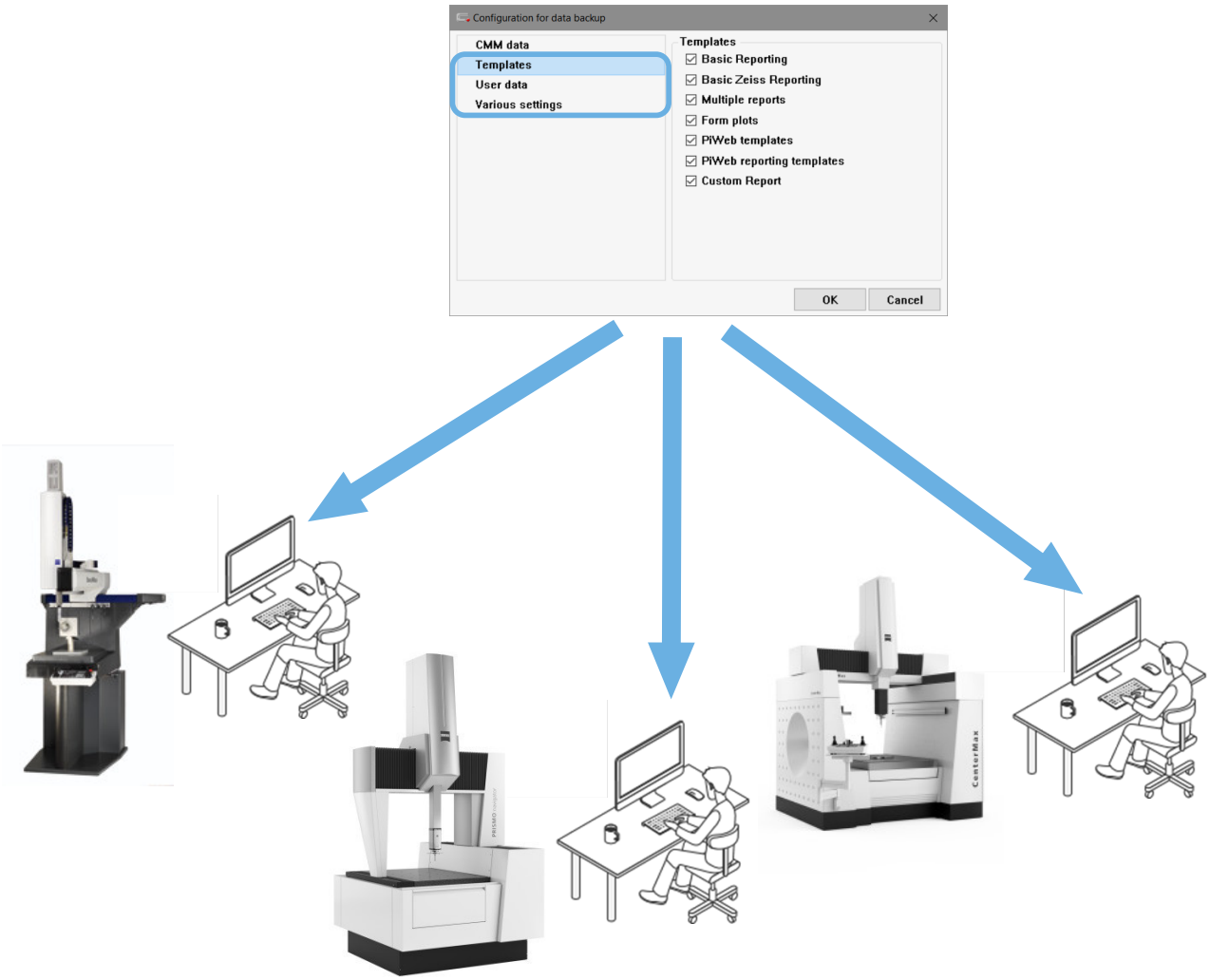
3. Save the data that are not CMM-specific:

   Extras → Settings → Miscellaneous → System → Restore



4. Transferring the configuration to another computer:

   Install the backup on other computers without the CMM-specific data.



Data which currently can be backed up and restored in CALYPSO

CMM data:

- CMM data and settings: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\config*
- CMM parameter file: *C:\ProgramData\Zeiss\CALYPSO {version}\es*
- Virtual CMM: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\exchange*

Templates:

- Templates for Basic Reporting *C:\Users\Public\Documents\Zeiss\CALYPSO {version} \workarea\basicReporting*
- Templates for Zeiss Reporting *C:\Users\Public\Documents\Zeiss\CALYPSO {version} \protocol\basicReportingTemplates*
- Templates of form plots: *C:\Users\Public\Documents\Zeiss\CALYPSO {version} \protocol\formplott*

- Templates for multiple reports: *C:\Users\Public\Documents\Zeiss\CALYPSO 6.8\protocol\protdefinitions*
- Templates for PiWeb: *C:\Users\Public\Documents\Zeiss\CALYPSO {version} \protocol\piWebTemplates*
- Templates for PiWeb reporting: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\protocol\PiWebReportingTemplates*
- Templates for Custom Report: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\protocol\protform*

User data:

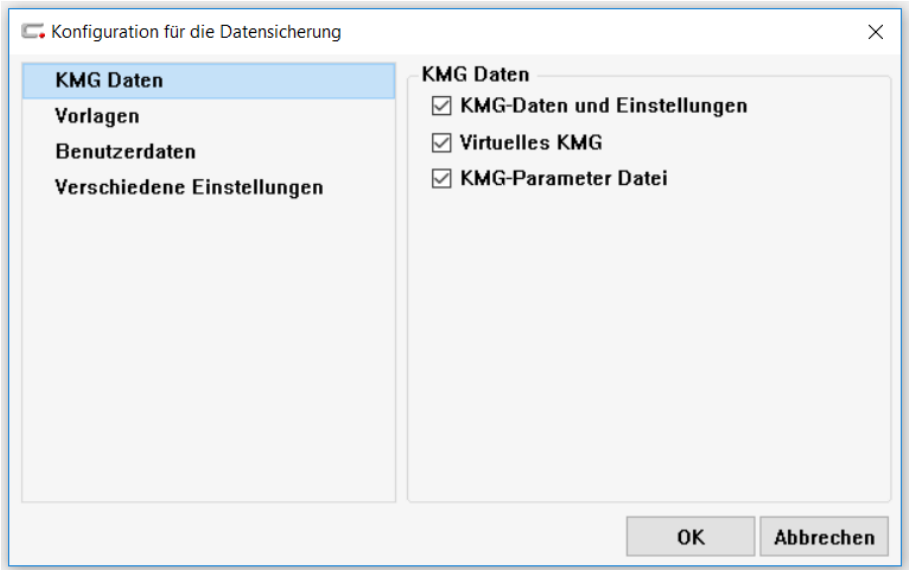
- User settings: *C:\ProgramData\Zeiss\CALYPSO {version}\users*

Various settings:

- User-defined icon bar: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}*
- CAD settings: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\workarea\CAD-workarea*
- Data directory: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\data*
- Default name: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}\data\config*
- Q-DAS settings: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}*
- Technology settings: *C:\Users\Public\Documents\Zeiss\CALYPSO {version}*
- Toolboxes: *C:\ProgramData\Zeiss\CALYPSO {version}\toolboxes*

Data backup

A data backup can be started in CALYPSO under **Extras → Settings → Miscellaneous → System → Save**.



Restoring data

A data restoration can be started in CALYPSO under **Extras → Settings → Miscellaneous → System → Restore**.

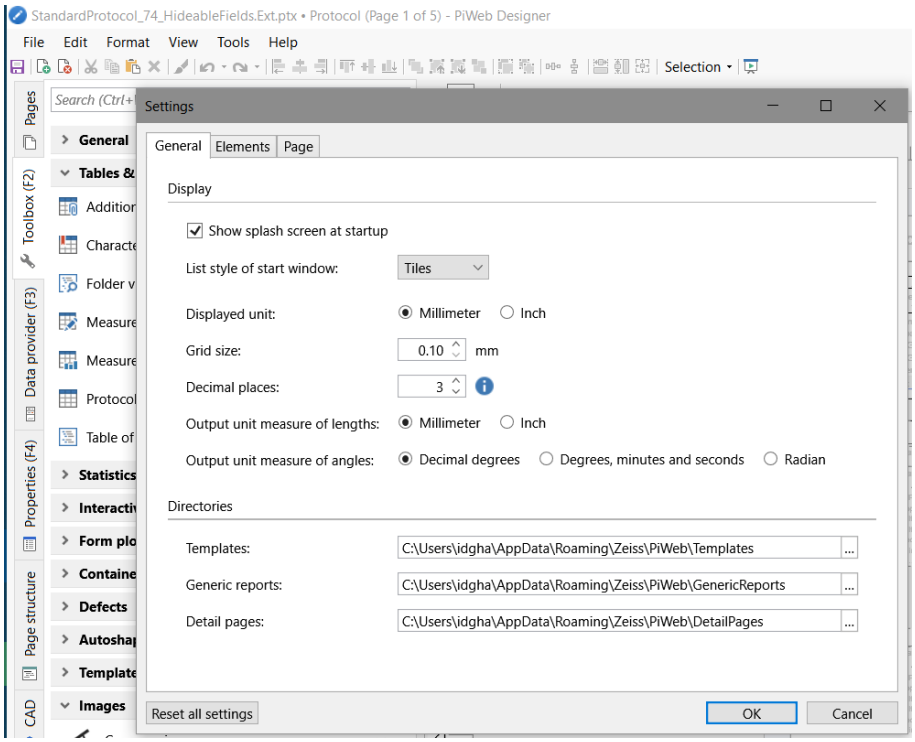
Functionality of the restoration process dialog

If the restoration is executed in CALYPSO, CALYPSO is restarted and a new restoration dialog is displayed. At least one setting that has to be restored must be selected in this dialog. The check boxes in the dialog are active and selectable only if an entry (directory) is available for the corresponding setting in the backup file.

- If the user confirms the dialog with **OK**, the restoration process is executed and CALYPSO is then started.
- If the user closes the dialog, the restoration process is canceled and CALYPSO is started.
- If no setting is selected in the dialog and the user confirms the dialog with **OK**, a warning is displayed.

NOTE

If the user has made any individual settings in the PiWeb Designer, these must be additionally saved.



New ZPiDef_Standard.qdb: Basic setting of data connection between CALYPSO and PiWeb

With *ZPiDef_Standard.qdb* you can easily configure the data connection between CALYPSO and PiWeb sbs.

Prerequisite: Use the right basic settings in CALYPSO.

1. Enter all users with their complete profile.
2. Use the fast user switch for the CNC start.
3. Use the default report header fields.

Benefit

The user can configure a data transfer between CALYPSO and PiWeb sbs very quickly and easily if the right basic settings are used in CALYPSO and in PiWeb. All default report header variables, the entire CALYPSO PiWeb reporting structure, and the ten free variables are transferred from CALYPSO.

Details

Piweb Planner with the right basic settings

– Start the PiWeb Planner.

– Under Administration, navigate to **Configuration → Open QDB file**

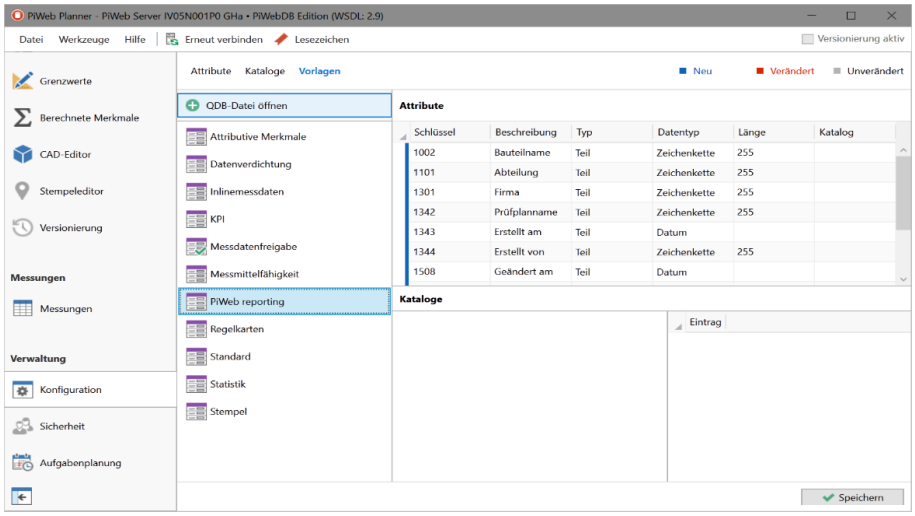
– Import the English or German *ZPiDef_Standard.qdb* file from CALYPSO:

  German configuration: *C:\Program Files (x86)\Zeiss\CALYPSO 7.0\userinfo\qdb_config\ qdb_config\de\ ZPiDef_Standard.qdb*

  English configuration: *C:\Program Files (x86)\Zeiss\CALYPSO 7.0\userinfo\qdb_config\ qdb_config\en\ ZPiDef_Standard.qdb*

The complete structure from CALYPSO PiWeb reporting is thus created in the PiWeb Planner. This concerns all default report header variables, the entire CALYPSO PiWeb reporting structure, and the ten free variables from CALYPSO.

Details



Comfortable search function

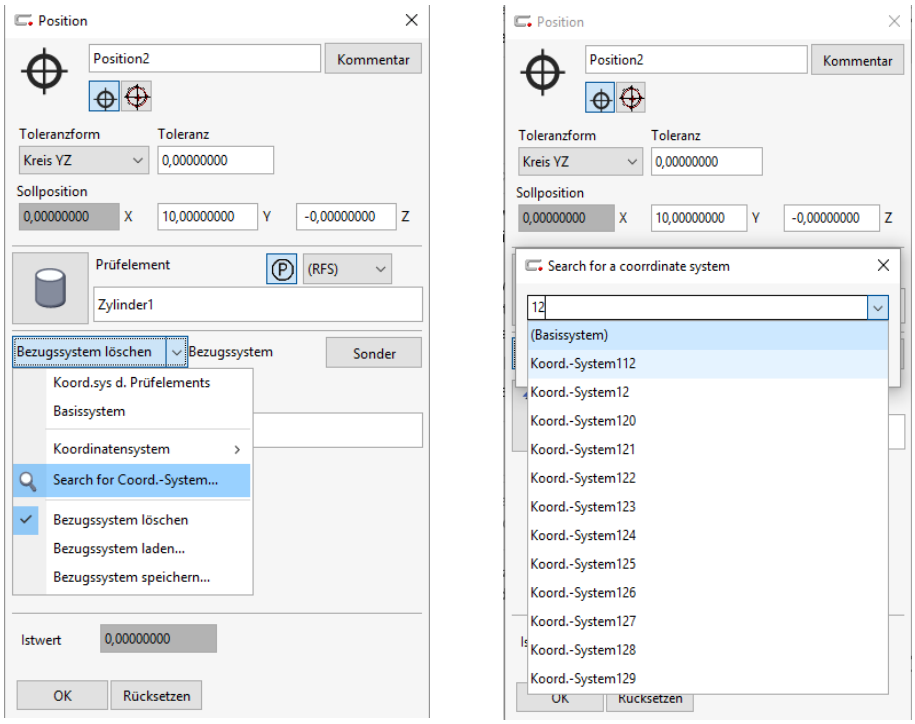
Measurement plans may contain a large number of items. Searching for a specific feature or alignment may be very time-consuming. The search function has been extended and simplified in CALYPSO 2020 to enhance search operations.

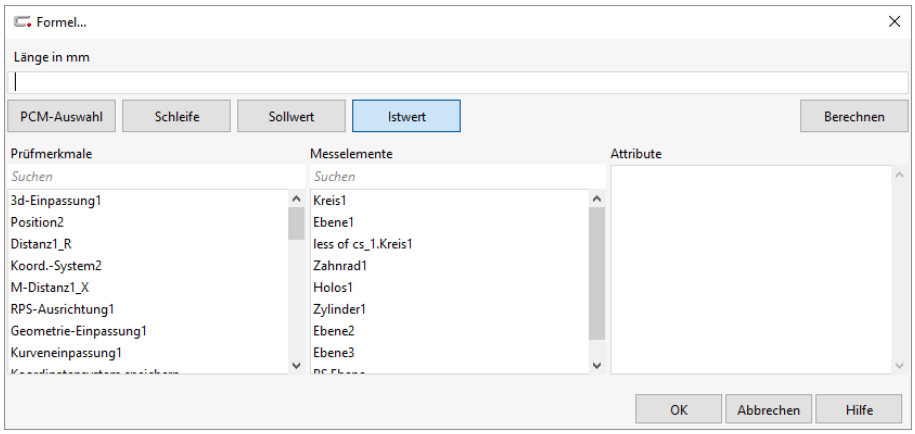
Benefit

Users can now find the item they're searching for faster and more conveniently. Programming effort can thus be reduced.

Details

Search function input fields can be found at various locations of the CALYPSO user interface (see figures).





Temperature compensation with up to 50 temperature sensors

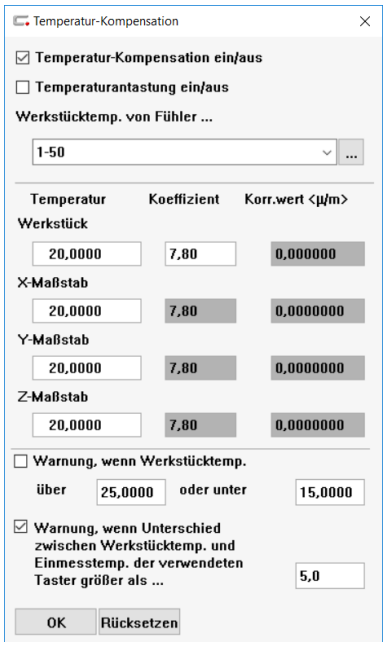
Up to now, only a maximum of 6 workpiece sensors could be selected in CALYPSO. That number is not sufficient for certain applications. In CALYPSO 2020, it is now possible to use 50 temperature sensors simultaneously.

Benefit

Up to CALYPSO 2019, the temperature compensation calculation had to be performed outside of CALYPSO starting with the 7th temperature sensor. Starting with CALYPSO 2020, the evaluation of up to 50 temperature sensors is integrated in the software. The results also are transferred to PiWeb automatically.

Details

Users can set the temperature compensation under: **Measurement plan → Temperature compensation**.



PiWeb reporting: setting characteristic type K13266

Characteristics have an additional K field “K13266 Characteristic Type” in the PiWeb reporting database. The characteristic type is created here.

Benefit

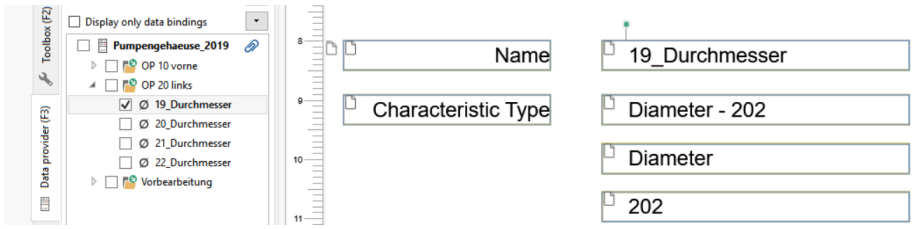
The characteristic name is a description. For example, only a characteristic number could be created as a name. With the new K field “K13266 Characteristic Type”, the characteristic type is uniquely defined and also can be output in the report if necessary.

Details

The characteristic type can be queried with the PiWeb Designer.

Keyword:

- `${Localization.AttributeKey.Description(13266)}`
- `${Qdb.Characteristic(13266)}`
- `${Qdb.Characteristic(13266, 0, 13000)}`
- `${Qdb.Characteristic(13266, 0, 13267)}`

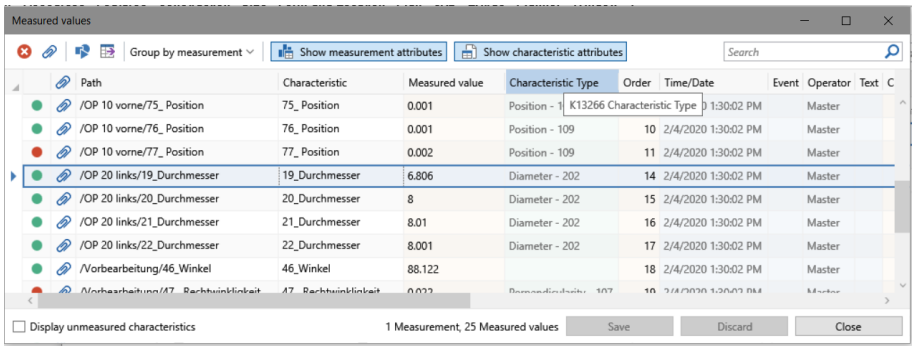


${Localization.AttributeKey.Description(13266)}

${Qdb.Characteristic(13266)}

${Qdb.Characteristic(13266, 0, 13000)}

${Qdb.Characteristic(13266, 0, 13267)}



PiWeb reporting: Warning in case of deviation calculation in amount mode

PiWeb does not support any deviation calculations in the amount mode. This results in differences between the old custom report and the PiWeb reporting report. A warning will be output if the amount mode is active in CALYPSO while PiWeb is being used.

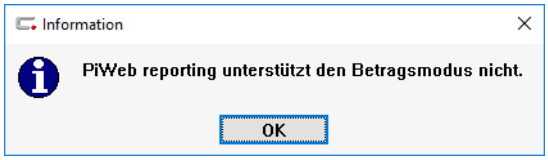
Benefit

The number scale mode is the default deviation calculation in CALYPSO. If the calculation is switched to the amount mode, a warning will be displayed.

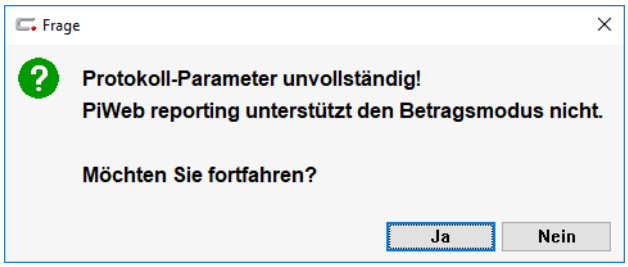
Details

The warning will be output if the amount mode is active while PiWeb is being used. A warning will be displayed in case of the following actions:

- Save the measurement plan if the amount mode is active and a PiWeb reporting output is set as the report in the measurement plan.
- CNC start if the amount mode is active and a multiple report option containing a PiWeb reporting output is selected in this user interface.
- Close the “Measurement Plan Editor Characteristics” if the amount mode is active and a PiWeb reporting output is set as the report in the measurement plan.
- Close the “Definition of Multiple Report” if the amount mode is active and a PiWeb reporting output is set as the report in the measurement plan.



At the CNC start:



Virtual CMM (VCMM) also for articulating probing systems

Prior to CALYPSO 2019, application of the VCMM was combinable only with VAST. Starting with CALYPSO 2020, the VCMM functionality also can be used for articulating probing systems.

Benefit

The influence of the rotation is considered. The estimation of the measuring uncertainty is therefore realistic and closer to the application.

Details

Starting with CALYPSO 2020, VCMM also supports evaluation with RDS, VAST XTR gold and ZAS (ZEISS articulating styli). The probe used and the position change (angle) are automatically detected by CALYPSO and taken into account for the calculation of the measurement uncertainty.

Support of new hardware in CALYPSO

CALYPSO 2020 supports new CMM and sensor hardware. The CAD models for new hardware are stored in the CALYPSO Planner.

Benefit

CALYPSO and CALYPSO Planner support new hardware. The simulation in the CALYPSO Planner has stored CAD models for new hardware.

Details

ZEISS CONTURA

ZEISS PRISMO fortis
ZEISS PRISMO verity

ZEISS O-DETECT

Integration of T-POINT and T-SCAN in CALYPSOCALYPSO

Starting with CALYPSO 2020, T-POINT and T-SCAN users can use both sensors and create measurement plans directly in CALYPSO.

Benefit

The workflow has been simplified. Parallel operation of CALYPSO and colin3D can therefore be avoided.

Details

In order to ensure correct connection of the sensors, colin 3D (Version 6.0.4. or higher) must be installed on the same computer.

Measurement of kinks and step points with optical sensors

Starting with CALYPSO 2020, users also can use the **Kink** and **Step Point** functions for optical measuring tasks.

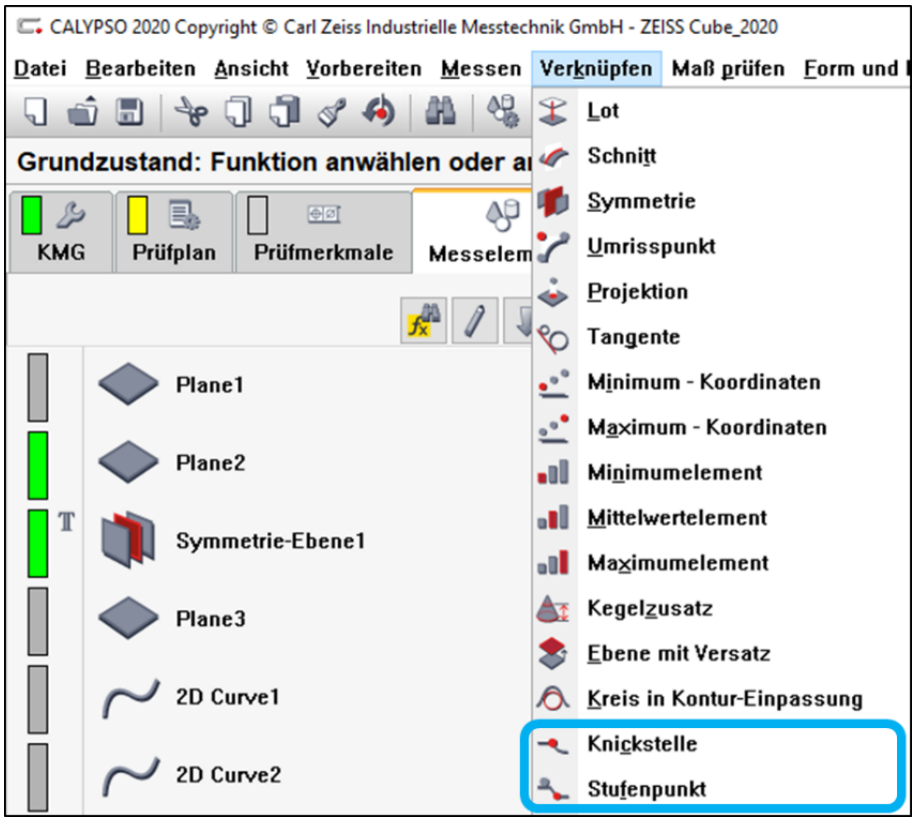
Knickstelle Stufenpunkt

Benefit

Simple calculation of kinks and step points, even when the measurement is performed with optical sensors.

Details

Both the Kink function and the Step Point function are located in the **Construct** menu. For more information on the use of these functions, please refer to the CALYPSO operating instructions.



CALYPSO Performance Probing (CPP) renamed to CALYPSO VAST probing mode

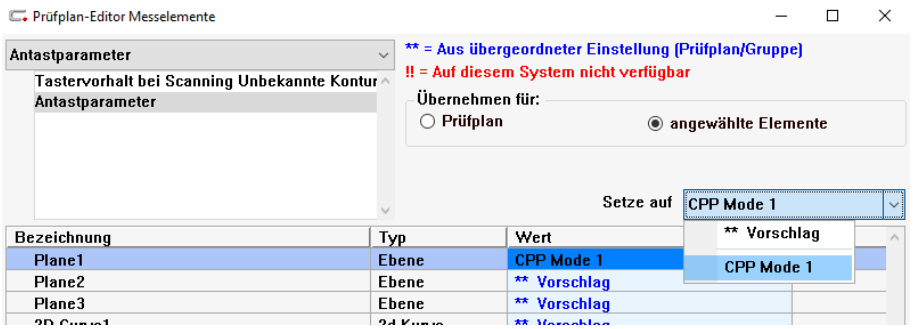
In CALYPSO 2020, the option previously called CALYPSO Performance Probing (CPP) was renamed to CALYPSO VAST probing mode. This option can be used to reduce the measuring time of single point measurements if a loss of accuracy is permissible for the required tolerances.

Benefit

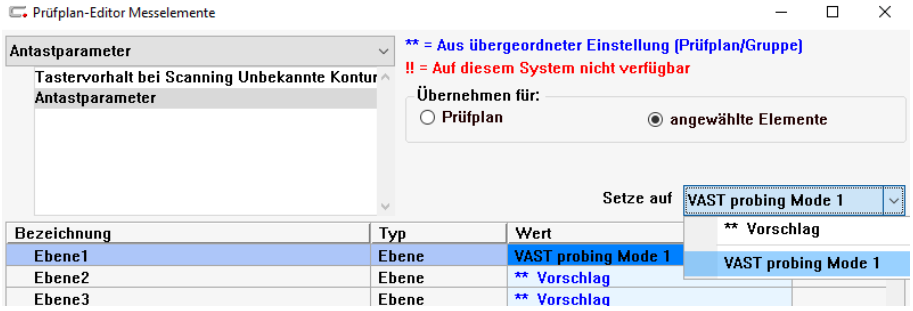
The new name makes it clear that an active VAST gold probe is a basic requirement for this option.

Details

The CALYPSO VAST probing mode still can be set individually for each feature in the Measurement Plan Editor Features. More information can be found in the CALYPSO operating instructions.



Einstellung des Antastparameters in CALYPSO 2019



Einstellung des Antastparameters in CALYPSO 2020

ROTOS: The display of measurement data can be switched off for unsuccessful roughness measurements

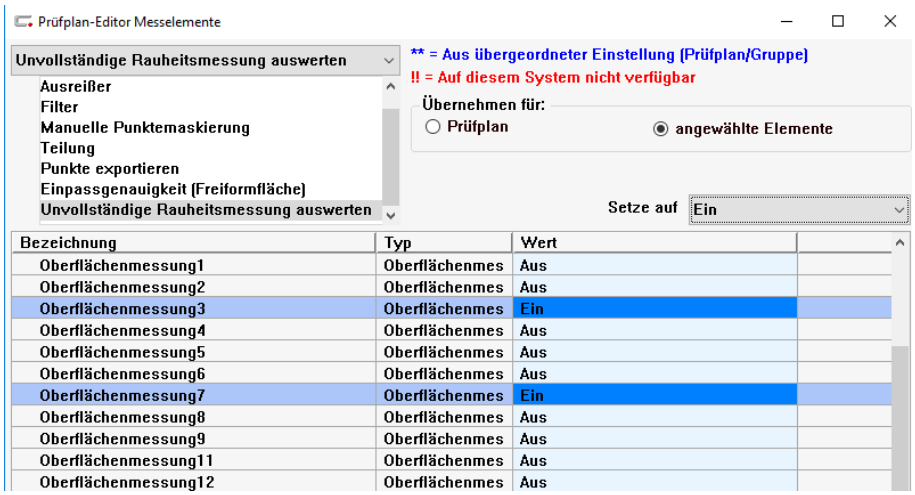
Up to CALYPSO 2019, the results of an unsuccessful roughness measurement were still displayed with the other measured points. However, it was not immediately clear to the user that the measurement point was not successfully measured. CALYPSO 2020 therefore offers the option of preventing the display of unsuccessful roughness measurements.

Benefit

The user can select the behavior for incomplete measurements, thus ensuring that an unsuccessful roughness measurement will be recognized as such.

Details

CALYPSO 2020 includes two modes: Either the incomplete measurements are still evaluated (inclusing graphics) or an error message appears in the report. This setting is possible both in the strategy window of the **Roughness line** and in the **Measurement Plan Editor Features**.

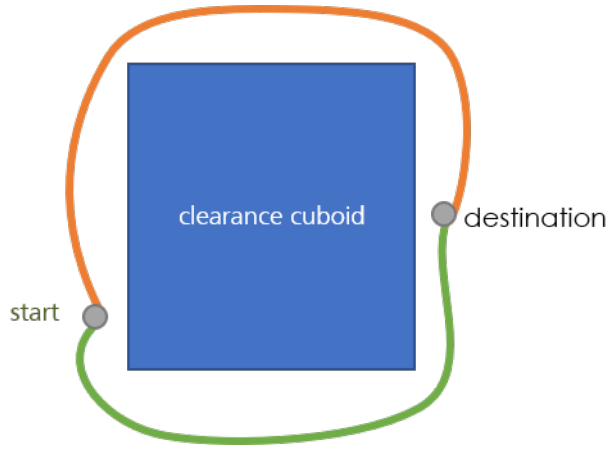


ROTOS: Travels along previously calculated travel paths

One big advantage of CALYPSO is that the travel paths of the CMM are automatically generated by means of the measurement plan information. This work step does not have to be performed manually by the user. In the case of ROTOS, special calculation methods are used for navigation planning which had to be recalculated for each CNC start up to CALYPSO 2019. Since various different travel paths can simultaneously be considered as “optimal”, it is possible for the CMM to follow an unexpected travel path.

Beginning with CALYPSO 2020, users can choose between two modes for ROTOS travel paths when creating a measurement run:

– In the *Preservation mode*, the calculated travel paths remain valid as long as no risk of collision occurs.
– In the *Optimization mode*, the travel paths are recalculated for each CNC start.



Benefit

The calculation of the travel paths takes place only one time in the *Preservation mode* and can be recalled only once. The time required for a measurement run is thus reduced and the cycle time of the measurement remains foreseeable.

Details

The *Preservation mode* can be activated under **RunFit → Navigation → Travel path generation**. More information can be found in the CALYPSO operating instructions.

NOTE

This function can be used only in combination with the ROTOS sensor.

NOTE

In CALYPSO 2020, the *Optimization mode* is set by default. This does not change the behavior in comparison to previous versions of the navigation planning. Disadvantages regarding previously created navigation plans can thus be avoided.

NOTE

Measurement plans from CALYPSO 2019 or older versions are not automatically converted. Please check your measurement runs if necessary.

Extended optical settings in the Measurement Plan Editor Features

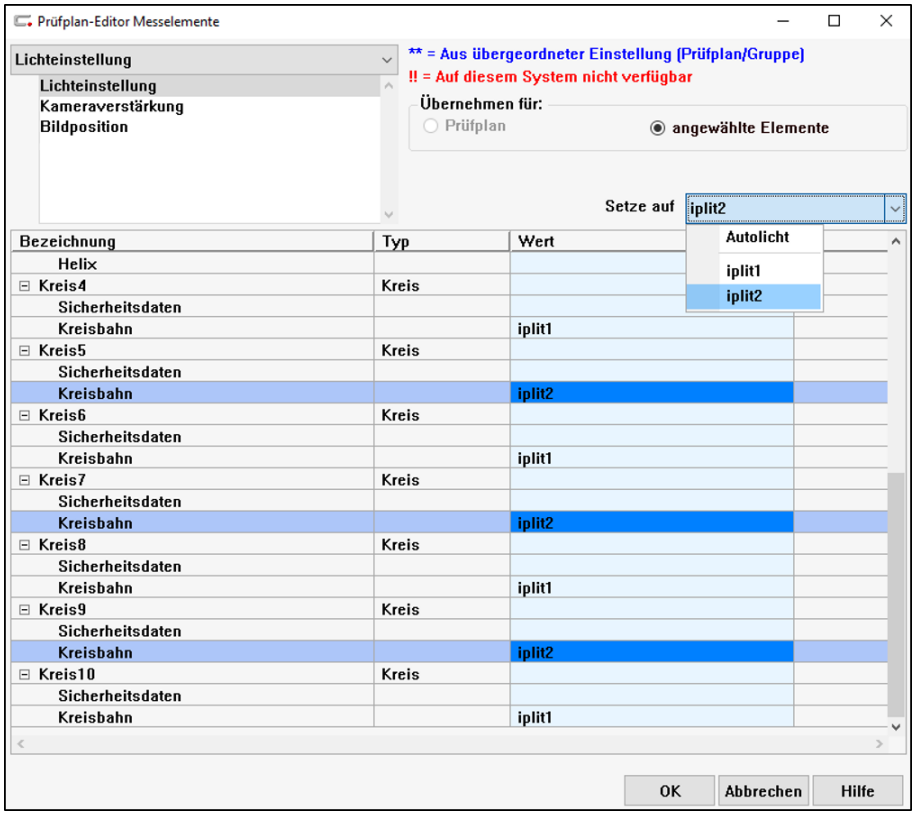
CALYPSO 2020 enables users to access various setting options for optical measurement methods. This enables fast and easy customization of optical measurement strategies.

Benefit

Fast and comfortable programming or adaptation of optical measurement plans.

Details

If an optical sensor type (e.g. ViScan) is active, typical settings such as, for instance, the light or edge detection settings can be found in the Measurement Plan Editor Features.



Clipping plane in the CAD Presentation in the report

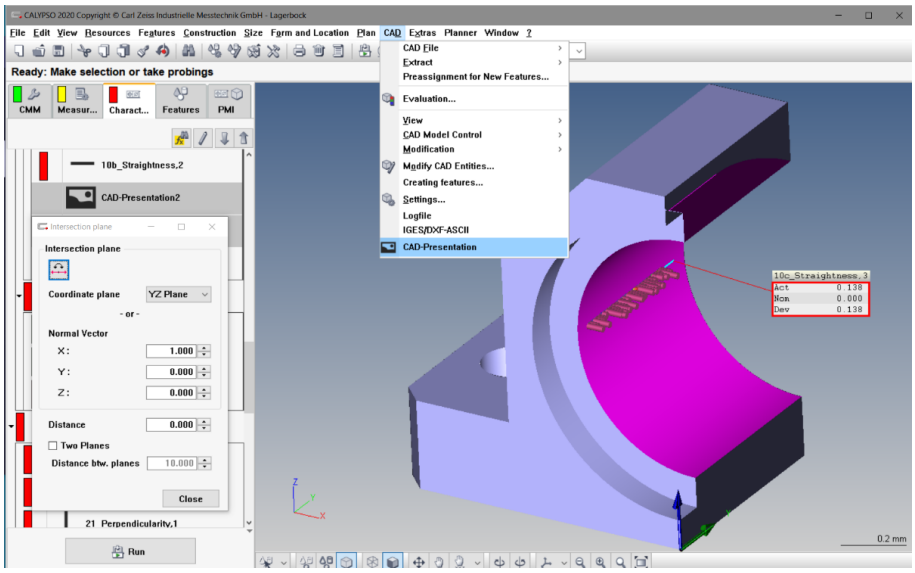
A CAD Presentation with a clipping plane can now be output in the report.

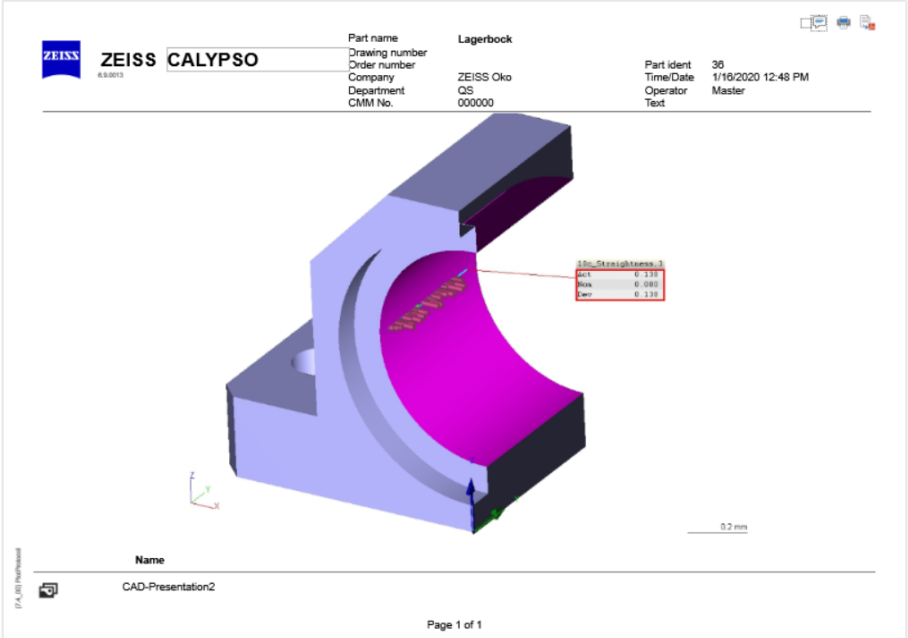
Benefit

Now clipping planes also can be output in the report.

Details

1. Define a clipping plane.
2. Define a CAD presentation under **CAD → CAD Presentation**





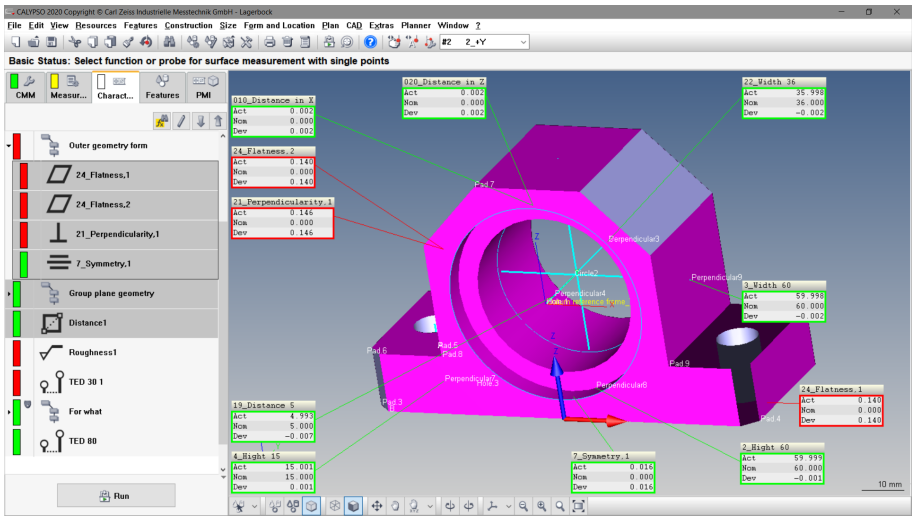
CAD improvement: Arrangement of banners without intersecting lines

CALYPSO can display characteristics and results in the CAD window. The display of characteristics banners in the CAD window was improved. The banners are now optimally arranged on the edge of the CAD window. A new, intelligent routine here calculates the position such that no lines intersect.

Benefit

The characteristic banners are optimally arranged in the CAD window without any intersecting of the lines.

Details



Multiple extraction of circles from CAD models

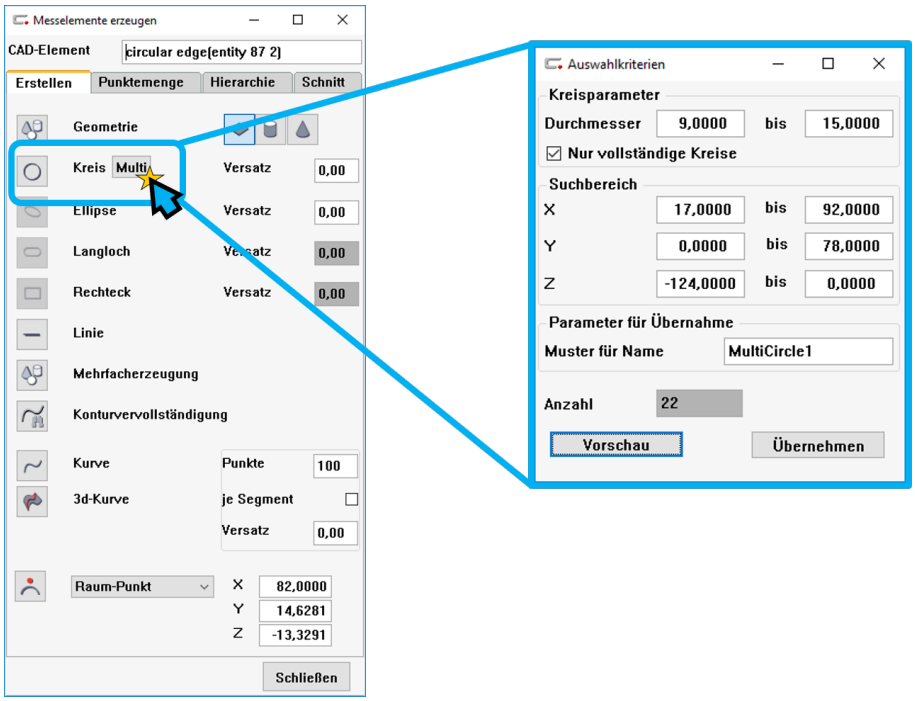
Workpieces such as PC boards often have a large number of holes which, due to differences either in their nominal diameters or in their nominal positions, cannot always be mapped with a single pattern very easily. Multiple extraction of circles from CAD models was implemented in CALYPSO 2020 to simplify the creation of measurement plans in such cases.

Benefit

Fast programming of workpieces with a large number of holes and radiuses which cannot be mapped by means of the pattern function.

Details

This function can be found under **CAD → Create features**. Users can restrict the element search according to the diameter range, the completeness of the element (full circle or radius), and the position. In addition, it is possible to define a name pattern directly for the generated elements.



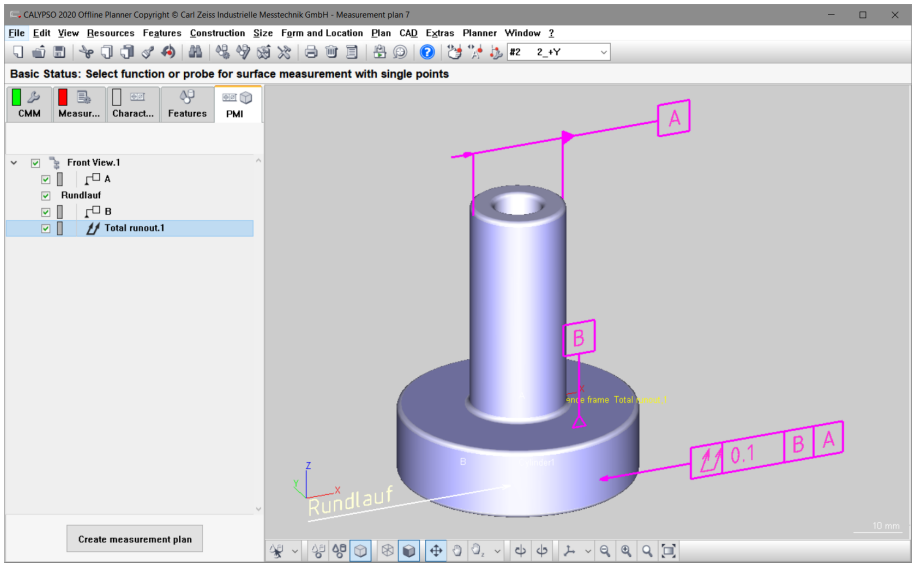
PMI improvement: run tolerances with two datums

Run tolerances for the simple run and for the overall run can be defined with two datums according to the ISO 1101 standard. Now the second datum also is transferred for CAD models with PMI in CALYPSO.

Benefit

CAD models with PMI are automatically created for the radial runout, single cumulative radial runout, axial runout and multi-axial runout characteristics.

Details



PMI improvement: datums are formed from datum targets

Recognition of punctiform, circular, and rectangular datum targets as PMI in a CAD model in CALYPSO.

Benefit

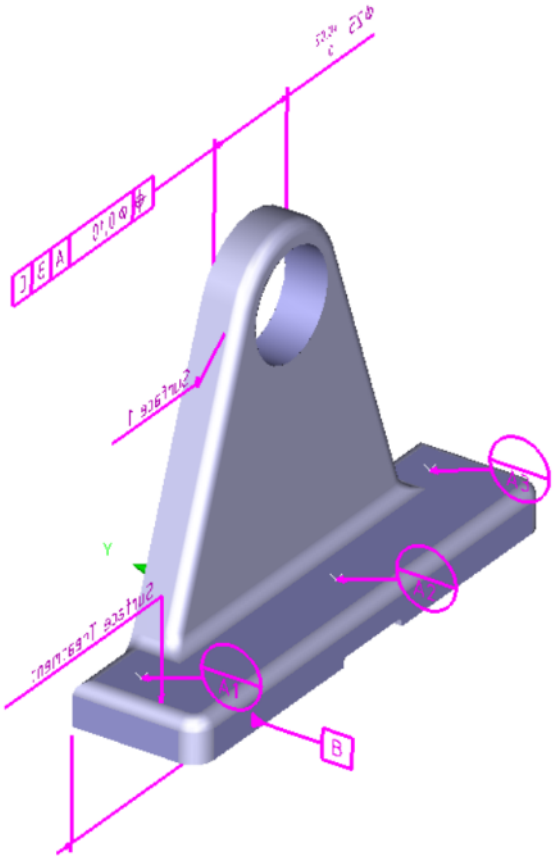
CAD models with PMI from CATIA V5:

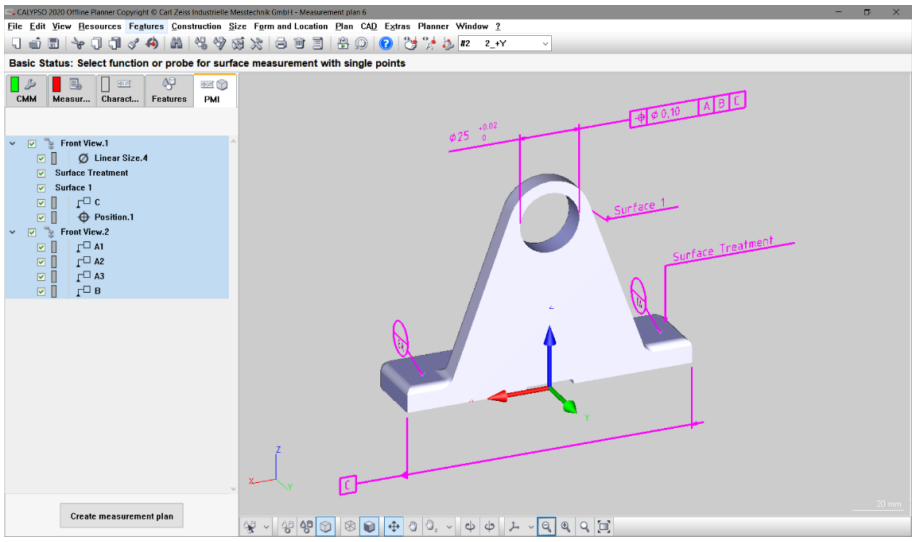
CAD models with PMI can have punctiform, circular, and rectangular datum targets. Measuring points with the set strategy are created from these datums.

Details

CAD models with PMI from CATIA V5:

Recognition of punctiform, circular, and rectangular datum targets as PMI in a CAD model in CALYPSO.





Display of the datum targets in ACIS.

Creation of features from these datum targets.

The following restriction applies:

Since it is not know what kind of datum is to be formed from these datum targets, no datums are created. A corresponding notice is output in the default report.

NOTE

In the ISO, datum targets always are shown in connection with an additional reference indicator in the rectangle.

PMI improvement: implementing data with commonly defined datums

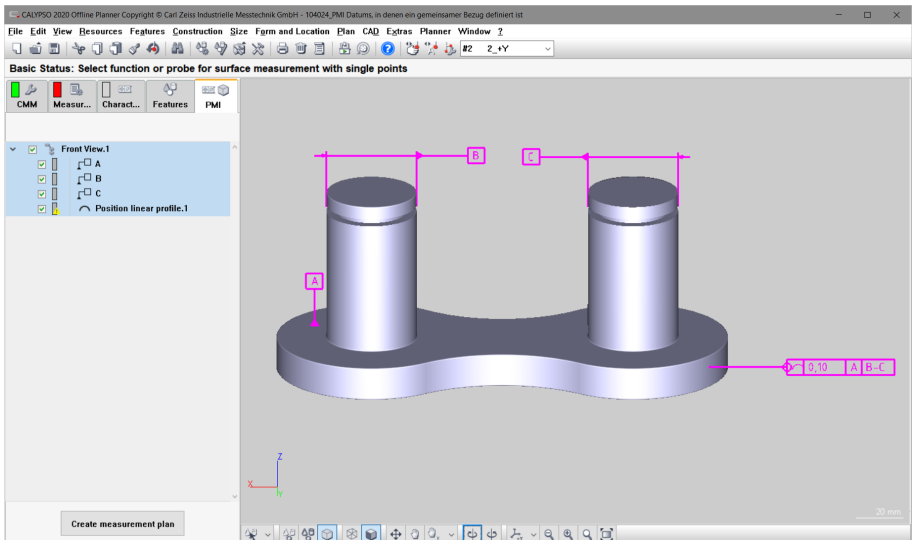
Shared datums not only can be coaxial axes, but also may be opposite grooves, or an axis and a plane at an angle to it. The shared datums function already exists in CALYPSO. Starting with CALYPSO 2020, these shared datums also will be transferred as PMI.

Benefit

CAD models with PMI from CATIA V5:

CAD models with PMI can create shared datums.

Details



PMI improvement: QIF

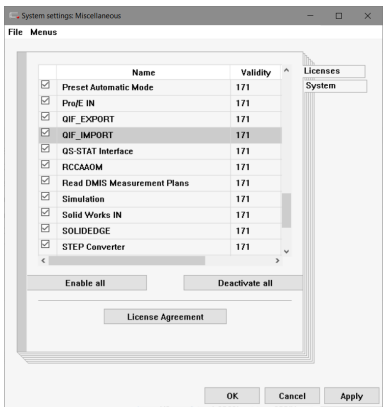
Now data can be imported in the new CAD format “QIF” with the PMI.

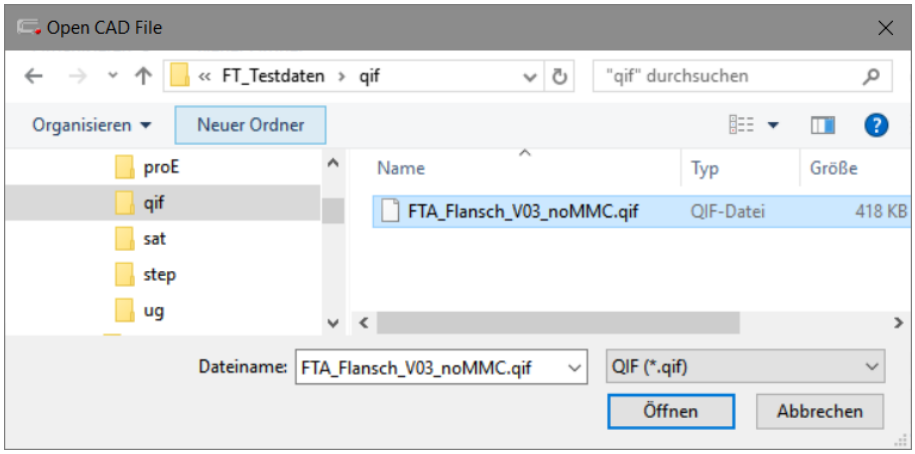
Benefit

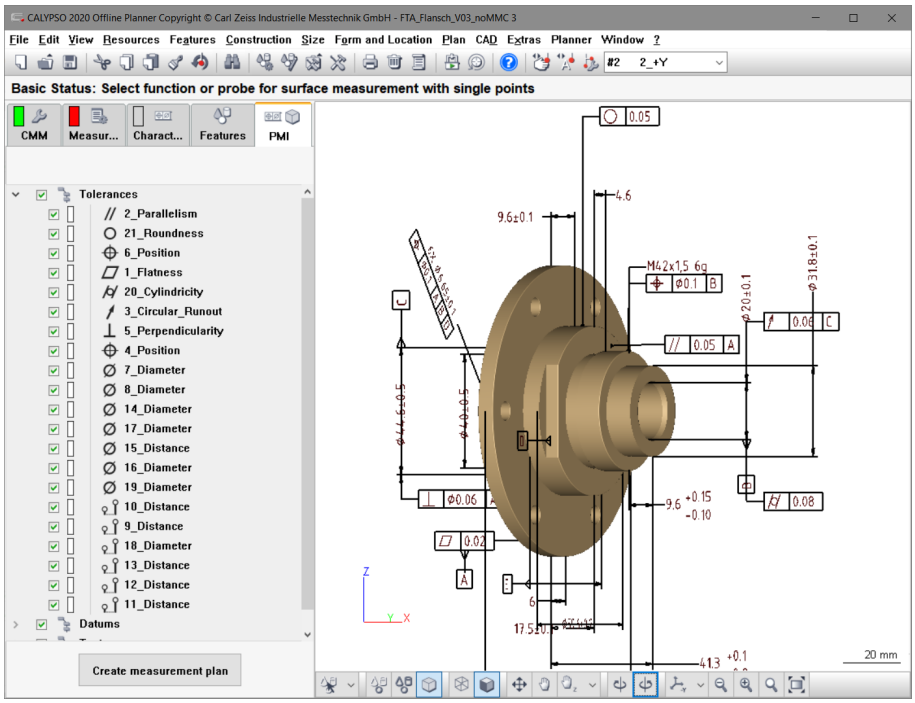
Users who have CAD files in the “QIF” format can load this format with the corresponding PMI in the CAD/DAD file dialog.

Details

New option for the CAD converter: QIF import with PMI







General tolerances for molded plastic parts according to ISO 20457

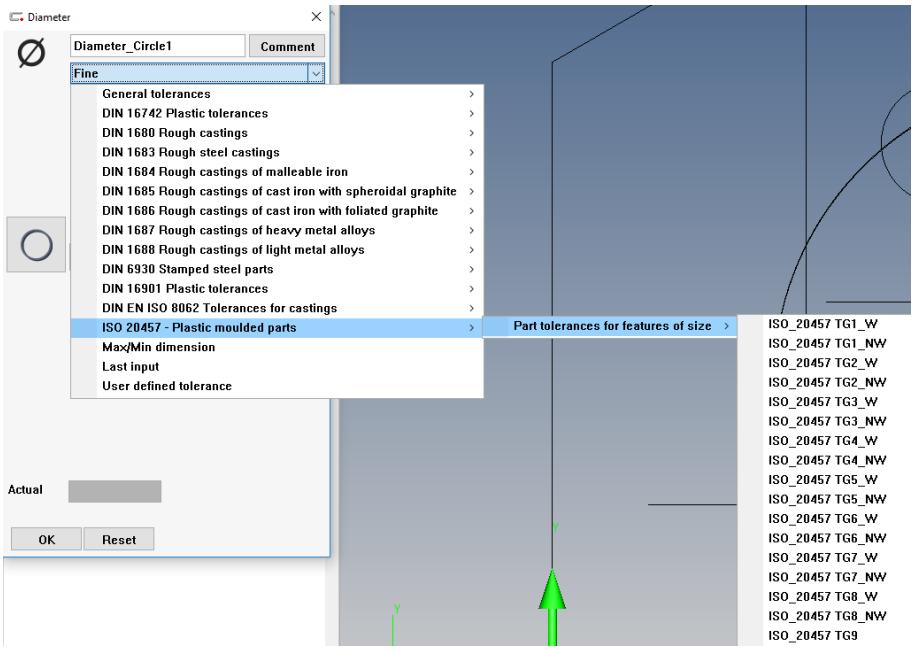
General tolerances for molded plastic parts also can be set according to ISO 20457 in CALYPSO 2020.

Benefit

Fast setting of the required dimensional tolerances within the CALYPSO measurement plan.

Details

You will find the dimensional tolerances from Table 2 (ISO 20457:2018, Plastics molded parts - Tolerances and acceptance conditions) in the tolerance list of a characteristic.



Two-point dimensions for parallel planes according to ISO 14405-1

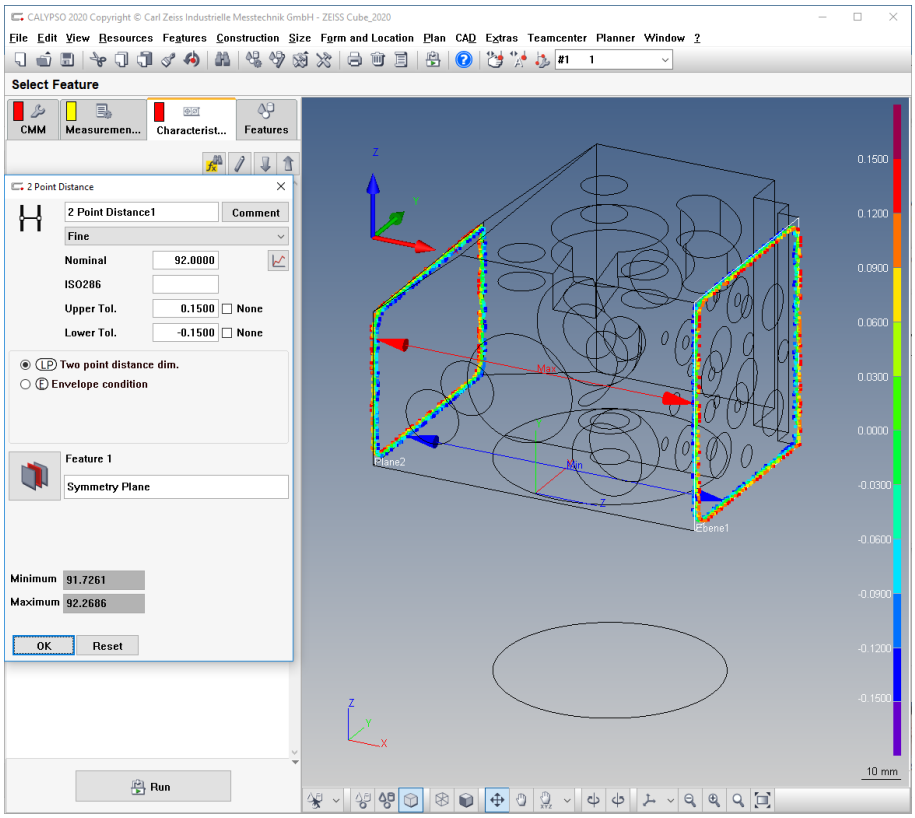
The *two-point distance* characteristic determines a minimum and a maximum width for two parallel planes.

Benefit

Measurement of the *two-point distance* according to ISO 14405-1 is possible.

Details

The *two-point distance* characteristic can be found under **Size → Standards**. The minimum and maximum distances are output as results. More information can be found in the CALYPSO operating instructions.

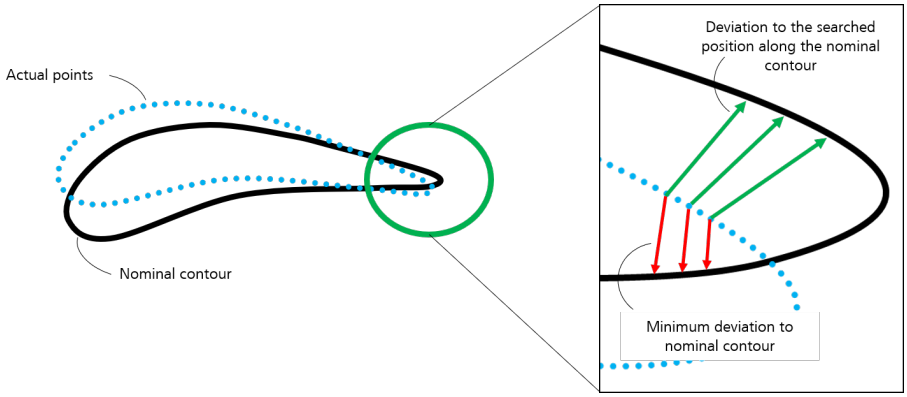


Robust *Feature extraction (FEx)* from point clouds

When measuring thin workpieces, correct assignment of the actual points on the nominal contour is a challenge with larger deviations. Due to the thinner walls, the actual points may be assigned to the opposite side of the nominal contour instead of to the nominal points actually being searched for. The new *Feature extraction (FEx)* function in CALYPSO 2020 prevents this effect and achieves higher stability for measurement results.

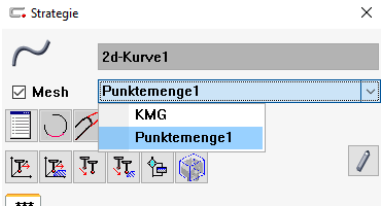
Benefit

More stable measurement and calculation of deviations. A typical application example is the measurement of turbine blades.



Details

Once a point set has been loaded in the measurement plan, the following setting is available in the strategy window of the 2D curve:



The mesh model from the point set is thus cut to the curve height and fit to the nominal curve.

Selection of the point set for *feature extraction (FEx)* available in the Measurement Plan Editor Features

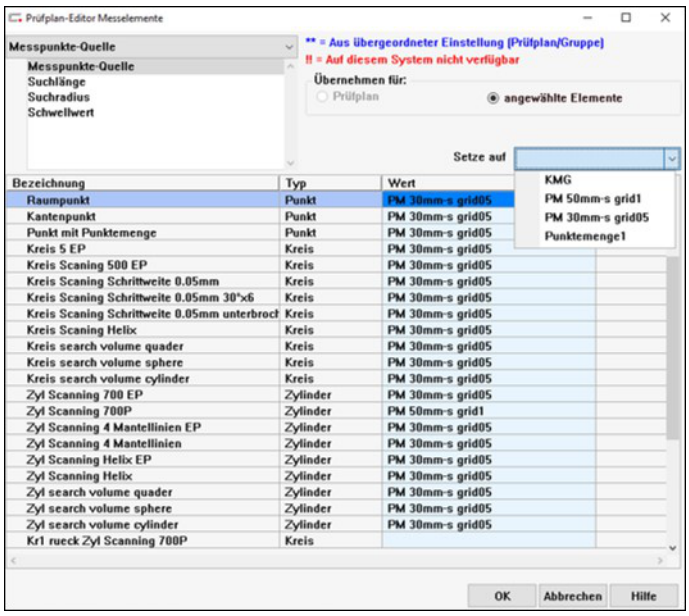
Up to CALYPSO 2019, users had to assign the desired point set for FEx to each feature individually. Starting with CALYPSO 2020, this action can be performed within the **Measurement Plan Editor Features**.

Benefit

Convenient and fast changes of FeX settings in the **Measurement Plan Editor Features**. Many features can thus be changed simultaneously.

Details

The FeX settings can be found under **Prerequisites → Measurement Plan Editor Features → Strategy → Point Set**. There you can adapt the following settings for one or more features: Measurement point source, Search Length, Search radius, and Threshold.



Automatically saving STL data after the CNC run

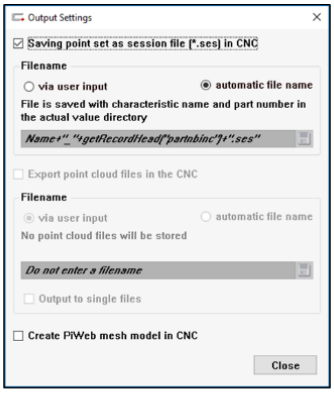
Analogous to other data formats, now STL data can automatically be saved after a measurement plan has been run.

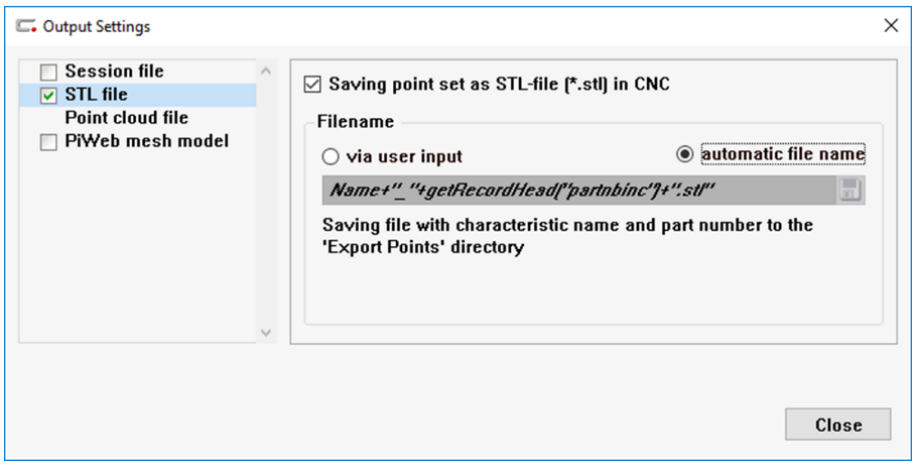
Benefit

The STL data no longer has to be saved manually and can easily be used for further evaluations in subsequent steps.

Details

The CNC dialog window of the Point Set element was converted to CALYPSO 2020 to simplify setting of the automatic save function. The clearly arranged dialog window simplifies and speeds up user workflow. The session files can be found in the *pointexport* folder of the measurement plan directory.





Simplification of handling of *STL Import* machine type

If *STL Import* is active as a machine type: typical work steps can now be skipped within a CALYPSO measurement plan. Information which is irrelevant when using an *STL Import* machine, for example the measuring speed, no longer has to be specified in CALYPSO 2020.

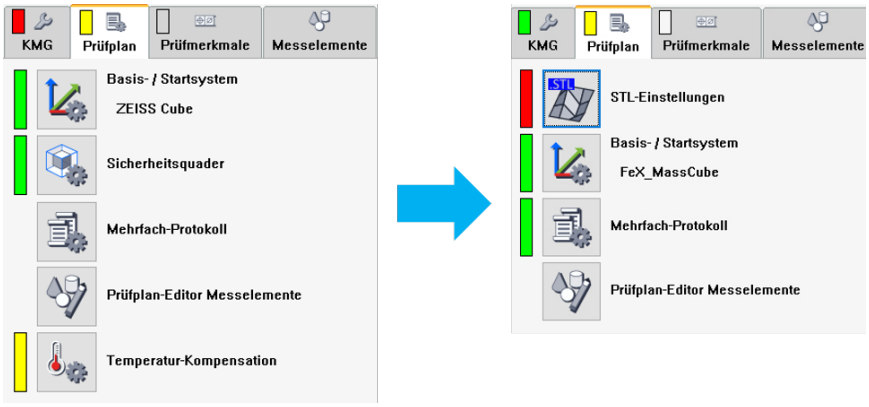
Benefit

The operation of CALYPSO 2020 when loading and executing STL measurement plans was improved to prevent unnecessary work steps.

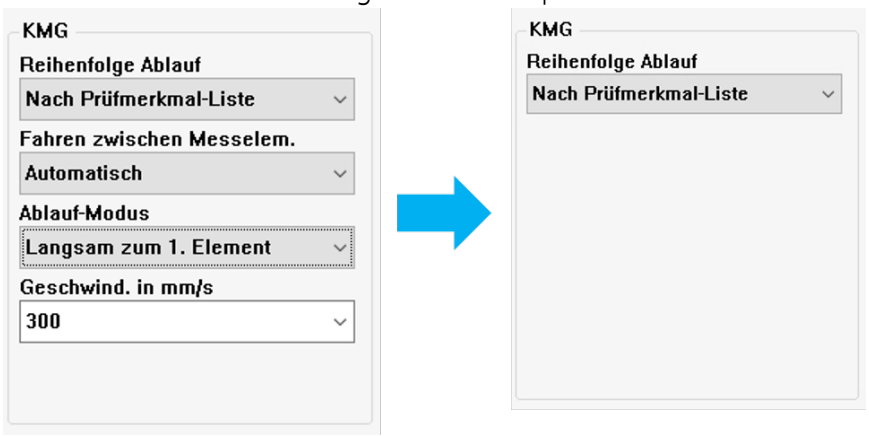
Details

Here are two examples:

1. Information regarding the clearance plane and the temperature compensation is required for the measurement run on an *STL Import* machine. For this reason, the **Measurement Plan** area has been reduced to the essential.



2. Only the setting for the order of the measurement run appears in the **CMM** area of the CNC dialog box. This simplifies the workflow.



Recall of modified points from the point set

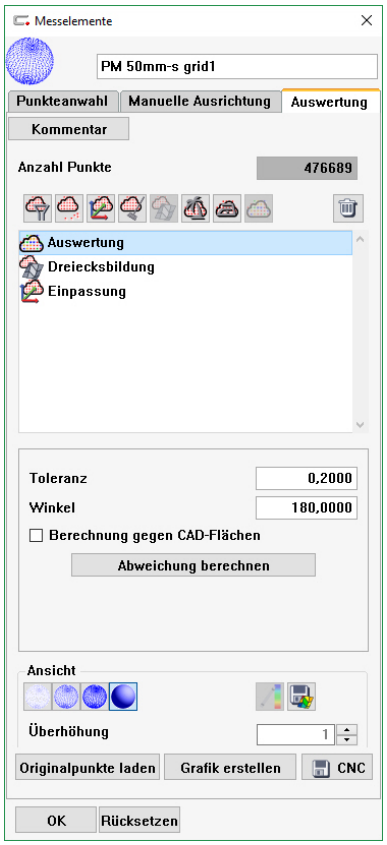
In CALYPSO 2020, the performed adaptations are considered in a point set during the point recall. This concerns, for example, the elimination of outliers or a realignment via best fit.

Benefit

The programming work of a measurement plan with a point set is thus reduced. The modified points now can be used for the following work steps directly in CALYPSO.

Details

During the recall, the performed modifications assigned to the point set under **Point Set → Evaluation** are taken into consideration.



NOTE

The recall of modified points is performed only with the point set element. The behavior of the recall function remains unchanged for other elements in CALYPSO 2020.

Optimized transfer of binary data to PiWeb

The processing of binary data for transfer to PiWeb is now performed with different, faster methods. The larger the amount of data involved is, the more perceptible positive changes become. The new method takes effect i.a. during CAD and plot data uploads.

Benefit

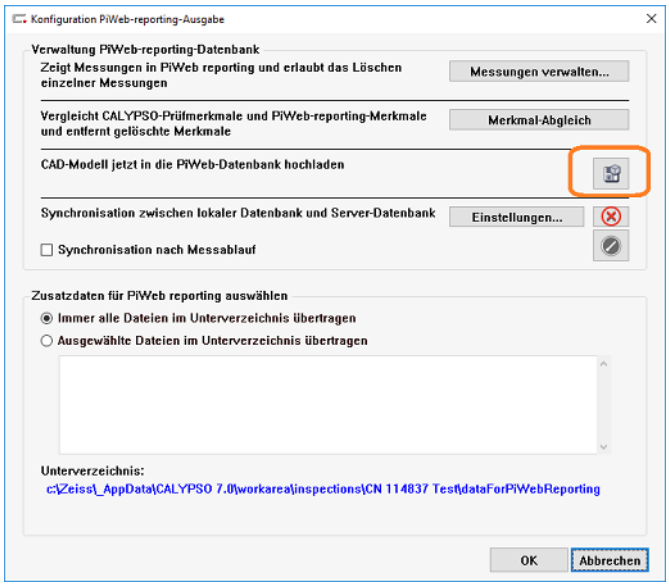
Faster data transfer of CAD and plot data to PiWeb.

Details

CAD models are transferred during the initial start of a measurement plan.

A subsequent CAD transfer is callable via:

Results to file → "PiWeb reporting" configuration → Upload CAD model to PiWeb database now



Local test via standard CNC run with PP "CAD_mesh_test" (incl. approx. 35 MB meshmodel for CAD deviation analysis)

Before: approx. 80 s

After: approx. 50 s

CALYPSO curve: New PCM commands

Curve data: New PCM commands for the tolerances of every single point and for the min and max points of the lower and upper tolerances.

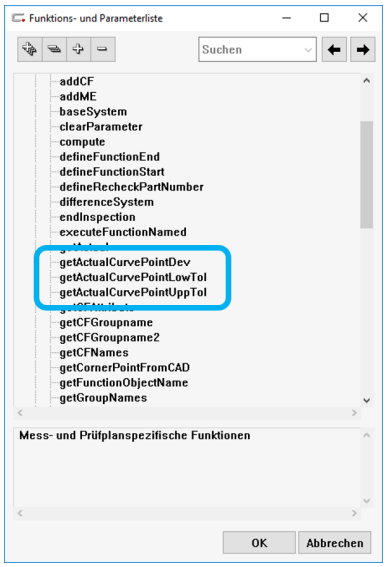
Benefit

The PCM functionality for curve data has been extended. This enables you to perform your own PCM evaluations.

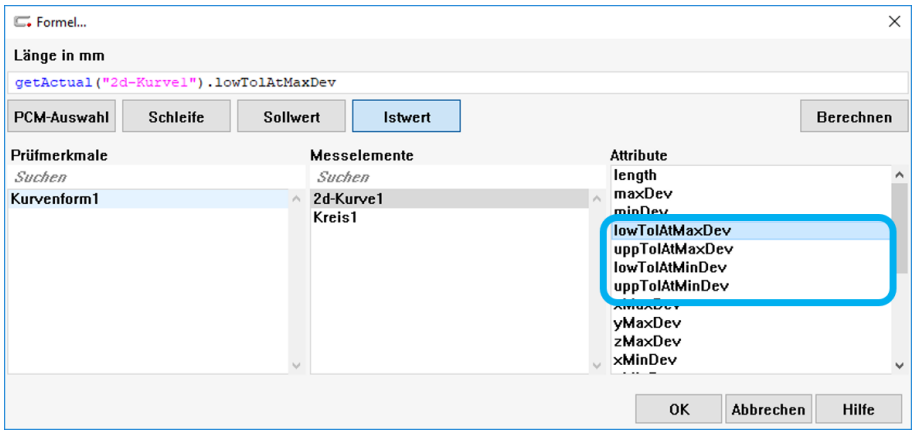
Details

The following PCM commands are now available:

- `getActualCurvePointDev( curve name [,loop index],point number )`
- `getActualCurvePointLowTol( curve name [,loop index],point number )`
- `getActualCurvePointUppTol ( curve name [,loop index],point number )`



In addition, CALYPSO users can use four other attributes for calculations via formulas.



Export of multiple curves in the new ZEISS standard format

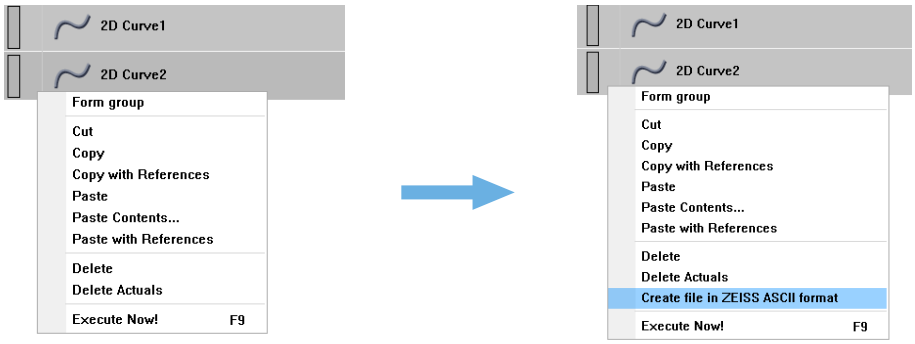
CALYPSO 2020 enables the simultaneous export of multiple curve points in the ZEISS standard format.

Benefit

Now nominal points from multiple curves can be exported at the touch of a button. Users previously had to perform this action individually for each curve.

Details

With CALYPSO 2020, users can select multiple curves in the measurement plan and export them in the ZEISS standard format. An ASCII file containing all of the selected curves is created.



CALYPSO 2019 CALYPSO 2020

The ZEISS standard format was already implemented in CALYPSO 2019. For more information, refer to the release notes for CALYPSO 2019 or the operating instructions for CALYPSO.

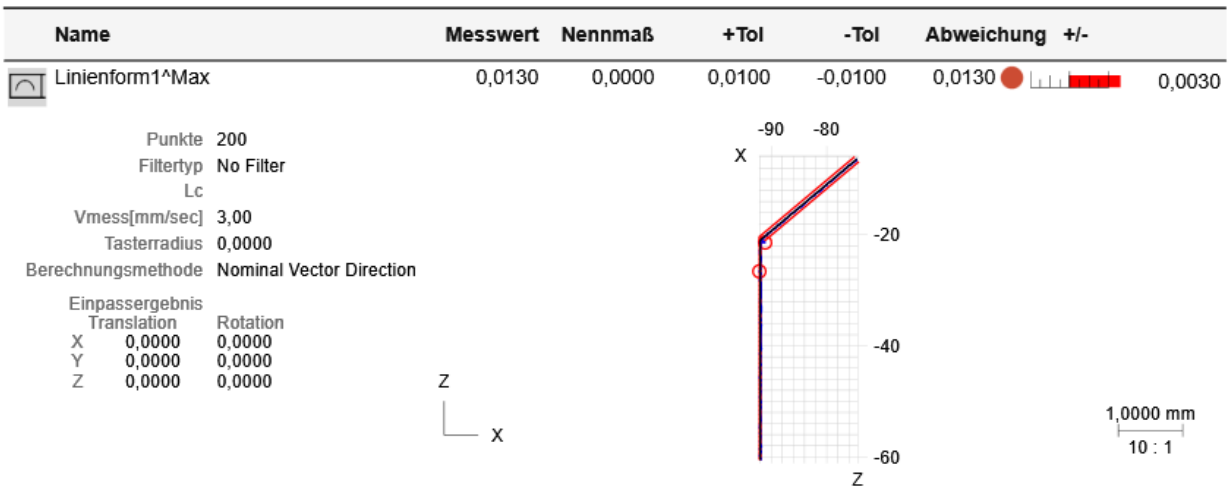
Curve line profile only one plot per segment

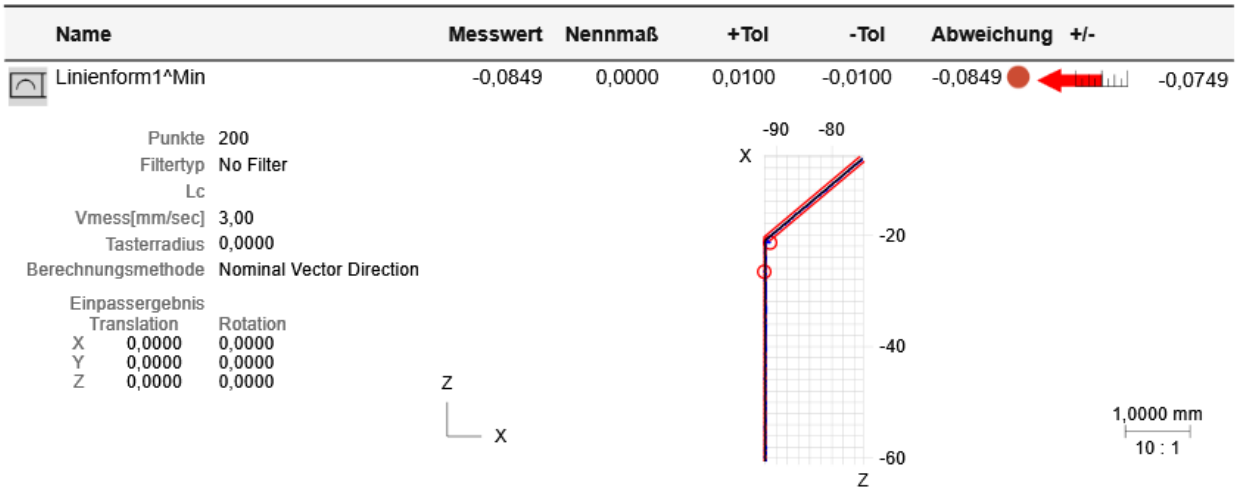
Several pages were previously output for line profiles with segment tolerances. In part, these pages had exactly the same content (display of the min. and max. point). The report output is now optimized.

Benefit

The display of the line profile with segment tolerances has been optimized in CALYPSO 2020.

Details





PiWeb reporting: output of the curve distance list

The characteristics of the CALYPSO curve option can output deviation lists.

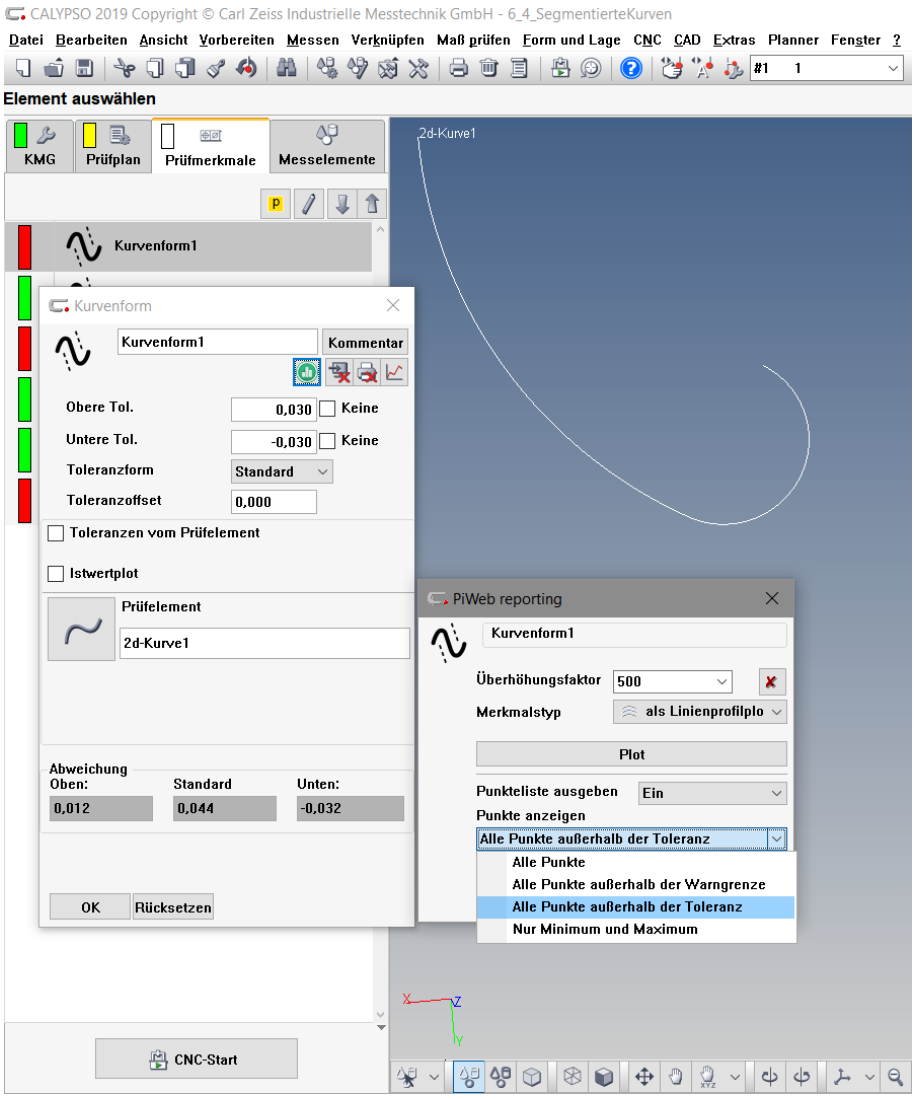
Benefit

Individual curve values are available as a list if required.

Details

The output of the point list is set in the characteristics of the CALYPSO curve option:

- **All points**
- **All points outside the warning limit:**
- **All points out of tolerance:**
- **Minimum and Maximum Only**



Name	Messwert	Nennmaß	+Tol	-Tol	Abweichung	+/-
Kurvenform1	0,040	0,000	0,030	-0,030	0,040	0,010
Kurvenform1.standard	0,080					
2	0,032		0,030	-0,030	0,032	0,002
4	0,040		0,030	-0,030	0,040	0,010
8	-0,040		0,030	-0,030	-0,040	-0,010

Deviation list

PiWeb reporting: curve distance list shows deviation position in interactive report

The position of the measurement value is visible in the interactive standard report (file name: *InteractiveStandardProtocol.ptx*)

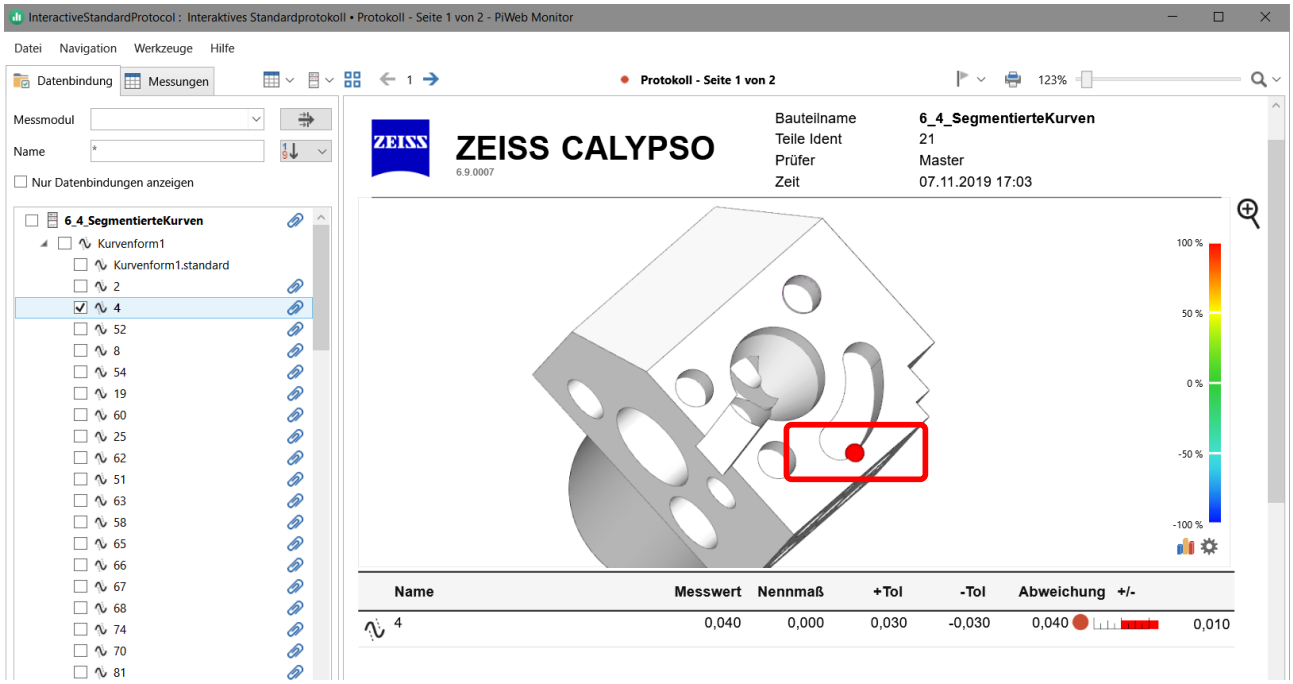
Benefit

The position is made visible with a single-click on the measurement value.

Details

If you click the "Value" column in the standard report, the *InteractiveStandardProtocol.ptx* file is opened and the location of the measurement value is displayed.

	Name	Messwert	Nennmaß	+Tol	-Tol	Abweichung	+/-	
	Kurvenform1	0,040	0,000	0,030	-0,030	0,040		0,010
	Kurvenform1.standard	0,080						
2		0,032		0,030	-0,030	0,032		0,002
4		0,040		0,030	-0,030	0,040		0,010
8		-0,040		0,030	-0,030	-0,040		-0,010



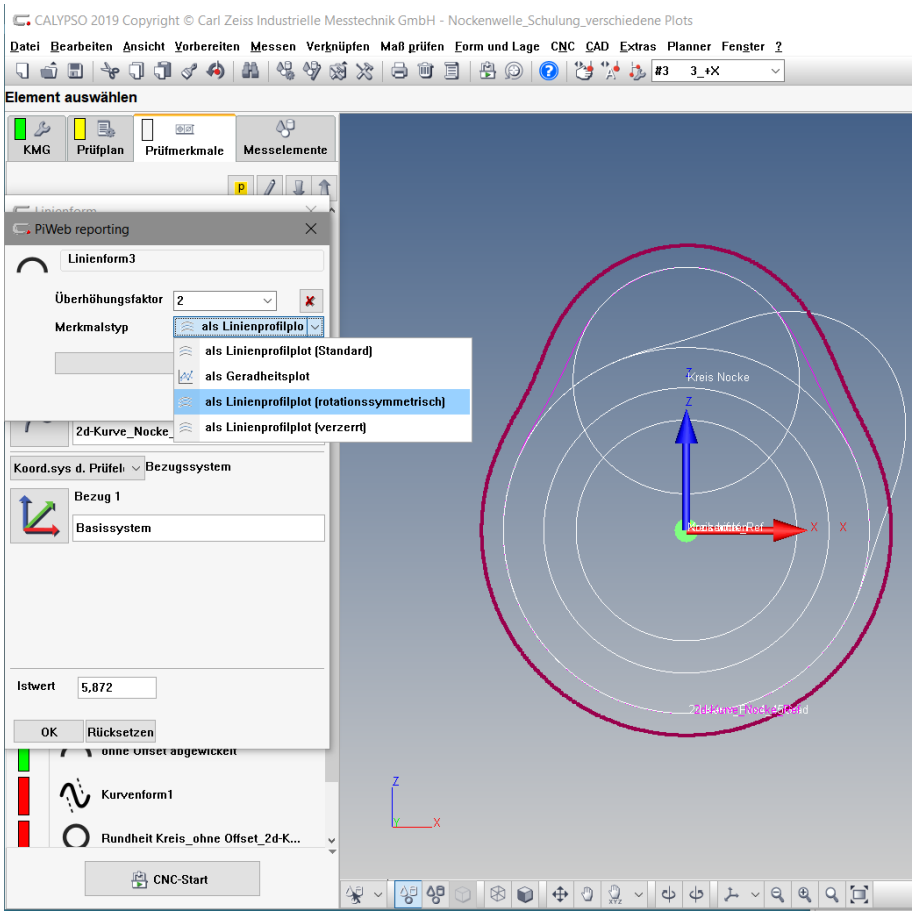
CALYPSO curve: New plot representation - Line profile plot (rotationally symmetric)

There is a new plot representation for rotationally symmetric curves with center: **Line profile plot (rotationally symmetric)**

Benefit

Rotationally symmetric curves are representable with radial lines and auxiliary circles.

Details



Line profile plot (rotationally symmetric)

PiWeb Designer:

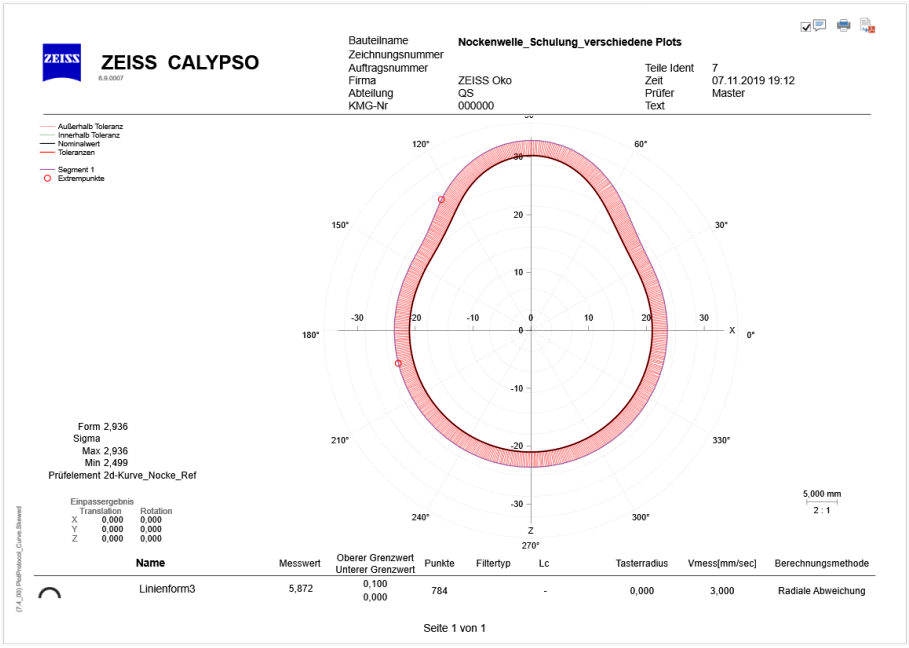
New row template "Curve.RotSym"

Radial lines and auxiliary circles

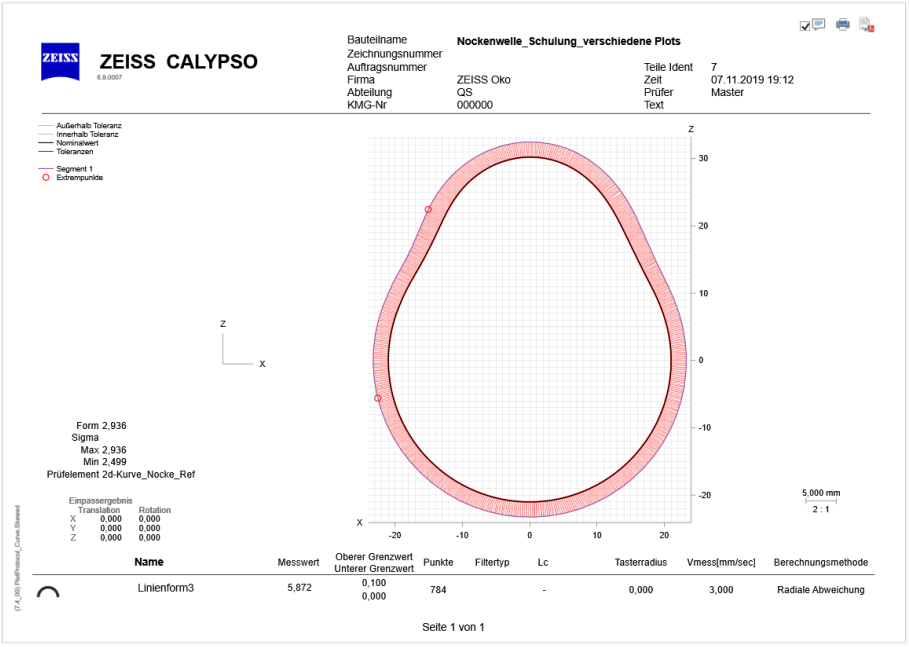
Axes; intersection point; coordinate origin

New line profile plot (rotationally symmetric):

Line profile plot with radial lines and auxiliary circles. The intersection point of the axes is in the coordinate origin.



Line profile plot (standard):



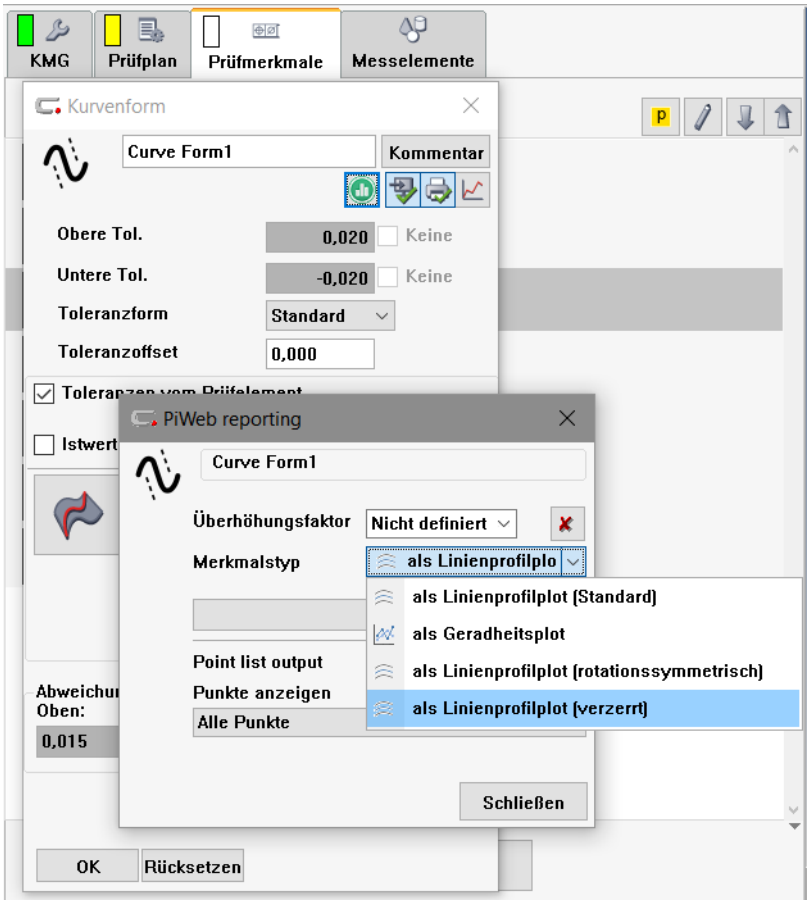
CALYPSO curve: New plot representation - Line profile plot (distorted)

Now a curve form also can be represented as distorted. This makes sense if the ratio of the length of the curve to its width differs considerably.

Benefit

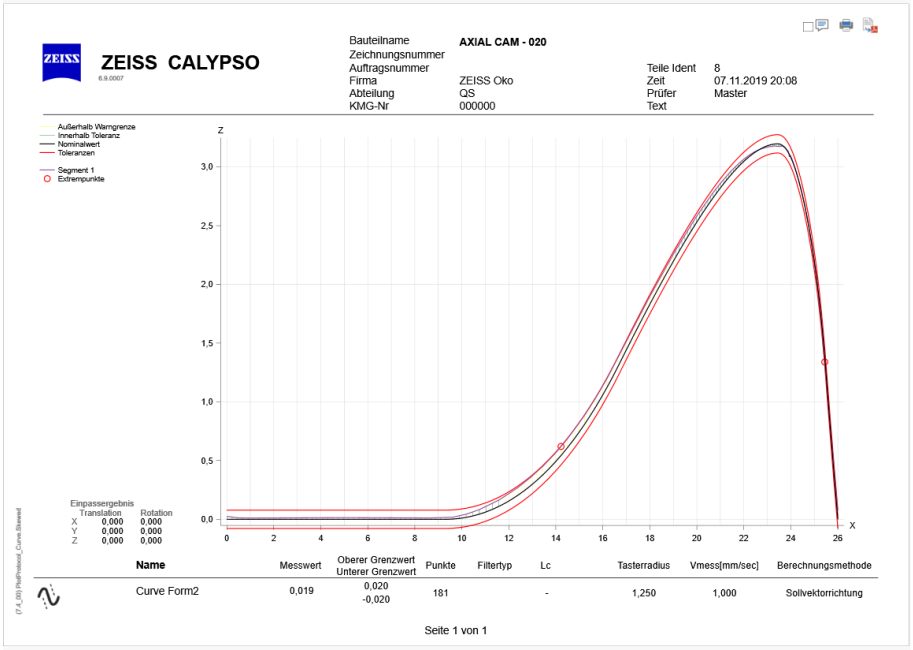
Curve forms are optimally representable.

Details



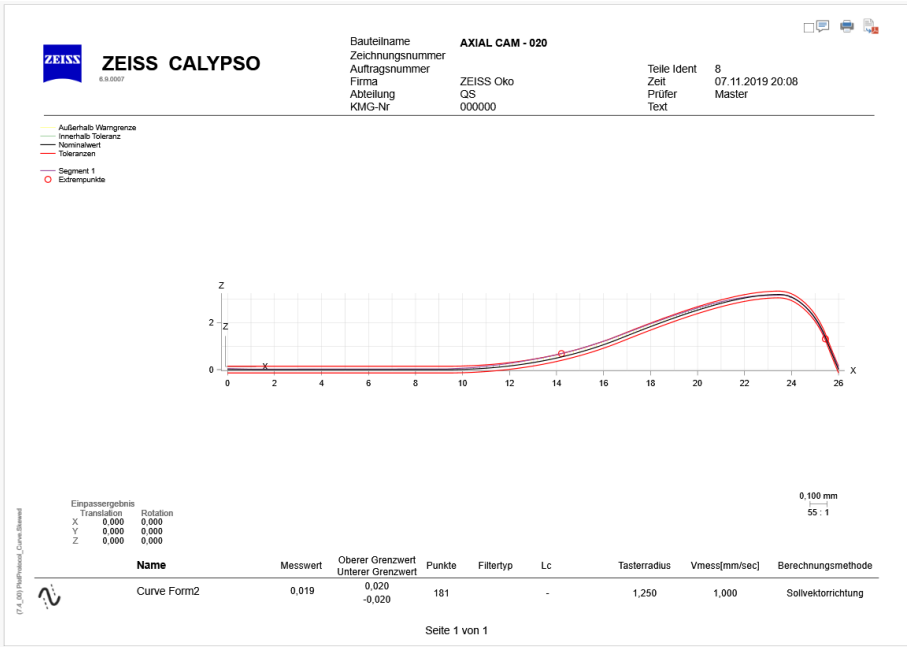
New line profile plot (distorted):

The curve form is optimally fit into the drawing layer. The scaling is distorted in the X and Y drawing layers.



Line profile plot (standard):

The scaling is the same in the X and Y drawing layers.



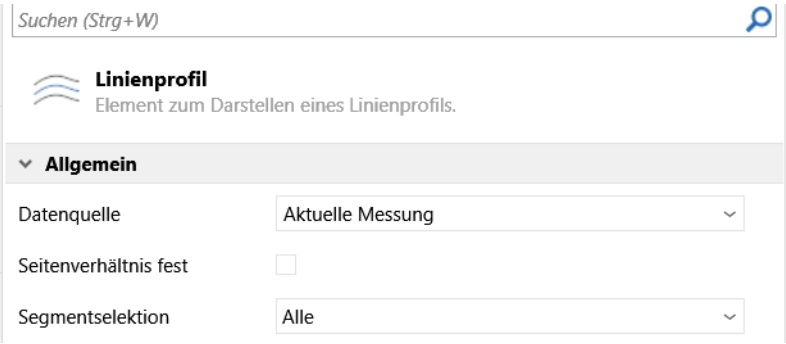
PiWeb Designer settings for line profile plot (distorted)

Line profile plot (distorted):

New line template: "Curve.Skewed"

Keyword: "Curve.Skewed"

Aspect ratio fixed: (Yes / No)



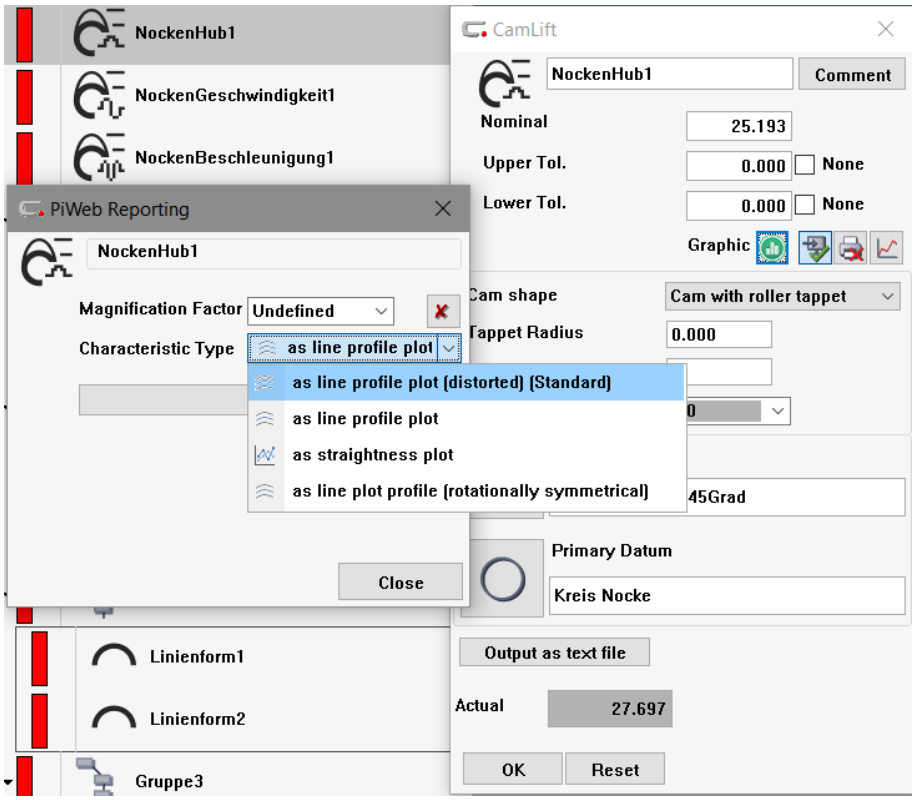
CALYPSO curve: new plot representation for lift, speed, and acceleration

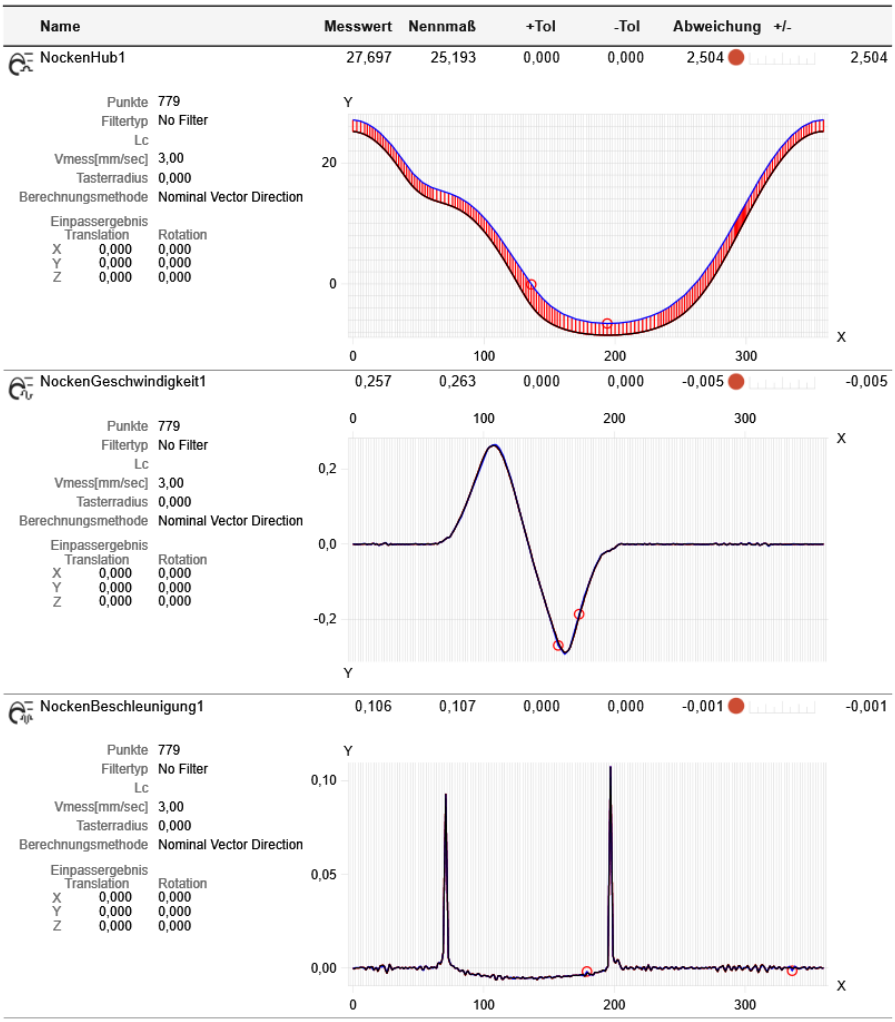
There are new plots in PiWeb reporting for the specific cam characteristics (lift, speed and acceleration).

Benefit

Lift, speed, and acceleration can be shown as a graphic in PiWeb reporting.

Details





CALYPSO curve: Moving the parallel curve to enable relative measurement of curve edges

If curves have to be measured on a narrow edge, it often is necessary to measure the curves relative to an edge. This new function creates a “temporary guide curve” which is displaced 90° from the measured curve.

Benefit

Narrow edges can be measured reliably.

Details

Improvement in the “Relative Measurement” curve:

- The combination button for the projection plane of the curve has been moved to the dialog **Relative Measurement → Working Plane**.
- There is a new dialog (similar to the edge point). A “temporary guide curve” displaced 90° from the measured curve is thus created. This “guide curve” is used only as a datum for the relative measurement of the measured curve. The measured curve and the guide curve are defined relative to the edge with the two values D1 and D2.
- The measuring reference to the element (similar to the measuring reference from the circle) is enabled for the curve.

Automatic export of BLADE PRO results from CALYPSO

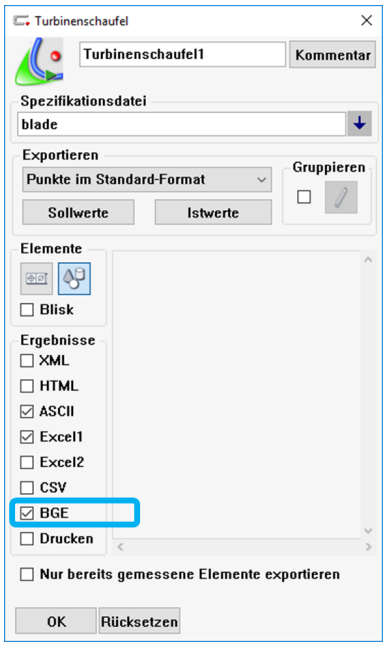
Up to now, only manual export of nominal and actual points from BLADE PRO was possible. Starting with CALYPSO 2020, users also have the option of automatically exporting this data after the CNC run.

Benefit

The export process has been automated and no longer needs to be started manually.

Details

The new Blade Geometry Export (BGE) format is now available in CALYPSO 2020. The nominal and actual points are thus output from BLADE PRO automatically. This information can be reloaded for further applications in CALYPSO.



More information can be found in the BLADE PRO operating instructions.

New line profile settings for PiWeb reporting

There are new line profile settings in PiWeb designer.

Benefit

New polar plot and coordinate origin selection for better display of rotationally symmetric curves.

Details

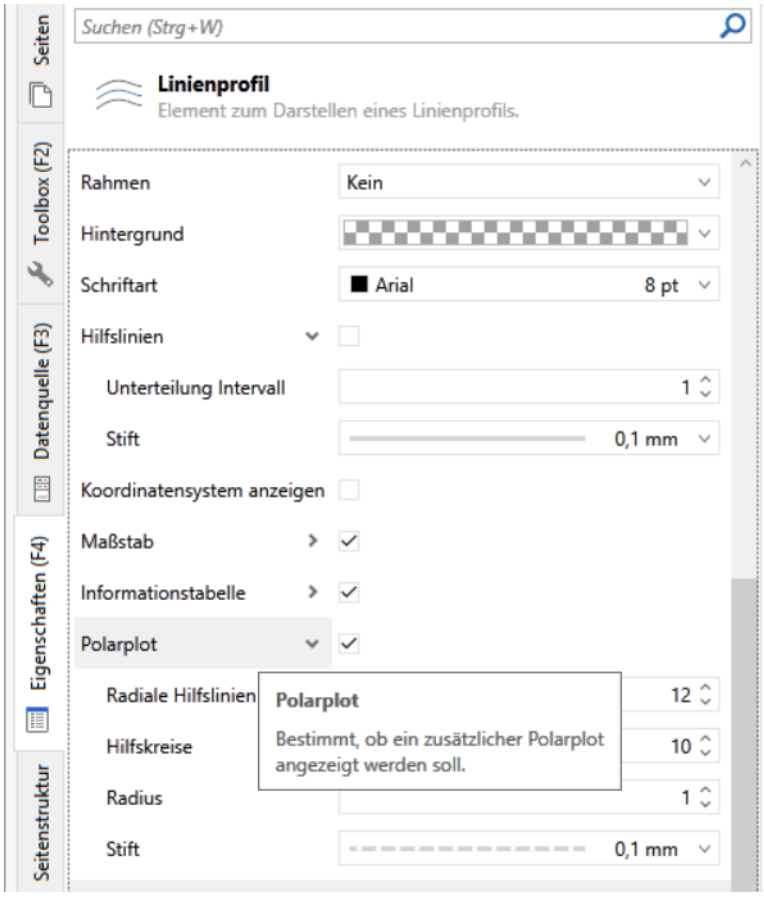
Form plots:

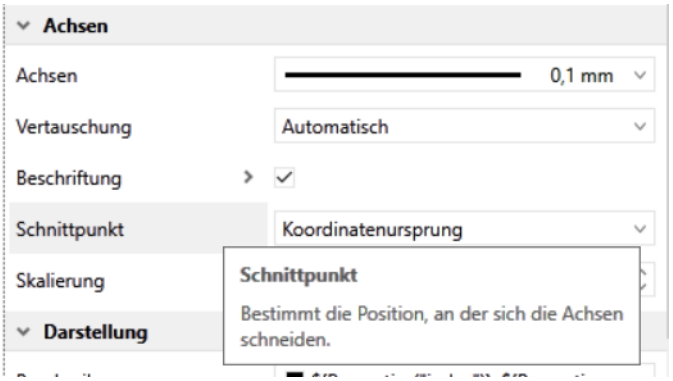
Line profile → Polar plot → Radial auxiliary lines

Line profile → Polar plot → Auxiliary circles

Line profile → Axes → Intersection point → Set coordinate origin

These radial lines can now be used separately or in addition to the existing auxiliary lines shown in the line profile.





Axis end points for position tolerances in the report

The axis end points for position tolerances are now also output in the standard report.

Measurement Plan Editor Characteristics:

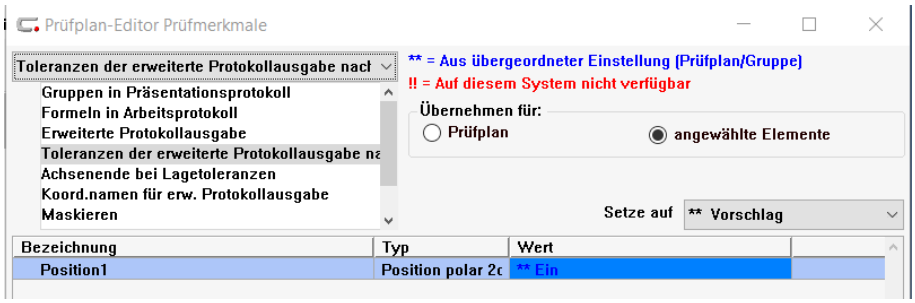
Output axis end points for position tolerances: (**On**/**Off**)

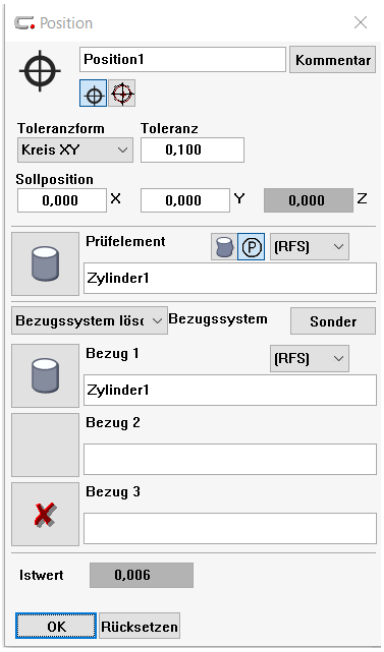
Tolerance of the extended report output to PiWeb: (**On**/**Off**)

Benefit

Axis end points for position toleranes are output in the PiWeb report.

Details





Measurement Plan Editor Characteristics:

Output axis end points for position tolerances: **On**

Tolerance of the extended report output to PiWeb: **On**

Name	Messwert	Nennmaß	+Tol	-Tol	Abweichung	+/-	
Position1	0,201	0,000	0,100	0,000	0,201		0,101
Position1.t1	0,003	0,000			0,003		
Position1.H1	-124,000						
Position1.X1	-40,201	-40,200	0,050	-0,050	-0,001		
Position1.Y1	32,099	32,100	0,050	-0,050	-0,001		
Position1.t2	0,201	0,000			0,201		
Position1.H2	-64,000						
Position1.X2	-40,201	-40,200	0,050	-0,050	-0,001		
Position1.Y2	31,999	32,100	0,050	-0,050	-0,101		-0,051

Measurement Plan Editor Characteristics:

Output axis end points for position tolerances: **On**

Tolerance of the extended report output to PiWeb: **Off**

Name	Messwert	Nennmaß	+Tol	-Tol	Abweichung	+/-
Position1	0,201	0,000	0,100	0,000	0,201	0,101
Position1.t1	0,003	0,000			0,003	
Position1.H1	-124,000					
Position1.X1	-40,201	-40,200			-0,001	
Position1.Y1	32,099	32,100			-0,001	
Position1.t2	0,201	0,000			0,201	
Position1.H2	-64,000					
Position1.X2	-40,201	-40,200			-0,001	
Position1.Y2	31,999	32,100			-0,101	

Output of expansion coefficient in report (for a temperature compensation of the measurement)

In addition to the expansion coefficient, the compensation factor also is output for a temperature compensation in the report.

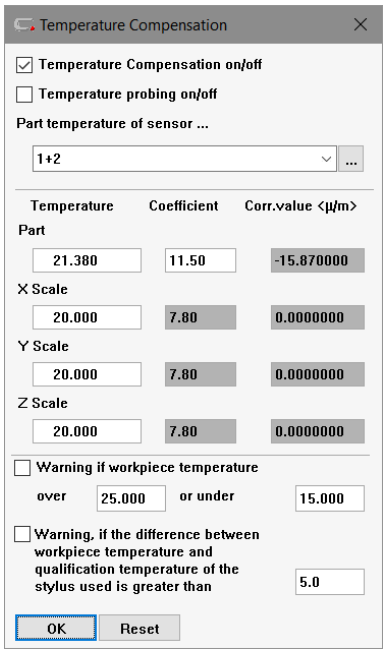
Benefit

The temperature compensation is clear and complete in the report.

Details

Report output for activated measurement temperature compensation:

Name	Measured value	Nominal value	+Tol	-Tol	Deviation	+/-
^Temperature workpiece	21.4					
Coefficient 1/K	11.50					
Compensation <µ/m> µ/m	-15.870000					



Measurement plan revision in header of standard report

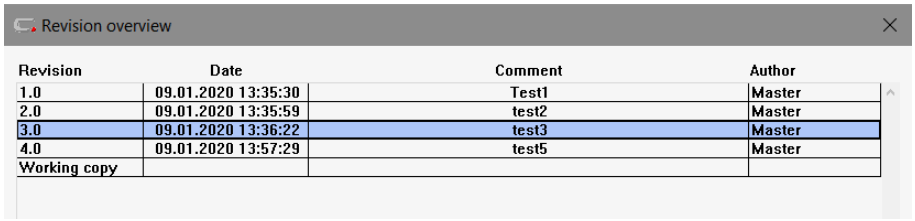
The measurement plan revision is output in the standard report if the measurement plan has been versioned. The current revision number is displayed. If the “working copy” is loaded, 0.0 is displayed as the revision number. If the measurement plan has not been versioned, the “Revision” field remains empty.

Benefit

The unique revision number of the measurement plan is output in the standard report.

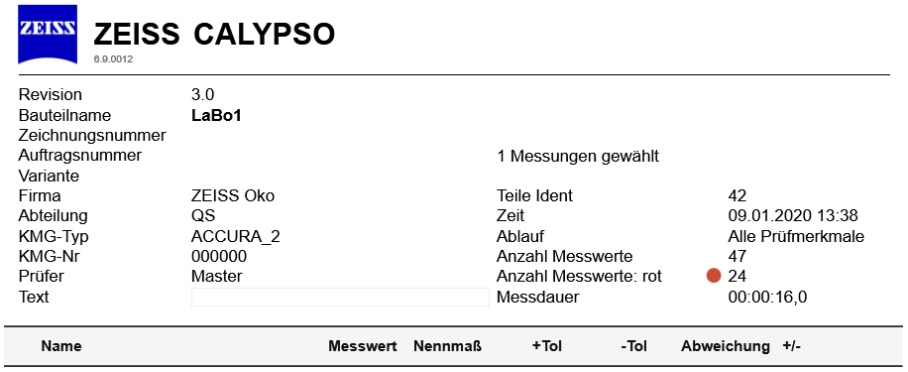
Details

Measurement plan versioning with revision:



Revision	Date	Comment	Author
1.0	09.01.2020 13:35:30	Test1	Master
2.0	09.01.2020 13:35:59	test2	Master
3.0	09.01.2020 13:36:22	test3	Master
4.0	09.01.2020 13:57:29	test5	Master
Working copy			

Revision in report header:



Text output field with variable `${Qdb.Measurement(1232,-1)}`

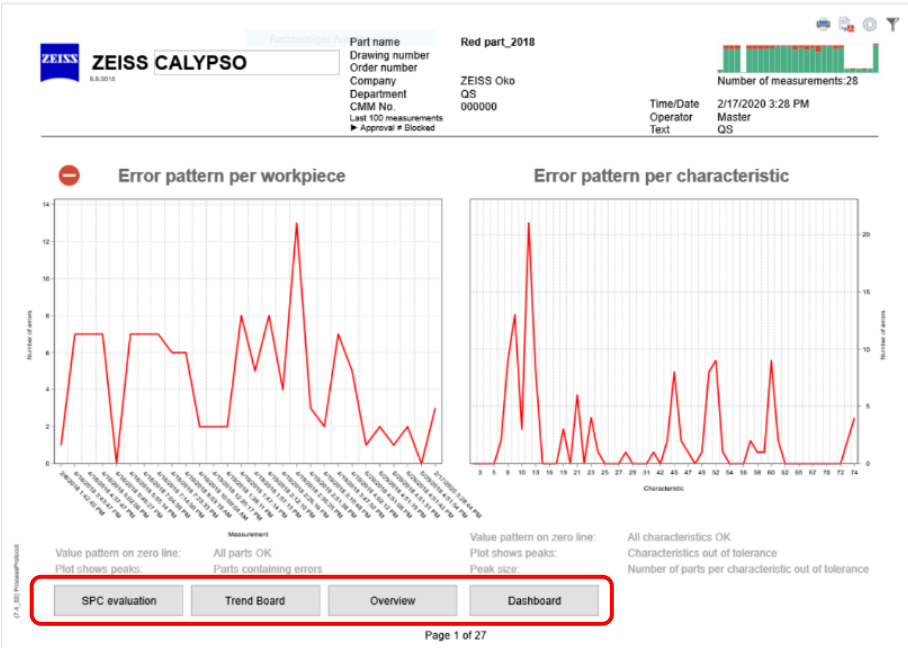
ProcessProtocol.ptx with trend evaluation

ProcessProtocol.ptx has a new link to *TrendProtocol.ptx* and to *Dashboard.ptx*. There are also buttons which enable fast navigation.

Benefit

Data and measurement values can be analyzed faster and more easily.

Details



Buttons

SPC	SPC evaluation, trend, control cards, tool correction values, statistics
Overview	Listing of measuring jobs. The corresponding standard report for a certain measurement can be retrieved to the overview list.

Dashboard	Create a fast data analysis as well as a weekly and a monthly report. The dashboard is a separate evaluation (*Dashboard.ptx*). Up to now, this evaluation could only be invoked separately in the PiWeb reporting plus user interface. The dashboard is described in detail in the release information for CALYPSO 2018.
Trend board	Trend report for fast trend analysis

New *TrendProtocol.ptx* for trend evaluation

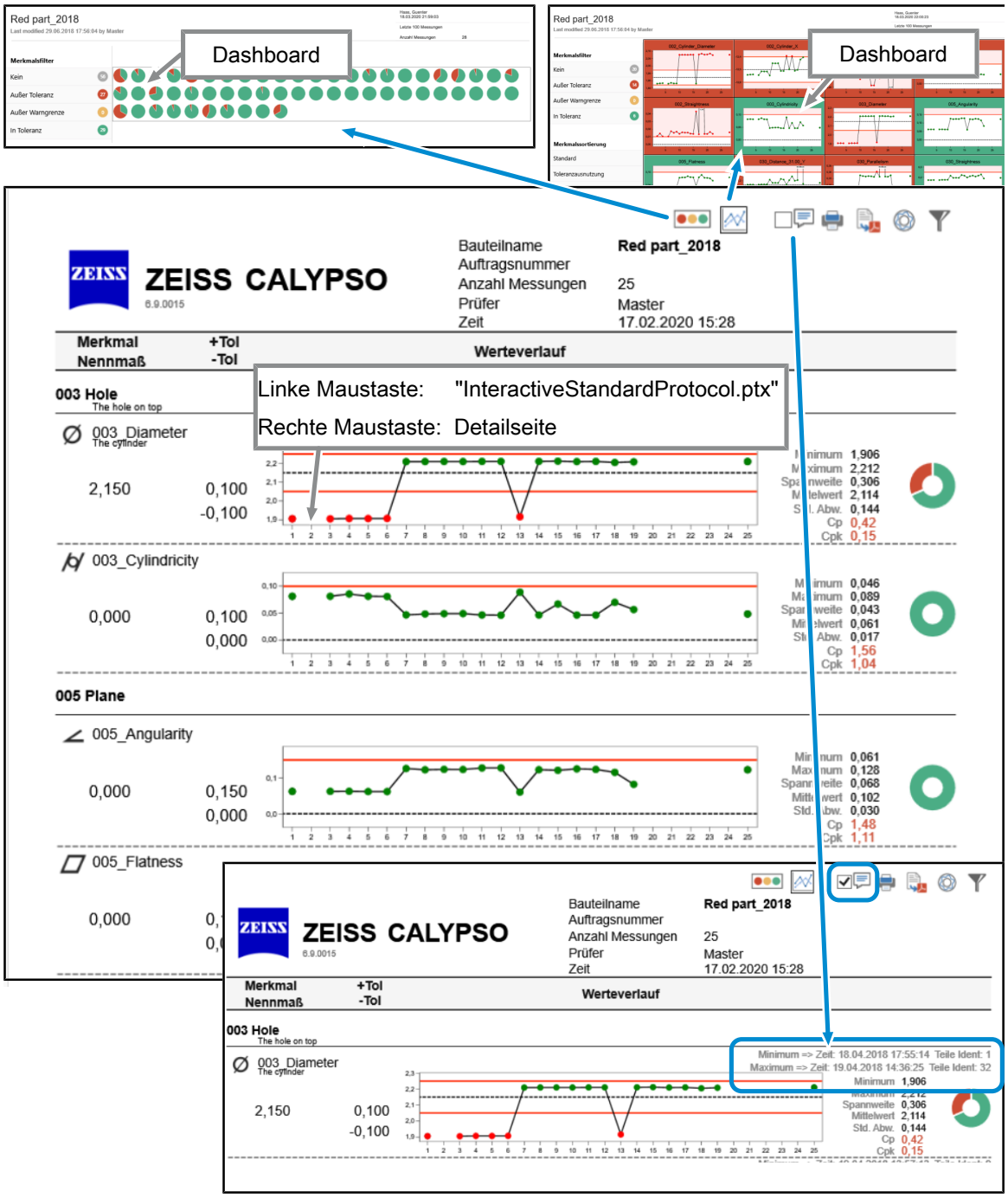
New *TrendProtocol.ptx* for trend evaluation and analysis. In addition, there is a link to *Dashboard.ptx*.

Prerequisite: The PiWeb reporting plus option is active.

Benefit

Data and measurement values can be analyzed faster and more easily.

Details



Gage R&R measuring system analysis in PiWeb reporting plus

PiWeb reporting plus contains templates for the GR&R measuring system analysis method, types 1, 2, and 3. These templates are opened from the PiWeb reporting plus user interface.

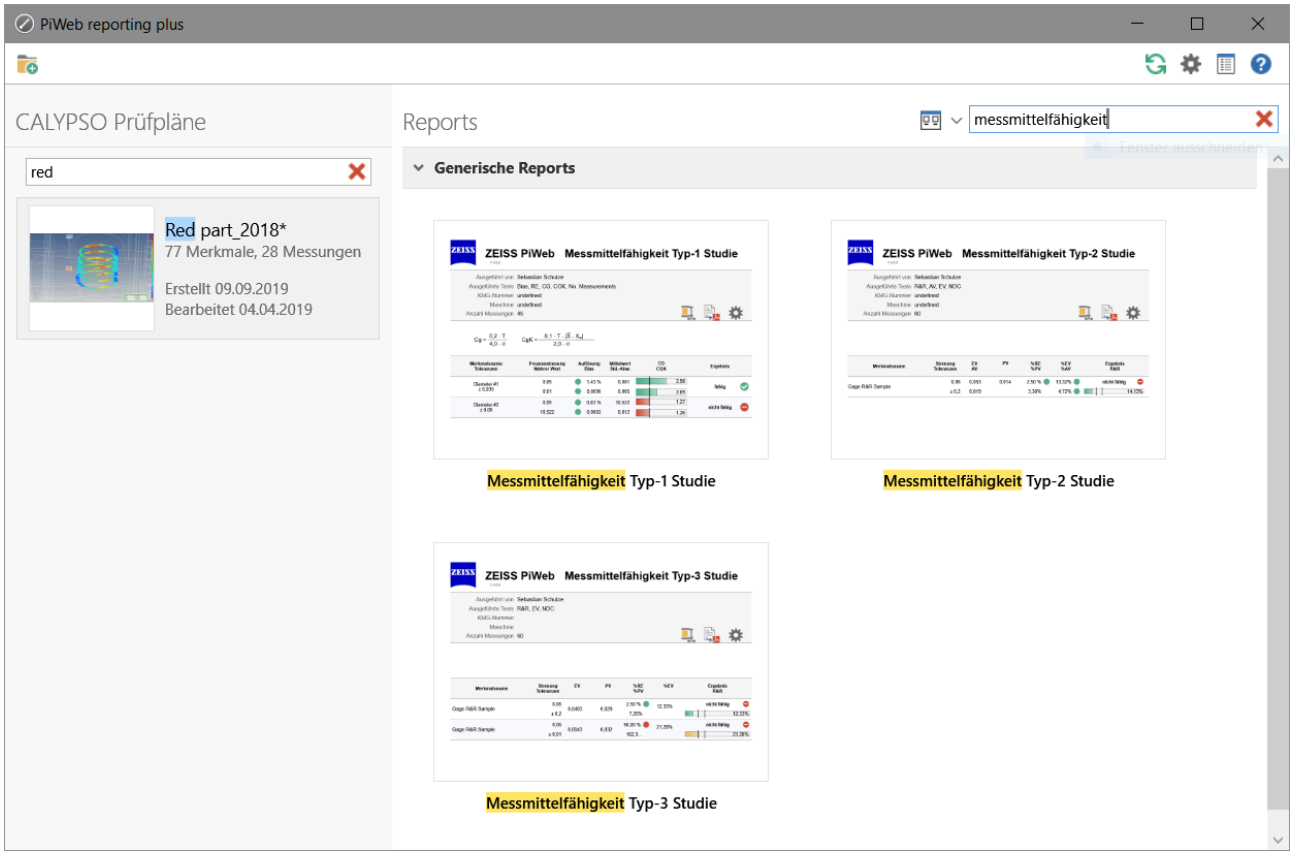
Benefit

A measuring system analysis according to the GR&R method, types 1, 2, and 3, is possible.

Details

GR&R type 3 is integrated as a new method.

GR&R types 1, 2, and 3 are made available as generic templates.

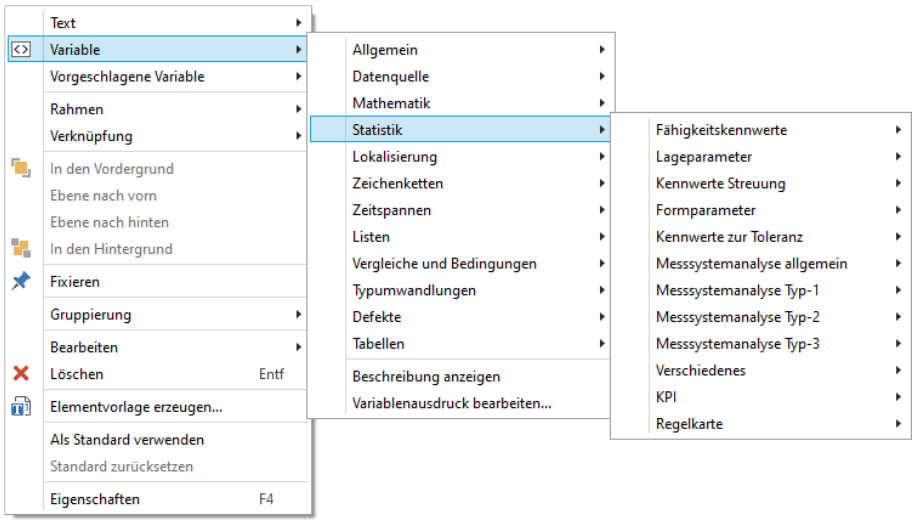


The module for calculating the measuring equipment capability within PiWeb supports type 1, type 2, and type 3 capability studies. Type 2 and type 3 studies are possible via two different key figure schemes.

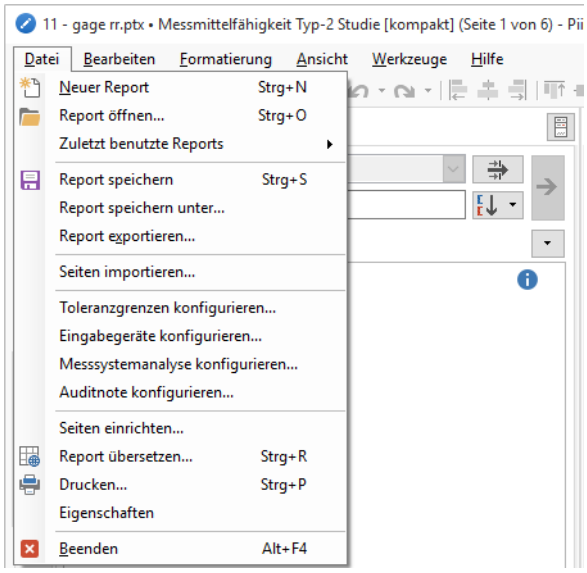
- Average and range method (ARM). This method is usually used if measuring equipment capability studies are performed with Microsoft Excel. This method uses averages and ranges to calculate the repeatability and reproducibility.
- Method of variance analysis (ANOVA). This method calculates more exactly using sums of squares and can detect interactions between the operator and the component. The following characteristic fields from the database are used for the measuring equipment capability:
  - Attribute key 2073: True value of master gauge. This value is used for type 1 studies.
  - Attribute key 2201: Process variation. This value is used for type 1, type 2, and type 3 studies.

– Attribute key 2404: Resolution of the measuring system. This value also is used for type 1, type 2, and type 3 studies.

If the values or fields are not available, they can be created and completed in the PiWeb Planner.

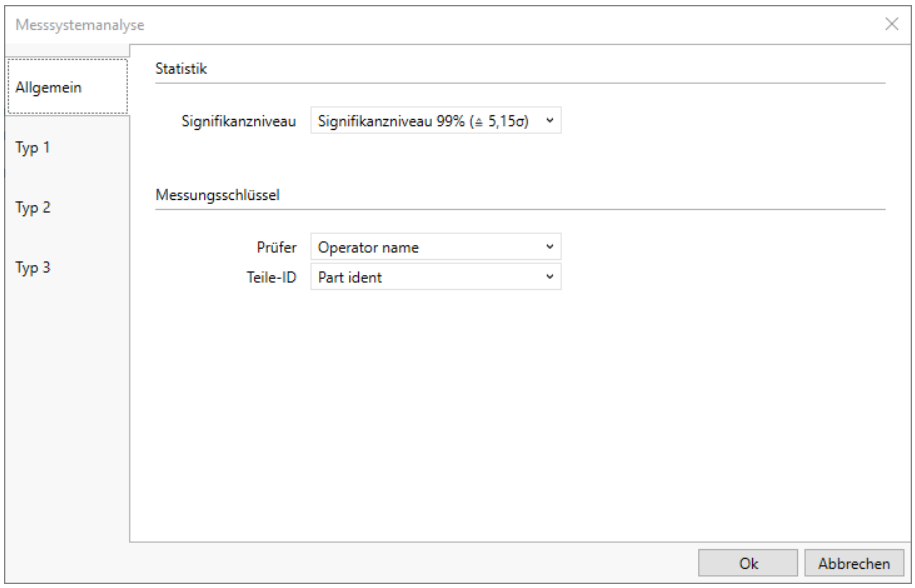


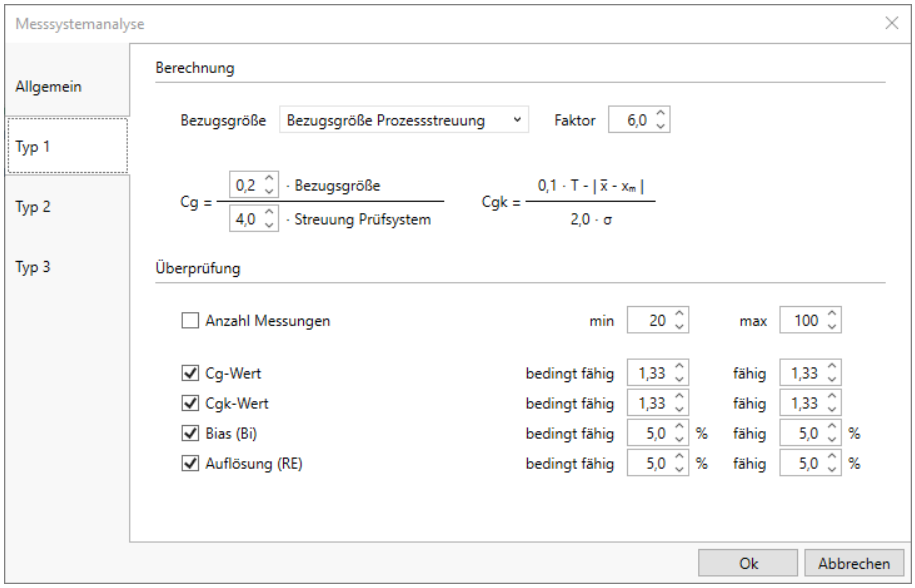
The various calculations for the measuring equipment capability are provided as system variables.

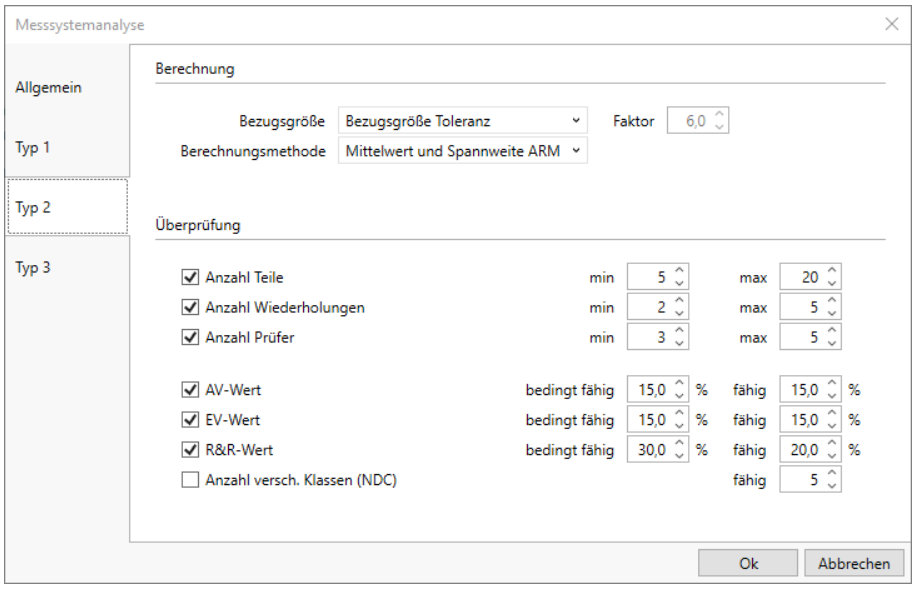


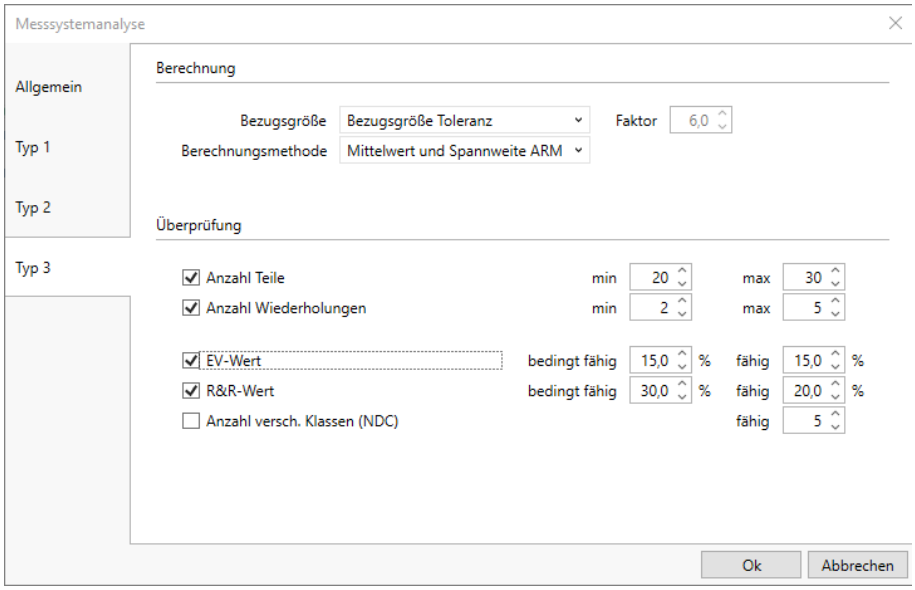
Click the entry **Configure measuring system analysis** to open the dialog for configuring the measuring equipment capability study.

The configuration dialog can be used to edit various aspects and parameters for the measuring system analysis. Please note that the settings always are made individually for each report.


Messsystemanalyse
Allgemein
Typ 1
Typ 2
Typ 3
Statistik
Signifikanzniveau
Signifikanzniveau 99% (≙ 5,15σ)
Messungsschlüssel
Prüfer
Operator name
Teile-ID
Part ident
Ok
Abbrechen

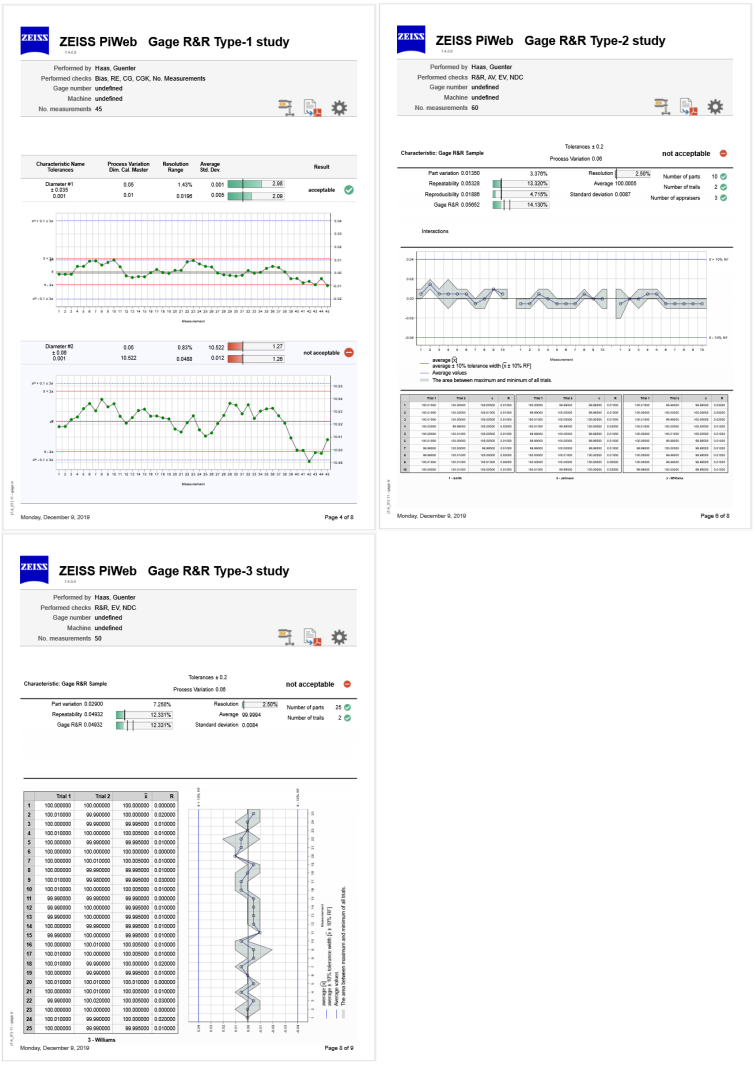

Messsystemanalyse
Allgemein
Typ 1
Typ 2
Typ 3
Berechnung
Bezugsgröße
Bezugsgröße Prozessstreuung
Faktor
6,0
Cg =
0,2
· Bezugsgröße
4,0
· Streuung Prüfsystem
Cgk =
0,1 · T - | x̄ - xm |
2,0 · σ
Überprüfung
Anzahl Messungen
min
20
max
100
Cg-Wert
bedingt fähig
1,33
fähig
1,33
Cgk-Wert
bedingt fähig
1,33
fähig
1,33
Bias (Bi)
bedingt fähig
5,0
%
fähig
5,0
%
Auflösung (RE)
bedingt fähig
5,0
%
fähig
5,0
%
Ok
Abbrechen



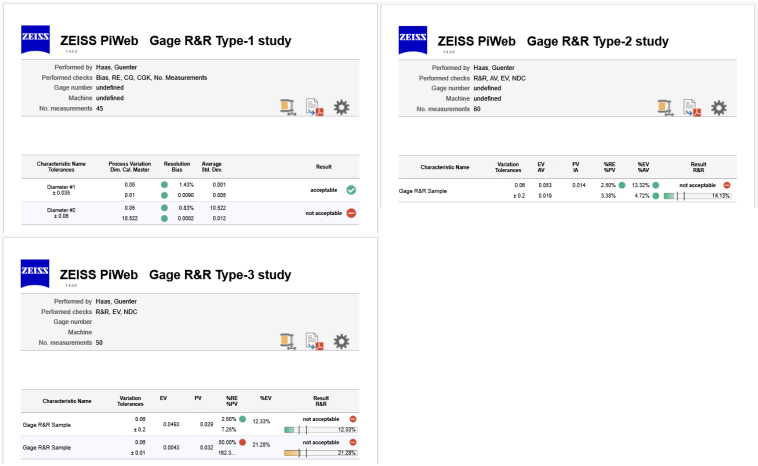


The templates are available for Gage R&R as a compact or a detailed version.

Detailed version of R&R type 1, type 2, and type 3:



Compact version of R&R type 1, type 2, and type 3:



CALYPSO PiWeb sbs data synchronization with background service

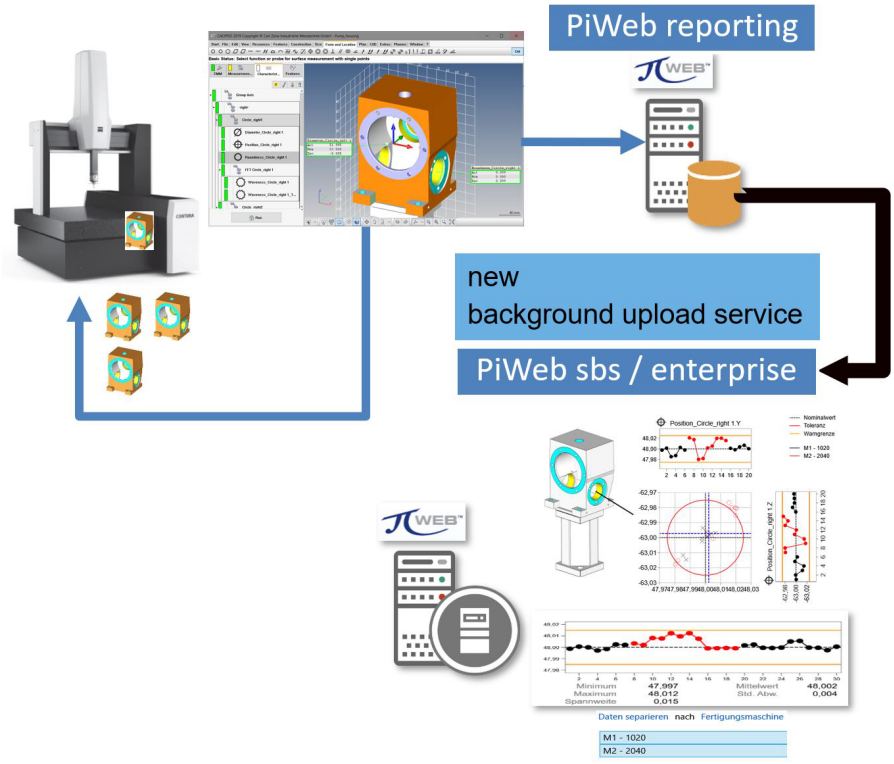
New background service for the data upload to a PiWeb server.

Benefit

Parallel background services enable faster CALYPSO runs in connection with a data synchronization to the PiWeb server. Faster start of the next CALYPSO run.

Details

Up to now, the data of a local CALYPSO measurement has been transmitted synchronously at the end of the measurement. CALYPSO first waited until the data upload to the server had been completed and then started the next run. The new background service avoids these waiting times. At the end of the CALYPSO measurement, the background service for the data upload to the PiWeb server is started. CALYPSO simultaneously starts the next CNC run right away.



PiWeb reporting: Database converted from dfm to dfs

The PiWeb reporting and PiWeb reporting plus databases have been converted to the dfs database format. The new dfs database format features a much higher performance as well as more storage space. Its file extension is **.dfs*. New CALYPSO 2020 measurement plans automati-

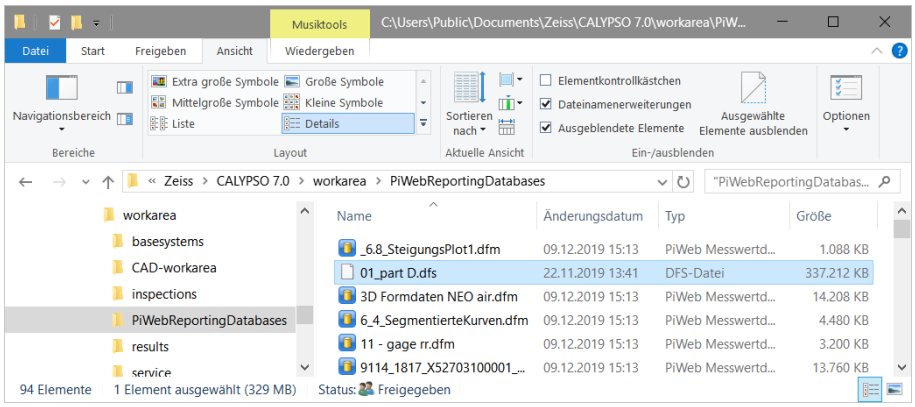
cally generate the new database format. A converter is available for databases which are older than CALYPSO 2020. The converter is opened in the Windows task bar under **ZEISS → CALYPSO 2020**.

Note: We recommend converting the old dfm data to the dfs format on completion of the software update.

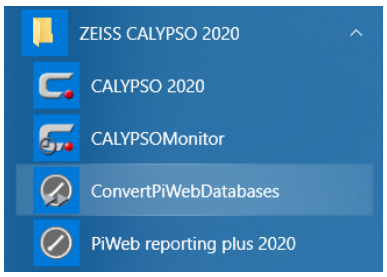
Benefit

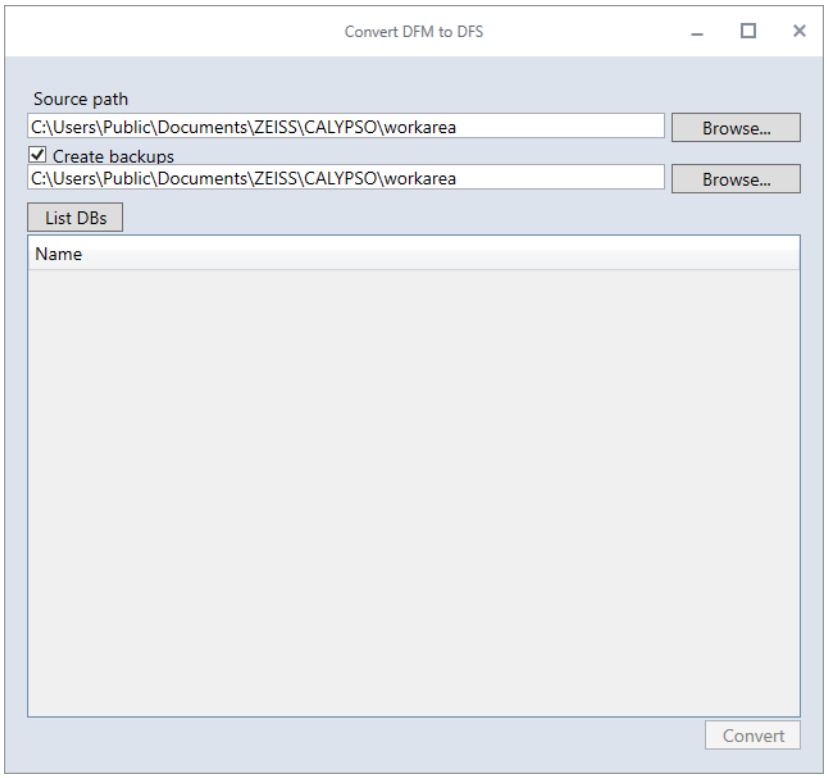
Faster database access when writing and reading PiWeb reporting data. In the old dfm database, the data volume was limited to max. 4 GB. The new dfs database has eliminated this 4 GB limit and allows a maximum of 1000 measurements per database.

Details



The converter is opened in the Windows task bar under **ZEISS → CALYPSO 2020**.





PiWeb reporting: faster creation of reports

The rendering engine in PiWeb reporting has been optimized.

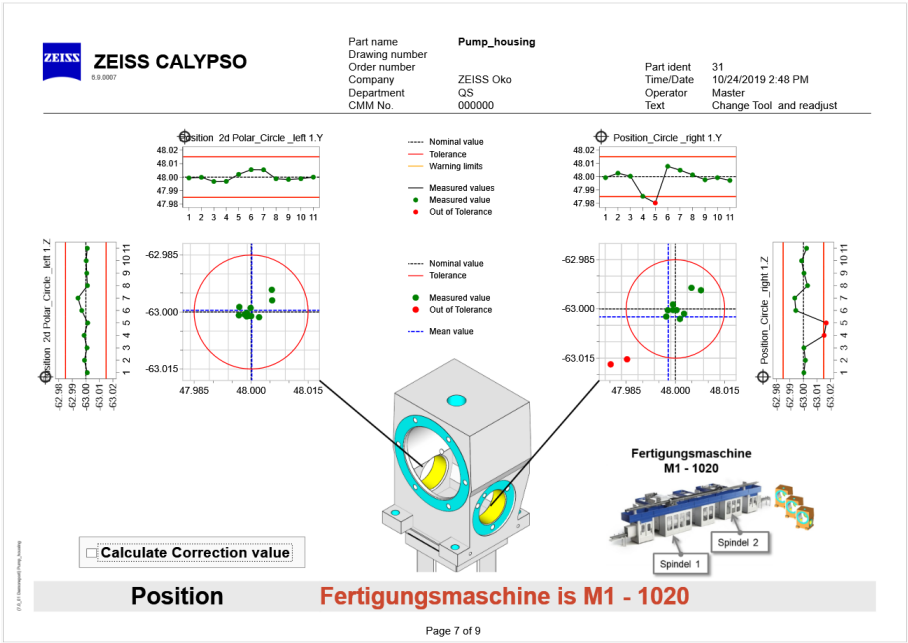
Benefit

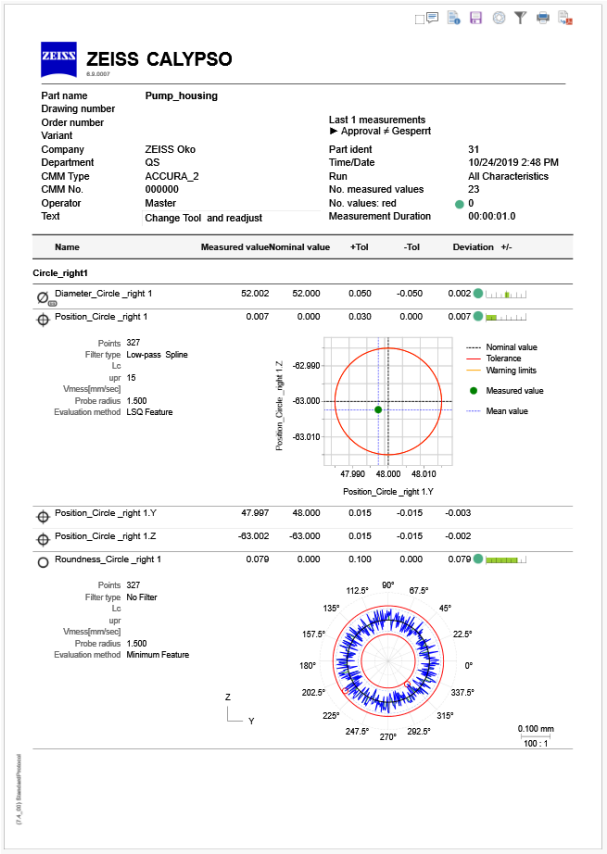
Much faster creation of reports.

Details

The rendering engine in PiWeb reporting has been optimized.

Advantages: much faster creation of reports





PiWeb reporting: Much faster creation of PDFs

The “rendering engine” was optimized in PiWeb reporting

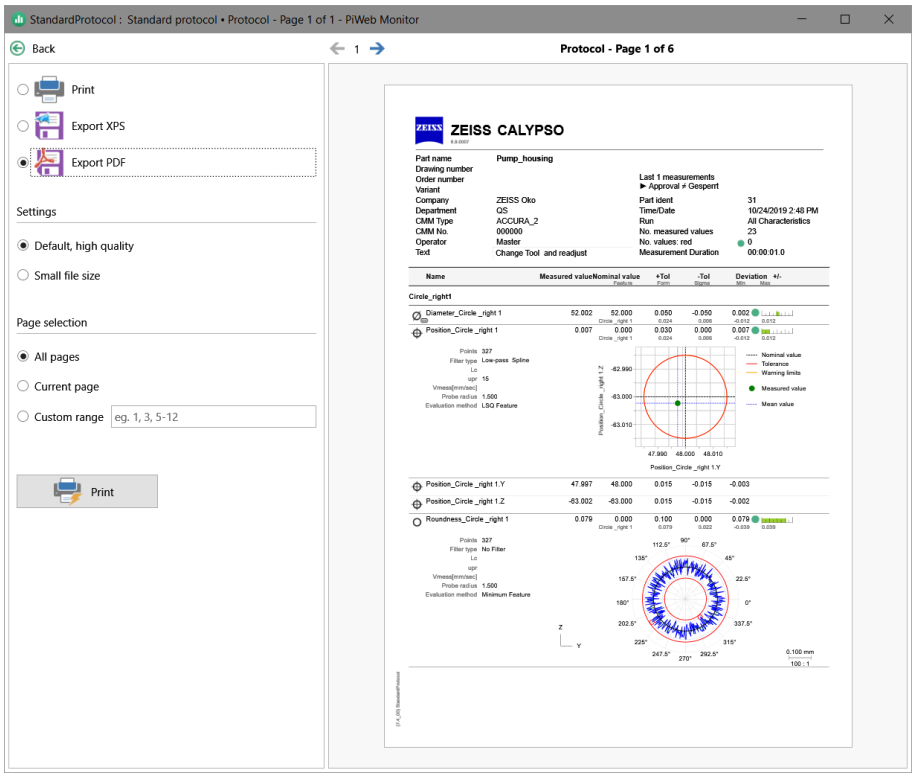
Benefit

Much faster creation of PDF files.

Details

The “pdf engine” was optimized in PiWeb reporting.

Advantages: Much faster creation of PDF files



PiWeb reporting plus: Changing the sample size or evaluation mode in CALYPSO

The sample size and the evaluation mode can be configured for statistical evaluations with PiWeb reporting plus.

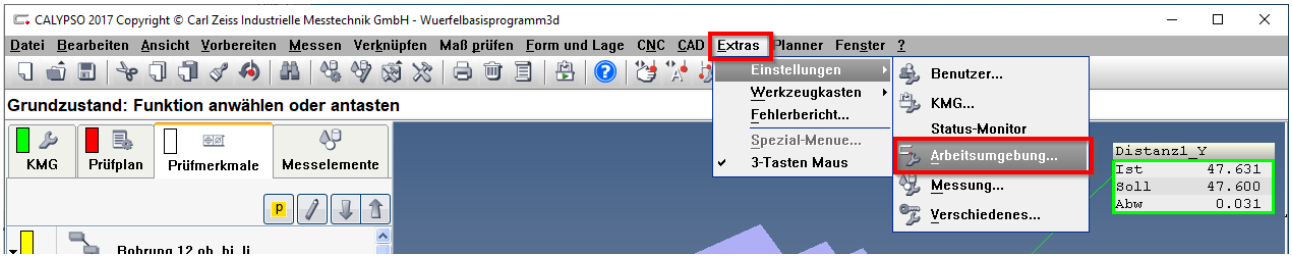
Benefit

The sample is configurable for statistical evaluations with PiWeb reporting plus.

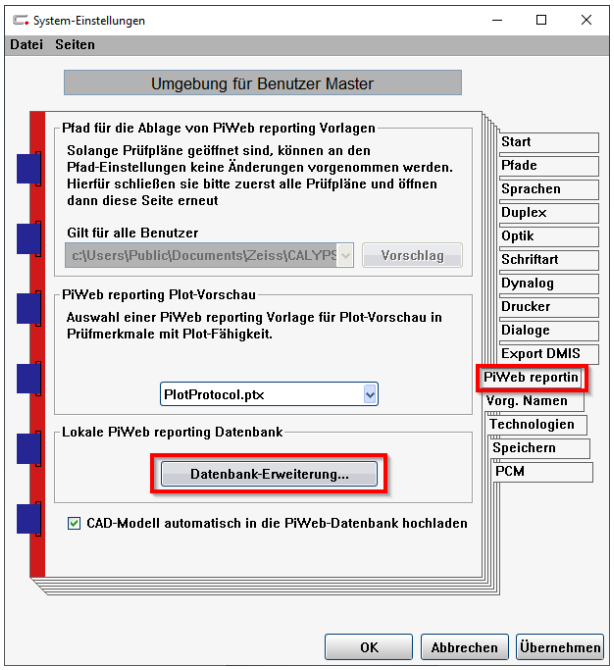
Details

Changing the sample size or evaluation mode in CALYPSO

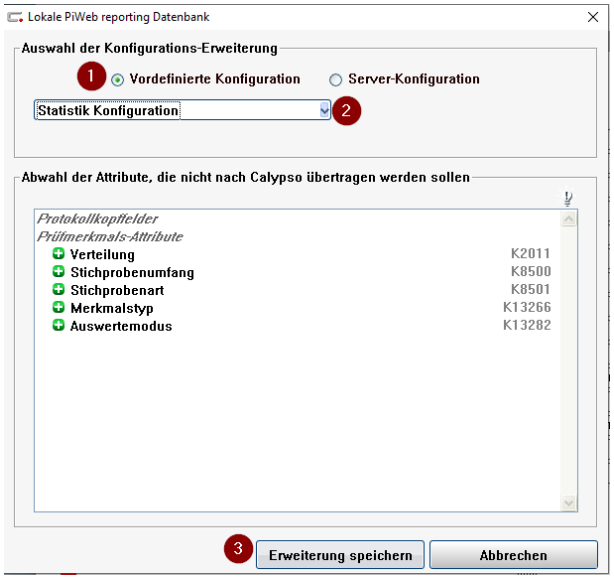
Open the **System Set Up** dialog:



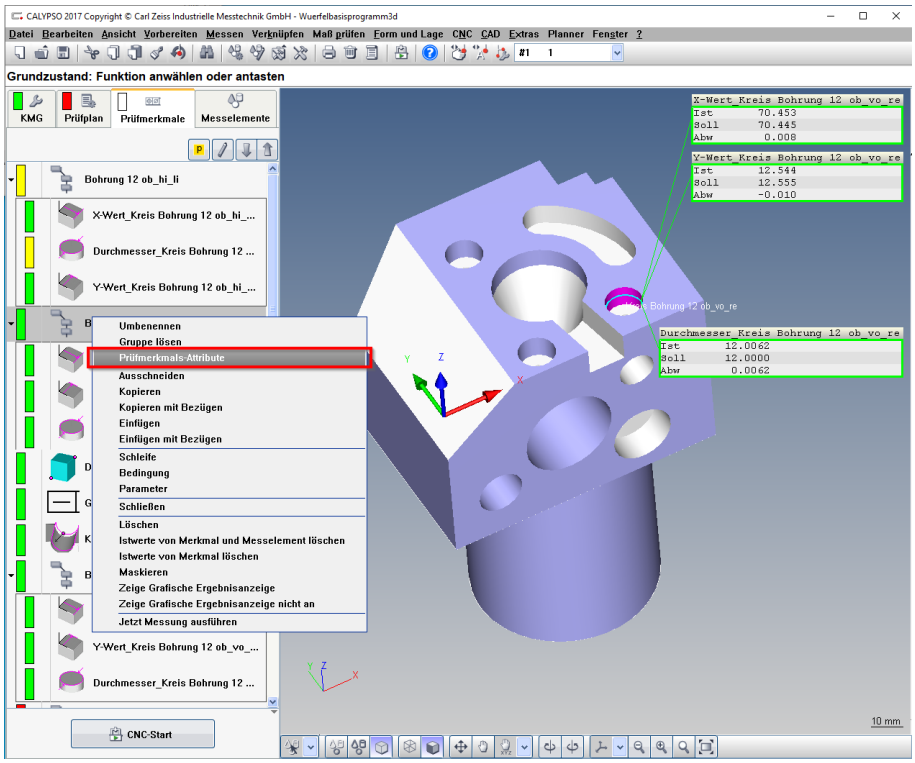
Open the database extension dialog:



Add or replace the template (alternatively: configure the server and transfer the configuration via the URL):



Right-click a characteristic and open the characteristic editor via the context menu:



Adjust the sample size, evaluation mode, distribution type, or characteristic type:

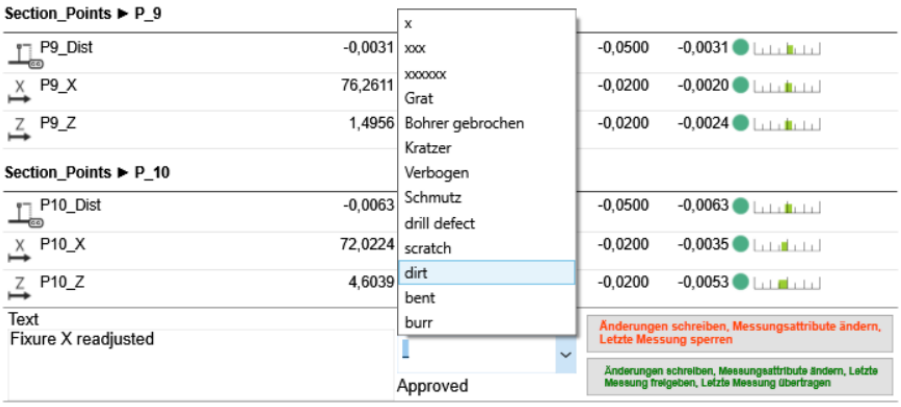
Standard report with new report footer

Standard report: A new “report footer” is included in the report element as the end line.

Benefit

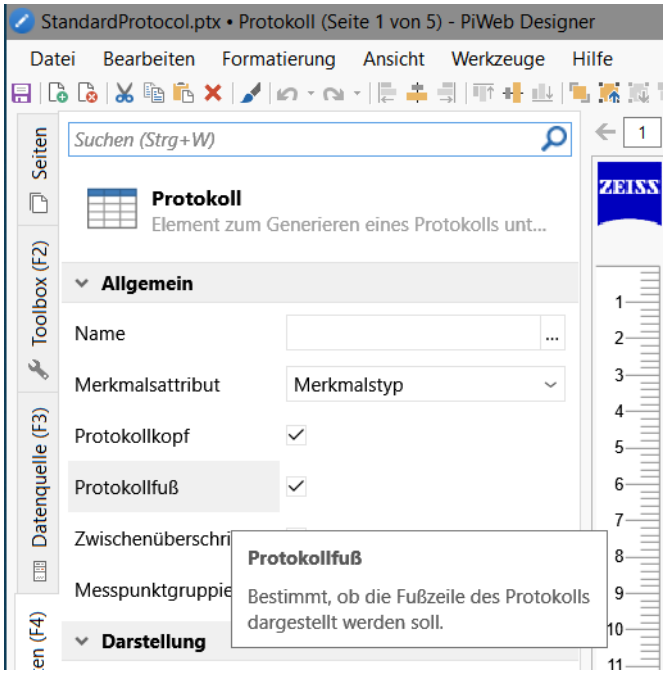
The new report footer contains functions for blocking and releasing a measurement. There is also an event selection and a comment field for the measurement. The functions themselves are the same as in *Accept-Protocol.ptx*.

Details



PiWeb Designer:

Can be switched on and off via **Report → Properties → Report footer**



Report header marked Header

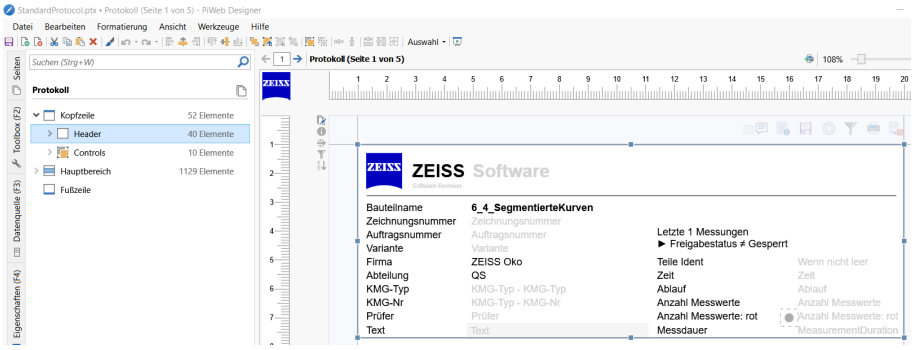
The container for the report header section is now calledHeader for improved identification. The Header is where for the report header is entered.

Benefit

The report header is easier to edit.

Details

The header is located in the page structure in PiWeb Designer. It is used as a container for the report header in the ZEISS standard template.



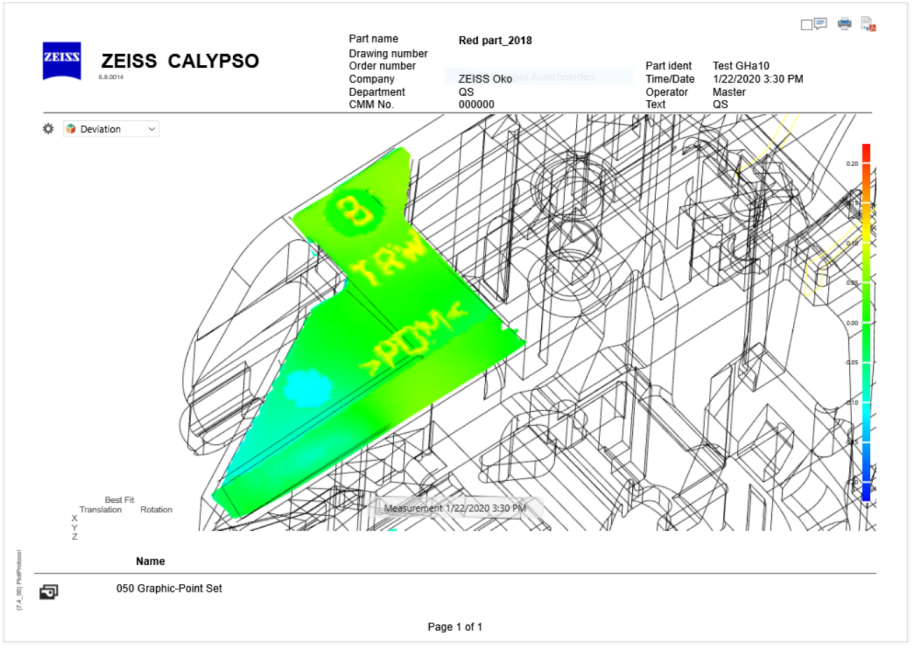
Report: interactive CAD view made printable (Visualization.CAD)

The interactive CAD view can now be printed. It also is possible to export the interactive CAD view as a PDF.

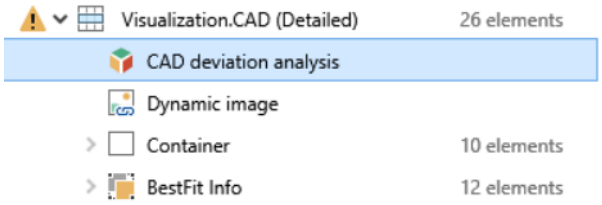
Benefit

Interactive CAD views are printable and can be saved as PDFs.

Details



PiWeb Designer → Report Element → Visualization.CAD (Detailed)



Printing enabled

Display on monitor enabled

NOTE

Individual settings for individual characteristics can be defined in PiWeb Designer. If individual settings from CALYPSO will be defined, the CAD Presentation must be used in CALYPSO.

PiWeb reporting plus: Manual measurement value input

The CALYPSO option PiWeb reporting plus 7.4 also enables you to take manual measurements using a slide gauge on a computer. For this purpose, generate a CALYPSO measurement plan with theoretical elements. Run the measurement plan. Create the input page for manual measurement value acquisition in PiWeb reporting plus with the PiWeb Designer. Read off and enter the measurement values.

Benefit

Manual measurement values which do not come from a CMM can be acquired via CALYPSO and PiWeb reporting plus.

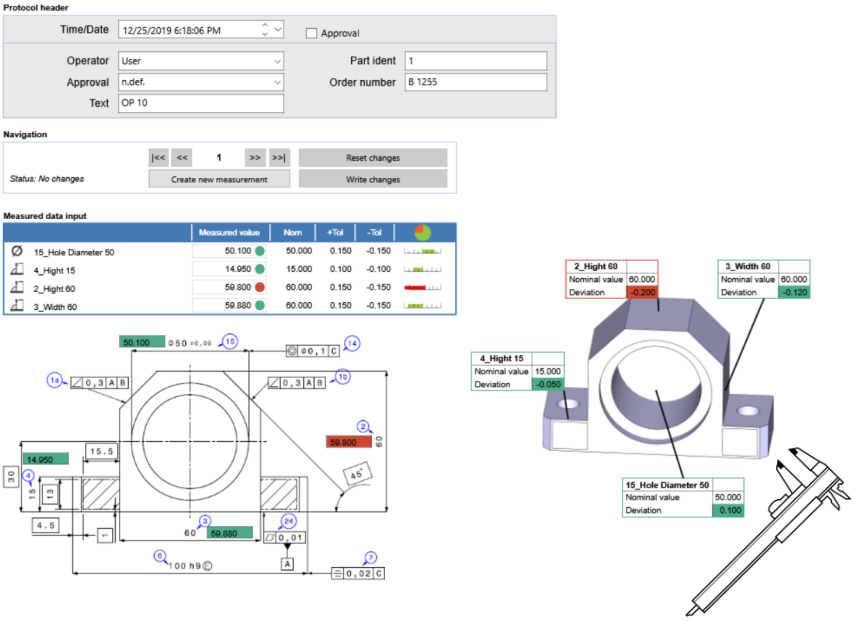
Details

NOTE

The manual measurement acquisition can be performed only on the computer where CALYPSO is installed.

A PiWeb sbs or PiWeb enterprise solution is required for the following applications:

- If manual measurement values are acquired at another workplace.
- If measurement values from a CALYPSO measurement plan are combined with measurement values from a manual data acquisition on the same computer.
- If the data acquisition of the manual devices occurs via an electronic interface.



CALYPSO results in the ZEISS PiWeb app

CALYPSO can send results to the ZEISS PiWeb app by synchronizing a local database with a server database.

Benefit

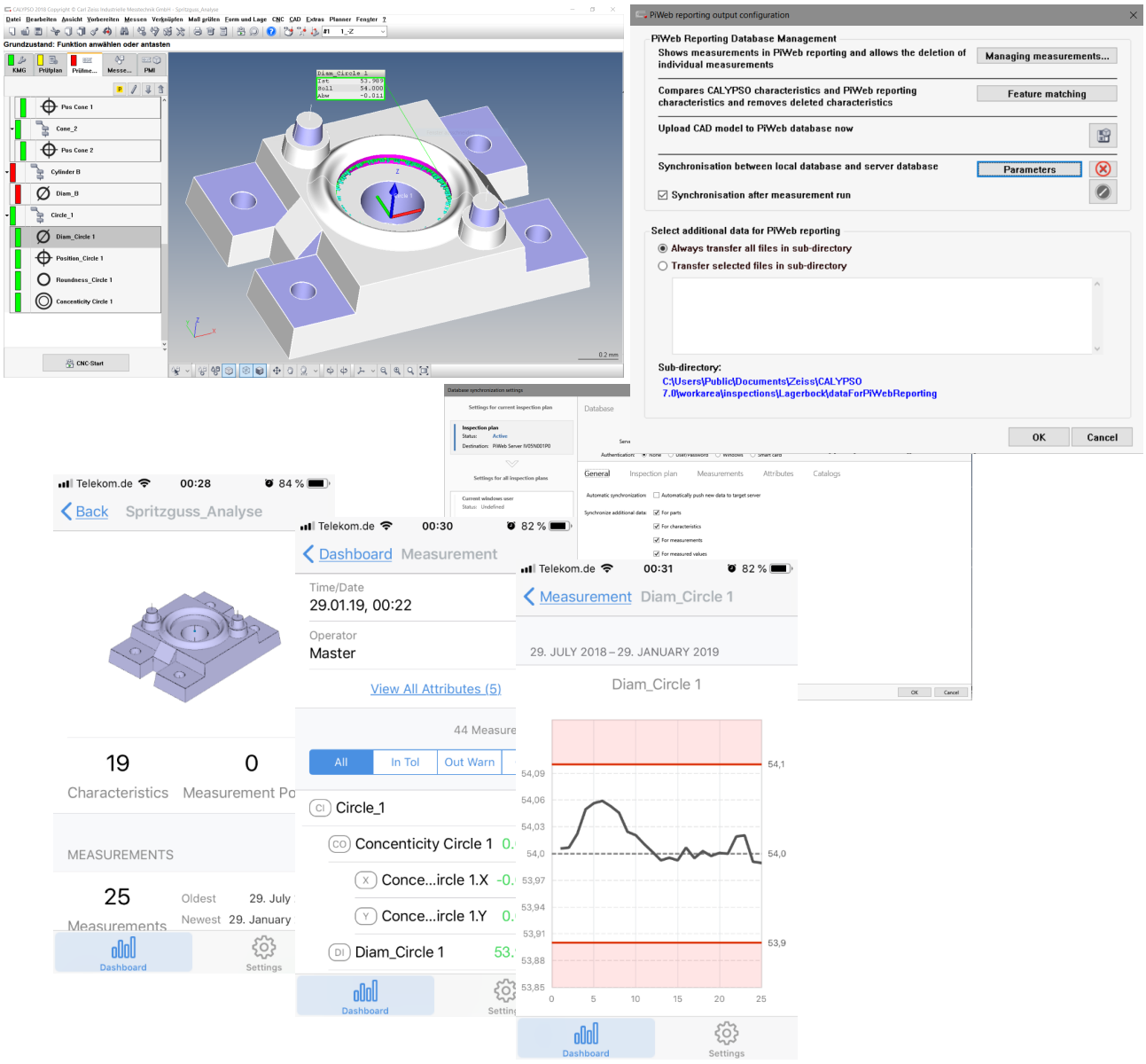
CALYPSO results are available under IOS on mobile devices immediately after the measurement.

https://www.zeiss.de/messtechnik/produkte/software/piweb/app.html

Details

Results in the → PiWeb reporting file:

Configure the synchronization between the local database and the server database.



Downloading the ZEISS PiWeb app:

https://itunes.apple.com/us/app/zeiss-piweb/id1448485902?mt=8

3 Installation

This chapter contains:

Installation notes and system-related information

FlexReporting option

The FlexReporting option has been removed from the setup interface. If necessary, FlexReporting can still be installed temporarily. Please start setup.exe via Windows Explorer directly from the installation medium in the FlexReporting directory.

Unattended installation with CALYPSO 2020.msi

Special rules apply to installation by means of CALYPSO 2020.msi. Please refer to the notes in ➢ *Installation with CALYPSO 2020.msi [⇨ 3-3]*.

Installation with CALYPSO 2020.msi

For CALYPSO 2020, a separate *CALYPSO 2020.msi* installation package is available in addition to the setup.exe file. Interface-free installation (silent installation) and centralized installation by administrators (remote installation) are possible in this format. This is particularly advantageous if several CMMs and/or OFFLINE stations have to be managed. *CALYPSO 2020.msi* is included on the installation medium, in the CALYPSO directory.

Special conditions must be observed:

Setup prerequisites – *CALYPSO 2020.msi* does not include the necessary setup prerequisites. They must must either already be in place or installed separately beforehand. There is no check to determine whether or not the setup requirements are met. The installer or the responsible administrator is responsible for this.

The following software setup prerequisites must be installed for CALYPSO 2020:

- Microsoft .Net Framework 3.5 SP1
- Microsoft .Net Framework 4.7.2
- InstallDSSoftwareVC10Prerequisites_x86_x64.msi
- InstallDSSoftwareVC11Prerequisites_x86_x64.msi
- Microsoft Visual C++ 2008 SP1 Redistributable Package (x64)
- Microsoft Visual C++ 2008 SP1 Redistributable Package (x86)
- Microsoft Visual C++ 2010 SP1 Redistributable Package (x64)
- Microsoft Visual C++ 2010 SP1 Redistributable Package (x86)
- Microsoft Visual C++ 2012 Update 4 Redistributable Package (x64)
- Microsoft Visual C++ 2012 Update 4 Redistributable Package (x86)
- Microsoft Visual C++ 2013 Redistributable Package (x64)
- Microsoft Visual C++ 2013 Redistributable Package (x86)
- Microsoft Visual C++ 2017 Redistributable Package (x64)
- Microsoft Visual C++ 2017 Redistributable Package (x86)
- Microsoft SQL Server 2017 Express (ZEISS SDCO)
- ZEISS License Activation Utility 64
- ZEISSBasicReportingSetup503100.exe
- ZEISS PDF Printer Set 7.7

The relevant installation packages for the setup prerequisites are located in the CALYPSO\ISSetupPrerequisites directory on the CALYPSO 2020 installation medium.

No warnings – The warnings included in the regular Setup.exe regarding EULA, parallel installations, SQL Server, FACS, .NET Framework installation, etc. are not displayed when the installation is started without a user interface. Please refer to the corresponding chapters in this document.

Basic CALYPSO installation from the installation medium

Please observe all notes on installation described in Installation notes and system-related information.

CALYPSO is a single-user application. It cannot be installed in a network and not be run as a client-server application. Local administrator rights are required to install CALYPSO.

NOTE

If this version updates an existing CALYPSO installation, you should first uninstall the existing installation.

This will not delete existing data such as measurement plans, stylus data, or other CMM-specific data. However, we recommend that you make backup copies of the data on a regular basis.

Use the Windows Uninstall function for uninstallation. To do this, open the control panel via the Windows key, select “Uninstall program”, select CALYPSO in the list, and click “Uninstall”.

To comply with the separation of programs and data recommended by Microsoft for Windows, the software will be installed in the following directories:

Programs	C:\Program Files (x86)\Zeiss\CALYPSO 7.0
Program data	C:\ProgramData\Zeiss\CALYPSO 7.0
User data	C:\Users\Public\Documents\Zeiss\CALYPSO

If the previous CALYPSO version is not uninstalled, CALYPSO 2020 will be installed in parallel to the existing version. This allows you to alternately use both versions.

NOTE

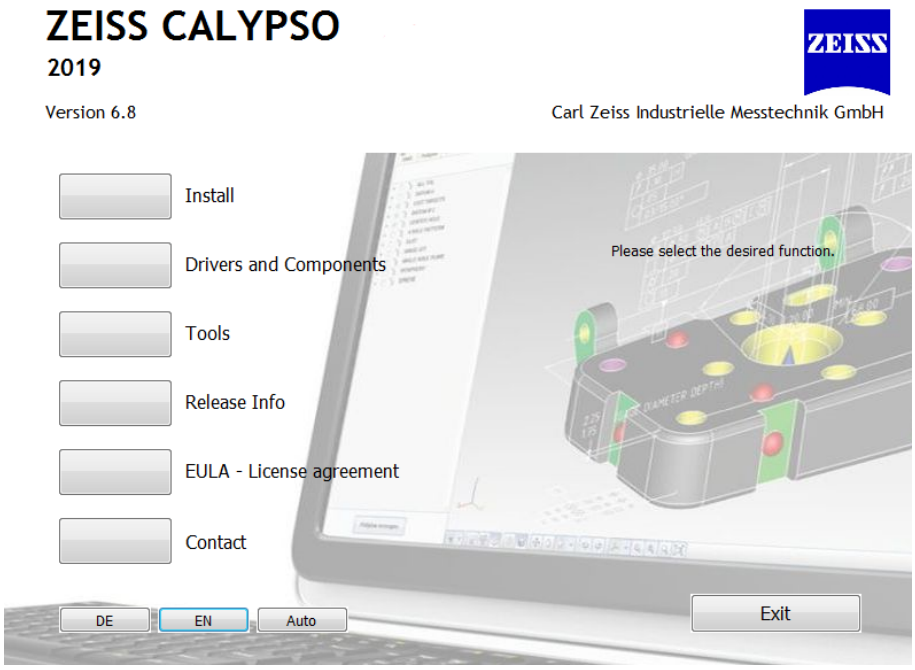
Special attention is required if several CALYPSO versions are used alternately!

- There is an increased risk of stylus systems being mixed up during automatic stylus system change! Before changing the stylus system for the first time, make sure that the currently used stylus system is actually inserted in the probe.
- Generally, measurement plans saved with a new CALYPSO version cannot be opened using an older version. Observe any warning on this when saving.
- If external evaluation programs are used, make sure to adjust the paths for data access accordingly.

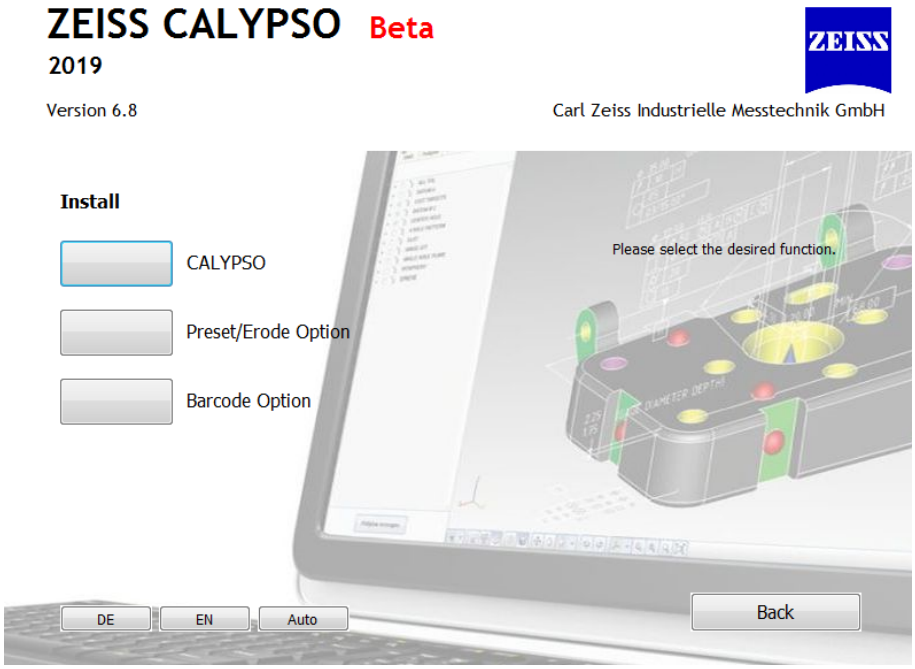
– Parallel installation of more than one CALYPSO version in combination with the METROTOM Measuring Module is *not* permitted.

Use Windows Explorer to select CALYPSO.exe on the installation medium and double-click to start the installation routine.

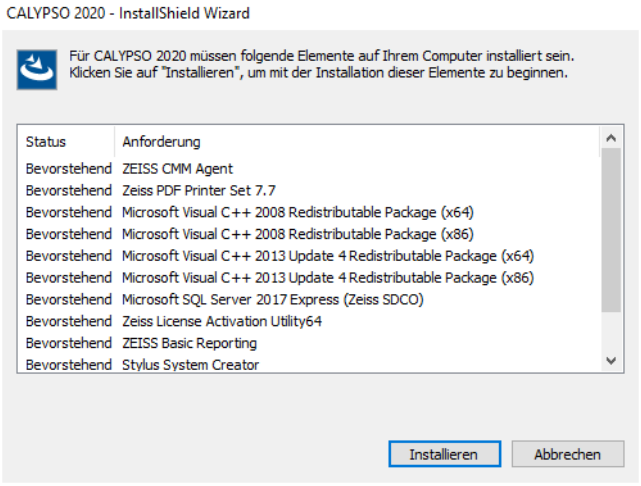
Click the **Installation** button.



Click the **CALYPSO** button.

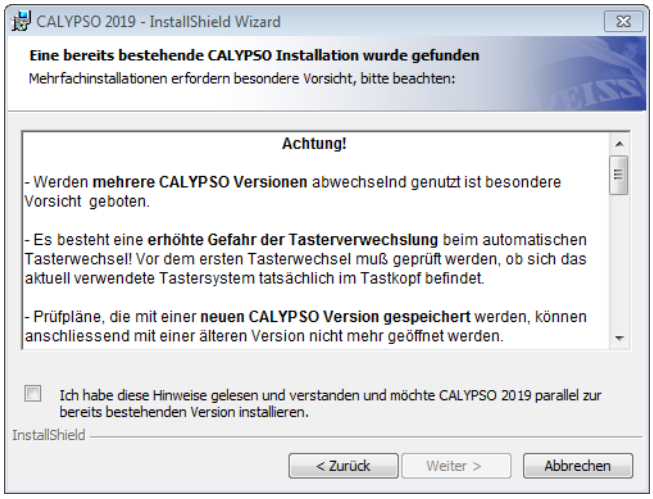


CALYPSO 2020 automatically installs several setup prerequisites in case they are not available on the target system. This procedure may require one or more system reboots and may take a while.



Once the setup prerequisites are installed, the CALYPSO 2020 setup is unpacked and the installation is initiated and started. You have to accept the end user license agreement.

Das CALYPSO setup detects automatically if an older version is already installed and, in that case, displays the following dialog page:



If you want to install the new CALYPSO version in parallel to an existing version, you have to confirm that you are aware of the above precautions in order to continue with the installation. **Installing an older version in parallel to an existing more recent version is not permitted!**

In case of simultaneous installation of several CALYPSO versions, user data is saved in separate directories.

For CALYPSO 2020, the directory is:

C:\Users\Public\Documents\Zeiss\CALYPSO 7.0

Installing service packs and patches

Necessary program changes and additions are provided in the form of service packs or patches. Service packs and patches can be made available by email, via download, or on a data storage device. The procedure is basically the same for all distribution media.

If you receive a CALYPSO service pack or patch along with the basic CALYPSO installation medium, the service pack or patch must be installed **after** installing the basic installation medium.

The installation of a service pack or patch always requires an existing installation of the corresponding basic version from an installation medium. The currently installed version can be found in CALYPSO in the “Miscellaneous” menu. In addition, the currently installed version is also automatically shown in the CALYPSO Error Report. You can access it via the “Miscellaneous” menu.

NOTE

A patch contains corrections to one or more acute error messages and has been tested at a reduced level. If your system is affected, we recommend installing the patch version. Otherwise, the correction will be included in the next service pack, which will undergo full testing. For detailed information on the current patch version, please contact our customer support staff.

Current service packs and patches for CALYPSO are available for download at:

https://portal.zeiss.com/

Service pack installation

1. Exit CALYPSO first if it has been started.
2. Use Windows Explorer to open the directory where you have stored the service pack file.
3. Start the service pack installation by double-clicking the relevant *Setup.exe* file.

   The service pack installation will then run completely without further input until the final dialog is displayed.
4. Click **Finish** to complete the installation.

A service pack can also be used for downgrading. For example, if desired, you can downgrade from service pack version 6.8.08 to service pack version 6.8.04. For this, simply install service pack 6.8.04 over the existing 6.8.08 version. This will automatically uninstall the existing version and restore CALYPSO 6.8.04.

Patch installation

1. Exit CALYPSO first if it has been started.
2. Use Windows Explorer to open the directory where you have stored the patch file.
3. Start the patch installation by double-clicking the relevant Setup.msp file.

   The patch installation will then run completely without further input until the final dialog is displayed.
4. Click **Finish** to complete the installation.

CALYPSO patches can be removed again if required. To do so, open Windows Control Panel and select “Uninstall Program”. Click **View Installed Updates** to make the patches visible, select the patch you want to remove and click **Uninstall**. Uninstalling the patch will restore the previous CALYPSO version.

CMM data backup

CALYPSO allows you to backup all relevant CMM data and settings. This is particularly useful if the PC has to be replaced.

Installing ViScan drivers

Hardware drivers are required for ViScan operation. Below you will find a description of how to install the required drivers.

Installation is done via Windows Explorer from the CALYPSO installation medium in the **ViScanDrivers** directory. Double-click MIL64Setup.exe to start the installation. All following windows can be confirmed by clicking **Next** or **OK**.

When the installation is complete, you are prompted to restart Windows.

Installing METROTOM software

The METROTOM Measuring Module still has to be installed in addition to the CALYPSO Basic software.

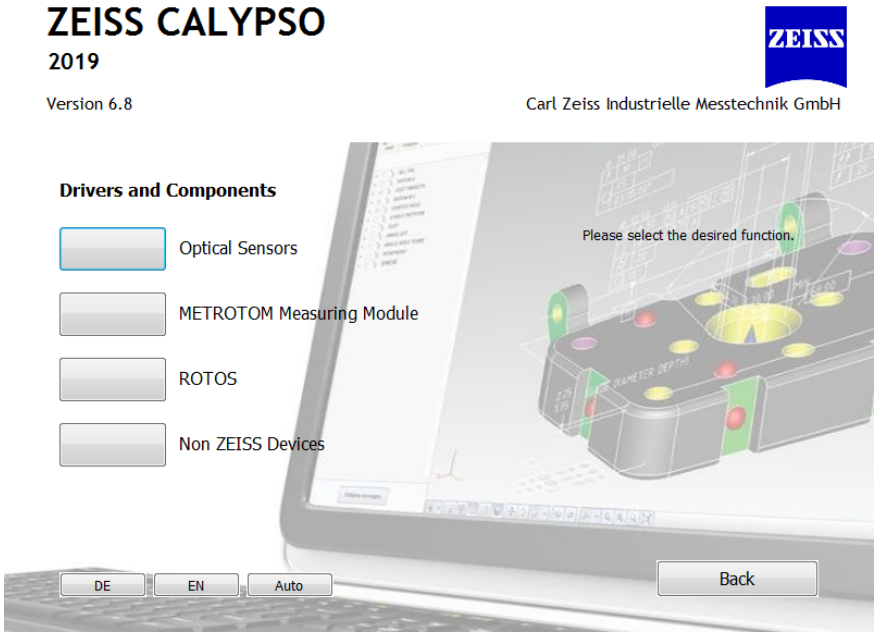
NOTE

Parallel installation of CALYPSO and the METROTOM Measuring Module is **not** permitted.

METROTOM-CT installation sequence:

1 Install CALYPSO Basic.

2 From the "Basic" installation medium, select **METROTOM Measuring Module** via "Drivers and Components".



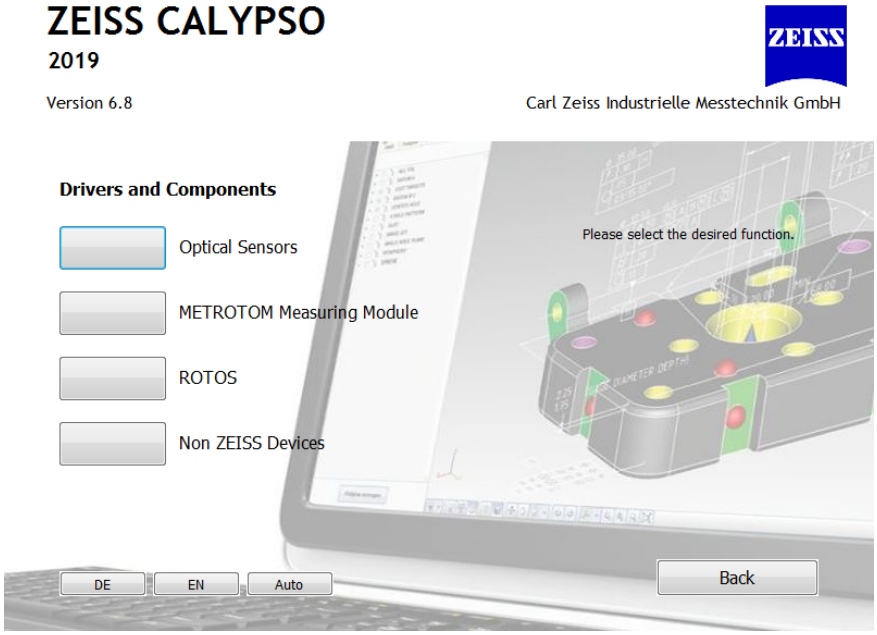
3 Finally, any available CALYPSO service pack or patch will be installed.

Installing ROTOS drivers

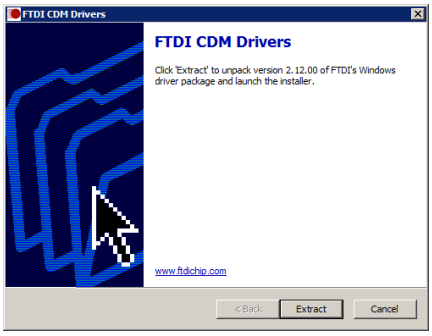
To use the ROTOS sensor, the software drivers for ROTOS must be installed in addition to CALYPSO Basic software.

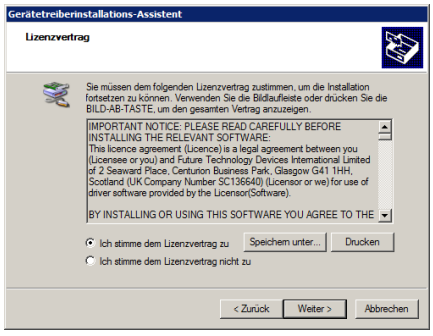
1 Install CALYPSO Basic.

2 From the "Basic" DVD, select **ROTOS** via "Drivers and Components".

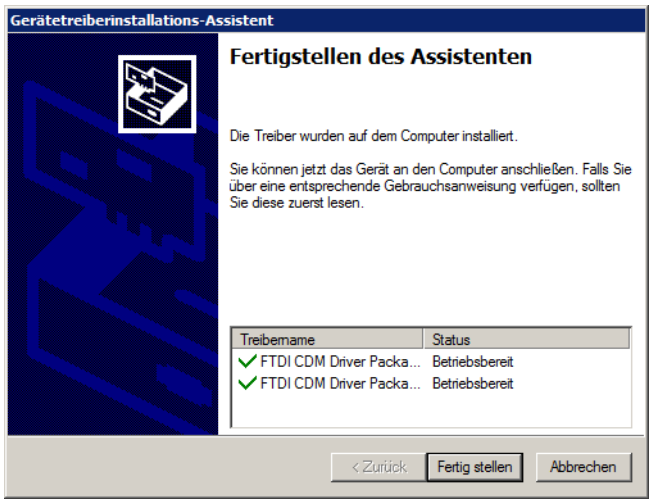


3 FTDI CDM Drivers starts. Confirm any dialog that appears.





4 Successful installation of the drivers is confirmed by display of the following dialog:


Gerätetreiberinstallations-Assistent
Fertigstellen des Assistenten
Die Treiber wurden auf dem Computer installiert.
Sie können jetzt das Gerät an den Computer anschließen. Falls Sie über eine entsprechende Gebrauchsanweisung verfügen, sollten Sie diese zuerst lesen.
Treibername
Status
FTDI CDM Driver Packa...
Betriebsbereit
FTDI CDM Driver Packa...
Betriebsbereit
< Zurück
Fertig stellen
Abbrechen

4 Compatibility

This chapter contains:

Software scope

CALYPSO 2020 includes the following software packages:

Program	Type	Version
CALYPSO 2020	Basic	7.0.0000
- PiWeb reporting	Comp	7.4.6.0
- Acis	Comp	R30 20201.0.1.20120
- Kmgio	Comp	35.0.2016.310
Presetting/eroding	Option	7.0.0000
Barcode	Option	8.231.005.616
FlexReporting	Option	5.0.31.0
ViScan optical sensor	Driver	10.00.2564
LineScan	Driver	1.24.18
CFS	Driver	1.23.4
PulstecTDS-H Program Setup	Driver	1.21.2
METROTOM Measuring Module	Extension	7.0.0000
ROTOS	Driver	2.12.00
ZEISS SES Viewer	Extension	1.0.2320.0
Third-party equipment – CNC	Extension	7.0.00
Third-party equipment – manual/laser tracker	Extension	7.0.00
Sample measurement plans	Extension	7.0.0000
Measurement plans – technical service	Extension	7.0.0000

The following programs are installed as a setup prerequisite if not already available:

Program	Version
ZEISS PDF Printer Set 7.7 (nova PDF printer)	5.5 and 7.7.394
Microsoft .NET Framework 3.5 SP1	
Microsoft .NET Framework 4.7.2	
Dassault Systemes Software VC10 Prerequisites x86-x64	
Dassault Systemes Software VC11 Prerequisites x86-x64	
Microsoft Visual C++ 2008 – x64 9.0.30729.6161	
Microsoft Visual C++ 2008 – x86 9.0.30729.6161	

Program	Version
Microsoft Visual C++ 2010 – x64 10.0.40219	
Microsoft Visual C++ 2010 – x86 10.0.40219	
Microsoft Visual C++ 2012 – x64 11.0.61030	
Microsoft Visual C++ 2012 – x86 11.0.61030	
Microsoft Visual C++ 2013 – x64 12.0.40660	
Microsoft Visual C++ 2013 – x86 12.0.40660	
Microsoft Visual C++ 2017 – x64 14.14.26405	
Microsoft Visual C++ 2017 – x86 14.14.26405	
Microsoft SQL Server 2017	
ZEISS License Activation Utility	2.20.0002
ZEISS Basic Reporting	5.0.31.0
Stylus System Creator	1.7.7459

Coordinate measuring machines and sensor systems

Minimum requirements

This chapter lists the minimum firmware versions required to operate the software, both for standard and retrofit systems.

Operation with a different firmware version

We recommend using the latest firmware version for optimal operation of the coordinate measuring machine. Under certain circumstances, it may be possible to run with an older firmware version. However, this can result in limitations in the stability or range of functions in the software. To eliminate these limitations, it may be necessary to purchase an upgrade to the minimum firmware and/or hardware version.

Additional requirements for individual functionalities

Individual software functions that are heavily dependent on specialized hardware products and functions may have additional requirements. Please see the additional specifications for the corresponding coordinate measuring machines.

Scope of testing

The software was tested with the latest coordinate measuring machines and the latest firmware. In this configuration, full performance and complete functionality are guaranteed.

ACCURA

Current product line

Variant and firmware	Sensors
≥ 22.04 ACCURA II	VAST XT gold, VAST XTR gold[1)], VAST XXT, VAST gold, DotScan[2)], LineScan[3)], ViScan IIs, RDS

Controller: C99N, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 20.09 ACCURA I (not MASS)	VAST gold D1 and D2, VAST XT gold, VAST XTR gold[1)], RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP20, TP200, ViScan I and II
≥20.09 ACCURA mass	VAST gold D1 and D2, VAST XT gold, VAST XTR gold[1)], RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP20, TP200, ViScan IIs

Controller: C99N, Interface: LAN

[1)] The use of VAST XTR gold requires firmware ≥31.23

[2)] The use of the DotScan sensor requires firmware ≥35.01.

[3)] LineScan 1 from firmware ≥ 26.10, WBScan ≥ 1.11 and MASS wiring

CARMET

Current product line

Variations and firmware	Probes
≥28.04 CARMET 2	RDS, RST-P, TP6, TP20

Controller: C99L, Interface: LAN

CenterMax

Current product line

Variant and firmware	Sensors
≥ 37.03 CenterMax USS2.0	ROTOS, ROTOS light, DotScan VAST XTR gold, VAST gold

Controller: C99N, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 20.09 CenterMax	VAST XTR gold[1)], VAST gold
≥37.08 CenterMax upgraded to USS2.0	VAST XTR gold, VAST gold, ROTOS

Controller: C99N, Interface: LAN

[1)] The use of VAST XTR gold requires firmware ≥ 26.10

CONTURA

Current product line

Variant and firmware	Sensors
≥31.04 CONTURA G2 model year from 2014	LineScan[1)], RDS, VAST XT gold, VAST XTR gold, VAST XXT, ViScan IIs, XDT
≥ 31.08 CONTURA G3	LineScan[1)], RDS, VAST XT gold, VAST XTR gold, VAST XXT, ViScan IIs, XDT

Controller: C99L, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥20.09 CONTURA model year <2006	VAST XT gold
≥20.09 CONTURA G2 with C99N model year 2005-2014 (not with C99L)	VAST XT gold, RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, XXT direkt, RST-P, Renishaw TP2, TP6, TP20, TP200, ViScan IIs

Controller: C99N, Interface: LAN

[1)] LineScan 1 from firmware 20.03, WBScan ≥1.11 and mass wiring

DuraMax

Current product line

Variant and firmware	Sensors
≥ 21.08 DuraMax	VAST XXT TL1 and VAST XXT TL3

Controller: C99L, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 21.08 DuraMax	VAST XXT TL1 and VAST XXT TL3

Controller: C99S, Interface: LAN

Variant and firmware	Sensors
≥ 21.08 DuraMax RT	VAST XXT TL1 and VAST XXT TL3

Controller: C99HC, Interface: LAN

GageMax

Current product line

Variant and firmware	Sensors
≥ 36.07 GageMax SC2020 from production year 2017	VAST XT gold, VAST XTR gold

Controller: C99HC, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 20.09 GageMax	VAST XT gold, VAST XTR gold[1)]

Controller: C99N, Interface: LAN

[1)] The use of VAST XTR gold requires firmware ≥ 26.10

MICURA

Current product line

Variant and firmware	Sensors
≥ 26.05 MICURA	VAST XT gold, VAST XTR gold[1)]

Controller: C99L, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥26.05 MICURA with C99N	VAST XT gold, VAST XTR gold[1)]

Controller: C99N, Interface: LAN

[1] The use of VAST XTR gold requires firmware ≥ 26.10

MMZ

Current product line

Variant and firmware	Sensors
≥ 31.05 MMZ G	VAST XT gold, VAST gold, VAST XTR gold, VAST XXT, LineScan, ROTOS, ROTOS light
≥ 31.05 MMZ M	VAST XT gold, VAST gold, VAST XTR gold, VAST XXT, LineScan, ROTOS, ROTOS light
≥ 31.05 MMZ T	VAST XT gold, VAST gold, VAST XTR gold, VAST XXT, LineScan, ROTOS, ROTOS light

Controller: C99, Interface: LAN

O-INSPECT

Current product line

Variant and firmware	Sensors
≥ 27.05 OI322	DotScan[1], VAST XXT
≥ 33.06 OI543 / OI863	DotScan[1], VAST XXT

Controller: C99L, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 20.09 OI442	VAST XXT TL1 and VAST XXT TL3, ViScan IIs, CFS[2]

Controller: C99S, Interface: LAN

[1] The use of the DotScan sensor requires firmware ≥35.01.

[2] The use of the CFS (chromatic focus sensor) requires firmware ≥24.03

PRISMO

Current product line

Variant and firmware	Sensors
≥36.04 PRISMO ultra with USS 2.0	DotScan, LineScan[4)], RDS, ROTOS[2)], ROTOS light[3)], VAST XTR gold, VAST XXT, VAST gold, ViScan IIs, VAST gold and ZAS[5)]
≥36.04 PRISMO mass with USS 2.0	DotScan, LineScan[4)], RDS, ROTOS[2)], ROTOS light[3)], VAST XTR gold, VAST XXT, VAST gold, ViScan IIs, VAST gold and ZAS[5)]

Controller: C99N, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥20.09 PRISMO (not mass, not ST, not ultra)	VAST gold D1 and D2, VAST XT gold, VAST XTR gold[1)], RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP20, TP200, ViScan I and II
≥20.09 PRISMO mass (not USS2.0)	VAST gold D1 and D2, VAST XT gold, VAST XTR gold[1)], RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP20, TP200, ViScan IIs
≥20.12 PRISMO ultra (not USS2.0)	VAST gold D1 and D2, VAST XT gold, VAST XTR gold[1)], RDS Standard, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP200, ViScan IIs
≥36.04 PRISMO upgraded to USS2.0	VAST gold D1 and D2, VAST XT gold, VAST XTR gold, RDS Standard, ROTOS, CAA and select, VAST XXT TL1 and VAST XXT TL3, RST-P, RST-T, Renishaw TP2, TP6, TP200, ViScan IIs, VAST gold and ZAS[5)]

Controller: C99N, Interface: LAN

[1] VAST XTR gold on PRISMO (PRISMO access, ACCURA I) requires firmware ≥ 31.23

[2] The ROTOS sensor requires a VAST probe and is currently only intended for use on the following CMMs: PRISMO USS2.0 Firmware ≥ 37

[3] The ROTOS light sensor is intended for use on the following CMMs: ACCURA and PRISMO with Z ≤ 1000

[4] LineScan 1 from WBScan ≥ 1.11 and MASS wiring

[5] The use of ZAS requires firmware ≥ 40.06

PRO 2

Current product line

Variations and firmware	Probes
≥24.03 PRO 2	TP6, TP20, RST-P

Controller: C99N, Interface: LAN

SPECTRUM/ECLIPSE

Current product line

Variant and firmware	Sensors
≥ 23.05 SPECTRUM II	RDS-C5, VAST XXT, XDT
≥38 SPECTRUM III	RDS-C5, VAST XXT, XDT
≥ 38.14 SPECTRUM plus	VAST XXT TL3 Direkt or RDS, RDS-C CAA, VAST XT gold

Controller: C99L, Interface: LAN

Previous product lines & retrofit

Variant and firmware	Sensors
≥ 34.18 SPECTRUM I, ECLIPSE	ST 3, RDS Standard, CAA and Select, VAST XXT TL1 and VAST XXT TL3, XXT Direkt, RST-P, Renishaw TP2, TP6, TP20, TP200, ViScan I and II

Controller: C99N, Interface: LAN

UMC, UMM, UC, UPMC, ZMC

Previous product lines & retrofit

Variant and firmware	Sensors
≥20.09 UMC (not UMC1000), UMM (not UMM500 or UMM800), UC, UPMC (not UPMC 1200), ZMC	VAST gold D1 and D2, HSS

Controller: C99N, Interface: LAN

VISTA

Previous product lines & retrofit

Variant and firmware	Sensors
≥20.09 Vista CNC (not Vista Vision), MAN/MOT	Renishaw TP2, TP6, TP20, TP200

Controller: C99N, Interface: LAN

WMM

Previous product lines & retrofit

Variant and firmware	Sensors
≥20.09 WMM, MC , OMC, PMC (not PMC500)	VAST XT gold, VAST XTR gold[1)]

Controller: C99N, Interface: LAN

[1)] The use of VAST XTR gold requires firmware ≥31.23

XENOS

Current product line

Variations and firmware	Probes
≥33.02 XENOS	VAST gold

Controller: C99N, Interface: LAN

MZ-1060

Previous product lines & retrofit

Variant and firmware	Controller
MZ 1060 report	MZ1060, MZ1070 MZ2010; MA 1070-2

Interface: RS232

C90/C98

8-bit and 16-bit controllers (e.g. C90, C98) are no longer approved.

Travel on cylindrical path or circular path function

Firmware ≥19.06 is required to use the **Travel on cylindrical path or circular path** function.

PC system

Recommended data systems

Component	Designation
Workstation	Z440 G3 HP HP Z440 700W 90 Percent Efficient ZEISS order no.: 614303-9089-002
Operating system	Windows 10 Pro 64 EUROA4
Processor	Intel Xeon E5-1620v4 3.5 10M 2400 4C CPU
Hard drive	HP Z Turbo Drive G2 256 GB PCIe 1st SSD 2 TB 7200 RPM SATA 1st HDD
RAM	32 GB DDR4-2400 (4x8 GB) RegRAM
Graphics card	NVIDIA Quadro K2200 4 GB 1st GFX
Pointing device	HP USB 1000 dpi laser mouse
Drive	9.5 mm Slim SuperMulti DVD-RW 1st ODD
Interfaces	Intel Ethernet I210-T1 PCIe NIC China Regulatory CCC Compliance Mark HP 3/3/3 Warranty EURO

Component	Designation
Workstation	HP Z840 HP Z840 1125W 90 Percent Efficient Chassis ZEISS order no.: 614303-9091-002
Operating system	Windows 10 Pro 64 EUROA4
Processor	Intel Xeon E5-2637v4 3.5 2400 4C 1st CPU Intel Xeon E5-2637v4 3.5 2400 4C 2nd CPU
Hard drive	HP Z Turbo Drive G2 256 GB PCIe 1st SSD 2 TB 7200 RPM SATA 1st HDD
RAM	64 GB DDR4-2400 (8x8 GB) 2 CPU RegRAM
Graphics card	NVIDIA Quadro M4000 8 GB 1st GFX
Pointing device	HP USB 1000 dpi laser mouse
Drive	9.5 mm Slim SuperMulti DVD-RW 1st ODD
Interfaces	Intel Ethernet I210-T1 PCIe NIC China Regulatory CCC Compliance Mark HP 3/3/3 Warranty EURO

Component	Designation
Workstation	Workstation ENTRY HP Z2 G4 SFF Workstation Z2 SFF V1 ZEISS order no.: 614303-9100-007
Operating system	Windows 10 IOT Enterprise 2016
Processor	Intel Core i3- 8100 4C
Hard drive	SSD 256G 2.5in SATA HDD 500GB 7200RPM SATA 3.5in 2nd
RAM	16GB (2x8GB) DDR4 2666 NECC
Graphics card	NVIDIA Quadro P620 2GB (4)mDP
Pointing device	HP USB 1000 dpi laser mouse
Drive	9.5mm Slim DVD-Writer 1st ODD
Interfaces	Intel Ethernet I350-T2 2Port 1 GB China Regulatory CCC Compliance Mark HP 3/3/3 Warranty EURO

Component	Designation
Workstation	Workstation PERFORMANCE HP Z4 Workstation Z4 V1 SAPSJ ZEISS order no.: 614303-9089-004
Operating system	Windows 10 IOT Enterprise 2016
Processor	Intel XeonW-2123 3.6 4C
Hard drive	SSD 256GB SATA HDD 4TB 7200RPM SATA Ent 3.5 2nd
RAM	64GB (4x16GB) DDR4 2666 ECC
Graphics card	NVIDIA Quadro P2000 5GB (4)DP
Pointing device	HP USB optical mouse
Drive	9.5 DVDWR 1st ODD
Interfaces	2x LAN (onboard) GB Ethernet China Regulatory CCC Compliance Mark HP 3/3/3 Warranty EURO

Component	Designation
Workstation	Workstation ULTIMATE Workstation Z8 V1 S ZEISS order no.: 614303-9091-006

Component	Designation
Operating system	Windows 10 IOT Enterprise 2016
Processor	2x Intel 5122 Xeon3.6 4C
Hard drive	256GB SATA SSD 4TB 7200RPM SATA Ent 3.5 2nd HDD
RAM	96GB (12x8GB) DDR42666 ECC REG 2CPU
Graphics card	NVIDIA Quadro P4000 8GB (4)DP
Pointing device	HP USB 1000 dpi laser mouse
Drive	9.5 mm Slim SuperMulti DVD-RW 1st ODD
Interfaces	Intel Ethernet I210-T1 PCIe NIC China Regulatory CCC Compliance Mark HP 3/3/3 Warranty EURO

Minimum system requirements

- PC with 3.1 GHz and 8 GB RAM
- Mouse, printer, and data backup option
- Screen resolution 1280 x 1024 pixels
- 2 network connections (CMM controller and company network)
- TCP/IP network report
- Graphics card with OPEN GL drivers as released by ZEISS

Windows system and software requirements

The necessary software requirements will be installed automatically during the installation of CALYPSO if they are not yet available on the target system. For a detailed overview of the software packages included, see Software scope and current modifications.

The release of new software products for Windows 10 is done with the following systems:

– ➢ *Enterprise LTSC/LTSB editions [⇨ 4-16]*

– ➢ *Enterprise and Pro editions [⇨ 4-17]*

Enterprise LTSC/LTSB editions

ZEISS software products are approved and supported for all LTSC/LTSB editions that have not yet reached Microsoft's end-of-regular-support date and will not reach it within one year.

ZEISS products will no longer be approved for Windows 10 versions that only receive extended support from Microsoft or have already exceeded the end date for extended support.

This procedure is required because new technologies are used on new ZEISS products, which must be partially supported by functions of the respective operating systems whose compatibility with older Windows 10 versions can no longer be guaranteed.

All service packs created during the lifetime of a version of a ZEISS software product are approved for the same Windows 10 versions as the main version.

Different rules can be implemented if, for example, individual Windows versions or critical development components are discontinued prematurely. In these instances, this will be communicated explicitly.

NOTE

Not all features of an update are functioning on all coordinate measuring machines. A CMM might not receive an update if its hardware is not compatible, the latest drivers are not installed or the support from the Original Equipment Manufacturer (OEM) has been discontinued. For more information, please see the Microsoft homepage.

Approval status of the latest Windows 10 versions on the release date of CALYPSO 2020:

Version	Approval status
Windows 10 Enterprise LTSC 2019	Approval
Windows 10 IoT Enterprise LTSC 2019	Approval
Windows 10 Enterprise 2016 LTSB	Approval
Windows 10 IoT Enterprise 2016 LTSB	Approval
Windows 10 Enterprise 2015 LTSB	Given the limited level of distribution and the comparably near end of support of this version, the development and test activities will focus on current and future LTSC versions.
Windows 10 IoT Enterprise 2015 LTSB	

Enterprise and Pro editions

ZEISS software products are approved for all Enterprise and Pro versions that have not yet reached Microsoft's end of service for all enterprise and education editions and will not reach it within one year.

All service packs created during the lifetime of a version of a ZEISS software product are approved for the same Windows 10 versions as the main version.

Different rules can be implemented if, for example, individual Windows versions or critical development components are discontinued prematurely. In these instances, this will be communicated explicitly.

NOTE

Not all features of an update work on all coordinate measuring machines. A CMM might not receive an update if its hardware is not compatible, the latest drivers are not installed or the support from the Original Equipment Manufacturer (OEM) has been discontinued. For more information, please see the Microsoft homepage.

Information on the lifecycle of Windows can be found under the following link:

https://support.microsoft.com/de-de/help/13853/windows-lifecycle-fact-sheet

Approval status of the latest Windows 10 versions on the release date of CALYPSO 2020:

Version	Approval status
Win10, 1909	Approved
Win10, 1903	Approved
Win10, 1809	Approved
Win10, 1803	Approved
Win10, 1709	Not approved
Win10, older	Not approved

Software compatibility

CALYPSO is a single-user application. It cannot be installed in a network and not be run as a client-server application.

GEAR PRO

The use of CALYPSO 2020 and GEAR PRO is possible with GEAR PRO 2019 (6.2.0200 Service Pack 1) and higher versions.

MCC

Due to the changed directory structure, MCC 3.1 and older MCC versions cannot be used in combination with CALYPSO 2020. Using MCC with CALYPSO 2020 is possible from version MCC 3.2.

FACS

The FACS automation interface is tailored to each customer's needs and may be affected by the changed directory structure. Before operating CALYPSO 2020 with your FACS application, you should first contact our support team.

PiWeb

If PiWeb is used in combination with CALYPSO 2020, at least PiWeb 3.8 must be installed. With older PiWeb versions, problems may occur when creating PDF files.

NON-Zeiss Device Interfaces

As of the present CALYPSO version, the following third-party systems are supported:

Articulated arms

Optical sensors are not supported

- Faro articulated arm (without Faro Gage)
- Cimcore articulated arm
- Romer articulated arm
- Tomelleri articulated arm

Laser trackers

- Faro laser tracker
- Leica laser tracker (without AT930, without AT960)
- API laser tracker from T3 (without Omnitrac 2)

Controllers

Optical and scanning sensors are not supported

- Mitutoyo CMMC-J
- Mitutoyo UC100
- Mitutoyo UC200
- Mitutoyo UC220

For questions regarding the support of other third-party systems:

Please contact retrofit.metrology.de@zeiss.com.

Counters

The following counters are supported by CALYPSO 2020 MAN:

Controller	Internet protocol	interface	Probe
MZ 1060 MZ 1070 MZ 2010	MZ 1060	RS 232	**MIH probe carriers:** TP2, TP6

CAD interfaces

The following CAD interfaces are supported:

CAD software	Version
Catia 6	Up to V6 R2020x[1)]
Catia 5	V5R8 – V5–6R2019
Catia 4	4.1.9-4.2.4
DXF	2.5-2020[2)]
IGES	Up to 5.3
JT Open	8.x, 9.x, 10, 10.2, 10.3, 10.5
Siemens NX	NX11–NX 1899
Parasolid	9.0–32.0.152
Pro/ENGINEER Creo Parametric	16 3.0-6.0
SolidEdge	V18-SE 2020
SolidWorks	2015-2020 2003-2014
STEP	AP203, AP214, AP242
VDA FS	1.0-2.0
Inventor	V11 - 2021
QIF	3.0

[1)] 3DEXPERIENCE (CATIA V6) users should export their database objects as CATIA V5 CATParts or CATProducts. They can then be imported into CALYPSO.

[2)]If no units of length are specified in the DXF file, the assumed unit of length will be inches.

PMI-compatible CAD software

CAD software	Version
Creo Parametric	3.0-6.0
Siemens NX	From 8.0 - 1847
SOLIDWORKS	From Premium 2014 x64 edition (service pack 5.0) – Premium 2019 without MBD
CATIA	From V5 - V6 R2020x

NOTE

It is recommended that you disable the PMI functionality for the import of unsupported CAD models.

The use of latest service packs for the CAD software is recommended.

NOTE

With Creo, PMI can only be imported from parts, not from assemblies.

With Creo models, PMI is only imported from the active view.

Compatibility of measurement runs and measurement plans

Compatibility – measurement plans and programs – exclusion of warranty

The licensor (Carl Zeiss Industrielle Messtechnik GmbH) will neither warrant nor guarantee functionality for measurement plans or programs created by third-party suppliers or by the licensee/customer or that such measurement plans or programs will run error free on the licencor's software or systems respectively. The licensor excludes any form of warranty or guarantee regarding measurement plans and programs supplied by a third party, especially upon implementation of software upgrades or new program versions.

In particular, the licensor emphasizes the resulting possibility of lack or alteration of performance relating to measurement plans should one or more of the following points apply:

- Changed computer operating system between software revisions
- Essential alterations to calculation algorithms
- Debugging and troubleshooting
- Changed dependencies between software options
- Improper programming of measurement plans
- Influence of software programs or modules not provided by the licensor

5 Software downloads

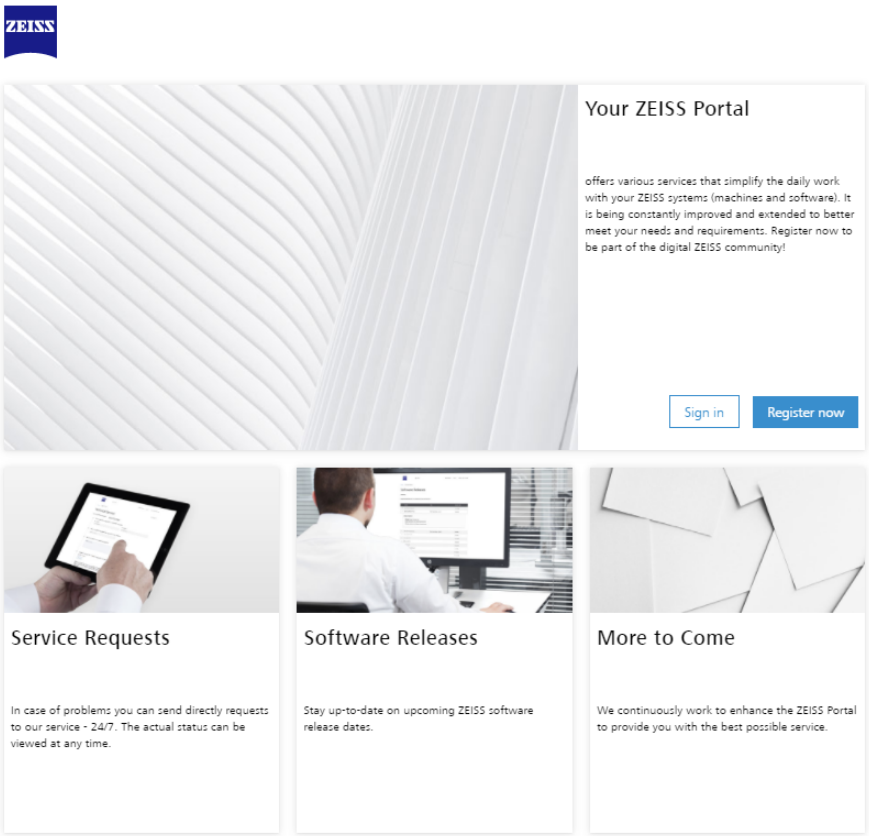
This chapter contains:

Software Downloads

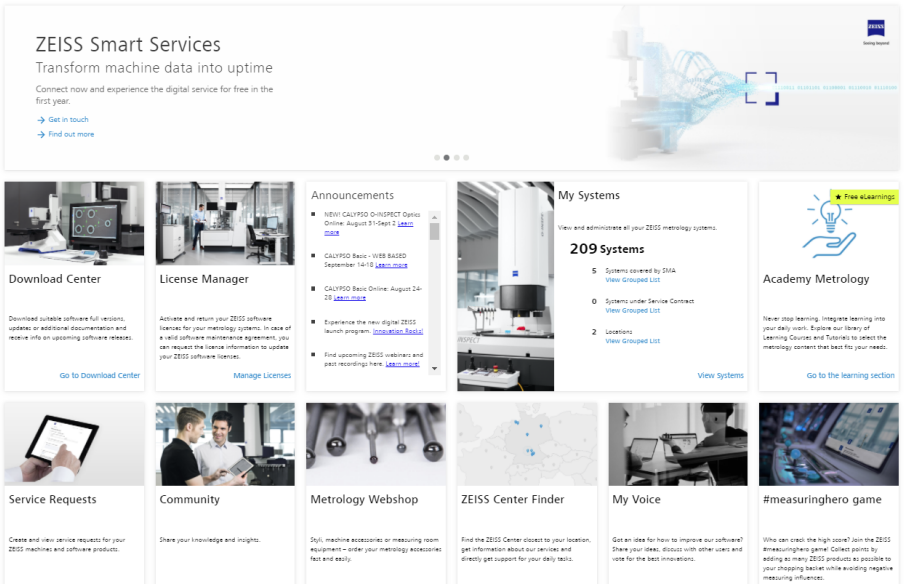
Use the new ZEISS Software Download Portal (SDP) to quickly and easily obtain current service packs and also full versions.

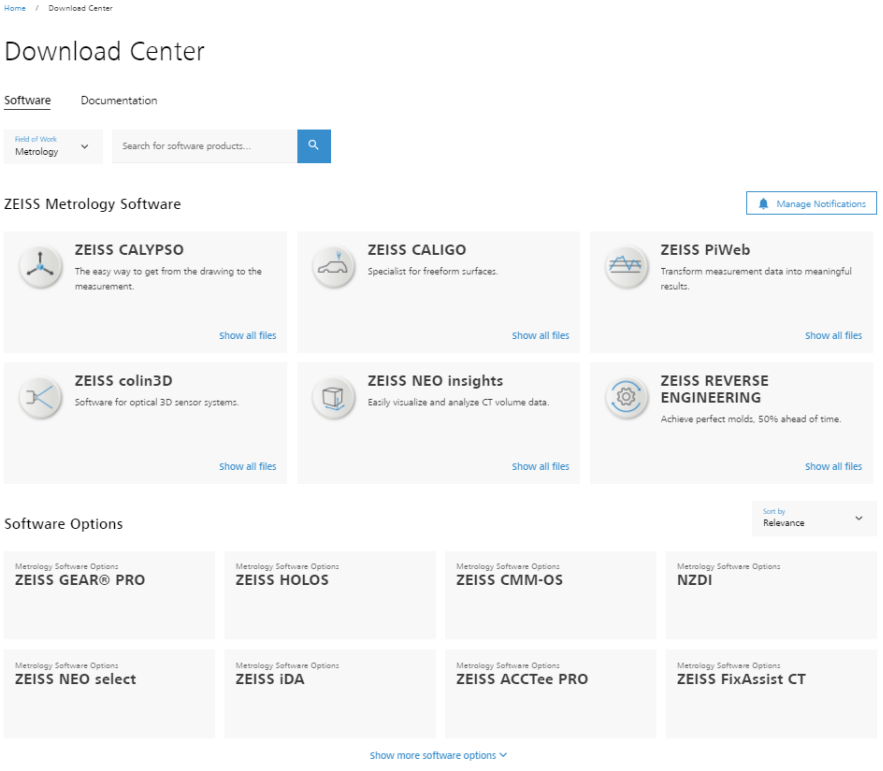
Click the following link to register for and access to the SDP:

https://portal.zeiss.com/



Welcome to your ZEISS Portal.





6 Videos and training material

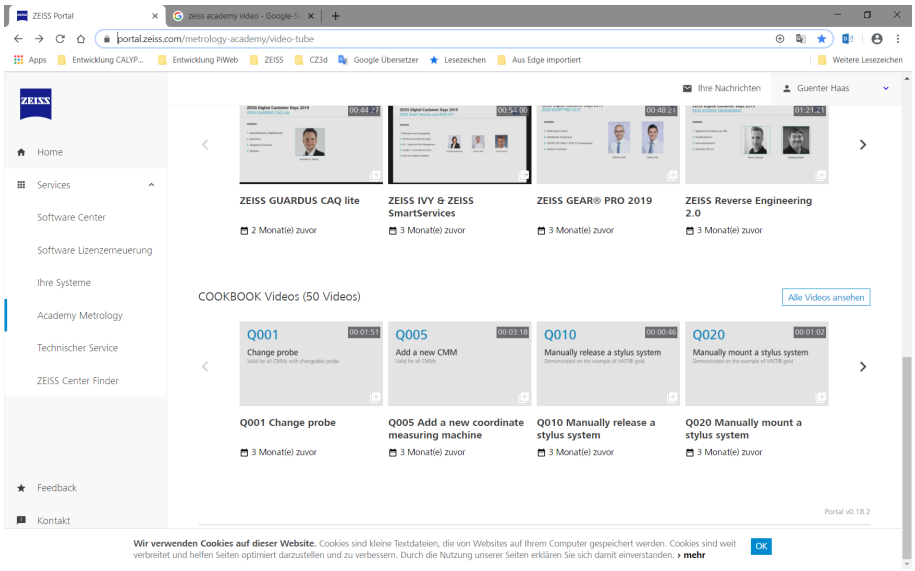
This chapter contains:

Videos and training material in the ZEISS Portal

Videos and training material can be purchased via the ZEISS Portal.

Use the following link to access the ZEISS Portal:

https://portal.zeiss.com/metrology-academy/video-tube



7

Contact

This chapter contains:

Contact

If you have any questions, ideas, or problems regarding CALYPSO, please always use the integrated CALYPSO error report to contact us. To open the form in CALYPSO, select “Error report” from the “Extras” menu in CALYPSO. You can enter any text that describes your request in the “Comment” field.

Use the pulldown menu within the error report to save the report (in order to forward it by email). Our email address and phone number are also indicated in the report.

For Germany

Carl Zeiss Industrielle Messtechnik GmbH

SES-AH Software Support

73446 Oberkochen, Germany

Phone: +49 7364-20-6337

Email: calypso-support.metrology.de@zeiss.com

www.zeiss.com/imt

For USA

Carl Zeiss IMT Corp.

Software Support

Novi MI 48377

Phone: 1-800-327-9735

Fax: 248-624-1258 or 763-535-9792

Email: cic.metrology.us@zeiss.com

www.zeiss.com

ZEISS Metrology Community – current notes on measuring software under Windows

For current notes regarding ZEISS measuring software under Windows, use the following link:

ZEISS Metrology Community

With login and password, you can access the Community for the latest tips and tricks.