CALYPSO

Option 28
CALYPSO teamcenter in/out

Operating Instructions

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

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Preface

About these operating instructions

The CALYPSO program consists of a base module and additional options for special purposes. You can customize the scope of program to fit your requirements.

These operating instructions describe an option of CALYPSO and are based on the assumption that the user is familiar with the operating instructions for the base module of CALYPSO.

NOTE

The additional CALYPSO options are described in separate manuals.

Reference information about the windows and dialogs can be found in the interactive reference in the CALYPSO Online Help.

Simply Measure – And what you should know to do it right, A metrology primer

Carl Zeiss, Industrial Metrology Business Group,

Order number: 612302-9002

Text conventions

The following text conventions are used in these instructions.

Example	Description
Features	Dialog box and dialog elements Terms
[cmmname]	Variably labeled dialog elements
Comment	The **Comment** button on the screen
<machine name>	Variable text or placeholder for a name
C:\windows\w.ini	The w.ini file in the Windows directory on drive C:\.
The function will *not* be executed ...	Text highlighted as *important*

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Example	Description
➤ *Foreword [⇨ Preface-1]*	This is a cross reference. When viewing this manual on the screen, you will be guided to the indicated text passage by clicking the reference.
CNC → Run → Run	The **Run** command in the **Run** submenu of the **CNC** menu.
CTRL+A	Press the CTRL key and the letter A at the same time.

Icons

Three special icons containing important information are used in this manual. The icons appear in the marginal column next to the respective text.

You will find a detailed explanation of the safety instructions under Configuration of safety instructions.

Configuration of safety instructions

Safety instructions indicate a personal health hazard. We distinguish three different levels: Danger, warning and caution. All three safety instructions are marked with the same warning symbol. The designation of the safety instruction is shown beside the symbol. The safety instructions used are described below.

Configuration of a safety instruction

A safety instruction may have the following components:

– Warning symbol and designation of the safety instruction (signal word): Danger, warning or caution.

– Source and cause of the danger

– Consequences for the user due to non-observance of the safety instruction

– Required measures to be taken by the user to avoid possible consequences

– A measure may cause an intermediate result.

– At the end of all measures, a final result may be caused.

Personal health hazard

⚠ **DANGER**

A »danger« indicates an imminent risk to life and limb.
Non-observance of this safety instruction when the described risk occurs causes death or serious injuries.
Example: Electric shock due to high electric voltage.

⚠ **WARNING**

A »warning« indicates a possible risk to life and limb.
Non-observance of this safety instruction when the described risk occurs may cause death or serious injuries.
Example: Risk of severe crushing of the body caused by heavy loads.

⚠ **CAUTION**

A »caution« indicates a personal health hazard.
Non-observance of this safety instruction when the described risk occurs may cause slight to moderate injuries.
Example: Risk of minor crushing of the limbs caused by small loads.

Risk of material damage

If there is no personal health hazard, but the CMM or components may get damaged, this is pointed out by the following notice.

This symbol refers to possible damage to the CMM.
Non-observance of this safety instruction when the event occurs may cause damage to the CMM or one of its components.
Example: Collision of the ram with a workpiece.

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CALYPSO Teamcenter in/out (Option)

The CALYPSO teamcenter in/out option enables you to manage measurement plans and CAD models centrally in Teamcenter.
Teamcenter is a registered trademark of Siemens Digital Industries Software.

This chapter contains:

Basics of Teamcenter

Using CALYPSO, you can use the functions of Teamcenter. In Teamcenter, measurement plans and CAD models are managed centrally in the form of measurement plan objects.

In addition to Connected Quality and local versioning, Teamcenter is one of the three alternative possibilities offered by CALYPSO for versioning.

Requirements

The following requirements must be met to access Teamcenter:

– You use the Siemens *Teamcenter UA* program.

– The following licenses have been installed on your workstation:

– TCM55071 Teamcenter 3rd Party CAM Integration from Siemens
– TC10101 Teamcenter Author from Siemens
– CALYPSO teamcenter in/out from ZEISS

CAD models and measurement plans in Teamcenter

Teamcenter is used for distributed working with defined versions of measurement plans and CAD models. Users located at different sites can access the same status of a measurement plan and CAD model. Measurement plans and CAD models can be provided, changed, and managed centrally in Teamcenter. The objects from the Teamcenter can only be edited by several users one after the other and not simultaneously.

The CAD models are provided centrally under unique names in Teamcenter. The measurement plans can be provided centrally as well as stored by users in Teamcenter. Different scenarios are thus possible:

– You download an available measurement plan with CAD model in Teamcenter and work with it. If you have edited the measurement plan, you can overwrite the revision in the Teamcenter with your modifications or save the measurement plan as a new revision in the Teamcenter.

– You download only a CAD model, thus creating a measurement plan in the process. You then save this measurement plan in Teamcenter. **Note:** If you want to work with a CAD model that you haven't just downloaded, but downloaded some time ago, you should check the status of the CAD model.

– You work with a CAD model that is not managed in Teamcenter and save the measurement plan based on this CAD model together with the CAD model in Teamcenter.

Teamcenter and AutoRun

You also can download measurement plans from Teamcenter to the AutoRun interface and run them there. For more information, please refer to the section of the basic documentation on the AutoRun interface.

Measurement plan objects and revisions

Using CALYPSO, you can download a revision of a measurement plan object from Teamcenter. If you have revised a measurement plan contained in the Teamcenter, you can overwrite the revision in Teamcenter with your modifications or save the revised version as a new revision of the same measurement plan object in the Teamcenter.

If you save the edited measurement plan under a different name, e.g. because it contains major changes, you can save it either as a revision of the existing measurement plan object or as a new measurement plan object. In contrast to local versioning, Teamcenter is not concerned with revisions of *measurement plans*, but rather, with revisions of *measurement plan objects*. The versioning of a measurement plan object's revisions continues regardless of whether the name of a measurement plan is changed.

The figure below illustrates the storage of revisions in Teamcenter. In this example, the revisions are versioned alphabetically. The first and second revision (A and B) of measurement plan object E000540 were created based on a measurement plan named *PartXY*. Following a major revision, the user renamed the measurement plan to *PartXY_new* and stored it as Revision C of this measurement plan object.
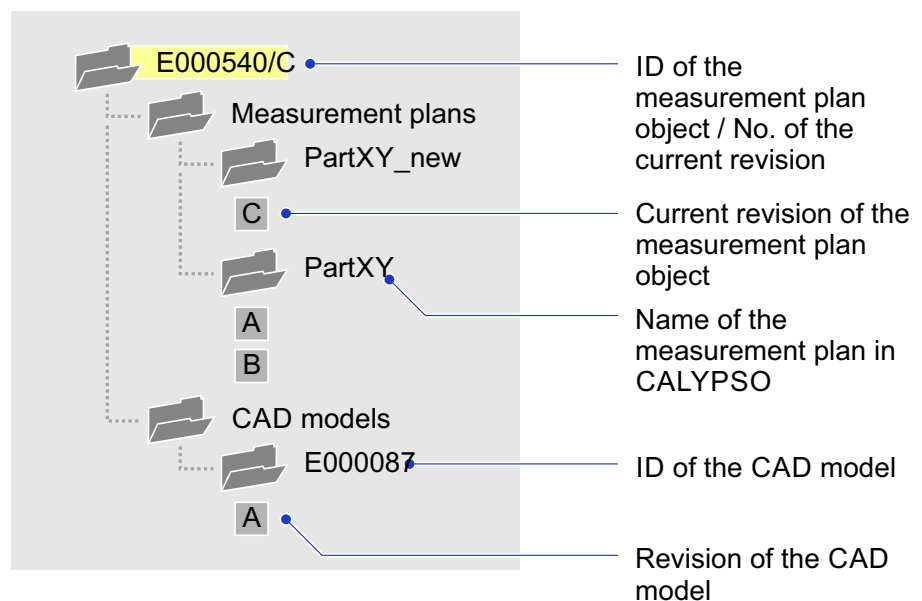
Preparing work with Teamcenter

Selecting Teamcenter in the system settings

You can select Teamcenter as the versioning type in the system settings.

1   Select **Extras → Settings → Miscellaneous** and open the **System** notebook.

2   Activate **Versioning** and select **Teamcenter** from the list.

3   Click **Apply** or **OK** to confirm.

The next time you open the notebook a new **Teamcenter** page will have been created.

Settings made by the "Master" user

Configure the interface for working with Teamcenter as a "Master" user in the system settings.

Conditions

–   You are logged in as a "Master" user.

1   Select **Extras → Settings → Miscellaneous** and open the **Teamcenter** notebook.

2   Enter the information you received from the Teamcenter administrator for **Workspace**, **Measurement plan object type**, **CAD data type name**, **Dataset name**, and **Position of the desired type**.

3   Click **Apply** or **OK** to confirm.

Now the users can work with Teamcenter.

Configuring CALYPSO for Teamcenter

Configure the interface for working with Teamcenter in the system settings.

Conditions

–   The basic configuration has already been done by the "Master" user.

1   Select **Extras → Settings → Miscellaneous** and open the **Teamcenter** notebook.

2   Enter the **Server URL** of Teamcenter. The Teamcenter administrator will notify you of this address.

3   Define the **Working directory**. The CAD models and measurement plans downloaded from Teamcenter are buffered in this directory.

4 Select the CAD formats of the CAD data you want to work with.

5 Define the interval after which an unsuccessful connection to the Teamcenter server will be canceled.

6 Click **Apply** or **OK** to confirm.

CALYPSO is now configured for Teamcenter.

Working with Teamcenter

CAD models and measurement plans in Teamcenter

What is a measurement plan object?

Measurement plans are organized in the form of measurement plan objects in Teamcenter. A measurement plan object is a directory with a unique designation, the measurement plan object ID, in which measurement plans and CAD models are stored.

You create a measurement plan object by storing a measurement plan in Teamcenter. The measurement plans are available as revisions of the measurement plan object which can respectively be created in multiple versions. If the measurement plan was created based on a CAD model downloaded from Teamcenter, the revision of the CAD model used is referenced in the measurement plan object. If a CAD model managed in Teamcenter is not used to create the measurement plan, the CAD model is saved together with the measurement plan in the respective revision of the measurement plan object.

The individual components of a measurement plan object are clearly represented in a tree view.

If you want to work with a measurement plan from Teamcenter, find the desired revision of the measurement plan object and download the measurement plan contained therein along with the corresponding CAD model.

Procedure with Teamcenter

Before working with Teamcenter, you first must establish the required connection:

– ➤ *Establishing a connection to Teamcenter [⇨ 1-6]*

The following options are available when working with Teamcenter:

– ➤ *Downloading a CAD model from Teamcenter [⇨ 1-7]*

– ➤ *Creating a measurement plan object in Teamcenter [⇨ 1-7]*

– ➤ *Downloading a measurement plan with a CAD model from Teamcenter [⇨ 1-8]*

– ➤ *Versioning a measurement plan object in Teamcenter [⇨ 1-9]*

– ➤ *Checking the status of the CAD model [⇨ 1-11]*

Establishing a connection to Teamcenter

1 Select **Teamcenter → Connect**.

The **Log in to TeamCenter** dialog box opens.

2 Enter your user data and your password.

Note: The administrator will notify you of your user data.

3 Confirm your entry with **OK**.

You are connected to Teamcenter. The connection is disconnected automatically after no actions have been initiated for 15 minutes.

Note: The number of available clients per Teamcenter license is limited. Close the Teamcenter session whenever you are not working with Teamcenter.

Note: If the user changes, the connection to Teamcenter will be disconnected automatically.

Loading a CAD model from Teamcenter

Conditions

   – ➤ *The working directory for storage of the CAD file and the CAD format have been defined. [➪ 1-4]*

   – ➤ *You are connected to Teamcenter. [➪ 1-6]*

1 Select **CAD → CAD File → Load**.

The **Download CAD model** dialog box with a maximum number of six search criteria opens according to the configuration of the Teamcenter.

2 Specify the ID of the CAD model and the desired revision as well as further criteria completely or partially, if necessary.

Note: You can use an asterisk (*) as a wildcard..

3 Click **Find**.

The CAD models available in Teamcenter that correspond to your entries are displayed.

4 Select the desired CAD model and confirm with **OK**.

A copy of the CAD model is saved in the designated working directory under *\ZEISSCAD*.

The CAD model is displayed in the CAD window.

Creating a new measurement plan object in Teamcenter

If you store a measurement plan in Teamcenter, you can create a new measurement plan object in Teamcenter at the same time.

Conditions

- – ➤ *You are connected to Teamcenter. [⇨ 1-6]*

- – The measurement plan is open.

1 Select **File → Save** or click the **Save Current Measurement Plan** icon.

Once you have activated the digital signature function, you will be prompted to sign this revision of the measurement plan.

2 If you want to sign it, confirm this query with **Yes** and enter the required information in the **Digital signature** window.

If you click **No**, this revision will not be signed.

The **Create / update** dialog box opens.

3 To obtain the next freely available ID for a measurement plan object from Teamcenter, click **Assign measurement plan object ID**.

The next freely available ID is displayed in the **Measurement plan object** field.

The measurement plan is automatically identified as the first revision of this measurement plan object. The version is displayed in the **Revision** field.

4 Enter further information on this revision if necessary.

5 Confirm with **OK**.

The measurement plan is stored in Teamcenter under the defined measurement plan object ID as the first revision of this measurement plan object. It is now available as a download to all authorized users of Teamcenter.

If the CAD model had *not* previously been downloaded from Teamcenter, it is stored together with the measurement plan in this revision of the measurement plan object. Otherwise the CAD model is referenced in the measurement plan.

Downloading a revision of a measurement plan object from Teamcenter

NOTE

If you download the revision of a measurement plan object from the Teamcenter, this revision is locked for other user until you store the revision again in the Teamcenter (see ➤ *Versioning/overwriting a measurement plan object in Teamcenter [⇨ 1-9]*)

Conditions

- ➤ *The working directory for storage of the measurement plan data has been defined. [⇨ 1-4]*

- ➤ *You are connected to Teamcenter. [⇨ 1-6]*

1 Select **File → Open**.

The **Download measurement plan object** dialog box with max. six search criteria according to the Teamcenter configuration opens.

2 Specify the ID of the measurement plan object and the desired revision as well as further criteria completely or partially, if necessary.

Note: You can use an asterisk (*) as a wildcard.

3 Click **Find**.

The revisions available in Teamcenter that correspond to your entries are displayed.

4 Select **Download** from the context menu of the desired revision.

The revision of the measurement plan object is downloaded.

The measurement plan opens.

A copy of the measurement plan is saved in the designated working directory under *\ZEISSPP*. **Note:** If you close the measurement plan without saving it, this copy willbe deleted.

A copy of the CAD model is saved in the designated working directory under *\ZEISSCAD*. **Note:** If you want to use this copy at a later time, you should check if this version of the CAD model is still up-to-date. To do this, check the status of the CAD model.

Versioning/overwriting a measurement plan object in Teamcenter

If you have downloaded and edited a measurement plan from the Teamcenter, you can overwrite the loaded revision in the Teamcenter or store the edited measurement plan as the next higher revision of the same measurement plan object in the Teamcenter.

Following major changes to the measurement plan, you can initially save the measurement plan locally under a different name. Then you can store it as the next higher revision of the same measurement plan object in Teamcenter.

Conditions

- ➤ *You are connected to Teamcenter. [⇨ 1-6]*

 – You have ➤ *downloaded and edited a measurement plan revi-sion from Teamcenter [⇨ 1-8]*.

1   If you want to store the current version in the Teamcenter under a different measurement plan name, select **File → Save as** and ini-tially save the measurement plan locally under a new name.

2   Select **File → Save** or click the **Save Current Measurement Plan** icon.

Note: If you first have saved the measurement plan locally under a new name and want to overwrite a revision stored in the Teamcen-ter, the new measurement plan name in the Teamcenter is ignored. The original measurement plan name of the overwritten revision re-mains unchanged.

Once you have activated the digital signature function, you will be prompted to sign this revision of the measurement plan.

3   If you want to sign it, confirm this query with Yes and enter the re-quired information in the **Digital signature** window.

If you click No, this revision will not be signed.

The **Create / update** dialog box opens.

4   Enter the measurement plan object ID under which you would like to store the measurement plan.

5   If you want to overwrite the loaded revision, enter its revision num-ber.

6   If you want to create a new revision of the measurement plan, click Assign revision.

The new revision number is displayed in the **Revision** field.

7   Enter more information on this measurement plan revision if neces-sary.

Notice: The entries for **Name**, **Comment**, and **Additional com-ment** are only taken into account for newly created revisions.

8   Click OK to confirm.

The measurement plan is stored in Teamcenter under the defined mea-surement plan object ID as the defined revision of this measurement plan object.

Checking the status of the CAD model

You can download CAD models from Teamcenter. If you did not download a CAD model immediately before creating a measurement plan, but had already downloaded it some time ago, a newer version of the CAD model may already be available in Teamcenter. Check the status of the CAD model before using it to create a measurement plan.

Conditions

- ➤ *You are connected to Teamcenter. [⇨ 1-6]*

- You ➤ *downloaded [⇨ 1-7]* the respective CAD model during one of your most recent Teamcenter sessions.

- The CAD model has been loaded.

1 Select **CAD** → **CAD File** → **CAD status**.

The status of the CAD model is displayed.

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