Using PiWeb in Calypso

PiWeb Reporting and Reporting Plus

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Learning Objectives

Upon completion of this module you will be able to…

1

Program reporting requirements into Calypso.

2

Use the Zeiss Templates to get the information you need.

3

Program header information into Calypso so it’s available for customizing report headers.

1. Program reporting into Calypso
2. Zeiss Templates
3. Printout Header parameters

PiWeb in Calypso

Section 1

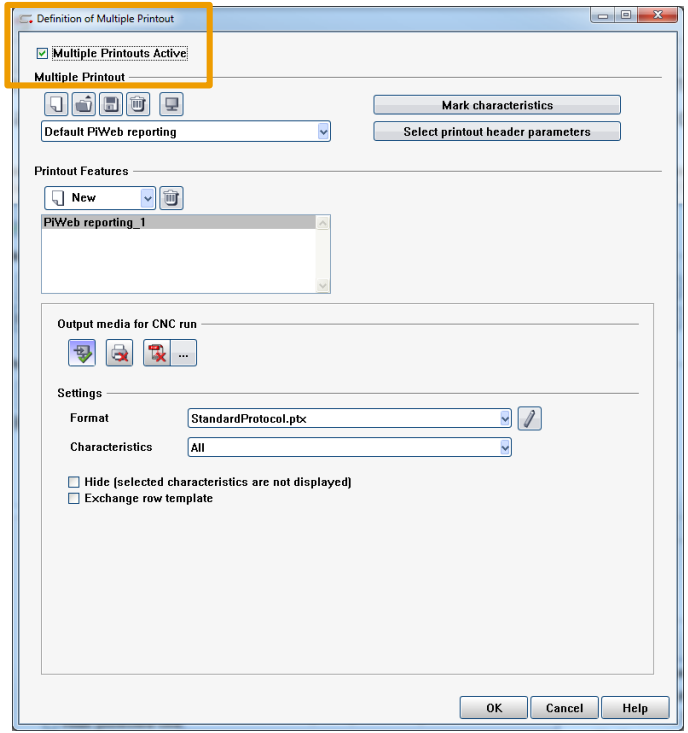
PiWeb in Calypso

Program your reporting needs for each program into Calypso.

Steps to turn on PiWeb Reporting

1. Click the Measurement Tab
2. Click Multiple Printouts
3. Check the box labeled multiple Printouts Active
4. Select your report template
5. Select the desired output
6. Save the program

Multiple Printouts

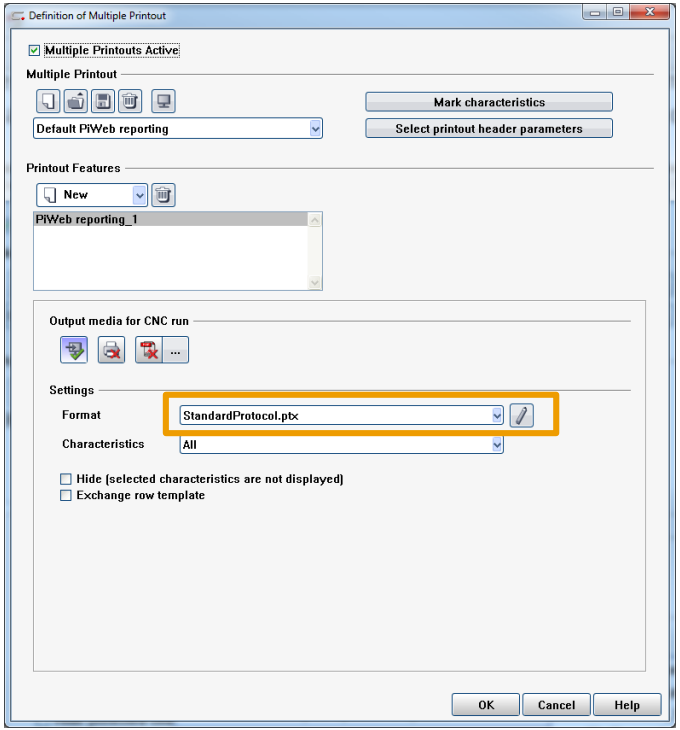


The multiple printouts window is where most of the settings for PiWeb Reporting are made.

Checking the box at the top (default in 2017) creates a results database. It stores your results. If you forget to check this box or forget to save after checking it, your results will not be saved.

Make sure you save after checking multiple printouts active.

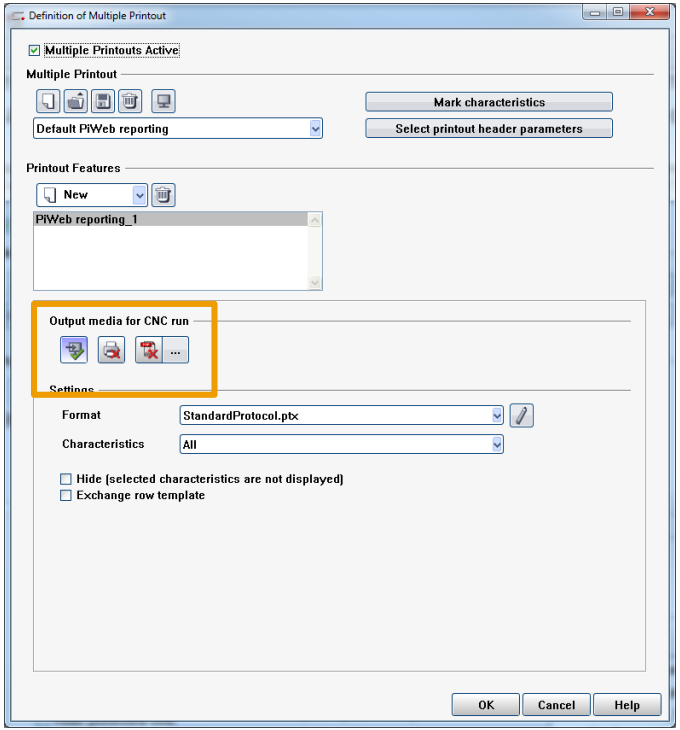
Multiple Printouts



Zeiss offers a number of premade templates. Click the drop down, go to Zeiss, and select the report you'd like have at the end of each CNC run.

The available templates will be shown in the next section.

Multiple Printouts



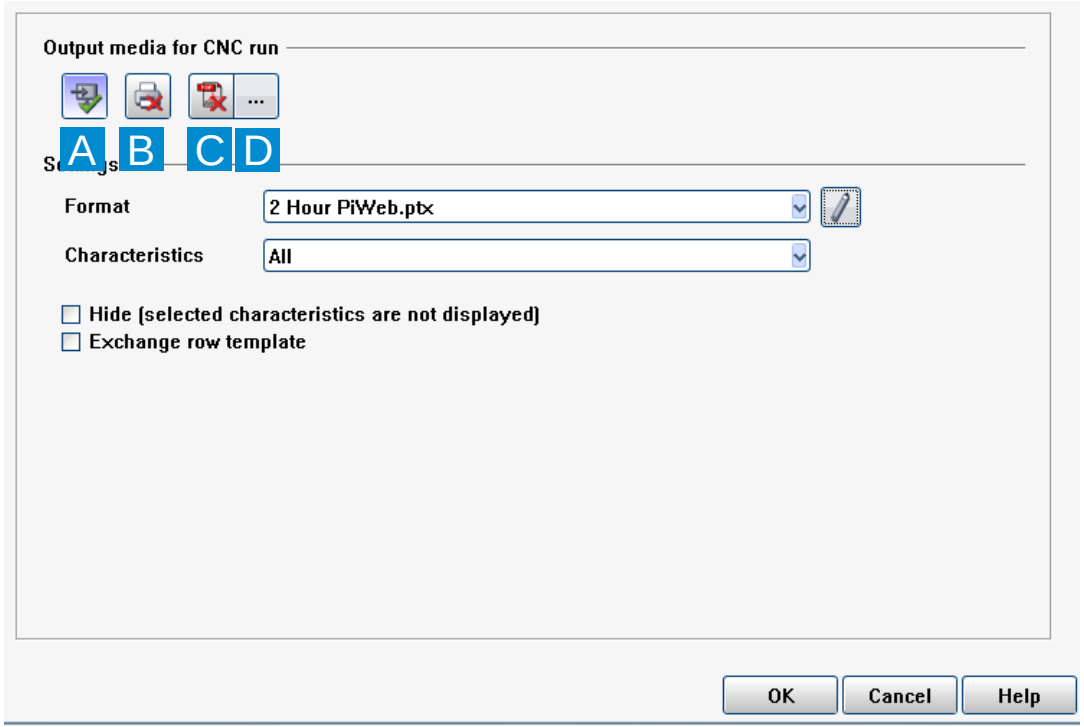
The output media section is where you decide what to do with the report at the end of each CNC run.

The first button displays the selected report on the screen at the end of the run.

The next button sends the report to the printer.

The third button saves a pdf of the selected PiWeb Report. And the … button next to it is where you set the location and name of the pdf file.

Multiple Printouts



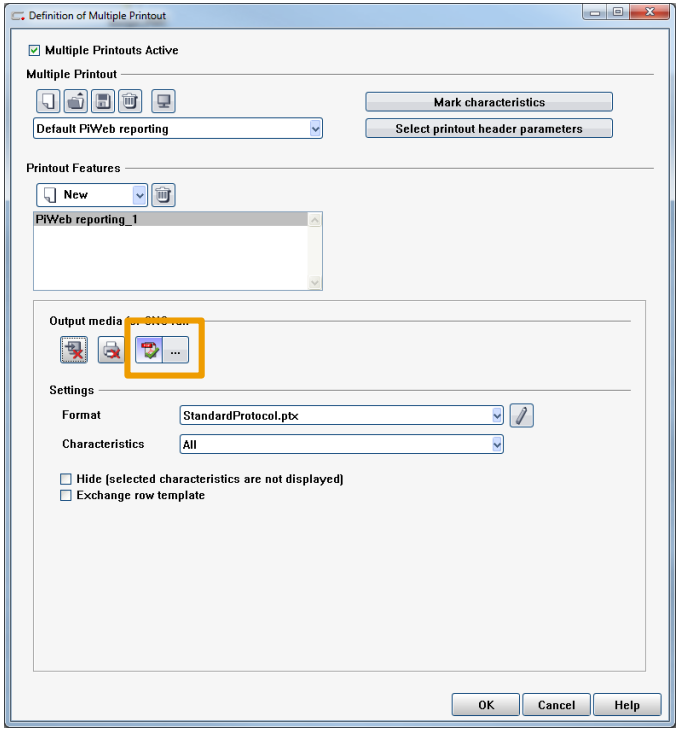
C 1. Save a PDF

B 2. Print a physical copy

D 3. Location and name for PDF

A 4. Show report on screen

Multiple Printouts

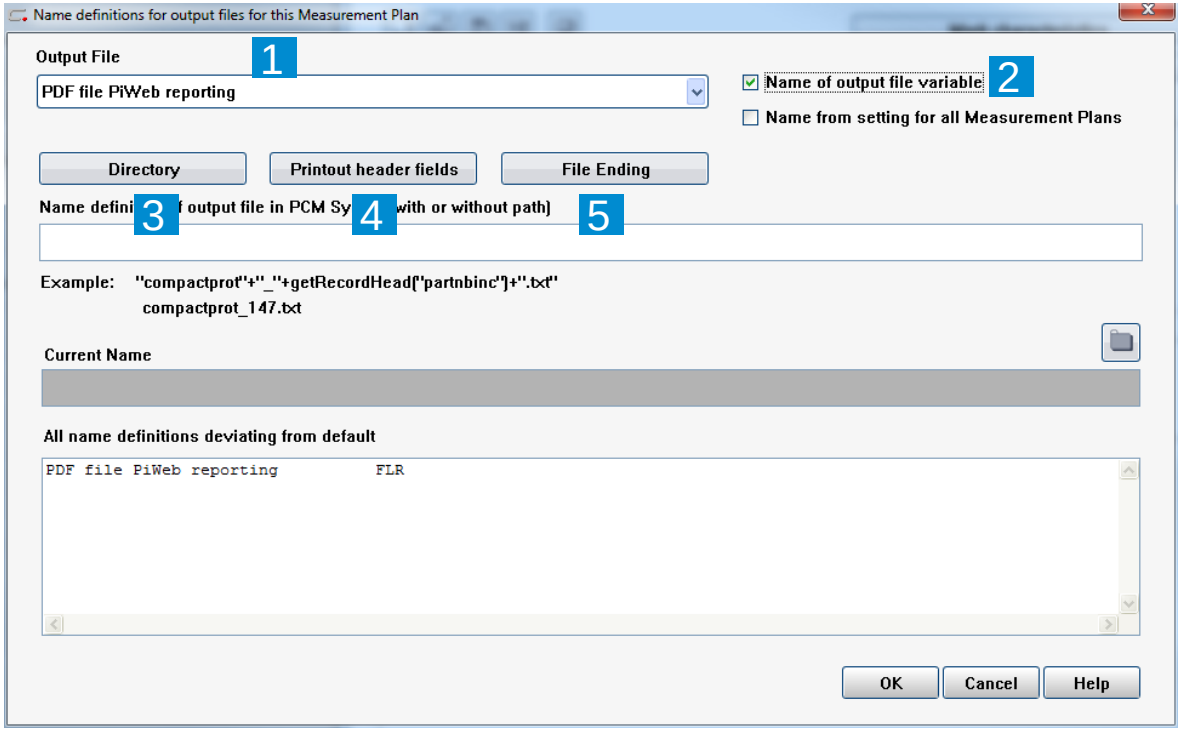


How do you set the PDF location and name?

Let's say you want the Standard Protocol to save a pdf after every run.

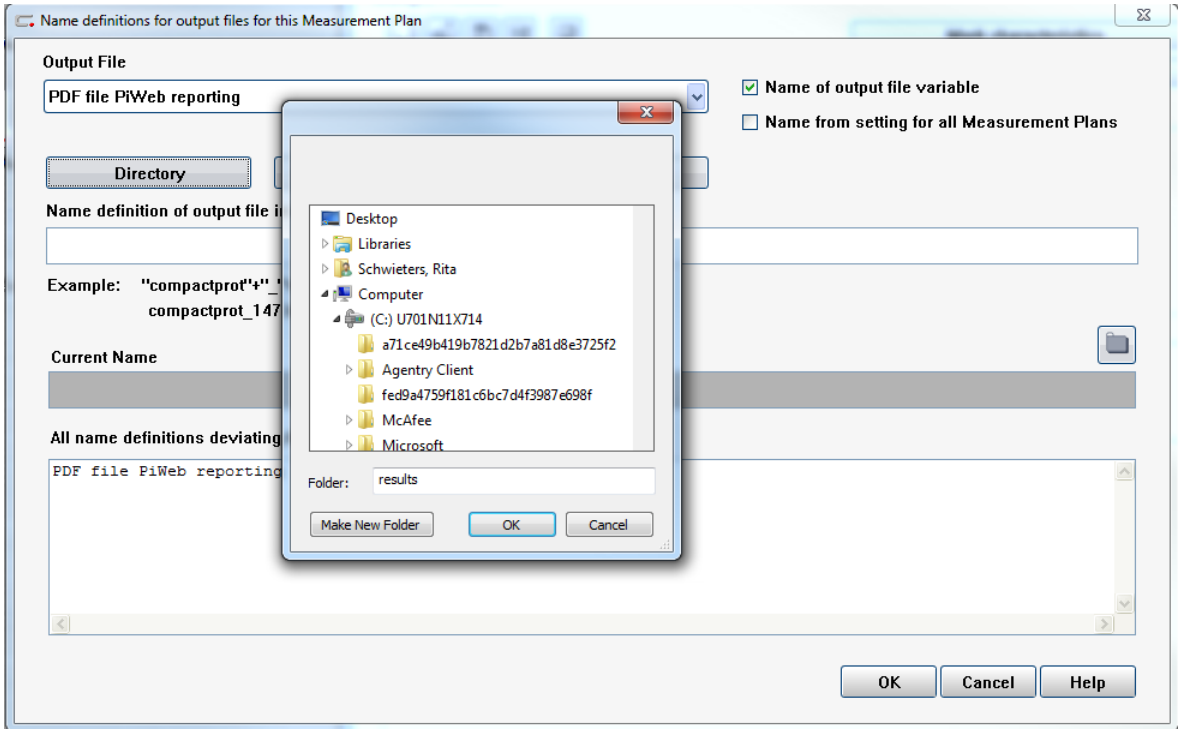
Turn on PDF and click the … button.

Multiple Printouts



1. Make sure the file is a PDF for PiWeb Reporting.
2. Check name of output file variable.
3. Click directory and navigate to save location.
4. Use header fields to name the pdf.
5. Click file Ending

Multiple Printouts



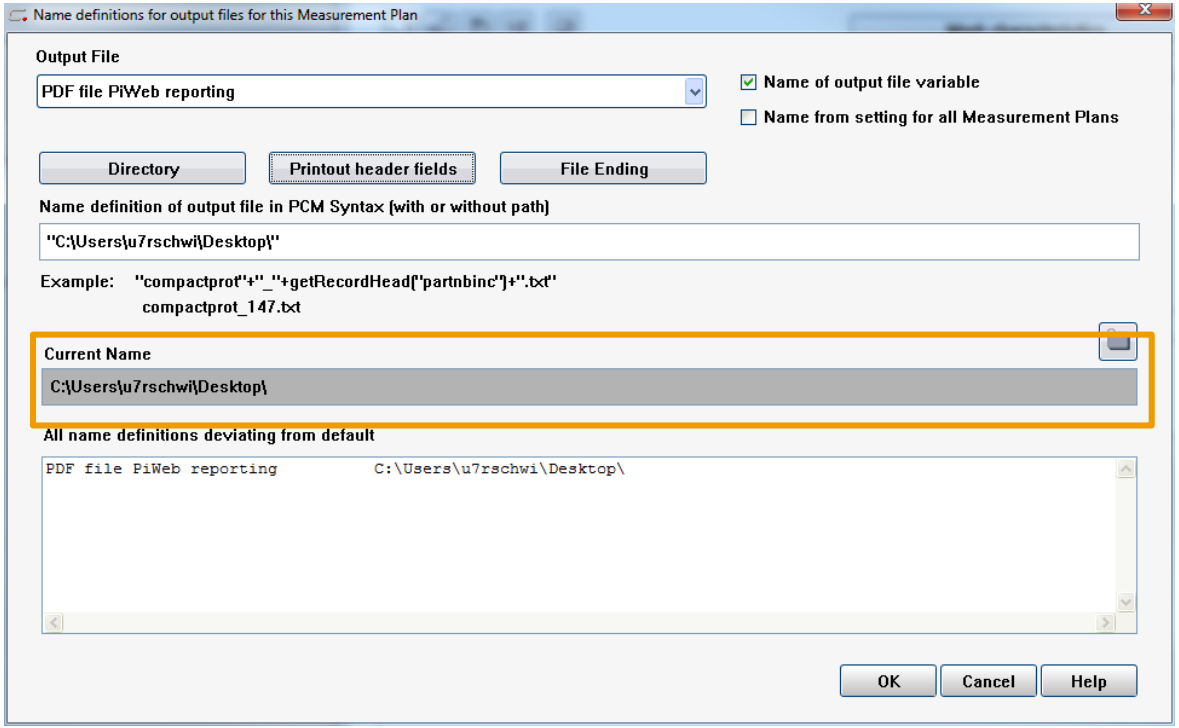
Once you have completed steps 1 and 2, you click Directory and this window pops up.

Navigate to the folder you want to save your pdfs in.

Some customers create a result folder on the desktop.

Saving reports on the network is another popular choice.

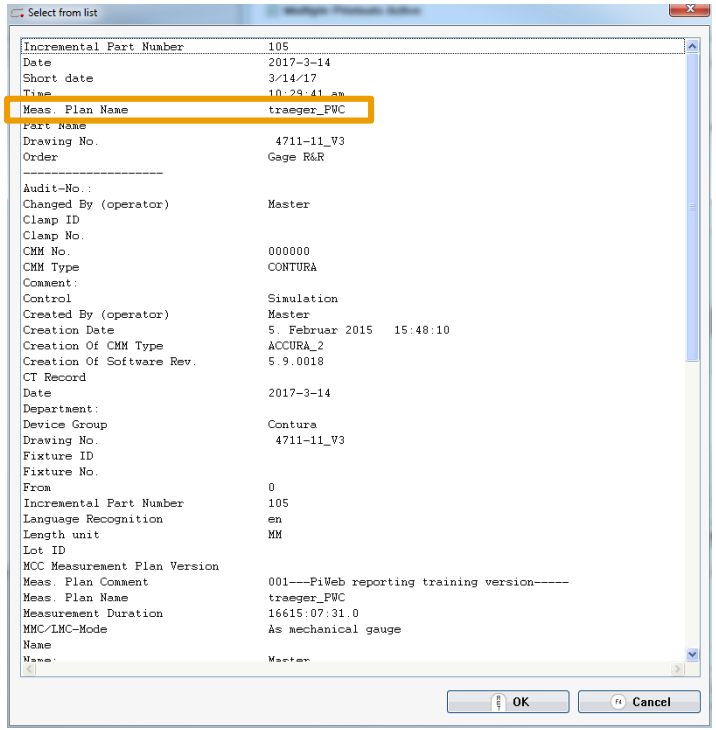
Multiple Printouts



Keep an eye on the Current Name, this is a preview of what the file path and name will look like.

Click Printout header fields to create a naming convention.

Multiple Printouts

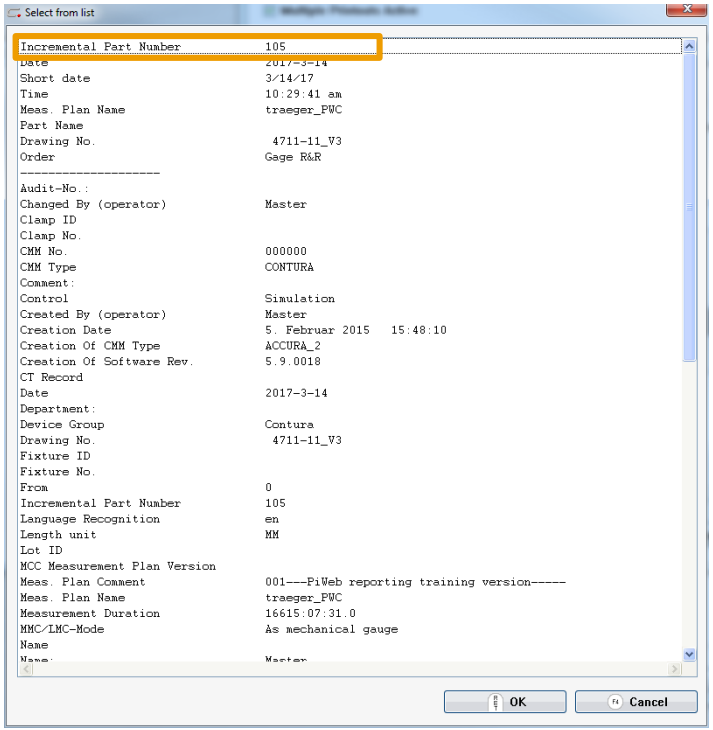


When you click Printout header fields, this window opens. It allows you to name your pdfs based on information about the program or about the run.

Most names include the Measurement Plan Name. Select Meas. Plan Name and click ok to insert it in the name.

If we leave it here. Each new CNC run will create a report named MeasurementPlan1.pdf (for example). Since the next run will have the same name it would overwrite the old report. We need another variable.

Multiple Printouts

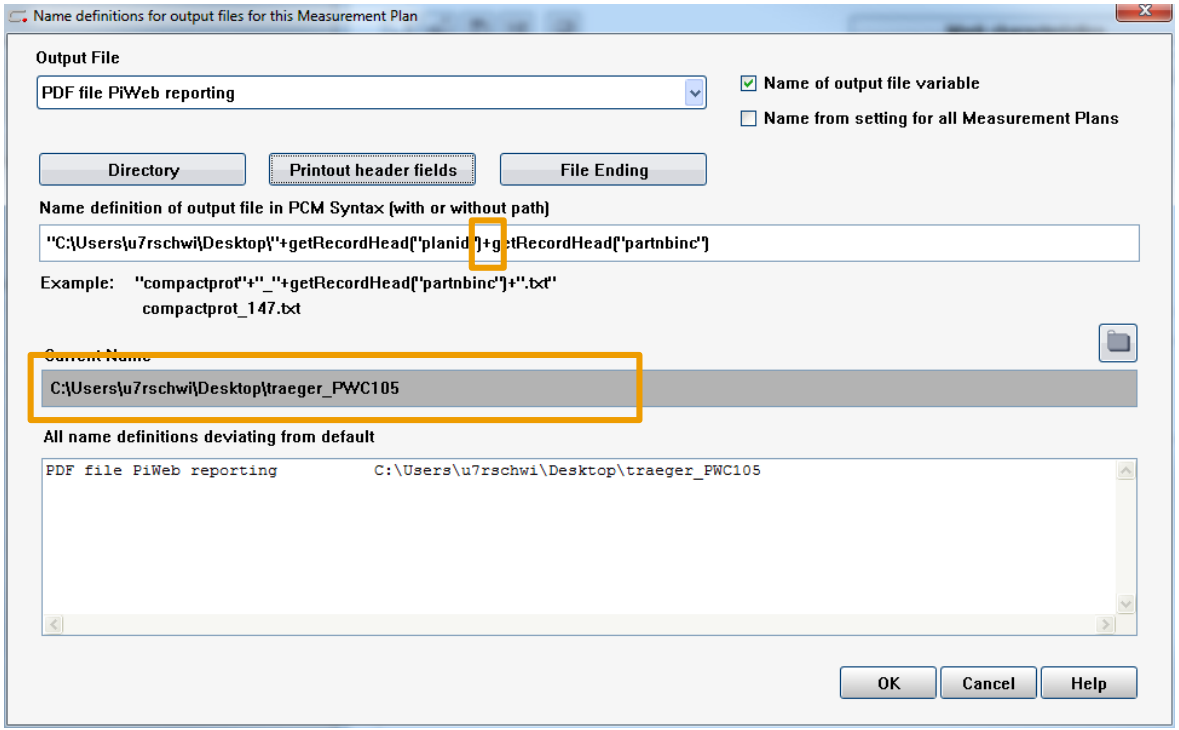


Click Printout header fields again.

This time we could enter the Incremental Part Number.

Now our report will be named MeasurementPlan125.pdf for the 25th part. It will not overwrite, but we might like a space between MeasurementPlan1 and 25.

Multiple Printouts



To add a space, you're going to click in the white box between the header parameters.

Currently there is a + sign. Change it to +" "+ or +"_"+ to get a space or underscore.

Remember to click File Ending before you click ok.

Multiple Printouts

What are the steps to creating a pdf name in calypso?

1. Make sure the file is PDF for PiWeb Reporting
2. Check name of output file variable
3. Click Directory and navigate to save location
4. Use header fields to name the pdf.
5. Click File ending

Multiple Printouts

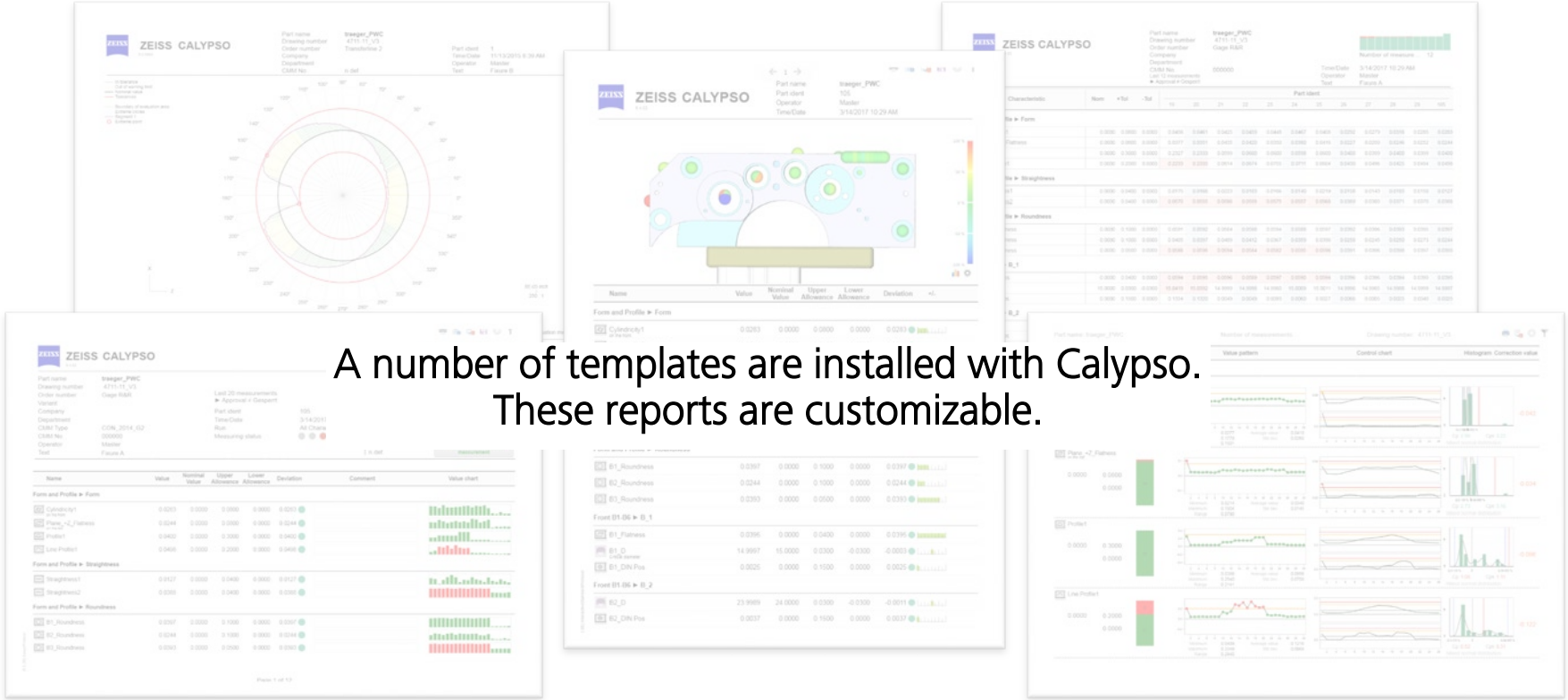
What are the steps to programming a report in Calypso?

1. *Click the Measurement Tab*
2. *Click Multiple Printouts*
3. *Check the box labeled multiple printouts active*
4. *Select your report template*
5. *Select the desired output format*
6. *Save the program*

Zeiss Templates 2017

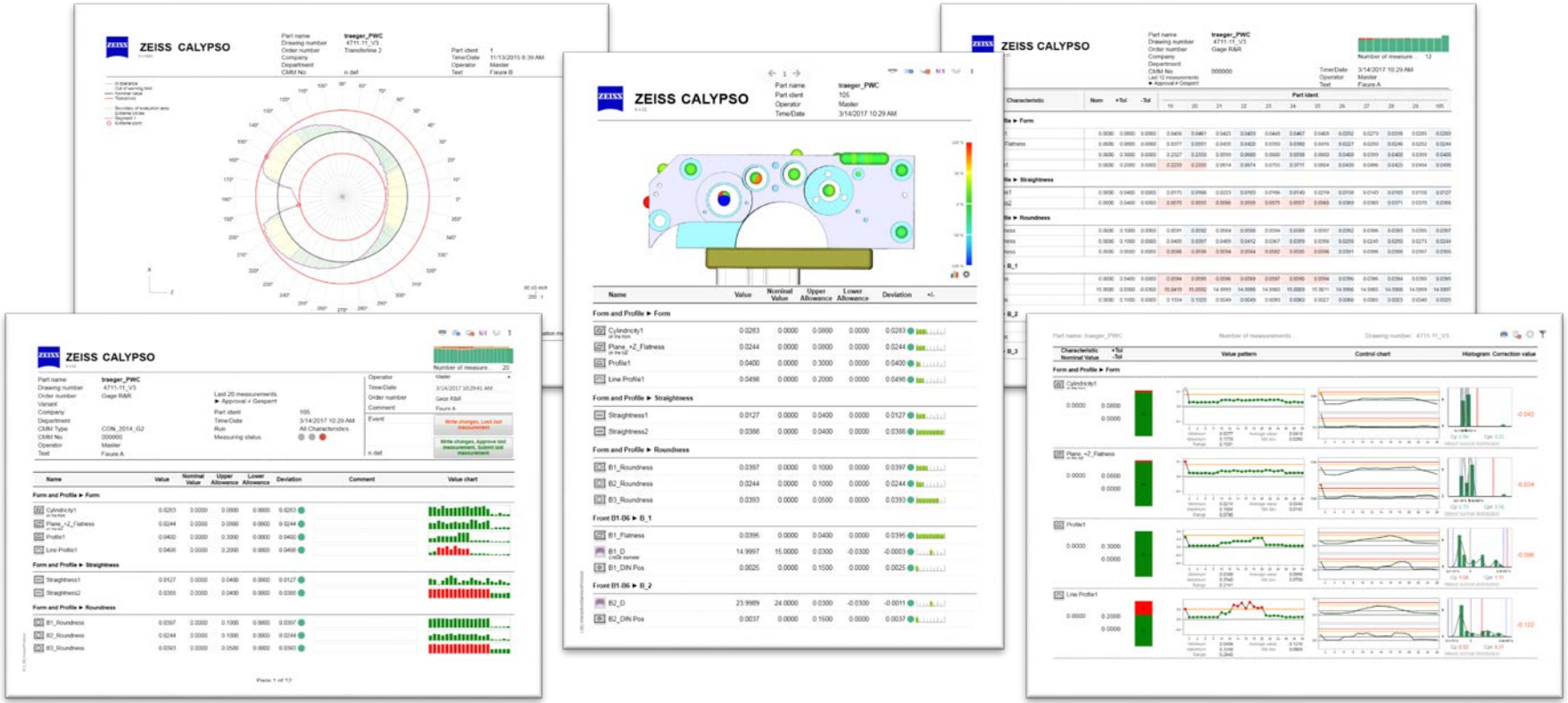
Section 2

Zeiss Templates

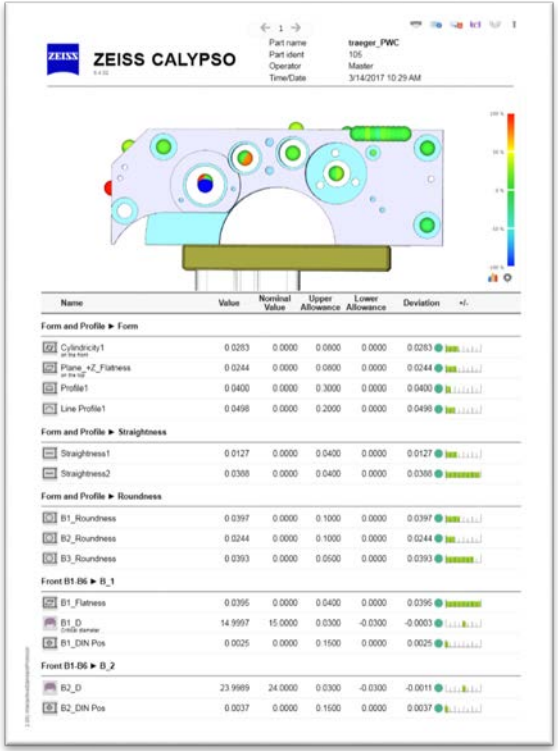


A number of templates are installed with Calypso.
These reports are customizable.

Zeiss Templates



Zeiss Templates – Interactive Standard Protocol



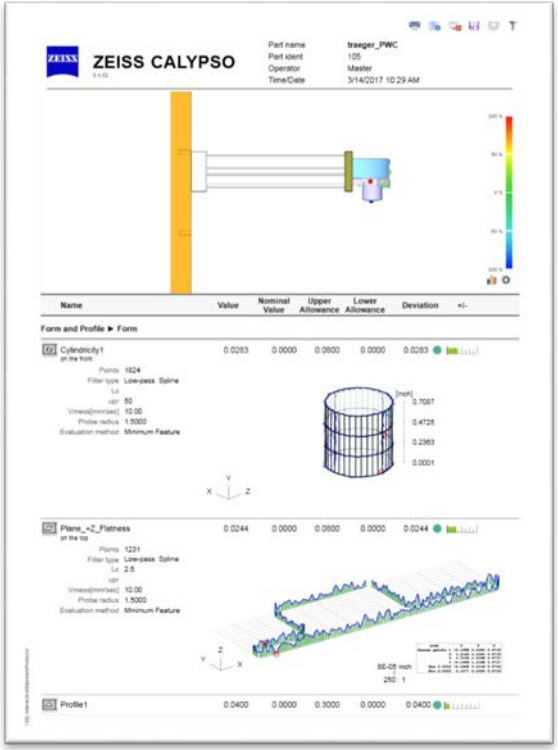
New in 2017, is a version of the Standard Protocol. This is the Interactive Standard Protocol.

This new version has an interactive CAD model at the top of the first page that indicates where characteristics were in and out of tolerance.

Each characteristic is displayed with the actual, nominal, tolerances, deviation, and a status indicator/ tolerance bar to indicate how much of the tolerance is being used up.

*The original Standard Protocol is also available, it's still named StandardProtocol

Zeiss Templates – Interactive Standard Protocol



All of the old functions are still available in the new Interactive Standard Protocol.

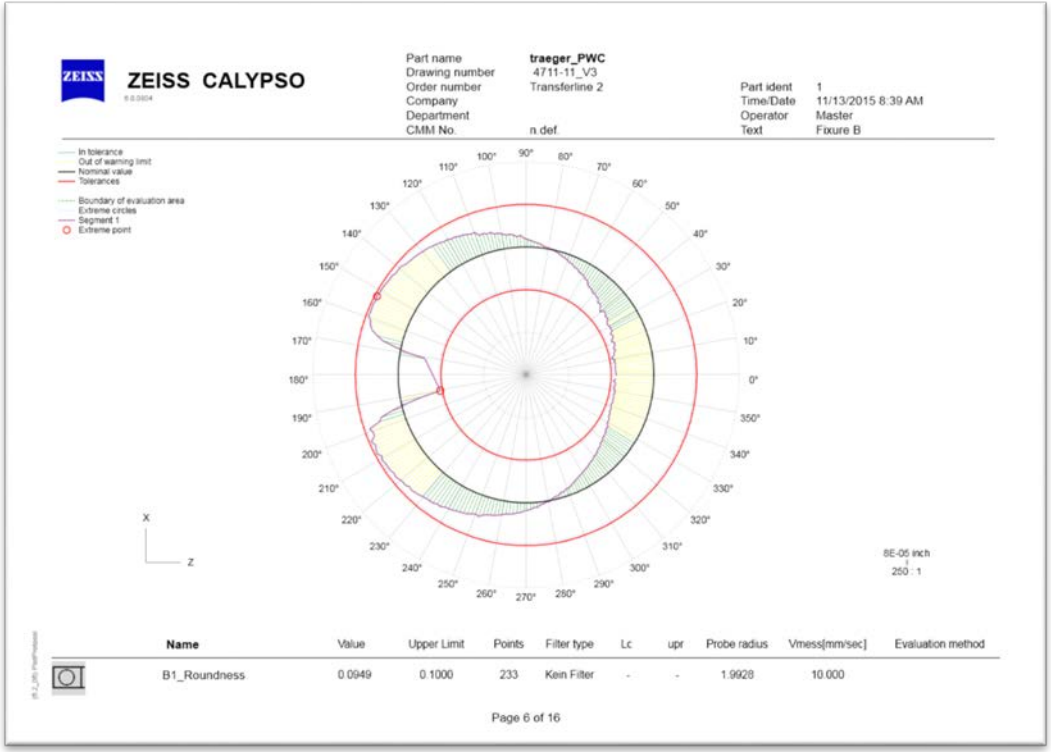
You can show form plots for form characteristics directly on the standard report by changing to detailed mode.

You can perform advanced actions on the plots by right clicking.

You can hold control and click on points to see the deviation.

You can click on plots to open a full screen view of the plot. *Plot Protocol will open*

Zeiss Templates – Plot Protocol



The Plot Protocol is a template that shows each form characteristic on a separate page.

This is the page that opens when you click on a plot in the Standard Protocol

Information about the scan settings is displayed below.

Holding control and clicking on the plot will show the deviation of individual points.

Zeiss Templates – Table Protocol

ZEISS CALYPSO

Part name	traeger_PWC
Drawing number	4711-11_V3
Order number	Gage R&R
Company	
Department	
CMM No.	000000
Last 12 measurements	
► Approval # Gespert	
Number of measure...	12
Time/Date	3/14/2017 10:29 AM
Operator	Master
Text	Fixure A

Characteristic	Nom	+Tol	-Tol	Part ident 19	20	21	22	23	24	25	26	27	28	29	105
Form and Profile ► Form															
Cylindricity1	0.0000	0.0800	0.0000	0.0456	0.0461	0.0425	0.0459	0.0448	0.0467	0.0406	0.0292	0.0279	0.0318	0.0285	0.0283
Plane_+Z_Flatness	0.0000	0.0800	0.0000	0.0377	0.0351	0.0435	0.0420	0.0350	0.0380	0.0416	0.0227	0.0250	0.0246	0.0252	0.0244
Profile1	0.0000	0.3000	0.0000	0.2327	0.2333	0.0599	0.0600	0.0600	0.0596	0.0600	0.0400	0.0399	0.0400	0.0399	0.0400
Line Profile1	0.0000	0.2000	0.0000	0.2233	0.2335	0.0614	0.0674	0.0755	0.0711	0.0604	0.0430	0.0496	0.0425	0.0494	0.0498
Form and Profile ► Straightness															
Straightness1	0.0000	0.0400	0.0000	0.0175	0.0166	0.0223	0.0183	0.0166	0.0140	0.0219	0.0158	0.0143	0.0185	0.0150	0.0127
Straightness2	0.0000	0.0400	0.0000	0.0570	0.0555	0.0586	0.0556	0.0575	0.0557	0.0568	0.0389	0.0380	0.0371	0.0370	0.0388
Form and Profile ► Roundness															
B1_Roundness	0.0000	0.1000	0.0000	0.0591	0.0592	0.0584	0.0588	0.0594	0.0588	0.0597	0.0392	0.0396	0.0393	0.0395	0.0397
B2_Roundness	0.0000	0.1000	0.0000	0.0405	0.0397	0.0409	0.0412	0.0367	0.0359	0.0398	0.0258	0.0245	0.0250	0.0273	0.0244
B3_Roundness	0.0000	0.0500	0.0000	0.0586	0.0598	0.0594	0.0584	0.0582	0.0595	0.0596	0.0391	0.0396	0.0398	0.0397	0.0393
Front B1-B6 ► B_1															
B1_Flatness	0.0000	0.0400	0.0000	0.0594	0.0595	0.0596	0.0589	0.0597	0.0590	0.0594	0.0396	0.0396	0.0394	0.0395	0.0396
B1_D	15.0000	0.0300	-0.0300	15.0419	15.0392	14.9999	14.9998	14.9980	15.0009	15.0011	14.9996	14.9985	14.9996	14.9999	14.9997
B1_DIN Pos	0.0000	0.1500	0.0000	0.1334	0.1320	0.0049	0.0049	0.0093	0.0060	0.0027	0.0066	0.0005	0.0025	0.0040	0.0025
Front B1-B6 ► B_2															
B2_D	24.0000	0.0300	-0.0300	24.0379	24.0410	23.9979	23.9986	24.0001	23.9994	23.9972	24.0026	24.0004	23.9992	24.0000	23.9989
B2_DIN Pos	0.0000	0.1500	0.0000	0.1382	0.1325	0.0034	0.0051	0.0028	0.0058	0.0064	0.0023	0.0021	0.0014	0.0049	0.0037
Front B1-B6 ► B_3															

Page 1 of 10

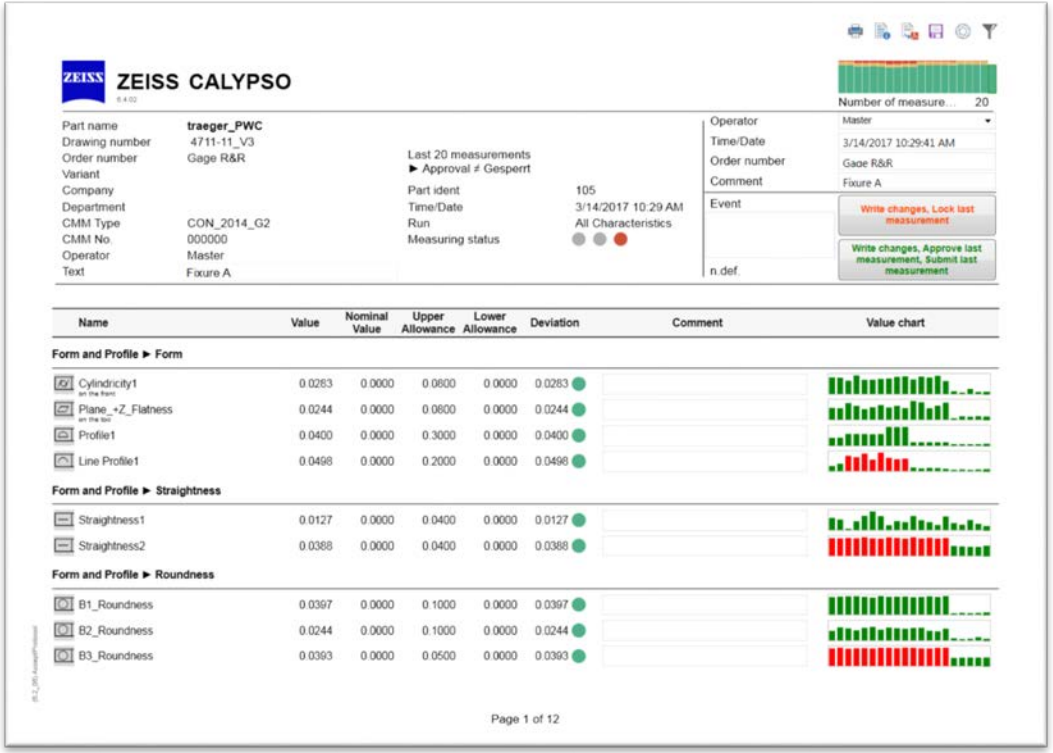
The Table Protocol is a template that shows the last 12 results for each characteristic.

The plot at the top of the page compares in tolerance and out of tolerance characteristics for the last 12 runs.

Out of tolerance results are shown in red.

Ctrl + Clicking opens additional information.

Zeiss Templates – Accept Protocol



ZEISS CALYPSO

Number of measure... 20

Part name	traeger_PWC	Operator	Master
Drawing number	4711-11_V3	Time/Date	3/14/2017 10:29:41 AM
Order number	Gage R&R	Order number	Gage R&R
Variant		Comment	Fixure A
Company		Event	Write changes, Lock last measurement
Department			Write changes, Approve last measurement, Submit last measurement
CMM Type	CON_2014_G2		
CMM No.	000000		
Operator	Master		
Text	Fixure A	n.def.	

Last 20 measurements
► Approval ≠ Gesperrt

Part ident	105
Time/Date	3/14/2017 10:29 AM
Run	All Characteristics
Measuring status	

Name	Value	Nominal Value	Upper Allowance	Lower Allowance	Deviation	Comment	Value chart
Form and Profile ► Form							
Cylindricity1	0.0283	0.0000	0.0800	0.0000	0.0283		
Plane_+Z_Flatness	0.0244	0.0000	0.0800	0.0000	0.0244		
Profile1	0.0400	0.0000	0.3000	0.0000	0.0400		
Line Profile1	0.0498	0.0000	0.2000	0.0000	0.0498		
Form and Profile ► Straightness							
Straightness1	0.0127	0.0000	0.0400	0.0000	0.0127		
Straightness2	0.0388	0.0000	0.0400	0.0000	0.0388		
Form and Profile ► Roundness							
B1_Roundness	0.0397	0.0000	0.1000	0.0000	0.0397		
B2_Roundness	0.0244	0.0000	0.1000	0.0000	0.0244		
B3_Roundness	0.0393	0.0000	0.0500	0.0000	0.0393		

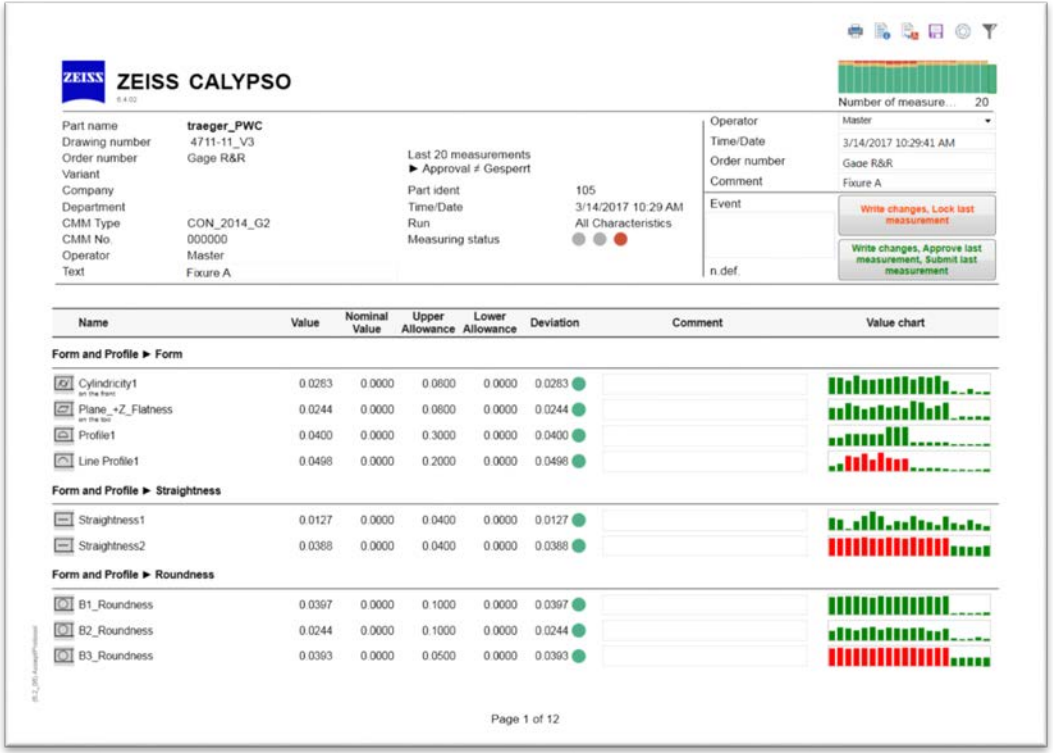
Page 1 of 12

The Accept Protocol is similar to the Standard Protocol.

This report also has a comment section to type characteristic specific information. And a value chart to show historical information.

The header includes options to change certain header information and the ability to “lock” or “approve” the measurement.

Zeiss Templates – Accept Protocol



ZEISS CALYPSO

Number of measure... 20

Part name	traeger_PWC	Operator	Master
Drawing number	4711-11_V3	Time/Date	3/14/2017 10:29:41 AM
Order number	Gage R&R	Order number	Gage R&R
Variant		Comment	Fixure A
Company		Event	Write changes, Lock last measurement
Department			Write changes, Approve last measurement, Submit last measurement
CMM Type	CON_2014_G2	n.def.	
CMM No.	000000		
Operator	Master		
Text	Fixure A		

Last 20 measurements
► Approval ≠ Gesperrt

Part ident	105
Time/Date	3/14/2017 10:29 AM
Run	All Characteristics
Measuring status	

Name	Value	Nominal Value	Upper Allowance	Lower Allowance	Deviation	Comment	Value chart
Form and Profile ► Form							
Cylindricity1	0.0283	0.0000	0.0800	0.0000	0.0283		
Plane_+Z_Flatness	0.0244	0.0000	0.0800	0.0000	0.0244		
Profile1	0.0400	0.0000	0.3000	0.0000	0.0400		
Line Profile1	0.0498	0.0000	0.2000	0.0000	0.0498		
Form and Profile ► Straightness							
Straightness1	0.0127	0.0000	0.0400	0.0000	0.0127		
Straightness2	0.0388	0.0000	0.0400	0.0000	0.0388		
Form and Profile ► Roundness							
B1_Roundness	0.0397	0.0000	0.1000	0.0000	0.0397		
B2_Roundness	0.0244	0.0000	0.1000	0.0000	0.0244		
B3_Roundness	0.0393	0.0000	0.0500	0.0000	0.0393		

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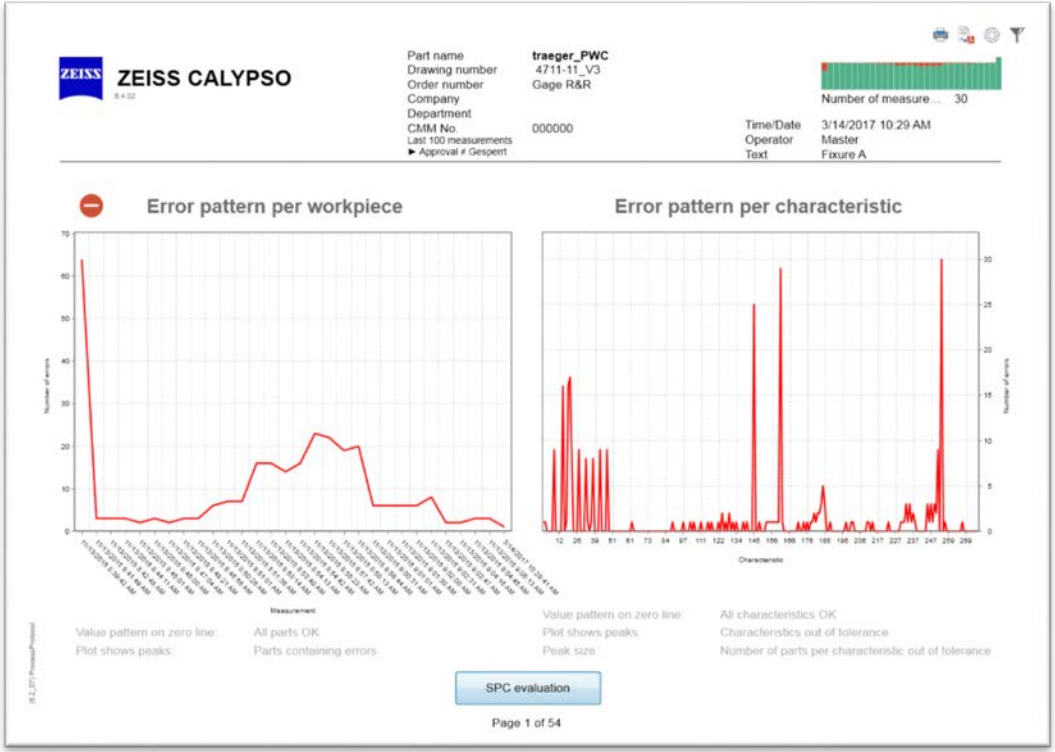
Locking a measurement does not prevent changes from being made to the report, instead it creates a searchable attribute.

Think of it like stamping the report with “approved” or “failed.”

This can be searched in the measurement selection by searching by attribute.

Zeiss Templates – Process Protocol



The Process Protocol is a neat option, it does require PiWeb Reporting Plus for most of the graphs to show data.

The first page has two graphs. The number of errors per measurement and the number of errors per characteristic.

Ctrl + clicking on any data point provides more information about what was out of tolerance for each.

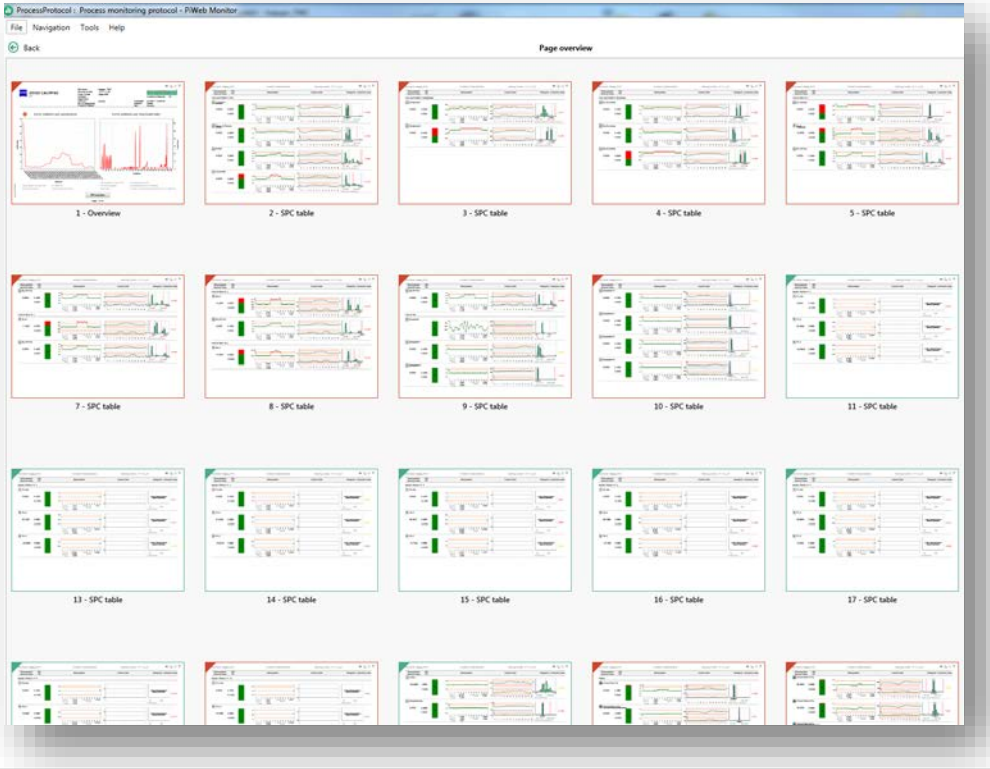
Zeiss Templates – Process Protocol

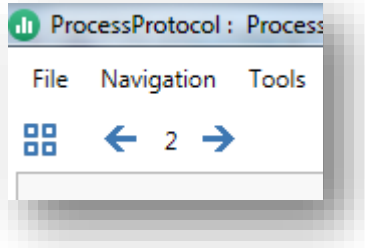
Clicking the SPC button opens a characteristic table.

This shows each characteristic and various SPC charts like a line chart, an x bar, a histogram, etc.

You can use ctrl + click to get more information.

Zeiss Templates – Process Protocol



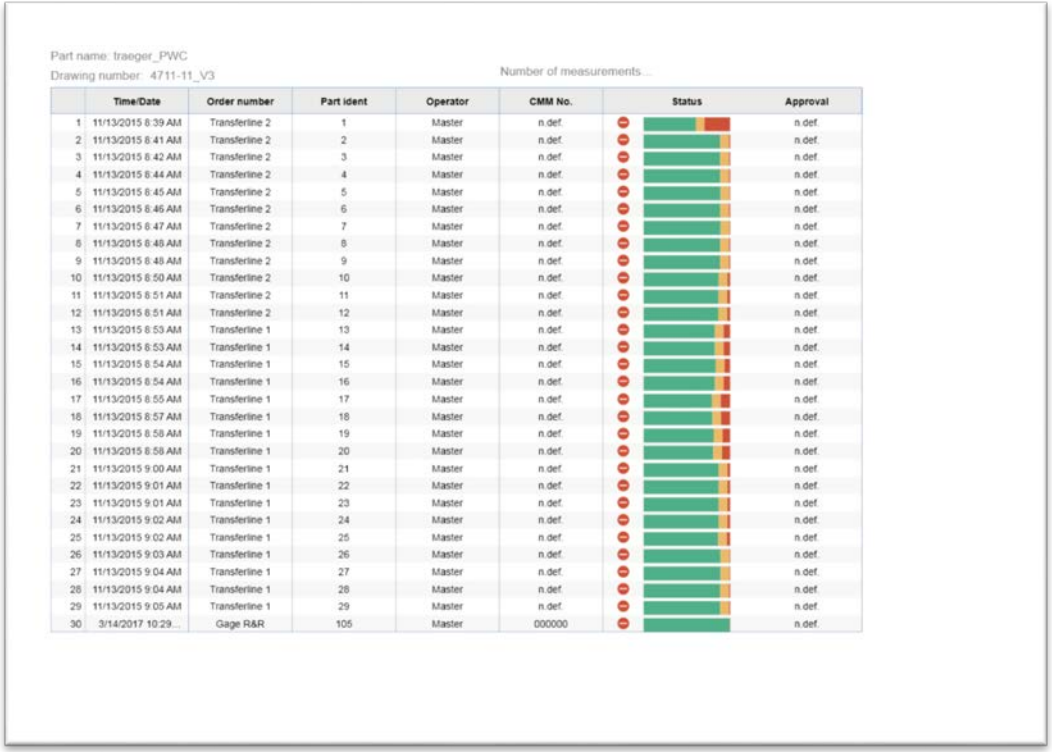


In the top left corner of the screen there are 4 squares. This icon will display thumbnails of all the pages.

Use this to select a page you would like to see.

For the Process Protocol, the last page has a measurement table.

Zeiss Templates – Process Protocol



Part name: traeger_PWC
Drawing number: 4711-11_V3

Number of measurements...

	Time/Date	Order number	Part ident	Operator	CMM No.	Status	Approval
1	11/13/2015 8:39 AM	Transferline 2	1	Master	n.def.		n.def.
2	11/13/2015 8:41 AM	Transferline 2	2	Master	n.def.		n.def.
3	11/13/2015 8:42 AM	Transferline 2	3	Master	n.def.		n.def.
4	11/13/2015 8:44 AM	Transferline 2	4	Master	n.def.		n.def.
5	11/13/2015 8:45 AM	Transferline 2	5	Master	n.def.		n.def.
6	11/13/2015 8:46 AM	Transferline 2	6	Master	n.def.		n.def.
7	11/13/2015 8:47 AM	Transferline 2	7	Master	n.def.		n.def.
8	11/13/2015 8:48 AM	Transferline 2	8	Master	n.def.		n.def.
9	11/13/2015 8:48 AM	Transferline 2	9	Master	n.def.		n.def.
10	11/13/2015 8:50 AM	Transferline 2	10	Master	n.def.		n.def.
11	11/13/2015 8:51 AM	Transferline 2	11	Master	n.def.		n.def.
12	11/13/2015 8:51 AM	Transferline 2	12	Master	n.def.		n.def.
13	11/13/2015 8:53 AM	Transferline 1	13	Master	n.def.		n.def.
14	11/13/2015 8:53 AM	Transferline 1	14	Master	n.def.		n.def.
15	11/13/2015 8:54 AM	Transferline 1	15	Master	n.def.		n.def.
16	11/13/2015 8:54 AM	Transferline 1	16	Master	n.def.		n.def.
17	11/13/2015 8:55 AM	Transferline 1	17	Master	n.def.		n.def.
18	11/13/2015 8:57 AM	Transferline 1	18	Master	n.def.		n.def.
19	11/13/2015 8:58 AM	Transferline 1	19	Master	n.def.		n.def.
20	11/13/2015 8:58 AM	Transferline 1	20	Master	n.def.		n.def.
21	11/13/2015 9:00 AM	Transferline 1	21	Master	n.def.		n.def.
22	11/13/2015 9:01 AM	Transferline 1	22	Master	n.def.		n.def.
23	11/13/2015 9:01 AM	Transferline 1	23	Master	n.def.		n.def.
24	11/13/2015 9:02 AM	Transferline 1	24	Master	n.def.		n.def.
25	11/13/2015 9:02 AM	Transferline 1	25	Master	n.def.		n.def.
26	11/13/2015 9:03 AM	Transferline 1	26	Master	n.def.		n.def.
27	11/13/2015 9:04 AM	Transferline 1	27	Master	n.def.		n.def.
28	11/13/2015 9:04 AM	Transferline 1	28	Master	n.def.		n.def.
29	11/13/2015 9:05 AM	Transferline 1	29	Master	n.def.		n.def.
30	3/14/2017 10:29...	Gage R&R	105	Master	000000		n.def.

The end of the Process Protocol has a measurement table. This Table lists each measurement done for the measurement plan.

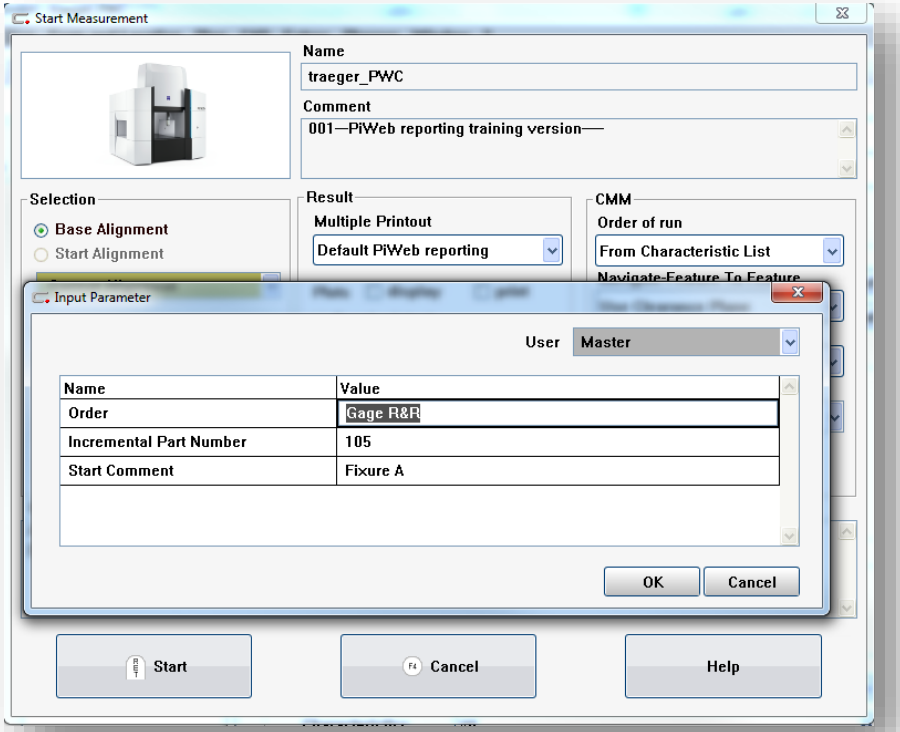
Under status, there is an indication of how many characteristics were in or out of tolerance.

It also lists, the order number, part number, and operator.

Header Parameters

Section 3

Header parameters

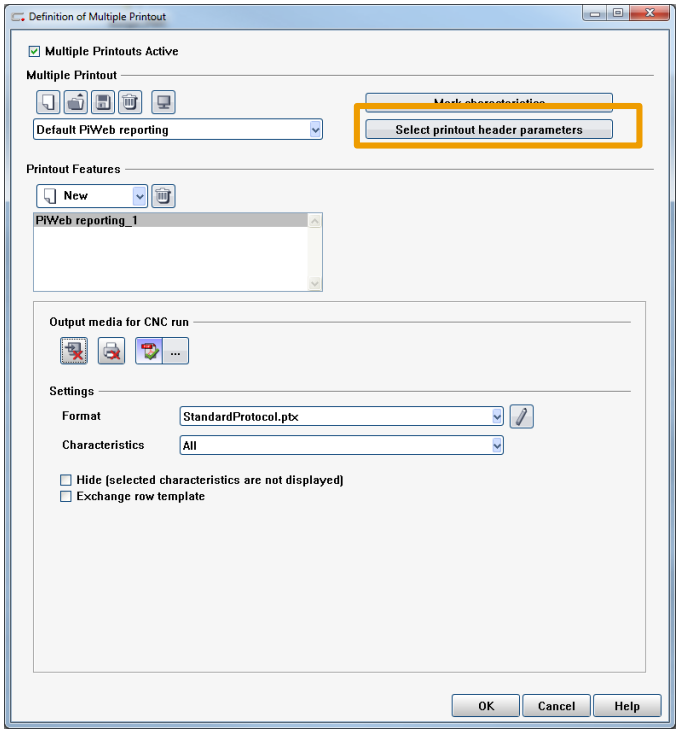


Header Parameters are pieces of information that are usually entered in the run window. Order Number, Incremental Part Number, or Drawing Number are examples of variables you can use.

You can configure what shows up in this window when you go to run your program.

Once you have this setup, your report can be customized to show this information if it doesn't already.

Header Parameters

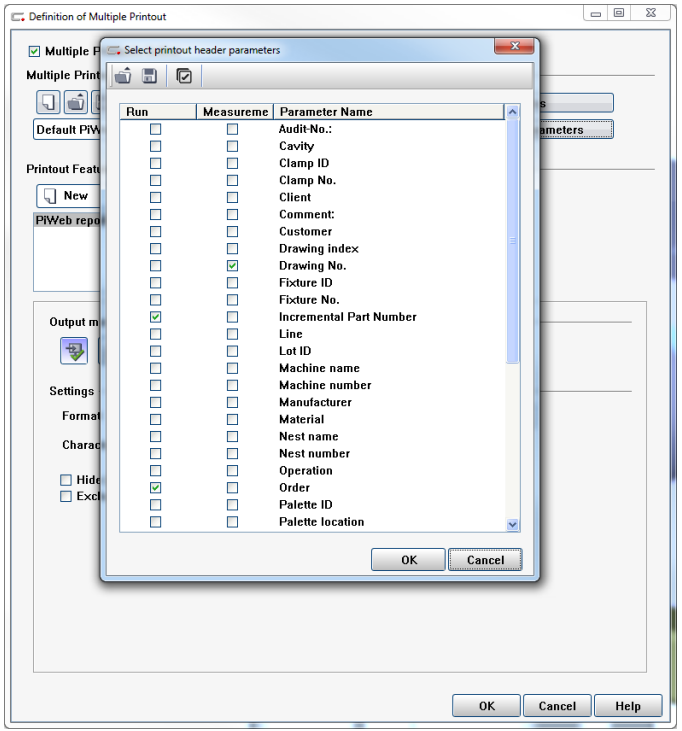


Turn on and off Header Parameters in the Multiple Printout window.

Remember you get to this window by going to the Measurement Tab and clicking Multiple Printout.

Click Select printout header parameters.

Header Parameters

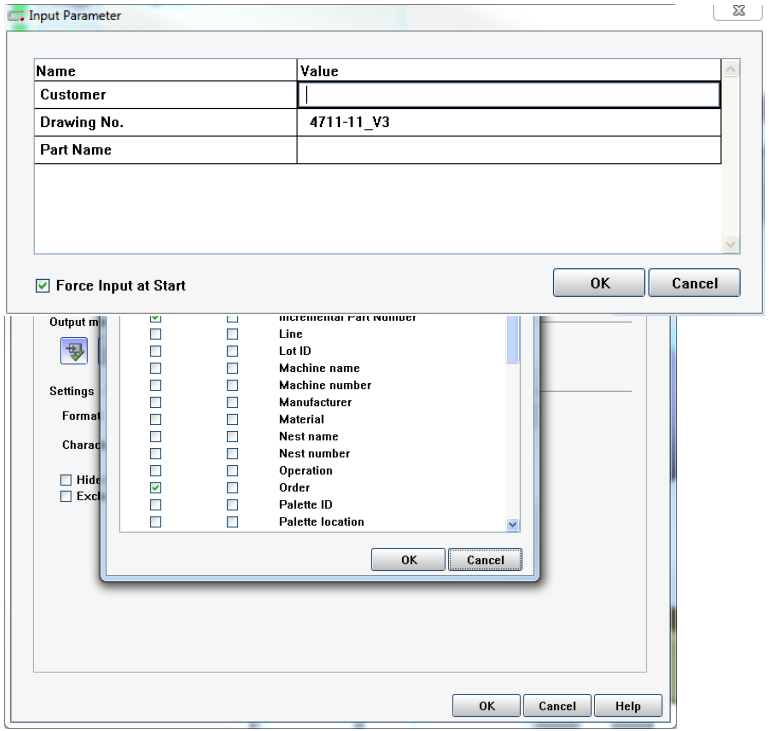


This window has all the parameters that are available. It is possible to create custom parameters, contact Zeiss support for help.

Check any boxes under the Run column to have those parameters available to enter by the operator. Check boxes under the Measurement Plan column to have those parameters available to enter by the programmer, in the resources menu.

For Instance I will check Drawing No., Customer, and Part Name under Measurement Plan. I will check Fixture ID, workpiece serial no., and operation under Run.

Header Parameters- Measurement Plan

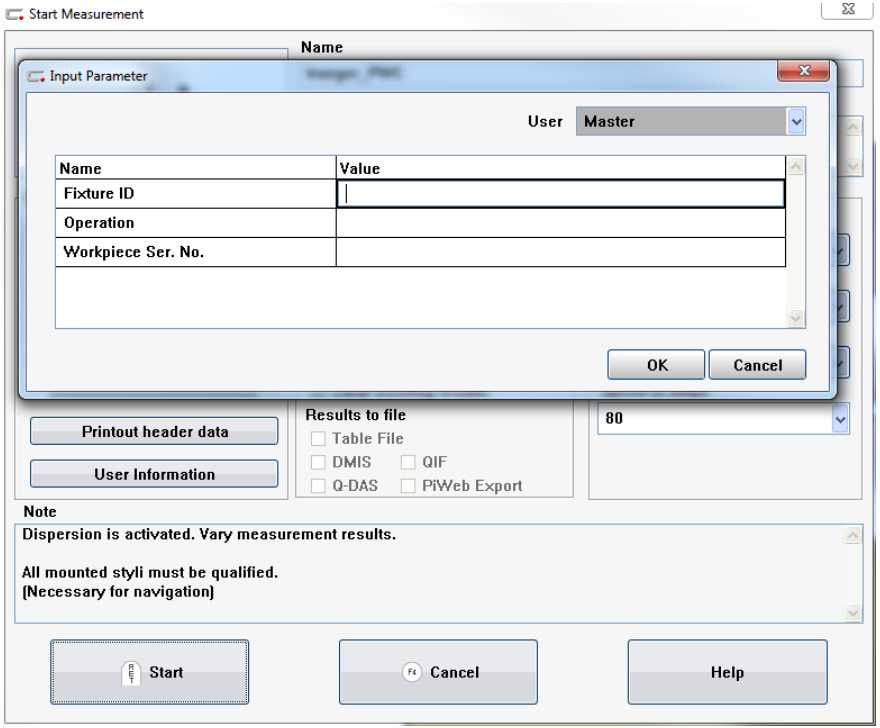


Go to Resources → Printout Header Parameters

The parameters that were checked under the Measurement Plan show up here. This window is meant to enter information that won't change for each run. Things like part name, and drawing number are common.

You can also check Force Input at Start. This will cause the Run Window header parameters to open before a CNC run.

Header Parameters- Measurement Plan

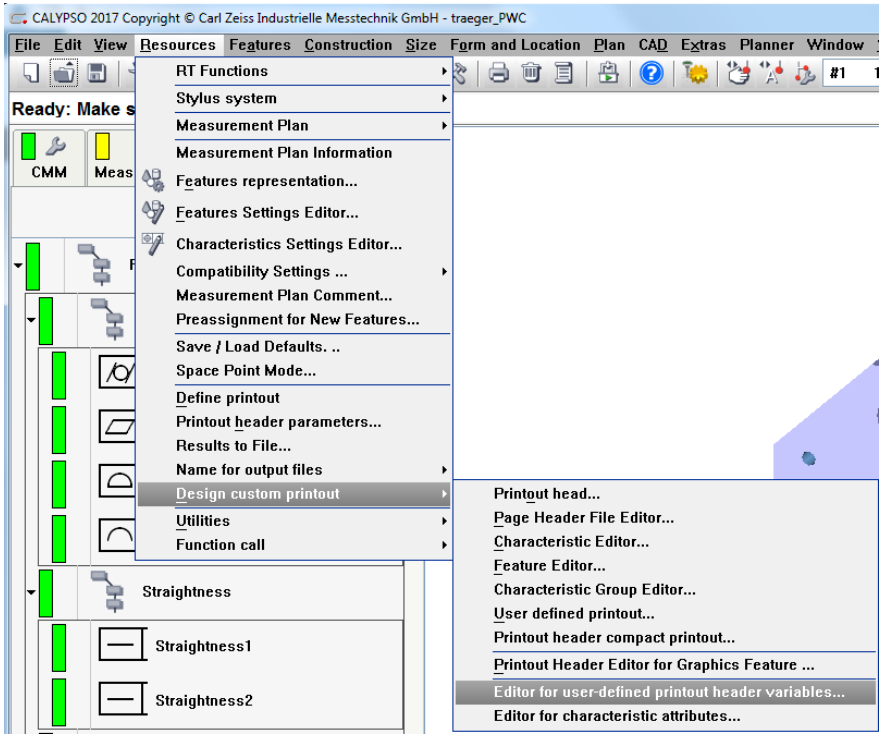


When you go to start a CNC run, the boxes that were checked under the Run column show up.

Alternatively you may select Printout Header data from the run window, if you don't want to force input.

In 2017 you can also change user from this window. If the user is password protect you will be prompted to enter the password when changing.

Header Parameters- Custom Variables

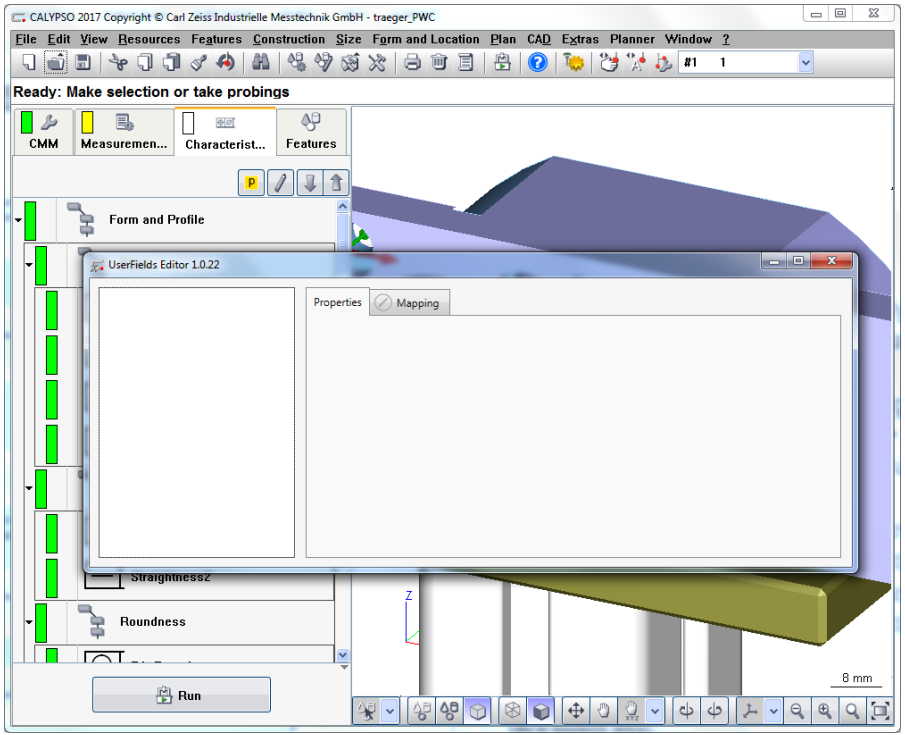


New in Calypso 2017, you can easily create custom header variables.

To do this go to resources → Design custom printout → Editor for user defined printout header variables.

*Notice there is also an editor for characteristic attributes. It will have the same process, but the variables will be for characteristics.

Header Parameters- Custom Variables

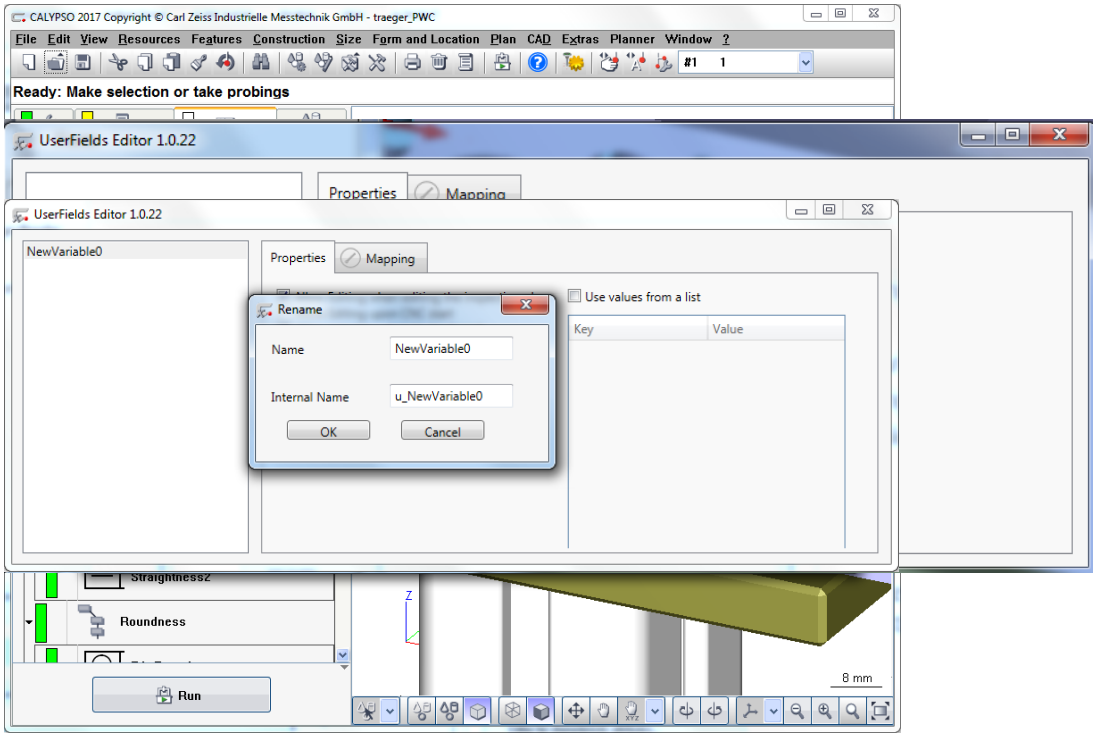


This is the userfields editor.

Userfields and userattributes are custom variables for the run and for characteristics respectively.

Almost everything in this window is done by right clicking. If something isn't working try right clicking.

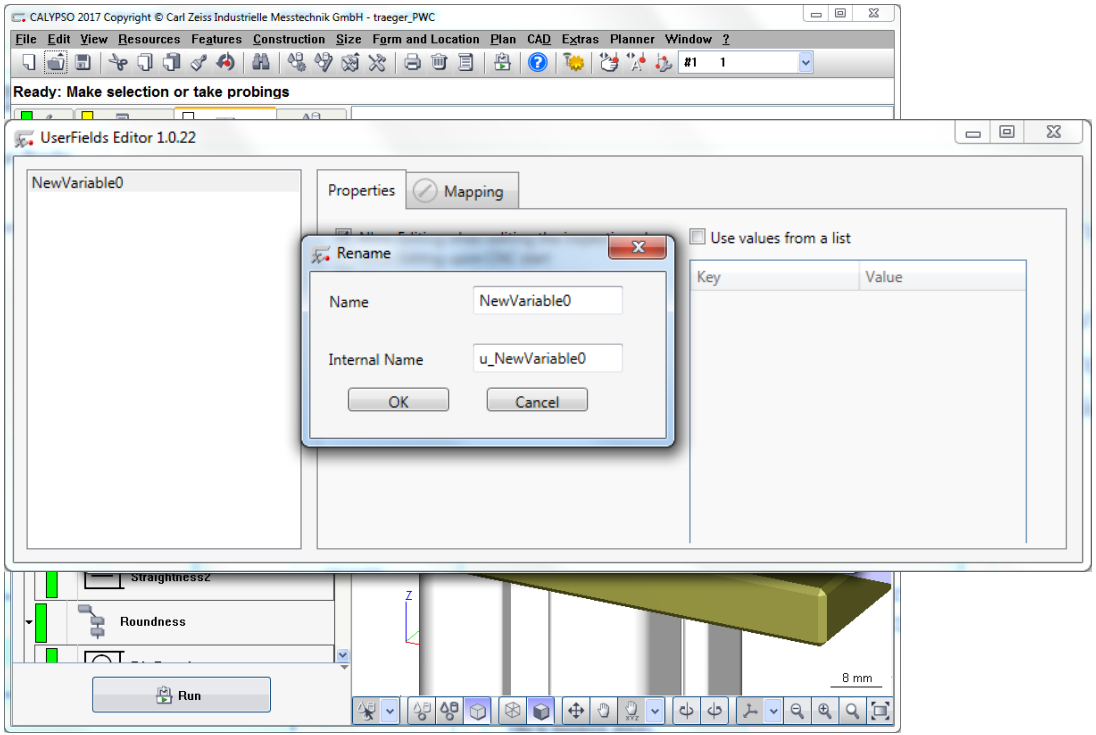
Header Parameters- Custom Variables



First, right click in the column on the left.

You will see this pop up. Select add variable, then right click the variable, and rename the variable

Header Parameters- Custom Variables



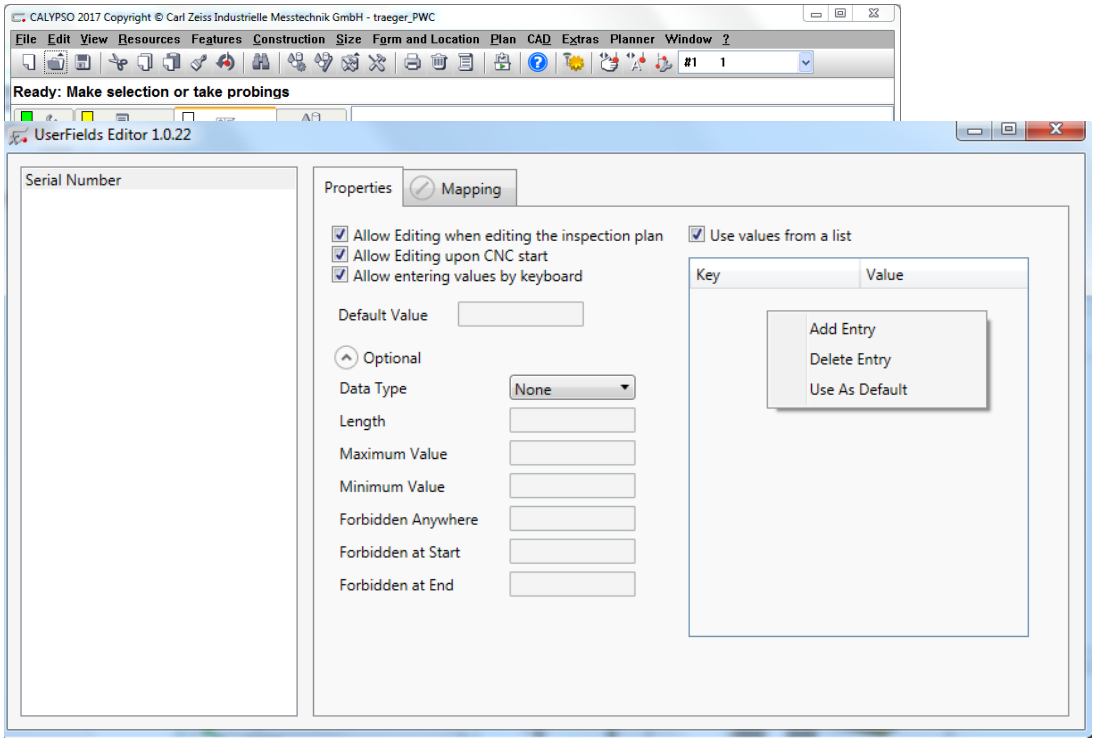
When you rename, this window comes up.

Give the variable a name like Serial Number

And an internal name like u_SerialNumber

The internal name should start with “u_” and should not have spaces or special characters

Header Parameters- Custom Variables

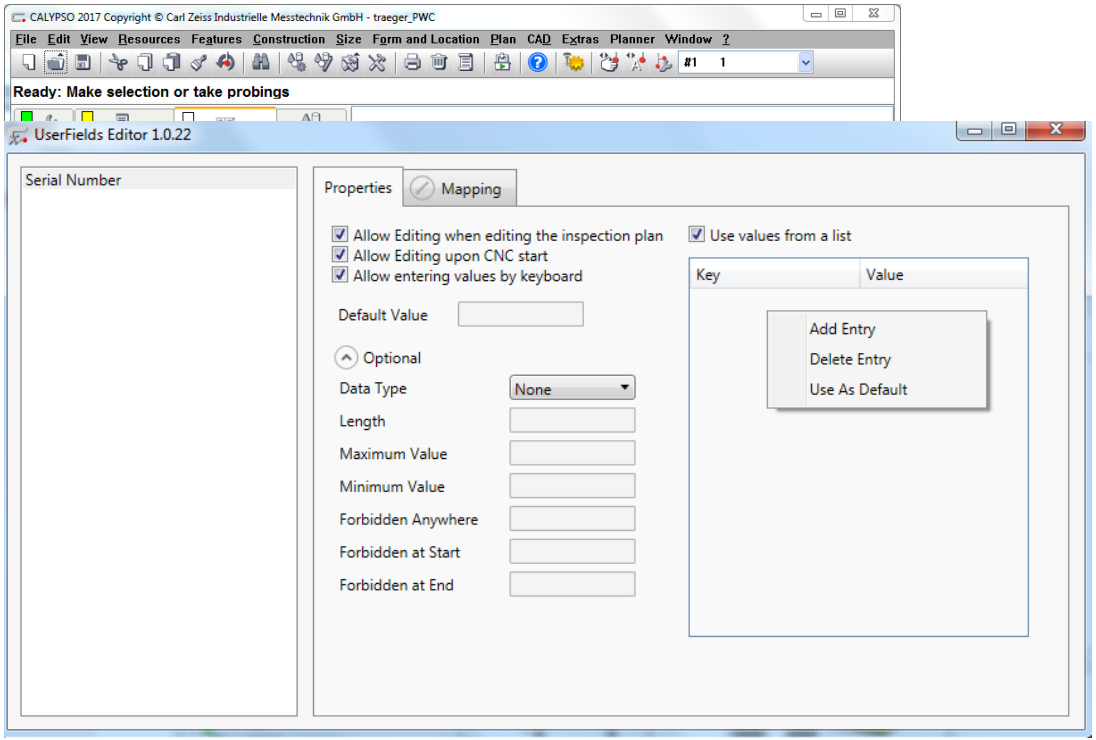


The tabs on the right are where you can define all the parameters of this variable.

Check the first two boxes, this makes the variable selectable in both columns in the printout header parameters.

You must choose at least one of “Allow entering values by keyboard” or “Use values from a list.” You may choose both.

Header Parameters- Custom Variables



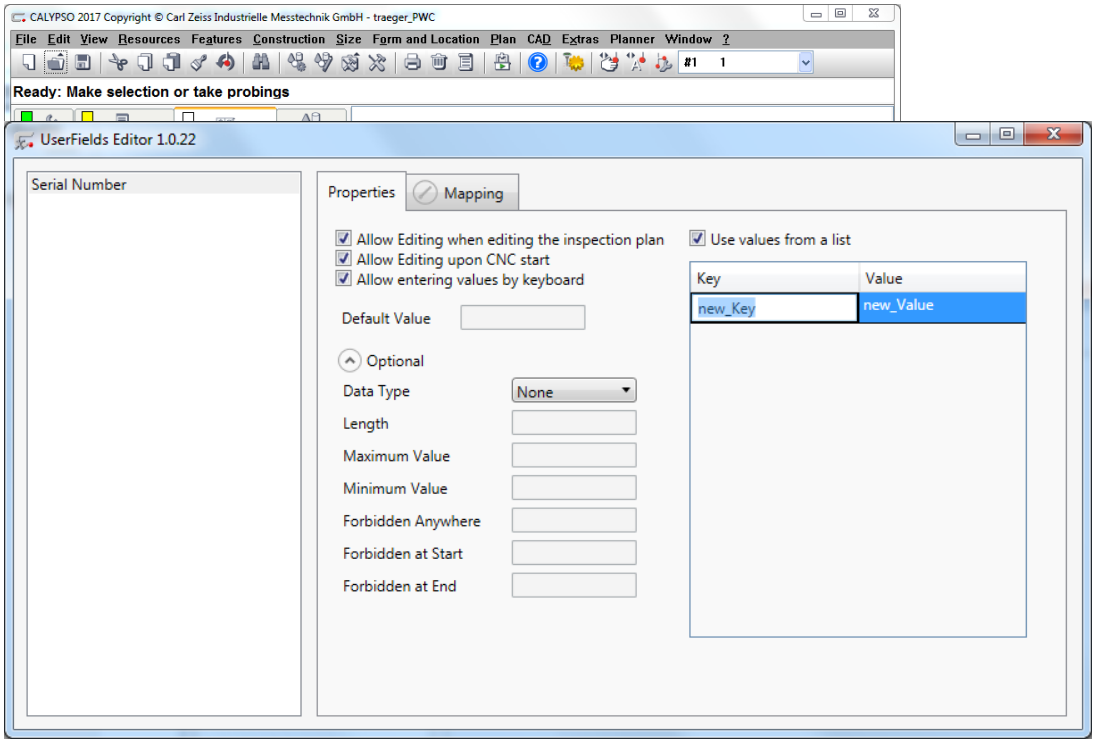
If you check “allow entering values by keyboard“ then the user can type any value.

If you check Use values from a list, you must also define the list options.

Right click in the box under key and value.

Select Add Entry

Header Parameters- Custom Variables

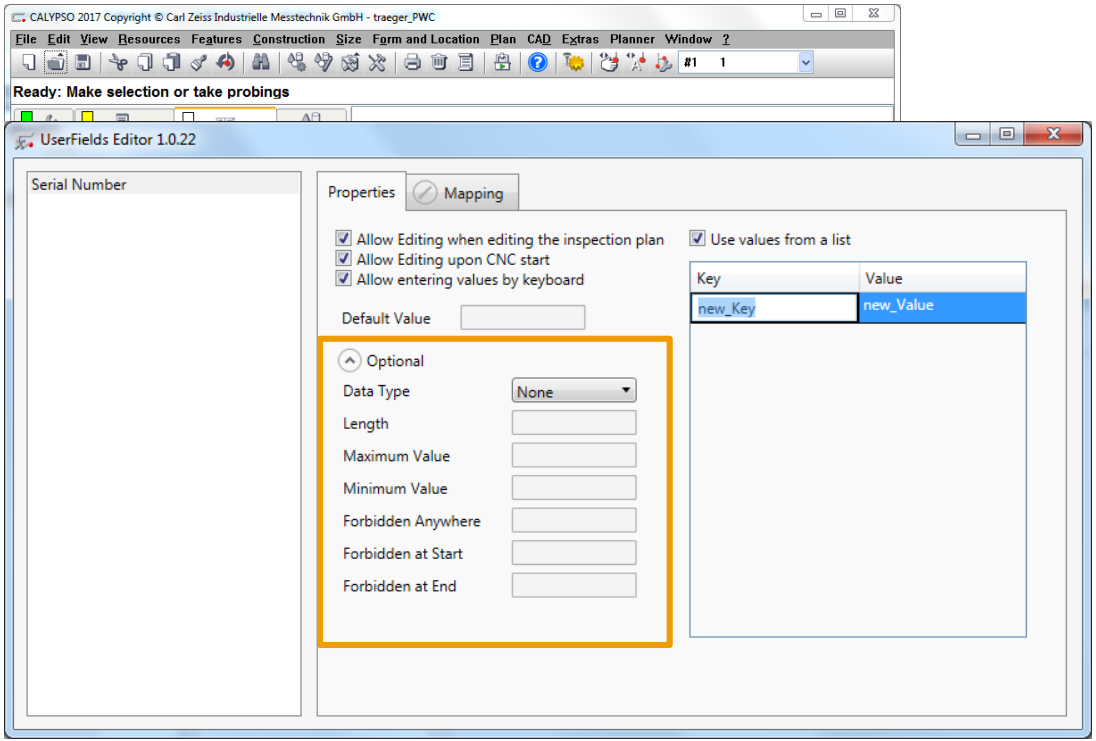


A list entry appears, double click to change the key and the value.

You can right click an entry and designate it as the default. For instance, you can make an entry that is blank or that says “choose a serial number.”

Consider if you want to force operators to select from the list, or if it’s ok to have ANY value.

Header Parameters- Custom Variables



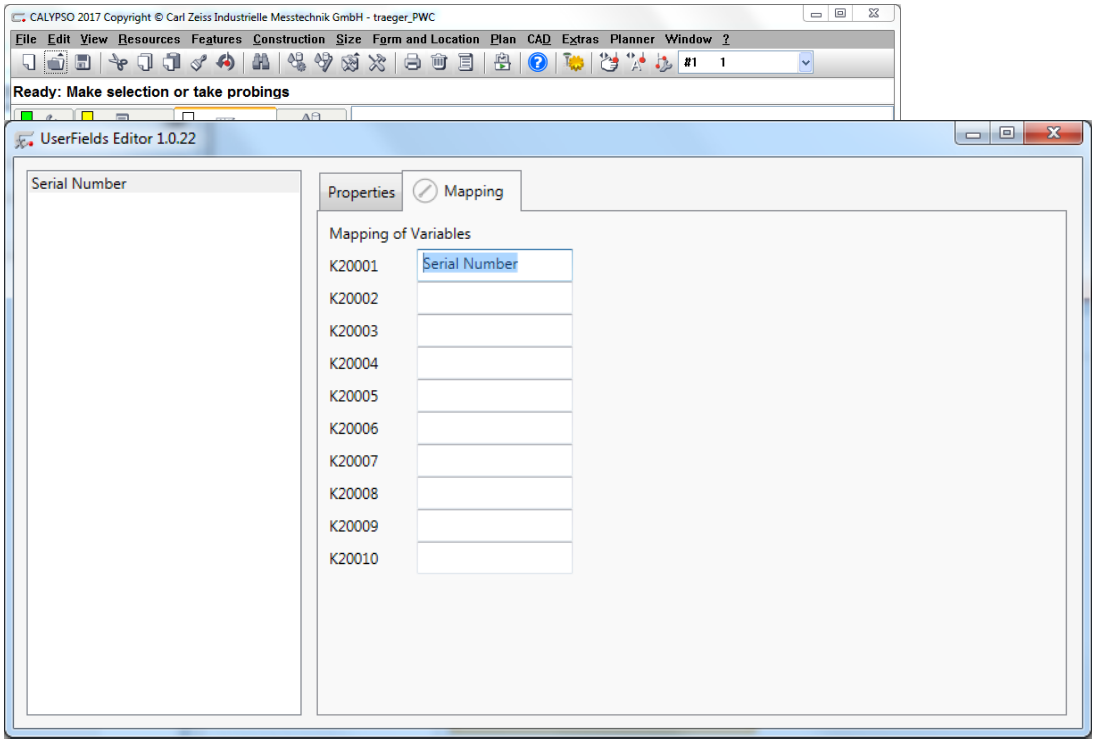
These are more advanced options that affect how the variable is written to the database.

You do not need to change anything here.

You also do not need to do anything with mapping.

At this point your variable should show up in Calypso.

Header Parameters- Custom Variables



The advanced options allow you to change the variable type (interger, floating point, string.) You can also set max length.

You do not have to map it, but it offers increased functionality for advanced PiWeb users. To map the userfiled drag and drop it into a k field.

Content Review

In this module you have learned…

1

Program reporting requirements into Calypso.

2

Use the Zeiss Templates to get the information you need.

3

Program header information into Calypso so it’s available for customizing report headers.