

RENISHAV.

# **Renishaw CNC Reporter**

	CP	1.59	3.50	0.21	0.41	3.50	0.68	0.68
	CPk	1.24	3.24	-0.10	0.10	3.24	0.37	0.37
	Span	0.0480	0.0210	0.1474	0.0924	0.0210	0.0550	0.0550
	Average	0.0220	39.9928	12.5731	-9.9626	0.0073	25.2233	0.0233
	StdDev	0.0209	0.0095	0.0788	0.0410	0.0095	0.0244	0.0244
	Nominal	0.0000	40.0000	12.5000	-10.0000	0.0000	26.2000	0.0000
	Upper Tol	0.1000	0.1000	0.0500	0.0500	0.1000	0.0500	0.0500
		0.1000	40,1000	12.5500	-9.9500	0,1000	25.2500	0.0500
	Lower Tol	-0.1000	-0.1000	-0.0500	-0.0500	-0.1000	-0.0500	-0.0500
		-0.1000	39.9000	12,4500	-10.0500	-0.1000	25,1500	-0.0500
	Max	0.0490	40.0010	12.6498	-9.9085	0.0200	25.2590	0.0590
		0.0010	39.9800	12.5024	-10.0009	-0.0010	25.2040	0.0040
		Part Number	<ul> <li>Operation</li> </ul>	Feature 🖃				
		•			A-1736-2735			
		8						
Sample ID	Sheet Index	01 Z TOP SURF TH POSITION Z	02 INCREE AL DOMMA TOO SIZE	82 DORE 46.0000 TR2 POSITION X	ED DORE 45,0000 TO2 POSITION Y	02 DORE 40.00000 T02 MAT CON	03 WEB 25 20MM 102 542E	03 WEB 25.20MB TR2 M CON
Benchmark	1	0.0490	39.9910	12.5024	-9.9868	0.0090	25.2040	0.0040
Benchmark	2	0.0110	39.9990	12.6498	-9.9541	0.0010	25.2590	0.0590
Benchmark	3	0.0270	39.9800		-9.9085	0.0200	25.2160	0.0160

Import measurement results

	0 1550 8 1000 8 2500 9 0 2000				12.100.80	D CARADELITY RE 191 POD D	01.2			0.0220 0.5450 0.5490 0.5490 0.5490 0.5490	Bax. Value Min. Value Mean fiel Deviation Cp	
	4 1000 4 1500	_			lpechetiane	-0.1900	eripatetint	- opor 0.0710	e Aanng Lind	- 6000	Newgland	
Chick on Down Arrow to select Feeture 4 Filter	Part Number	Operation	Bampie ID	Nominal	Actual	Ovviation	Upper Tolerance	Lower Tolerance	Upper Specified Lond	Lower Specified Limit	Upper Warning Limit	Lower Warring
	Vators	1	Sample 1	0.0000	0.349(4)	0.0490	6 1000	-0.1000	0.9300	-0.1000	00750	0175
en 2 TCP SLEE Ten POSITION 2 en 2 TCP SLEE Ten POSITION 2	Varian						0 1000	4 1000				* activ

0

**Review statistical data** 

						RENISH apply innovation	
		Part Number:		4001	Name:	Nat	124
Probing Inspection Report		Operation:		1	Sample ID:	Samp	
1 Failure(s)		Machine Type:	Demo	Machine	Date:	18/05	
		Work Centre ID:		emo	Units:	Me	
Feature	Neminal	Actual	Declation	Lower Tolerance	Upper Tolerance	In Tolerance?	Casa/fail
A001	1	CNC_1					
OL Z TOP SURF TOL		++					
POSITION 2	0.0000	0.0500	0.0500	-0.1000	0.1000	YES	PASS
WORK OFFSET UPDATED	\$54						
02 BORE 40.00MM TO2		++					
\$25	60,0000	40.0100	0.0100	-0.1000	0.1000	YES	PASS
POSITION X	12,5000	12,5100	0.0100	-0.0500	0.0500	785	PASS
POSITION Y	-10.0000	-10.0300	-0.0300	-0.0500	0.0500	YES	PASS
MAT CON	0.0000	-0.0500	-0.0500	-0.1000	0.1000	YES	PASS
03 WEB 25.20MM T02							
\$28	25,2000	25.2200	0.0300	-0.0500	0.0500	YES	PASS
POSITION Y	25.0000	24.8909	-0.1091				
MAT CON	0.0000	-0.0600	-0.0600	-0.0500	0.0500	NO	FAIL
COMPONENTEND							

**Determine process capability** 

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# About Renishaw CNC Reporter

Renishaw CNC Reporter is a software package designed to display and process inspection results from Renishaw probing software. It allows users to create multiple inspection reports and to track a measured feature between several measured parts.

An additional, complementary application - Data Manager - allows the historical analysis of inspection data that has previously been processed using Renishaw CNC Reporter.

Both CNC Reporter and Data Manager run within the Microsoft Excel spreadsheet package, providing a familiar operating environment in which to work.

We hope that Renishaw CNC Reporter meets your reporting requirements. If you have any questions, or require technical assistance, please contact your local Renishaw representative. Details are available at www.renishaw.com/contact

# Compatibility and system requirements

### Data output package

Renishaw CNC Reporter is compatible with inspection data produced by the following software packages:

- Productivity+<sup>™</sup> Active Editor Pro
- Productivity+<sup>™</sup> GibbsCAM® plug-in
- Renishaw Inspection Plus \*

\* Configuration by Renishaw engineers is required before Inspection Plus data can be used with Renishaw CNC Reporter.

## **PC** specification

For optimum performance ensure the target PC meets or exceeds the following PC specification.

Operating system	Microsoft Windows 7 (or later)
Processor	2.0 GHz Intel Core 2 Duo (or equivalent)
Memory	4 GB RAM, 1 GB hard disk space
Other	CD/DVD drive for software installation Microsoft Excel 2007 (or later): Microsoft Excel 2016 recommended

#### NOTES:

Earlier operating systems (Windows Vista and Windows XP) can be supported by installing Renishaw CNC Reporter V6.02, which is located in the Archive folder of the V6.03.01 installation media.

Version 6.02 is compatible with Microsoft Excel 2003, however Excel 2003 with a Windows 7 operating system is not a supported combination. Additionally, it is not possible to use a 64-bit version of Microsoft Excel in combination with a 32-bit operating system.

Renishaw CNC Reporter is available in English only.

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# Customise the Productivity+ post processor

The Renishaw Productivity+ post processor is a text file with a .RenMF file extension containing a series of commands and switches that can be configured to suit a particular CNC machine tool and application.

The post processor includes a **DELIM#** function that is used to configure the system to output delimited data. When the post processor is first installed, the **DELIM#** function is disabled, rendering the function inactive. In order to use Productivity+ generated inspection data in Renishaw CNC Reporter, the **DELIM#** function must be activated and the appropriate delimiter character, for example "/" must be defined.

Example post processor content:

DELIM# function inactive with "/" delimiter character

```
;_DELIM# /
```

DELIM# function active with "/" delimiter character

\_delim# /

DELIM is located in the Reporting section of the Renishaw .RenMF editing tool.

# Indicating a new component in an inspection report

When inspecting a batch of components it is important to identify each instance of a new component being inspected. This is achieved by outputting a 'trigger word' at the end of the Productivity+ inspection cycle using DPRNT (or equivalent) followed by a particular word or string of characters added as, for example, a G-code block.

A sample G-code block for an ISO controller would be:

```
POPEN
G103P1
DPRNT[COMPONENTEND]
G4P50
G103
PCLOS
```

**CAUTION:** The 'trigger word' used within the macro program must exactly match the **New Part Inspection Sheet** "**Trigger Word**" defined in the *Initial Set Up Data* panel in the **Start** tab of Renishaw CNC Reporter.

Sample output results (as per the Demo Results. txt file) would appear:

```
PNUM-A001/OPERATION/1/
02 BORE 40.00MM T02/
SIZE/40.0000/39.991/-0.009/-0.1000/0.1000/
POSITION X/12.5000/12.5024/0.0024/-
0.0500/0.0500/
POSITION Y/-10.0000/-9.9868/0.0132/-
0.0500/0.0500/
MAT CON/0.0000/0.009/0.009/-0.1000/0.1000/
03 WEB 25.20MM T02/
SIZE/25.2000/25.204/0.0040/-0.0500/0.0500/
POSITION Y/25.0000/24.890^'
                            New Part
0.0000/0.0000/
                          Inspection Sheet
                                       .0500/
MAT CON/0.0000/0.0040/0.(
                           "Trigger Word"
COMPONENTEND/
PNUM-A001/OPERATION/1/
```

/ 02 BORE 40.00MM T02/ SIZE/40.0000/39.999/-0.0010/-0.1000/0.1000/ POSITION X/12.5000/12.6498/0.1498/-0.0500/0.0500/ POSITION Y/-10.0000/-9.9541/0.0459/-0.0500/0.0500/ MAT CON/0.0000/0.001/0.001/-0.1000/0.1000/ / 03 WEB 25.20MM T02/ SIZE/25.2000/25.259/0.059/-0.0500/0.0500/ POSITION Y/25.0000/24.97! New Part 0.0000/0.0000/ MAT CON/0.0000/0.059/0.0! "Trigger Word" 500/

COMPONENTEND/

3

# Installation and product registration

### Install Renishaw CNC Reporter

NOTE: Admin rights for the target PC are required to install Renishaw CNC Reporter.

Insert the Renishaw CNC Reporter software disc into the CD/DVD drive.

Select the appropriate installer (32-bit or 64-bit) and follow the on-screen instructions to complete the installation.

If the installer cannot detect an installed copy of Microsoft Excel, notification will be given and the installation process will cease.

A dialog will indicate that additional, prerequisite software packages are required by Renishaw CNC Reporter: ensure the tick boxes are selected to install these packages.

Ø	Renishaw CNC Reporter Setup			×
	Prerequisites Select which prerequisites will be installed	1		Ð
	Name	Required	Found	Action
	SQL Server Compact 3.5 SP1	2.80 or hig	6.1.7601	Must Install Skip
Adv	vanced Installer	< Back	Next >	Cancel

**NOTE:** When installing Renishaw CNC Reporter on PCs with early versions of Microsoft Windows and Microsoft Excel, additional components may also be installed.

Once installation is complete a Renishaw CNC Reporter icon will be visible on the PC desktop.

Double-click this icon (or single-click and press Enter) to open the application.

On opening, a 'Security Warning (Macros have been disabled)' dialog may be displayed in the Microsoft Excel header.

Select the option to enable content / trust the publisher and allow the application to run.

Depending on the target PC configuration and permission settings, a 'Macro Security Trust Settings' dialog may be displayed.

Renishaw CNC Reporter will close down allowing the 'trust access to Visual Basic / VBA Project' to be checked.

Follow the instructions provided within the dialog to resolve the issue.

# **Renishaw CNC Reporter screen layout**

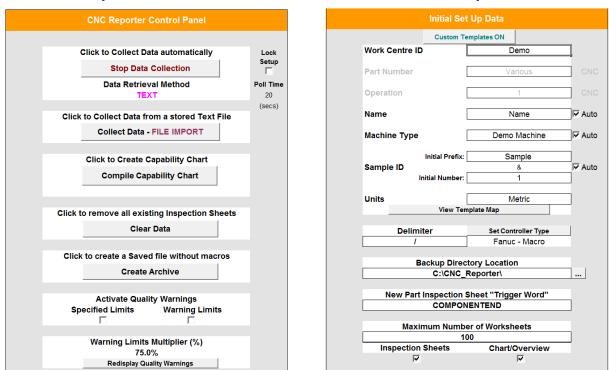
(For detailed operational information, please see "Using Renishaw CNC Reporter" on page 9.) Use the tabs at the bottom of the screen to navigate through Renishaw CNC Reporter.





Source - De	mo - TEXT	Demo - CNC Reporter		v ()
indow	p Data Collection			
			Initial Set Up Data	
	Click to Collect Data automatically Loc Stop Data Collection " Data Retrieval Method TEXT 20 Click to Collect Data from a stored Text File Collect Data - FILE IMPORT	<sup>p</sup> apply innovation <sup>™</sup>	Custom Templates ON United States Templates ON United States Templates ON Part Number Part Number Operation Operation Name Name Name Valo Machine Type Demo Machine Valo	
	Click to Create Capability Chart Compile Capability Chart Click to remove all existing Inspection Sheets		Initial Prefix: Sample Sample ID Initial Number: 1 Units View Template Mag	
	Clear Data Click to create a Saved file without macros Create Archive		Delimiter Set Controller Type 7 Fanuc - Mecro Backup Directory Location C:ICNC_Reporteri	
	Activate Quality Warnings Specified Limits Warning Limits		New Part Inspection Sheet "Trigger Word" COMPONENTEND Maximum Number of Worksheets	
	Warning Limits Multiplier (%) 75.0% Redisplay Quality Warnings		100 Inspection Sheets Chart/Overview	

The Renishaw CNC Reporter Start tab comprises two panels:



# CNC Reporter Control Panel

# **Initial Set Up Data**

The *CNC Reporter Control Panel* is used to select the data file for import and to initiate the creation of the **Capability Chart**. Options allow the calculation of warning limits, derived from tolerance values within the inspection data, and the display of **Specified Limits** (tolerance) and **Warning Limits** on the chart.

The *Initial Set Up Data* panel is used to define information contained within the header section of each **Probing Inspection Report**, and specifies how the inspection of a new component and the end of a report are identified within the imported inspection data file.

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### **Capability Chart Data tab**



The **Capability Chart** provides a graphical representation of the variation in measured data for a single feature across multiple components, along with associated statistical analysis data. User selectable filters allow data to be refined as necessary.

**NOTE:** The **Capability Chart** can only display toleranced results data. If the imported results file does not contain toleranced data, CNC Reporter is unable to populate the chart and a dialog advising 'There was no TOLERANCED data to process' will be displayed.

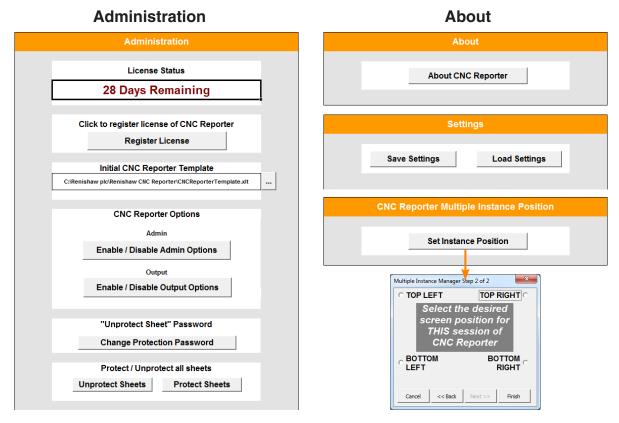
	СР	4.71	0.79	1.18	1.18	1.57	2.36	0.26
	CPk	2.12	0.47	0.71	0.24	1.02	0.71	0.18
	Span	0.0100	0.0600	0.0200	0.0200	0.0300	0.0100	0.0900
	Average	0.0550	40.0400	12.5200	-10.0400	-0.0350	25.2350	-0.0150
	StdDev	0.0071	0.0424	0.0141	0.0141	0.0212	0.0071	0.0636
	Nominal	0.0000	40.0000	12.5000	-10.0000	0.0000	25.2000	0.0000
	Upper Tol	0.1000	0.1000	0.0500	0.0500	0.1000	0.0500	0.0500
	USL	0.1000	40.1000	12.5500	-9.9500	0.1000	25.2500	0.0500
	Lower Tol	-0.1000	-0.1000	-0.0500	-0.0500	-0.1000	-0.0500	-0.0500
	LSL	-0.1000	39.9000	12.4500	-10.0500	-0.1000	25.1500	-0.0500
	Max	0.0600	40.0700	12.5300	-10.0300	-0.0200	25.2400	0.0300
	Min	0.0500	40.0100	12.5100	-10.0500	-0.0500	25.2300	-0.0600
		Part Number 🖃	Operation 🗸	Feature	1			
					A001			
		8			1			
Sample ID	Sheet Index	01 Z TOP SURF T01 POSITION Z	02 BORE 40.00MM T02 SIZE	02 BORE 40.00MM T02 POSITION X	02 BORE 40.00MM T02 POSITION Y	02 BORE 40.00MM T02 MAT CON	03 WEB 25.20MM TO2 SIZE	03 WEB 25.20MM T02 MAT CON
Sample 1	1	0.0500	40.0100	12.5100	-10.0300	-0.0500	25.2300	-0.0600
		0.0600	40.0700	12.5300	-10.0500	-0.0200	25,2400	0.0300

# **Overview tab**

The **Overview** tab displays actual measured data in colour coded data cells, providing a visual indication of features which are in tolerance (green), approaching tolerance (yellow) and out of tolerance (red).

**NOTE:** The **Overview** tab can only display toleranced results data. If the imported results file does not contain toleranced data, the **Overview** tab will remain empty.

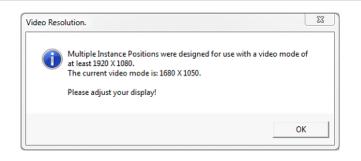
#### Admin tab



The Admin tab displays the current license status, and allows background functionality (as described in the 'Advanced features' section) to be set.

The *CNC Reporter Multiple Instance Position* panel provides the option to run four instances of CNC Reporter concurrently. Select **Set Instance Position** and use the *Multiple Instance Manager* to position the windows.

**NOTE:** In order to use the multiple instance function, a minimum screen resolution of  $1920 \times 1080$  is required. If this minimum resolution is not met, the following dialog will be displayed.



#### **Templates tab**

The **Templates** tab allows users to vary the templates used for **Probing Inspection Reports** depending on the part number of the inspected component.

**NOTE:** To access the **Templates** tab, select **Custom Templates OFF** in the *Initial Set Up Data* panel within the **Start** tab. This setting will then toggle to **Custom Templates ON** and the **Templates** tab will be visible.



Current Part PNUM-B002		New Part Number "Trigger Word" PNUM-	Exclude Trigger Word
		Increase Available Input Rows	Archive By Part
Part Number	Operation	Template (Click in Cell to define Template File (*.xlt) Location)	Metric / Imperial
PNUM-A001	1	C:Renishaw plc:Renishaw CNC ReporteriCNCReporterTemplate.xit	Metric
PNUM-B002	1	C:Renishaw plc/Renishaw CNC Reporter/EngineeringLogoTemplate.xlt	Metric

# **Using Renishaw CNC Reporter**

# Initial configuration

When first run, Renishaw CNC Reporter will display a message indicating that registration is required. Until registration is complete the application will run using a time limited license.

The time limited license allows the application to operate for 30 days and limits analysis capability to the Demo Results.txt file (supplied with the application).

**NOTE:** License status is always displayed in the *Administration* panel (located on the **Admin** tab - as shown on page 7).

## **Register Renishaw CNC Reporter**

Navigate to the **Admin** tab and select **Register License** to display the **CNC Reporter License Registration** dialog.

License Registration RENI apply inno	SHAW. do vation™	
	Reporter Registration	
Work Centre ID Serial ID	Demo	 RENISHAW CNC Reporter
Company ID	•	Company ID
Machine ID Acti	FB2BE4D34675 vation Code	Activation Code
Vali	date License	
Regis	stration Status	
Trial Version	28 Days Remaining	
	Exit	

In the **Work Centre ID (WCID)** field enter a unique name for the CNC machine tool used to gather inspection data. (The default 'Demo' entry is only valid for use with the Demo Results.txt file and cannot be used with real inspection data files.)

In the remaining fields enter the seven digit **Serial ID**, the seven digit alpha-numeric **Company ID** and the 32 digit alpha-numeric **Activation Code** (provided on a product label on the rear of the packaging).

#### Select Validate License.

Read, acknowledge and accept the resulting software product license agreement.

Renishaw CNC Reporter is now activated and available for unlimited use.

**NOTE:** If Renishaw CNC Reporter is uninstalled from a PC and then reinstalled at a later date it is not necessary to reactivate the software as the PC will retain license information.

### Initial Set Up Data panel

Before data is imported into Renishaw CNC Reporter, it is necessary to populate the *Initial Set Up Data* panel (within the **Start** tab) to define the information which will be displayed in the header section of **Probing Inspection Reports**.

Initial Set	t Up Data		
Custom Te	m plates OFF		
Work Centre ID	D	əmo	
Part Number	Va	rious	
Operation		1	
Name	Na	ame	
Machine Type	Demo	Machine	
Initial Prefix:	Sa	mple	
Sample ID		&	
Initial Num ber:		1	
Units		etric	
View Tem	plateMap		
Delimiter	Set Cont	roller Type	
1	Fanuc	- Macro	
Backup Direc	tory Location Reporter\	1	
New Part Inspection S	•	er Word"	-
СОМРОМ			
Maximum Numb		eets	
10			
Inspection Sheets	Charl/C	Dverview	
		<b>V</b>	

#### Work Centre ID

Unique name of the CNC machine tool used to gather the inspection data which will be imported.

#### Part Number

Number or identifier of the part for which inspection data is to be imported.

#### Operation

Operation name or number associated with the inspection data to be imported.

#### Name

Company or operator name associated with the inspection data to be imported.

#### **Machine Type**

The machine type or name from which the inspection data is to be imported.

#### Sample ID

An automatically generated, incremental value comprising a prefix and numeric value.

#### **Initial Prefix**

Can be either a text or numeric value.

#### **Initial Number**

A numeric value which will be incremented with each new inspection report.

#### Units

Measurement units: Metric or Imperial/Inches.

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#### Delimiter

Defines the delimiter character used in the inspection data file to be imported. The default character is "/".

See "Customise the Productivity+ post processor" on page 2 for further information, and for an example of how the delimiter character should appear as part of the function.

#### Set Controller Type

Click Set Controller Type to initiate the Set Controller Wizard.

Within the wizard select the probing software used for data collection then press Next.

CNC Reporter Step 1 of 2	X
Select the Renishaw	Probing Software Type
	Software Type
	Inspection (Plus)
	C Productivity Plus (pre v1.7)
	C Productivity Plus
Cancel	< <back next="">&gt; Finish</back>

Select the CNC controller type then press **Finish**. (For CNC machine controllers similar to Fanuc, select the arrow to the right of the **Fanuc** field and select the appropriate control from the drop-down list.)

CNC Reporter Step 2 of 2	X
Please indicate the C	CNC Controller type for the Machine Tool
	Image: Fanuc       C       Siemens       C       Qkuma       C       Heidenhain
Cancel	<< Back Next >> Finish

**NOTE:** Some NC control platforms which are compatible with Renishaw probing software do not support the output of inspection report data and are therefore not compatible with Renishaw CNC Reporter.

#### **Backup Directory Location**

Defines the location to which Excel Archives and data Text Logs are stored.

#### New Part Inspection Sheet "Trigger Word"

Defines the word used in the inspection data to indicate the end of a report.

See also "Indicating a new component in an inspection report" on page 2.

#### **Maximum Number of Worksheets**

Defines the number of inspection reports that will trigger the automatic archive process. The entered value must be between 5 and 400 inspection reports.

See "Archive data" on page 17 for more information.

#### Inspection Sheets checkbox

When this tick box is checked, all **Probing Inspection Reports** will be archived during the automated archive process.

#### Chart/Overview checkbox

When this tick box is checked, the **Capability Chart** and **Overview** sheets will be archived during the automated archive process.

NOTE: Select Inspection Sheets and Chart/Overview checkboxes to ensure all data is archived.

# **Importing data**

Two methods of data import are available: **FILE IMPORT** and **REAL TIME**.

## **Data collection - FILE IMPORT method**

**FILE IMPORT** is a manual process which imports all inspection data from a text (or similar) file in a single operation. This is expected to be the most common method of data import.

Select Collect Data - FILE IMPORT from the Start tab.

ource - Demo - TEXT		
Connection Disabled at Icols Data Window Help		
Collect Data - REAL TIME δ 📾 🛍 • 🟈 🗐 • 🔍 •   🥮 Σ • 👌 🛣 🖗	130% - (	④ Arial • 10 • B I U   至 至 强   弱 % • ‰ ‰ 算
Pause Resume		
View Capability Chart		
CNC Reporter Control Panel		
		RENISHAW 🖾 📃
Click to Collect Data automatically	Lock	
Collect Data - REAL TIME	Setup	apply innovation <sup>™</sup>
Data Retrieval Method	Poll Time	
TEXT	20 Open	ि <mark>स्ट</mark>
Click to Collect Data from a stored Text File	(50	Look in: Renishaw CNC Reporter 💌 🕲 📲 🕄 🖬 🔹 Tools 🔹
		Name Date modified Type Size
Collect Data - FILE IMPORT	м	In ages
		ocuments Demo Results Readme
Click to Create Capability Chart		
Compile Capability Chart		Desktop
	My	Cocuments
Click to remove all existing Inspection Sheets		
Clear Data		
	My	/ Computer
Click to create a Saved file without macros		File name:  Qpen
Create Archive		y Network Places Files of type: Text Files  Cancel

Click **OK** in the **Import a Data File** dialog, then navigate to and select the data file for import.

**NOTE:** By default the Open dialog will display files with a .txt file extension. This can be modified and any file type supported by Microsoft Excel can be imported.

### **Data collection - REAL TIME method**

The **REAL TIME** data import method periodically accesses (polls) a file to retrieve inspection data. The time between each access, the poll time, can be any whole value between 5 and 999 seconds (default setting is 20 seconds) and is defined in the **Poll Time** field. (See also "Poll time" on page 23.)

If the file is locked by another application, CNC Reporter skips over the file by the defined poll time.

To import data, select **Collect Data - REAL TIME** (from the *Floating Window* or the *CNC Reporter Control Panel* within the **Start** tab).

	Source - Demo - TEXT	
	Connection Disabled at Iools Data Window Help	
Floating	Collect Data - REAL TIME 🕴 🛍 🔹 🗸 📝 🔊 - 🔍 - ] 🥮 Σ - 🏦 🕌 🦓	130% • 🔘 🛃 Arial • 10 • B I U   至 👅 国 🗐 % , 🎎 🕮   導
window	Pause Resume	
	View Capability Chart	
	CNC Reporter Control Panel Click to Collect Data automatically Collect Data - REAL TIME Data Retrieval Method TEXT	Lock Setup Pol Time 200000 € 2 2
		(se open
	Click to Collect Data from a stored Text File	Look in: 🎉 Renishaw CNC Reporter 💽 🎯 📲 🖏 🗙 🔛 📰 🔻 Tools 👻
	Collect Data - FILE IMPORT	Name Date modified Type Size Wy Recent Document Demo Results
	Click to Create Capability Chart	Readme
	Compile Capability Chart	Desktop
	Click to remove all existing Inspection Sheets Clear Data	My Documents
	Click to create a Saved file without macros	My Network File game:
	Create Archive	Places Files of type: Text Files Cancel

In the resulting dialog, navigate to and select the data file to import.

**NOTE:** By default the **Open** dialog will display files with a .txt file extension. This can be modified and any file type supported by Microsoft Excel can be imported.

Once all data has been imported the file is deleted, but the application will continue to interrogate the folder location periodically (as defined by the poll time) for any additional results files that may be added.

# **Review and analyse data**

## **Review data: Probing Inspection Reports**

A **Probing Inspection Report** is created for each inspected component, with a new worksheet created for each report. Worksheet tabs are named sequentially using the data from the **Initial Prefix** field and the **Initial Number** field (defined in the *Initial Set Up Data* panel of the **Start** tab).

Each report comprises a header section and a body section.

										Header
									$\geq$	section
		Dort Number		201	Name	No				
Prohing Inspection Report			A	1						
			Demo	Machine	Date:					
		Work Centre ID:			Units:			レフ		
Feature	Nominal	Actual	Deviation	Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Notes		
A001	1	CNC_1								
		0.0500	0.0500	-0.1000	0.1000	YES	PASS			
WORK OFFSET UPDATED	\$54									
	40,0000	40.0100	0.0100	-0.1000	0 1000	VES	PASS			
POSITION X					0.0500		PASS			
POSITION Y	-10.0000	-10.0300	-0.0300	-0.0500	0.0500	YES	PASS			
MAT CON	0.0000	-0.0500	-0.0500	-0.1000	0.1000	YES	PASS	] '		Bodv
									$\geq$	Body section
03 WEB 25.20MM T02									(	section
SIZE	25.2000	25.2300	0.0300	-0.0500	0.0500	YES	PASS			
POSITION Y		24.8909	-0.1091							
MAT CON	0.0000	-0.0600	-0.0600	-0.0500	0.0500	NO	FAIL			
COMPONENTEND										
								1 )		
								レノ		
	12 TOP SUBF T01           12 TOP SUBF T01           OSSITION 2           OSSITION 2           D00R OFFSET UPDATED           12 EORE 40.000MI T02           HZE           OSSITION X           OSSITION Y           MAT CON           VIE 83.20MM T02           HZE           OSTION Y           MAT CON           COMPONENTEND	It Fallure(s)           Stature         Nominal           1         1           101 Z TOP SUBS T01         0.0000           VORK OFFSET UPDATED         554           22 TOPE 40,000M T02         9           VEX         40,0000           VOSITION X         12,3600           VOSITION Y         -10,0000           VEX E         25,0000           VOSITION Y         25,0000           VAT CON         0.0000           VEX E         25,0000           VAT CON         0.0000           VEX E         25,0000           VAT CON         0.0000           VEX E         25,0000           VAT CON         0.0000	It Fallure(s)         Machine Type:           Itstature         Neminal         Actual           001         1         CNC_1           12 TOP SUBF T01         0         0           001001         2         0.0000         0.0500           NORR OFFSET UPDATED         554	Problem (nspection Report L failure(s)         Operation: Machine Type: Uwrk Centre ID: Work Centre ID: Do D           Stature         Neminal         Actual         Deviation           1         CNC_1         Deviation         Deviation           302 1709 SUBF TO1         -         -         -           202 2006 F001         0.0000         0.0500         0.0500           VORK OFFLUPPATED         254         -         -           22 2064 40.0000         40.0100         0.0100         -           VORK OFFLUPPATED         254         -         -           22 2064 40.0000         40.0100         0.0100         -           VORK OFFLUPPATED         254         -         -           22 2064 40.0000         40.0100         0.0100         -           VEB 28 2000         40.0100         -         -           VEB 28 2000         25.2000         25.2300         -           VEB 28 2000         25.2000         25.2300         -           VEB 28 2000         40.0500         -         -           VEB 28 2000         20.0500         -         -           VEB 28 2000         20.0500         -         -           VEB 28 20000         <	Probing inspection Report 1 Failure(s)         Operation: Machine Type: UWK Centre UP: Dermo Machine Setture         1 Dermo Machine Dermo Machine Setture         1 Dermo Machine Dermo Machine Setture         1 Dermo Machine Setture           1         OVC_1         Periation         Lewer. Tolerance           1         OVC_1         Periation         Lewer. Tolerance           1         OVC_1         Periation         Lewer. Tolerance           12.1 TOP SURE Y01         0.0000         0.0500         -0.1000           12.1 TOP SURE Y01         0.0000         0.0500         -0.1000           12.2 ADR 4.000MM T02         0.0100         0.0100         -0.1000           12.2 BOR 4.000MM T02         0.0200         12.5100         0.0200         -0.0500           NAT CON         0.0000         -0.0500         -0.0500         -0.0500           NAT CON         0.0000         25.2000         25.2000         -0.0500           SURE 23.00MM T02         0.0000         -0.0500         -0.0500           SURE Y         25.2000         25.2000         -0.0500         -0.0500           SURE 23.00MM T02         0.0000         -0.0500         -0.0500         -0.0500           SURE 23.00MM T02         0.0000         -0.0500         -0.0500         <	Problem (spection Report L Fallure(s)         Operation: Machine Type: brow         1 Demo         Sample (D): Demo           Stature         Nominal         Actual         Deviation         Lever: Tolerance         Upper: Tolerance           soot         1         CVC_1         Deviation         Lever: Tolerance         Upper: Tolerance           N2 TOP SUBE T01         1         CVC_1         Lever: Tolerance         0.000         0.000           N2 TOP SUBE T01         0         0.0000         0.0500         0.0000         0.0000           N2 TOP SUBE T01         554         C         C         C         C           NORK OFFSETU VPOATED         554         C         C         C         C           Static         40.0000         40.0100         0.0100         -0.1000         0.0000           Static         40.0000         12.3100         0.0100         -0.0500         0.0500           Static         11.5000         12.3108         0.0100         -0.0500         0.0500           Static         11.5000         12.0108         -0.0500         -0.0500         0.0500           Static         11.5000         12.3108         0.0100         -0.0500         0.0000           Sta	Problem inspection Report L Fallure(s)         Operation: Machine Type: Demo Machine Unit:         1 Demo Machine Unit:         Sample ID: Top Unit:         Sample ID: It 38/05           stature         Nominal         Actual         Deviation         Lowe: Tolerance         Upper: Tolerance         In Tolerance?           1         CNC_1         Lowe: Tolerance         Upper: Tolerance         In Tolerance?           12 TOP SUME TO1         -         -         -         -           12 TOP SUME TO1         -         -         -         -           12 TOP SUME TO1         -         -         -         -           12 A TOP SUME TO1         54         -         -         -         -           12 2 GOE 4000MM TO2         -         -         -         -         -         -           12 2 GOE 4000MM TO2         -	Probing inspection Report L Failure(s)         Operation: Machine Type Work Centre ID: Demo Machine         1 Demo Machine         Sample ID: Demo Date:         Sample ID: 18/05/2012           stature         Nominal         Actual         Derivation         Lower. Tolerance         Mper.Tolerance         In.Tolerance2         Psss/Fail           stature         1         CHC_1         Lower.Tolerance         Mper.Tolerance         In.Tolerance2         Psss/Fail           1         CHC_1         Lower.Tolerance         Mper.Tolerance         Mper.Tolerance         Psss/Fail           12         TOP SUME YOL         0.0000         0.0000         -0.1000         0.0000         YES         PASS           NORK CPFSET UPDATED         554         -         -         -         -         -           22         0.0000         40.0100         0.0100         -0.1000         0.0000         YES         PASS           VORK CPFSET UPDATED         12.3000         12.3100         0.0200         -0.0000         0.0000         YES         PASS           VORK CPFSET UPDATED         12.3000         12.3100         0.0300         -0.0300         0.0500         YES         PASS           VEE 22 MORE TO         -         -         -         -	Probleg Inspection Report L Fallure(s)         Operation: Machine Type: Umo:         1 Demo Machine Demo Machine         Sample ID: Dett         Sample 1 18/05/2012           Stature         Nominal         Actual         Demo Machine         Date:         18/05/2012         Metric:         Notes           Stature         Nominal         Actual         Deviation         Lower.Tolerance         Mper.Tolerance         Machine Type: (Metric:         Notes         N	Probleg inspection Report         Operation: Machine Type: Demo Machine Type: Demo Machine Date:         Sample 10: 18/05/2012           Verof. Centre ID: Demo Unit:         Demo Unit:         Metric           Stature         Nominal         Actual         Devisition         Lower.Tolerance:         Upper.Tolerance:         In Tolerance?         Pass/fail           Stature         1         OVC_3         -         -         -         -         -           12.1 COP SUME TO1         0.0000         0.0500         -0.1000         0.1000         YES         PASS           VOIR COFFSET UPDATED         554         -         -         -         -         -           20 2006 0.0000         0.0100         -0.1000         0.1000         YES         PASS           VOIR COFFSET UPDATED         554         -         -         -         -           20 20 60.00000         40.0100         0.0100         -0.0000         YES         PASS           PostTON X         12.5000         12.3100         0.0100         -         -         -           State         20.2000         -0.0500         -0.0500         -0.0500         YES         PASS           State         20.2000         25.300         0.0500<

The header section is populated using data defined in the *Initial Set Up Data* panel and provides a summary of any failures found.

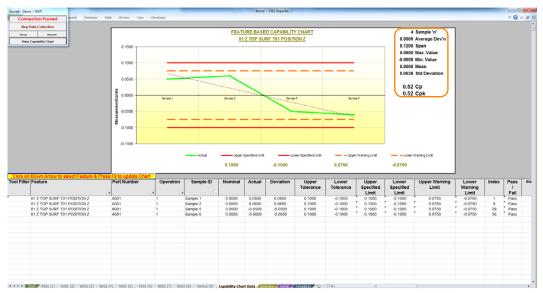
The body section is populated with colour coded inspection data.

- Feature Names appear in **bold blue** font.
- **Toleranced Feature Attributes** appear in **bold red** or **bold green** font (depending on adherence to tolerance).
- Untoleranced Feature Attributes and Process Information appear in non-bold black font.

## Analyse data: Capability Chart

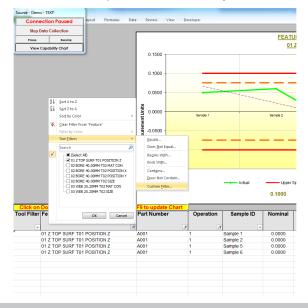
Select **View Capability Chart** (from the *Floating Window*) or **Compile Capability Chart** (from the *CNC Reporter Control Panel* located on the **Start** tab).

The **Capability Chart Data** tab will become active and a graphical display showing the variation of actual measured values for a single feature across all inspected components is visible.



Statistical data such as mean, standard deviation, Cp and Cpk values for the feature is displayed to the right of the chart.

Data can be filtered by **Feature**, **Part Number**, **Operation** and **Sample ID**. Microsoft Excel custom filters can also be used. Statistical data is updated automatically as filters are applied.



**NOTE:** The Renishaw CNC Reporter **Capability Chart** shows data for a single feature across multiple components. Users of Microsoft Excel 2010 can use the **Comparison Chart** within Data Manager to compare data across multiple features.

### **Control limits**

Red lines on the capability chart are **Specified Limits**, determined by the tolerance value set within the probing cycles. Visibility of these limits on the capability chart is determined by the status of the **Specified Limits** tick box in the *CNC Reporter Control Panel* (on the **Start** tab).

Orange lines are **Warning Limits**, defined as a percentage of the tolerance value. Visibility of these limits on the compatibility chart is determined by the status of the **Warning Limits** tick box in the *CNC Reporter Control Panel* (on the **Start** tab). The percentage of tolerance (**Warning Limits Multiplier**) is also set in the *Control Panel*. By default the **Warning Limits Multiplier** is 75%.

# Analyse data: Overview tab

The Overview tab shows a Red Amber Green (RAG) chart for the data and a range of statistical data.

	СР	0.52	1.60	0.80	0.42	1.05	0.35	0.30
	CPk	0.52	1.36	0.24	0.27	0.95	0.21	0.18
	Span	0.1200	0.0500	0.0500	0.0900	0.0700	0.1100	0.1200
	Average	0.0000	40.0150	12.5350	-10.0175	-0.0100	25.2200	0.0200
	StdDev	0.0638	0.0208	0.0208	0.0395	0.0316	0.0483	0.0548
	Nominal	0.0000	40.0000	12.5000	-10.0000	0.0000	25.2000	0.0000
	Upper Tol	0.1000	0.1000	0.0500	0.0500	0.1000	0.0500	0.0500
	USL	0.1000	40.1000	12.5500	-9.9500	0.1000	25.2500	0.0500
	Lower Tol	-0.1000	-0.1000	-0.0500	-0.0500	-0.1000	-0.0500	-0.0500
	LSL	-0.1000	39.9000	12.4500	-10.0500	-0.1000	25.1500	-0.0500
	Max	0.0600	40.0400	12.5600	-9.9600	0.0200	25.2600	0.0600
	Min	-0.0600	39.9900	12.5100	-10.0500	-0.0500	25.1500	-0.0600
		Dout Number	Onenetien	Fasture				
		Part Number	Operation <sub>.</sub>	Feature 🗸	A001			
					A001			
	Sheet	01 Z TOP SURF T01 POSITION	02 BORE 40.00MM TO2 SIZE	02 BORE 40.00MM T02 POSITION X	02 BORE 40.00MM T02 POSITION Y	02 BORE 40.00MM T02 MAT CON	03 WEB 25.20MM T02 SIZE	03 WEB 25.20MM T02 MAT CON
ample ID	Index	2						
	Index 1	0.0500	40.0100	12.5100	-10.0300	-0.0500	25.2300	-0.0600
ample 1	1 2	0.0500 0.0600	40.0100 40.0200	12.5100 12.5300	-10.0300 -10.0500	-0.0500 -0.0200	25.2300 25.2400	-0.0600 0.0300
ample ID Sample 1 Sample 2 Sample 5	1							

Data can be filtered by **Feature**, **Part Number**, **Operation**, **Sample ID** or **Sheet Index** to change, add or remove attributes. Microsoft Excel custom filters can also be used. Statistical data is updated automatically as filters are applied.

Colour coding of the actual data cells is dependent on the **Specified Limits** and **Warning Limits**. Red indicates actual data is outside the **Specified Limit**; green indicates actual data is inside the **Warning Limit**; yellow indicates that actual data is outside the **Warning Limit** but inside the **Specified Limit**.

Colour of Cp and Cpk data cells are determined using **Conditional Formatting** within Microsoft Excel. The default settings are Red  $\leq$  1; yellow > 1 and < 1.33; green  $\geq$  1.33

These values can be amended using the **Conditional Formatting Rules Manager** within Microsoft Excel.

Show formatting rules for: Current Selection	<b>•</b>			
Mew Rule Dek	ete Rule			
Rule (applied in order shown) Format	Applies to		Stop If True	
Cell Value >= 1.33 AaBbCcYyZ	z =\$E\$2:\$HC\$3	<b>1</b>		
Cell Value between 1 AaBbCcYyZ	z =\$E\$2:\$HC\$3	<b></b>		
Cell Value <= 1 AaBbCcYyZ	z =\$E\$2:\$HC\$3	<b>1</b>		
	OK	Close	Apply	Ī

#### **Archive data**

An Excel workbook archive containing **Inspection Reports**, **Capability** charts and **Overviews** can be saved automatically or manually to the **Backup Directory Location** defined in the *Initial Set Up Data* panel.

(The type of data archived is dependent on selections made in the *Initial Set Up Data* panel within the **Start** tab.)

#### Manual archive

Select **Create Archive** from the *CNC Reporter Control Panel* (on the **Start** tab). All data will be processed, and a date stamped Excel workbook created in the defined backup location.

The same archive workbook will be overwritten on each manual archive operation unless **Clear Data** is selected, which will create a new archive workbook for subsequent archive data.

**NOTE:** Where more than one archive is created in a single day, an incremental prefix is applied to the name of the Excel workbook.

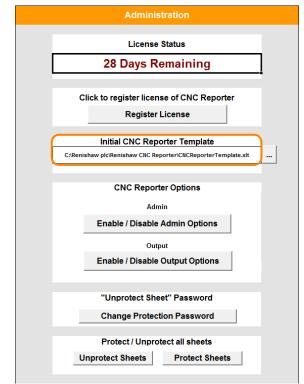
#### Automatic archive

When the number of inspection reports (worksheets) equals the number defined in the **Maximum Number of Worksheets** field (defined in the *Initial Data Set Up* panel on the **Start** tab), Renishaw CNC Reporter will automatically pause, process and archive data before resuming collection.

# Additional features

# **Custom templates**

By default Renishaw CNC Reporter is configured to use a standard template for all **Probing Inspection Reports**. The location and name of this template file is defined in the *Administration* panel (on the **Admin tab**) as C:\Renishaw plc\Renishaw CNC Reporter\CNCReporterTemplate.xlt



If required, the white area at the top of this template can be modified and images can be added to create a customised template that can be used instead.

To create a customised template, open the existing template file in a new instance of Microsoft Excel, make the necessary amendments and save as an Excel template (.xlt or .xltx file extension).

NOTE: Do not amend cell positions or data column headings.

To use a customised template for all **Probing Inspection Reports** relating to a single data results file, navigate to the **Admin** tab, and select the ellipsis button to the right of the location and file name of the default template within the *Administration* panel. Navigate to and select the required alternative template. The location and file name of this template will now be displayed in the **Initial CNC Reporter Template** field.

Where a results file contains inspection data for multiple parts, it is also possible to vary the template used dependent on the part inspected.

Select **Custom Templates OFF** in the *Initial Set Up Data* panel within the **Start** tab. This will toggle the setting to **Custom Templates ON**/ and will make the **Part number and Operation** fields in this panel inactive. A **Templates** tab will open and CNC Reporter will jump to this tab.

Initia	I Set Up Data	
Custo	om Templates ON	
Work Centre ID	Demo	
Part Number	Various	CNC
Operation	1	CNC
Name	Name	🔽 Auto

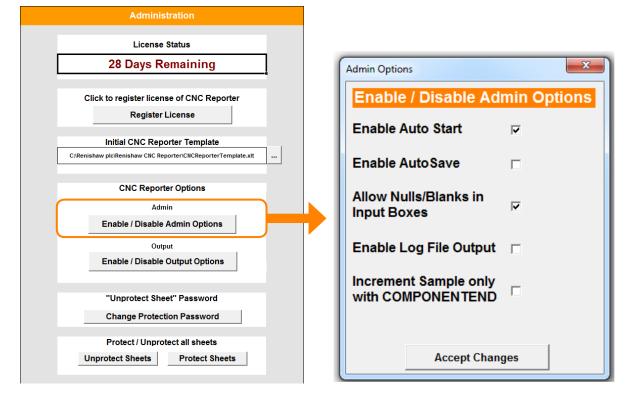
Start / Capability Chart Data / Overview / Admin / Templates /

In the **Part number** column enter the part numbers that appear in the results data file. Click the relevant cell in the **Template** column to select the template to be used for each part.

		Custom "Part Specific" Template Manager		
Current Part PNUM-B002		New Part Number "Trigg PNUM- Increase Available Input Ro	er Word" Text string to in new part num	Exclude Trigger Word
Part Number	Operation	Template (Click in Cell to define Template	File (*.xlt) Location)	Metric / Imperial
PNUM-A001	1	C:/Renishaw plc/Renishaw CNC Reporter/CNCReporterTemplate.xlt		Metric
PNUM-B002	1	C:\Renishaw plc\Renishaw CNC Reporter\EngineeringLogoTemplate.xlt	)	Metric
Part number within the results file		Custom template to use — for specified part number		

In the **New Part Number** "**Trigger Word**" area at the top of the worksheet enter the unique text string used in the results data file to indicate the inspection of a new part number.

# **CNC Reporter Options: Admin Options**



#### **Enable Auto Start**

When checked, CNC Reporter will go straight into **Collect Data - REAL TIME** mode when CNC Reporter is opened.

**NOTE:** This option must be used in conjunction with the **Lock Setup** check box (*CNC Reporter Control Panel*, **Start** tab).

#### Enable AutoSave

When checked, CNC Reporter will auto save hourly.

#### Allow Nulls/Blanks in Input Boxes

When checked, Input Box fields used for Custom Template information can remain empty.

If left unchecked and **Input Box** fields remain empty, a prompt will be displayed until sufficient valid information is entered.

#### **Enable Log File Output**

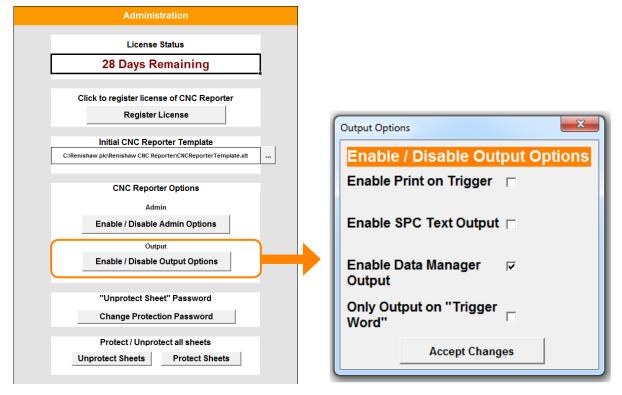
When checked, CNC Reporter will log all events to a file in the installation directory.

#### Increment Sample only with COMPONENTEND

When checked, the **Sample ID Number** will only increment when the **New Part Inspection Sheet** "**Trigger Word**" (COMPONENTEND or similar) is seen at the end of a report.

If left unchecked, the **Sample ID Number** will remain as set in the *Initial Set Up Data* panel (within the **Start** tab), and will not increment when the **New Part Inspection Sheet "Trigger Word"** is seen.

# **CNC Reporter Options: Output Options**



#### **Enable Print on Trigger**

When checked, the live report is sent to the default printer whenever the **New Part Inspection Sheet** "Trigger Word" is seen.

#### Enable SPC Text Output

When checked, a text file called [wcid\_name]\_SPC\_ARCHIVE\_DATA.txt of inspection results data for toleranced features is produced in the specified backup directory location.

This data can then be imported into an external SPC package for further analysis. The structure of the output is as follows.

Part number /	A001/
Operation Number /	1/
Machine Type /	Demo Machine/
Work Centre ID /	Demo/
Company Name /	Renishaw plc/
Sample Number /	Sample1/
Date /	02 June 2012/
Units /	Metric/
Feature Name & Attribute /	POINT1 POSITION X/
Nominal /	0/
Actual /	-0.03/
Deviation /	-0.03/
Lower Tolerance /	-0.05/
Upper Tolerance /	0.05/
In Tolerance? /	YES/
Pass\Fail /	PASS/

#### **Enable Data Manager Output**

When checked, this option enables toleranced results data to be written to a local database for subsequent access and analysis using Data Manager.

An on screen dialog will advise if the database is unaccessible, and a message will be added to the **Probing Inspection Report**.

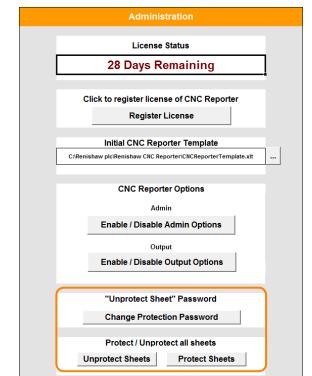
CNC Reporter	-0.1000		0.1000	YES	× P/
Data Man	ager Database at C	:\CNC_Repo	orter\ is currently NC	)T available.	
	DATA MANAGER DATAE	BASE AT C:\CNC_Repor	orter\ WAS NOT AVAILABLE.		

#### Only Output on "Trigger Word"

When checked, results are only sent to the database when the **New Part Inspection Sheet "Trigger Word"** (COMPONENTEND or similar) is seen at the end of a report.

Leave this option unchecked during component or job prove out, where a disproportionate number of failures could be expected. This will prevent data obtained during the prove out process being sent to database within Renishaw CNC Reporter and processed by the application.

Once the prove out process is complete, check the option to allow Renishaw CNC Reporter to import and analyse results data.



# **Password protection**

Data imported into Renishaw CNC Reporter is password protected to prevent deletion or editing.

Attempts to edit data will display a warning that cells are password protected and therefore read-only.

<u>Feature</u>		Nominal	Actual	Deviation	Upper Tolerance	Lower Tolerance	
	Micro	soft Excel					
POINT1							
POSITION X		The cell or chart you are trying t	o change is protected and	therefore read-only.			
POSITION Y		To modify a protected cell or chart, first remove protection using the Unprotect Sheet command (Tools menu, Protection submenu). You ma					
POSITION Z		prompted for a password.					
UPDATE2				ОК			
POSITION Z		0.0020					
WCSTOUPDATE		1.0000					
REFERENCEWCS		1.0000					
					ĺ		
			1		†		

To unprotect a worksheet open the Unprotect Sheet dialog and enter the password.

As shipped the required password is 'password' (all lower case).

To modify the password, select **Change Protection Password** (on the **Admin** tab). Enter the default password when prompted, then enter and confirm the new password.

Save Renishaw CNC Reporter to retain the new password.

**NOTE:** The password can only be changed when there is no data within CNC Reporter. If necessary, perform a **Clear Data** operation before changing the password.

#### Protect / Unprotect all sheets

To unprotect all **Probing Inspection Reports** in a single operation, select **Unprotect Sheets** (on the **Admin** tab).

Password protection can be applied to all the sheets in a single operation by selecting **Protect Sheets** (on the **Admin** tab).

NOTE: Poll time is only applicable when using the REAL TIME method of data import.

The period of time between accessing a results data file can be adjusted by amending the **Poll Time** (secs) value in the *CNC Reporter Control Panel* (on the **Start** tab). **Poll Time** can be any whole number between 5 and 999 seconds.

CNC Reporter Control Panel	
Click to Collect Data automatically	Lock
Collect Data - REAL TIME	Setup
Data Retrieval Method	Poll Time 20
	(secs)

### Lock setup

The Lock Setup check box allows users to prevent changes to a number of fields within the *Initial Set Up Data* panel. With this option ticked, only **Part Number**, **Operation**, **Name**, **Machine Type** and **Sample ID** remain editable.

The method of data retrieval, the results file being imported and the poll time are also locked when this check box is selected.



To unlock, deselect the check box and enter the Unprotect Sheet password.

# Alarms

The *CNC Reporter Control Panel* (on the **Start** tab) provides the ability to generate on screen alarms when either **Specified Limits** and / or **Warning Limits** are exceeded.

#### **Specified Limits**

**Specified Limits**, displayed as red lines on the **Capability Chart**, provide a visual indication of tolerances defined within inspection programs. Measured values which exceed these limits are displayed in red in the **Probing Inspection Report** and in red cells in the **Overview** tab.

NOTE: Where tolerances are specified as ±0.000 no limits are displayed on the Capability Chart.

#### Warning Limits

**Warning Limits**, displayed as dashed orange lines on the **Capability Chart**, provide a visual indication of features approaching tolerance. These limits are generated by Renishaw CNC Reporter and are defined as a percentage of the **Specified Limit** (Warning Limits Multiplier).

Measured values exceeding these limits but within the **Specified Limits**, are displayed in green in the **Probing Inspection Report** and in yellow cells in the **Overview** tab.

**NOTE:** Where the **Warning Limit Multiplier** is 100% **Warning Limits** and **Specified Limits** are the same: no **Specified Limits** are displayed on the **Capability Chart**.

#### **Alarm Messages**

Alarm message boxes will appear at the top of the screen for inspection values which exceed the defined limits.

	Look Up Reset Alarm	Look Up Reset Alarm
	Sample 2 Row 26	Sample 2 Row 22
ile Home Insert Page Layout	Out of Tolerance	iew D Above Upper Warning Limit

The alarm message will show whether the dimension is **Out of Tolerance** or outside (above or below) a **Warning Limit**.

The message will also show the **Sample ID** that is out of tolerance and identify the row on which it appears.

NOTE: Where multiple alarm messages are generated they may stack on top of one another.

Selecting **Look Up** from the alarm dialog will highlight the row within the **Probing Inspection Report** relating to the error message.

Quality Problem CNC_Reporter.xls	Nominal	Actual	Deviation	 Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Notes
Out of Tolerance								
Sample 1 Row 20								
Look Up	0.0000	0.0400	0.0400	-0.1000	0.1000	YES	PASS	
Reset Alarm	\$54							
02 BORE 40.00MM T02								
SIZE	40.0000	39.8900	-0.1100	-0.1000	0.1000	NO	FAIL	

### Notes

Add notes to, and clear alarm messages by pressing Reset Alarm from the alarm dialog.

	Quality War	ning		Deviation	Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Notes
Out of Tolerance	Corrective	Action?	ОК						
Sample 1 Row 20									]
Look Up			Cancel	0.0400	-0.1000	0.1000	YES	PASS	]
Reset Alarm		SET UPDATED							
(I	TIOOLOFF	SET OFDATED							
02 BORE 40.00MM T02									
SIZE		40.0000	39,8900	-0.1100	-0.1000	0.1000	NO	FAIL	

Enter a Corrective Action into the input box and press OK.

Feature	Nominal	Actual	Deviation	Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Notes
02 BORE 40.00MM T02								
SIZE	40.0000	39.8900	-0.1100	-0.1000	0.1000	NO	FAIL	TOOL OFFSET UPDATED
POSITION X	12.5000	12.5100	0.0100	-0.0500	0.0500	YES	PASS	
POSITION Y	-10.0000	-10.0500	-0.0500	-0.0500	0.0500	YES	PASS	

The note will then be added to the Probing Inspection Report.

**NOTE:** Alarm notes are not displayed in the Data Manager database.

# **Redisplay Quality Warnings**

To redisplay all warnings after they have been acknowledged, click **Redisplay Quality Warning** (on the **Start** tab).

All warnings will be redisplayed at the top of CNC Reporter. Be aware that they may stack on top of one another.

Quality Problem CNC_Rep	Nominal	Actual	Deviation	Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Notes
Out of Tolerance								
Sample 1 Row 20	0.0000	0.0400	0.0400	-0.1000	0.1000	YES	PASS	]
Look Up	\$54							]
								1
02 BORE 40.00MM T02								1
SIZE	40.0000	39.8900	-0.1100	-0.1000	0.1000	NO	FAIL	TOOL OFFSET UPDATED
POSITION X	12.5000	12.5100	0.0100	-0.0500	0.0500	YES	PASS	

# Upgrading and retaining settings

When upgrading to a new version of Renishaw CNC Reporter it is possible to save settings from the existing installation which can then be loaded to the new version.

- Select Save Settings (Settings panel, Admin tab).
- Install the latest version of Renishaw CNC Reporter. This will overwrite the currently installed version, but will not affect software registration and database files.
- Open the new installation.
- Select Load Settings (Settings panel, Admin tab).

**NOTE:** Before loading the saved settings, any existing **Probing Inspection Report** data should be cleared by selecting **Clear Data** (*CNC Reporter Control Panel*, on the **Start** tab).

# **Data Manager**

Data Manager is a separate, complementary application for the analysis of historical data which has previously been processed using Renishaw CNC Reporter, allowing data to be viewed in tabular (Archive Query tab), Overview and chart formats to determine trends and variations.

The application installs alongside Renishaw CNC Reporter, and a Data Manager icon is added to the desktop.

#### NOTES:

Only toleranced data is available for review and analysis in Data Manager.

The version of Data Manager installed is dependent on the version of Microsoft Excel on the target PC.

# Data Manager screen layout

Use the tabs at the bottom of the screen to navigate through Data Manager. (Tabs shown below are from an installation with Microsoft Excel 2010.)

Archive Query Overview Comparison Chart

# **Archive Query tab**

				Clear Data		apply innov	HAW &			About		
											Crea	
											Hyperl	Inks
						Select Machine:	De	mo	Get Machines			
				Probing Report	Se	elect Date Range:			Set Dates			
					Sel	ect Part Number:	A	001	Get Parts	Filter by		
				Filter by Feature						Pass/Fail		
Part Number	Operation	Sample ID	Date	Feature	Nominal	Actual	Deviation	Lower Tol.	Upper Tol.	Pass / Fail	Notes	Link
	¥ ¥	w.		v		v v			*		*	
A001	1	Sample 1	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.1000	-0.1000	-0.1000	0.1000	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 SIZE	40.0000	39.9500	-0.0500	-0.1000	0.1000	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.4900	-0.0100	-0.0500	0.0500	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-10.0200	-0.0200	-0.0500	0.0500	PASS		
A001	1	Sample 1	23-May-12	03 WEB 25.20MM TO2 SIZE	25.2000	25.2600	0.0600	-0.0500	0.0500	FAIL		
A001	1	Sample 2	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0500	-0.0500	-0.1000	0.1000	PASS		
A001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 SIZE	40.0000	39.9200	-0.0800	-0.1000	0.1000	PASS		
A001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.4600	-0.0400	-0.0500	0.0500	PASS		
A001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-9.9800	0.0200	-0.0500	0.0500	PASS		
A001	1	Sample 2	23-May-12	03 WEB 25.20MM TO2 SIZE	25.2000	25,1900	-0.0100	-0.0500	0.0500	PASS		
A001	1	Sample 3	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0400	-0.0400	-0.1000	0.1000	PASS		
A001	1	Sample 3	23-May-12	02 BORE 40.00MM TO2 SIZE	40.0000	40.0300	0.0300	-0.1000	0.1000	PASS		
A001	1	Sample 3	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.4600	-0.0400	-0.0500	0.0500	PASS		
A001	1	Sample 3	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-10.0400	-0.0400	-0.0500	0.0500	PASS		
A001	1	Sample 3	23-May-12	03 WEB 25.20MM TO2 SIZE	25.2000	25.1500	-0.0500	-0.0500	0.0500	PASS		
A001	1	Sample 4	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	0.0900	0.0900	-0.1000	0.1000	PASS		
A001	1	Sample 4	23-May-12	02 BORE 40.00MM TO2 SIZE	40.0000	39.9500	-0.0500	-0.1000	0.1000	PASS		
A001	1	Sample 4	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.5300	0.0300	-0.0500	0.0500	PASS		
A001	1	Sample 4	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-10.0100	-0.0100	-0.0500	0.0500	PASS		
A001	1	Sample 4	23-May-12	03 WEB 25.20MM T02 SIZE	25.2000	25.2500	0.0500	-0.0500	0.0500	PASS		
A001	1	Sample 5	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	0.0300	0.0300	-0,1000	0,1000	PASS		

The Archive Query tab presents a tabular view of the inspection data retrieved by Data Manager based on Machine, Date range and Part number selections.

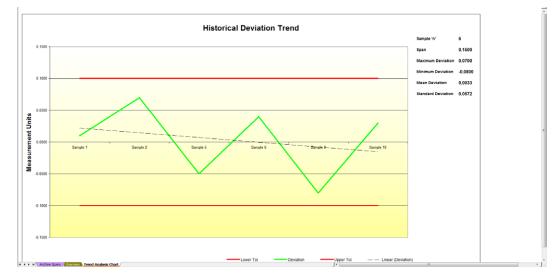
### **Overview tab**



The **Overview** tab shows actual measured data in colour coded data cells indicating adherence to tolerance. (This is the same information as displayed by the **Overview** tab in Renishaw CNC Reporter.)

# **Trend Analysis Chart tab**

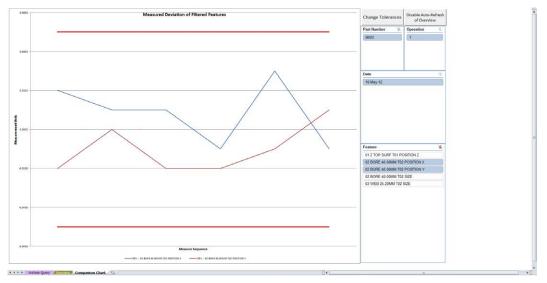
(Installations with Excel 2007 only)



The **Trend Analysis Chart** provides a graphical representation of measured data for a single feature across multiple components.

# **Comparison Chart tab**

(Installations with Excel 2010 and later)



The **Comparison Chart** provides a graphical representation of measured data for one or more features across multiple components.

# **Using Data Manager**

## Select machine

Select **Get Machines** (from the **Archive Query** tab) to display a list of the CNC machine tools from which data has been collected.

				Clear Data		RENIS apply innova	HAW.			About	J	
											Crea	ate
											Hyperl	inks
						Select Machine:		Demo	Get Machines			
				Probing Report			01/01/2010		S. Dates			
				Frobing Report					Duttoo		_	
				Filter by Feature		elect Part Number:		4001	Get Parts	Filter by Pass/Fail		
Part Number	Operation	Sample ID	Date	Feature	Nominal	Actual	Deviation	ower Tol.	Upper Tol.	Pass / Fail	Notes	Lit
	v v	¥				¥ ¥					¥	
4001	1	Sample 1	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.1000	-0.100	-0.1000	0.1000	PASS		
4001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 SIZE	40.0000	39.9500	0.0500	-0.1000	0.1000	PASS		
4001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.4900	-0.0100	-0.0500	0.0500	PASS		
4001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-10.0200	-0.0200	-0.0500	0.0500	PASS		
4001	1	Sample 1	23-May-12	03 WEB 25.20MM T02 SIZE	25.2000	25 .000	0.0600	-0.0500	0.0500	FAIL		
4001	1	Sample 2	23-May-12	01 Z TOP SURE TO1 POSITION Z	0.0000	-0.0500	-0.0500	-0.1000	0,1000	PASS		
4001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 SIZE	40.0000	39.9200	-0.0800	-0.1000	0.1000	PASS		
4001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 PO SITION X	12.5010	12.4600	-0.0400	-0.0500	0.0500	PASS		
4001	1	Sample 2	23-May-12	02 BORE 40.00MM T02 POSITION Y	10.0000	-9.9800	0.0200	-0.0500	0.0500	PASS		
4001	1	Sample 2	23-May-12	03 WEB 25.20MM TO2 SIZE	25.2000	25.1900	-0.0100	-0.0500	0.0500	PASS		
4001	1	Sample 3	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0400	-0.0400	-0.1000	0.1000	PASS		
4001	1	Sample 3	23-May-12	02 BORE 40.00MM T02 SIZE	40,0000	40.0300	0.0300	-0.1000	0.1000	PASS		
4001						12.4600	-0.0400	-0.0500	0.0500	PASS		
4001		-				-10.0400	-0.0400	-0.0500	0.0500	PASS		
4001		-0	t N/	lachir	NOC	25.1500	-0.0500	-0.0500	0.0500	PASS		
4001		Ge	LIV	aulili	162		0.0900	-0.1000	0.1000	PASS		
4001						39.9500	-0.0500	-0.1000	0.1000	PASS		
401						12.5300	0.0300	-0.0500	0.0500	PASS		
4001		pample 4	23-May-12	02 BORG 40.00MM T02 PO STICK Y	-10.0000	-10.0100	-0.0100	-0.0500	0.0500	PASS		
4001	1	Sample 4	23-May-12	03 WEB 25.20MM T02 SIZE	25,2000	25.2500	0.0500	-0.0500	0.0500	PASS		
.001		Sample 5	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	0.0300	0.0300	-0.1000	0,1000	PASS		

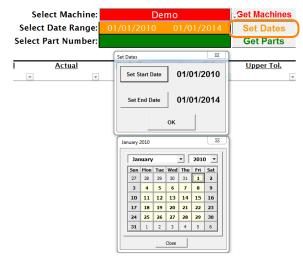
Click on the red cell to open a drop-down box listing all machines.

hine:	Demo	Get Machines
Demo	01/01/2010 01/01/2014	Set Dates

Select the required CNC machine tool from the list.

### Select date range

Select **Set Dates** and use the resulting calendar to set the required start and end dates of the machine data to be analysed.



### Select part number

Select **Get Parts**. Parts are listed in the database alphabetically, and by default the first part number in the database is selected. Click in the green coloured cell to open a drop down box allowing other parts to be selected.

Based on these selections, data is retrieved and analysed.

				Probing Report Filter by Feature	Se	Select Machinelect Date Ran elect Date Ran lect Part Numb	ge: 01/0 er: %	De 1/2010 A0	01/01/2014 01	Get Machines Set Dates Get Parts	Filter by Pass/Fail		
Part Number	Operation	Sample ID	Date	Feature	Nominal	Actual	Dev	iation	Lower Tol.	Upper Tol.	Pass / Fail	Notes	Link
	* *	*		*		*	×	*				-	
A001	1	Sample 1	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.1000	-0	1000	-0.1000	0.1000	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 SIZE	40.0000	39.9500	-0	0500	-0.1000	0.1000	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION X	12.5000	12.4900	-0	0100	-0.0500	0.0500	PASS		
A001	1	Sample 1	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10.0000	-10.0200	-0	0200	-0.0500	0.0500	PASS		
A001	1	Sample 1	23-May-12	03 WEB 25.20MM T02 SIZE	25.2000	25.2600	0.	0600	-0.0500	0.0500	FAIL		

The Archive Query, Overview and Trend Analysis Chart tabs are all populated during the data retrieval process.

**NOTE:** Progress bars may be visible on screen depending on the volume of data being retrieved. If retrieval times are prohibitive, select a smaller date range.

# **Review and analyse data**

# **Review data: Archive query**

The Archive Query tab presents a tabular view of retrieved data.

User selectable filters allow data to be refined. For example, select a single feature, and **Fail** instances of that feature.

				Clear Data		RENIS apply innova	HAW &			About	]	
											Crea Hyperli	
						Select Machine:	De	<b>m</b> 0	Get Machines		- inflorence	iiiko
				Deal-law Dealers		ect Date Range:		01/01/2014	Set Dates			
				Probing Report			01/01/2010				_	
				Filter by Feature	Sele	ct Part Number:	AO	101	Get Parts	Filter by Pass/Fail		
art Number	Operation	Sample ID	Date	Feature	Nominal	Actual	Deviation	Lower Tol.	Upper Tol.	Pass/Fall Pass/Fail	Notes	
				· ·	-		Contraction of the					
101	1	Cargle 1	23-May-12	OF 2 TOP SURF THE POSITION 2	0.0000	-0.1000	-0.1000	-0.1000	0,1000	PASS		
11	1	Sample 1	23-May-12	02 BORE 40.000M T02 525	40.0000	39,9500	-0.0500	-0.1000	0,1000	PASS		
11		Sample 1	23-May-12	02 FORE 40 COMPTO 2 POSITION X	12,5000	12,4900	-0.0100	-0.0500	0.0500	PASS		
101	1	Sample 1	23-May-12	02 DORE 40.00MI T02 POSITION Y	-10.0000	-10.0200	-0.0200	-0.0500	0.0500	PASS		
101	1	Sample 1	23-May-12	03 INEB 25 20MW 102 5/25	25,2000	25,2600	0.0600	-0.0500	0.0500	FAIL		
01	1	Sample 2	23-May-12	of 2 TOP SURF THE POSITION 2	0.0000	-0.0500	-0.0500	-0.1000	0.1000	PASS		
01	1	Sample 2	23-May-12	02 TIORE 40.00MI T02 5/2E	40.0000	39.9200	-0.0300	-0.1000	0.1000	PASS		
01	1	Sample 2	23 May 12	02 DOIE 40.00MI T02 POSITION X	12,6000	12,4600	-0.0400	-0.0500	0.0500	PASS		
01		Sample 2	23-May-12	02 BORE 40.00MM T02 POSITION Y	-10,0000	-9.9800	0.0200	-0.0500	0.0500	PASS		
11	1	Sample 2	23-May-12	03 WEB 25 20MW T02 527	25.2000	25.1900	-0.0100	-0.0500	0.0500	PASS		
21	1	Sample 3	23 May 12	of 2 TOP SURF THE POSITION 2	0.0000	-0.0400	-0.0400	-0.1000	0.1000	PASS		
1	1	Sample 3	23-May-12	02 BOHE 40.00081 T02 SIZE	40.0000	40,0300	0.0300	-0.1000	0,1000	PASS		
51	1	Sample 3	23-May-12	02 DORE 40.00MB T02 POSITION X	12,5000	12,4600	-0.0400	-0.0500	0.0500	PASS		
21	1	Sample 3	23 May 12	02 DORE 40.00MM T02 POSITION Y	-10.0000	-10.0400	-0.0400	-0.0500	0.0500	PASS		
21	1	Sample 3	23 May 12	03 INER 25-20MW 102 5128	25.2000	25.1500	-0.0500	-0.0500	0.0500	PASS		
24	,	Sample 4	23-May-12	01 Z TOP SUBJ THE POSITION Z	0.0000	0.0900	0.0900	-0.1000	0.1000	PASS		
11	1	Sample 4	23-May-12	02 DORE 40.00MI T02 5/2E	40.0000	39,9500	-0.0500	-0.1000	0.1000	PASS		
21	1	Sample 4	23-May-12	92 BORE 49.09988 192 POSTRON X	12.5000	12.5300	0.0300	-0.0500	0.0500	PASS		
01		Sample 4	23-May-12	02 INCRE 40 DOME TO 2 POSITION Y	-10.0000	-10.0100	-0.0100	-0.0500	0.0500	PASS		
01	1	Sample 4	23-May-12	03 WEB 25,20MW T02 SIZE	25.2000	25.2500	0.0500	-0.0500	0.0500	PASS		
101	1	Sample 5	23-May-12	01 Z TOP SUBFITIES POSITION Z	0.0000	0.0300	0.0300	-0.1000	0.1000	PASS		

### **Review data: Overview**

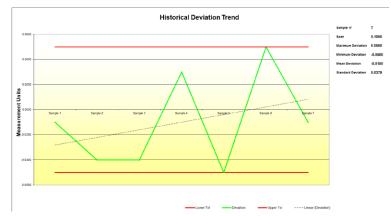
The **Overview** tab provides the same information as the **Overview** tab in Renishaw CNC Reporter with the addition of a filterable **Date** field.

Cells are colour-coded to identify whether data is in tolerance (green) or out of tolerance (red) .

СР	0.47	0.88	0.44	0.79	0.38
CPk	0.34	0.64	0.35	0.61	0.31
Span	0.2000	0.1100	0.1000	0.0600	0.1100
Average	-0.0271	39.9729	12.4900	-10.0114	25.2100
StdDev	0.0709	0.0377	0.0379	0.0212	0.0436
Nominal	0.0000	40.0000	12.5000	-10.0000	25.2000
Upper Tol.	0.1000	0.1000	0.0500	0.0500	0.0500
USL	0.1000	40.1000	12.5500	-9.9500	25.2500
Lower Tol.	-0.1000	-0.1000	-0.0500	-0.0500	-0.0500
LSL	-0.1000	39.9000	12.4500	-10.0500	25.1500
Max	0.0900	40.0300	12.5500	-9.9800	25.2600
Min	-0.1100	39.9200	12.4500	-10.0400	25.1500
	Part Number 🕞	Operation 🚽	Feature 🕞		
	•				
			A001		
	8		A001 1		
Date Sample ID	01 Z TOP SURF T01 POSITION Z	02 BORE 40.00MM TO2 SIZE	A001 1 02 BORE 40.00MM T02 POSITION X	02 BORE 40.00MM T02 POSITION Y	03 WEB 25.20MM TO2 SIZE
Date Sample ID	01 Z TOP SURF T01 POSITION Z	02 BORE 40.00MM TO2 SIZE	1 02 BORE 40.00MM T02		03 WEB 25.20MM TO2 SIZE 25.2600
	01 Z TOP SURF T01 POSITION Z		1 02 BORE 40.00MM T02 POSITION X	POSITION Y	
Sample 1	01 Z TOP SURF T01 POSITION Z -0.1000	39.9500	1 02 BORE 40.00MM T02 POSITION X 12.4900	POSITION Y -10.0200	25.2600
Sample 1 Sample 2	01 Z TOP SURF T01 POSITION Z -0.1000 -0.0500	39.9500 39.9200	1 02 BORE 40.00MM T02 POSITION X 12.4900 12.4600	POSITION Y -10.0200 -9.9800	25.2600 25.1900
Sample 1 Sample 2 Sample 3	01 Z TOP SURF T01 POSITION Z -0.1000 -0.0500 -0.0400	39.9500 39.9200 40.0300	1 02 BORE 40.00MM T02 POSITION X 12.4900 12.4600 12.4600	РОЗПОН У -10.0200 -9.9800 -10.0400	25.2600 25.1900 25.1500
State Sample 1 Sample 2 Sample 3 Sample 3 Sample 4	01 Z TOP SURF T01 POSITION Z -0.1000 -0.0500 -0.0400 0.0900	39.9500 39.9200 40.0300 39.9500	1 02 BORE 40.00MM T02 POSITION X 12.4900 12.4600 12.4600 12.5300	Розпон у -10.0200 -9.9800 -10.0400 -10.0100	25.2600 25.1900 25.1500 25.2500

# Analyse data: Trend Analysis Chart

(Excel 2007 only)

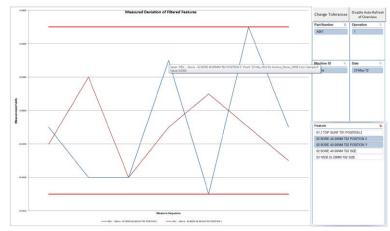


The Trend Analysis Chart shows a single stream of data representing data in the Archive Query tab.

NOTE: Whatever the number of features selected, only a single line will be plotted.

### Analyse data: Comparison Chart

(Excel 2010 and later)



The **Comparison Chart** shows an individual line for each feature selected using the **Feature** slicers located to the top right of the chart.

To clear the filters, click on the filter cross.



**NOTE:** Both the **Overview** tab and **Archive Query** tab are linked to the **Feature** slicers. To disable the link, press **DISABLE AUTO-REFRESH OF OVERVIEW**.



Where features with different tolerances have been selected is it possible to adjust the tolerances used. Select **Change Tolerances** and specify the new upper and lower tolerances to be applied to all currently filtered features.

		Change Tolerances	x
		New Upper Tolerance	2
Change Tolerances	Disable Auto-Refresh of Overview	New Lower Tolerance	2
Part Number 🕅 🕅	Operation 隊	ОК	Cancel

**NOTE:** This will affect the display on the **Comparison Chart** but will not affect data in the source database.

# Additional features

# **Create hyperlinks**

Hyperlinks can be added to individual rows within the **Archive Query** tab to link back to an archived **Probing Inspection Report** containing the original toleranced data.

Select Create Hyperlinks (in the Archive Query tab).

												Creat Hyperlin	
						Select Machi	ne:	Der	no	Get Machines			
				Probing Report		Select Date Ran	ge: 0	1/01/2010	01/01/2014	Set Dates			
				Filter by Feature		Select Part Numb	er:	AO	01	🗸 Get Parts	Filter by		
											Pass/Fail		
Part Number	Operation		Date	Feature	Nominal	Actual		Deviation	Lower Tol.	Upper Tol.	Pass / Fail	Notes	Link
	¥ ¥	*		* J		<b>v</b>		Y		×	٣		
A001	1	Sample 1	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.1000		-0.1000	-0.1000	0.1000	PASS		<u>G0</u>
A001	1	Sample 2	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0500		-0.0500	-0.1000	0.1000	PASS		<u>GO</u>
A001	1	Sample 3	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0400		-0.0400	-0.1000	0.1000	PASS		<u>60</u>
A001	1	Sample 4	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	0.0900		0.0900	-0.1000	0.1000	PASS		<u>GO</u>
A001	1	Sample 5	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	0.0300		0.0300	-0.1000	0.1000	PASS		60
A001	1	Sample 6	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.1100		-0.1100	-0.1000	0.1000	FAIL		<u>60</u>
A001	1	Sample 7	23-May-12	01 Z TOP SURF T01 POSITION Z	0.0000	-0.0100		-0.0100	-0.1000	0.1000	PASS		GO

Data Manager will process the filtered **Archive Query** fields and create a blue 'GO' hyperlink. When the hyperlink is clicked, Data Manager will retrieve the relevant archive and open the **Probing Inspection Report** containing the toleranced data.

						RENISH apply innovation		
		Part Number:	A	001	Name:	Na	me	1
Probing Inspection Report		Operation:		1	Sample ID:	Sam	ple 6	
L Failure(s)		Machine Type:	Demo	Machine	Date:	23/05	/2012	
		Work Centre ID:	De	emo	Units:			
Feature	Nominal	Actual	Deviation	Lower Tolerance	Upper Tolerance	In Tolerance?	Pass/Fail	Not
A001	1							
	Ĭ							
01 Z TOP SURF T01								
POSITION Z	0.0000	-0.1100	-0.1100	-0.1000	0.1000	NO	FAIL	
	\$54							1

NOTE: Hyperlinks will not work if the archives have been moved from their original location.

# **Clear data**

Press Clear Data to return Data Manager to its original state, and remove all applied filters.

				Clear Data	)								
												Crea Hyperl	
						Sele	ct Machine:			Get Machines			
				Probing Report		Select	Date Range:	01/01/2010	01/01/2014	Set Dates			
				Filter by Feature		Select P	art Number:			Get Parts	Filter by Pass/Fail		
Part Number	Operation S	Sample ID	<u>Date</u>	Feature		Nominal •	Actual •	Deviation •	Lower Tol.	Upper Tol.	Pass / Fail	<u>Notes</u>	Link

# Use of wildcards

If there is a requirement to analyse data obtained using multiple CNC machines, use a wildcard character (\*) in the red **Select Machines** field.

Select Machine:	Č	Get Machines			
Select Date Range:	01/01/2010	01/01/2014	Set Dates		
Select Part Number:	AO	Get Parts			

# Troubleshooting

#### Problem

'NO TOLERANCED DATA FOUND' displayed at the end of a Probing Inspection Report.

In addition to this message, no coloured data is shown in **Probing Inspection Reports**, the **Capability Chart**, **Overview** tab or Data Manager.

#### Cause

This message is displayed when no tolerance data is received from the CNC machine tool.

#### Solution

Ensure tolerance values are set in the probing cycles.

#### Problem

'There is a Format Problem with the Feature' displayed in the **Notes** column within a **Probing Inspection Report** or when attempting to export to Data Manager or a statistical process control (SPC) package.

#### Cause

This is the result of corrupt numerical data (spurious characters being output from the CNC).

#### Solution

Check for possible issues with the data transfer process. Re-inspect the component and import new data.

#### Problem

CNC Reporter dialog with the message 'Data Manager Database at C:\CNC\_Reporter\ is currently NOT available' displayed and 'DATA MANAGER DATABASE AT C:\CNC\_REPORTER\ WAS NOT AVAILABLE' displayed at the end of a **Probing Inspection Report**.

#### Cause

Data Manager not installed correctly, was not installed to the correct location, or the data base file could not be found.

#### Solution

Reinstall Renishaw CNC Reporter, ensuring to accept all default file locations offered.

#### Problem

'Cross talk' between multiple instances of Renishaw CNC Reporter or Data Manager, where one instance of Renishaw CNC Reporter attempts to access data specified by another instance of the application.

#### Cause

Registry key changes which allow each instance of Renishaw CNC Reporter to open in a new instance of Microsoft Excel have not been made.

#### Solution

Reinstall Renishaw CNC Reporter to automatically make the necessary adjustments to the necessary registry keys, or make the amendments manually.

These registry keys and the changes made are:

hkey\_classes\_root\excel.sheet.8\shell\open\command

hkey\_classes\_root\excel.sheet.12\shell\open\command

hkey classes root\Excel.SheetMacroEnabled.12\shell\open\command

The (Default) key setting of /e or /dde is changed to: "%1"

The command key (just below (Default)) is deleted

The ddeexec key has [open("%1")] removed from the (Default) key

(See also <u>Microsoft Knowledgebase Article 2636670</u> covering 'How to open Excel files in separate windows in Windows 7'.)

**NOTE:** Microsoft Office updates may restore these registry keys to their original settings. CNC Reporter will detect this, and when next opened will ask to run an executable (AMEND\_EXCEL\_REGISTRY.exe) which will return these registry keys to the settings CNC Reporter requires.

Administration rights on the PC are required to enable this executable to run.

#### Problem

When using **REAL TIME data import**, multiple instances of the results data are imported and the source file is not deleted.

#### Cause

The results data file being imported into Renishaw CNC Reporter contains the word 'demo' in the file name.

#### Solution

Rename the results data file. In the *CNC Reporter Control Panel* (on the **Start** tab) select **Collect Data** - **REAL TIME** and in the **File Open** dialog, navigate to and select the renamed file.

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