

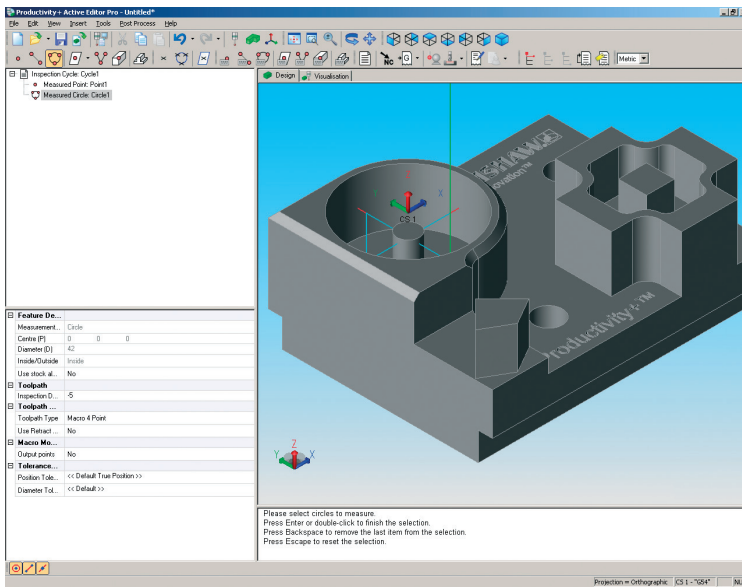
Updating the machine

Having learnt how to create a measurement cycle by selecting features from the CAD model, the next step is to do something with the data provided by that cycle.

This can take several forms: Updating the WCS; Updating the tool length and/or diameter; Updating machine variables; or Updating a rotating axis.

Having completed this module you will be able to:

- Update the WCS
- Update the tool length/diameter
- Update machine variables
- Complete a rotation update

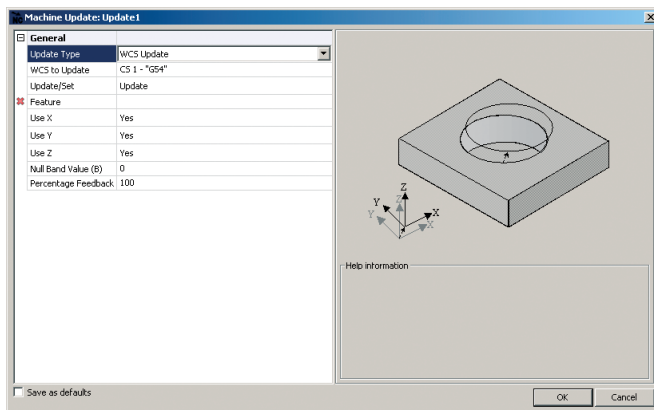


Using the Measured Point icon, select a position on the top surface of the model. Next, using the Measured Circle icon, select the large bore with the central island.

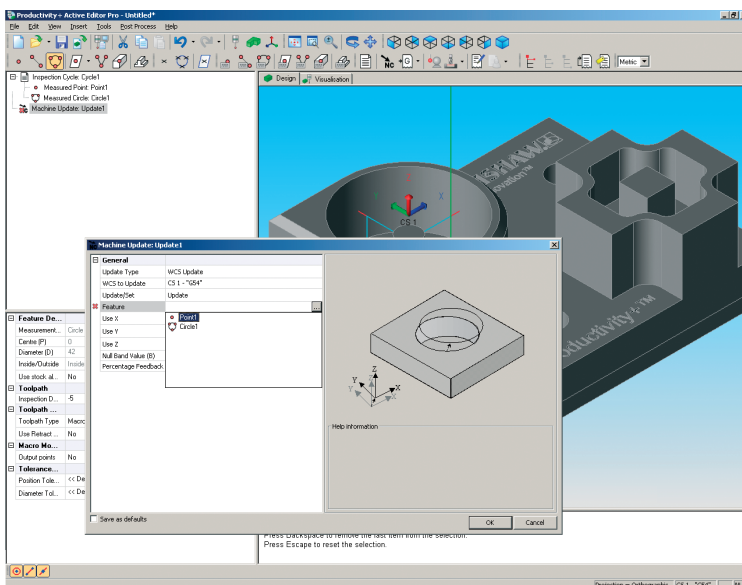


Updating the WCS (default)

Select the Machine Update icon. The resulting dialog box contains a series of options.

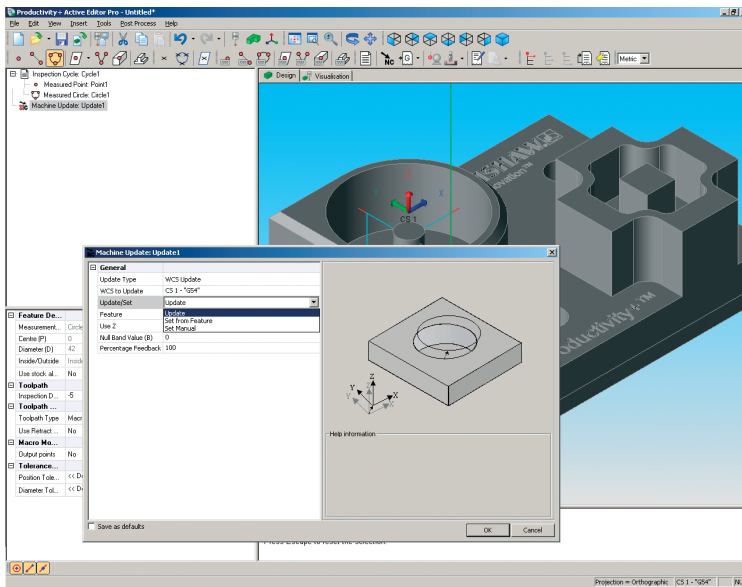


A red cross next to the Feature field indicates that no feature is currently selected.



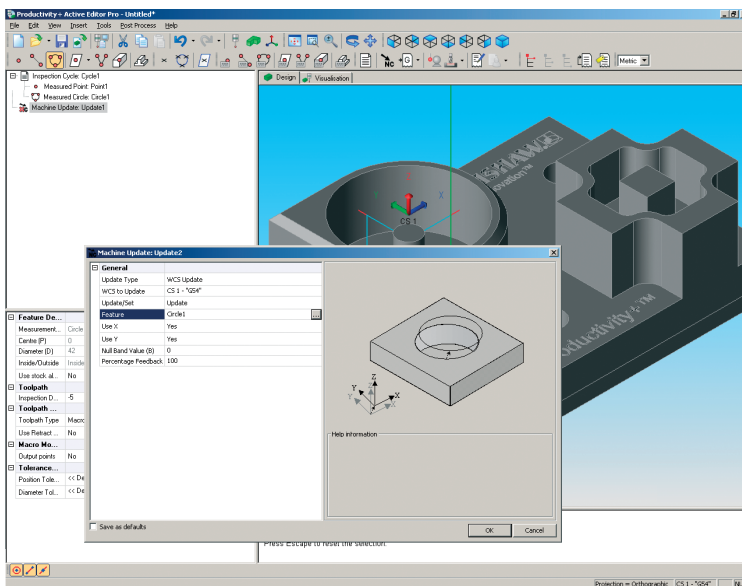
Click the button to the right of the Feature field: a drop down box lists the features that are currently available to update the WCS. In this example there are two available features: Point1 and Circle1.

Select Point 1.



Next, select the drop down box to the right of the Update/Set field. Select Update from the available list.

The Update option can only update the WCS that a selected feature was measured in. Therefore this operation will update the WCS corresponding to CS1 (in this case G54) in the Z direction. Select OK to close the dialog.



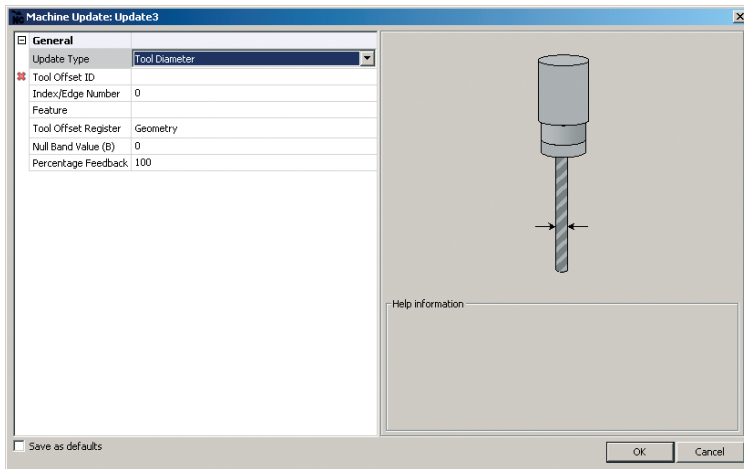
To update G54 in X and Y we will use the Circle1 feature. The process to select this feature is the same as above: select the Machine Update icon, select Circle1 from the feature drop down list, and click OK.

We have now corrected the G54 WCS in X, Y and Z using the data from the Point1 and Circle1 features previously measured with the probe.

The Update option from the Update/Set drop down will update the G54 WCS in X, Y and Z by the amount of error found.

In addition to Update, there is a Set from Feature option which allows you to probe a feature and then set the WCS a certain distance away from that feature.

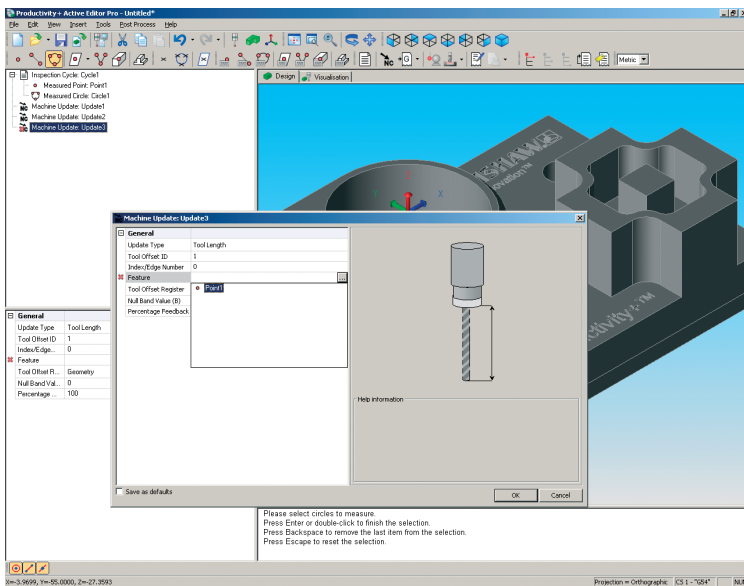
This option allows you to input an X, Y, Z co-ordinate of where you want your datum to be located from the selected, probed feature.



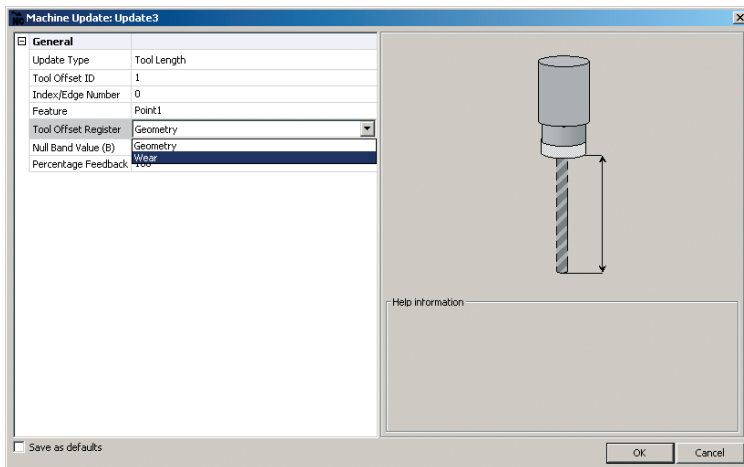
Updating Tool Length

Select the Machine Update icon. In the Update Type field select Tool Length from the drop down box.

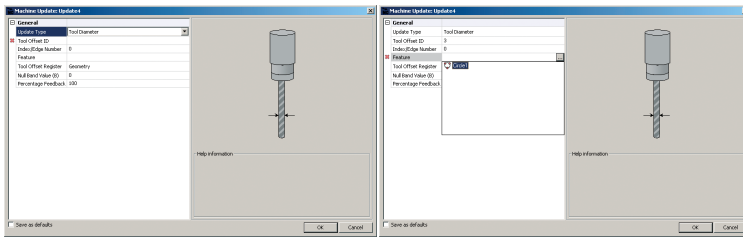
A red cross appears next to the Tool Offset ID. Enter the tool offset number to be updated. This may be different to the tool number.



A red cross now appears next to the Feature field, prompting you to select the required feature to use for this update. In this instance, select Point1.

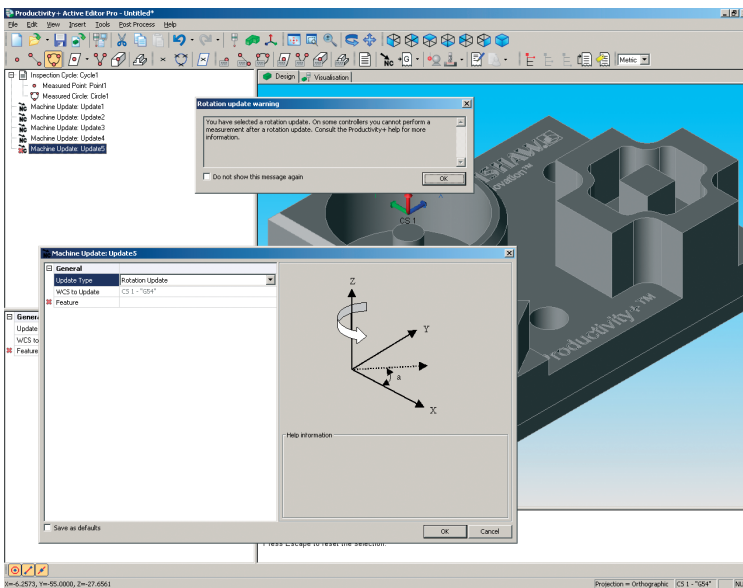


Finally, select whether to update either the Geometry or Wear Register followed by OK.



Updating Tool Diameter

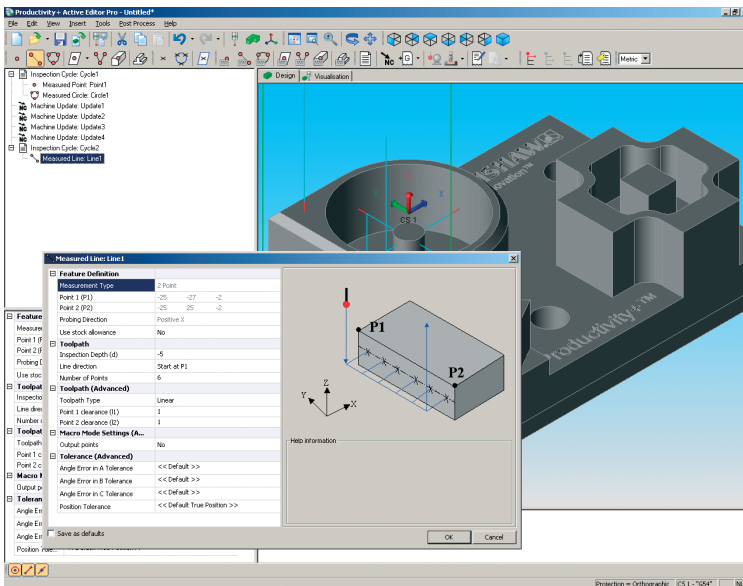
The process to update Tool Diameter is the same as that to update Tool Length, except you must select Tool Diameter from the Update Type drop down box and you can only use Circle1 as the feature. Having made these selections, click OK to finish.



Rotation Update

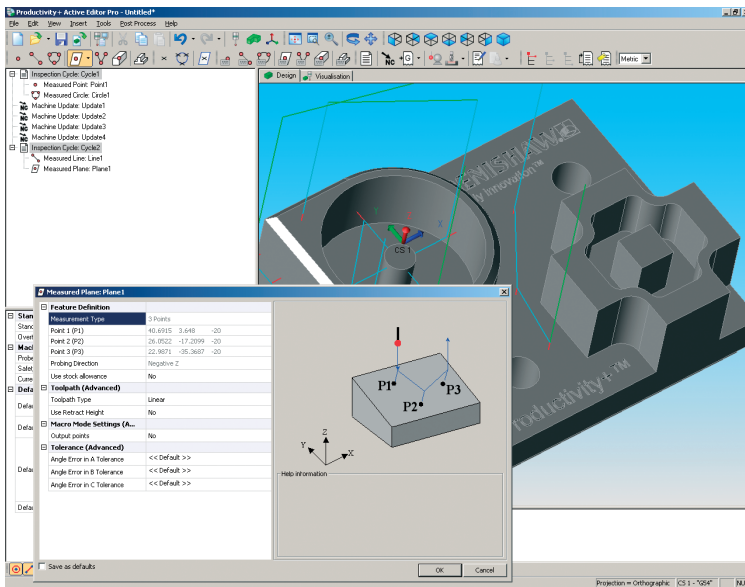
Note: If you update an axis using a software rotation, you can not perform any further probing operations until you cancel the rotation.

This does not apply when performing a physical axis rotation.

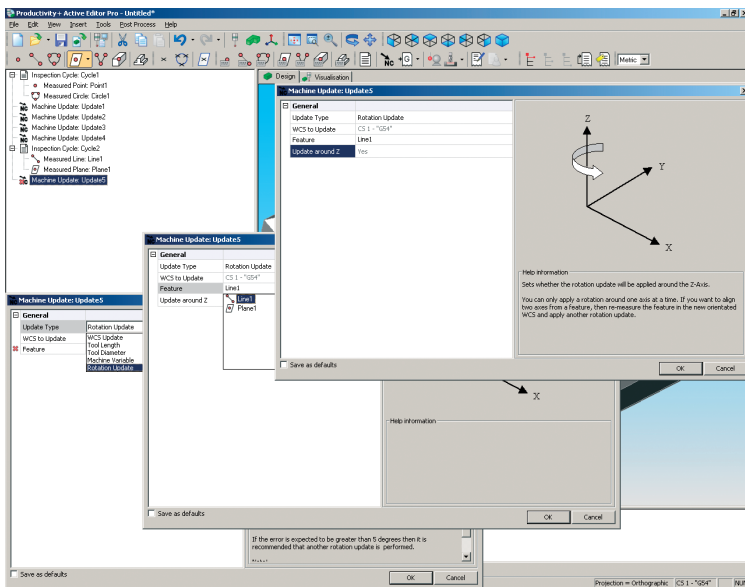


Firstly, create some features to use. Features that can be used to perform a rotation update are: Line, Plane, 2D Corner and Web/Pocket.

To follow this example, select the Measured Line icon and create a line feature as shown. This will allow rotations about the Z axis.



Now, create a Measured Plane as shown. This feature will allow rotations about X or Y.



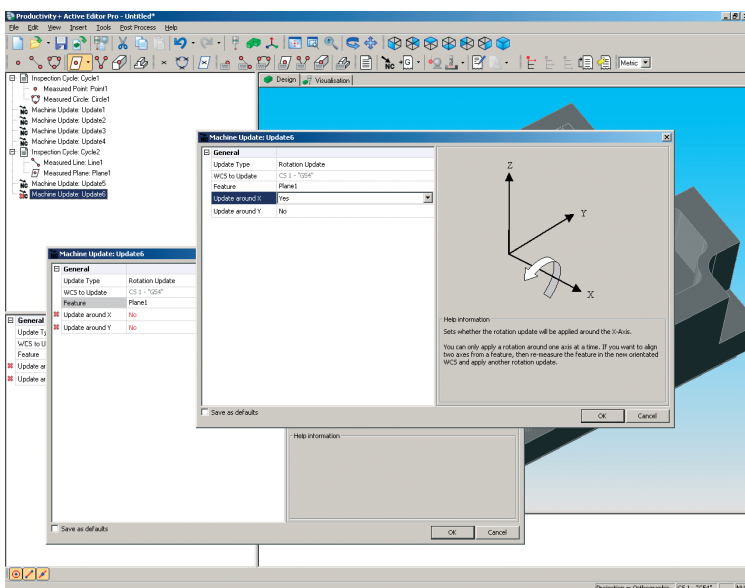
Select Machine Update, and Rotation Update from the drop down box of the Update Type field. A red cross appears next to the Feature field. Select Line1 from the drop down box of the Feature field.

Click on 'NC Update' and choose Rotation update from the drop down menu.

Notice the X next to Feature.

Click in the box, and select Line1. The dialog box will indicate that you will be rotating about the Z axis.

OR



Follow the steps above, selecting Plane 1 from the Feature field drop down box.

Two new fields appear - Update around X, and Update around Y - each with a red cross next to them. Use the drop down boxes to select Yes for Update around X and No for Update around Y.

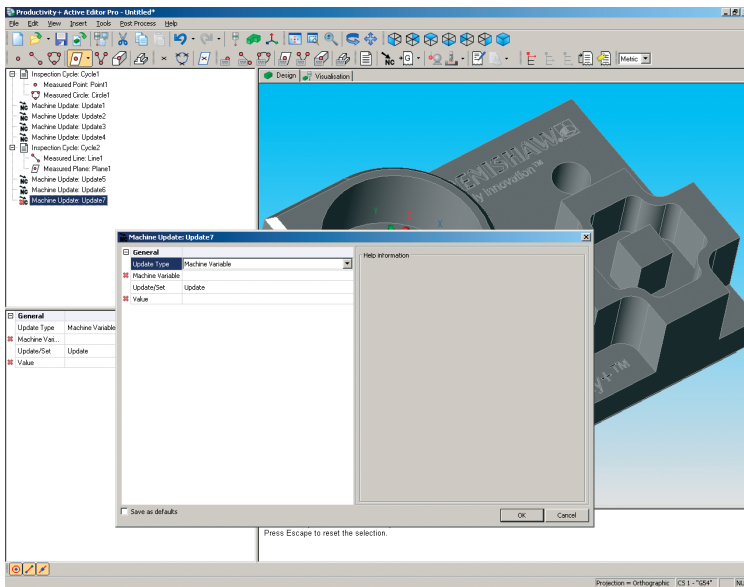
Note: If your machine tool is not capable of performing any of these rotations, it will error out during post processing.

Updating Machine Variables

Select the Machine Update icon. In the resulting dialog box, select Machine Variable from the Update Type drop down box.

Red crosses appear next to the Machine Variable and Value fields indicating that data is required.

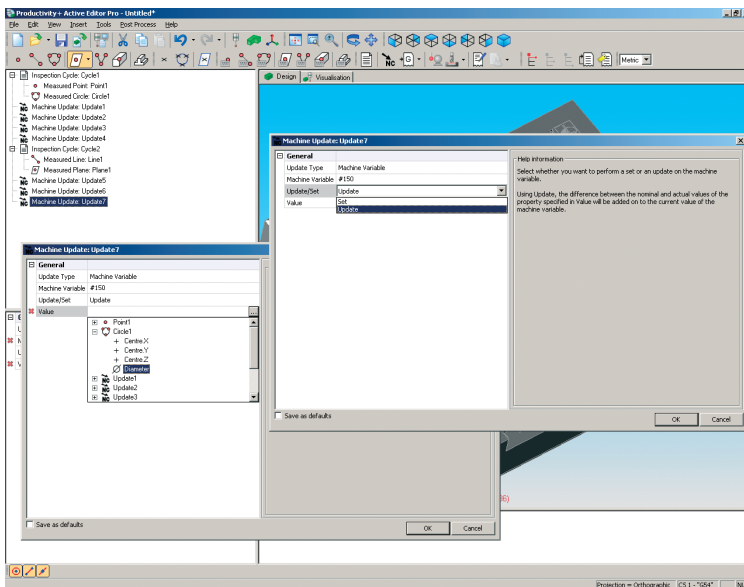
The Machine Variable field requires a number.



In this example we use a #150 variable.

In the Value field drop down box double click on Circle1 and then select Diameter. The Value field will now display Circle1:Diameter. This value will be stored to #150.

Finally, from the Update/Set field, select Set. This will update the value in the variable location, overwriting any existing data.



Renishaw plc
New Mills, Wotton-under-Edge,
Gloucestershire GL12 8JR
United Kingdom

T +44 (0) 1453 524524
F +44 (0) 1453 524901
E uk@renishaw.com
www.renishaw.com

RENISHAW 
apply innovation™



For worldwide contact details please see our main website at
www.renishaw.com/contact

RENISHAW HAS MADE CONSIDERABLE EFFORTS TO ENSURE THE CONTENT OF THIS DOCUMENT IS CORRECT AT THE DATE OF PUBLICATION BUT MAKES NO WARRANTIES OR REPRESENTATIONS REGARDING THE CONTENT. RENISHAW EXCLUDES LIABILITY, HOWSOEVER ARISING, FOR ANY INACCURACIES IN THIS DOCUMENT.

©2004-2010 Renishaw plc. All rights reserved.

Renishaw reserves the right to change specifications without notice

RENISHAW® and the probe emblem used in the RENISHAW logo are registered trademarks of Renishaw plc in the UK and other countries.
apply innovation is a trademark of Renishaw plc.



H - 4007 - 0035 - 02

Issued February 2010 Part no. H-4007-0035-02-A