

Productivity+™ - PC based probing software for machining centres

Productivity+™ release 1.60.2

Productivity+™, Renishaw's advanced measurement and process control software, is the most powerful tool available for using on-machine measurement to control manufacturing processes. Release 1.60.2 includes several enhancements and refinements in addition to the major functionality improvements seen in release 1.60.

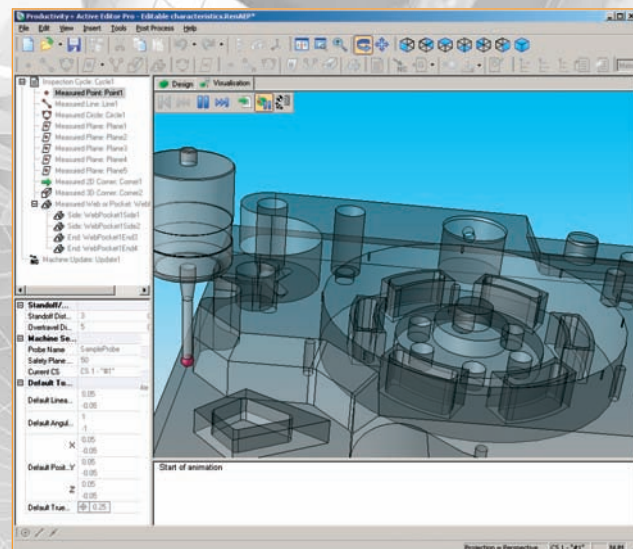
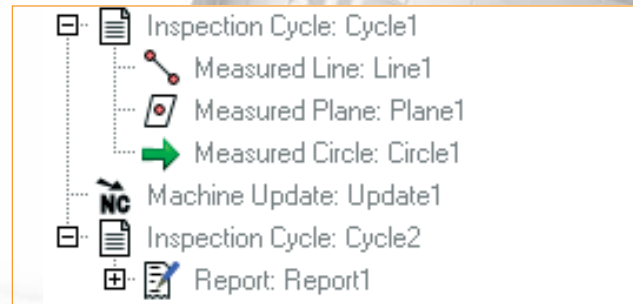
This document provides an overview of the additional functionality provided by these latest releases.

Integrating probing into an existing G-Code program is even easier with enhanced file import options and the ability to split/re-combine G-Code around probe cycles. The Visualisation functionality now includes icon indication of the simulation's current position within the probe routine, and the ability to fully simulate a program containing multiple probe types in the same Visualisation routine.

The introduction of transparent and wireframe model view options simplifies navigation and cycle creation for complex component models. This, coupled with the availability of view (orientation) options via a mouse click helps to make programming even quicker than before.

In addition to enhanced operational functionality, Productivity+™ 1.60 (and later) can now be installed side-by-side with an earlier version, providing support for legacy programs without the need to update them.

Controller specific advances include support for the Heidenhain 'TCH PROBE 4' option for vector measurement, and more effective sister tooling updates for the Siemens 840D.



Key benefits of Productivity+™

In-process measurement

Productivity+™ lets users combine probing and machining, so features can be automatically checked without the need for an external PC. Incorporating logic statements allows the machine tool to make intelligent choices about how to proceed.

Integrated workflow

Programming measurement on the solid model means it's faster to program and that no special machine knowledge is needed. Programming can be performed directly on the CAM workbench. Those programming without solid models can also take advantage of Productivity+™ functionality.

Automatic machine updates

Measurements can be used to set work co-ordinates, update tool length and/or diameter, machine variables and rotation updates.

Innovations in version 1.60/1.60.2

Side-by-side installation

Productivity+™ release 1.60 can be installed with a single copy of an earlier release allowing continued use of legacy programs with no requirement to modify them.

Enhanced view and simulation options

Solid model shading options and model orientation can be changed via a simple mouse click, making navigation and program creation simpler and easier than before. Enhanced Visualisation now supports simulation with multiple probe types in the same program.

G-Code import and editing

G-Code block import options are extended, further simplifying integration of probe inspection routines and NC updates at the most appropriate location within existing cutting programs.

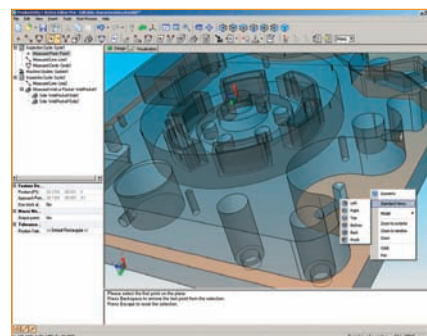
Key features

- Sophisticated part set-ups and operations** Integrated control statements add intelligence to your machining programs
- Point and click programming** Simple to use, icon based software
Individual view windows for probe program, G-Code and probing statement
- Tool setting** Determine the length, radius and/or diameter of your cutting tools to maximise machining accuracy
- CAD/CAM compatibility** Integrates easily into existing programs and processes
Import a variety of CAD model formats and use to generate probe routines (STEP, IGES and Parasolid® are supported as standard)
Import G-Code, then split/re-combine as necessary around probe cycles
- Program without solids** 'Basic Statements' allow program creation without CAD models
- Integrate tool setting and probe routines into existing G-Code** PC based programming eliminates the need to spend time at the machine tool
Select where to add probing to existing machining programs
- Instructional dialogs and wizards** Dialog boxes with step-by-step instructions
Post Processor transforms probe routines into machine G-Code
On-line Help and tutorial examples
- Program simulation** Visualisation feature allows users to prove-out the program before loading to the machine controller
Eliminate the risk of damage to machine and probe
Visual identification of current position within the simulated program
Support of multiple probes during simulation
- Probe database** Identify available probes and their carousel location
Select standard Renishaw probes or define individual parameters to create additional probes
Full stylus configuration
- NC updates** WCS (G54, G55 ...)
Rotation
Tool length and diameter
Macro variables
- Side-by-side installation** Support legacy programs without modification

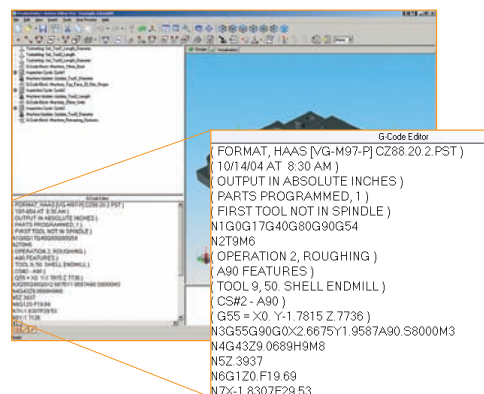
More information

Details of Renishaw's software solutions for machine tools and a comprehensive list of supported CAD formats can be found at www.renishaw.com/mtpssoftware

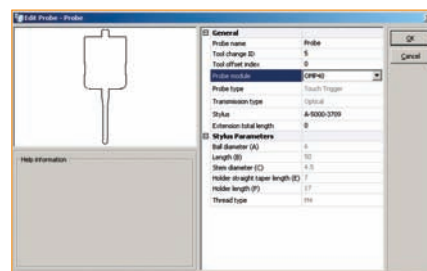
For worldwide contact details please visit our main website at www.renishaw.com/contact



Solid model shading and view options



Import existing G-Code



Probe database