

# On Machine Probing – NX CAM or CAM Express add-on product

## Benefits

- Inspection cycles included in NC programs
- Confidence that probes are moved safely
- Increased part quality
- Reduced scrap

## Features

- Visualization and simulation of probe tool

### Renishaw Inspection Plus

#### Cycles for single-point probes:

- Calibrate length
- Calibrate stylus
- Calibrate on sphere
- Probe point
- Probe surface point
- Probe bore or boss
- Solid tool models

## Summary

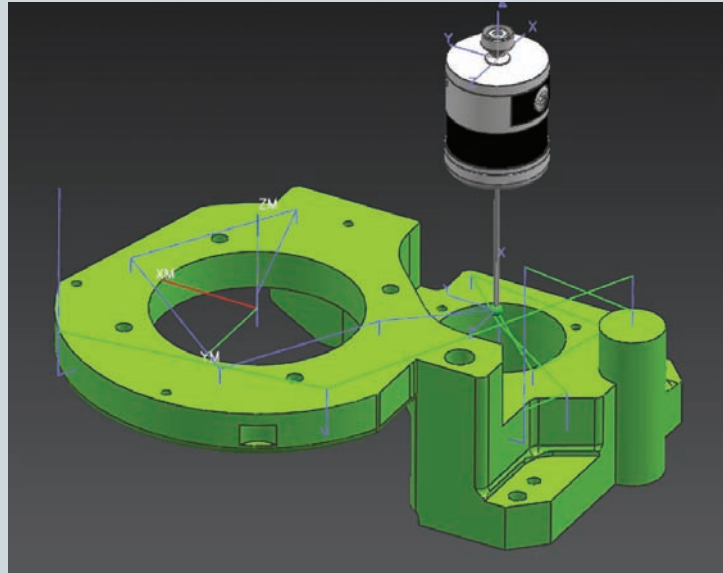
The On Machine Probing module provides a select set of Renishaw Inspection Plus Cycle as part of the programming environment in NX™ CAM and CAM Express software. The probing tools can be modeled as solids and stored in the tool libraries. Additionally, the probe motion can be simulated as part of the machine simulation capabilities in NX CAM and CAM Express.

## Renishaw Inspection Plus Cycles

On-machine probing provides calibration and measurement cycles for single-point probes.

## Solid tool models

NX CAM and CAM Express allow for solid models to be stored as part of the representation of the probe – handled the same way as a cutting tool and managed in the tool library. Probes are different from typical milling and drilling tools, and the solid model allows these important differences to be properly visualized.



*Probing cycles are fully simulated with solid tools.*

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### Postprocessor support

Probing cycles are supported in the postprocessor. The Post Builder module included as standard within NX CAM (and CAM Express) provides options for output of probing cycles without requiring any custom scripting. Existing Siemens 810D/840D and Fanuc 15M postprocessors can be easily updated to support the probing cycles through Post Builder.

### Machine simulation

The probing motion is simulated in the full machining environment, including the representation of the solid tool. Programmers can be confident that the probes are moving safely and that the expected measurements are being performed.

### Quality improvements

Integrating measurement and inspection into the NC programming environment means that tolerances are held closer and errors are spotted immediately. The on-machine probing capability allows measurement tasks to be programmed during the preparation of the NC machining program. The data can be used to check and adjust the machining process, reducing the possibility of errors and material wastage, and helping to meet dimensional accuracy requirements during the machining process. In some cases the use of on-machine probing can eliminate the need for a separate setup on a Coordinate Measuring (CMM) machine. Let NX CAM and CAM Express help take quality to the next level.

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