

# GoProbe D00 for Brother D00 controllers

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## Caution – Software safety

The software you have purchased is used to control the movements of a machine tool. It has been designed to cause the machine to operate in a specified manner under operator control, and has been configured for a particular combination of machine tool hardware and controller.

Renishaw has no control over the exact program configuration of the controller with which the software is to be used, nor over the mechanical layout of the machine. Therefore, it is the responsibility of the person putting the software into operation to:

- ensure that all machine safety guards are in position and are correctly working before commencement of operation;
- ensure that any manual overrides are disabled before commencement of operation;
- verify that the program steps invoked by this software are compatible with the controller for which they are intended;
- ensure that any moves which the machine will be instructed to make under program control would not cause the machine to inflict damage upon itself or upon any person in the vicinity;
- be thoroughly familiar with the machine tool and its controller, understand the operation of work co-ordinate systems, tool offsets, program communication (uploading and downloading) and the location of all emergency stop switches.

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**IMPORTANT:** This software makes use of controller variables in its operation. During its execution, adjustment of these variables, including those listed within this manual, or of tool offsets and work offsets, may lead to malfunction. Ensure that all variable and program numbers required and/or used by the Renishaw system are not used by any other function or software package already installed on the CNC machine tool.

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## About this manual

This document contains basic information on installing GoProbe D00.

- Chapter 1 outlines the prerequisites for installing and running GoProbe D00.
- Chapter 2 covers the installation of GoProbe D00.
- Chapter 3 describes how to get started with your GoProbe D00 application.

## About GoProbe D00

GoProbe D00 is a simple, intuitive on-machine probing application providing users with an easy-to-use probing solution.

With this seamless and integrated machine tool probing application, users of all levels of experience can take advantage of the many benefits offered by the Renishaw probing systems.

## Intended use

The Renishaw GoProbe D00 application must only be used as intended.

The software is only intended for use with Renishaw macros on a Brother D00 controller. Use of the application with non-Renishaw macros is not supported. This version of the software is for use on a Brother D00 controller with firmware version 4.001 or higher.

## Prerequisites

In order to use the GoProbe D00 application, the following are required:

- Brother NC with firmware version 4.001 or higher.
- Renishaw macro software package A-4012-1028 (version 0M or later).
- Renishaw macro software package A-5642-4161 (version 0B or later).
- Renishaw macro software package A-4012-1007 (version 0T or later).
- Renishaw macro software package A-5475-8700. To use the LTS “Length measure – off centre – automated positioning” cycle, version 0F (or higher) must be installed on the machine.
- Renishaw macro software package A-4012-1035 (version 0J or later).

## Designations

Throughout this manual, the following designations are used:

- Soft keys are referenced in capitals and bold font, for example, **PRGRM**.
- Screen names, tabs and selectable menu options are referenced in oblique font, for example, *External I/O*, *Maintenance*.
- Folders, paths and file names are referenced in bold Courier font, for example, **GoProbe\_D00.BAPP**, **Output.xml**.

## Renishaw customer services – calling Renishaw

If you have a question about the software, first consult the documentation and other information included with your product.

If you cannot find a solution, you can receive information on how to obtain customer support by contacting the Renishaw subsidiary company that serves your country.

When you call, it will help the Renishaw support staff if you have the appropriate product documentation at hand. Please be prepared to give the following information (as applicable):

- The version of the software you are using.
- The make and model of your CNC machine tool controller.
- The type of hardware that you are using.
- The exact wording of any messages that appear on your screen.
- A description of what happened and what you were doing when the problem occurred.
- A description of how you tried to solve the problem.



# Chapter 1

## Prerequisites

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## Prerequisites

The GoProbe D00 application can be installed on any Brother D00 controller with firmware version 4.001 or higher.

Application configuration settings can only be changed using the wizard and where 7-Zip is installed. If 7-Zip is not installed, a default configuration can be loaded to the machine instead.

### Renishaw macro software

The following Renishaw macro software must be installed and configured on the NC controller in order for the GoProbe D00 to operate correctly:

- Inspection Plus (A-4012-1028, with the GoProbe option selected)
- AxiSet Check-Up (A-5642-4161)
- Contact tool setting (A-4012-1007)
- Length tool setting (LTS) (A-5475-8700)
- Non-contact tool setting (A-4012-1035)

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**NOTE:** Before running any of the measurement cycles, please ensure that the probe is calibrated using the calibration cycles.

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See the relevant installation and programming manuals for help with this macro software.

## Chapter 2

# Installing GoProbe D00

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## Introduction

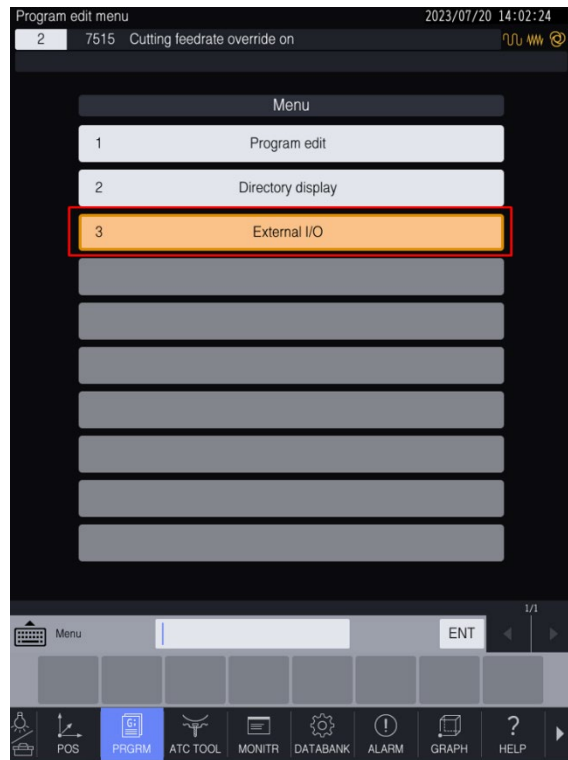
The following files are output when running the macro installation wizard. Run the wizard before attempting to install the GoProbe D00 application on the controller. **Output.xml** is not required for the installation.

**GoProbe\_D00.BAPP**

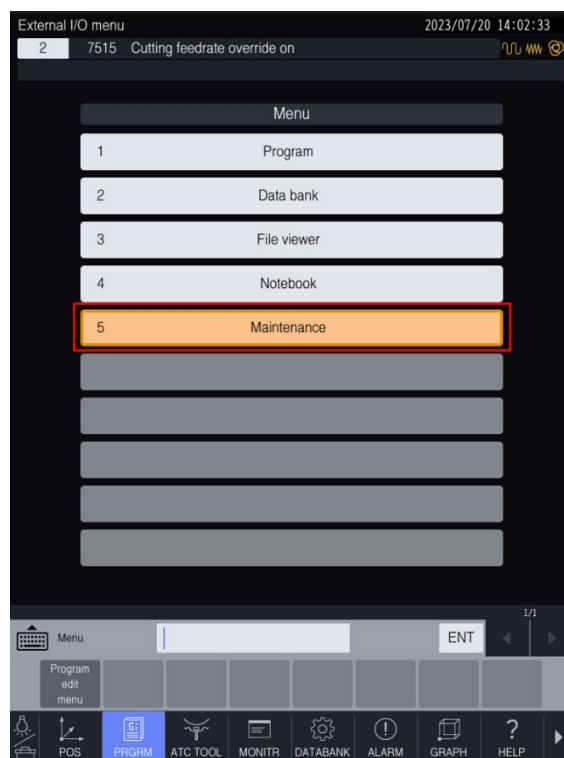
**Output.xml**

## Installing GoProbe D00

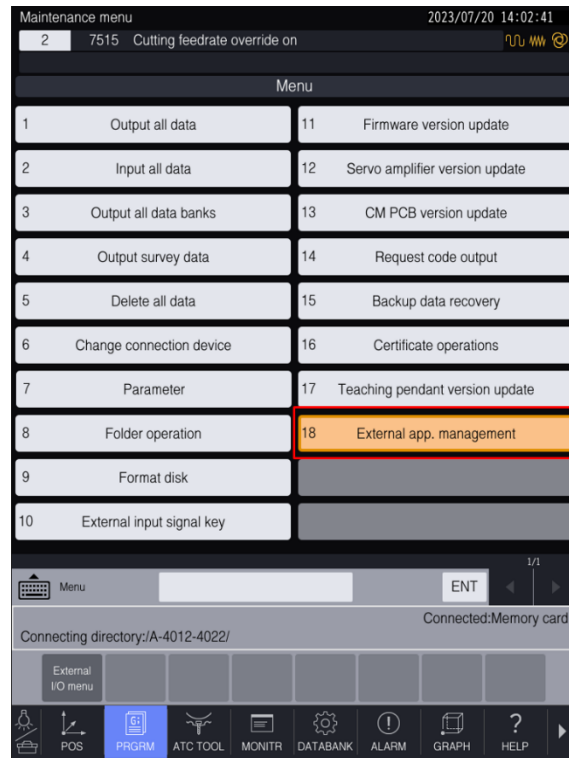
1. Insert the USB disc (containing the generated files from the macro installation wizard) into the controller.
2. Select EDIT mode, press the **PRGRM** soft key then the *External I/O* button.



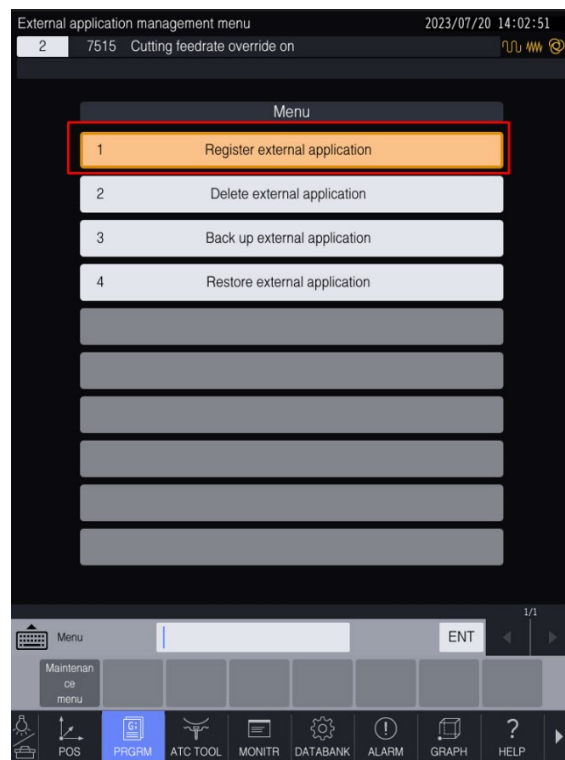
3. Press the *Maintenance* button.



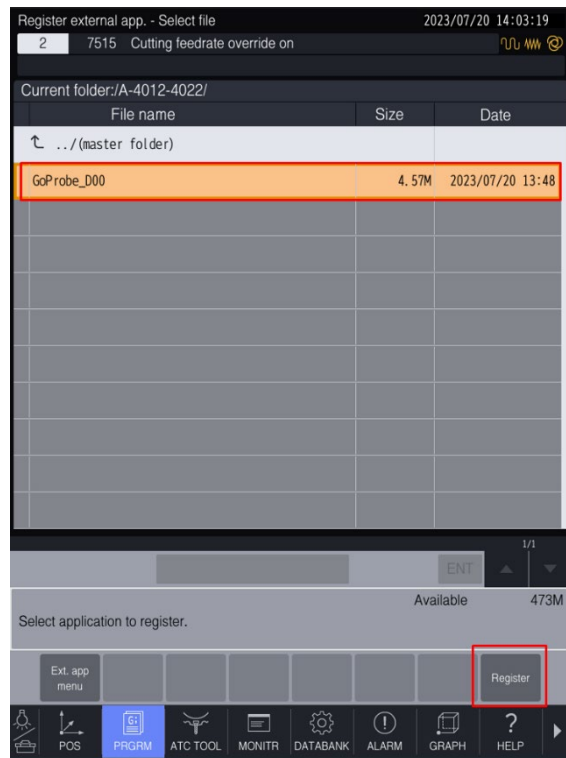
4. Press the *External app. management* button.



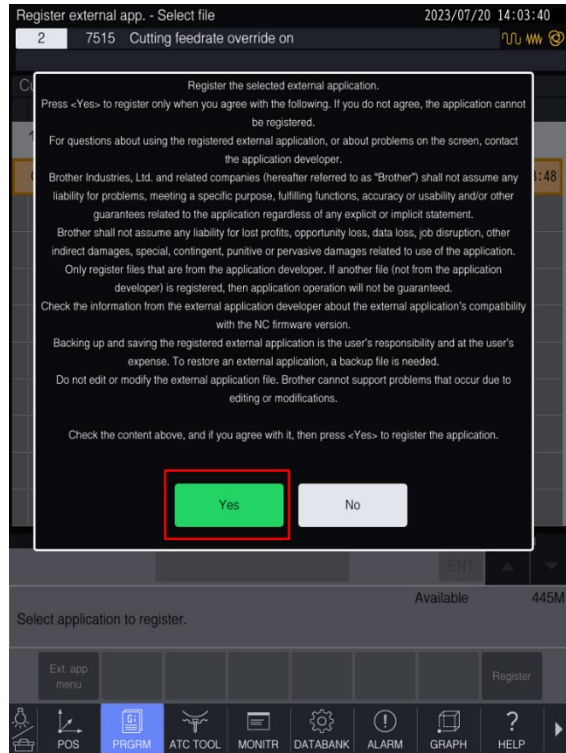
5. Press the *Register external application* button.



6. Select the GoProbe\_D00 file from the USB disc and press the *Register* button.



7. Press the Yes button on the confirmation message.

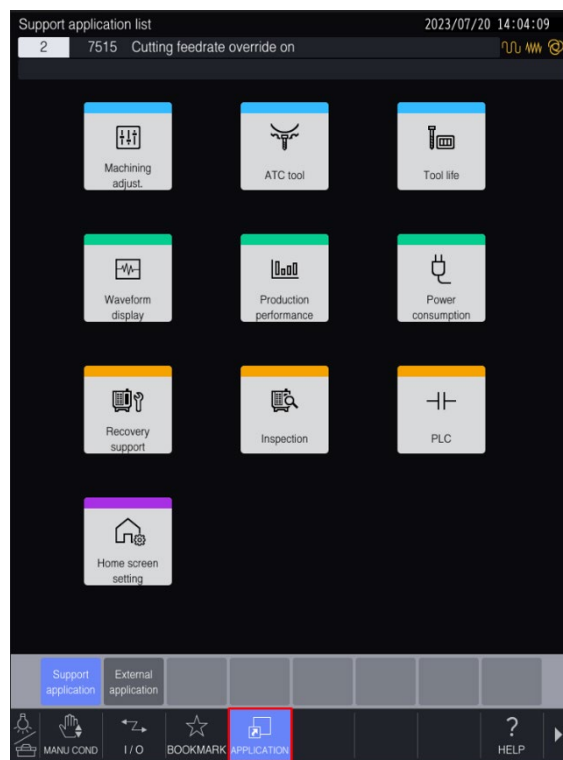


## Accessing GoProbe D00 on the NC controller

1. Press the right arrow button.

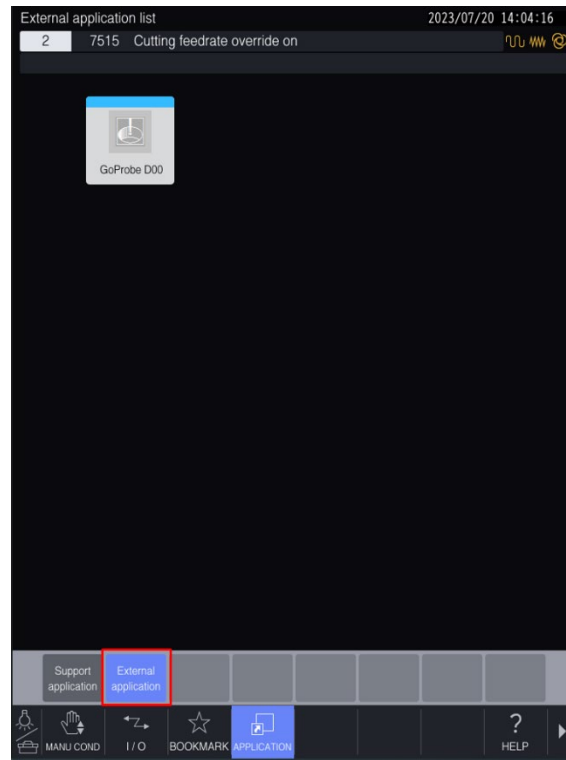


2. Press the **APPLICATION** soft key.





3. Press the *External application* button then the *GoProbe D00* button.



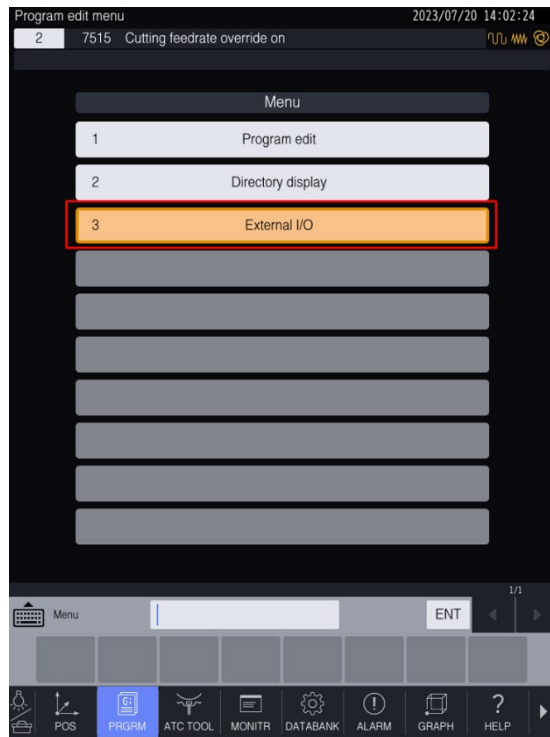
## Uninstalling GoProbe D00

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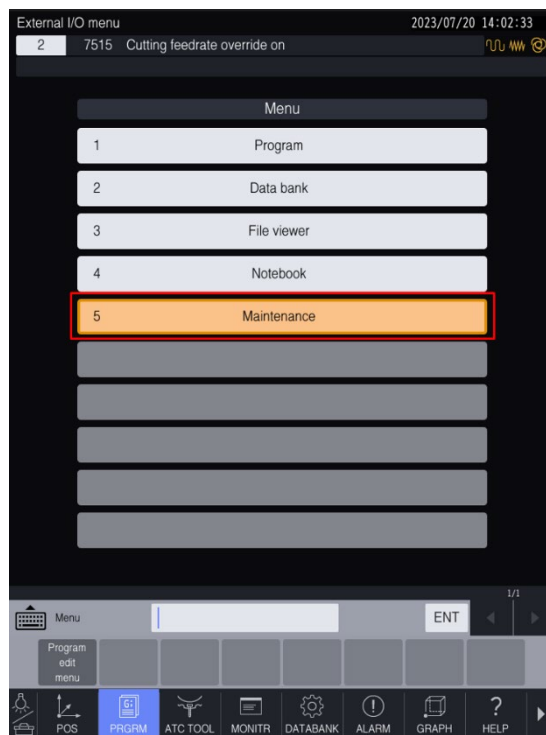
**NOTE:** When updating GoProbe D00, uninstall the previous version first.

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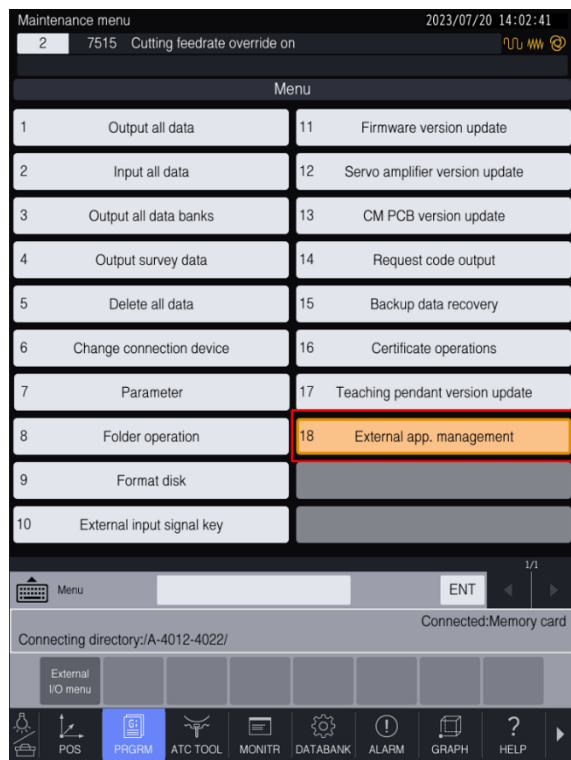
1. Select Program edit mode, press the **PRGRM** soft key then the *External I/O* button.



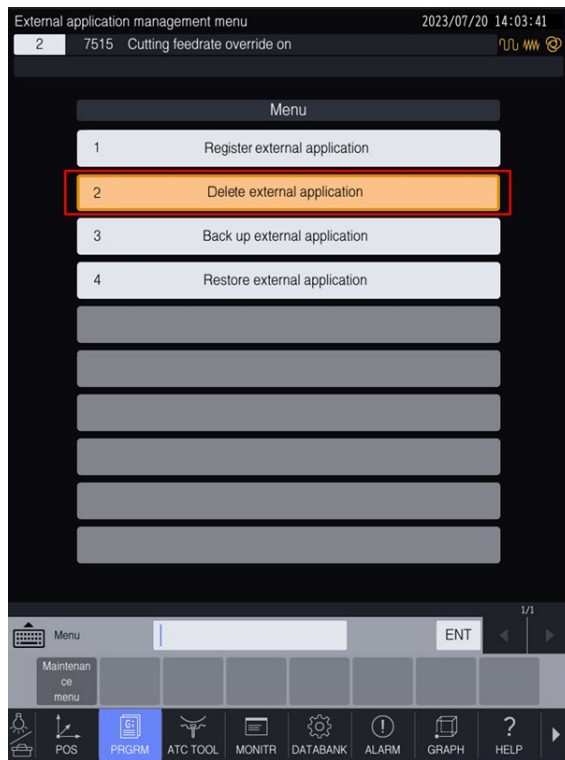
2. Press the *Maintenance* button.



3. Press the *External app. management* button.



4. Press the *Delete external application* button.



5. A list of registered external applications is displayed. Select GoProbe\_D00 then press the *Delete* button. Press the *Yes* button on the confirmation message.

## Configuring GoProbe D00

The GoProbe D00 application can be configured using the macro software installation wizard where 7-Zip is installed. If 7-Zip is not installed, a default configuration can be loaded to the machine instead.

The following settings can be adjusted to control the behaviour of the GoProbe D00 application.

Option	Description
Language	The display language of the application. If Automatic is selected, the on-machine language setting is used.
Probing Systems	Select whether a spindle probe or tool setting system, or both, are installed on the machine tool. Changing this value will alter the selectable cycles and the generated NC code.
Tool Setter	Select the type of tool setter installed on the machine tool. Changing this value will alter the selectable cycles and the generated NC code.
Contact Tool Setter	Select the type of contact tool setter installed on the machine tool. Changing this value will alter the selectable cycles and the generated NC code.
Contact Tool Setting Compatibility Mode	<p>Switch to compatibility mode when the contact tool setting macro package installed on the machine tool is also in Compatibility mode.</p> <p>When compatibility mode is switched on, cycles will use the original input letters that were used in older versions of the contact tool setting package A-4012-0584, from mod level 0J (2008) to AG (2020).</p> <p>When compatibility mode is switched off, cycles will use slightly different input letters to enable new functionality. If selecting this option, ensure that no pre-existing programs containing tool setting cycles are used with this software.</p> <p><b>Important note:</b></p> <p>If compatibility mode is switched on, the following newer functionality will no longer be available:</p> <ul style="list-style-type: none"> <li>• Outputting contact tool setting results to Reporter</li> <li>• Long/short tool search off centre</li> <li>• Separate tolerance value settings for Length and Diameter tool measurement</li> <li>• The ability to perform tool checking against a tolerance (tool offset only updated when in tolerance)</li> </ul>

Option	Description
Enable Broken Tool Solid Tools	<p>The availability of the Broken tool cycle for solid tools depends on the configuration of the hardware interface (NCi-6) for Tool Break Mode.</p> <p>This will have been determined during the NCi-6 installation, where an M-code will need to have been connected to the NCi-6 for Tool Break Mode to be available.</p> <p>For more information about Tool Break Mode, refer to the NCi-6 installation manual H-6515-8500.</p>
XY Calibration Options	Select whether the spindle supports 180° orientation or rotating. If neither is available, select Traditional.
Calibration Cycles	Allows the user to select Traditional calibration cycles or GoProbe-based calibration cycles (using the GoProbe training part).
Multiple Tool Setting	Displays the Multiple tool setting button in the Tool setting menus.
Tool Change Commands	<p>Enter the G-code used to perform a tool change on the machine tool.</p> <hr/> <p><b>NOTE:</b> Do not replace the (t) symbol with a tool offset number, as this will be replaced with each tool offset number as part of the cycles.</p> <hr/>
Rotary Axis Updates	Where applicable, select the axis/axes used for the rotary axis update cycle.
Extended Work Offsets	Where applicable, select extended work offsets and select the number of extended work offsets that are available.
SupaTouch Optimisation	Displays the SupaTouch optimisation cycle in the Calibration cycle page for Spindle probes.

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## Chapter 3

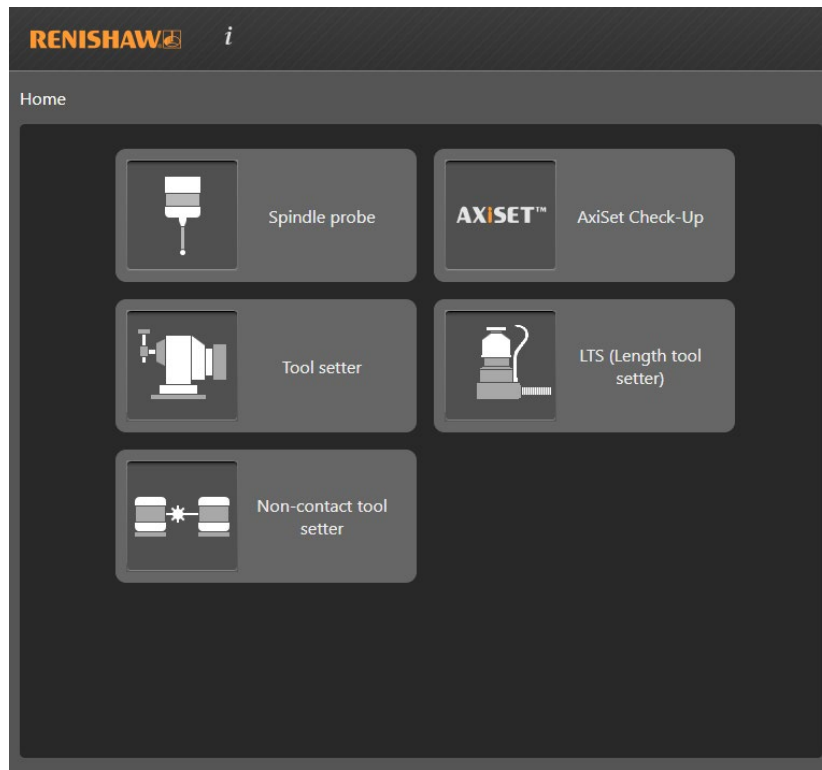
### Getting started with GoProbe D00

#### Contained in this chapter

Running a cycle (example: the bore cycle)..... 3-2

## Running a cycle (example: the bore cycle)

1. Select *Spindle probe*.



2. Select *Measurement cycles*.

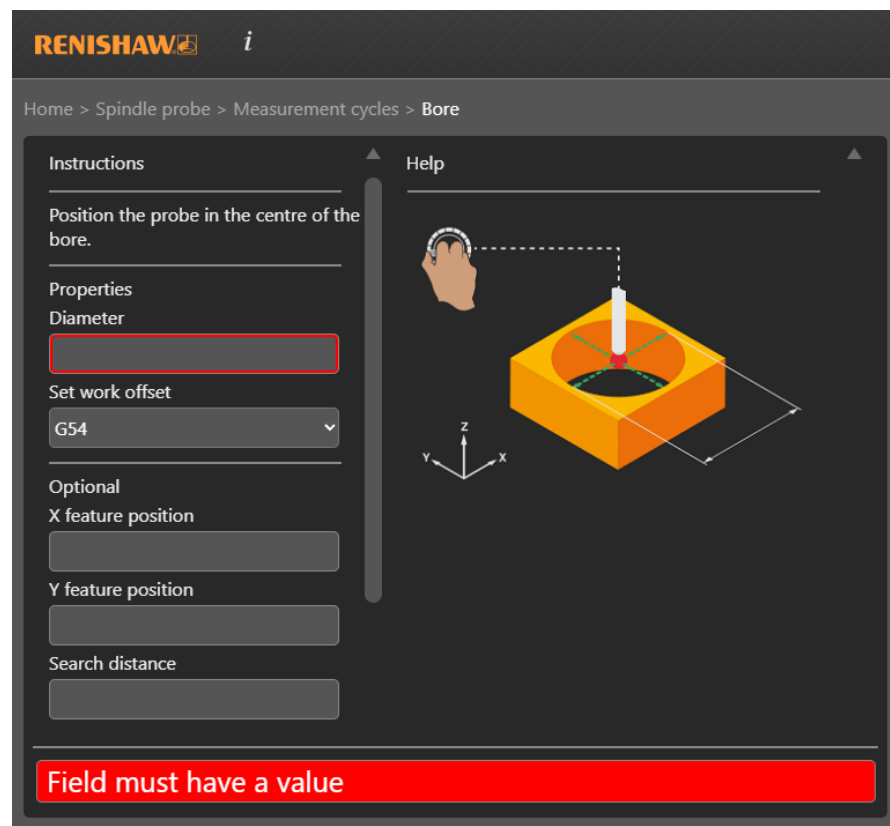




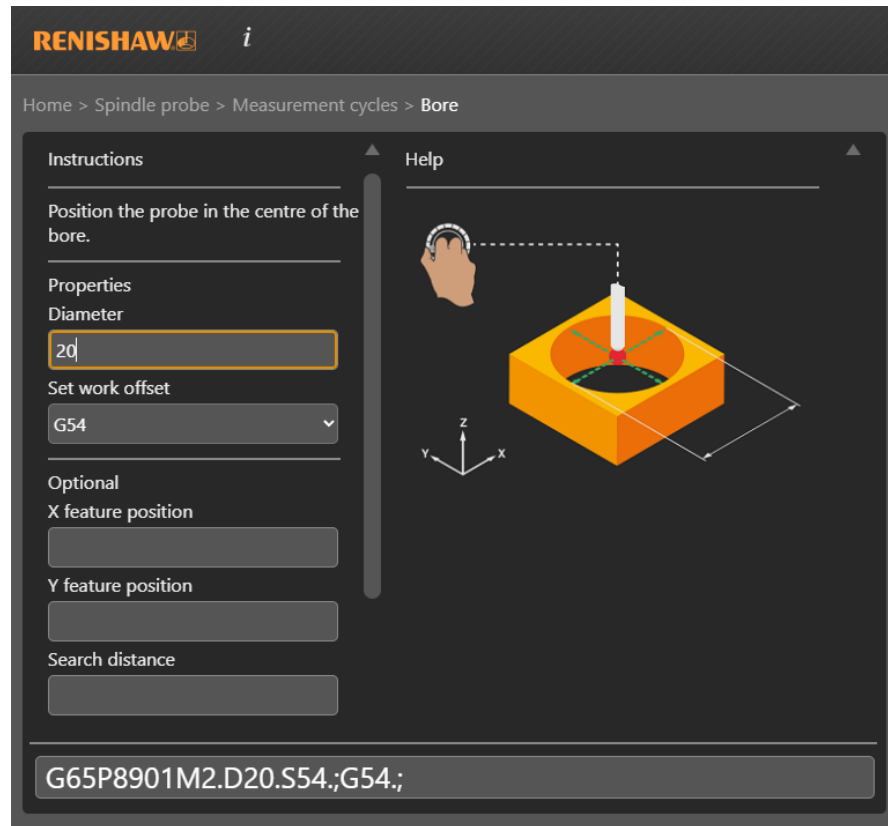
3. Select *Bore*.



4. Enter the feature diameter into the *Diameter* field and select the work offset to be updated with the resulting XY centre of the bore.



5. Once all required values have been entered into the cycle, load the probe to the machine spindle (if not already loaded). Jog the probe to the start position and tap Copy. This will copy the displayed macro call (bottom left corner) to the clipboard so it can be pasted into a program.



6. Put the controller into EDIT mode and navigate to the program into which you wish to insert the macro call (or create a new program). Press the Paste button then run the program.

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**NOTES:**

Do not run the program if the probe or tool is not in the same position as it was when the macro call was created.

Do not insert multiple macro calls into the program.

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