Wireless Intuitive Probe System

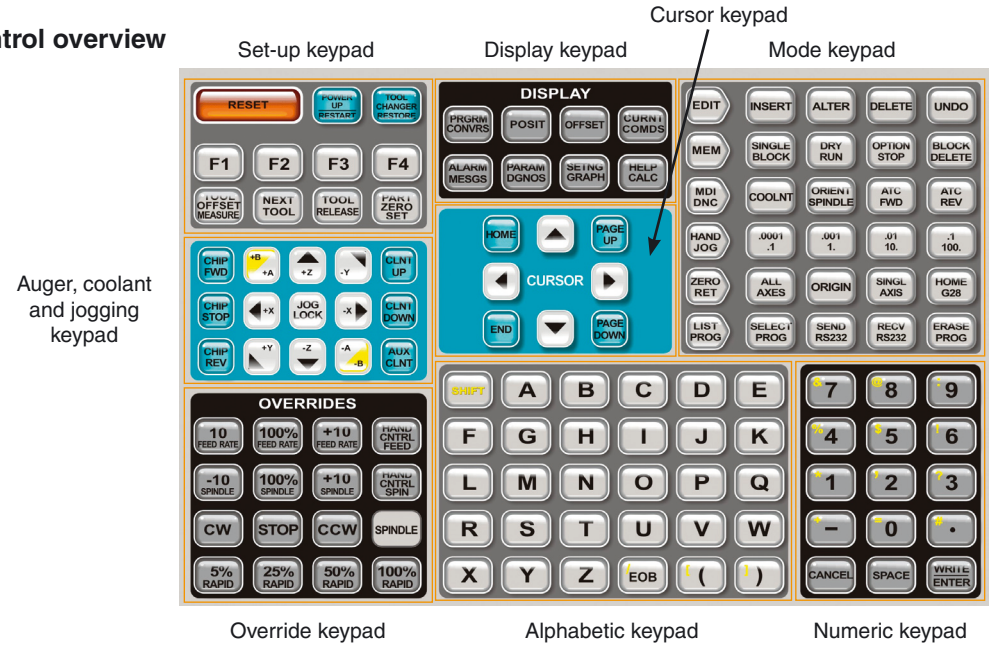
Both the work probe and the tool probe must be calibrated before WIPS probing during manufacture.

This document assumes that:

- both the OMP40-2 work probe and the OTS tool probe are correctly installed and operational
- the user is familiar with the safe operation of Haas machine tools and the functionality of the control

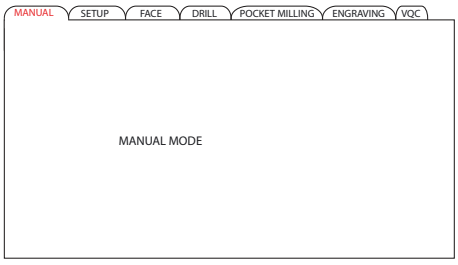
This document is designed to supplement the information provided by the WIPS software screens: it is not intended to provide stand alone instruction.

Control overview



Enter the Intuitive Programming System (IPS)

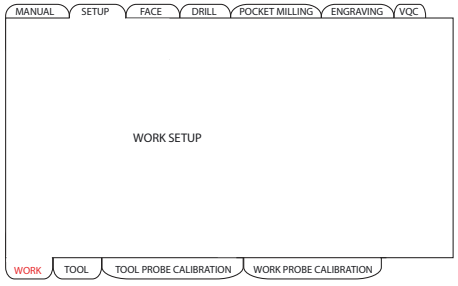
=



Note: Red font indicates currently active menu option

= SETUP

=



= **Starting position**

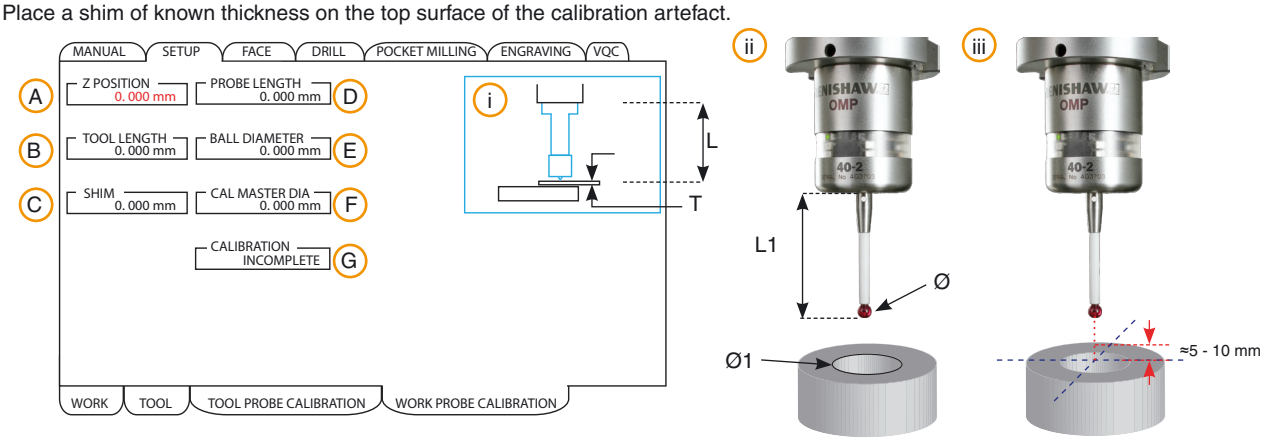
Work probe calibration

From starting position  x 3 = WORK PROBE CALIBRATION 

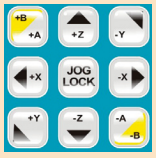
Work probe calibration requires the use of an inner diameter calibration ring, ring gauge or bored hole of known diameter. Securely fix the calibration artefact being used to the machine table.

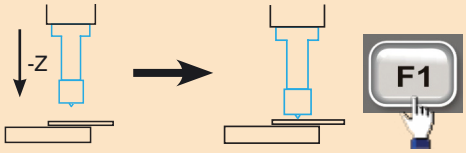
Load a calibration bar to the machine spindle.

Place a shim of known thickness on the top surface of the calibration artefact.



Step 1

A  & 



Step 2

B & i  L *(calibration bar length)* 

Step 3

C & i  T *(shim thickness)* 

Step 4

D & ii Remove shim
Load work probe  ~ L1 *(approx. length of work probe)* 

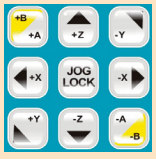
Step 5

E & ii  Ø *(probe ball diameter)* 

Step 6

F & ii  Ø1 *(diameter of calibration artefact)* 

Step 7

iii  

To position probe

Step 8

To run calibration cycle

Step 9

G CALIBRATION INCOMPLETE → CALIBRATION COMPLETED

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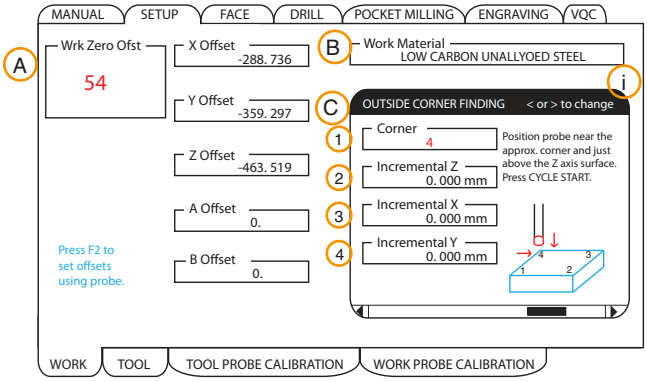
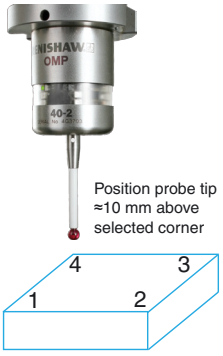
Updating work offsets

From starting position





Step 1

A

Select offsets to update

Step 2 (optional)

B

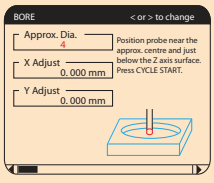
x 2 Work Material LOW CARBON UNALLOYED STEEL

Select work material

Step 3

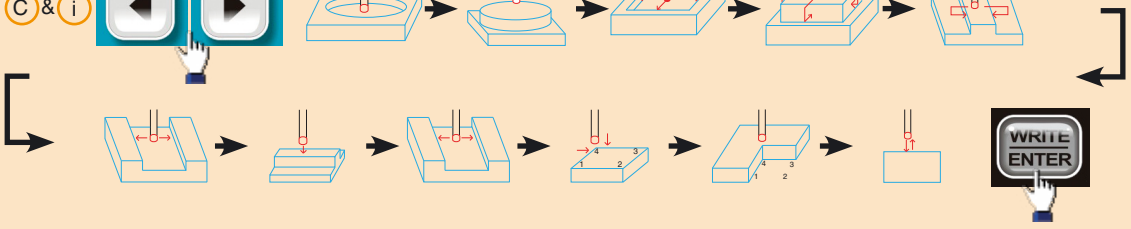
C

= i



Step 4

C & i

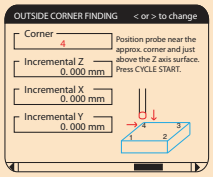


Note: Only OUTSIDE CORNER FINDING and INSIDE CORNER FINDING will update offsets in X, Y and Z. All other feature types will require at least one additional cycle to update all offsets.

Example: Outside corner finding

Step 4

C1



Corner number

ii

&

Step 5

C2

-Z move to surface

Step 6

C3 & C4

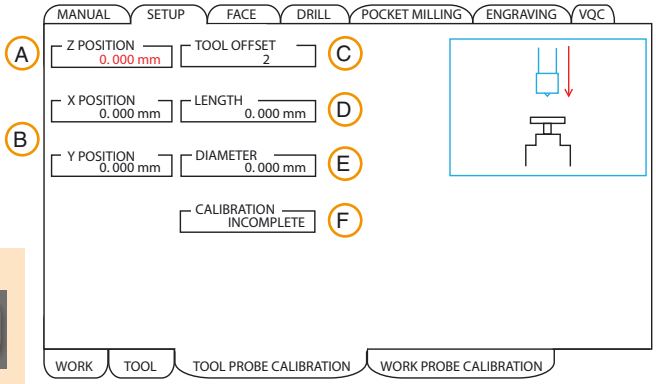
Move before contact on side faces

Step 7

To run calibration cycle

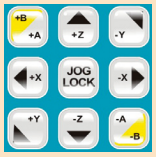
Tool probe calibration

From starting position  x 2 = TOOL PROBE CALIBRATION 



Ensure the machine spindle contains a calibration bar.

Step 1

A & i  &  

Step 2

B & ii  &  

Step 3

C  Tool offset number/ tool number 

Step 4

D & i  L *(length of calibration bar)* 

Step 5

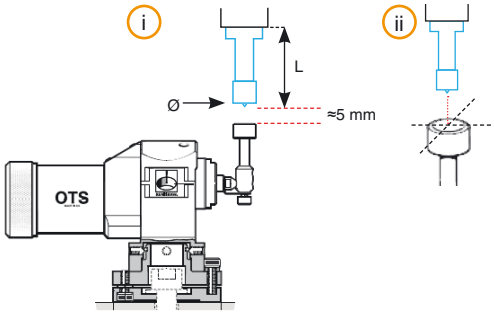
E & i  Ø *(diameter of calibration bar)* 

Step 6

To run calibration cycle

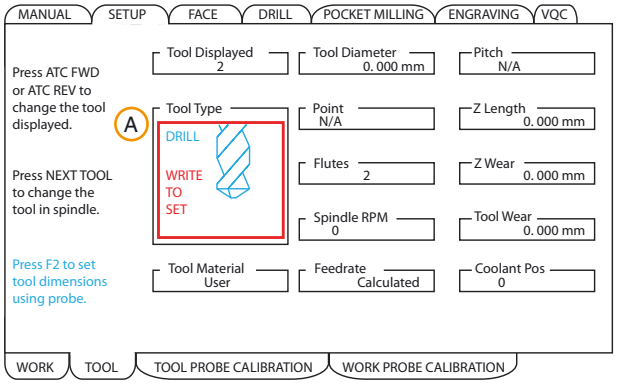
Step 7

F CALIBRATION INCOMPLETE → CALIBRATION COMPLETED

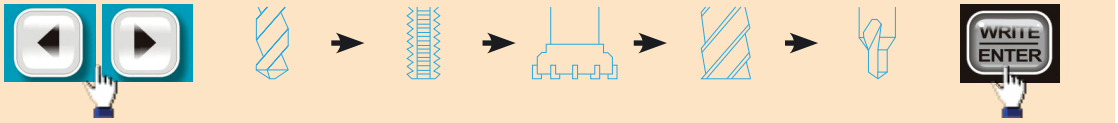


Tool set-up

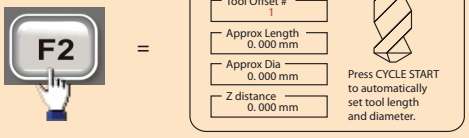
From starting position  x 1 = TOOL 



Step 1

A 

Step 2



Step 3

Tool dimensions 

Step 4

To run calibration cycle

Note: If no value is entered in the Z distance field (-Z distance from the tool tip), tool diameter will not be measured and the cycle will record tool length only.

For installation and maintenance information on the OMP40-2 work probe see *OMP40-2 optical machine probe Installation guide* (Renishaw part no. H-4071-8504) or *OMP40-2 Quick-start guide* (Renishaw part no. A-4071-8500).

For installation and maintenance information on the OTS tool probe see *OTS optical tool setter Installation guide* (Renishaw part no. H-5514-8504) or *OTS optical tool setter Quick-start guide* (Renishaw part no. A-5514-8500).

These documents are available to download from **www.renishaw.com/mtp**

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