

# TWP and G28 for Matsuura

November 2006

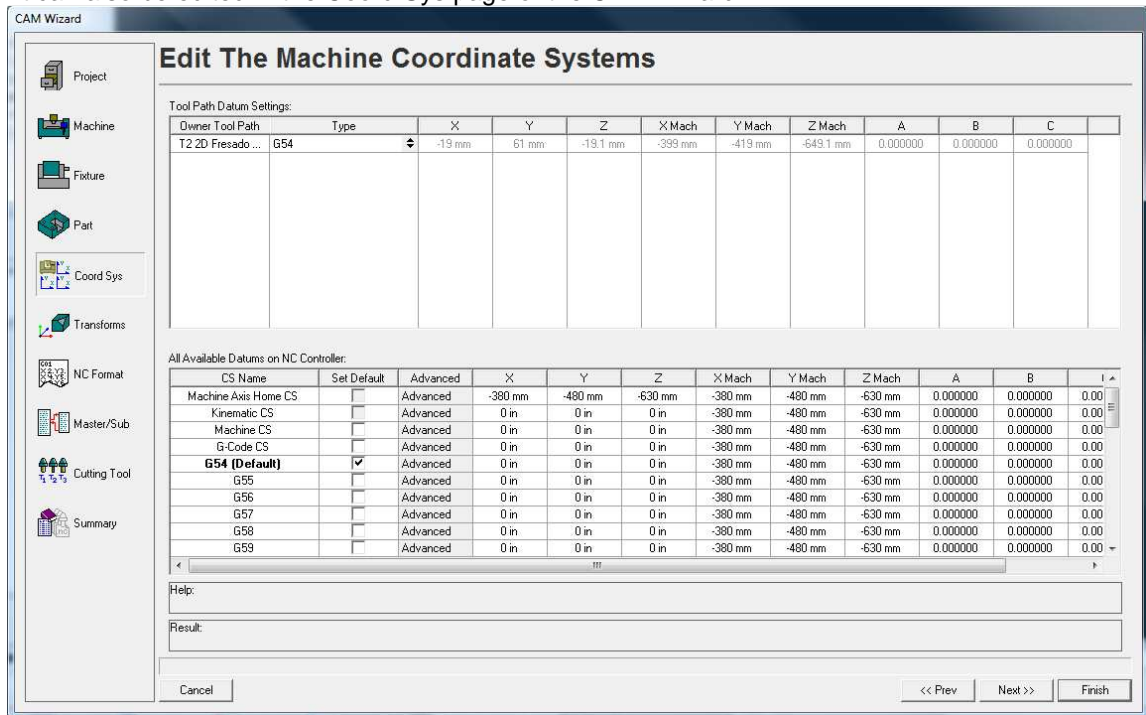
## 1.0 TWP Output of XYZ Offsets

To enable this option, add the text [COORD\_SYS] to the option line for the work plane code. For example:

Start 3+2 Orientation Lines:

Index	Default Settings	Code Layout
1	Auto Tool Path Name Comment	[Auto Comment: Tool Path Name]
2	Options [SKIP=RIGID_TAPPING][OUTPUT Spindle Speed 0 <input type="radio"/> Stop <input checked="" type="radio"/> Clockwise <input type="radio"/> Counter Clockwise	Control the output of the given line <b>S0</b> <b>M03</b>
3	Axis Clamp/Unclamp Unclamp ALL Rota	<b>M132</b>
4	<input checked="" type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp <input checked="" type="radio"/> Abs Coords <input type="radio"/> Incr Coords <input type="radio"/> Incr Coords (H) <input type="radio"/> None WP CS Set Origin Select Origin <input checked="" type="checkbox"/> Set A [NEXT] <input checked="" type="checkbox"/> Set B [NEXT] <input checked="" type="checkbox"/> Set C [NEXT] Options [PRE_SELECT_ROTATION=ON]	<b>G00</b> <b>G90</b> Work Piece Coord System Set Origin Machine Pos ABC Simulation/Post Option
5	Custom Code G131R5	<b>G131R5</b>
6	WP CS Set Plane Set Spatial Rot [EULER][COORD_SYS]	<b>G68.2 X0.0 Y0.0 Z0.0 [EULER][COORD_SYS]</b>
7	Custom Code G53.1	<b>G53.1</b>
8	<input checked="" type="checkbox"/> Set X [NEXT] <input checked="" type="checkbox"/> Set Y [NEXT] <input type="checkbox"/> Set Z [NEXT] <input checked="" type="checkbox"/> Set A [NEXT] <input checked="" type="checkbox"/> Set B [NEXT] <input checked="" type="checkbox"/> Set C [NEXT] Options [PRE_SELECT_ROTATION=ON]	Machine Pos XYZ Machine Pos ABC Simulation/Post Option
9	Axis Clamp/Unclamp Clamp ALL Rotary	<b>M131</b>
10	<input type="radio"/> Cancel Tool L <input checked="" type="radio"/> Tool Len Corr <input type="radio"/> Tool Len Corr <input type="radio"/> None <input type="checkbox"/> Set X 0.000000 <input type="checkbox"/> Set Y 0.000000 <input checked="" type="checkbox"/> Set Z [NEXT]+.1IN Tool Length Comp Offset <input type="checkbox"/> Over-ride	<b>G43</b> Machine Pos XYZ <b>H0</b>

This will output the XYZ offset in the G-Code. The XYZ offset will be read from the tool CS of the hyper mill file. It can also be edited in the Coord Sys page of the CAM Wizard:



2.0 G28 Simulation and Posting

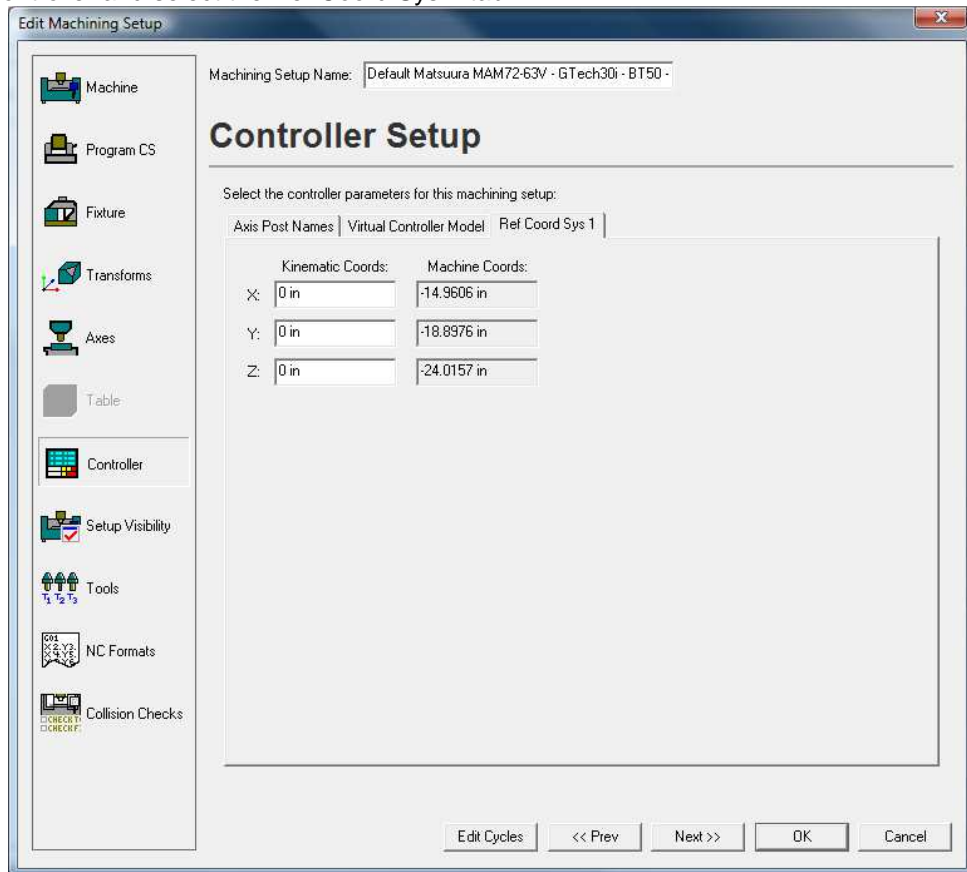
The G28 code can now be posted and simulated. For example:

End 3+2 Orientation Lines:

Index	Default Settings	Code Layout
1	<input checked="" type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp	G00
2	<input checked="" type="radio"/> Cancel Tool L <input type="radio"/> Tool Len Corr <input type="radio"/> Tool Len Corr <input type="radio"/> None	G49
3	WP CS Set Plane Spatial Reset	G69
4	<input type="radio"/> Abs Coords <input checked="" type="radio"/> Incr Coords <input type="radio"/> Incr Coords (H) <input type="radio"/> None <input checked="" type="radio"/> Rapid <input type="radio"/> Linear (Cutting) <input type="radio"/> Circular Interp <input type="radio"/> Circular Interp <input checked="" type="radio"/> First Datum <input type="radio"/> Additional Datum <input type="checkbox"/> Set X 0.000000 <input type="checkbox"/> Set Y 0.000000 <input checked="" type="checkbox"/> Set Z 0.0 mm	G91 G00 G28 Machine Pos XYZ
5	<input checked="" type="radio"/> Abs Coords <input type="radio"/> Incr Coords <input type="radio"/> Incr Coords (H) <input type="radio"/> None	G90

This will output the correct G28 output code. You also need to set up the location of the G28 reference coordinate system.

1. Go to Resources > Machining Setup Editor
2. Hold the SHIFT key and click EDIT
3. Click Controller and select the Ref Coord Sys 1 tab



4. This offset is measured relative to the kinematic coord system. So to set the reference to the top of the Z-axis travel, set this value to 610 mm for Z (for example for the 63V).