



HRS Mach4 Mill Post

Thank you for Downloading a **Hawk Ridge Systems** post!
Hawk Ridge Systems has decades of experience developing posts for CAMWorks and SolidWorksCAM.

Overview

This post Supports All 3 axis operations.

1. SWCAM and CAMWorks Probing supported (2020)
2. All post files must be in the same location.

Output file

The extension for this post is .TXT, changeable in the file .PINF. To edit this, open by right clicking on it and selecting "Open With" then select notepad.

Change the line "PostExtension = " to your preferred extension. Do not use a "." before it.

Posting Tab of Machine

Parameter	Value
Program Number	1
Customer Name	*-*-*ENTER VALUE*-**
Programmer	*-*-*ENTER VALUE*-**

1. Program Number Type= Number, Default=**1**.
This is the Oxxxx number at the top of the program.
2. Customer Name Type=Characters, Default=*_*_***ENTER VALUE***_*_*
Default or blank will not be posted.
3. Programmer Type=Characters, Default=*_*_***ENTER VALUE***_*_*
Default or blank will not be posted.

Post Operation Insert

Right click on operations tree and select "Post Operation" from the menu

Post Program Stop

Inserts a Program or Option Stop.



Parameter	Value
Program/Optional Stop	Program Stop
Tool Change After Stop	Yes
Tool Retract Same Tool#	No

1. Program/Optional Stop **Type=Select, Default=Program Stop**
Select between "Program Stop" (M00) or "Optional Stop" (M01) output.
2. Tool Change After Stop **Type=Select, Default=Yes**
Select "Yes" for a tool change after the stop (M00) or "No" for no tool change.
3. Tool Retract Same Tool# **Type=Select, Default=No**
If "Tool Change After Stop" = "No" then you can output a Z retract or not. If "Tool Change After Stop" = "Yes" then the post will automatically output a Z retract home.

Force Tool Change

Forces the post to do a tool change. Normally used between two operations using the same tool number.

1. No settings. Select and press the Insert button then close.

Setup Information

Will insert setup information (as a comment) or Code (as-typed) in the posted code going to the machine.

Parameter	Value
Output As Code	No

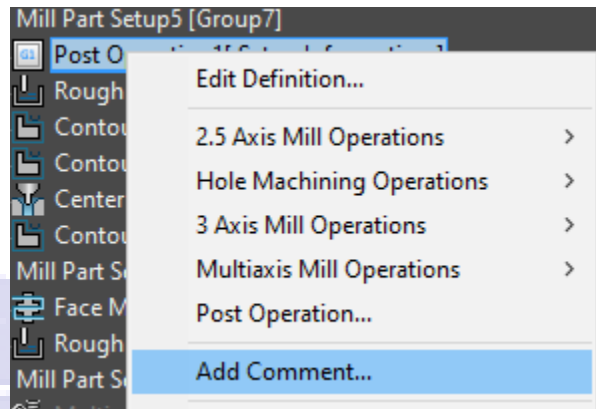
1. Output As Code **Type=Select, Default=No**
 - a. Depending on the Output as code selection you will either get comments or code.



- b. In the operations tree Find the newly created post operation. Normally called 'Post OperationX[Setup Information]'.

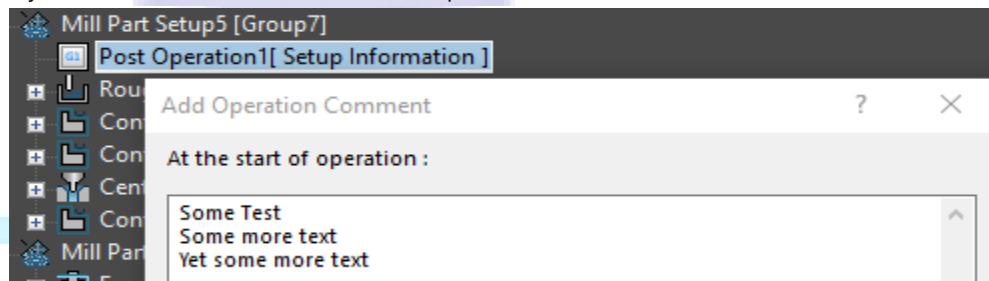
The 'X' represents the number after the post operation.

- c. Right click on 'Post OperationX[Setup Information]' and select 'Add Comment'



- d. In the top box in the add operation window.

Enter your comments or code. For a new line press CTRL + Enter.



How it works:

When you post the system will output the comments or code you entered. This can go anywhere in the tree but most of the time it is at the top before the first operation in a setup.

Note: If you want to insert comments to an operation in CAMWorks start at letter 'c' above. Right click on the operation instead of the post operation.

Operation Post Tab

Double click on an operation or RBM (right button mouse) on the operation and select 'Edit Definition'

Mill Operation



Operation Parameters

Tool F/S Contour NC Feature Options Leadin Advanced Posting Optimize

☐ Output subroutines

Parameter	Value
Absolute Incremental	Absolute
Max Arc Deviation	0.00100"
Coolant 1	Flood (M08)
Coolant 2	Off
Coolant 3	Off
Coolant 4	Off
Mill Feed Type	Per Minute
Rotary Feed Type	Mill Feed Type Selection
Programmable Finish	Off
HPCC(G5 P10000)	Off
Tool Breakage Check	Off
Allowable Tool error	0.00500"

1. Absolute Incremental **Type**=Select, **Default**=**Absolute**
All Z moves are Absolute regardless of selection.
2. Max Arc Deviation **Type**=Decimal, **Default**=**.001"**
If the Arc needs to be broken into line segments this is the deviation for the breaking of the arc.
3. *Coolant 1 **Type**=Select, **Default**=**Flood(M08)**
4. *Coolant 2~4 **Type**=Select, **Default**=**Off**
5. Mill Feed Type **Type**=Select, **Default**=**Per Minute**
Feed of per minute (IPM/MMPM) or per revolution (IPR/MMPR)
6. Rotary Feed Type **Type**=Select, **Default**=**Mill feed Type Selection**
Defines feed type output for rotary move. Default is the 'Mill Feed Type' selection above. Other options are Inverse Feed and Degrees Per Minute.
7. Programmable Finish **Type**=Select, **Default**=**Off**
Better known as smoothing.
8. HPCC(High Speed Mach) **Type**=Select, **Default**=**Off**
High speed cycle machining.



9. Tool Breakage Check Type=Select, Default=**Off**
Switch for machines that are equipped.
10. Allowable Tool error Type=Decimal, Default=**.005"**
Coincides with tool breakage check.

Tap Operation Additions

In addition to the above items these are in a Tapping operation.

Parameter	Value
Absolute Incremental	Absolute
Coolant 1	Flood (M08)
Coolant 2	Off
Coolant 3	Off
Coolant 4	Off
Rigid Tap On or Off	Off
Pecking	No
Peck Amount	0.10000"
Tool Breakage Check	Off
Allowable Tool error	0.00500"

1. Rigid Tap On or Off Type=Select, Default=**Off**
 a. **On** Rigid Synchronous tapping (G84.2) - Option in control
 b. **Off** (Async) Normal Asynchronous tapping (G84) – standard
2. Pecking Type=Select, Default=**No**
3. Peck Amount Type=Decimal, Default=**.100"**
 *peck tapping may or may not be supported by your control

External Configuration

Warning: This needs to be edited before posting or your output may not run your machine.

Externally configurable post processor output options are found in the file '.CNF'. These are self-explanatory in nature.

General Machine setup will define items about your machine and control.

General output to the machine will define items and how you prefer to see them in the code.

CNF file contents

*-----



- * The settings in this file will override the settings of the post processor.
- * Lines started with an asterisk (*) are comments and are ignored.
- * This file will only affect the post processor (*.CTL file) with the same name.
- * Not all post processors support CNF files.

```
*-----  
*                -*-*- General Machine setup -*-*-  
*-----
```

- * CNF_NT_STAGE_CNFG=0 then the next tool WILL be pre-loaded.
- * Will be output in the code after the tool change (Arm Changers).
- *
- * CNF_NT_STAGE_CNFG=1 then the next tool WILL NOT be pre-loaded.
- * (Carousel Style Changers Without an Arm).
- *

CNF_NT_STAGE_CNFG=1

```
*-----  
*                -*-*- General output to the machine -*-*-  
*-----
```

- * CNF_TLIST_CNFG=0 then no tool list will be present.
- *
- * CNF_TLIST_CNFG=1 then a tool list will be present.
- *

CNF_TLIST_CNFG=1

- ```
*-----
```
- \* CNF\_LINE\_NUM\_CNFG=0 then no line number.
  - \*
  - \* CNF\_LINE\_NUM\_CNFG=1 then line numbers on every line.
  - \*
  - \* CNF\_LINE\_NUM\_CNFG=2 then Line Numbers at Tool change by tool #. (N7,N10,N1).
  - \*
  - \* CNF\_LINE\_NUM\_CNFG=3 then Line Numbers at Tool change incrementally. (N1,N2,N3).
  - \*

CNF\_LINE\_NUM\_CNFG=1

- ```
*-----
```
- * CNF_TC_POS_CNFG=1 then G53 Z at operation end and G53 Z then Y at program end.
 - *
 - * CNF_TC_POS_CNFG=2 then G28 G91 Z0 at operation end and G28 G91 Z0 then G28 G91 Y0 at program end.
 - *
 - * CNF_TC_POS_CNFG=3 then nothing
 - *

CNF_TC_POS_CNFG=1

- ```
*-----
```
- \* If above (CNF\_TC\_POS\_CNFG) equals 1 G53 End of Tape Y position.

CNF\_Y\_EOT\_POS=0.0

- \* G53 Z retract position



CNF\_Z\_RET\_POS=0.0

\*-----

\* Determines if the drill X and Y positions need to be in the cycle line.

\*

\* CNF\_DRILL\_XY\_CNFG = 0 - X&Y's are not in the cycle line.

\* CNF\_DRILL\_XY\_CNFG = 1 - X&Y's are in the cycle line.

\*

CNF\_DRILL\_XY\_CNFG=1

\*-----

\* Determines if the tap feed rate is per minute or pitch.

\*

\* CNF\_TAP\_FEED\_CNFG = 0 - Pitch is used for feed rate.

\* CNF\_TAP\_FEED\_CNFG = 1 - Feed is per minute (IPM/MMPM).

\*

CNF\_TAP\_FEED\_CNFG=1

\*-----

\* Determines if tool change will be output to tape.

\*

\* TOOL\_CHANGE\_CNFG = 0 - Tool changes ARE output to tape.

\* TOOL\_CHANGE\_CNFG = 1 - Tool changes are NOT output to tape.

\*

TOOL\_CHANGE\_CNFG=0

\*-----

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