

Setting Q-Variables to the Current Cutter Diameter

February 2010

1.0 NC Format Modifications

To produce this G-Code:

```
Q1610=.500
CALL PGM TNC:\SUBS\CHECKDIA
```

You need to make the following changes to your NC Format. This example assumes that you want the code at the very beginning of the program.

1. Start CAMplete TruePath
2. Go to Tools > NC Format Editor
3. In the tree, find the NC Format item where you wish this to appear. In this example, we want the item ending in "...Start Program Block"
4. Select the item in the tree and click Edit
5. In the NC Format Editor, select the line in the Index where you want your new lines to appear

Start Program Lines: Insert New Line

Index	Default Settings	Code Layout
1	Program Begin <input type="radio"/> Inches <input type="radio"/> Millimeters <input checked="" type="radio"/> Auto Select	BEGIN PGM Set Units
2	Code Comment *****	.Comment
3	Code Comment --- HPM ---	.Comment
4	Auto Date Comment:	.Auto Comment: Date
5	Auto CAMplete Version Comment:	.Auto Comment: CAMplete Version
6	Auto Comment: NC Format Info [REMARK=NC Format =][PR	.Auto Comment: NC Format Info
7	Auto Comment: NC Format Info [REMARK=NC Format Date :	.Auto Comment: NC Format Info
8	Code Comment --- Project Parameters ---	.Comment
9	Project Parameter: Programmer Name [LABEL]: [VALUE]	.Auto Comment: Project Parameter
10	Project Parameter: Customer [LABEL]: [VALUE]	.Auto Comment: Project Parameter
11	Project Parameter: Part Number [LABEL]: [VALUE]	.Auto Comment: Project Parameter
12	Code Comment --- Machine Setup ---	.Comment
13	Auto Milling Machine Comment:	.Auto Comment: Milling Machine
14	Auto Machining Setup Comment:	.Auto Comment: Machining Setup
15	Auto Comment: Cutting Tool List [NAME=40][REMARK=TL:	.Auto Comment: Cutting Tool List .Comment
	Code Comment --- Tool List ---	
16	Auto Comment: Tool Path List [REMARK=Op][INDEX=3][RE	.Auto Comment: Tool Path List .Comment
	Code Comment --- Operation List ---	
17	Code Comment --- Start Machine Options ---	.Comment
18	Custom Code M38 Code Comment Mist Buster ON	M38 .Comment
19	Custom Code M36 Code Comment Chip Conveyor ON	M36 .Comment
20	Code Comment --- Initialize Machine ---	.Comment
21	WP CS Shift Enable Trans	CYCL DEF 7.0 DATUM SHIFT
22	WP CS Shift Set X Trans 0	CYCL DEF 7.1 X
23	WP CS Shift Set Y Trans 0	CYCL DEF 7.2 Y
24	WP CS Shift Set Z Trans 0	CYCL DEF 7.3 Z

6. Click Insert New line
7. Select the line again and click Insert New Line a second time
8. You should now have two blank lines as shown:

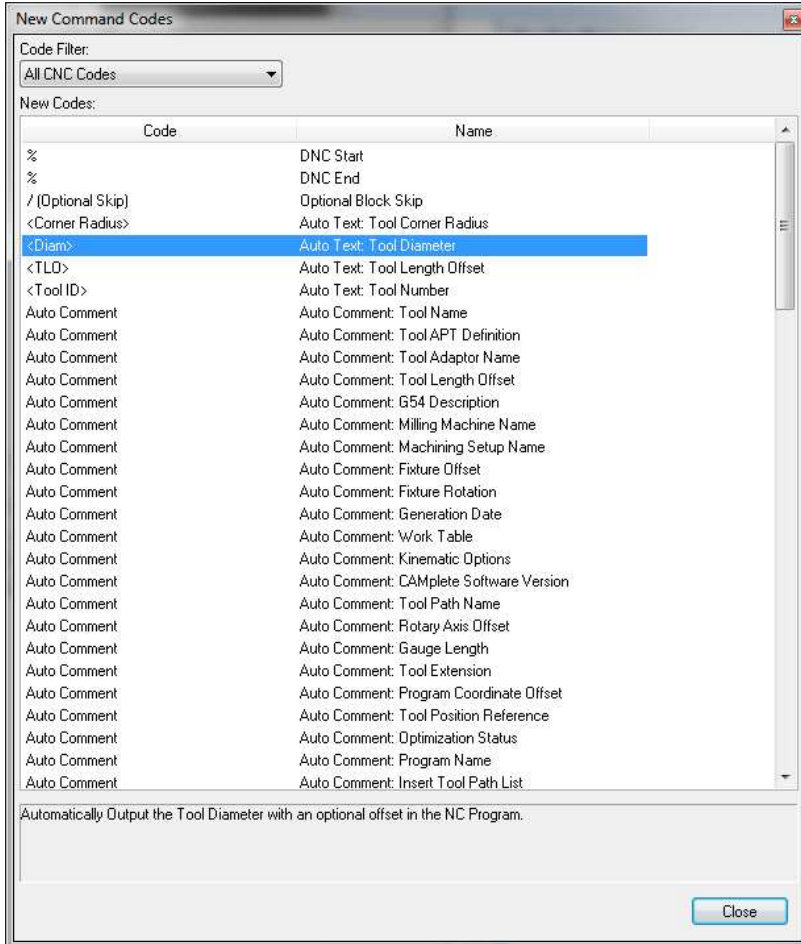
Start Program Lines:

Index	Default Settings	Code Layout
1	Program Begin <input type="radio"/> Inches <input type="radio"/> Millimeters <input checked="" type="radio"/> Auto Select	BEGIN PGM Set Units
2		
3		
4	Code Comment *****	.Comment
5	Code Comment --- HPM ---	.Comment
6	Auto Date Comment:	.Auto Comment: Date
7	Auto CAMplete Version Comment:	.Auto Comment: CAMplete Version
8	Auto Comment: NC Format Info [REMARK=NC Format =][PR	.Auto Comment: NC Format Info
9	Auto Comment: NC Format Info [REMARK=NC Format Date :	.Auto Comment: NC Format Info
10	Code Comment --- Project Parameters ---	.Comment
11	Project Parameter: Programmer Name [LABEL]: [VALUE]	.Auto Comment: Project Parameter

Setting Q-Variables to the Current Cutter Diameter

February 2010

9. Click New Codes Window to show new codes that you can add
10. Select the Custom Code and drag and drop it to line #2 into the Code Layout column
11. Repeat this for line 3 (Select the Custom Code and drag and drop it to line #3 into the Code Layout column)
12. Now find the "Auto Text: Tool Diameter" code from the New Codes Window:



13. Drag that to line #2 AFTER the custom code.
14. When you are done, it should look like this:

Setting Q-Variables to the Current Cutter Diameter

February 2010

Start Program Lines:		
Index	Default Settings	Code Layout
1	Program Begin <input type="radio"/> Inches <input type="radio"/> Millimeters <input checked="" type="radio"/> Auto Select	BEGIN PGM Set Units
2	Custom Code Auto Output Tool Diameter: <input type="checkbox"/> Apply Offset:	Custom Auto Output: Tool Diameter
3	Custom Code	Custom
4	Code Comment *****	:Comment
5	Code Comment --- HPM ---	:Comment
6	Auto Date Comment:	:Auto Comment: Date
7	Auto CAMplete Version Comment:	:Auto Comment: CAMplete Version
8	Auto Comment: NC Format Info [REMARK=NC Format =][PR	:Auto Comment: NC Format Info
9	Auto Comment: NC Format Info [REMARK=NC Format Date -	:Auto Comment: NC Format Info
10	Code Comment --- Project Parameters ---	:Comment
11	Project Parameter: Programmer Name [LABEL]: [VALUE]	:Auto Comment: Project Parameter
12	Project Parameter: Customer [LABEL]: [VALUE]	:Auto Comment: Project Parameter
13	Project Parameter: Part Number [LABEL]: [VALUE]	:Auto Comment: Project Parameter
14	Code Comment --- Machine Setup ---	:Comment
15	Auto Milling Machine Comment:	:Auto Comment: Milling Machine
16	Auto Machining Setup Comment:	:Auto Comment: Machining Setup
17	Auto Comment: Cutting Tool List [NAME=40][REMARK=TL: Code Comment --- Tool List ---	:Auto Comment: Cutting Tool List :Comment
18	Auto Comment: Tool Path List [REMARK=Op][INDEX=3][RE	:Auto Comment: Tool Path List :Comment

15. For the Custom code on Line #2, enter the text Q1610 =
16. For the Custom code on Line #3, enter the text CALL PGM TNC:\SUBS\CHECKDIA
17. When you are done it should look like:

Start Program Lines:		
Index	Default Settings	Code Layout
1	Program Begin <input type="radio"/> Inches <input type="radio"/> Millimeters <input checked="" type="radio"/> Auto Select	BEGIN PGM Set Units
2	Custom Code Q1610 = Auto Output Tool Diameter: <input type="checkbox"/> Apply Offset:	Custom Auto Output: Tool Diameter
3	Custom Code CALL PGM TNC:\SUBS\CHECKDIA	Custom
4	Code Comment *****	:Comment
5	Code Comment --- HPM ---	:Comment
6	Auto Date Comment:	:Auto Comment: Date
7	Auto CAMplete Version Comment:	:Auto Comment: CAMplete Version
8	Auto Comment: NC Format Info [REMARK=NC Format =][PR	:Auto Comment: NC Format Info
9	Auto Comment: NC Format Info [REMARK=NC Format Date -	:Auto Comment: NC Format Info
10	Code Comment --- Project Parameters ---	:Comment
11	Project Parameter: Programmer Name [LABEL]: [VALUE]	:Auto Comment: Project Parameter
12	Project Parameter: Customer [LABEL]: [VALUE]	:Auto Comment: Project Parameter
13	Project Parameter: Part Number [LABEL]: [VALUE]	:Auto Comment: Project Parameter
14	Code Comment --- Machine Setup ---	:Comment
15	Auto Milling Machine Comment:	:Auto Comment: Milling Machine
16	Auto Machining Setup Comment:	:Auto Comment: Machining Setup
17	Auto Comment: Cutting Tool List [NAME=40][REMARK=TL: Code Comment --- Tool List ---	:Auto Comment: Cutting Tool List :Comment

18. Click FINISH to commit this change

Now when you select this NC Format, you should get the correct G-Code posted at the beginning of the program. This method will output the diameter in the value of the current units.