



Using Two Different Tool Offsets for the Same Tool

I have a part that I am using the same tool for two different operations. If one of the operations is on size and the other operation is too big or two small, I can't fix both of them by changing the tool wear value on the tooling page.

Therefore, I decided to use tool #2 for the first operation and then use tool #12 for the second operation.

Both tool #2 and tool #12 are the same tool. On the tooling page, I describe them the same and I touch off the X and Z-axis in the same place for both.

For the Z-axis, just input the same Z value from #2 into #12 (-4.988, see Figure 1).

The value in the X-axis and Z-axis for tool #12 should be the same as the value for tool #2.

In my program, I will call up "T2 M6" before the section of the program that cuts the first operation (or part).

Then I will call up "T12 M6" before the section of the program that cuts the second operation (or part).

Now I have two different offsets that I can use to control the two individual diameters, while using the same tool to cut both diameters.

Thank you,
Sherline Products Inc.

Tool No	Slot No	Tool Name	Z Offset	X Offset	Z Wear	X Wear	Tool Radius	Tool Dir
0		G53 BLANK	0.000	0.000	0.000	-0.000	0.000	0
1		CUT OFF	-3.408	-1.486	-0.002	-0.003	0.000	1
2		55 FINISH TOP	-4.988	-3.218	-0.080	0.002	-0.000	2
3		THRD	-11.154	-0.501	-0.000	-0.006	0.000	1
4		CTR DRILL	-9.434	-1.090	-0.000	-0.000	0.000	0
5		1/8 DRILL	-7.061	-2.671	0.000	-0.000	0.000	0
6		C BORE	-9.393	-0.113	-0.000	-0.000	0.000	0
7		BEARING	-12.436	-1.199	-0.015	-0.000	0.000	0
8		TEST TOOL	-9.696	-0.121	0.000	0.000	0.000	0
9		#3 CTR DRILL	-8.637	-0.153	0.000	-0.000	0.000	0
10		1/4" DRILL LONG	-6.192	-3.482	0.000	-0.000	0.000	0
11		.062 GROOVE	-11.592	-0.993	0.000	-0.000	0.000	0
12		55 FINISH BOTTOM	-4.988	-3.218	0.000	0.002	0.000	0
13		55 ROUGH TOP	-9.276	-0.233	-0.080	0.012	0.000	0
14		55 ROUGH BOTTOM	-11.897	-0.233	0.000	0.012	0.000	0
15			0.000	0.000	0.000	-0.000	0.000	0

FIGURE 1—The red outlines show Tool No. 2 and Tool No. 12 with the same offsets.

The controller will not let me type in the X value so I did the following:

- MDI- T2 M6
- MDI- G90 G0 X0.0 Z0.0
- Tool #2 moves to X0.0 Z0.0

NEXT:

MDI- T12 M6 (Now the computer thinks it has tool #12, but it is still tool #2)

- Go to the tooling page and click on tool #12
- Input part diameter as 0.0
- Click on the touch button and then Save
- Then click on Zero for the Z-axis