Passive Tool Setter Operation

Hello my name is David Mahlmeister with MillFast Products. I just wanted to describe my personal approach to tool setting using the MillFast PTS-144 Tool Setter with my Tormach® PCNC1100 mill. This is just my personal approach and should not be used to replace the official tool setter video instructions supplied by Tormach®.

I am writing this as I never liked moving my spindle down to the table or to the top of the vice and using a feeler gauge, 1 2 3 block, or a piece of paper to set my Spindle Z-Zero setting that is normally needed before using a Tool Setter.

I came up with an easy way to set up my spindle Z-Zero position on the top of my tool setter rather than on the base. I am sure that there are many out there that will say that I am doing it wrong but, this it is the way I like to set up my tool setter before I measure my tools.

Change Tool Setter Height Setting
1. Click on the Probe tab in the middle of the PathPilot® screen and then select the ETS/Probe setup tab.
2. Click in the ETS Height box in about the middle of the screen and enter .000001 and press enter.
3. Basically we are telling PathPilot that our Tool Setter has no height to be subtracted from the tool length.

Set Z-Zero just above Tool Setter
1. Click on the Offset tab in the middle of the screen to enter the PathPilot® Offset screen.
2. Remove any tools that you may have in your spindle and verify that the collet does not protrude past the spindle.
3. Select tool #0 and move the spindle down so that it is about 3/8" above the tool setter and press the Z-Zero button.
4. Now select tool #98 and then press the "Move and Set Tool Length" button.
5. This just measured the distance to the top of the tool setter and entered it as tool #98's length.
6. On the screen you will see a negative number for the length of tool #98. Write down that number.
7. Now select tool #0 again and notice that the WORK dimension for Z is back to .0000.
8. Click in the field so that you can change the Z dimension.
9. Enter the number that you wrote down earlier as a positive number and press enter.

Verify the Tool Setter is set to .0000
1. Select tool #98 again and then press the "Move and Set Tool Length" button to measure Tool.
2. Tool #98 length should be very close to .0000.
3. Once you verify that the top of the tool setter is .0000 +/- .0005 you can start setting the offsets for all of your tools.

Setting Tool Offsets
1. Move the spindle up so that you have room to inset the tool in the spindle.
2. Enter the tool number in the box next to the T in the lower right corner and press enter.
3. Move the tip of the tool about 3/8" above and in the middle of the tool setter.
4. Press the "Move and Set Tool Length" button to measure tool.
5. A few seconds after the probing completes you will see the length of the tool change.

Warning!!!

Any machine tool is potentially dangerous. The automation inherent in a CNC machine presents added risk not present in a manual mill.

Safe operation of the machine depends on its proper use and the precautions taken by the operator.

Read and understand your mills manual prior to its use. Only trained personnel with a clear and thorough understanding of its operation and safety requirements should operate any mill.

Millfast Products accepts no responsibility for machine performance or any damage or injury caused by its use. It is your responsibility to ensure you understand the implications of what you are doing and comply with any legislation and codes of practice applicable to your city, state or nation.

If you have any issues or questions feel free to send us an email at info@millfastproducts.com