THERMWOOD
CORPORATION

CNC Rental Program

Rental Program Name: RP-RR-FN0001

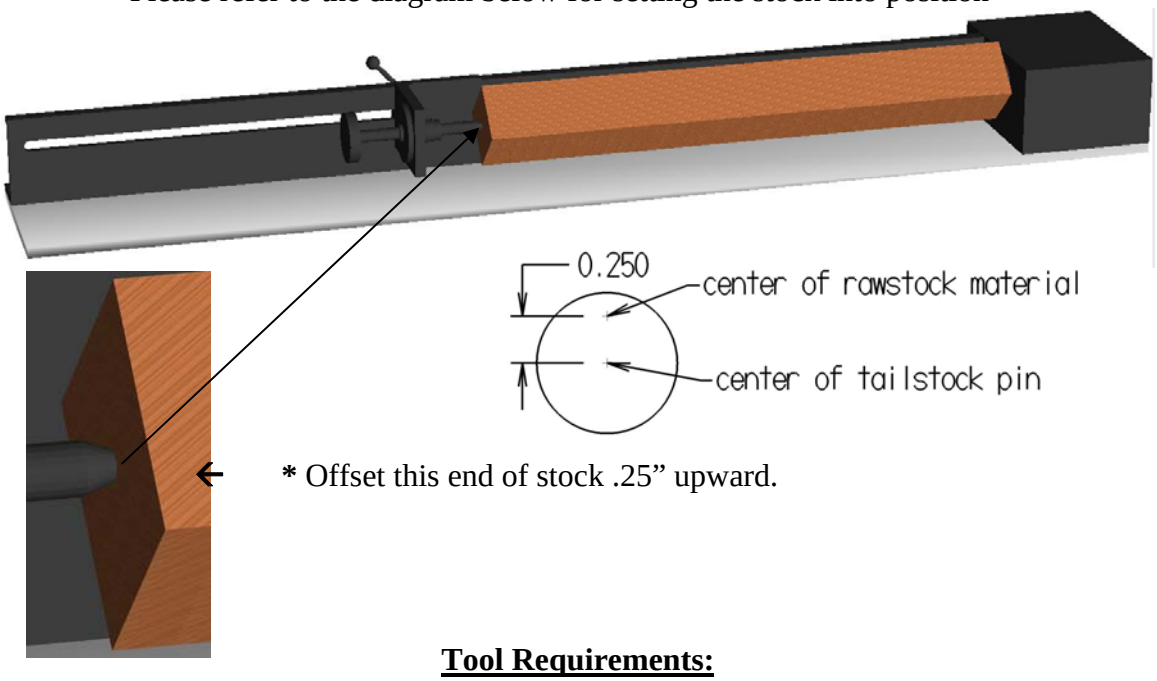
Rental Program Fee: $10.00

Estimated Cycle Time: 1 hour, 20 minutes

Carving Dimensions (L x W): 26” x 4”

Raw Stock Dimensions (L x W): 27” x 4.25” sq.

* Please refer to the diagram below for setting the stock into position *



***** Offset this end of stock .25” upward.

Tool Requirements:

*Tooling may be purchased from Thermwood by using the provided part numbers.

T1 = .500” dia. ballnose cutter Part # FSH0399
* min. tool length = 3.25” from covernut
T2 = .250” dia. endmill cutter Part # CI-CU-250-4
* min. tool length = 2” from covernut
T3 = .1875” dia. ballnose cutter Part # ? CI-CUX-187-2B
* min. tool length = 2” from covernut
T4 = Oertli engraving cutter Part # FSH0358
* min. tool length = 2” from covernut

Program Setup:

1. Tool numbers have already been chosen in the program. If you would like to change Tool numbers, simply edit the line of code(s) at the top of the program. Below is an example;

   Change from: [TOOL_1 = 1] (.250" endmill tool)
   to; [TOOL_1 = **14**] (.250" endmill tool)

2. Inside the Tool Table (F9, F2) be sure all daylight values are correct for the tools numbers used.
3. Set the **ZSHIFT** value. If the daylight values are set to the spoilboard, then the ZSHIFT value should equal the distance from the spoilboard to the center

of the headstock. If the daylight values are set to the center of the headstock, then the ZSHIFT value should equal zero.

4. The fixture offset will need to be entered. This is the distance from HOME to the center and edge of the headstock pin. Once you've found these values, enter them into the following line of code;

   G51 X? Y?

5. Since ATH toolchangers do not have enough clearance above the rotary playback device to perform tool changes, **[XTCHANGEPOS = ?]** and **[YTCHANGEPOS = ?]** are used for positioning the head prior to tool changes. This value is the distance from Home to the tool change position. Be sure you can perform tool changes in this position!
6. An optional setting you may adjust in the program is **[ZCLEARANCE = ??]**. This value determines the tool clearance from the center of the headstock pin for indexing moves. This value should be larger than the radius of the raw stock post. Defaults may have been set.
7. If you would like full control over Rapid Indexes using your FeedRate OverRide Knob, then leave **[RAPOVRIDE$="YES"]** alone. Setting this to "NO" will speed up your machine, and you will lose full control over indexes.

8. If your machine does not have an Automatic Tool Changer, and you must change tools manually, then you must change the following line to "YES";

   [MAN_TCHANGE$="NO"]

   When this is set to "YES", the machine will return to the HOME position prompting you to manually change out the tools. To change out the tools, follow the directions below;

   - Turn the Tool Lockout Switch to safety mode, which will put the machine into E-STOP.
   - Change to the next tool manually.
   - Turn the Tool Lockout Switch to run mode.
   - Press NC-RESET one time.
   - Press the green START button to resume machining.

   Below is the order in which the tools are used during machining;

   - [TOOL_1] (.500" dia. ballnose cutter)
   - [TOOL_2] (.250" dia. endmill cutter)
   - [TOOL_3] (.1875" dia. ballnose cutter)
   - [TOOL_4] (Oertli engraving cutter)

Program Operation:

After the Rental Program has been setup and the blank is secure, you may begin running the program. Press the green START button on the controller. A blue screen will appear with 2 options. Choose the start option to begin cutting or choose the exit option.

Additional Comments:

- Due to the wide variety of tooling types, etc. you may need to adjust the FeedRate Overide Knob as needed, to help control cutting speeds. Optimal speeds have been preset.
- The scaling option at the Thermwood Control may not be available for all rotary parts.

If you have any questions or concerns, feel free to contact us at (800) 533-6901.
Thank you for your interest.