

Knowledge Base: KB0014 – Adjusting the Position after Datum on HP3 Controllers

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Overview

Adjusting the datum position is very useful and sometimes necessary depending on the type of table being used. Adjusting the position after datum's will allow the user to achieve the maximum physical space on the engraving table or have a custom move to position after the machine is datumed.

Requirements

- HP3 Controller
- Machine Parameters (enable/disable datum's)
- Newing-Hall Engraving Table w/ datum's (or optional bolt on datum's)

Procedure

1. Turn on the HP3 Controller.
2. Start Machine Parameters located in the **APEX Product Software** program group from the START Menu.
3. In the left pane select **Datum Parameters**.
4. Select the appropriate **Limit Mask**. Note: Adjusting the Position after Datum requires having at least one datum turned on.

Limit Mask Setting	Meaning
0	No limits active
1	X-axis limit only
2	Y-axis limit only
4	Z-axis limit only
8	X-CYL limit active
64	Over-travel enabled

Example: To enable limits for X, Y, and Z, Limit Mask = 1+2+4 = 7.

With this example the value of 7 is placed in the **Limit Mask** box. This will turn on the X, Y, and Z datum's.

5. Exit Machine Parameters and select YES to save the new parameters to the HP3 controller.
6. Turn the **Drives On**.
7. Datum the controller.
8. Enter the menu on the controller's pendant by pressing the **Enter** key.
9. Scroll down the display until **Pos After Datum** is found. Place the flashing cursor on Pos After Datum and press the **Enter** key. The machine will datum.
10. Move the spindle to the desired position on the table. It is best when using a single spindle to position the spindle in the center of the T-slot.
11. Press the **Enter** key on the controller to save changes. The controller will now prompt to datum the machine – select **YES**. Setting datum positions after datum is now complete.