Quick Reference – Creating a Vertical Stack

This Quick Reference Guide explains to the robot user how to stack parts in a vertical fashion.

Precondition:
The robot user is in the "teach" menu and has begun to create their program. The "Stack Motion" tab should be selected when the robot user is ready to begin their vertical stack. The robot user is ready to begin their vertical stack when their robot's traverse (X-Axis) is in the part drop area, the strip axis (Y-Axis) is in position, the vertical arm (Z-Axis) sis 0.0, and the flip (C-Axis) is horizontal.

1. With the robot in position, select the "Stack Motion" Tab. [Stack Motion]
   The following screen will appear:
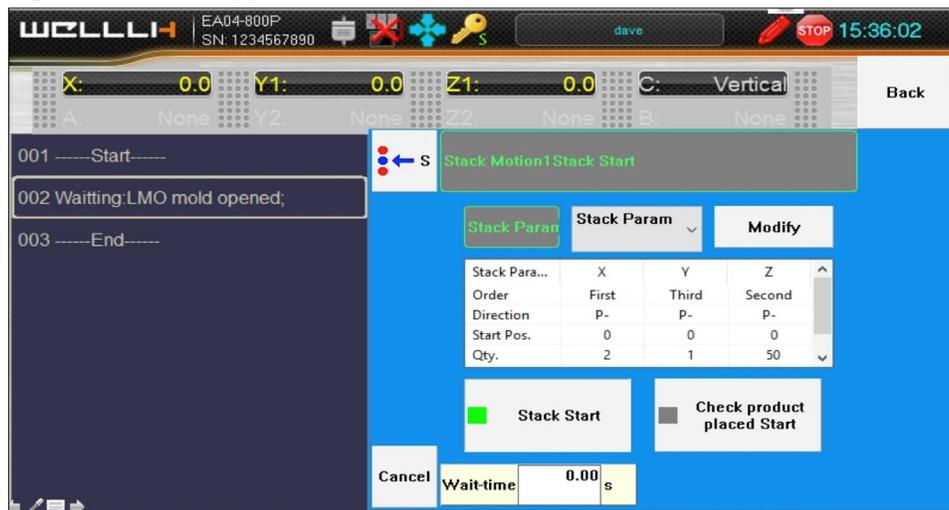
2. Select the Stack Parameter you would like to modify (Stack Param 1-5).

3. Now select "Modify". [Modify]
   The following screen will appear:

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4. While in "Modify" Select the "Start Pos." values for the X&Y Axis and select "Yes". This will automatically populate the "Start Pos." values with the current X & Y Axis' positions. For the Z-Axis, select the "Start Pos." value for the Z-Axis, now instead of hitting "Yes" select the "Down" soft key. Now move the Z-Axis to its start stack position where the robot will drop the first part of the stack. When the Z-Axis is in position, select "Yes" to populate the value.

5. Since we are stacking on the Z-Axis, make sure the "Product Space" [Product Space] values for the X&Y Axis are "0.0". The product space for your Z-Axis should be the thickness of the part +5mm.

6. Change the "Direction" [Direction] value of the Z-Axis to "P -".

7. In the "Qty" [Qty.] value for the X&Y Axis, select one (1). In the "Qty" value for the Z-Axis, enter the number of parts you would like to stack vertically.

    IMPORTANT: **When dropping stacks on a conveyor, it is absolutely crucial that the number of parts being stacked (sum of X,Y and Z quantities) matches the "Product Output" value in the "Production Set" Tab in the "Function" Menu.**

8. Verify above information is correct and select "Save"

9. Now you have started the first line in your stack program. Now we need to save the start position for the stack under "Axis Motion". Therefore, select "Axis Motion"

10. Now simply select "Save" to save the current position of the Z-Axis.

11. Select "Stack Motion" , select "Save" to end the stack command in the program.

12. With the Stack Motion complete, the robot user can turn off the vacuum and/or gripper functions to drop the parts and return the robot to its start point to finish writing the robot program.