



00. Changing Machine Settings

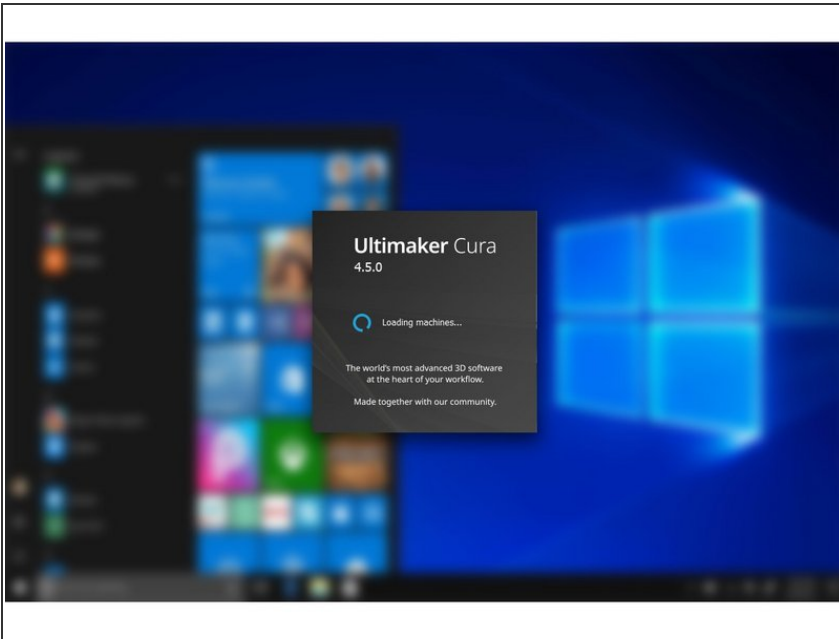
Here you can learn how to update the machine settings to allow the Creality 3D printers to use the DDX.

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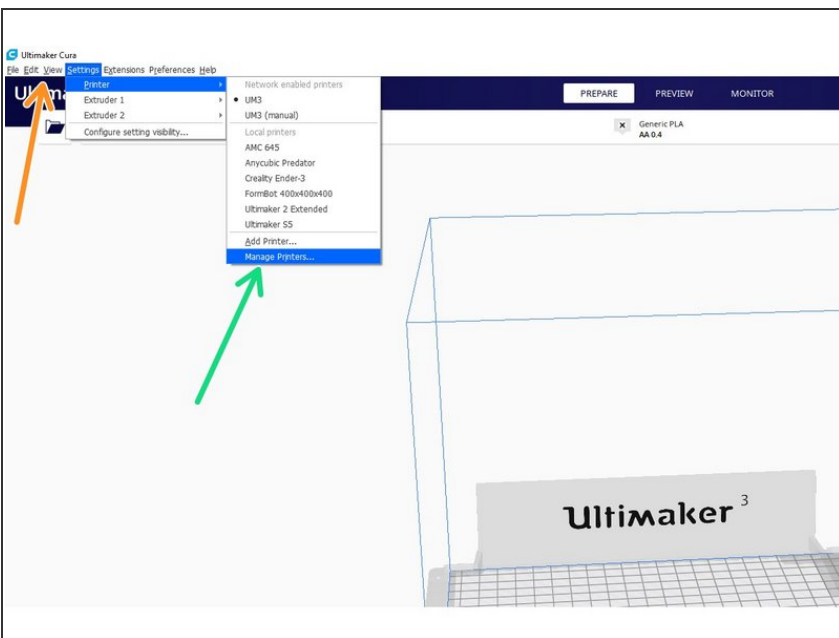
Changing Machine Settings

Step 1 — Open Cura



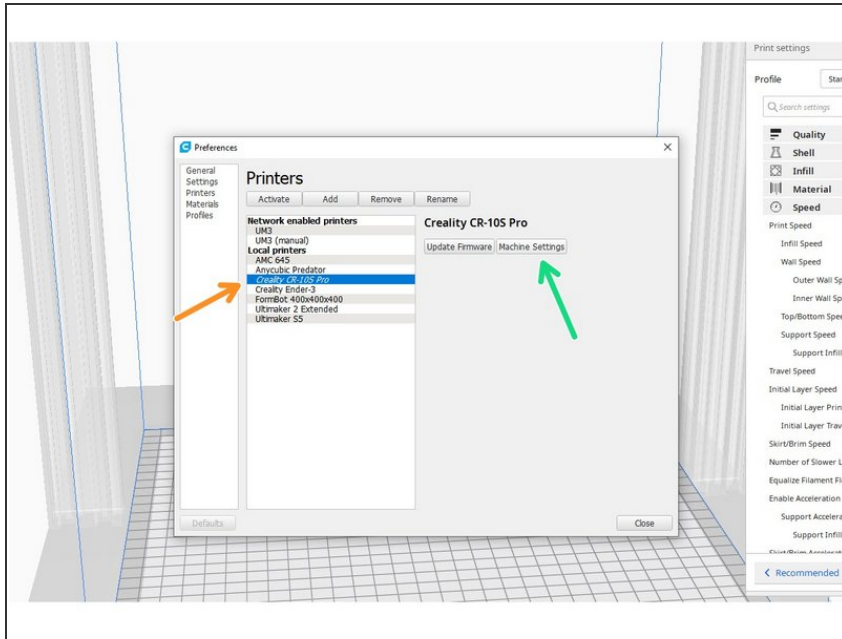
- Open Cura.
- ❗ In this guide we are using Windows 10 and Cura 4.5.0

Step 2 — Access Manage printers



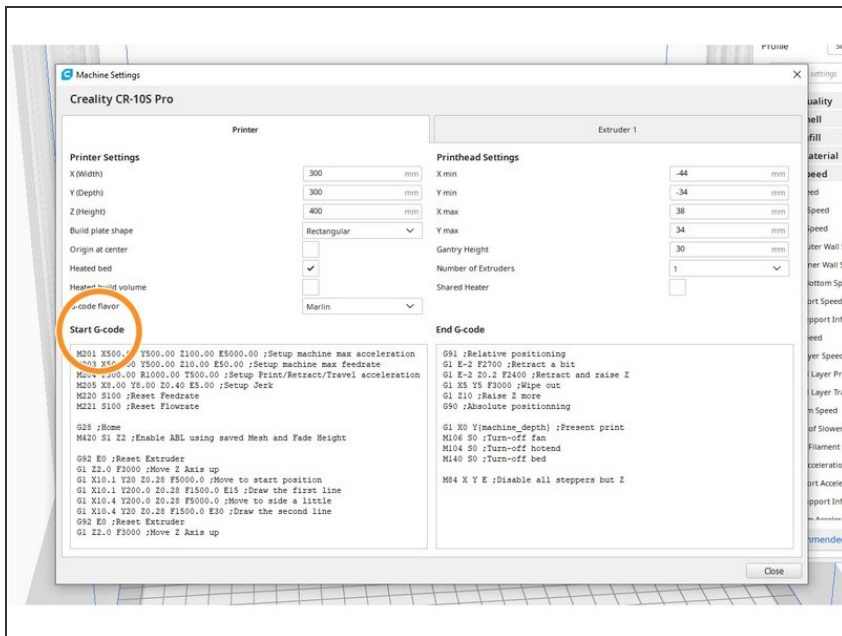
- Using the navigation menu
- Click Manage Printers...

Step 3 — Select The Printer With DDX



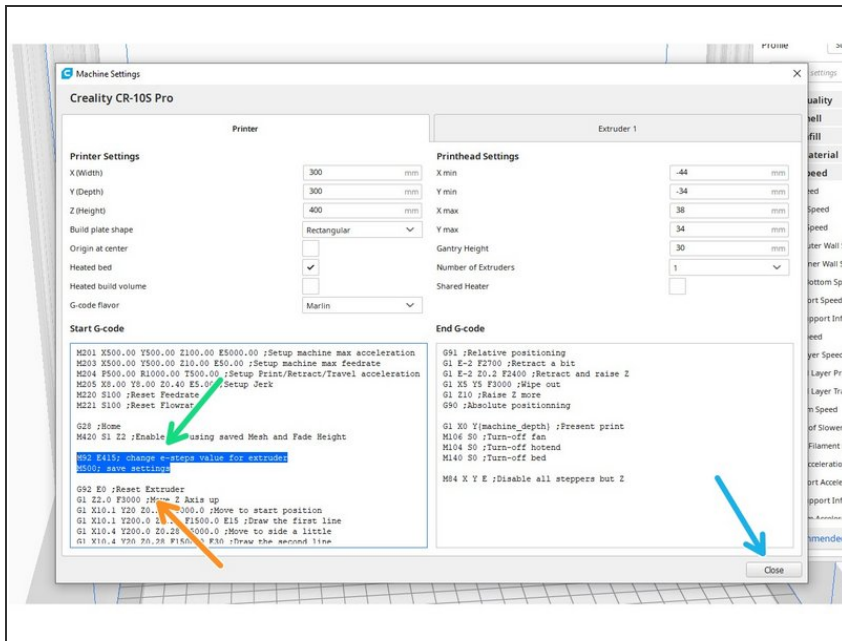
- Select your printer with the DDX
- Click Machine Settings
- ⓘ In this guide we are using the CR-10S Pro as example.

Step 4 — Editing Start G-code



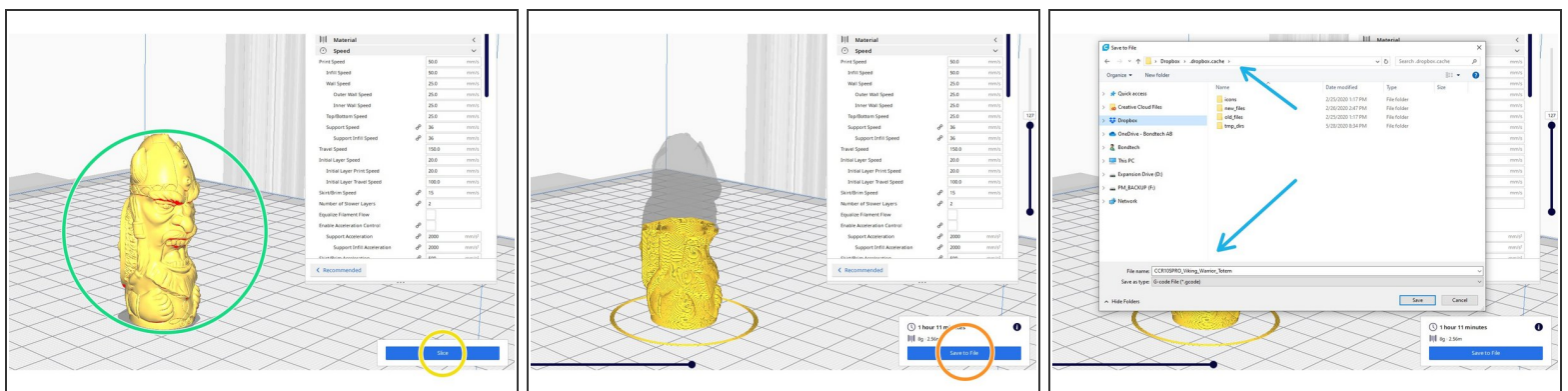
- To set the proper e-steps value we will use the Start G-code

Step 5 — Set E-steps Value With G-code



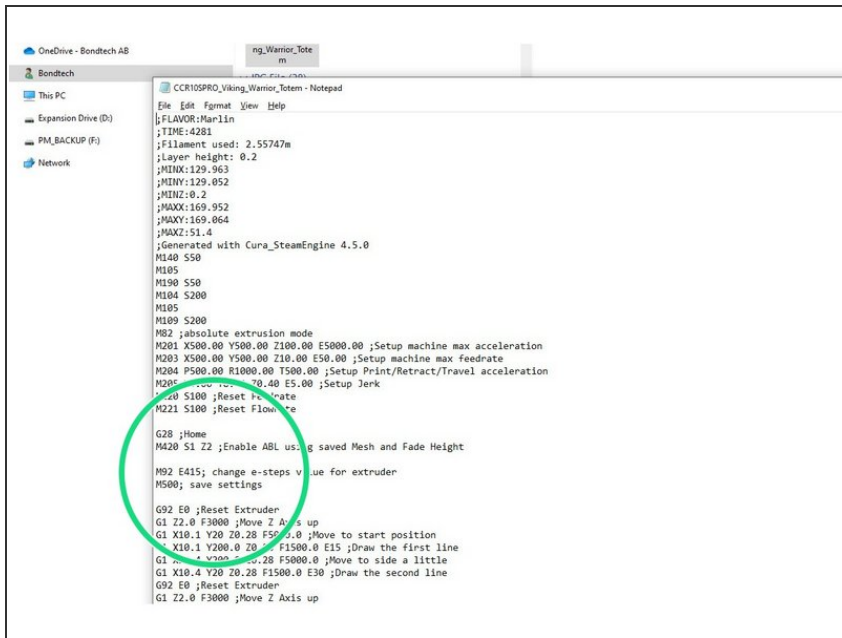
- Just before "Reset Extruder"
- Add the following G-code:
 - M92 E415; set e-steps value
 - M500; save settings
- Click Close to save the changes.
- ⓘ The M500 g-code will only work on Creality units that have a bootloader, like the CR-10S Pro.
- **Ender-3, Ender-3 Pro, Ender-5, and CR-10 are examples of models without bootloader. There may be other models.**

Step 6 — Perform One Print Job



- Add a model to the print table (something you do want to print would be recommended :)
- Click to slice it
- Click to save it
- Choose a location and name to save the file

Step 7 — Check The G-code



```

OneDrive - Bondtech AB
Bondtech
This PC
Expansion Drive (D:)
PM_BACKUP (F:)
Network
ng_Warrior_Tote
m
CCRI10SPRO_Viking_Warrior_Totem - Notepad
File Edit Format View Help
;FLAVOR:Marlin
;TIME:4251
;Filament used: 2.55747m
;Layer height: 0.2
;MINX:129.963
;MINY:129.052
;MINZ:0.2
;MAXX:169.952
;MAXY:169.064
;MAXZ:51.4
;Generated with Cura_SteamEngine 4.5.0
M140 S50
M105
M190 S50
M104 S200
M105
M109 S200
M82 ;absolute extrusion mode
M201 X500.00 Y500.00 Z100.00 E5000.00 ;Setup machine max acceleration
M203 X500.00 Y500.00 Z10.00 E50.00 ;Setup machine max feedrate
M204 P500.00 I1000.00 F500.00 ;Setup Print/Retract/Travel acceleration
M205 X:0.40 Y:0.40 Z:0.40 E5.00 ;Setup Jerk
M206 X:0.00 Y:0.00 Z:0.00 E0.00 ;Setup Endstop offsets
M207 S100 ;Reset Max Temperature
M221 S100 ;Reset Flow Rate

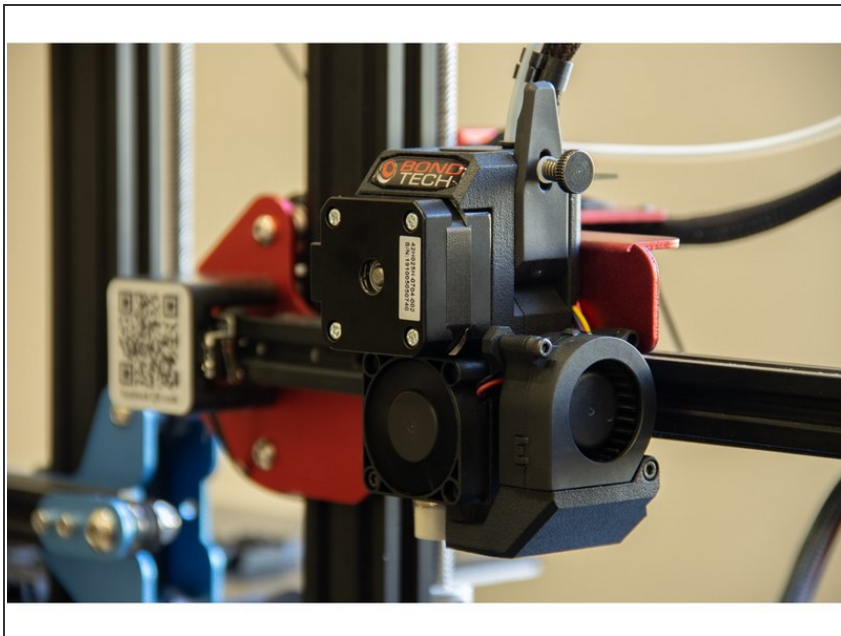
G28 ;Home
M420 S1 Z2 ;Enable ABL using saved Mesh and Fade Height

M92 E415; change e-steps value for extruder
M500; save settings

G92 E0 ;Reset Extruder
G1 Z2.0 F3000 ;Move Z Axis up
G1 X10.1 Y20 Z0.28 F5000.0 ;Move to start position
G1 X10.1 Y200.0 Z0.28 F1500.0 E15 ;Draw the first line
G1 X10.4 Y200.0 Z0.28 F5000.0 ;Move to side a little
G1 X10.4 Y20 Z0.28 F1500.0 E30 ;Draw the second line
G92 E0 ;Reset Extruder
G1 Z2.0 F3000 ;Move Z Axis up
  
```

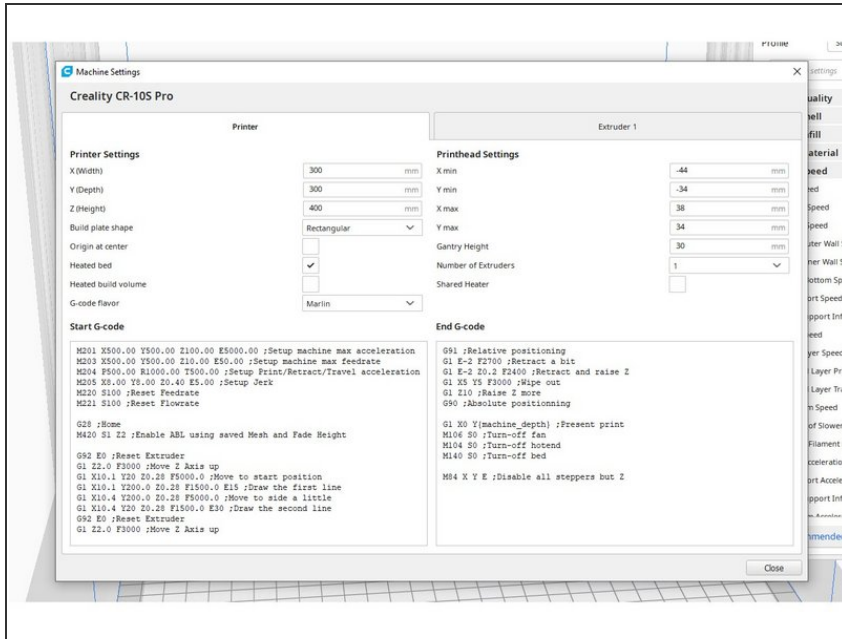
- Navigate to the location where you saved the G-code file.
- Edit the file with a text editor.
- The code inserted in the Start G-code will be there at the beginning.
- Close the file without saving and exit the text editor.

Step 8 — 3D Print The G-code File



- 3D print the G-code file
- ⓘ If your printer has a bootloader, printing this model will set and save the e-steps value.

Step 9 — Revert Start G-code To Default



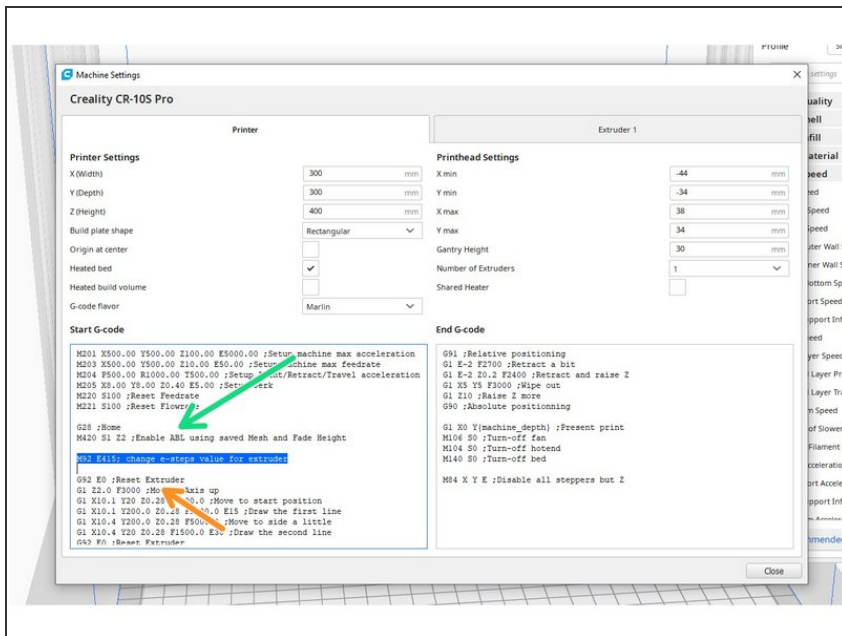
i Perform this step only after you have a print job without under-extrusion.

- Go back to the printer Machine Settings and revert the Start G-code section to default.

★ You can instead:

- keep the M92 E415 command
- delete the M500 command.

Step 10 — What If My Settings Were Not Saved???



i Printers without bootloader will not save the e-steps value.

★ Ender-3, Ender-3 Pro, Ender-5, and CR-10 are examples of models without bootloader. There may be other models.

i In this case the change in the Start G-code must be permanent:

- Before the Extruder reset
- Add the following code:
- M92 E415; set e-steps value

And that's it :)

You completed the software setup of your DDX Direct Drive eXtruder for Creality.