Tuning your Printer's Nozzle and platform temperatures

For this instruction manual, the desired temperature for the nozzle and platform is 25C. This is noted as the 'S' value in the commands below. You should change this value based on your desired value. Tuning should only be done when there is a significant overshooting and undershooting of your desired temperature value.

Disclaimer: 3D Cultures is not responsible for any damages caused to your printer for incorrect tuning.

** If auto tuning fails due to high temperature, you would want to do a series of tuning. If your desired temperature is 25C, try tuning at 100C then gradually step-down until you can tune at your desire temperature. You can also manually tune by entering the desired PID values using the M304 commant.**

Using any user interface with manual command entry should work, we recommend; Cura, Pronterface, RepieterHost.

M303 E0 S25 C10

M303 is the auto tune command, while S25 is the desired temperature you wish to tune it for and C10 is the number of tuning cycles.

After autotuning, the printer will give back PID values you can then use in your G-codes or to use to make permanent (Kp, Ki, Kd values).

If you are using it temporarily, simply add these PID values into your g-code using the following code or enter the following code after each power cycle, PID values (if not permanent) will go back to permanent value after a power cycle:

M301 E0 P## I## D## (enter Kp value next to the P, enter Ki values next to the I, enter Kd value next to the D)

If you are planing to make it permanent, do the following:
Send M500 to the printer, it will write current parameters permanently.

To tune the platform use
M303 E-1 S25 C10

To set PID Values for the platform temporarily:

M304 P## I## D## (enter Kp value next to the P, enter Ki values next to the I, enter Kd value next to the D)
or
M301 E-1 P## I## D## (enter Kp value next to the P, enter Ki values next to the I, enter Kd value next to the D)

If you are planing to make it permanent, do the following:
Send **M500** to the printer, it will write current parameters permanently.

Please note that will be some overshoot with temperatures, you have set a lower temperature than the desired to have the best outcome for printing.