Best Practices for Using METHOD XL

Simple guidelines and best practices we always recommend to users, so they get the most out of their printer:

Always print with supports.

- Heated chamber machines keep the plastic softer for longer, so the required support angles differ from non-heated chamber machines

Never print without a raft.

- Compensates for any variability in bed flatness to improve dimensional accuracy.
- Reduces defects due to wear and tear of the build surface
- Ensures adhesion of both model and support materials to prevent detachment and build failures.
- For best bottom surface quality, highly recommend to run the Manual Z Calibration + use Rapid Rinse as the Raft.

Clean and Calibrate (Automatic X,Y,Z calibration)

- The goal with calibration is to get the relative positions of the nozzles within 10% of a bead height – the thickness of a human hair – which is crucial to achieve the best possible print quality.
- The calibration process uses the nozzles' external surfaces and a fixed feature on the printer to determine their relative positions in the X, Y, and Z axes.
- Due to both of these reasons, automatic calibration is very sensitive to nozzle cleanliness. The nozzles must be brushed thoroughly, down to bare metal, at both at the tip as well as the outer rim.
- Best practice is to remove any burned material from the nozzle exterior, then brush the tip to remove any leaked material as the extruder cools. If necessary, use the snips to scrape off any adhered material.
- Once calibrated, extruders will maintain their calibration until removed. We recommend running automatic calibration each time you replace the
- extruders to ensure good part quality and reliability.

Manage Material Moisture Content

- **Dry all materials before use, especially Rapid Rinse.**
- Only use the drying function in the Method XL. Update to the latest FW version to use the drying feature.
- UltiMaker filaments, especially water-soluble materials like Rapid Rinse, are easily degraded from typical ambient humidity.
- Materials absorb moisture from the air within minutes, sharply increasing the risk of print failures, extruder jams, and poor

surface quality.

- To prevent this, store spools with plenty of fresh desiccant bags in the original spool bags or in the material case if in use.
- Best practice: If not using your machine for more than 2 days, store the filament in the original spool bags.

Use the Preset Print Modes in Cloud Print or Cura

- Preset print modes have been developed and extensively tested to ensure the best possible part quality and dimensional accuracy.
- Deviation from these modes, in particular the removal of raft or support features, will jeopardize part quality and part success.

LABS is totally open. Use at your own risk.

- The LABS extruder gives you complete freedom of choice in materials and printer settings. However, it is an experimental Experience.
- UltiMaker cannot guarantee part quality, dimensional accuracy, or extruder reliability when using the LABS extruder with

third-party filaments or print settings.

- The LABS extruder is only available for model materials. UltiMaker does not currently offer a LABS material for support materials.
- We recommend using materials tested by our material partners, as UltiMaker offers settings profiles for these materials.
- For best results, UltiMaker recommends using UltiMaker branded materials whenever possible to ensure the best possible

outcomes.

Adhere to proper loading/unloading procedures

- Cut the filament tip correctly according to the instructions on the display, before loading to the Extruder(s)
- Wait until the Extruder's temperature is at **50 Deg Celsius or below,** before removing the Extruder. This will ensure increase of the

Extruders' lifespan as well as ensuring extrusion reliability.

For carriage homing errors

- **Manually shift the carriage to the centre of the build tray.**
- Use the **Dry Material** function to heat up the printer.
- Once the chamber reaches the target temperature, cancel the **Dry Material** function and allow the printer to cool down to room temperature.

This process helps the Y bellow to reform its shape, which may resolve the obstruction