

Hero Me Gen7 Parts Selection and Assembly Instructions

PRELIMINARY – Sept. 29, 2022

This is an initial basic document that is being edited and expanded almost daily. The next update will include rendered images and photos.

Please provide feedback on this document or anything else Hero Me Gen7 related via the #hero-me-gen7 or #hmg7-support channels in the Hero Me Discord server. Be sure to review the #gen7-faqs channel first before posting your question as it may already be answered.

Hero Me Gen7 STL Parts Selection

Hero Me Gen7 part selection in most cases is much simpler than with Gen6. First off, there is just one Hero Me Base (well two if you're going with the Magnet Edition). All of the Hero Me Gen7 STLs are organized by part category and type. STL filenames contain the name of the specific components so it is easy to identify which ones you will need.

1. Get the Hero Me Gen7 Base STL.
2. Select the Gantry Adapter STL for your specific 3D printer model.
3. Select the Mount STL for your hotend and the Skirt-Mount STL that matches your hotend.
4. Optional: Select an Extruder mount STL if you are going setup for Direct Drive use. There are both 'Front' and 'Rear' versions of most extruder mounts. This refers to the location of the stepper motor. Select the appropriate mount for how you want the extruder/stepper positioned.
5. Select the part cooling duct(s) STL(s) for the fan(s) you will be using.
6. Optional: Select the ABL wing & mount STLs for the ABL sensor you will use.
7. Select one of the wire management tower STLs you want to use.

Basic Assembly

Print the parts you have selected. The parts are pre-oriented for best print results. Most parts do not require supports, those that do, only need minimal support (you need less than you think) and most are build plate only.

DO NOT USE the automatic support settings in your slicer!

The few STLs that do need support within the part (part cooling ducts) only need support for the overhangs. Do not place supports inside the part cooling ducts.

Hero Me Gen7 uses M3 threaded inserts to secure the parts together with M3 screws. These are the same as are used with Gen6.

Once the parts are printed and cleaned up. Install the threaded inserts in all the round holes, EXCEPT the filament path. There are two new threaded insert holes on the top of the Hero Me Gen7 Base. These are deep, with a second inset hole; you want the inserts to be flush with the lower ledge. The top area needs to be clear so that the round tabs of the hotend, spacer (if needed), and extruder mounts to mate with each other.

Before assembly, 'dry fit' all the parts to be sure they will seat properly. During this step take any needed measurements for a PTFE tube to be cut and placed in the Hotend assembly stack, from inside the hotend's heat sink, through the hotend mount(s), riser (if needed), direct drive mount, and into the bottom of the extruder (if used).

In a few instances, the hot-end and its mount will need to be assembled after the Hero Me Base and Gantry Adapter have been attached to the X carriage. This is due to some X carriages only having a need mount point that is within the width of the Hero Me body. Be sure to check your setup to see if a gantry mount point is behind where the hotend will be placed, if so, they this will have to be done before the hotend is inserted into the Base and mounted to its mount plate.

Note that for collar/groove mount based hotends, there is a new retaining system. The E3DV6/Clone mount use two threaded inserts in the back of the collar. The hotend is prevented from moving by the M3 screw threads that 'dig in' to the sides of the collar, preventing it from dropping or spinning in place. Because there are different heights of the collar rings on hotends that are V6 style, I provide four different spacers (1mm to 2.5mm in thickness). The E3DV6 and true clones will use one 1mm spacer placed in the collar before inserting the hotend. You will want to test fit your hotend with screws to find the spacer that is correct for your hotend.

Assemble the hotend into its mount. Mount the hotend assembly to the Base. If direct drive, skip this next step.

If your setup will be Bowden based, now add two M3 screws into the top of the hotend mount to secure to parts together.

Attach the skirt to the bottom of the base with two M3 screws.

Attach the Gantry Adapter to the Base. As there is no 'chimney' in the Gen7 Base, you will want to route the wires out the back left or right side of the base (behind where the fans mount). Wire management tower STLs are connected to either the new left or the right rear mount points. Note that an ABL bracket can be mounted on either the left or right side of the base using these same mount points. The tower and ABL mount can be 'stacked' on one side if needed.

In addition to the 'Front' and 'Rear' versions of most extruder mounts. There are also optional 'riser' STLs (4mm, 6mm, 10mm) that can be using if needed to raise the height of the extruder/stepper in a rear mount setup, so that the stepper clears over the top of the X carriage.

If needed place any riser(s) between the hotend mount and the extruder mount.

Some extruders must be secured to their mount plate before attaching to the base assembly as their mount points are from under the bottom of the mount plate. Other extruders can be mounted later, as they connect from the top or sides of the mount plate. If the extruder mounts from underneath, once secured you will want to install the PTFE tube into the base assembly and then into the extruder base when securing it.

Attach the extruder mount to the top of the base and hotend mount assembly. Add two M3 screws into the top of the hotend/ extruder assembly. long enough to secure the extruder mount, risers, hotend and base together.

Mount the Hero Me assembly to your X carriage.

Attach the part cooling duct(s). Before adding the fans, adjust and position the part cooling ducts height position so that the bottom of the duct tips are 1.6mm above the build plate when the nozzle is touching the plate. Then attach the part cooling fan(s) to the ducts.

Attach the ABL bracket and sensor mounts and ABL sensor. In some cases, this should be done before attaching the part cooling ducts.

Attach the heat sink fan and shroud (if any) to the front of the Base.

Optionally attach an ADXL345 mount and PCB if used.

Perform cable management and final wiring.

Please let me know if you find issues with this assembly process or have a better way to do it. These are the basic steps, and there will be some esoteric assemblies that may need a very different process due to the unique nature of the setup (e.g., Anycubic Vyper setup).

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Thanks,

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