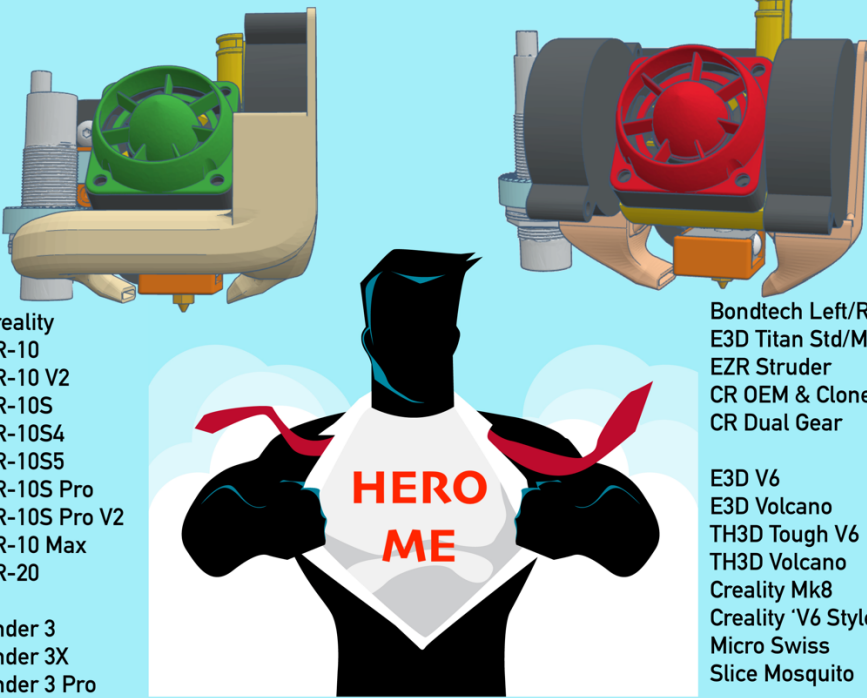


## Hero Me Gen5 Master Suite



Creality  
CR-10  
CR-10 V2  
CR-10S  
CR-10S4  
CR-10S5  
CR-10S Pro  
CR-10S Pro V2  
CR-10 Max  
CR-20

Ender 3  
Ender 3X  
Ender 3 Pro  
Ender 3 V2  
Ender 5  
Ender 5 Plus  
Ender 5 Pro  
Clones

Supports: 16 Creality Printers & Clones, 8 Hotends, 7 ABL sensors, 7 Direct Drive Extruders, 16 5015 and 4020 Fan Combinations, All New Designed, Tested and CFD Verified Part Cooling Ducts

**Over 3 Million Combinations!**

Bondtech Left/Right  
E3D Titan Std/Mirror  
EZR Struder  
CR OEM & Clones  
CR Dual Gear

E3D V6  
E3D Volcano  
TH3D Tough V6  
TH3D Volcano  
Creality Mk8  
Creality 'V6 Style'  
Micro Swiss  
Slice Mosquito

BLTouch  
EZABL Pro  
Creality OEM  
12mm & 18mm  
Pinda  
HallON

## Parts Cross Reference and Assembly Instructions

Welcome and thank you for reviewing the Hero Me Gen5 cooling system. The instructions below will help you to select the parts needed for your printer as well as guide you through printing, assembly, and setup to be able to make great things with the Hero Me Gen5 and your 3D printer.

An interactive Hero Me Gen5 configurator has been created by one of the Hero Me community (SoulStyle on Thingiverse). It is available at the link below. **To use it, you must make a copy.**

[https://docs.google.com/spreadsheets/d/1q3H9w8mgt181L7F2nhLkkFILbWLUgoi\\_dac23wQDUwU/edit#gid=1412928881](https://docs.google.com/spreadsheets/d/1q3H9w8mgt181L7F2nhLkkFILbWLUgoi_dac23wQDUwU/edit#gid=1412928881)

**Updates to the project are at the bottom of this document.**

Michael from Teaching Tech did a review AND step by step assembly instructions (17min). Before you send me questions, please watch this video as it will help you greatly when using these instructions and parts cross reference!

<https://www.youtube.com/embed/DUkoKzOFWFs>

Tim from TH3DStudio.com has done a detailed video of the parts selection, slicing, setup and print prep guide (32min).

<https://www.youtube.com/embed/GJtpsmtKFD4>

Kris from Kersey Fabrications lists the Hero Me as one of the Top 5 upgrades for the Ender 5. <https://www.youtube.com/embed/dbS9MA4UkZA>

I am proud to announce a relationship with [PrinterMods.com](http://PrinterMods.com)!

PrinterMods.com has chosen to offer Hero Me Gen5 compatible hardware kits (nuts and bolts) that complement their MDD (Modular Direct Drive) printer upgrades. These Hero Me Gen5 kits will include all the M3 screws and nuts needed to assemble your hotend with their MDD kits and your Hero Me Gen5 printed parts.

I am very excited to work with the PrinterMods.com team who is very active in the 3D printer community.

**3D Printer models currently supported by the Hero Me Gen5.**

Below is the continually growing list of 3D printers that are compatible with the Hero Me Gen5.

Other manufacturer’s clones of the Creality CR and Ender series printers may be compatible but have not been tested. With 72 parts across 6 categories, there are over 2 Million Hero Me Gen5 part combinations! But fear not, this cross reference makes it very easy for you to select the parts you need to print for your specific printer setup.

<ul style="list-style-type: none"> <li>• CR-10</li> <li>• CR-10 V2</li> <li>• CR-10 Mini</li> <li>• CR-10S</li> <li>• CR-10S4</li> <li>• CR-10S5</li> <li>• CR-10S Pro</li> <li>• CR-10S Pro V2</li> <li>• CR-20</li> <li>• CR-MAX</li> </ul>	<ul style="list-style-type: none"> <li>• Ender 3</li> <li>• Ender 3X</li> <li>• Ender 3 V2</li> <li>• Ender 3 Pro</li> <li>• Ender 5</li> <li>• Ender 5 Pro</li> <li>• Ender 5 Plus</li> <li>• <a href="http://PrinterMods.com">PrinterMods.com</a> MDD kit versions 1.2 and 1.3 for CR-10 series, Ender 3 series, &amp; Ender 5 series. Gantry plate replacements kits for Direct Drive use.</li> <li>• BLV Ender 3 Pro Upgrade</li> </ul>
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**Hero Me Gen5 Parts Cross Reference**

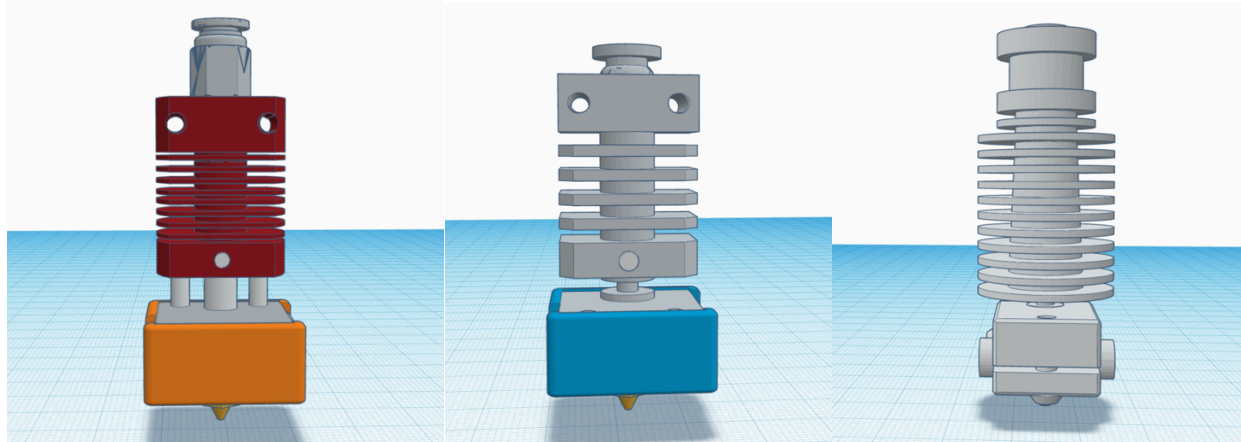
You will need the following information about your printer’s setup to select the correct parts to print.

<p><b>Required:</b>          Printer Model          Hotend type          Fan(s) &amp; size(s) for part cooling</p>	<p><b>Optional:</b>          ABL Sensor model/type (if any)          Extruder model/type (for use with MDD kit for Direct Drive Hero Me)</p>
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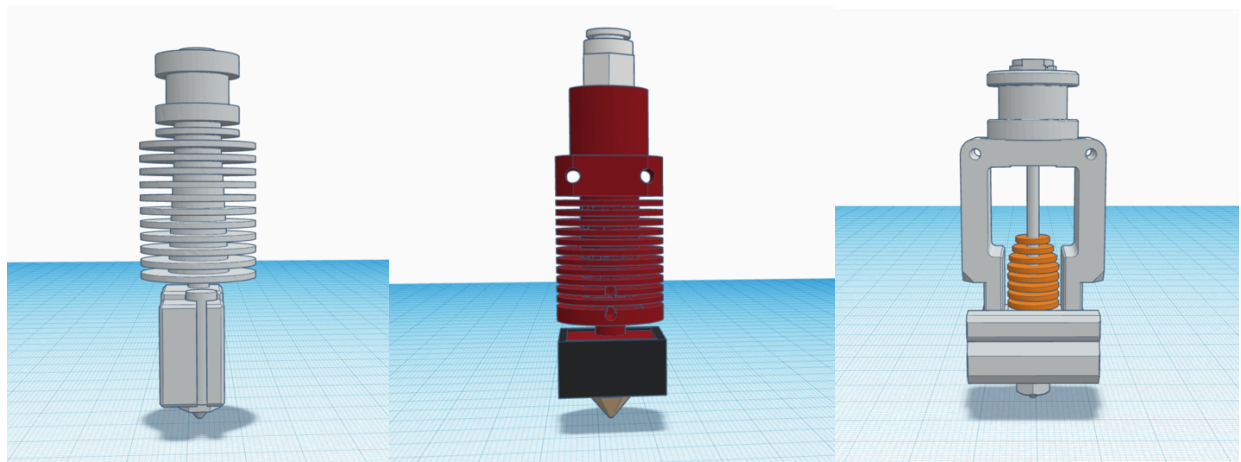
**Important Note:** You will see references to some hotends as being either ‘V6 style’ or ‘V6 clone’. For the purposes of these instructions, ‘V6 style’ specifically refers to the Creality OEM hotend for the CR-10S Pro (V1, V2, others) that have a red round heat sync, but mount to the gantry with two M3 bolts. This style of hotend mounts the same way and location as the OEM hotend on an Ender 3 or the 3<sup>rd</sup> party Micro Swiss hotend.

All references to E3D V6 or ‘V6 clone’ refer to all those hotends that match the round collar mount of an E3D V6 hotend. This is important as there are different Hero Me Gen5 base and Gantry Adapter parts for these two different hotend mounting styles. There are others that do not match either of these, and they have their own Hero Me Base and Gantry Adapter parts.

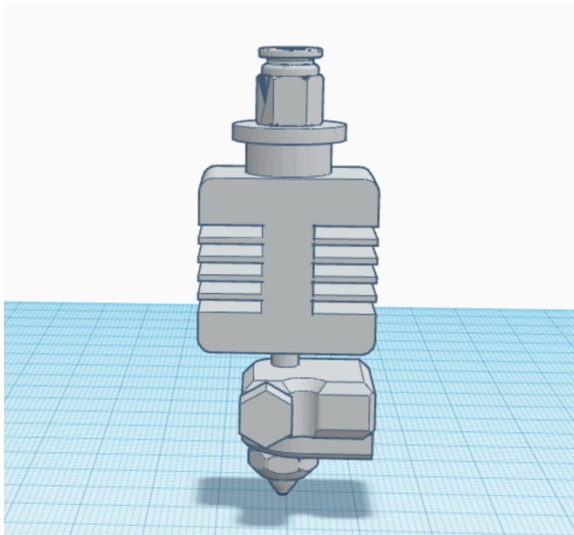
Here are renderings of the various hotends that the Hero Me Gen5 supports:



Left: Creality OEM (Ender 3, CR-10/S), Center: Micro Swiss, Right: E3D V6 or clone (Phaetus Dragonfly BMO and others)



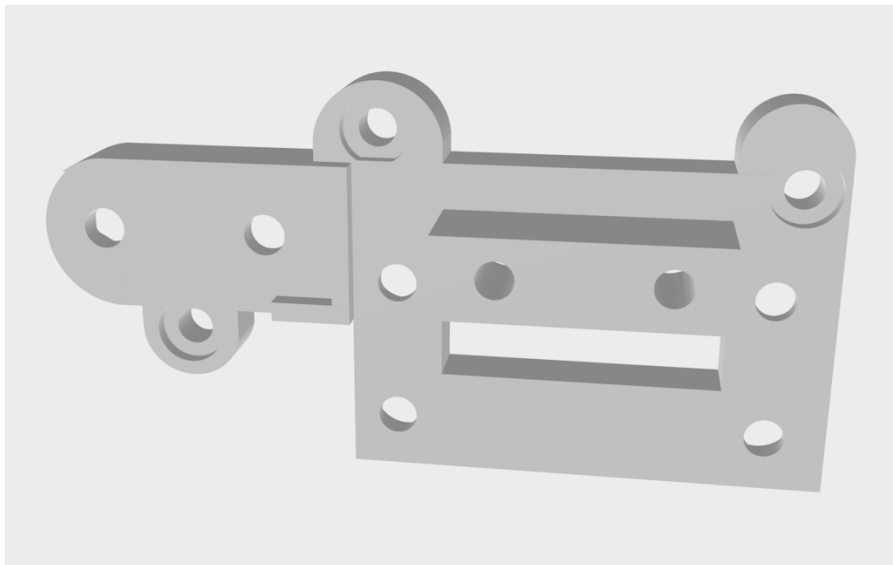
Left: E3D Volcano or clone, Center: Creality ‘V6 Style’ (CR-10S Pro), Right: Mosquito



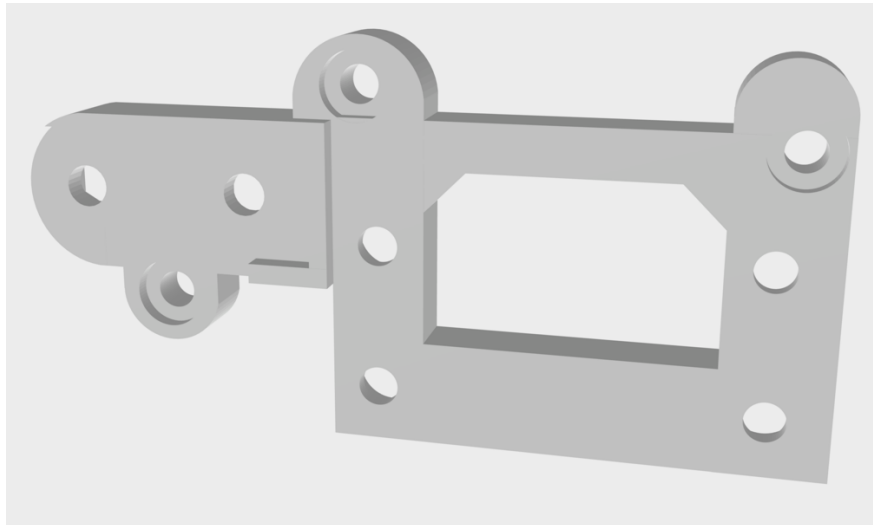
Dyze Designs DyzEnd-X and DyzEnd Pro

**Hero Me Gen5 Gantry Adapter plates and the printer models that they support (choose one set):**

There are two basic types of Hero Me Gantry Adapters. One type is used where the hotend you want to use is mounted to the gantry with two M3 bolts (e.g. Creality OEM, Mk8, and Micro Swiss, etc.). The other type is used for all other hotends that have some other gantry mount type (e.g. E3D V6, or Mosquito, etc.).



Example: OEM, Mk8, Micro Swiss, and Creality 'V6 Style', all mount with two M3 bolts



Example: E3D V6, Volcano, Mosquito, all mount to the Hero Me Base

Start with your printer, find your printer model from the list below and also note which hotend you are using in order to select the right Gantry Adapter for your printer. Note that some Creality printers have versions (V1, V2, etc.), be sure that you are matching to the exact model you have to what is listed below. There can be differences in the gantry plates from one version to the next. There may be a second part listed, you will need this as well.

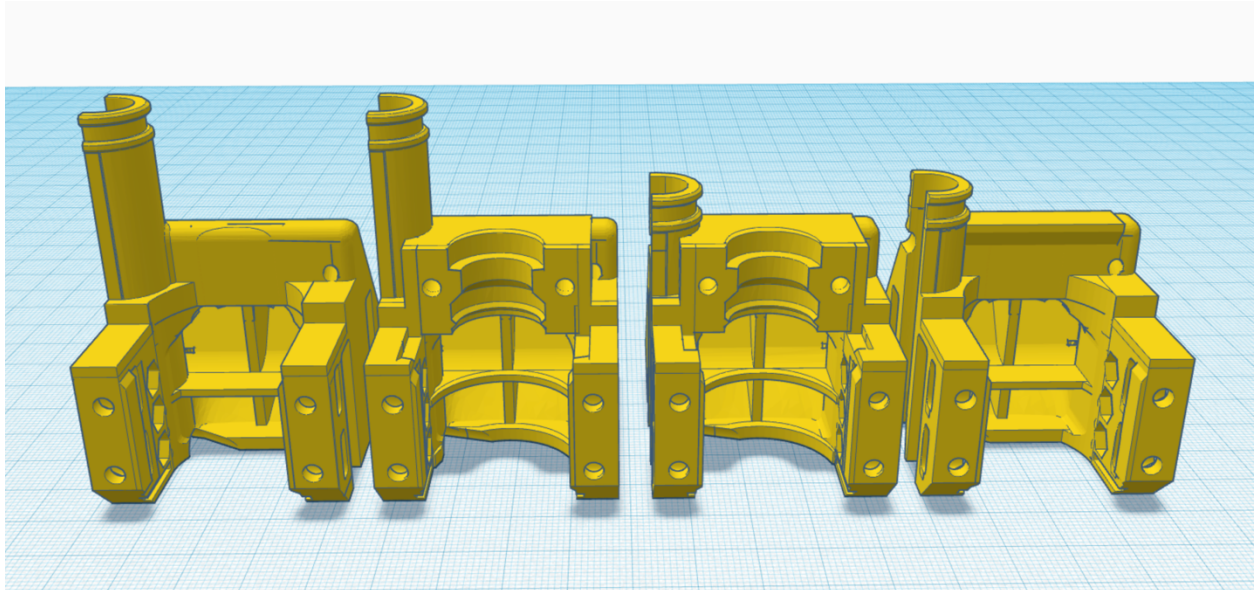
- If you have a: CR-10, CR-10S, CR-10S4, CR-10S5, CR-20, Ender 3, Ender 3X, or Ender 3 Pro. With one of these you are using an OEM, MK8, Creality 'V6 style', or Micro Swiss hotend (hotends that use two M3 bolts to mount the hotend) then use the following:
  - CR-Ender\_OEM-MS\_Gantry\_Adapter\_1A.stl
  - CR-Ender\_Gantry\_Clip\_1.stl
  - Y axis offset is -9mm. Not for use with E3D V6 or V6 clones.
- If you have a: CR-10, CR-10S, CR-10S4, CR-10S5, CR-20, Ender 3, Ender 3X, or Ender 3 Pro. With one of these you are using a Dragonfly BMS hotend, then use the following:
  - BMS Ender OEM Gantry Adapter 8C.stl
  - CR-Ender\_Gantry\_Clip\_1.stl
  - Y axis offset is -9mm. Not for use with E3D V6 or V6 clones.
- If you have a: CR-10, CR-10S, CR-10S4, CR-10S5, CR-20, Ender 3, Ender 3X, or Ender 3 Pro. With one of these you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clone hotends (hotends that do not use the Creality two M3 bolt arrangement to mount the hotend) then use the following:
  - CR-Ender\_E3D\_Gantry\_Adapter\_1B.stl
  - CR-Ender\_Gantry\_Clip\_1.stl
  - Y axis Home offset is -9mm. Not for use with Creality OEM 'V6 style' (hotend uses 2 screws to mount).
- If you have a CR-10 V2 and you are using an MK8, Micro Swiss, or clone hotends then use the following: (Y axis Home offset is -9mm)
  - CR\_MK8-MS\_Gantry\_Adapter\_2A.stl
- If you have a CR-10 V2 and you are using an OEM, E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clone hotends then use the following: (Y axis Home offset is -9mm)

- CR\_E3D\_Gantry\_Adapter\_2B.stl
- If you have a CR-10S Pro or CR-10 MAX and you are using a Creality OEM V6 style via screw mount, then use the following: (Y axis Home offset is -9mm. Do not use with E3D V6 or clones)
  - CR\_OEM\_Gantry\_Adapter\_3A.stl
- If you have a CR-10S Pro or CR-10 MAX and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - CR\_E3D\_Gantry\_Adapter\_3B.stl
- If you have a CR-10S Pro V2 and you are using a Creality OEM V6 style via screw mount then use the following: (Y axis Home offset is -9mm. Do not use with E3D V6 or clones)
  - CR\_OEM\_Gantry\_Adapter\_7A.stl
- If you have a CR-10S Pro V2 and you use an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - CR\_E3D\_Gantry\_Adapter\_7B.stl
- If you have an Ender 5, Ender 5 Pro, or Ender 5 Plus and you use an OEM, MK8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm)
  - Ender\_OEM-MS\_Gantry\_Adapter\_4A.stl
  - Ender\_Gantry\_Clip\_4.stl
- If you have an Ender 5, Ender 5 Pro, or Ender 5 Plus and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - Ender\_E3D\_Gantry\_Adapter\_4B.stl
  - Ender\_Gantry\_Clip\_4.stl
- If you have a Printermods.com MDD kit version 1.2 for CR-10 / Ender 3 series and you are using an OEM, MK8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones)
  - PM\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl
  - PM\_Gantry\_Clip\_5.stl
- If you have a Printermods.com MDD kit version 1.2 for CR-10 / Ender 3 series and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - PM\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl
  - PM\_Gantry\_Clip\_5.stl
- If you have a Printermods.com MDD kit version 1.2 for Ender 5 series and you are using an OEM, MK8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones)
  - PM\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl
  - PM\_Gantry\_Clip\_6.stl
- If you have a Printermods.com MDD kit version 1.2 for Ender 5 series and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)

- PM\_Ender\_E3D\_Gantry\_Adapter\_6B.stl
- PM\_Gantry\_Clip\_6.stl
- If you have a Printermods.com MDD kit version 1.3 for CR-10 / Ender 3 series and you are using an OEM, MK8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones)
  - PM\_v1.3\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl
  - PM\_Gantry\_Clip\_5.stl
- If you have a Printermods.com MDD kit version 1.3 for CR-10 / Ender 3 series and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - PM\_v1.3\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl
  - PM\_Gantry\_Clip\_5.stl
- If you have a Printermods.com MDD kit version 1.3 for Ender 5 series and you are using an OEM, MK8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones)
  - PM\_v1.3\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl
  - PM\_Gantry\_Clip\_6.stl
- If you have a Printermods.com MDD kit version 1.3 for Ender 5 series and you are using an E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - PM\_v1.3\_Ender\_E3D\_Gantry\_Adapter\_6B.stl
  - PM\_Gantry\_Clip\_6.stl
- If you have a BLV upgraded Ender 3 Pro and you are using an OEM, Mk8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones)
  - BLV\_Ender\_OEM\_Gantry\_Adapter\_8A.stl
- If you have a BLV upgraded Ender 3 Pro and you are using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm)
  - BLV\_Ender\_OEM\_Gantry\_Adapter\_8B.stl
- If you have an Ender 3 V2 and you are using an OEM, Mk8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones). It seems that Creality has changed the Ender 3 V2 gantry over time. If you have this printer model, you may have to print both to identify the one that fits your version.
  - Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A.stl
  - Or
  - Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A\_V2.stl
- If you have an Ender 3 V2 and you are using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm). It seems that Creality has changed the Ender 3 V2 gantry over time. If you have this printer model, you may have to print both to identify the one that fits your version.
  - Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B.stl
  - Or

- Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B\_V2.stl
- If you have a Voxelab Aquila and you are using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (Y axis Home offset is -9mm).
  - Voxelab\_Aquila\_E3D\_Gantry\_Adapter\_10B.stl
- If you have a Voxelab Aquila and you are using OEM, Mk8, or Micro Swiss hotends then use the following: (Y axis Home offset is -9mm. Not for use with V6 or clones).
  - Voxelab\_Aquila\_OEM\_Gantry\_Adapter\_10A.stl
- If you have the PrinterMods XChange tool changer and you are using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones then use the following: (add -9mm to the Y axis Home offset recommended by PrinterMods for the XChange).
  - Xchange E3D Gantry Adapter.stl
- If you have the PrinterMods XChange tool changer and you are using OEM, Mk8, or Micro Swiss hotends then use the following: (add -9mm to the Y axis Home offset recommended by PrinterMods for the XChange. Not for use with V6 or clones).
  - Xchange OEM Gantry Adapter.stl



**Hero Me Gen5 Bases and the hotends they support (choose one set):**

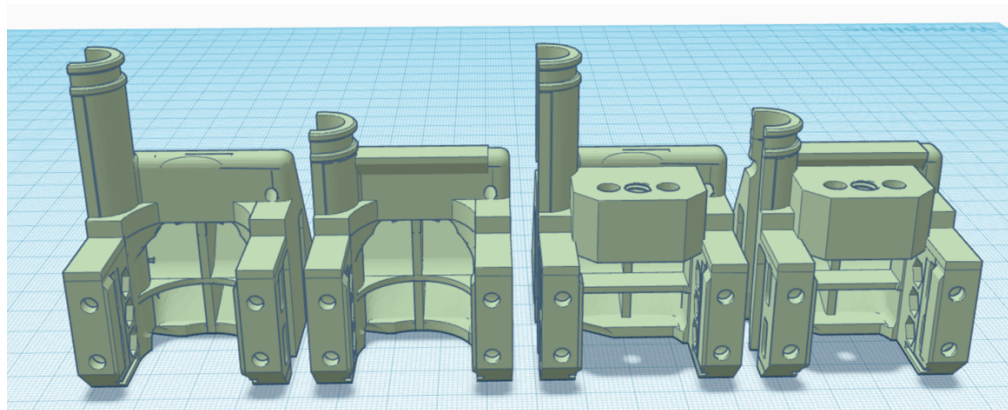
Hero Me Bases above from left to right:

Hero\_Me\_Gen5\_Base\_1.stl (Creality OEM, MK8, Micro Swiss, Dragonfly BMS, and other MK8 clone hotends)

Hero\_Me\_Gen5\_Base\_2.stl (E3D V6, E3D V6 Volcano, Tough, and other V6 clone hotends)

Hero\_Me\_Gen5\_Base\_3.stl (MDD ready, E3D V6, E3D V6 Volcano, Tough, V6 clone hotends)

Hero\_Me\_Gen5\_Base\_4.stl (MDD ready, Creality OEM, MK8, Micro Swiss, Dragonfly BMS, clones of the OEM hotends)



Hero Me Bases above from left to right:

Hero\_Me\_Gen5\_Base\_5.stl (Creality OEM 'V6 style' and other large hotends)

Hero\_Me\_Gen5\_Base\_6.stl (MDD ready, Creality OEM 'V6 style' and other large hotends)

Hero\_Me\_Gen5\_Base\_7.stl (Slice Engineering Mosquito hotend)

Hero\_Me\_Gen5\_Base\_8.stl (MDD ready, Slice Mosquito, & Phaetus Dragon hotends)

Not shown: Hero\_Me\_Gen5\_Base\_9.stl (DyzeDesigns DyzeEnd-X and Pro hotends)

Next, knowing which hotend you are using, select the right Base for your printer. There may be additional parts listed, you will need these as well (if listed with the base).

- HMG5 for Creality OEM, MK8, Micro Swiss, and other MK8 clone hotends

- Hero\_Me\_Gen5\_Base\_1.stl
- HMG5 for E3D V6, E3D V6 Volcano, TH3D Tough, and other V6 clone hotends
  - Hero\_Me\_Gen5\_Base\_2.stl
  - HMG5\_E3D\_V6-Clone\_Collar.stl
  - HMG5\_E3D\_V6-Clone\_Air\_Dam.stl
- HMG5 Direct Drive Base ready for E3D V6, E3D V6 Volcano, TH3D Tough, and other V6 clone hotends
  - Hero\_Me\_Gen5\_Base\_3.stl
  - HMG5\_E3D\_V6-Clone\_Collar.stl
  - HMG5\_E3D\_V6-Clone\_Air\_Dam.stl
- HMG5 Direct Drive Base ready for Creality OEM, MK8, Micro Swiss, and other clones of the OEM hotends
  - Hero\_Me\_Gen5\_Base\_4.stl
- HMG5 for Creality OEM 'V6 style' and other large hotends (Not for E3D V6 or clones)
  - Hero\_Me\_Gen5\_Base\_5.stl
- HMG5 Direct Drive Base ready for Creality OEM 'V6 style' and other large hotends (Not for E3D V6 or clones)
  - Hero\_Me\_Gen5\_Base\_6.stl
- HMG5 for Slice Engineering Mosquito hotend
  - Hero\_Me\_Gen5\_Base\_7.stl
- HMG5 Direct Drive Base ready for Slice Mosquito & Phaetus Dragon hotends
  - Hero\_Me\_Gen5\_Base\_8.stl
- HMG5 for Dyze Designs DyzEnd-X and DyzEnd Pro hotends (not direct drive)
  - Hero\_Me\_Gen5\_Base\_9.stl
  - HMG5\_DyzEnd-X\_or\_Pro\_Collar.stl
  - Does not use the 25mm fan included with the DyzEnd. Use a 40mm axial fan.

**Hero Me Gen5 Direct Drive Adapters for use with the following HMG5 Direct Drive Bases #3, #4, #6, & #8 (optional, only needed for DD setups. choose one):**

**IMPORTANT!** All the current Direct Drive Adapters that are included with the Hero Me Gen5 **REQUIRE** that you have one of the PrinterMods.com MDD Kits (versions 1.2 or 1.3)! There are several DD adapters in the Remixes section of the Hero Me Gen5 on Thingiverse that do not require an MDD kit.

If your printer uses a Bowden setup (and you are not changing from it), you can skip this section. If you plan to go with a PrinterMods.com MDD kit, based on the extruder you have, select the DD Adapter from the list below. As some have choices, you may want to view the STL in your slicer software to help make a choice. Note that there are now separate DD adapters for the two different PrinterMods.com versions (1.2 and 1.3). You only need one, be sure to check which version of PrinterMods.com kit you have.

- OEM Extruder and PrinterMods.com gantry plate version 1.2 - Pick One

- PM\_OEM\_Extruder\_Adapter.stl (for the original plastic OEM extruder, not for use with the Creality Dual Gear extruder – or clones of the Dual Gear extruder)
- PM\_OEM\_Dual\_Gear\_Extruder\_Adapter.stl (for the Creality Dual Gear extruder, Winsinn Dual Gear extruder, and other clones.
- OEM Extruder and PrinterMods.com gantry plate version 1.3
  - PM\_v1.3\_OEM\_Extruder\_Adapter\_v2.stl
- Bondtech and PrinterMods.com gantry plate version 1.3 - Pick One
  - PM\_v.13\_Bondtech\_RH\_Adapter\_1\_v2.stl
  - PM\_v.13\_Bondtech\_LH\_Adapter\_2\_v2.stl
  - PM\_v.13\_Bondtech\_LH\_Adapter\_3\_v2.stl
- Bondtech and PrinterMods.com gantry plate version 1.2 - Pick One
  - PM\_Bondtech\_RH\_Adapter\_1.stl
  - PM\_Bondtech\_LH\_Adapter\_2.stl
  - PM\_Bondtech\_LH\_Adapter\_3.stl
- E3D Titan, TH3D Tough and printerMods.com gantry plate version 1.3 - Pick One
  - PM\_v.13\_Titan\_RH\_Adapter\_1\_v2.stl
  - PM\_v.13\_Titan\_Mirror\_Adapter\_2\_v2.stl
  - PM\_v.13\_Titan\_RH\_Adapter\_3\_v2.stl
- E3D Titan, TH3D Tough and printerMods.com gantry plate version 1.2 - Pick One
  - PM\_Titan\_RH\_Adapter\_1.stl
  - PM\_Titan\_Mirror\_Adapter\_2.stl
  - PM\_Titan\_RH\_Adapter\_3.stl
- SeeMeCNC EZR Struder and PrinterMods.com gantry plate version 1.3
  - PM\_v.13\_EZR\_Struder\_Adapter\_1.stl (for OEM MK8.Micro Swiss and E3D V6 and clones)
  - PM\_v.13\_EZR\_Struder\_OEM-MS\_Adapter\_2\_optional.stl
  - PM\_v.13\_EZR\_Struder\_E3D\_Adapter\_2\_optional.stl
- SeeMeCNC EZR Struder and PrinterMods.com gantry plate version 1.2
  - PM\_EZR\_Struder\_Adapter\_1.stl (for OEM MK8.Micro Swiss and E3D V6 and clones)
  - PM\_EZR\_Struder\_OEM-MS\_Adapter\_2\_optional.stl
  - PM\_EZR\_Struder\_E3D\_Adapter\_2\_optional.stl

**Hero Me Gen5 Part Cooling Ducts by ACWest. Supporting 5015 and 4020 radial fans (choose one single or dual or choose two single):**

Now on to the parts cooling fan(s) choices. Based upon which fan or fans you want to use, select the single duct or pair of ducts that meet your needs. Note that the Lightweight ducts give the best visibility of your printer's hotend.

- Single 5015 radial fan with single duct - Pick One
  - 5015\_Lightweight\_Duct\_Standard\_Right.stl
  - 5015\_Lightweight\_Duct\_Forward\_Right.stl
- Single 4020 radial fan with single duct - Pick One

- 4020\_Lightweight\_Duct\_Standard\_Right.stl
  - 4020\_Lightweight\_Duct\_Forward\_Right.stl
- Single 5015 radial fan with dual ducts - Pick One
  - 5015\_Single\_Radial\_Fan\_Dual\_Ducts.stl
  - 5015\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl
- Single 4020 radial fan with dual ducts – Pick one
  - 4020\_Single\_Radial\_Fan\_Dual\_Ducts.stl
  - 4020\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl
- Single 5020 radial fan with dual ducts – Pick one
  - 5020\_Single\_Radial\_Fan\_Dual\_Ducts.stl
  - 5020\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl
- Single 4010 radial fan with dual ducts – Pick one
  - 4010\_Single\_Radial\_Fan\_Dual\_Ducts.stl
  - 4010\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl
- Dual 5015 radial fans with dual ducts - Pick One Set
  - 5015\_Dual\_Radial\_Fans\_Dual\_Ducts.stl
  - 5015\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl
  - 5015\_Lightweight\_Duct\_Standard\_Right.stl and 5015\_Lightweight\_Duct\_Standard\_Left.stl
  - 5015\_Lightweight\_Duct\_Forward\_Right.stl and 5015\_Lightweight\_Duct\_Forward\_Left.stl
- Dual 4020 radial fans and dual ducts - Pick One Set
  - 4020\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4020\_Fan\_Mount\_Spacer.stl
  - 4020\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4020\_Fan\_Mount\_Spacer.stl
  - 4020\_Lightweight\_Duct\_Standard\_Right.stl and 4020\_Lightweight\_Duct\_Standard\_Left.stl  
plus 4020\_Fan\_Mount\_Spacer.stl
  - 4020\_Lightweight\_Duct\_Forward\_Right.stl and 4020\_Lightweight\_Duct\_Forward\_Left.stl  
plus 4020\_Fan\_Mount\_Spacer.stl
- Dual 5020 radial fans and dual ducts - Pick One Set
  - 5020\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4020\_Fan\_Mount\_Spacer.stl
  - 5020\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4020\_Fan\_Mount\_Spacer.stl

- 5020\_Lightweight\_Duct\_Standard\_Right.stl and 5020\_Lightweight\_Duct\_Standard\_Left.stl plus 4020\_Fan\_Mount\_Spacer.stl
- 5020\_Lightweight\_Duct\_Forward\_Right.stl and 5020\_Lightweight\_Duct\_Forward\_Left.stl plus 4020\_Fan\_Mount\_Spacer.stl
- Dual 4010 radial fans and dual ducts - Pick One Set
  - 4010\_Dual\_Radial\_Fans\_Dual\_Ducts.stl
  - 4010\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl
  - 4010\_Lightweight\_Duct\_Standard\_Right.stl and 4010\_Lightweight\_Duct\_Standard\_Left.stl
  - 4010\_Lightweight\_Duct\_Forward\_Right.stl and 4010\_Lightweight\_Duct\_Forward\_Left.stl

Note that I do not recommend the 4010 radial fan used in a single part cooling fan setup, especially with a dual duct. If you choose not to use a second 4010 fan with your OEM part, do not complain to me when your part cooling is sub-par and you are not able to bridge wide gaps. A single 4010 radial fan does not produce enough CFM to drive dual ducts.

## Hero Me Gen5 ABL (Automatic Bed Leveling) mounts supporting EZABL, BLTouch, 12mm & 18mm OEM Sensors (choose one):

Finally, on to the ABL mounts. If you not are going to use an ABL sensor, you can skip this section. Based upon the ABL sensor you have and the part cooling fan or fans you are going to use, select the appropriate ABL mount.

If you are not using a fan on the left, then use the appropriate ABL mount that has 'No Duct' in the name. If you are using a 4010 fan on the left, you will most likely need one with 'Narrow' or 'Compact' in the name. If you are using a 5015 fan on the left, you will most likely need one with 'Medium' in the name. If you are using a 5020 or a 4020 fan on the left, you will need one with 'Wide' in the name. Dual Ducts with a single fan, will most likely need an adapter with 'Narrow' in the name. This is not exact as there are combinations of ABL sensor and part cooling duct that need an ABL mount that is one size larger than above.

**Important Note 1:** The use of an ABL sensor with the Hero Me Gen5 will require you to update your firmware X & Y offsets for the sensor in relation to the hotend nozzle. Instructions on updating your firmware are not part of this guide. There are many sources available for this information (Facebook groups, YouTube videos, etc. If you purchase an EZABL Pro from TH3DStudios.com they provide complete instructions on how to make the firmware changes. If you have their EZBoard Lite, they even provide a web portal to help automate the firmware update. The firmware X, Y offsets for the ABL mount you select are found in Step 12 of the Hero Me assembly instructions below.

**Important Note 2:** If you have any Ender 5 series and are using any of the ABL sensor mounts, you may need to use a spacer to clear the metal clip that holds the belt on the left side. This applies to both the OEM gantry plate and the PrinterMods.com MDD plate. The spacer file is: PM-Ender\_5\_ABL\_Spacer.stl The firmware offset for the Y axis will increase by -6 (spacer width).

- EZABL, EZABL Pro Sensor Mounts - Pick One
  - EZABL\_Mount\_No\_Duct\_18mm.stl (for use with no left fan)
  - EZABL\_Mount\_Close\_18mm.stl (for use with single fan, dual duct)
  - EZABL\_Mount\_Narrow\_18mm.stl (for use with 5015 single fan dual ducts)
  - EZABL\_Mount\_Medium\_18mm.stl (for use with 5015 dual fans and 5015 dual fan ducts)
  - EZABL\_Mount\_Wide\_18mm.stl (for use with 4020 dual fans)
- 18mm OEM/Generic Sensor Mounts - Pick One
  - OEM\_Mount\_No\_Duct\_18mm.stl (for use with no left fan)
  - OEM\_Mount\_Close\_18mm.stl (for use with single fan, dual duct)
  - OEM\_Mount\_Narrow\_18mm.stl (for use with 5015 single fan dual ducts)
  - OEM\_Mount\_Medium\_18mm.stl (for use with 5015 dual fans and dual fan ducts)
  - OEM\_Mount\_Wide\_18mm.stl (for use with 4020 dual fans)
- EZABL Mini and 12mm OEM Sensor Mounts - Pick One
  - EZABL-OEM\_Mount\_No\_Duct\_12mm.stl (for use with no left fan)
  - EZABL-OEM\_Mount\_Medium\_12mm.stl (for use with 5015 single fan dual ducts, 5015 dual fans, and 5015 dual fan ducts)
  - EZABL-OEM\_Mount\_Wide\_12mm.stl (for use with 4020 dual fans)
- 8mm OEM Sensor Mounts - Pick One

- OEM\_Mount\_No\_Duct\_8mm.stl (for use with no left fan)
- OEM\_Mount\_Medium\_8mm.stl (for use with 5015 single fan dual ducts, 5015 dual fans, and 5015 dual fan ducts)
- OEM\_Mount\_Wide\_8mm.stl (for use with 4020 dual fans)
  
- BLTouch Wing - Pick One Wing
  - BLTouch\_Wing\_No\_Duct.stl (for use with no left fan)
  - BLTouch\_Wing\_Narrow.stl (for use with 5015 single fan dual ducts)
  - BLTouch\_Wing\_Medium.stl (for use with 5015 dual fans and 5015 dual fan ducts)
  - BLTouch\_Wing\_Wide.stl (for use with 4020 dual fans)
  
- BLTouch Mount - Pick One Mount
  - BLTouch\_Standard\_Mount.stl
  - BLTouch\_Flat\_Mount.stl
  
- BLTouch Compact Mount and Slider (Set)
  - BLTouch\_Wing\_Compact.stl
  - BLTouch\_Slider\_Compact.stl
  - This set can be used to have the BLTouch sit behind a 4020 or 5015 Lightweight duct on the left.

## Hero Me Gen5 Options

To wrap the choices up, select the heat sync fan guard or provide one of your own. If you have an LED strip to light the hotend and are using two 5015 fans with the Lightweight ducts, be sure to print the STL file for the LED Bar .

- HMG5\_Jet\_Fan\_Guard.stl
- HMG5\_Turbine\_Fan\_Guard.stl
- LED\_Bar\_for\_Lightweight\_5015\_Ducts.stl

You are now ready to proceed to the prep and assembly procedures.

## Hero Me Gen5 General Assembly Procedures:

**Step 1:** If you skipped the parts cross reference, you will need the following information about your printer's setup to select the correct parts to print from the parts cross reference guide above.

<b>Required:</b> Printer Model Hotend type Fan(s) & size(s) for part cooling	<b>Optional:</b> ABL Sensor model/type (if any) Extruder model/type (for use with MDD kit for Direct Drive Hero Me)
---	---

The following hardware is required\* to assemble the Hero Me Gen5 system onto your printer:

M3 Bolts

25-30mm – Qty: 2 (for Creality OEM, Mk8, Micro Swiss, 'V6 style' hotends)

-OR-

20-25mm – Qty: 2 (for E3D V6, Volcano, Tough, and V6 clone hotends)

Plus

25mm – Qty: 2 (for 5015 and 4020 fans)

18mm – Qty: 8

12mm – Qty: 6

10mm – Qty: 5

8mm – Qty: 4

M3 hex nuts – Qty: 29

M3 flat square nuts – Qty: 2 (optional)\*

\*note some setups may need fewer M3 bolts and nuts due to the parts selection you make. The quantities and mix above should cover most all complete setups.

MDD Direct Drive kits from PrinterMods.com will soon have the needed hardware to assemble the extruder and stepper motor to the backplate and Hero Me MDD adapters. If you have already purchased the PrinterMods.com MDD kit before the Hero Me Gen5 was released (or their Hero Me hardware kits are available), you will likely need several more M3 nuts and bolts in the 20mm to 50mm length based upon the extruder you are using and the DD Adapter you have selected. Check, measure, and obtain any needed M3 bolts before assembling the Direct Drive portion of your upgrade.

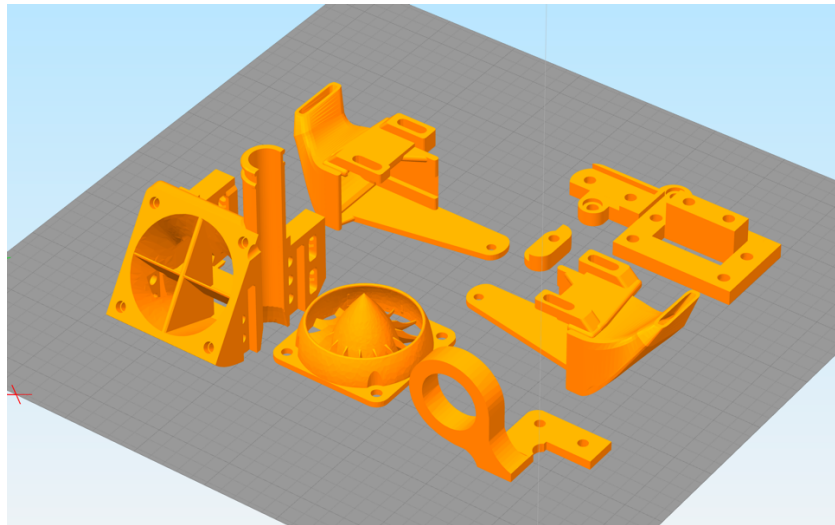




For those wanting to build a Direct Drive version of the Hero Me. You will need to order the MDD kit for your printer from PrinterMods.com. There are other DD adapters on Thingiverse that can work with the Hero Me but have not been tested. I will be creating additional DD adapters for some 3D printer models that do not require the MDD kit (CR-10S Pro, CR-10 V2) as these have the needed gantry plate mount points to securely hold the weight and prevent vibration from the extruder and stepper motor.

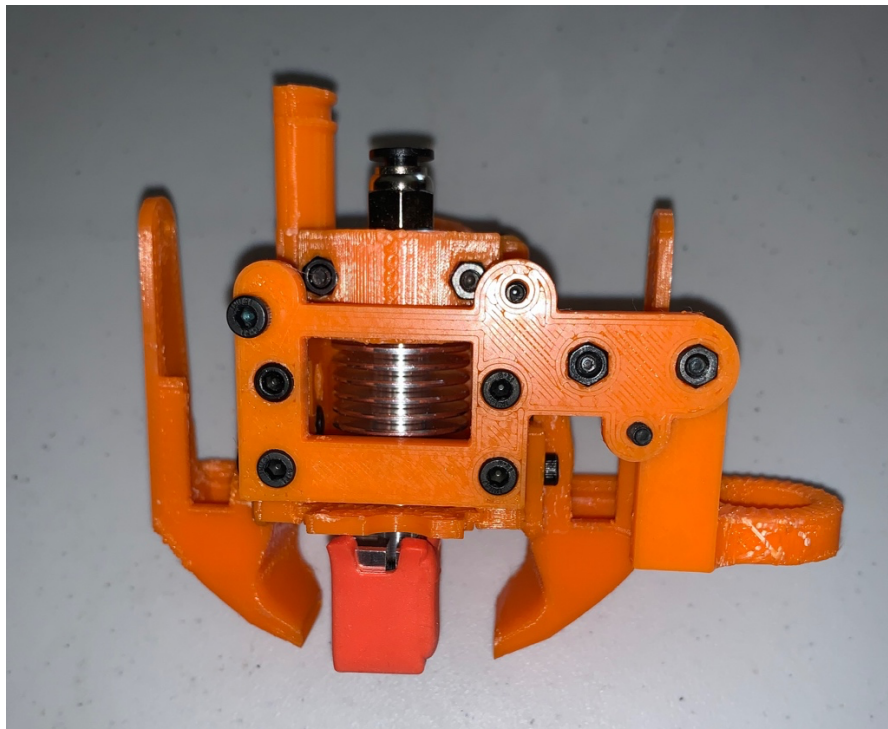
If you have not already done so, with your printer and specific parts info from the table above, use the Hero Me Parts Cross Reference guide to select the needed parts to print.

**Step 2.** Print the parts. Recommended printer settings: set layer height between .2mm to .28mm layer height (lower is fine, but not required, also slows the print time greatly). Set infill to be between 35% and 50%. The Direct Drive adapters should be at 85% or higher. Use automated supports from the build plate only (these can be sparse; you do not need a lot of support). The lightweight cooling ducts can use a few well-placed supports just inside the part (not down into the duct).



If you use a silicone sock on your printer's hotend, you can use PLA for the cooling ducts and Hero Me base. I highly recommend using a silicone sock for you hotend in all cases. I have printed for two years with the Hero Me made from 100% PLA with no warping or melting because I have always used a silicone sock. If you do not have a silicone sock, I recommend using PETG or ABS for the base and parts cooling duct(s).

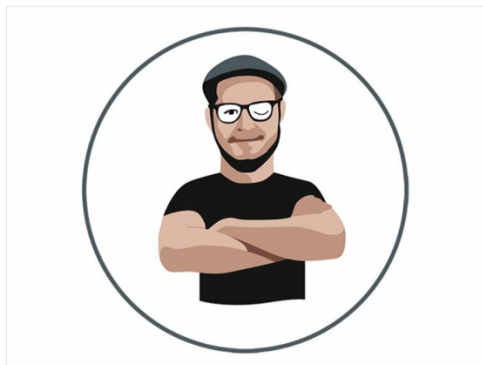
**Step 3.** Clean and trim the parts as needed. Pre-seat all the needed M3 hex and flat nuts on all the parts, as they can be a tight fit. On the Hero Me base the four captured hex nut inserts (used to mount the base to the gantry adapter plate) are slightly hidden but accessible from the air exhaust ports on each side of the base.



Use the 'Prusa method\*' by using a small M3 bolt to pull the hex nut into the insert (if it won't go with just finger pressure). The flat nuts may need pliers to press the flat nuts into the slots. The M3 bolt and flat nut used for the front peg of the part cooling ducts may be optional. Usually only one M3 bolt and hex nut on the part cooling duct's back peg of the right and left side of the Hero Me base is needed to hold the ducts securely.

\*see step 8 on the linked page to see the Prusa screw pulling method: [https://help.prusa3d.com/en/guide/1-introduction\\_24976](https://help.prusa3d.com/en/guide/1-introduction_24976)

#### Step 8 Pro tip: inserting the nuts

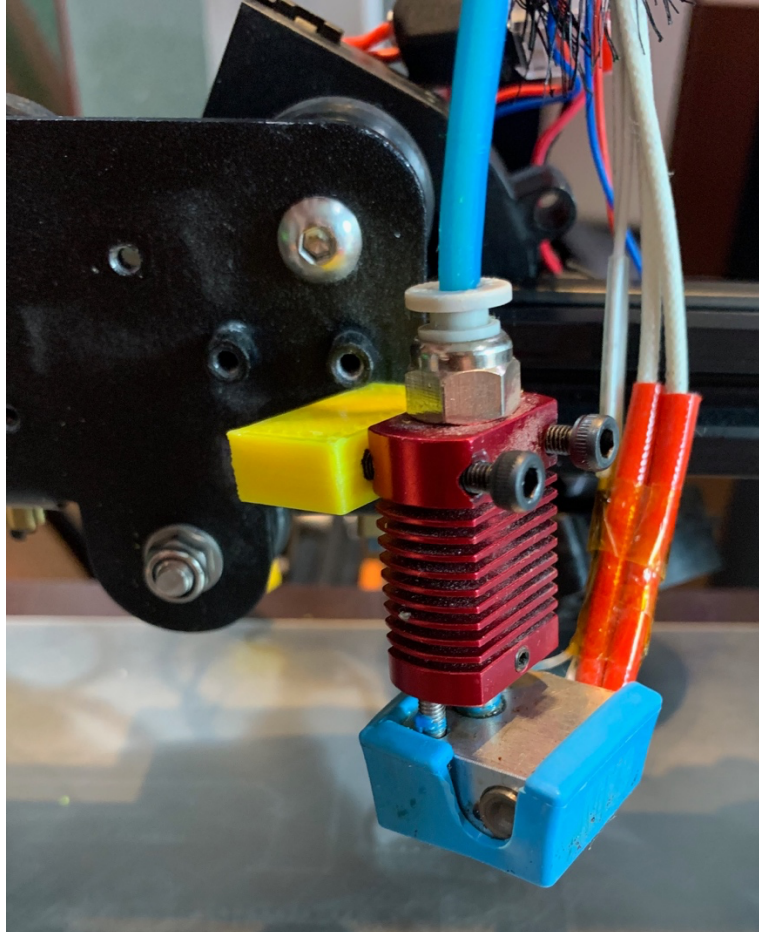


- 3D printed parts are very precise, however, there still might be a tolerance in the printed part and same goes for the size of the nut.
- Therefore it might happen, that the nut won't fit easily in or might be falling out. Let's see, how to fix it:
  - **Nut won't fit in:** use a screw with a thread along its entire length (typically: M3x10, M3x18) and screw it from the opposite side of the opening. While tightening the screw, the nut will be pulled in. Remove the screw afterwards.
  - **Nut keeps falling out:** Use a piece of tape to fix the nut temporarily in place, as soon as you insert the screw in, you can remove the tape. *Using glue isn't recommended as it can partly reach into the thread and you won't be able to tighten the screw properly.*

Depending on the height of your hotend block, on the Hero Me base you will want to choose one of the three cooling duct mount positions to place a hex nut on each side. Volcano = lower mount, Standard = middle mount, short = top mount. The proper placement should give you 3-

4mm of vertical adjustment. I recommend that the bottom of the part cooling duct should be 1.4mm to 1.8mm off the build plate when the nozzle is just touching the bed surface.

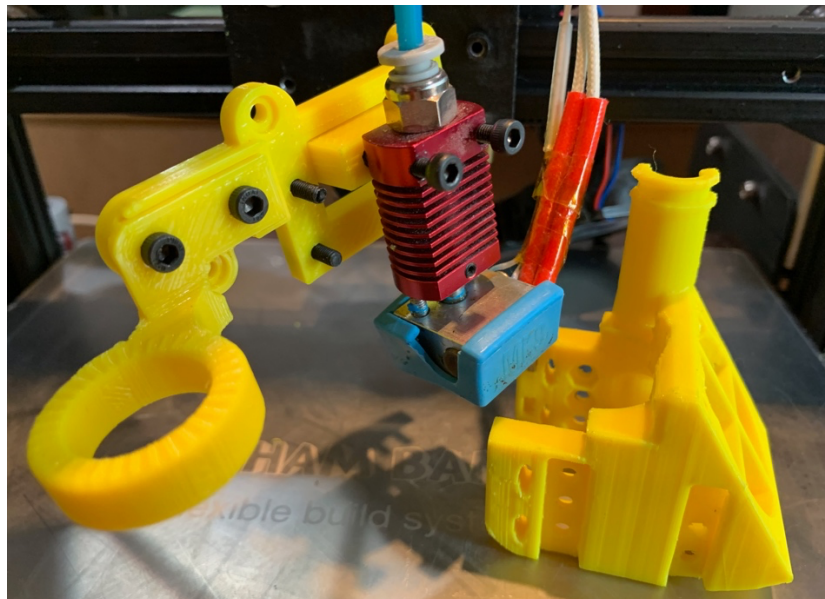
**Step 4.** Disassemble your current hotend assembly from the X axis gantry plate. Prepare and make any adjustments, wiring changes, fan changes or additions, or any other changes needed on you hotend wire loom before assembling the Hero Me Gen5 cooling system.



**Optional:** For an MDD Direct Drive setup follow the Printermod.com instructions Step 1-7 at this point.

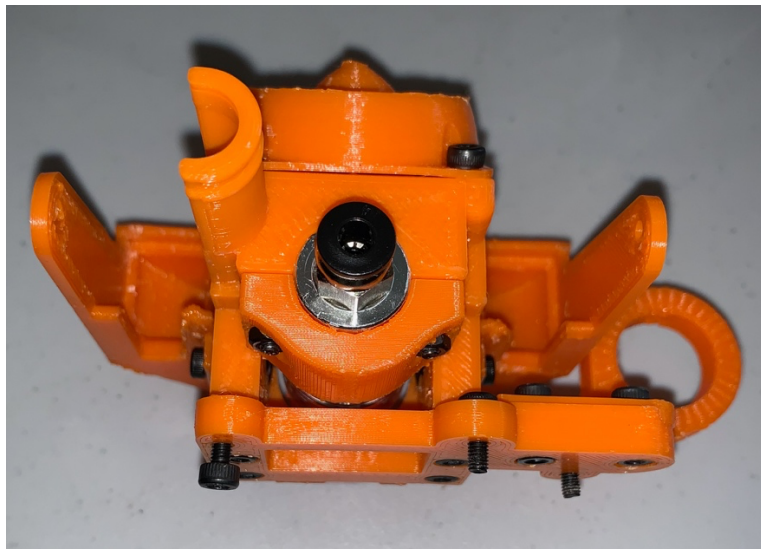
**Depending on the hotend you have, perform Step 5A or Step 5B (not both).**

**Step 5A.** If using an OEM, Mk8, or Micro Swiss style hotend (one that has 2 screws to mount it), place it on the gantry adapter stand-off and feed the screws through the hotend and stand-off. If your selected stand-off has inserts for M3 hex nuts for the hotend, then tighten the bolts to the hex nuts in the back of the gantry adapter. If your selected adapter does not have the nut inserts, leave the bolts loose for now. They will be tightened when mounting to the back plate. Be sure to have the heat block oriented correctly with the wires coming up the right side of the base in the wire tower.

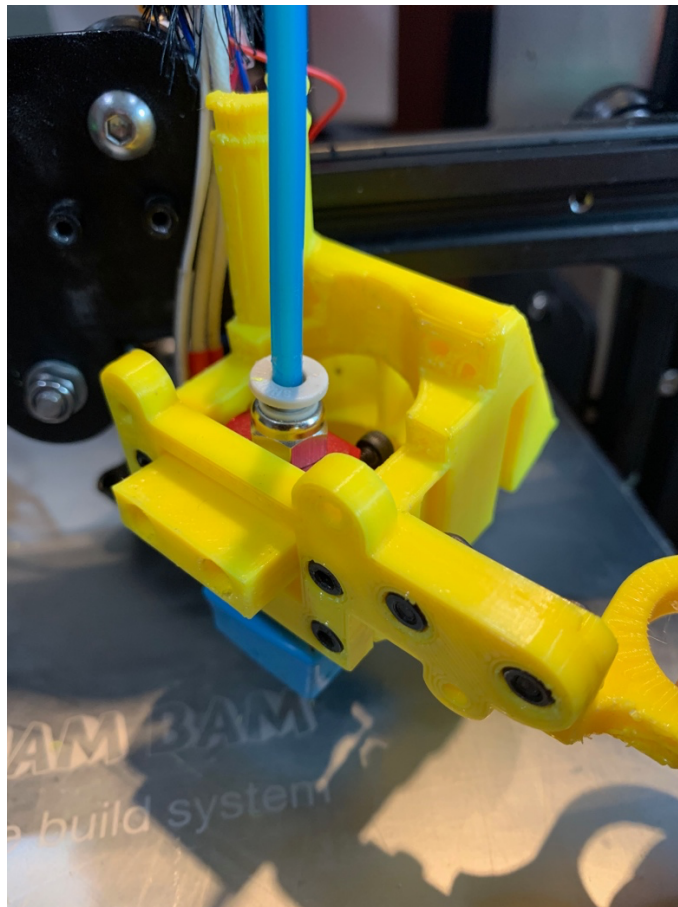


**-OR-**

**Step 5B.** If using an E3D V6, Volcano, Tough, Mosquito, or V6 clone, place it in the Hero Me base and add the M3 screws (and collar for E3D, Tough, and V6 clones) and tighten securely, be sure to have the heat block oriented correctly with the wires coming up the right side of the base in the wire tower. If using an E3D V6 or clone, insert the small air dam part into the slot in the bottom back of the base.



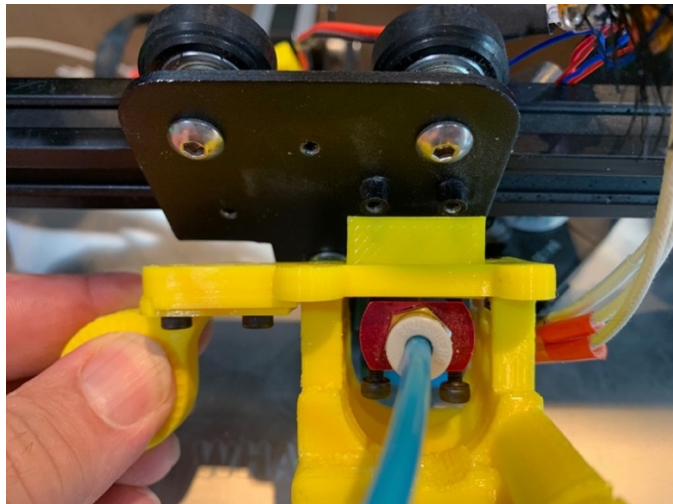
**Step 6.** Attach the Hero Me base to the gantry adapter and insert and tighten the four M3 bolts from the back of the gantry adapter into the Hero Me.



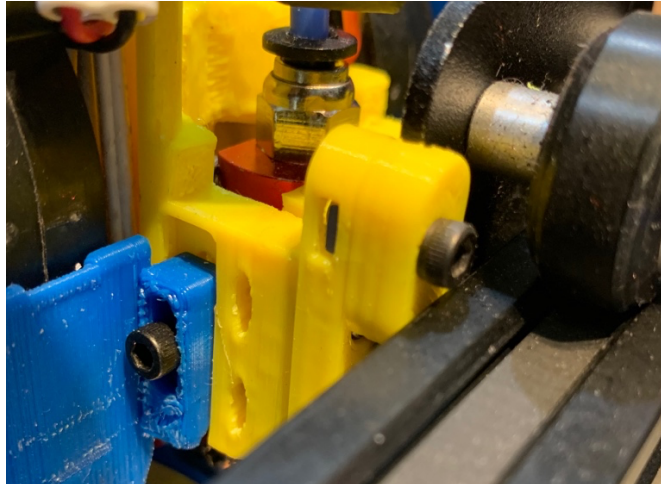
Note in the photo above the spacer for the hotend is a separate piece, so it looks like the gantry adapter is on backwards, but it isn't. It slid through the backplate when the photo was taken. All gantry adapters that have a spacer for the hotend are now one piece and the spacer faces inward on the side with the hotend.

**Step 7.** Optional. If you have an ABL sensor, attach your sensor to the ABL adapter. And attach the ABL adapter to the gantry adapter with two M3 bolts and tighten.

**Step 8.** Attach the Hero Me and gantry adapter assembly to your printer's backplate at the three mount point holes (or two holes and the gantry adapter clip) with M3 bolts. Tighten the two bolts for the hotend body to the gantry plate. There is easy access from the front of the Hero Me base.

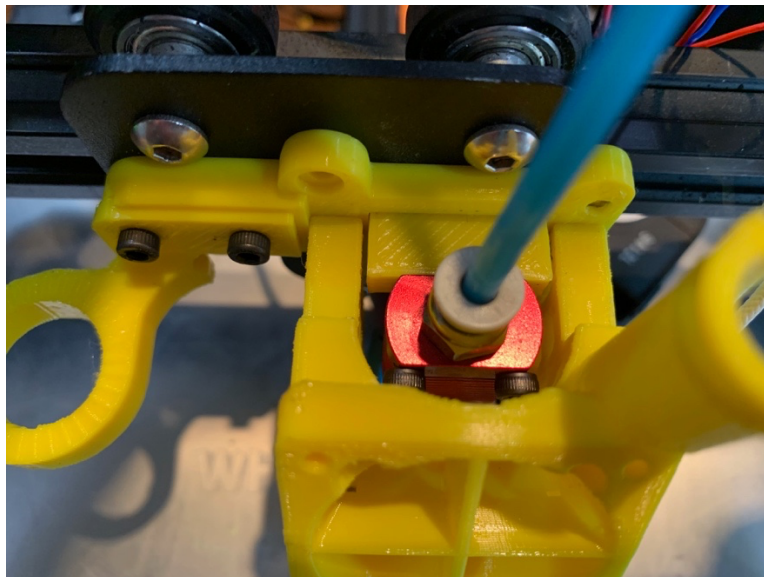


Again, photo is of an older version where the hotend spacer is a separate part.



If your setup uses one, here is where the Gantry Clip goes.

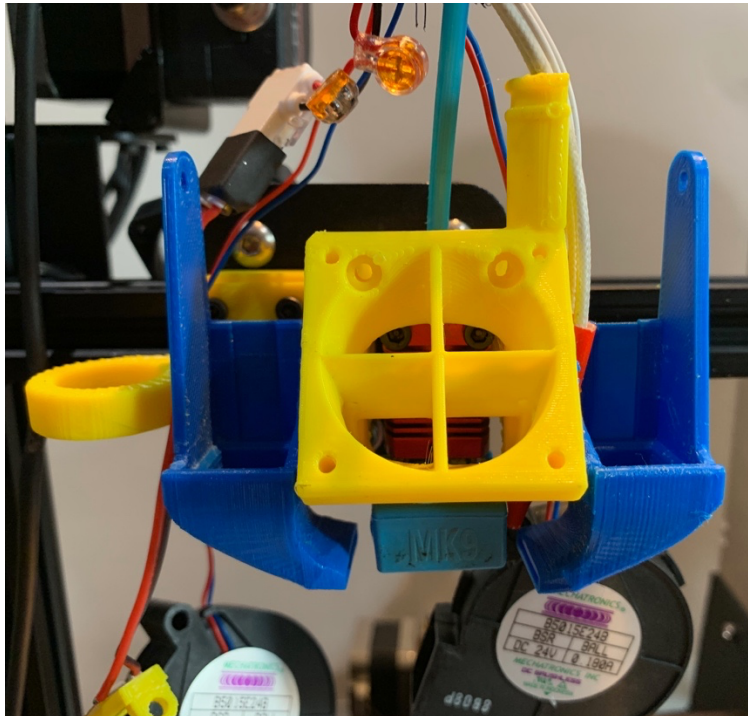
Depending on your printer model, you may have to loosen or remove the gantry from the X axis rail as on some models the gantry mount holes are not threaded, and the M3 nuts can be difficult to position on the back. Tighten until secure. If needed tighten or reattach the gantry plate to the rail and adjust the printer's offset spacer so the gantry rides smoothly on the rail with no play/slop.



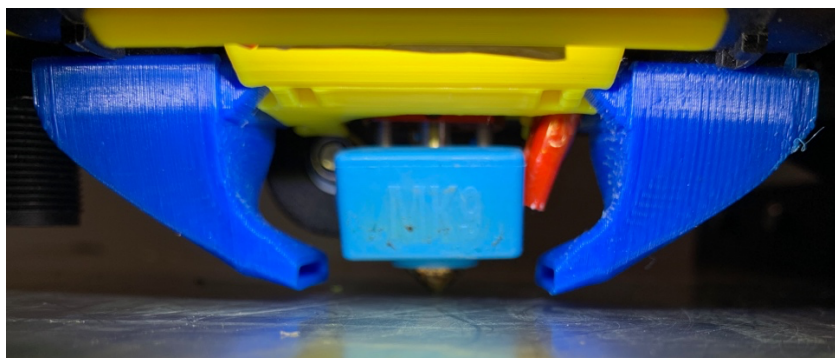
This shows the correct positioning of the hotend spacer.

**Optional:** For an MDD Direct Drive setup follow Steps 8-15 but use the Hero Me Gen5 Direct Drive Adapter part(s) you selected. You will need to measure and test the length of PTFE tube needed for your hotend, MDD adapter, and extruder combination. Mount the extruder and motor to the adapter, Feed the PTFE tube into your extruder, then into your hotend as far as it will go, then mount the DD adapter to the top of the PrinterMods.com backplate. If the PTFE tube kinks or won't let you secure the DD adapter to the PrinterMods.com backplate, the PTFE tube is too long. Depending on your DD setup, the PTFE tube may not have a perfectly straight path from the extruder to the hotend. A 1-2mm offset may exist but will not impact the performance of the direct drive.

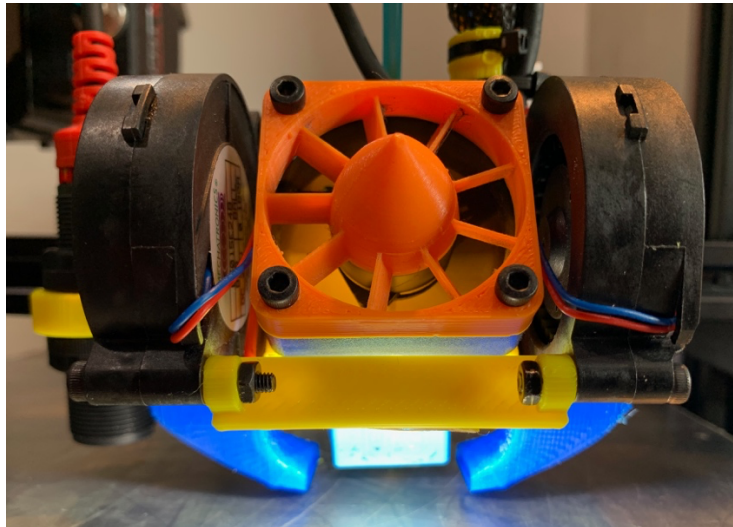
**Step 9.** Attach the part cooling duct (or ducts) to the Hero Me base. One M3 bolt in the back peg of each is enough. Loosely tighten, allow for you to move the cooling duct up and down along the slots.



**Step 10.** Attach the part cooling fans to the ducts and adjust the height of the ducts to you desired spacing above the build plate and tighten. I recommend that the bottom of the cooling duct(s) be between 1.4mm and 1.8mm off the build plate when the hotend nozzle is touching the build plate.



**Step 11.** Attach the fan to cool the hotend to the front of the Hero Me base. Optionally use one of the supplied fan guards (or your own) when attaching the fan to the front of the Hero Me base. Perform any needed cable management and place a zip-tie at the top of the Hero Me towel to hold the wires in place.



**Optional:** If you have an ABL sensor, adjust the height of the sensor to the specs provided by the manufacturer. Below are the ABL X,Y offsets based upon the STL file measurements of all the ABL sensor mounts. Based upon your printed parts and how the Hero Me is assembled, your setup may vary slightly. To get the best results for your printer, measure your setup's X,Y offsets from the tip of your nozzle to the tip (or center) of your ABL sensor (round to the nearest integer). Since the ABL mounts are on the left, the X distance in mm will be a negative value for the firmware offset. The Y axis may have a positive or negative number. If you do not have calipers to properly measure the offsets, use the values below that match your part selection.

**Important Note:** If you have any Ender 5 series, are using any of the ABL sensor mounts, and had to use the spacer to clear the metal clip, then be sure to increase the ABL sensor Y axis offset by -6.

#### Firmware Offset for BLTouch ABL sensor:

BLTouch_Wing_Wide.stl with BLTouch_Standard_Mount.stl	X -60, Y -13
BLTouch_Wing_Wide.stl with BLTouch_Flat_Mount.stl	X -68, Y -2
BLTouch_Wing_Medium.stl with BLTouch_Standard_Mount.stl	X -55, Y -13
BLTouch_Wing_Medium.stl with BLTouch_Flat_Mount.stl	X -64, Y -2
BLTouch_Wing_Narrow.stl with BLTouch_Standard_Mount.stl	X -43, Y -13
BLTouch_Wing_Narrow.stl with BLTouch_Flat_Mount.stl	X -51, Y -12
BLTouch_Wing_No_Duct.stl with BLTouch_Standard_Mount.stl	X -37, Y -8
BLTouch_Wing_No_Duct.stl with BLTouch_Flat_Mount.stl	X -46, Y +2
BLTouch_Wing_Compact.stl with BLTouch_Slider_Compact.stl	X -38, Y +6
BLTouch_Wing_Compact.stl with BLTouch_Standard_Mount.stl	X -57, Y -10

#### Firmware Offset for EZABL, EZABL Pro:

EZABL_Mount_Wide_18mm.stl	X -62, Y -5
EZABL_Mount_Medium_18mm.stl	X -58, Y -5
EZABL_Mount_Narrow_18mm.stl	X -51, Y -5
EZABL_Mount_Close_18mm.stl	X -41, Y -3
EZABL_Mount_No_Duct_18mm.stl	X -35, Y -3



**Firmware Offset for OEM/Generic 18mm sensor:**

OEM_Mount_Wide_18mm.stl	X -62, Y -5
OEM_Mount_Medium_18mm.stl	X -58, Y -5
OEM_Mount_Narrow_18mm.stl	X -51, Y -5
OEM_Mount_Close_18mm.stl	X -41, Y -3
OEM_Mount_No_Duct_18mm.stl	X -35, Y -3

**Firmware Offset for EZABL Mini, & OEM/Generic 12mm sensor:**

EZABL-OEM_Mount_Wide_12mm.stl	X -56, Y -1
EZABL-OEM_Mount_Medium_12mm.stl	X -46, Y +1
EZABL-OEM_Mount_No_Duct_12mm.stl	X -39, Y +1

The Marlin setting for the ABL offset can be made in firmware, but it also can be done via GCode. The firmware setting can be edited/added to the configuration.h file. You would add the following line and replace the X and Y values with the ones from the ABL sensor and mount combination you are using from the list above.

```
#define X_PROBE_OFFSET_FROM_EXTRUDER -50 ; -left of nozzle
#define Y_PROBE_OFFSET_FROM_EXTRUDER -10 ; -front of nozzle
```

Or you can set the ABL sensor offsets in GCode via your slicer software. Based upon the ABL sensor and mount combination you are using from the above list, you would add the following line and replace the X and Y values with the ones from the list to the Start GCode in your slicers settings:

```
M851 X-50 Y-10 ; ABL Sensor offsets
```

The detailed instructions for Marlin firmware and GCode on setting the ABL offset are here: <https://marlinfw.org/docs/gcode/M851.html>

**Step 12.** Check that everything is secure and where it belongs. And before you print...

You will need to set your printer's Home offset (not to be confused with the ABL sensor firmware offset). The Gantry Adapters for the hotends move the nozzle forward -9mm from the original position.

This move was necessary to allow the Hero Me Gen5 to be compatible with the most printers, hotends, ABL sensors, and fans. The nozzles of all the supported hotends are in the same position in the Hero Me Gen5, allowing the parts cooling ducts to all be accurately designed to cool the part directly below the nozzle tip. The cooling ducts have been CFD calibrated and real-world tested to perform to the optimum. When using two fans you can reduce the power to just 25-40% to have practically silent printing.

This Home setting can be made in firmware, but it also can be done via GCode. The firmware setting can be edited/added to the configuration.h file. Based upon the Gantry Adapter you are using, you would add one of these two lines in the configuration.h file, then recompile and upload to your printer.

```
#define MANUAL_Y_HOME_POS -9
```

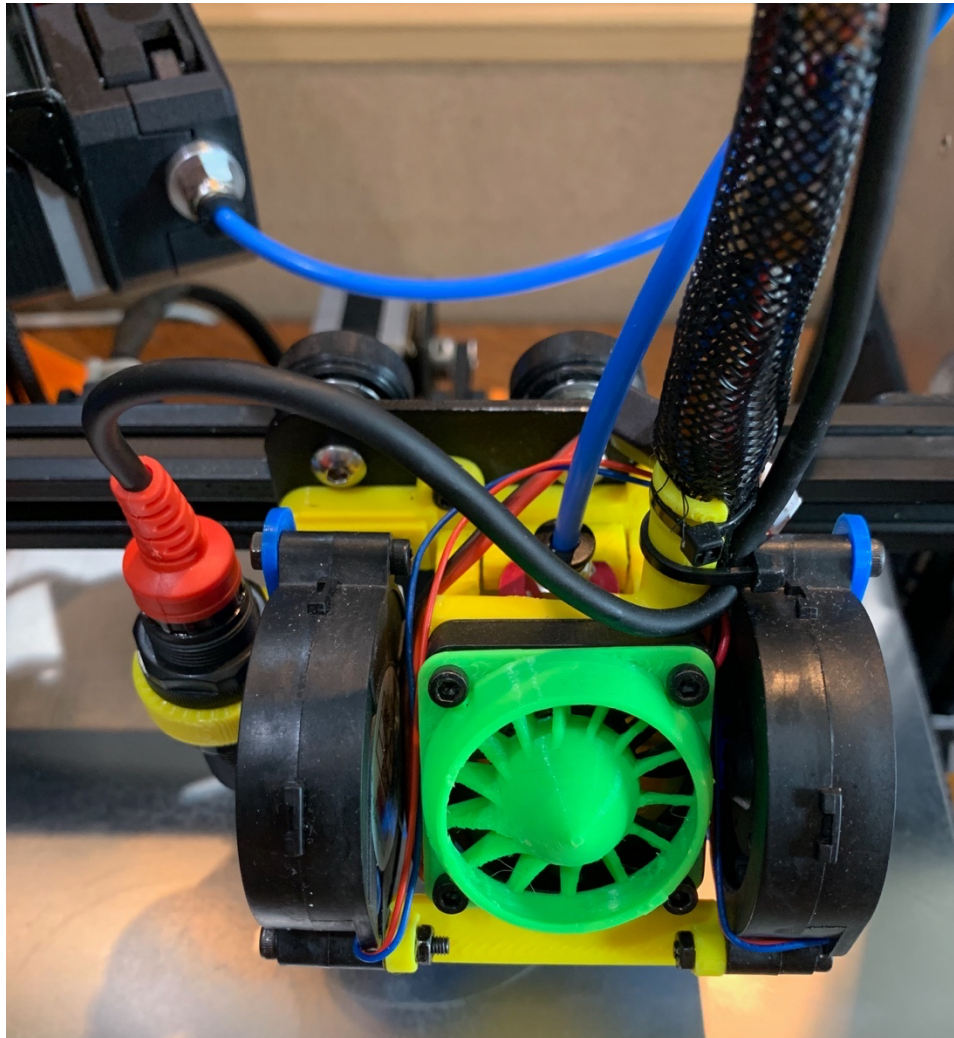
You can set the Home setting via your slicer software. Based upon the Gantry Adapter you are using, you would add one of these two lines to the Start GCode in your slicer's settings:

```
M206 Y-9 ; Y axis offset
```

In case these values do not place the hotend's nozzle just inside the edge of the build plate when homing the Y axis, you can adjust the Y offset value up or down to work for your setup.

The Marlin firmware detailed instructions on setting the printer's Home offset are here:

<https://marlinfw.org/docs/gcode/M206.html>



Once you have set the Home offset, perform your printer's bed leveling process, then take a picture of your completed upgrade with the Hero Me and post a Make to Thingiverse! Happy Printing!

## Remixes and mods of the previous Hero Me Gen3 and Gen4 cooling systems

All the earlier Hero Me designs used the 45° angle ABL/accessory because that was what Creality provided with the Ender 3 and CR-10 series. Now that Creality and other manufacturers have created many more printer models that do not use that pattern, it does not make sense to be restricted to that specific pattern.

The Hero Me Gen5 Master Suite has standardized on a horizontal mount point for all ABL sensors and other accessories that can be attached to the printer's gantry plate. The new horizontal position is the result from comparing all the X axis gantry plates (up until the CR-6SE) and designing it to not only be compatible across all the printers by also enable new uses and also clear the X axis end-stop box.

Many, but not all of other maker's remixed Hero Me add-on parts that do not use the ABL mount for the Hero Me Gen3 and Gen4 are compatible with Gen5. Part cooling ducts are likely to fit.

Those parts that specifically use the Gen3 and Gen4's 45° angle ABL/accessory mount position are no longer compatible with the Hero Me Gen5.

I would like to encourage all those makers who have created remixes or new parts for the Hero Me in the past, to update their designs to use the Gen5's new horizontal ABL/Accessory mount points.

## Thanks and Credits

I would like to thank PrinterMods.com for selecting the Hero Me Gen5 Master Suite to complement their products!

I would especially like to thank ACWest for providing his awesome part cooling ducts to be part of the Hero Me Gen5 Master Suite. His cooling ducts have been CFM tested and validated to have the optimum focused airflow across the part at the tip of the nozzle. ACWest and I have collaborated on the Hero Me Gen5 over the past several months. His testing and recommendations have been key to help make the Hero Me Gen5 the best possible cooling system.

Thank you for choosing the Hero Me Gen5 to be part of your 3D printing experience! Please post your feedback, make, or remix on the Hero Me Gen5 Thingiverse project and share this with your 3D printing friends!

MediaMan - Thingiverse: <https://www.thingiverse.com/mediaman/>

If you would like support for your Hero Me Gen5, please visit my Patreon page.

Patreon: <https://www.patreon.com/MediaMan3D>

Video content for the Hero Me Gen5 coming soon!

YouTube: <https://www.youtube.com/channel/UC5OZ3h7NX1p3mran2hgrQvQ>

ACWest - Thingiverse: <https://www.thingiverse.com/acwest/>

klsummers92 – Thingiverse: <https://www.thingiverse.com/klsummers92>

PM\_OEM\_Dual\_Gear\_Extruder\_Adapter.stl remix provided by klsummers92

SoulStyle – Thingiverse – created the Hero Me Gen5 configurator

Superhero graphic courtesy of [www.freepik.com](http://www.freepik.com)

**Additional Project Updates:**

**October 23<sup>rd</sup>, 2021 1PM PDT:** Updated the gantry adapter for the Dragonfly BMS on the Ender 3/Pro to add more space for the heat sink to sit flush with the adapter.

BMS Ender OEM Gantry Adapter 8C.stl

I have updated the 4010\_Dual\_Radial\_Fans\_Dual\_Ducts.stl to allow for rotating the fan 180 so that the power wires are on the same side. I did this for a user request, but I DO NOT recommend this orientation as it will cause one of the fan's air intakes to face the side of the Hero Me base.

The 4010 radial fan is small and has a lower than optimal CFM output for part cooling (Chinese manufactures went with a cheap solution) which is why the Hero Me exists in the first place and the many other community designed part cooling solutions that have been published... to correct for the poor performing 4010 radial part cooling fan.

I originally did not offer 4010 fan based cooling ducts, but to stop all the complaints/requests from new makers who don't understand this issue, and wanted to use the parts they had, I relented and made versions for the 4010. So, my recommendation when using the dual 4010 fan ducts, the fans should be oriented so that the air intakes are facing away from the body of the Hero Me.

But if you want to have your setup of the fans so the power wires go straight back, I have modified the 4010 dual duct to allow either side fan to be rotated 180deg. But if you use it this way, don't complain to me if you don't get the proper airflow from a 4010 fan where the air intake faces the side of the Hero Me base.

I continue to only recommend larger part cooling fans. All the cooling performance claims I make are based on 5015, 4020, 5020 radial fans. This is also why I do not offer 40mm axial fan part cooling ducts. Not enough static pressure and low CFM.

With that said, these files have been updated:

4010\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4010\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl

**October 22nd, 2021 8PM PDT:** Updated all the 4010 radial fan part cooling ducts to have the proper spacing for the fans to fit the ducts. I have also increased the inner duct throat size to improve the air flow from the fan to the duct.

4010\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4010\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl  
4010\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4010\_Lightweight\_Duct\_Forward\_Left.stl  
4010\_Lightweight\_Duct\_Forward\_Right.stl

4010\_Lightweight\_Duct\_Standard\_Left.stl  
4010\_Lightweight\_Duct\_Standard\_Right.stl  
4010\_Single\_Radial\_Fan\_Dual\_Ducts.stl

**October 11th, 2021 8PM PDT:** Added an Ender 3 class gantry adapter to support the Dragonfly BMS hot-end. The BMS has a curve on the back that required the standoff on the gantry adapter to have the matching shape to allow the hot-end to mount securely.

BMS Ender OEM Gantry Adapter 8C.stl

**August 18th 2021, 4PM PDT:** Added support for PrinterMods XChange tool changer. Also updated the PDF docs to match.

XChangeOEM Gantry Adapter.stl  
XChange E3D Gantry Adapter.stl

**August 17th 2021, 5PM PDT:** Corrected the width of the hot-end stand-off for the Voxelab OEM gantry adapter.

Voxelab\_Aquila\_OEM\_Gantry\_Adapter\_10A.stl

**August 13<sup>th</sup> 2021, 5PM PDT:** Added support for the Voxelab Aquila 3D printer.

Voxelab\_Aquila\_OEM\_Gantry\_Adapter\_10A.stl  
Voxelab\_Aquila\_E3D\_Gantry\_Adapter\_10B.stl

Created V2 versions of the Ender 3 V2 Gantry Adapters. It seems that Creality has changed the Ender 3 V2 gantry over time. If you have this printer model, you may have to print both to identify the one that fits your version.

Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A\_V2.stl  
Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B\_V2.stl

Updated this PDF to match the updates on the Thingiverse details page. Updated the ZIP file to include the new STLs from the last two updated.

**Aug 2nd, 11:55AM PDT:** Updated to direct drive adapters for the PrinterMods 1.3 gantry plate and Bondtech BMG style extruders to mount correctly on top of the Hero Me Gen5 Bases.

PM\_v1.3\_Bondtech\_LH\_Adapter\_3\_v2.stl  
PM\_v1.3\_Bondtech\_LH\_Adapter\_2\_v2.stl  
PM\_v1.3\_Bondtech\_RH\_Adapter\_1\_v2.stl  
PM\_v1.3\_Titan\_Mirror\_Adapter\_2\_v2.stl

**July 23rd, 7:45PM PDT:** Added DD adapter for Creality OEM extruders to mount to the PrinterMods v1.3 gantry plate with the Hero Me Gen5 Bases.

PM\_v1.3\_OEM\_Extruder\_Adapter\_v2.stl

**July 23rd, 7:45PM PDT:** Updated to direct drive adapters for the PrinterMods 1.3 gantry plate and E3D Titan style extruders to mount correctly on top of the Hero Me Gen5 Bases.

PM\_v1.3\_Titan\_RH\_Adapter\_1\_v2.stl  
PM\_v1.3\_Titan\_RH\_Adapter\_3\_v2.stl

**July 11th, 9:40AM PDT:** Added support for the Dyze Design DyzEnd-X and DyzEnd Pro hotends.

Hero\_Me\_Gen5\_Base\_9.stl for DyzEnd-X and DyzEnd Pro hotend (not direct drive)  
HMG5\_DyzEnd-X\_or\_Pro\_Collar.stl for DyzEnd-X and DyzEnd Pro hotend

**July 11th, 9:40AM PDT:** Added the missing adapter for a BLV upgraded Ender 3 Pro and you are using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones. This STL was always in the ZIP file, but missing from the loose parts in the Thingiverse project:  
BLV\_Ender\_OEM\_Gantry\_Adapter\_8B.stl

**August 31<sup>st</sup>, 7PM PDT:** Fixed the positioning of the mounting holes on the Ender 3 V2 Gantry Adapters. Validation testing has been done on the Ender 3 V2 Gantry Adapters and the final versions posted today.

Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A.stl  
Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B.stl

An interactive Hero Me Gen5 configurator has been created by one of the Hero Me community (SoulStyle). It is available at the link below. To use it, you must make a copy.

[https://docs.google.com/spreadsheets/d/1q3H9w8mgt181L7F2nhLkkFILbWLUgoi\\_dac23wQDUwU/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1q3H9w8mgt181L7F2nhLkkFILbWLUgoi_dac23wQDUwU/edit?usp=sharing)

**August 29<sup>th</sup>, 3PM PDT:** Fixed the positioning of the mounting holes on the Ender 3 V2 Gantry Adapters and made them so that they can be printed without supports.

Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A.stl  
Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B.stl

Fixed the depth of the holes for the hot-end standoffs for the BLV OEM Gantry Adapter.

BLV\_Ender\_OEM\_Gantry\_Adapter\_8A.stl

**August 28<sup>th</sup>, 11PM PDT:** Added new Gantry Adapters for the revised PrinterMods.com carriage plates (version 1.3). There are now gantry adapters for both the 1.2 and 1.3 versions. The newer ones have 'v1.3' in the filename.

PM\_v1.3\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl  
PM\_v1.3\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl  
PM\_v1.3\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl  
PM\_v1.3\_Ender\_E3D\_Gantry\_Adapter\_6B.stl

Also updated several other gantry adapters to be able to print them without supports.

BLV\_Ender\_E3D\_Gantry\_Adapter\_8B.stl

BLV\_Ender\_OEM\_Gantry\_Adapter\_8A.stl  
PM\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl  
PM\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl  
PM\_Ender\_E3D\_Gantry\_Adapter\_6B.stl  
PM\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl

Updated the PrinterMods.com Direct Drive Adapters to be compatible with their new 1.3 versions. The newer PrinterMods.com Direct Drive Adapters have 'v1.3' in the filename.

PM\_v1.3\_Bondtech\_RH\_Adapter\_1.stl  
PM\_v1.3\_Bondtech\_LH\_Adapter\_2.stl  
PM\_v1.3\_Bondtech\_LH\_Adapter\_3.stl  
PM\_v1.3\_Titan\_RH\_Adapter\_1.stl  
PM\_v1.3\_Titan\_Mirror\_Adapter\_2.stl  
PM\_v1.3\_Titan\_RH\_Adapter\_3.stl  
PM\_v1.3\_EZR\_Struder\_Adapter\_1.stl  
PM\_v1.3\_EZR\_Struder\_E3D\_Adapter\_2\_optional.stl  
PM\_v1.3\_EZR\_Struder\_OEM\_Adapter\_2\_optional.stl

**July 13th 12:45AM PDT:** Added two new Gantry Adapters for the Ender 3 V2. This gantry is different from the others in the Ender 3 series. Note this is untested, as I only had a photograph and measurements sent to me by an owner of this new printer. If you have this printer, please let me know if this works for you, or what adjustments are needed.

Ender\_3\_v2\_OEM\_Gantry\_Adapter\_9A.stl  
Ender\_3\_v2\_E3D\_Gantry\_Adapter\_9B.stl

Due to popular request, I have added 8 new part cooling duct combinations for the 5020 radial fan!

5020\_Lightweight\_Duct\_Forward\_Left.stl  
5020\_Lightweight\_Duct\_Forward\_Right.stl  
5020\_Lightweight\_Duct\_Standard\_Left.stl  
5020\_Lightweight\_Duct\_Standard\_Right.stl  
5020\_Single\_Radial\_Fan\_Dual\_Ducts.stl  
5020\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
5020\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
5020\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl

Also, to meet repeated requests, I have added 8 new part cooling duct combinations for the 4010 radial fan (what comes stock with most printers). Note that I do not recommend the 4010 radial fan when used in a single fan setup, especially with a dual duct. If you choose not to use a second 4010 fan with your OEM part, do not complain to me when your part cooling is sub-par and you are not able to bridge wide gaps. A single 4010 radial fan does not produce enough CFM to drive dual ducts.

4010\_Lightweight\_Duct\_Forward\_Left.stl  
4010\_Lightweight\_Duct\_Forward\_Right.stl  
4010\_Lightweight\_Duct\_Standard\_Left.stl  
4010\_Lightweight\_Duct\_Standard\_Right.stl  
4010\_Single\_Radial\_Fan\_Dual\_Ducts.stl  
4010\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4010\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4010\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl

Updated ALL part cooling ducts to have stronger mount arms and changed print bed orientation to reduce or in some cases eliminate the need for supports.



**July 10th 5PM PDT:** PrinterMods.com now has 3 hardware kits available for the Hero Me Gen5!



You can order the hardware (M3 fasteners) from them here:

<https://printermods.com/collections/all-products/products/herome-gen-5-installation-kit-for-ender-3-mdd-v1-2>

**July 4<sup>th</sup> 6:15PM PDT:** Updated a Direct Drive adapter in the Remixes section to support both Ender 3 and Ender 5 series printers. Added a new PrinterMods.com MDD compatible Direct Drive Adapter for the Creality Dual Gear extruder, Winsinn Dual Gear extruder, and clones. This remix is provided by klsummers92 on Thingiverse. Thank you Kodi!

PM\_OEM\_Dual\_Gear\_Extruder\_Adapter.stl

**July 4<sup>th</sup> 4:30PM PDT:** Updated the Gantry Adapter for the CR-10S Pro to have better clearances when mounting to the gantry plate. Updated the PDF assembly instructions with an image to show the position of the Gantry Clips when one is needed.

CR\_OEM-MS\_Gantry\_Adapter\_3A.stl

CR\_E3D\_Gantry\_Adapter\_3B.stl

**July 2<sup>nd</sup> 6:45PM PDT:** Updated documentation with photos and illustrations! Added support for the BLV upgrade for Ender 3 Pro systems. More info on this upgrade can be found here:

<https://www.blvprojects.com>

BLV\_Ender\_OEM\_Gantry\_Adapter\_8A.stl

BLV\_Ender\_E3D\_Gantry\_Adapter\_8B.stl

**July 1st 12PM PDT:** All but two of the Part Cooling Ducts have been updated with reinforced mounting brackets. The previous ones were snapping off for some people at the narrow point where the mount arm connect to the main fan duct body. Print these at 100% infill for best results. The two remaining (forward 5015 lightweight left/right ducts) are being updated as well and will be posted when completed.

4020\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl

4020\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl

4020\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
4020\_Lightweight\_Duct\_Standard\_Left.stl  
4020\_Lightweight\_Duct\_Standard\_Right.stl  
4020\_Single\_Radial\_Fan\_Dual\_Ducts.stl  
5015\_30deg\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
5015\_30deg\_Single\_Radial\_Fan\_Dual\_Ducts.stl  
5015\_Dual\_Radial\_Fans\_Dual\_Ducts.stl  
5015\_Lightweight\_Duct\_Standard\_Left.stl  
5015\_Lightweight\_Duct\_Standard\_Right.stl  
5015\_Single\_Radial\_Fan\_Dual\_Ducts.stl

**July 1<sup>st</sup> 1130PM PDT:** Added draft ABL sensors for Hallon and Touch-Mi.

Touch-Mi\_ABL\_Medium\_Mount.stl  
Hallon\_ABL\_Medium\_Mount.stl

**June 30th 12PM PDT:** Added missing hotend bolt arches in the front of Base 5 and Base. 6, increased the access arch for Base 1 and Base 4 to match.

Hero\_Me\_Gen5\_Base\_1.stl  
Hero\_Me\_Gen5\_Base\_4.stl  
Hero\_Me\_Gen5\_Base\_5.stl  
Hero\_Me\_Gen5\_Base\_6.stl

**June 26th 10AM PDT:** Re-posted correct ABL Adapter for close OEM 18mm sensor to include grub screw holes.

OEM\_Mount\_Close\_18mm.stl

**June 26th 8:10AM PDT:** Created new Gantry Adapters for the CR-10S Pro V2 to match the mount holes on the gantry plate (they changed from the CR-10S Pro).

CR\_OEM\_Gantry\_Adapter\_7A.stl  
CR\_E3D\_Gantry\_Adapter\_7B.stl

Adjusted the Gantry Adapters for the CR-10 V2 to not crowd the top left wheel bolt.

CR\_MK8-MS\_Gantry\_Adapter\_2A.stl  
CR\_E3D\_Gantry\_Adapter\_2B.stl

Additional Direct Drive Adapters for the Ender 3 series, Ender 5 series, and CR-10/S have been added in the Remixes section. These do not require the PrinterMods.com MDD kit.

Updated the PDT document (and instructions below). The Y axis Home offset is now -9mm across all printers. The old Gantry Adapter CR\_OEM\_Gantry\_Adapter\_3A.stl has been deprecated, and the CR\_OEM\_Gantry\_Adapter\_3C.stl has been renamed to CR\_OEM\_Gantry\_Adapter\_3A.stl.

**June 23rd 7:45PM PDT:** The instructions below and the included PDF file that can be downloaded, have been updated to include instructions for setting the printer's X/Y Home offset (-7 or -9) as well as the instructions for the ABL sensor's firmware X/Y offset.

Direct Drive Options: All the initial Direct Drive Adapter options for the Hero Me Gen5 use the MDD kit from PrinterMods.com. I am creating other DD adapters for the Hero Me Gen5 over time, and they will be added in the coming days. The first one is available now for the Ender 5

series. I have posted a remix of a DD adapter that should be compatible (was an easy remix, but I have not tested it). Currently you can find it in the Remixes section of this project.

**Update June 22nd 1:15PM PDT:** The Hero Me Base files have been updated one last time. I found that in some setups on some printer configurations, that the the bottom back mount surface would hit against the M5 bolt and nut for the bottom wheel on the gantry. This has been corrected across all 8 base files. You would only need to re-download the base you need if you encounter the back of the base not seating flush against the gantry adapter because of the interference from the M5 nut and bolt.

Hero\_Me\_Gen5\_Base\_1.stl  
Hero\_Me\_Gen5\_Base\_2.stl  
Hero\_Me\_Gen5\_Base\_3.stl  
Hero\_Me\_Gen5\_Base\_4.stl  
Hero\_Me\_Gen5\_Base\_5.stl  
Hero\_Me\_Gen5\_Base\_6.stl  
Hero\_Me\_Gen5\_Base\_7.stl  
Hero\_Me\_Gen5\_Base\_8.stl

**Update June 22nd 10:30AM PDT:** Updated the instructions below (and in the PDF and ZIP) with more details regarding the types of hotends, how they mount, and how that affects the parts you choose.

All the part cooling duct STLs (re-oriented for best printing) had to be re-uploaded again as these parts failed to upload early this AM.

**Update June 22nd 1:30AM PDT:** For those with any Ender 5 series printer, and are using any of the ABL sensor mounts, a spacer file has been added. This is to be used if your ABL mounts do not clear the metal clip that retains the belt. Be sure to increase the Y axis firmware offset by -6.

PM-Ender\_5\_ABL\_Spacer.stl

The Hero Me Base files have been strengthened further to ensure that the cooling system is secure to the gantry adapter. The hex nut inserts have been made larger. The top rear of the Hero Me Base has been re-enforced. All eight Hero Me Base files have been updated.

Hero\_Me\_Gen5\_Base\_1.stl  
Hero\_Me\_Gen5\_Base\_2.stl  
Hero\_Me\_Gen5\_Base\_3.stl  
Hero\_Me\_Gen5\_Base\_4.stl  
Hero\_Me\_Gen5\_Base\_5.stl  
Hero\_Me\_Gen5\_Base\_6.stl  
Hero\_Me\_Gen5\_Base\_7.stl  
Hero\_Me\_Gen5\_Base\_8.stl

All the Gantry Adapters have been updated to so as not to require supports when printing. Hex nut inserts have been added or made larger (if pre-existing).

CR-Ender\_OEM-MS\_Gantry\_Adapter\_1A.stl  
CR-Ender\_E3D\_Gantry\_Adapter\_1B.stl  
CR\_MK8-MS\_Gantry\_Adapter\_2A.stl  
CR\_E3D\_Gantry\_Adapter\_2B.stl  
CR\_OEM\_Gantry\_Adapter\_3A.stl

CR\_E3D\_Gantry\_Adapter\_3B.stl  
CR\_MS\_Gantry\_Adapter\_3C.stl  
Ender\_OEM-MS\_Gantry\_Adapter\_4A.stl  
Ender\_E3D\_Gantry\_Adapter\_4B.stl  
PM\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl  
PM\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl  
PM\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl  
PM\_Ender\_E3D\_Gantry\_Adapter\_6B.stl  
PM\_Gantry\_Clip\_6.stl

All the part cooling duct STLs have been re-uploaded after changing their orientation to be best for printing with little to no supports required.

Two new ABL mounts have been created to enable EZABL and OEM 18mm sensors to be closer to the hotend when using any of the single fan-dual ducts.

EZABL\_Mount\_Close\_18mm.stl  
OEM\_Mount\_Close\_18mm.stl

**Update June 16th 9:45PM PDT:** An error was found in the Hero Me Base files where one wall was too thin for the captured hex nuts to hold the base to the gantry adapter. All eight Hero Me Base files have been updated.

Hero\_Me\_Gen5\_Base\_1.stl  
Hero\_Me\_Gen5\_Base\_2.stl  
Hero\_Me\_Gen5\_Base\_3.stl  
Hero\_Me\_Gen5\_Base\_4.stl  
Hero\_Me\_Gen5\_Base\_5.stl  
Hero\_Me\_Gen5\_Base\_6.stl  
Hero\_Me\_Gen5\_Base\_7.stl  
Hero\_Me\_Gen5\_Base\_8.stl

The three gantry adapters for the CR-10S Pro, CR-10S Pro V2, And CR-MAX for all their hotend types had an error due to a bad Creality Gantry STL. These have been redesigned and fixed.

CR\_OEM\_Gantry\_Adapter\_3A.stl  
CR\_E3D\_Gantry\_Adapter\_3B.stl  
CR\_MS\_Gantry\_Adapter\_3C.stl

**Update June 15th 3:30PM PDT:** Thanks for all the great feedback and for spotting some typos and a couple missing files, etc. All have been corrected and posted. Both the PDF and docs below are updated.