

# Hero Me Gen5 Master Suite

## Parts Cross Reference and Assembly Instructions

### Introduction

Welcome and thank you for selecting the Hero Me Gen5 cooling system. These instructions will show you how to select your parts for your printer as well as guide you through printing the parts, assembly, and setup to be able to make great things with your 3D printer.

I am proud to announce the following separate relationships with PrinterMods.com and TH3DStudio.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 hot-end with their MDD kits and your Hero Me Gen5 printed parts.

TH3DStudio.com plans to offer Hero Me Gen5 printed parts and hardware kits with several of their Creality 3D printer (and clones) upgrade kits. As soon as they update their shop pages, when you order your TH3D Tough All Metal Hotend, Tough Extruder, or EZABL Pro upgrades, you will be able to optionally select your printer, fan(s), EZABL, and other options so that your upgrade kit is customized to include the Hero Me Gen5 parts needed to assemble your kit on your printer.

Note that there is no relationship between PrinterMods.com and TH3DStudio.com in regard to the Hero Me Gen5 cooling system. These are separate collaborations between me and each of these businesses.

I am very excited to work with these two great teams who are 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-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="#">PrinterMods.com</a> MDD kits version 1.2 for CR-10 series, Ender 3 series, &amp; Ender 5 series. Gantry plate replacements kits for Direct Drive use.</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.

Required: Printer Model Hot-End type Fan(s) & size(s) for part cooling	Optional: ABL Sensor (if any) Extruder type (for use with MDD kit for Direct Drive Hero Me)
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### Hero Me Gen5 Gantry Adapter plates and the printer models that they support (choose one set):

Start with your printer, find your printer model from the list below and also note which hot-end you are using in order to select the right Gantry Adapter for your printer. There may be a second part listed, you will need this as well.

- CR-10, CR-10S, CR-10S4, CR-10S5, CR-20, Ender 3, Ender 3 V2, Ender 3X, and Ender 3 Pro using OEM, MK8, or Micro Swiss hot-end.
  - CR-Ender\_OEM-MS\_Gantry\_Adapter\_1A.stl
  - CR-Ender\_Gantry\_Clip\_1.stl
  - Use these for OEM/MK8 and Micro Swiss hot-ends.  
Y axis offset is 8.8mm. Not for use with V6 style)
- CR-10, CR-10S, CR-10S4, CR-10S5, CR-20, Ender 3, Ender 3 V2, Ender 3X, and Ender 3 Pro using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clone hot-ends.
  - CR-Ender\_E3D\_Gantry\_Adapter\_1B.stl
  - CR-Ender\_Gantry\_Clip\_1.stl
  - Use these for E3D V6, Volcano, TH3D Tough, or V6 clone hot-ends.  
Y axis offset is 8.8mm. Not for use with V6 style)
- CR-10 V2 using MK8, Micro Swiss, and clone hot-ends.
  - CR\_MK8-MS\_Gantry\_Adapter\_2A.stl
- CR-10 V2 using OEM, E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clone hot-ends.  
Y axis offset is 8.8mm.
  - CR\_E3D\_Gantry\_Adapter\_2B.stl
- CR-10S Pro, CR-10S Pro V2, CR-MAX using Creality OEM V6 style via screw mount. Y axis offset is 7mm. Do not use with E3D V6 or clones.
  - CR\_OEM\_Gantry\_Adapter\_3A.stl
- CR-10S Pro, CR-10S Pro V2, CR-MAX using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones.
  - CR\_E3D\_Gantry\_Adapter\_3B.stl
- CR-10S Pro, CR-10S Pro V2, CR-MAX using Micro Swiss.
  - CR\_MS\_Gantry\_Adapter\_3C.stl

- Ender 5, Ender 5 Pro, Ender 5 Plus using OEM, MK8, or Micro Swiss hot-ends.
  - Ender\_OEM-MS\_Gantry\_Adapter\_4A.stl
  - Ender\_Gantry\_Clip\_4.stl
- Ender 5, Ender 5 Pro, Ender 5 Plus using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones.
- Ender\_E3D\_Gantry\_Adapter\_4B.stl
  - Ender\_Gantry\_Clip\_4.stl
- PrinterMods.com MDD kit version 1.2 for CR-10 / Ender 3 series using OEM, MK8, or Micro Swiss hot-ends.
  - PM\_CR-Ender\_OEM-MS\_Gantry\_Adapter\_5A.stl
  - PM\_Gantry\_Clip\_5.stl
  - Y axis offset is 8.8mm. Not for use with V6 or clones
- PrinterMods.com MDD kit version 1.2 for CR-10 / Ender 3 series using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones.
  - PM\_CR-Ender\_E3D\_Gantry\_Adapter\_5B.stl
  - PM\_Gantry\_Clip\_5.stl
  - Y axis offset is 8.8mm.
- PrinterMods.com MDD kit version 1.2 for Ender 5 series using OEM, MK8, or Micro Swiss hot-ends.
  - PM\_Ender\_OEM-MS\_Gantry\_Adapter\_6A.stl
  - PM\_Gantry\_Clip\_6.stl
  - Y axis offset is 8.8mm. Not for use with V6 or clones.
- PrinterMods.com MDD kit version 1.2 for Ender 5 series using E3D V6, Volcano, TH3D Tough, Mosquito, or V6 clones.
  - PM\_Ender\_E3D\_Gantry\_Adapter\_6B.stl
  - PM\_Gantry\_Clip\_6.stl
  - Y axis offset is 8.8mm.

### **Hero Me Gen5 Bases and the hot-ends they support (choose one set):**

Next, knowing which hot-end 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 hot-ends
  - Hero\_Me\_Gen5\_Base\_1.stl
- HMG5 for E3D V6, E3D V6 Volcano, TH3D Tough, and other V6 clone hot-ends
  - 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 hot-ends
  - 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 hot-ends
  - Hero\_Me\_Gen5\_Base\_4.stl
- HMG5 for Creality OEM 'V6 style' and other large hot-ends (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 hot-ends (Not for E3D V6 or clones)
  - Hero\_Me\_Gen5\_Base\_6.stl
- HMG5 for Slice Engineering Mosquito hot-end
  - Hero\_Me\_Gen5\_Base\_7.stl
- HMG5 Direct Drive Base ready for Slice Engineering Mosquito hot-end
  - Hero\_Me\_Gen5\_Base\_8.stl

**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):**

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. You only need one.

- OEM Extruder and PrinterMods.com gantry plate version 1.2 - Pick One
  - PM\_OEM\_Extruder\_Adapter.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 1.2 - 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 1.2
  - 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 hot-end.

- 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
- 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

NOTE: I am no longer creating part cooling ducts based upon the OEM 4010 radial fan. I do not believe there is enough air flow from a 4010 radial fan to sufficiently cool the parts being

printed, especially for overhangs and bridging. This has been proven by the poor results encountered by many testers and can be seen on many YouTube videos with fan comparison tests. If you insist on using your OEM 4010 radial fan, there are a number of dual 4010 radial fan duct remixes that are compatible with the Hero Me Gen5.

### **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 5015 fan on the left, you will most likely need one with 'Medium' in the name. If you are using 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 that suggested above.

**Important Note:** 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 hot-end 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.

- EZABL, EZABL Pro Sensor Mounts - Pick One
  - EZABL\_Mount\_No\_Duct\_18mm.stl (for use with no left fan)
  - 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\_Narrow\_18mm.stl (for use with 5015 single fan dual ducts)
  - OEM\_Mount\_Medium\_18mm.stl (for use with 5015 dual fans and 5015 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 hot-end 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.

Required: Printer Model Hot-End type Fan(s) & size(s) for part cooling	Optional: ABL Sensor (if any) Extruder type (for use with MDD kit for Direct Drive Hero Me)
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The following hardware is required\* to assemble the Hero Me Gen5 system onto your printer:

M3 Bolts

35mm – Qty: 2 (for Creality OEM, Mk8, Micro Swiss, 'V6 style' hot-ends)

-OR-

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

Plus

25mm – Qty: 2 (for 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 hot-end, you can use PLA for the cooling ducts and Hero Me base. I highly recommend using a silicone sock for you hot-end 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)

Depending on the height of your hot-end 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 hot-end 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 hot-end 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 hot-end you have, perform Step 5A or Step 5B (not both).**

**Step 5A.** If using an OEM, Mk8, or Micro Swiss style hot-end (one that has 2 screws to mount it), place it on the gantry adapter stand-off and feed the screws through the hot-end and stand-off. If your selected stand-off has inserts for M3 hex nuts for the hot-end, 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.

**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 hot-end body to the gantry plate. There is easy access from the front of the Hero Me base.

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.

**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 hot-end, MDD adapter, and extruder combination. Mount the extruder and motor to the adapter, Feed the PTFE tube into your extruder, then into your hot-end 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 hot-end. 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 hot-end nozzle is touching the build plate.

**Step 11.** Attach the fan to cool the hot-end 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 distance may be a positive or negative number. If you do not have

calipers to properly measure the offsets, use the numbers below that match your part selection.

**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_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_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 instructions 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. 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 both PrinterMods.com and TH3DStudio 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!

Thanks,

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/>