

Step Number	Step Title	Parts list		Tools list		Remarks
		Quantity	Part name [1]	Quantity	Tool name	
1.1	Prepare X-axis - linear guide	1	X-axis Support	1	Allen Key 2.5	Insert the carriage in the linear guide before fixing it to the X-axis Support.
		1	X Linear Guide	1	Masking Tape	Tighten the linear guide screws while aligning it against the lower edge of the slot.
		12	C-screw M3-10			Place a tape on the ends of the linear guides to avoid that the carriage slides out.
		1	Carriage			
1.2	Insert Y Linear Bearings	2	Y Linear Bearing	1	Square	Align the Y linear bearings to the bottom of the X-axis Support with a square.
		8	C-screw M4-12	1	Allen Key 3.0	
1.3	Fix the Belt Tensioner	2	B-screw M3-10	1	Allen Key 2.0	Don't tighten the Belt Clamps.
		2	B-screw M3-12			To fix the Belt Tensioner, use the B-screw M3-10 on the top hole and the B-screw M3-12 on the bottom hole.
		2	Belt Tensioner			
		2	Belt Clamps			
		2	C-screw M4-12			
1.4	Fix the Cable Hose Holder Front and X-pulley Right	1	Cable Hose Holder Front	1	Allen Key 2.5	The Cable Hose Holder Front needs to be flat with the top and sides surfaces of the X-axis Support.
		2	C-screw M3-14	1	Allen Key 6.0	The set screws of the pulley are turned to the front.
		1	X-pulley	1	Wrench 13	
		1	C-screw M8-40			
		1	Washer M8			
		1	Lock Nut M8			
1.5	X-motor and X-motor Pulley	1	X-motor	1	Allen Key 2.5	The cables of the motor should be facing inwards.
		4	C-screw M3-8	1	Allen Key 3.0	The X-pulley Left should be placed with the set screws facing the motor.
		1	X-motor Pulley	1	Wrench 7	Tighten very well the setscrews of the pulleys.
		1	X-endstop			

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		2	C-screw M3-16			
		1	C-screw M4-30			
		1	Nut M4			
2	Prepare the side panels	1	Right Panel	1	Allen Key 3.0	Don't tighten the screws of the Y-bearing Holders yet.
		1	Left Panel	1	Allen Key 2.5	To identify the panels, their outer surface have bigger pockets for the countersunk screws.
		4	Y-bearing Holder			
		8	C-screw M4-12			
		1	Y-endstop			
		2	C-screw M3-16			
3.1	Prepare Bed Subframe	1	Bed Subframe	1	Allen Key 2.5	The spacer and bearings should be fixed on the top of the Bed Subframe
		1	Bed Spacer	1	Allen Key 3.0	The fillet of the Bed Subframe support should be outwards.
		1	Bed Subframe Support	1	Wrench 5.5	
		5	C-screw M3-6			
		8	C-screw M4-20			
		2	Z Linear Bearing			
		1	Sensor Plate			
		2	C-screw M3-12			
		1	C-screw M3-25			
		1	Nut M3			
3.2	Fix the Z Ball Screw	1	Z Ball Screw	1	Allen Key 3.0	Place the locking ring on the top of the ball screw after the top bearing holder is fixed.
		6	C-screw M4-25			
		1	Z Bearing Holder Top			
		1	Z Bearing Holder Bottom			

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		Quantity	Part name [1]	Quantity	Tool name	
4.1	Prepare the Back Panel	1	Back Panel	1	Allen Key 4.0	Fix the Z-shaft Holders with the screws pointing inwards.
		4	Z-shaft Holders			Don't tighten the screws yet for further alignment.
		8	C-screw M5-12			
4.2	Fix the Bed Subframe	1	Prepared Bed Subframe (Step 3)	1	Allen Key 5.0	Tighten the shaft to the shaft holders.
		6	C-screw M6-30			
		2	Z-shaft			
4.3	Fix the motors and Z-endstop	2	Motor Bracket	1	Allen Key 2.5	Don't tighten the Motor Brackets screws yet.
		1	Z-endstop Sensor	1	Wrench 5.5	The wires of the Z-motor should be pointing left and the wires of the Y-motor should point down.
		2	C-screw M3-16			The Motor Brackets screws should be inserted from behind the panel.
		8	B-screw M3-10			
		8	Washer M3			
		8	Lock Nut M3			
		1	Z-motor			
		1	Y-motor			
		8	C-screw M3-8			
4.4	Fix the Cable Hose Holder Back	1	Cable Hose Holder Back	1	Allen Key 2.0	
		1	Big Hose Holder Back	1	Allen Key 3.0	
		1	Filament Tube Holder			
		4	B-screw M3-10			
		2	B-screw M5-10			
4.5	Fix the Bottom Panel and pulleys	1	Bottom Panel	1	Allen Key 2.5	Tighten the Z-belt by pulling the Z-motor and tightening the screws.
		1	Y-motor Pulley			
		1	Z-motor pulley			
		1	Z-pulley			

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		Quantity	Part name [1]	Quantity	Tool name	
		1	Z-belt			
5	Attach the side panels					
		2	Fillet Profiles	1	Allen Key 3.0	
		4	Countersunk screw M5-10			
		1	Prepared Left Panel			
		1	Prepared Right Panel			
6	Insert the X-axis	1	Prepared X-axis (Step 1)	1	Allen Key 5.0	
		4	Countersunk M8-10			
		2	Y Linear shaft			
7	Fix the housing					Drill the holes on the front and back panels with a M3 bit while holding the panels pressed together. Make sure to align them well on all sides.
		1	Front Panel	1	Drill with M3 bit	
		16	Countersunk screw M3-16	1	Allen Key 2.0	
		16	Lock Nut M3	1	Wrench 5.5	
8	Insert the Y-shafts					Insert the shafts through the side panel hole. Tighten the Y-bearing Holders making sure the shaft is well aligned with the side panel holes.
		2	Y-shaft			
		5	Y-pulley			Don't tighten the set screws of the pulleys yet.
		1	Y-motor Belt			Put the Y-endstop cable down and tighten the Y-motor Belt by pulling the Y-motor bracket down. Keep it as close as possible to the side panel.
						The pulley in the extremities should be as close as possible to the bearings.
9	Tighten the Y-belts					To tighten the belts, pull the ends of the belt down through the slots of the Belt Tensioner and tighten the Belt Clamps.
		2	Y-belt	1	Large Pliers	
						The Y-belts should have the same tension

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10	Align the X-axis			2	X-axis or two identical objects	Use the templates or two identical objects to align the X-axis using the panel as reference and tighten the set screws.
11	Assemble the extruder	1	Extruder			Assemble the extruder following the instructions of the provider: https://e3d-online.zendesk.com/hc/en-us/articles/360017204078-Hemera-Direct-V6-Assembly-Guide-Edition-2-
						Do not fix the fan, the Extension Cable and Heater Cartridge of the extruder yet.
12.1	Prepare the head 1	1	Head Right Support	1	Allen Key 2.5	Use the square nuts included in the extruder kit.
		1	Head Left Support	1	Allen Key 1.5	It is critical to use the correct size of screws to fix the Head supports, to not damage the extruder.
		6	C-screw M3-8	1	Wrench 4	The arrow of the Side Fan should be pointing down.
		6	Washer M3	1	Wrench 5.5	
		1	Side Fan			
		2	C-screw M2-10			
		1	C-screw M2-16			
		2	Lock Nut M2			
		1	C-screw M3-12			
		1	Nut M3			
12.2	Prepare the head 2	1	Big Hose Holder Front	1	Allen Key 2.0	Fix the extruder fan.
		4	B-screw M3-10			
13	Attach the head	1	Prepared Head (Step 12)	1	Square	Align the Head Attacher to the top of Carriage very well.
		1	Head Attacher	1	Allen Key 2.5	
		3	C-screw M3-10			
14	Tension the X-belt	1	X-belt	1	Large Pliers	Fix the cable ties as close as possible to the head and cut the excess.

Step Number	Step Title	Parts list		Tools list		Remarks
		Quantity	Part name [1]	Quantity	Tool name	
15	Completing the Head	4	Cable Ties	1	Cutter	Fix the Extension Cable and Heater Cartridge of the extruder.
		1	Bed Leveling Sensor	1	Allen Key 2.0	
		2	C-screw M3-16	1	Cutter	
		4	Cable Ties			
16.1	Preparing the bed					Use the square to make sure the Bed Inserts will not protrude on the top surface of the bed.
		1	Bed	1	Square	
		3	Bed Insert	1	Wrench 13	
		3	Nut M8			
16.2	Attaching the bed sticker and heating pad					Clean and dry the surfaces of the bed very well with water and soap before attaching the heating pad and bed sticker. Apply the Bed sticker precisely with the logo turned to the front (single notch). Trim the excess with a paper cutter. Apply the heating pad in the middle of the bottom surface with wires pointing to the back (two notches).
		1	Heating Pad	1	Paper Cutter	
		1	Bed Sticker			
17	Fixing the bed	3	Bed Regulator			
		3	Spring			
18	Preparing the Top Frame					Clean the bottom surface of the Top Frame very well before applying the LED strips and wire fixers. Remove the protective foil and tape the Wire Fixers and LED strip. The cable should be pointing to the bottom left corner of the panel. Tighten the cable to the Wire Fixer with a Cable Tie. The front of the frame is thicker than the back.
		2	Wire Fixer	1	Cutter	
		1	LED Strip			
		2	Cable Tie			
		1	Top Frame			

Step Number	Step Title	Parts list		Tools list		Remarks
		Quantity	Part name [1]	Quantity	Tool name	
19	Fix the Top Frame	1	Prepared Top Frame (Step 18)	1	Drill with M3 bit	Drill the holes in the Top Frame with an M3 bit.
		8	Countersunk screw M3-16	1	Allen Key 2.0	
		8	Lock Nut M3	1	Wrench 5.5	
20.1	Cable Management Left 1	1	Cable Hose	1	Heat Gun	Cover the motor cables with the shrinking tube as close as possible to the motor.
		2	Shrinking Tube			Insert the X-motor and X-endstop cable in the Cable Hose. Fix it in the Cable Hose Holder Front by opening and closing the screw. Fix the other end in the Cable Hose Holder Back the same way. Cover it with another shrinking tube to protect the Cables and pass it through the Back Panel hole.
20.2	Cable Management Left 2	1	Wire Fixer	1	Heat Gun	Pass the X-motor, X-endstop, LED and Y-endstop cables behind the Y-motor and add it's cable to the bundle.
		2	Shrinking Tube	1	Cutter	Insert the bundle in the mesh and tighten its end with shrinking tube
		1	Left Mesh			Pass the bundle and the Z-motor cable through the left Bottom Panel hole.
		1	Cable Tie			Fix the mesh to the Wire Fixer with a Cable Tie.
21.1	Cable Management Right 1	1	Filament Tube	1	Heat Gun	Pass the Side Fan cable, the extruder fan cable, the Extension Cable and the Heater Cartridge through the Big Hose Holder Front.
		1	Big Cable Hose	1	Allen Key 3.0	Insert the Filament Tube in the Extruder and pass the bundle through the Big Cable Hose.
		2	Large Shrinking Tube			Fix the shriking tube in the ends of the Big Cable Hose and fix it to the front and back holders by upening and closing the screw.
						Fix the Filament Tube to the Filament Tube Holder by opening and closing the screw.

Step Number	Step Title	Parts list		Tools list		Remarks
		Quantity	Part name [1]	Quantity	Tool name	
21.2	Cable Management Right 2	1	Right Mesh	1	Heat Gun	Insert the bundle in the mesh and tighten its end with shrinking tube
		2	Shrinking Tube	1	Cutter	Pass the bundle through the right Bottom Panel hole.
		1	Wire Fixer			Fix the mesh to the Wire Fixer with a Cable Tie.
		1	Cable Tie			
22	Cable Management Middle	2	Shrinking Tube	1	Heat Gun	Insert the bed Heating Pad cables though the mesh and tighten its ends with a shrinking tube.
		1	Middle Mesh	1	Cutter	Pass the bundle through the middle Bottom Panel hole.
		1	Wire Fixer			Fix the mesh to the Wire Fixer with a Cable Tie.
		1	Cable Tie			
23.1	Fixing Electronics components - back panel	1	Power Plug + Mains + Earth	1	Allen Key 2.0	
		1	Fuse			
		2	Countersunk screw M3-8			
23.2	Fixing Electronics components - front panel	1	USB Cable Inside	1	Allen Key 2.0	
		1	Display	1	Wrench 5.5	
		4	Countersunk screw M3-10			
		4	Plastic Nut M3			
23.3	Fixing Electronics components - bottom panel 1	4	Bottom Cap Spacer	1	Wrench 8	Tighten the Earth cable in the Bottom Cap Spacer.
		4	Lock Nut M5	1	Allen Key 2.5	
		1	Power Supply			
		4	B-screw M4-8			
23.4	Fixing Electronics components - bottom panel 2	1	Main Board	1	Scissors	Fix the Board Fan with double-sided tape. The arrow should point to the board.
		4	Motor Driver			

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		Quantity	Part name [1]	Quantity	Tool name	
		8	Standoff M-F M3-6+6			
		1	LED Board			
		4	Standoff M-F M3-15+6			
		1	Sensor PCB			
		12	Plastic Screw M3-8			
		1	Board Fan			
		1	Double-sided Tape			
24	Wiring	1	Main Board Power Cable	1	Screwdriver slotted small	
		1	LED Board Power Cable	1	Screwdriver Phillips	
		1	Sensor PCB Power Cable			
		1	X-endstop Connector			
		1	Y-endstop Connector			
		1	Z-endstop Connector			
		1	Bed Leveling Connector			
25	Cable Management Bottom	4	Wire Fixer	1	Cutter	
		5	Cable Tie			
26	Fix the Bottom Cap	1	Bottom Cap	1	Allen Key 2.0	
		4	B-screw M3-10			
27	Fix the Windows	2	Window	1	Allen Key 2.0	Remove the protective foil of the panels.
		8	B-screw M3-8			
28	Fix the doors	4	Hinge	1	Allen Key 2.5	Remove the protective foil of the panels.
		16	Countersunk M4-10	1	Wrench 7	To fix the door magnets, tape one part on the door and the other behind the front panel.
		1	Door Right			
		1	Door Left			
		4	Magnet			
		4	Lock Nut M4			

Step Number	Step Title	Parts list		Tools list		Remarks
		Quantity	Part name [1]	Quantity	Tool name	
		2	Handle			