

ITEM NO.	QTY. Per Subassembly	Qty Total	PART NUMBER	DESCRIPTION	Supplier 1: Links & Price ea.	Supplier 2: Links & Price ea.
<b>1</b>	<b>1</b>		<b>Herculien_Frame (Subassembly)</b>			
1.1	4	4	HFS5-2020-609.5(holes_added)	20mmx20mm609.5mm aluminum extrusion for vertical supports at the corners. Extrusions requires holes be drilled. 3d model for drill guide available.	<a href="#">\$15.00 / 1500mm</a>	<a href="#">\$3.47</a>
1.2	2	2	HFS5-2080-569.5 (SidesBottom_Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.3	1	1	HFS5-2080-569.5 (LeftTop_Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.4	1	1	HFS5-2080-569.5 (RightTop_Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.5	3	3	HFS5-2080-569.5 (Default_No Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.6	1	1	HFS5-2080-569.5 (BackTop_Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.7	1	1	HFS5-2080-569.5 (FrontTop_Holes)	20x80x569.5mm aluminum extrusions.	<a href="#">\$30.00 / 1500mm</a>	<a href="#">\$11.90</a>
1.8	2	2	V-Slot 20mmX80mm489.5mm	20mmx80mmx489.5mm Vslot Extrusion	<a href="#">\$20.00 / 1000</a>	<a href="#">\$20.00 / 1000</a>
1.9	16	16	HNTTSN5-5	T-Slot Nuts	<a href="#">\$0.20</a>	<a href="#">\$28.00 / 100</a>
1.1	6	6	Optional: HSCA5-R 460mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
1.11	6	6	Optional: HSCA5-R 569.5mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
1.12	1	1	Optional: 4.3mm thick Acrylic or Polycarbonate Rightside Panel	<a href="http://goo.gl/oR3krK">http://goo.gl/oR3krK</a>	<a href="#">\$15.70 (24"x24")</a>	
1.13	1	1	Optional: 4.3mm thick Acrylic or Polycarbonate Leftside Panel	<a href="http://goo.gl/YAD9aY">http://goo.gl/YAD9aY</a>	<a href="#">\$15.70 (24"x24")</a>	
1.14	1	1	Optional: 4.3mm thick Acrylic or Polycarbonate Backside Panel	<a href="http://goo.gl/BmHRNU">http://goo.gl/BmHRNU</a>	<a href="#">\$15.70 (24"x24")</a>	
1.15	72	72	91239A224	5mm x 10mm button head screw	<a href="#">\$7.93 / 100</a>	
1.16	16	16	94500A230	5mm x 8mm button head socket cap screw	<a href="#">\$6.15 / 50</a>	
<b>2</b>	<b>1</b>		<b>Top_Cover (Subassembly) (Optional, not needed for printer function)</b>			
2.1	3	3	HFS5-2020-300	20x20x300mm Extruded Aluminum	<a href="#">\$10.00 / 1000mm</a>	<a href="#">\$1.71</a>
2.2	1	1	HFS5-2020-300 (configuration)	20x20x300mm Extruded Aluminum	<a href="#">\$10.00 / 1000mm</a>	<a href="#">\$1.71</a>
2.3	8	8	HFS5-2020-569.5	20x20x569.5mm Extruded Aluminum	<a href="#">\$15.00 / 1500mm</a>	<a href="#">\$3.24</a>
2.4	1	1	HFS5-2020-515	20x20x515mm Extruded Aluminum	<a href="#">\$15.00 / 1500mm</a>	<a href="#">\$2.93</a>
2.5	1	1	HFS5-2020-100	20x20x100mm Extruded Aluminum	<a href="#">from drop cut</a>	<a href="#">\$3.03</a>
2.6	1	1	HFS5-2020-54.5	20x20x54.5mm Extruded Aluminum	<a href="#">from drop cut</a>	<a href="#">\$3.03</a>
2.7	4	4	HHPSN5	Hinge for 20x20 Extrusion	<a href="#">\$5.60</a>	
2.8	20	20	HNTTSN5-5	T-Slot Nuts	<a href="#">\$0.20</a>	<a href="#">\$28.00 / 100</a>
2.9	5	5	HSCA5-R 300mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.10	1	1	HSCA5-R 515mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.11	1	1	HSCA5-R 98mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.12	1	1	HSCA5-R 48.5	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.13	1	1	HSCA5-R 200mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.14	11	11	HSCA5-R 569.5mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.15	4	4	HFC5-2020-B	Extrusion Endcap	<a href="#">\$1.88</a>	
2.16	3	3	.177in thick Acrylic or Polycarbonate Left Front Back Cover	<a href="http://goo.gl/mjZ4er">http://goo.gl/mjZ4er</a>	<a href="#">\$15.70 (24"x24")</a>	
2.17	1	1	.177in thick Acrylic or Polycarbonate Right Cover	<a href="http://goo.gl/rPAJGD">http://goo.gl/rPAJGD</a>	<a href="#">\$15.70 (24"x24")</a>	
2.18	1	1	.177in thick Acrylic or Polycarbonate Split Top Cover	<a href="http://goo.gl/l9hLrq">http://goo.gl/l9hLrq</a>	<a href="#">\$15.70 (24"x24")</a>	
2.19	24	24	91239A224	5mm x 10mm button head socket cap screw	<a href="#">\$7.93 / 100</a>	
2.20	16	16	91294A207	5mm x 8mm flat head socket cap screw	<a href="#">\$6.75 / 100</a>	
2.21	2	2	1078A311	Plastic Handle	<a href="#">\$3.76</a>	
2.22	2	2	90965A160	5mm stainless flat washer	<a href="#">\$4.62 / 100</a>	
2.23	4	4	92290A228	5mm x 12mm SST socket head cap screw	<a href="#">\$7.72 / 25</a>	
2.24	2	2	HFS5-2020-567.5	20x20x567.5mm Extruded Aluminum	<a href="#">\$15.00 / 1500mm</a>	<a href="#">\$3.23</a>
2.25	2	2	HFS5-2020-218	20x20x218mm Extruded Aluminum	<a href="#">\$15.00 / 1500mm</a>	<a href="#">\$3.03</a>
2.26	2	2	HSCA5-R 170mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
2.27	2	2	HSCA5-R 537.5mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
<b>3</b>	<b>1</b>		<b>Front_Door (Optional, Subassembly)</b>			
3.1	2	2	HFS5-2020-407.5	20x20x407.5mm Extruded Aluminum	<a href="#">\$10.00 / 1000mm</a>	<a href="#">\$2.32</a>
3.2	2	2	HFS5-2020-567.5	20x20x567.5mm Extruded Aluminum	<a href="#">\$10.00 / 1000mm</a>	<a href="#">\$3.23</a>
3.3	2	2	HHPSN5	Hinge for 20x20 Extrusion	<a href="#">\$5.60</a>	
3.4	8	8	HNTTSN5-5	T-Slot Nuts	<a href="#">\$0.20</a>	<a href="#">\$28.00 / 100</a>
3.5	2	2	HSCA5-R 537.5mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
3.6	2	2	HSCA5-R 407.5mm	T-SLot Covers (To Hold Clear Panels)	<a href="#">\$3.00 / 1000mm</a>	<a href="#">\$2.38 / 2000mm</a>
3.7	1	1	.177in thick Acrylic or Polycarbonate Door Window	<a href="http://goo.gl/HMq1ng">http://goo.gl/HMq1ng</a>	<a href="#">\$15.70 (24"x24")</a>	
3.8	8	8	91294A207	5mm x 8mm flat head socket cap screw	<a href="#">\$6.75 / 100</a>	
3.9	4	4	91239A224	5mm x 10mm button head socket cap screw	<a href="#">\$7.93 / 100</a>	
<b>4</b>	<b>1</b>		<b>Power Supply (Subassembly)</b>			
4.1	1	1	Meanwell_SE-450-24	24V 450W Power Supply (Lower Watt Version can be used with 120V bed)	<a href="#">\$64.95</a>	<a href="#">39.99</a>
4.2	1	1	Power Supply Bracket 1	3D Printed	<a href="#">NA</a>	
4.3	2	2	Power Supply Bracket 2	3D Printed	<a href="#">NA</a>	
<b>5</b>	<b>1</b>		<b>Electronics_Package (Subassembly)</b>			
5.1	1	1	Q24169PCDCC	Hoffman Qline Enclosure (233x153x84mm)	<a href="#">\$58.34</a>	<a href="#">\$58.41</a>
5.2	1	1	Hinge(McMaster 1598A180)	Hinge top swing electronics out of the way	<a href="#">\$1.83</a>	
5.3	1	1	Azteeg X3 V2	Printer Controler Board	<a href="#">\$174.99 w/ stepper</a>	<a href="#">\$109.99 or \$41.99</a>
5.4	1	1	raspberrypi_b+	Raspberry Pi B+ Print Server (for octoprint / octopi)	<a href="#">\$39.99</a>	
5.5	1	1	ViKi LCD	print controller lcd	<a href="#">\$75.00</a>	<a href="#">\$12.99</a>
5.6	2	2	Jamicon_KF0410-01	40x40mm 24v fan	<a href="#">\$2.95</a>	
5.7	1 lot	1 lot	Cable Sleaving	Cable Sleeve to keep wiring clean	<a href="#">\$1.99 / Meter</a>	
<b>6</b>	<b>1</b>		<b>Outlet_And_Network_Mount</b>			
6.1	1	1	Outlet_Switch_And_Network_Mount	3D Printed	<a href="#">NA</a>	
6.2	1	1	Amazon_Electrical_Fused_Plug	Fuse & Power Socket 10A 250V 3 Pin IEC320 C14	<a href="#">\$3.01</a>	
6.3	1	1	CAT5 Toolless IDC Keystone Jack	Network Keystone Jack	<a href="#">\$4.35</a>	
<b>7</b>	<b>1</b>		<b>Solid State Relay (Subassembly)</b>			
7.1	1	1	G3NA_220B	20A DC to AC Solid State Relay (to run heated bed at 120C AC)	<a href="#">\$27.32</a>	
7.2	2	2	HNTTSN5-5	T-Slot Nuts	<a href="#">\$0.20</a>	<a href="#">\$28.00 / 100</a>
7.3	2	2	91239A224	5mm x 10mm button head socket cap screw	<a href="#">\$7.93 / 100</a>	
<b>8</b>	<b>1</b>		<b>Y_Limit_Switch (Subassembly)</b>			
8.1	1	1	XY_LimitSwitch_Mount_A	3D Printed	<a href="#">NA</a>	
8.2	1	1	Micro Switch Button	NO / NC Limit Switch	<a href="#">\$1.99</a>	<a href="#">\$2.00</a>
8.3	1	1	HNTTSN5-5	T-Slot Nuts	<a href="#">\$0.20</a>	<a href="#">\$28.00 / 100</a>
8.4	2	2	94500A223	3mm x 10mm button head socket cap screw	<a href="#">\$6.08 / 100</a>	

8.5	1	1	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
<b>9</b>	<b>1</b>		<b>X Limit Switch (Subassembly)</b>			
9.1	1	1	XY LimitSwitch_Mount_B	3D Printed	NA	
9.2	1	1	Micro Switch Button	NO / NC Limit Switch	\$1.99	\$2.00
9.3	1	1	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
9.4	2	2	94500A223	3mm x 10mm button head socket cap screw	\$6.08 / 100	
9.5	1	1	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
<b>10</b>	<b>2</b>		<b>Drive Corner Bracket A (Subassembly)</b>			
10.1	1	2	Corner_Bearing_Bracket_A	3D Printed	NA	
10.2	14	28	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
10.3	2	4	5972K164	10mm x 22mm x 6mm (6900 series bearing)	\$9.99 / 10	
10.4	2	4	90214A422	10mmx16mmx0.5mm Shim	\$11.73 / 10	
10.5	14	28	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
<b>11</b>	<b>2</b>		<b>Drive Corner Bracket B (Subassembly)</b>			
11.1	1	2	Corner_Bearing_Bracket_B	3D Printed	NA	
11.2	14	28	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
11.3	2	4	5972K164	10mm x 22mm x 6mm (6900 series bearing)	\$9.99 / 10	
11.4	2	4	90214A422	10mmx16mmx0.5mm Shim	\$11.73 / 10	
11.5	14	28	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
<b>12</b>	<b>1</b>		<b>X/Y Gantry Rods (Subassembly)</b>			
12.1	4	4	SFJ10-610	10mm x 610mm hardened precicion rods for x/y axis guides	\$20.33	
12.2	2	2	SFJ10-512	10mm x 512mm hardened precicion rods for x/y overhead gantry	\$15.10	
<b>13</b>	<b>2</b>		<b>XY Axis Belt Tensioner A</b>			
13.1	1	2	XY Axis Belt Tensioner A	3D Printed	NA	
13.2	1	2	XY Axis Belt Tensioner Block A	3D Printed	NA	
13.3	2	4	a_7z41mpsb10m	10mm self aligning bronze sintered bushings	\$9.99 / 4	
13.4	2	4	91290A137	3mm x 50mm socket head cap screw	\$3.34 / 25	
13.5	4	8	90576A102	3mm nylock hex nut	\$3.27 / 100	
13.6	1	2	90591A146	3mm standard hex nut (DIN 934)	\$2.08 / 100	
13.7	1	2	91239A232	5mm x 16mm button head socket cap screw	\$8.82 / 100	
13.8	2	4	91290A125	3mm x 25mm socket head cap screw	\$11.74 / 100	
<b>14</b>	<b>2</b>		<b>XY Axis Belt Tensioner B</b>			
14.1	1	2	XY Axis Belt Tensioner B	3D Printed	NA	
14.2	1	2	XY Axis Belt Tensioner Block B	3D Printed	NA	
14.3	2	4	a_7z41mpsb10m	10mm self aligning bronze sintered bushings	\$9.99 / 4	
14.4	2	4	91290A137	3mm x 50mm socket head cap screw	\$3.34 / 25	
14.5	4	8	90576A102	3mm nylock hex nut	\$3.27 / 100	
14.6	1	2	90591A146	3mm standard hex nut (DIN 934)	\$2.08 / 100	
14.7	1	2	91239A232	5mm x 16mm button head socket cap screw	\$8.82 / 100	
14.8	2	4	91290A125	3mm x 25mm socket head cap screw	\$11.74 / 100	
<b>15</b>	<b>1</b>		<b>XY Gantry Belts and Pullies</b>			
15.1	10	10	GT2_Aluminum_Timing_Pulley_32_Tooth	GT2 2mm pitch, 10mm ID, 32 tooth pulley	\$2.10	
15.2	5	5	Bulk GT2 (2MM pitch x 6mm wide) Belt	Bulk GT2 (2MM pitch x 6mm wide) Belt	\$1.8 / Meter	\$2 / meter
15.3	2	2	A 6R51M113060	113 tooth (226mm long) closed loop GT2 Belt (2mm pitch x 6mm wide)	\$0.50	\$4.86
<b>16</b>	<b>2</b>		<b>X/Y Gantry Drive Motor (Subassembly)</b>			
16.1	1	2	External_Motor	3D Printed	NA	
16.2	1	2	NEMA_17_60mm_1.5A	High Torque 6.5kg/cm 60mm Long Nema 17 Stepper Motor	\$11.80	
16.3	4	8	91290A137	3mm x 50mm socket head cap screw	\$3.34 / 25	
16.4	4	8	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
16.5	1	2	GT2_Aluminum_Timing_Pulley_20_Tooth	20 tooth GT2 Pulley (5mm ID) (2mm pitch)	\$1.85	\$5.49
16.6	4	8	94500A223	3mm x 10mm button head socket cap screw	\$6.08 / 100	
16.7	4	8	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
<b>17</b>	<b>1</b>		<b>Carriage Dual E3DV6</b>			
17.01	1	1	Double_Carriage_E3DV6	3D Printed	NA	
17.02	1	1	Dual_Bowden_Tube_Carriage_Adapter_E3DV6	3D Printed	NA	
17.03	1	1	Blower_Duct_1	3D Printed	NA	
17.04	1	1	Blower_Duct_1Mirror	3D Printed	NA	
17.05	1	1	Front_Clamp_With_Fan_Mount_E3DV6	3D Printed	NA	
17.06	1	1	Dual_Fan_Shroud_E3DV6	3D Printed	NA	
17.07	4	4	a_7z41mpsb10m	10mm self aligning bronze sintered bushings	\$9.99 / 4	
17.08	2	2	E3D_V6	Hot End (need 24V fan and heater cartridge if 24V power supply is used, by default E3D V6 is designed for 12V system)	\$79.99	
17.09	2	2	50x50x15_Fonsoning_FSY5015S24H_Blower	50x50x15 centrifugal blower fan (needs to be 24V if 24V power supply is used)	\$6.81	
17.10	2	2	30x30_Fan	included with e3d kit (needs to be 24v if 24V power supply is used)	Request 24v when ordering	
17.11	11	11	90591A121	3mm hex nut (Din 934)	\$1.39 / 100	
17.12	4	4	92095A185	3mm x 20mm button head socket cap screw	\$5.31 / 50	
17.13	7	7	92095A184	3mm x 16mm button head socket cap screw	\$8.85 / 100	
17.14	2	2	91292A029	3mm x 18mm socket head cap screw	\$5.60 / 100	
17.15	2	2	91100A120	3mm oversized flat washer (Din 9021)	\$1.10 / 100	
17.16	2	2	91292A123	3mm x 20mm socket head cap screw	\$6.00 / 100	
<b>18</b>	<b>2</b>		<b>Manual Movement Knob</b>			
18.1	1	2	Rod_End_Knob	3D Printed	NA	
18.2	1	2	90591A121	3mm hex nut (Din 934)	\$1.39 / 100	
18.3	1	2	94500A222	3mm x 8mm button head socket cap screw	\$5.90 / 100	
<b>19</b>	<b>1</b>		<b>Z Bed Assembly</b>			
<b>19.1</b>	<b>2</b>		<b>Z Axis Module (Sub-Sub Assembly)</b>			
19.1.1	1	2	MTSBRW12-480-F10-V8-S26-Q8	12mm Lead Screw 480L (both ends stepped to 8mm)	\$51.25	\$20.71
19.1.2	1	2	Z_Leadscrew_Bearing_Holder_Top	3D Printed	NA	
19.1.3	1	2	Z_Leadscrew_Bearing_Holder_Base	3D Printed	NA	
19.1.4	2	4	608ZZ-8x22x7	608ZZ Bearing	\$0.90	\$0.30
19.1.5	1	2	GT2_Aluminum_Timing_Pulley_36_Tooth	GT2 2mm pitch, 8mm ID, 36 tooth pulley	\$2.50	\$11.95



19.1.6	2	4	91290A252	5mm x 25mm socket head cap screw	\$7.24 / 50	
19.1.7	4	8	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
19.1.8	2	4	91239A232	5mm x 16mm button head socket cap screw	\$8.82 / 100	
19.2	2		Z_Gantry_Angle_Plate (Sub-Sub Assembly)			
19.2.1	1	2	Z_Gantry_Plate	ASTM B221-08 6063-T52 Aluminum Architectural Unequal Leg Angle 3-1/2" x 1-1/4" x 1/8"	\$8.88	
19.2.2	4	8	Dual_V_Wheel_Bolt_Assembly	Open Builds V-slot wheel kit	\$3.85	\$3.85
19.2.3	4	8	1/4" Eccentric Spacer	1/4" Eccentric Spacer	\$2.00	\$2.00
19.2.4	1	2	MTSRN12	12mm / 2mm pitch lead screw nut	\$25.95	Not needed with ball screw
19.2.5	4	8	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
19.2.6	4	8	94500A230	5mm x 8mm button head socket cap screw	\$6.15 / 50	
19.2.7	2	4	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
19.3	1		Heated_Bed_Assembly			
19.3.01	1	1	Aluminum_Build_Plate	1/4" ASTM B209-10 5052-H32 Aluminum Plate	\$32.07	
19.3.02	1	1	MDF_Insulator_Board	3/4" MDF Insulator board from local hardware store	\$11.97	
19.3.03	4	4	92125A219	5mm x 70mm flat head socket cap screw	\$4.38 / 10	
19.3.04	4	4	9657K292	Spring (0.75"L x 0.50"OD x 0.062"wire)	\$8.38 / 6	
19.3.05	14	14	91100A140	5mm oversized flat washer (DIN 9021)	\$3.45 / 100	
19.3.06	2	2	92125A220	5mm x 30mm flat head socket cap screw	\$6.55 / 25	
19.3.07	6	6	94205A240	5mm nylock nut (DIN 985)	\$6.09 / 50	
19.3.08	4	4	94545A225	5mm wing nut (DIN 315)	\$6.21 / 10	
19.3.09	1	1	380mmx380mm_800W_120V_Silicone_Heater(Alirubber)	AliRubber Custom Silicon Heated Bed (You can spec Voltage, Wattage, Size, Thermistor Location, Etc.)	\$34.30 + Shipping	
19.3.10	1	1	Window_Glass_420mm X 430mm	Window Glass 420mm X 430mm or Boro Glass	\$5.00	
19.3.11	2	2	Bed_Glass_Clip	3D Printed	NA	
19.3.12	2	2	Bed_Glass_Clip_Mirror	3D Printed	NA	
19.3.13	2	2	HFS5-2020-519_5	20x20x519.5mm Extruded Aluminum	\$15.00 / 1500mm	2.95
19.4	1		Z_Limit_Assembly			
19.4.1	1	1	Limit Switch Mounting Bracket	Aluminum Limit Switch Mounting Bracket	\$2.00	\$2.00
19.4.2	1	1	Micro Switch Button	NO / NC Limit Switch	\$1.99	\$2.00
19.4.3	1	1	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
19.4.4	2	2	94500A223	3mm x 10mm button head socket cap screw	\$6.08 / 100	
19.4.5	2	2	93475A210	3mm flat washer (DIN 125)	\$1.62 / 100	
19.4.6	1	1	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
20	1		Z_Drive_Mount_With_Nema17_60mm			
20.1	1	1	External_Motor	3D Printed	NA	
20.2	1	1	NEMA_17_60mm_1.5A	High Torque 6.5kg/cm 60mm Long Nema 17 Stepper Motor	\$11.80	
20.3	4	4	91290A137	3mm x 50mm socket head cap screw	\$3.34 / 25	
20.4	4	4	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
20.5	1	1	GT2_Aluminum_Timing_Pulley_20_Tooth	20 tooth GT2 Pulley (5mm ID) (2mm pitch)	\$1.85	\$5.49
20.6	4	4	94500A223	3mm x 10mm button head socket cap screw	\$6.08 / 100	
20.7	1	1	Timing Belt GT2 Profile - 2mm pitch - 6mm wide 1164mm long	1164mm Long GT2 (2mm pitch) (6mm wide) (1164mm Long)	\$9.95	
20.8	4	4	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
21	2		Z_Belt_Idler			
21.1	1	2	Z_Idler_Slide_Support	3D Printed	NA	
21.2	1	2	Smooth_Idler_Pulley kit	GT2 Smooth Idler Pulley	\$4.85	\$4.85
21.3	2	4	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
21.4	1	2	91290A254	5mm x 30mm socket head cap screw	\$7.87 / 50	
21.5	1	2	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
22	2		Spool_and_Holder			
22.1	1	2	Spool_Holder_Flange	3D Printed	NA	
22.2	1	2	50mm_Threaded_Spool_Holder_Full_Round	3D Printed	NA	
22.3	4	8	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
22.4	4	8	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
23	2		HercuStruder_V2	(recommended alternative = Bondtech Extruder)		
23.01	1	2	HercuLien_Extruder_Base_V2	3D Printed	NA	
23.02	1	2	HercuStruder_Bearing_Pivot	3D Printed	NA	
23.03	1	2	HercuStruder_Dogbone_Connector	3D Printed	NA	
23.04	1	2	HercuStruder_Pin	3D Printed	NA	
23.05	2	4	Bowden_Tube_Nut_Trap	3D Printed	NA	
23.06	2	4	HNTTSN5-5	T-Slot Nuts	\$0.20	\$28.00 / 100
23.07	1	2	4mmODx2mmID_Teflon_Tube_Section	Teflon tube for extruder drive inlet and bowden tube from extruder to the carriage	\$12.00	
23.08	1	2	608ZZ-8x22x7	608ZZ Bearing	\$0.90	\$0.30
23.09	1	2	8mm_Shaft_Hobb_Gear	Filament Drive Gear	\$9.95	
23.10	1	2	NEMA_17_5.18_Planetary	5.18:1 planetary reduced 40mm Long Nema 17 Stepper Motor	\$30.00	
23.11	4	8	90591A121	3mm hex nut (Din 934)	\$1.39 / 100	
23.12	2	4	91290A137	3mm x 50mm socket head cap screw	\$3.34 / 25	
23.13	4	8	93475A210	3mm flat washer (DIN 125)	\$1.62 / 100	
23.14	2	4	91100A120	3mm oversized flat washer (Din 9021)	\$1.10 / 100	
23.15	2	4	92095A183	3mm x 12mm button head socket cap screw	\$4.00 / 100	
23.16	4	8	94500A223	3mm x 15mm button head socket cap screw	\$6.08 / 100	
23.17	2	4	91290A135	3mm x 35mm socket head cap screw	\$9.07 / 50	
23.18	2	4	90576A102	3mm nylock hex nut	\$3.27 / 100	
23.19	2	4	91239A224	5mm x 10mm button head socket cap screw	\$7.93 / 100	
23.20	2	4	94150A335	4mm hex nut (DIN 934)	\$3.42 / 50	
23.21	2	4	9657K283	Spring (0.75"L x 0.187" OD x 0.029" Wire)	\$9.80 / 12	

**Other good suppliers and resources for parts**

Bolts: <http://www.trimcraftaviationrc.com/>  
Extruder: <http://www.bondtech.se/>

Part#	Qty	Description	Cost/Each	Total Cost	Link
.177in thick Acrylic or Polycarbonate	7	.177in thick Acrylic or Polycarbonate	\$15.70	\$109.90	http://www.amazon.com/Lexan-Sheet-Polycarbonate-Thick-Nominal/dp/B00CAWRVJO/ref=pd_sim_sbs_indust_12?ie=UTF8&refRID=1PFE2E4NCQNS4G3M8816
1/4" Eccentric Spacer	8	1/4" Eccentric Spacer	\$2.00	\$16.00	
1078A311	3	Plastic Handle	\$3.76	\$11.28	
30x30 Fan	2	included with e3d kit (needs to be 24v if 24V power supply is used)		\$0.00	http://www.mcmaster.com/#cad-2d/=w7lpr0
380mmx380mm_800W_120V_Silicone_Heater(Alirubber)	1	AlIRubber Custom Silicon Heated Bed (You can spec Voltage, Wattage, Size, Thermistor Location, Etc.)	\$34.30	\$34.30	
4mmODx2mmID_Teflon_Tube_Section	2	Teflon tube for extruder drive inlet and bowden tube from extruder to the carriage	\$12.00	\$24.00	
50x50x15_Fonsoning_FSY5015S24H_Blower	2	50x50x15 centrifugal blower fan (needs to be 24V if 24V power supply is used)	\$6.81	\$13.62	
5972K164	1	10mm x 22mm x 6mm (6900 series bearing) (10 pack)	\$9.99	\$9.99	http://www.fasteddybearings.com/10-units-10x22x6-rubber-sealed-bearing-6900-2rs/
608ZZ-8x22x7	6	608ZZ Bearing	\$0.30	\$1.80	
8mm_Shaft_Hobb_Gear	2	Filament Drive Gear	\$9.95	\$19.90	
90214A422	1	10mmx16mmx0.5mm Shim (10 pack)	\$11.73	\$11.73	
90576A102	1	3mm nylock hex nut (25 pack)	\$0.44	\$0.44	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=234
90591A121	2	3mm hex nut (Din 934) (25 pack)	\$0.24	\$0.48	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=133
90965A160	1	5mm stainless flat washer (25 pack)	\$0.19	\$0.19	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=231
91100A120	1	3mm oversized flat washer (Din 9021) (100 pack)	\$1.10	\$1.10	http://www.mcmaster.com/#91100a120/=w7kv5a
91100A140	1	5mm oversized flat washer (DIN 9021) (100 pack)	\$3.45	\$3.45	http://www.mcmaster.com/#91100a140/=w7kusz
91239A224	3	5mm x 10mm button head screw	\$7.93	\$23.79	http://www.mcmaster.com/#91239a224/=w7kw2c
91239A232	1	5mm x 16mm button head socket cap screw (25 pack)	\$1.22	\$1.22	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=52
91290A125	1	3mm x 25mm socket head cap screw (25 pack)	\$0.89	\$0.89	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=197
91290A135	1	3mm x 35mm socket head cap screw (25 pack)	\$0.89	\$0.89	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=194
91290A137	1	3mm x 50mm socket head cap screw (25 pack)	\$3.34	\$3.34	http://www.mcmaster.com/#91290a137/=w7l1at
91290A252	1	5mm x 25mm socket head cap screw (25 pack)	\$1.91	\$1.91	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=179
91290A254	1	5mm x 30mm socket head cap screw (12 pack)	\$1.31	\$1.31	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=180
91292A029	1	3mm x 18mm socket head cap screw (25 pack)	\$0.89	\$0.89	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=434
91292A123	1	3mm x 20mm socket head cap screw (25 pack)	\$0.84	\$0.84	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=170
91294A207	1	5mm x 8mm flat head socket cap screw (100 pack)	\$6.57	\$6.57	http://www.mcmaster.com/#91294a207/=w7lc9s
92095A183	1	3mm x 12mm button head socket cap screw (25 pack)	\$0.77	\$0.77	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=23
92095A184	1	3mm x 16mm button head socket cap screw (25 pack)	\$0.83	\$0.83	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=26
92095A185	1	3mm x 20mm button head socket cap screw (25 pack)	\$0.99	\$0.99	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=27
92125A219	1	5mm x 70mm flat head socket cap screw (10 pack)	\$4.38	\$4.38	http://www.mcmaster.com/#92125a219/=w7lg57
92125A220	1	5mm x 30mm flat head socket cap screw (25 pack)	\$6.55	\$6.55	http://www.mcmaster.com/#92125a220/=w7lhvz
92290A228	1	5mm x 12mm SST socket head cap screw (25 pack)	\$7.72	\$7.72	http://www.mcmaster.com/#92290a228/=w7lj6a
93475A210	1	3mm flat washer (DIN 125) (25 pack)	\$0.14	\$0.14	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=230
94150A335	1	4mm hex nut (DIN 934) (25 pack)	\$0.34	\$0.34	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=134
94205A240	1	5mm nylock nut (DIN 985) (25 pack)	\$0.66	\$0.66	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=236
94500A222	1	3mm x 8mm button head socket cap screw (25 pack)	\$0.52	\$0.52	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=25
94500A223	2	3mm x 10mm button head socket cap screw (25 pack)	\$0.64	\$1.28	http://www.trimcraftaviationrc.com/index.php?_a=product&product_id=37
94500A230	1	5mm x 8mm button head socket cap screw (50 pack)	\$6.15	\$6.15	http://www.mcmaster.com/#94500a230/=w7lmba
94545A225	1	5mm wing nut (DIN 315) (10 pack)	\$6.21	\$6.21	http://www.mcmaster.com/#94545a225/=w7lnl4
9657K283	1	Spring (0.75"L x 0.187" OD x 0.029" Wire) (12 pack)	\$10.35	\$10.35	http://www.mcmaster.com/#9657k283/=w7lo18
9657K292	1	Spring (0.75"L x 0.50"OD x 0.062"wire) (6 pack)	\$8.84	\$8.84	http://www.mcmaster.com/#9657k292/=w7loha
A 6R51M113060	2	113 tooth (226mm long) closed loop GT2 Belt (2mm pitch x 6mm wide)	\$0.50	\$1.00	
a 7z41mpsb10m	3	10mm self aligning bronze sintered bushings (4 pack)	\$9.99	\$29.97	
Aluminum_Build_Plate	1	1/4" ASTM B209-10 5052-H32 Aluminum Plate	\$32.07	\$32.07	
Amazon_Electrical_Fused_Plug	1	Fuse & Power Socket 10A 250V 3 Pin IEC320 C14	\$3.01	\$3.01	
Azteeg X3 V2	1	Printer Controler Board	\$174.99	\$174.99	
Bulk GT2 (2MM pitch x 6mm wide) Belt	5	Bulk GT2 (2MM pitch x 6mm wide) Belt	\$1.80	\$9.00	
Cable Sleaving	0	Cable Sleeve to keep wiring clean	\$1.99	\$0.00	
CAT5 Tooless IDC Keystone Jack	1	Network Keystone Jack	\$4.35	\$4.35	
Dual_V_Wheel_Bolt_Assembly	8	Open Builds V-slot wheel kit	\$3.85	\$30.80	
E3D_V6	2	Hot End (need 24V fan and heater cartridge if 24V power supply is used, by default E3D V6 is designed for 12V system)	\$79.99	\$159.98	
G3NA_220B	1	20A DC to AC Solid State Relay (to run heated bed at 120C AC)	\$27.32	\$27.32	
GT2_Aluminum_Timing_Pulley_36_Tooth	2	GT2 2mm pitch, 8mm ID, 36 tooth pulley	\$2.50	\$5.00	
GT2_Aluminum_Timing_Pulley_20_Tooth	3	20 tooth GT2 Pulley (5mm ID) (2mm pitch)	\$1.85	\$5.55	
GT2_Aluminum_Timing_Pulley_32_Tooth	10	GT2 2mm pitch, 10mm ID, 32 tooth pulley	\$2.10	\$21.00	
HFC5-2020-B	4	Extrusion Endcap	\$1.88	\$7.52	
HFS5-2020-100	1	20x20x100mm Extruded Aluminum	\$3.03	\$3.03	
HFS5-2020-218	2	20x20x218mm Extruded Aluminum	\$3.03	\$6.06	
HFS5-2020-300	4	20x20x300mm Extruded Aluminum	\$1.71	\$6.84	
HFS5-2020-407.5	2	20x20x407.5mm Extruded Aluminum	\$2.32	\$4.64	
HFS5-2020-515	1	20x20x515mm Extruded Aluminum	\$2.93	\$2.93	
HFS5-2020-519.5	2	20x20x519.5mm Extruded Aluminum	2.95	\$5.90	
HFS5-2020-54.5	1	20x20x54.5mm Extruded Aluminum	\$3.03	\$3.03	
HFS5-2020-567.5	4	20x20x567.5mm Extruded Aluminum	\$3.23	\$12.92	
HFS5-2020-569.5	8	20x20x569.5mm Extruded Aluminum	\$3.24	\$25.92	
HFS5-2020-609.5	4	20mmx20mm609.5mm aluminum extrusion for vertical supports at the corners. Extrusions requires holes be drilled. 3d model for drill guide available.	\$3.47	\$13.88	
HFS5-2080-569.5	9	20x80x569.5mm aluminum extrusions.	\$11.90	\$107.10	
HHPSN5	6	Hinge for 20x20 Extrusion	\$5.60	\$33.60	
Hinge(McMaster_1598A180)	1	Hinge top swing electronics out of the way	\$1.83	\$1.83	
HNTTSN5-5 (bag of 100)	2	T-Slot Nuts	\$28.00	\$56.00	
HSCA5-R (2M Lengths)	12	T-Slot Covers (To Hold Clear Panels)	\$2.38	\$28.56	
Jamicon_KF0410-01	2	40x40mm 24v fan	\$2.95	\$5.90	
Limit Switch Mounting Bracket	1	Aluminum Limit Switch Mounting Bracket	\$2.00	\$2.00	
MDF_Insulator_Board	1	3/4" MDF Insulator board from local hardware store (Hand Routed)	\$11.97	\$11.97	
Meanwell_SE-450-24	1	24V 450W Power Supply (Lower Watt Version can be used with 120V bed)	\$64.95	\$64.95	
Micro Switch Button	3	NO / NC Limit Switch	\$1.99	\$5.97	
MTSBRW12-480-F10-V8-S26-Q8	2	12mm Lead Screw 480L (both ends stepped to 8mm)	\$51.25	\$102.50	Recommended to use ball screw at (http://goo.gl/HeSLzv) versus lead screw due to cost and speed of z-axis
MTSRN12	2	12mm / 2mm pitch lead screw nut	\$25.95	\$51.90	
NEMA_17_5.18_Planetary	2	5.18:1 planetary reduced 40mm Long Nema 17 Stepper Motor	\$30.00	\$60.00	
NEMA_17_60mm_1.5A	3	High Torque 6.5kg/cm 60mm Long Nema 17 Stepper Motor	\$11.80	\$35.40	
Q24169PCDCC	1	Hoffman Oline Enclosure (233x153x84mm)	\$58.34	\$58.34	
raspberrypi_b+	1	Raspberry Pi B+ Print Server (for octoprint / octopi)	\$39.99	\$39.99	
Rod_End_Knob	2	3D Printed		\$0.00	
SFJ10-512	2	10mm x 512mm hardened precicion rods for x/y overhead gantry	\$15.10	\$30.20	
SFJ10-610	4	10mm x 610mm hardened precicion rods for x/y axis guides	\$20.33	\$81.32	
Smooth_Idler_Pulley kit	2	GT2 Smooth Idler Pulley	\$4.85	\$9.70	
Timing Belt GT2 Profile - 2mm pitch - 6mm wide 1164mm long	1	1164mm Long GT2 (2mm pitch) (6mm wide) (1164mm Long)	\$9.95	\$9.95	
ViKi LCD	1	print controller lcd	\$75.00	\$75.00	
V-Slot_20mmX80mm489.5mm (1000mm cut in 2)	1	20mmx80mmx489.5mm Vslot Extrusion	\$10.00	\$10.00	
Window_Glass_420mm X 430mm	1	Window Glass 420mm X 430mm or Boro Glass	\$5.00	\$5.00	
Z_Gantry_Plate	2	ASTM B221-08 6063-T52 Aluminum Architectural Unequal Leg Angle 3-1/2" x 1-1/4" x 1/8"	\$8.88	\$17.76	
Total				\$1,857.21	



Printed Parts	Qty:
Z_Idler_Slide_Support	2
Z_Leadscrew_Bearing_	
Holder_Base	2
Z_Leadscrew_Bearing_Holder_Top	2
Bed_Glass_Clip	2
Bed_Glass_Clip_Mirror	2
Blower_Duct_1	1
Blower_Duct_1Mirror	1
Bowden_Tube_Nut_Trap	4
Corner_Bearing_Bracket_A	2
Corner_Bearing_Bracket_B	2
Double_Carriage_E3DV6	1
Dual_Bowden_Tube_Carriage_Adapter_E3DV6	1
Dual_Fan_Shroud_E3DV6	1
External_Motor	3
Front_Clamp_With_Fan_Mount_E3DV6	1
HercuLien_Extruder_Base_V2	2
HercuStruder_Bearing_Pivot	2
HercuStruder_Dogbone_Connector	2
HercuStruder_Pin	2
Outlet_Switch_And_Network_Mount	1
Power_Supply_Bracket_1	1
Power_Supply_Bracket_2	2
Spool_Holder_Flange	2
XY_Axis_Belt_Tensioner_A	2
XY_Axis_Belt_Tensioner_B	2
XY_Axis_Belt_Tensioner_Block_A	2
XY_Axis_Belt_Tensioner_Block_B	2
XY_LimitSwitch_Mount_A	1
XY_LimitSwitch_Mount_B	1
50mm_Threaded_Spool_Holder_Full_Round	2