| Part # | Component | Description | Quantity | Cost Per Unit | Total Cost |
|---|---|---|---|---|---|
| HE1 | **Aluminum Bar** | Multipurpose 6061 Aluminum 1/2" Thick x 1" Wide x 6" Long | 1 | 4.92 | 4.92 |
| HE2 | **Volcano nozzle** | Brass E3D Volcano Nozzle 1.75mm in 1.2mm out | 1 | 7.1 | 7.1 |
| HE3 | **Heater Cartridge** | 24V, 40W, E3D High Precision Heater Cartridges | 2 | 20 | 40 |
| HE4 | **Heat Sink** | BGAH270-175E Heat Sink, 3.5 C/W Natural Thermal Resistance | 1 | 6.61 | 6.61 |
| HE5 | **Silicon Casting Kit** | Platinum Liquid Silicone for Mold Making | 1 | 34 | 34 |
| HE6 | **Heat Break** | Bimetal Heatbreak Titanium Alloy and Copper | 1 | 8.99 | 8.99 |
| HE7 | **Bowden Tube** | Bowden PTFE Tube for 1.75mm Filament with Fittings | 1 | 11.45 | 11.45 |
| HE8 | **Thermal Paste** | Corsair TM30 Performance Thermal Paste  0.029 C/W | 1 | 7.99 | 7.99 |
| HE9 | **Heat Break Fan** | FAN AXIAL 40X20MM 24VDC WIRE 4.4 CFM | 1 | 6 | 6 |
| HE10 | **Print Fan** | FAN BLOWER 76X30MM 24VDC WIRE, B7530E24B-BSR | 1 | 15.8 | 15.8 |
| HE11 | **Hot End Thermistor** | E3D Semitec 104NT Cartridge | 1 | 7 | 7 |
| HE12 | **Mini Heated Bed** | 100mm x 100mm 24/12V Openbuild Heated Bed | 1 | 10.99 | 10.99 |
| HE13 | **PEI Sheet** | Gizmo Dorks PEI Sheet 5" x 5.5" | 1 | 12 | 12 |
| HE14 | **Bed Thermistor** | THERM NTC 100KOHM 4263K BEAD | 1 | 1.19 | 1.19 |
| HW1 | **Z-Axis 3030 Aluminum Extrusion** | 288.5mm Long, Black Anodized | 1 | 6.66 | 6.66 |
| HW2 | **Y-Axis 3030 Aluminum Extrusion** | 261mm Long, Black Anodized | 2 | 6.66 | 13.33 |
| HW3 | **MGN12H Linear Rail** | 200mm Long | 4 | 13.99 | 55.96 |
| HW4 | **8mm Metric Acme Lead Screw** | 290mm long | 1 | 10.99 | 10.99 |
| HW5 | **Anti-Backlash Nut Block** | For 8mm Metric Acme Lead Screw | 1 | 9.99 | 9.99 |
| HW6 | **5mm * 8mm Flexible Coupling** | For 8mm Metric Acme Lead Screw | 1 | 6.99 | 6.99 |
| HW7 | **Flanged Bearing** | 688ZZ 8x16x5 | 2 | 1.5 | 3 |
| HW8 | **Timing Belt** | GT2-2M, 5 Ft. | 1 | 12.45 | 12.45 |
| HW9 | **Belt Crimps** | Copper | 4 | 2.5 | 10 |
| HW10 | **Smooth Idler Pulley** | OD: 22mm ID: 16mm Width: 12.7mm | 2 | 5.99 | 11.98 |
| HW11 | **Extruder Drive Gear** | 36Teeth Bore 5mm Stainless Steel Drive Gear | 1 | 6.99 | 6.99 |
| HW12 | **Timing Pulley Gear** | 30 Tooth GT2-2M | 2 | 6.99 | 13.98 |
| HW13 | **Bearing Block Spacer** | M5 ID, 40mm,10mm OD, Aluminum | 4 | 1.5 | 6 |
| HW14 | **Extruder Idler Bearing** | 4mmx13mmx4mm Double Metal Shielded Carbon Steel Bearings | 1 | 0.66 | 8 |
| E1 | **RAMPS 1.4 Sheild** | Shield For Arduino Mega | 1 | 10 | 10 |
| E2 | **Arduino Mega** | Mega 2560 5V | 1 | 20.99 | 20.99 |
| E3 | **24V Meanwell Power Supply** | LRS-350-24, 24V/14.6A MeanWell Power Suppy | 1 | 70 | 70 |

| E4 | Stepper Motor Driver | Pololu 3099, 1.1A Continous | 4 | 12.25 | 49 |
|---|---|---|---|---|---|
| E5 | Stepper Motor Driver Heat Sink | SilentStepStick Heatsink 9 x 9 x 12 | 4 | 0.93 | 3.72 |
| E6 | End Stop Switches | Kailh BOX Black Switches Plate Mount - Linear | 3 | 1.16 | 3.5 |
| E7 | Stepper Motor | SF2422-10B41,<br>Bipolar Stepper Motor Hybrid Frame Size 200.0 Step 1 A 24VDC | 4 | 26 | 104 |
| E8 | JST 2Pin Connector Female | Amazon, 20pcs per 8.99 | 7 | 0.45 | 8.99 |
| E9 | Stepper Motor Cables | SANMOTION 4835775-1 | 4 | 3.75 | 15 |
| E10 | JST 4Pin Connector Female | Amazon, 20pcs per 8.59 | 4 | 0.45 | 8.59 |
| P1 | X-AxisBackPlate | 41g PETG, 0.8mm nozzle, 20% infill | 1 | 1.03 | 1.03 |
| P2 | X-AxisMotorFixture | 31g PETG, 0.8mm nozzle, 20% infill | 1 | 0.78 | 0.78 |
| P3 | HotEndBackPlate | 8g PETG, 0.8mm nozzle, 20% infill | 1 | 0.2 | 0.2 |
| P4 | HotEndFrontPlate | 6g PETG, 0.8mm nozzle, 20% infill | 1 | 0.15 | 0.15 |
| P5 | X-AxisBackPlateSpacer | 1g PETG, 0.8mm nozzle, 20% infill | 2 | 0.03 | 0.06 |
| P6 | X-AxisTensionerBase | 40g PETG, 0.8mm nozzle, 20% infill | 1 | 1 | 1 |
| P7 | Y-AxisRailConnectingPlate | 14g PETG, 0.8mm nozzle, 20% infill | 1 | 0.35 | 0.35 |
| P8 | BedBasePlate | 27g PETG, 0.8mm nozzle, 20% infill | 1 | 0.68 | 0.68 |
| P9 | LevelingKnob | 1g PETG, 0.8mm nozzle, 20% infill | 4 | 0.03 | 0.12 |
| P10 | Y-AxisFrontPlate | 42g PETG, 0.8mm nozzle, 20% infill | 1 | 1.05 | 1.05 |
| P11 | BearingPillowBlockPlate | 5g PETG, 0.8mm nozzle, 20% infill | 1 | 0.13 | 0.13 |
| P12 | Z-AxisMotorFixture | 16g PETG, 0.8mm nozzle, 20% infill | 1 | 0.4 | 0.4 |
| P13 | LeadScrewBearingFixture | 16g PETG, 0.8mm nozzle, 20% infill | 1 | 0.4 | 0.4 |
| P14 | Y-AxisRearPlate | 54g PETG, 0.8mm nozzle, 20% infill | 1 | 1.35 | 1.35 |
| P15 | X-AxisTensioner | 13g PETG, 0.8mm nozzle, 20% infill | 1 | 0.33 | 0.33 |
| P16 | ExtruderMotorFixture | 25g PETG, 0.8mm nozzle, 20% infill | 1 | 0.63 | 0.63 |
| P17 | PowerSupplyMountingPlate | 126g PETG, 0.8mm nozzle, 20% infill | 1 | 3.15 | 3.15 |
| P18 | Y-AxisTensioner | 10g PETG, 0.8mm nozzle, 20% infill | 1 | 0.25 | 0.25 |
| P19 | Y-AxisBeltAnchor | 2g PETG, 0.8mm nozzle, 20% infill | 1 | 0.05 | 0.05 |
| P20 | X-AxisEndStop | 5g PETG, 0.8mm nozzle, 20% infill | 1 | 0.13 | 0.13 |
| P21 | HotEndSpacer | 3g PETG, 0.8mm nozzle, 20% infill | 4 | 0.08 | 0.32 |
| P22 | Z-AxisBasePlate | 70g PETG, 0.8mm nozzle, 20% infill | 1 | 1.75 | 1.75 |
| P23 | PrintFanFixture | 6g PETG, 0.8mm nozzle, 20% infill | 1 | 0.15 | 0.15 |
| P24 | FanDuct | 102g PETG, 0.8mm nozzle, 20% infill | 1 | 2.55 | 2.55 |
| P25 | Z-AxisEndStopFixture | 3g PETG, 0.8mm nozzle, 20% infill | 1 | 0.08 | 0.08 |
| P26 | Y-AxisEndStopFixture | 10g PETG, 0.8mm nozzle, 20% infill | 1 | 0.25 | 0.25 |
| P27 | FrontBasePlate | 50g PETG, 0.8mm nozzle, 20% infill | 1 | 1.25 | 1.25 |

| P28 | ArduinoCaseBottom | 119g PETG, 0.8mm nozzle, 20% infill | 1 | 2.98 | 2.98 |
|---|---|---|---|---|---|
| P29 | ArduinoCaseTop | 117g PETG, 0.8mm nozzle, 20% infill | 1 | 2.93 | 2.93 |
| P30 | ArduinoCaseGrate | 10g PETG, 0.8mm nozzle, 20% infill | 1 | 0.25 | 0.25 |
| P31 | Y-Z-AxisConnectingBracket | 7g PETG, 0.8mm nozzle, 20% infill | 1 | 0.18 | 0.18 |
| P32 | ExtruderLever | 7g PETG, 0.8mm nozzle, 20% infill | 1 | 0.18 | 0.18 |
| P33 | ExtruderPlate | 11g PETG, 0.8mm nozzle, 20% infill | 1 | 0.28 | 0.28 |
| P34 | ExtruderSpringEndstop | 1g PETG, 0.8mm nozzle, 20% infill | 1 | 0.03 | 0.03 |
| P35 | EndStopCap | 2g PETG, 0.8mm nozzle, 20% infill | 1 | 0.05 | 0.05 |
| P36 | BacklashNutSpacer | 1g PETG, 0.8mm nozzle, 20% infill | 2 | 0.03 | 0.06 |
| F1 | M3x10mm Socket Head | McMaster-Carr: 91290A115, $9.54 per pack of 100 | 4 | 0.1 | 9.54 |
| F2 | M3x12mm Socket Head | McMaster-Carr:91290A117, $10.85 per pack of 100 | 5 | 0.11 | 10.85 |
| F3 | M3x16mm Socket Head | McMaster-Carr:91290A120, $11.48 per pack of 100 | 1 | 0.11 | 11.48 |
| F4 | M3x20mm Socket Head | McMaster-Carr:91290A123, $13.59 per pack of 100 | 5 | 0.14 | 13.59 |
| F5 | M3x25mm Socket Head | McMaster-Carr:91290A125, $16.70 per pack of 100 | 7 | 0.17 | 16.7 |
| F6 | M3x30mm Socket Head | McMaster-Carr:91290A171, $7.17 per pack of 10 | 1 | 0.72 | 7.17 |
| F7 | M3x45mm Socket Head | Openbuilds, 1 pc per 0.29$ | 4 | 0.29 | 1.16 |
| F8 | M3x70mm Socket Head | McMaster-Carr:91290A297, $4.26 per pack of 1 | 4 | 4.26 | 17.04 |
| F9 | M3x6mm Flat Head | McMaster-Carr:91294A126, $5.45 per pack of 100 | 8 | 0.05 | 5.45 |
| F10 | M3x12mm Flat Head | McMaster-Carr:91294A132, $7.34 per pack of 100 | 1 | 0.07 | 7.34 |
| F11 | M3x30mm Flat Head | McMaster-Carr:91294A141, $6.93 per pack of 50 | 7 | 0.04 | 6.93 |
| F12 | M3x35mm Flat Head | McMaster-Carr:91294A536, $13.17 per pack of 25 | 2 | 0.53 | 13.17 |
| F13 | M3x6mm Button Head | Openbuilds, 10 pcs per 1$ | 1 | 0.1 | 1 |
| F14 | M3x8mm Button Head | Openbuilds, 10 pcs per 1$ | 41 | 0.1 | 5 |
| F15 | M3x12mm Button Head | Openbuilds, 10 pcs per 1$ | 6 | 0.1 | 1 |
| F16 | M3x18mm Button Head | McMaster-Carr:92095A472, $8.70 per pack of 100 | 2 | 0.09 | 8.7 |
| F17 | M3x25mm Button Head | McMaster-Carr:92095A186, $6.34 per pack of 50 | 4 | 0.13 | 6.34 |
| F18 | M3 Set Screw 6mm | McMaster-Carr:91390A100, $6.52 per pack of 100 | 5 | 0.07 | 6.52 |
| F19 | M3 Tnut | Openbuilds, 10 pcs per 2.79$ | 33 | 0.28 | 11.16 |
| F20 | M3 Nut | McMaster-Carr:90592A085, $2.62 per pack of 100 | 32 | 0.03 | 2.62 |
| F21 | M4x12mm Socket Head | McMaster-Carr:91290A148, $11.54 per pack of 100 | 2 | 0.12 | 11.54 |
| F22 | M5x6mm Socket Head | McMaster-Carr:91290A221, $13.12 per pack of 100 | 18 | 0.13 | 13.12 |
| F23 | M5x8mm Socket Head | McMaster-Carr:91290A222, $12.28 per pack of 100 | 2 | 0.13 | 12.28 |
| F24 | M5x12mm Socket Head | McMaster-Carr:91290A228, $15.38 per pack of 100 | 2 | 0.15 | 15.38 |
| F25 | M5x18mm Socket Head | McMaster-Carr:91290A238, $17.44 per pack of 100 | 1 | 0.17 | 17.44 |

| F26 | **M5x40mm LowProfile** | McMaster-Carr:93070A133, $8.18 per pack of 25 | 1 | 0.33 | 8.18 |
|-----|------------------------|------------------------------------------------|---|------|------|
| F27 | **M5x10mm Flat Head** | McMaster-Carr:92125A208, $14.76 per pack of 100 | 1 | 0.15 | 14.76 |
| F28 | **M5x18mm Flat Head** | McMaster-Carr:92125A213, $10.62 per pack of 50 | 1 | 0.21 | 10.62 |
| F29 | **M5 Tnut** | Openbuilds, 10 pcs per $2.99 | 8 | 0.3 | 2.99 |
| F30 | **M5 Nut** | McMaster-Carr:90592A095, $4.05 per pack of 100 | 2 | 0.04 | 4.05 |
| F31 | **M6x50mm Socket Head** | McMaster-Carr:91290A207, $5.52 per pack of 5 | 4 | 1.1 | 5.52 |
| F32 | **M6 Nut** | McMaster-Carr:90591A151, $3.14 per pack of 100 | 4 | 0.03 | 3.14 |
| F33 | **Ender3 Bed Spring** | Amazon, 20pcs per 8.99 | 9 | 0.45 | 8.99 |
| F34 | **M3 Heat Inserts** | 100pcs/lot M3x4.0mm, OD4.6mm | 7 | 0.12 | 12 |
| | | | | Total | 972.45 |