




Bear X axis and Extruder

Bill of Materials

Hardware BOM For Prusa Printers

Check the spare parts bags from your Prusa, you might already have most of this list.

Parts	Quantity	Details	Example Links
Original Prusa i3 MK2.5S or MK3s printer	1		Prusa
Dowel pin diameter: 2.90-2.95mm length: 15mm to 15.8mm	1	 Cut a M3 screw if you can't find one	
M3x10mm socket head screw (ISO 4762)	14		McMaster-Carr
M3x14mm socket head screw (ISO 4762)	4	 Use M3x16 button head (ISO 7380) for Sunon or Delta hotend fan	McMaster-Carr
M3x18mm socket head screw (ISO 4762)	14		McMaster-Carr
M3x25mm socket head screw (ISO 4762)	2		McMaster-Carr
M3x40mm socket head screw (ISO 4762)	6		McMaster-Carr
M2x12mm socket head screw (ISO 4762)	2	 MK2.5 only	McMaster-Carr
M3 Hex nuts (DIN 934)	14		McMaster-Carr
M3 Hex nylock nuts (DIN 985)	4		McMaster-Carr
M3 Square nuts (DIN 562)	7	1.8mm thick and 5.5mm wide	
M3 Steel washer (DIN 125), 0.5mm thick	5		
50mm PTFE Tube ¹	1	Same PTFE tube than in MK2S, MK2.5 (non-S) and MK3 (non-S).  Check our guide: Trim PTFE Tube	
Zip ties 2.5x100mm	6		

Note¹ : The printed parts include a PTFE cutter and the assembly will guide you on how to properly trim the PTFE tube. You can check our [Trim PTFE Tube](#) guide to ensure you have all the hardware to do it.

Additional BOM for scratch build

Parts	Quantity	Specifications	Example Links
Bondtech gears	1	1.75mm/5.0mm with its 20mm shaft	Bondtech
Nema 17 stepper for X axis LDO 42STH38-1004A100CM	1	Datasheet	Prusa

Parts	Quantity	Specifications	Example Links
Nema 17 stepper for Z axis integrated Lead screw Tr8x8 (P2x4) and nut LDO-42STH34-1004L321E100CM	2	Datasheet	Prusa
Nema 17 stepper for extruder extruder LDO Cool Power 42STH40-1004ASR	1	Datasheet	
Hotend Fan	1	Check our recommended fans	
Nozzle Fan	1	Minimal specifications: - CFM: 3.8 - Static Pressure: 11.3 mmH2O - Bearing type: ball bearing	Prusa
Inductive Sensor	1	Diameter of 8mm, length around 35mm	
Filament sensor with magnets, steel ball and cables	1	1x IR Sensor: GitHub Prusa 1x Steel ball 7mm diameter 1x Magnet 20x6x2 1x Magnet 10x6x2	Prusa
2GT 16T pulley	1	3mm bore	E3D-Online store
2GT 20T idler	1	3mm bore smooth or toothed Check this optional part for E3D idler	
Extruder spring	1	Wire Diameter: 0.8mm Centre Diameter: 4.9mm Free length: 15mm Compressed length: 10mm Material: DIN 2076-B	Prusa
Smooth rods	2	8mm diameter H6 370mm long	Prusa
Gates LL-2GT RF belt	1	6mm width 880mm long	E3D-Online store
Nylon cable 2.85-3.00mm diameter 500mm long	1	Check 2.85mm filament samples or 2.85mm cleaning filaments	

🔗 : You need to have ordered a Prusa printer and need to login on Prusa store to see the articles. You can probably find this hardware from our [official distributors](#)

Printed Parts BOM

Parts	Quantity
cable_guide_back_a	1
cable_guide_back_b	1
extruder_body	1

Parts	Quantity
extruder_cover	1
extruder_idler_bondtech	1
filament_sensor_cover	1
hotend_collet_clip	1
x_carriage	1
x_carriage_back	1
x_end_idler	1
x_end_idler_idler_mount	1
x_end_motor	1