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.

Part	Quantity	Detail	Link
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		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).	
Zip ties 2.5x100mm	6		

> Note [1] : The printed parts include a PTFE cutter and the assembly will guide you on how to properly trim the PTFE tube. In this case you need a 100mm PTFE tube that you will prepare and cut.

Additional BOM for scratch build

Part	Quantity	Specifications	Link
Bondtech gears	1	1.75mm/5.0mm with its 20mm shaft	Bondtech
X axis stepper LDO 42STH38-1004A100CM	1	Datasheet	Prusa
Extruder stepper LDO Cool Power 42STH40-1004ASR	1	Datasheet	
Tr8x8 (P2x4) Nuts	1	Datasheet	Prusa
		40x40x10 mm	

Hotend Fan	1	5V with Tachometer (3 wires) Check recommend fans	
Filament sensor with magnets, steel ball and cables	1	1x IR Sensor: GitHub Prusa 1x Steel ball 8mm diameter 1x Magnet 20x6x2 1x Magnet 10x6x2	Prusa
2GT 20T idler	1	3mm bore smooth or toothed Check this optional part for E3D idler	
Spring	1	15mm length (relaxed) inside diameter: 3.2mm wire diameter: 0.8mm	Prusa
Smooth rods	2	8mm diameter H6 370mm long	Prusa
Gates LL-2GT RF belt	1	6mm width 880mm long	Prusa

✂ : You need to have ordered a Prusa printer and need to login on Prusa store to see the articles. Alternatively checkout our official distributors

Printed Parts BOM

Part	Quantity
cable_guide_back_a	1
cable_guide_back_b	1
extruder_body	1
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