

# 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		<a href="#">Prusa</a>
Dow el 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		<a href="#">McMaster-Carr</a>
M3x14mm socket head screw (ISO 4762)	4		<a href="#">McMaster-Carr</a>
M3x18mm socket head screw (ISO 4762)	14		<a href="#">McMaster-Carr</a>
M3x25mm socket head screw (ISO 4762)	2		<a href="#">McMaster-Carr</a>
M3x40mm socket head screw (ISO 4762)	6		<a href="#">McMaster-Carr</a>
M2x12mm socket head screw (ISO 4762)	2	 MK2.5 only	<a href="#">McMaster-Carr</a>
M3 Hex nuts (DIN 934)	14		<a href="#">McMaster-Carr</a>
M3 Hex nylock nuts (DIN 985)	4		<a href="#">McMaster-Carr</a>
M3 Square nuts (DIN 562)	7	1.8mm thick and 5.5mm w ide	
M3 Steel w asher (DIN 125), 0.5mm thick	5		
50mm PTFE Tube <sup>1</sup>	1	Same PTFE tube than in MK2S, MK2.5 (non-S) and MK3 (non-S).	
Zip ties 2.5x100mm	6		

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

### Additional BOM for scratch build

Part	Quantity	Specifications	Link
Bondtech gears	1	1.75mm/5.0mm w ith its 20mm shaft	<a href="#">Bondtech</a>
X axis stepper LDO 42STH38-1004A100CM	1	<a href="#">Datasheet</a>	<a href="#">Prusa</a>
Extruder stepper LDO Cool Pow er 42STH40-1004ASR	1	<a href="#">Datasheet</a>	
Tr8x8 (P2x4) Nuts	1	<a href="#">Datasheet</a>	<a href="#">Prusa</a>
		40x40x10 mm	

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

🔗 : 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