BILL OF MATERIALS

Robotic Arm

Rev. 2026-04-30 74 items

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BOM	Product/Project: Robotic Arm Revision date: 2026-04-30	https://www.printables.com/model/1510558-robotic-arm

COMPONENT 33 items

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Nema 17 - Stepper Motor	**1**	AliExpress Link	Amazon Link	*SM42HT47-1684 1,8” step, 1,6 A, 60mm*
>>	Arduino Mega	**1**	AliExpress Link	Amazon Link	*ARDUINO MEGA 2560*
>>	Stepper Driver	**x6**	AliExpress Link	Amazon Link	*Stepper Driver tb6560*
>>	Power Supply	**1**	AliExpress Link	Amazon Link	*Power Supply 24V 320W*
>>	RAMPS Board	**1**	AliExpress Link	Amazon Link	*RAMPS V1.4*
>>	Voltage Converter	**1**	AliExpress Link	Amazon Link	*Power converter 24V a 12V*
>>	Servo Motor	**1**	AliExpress Link	Amazon Link	*Servo Motor 180 deg 55G TORQUE=13KG/CM*
>>	Nema 17 - Geared Stepper	**1**	AliExpress Link	Amazon Link	*Gear Ratio 5:1 Planetary Gearbox (step 0,35” , 2Nm, 1,68A)*
>>	Nema 23 - Stepper Motor	**x2**	AliExpress Link	Amazon Link	*112mm Single shaft Ø8mm, step 1,8”, 3A, 3Nm hoding torque*
>>	Nema 14 - Stepper Motor	**1**	AliExpress Link	Amazon Link	*SM35HT36-1004A, 1,8” step, 1A, 1400g*cm*
>>	Nema 17 - Stepper Motor	**1**	AliExpress Link	Amazon Link	*SM42HT33-1334, 1,8” step, 1,33A, 2200 g*cm*
>>	Smooth Rod	**1**	AliExpress Link	Amazon Link	*Smooth Rod_M8x134mm (cut to length)*
>>	Smooth Rod	**1**	AliExpress Link	Amazon Link	*Smooth Rod_M8x114mm (cut to length)*
>>	Smooth Rod	**1**	AliExpress Link	Amazon Link	*Smooth Rod_M8x80mm (cut to length)*

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COMPONENT continued

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Bearing	**x10**	AliExpress Link	Amazon Link	*Ball Bearing 608ZZ 8mm x 22mm x 7mm*
>>	Bearing	**x8**	AliExpress Link	Amazon Link	*Ball Bearing 625ZZ 5mm x 16mm x 5mm*
>>	Bearing	**x9**	AliExpress Link	Amazon Link	*Ball Bearing 624ZZ 4mm x 13mm x 5mm*
>>	Bearing	**x3**	AliExpress Link	Amazon Link	*Ball Bearing 623ZZ 3mm x 10mm x 4mm*
>>	Brass Heat Insert	**x3**	AliExpress Link	Amazon Link	*M4x8x5*
>>	Brass Heat Insert	**x20**	AliExpress Link	Amazon Link	*M3x5,6x4,7*
>>	Pulley	**x3**	AliExpress Link	Amazon Link	*Pulley T5, Bore 8mm, 14 tooth, 17mm width*
>>	Pulley	**x2**	AliExpress Link	Amazon Link	*Pulley T5, Bore 5mm, 10 tooth, 17 mm width*
>>	Threaded Rod	**1**	AliExpress Link	Amazon Link	*ROD BAR M8 L 42mm (Order 50mm and grind 2mm off)*
>>	Shaft Coupling	**1**	AliExpress Link	Amazon Link	*COUPLING STEEL 5 TO 8 mm rigid*
>>	Cooling Fan	**1**	AliExpress Link	Amazon Link	*Axial Fan DC 24V 80x80x25mm*
>>	Cooling Fan	**1**	AliExpress Link	Amazon Link	*Axial Fan DC 24V 50x50x15mm*
>>	Power Cable	**1**	AliExpress Link	Amazon Link	*Power supply cable IEC 1,5m (buy the one for your region.*
>>	USB Cable	**1**	AliExpress Link	Amazon Link	*Cable USB 2.0 AM/BM 1,8m*
>>	Cable Management	**x10**	AliExpress Link	Amazon Link	*Cable Ties*

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COMPONENT continued

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Bushing	**x8**	AliExpress Link	Amazon Link	*Self Lubricating bearing 5mm x 8mm x 10mm*
>>	Bushing	**x2**	AliExpress Link	Amazon Link	*Self Lubricating bearing 8mm x 12mm x 20mm*
>>	Timing Belt	**1**	AliExpress Link	Amazon Link	*Breco belt T5, 15mm width, L 180cm*
>>	Base Plate	**1**	-	-	*Wood Base - 550mm x 550mm x 16mm (Or another material fo your choosing)*

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FASTENERS 27 items

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M3x8*
>>	Hexagonal Head Cap Screw	**x30**	AliExpress Link	Amazon Link	*MC6S M3x10*
>>	Hexagonal Head Cap Screw	**x6**	AliExpress Link	Amazon Link	*MC6S M3x12*
>>	Hexagonal Head Cap Screw	**x13**	AliExpress Link	Amazon Link	*MC6S M3x16*
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M3x20*
>>	Hexagonal Head Cap Screw	**x5**	AliExpress Link	Amazon Link	*MC6S M3x25*
>>	Hexagonal Head Cap Screw	**x2**	AliExpress Link	Amazon Link	*MC6S M3x30*
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M3x35*
>>	Hexagonal Head Cap Screw	**x7**	AliExpress Link	Amazon Link	*MC6S M3x40*
>>	Hexagonal Head Cap Screw	**x2**	AliExpress Link	Amazon Link	*MC6S M4x10*
>>	Hexagonal Head Cap Screw	**x2**	AliExpress Link	Amazon Link	*MC6S M4x12*
>>	Hexagonal Head Cap Screw	**x8**	AliExpress Link	Amazon Link	*MC6S M4x16*
>>	Hexagonal Head Cap Screw	**x3**	AliExpress Link	Amazon Link	*MC6S M4x20*
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M4x25*
>>	Hexagonal Head Cap Screw	**x8**	AliExpress Link	Amazon Link	*MC6S M4x30*
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M4x40*
>>	Hexagonal Head Cap Screw	**x6**	AliExpress Link	Amazon Link	*MC6S M4x45*
>>	Hexagonal Head Cap Screw	**x4**	AliExpress Link	Amazon Link	*MC6S M4x60*
>>	Hexagonal Head Cap Screw	**x120**	AliExpress Link	Amazon Link	*MC6S M5x14*

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FASTENERS continued

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Hexagonal Head Cap Screw	**x8**	AliExpress Link	Amazon Link	*MC6S M5x20*
>>	Hexagonal Bolt	**1**	AliExpress Link	Amazon Link	*M6S M8x65*
>>	Nut	**x30**	AliExpress Link	Amazon Link	*NUT M3*
>>	Nut	**x4**	AliExpress Link	Amazon Link	*NUT M4*
>>	Locknut	**x18**	AliExpress Link	Amazon Link	*LOCKNUT M4*
>>	Locknut	**x16**	AliExpress Link	Amazon Link	*LOCKNUT M5*
>>	Locknut	**x2**	AliExpress Link	Amazon Link	*LOCKNUT M8*
>>	Washer	**x10**	AliExpress Link	Amazon Link	*WASHER M3*

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FILAMENTS

4 items

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	ABS/ASA/PETG&PC Filament	**1**	AliExpress Link	Amazon Link	*Approx 500g required*
>>	ABS/ASA/PETG&PC Filament	**1**	AliExpress Link	Amazon Link	*Approx 500g required*
>>	Black PLA Filament	**1**	AliExpress Link	Amazon Link	*Approx 750g required (includes 500g for the stand)*
>>	White TPU Filament	**1**	AliExpress Link	Amazon Link	*Approx 50g required, for feet*

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TOOLS

10 items

	Description	Qty	AliExpress	Amazon (Geniuslink)	Notes
>>	Crimp Tool	**1**	AliExpress Link	Amazon Link	-
>>	Hex Key set	**1**	AliExpress Link	Amazon Link	-
>>	Soldering Iron	**1**	AliExpress Link	Amazon Link	-
>>	Wire cutter	**1**	AliExpress Link	Amazon Link	-
>>	Wire stripper	**1**	AliExpress Link	Amazon Link	-
>>	Precision Screwdriver Set	**1**	AliExpress Link	Amazon Link	-
>>	Heat insert set	**1**	AliExpress Link	Amazon Link	-
>>	Heat insert tip - set	**1**	AliExpress Link	Amazon Link	-
>>	Soldering Iron TS101	**1**	AliExpress Link	Amazon Link	-
>>	Heat Insert Kit	**1**	AliExpress Link	Amazon Link	-