

This file contains all the parts you need to build PAROL6 robot!
Most items have links where you can buy the item, and some of them are affiliate links.
Items like screws, belts and bearings can be bought locally or from many other vendors.

Screws and nuts:				
	diameter , length	quantity	Description	
	M4x10mm	20	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x8mm	10	2 mm head height	
	M3x8mm	50	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x14mm	30	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3 nut	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x25mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M2x10mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x16mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x6mm	10	Pan head phillips	
	M3x12mm	30	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x35mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M4x16mm	30	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M4x14mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M4x50mm	10	DIN 912 / ISO 4762 (hexagon socket head cap)	
	M3x15mm	2	Tapered screw head	
Gearboxes:				
Name in building instructions	Type	quantity	Description	Alternative
Gearbox 20:1	Nema 17 20:1 EG precision planetary	2	Link	Link
Gearbox 10:1	Nema 17 10:1 EG precision planetary	1	Link	Link
Motors:				
Name in building instructions	Type	quantity	Description	
Stepper 1	Nema 17 16Ncm,42x42x20mm	1	Link	
Stepper 2	Nema 17 45Ncm,42x42x40mm	3	Link	
Stepper 3	Nema 17 65Ncm,42x42x60mm	2	Link	
Belts:				
Name in building instructions	Type	quantity	Description	
Joint 1 belt	HTD3 396	1	6 mm width	
Joint 3 belt	HTD3 342	1	6 mm width	
Joint 4 belt	HTD3 201	1	6 mm width	
Joint 5 belt	HTD3 246	1	6 mm width	
Pulleys:				
Name in building instructions	Type	quantity	Description	
J4 pulley, J5 pulley	HTD3M 12 tooth 5mm bore 10mm width	2		
J1 pulley	HTD3M 15 tooth 5mm bore 10mm width	1		
Mechanical stuff:				
Name in building instructions	Type	quantity	Description	
Shaft coupler	Shaft coupler	3	8 mm hole shaft, M4 screw holes	
Bearings:				
Name in building instructions	Type	quantity	Description	
Bearing 1	AXK3552	1	35X52X4, needs to have top and bottom plate	
Bearing 2	NSK HR32906J	5	Joint 5, 4 and 3	
Bearing 3	NSK HR32907J	4	Joint 1 and 2	
Tension bearing	Ball bearing 3x8x4	20	Used for belt tension	
Tension bearing	Ball bearing 3x10x4	20	Used for belt tension	
Electronics:				
Name in building instructions	Type	quantity	Description	
	PAROL control board	1	source-robotics.com	
	TMC5160	6	Drivers from the links are tested. Use any other at own risk: Link1	
	Thermal paste	2	Needed only if your control board has no drivers!	
	On/Off button	1	12mm 3-6V	
	JST PH 2.0mm 200mm 4PIN	1	For power button	
	Noctua NF-A4x20 5V 40mm	1		
	Power connector - male + female	1	GX16 2PIN	
	Gripper connector (electric)	1	M8 sensor Female 4 pin	
	Power supply	1	Any 24V 5A supply	
	Limit switches	3	Type ZW12-3	
	Inductive sensor 1	1	4mm NPN NO	
	Inductive sensor 2	1	GX-F8A	
	Inductive sensor 3	1	M5, NPN NO	
	Estop	1	Any NC estop	
	Cable gland for estop	1	PG7 type	
	M3 brass insert	4	M3, 6mm lenght	
	Pneumatic connector - robot	4	4 mm type PM	
	Pneumatic Gripper	1	MHZ2-16D	
	Pneumatic gripper connector	2	PC4 - M5	
	Pneumatic tube	5 meters	1 meter, 4x2.5mm	
	x130 connector female	1	used to deliver power to PAROL6 PCB	
	Stlink	1	Use link! Pin order needs to be: SWCLK,SWDIO,GND,3V3,5V	
	USB B cable	1	Comms to the PC	
	5/2 solenoid air valve	1	4mm tube connectors, 5/2, 24V	
Vacuum gripper				
Name in building instructions	Type	quantity	Description	
	Suction cup gripper	1		
	Vacuum generator	1		
	4mm to 6mm coupler	1		