

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	Link	Alternative links
	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	Link	Alternative (Note these gearboxes have bigger backlash and in turn your robot will be less precise if you use them)
Gearbox 20:1	Nema 17 20:1 EG precision planetary	2	Link	Link	Link
Gearbox 10:1	Nema 17 10:1 EG precision planetary	1	Link	Link	Link
Motors:					
Name in building instructions	Type	quantity	Description	Link	
Stepper 1	Nema 17 16Ncm,42x42x20mm	1	Link	Link	
Stepper 2	Nema 17 45Ncm,42x42x40mm	3	Link	Link	
Stepper 3	Nema 17 65Ncm,42x42x60mm	2	Link	Link	
Belts:					
Name in building instructions	Type	quantity	Description	Link	
Joint 1 belt	HTD3 396	1	6 mm width	Link	
Joint 3 belt	HTD3 342	1	6 mm width	Link	
Joint 4 belt	HTD3 201	1	6 mm width	Link	
Joint 5 belt	HTD3 246	1	6 mm width	Link	
Pulleys:					
Name in building instructions	Type	quantity	Description	Link	
J4 pulley, J5 pulley	HTD3M 12 tooth 5mm bore 10mm width	2		Link	
J1 pulley	HTD3M 15 tooth 5mm bore 10mm width	1		Link	
Mechanical stuff:					
Name in building instructions	Type	quantity	Description	Link	
Shaft coupler	Shaft coupler	3	8 mm hole shaft, M4 screw holes	Link	
Bearings:					
Name in building instructions	Type	quantity	Description	Link	
Bearing 1	AXK3552	1	35X52X4, needs to have top and bottom plate	Link	
Bearing 2	NSK HR32906J	5	Joint 5, 4 and 3	Link	
Bearing 3	NSK HR32907J	4	Joint 1 and 2	Link	
Tension bearing	Ball bearing 3x8x4	20	Used for belt tension	Link	
Tension bearing	Ball bearing 3x10x4	20	Used for belt tension	Link	
Electronics:					
Name in building instructions	Type	quantity	Description	Link	
	PAROL control board	1	source-robotics.com	Link	
	TMC5160	6	Drivers from the links are tested. Use any other at own risk.	Link1	Link2
	Thermal CEMENT	2	Needed only if your control board has no drivers!		
	On/Off button	1	12mm 3-6V	Link	
	JST PH 2.0mm 200mm 4PIN	1	For power button	Link	
	Noctua NF-A4x20 5V 40mm	1			
	Power connector - male + female	1	GX16 2PIN	Link	
	Gripper connector (electric)	1	M8 sensor Female 4 pin	Link	
	Power supply	1	Any 24V 5A supply	Link	
	Limit switches	3	Type ZW12-3	Link	
	Inductive sensor 1	1	4mm NPN NO	Link	
	Inductive sensor 2	1	GX-F8A	Link	
	Inductive sensor 3	1	M5, NPN NO	Link	
	Estop 19mm	1	Any NC estop	Link	
	Cable gland for estop	1	PG7 type	Link	
	M3 brass insert	4	M3, 6mm lenght	Link	
	Pneumatic connector - robot	4	4 mm type PM	Link	
	Pneumatic Gripper	1	MHZ2-16D	Link	
	Pneumatic gripper connector	2	PC4 - M5	Link	
	Pneumatic tube	5 meters	1 meter, 4x2.5mm	Link	
	xt30 connector female	1	used to deliver power to PAROL6 PCB	Link	
	Stlink	1	Use link! Pin order needs to be: SWCLK, SWDIO,GND,3V3,5V	Link	
	USB B cable	1	Comms to the PC		
	5/2 solenoid air valve	1	4mm tube connectors, 5/2, 24V	Link	

	Vacuum gripper				
Name in building instructions	Type	quantity	Description	Link	
	Suction cup gripper	1		Link	
	Vacuum generator	1		Link	
	4mm to 6mm coupler	1		Link	