**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 |
| | 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 |
| 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 | 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 | |
| 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 |
| | 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 | 1 | Any NC estop | 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 | Used to program PAROL6 control board | |
| | USB B cable | 1 | Comms to the PC | |
| | 5/2 solenoid air valve | 1 | 4mm tube connectors, 5/2, 24V | Link |