

Hercules BOM

		quantity	notes
Fixings	Description		
	M3 x 40mm	2	front axles
	M3 x 20-25mm	2	rear axles
	M3 x 25-30mm	2	arm rear
	M3 x 40-45mm	2	arm front
	3mm studding/tube x60mm	1	arm hinge
	M2 x 6-8mm	4	lifter plate
	M2 x 8-10mm thread forming screws.	8	lid retention
	M3 washer (steel or nylon)	optional	for wheels and arm linkage spacing (will make smoother running)
	M3 Nyloc	8	4 for arm, 2 for rear axles, 2 for front axles (optional)
	M2 nut	4	Lifter plate (insert into over the top lifter fork)
	M2 washer	4	optional, under M2 screw head to spread load into lifter plate
Tyres	22mm ID 2.5mm section Oring	8	O-ring tyres (can be 2.5-3mm section, and 20-22mm ID, smaller ID will give a tighter fit)
	Rubber band ~5.5mm wide		Tyres for rubber band wheels.
Motors	N10/20 500-1000RPM	2	wheel drive e.g. https://shop.bristolbotbuilders.com/product/n20/
	N10/20 30-100RPM	1	lifter (30RPM will do 90 degree lift in 1s, 60in 0.5s etc) e.g. https://shop.bristolbotbuilders.com/product/100n10/
Electronics	Malenki nano	1	https://shop.bristolbotbuilders.com/product/malenki/
	Slide switch	1	SS12D10G5 (6.7x12.7mm) similar to : https://www.ebay.co.uk/itm/296954442063 or BBB antweight switch https://shop.bristolbotbuilders.com/product/switch/
	red+black wire	not a lot	20-24 awg
	JST XH connecotr (3 pin)	1	battery balence connector mating half middle pin removed or use your own connector
	Battery	1	250-100mAh 2S (or 2x 1S with connectors to suit) should supply >2A for good performance
Sundries	heatshrink tape	some some	insulate battery connector and misc joints insulate Malenki nano

Printable Parts	Description	quantity	notes
Gears	Motor gear (10/20/15T)	2	Gear and wheel motor combination must add up to 30T motor gears have variants for different "D" clearances, some test prints will be needed to get the best fitting parts (Fit 0.025-0.3mm clearances)
	Motor gear (10T Wide)	1	For lifter arm motor motor gears have variants for different "D" clearances, some test prints will be needed to get the best fitting parts (Fit 0.025-0.3mm clearances)
wheels	Wheel 25mm gear (15T,18T,20T) (2.5mm tyres, flat band tyres)	4	2 wheel variants, one for Orings, one for gluing Rubber bands both come in 15,18,20T options, motor and wheel combination must add up to 30T
Lifter Mech	Grabber Gear 18mm 10T	1	this gear has a 18mm lever to actuate the grabber
	Idler gear 20T	1	20T Idler gear, connects lifter motor to the arm and grabber.
	Lifter plate v2 (not) big	1	2 options, a "big" and "not big" if you need to save some weight
	Top claw (Left/Right)	1 pair	2 mirrored parts
	Linkage 40mm	2	connects grabber gear to claws
	Over the top lifter fork (Left/Right)	1 pair	2 mirrored parts
Forks	front fork Big v2 (Left/Right)	1 pair	2 mirrored parts
Chassis	Hercules Lid	1	The Lid (strangely on the bottom)
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