

item	quantity	description
filament, petg or pla	2kg	Petg for temperature resistance if the unit is to be used in a hot climate, otherwise PLA is fine an a bit easier to print with/gives better quality. I haven't tried PHA yet, but it's worth investigating.
bearing	2	24 mm od, 15 mm id, 5 mm width
Wheel drive motor	1	34 mm gimbal motor, see the cad file for the exact dimensions. It just glues onto the motor mounting bracket, I tried using screws, but the screws and hole patterns used by the various motors change a lot between models and they use hard to obtain screw sizes, so there is little point. Glue works fine.
motor driver	1	https://www.amazon.ca/DollaTek-5V-12V-Brushless-Driver-Controller/dp/B082QN3V9Q/?_encoding=UTF8&pd_rd_w=w3twL&content-id=amzn1.sym.aa0eb9f1-1ea2-48b2-8ab1-b3859370648d&pf_rd_p=aa0eb9f1-1ea2-48b2-8ab1-b3859370648d&pf_rd_r=SN2NJWCDP4P3QP1K3DEF&pd_rd_wg=2lll5&pd_rd_r=17bfa6b1-ff57-4147-a922-311c10362ca0&ref_=pd_gw_ci_mcx_mi
Toothed belt, 752 mm, 2 mm pitch, gt-2 or trapezoidal profile, 6 mm wide	1	Belts are hard to get in sensible sizes and types, this is the most common. If you can't source it you would have to modify the file and use a different length.
Raspberry pi pico	1	
12v power supply, 3 amp, 2.1 mm pin, 5.5 mm OD		You might not need 3 amps, but that gives you some extra just in case. Most 2.5 mm ID adapters also work fine.
Fans, centrifugal, 4 pin, 120mm	2	These are kind of hard to source. You can also use te 2 pin kind and some drive circuitry to PWM them down. You can also use axial fans, see previous CAD files for the parts to adapt them. However the flow rate is lower and they aren't any better in any other ways.
Protoboard		This is just blank protoboard. You could also use a solderless breadboard or other approaches, the wiring is so simple you could also just solder things point to point and not use a PCB.
potentiometer		Any potentiometer will do, basically, just a matter of the mounting style. https://www.amazon.ca/gp/product/B07SPS71RW/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
power connector, 2.1 mm id pin, 5.5 Mm od		Definitely get the 2.1 mm id one, they are usually compatible with the 2.5 mm adapters, but not vice versa.
thermistors		10k ohm thermistors, preferably waterproof
Wires, 22	8	Any wire of about the right gauge is fine, I slightly prefer solid core as it can connect

gauge		to the connectors of the fans easily..
rubber washers	8	3d printed, included in the kit, if you want to print your own, they are in the cad file.
voltage regulator, ST Micro L78S05CV	1	Any 5 volt regulator that can handle the 12 volt input will do. This one is fine
capacitors, resistors, diode, solder		1 0.1 uf for the output of the regulator, one 0.33 uf for the input, 2 10kohm resistors for the thermistor system, one silicon power diode of any type for the pico, this allows you to connect the pico to the usb port of a computer without problems while the unit is powered on.
grease, syringe, needle		Optional, a 5 mm luer lock needle an 18 gauge needle works well. This is to get grease into the seal after assembly, but you can also add it during assembly instead.
Screws 12 mm	22	12mm long thread, plastic screws (made for plastic, not of plastic), 3 mm hex cap
Screws, 20 mm	4	Some longer ones are needed for mounting the wheel drive motor, because of the thickness of the rubber washers. You could omit the other washers and just use 12 mm screws, too.
Screws, 10 mm	3	These are for mounting the motor drive board, but you can use 12 mm ones too.
glue, sealant		<p>Shoe goo is convenient, silicone caulk works but the tubes set easily, wasting a whole tube, which is expensive. Shoe goo works by solvent evaporation, so it keeps no problem as long as you put the cap back on. It doesn't look quite as nice. It also solidifies a bit faster in thin layers.</p> <p>One place this is needed is on the cracks between parts on the exterior region, the top and sides, and the rain cover.</p> <p>Shoe goo can be used as sealant and also to glue the pulley onto the gimbal motor. CA glue can also work for that, but it tends to be a bit brittle.</p> <p>It can be used to seal the area between the intake and output duct areas, there is a single dividing wall on either side that benefits from some sealing, but it is optional to seal that part.</p> <p>You may need some glue to glue the top grid component to the media regenerator holder component, depending on how good your print quality is. I use low viscosity "lepage ultra liquid" glue, a cyanoacrylate glue.</p>
straws/regen media		6 inch long stone brand coffee stirrers is what I'm using.