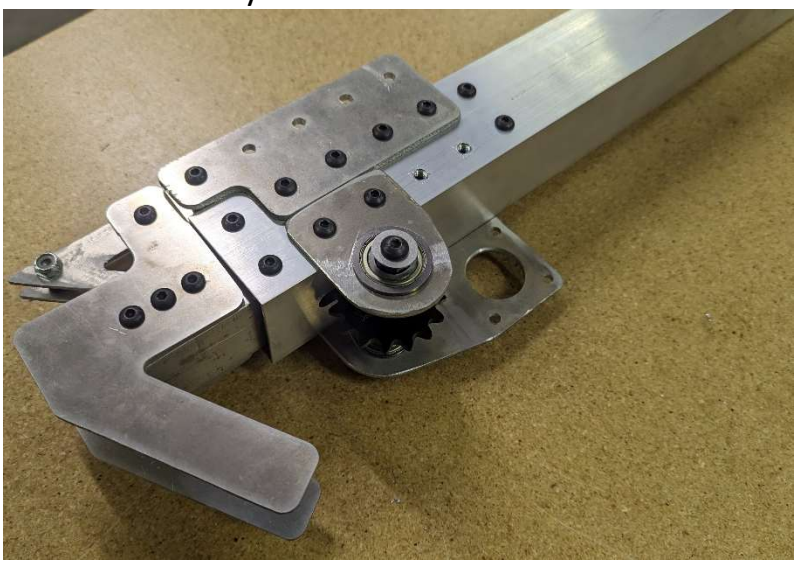
ROB-17562: Latching Climber Arm
Assembly Guide

Thanks for your purchase! Please let us know immediately if there is something missing or otherwise incorrect.

With a handful of simple hand tools at hand, we expect this assembly to take about 20 minutes per arm. We recommend using thread locker (Loctite or similar) to prevent vibration-induced loosening. Thread locker is not advised on locknuts.

Note: The arm can be mirrored so the motor assembly doesn't stick outside of your frame perimeter.

ROB-17562: fully assembled



ROB-17562: parts after unboxing

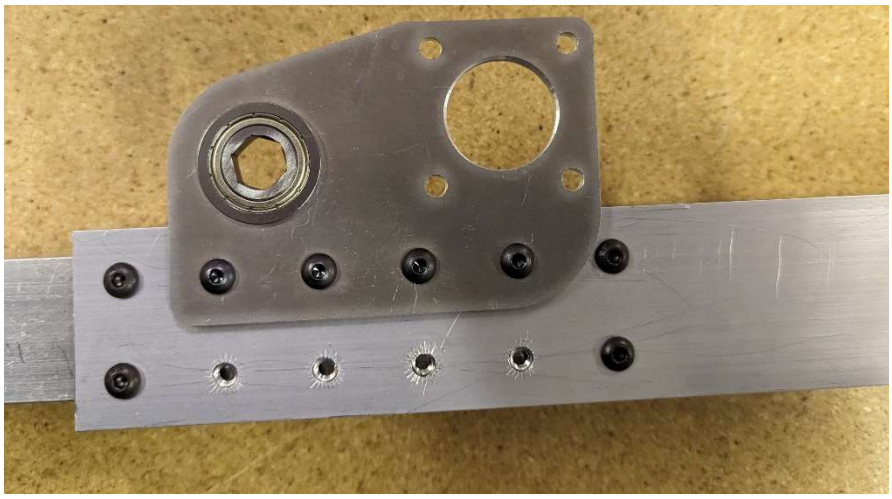
ROB-17562 BOM

Custom Metal	
Assy, Outer tube, 2" Nut-serts, sliders installed	1
Inner tube, 1.5"	1
Custom Plates	
Motor plate	1
Drive shaft end	1
Backside mount	2
Chain hook	2
Latch	2
Hardware	
Shaft, custom 1/2"	1
Bearing, flange 1/2"	2
Sprocket, #35 15T	1
Spring	1
Screw, 10-32 x 5/16"	14
Screw, 10-32 x 3/4"	2
Screw, 10-32 x 2 1/2"	5
Screw, 1/4-20 x 3/8"	2
Washer, 1/4"	2
Nut, lock, 10-32	7
Spacer, 3D Lg	2
Spacer, 3D Sm	2

Step 1

Start with the Outer Tube, Motor mount plate, and 4x 10-32 x 5/16” machine screws.

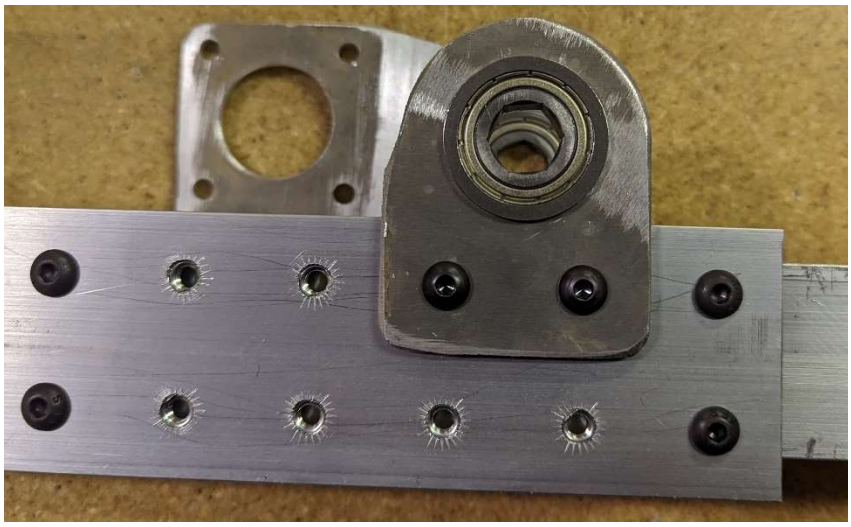
Assemble the Motor Mount plate to the outer tube using 4x 10-32 x 5/16” machine screws. We recommend adding thread locker to these screws.



Step 2

Start with the previous assembly, Drive Shaft End plate, and 2x 10-32 x 5/16” machine screws.

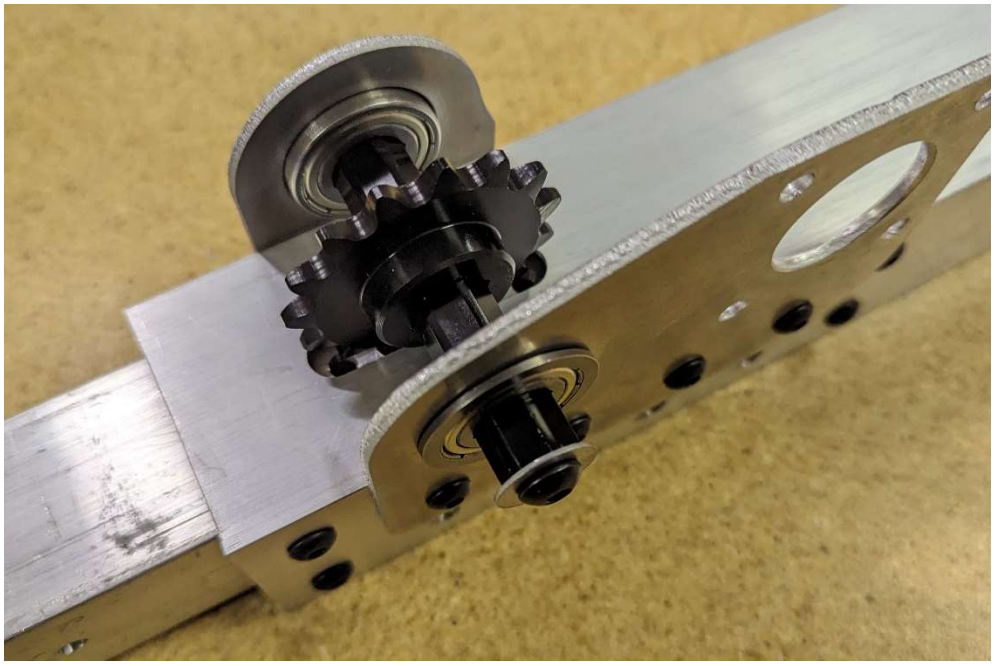
Assemble the Drive Shaft End plate to the outer tube using the 2x 10-32 x 5/16” machine screws. We recommend adding thread locker to these screws.



Step 3

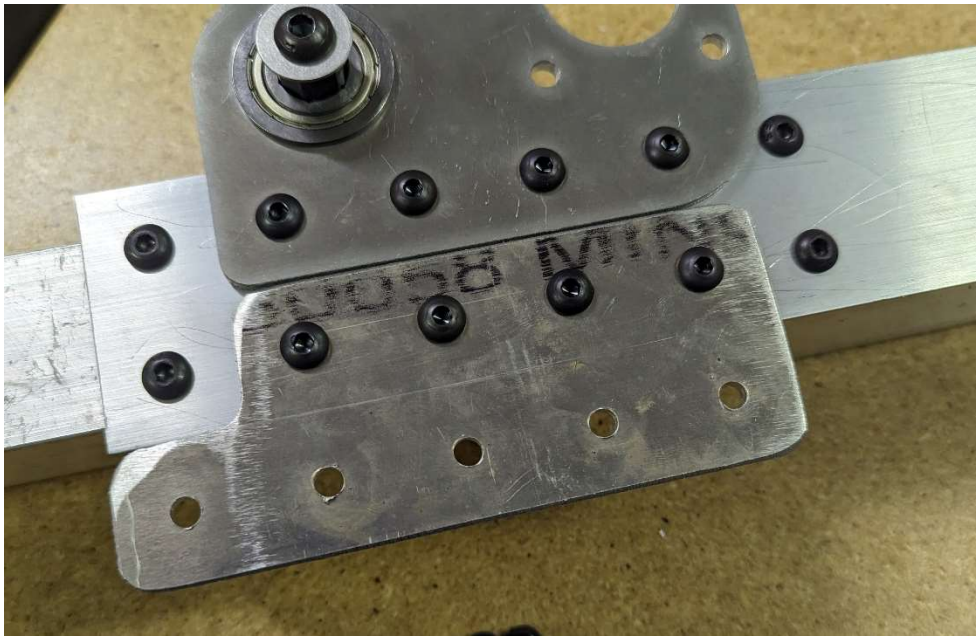
Start with the previous assembly, Inner Tube, ½” HEX shaft, sprocket, 2x bearings, 2x ¼” washers, and 2x ¼-20 x 3/8” screws.

Insert the inner tube into the outer tube with the holes visible in the slot. With one hand, hold the sprocket engaged and perpendicular with the holes in the inner tube while inserting the ½” HEX shaft through the sprocket. Install one end of the HEX shaft into one bearing, which then installs into the bearing hole. Repeat this for the second bearing. Note, the second bearing will be a snug fit – this is intentional. Finally, install the screws with washers into each end of the ½” HEX shaft. The telescopic drive assembly is now complete. Next is the latch assembly.



Step 4

Start with the previous assembly, 2x Backside Mount plates, and 8x 10-32 x 5/16” screws. Attach the plates to each side of the back of the outer tube assembly as shown. Note: the “nub” (latch mount) points towards the closest end of the outer tube assembly.



Step 5

Start with both latch plates, 2x 10-32 x ¾” screws, 2x 10-32 locknuts, and 2x short 3D printed spacers. Assemble the stack as shown in the following pictures.

Step 6

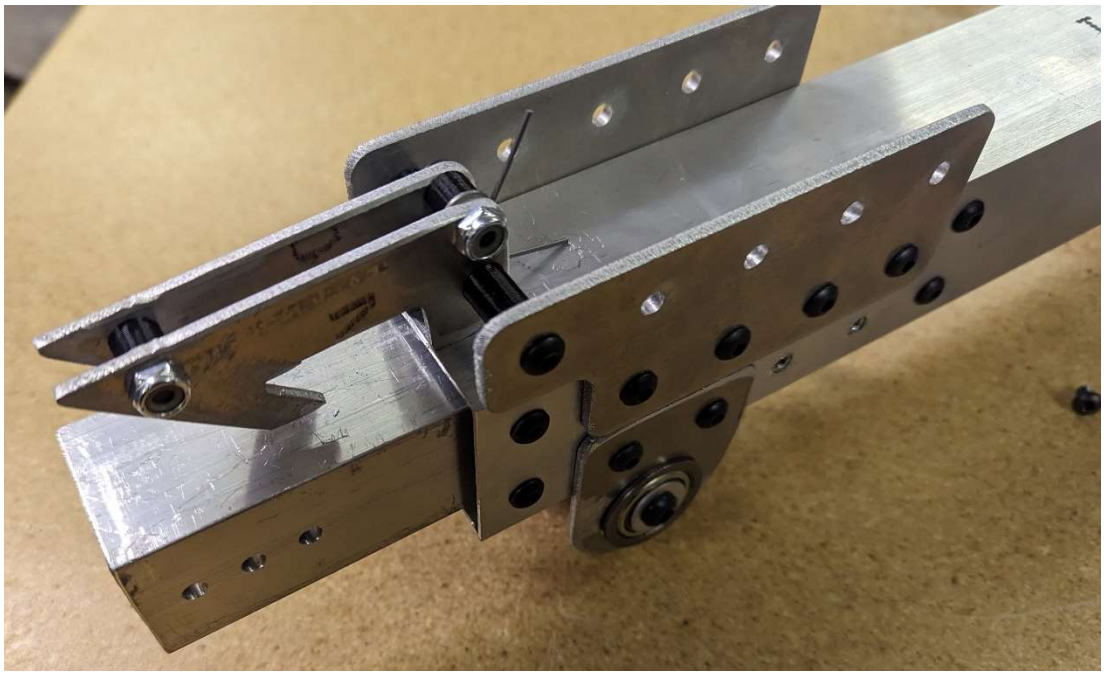
In this step you will install the latch assembly from the previous step to the outer tube assembly using 1x spring, 1x 10-32 x 2 ½" screw, 1x 10-32 locknut, and 2x large 3D printed spacers.

Note 1: the latch jaw will face the inner tube.

Note 2: Please note the picture for proper positioning of the spring, which is **in-between** the latch plates. Positioning of the spring ends is also important.

Note 3: An extra set of hands will be helpful to get all of these parts aligned at the same time!

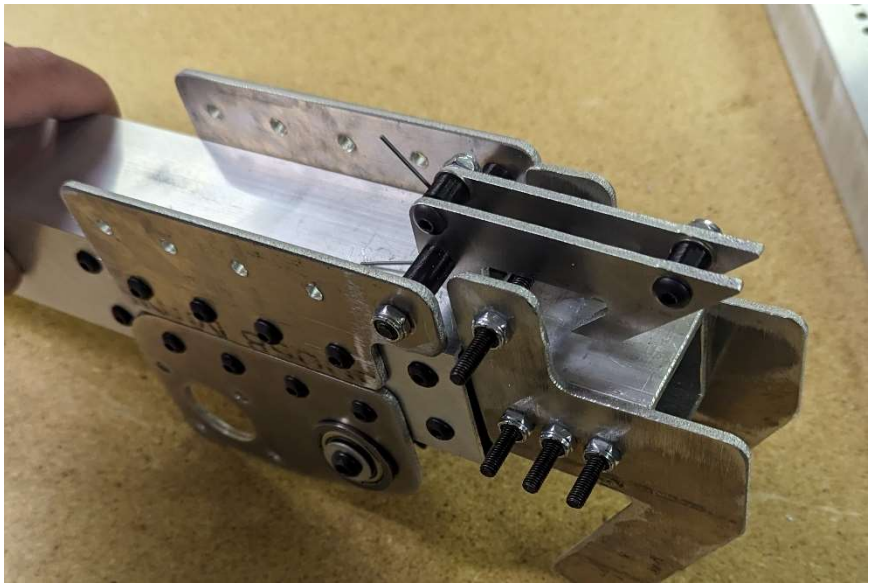
Guide the screw through the "nub" hole on one of the backside mount/latch plates, then through one spacer, then the latch/spring, then the second spacer, then the other mount/latch plate, securing the assembly with a locknut. The stack does **NOT** need to be tight to be secure – that's what the locknut is for. If the latch doesn't move freely and spring towards the inner tube when released, you likely have binding due to over-tightening.



Step 7

In this step you will finish the assembly by adding the chain hook to the inner tube assembly. You will need 2x hook plates, 4x 10-32 x 2 ½" screws, and 4x 10-32 locknuts. Note that the screws in the kit are longer than necessary and can be cut off as needed to remove poking hazard.

With the inner tube slightly extended, position one chain hook plate on one side of the tube while inserting a screw through the plate and both sides of the tube. Add the second plate to the far side of the tube and secure with a locknut. Install the next two screws through the plate/tube assembly to affix the hook to the inner tube assembly. Finally, install the last screw between the plates and install the locknut until just touching the plates. This should not be tightened beyond this to avoid damaging the plates.



Adding a Drive Mechanism:

You have completed the kit assembly, now it's time to add a drive mechanism. While there are lots of options, anything from a bag motor to a Kraken can be attached to a transmission / planetary drive to provide the drive power. Here's a pic from our launch video of a Versa-planetary stack being driven by a bag motor: