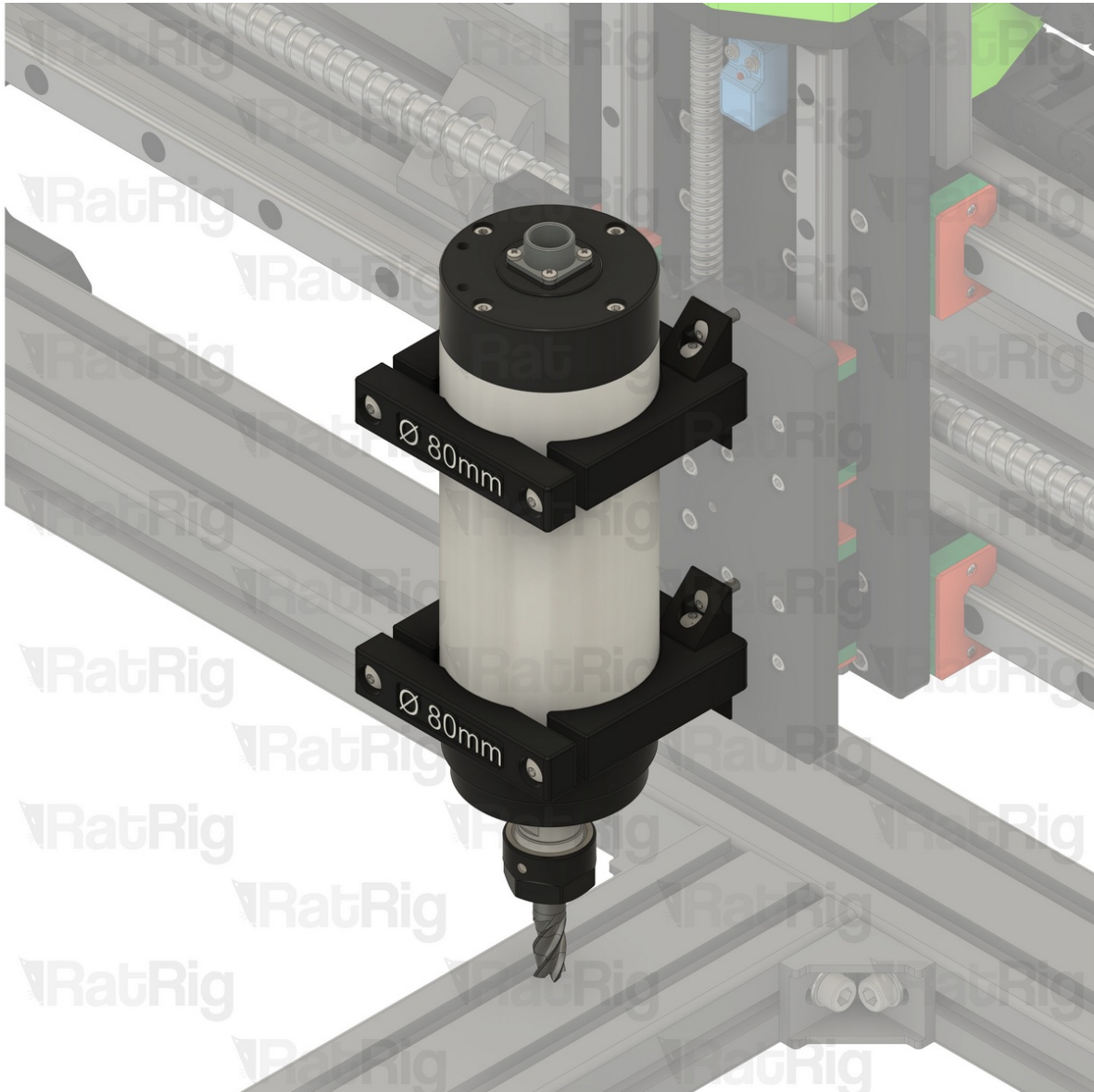


Rat Rig

05. Spindle Mount & Spindle

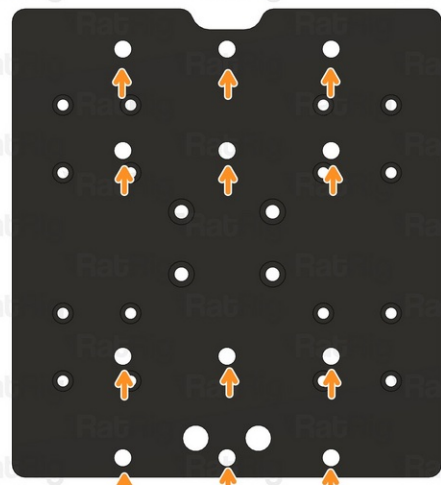
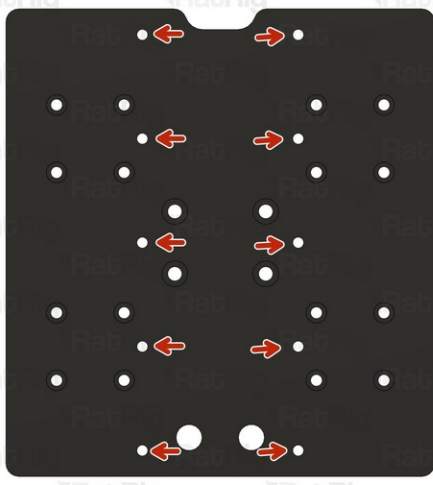
Written By: Simon Davie



INTRODUCTION

Please note: This guide is based upon using two 80mm spindle mounts and an 80mm spindle. The required mounts, and number of them, will depend on your choice of spindle.

Step 1 — Identify your Z plate



✦ In the pursuit of a sturdier machine, Rat Rig updated the Z plate allowing for a stiffer spindle mount, the Rat Rig spindle mount!

ⓘ Carefully identify your Z plate layout:

- Z Plate V1.0 - compatible only with the Openbuilds spindle mount
- Z Plate V1.1 - compatible only with the Rat Rig spindle mount

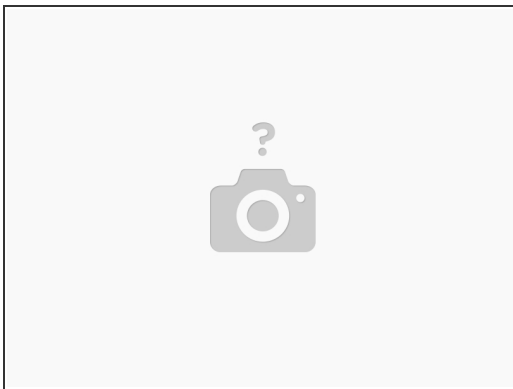
Step 2 — Identify the spindle mount



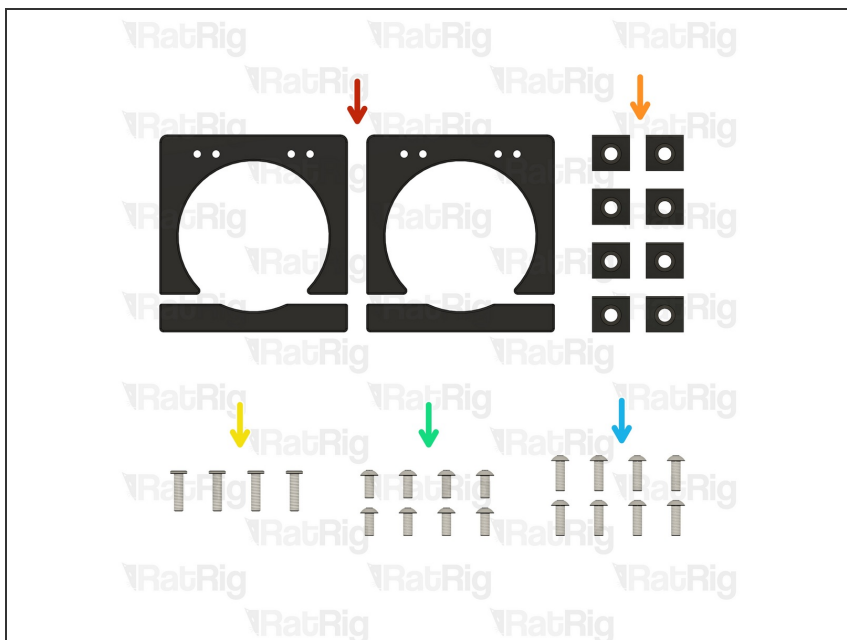
☒ Identify the spindle mount included in your kit:

- [OpenBuilds style spindle mount](#)
- [Rat Rig spindle mount](#)

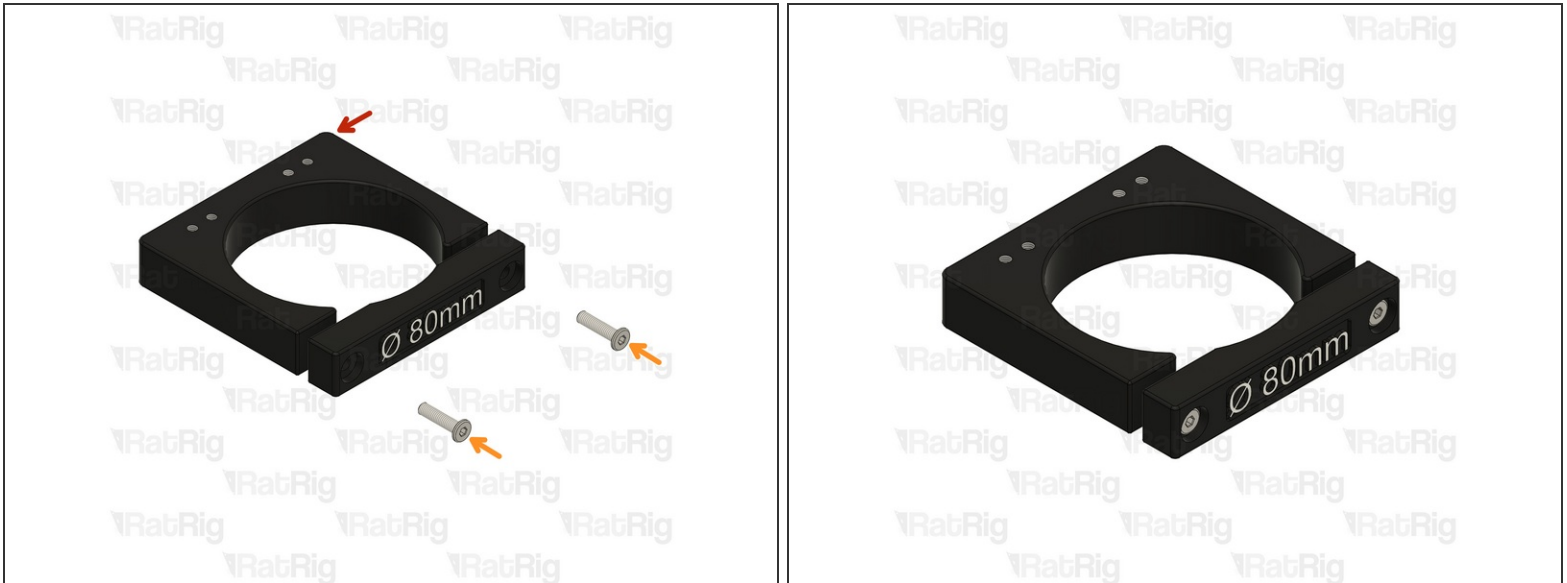
Step 3 — OpenBuilds style spindle mount



- Follow the next steps and assemble the spindle mount

Step 4 — Prepare the spindle mount parts

- 2x OpenBuilds Style Spindle Mount - 80mm
- 8x 90 Degree Corner Connector
- 4x M5x20 Cap Head Screw - Low Profile
- 8x M5x8 Button Head Screw
- 8x M5x10 Button Head Screw

Step 5 — Assemble the spindle mount - Part 1

- OpenBuilds Style Spindle Mount - 80mm
- M5x20 Cap Head Screw - Low Profile
- ① Insert an M5x20 screw through each hole in the spindle mount front and secure it into the spindle mount body
- ① Do not fully fasten the M5x20 screws at this point. They will be used to hold the spindle in place later in the assembly

Step 6 — Assemble the spindle mount - Part 2



● 90 Degree Corner Connector

● M5x8 Button Head Screw

i Insert an M5x8 screw through each 90 degree corner connector and fasten fully into the spindle mount

Step 7 — Assemble the spindle mount - Part 3

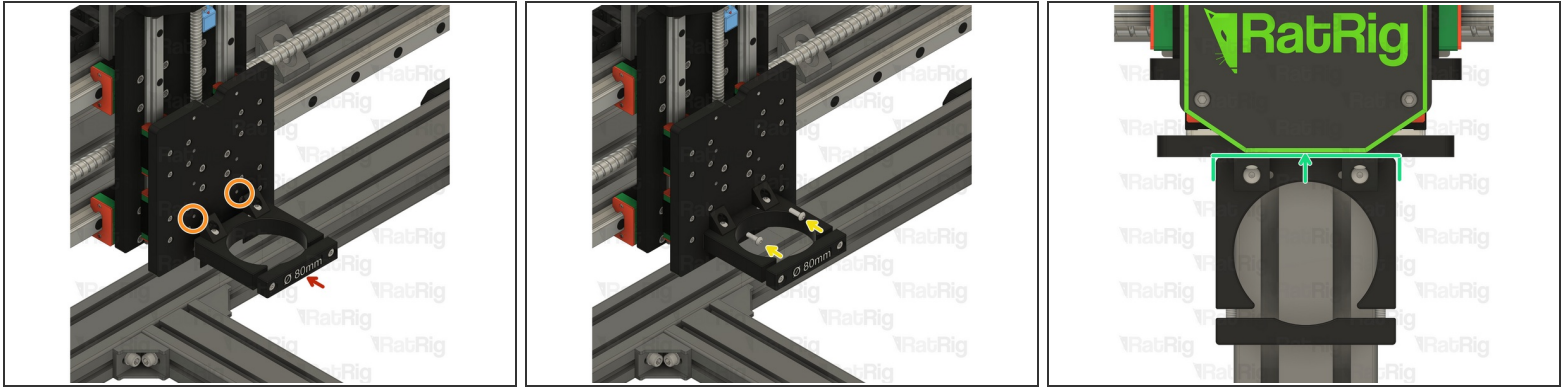


● Spindle mount assembly from the previous step

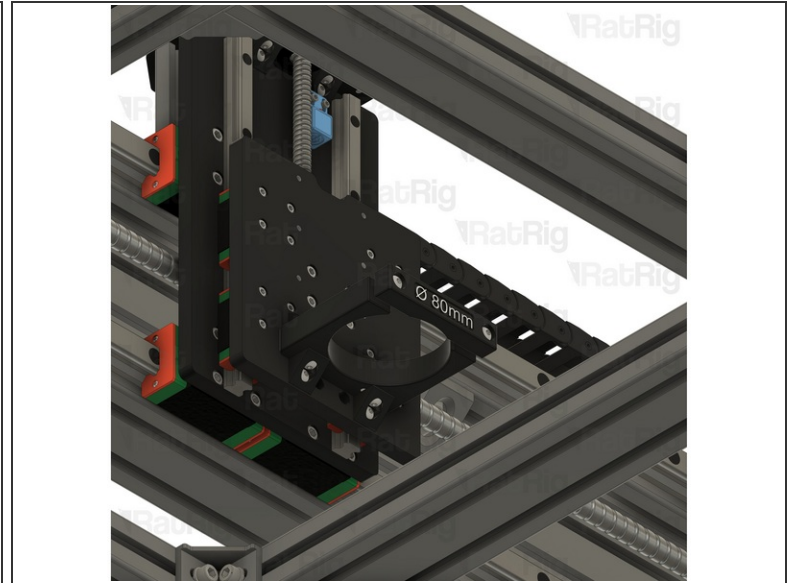
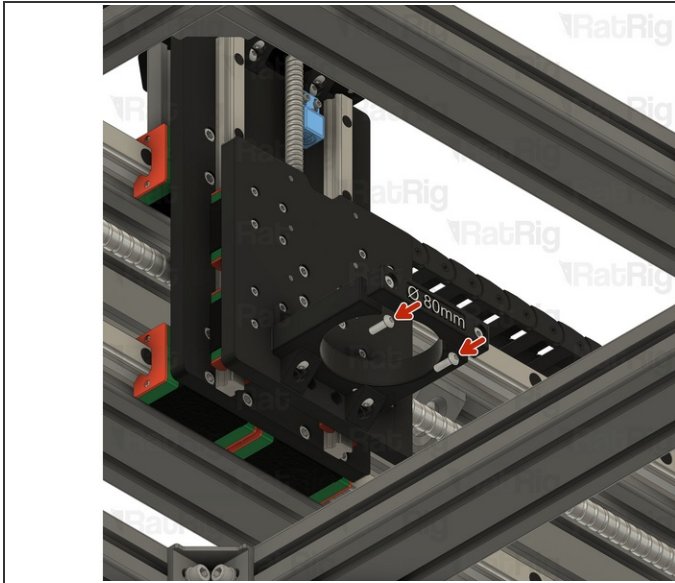
● 90 Degree Corner Connector

● M5x8 Button Head Screw

i Insert an M5x8 screw through each 90 degree corner connector and fasten fully into the spindle mount

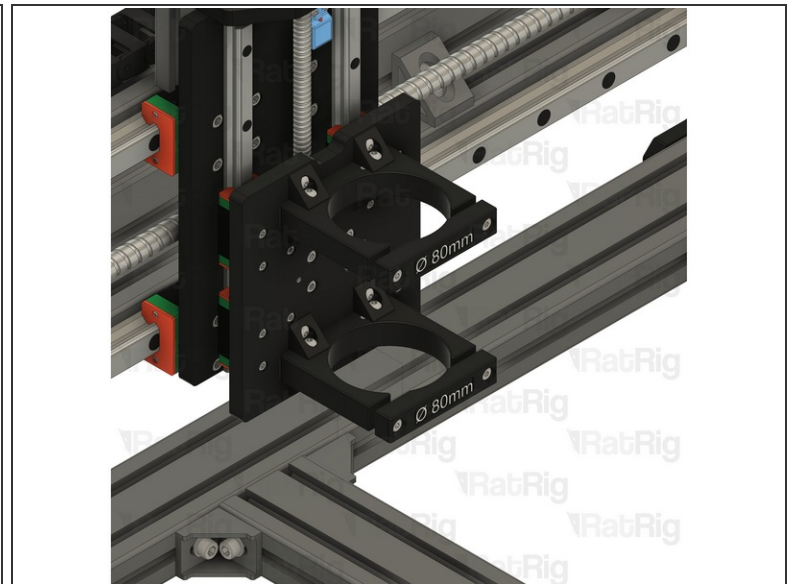
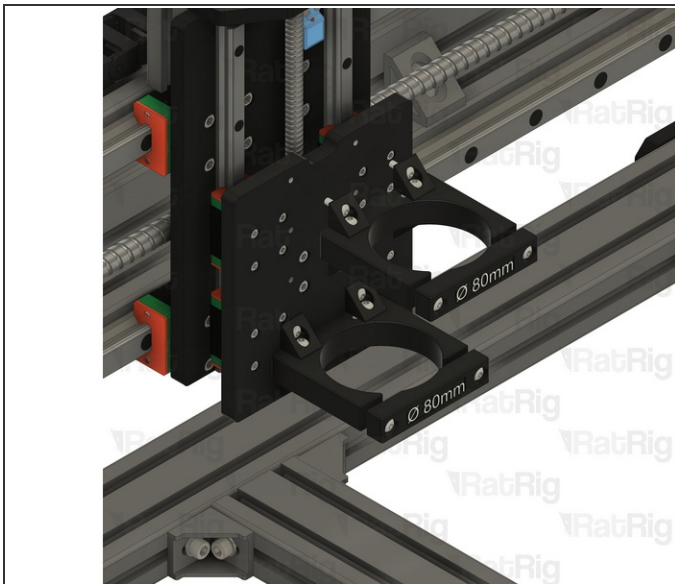
Step 8 — Install the lower spindle mount - Part 1

- Spindle Mount Assembly
- Align the spindle mount with the M5 threaded holes on the Z-axis
- M5x10 Button Head Screw
- ① Insert an M5x10 screw through each 90 degree corner connector and tighten into the threads on the Z-axis
- Check that the spindle mount is flush and square with the Z-axis plate as shown

Step 9 — Install the lower spindle mount - Part 2

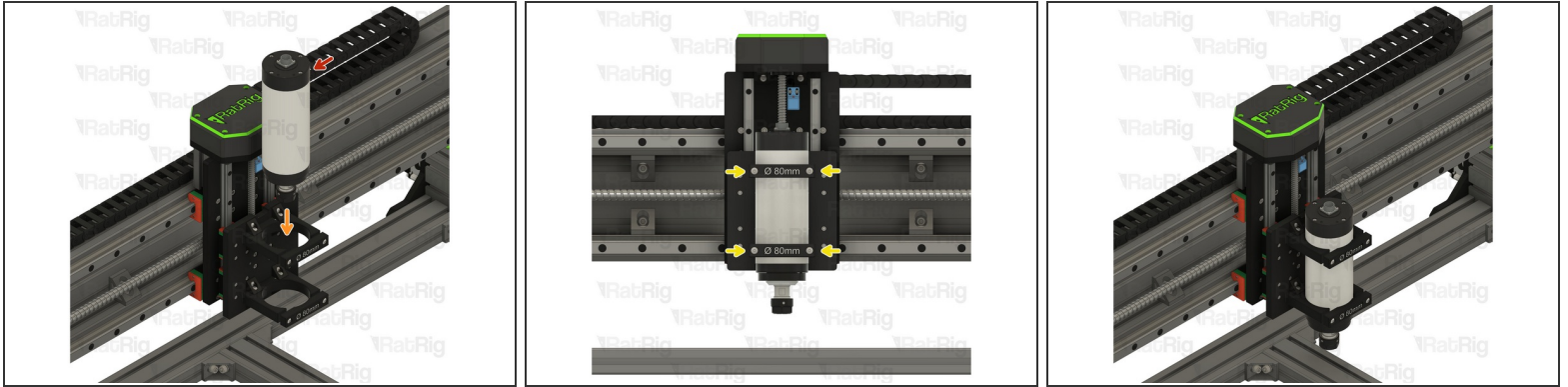
- M5x10 Button Head Screw

- ① Insert an M5x10 screw through each 90 degree corner connector and tighten into the threads on the Z-axis

Step 10 — Install the upper spindle mount

- ① Repeat the instructions in **Steps 5 & 6** to install the top spindle mount

Step 11 — Install the spindle



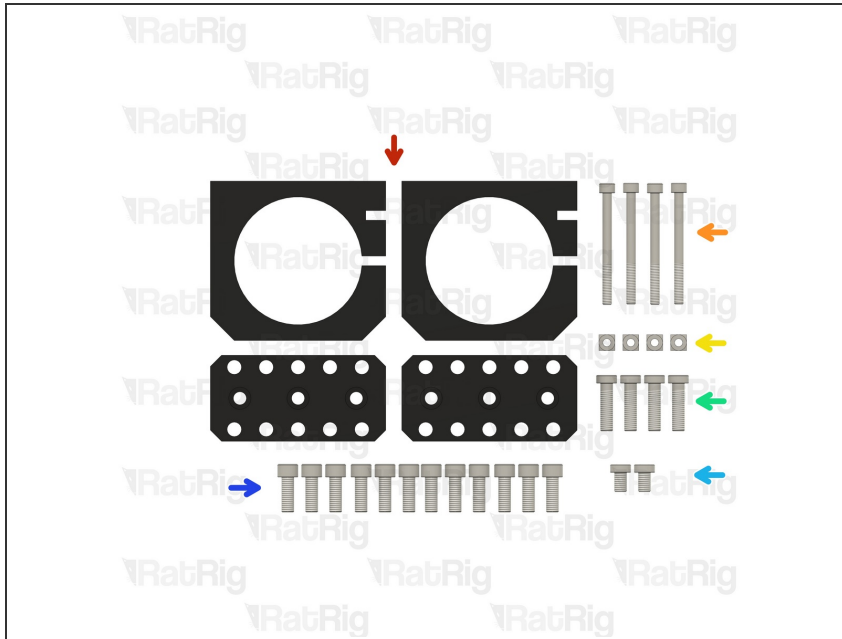
- 80mm Spindle
- Insert the spindle into the mounts as shown
- M5x20 Cap Head Screw - Low Profile
- ⓘ Tighten the M5x20 screws to secure the spindle in to the mounts

Step 12 — Rat Rig 80mm spindle mount



- ⓘ Follow the next steps and assemble the spindle mount.

Step 13 — Prepare the spindle mount parts



- Rat Rig 80mm Spindle Mount
- 4x M6x70 Cap Head Screw
- 4x M6 Square nut
- 4x M8x30 Low Profile Cap Head Screw
- 2x M8x12 Low Profile Cap Head Screw
- 12x M8x22 Cap Head Screw

Step 14 — Assemble the spindle mount - Part 1

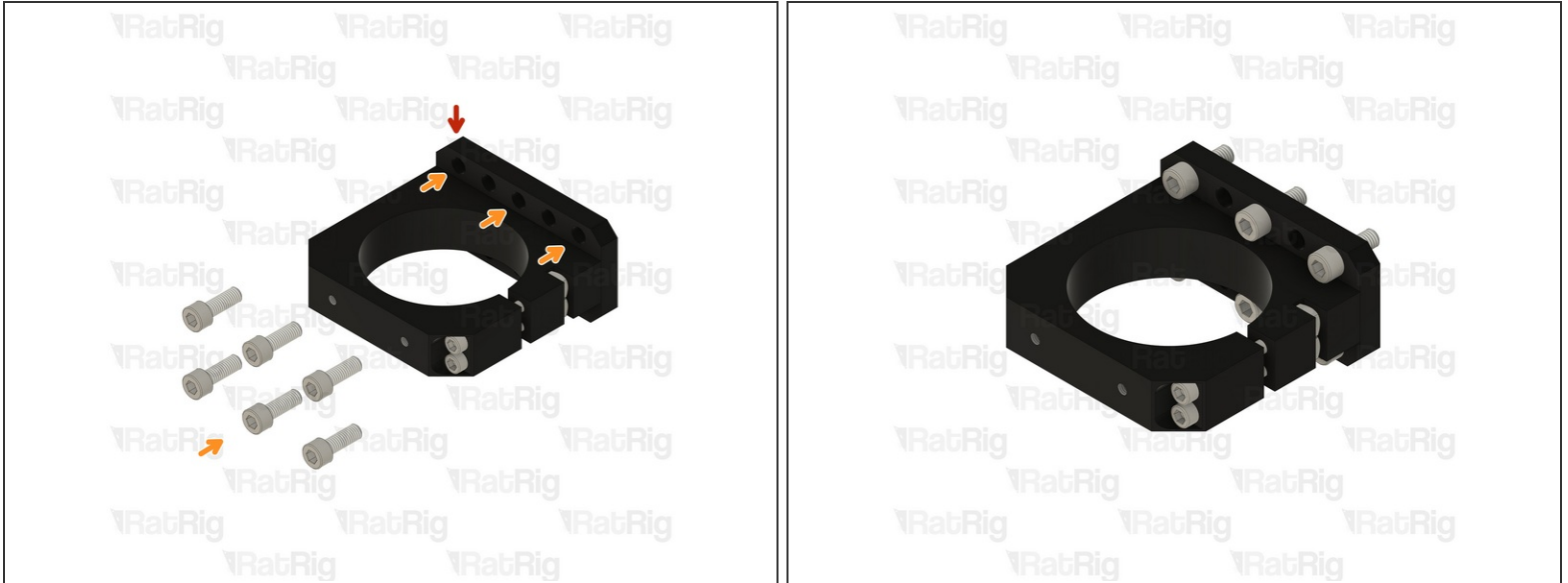


- Rat Rig Spindle Mount - 80mm
- M8x30 Low Profile Cap Head Screw
- M8x12 Low Profile Cap Head Screw

(i) Insert the screws through each hole in the spindle mount and secure it into the spindle mount body

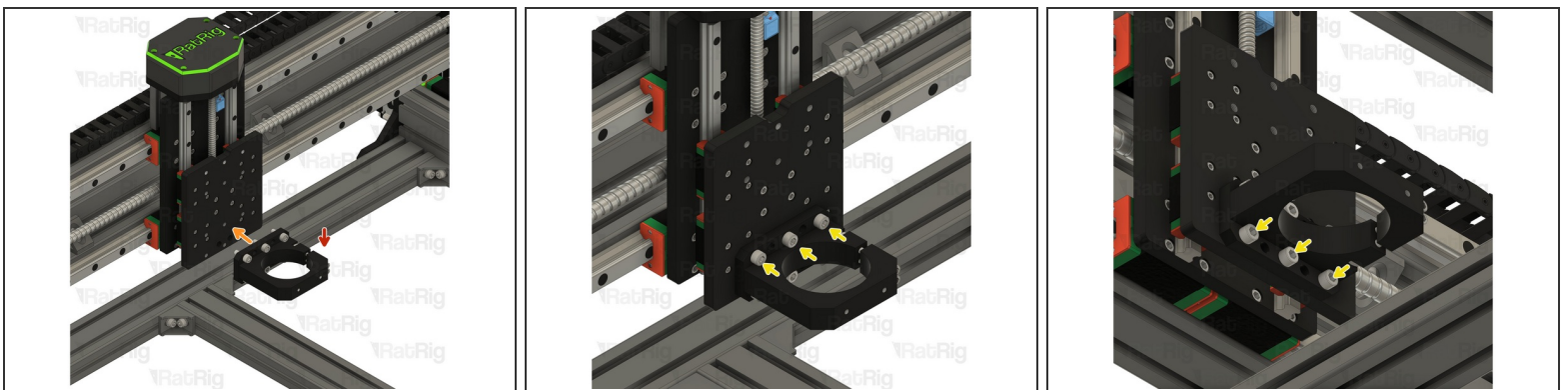
Step 15 — Assemble the spindle mount - Part 2

- Assembly from the previous step
 - M6x70 Cap Head Screws
 - Square nut M6
- i** Do not fully fasten the M6x70 screws at this point. They will be used to hold the spindle in place later in the assembly

Step 16 — Assemble the spindle mount - Part 3

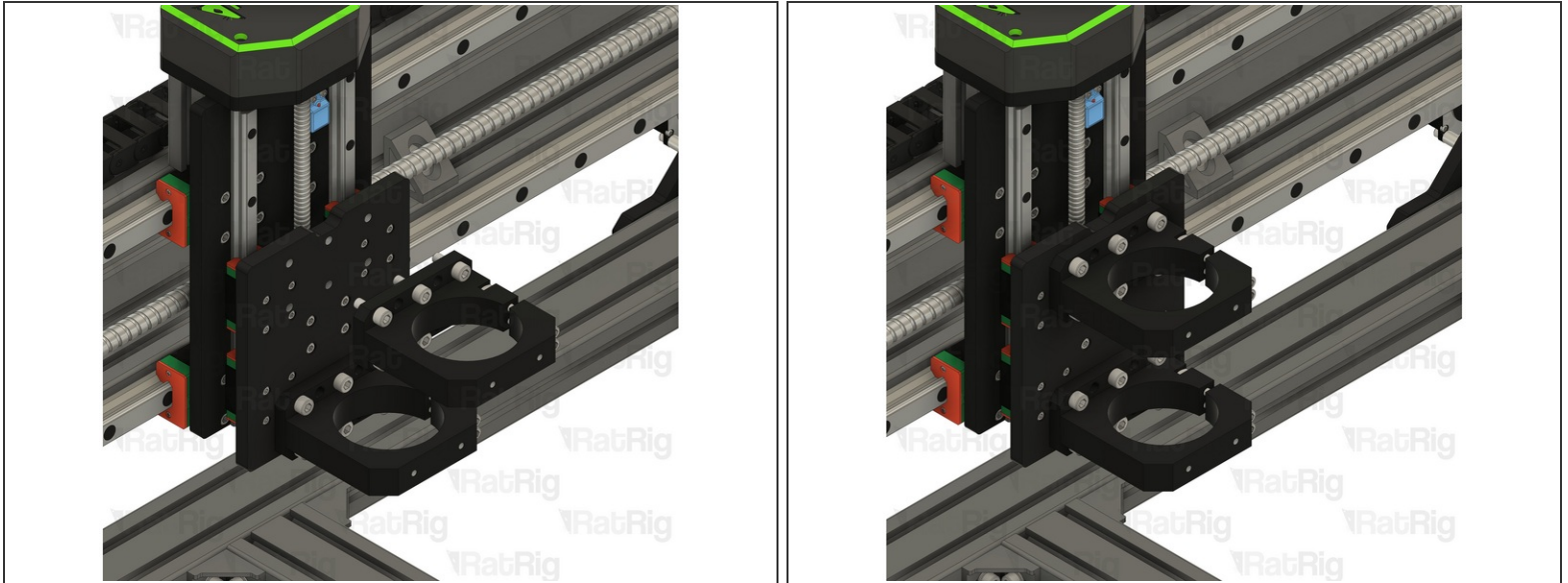
- Spindle mount assembly
- M8x22 Cap Head Screws

i Place the screws in the designated holes, they will be tightened on the next step.

Step 17 — Install the lower spindle mount

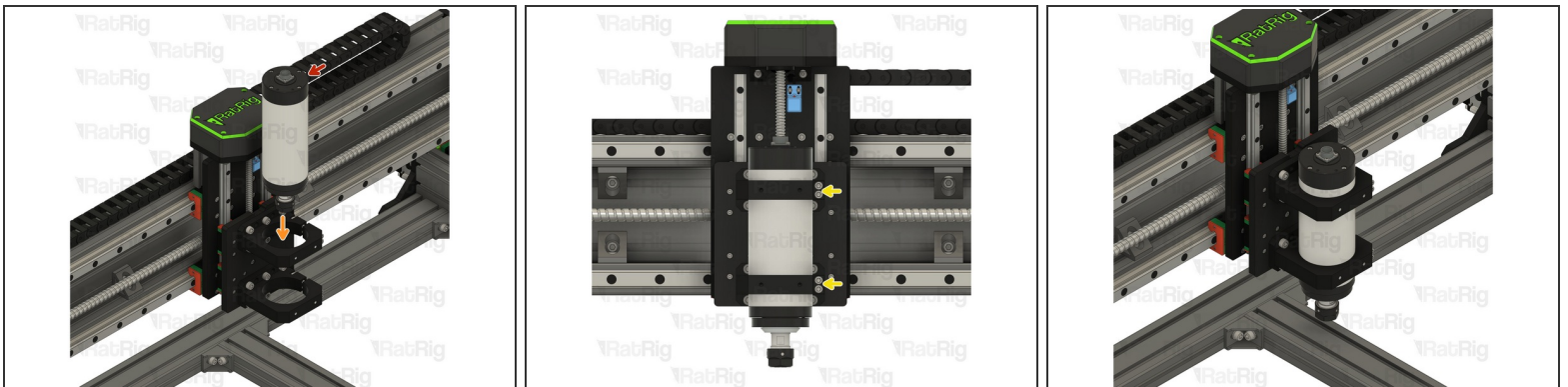
- Spindle Mount Assembly
- Mount the Spindle mount assembly on to the Z-Axis
- Tighten the M8x22 screws

Step 18 — Install the upper spindle mount



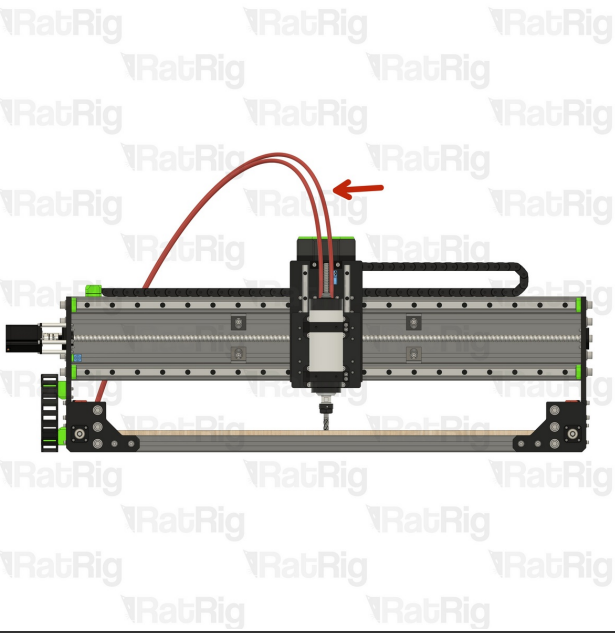
 Repeat the instructions in Steps 5 to install the top spindle mount

Step 19 — Install the spindle



- 80mm Spindle
- Insert the spindle into the mounts as shown
- Tighten the M6x70 screws to secure the spindle in to the mounts

Step 20 — Water-Cooled Spindle - assembly tip



- ★ When assembling the cooling circuit for your rig with a water-cooled spindle, please take this tip into account.
- Allow the liquid hoses to move freely by themselves, do not constrain their movement.
- ⚠ Do not insert them into the drag chains, as the constricted pathways and tight bends may potentially result in punctures or leaks, thereby leading to machine malfunction.