Genmitsu

INSTALLATION GUIDE

# 4040-PRO Extension Kit Installation Guide

V1.0 Jan 2024

# Contents

# Contents

# Contents

# Welcome

Thank you for purchasing the Genmitsu 4040-PRO CNC Router Extension Kit from SainSmart.

For technical support, please email us at support@sainsmart.com.

Help and support is also available from our Facebook group. (SainSmart Genmitsu CNC Users Group)

Scan QR code to find information.

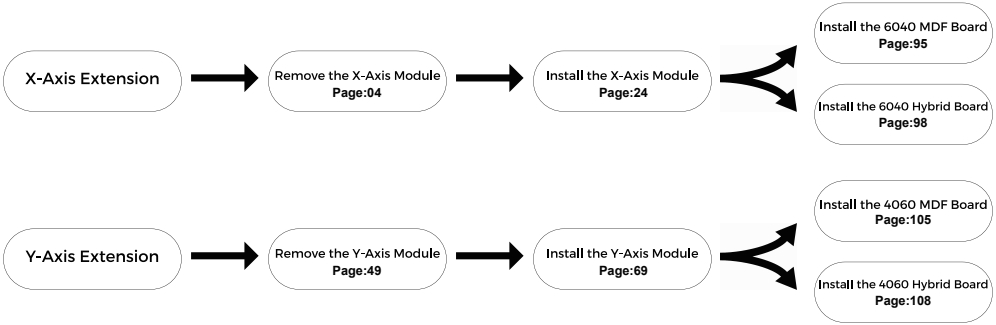

Das deutschsprachige Handbuch kann durch Scannen des folgenden QR-Codes aufgerufen werden

日本語マニュアルは以下のQRコードをスキャンして入手できます。

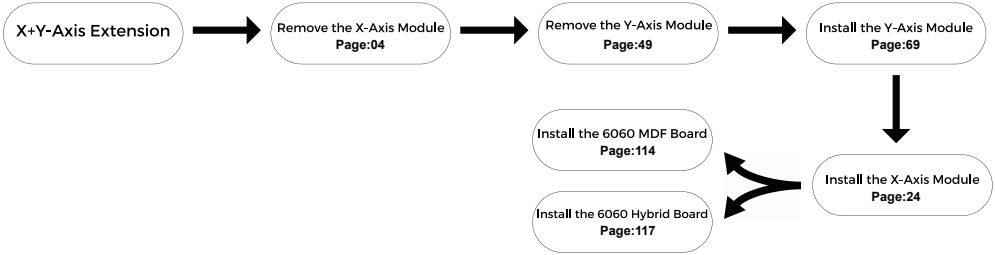
# Welcome

In order for you to have a better experience, please make sure to inventory the materials first and read the installation manual carefully before installing.

Please select the installation steps according to your needs.



If you need to upgrade the X-axis and Y-axis modules, we recommend that you follow the flowchart for removal and installation.

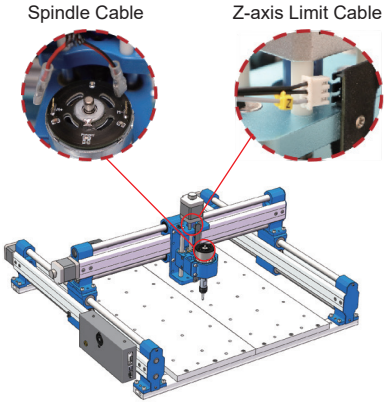


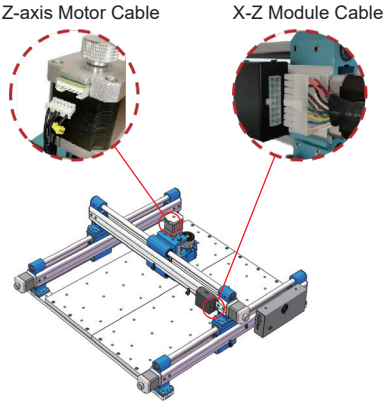
# PART 1: X-axis Extension Module

## Remove the X-axis module

# Step 1: Disconnect Cables

Gently disconnect and remove all the cables connected to the X-axis.
Tip: Note how and where each cable is connected for easy reconnection later.



# Step 2: Remove the Z-axis Module

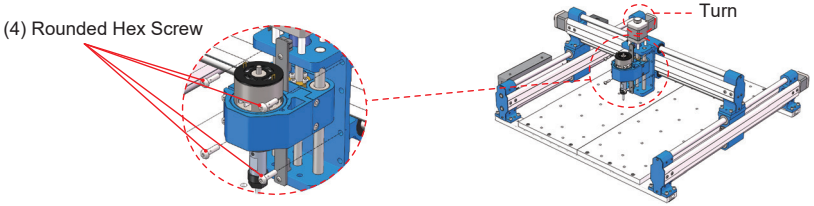
**What to keep in this step of removal:**

(4) Rounded Hex Screw

XZ Axis Assembly (With spindle installed)

**Adjust the Z-axis Slider:** Rotate the Z-axis motor handwheel to move the Z-axis slider to a comfortable working position.

**Unscrew to Detach:** Use an Allen wrench to remove the four rounded hex screws from the Z-axis mount.



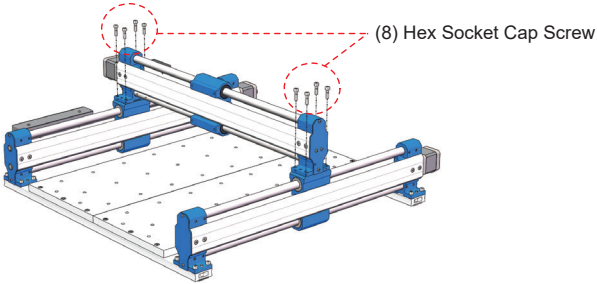
# Step 3: Detaching the X-axis Module

**What to keep in this step of removal:**

(8) Hex Socket Cap Screw

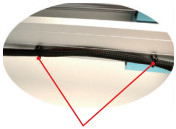
**Unscrew Mounting Screws:** Use an Allen wrench to remove the eight hex socket cap screws that secure the X-axis module.

**Remove the Module:** Carefully lift and place the X-axis module on a table for further disassembly.



# Step 4: Removing the Control Board

1. **Cut and Unplug:** Begin by cutting the tie around the cable holder. Carefully unplug the spindle cable from its terminal.



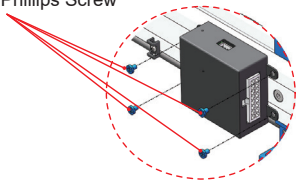
Cut the Ties

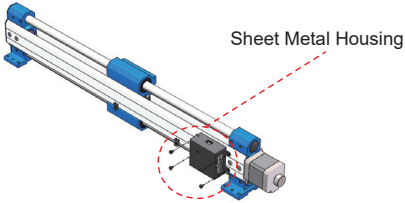

Unplug

**Unscrew the Housing**: Locate the 4 screws on the control board's sheet metal housing. Unscrew them to open the housing.

**Tip**: If the screws are hard to remove due to adhesive, gently heat them with a hot air gun for easier unscrewing.

(4)M3x4mm Flat Head Phillips Screw





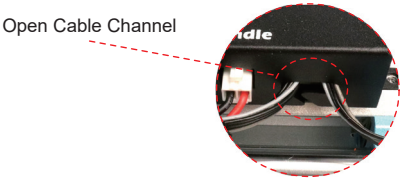
Sheet Metal Housing

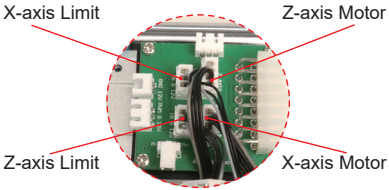
# Step 4: Removing the Control Board

**What to keep in this step of removal:**

Sheet Metal Housing

2. **Unscrew Mounting Screws:** Gently unplug all the cables attached to the outside of the case. Open the case, and then disconnect the 4 cables connected to the circuit board. Finally, remove the sheet metal housing.



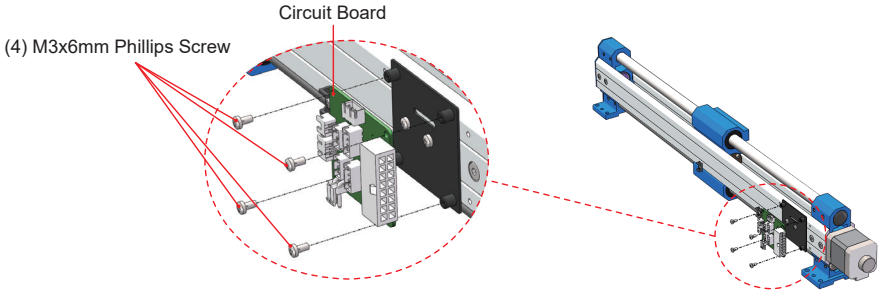



# Step 4: Removing the Control Board

**What to keep in this step of removal:**

Circuit Board

3. Use a Phillips wrench to unscrew the 4 screws and remove the board.

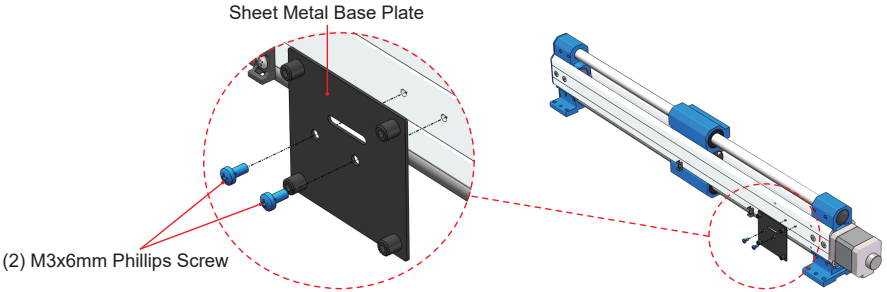


# Step 4: Removing the Control Board

**What to keep in this step of removal:**

Sheet Metal Base Plate

3. Use a Phillips wrench to unscrew the 2 set screws and remove the sheet metal base plate.



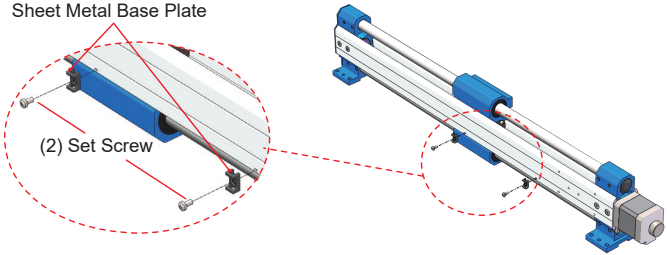
# Step 5: Remove the Guards from X-axis Module

**What to keep in this step of removal:**

(2) Set Screw

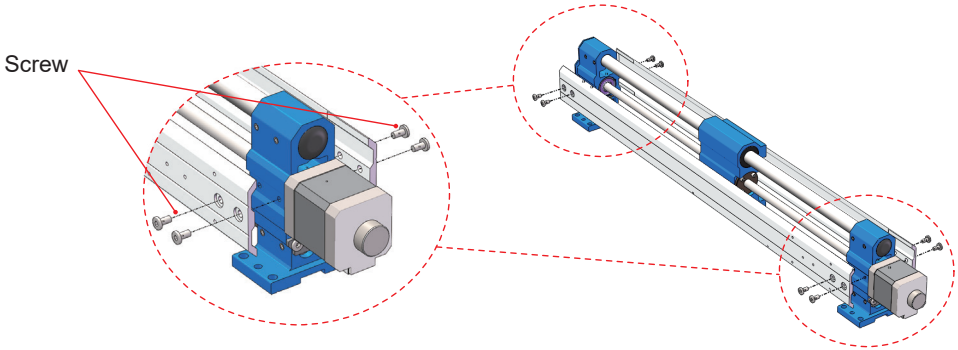
(2) Cable Holder

1. **Unscrew the Cable Holders:** Use a Phillips wrench to remove the two set screws and take off the cable holders.



# Step 5: Remove the Guards from X-axis Module

2. **Remove the Guards:** Next, use an Allen wrench to unscrew the eight screws holding the front and rear guards, and then remove these guards.

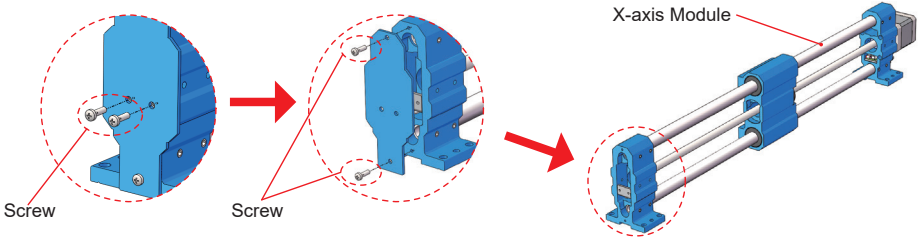


# Step 6: Remove the Rod Guard and Limit Sheet

**What to keep in this step of removal:**

Polished Rod Guard

1. **Detach Polished Rod Guard:** Use a Phillips wrench to unscrew the four screws on the polished rod guard. Follow this order: left, right, top, and then bottom. Then, take off the guard.
2. Remove the polished rod guard.



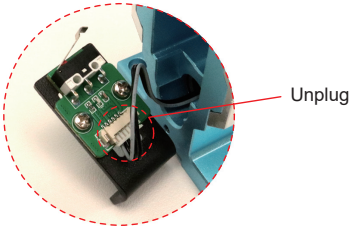
# Step 6: Remove the Rod Guard and Limit Sheet

**What to keep in this step of removal:**

Polished Rod Guard

3. **Remove the Limit Sheet Metal:** Gently remove the limit sheet metal. Also, disconnect the Z-axis limit cable.

4. **Remember to Keep:** The polished rod guard and the limit sheet metal."

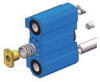


# Step 7: Remove the X-axis Polished Rod Mount and Slider

**What to keep in this step of removal:**

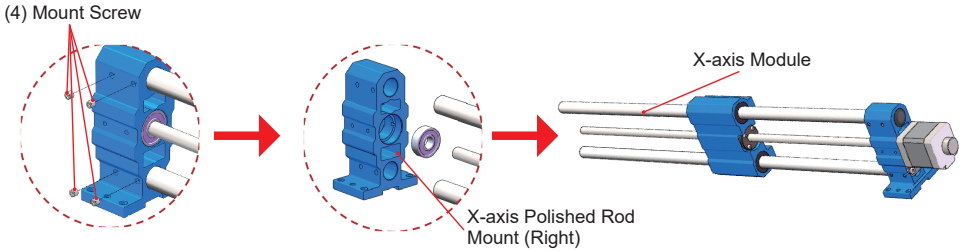
(4) Mount Screw

X-axis Polished Rod Mount (Right)



Z-axis Module Slider with T-brass Nut

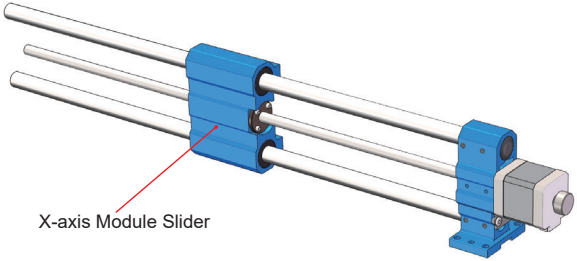
1. **Unscrew the Polished Rod Mount:** Use an Allen wrench to remove the four screws from the right X-axis polished rod mount, then lift off the mount.



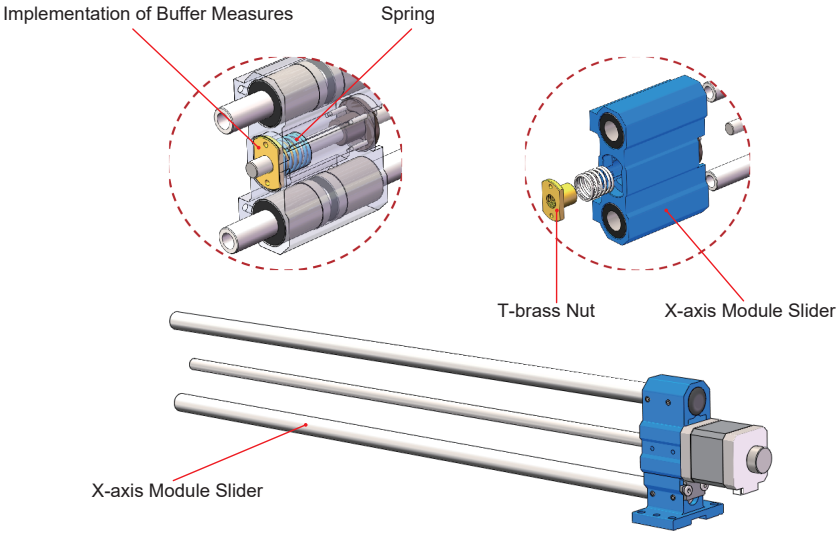
# Step 7: Remove the X-axis Polished Rod Mount and Slider

2. **Detach the X-axis Slider:** Rotate the motor handwheel to slide the X-axis module slider towards the end of its track. Continue turning until the slider is completely free from the polished rod and lead screw.

3. **Caution:** Be aware of the spring inside the X-axis T-brass nut. Ensure it's covered to prevent it from springing out.



# Step 7: Remove the X-axis Polished Rod Mount and Slider



# Step 8: Remove the Left Polished Rod Mount and Motor Kit

**What to keep in this step of removal:**

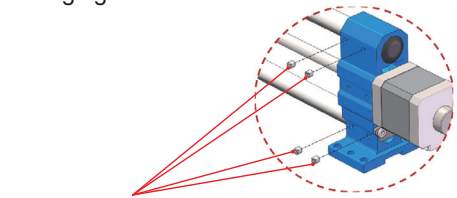
(4) Mount Screw

X-axis Polished Rod Mount (Left)

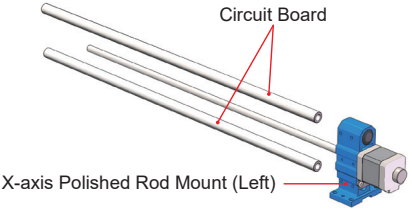
(4) M3x25mm Cup Head Hexagon Socket Screw

**Detach Left Polished Rod Mount:** Use an Allen wrench to unscrew the four mount screws. Carefully remove the polished rods from the left X-axis polished rod mount.

**Note:** Be mindful of the Z-axis limit cable that runs through one of the polished rods to avoid damaging it.

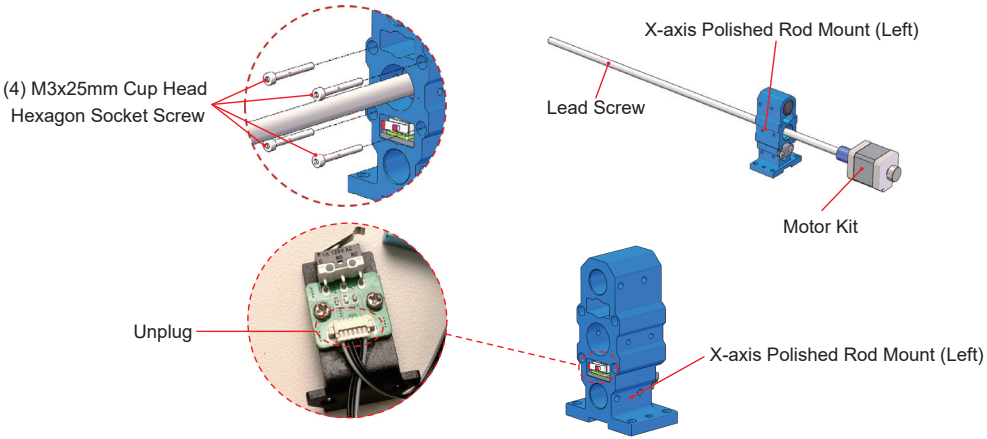


(4) M3x6mm Phillips Screw



# Step 8: Remove the Left Polished Rod Mount and Motor Kit

**Remove the Motor Kit:** Unplug the X-axis motor limit cable and then unscrew the four screws with an Allen wrench to remove the motor kit

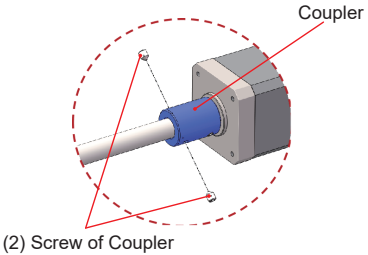


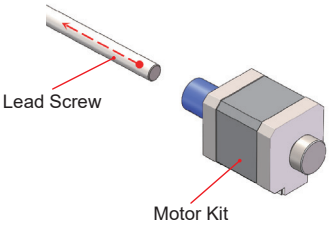
# Step 8: Remove the Left Polished Rod Mount and Motor Kit

**What to keep in this step of removal:**

Motor Kit

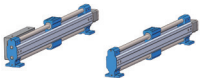
1. **Remove the Lead Screw:** Unscrew the two coupler screws with an Allen wrench and remove the lead screw



# Step 9: Remove the Y-axis Module Platform and MDF Board

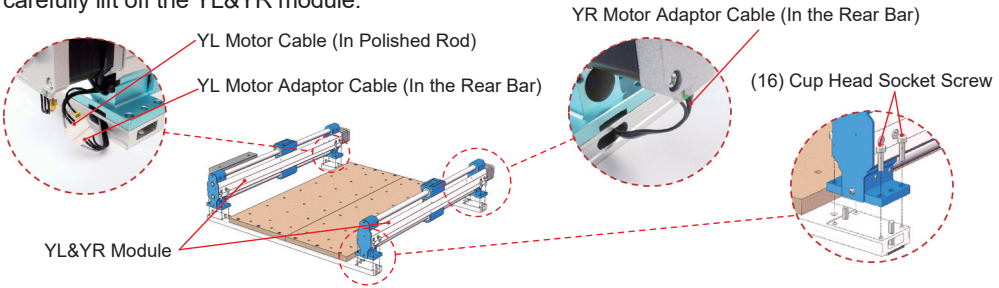
**What to keep in this step of removal:**



YL&YR Module

(16) Cup Head Socket Screw

1. **Disconnect the YL&YR Modules:** Unplug the motor cable from both the YL and YR modules.
2. **Unscrew the Y-axis Module:** Use the hex tool to remove the 16 cup head socket screws. Then, carefully lift off the YL&YR module.



# Step 9: Remove the Y-axis Module Platform and MDF Board

**What to keep in this step of removal:**

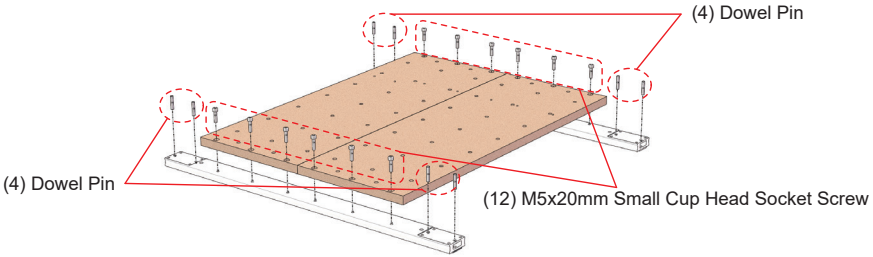
(12) M5x20mm Small Cup Head Socket Screw

(8) Dowel Pin

(2) MDF Board

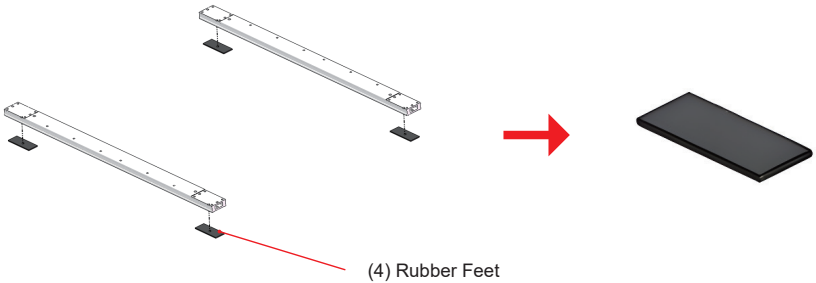
(4) Rubber Feet

3. **Dismantle the Platform:** Take out the 8 dowel pins and unscrew the 12 small cup head socket screws. Remove the two MDF boards from the bottom platform.



# Step 9: Remove the Y-axis Module Platform and MDF Board

4. **Remove the Rubber Feet:** Detach the four rubber feet located under the front and rear plates.



## Install the X-axis Extension Module

***If you need to install both X-axis and Y-axis extensions, please complete the Y-axis extension module (PART 2, turn to page XX) before installing the X-axis extension module.***

# Unbox (101-63-40P-XE60)

Extended
Front Plate

Extended Rear Plate (YR motor
extension cable threaded inside)

X-axis Extended
Front Guard

X-axis Extended
Rear Guard

(2) Polished Rod (One of
the polished rod is threaded
into the X-axis limit cable)

L755mm
Lead Screw

Z-axis Extension
Motor Cable

Z-axis Extension
Limit Cable

Spindle
Extension Cable

# Unbox (101-63-40P-XE60)

Customized Spring

(10) M3x6mm Round Head Phillips Screw

(3) M3x10mm Round Head Phillips Screw

(5) M3x4mm Flat Head Phillips Screw

(5) M4x8mm Flat Head Hexagon Screw

2.5mm Allen Wrench

(3) M4x4mm Hexagon Socket Set Screw


User Manual

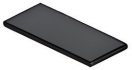
*The objects marked with ☆ in the items required for installation are those that have been previously removed.*

# Step 1: Install the Y-axis Module Platform

**What you need in this step of the installation:**

Extended Front Plate

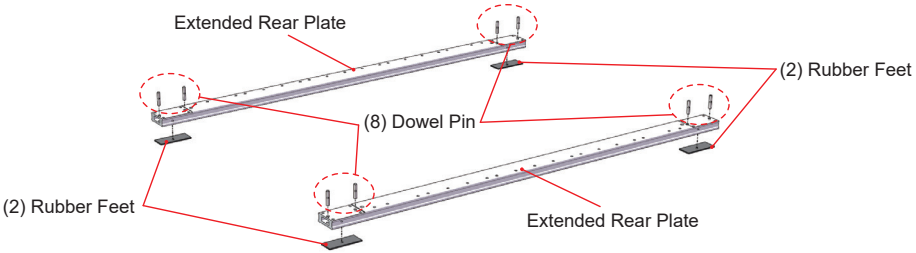
Extended Rear Plate (YR motor extension cable threaded inside)



☆(4) Rubber Feet

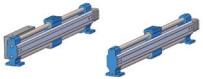
☆(8) Dowel Pin

Attach the extended front and rear plates with rubber feet and dowel pins.



# Step 1: Install the Y-axis Module Platform

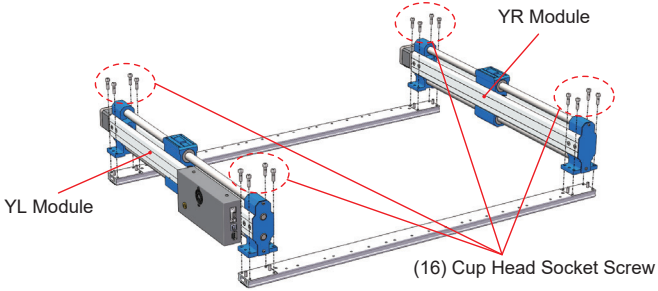
**What you need in this step of the installation:**



YL&YR Module (Already Installed)

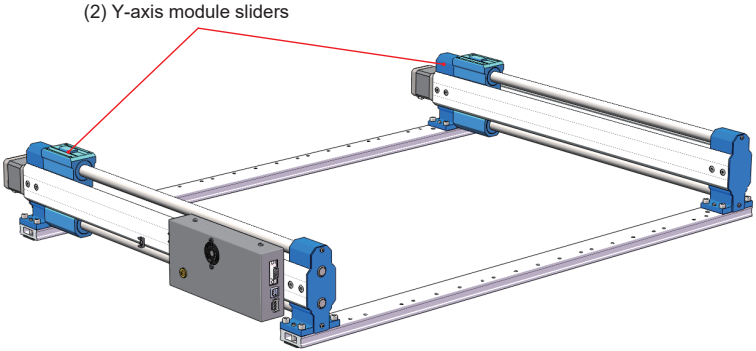
☆ (16) Cup Head Socket Screw

2. Assemble YL&YR modules on the plates, securing with provided screws.



# Step 1: Install the Y-axis Module Platform

3. Turn the Y-axis module motor handwheel to adjust the Y-axis module slide to the limit position of the motor end, making sure that the handwheel can no longer be turned at this point.



## Step 2: Install the Extended Lead Screw and X-axis Polished Rod Mount (Left)

**What you need in this step of the installation:**

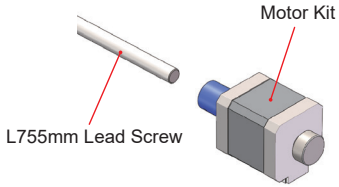
L755mm Lead Screw

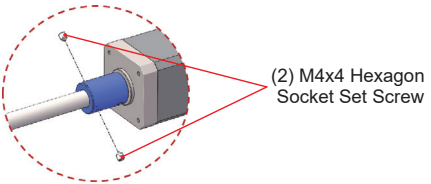
(2) M4x4mm Hexagon Socket Set Screw

☆ Motor Kit

1. Install the extended lead screw into the coupler, screw the 2 M4x4mm screws with an Allen wrench and tighten them.

*Note: To ensure the stability and accuracy of the machine, it is recommended that you reinforce the screws with a screw fixing compound. ( It is recommended to use a high strength screw fixing compound. Apply to the first third of the tightening screw threads.)*



## Step 2: Install the Extended Lead Screw and X-axis Polished Rod Mount (Left)

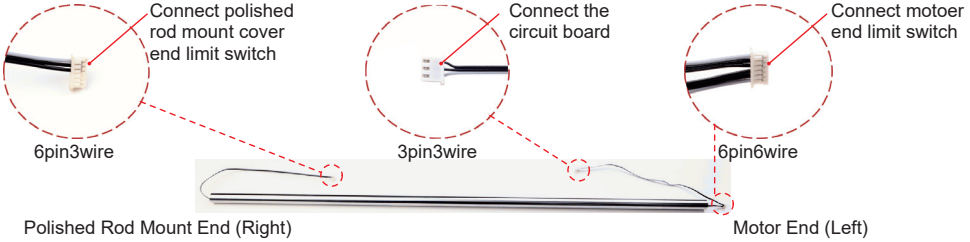
**What you need in this step of the installation:**

(2) Polished Rod (One of the polished rod is threaded into the X-axis limit cable)

☆ X-axis Polished Rod Mount (Left)

☆ (4) M3x25mm Cup Head Hexagon Socket Screw

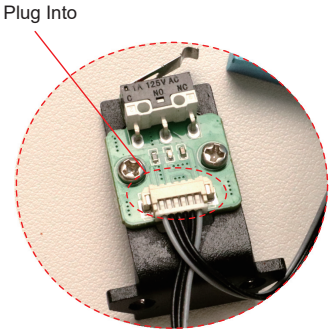
### X-axis Threading Details

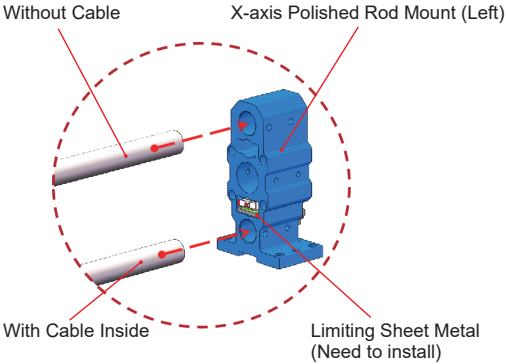


## Step 2: Install the Extended Lead Screw and X-axis Polished Rod Mount (Left)

2. Connect the polished rod cable with the limit switch at the motor end. Connect the X-axis limit cable with the limit switch.

3. Install the limit assembly with the cables connected into the polished rod mount.
Note: Do not screw the screws into the polished rod mount beforehand.

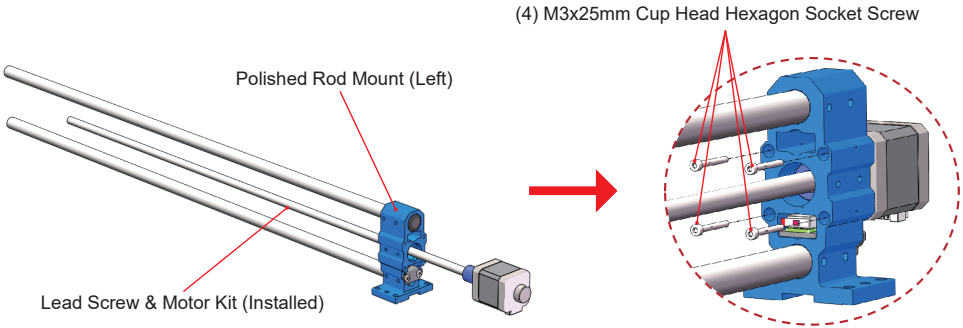


## Step 2: Install the Extended Lead Screw and X-axis Polished Rod Mount (Left)

Insert the X-axis motor assembly into the polished rod mount, screw the 4 M3x25mm screws with an Allen wrench and tighten them.

Tip: It is recommended to use a medium-strength screw fixing compound, and apply it to the first third of the threads.



# Step 3: Install the X-axis Module Slider

**What you need in this step of the installation:**

☆ X-axis Module Slider

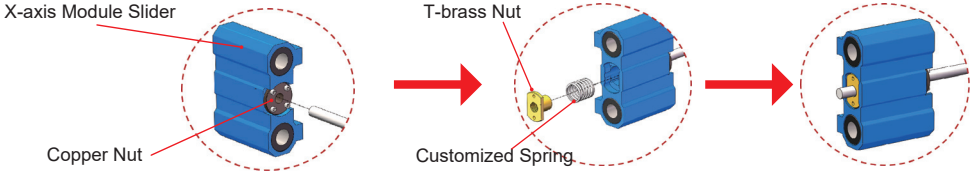
Customized Spring

☆ T-brass Nut

1. Turn the motor handwheel until the slider copper nut is screwed in about 20mm.

2. Put the spring at the other end of the X-axis slider, then press in the T-brass nut. Press the T-brass nut as deep as possible.

3. Keeping the T-brass nut pressed, turn the motor handwheel and screw the lead screw completely through the T-brass nut.



# Step 4: Install the X-axis Polished Rod Mount (Right)

*After completing this step, the X-axis extension has been preassembled.*

**What you need in this step of the installation:**

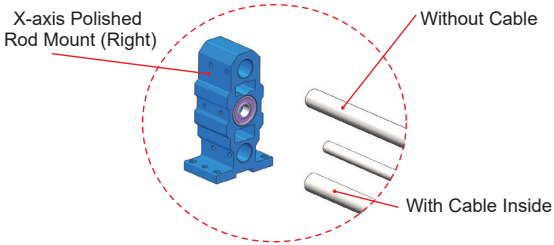
X-axis Polished Rod Mount (Right)

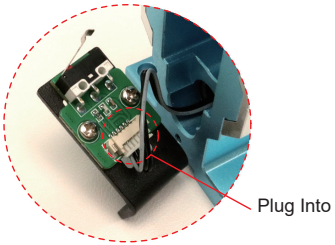
Limit Sheet Metal

(2) M3x6mm Round Head Phillips Screw

Polished Rod Guard

1. Since the polished rods are not currently locked, move the polished rod mounts and put the polished rods and lead screw into the mount at the same time.



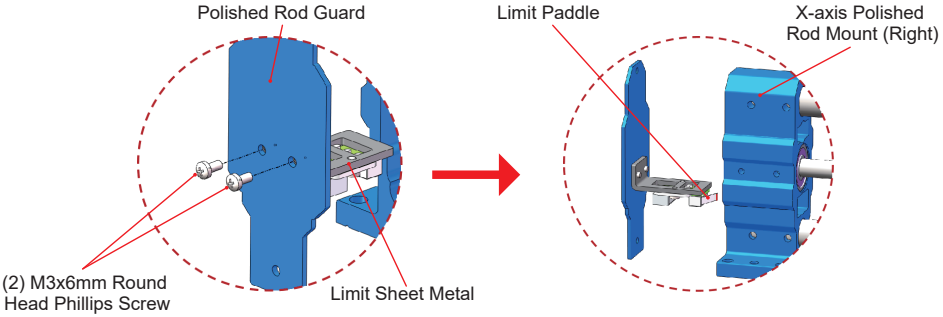
# Step 4: Install the X-axis Polished Rod Mount (Right)

2. Use 2 M3x6mm screws through the polished rod guard over-holes to assemble it with the limit switch assembly.

*Tip: It is recommended to use a medium-strength screw fixing compound, and apply it to the first third of the threads.*

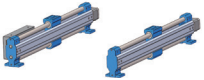
3. Attach the assembled polished rod guard to the surface of the X-axis polished rod mount, and extend the limit assembly into the slot of the X-axis polished rod mount.

*Note: The limit paddles are fragile, so be careful not to bump them when performing this procedure.*



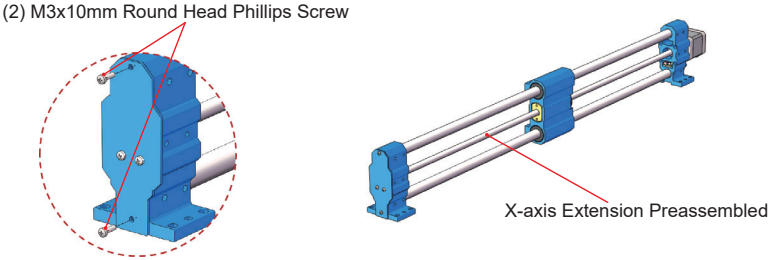
# Step 4: Install the X-axis Polished Rod Mount (Right)

**What you need in this step of the installation:**



(2) M3x10mm Round Head Phillips Screw

4. Use 2 M3x10mm screws through the polished rod guard over-holes to attach the X-axis polished rod mount.



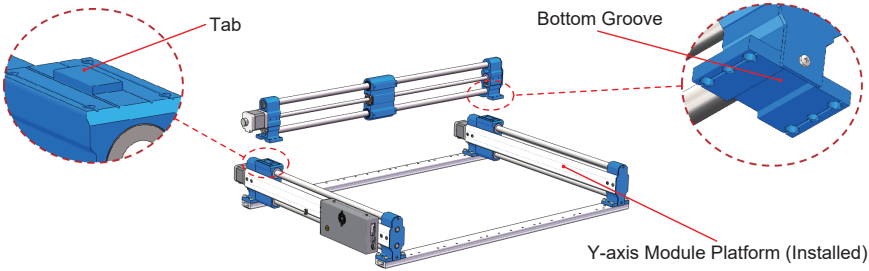
# Step 5: Install the X-axis Module to Y-axis Module Platform

**What you need in this step of the installation:**

☆ (8) Hex Socket Cap Screw

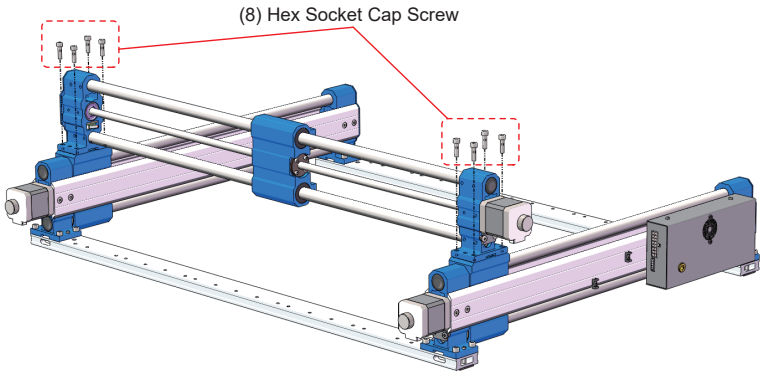
☆ (8) Mount Screw

1. Carefully place the X-axis module on the Y-axis module platform slider, completely snap the bottom grooves of the X-axis polished rod mounts into the slider tab of Y-axis module platform.



# Step 5: Install the X-axis Module to Y-axis Module Platform

2. Use 8 screws to pass the over-holes of X-axis polished rod mounts and screw into the Y-axis slider screw holes, then lock them.

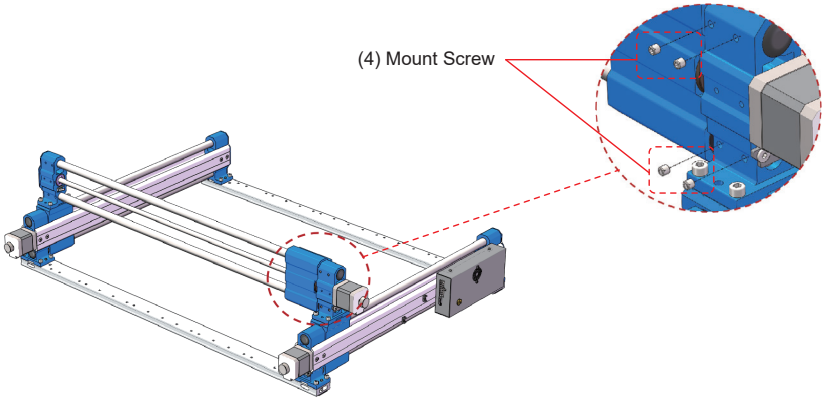


# Step 5: Install the X-axis Module to Y-axis Module Platform

3. Turn the handwheel to move the X-axis slider module to the X-axis motor end, until the handwheel can no longer be turned.

4. Screw the 4 mount screws into the X-axis polished rod mount (Left) and tighten it.

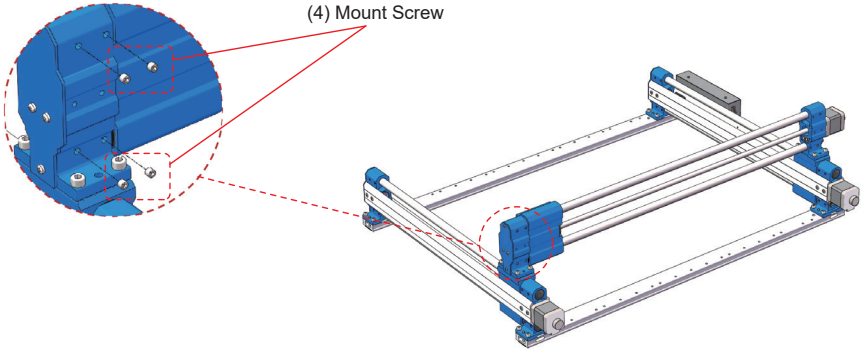
*Tip: It is recommended to use a high-strength screw fixing compound, applied to the first third of the threads.*



# Step 5: Install the X-axis Module to Y-axis Module Platform

5. Turn the handwheel to move the X-axis slider module to the other X-axis end, until the handwheel can no longer be turned.

6. Screw the 4 mount screws into the X-axis polished rod mount (Right) and tighten it.



# Step 6: Install the X-axis Extended Front and Rear Guard

**What you need in this step of the installation:**

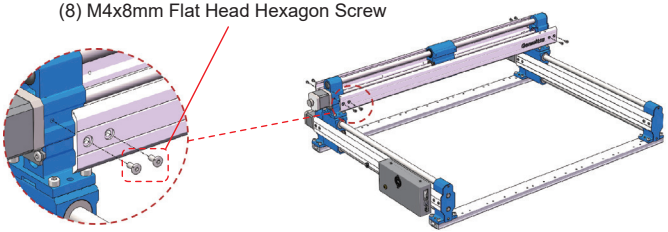
X-axis Extended Front Guard

X-axis Extended Rear Guard

(5) M4x8mm Flat Head Hexagon Screw

1. Take out the X-axis extended front and rear guards, please note that you need to distinguish the front and back, the one with fewer holes faces forward, the one with more holes faces back.

2. Use 8 M4x8mm screws through the guard holes to attach the guard to the X-axis polished rod mounts.



# Step 7: Install the X-axis Control Board

**What you need in this step of the installation:**

(6) M3x6mm Round Head Phillips Screw

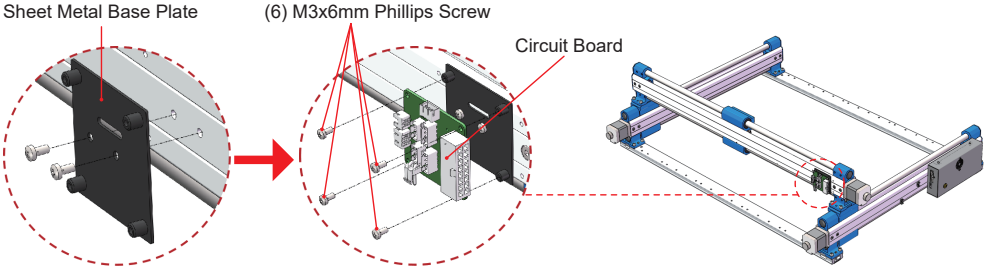
☆ Sheet Metal Base Plate

☆ Circuit Board

(4) M3x4mm Flat Head Phillips Screw

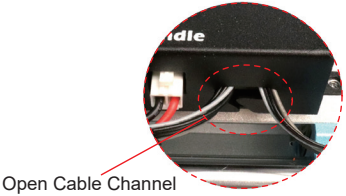
☆ Sheet Metal Housing

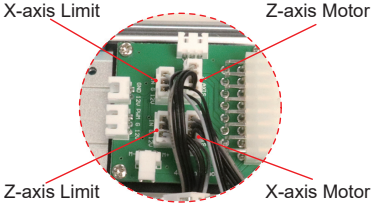
1. Use 2 M3x6mm screws to mount the sheet metal base plate on the X-axis rear guard.
2. Use 4 M3x6mm screws to mount the circuit board on the sheet metal base plate.



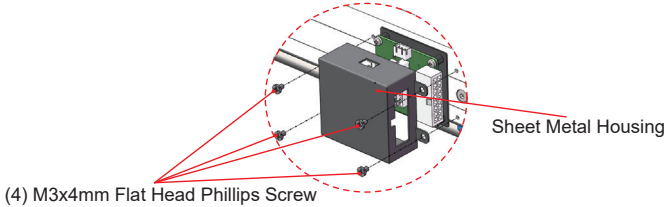
# Step 7: Install the X-axis Control Board

3. Carefully snap the cables through the open cable channel. Plug the corresponding cables into the circuit board as shown.




4. Use 4 M3x4mm screws to mount the sheet metal housing on the X-axis rear guard.



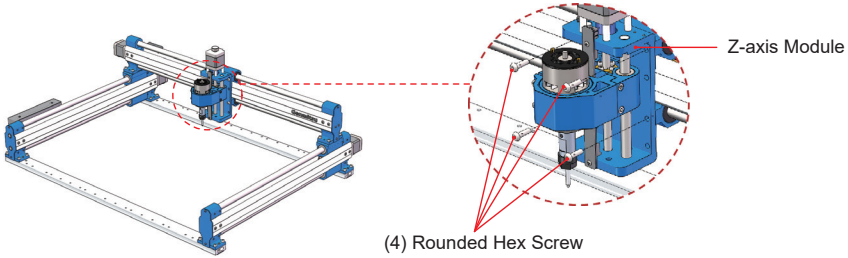
# Step 8: Install the Z-axis Module

**What you need in this step of the installation:**

☆ (4) Rounded Hex Screw

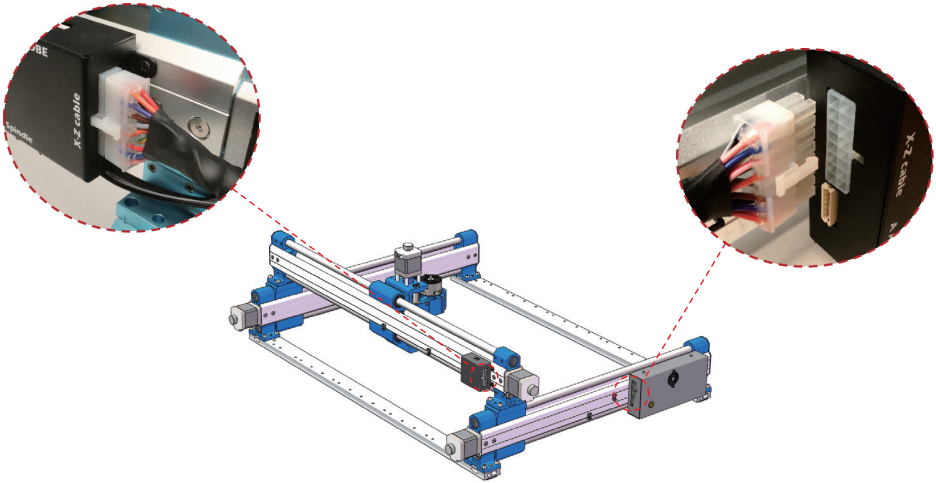
XZ Axis Assembly (with spindle installed)

1. Turn the Z-axis motor handwheel so that the Z-axis slider is adjusted to the proper position.
2. Use 4 screws to attach the Z-axis module to the X-axis module slider.



# Step 9: Wiring

Connect the X-Z module cable to the corresponding position.



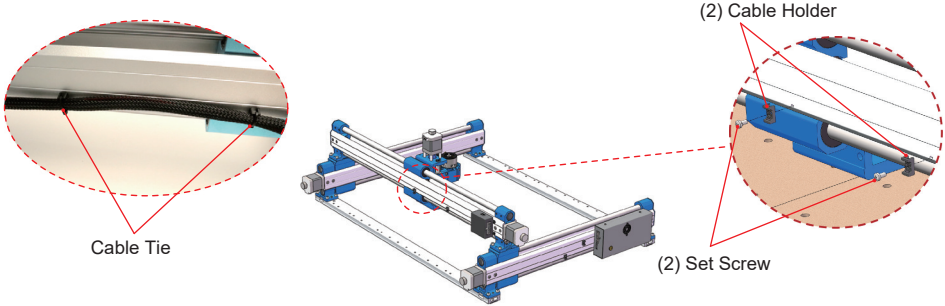
# Step 10: Install Cable Holders

**What you need in this step of the installation:**

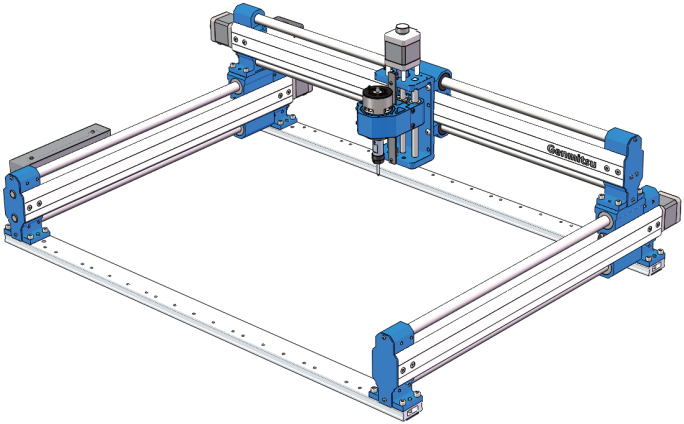
☆ (2) Set Screw

☆ (2) Cable Holder

Install the cable holders, as well as secure the cable.



# Finished



**For the installation of the MDF board or hybrid spoilboard, please refer to PART 3 of the corresponding installation guide.**

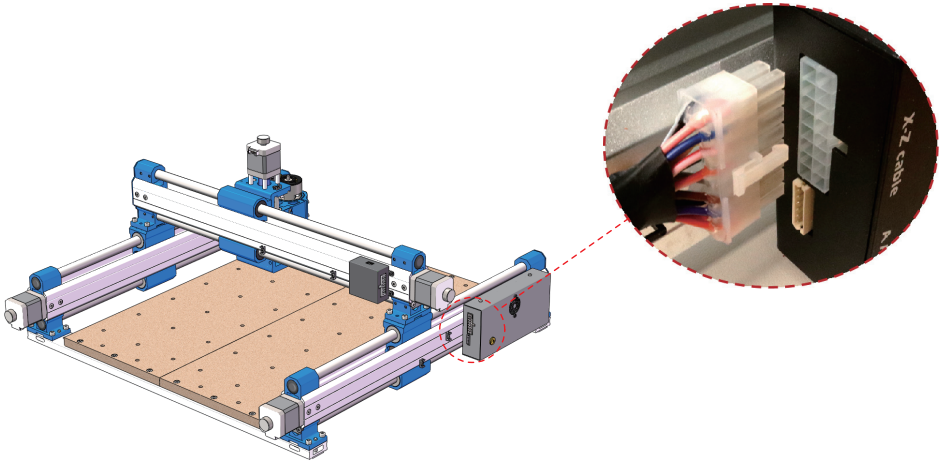
## PART 2：Y-axis Extension Module

***If you need to upgrade the X&Y modules at the same time, please make sure that you have finished removing the X-axis module (In PART 1) before proceeding as follows.***

**Remove the Y-axis module**

# Step 1: Remove the Cables

Remove the connecting cable as shown.



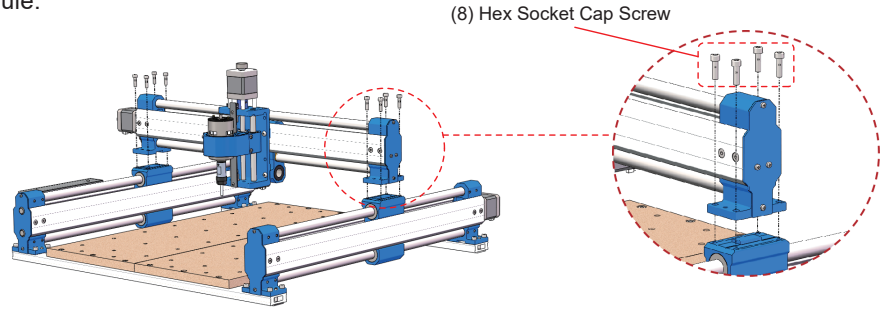
# Step 2: Remove the X-axis Module

**What to keep in this step of removal:**

(8) Hex Socket Cap Screw

XZ Axis Assembly (With spindle installed)

Unscrew the 8 X-axis mounting screws with an allen wrench.Then remove and the XZ-axis module.



# Step 3: Remove the MDF Board

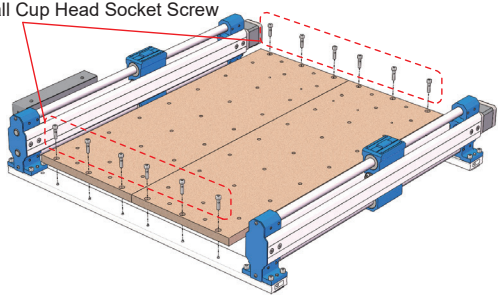
**What to keep in this step of removal:**

(12) M5x20mm Small Cup Head Socket Screw

(2) MDF Board

Remove the 12 screws and 2 MDF boards from the platform.

(12) M5x20mm Small Cup Head Socket Screw



# Step 4: Remove the Y-axis Module Platform

**What to keep in this step of removal:**

(8) Dowel Pin

Front Plate

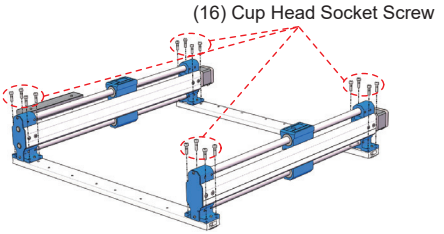
Rear Plate

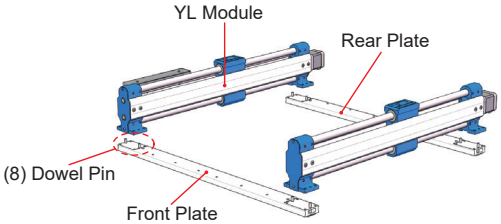
(16) Cup Head Socket Screw

Unscrew the 16 screws for the YL & YR modules.

Carefully remove and place the Y-axis modules on the table for easy subsequent disassembly.

Pay attention to the dowel pins on the polished rod mounts.



# Step 5: Remove the Y-axis Right Module

**What to keep in this step of removal:**

Polished Rod Guard(YR)

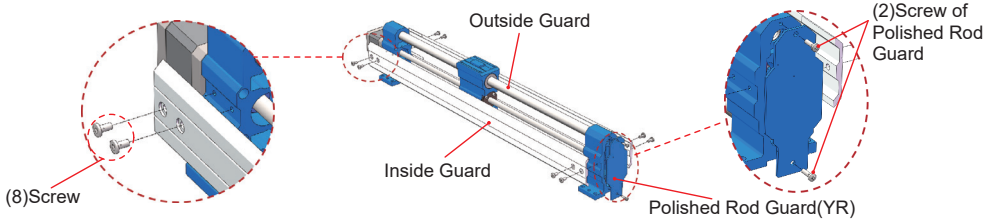
(2)Screw of Polished Rod Guard

(8)Mount Screw

Polished Rod Mount(YR)

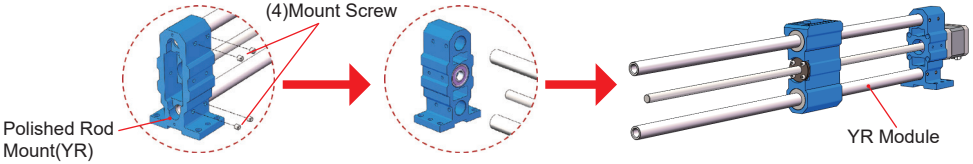
Y-axis Right Module Slider with T-brass Nut

1. Unscrew the 2 screws of the polished rod guard with a Phillips wrench, remove the polished rod guard.
2. Unscrew the 8 screws with an Allen wrench, and remove both the inside and outside guards.



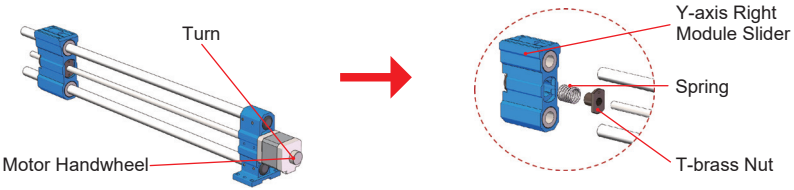
# Step 5: Remove the Y-axis Right Module

3. Unscrew the 4 mount screws on the polished rod mount(YR) with an Allen wrench and remove the polished rod mount(YR).



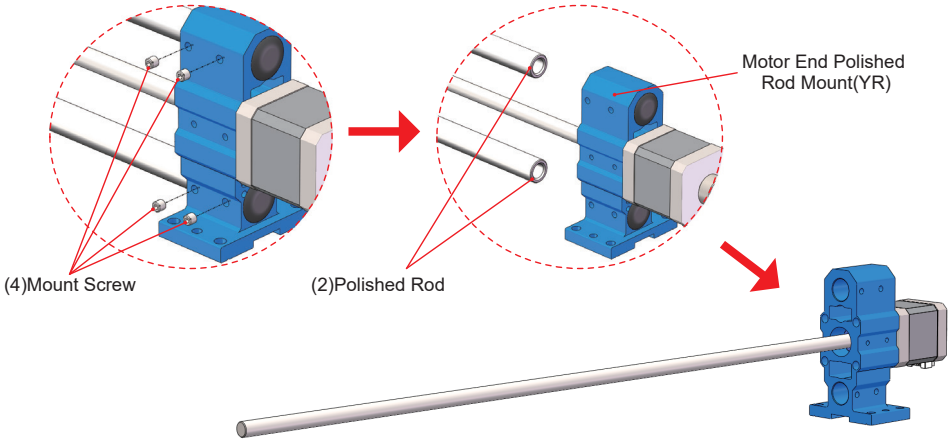

4. Keep turning the motor handwheel until the Y-axis slider module is completely turned out of the polished rod and lead screw assembly.

*Tip: There is a spring mounted inside the Y-axis T-brass nut, so make sure to cover the T-brass nut when it is about to be screwed out of the lead screw.*



# Step 5: Remove the Y-axis Right Module

5. Unscrew the 4 mount screws on the motor end polished rod mount(YR), then remove the polished rods.



# Step 5: Remove the Y-axis Right Module

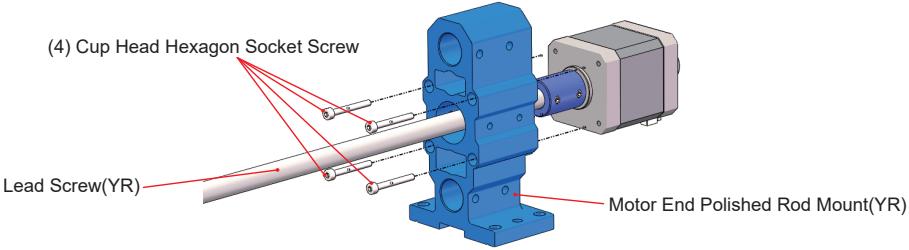
**What to keep in this step of removal:**

(4) Cup Head Hexagon Socket Screw

Motor End Polished Rod Mount(YR)

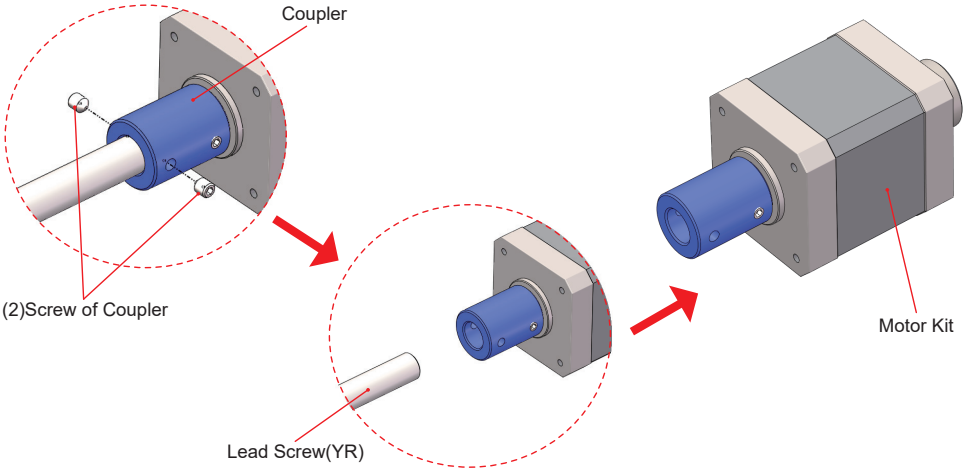
Motor Kit(YR)

6. Unscrew the 4 screws on the motor end polished rod mount(YR) with an Allen wrench and remove the motor end polished rod mount(YR).



# Step 5: Remove the Y-axis Right Module

Unscrew the 2 screws on the coupler with an Allen wrench and remove the lead screw(YR).



# Step 6: Remove the Y-axis Left Module

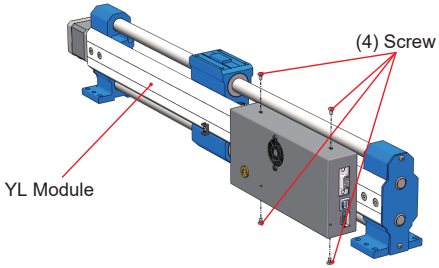
**What to keep in this step of removal:**

Control Box Module

(2) Screw of Polished Rod Guard

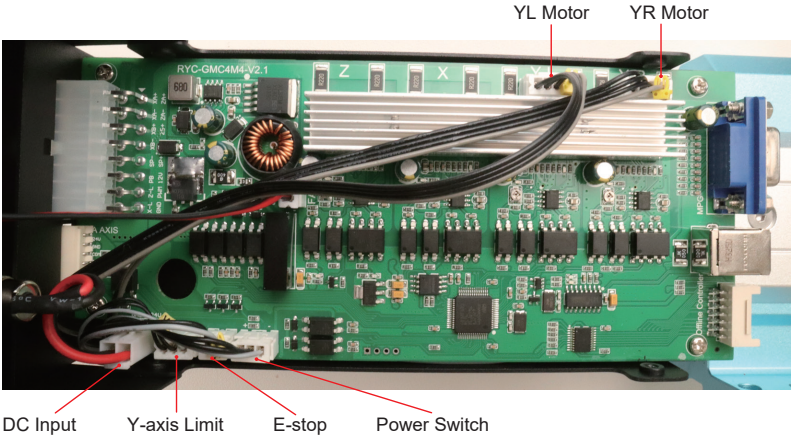
Polished Rod Guard(YL)

1. Remove the 4 screws from the control box at the sheet metal housing and carefully open the sheet metal housing.



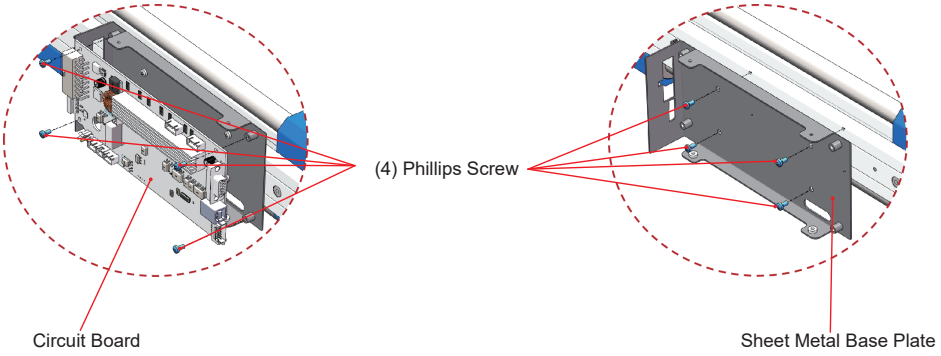
# Step 6: Remove the Y-axis Left Module

2. Open the case and unplug the 5 cables from the circuit board inside the case as shown in the figure. Remove the sheet metal housing.



# Step 6: Remove the Y-axis Left Module

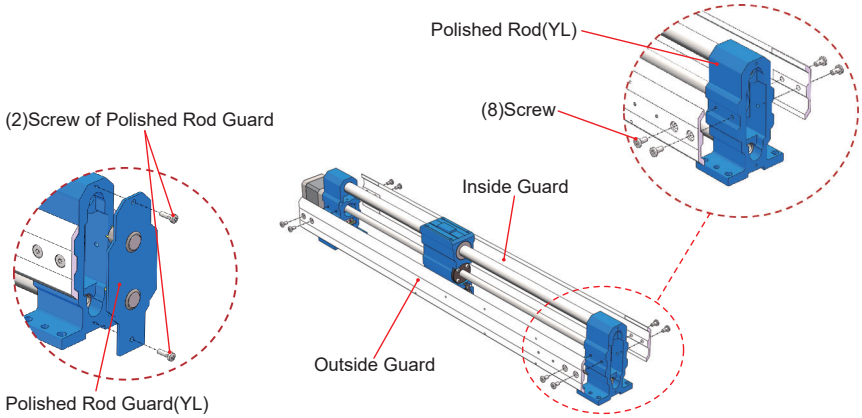
3. Use a Phillips wrench to unscrew the 4 screws and remove the board.
4. Use a Phillips wrench to unscrew the 4 set screws and remove the sheet metal base plate.



# Step 6: Remove the Y-axis Left Module

5. Unscrew the 2 screws of the polished rod guard with a Phillips wrench, remove the polished rod guard.

6. Unscrew the 8 screws with an Allen wrench, remove both the inside and outside guards.



# Step 6: Remove the Y-axis Left Module

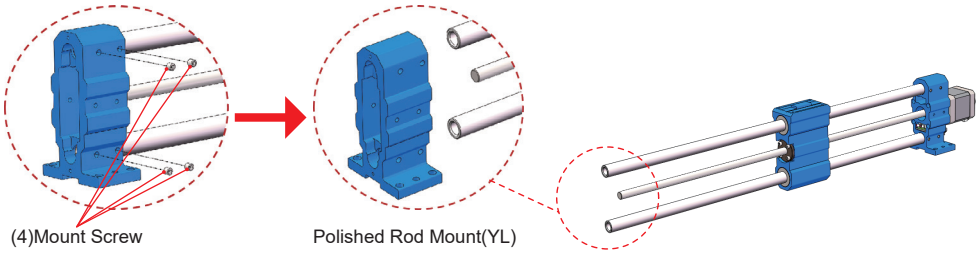
**What to keep in this step of removal:**

Polished Rod Mount(YL)

(4) Mount Screw

Y-axis Left Module Slider with T-brass Nut

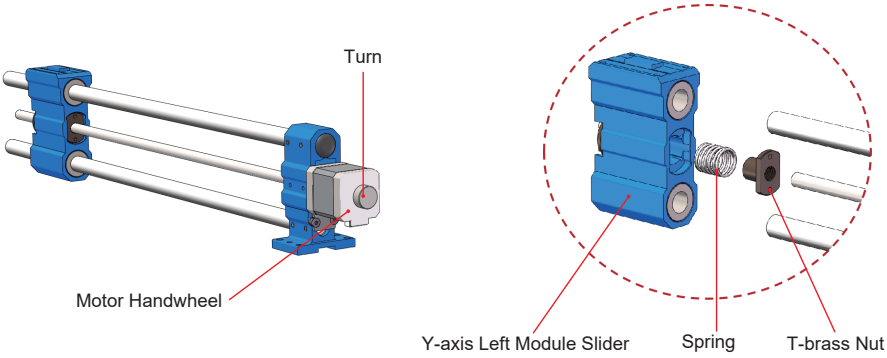
1. Unscrew the 4 mount screws on the polished rod mount(YL) with an Allen wrench and remove the polished rod mount(YL).



# Step 6: Remove the Y-axis Left Module

5. Keep turning the motor handwheel until the Y-axis slider module is completely turned out of the polished rod and lead screw assembly.

*Tip: There is a spring mounted inside the Y-axis T-brass nut, so make sure to cover the T-brass nut when it is about to be screwed out of the lead screw.*



# Step 6: Remove the Y-axis Left Module

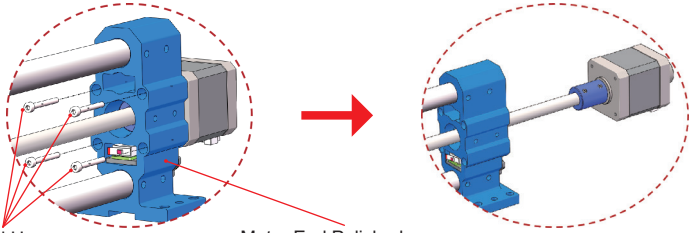
**What to keep in this step of removal:**

Polished Rod Mount(YL)

(4) Cup Head Hexagon Socket Screw

(4) Mount Screw

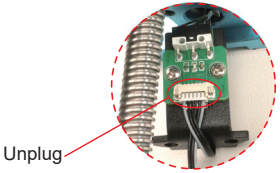
9. Unscrew the 4 screws on the motor end polished rod mount(YL) with an Allen wrench and remove the motor end polished rod mount(YL).

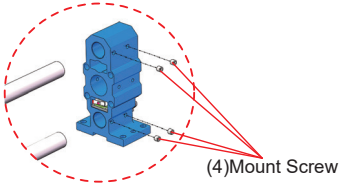


# Step 5: Remove the Y-axis Right Module

10. Carefully remove the sheet metal and unplug the Y-axis cable.

11. Unscrew the 4 mount screws on the motor end polished rod mount(YL) with an Allen wrench and remove the polished rod mount(YL).




**What to keep in this step of removal:**

(2) Set Screw of Cable Holder

(2) Cable Holder

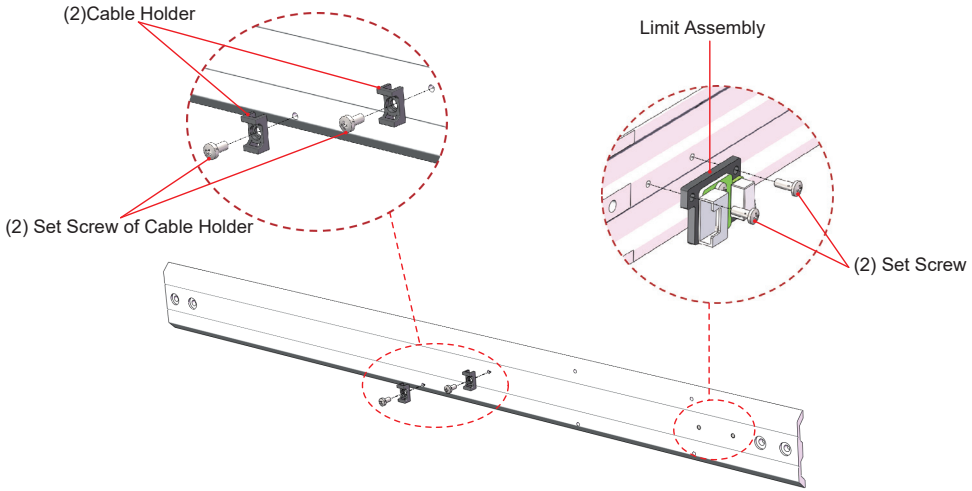
Limit Assembly

(2) Set Screw

12. Use a Phillips wrench to unscrew the 2 set screws of the cable holder and remove the cable holders.

# Step 5: Remove the Y-axis Right Module

13. Use a Phillips wrench to unscrew each of the 2 set screws and remove the limit assembly.

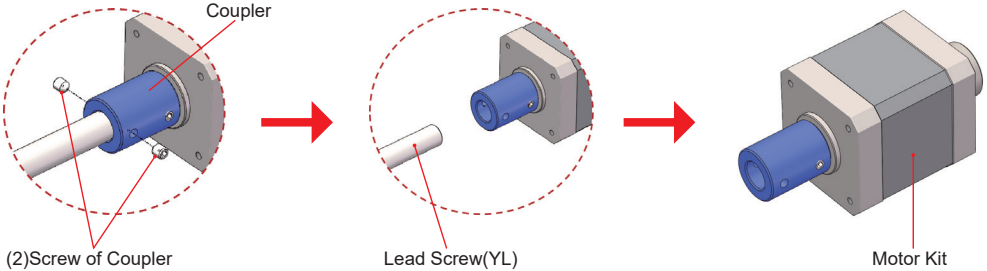


# Step 5: Remove the Y-axis Right Module

**What to keep in this step of removal:**

Motor Kit(YL)

14. Unscrew the 2 screws on the coupler with an Allen wrench and remove the lead screw(YL).



## Install the Y-axis Extension Module

***If you need to install both X-axis and Y-axis extensions, this is the part you need to complete first, come along and experience the installation journey!***

# Unbox (101-63-40P-YE60)

Extended Guard with
Control Box (YL Outside)

(3) Extended Y-axis
Lead Screw Guard

(1) L780mm Polished Rod (Threaded into
the Y-axis Limit Cable & YR Extension
Motor Cable & YL Extension Cable)

(2) L755mm Lead Screw

(3) L780mm Polished Rod

XZ-axis Extension Cable

Customized Spring

(17) M4x8mm Flat Head
Hexagon Screw

(5) M3x6mm Flat
Head Phillips Screw

# Unbox (101-63-40P-YE60)

2.5mm Allen Wrench

(3) M4x4mm Hexagon Socket Set Screw

(5) M3x6mm Flat Head Phillips Screw


User Manual

*The objects marked with ☆ in the items required for installation are those that have been previously removed.*

# Step 1: Install the Y-axis Right Module

**What you need in this step of the installation:**

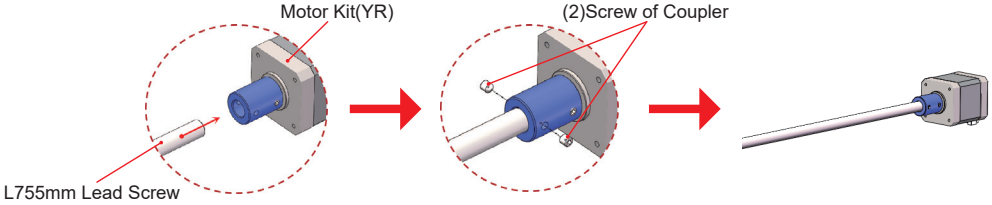
L755mm Lead Screw

☆ Motor Kit(YR)

(2) M4x4mm Hexagon Socket Set Screw

1. Install the extended lead screw into the coupler, screw the 2 M4x4mm screws with an Allen wrench and tighten them.

*Note: To ensure the stability and accuracy of the machine, it is recommended that you reinforce the screws with a screw fixing compound. (It is recommended to use a high strength screw fixing compound. Apply to the first third of the tightening screw threads.)*



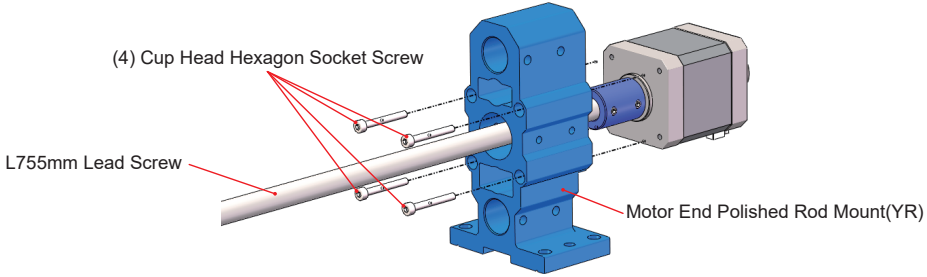
# Step 1: Install the Y-axis Right Module

**What you need in this step of the installation:**

☆Polished Rod Mount(YR)

☆(4) M3x25mm Cup Head Hexagon Socket Screw

2. Insert the Y-axis right motor assembly into the polished rod mount, screw the 4 M3x25mm screws with an Allen wrench and tighten them.



# Step 1: Install the Y-axis Right Module

**What you need in this step of the installation:**

☆Y-axis Right Module Slider

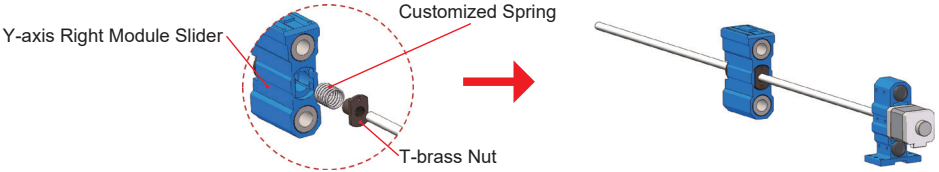
Customized Spring

☆T-brass Nut

3. Turn the motor handwheel until the T-brass nut/slider copper nut is screwed in about 20mm.

4. Place the spring, then press in the Y-axis right module slider, and press the T-brass nut as deep as possible.

5. Keeping the T-brass nut pressed, turn the motor handwheel and screw the lead screw completely through the Y-axis right module slider.



# Step 1: Install the Y-axis Right Module

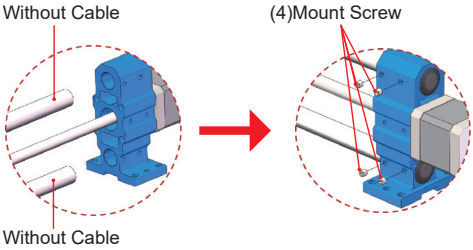
**What you need in this step of the installation:**

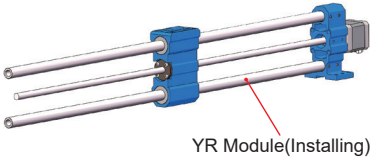
(2) Polished Rod (Both without cable)

☆(8)Mount Screw

☆Polished Rod Mount(YR)

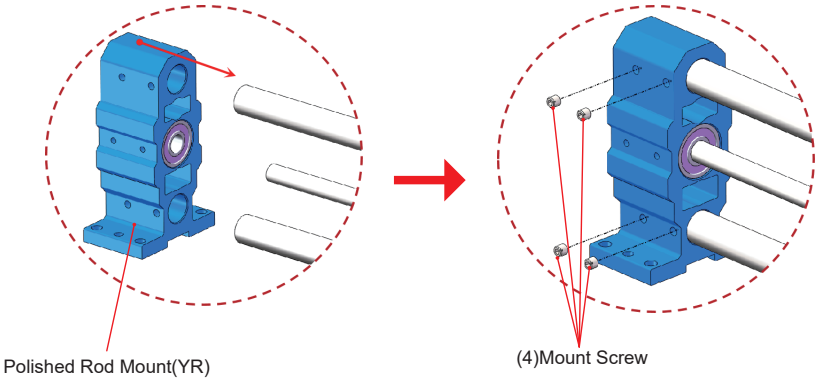
6. Insert the polished rods into the polished rod mount and use the 4 screws to completely secure the polished rods in the polished rod mount.



# Step 1: Install the Y-axis Right Module

7. Insert the other polished rod mount(YR) into the YR module and use the 4 screws to completely secure the polished rods in the polished rod mount.



# Step 1: Install the Y-axis Right Module

**What you need in this step of the installation:**

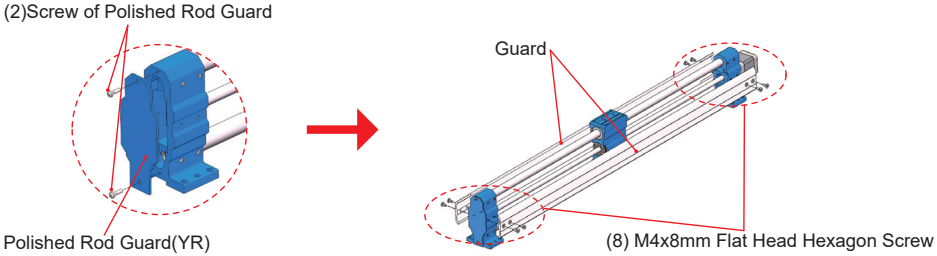
☆ Polished Rod Guard(YR)

☆ (2)Screw of Polished Rod Guard

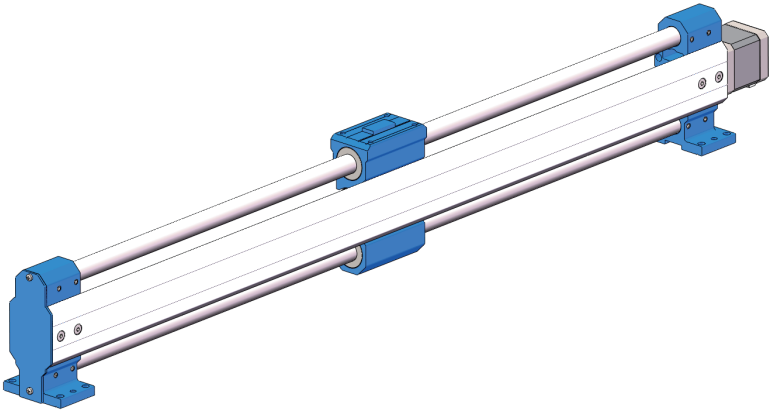
(8) M4x8mm Flat Head Hexagon Screw

(2) Extended Y-axis Lead Screw Guard

8. Use 2 screws of polished rod guard to attach the YR polished rod guard.
9. Use 8 flat head screws to attach the extended Y-axis lead screw guards to the YR module.



## YR module assembly completed!



# Step 2: Install the Y-axis Left Module

**What you need in this step of the installation:**

Extended Guard with Control Box (YL Outside)

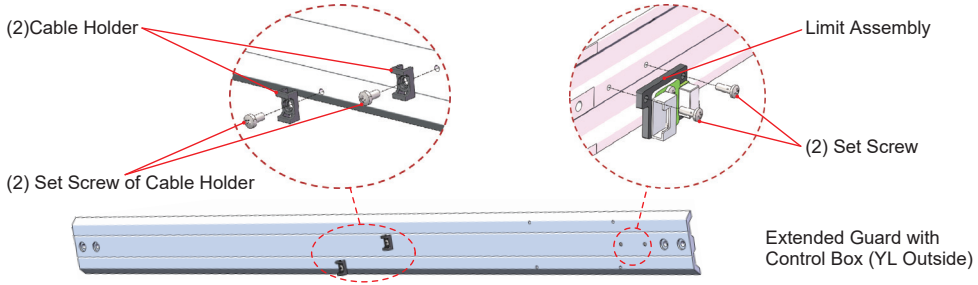
☆ (2) Set Screw of Cable Holder

☆ (2) Cable Holder

☆ Limit Assembly

☆ (2) Set Screw

1. Use the 2 set screws of the cable holder to install the cable holders.
2. Use the 2 set screws to install the limit assembly on the YL outside extended guard.



# Step 2: Install the Y-axis Left Module

**What you need in this step of the installation:**

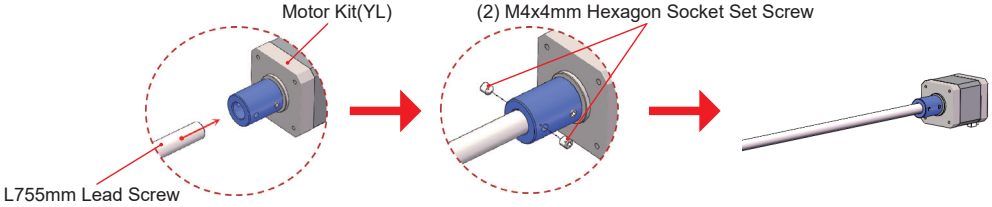
L755mm Lead Screw

☆ Motor Kit(YR)

(2) M4x4mm Hexagon Socket Set Screw

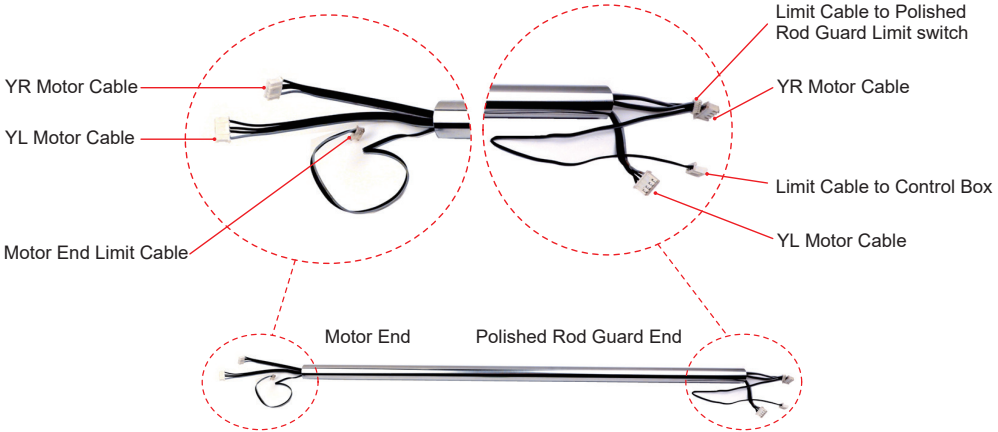
3. Install the extended lead screw into the coupler, screw the 2 M4x4mm screws with an Allen wrench and tighten them.

*Note: To ensure the stability and accuracy of the machine, it is recommended that you reinforce the screws with a screw fixing compound. (It is recommended to use a high strength screw fixing compound. Apply to the first third of the tightening screw threads.)*



# Step 2: Install the Y-axis Left Module

## Y-axis Threading Details



# Step 2: Install the Y-axis Left Module

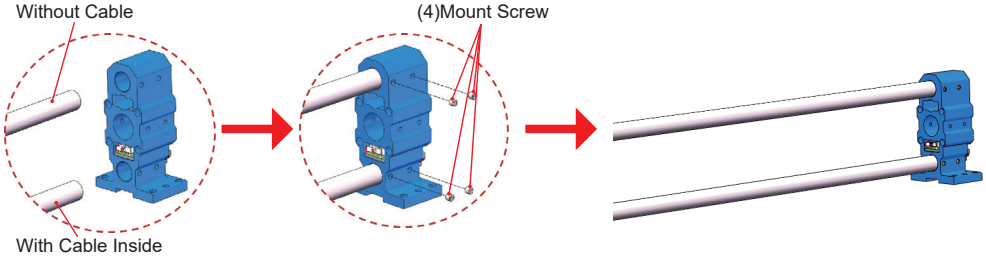
**What you need in this step of the installation:**

(2) Polished Rod (One of the polished rod is threaded into the Y-axis limit cable)

Motor End Polished Rod Mount with Sheet Metal (YL)

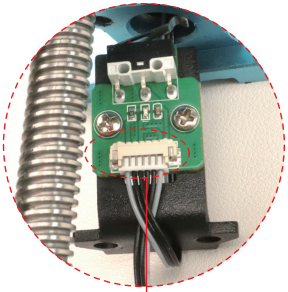
(4) Cup Head Hexagon Socket Screw

4. Insert the polished rods into the polished rod mount as shown and use the 4 screws to completely secure the polished rods in the polished rod mount.

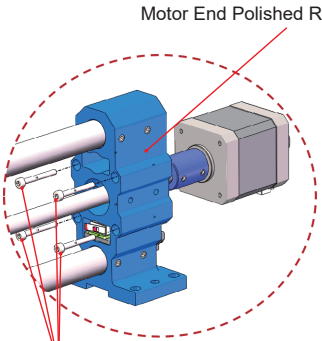


# Step 2: Install the Y-axis Left Module

5. Connect the motor end limit switch cable inside the limit assembly terminals.
6. Use 4 cup head screws to fit the motor into the polished rod mount and cross lock the screws.



Plug Into



Motor End Polished Rod Mount (YL)

(4) Cup Head Hexagon Socket Screw

# Step 2: Install the Y-axis Left Module

**What you need in this step of the installation:**

☆Y-axis Left Module Slider

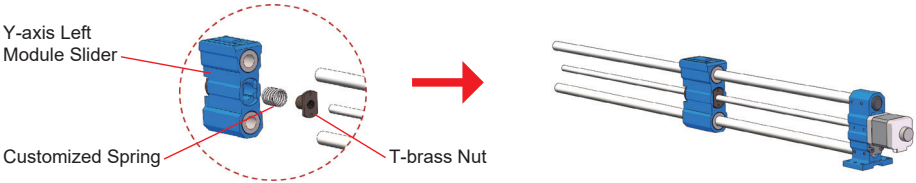
Customized Spring

☆T-brass Nut

7. Turn the motor handwheel until the T-brass nut/slider copper nut is screwed in about 20mm.

8. Place the spring, then press in the Y-axis left module slider, and press the T-brass nut as deep as possible.

9. Keeping the T-brass nut pressed, turn the motor handwheel and screw the lead screw completely through the Y-axis left module slider.



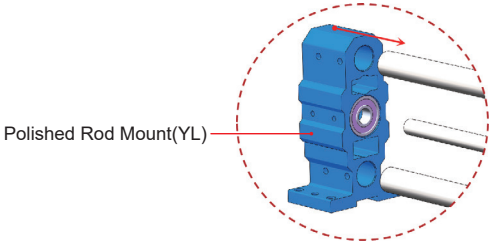
# Step 2: Install the Y-axis Left Module

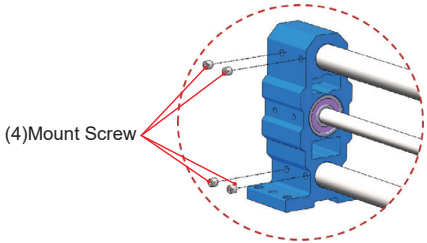
**What you need in this step of the installation:**

☆ Polished Rod Mount(YL)

☆ (4)Mount Screw

10. Insert the other polished rod mount(YL) into the YL module and use the 4 screws to completely secure the polished rods in the polished rod mount.



# Step 2: Install the Y-axis Left Module

**What you need in this step of the installation:**

☆Polished Rod Guard(YL)

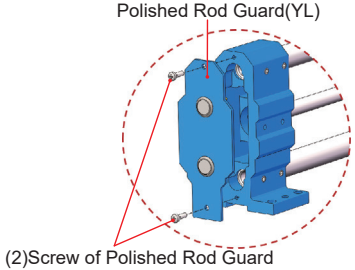
☆(2)Screw of Polished Rod Guard

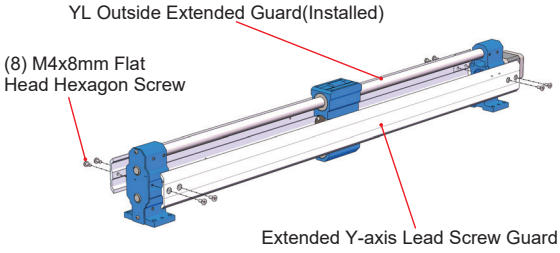
(8) M4x8mm Flat Head Hexagon Screw

YL Outside Extended Guard (Installed)

Extended Y-axis Lead Screw Guard

11. Use 2 screws of polished rod guard to attach the YL polished rod guard.
12. Use 8 flat head screws to attach the extended Y-axis lead screw guards to the YL module.



# Step 2: Install the Y-axis Left Module

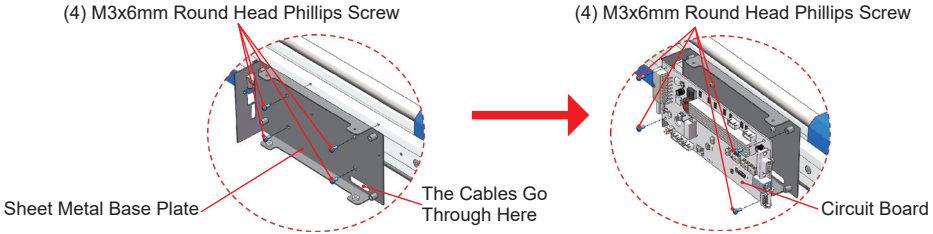
**What you need in this step of the installation:**

☆ Sheet Metal Base Plate

☆ Circuit Board

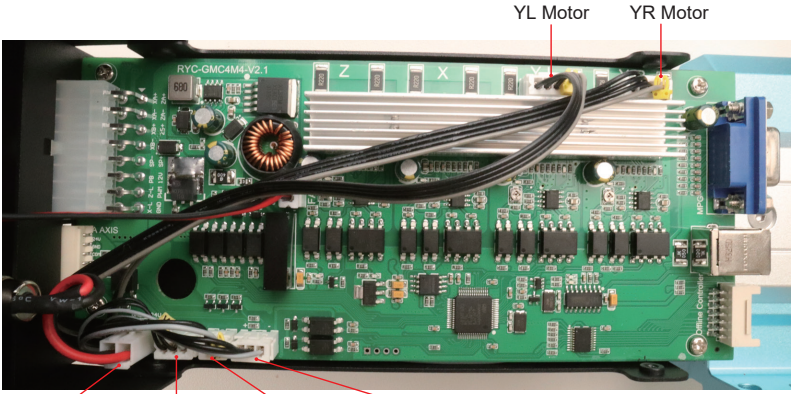
(8) M3x6mm Round Head Phillips Screw

13. Pass the previously unplug cables through the holes in the figure.
14. Use 4 round head Phillips screws to attach the sheet metal base plate to the lead screw guard.
15. Use 4 round head Phillips screws to attach the circuit board to the sheet metal base plate.



# Step 2: Install the Y-axis Left Module

16. Connect the cables as shown



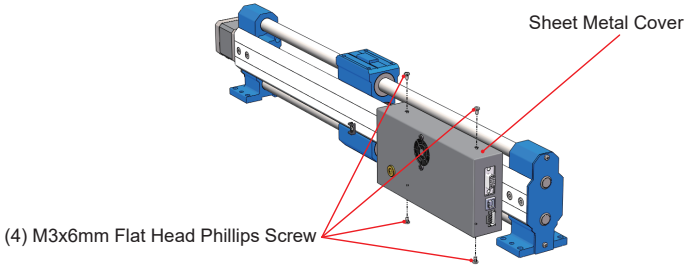
# Step 2: Install the Y-axis Left Module

**What you need in this step of the installation:**

☆ Sheet Metal Cover

(4) M3x6mm Flat Head Phillips Screw

17. Use 4 flat head Phillips screws to mount the sheet metal cover to the sheet metal base plate.

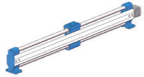


# Step 3: Install the Machine Frame and Wiring

*If you need to upgrade the X-axis, refer to Part 1 for the rest of the installation.*

**What you need in this step of the installation:**

☆ Front and Rear Plate (With Rubber Feet and Dowel Pin)

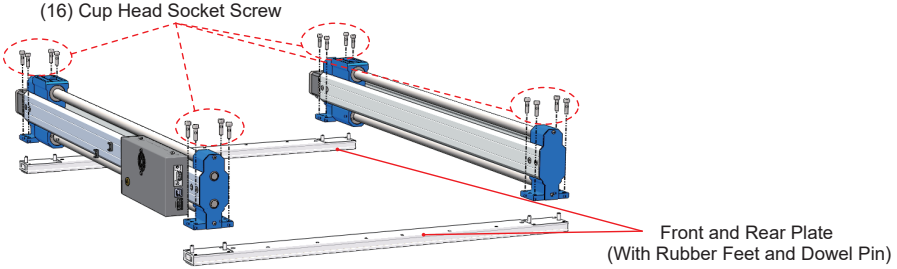


Y-axis Right Module

Y-axis Left Module

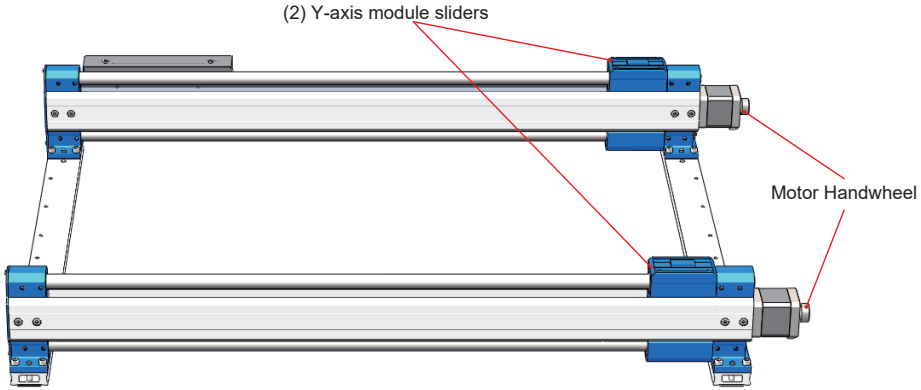
☆ (16) Cup Head Socket Screw

1. Use 16 cup head socket screws to mount the YL&YR module to the front and rear plate.



# Step 2: Install the Y-axis Left Module

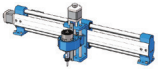
2. Turn the Y-axis module motor handwheel to adjust the Y-axis module slide to the limit position of the motor end, making sure that the handwheel can no longer be turned at this point.



# Step 3: Install the Machine Frame and Wiring

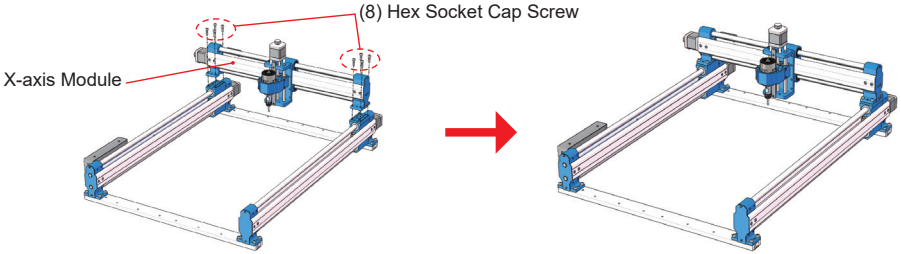
**What you need in this step of the installation:**

☆ (8) Hex Socket Cap Screw



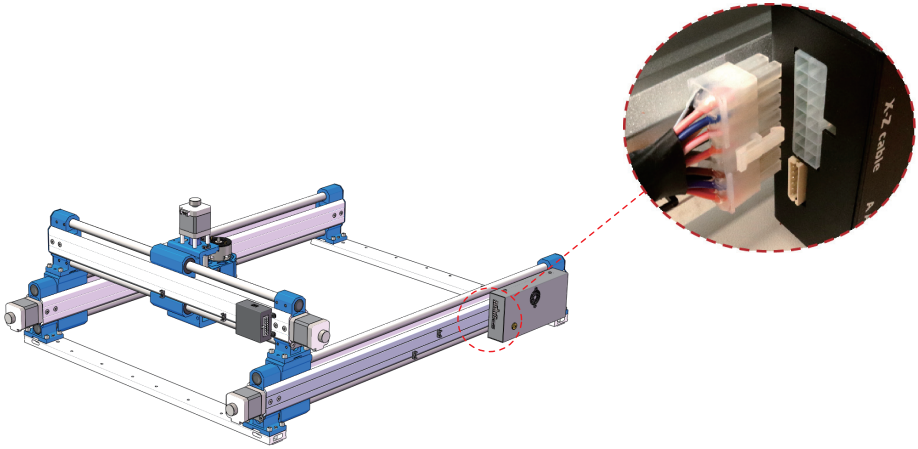
☆ X-axis Module

3. Use 8 screws to pass the over-holes of X-axis polished rod mounts and screw into the Y-axis slider screw holes, then lock them.

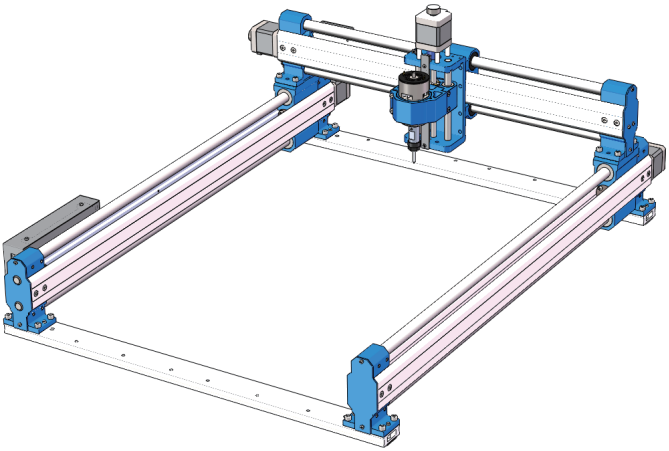


# Step 3: Install the Machine Frame and Wiring

4. Connect the X-Z module cable to the control box as shown.



# Finished



**For the installation of the MDF board or hybrid spoilboard, please refer to PART 3 of the corresponding installation guide.**

# PART 3：MDF Board & Hybrid Spoilboard

***Select the platform plate to be installed according to your needs.***

## Install the 6040 MDF Board

***For only X-axis expansion.***

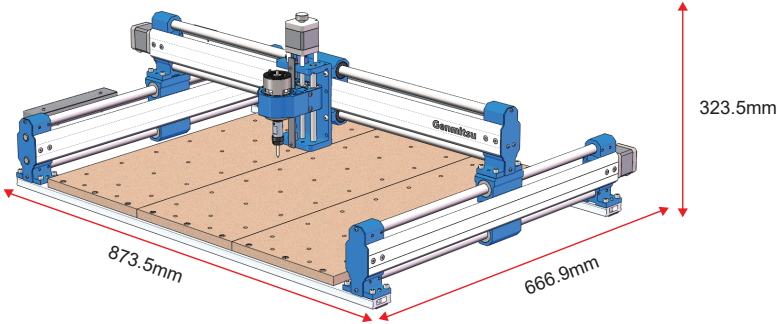
# Unbox (101-63-40P-X64MDF)

MDF Board

(7) M5x20mm Small
Cup Head Socket Screws

4mm Allen Wrench

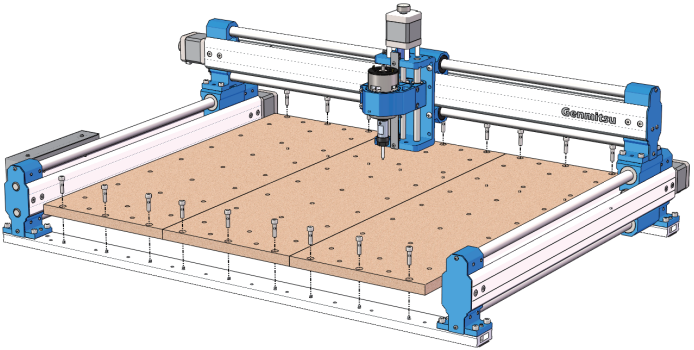

User Manual



Use 18 (12 for original and 6 for new) M5x20mm small cup head socket screws through MDF board holes to mount the 3 (2 for original and 1 for new) MDF boards on the front and rear plate.

*Note: There are a lot of screw holes, please make sure to install the screws crosswise, and do not screw directly until all the screws are installed.*

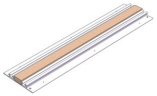
*After all the screws are pre-installed, they can be tightened. The MDF board is not as hard as the metal parts, so be careful not to use too much force when tightening, as it is easy to damage the MDF board.*



# Install the 6040 Hybrid Spoilboard

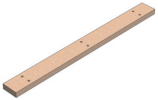
***For only X-axis expansion. Needs to be used with 101-63-R40P-HSP4040.***

# Unbox (101-63-40P-X64HSP)

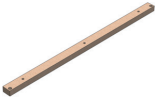


Wide Aluminum &
MDF Hybrid Slat

(2) Narrow Aluminum &
MDF Hybrid Slat



Wide MDF Slat



(2) Narrow MDF Slat

(5) M5X20mm Hex
Socket Cap Screw

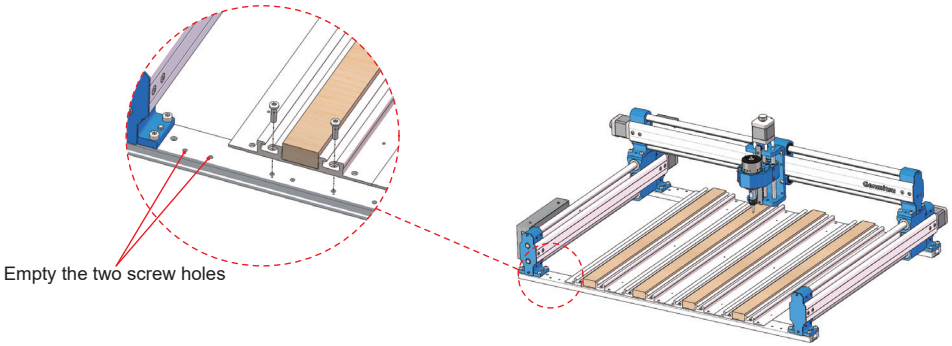
(13) M3X14mm
Flat Head Cap Screw

(9) M5X16mm Thin Cup
Head Cap Screw

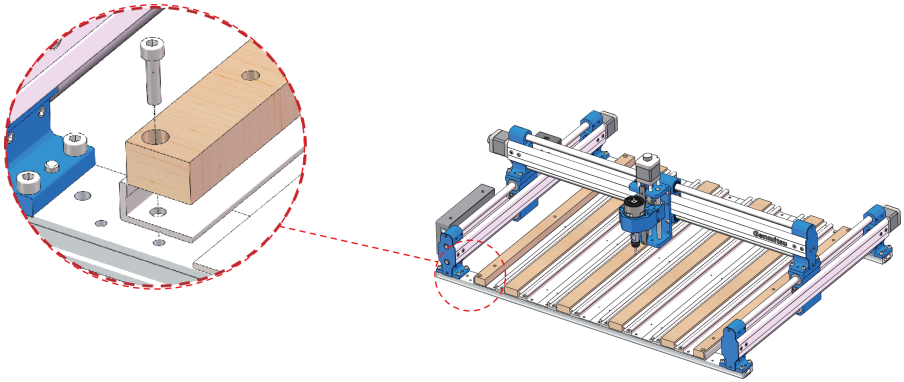
2mm Allen Wrench
3mm Allen Wrench
4mm Allen Wrench

1. Use 16 (8 for original and 8 for new) M5x16mm thin cup head cap screws through holes to mount the 4 (3 for original and 1 for new) wide aluminum & MDF hybrid slat on the front and rear plate as shown. Do not tighten the screws.

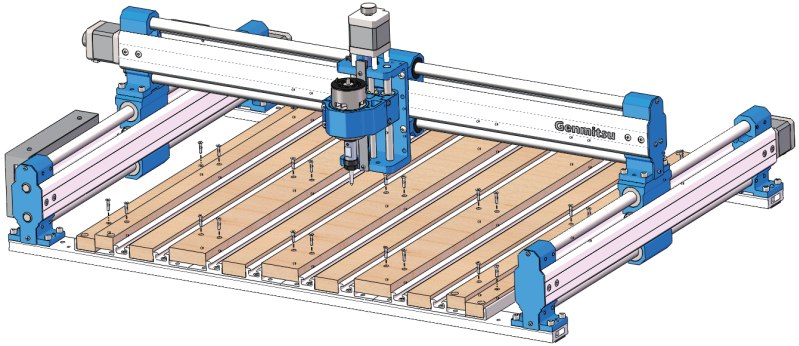
*Note: There are more screw holes, please make sure to cross install the screws and do not screw them directly until all the screws are in place.*



2. Use 4 M5x25mm screws through holes to mount the 2 narrow MDF slats and 2 narrow aluminum & MDF hybrid slats on the front and rear plate as shown. Do not tighten the screws.

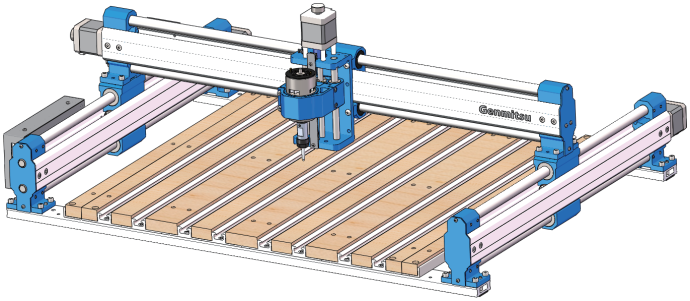


3. Use 30 (18 for original and 12 for new) M3x14mm screws through holes to mount the all MDF slats on the aluminum platforms as shown. Do not tighten the screws.

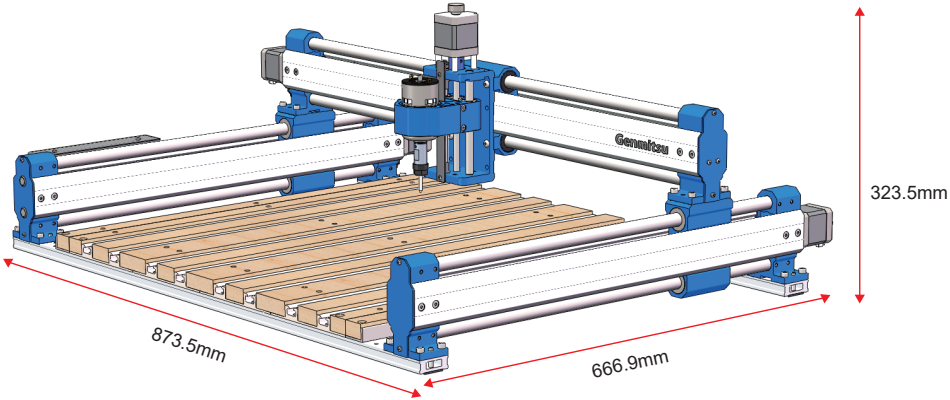


4. When all the screws have been pre-installed, start tightening the screws, prioritizing the M5x16mm screws, followed by the M5x25mm screws, and finally the M3x14mm screws.

*Note: There are more screw holes, in order to prevent bad installation, please use cross tightening to lock the screws. HDF board is not as hard as metal parts, when tightening, please note that the force should not be too large, it is easy to damage the MDF board.*



# Unbox (101-63-40P-X64HSP)



# Install the 4060 MDF Board

***Needs 2 pieces of 101-63-40P-Y46MDF.***

# Unbox (101-63-40P-X64MDF)

MDF Expansion Board

(7) M5x20mm Small Cup Head Hexagon Socket Screws

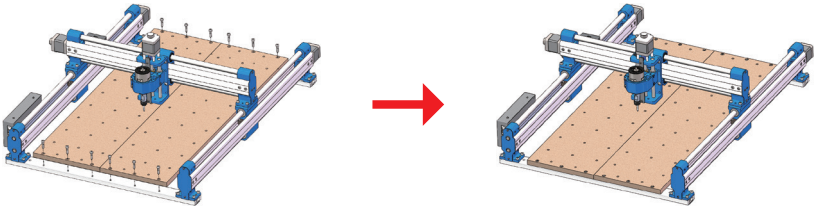
4mm Allen Wrench


User Manual

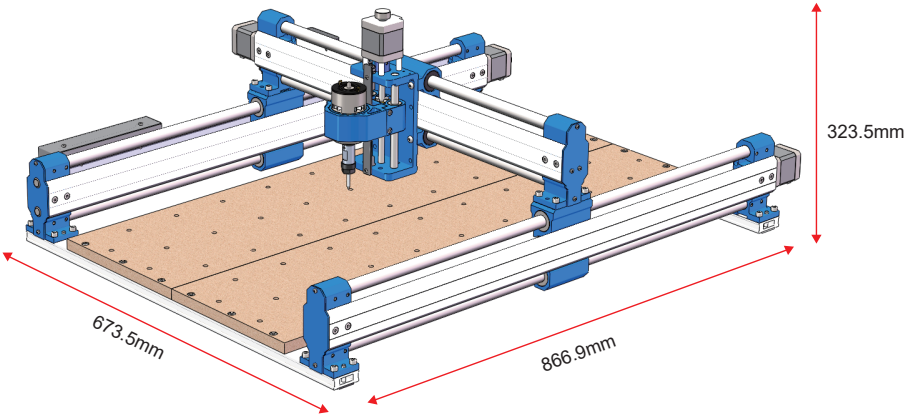
Use 12 M5x20mm screws through 2 expansion MDF board holes to mount the MDF boards on the front and rear plates.

*Note: There are a lot of screw holes, please make sure to install the screws crosswise, and do not screw directly until all the screws are installed.*

*After all the screws are pre-installed, they can be tightened. The MDF board is not as hard as the metal parts, so be careful not to use too much force when tightening, as it is easy to damage the MDF board.*



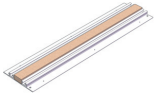
# Unbox (101-63-40P-X64MDF)



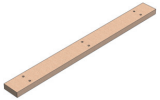
# Install the 4060 Hybrid Spoilboard

***For only Y-axis expansion.***

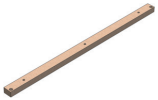
# Unbox (101-63-40P-Y46HSP)



(3) Wide Aluminum
& MDF Hybrid Slat



(2) Wide MDF Slat



(2) Narrow MDF Slat

(5) M5X20mm Hex
Socket Cap Screw

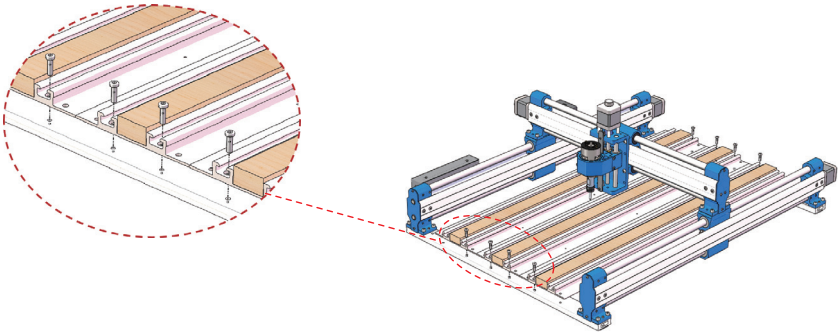
(9) M5X16mm Thin
Cup Head Cap Screw

(20) M3X14mm
Flat Head Cap Screw

2mm Allen Wrench
3mm Allen Wrench
4mm Allen Wrench

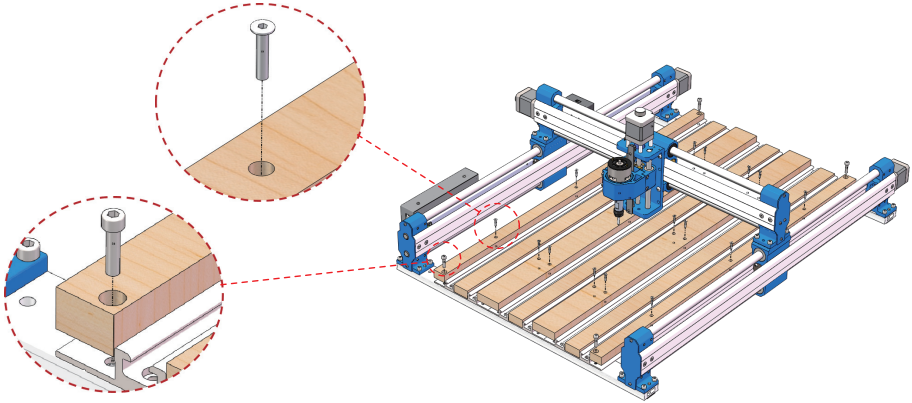
1. Use 8 M5x16mm thin cup head cap screws through holes to mount the 3 wide aluminum & MDF hybrid slat on the front and rear plate as shown. Do not tighten the screws.

*Note: There are more screw holes, please make sure to cross install the screws and do not screw them directly until all the screws are in place.*



2. Use 4 M5x20mm screws through 4 corner holes to mount the 2 narrow MDF slats and 2 aluminum & MDF hybrid slats on the front and rear plate as shown. Do not tighten the screws.

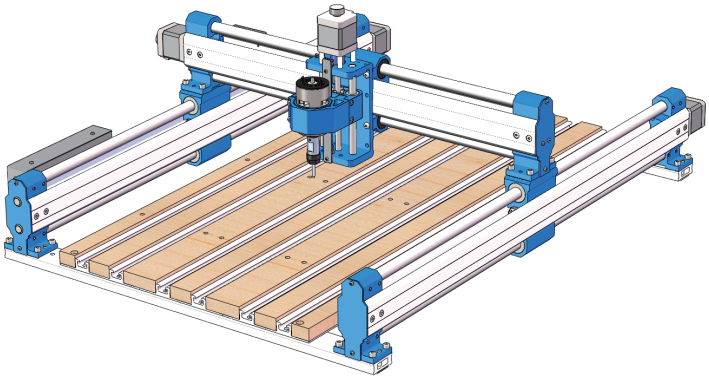
3. Use 18 M3x14mm screws through holes to mount all MDF slats on the aluminum platforms as shown. Do not tighten the screws.



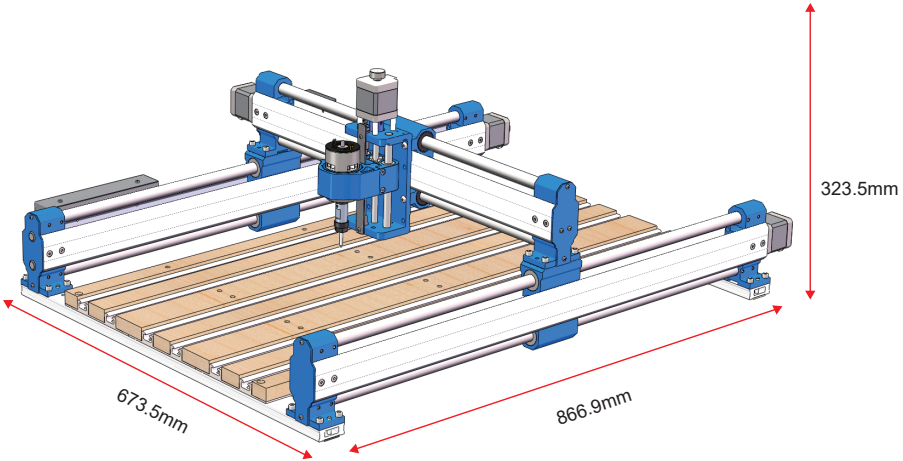
4. When all the screws have been pre-installed, you can start tightening the screws.

*Note: There are more screw holes, in order to prevent bad installation, please use cross tightening to lock the screws.*

*HDF board is not as hard as metal parts, when tightening, please note that the force should not be too large, it is easy to damage the MDF board.*



# Unbox (101-63-40P-Y46HSP)



## Install the 6060 MDF Board

***Needs 3 pieces of 101-63-40P-Y46MDF.***

# Unbox (101-63-40P-Y46MDF)

MDF Expansion Board

(7) M5x20mm Small Cup Head Hexagon Socket Screws

4mm Allen Wrench

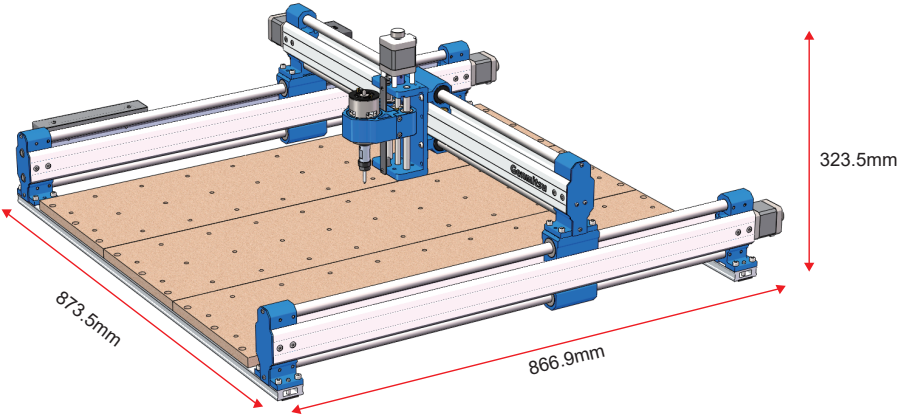

User Manual

Use 18 M5x20mm small cup head socket head cap screws through 3 MDF expansion board holes to mount the MDF boards on the front and rear plate.

*Note: There are a lot of screw holes, please make sure to install the screws crosswise, and do not screw directly until all the screws are installed.*

*After all the screws are pre-installed, they can be tightened. The MDF board is not as hard as the metal parts, so be careful not to use too much force when tightening, as it is easy to damage the MDF board.*

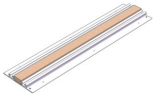
# Unbox (101-63-40P-Y46MDF)



# Install the 6060 Hybrid Spoilboard

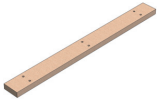
***Needs to be used with 101-63-40P-Y46HSP.***

# Unbox (101-63-40P-X64HSP)

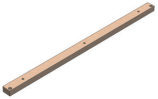


Wide Aluminum &
MDF Hybrid Slat

(2) Narrow Aluminum &
MDF Hybrid Slat



Wide MDF Slat



(2) Narrow MDF Slat

(5) M5X20mm Hex
Socket Cap Screw

(13) M3X14mm
Flat Head Cap Screw

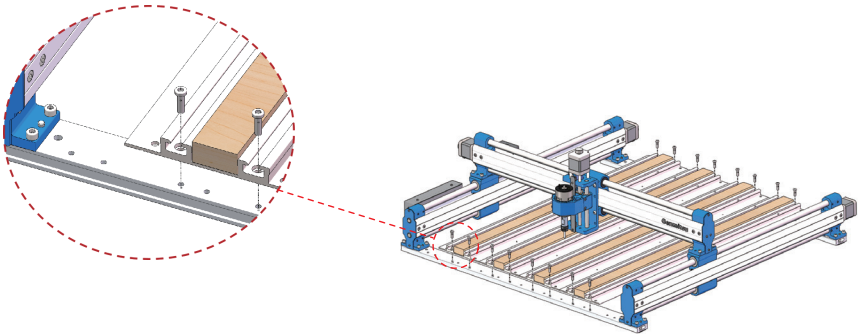
(9) M5X16mm Thin
Cup Head Cap Screw

2mm Allen Wrench
3mm Allen Wrench
4mm Allen Wrench

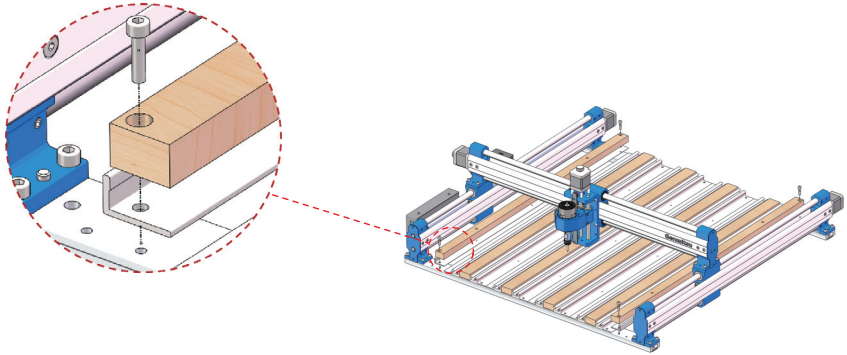
# Unbox (101-63-40P-Y46HSP)

1. Use 16 (8 for Y46HSP and 8 for new) M5x16mm thin cup head cap screws through holes to mount the 4 (3 for 4060 and 1 for new) wide aluminum & MDF hybrid slat on the front and rear plate as shown. Do not tighten the screws.

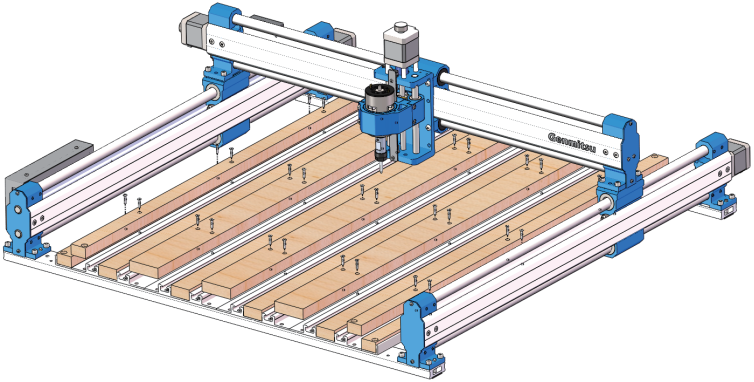
*Note: There are more screw holes, please make sure to cross install the screws and do not screw them directly until all the screws are in place.*



2. Use 4 M5x20mm screws through 4 corner holes to mount the 2 narrow MDF slats and 2 aluminum & MDF hybrid slats on the front and rear plate as shown. Do not tighten the screws.

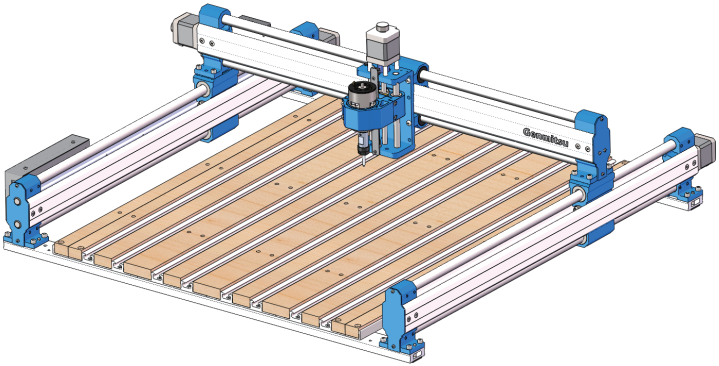


3. Use 30 M3x14mm screws through holes to mount the all MDF slats on the aluminum platforms as shown. Do not tighten the screws.

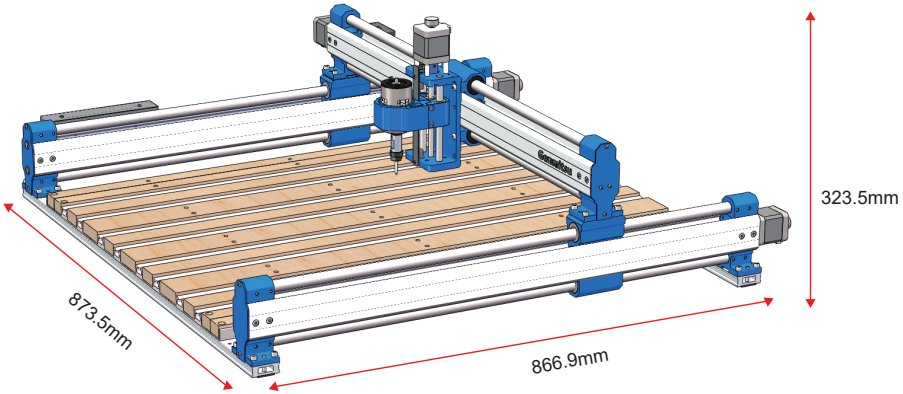


4. When all the screws have been pre-installed, start tightening the screws, prioritizing the M5x16mm screws, followed by the M5x20mm screws, and finally the M3x14mm screws.

*Note: There are more screw holes, in order to prevent bad installation, please use cross tightening to lock the screws. HDF board is not as hard as metal parts, when tightening, please note that the force should not be too large, it is easy to damage the MDF board.*



# Unbox (101-63-40P-Y46HSP)



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