

# Genmitsu

INSTALLATION GUIDE

## **PROVerXL 4030 Close-loop Stepper Motor Upgrade Set Installation Guide**

V1.0 Nov 2024



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# Welcome

Thank you for purchasing the Upgraded Close-Loop Stepper Motor Kit for PROVerXL 4030 from SainSmart.

For technical support, please email us at [support@sainsmart.com](mailto:support@sainsmart.com).

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

Scan QR code to find information.



**Scan To Find**  
CNC Resource

# Part list



(4) Close-loop Stepper Motor



Control Box



X/Y Drag Chain



(2) M4\*12 Socket Head Cap Screws



(2) M5\*50 Socket Head Cap Screws



(2) M5\*55 Socket Head Cap Screws

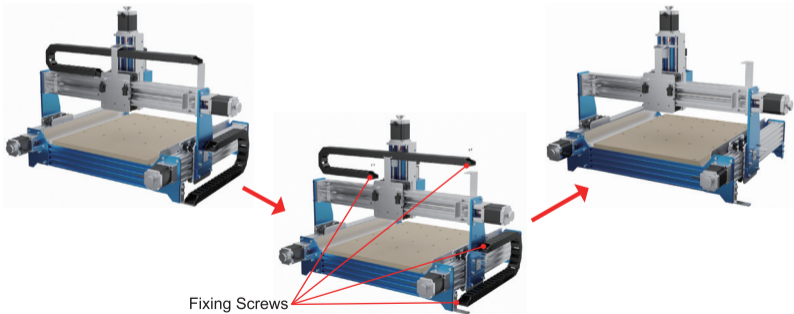


Hex Key Set [2,2.5,3,4]

# Installation Guide

## STEP 1: Remove X-Axis and Y-Axis Drag Chain

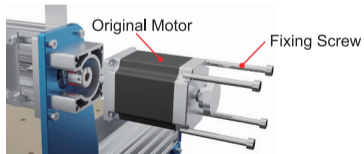
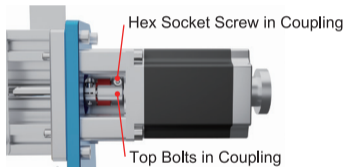
Remove all Axis motor wiring, unscrew the X-axis drag chain and Y-axis drag chain fixing screws, remove the drag chain and keep the screws for backup.



# Installation Guide

## STEP 2: Remove X-Axis Motor

Loosen the top bolts and socket head cap screw on the motor-facing side of the X-axis coupling, remove the 4 X-axis motor screws for backup, and remove the X-axis motor.

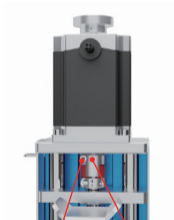
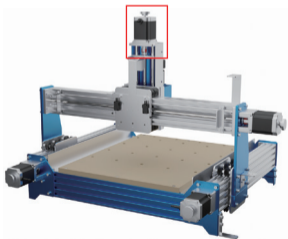




# Installation Guide

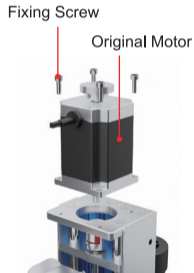
## STEP 3: Remove Z-Axis Motor

Loosen the top bolts and socket head cap screw on the motor-facing side of the Z-axis coupling, remove the 4 Z-axis motor screws for backup, and remove the Z-axis motor.



Top Bolts in Coupling

Hex Socket Screw in Coupling



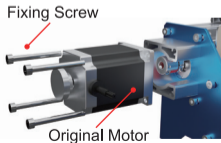
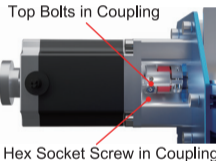
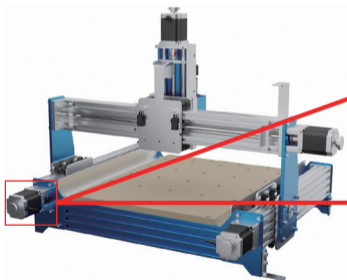
Fixing Screw

Original Motor

# Installation Guide

## STEP 4: Remove Y1-Axis Motor

Loosen the top bolts and socket head cap screw on the motor-facing side of the Y1-axis coupling, remove the 4 Y1-axis motor screws for backup, and remove the Y1-axis motor.

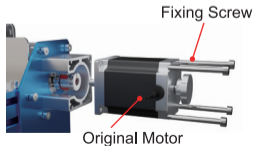
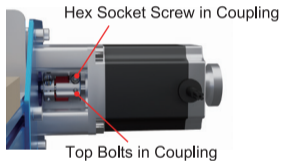
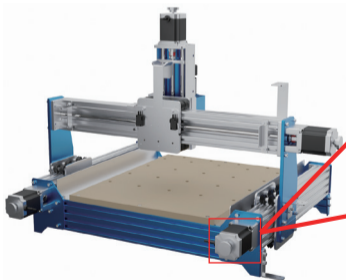




# Installation Guide

## STEP 5: Remove Y2-Axis Motor

Loosen the top bolts and socket head cap screw on the motor-facing side of the Y2-axis coupling, remove the 4 Y2-axis motor screws for backup, and remove the Y2-axis motor.



# Installation Guide

**STEP 6: The removal is completed as shown**

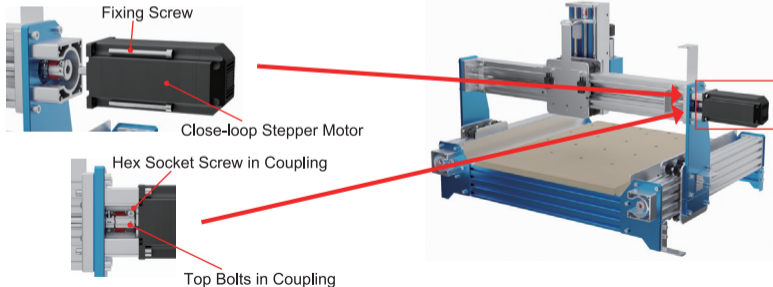


# Installation Guide

## STEP 7: Installation of X-Axis Motor

Install the close-loop stepper motor on the X-axis motor mount, use the disassembled X-axis motor fixing screws to lock the stepper motor, tighten the socket head cap screws and the top bolt on the motor side of the coupling.

(If the screws are slippery, please use the spare screws in the kit to replace them)



# Installation Guide

## STEP 8: Installation of Z-Axis Motor

Install the close-loop stepper motor on the Z-axis motor mount, use the disassembled Z-axis motor fixing screws to lock the stepper motor, tighten the socket head cap screws and the top bolt on the motor side of the coupling.

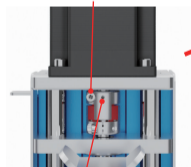
(If the screws are slippery, please use the spare screws in the kit to replace them)

Stepper Motor

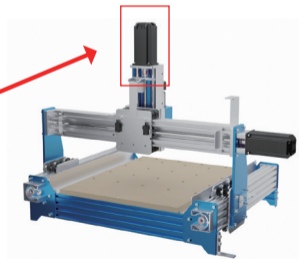


Fixing Screw

Hex Socket Screw in Coupling



Top Bolts in Coupling

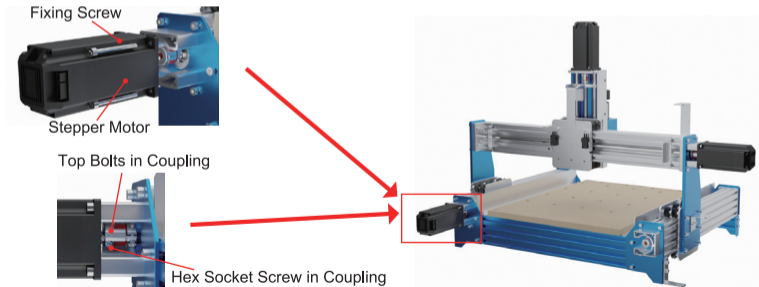


# Installation Guide

## STEP 9: Installation of Y1-Axis Motor

Install the close-loop stepper motor on the Y1-axis motor mount, use the disassembled Y1-axis motor fixing screws to lock the stepper motor, tighten the socket head cap screws and the top bolt on the motor side of the coupling.

(If the screws are slippery, please use the spare screws in the kit to replace them)

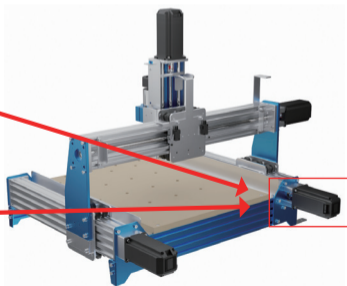
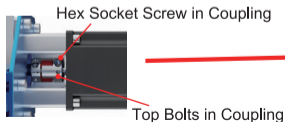
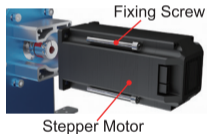


## Installation Guide

### STEP 10: Installation of Y2-Axis Motor

Install the close-loop stepper motor on the Y2-axis motor mount, use the disassembled Y2-axis motor fixing screws to lock the stepper motor, tighten the socket head cap screws and the top bolt on the motor side of the coupling.

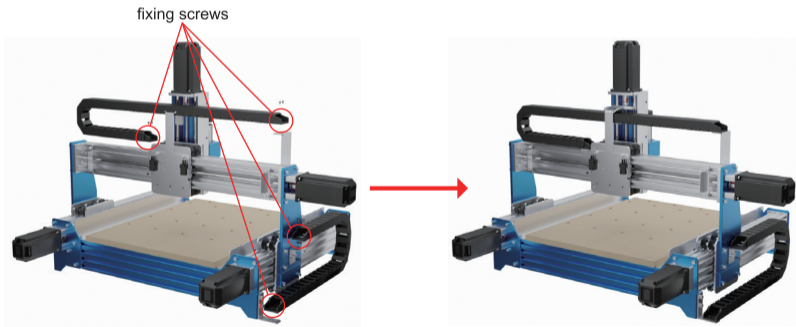
(If the screws are slippery, please use the spare screws in the kit to replace them)



# Installation Guide

## STEP 11: Installation of Drag Chain

Install the new drag chain by using the disassembled drag chain fixing screw.





## Installation Guide

**STEP 12: Installation is completed as shown**





## Buttons and Interfaces



**WARNING:** Please check your voltage selection on the power supply unit before powering on. Verify it is switched to the proper voltage for your region.

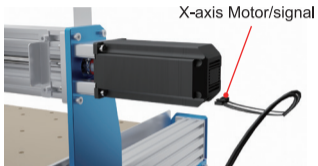
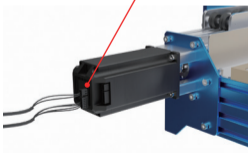


AC Input Voltage Adjustment Switch

## XYZ Axis Motor Wiring



Y-axis Motor/signal



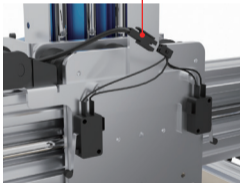
X-axis Motor/signal



Z-axis Motor/signal

## Limit Switch Wiring

X Limit Switch



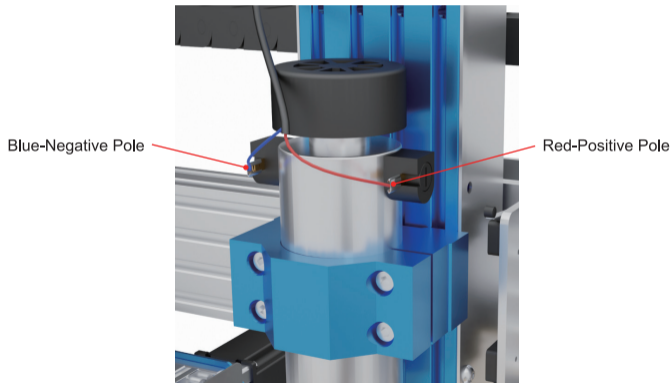
Y Limit Switch



Z Limit Switch

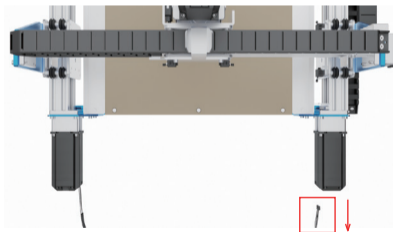
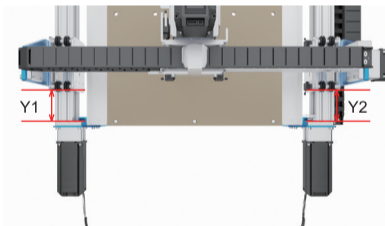


## Spindle Wiring



## STEP 14: Adjusting Lead Screw

Measure the distance Y1 and Y2 from both Y-axis sliders to the fixed plate at the motor end of the Y-axis, calculate the distance difference, and then unplug one of the Y-axis motors from the motor cable. Use the software to control the rotation of one of the Y-axis motors to adjust the distance of the Y-axis sliders to  $Y1=Y2$ .





# Genmitsu

Desktop CNC & Laser

✉ Email: [support@sainsmart.com](mailto:support@sainsmart.com)

📘 Facebook messenger: <https://m.me/SainSmart>

Help and support is also available from our Facebook Group

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Facebook Group