

## Genmitsu 101-63-YS3018

# Genmitsu 3018 Y-Axis Extension Kit Instruction Manual

Upgrade your 3018 CNC Router Machine to a 3040 working area.

[Introduction](#)[Safety](#)[Contents](#)[Setup](#)[Operation](#)[Maintenance](#)[Troubleshooting](#)[Specifications](#)[Support](#)

## 1. INTRODUCTION

This manual provides instructions for installing and using the Genmitsu 3018 Y-Axis Extension Kit. This kit is designed to expand the working area of compatible Genmitsu 3018 CNC Router Machines, such as the 3018-PRO and 3018-MX3, effectively upgrading them to a 3040 working area. By extending the Y-axis, users can process larger materials and undertake more ambitious projects without needing to purchase an entirely new machine.

## 2. SAFETY INFORMATION

Always prioritize safety when working with CNC machinery. Read and understand all safety guidelines provided with your original CNC router before beginning installation or operation of this extension kit.

- **Power Disconnection:** Always disconnect the CNC machine from its power source before performing any assembly, disassembly, or maintenance.
- **Eye Protection:** Wear appropriate eye protection to shield against flying debris.
- **Hand Protection:** Use gloves to protect hands from sharp edges or pinch points.
- **Work Area:** Ensure your workspace is clean, well-lit, and free from obstructions.
- **Component Handling:** Handle all components carefully to avoid damage or injury.

## 3. PACKAGE CONTENTS

Verify that all components listed below are present in your kit before beginning assembly. If any parts are missing or damaged, contact Genmitsu customer support.



Image: All components included in the Genmitsu 3018 Y-Axis Extension Kit, laid out on a white background. This includes two longer aluminum profiles, two longer linear guide rods, one longer lead screw, and a brass nut.

- Longer Y-axis Aluminum Profiles (2 pcs)
- Longer Linear Guide Rods (2 pcs)
- Longer Lead Screw (1 pc)
- Brass Lead Screw Nut (1 pc)
- Y-axis Limit Switch Extension Cable (1 pc)
- Assorted Fasteners and Hardware



Image: The Genmitsu 3018 Y-Axis Extension Kit components, including the longer aluminum profiles, linear rods, lead screw, brass nut, and a coiled black extension cable for the limit switch.

## 4. SETUP AND INSTALLATION

This section outlines the general steps for installing the Y-axis extension kit. Specific details may vary slightly depending on your exact 3018 model. Refer to your original CNC manual for detailed disassembly instructions.

### 4.1 Compatibility Check

Ensure your 3018 CNC machine is compatible with this extension kit. This kit is designed for models such as the 3018-PRO and 3018-MX3. Some models, like the 3018-PROVer V2, may require specific considerations for limit switch wiring or end plate design.



Image: A comparison graphic showing two different end plate designs. One is labeled 'Spotface Compatible with 3018-PRO/MX3' (black) and the other 'Counterbore Compatible with 3018-PROVer/3018-PROVer Mach3' (blue), highlighting differences in screw hole design for compatibility.

## 4.2 Disassembly of Original Y-Axis

- 1. Disconnect Power:** Ensure the CNC machine is unplugged from all power sources.
- 2. Remove Y-Axis Components:** Carefully remove the existing Y-axis aluminum profiles, linear guide rods, and lead screw from your 3018 CNC machine. Keep all fasteners organized.
- 3. Detach Y-Axis Motor:** Disconnect the Y-axis stepper motor and remove it from the original frame.

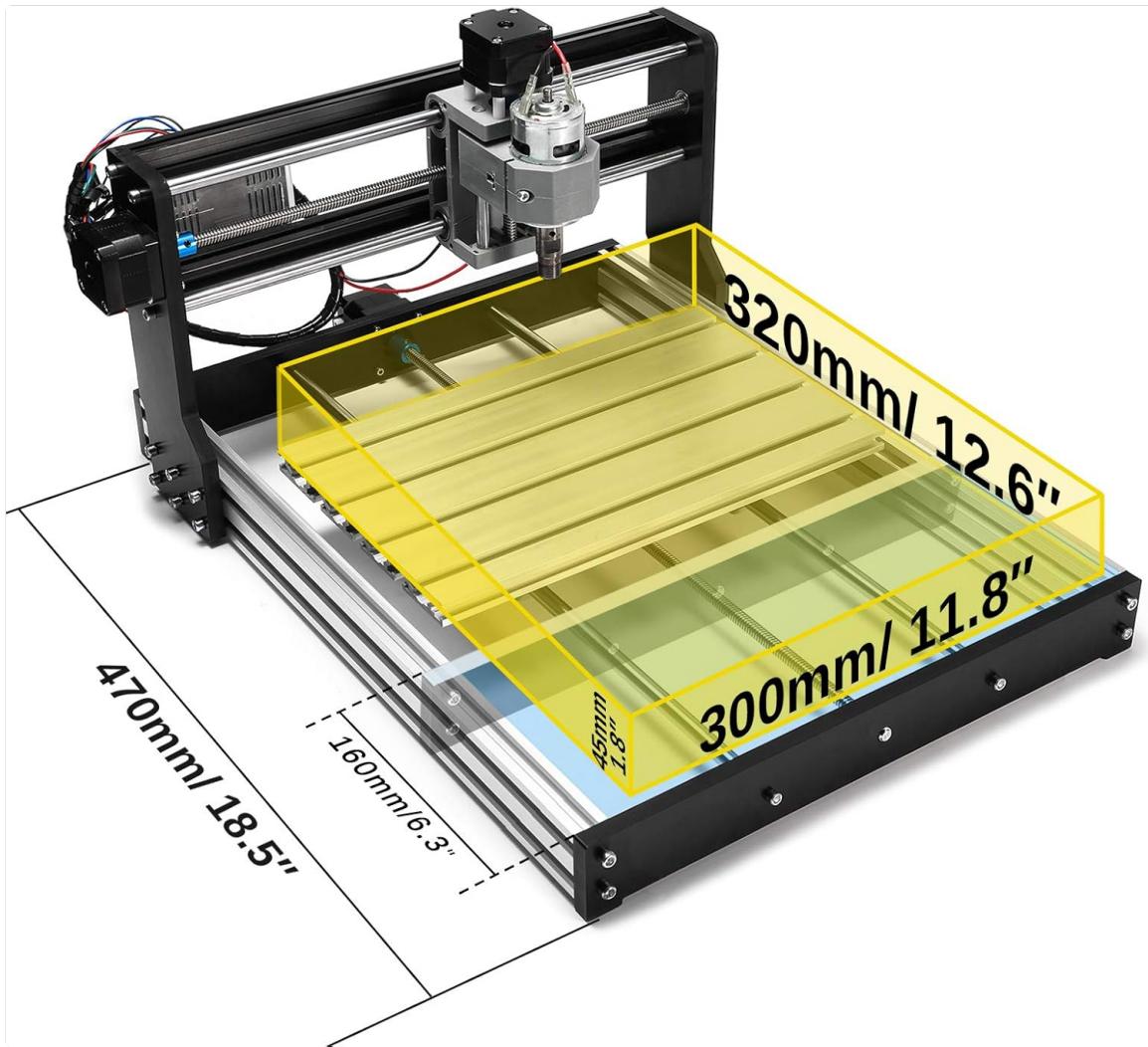


Image: A Genmitsu 3018 CNC machine with its original Y-axis setup, showing the compact working area before the extension. Dimensions are overlaid, indicating a Y-axis travel of approximately 160mm (6.3 inches).

#### 4.3 Assembly of Extension Kit

- 1. Install Longer Profiles:** Attach the new, longer Y-axis aluminum profiles to the front and rear end plates of your CNC machine using the provided fasteners.
- 2. Insert Linear Rods:** Slide the longer linear guide rods through the bearing blocks on the Y-axis carriage and secure them into the end plates.
- 3. Install Lead Screw:** Thread the new, longer lead screw through the brass nut on the Y-axis carriage. Secure the lead screw ends to the appropriate mounts on the end plates.
- 4. Reattach Y-Axis Motor:** Mount the Y-axis stepper motor to the new frame and connect it to the lead screw.
- 5. Connect Limit Switch Extension:** If your model requires it, use the provided extension cable to connect the Y-axis limit switch to the control board.

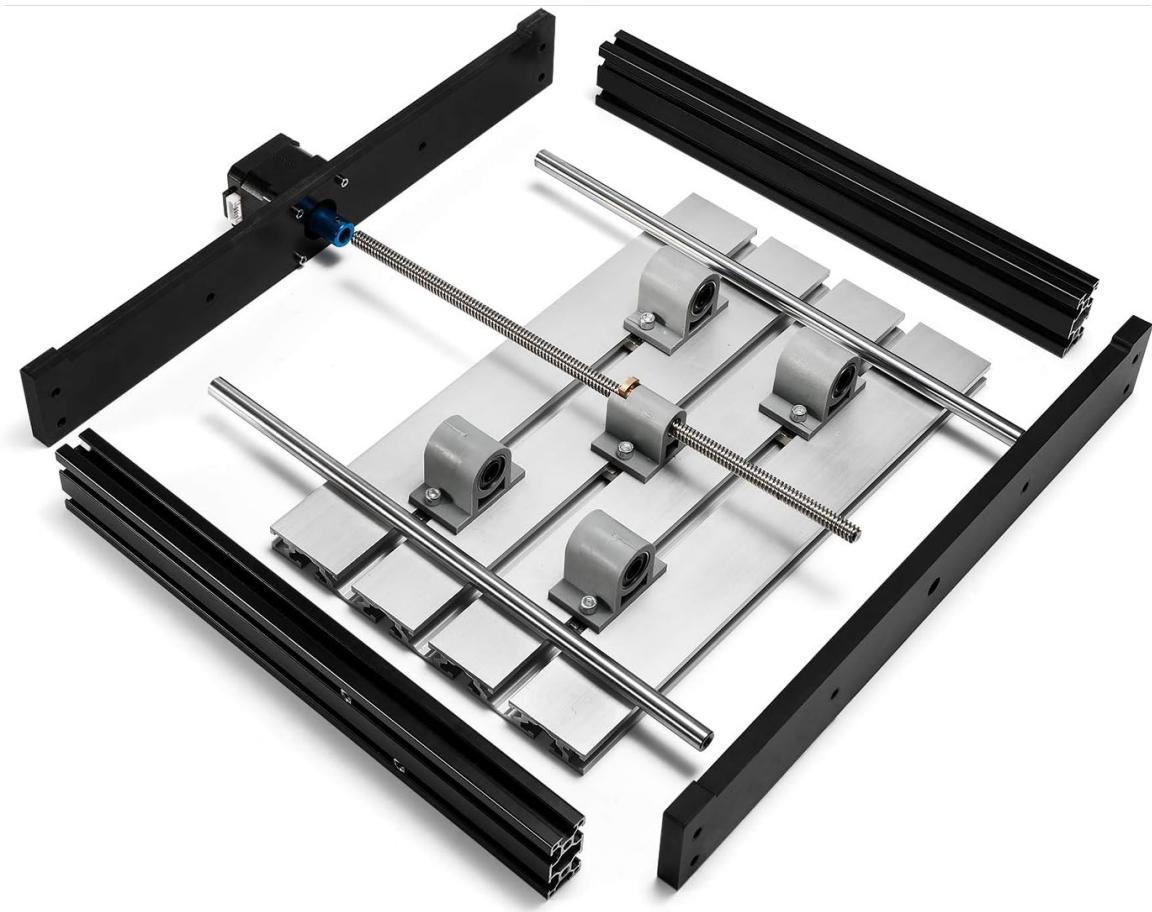


Image: An exploded diagram showing the individual components of the Y-axis assembly, including the aluminum profiles, linear rods, lead screw, bearing blocks, and end plates, illustrating how they fit together.



Image: The base frame of a Genmitsu 3018 CNC machine with the extended Y-axis components fully assembled. This view shows the longer aluminum profiles, linear rods, and lead screw in place, ready for the gantry to be mounted.



Image: A fully assembled Genmitsu 3018 CNC machine featuring the Y-axis extension kit. The image highlights the increased working area, demonstrating the machine's enhanced capabilities for larger projects.

#### 4.4 Software Configuration

After physical installation, it is crucial to update your CNC control software (e.g., GRBL, Candle, UGS) to reflect the new, larger Y-axis working area. Failure to do so may result in crashes or incorrect machining operations.

- **Adjust Y-Axis Travel Limits:** Modify the Y-axis travel limits in your GRBL settings (e.g., \$131) to match the new physical dimensions.
- **Verify Home Position:** Re-establish and verify the home position and soft limits if applicable.

### 5. OPERATION

The fundamental operation of your Genmitsu 3018 CNC machine remains unchanged after installing the Y-axis extension kit. The primary benefit is the increased working envelope, allowing for larger projects.

- **Material Placement:** Utilize the expanded Y-axis to secure larger workpieces.
- **G-Code Generation:** When generating G-code, ensure your CAM software is configured with the updated machine dimensions to prevent out-of-bounds errors.
- **Monitoring:** Always monitor the machine during operation, especially when working with new dimensions, to ensure smooth movement and prevent collisions.

### 6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your extended CNC machine.

- **Cleaning:** Keep the linear guide rods, lead screw, and aluminum profiles free from dust, chips, and debris. Use a soft brush or compressed air.
- **Lubrication:** Periodically apply a light lubricant to the linear guide rods and lead screw to ensure smooth movement and reduce wear.

- **Fastener Check:** Regularly inspect all fasteners to ensure they are tight. Vibrations during operation can loosen screws over time.
- **Belt Tension:** If your machine uses belts, check their tension periodically.

## 7. TROUBLESHOOTING

This section addresses common issues that may arise after installing the Y-axis extension kit.

Problem	Possible Cause	Solution
Y-axis does not move or moves erratically.	Loose wiring, incorrect software settings, binding components.	Check all motor and limit switch connections. Verify Y-axis travel limits in software. Ensure linear rods and lead screw are clean and lubricated, and move freely.
Machine crashes into end of Y-axis.	Software travel limits not updated.	Update Y-axis travel limits (\$131 in GRBL) in your CNC control software to match the new physical dimensions.
T-nuts do not fit slots well.	Manufacturing tolerance or specific T-nut design.	Ensure T-nuts are correctly oriented. Some users report slight difficulty; careful alignment and gentle force may be required. Consider alternative T-nuts if persistent.
Guide rods are too long for specific 3018 models.	Compatibility issue with certain 3018 variants (e.g., some 3018 Pro models with flat end plates).	Verify kit compatibility with your specific 3018 model before purchase. If already purchased, minor modifications (e.g., drilling a small relief pocket in the end plate) might be necessary, but this is not officially supported and should be done with caution.

## 8. SPECIFICATIONS

- **Brand:** Genmitsu
- **Model Number:** 101-63-YS3018
- **Compatible Models:** Genmitsu 3018-PRO, 3018-MX3 (and others with similar Y-axis structure)
- **Material:** Aluminum profiles, steel rods, brass nut
- **Product Dimensions (approximate extended Y-axis):** 300mm (11.8") to 320mm (12.6") Y-axis travel, depending on model and setup.
- **Item Weight:** Approximately 1.66 kg (3.64 lbs)
- **UPC:** 816550024317



Image: A top-down view of a Genmitsu 3018 CNC machine with the Y-axis extension installed, illustrating the significantly increased working area. Dimensions are overlaid, showing the expanded Y-axis travel.

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or to report missing/damaged parts, please contact Genmitsu customer service directly. Refer to the official Genmitsu website or your product packaging for the most current contact details and warranty terms.

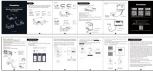
### Online Resources:

- Visit the [Genmitsu Store on Amazon](#) for product information and accessories.
- Check the official Genmitsu website for updated manuals, FAQs, and community forums.

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### Related Documents - 101-63-YS3018

 Genmitsu CNC Router 3018-PRO User Manual Version 1.0 2023-09-01 SainSmart	<a href="#">Genmitsu 3018-PRO CNC Router User Manual: Assembly, Setup, and Operation Guide</a> This user manual for the Genmitsu 3018-PRO CNC Router by SainSmart provides detailed instructions for assembly, software setup, operation, and using the offline controller. Essential guide for hobbyists and makers.
 SainSmart Genmitsu Controller Board (GRBL) User Manual Version 1.0 2023-09-01 SainSmart	<a href="#">SainSmart Genmitsu Controller Board (GRBL) User Manual</a> Comprehensive user manual for the SainSmart Genmitsu Controller Board (GRBL) with ABS case and built-in fan, compatible with CNC routers like 3018, 3018-PRO, and 1810-PRO. Covers setup, connections, Vref setting, firmware updates, and accessories.

 <b>Genmitsu</b> <small>CNC Router 3018-PRO</small> <small>ENGLISH EDITION</small>	<p><a href="#"><u>Genmitsu CNC Router 3018-PRO User Manual - Assembly, Software, and Operation Guide</u></a></p> <p>Comprehensive user manual for the Genmitsu 3018-PRO CNC Router by SainSmart. Covers unboxing, assembly, software installation, drivers, getting started, and offline controller usage.</p>
	<p><a href="#"><u>Genmitsu Wireless Control Module User Guide</u></a></p> <p>Comprehensive user guide for Genmitsu Wireless Control Modules (GGW-U232, GGW-UART, GGW-JTAG), detailing unboxing, installation methods for various CNC models, app setup, Wi-Fi configuration, and FCC compliance information.</p>
 <small>Contents / Inhalt</small> <small>English</small> <small>Deutsch</small>	<p><a href="#"><u>Genmitsu 5.5W Laser Module User Manual for CNC 3018-PROVer</u></a></p> <p>Comprehensive user manual for the SainSmart Genmitsu 5.5W Laser Fixed Focus Module, detailing installation, setup with LaserGRBL, and usage with CNC 3018-PROVer and other Grbl-based routers.</p>
 <small>Contents / Inhalt</small> <small>English</small> <small>Deutsch</small>	<p><a href="#"><u>Genmitsu 5.5W Laser Module User Manual for PROVerXL4030</u></a></p> <p>User manual detailing the installation, connection, and operation of the Genmitsu 5.5W Fixed Focus Laser Module for CNC machines, including safety instructions and software setup with LaserGRBL.</p>