

# The 17 Best CNC Machines & Routers for WoodWorking in 2024

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An excellent CNC machine may enhance your woodworking output and enable you to create things that would be challenging to accomplish manually with any power tool.

The best CNC router for a woodworking application depends on whether you're a hobbyist seeking to perform simple wood carving or if you're doing some significant production work, despite the fact that there are several good CNC routers on the market today.

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This list was created after careful examination of all best CNC router options for woodworking and comparing them based on a range of criteria, including overall stiffness, carving abilities, simplicity of assembly, software, speeds, drive mechanism, feeds, and the work area they offer.

On Linquip website, among the many options available to you, you will find all the information you need to know about the CNC Machines & Routers, as well as information regarding this marketplace. You can count on Linquip to provide you with as much general and reliable information about this topic, whether you're a professional or a customer looking for a proper company. We recommend you review a list of all **CNC Machines & Routers** available in Linquip.

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## List of 17 Best CNC Machines & Routers for WoodWorking in 2024

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According to the factors that we will mention in this article, Here is the List of 17 Best CNC Machines & Routers for WoodWorking in 2024:

1. **Sintron CNC 3018 Pro Router Kit**
2. **2020B Mini CNC Engraving Machine**
3. **VEVOR CNC Wood Router for Hobbyists**
4. **JFT 60130 CNC Wood Router For Beginners**
5. **TEN-HIGH 6090 CNC Router**
6. **CNC 3020 Wood Carving Engraving Router**
7. **Next Wave 10022 Shark HD510 CNC Router**
8. **JFT 6090 CNC Router For Wood**
9. **Bobs CNC Evolution 4 CNC Router Kit**
10. **3018-SE V2 CNC Router Machine**
11. **SainSmart Genmitsu 3018-PROVer**
12. **Longer Ray5**
13. **Stepcraft X3**
14. **X-Carve Pro**
15. **Avid CNC Pro**
16. **Carbide 3D Shapeoko XXL CNC Router**
17. **Axiom Precision AR8 Pro+ CNC Router**

## **How We Picked The Best CNC Machines & Routers for WoodWorking in 2024**

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Selecting the right CNC machine and router can be a daunting task, especially considering the multitude of options on the market. That's why we decided to do extensive research and consult with our team of experts to identify the best CNC machines and routers for woodworking in 2024.

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We began by thoroughly examining more than 15 webpages and consulting with our expert team of woodworkers, who have decades of experience using CNC machines and routers. They provided invaluable insights, helping us understand the pros and cons of various makes and models.

Once we had compiled a list of potential candidates, we researched the products and read hundreds of reviews from trusted websites and users. We looked at factors such as ease of use, precision, cutting speed, and durability to determine which CNC machines and routers would perform the best for our specific use case.

We ultimately selected the five best CNC machines and routers for woodworking in 2024 based on their proven track record, ease of use, and precision. Our blog post provides detailed information on each machine and router, including their features, specifications, and

pricing, to help readers make an informed buying decision.

At the end of the day, selecting the right CNC machine and router for woodworking is crucial to achieving the desired results. We hope that our comprehensive research and expert opinion will help readers make an informed choice and achieve the very best results in their woodworking projects.

**Technical Support and Warranty:** We also considered the level of technical support and warranty offered by the manufacturers. Reliable customer service and a solid warranty are crucial for troubleshooting and ensuring long-term satisfaction with the product. Machines backed by responsive, knowledgeable support and a favorable warranty period were given preference, as they offer peace of mind and help protect the user's investment.

**Community and Resources:** Finally, we looked at the community and resources surrounding each CNC machine and router. A strong, active user community can be an invaluable resource, offering shared knowledge, tips, and modifications. Additionally, we evaluated the availability of online resources such as tutorials, forums, and instructional videos. Machines with a robust community and extensive resources can greatly enhance the user experience, especially for beginners.

Follow the [CNC machining service](#).

## 1. Sintron CNC 3018 Pro Router Kit

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Sintron CNC 3018 Pro Router Kit (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Easily put together
- Clearly written instructions
- Decent value

### Cons

A steep learning curve

## Specifications

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<b>Brand</b>	Sintron
<b>Platform</b>	Windows XP, Windows 8, Windows 7, Windows 10
<b>Graphics Card Interface</b>	Integrated

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## Product Description

Your safety is important to Sintron, thus for the 2020 model, it created an enhanced adaptor. The adapter is of good quality and may be used continuously for extended periods. This DIY CNC router has an ER11-style chuck and a 775 spindle motor, both of which are quite effective and enable quick woodworking.

The essential parts of this CNC router are clamps, the spindle motor, the control board, the stepper motor, the power supply, the end mills, and the collets. The finest CNC router for beginners is one that allows them to easily set up and follow clear setup instructions to begin their learning process. Upgrade the components after your device is built using the supplied parts for higher manufacturing volume and quality.

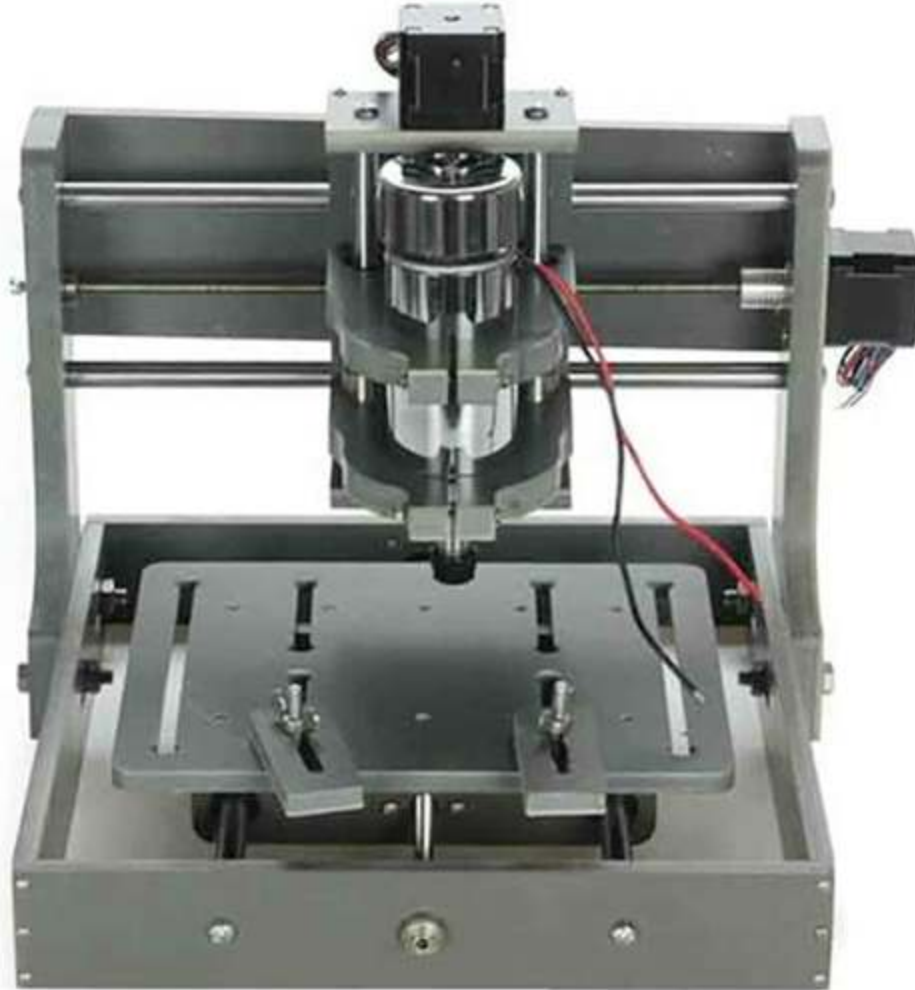
Anything softer than wax may be cut and inscribed with the Sintron router kit with efficiency. Just remember that you must exercise patience when operating it. Your annoyance may cause spindle damage.

The Sintron 3018 Pro CNC router kit's ability to cut both horizontally and vertically makes it ideal for creating a variety of patterns, which is its most impressive feature. You can carve detailed graphics, signboards, and even 3D creations with this 3-axis CNC router.

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## 2. 2020B Mini CNC Engraving Machine

# CNC2020B MINI ENGRAVER



Spindle Power: 300W  
Can Engrave: PCB/PVC/Wood

Power Supply: AC110V/220V  
Speed: 10,000rpm

2020B Mini CNC Engraving Machine (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Aid the GRBL system
- The USB interface is practical
- Possess a high-speed spindle

### Cons

A few installation guidelines

## Specifications

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<b>Spindle Motor</b>	300W
<b>Resolution ratio</b>	0.0125 mm
<b>Table structure</b>	10mm PCB
<b>MAX. moving speed</b>	4000 mm/min

## Product Description

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The 2020B Mini CNC engraving machine, which has dimensions of 400\*430\*350 mm, is made by KHYOPE. It has a 300W high-speed spindle motor that is effective for any woodcutting activity, including drilling, engraving, and cutting.

Like other routers, this DIY CNC router runs on G-coding-based instructions, and the system is compatible with Windows 7, Windows 8, and Windows 10.

The inexpensive DIY CNC router supports all enthusiast woodworkers with desktop or laptop PCs and shares a USB interface.

The 200\*200\*60mm effective engraving area enables easy working with the ideal surface polish.

## 3. VEVOR CNC Wood Router for Hobbyists

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VEVOR CNC Wood Router for Hobbyists (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Includes a controller for offline use
- Accepts the G-code system
- Firm arrangement

### Cons

It is unable to switch components for an upgrade.

## Specifications

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<b>Manufacturer</b>	VEVOR
<b>Item Weight</b>	16.7 pounds
<b>Product Dimensions</b>	22.1 x 18.5 x 4.7 inches
<b>Power Source</b>	70

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### Product Description

There are 5 various variants of the Vevor CNC 3018 pro, each with subtle variations based on usage. The DIY CNC router is made of Bakelite and aluminum, which provides durability. Since all of its parts are permanent, alignment and placement are simplified, improving accuracy and surface smoothness.

The Vevor CNC router kit promotes efficient manufacturing thanks to its 11.8" x 7.1" x 1.8" effective working surface. Additionally, the driving unit includes T8 screw rods made of stainless steel grade 304, ensuring the device's durability and long-term use.

The Vevor CNC router kit has an offline controller and GRBL compatibility, which promotes limitless file downloads and simple manual spindle manipulation. The 42 stepper motors increase the CNC's versatility and efficiency in a variety of applications.

A USB connector on this DIY CNC router enables flexible control as well. Along with this, Windows XP, Win 7, Win 8, and Win 10 are supported by the tiny laser engraver.

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## 4. JFT 60130 CNC Wood Router For Beginners



JFT 60130 CNC Wood Router For Beginners (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Engraving machine with four axes.
- Very exact and precise in operation, up to 0.033mm
- Is equipped with a water cooling system.
- Permits working a lot of hours
- Less clamor

### Cons

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## Specifications

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<b>Effective working travel</b>	600(X)mm*1300(Y)mm*110(Z)mm
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<b>Frame materials</b>	Hard aluminum alloy 6061
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**Acceptable material thickness** 150mm

## **Product Description**

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JFT is a product of the renowned Jessica brand, which is known for producing sturdy constructions appropriate for mass manufacturing. Its cutting area is 600 x 1300 x 110 mm, and its operating travel is 110 mm.

This outstanding CNC router is built for industrial use, which is why it has automatic spray cutting and a water cooling system that improves its capacity to operate for extended periods of time without becoming tired.

This CNC router is a 4-axis device that can engrave precisely. Limit switches are also included, which improves the safety features for easy usage.

Due to its high-speed spindle, it can produce goods quickly and precisely. Additionally, this CNC woodworking router supports G-codes and virtually all Windows operating systems and is very user-friendly. The package also comes with everything you need to get your woodworking business off the ground.

## **5. TEN-HIGH 6090 CNC Router**

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TEN-HIGH 6090 CNC Router (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Extremely exact
- Consists of a fourth axis that aids in the capacity to engrave spells.
- Containing a USB port
- It is a solidly constructed system.

### Cons

A pricey set up

## Specifications

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Brand	TEN-HIGH
Working Travel	600*900*125mm

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<b>Item weight</b>	260 pounds
<b>Engraving Precision</b>	0.03mm

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### **Product Description**

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Ten-High is the right choice for you if you're a skilled carpenter and willing to spend your money on a DIY CNC router that looks good. It comprises an engraving machine, control box, engraving tools, spindle wrench, USB cable, power cord, machine connection line, pressure plate, and water pump as part of a full setup that is long-lasting and doesn't require any adjustment.

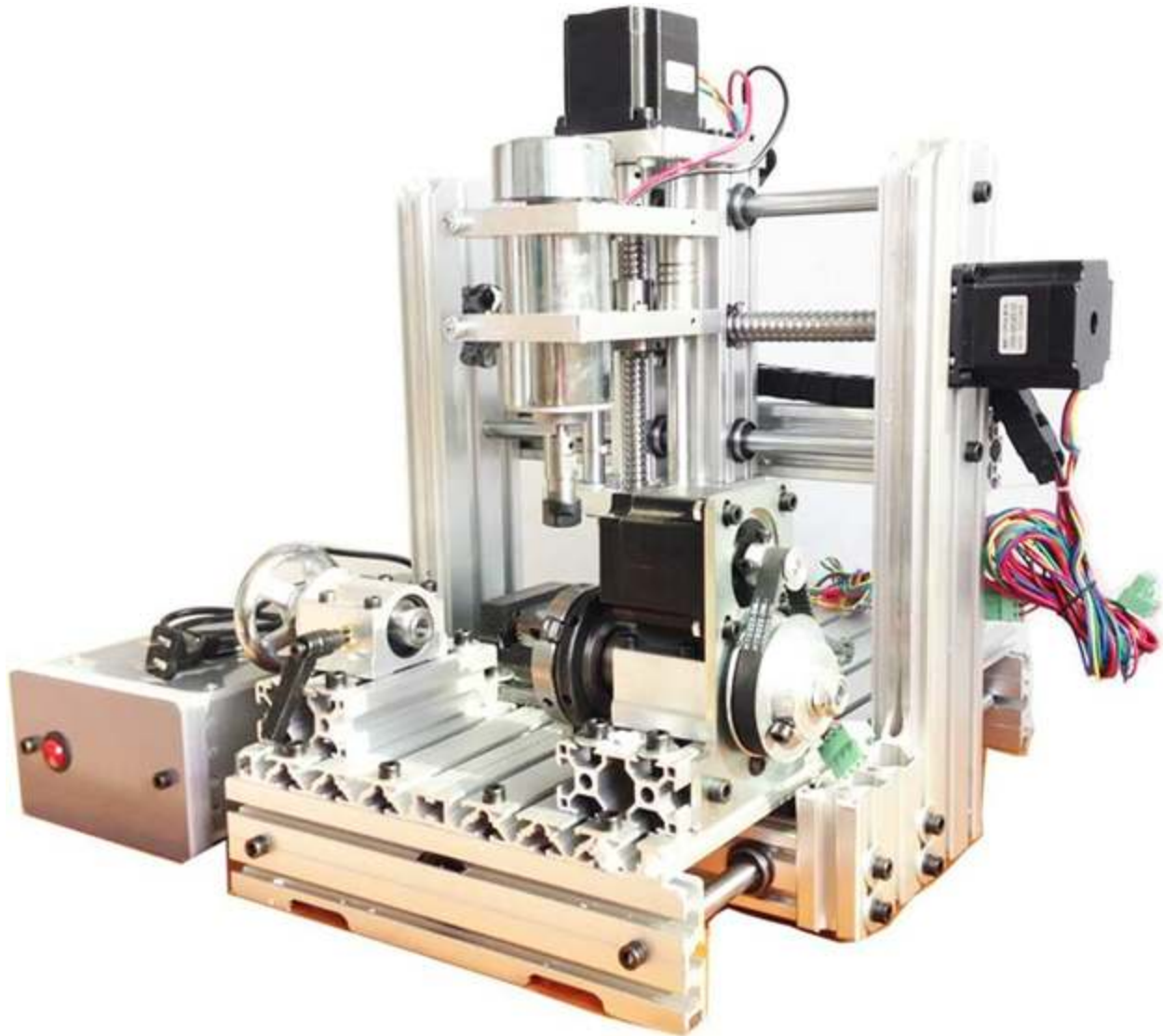
With the help of this amazing CNC DIY router's 4th axis, you can precisely engrave furniture, décor items, hoardings, and other home things. However, bear in mind that this will put a strain on your finances.

It offers an extraordinarily broad working surface of 1135 x 700mm and a high-speed spindle power of 1500W that encourages speedy operations. A sturdy and impact-resistant aluminum alloy was used to build the whole construction.

This CNC router for woodworking features a USB connector and supports the Mach 3 control program. This grand construction is very user-friendly and works well with practically all laptops and computer systems, giving you the highest precision and accuracy possible.

## **6. CNC 3020 Wood Carving Engraving Router**

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CNC 3020 Wood Carving Engraving Router (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- The precision of up to 0.05mm.
- 9000 RPM high-speed spindle with adjustable functionality
- Since it is entirely pre-built, there are no assembly problems.
- Both enthusiasts and business people can use it.

### Cons

- Complex architecture
- A steep learning curve

## Specifications

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<b>Power</b>	400 W
<b>Working Area</b>	300x200x80 mm
<b>Precision</b>	0.05mm
<b>Cooling</b>	Air
<b>Weight</b>	19 kg

## Product Description

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In the world of CNC manufacturing, Purewords is a well-known brand. Although it comes in a variety of variants, including the 3018 and 3040, the CNC 3020 wood carving and engraving machine is now the favorite among woodworkers.

This CNC router has a large working surface of 300 x 200 x 800mm and a high moving spindle with a 9000 RPM spindle, making it appropriate for beginners, enthusiasts, and experts alike. Its remarkable feature is that you can quickly modify the spindle speed to meet your needs.

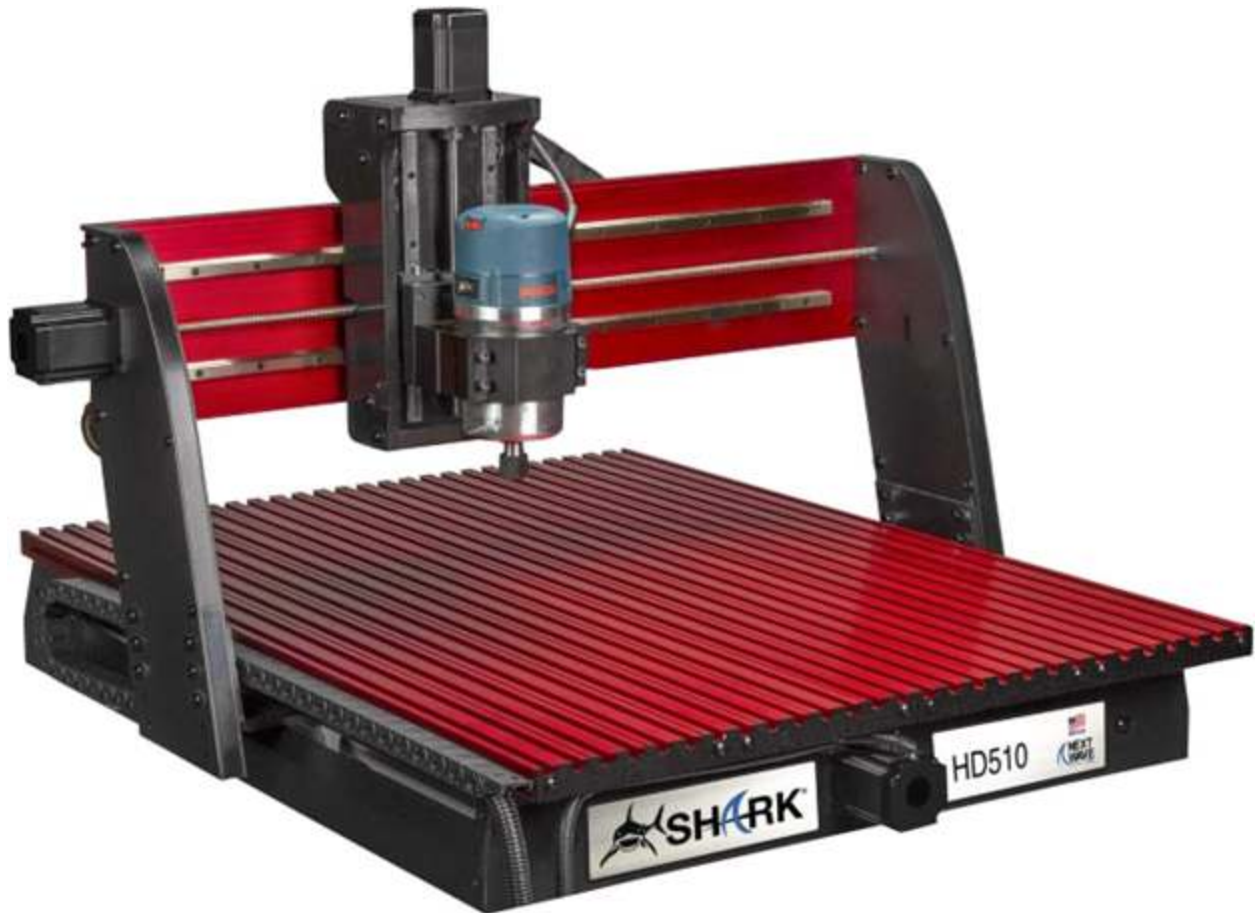
The JFT 60130 CNC wood router cannot match the 0.05 mm precision of the Purewords CNC 3020, which is a modified version of the 3018 model.

The gantry type construction has a formal, industrial appearance and is solidly constructed. It has 57 stepper motors, making it more efficient than many of the other types included in this list. The DIY CNC is simple to use with practically any version of Microsoft Windows and supports the GRBL controller.

The CNC 3020 wood router's ability to do away with the trouble of assembly is its most amazing feature. Every time you need to use the machine, all you have to do is plug in the switchboard, which is a fully assembled configuration. Drilling, excavating, cutting, and carving tasks are encouraged by the fourth axis, also known as the rotary axis.

## 7. Next Wave 10022 Shark HD510 CNC Router

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Next Wave 10022 Shark HD510 CNC Router (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Strong and sturdy construction.
- Equipped with a number of precision-enhancing linear guides and an anti-backlash mechanism.
- Contains carbide V-bits to increase the cutting tool's durability.
- Warranty for two years
- Continual technical assistance
- Cooling system using water

### Cons

A very expensive object

## Specifications

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**Package Dimensions** 38 x 36.5 x 24.5 inches

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<b>Item Weight</b>	50 pounds
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<b>Manufacturer</b>	Manufacturer
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## Product Description

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Undoubtedly, the Next wave HD510 router is the most in-demand piece of equipment now available in the woodworking sector. It fits both a small hobbyist workshop and a large manufacturing facility with ease. It has a sturdy aluminum gantry construction and robust legs of industrial quality that prevent the router from swaying during high-speed machining.

With its anti-backlash mechanism, the Shark HD510 is a true representation of its name and offers you razor-sharp precision. Additionally, it has an interlocking aluminum table, linear guide rails, and several clamps that allow the machine to precisely secure the work piece while milling. The finest CNC woodworking router is compatible with a variety of routers on the market. It also has a 24" × 24" x 7" effective travel.

The Next wave CNC router also comes with a complete set of tools for woodworking operations. Additionally, it has the most recent version of Vectric VCarve Desktop software and carbide bits for long-lasting performance and a stable bidding experience.

## 8. JFT 6090 CNC Router For Wood

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JFT 6090 CNC Router For Wood (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Equipped with a dust cover and a water cooling system.
- The new hybrid stepper motor is speedy and energy-efficient.
- The silent spindle is comforting to the ears.
- Processing is quick and precise with a repeatability factor.

### Cons

The assembly and execution cannot be done with the help of the instruction manual.

## Specifications

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<b>Outline dimension</b>	1300×1050×750mm (L×W×H)
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<b>Spindle Speed</b>	2000 ~ 24000R/M
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<b>Cooling mode</b>	Water Cooling
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## Product Description

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Jessica CNC routers' newest model, the JFT 6090, is made particularly for commercial use. The setup's lifetime is increased by the use of high-grade metal with an anodized surface in the gantry-type framework. For flawless square pieces, the surface has been extensively smoothed.

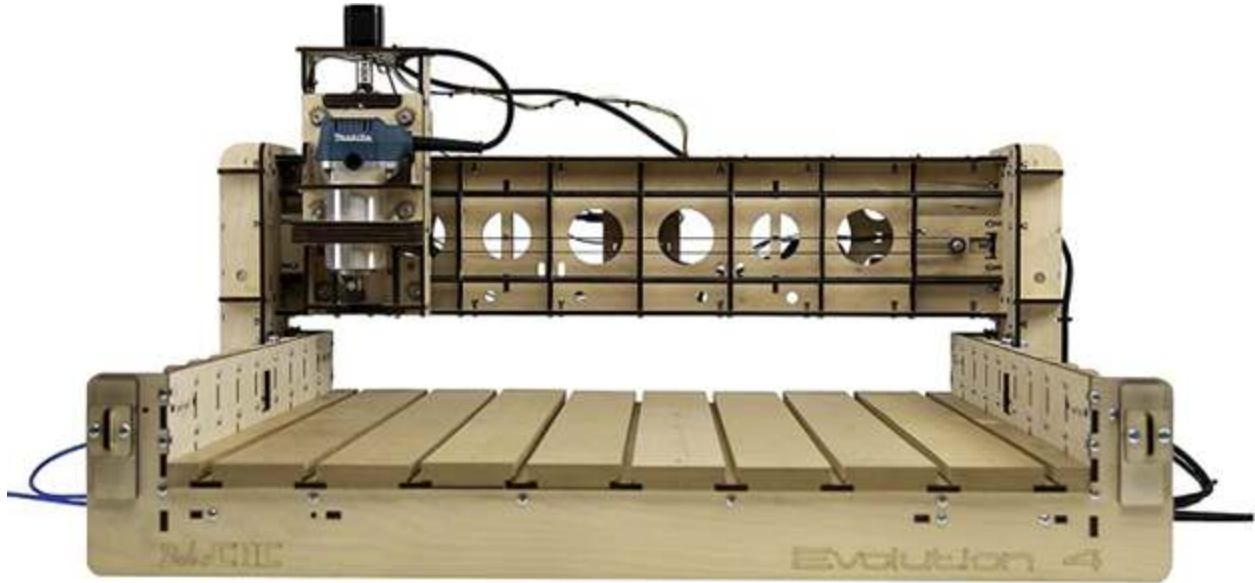
A closed-loop hybrid stepper motor that can achieve a high production speed of up to 10,000 mm/m is installed in this CNC router machine. Another distinguishing characteristic is its ability to provide a controllable engraving speed between 50 and 10,000 mm/m. Consistent positioning precision of up to 0.02mm is also provided.

Water cooling is a feature of both JFT 6090 and JFT 60130, its predecessor. Additionally, the surroundings are kept tidy and clean by the flawlessly crafted dust cover, which has been specifically created to accommodate batch production. A 600 x 900 x 110mm effective travel is also provided.

This top-notch equipment is incredibly adaptable in its operations and can handle drilling, milling, 3D sculpture creation, and engraving tasks with ease. Additionally, the continual machining din is eliminated by the spindle's silence.

## 9. Bobs CNC Evolution 4 CNC Router Kit

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Bobs CNC Evolution 4 CNC Router Kit (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- Area for cutting: 24 × 24
- Excellent torque is provided by the NEMA stepper motor.
- Excellent client service

### Cons

- Expensive object
- A steep learning curve

## Specifications

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<b>Brand</b>	BobsCNC
<b>Power Source</b>	AC
<b>Item Dimensions LxWxH</b>	30 x 38 x 19 inches
<b>Voltage</b>	110 Volts (AC)
<b>Item Weight</b>	42 Pounds

## Product Description

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Bobs is renowned for both its excellent customer service and high-quality goods. Both E3 and E4 are excellent instances. The CNC E4 router kit from Bobs is an improved version of the E3 with a cutting surface that has been increased from 17.7" x 15.3" to 24" x 24" and

may be further enhanced to 24" x 48" with the help of Bobs' qualified expertise.

The NEMA stepper motor in this CNC woodworking router provides you with maximum thrust for your demanding applications. Bobs' E4 CNC router has a strong gantry-style frame and is packaged with high-quality goods that are delivered on schedule.

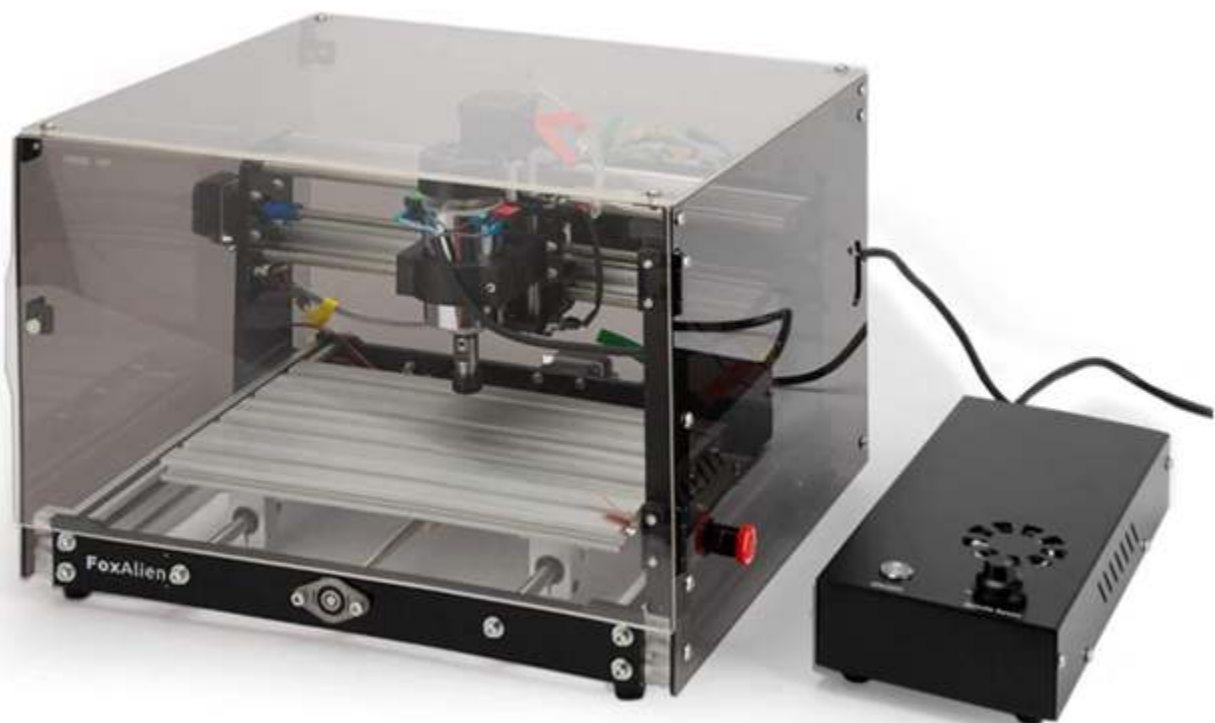
The major drawback, however, is that assembly takes the entire two days and does not ensure that you really understand how it works. Additionally, there is a high learning curve, making it unsuitable for novice woodworkers.

The massive structure wobbles as raw timber are being machined because of the overdue play in

Overall, Bob's CNC Evolution 4 CNC Router Kit is worth every money you spend. Drive screw of z-axis still.

## 10. 3018-SE V2 CNC Router Machine

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3018-SE V2 CNC Router Machine (Reference: [amazon.com](https://www.amazon.com))

### Pros & Cons

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#### Pros

- Transparent dust enclosure shield
- Limit switches and an emergency power button are included.

- There's no need to assemble

## Cons

There are cheaper alternatives on the market with the same qualities.

## Specifications

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<b>Spindle</b>	300 W
<b>Input Voltage</b>	110V
<b>Power supply output</b>	48V

## Product Description

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The 3018-SE V2 CNC router, which has improved safety features and a fair price, is the ideal option for enthusiast woodworkers. The desktop machine and the CNC upgrade kit are the two components of the CNC router kit's package.

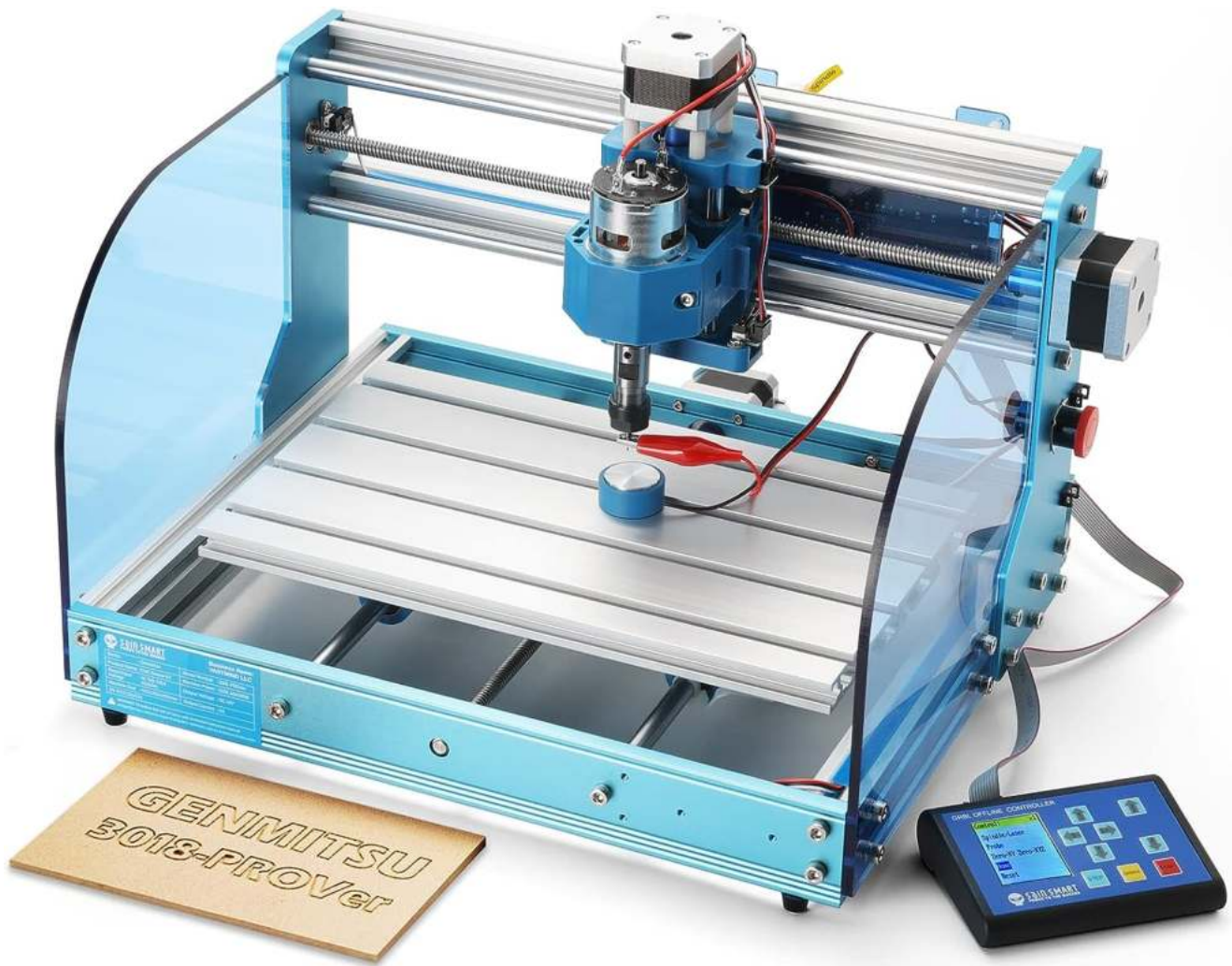
A transparent shield that is particularly made for novices who can manage the production process is included with the excellent CNC DIY router. In order to maintain a clean atmosphere, the barrier also retains the wood chips inside the cutting area. Emergency stop buttons, limit switches, an integrated power button, and a control box are further safety measures.

This amazing CNC router kit is practically industry-ready; all you need to do to get it going is connect in power and make a few minor adjustments. Consequently, it is appropriate for small business uses and for seminars conducted at home.

With the aid of G-code, the 3018 SE-V2 CNC router kit functions with all variations of Windows operating systems. The 3018-SE V2 router kit is suitable for cutting and engraving tasks thanks to improved efficiency and precision.

## 11. SainSmart Genmitsu 3018-PROVer

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SainSmart Genmitsu 3018-PROVer (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- The assembly of this device is relatively simple.
- Utilizing it is very simple. This device is incredibly user-friendly for beginners. Any user, regardless of experience, can quickly get the hang of it.

### Cons

The teeny-tiny size of the motor limits the router's speed.

## Specifications

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<b>Maximum rotational speed</b>	10000
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<b>Voltage</b>	24 Volts
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**Material**

Aluminum

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**Product Description**

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The SainSmart Genmitsu 3018 PROver has a prominent position in terms of affordable CNC equipment. It is a wonderful match for novices and has a stellar reputation among users. This machine can deal with a variety of product types because of its 1.8-inch engraving depth. When it is taken out of the box, it is already built and needs little effort to put the components back together.

You have total control over this system thanks to its enhanced offline controller. It has increased stability because its whole body is constructed of aluminum. Because of its resilience, it can grind a variety of materials. It utilizes CAD/CAM software, which turns the commands you provide to the machine into instructions.

With open-source Grbl v1.1, PROver operates. It contains strong drives that are intended to extend the machine's life and enhance performance. Additionally, it has optocouplers, which eliminate signal noise and stop the mainboard from making hard stops without the risk of damage, improving project consistency.

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**12. Longer Ray5**

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Longer Ray5 (Reference: [amazon.com](https://www.amazon.com))

## Pros & Cons

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### Pros

- **Precision and Quality:** The Longer Ray5 offers high precision in engraving and cutting, delivering quality results on a variety of materials.
- **Ease of Use:** With user-friendly software and an intuitive interface, it's accessible to beginners while still offering features that appeal to more experienced users.
- **Versatility:** It can work on a range of materials, including wood, acrylic, and certain metals, making it suitable for various projects.



- **Compact and Portable:** Its relatively compact size makes it suitable for small workspaces and easy to move around.
- **Affordable:** The Ray5 is competitively priced, making it an attractive option for hobbyists or those just starting with laser engraving and cutting.
- **Good Community and Support:** There is a growing community of users and the company offers decent customer support, which is helpful for troubleshooting and tips.

## Cons

- **Limited Cutting Power:** While great for engraving, its cutting capabilities are somewhat limited, especially with thicker or harder materials.
- **Safety Concerns:** As with all laser engravers, there are safety concerns, including the need for proper ventilation and eye protection.
- **Learning Curve:** Despite being user-friendly, there's still a learning curve, especially for those new to laser engraving and cutting.
- **Software Compatibility:** Some users may find the software limited and might need to use third-party software for more complex tasks.
- **Size Limitation:** The working area might be too small for those looking to work on larger projects.
- **Maintenance and Longevity:** Regular maintenance is required to keep it in optimal condition, and the longevity of the product can be a concern depending on usage intensity.

## Specifications

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<b>Maximum cutting speed</b>	10000 mm/min
<b>Voltage</b>	DC 12 V
<b>Weight</b>	10.19 pounds

## Product Description

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This CNC machine has a modern design and is distinctive. It contains an offline engraving feature and a touch screen. There is no need to connect the device to a computer because it includes a built-in controller. All you have to do to get the computer to run according to the pre-set software is save the file to a TF card.

The newest engraving technique used by the laser engraver has a laser dot size of 0.08 mm by 0.08 mm, which increases the laser's power. It is possible to engrave at speeds of up to 10,000 mm per minute.

Active position protection, a power button, a thermal protection feature, and a current safety control system are just a few of Ray5's many safety features. The 240MHz ESP32 Chipset used in the construction of Ray5 boosts the machine's productivity and performance. To enable cutting and engraving over the web or an application, it supports a WiFi connection.

A built-in controller, 3.5" touch screen, 32-bit chipset, precise beam, heat protection, and motion protection are just a few of its unique features.

### 13. Stepcraft X3

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Stepcraft X3 (Reference: [jtechphotonics.com](http://jtechphotonics.com))

### Pros & Cons

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#### Pros

- Large working area: The Stepcraft X3 has a large working area of 1000 x 400 x 200 mm, which makes it perfect for large woodworking projects.
- Powerful spindle: The Stepcraft X3 has a powerful 2.2 kW spindle, which makes it capable of cutting through a variety of materials, including wood, acrylic, and metal.
- High-precision linear guide system: The Stepcraft X3 uses a high-precision linear guide system, which ensures that it can cut with high accuracy.
- Easy to use: The Stepcraft X3 comes with intuitive software and a user-friendly interface, making it easy to use for beginners and experienced users alike.

## Cons

- Price: The Stepcraft X3 is a relatively expensive CNC router.
- Weight: The Stepcraft X3 is quite heavy, making it difficult to transport.
- Noise: The Stepcraft X3 can be quite noisy when in use.

## Specifications

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<b>Working area</b>	1000 x 400 x 200 mm
<b>Spindle</b>	2.2 kW
<b>Linear guide system</b>	High-precision

## Product Description

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The Stepcraft X3 is a high-performance CNC router that is perfect for precision woodworking. It features a large working area of 1000 x 400 x 200 mm, a powerful 2.2 kW spindle, and a high-precision linear guide system. The Stepcraft X3 is also very easy to use, thanks to its intuitive software and user-friendly interface.

Overall, the Stepcraft X3 is a high-performance CNC router that is perfect for precision woodworking. It is easy to use and has a large working area. However, it is also relatively expensive and can be quite noisy.

## 14. X-Carve Pro

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X-Carve Pro (Reference: [mellowpine.com](http://mellowpine.com))

## Pros & Cons

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### Pros

- Large working area: The X-Carve Pro has a large working area of 40 x 24 x 3 inches, which makes it perfect for a variety of woodworking projects.
- Powerful spindle: The X-Carve Pro has a powerful 1.5 kW spindle, which makes it capable of cutting through a variety of materials, including wood, acrylic, and plastics.
- High-precision ball screw system: The X-Carve Pro uses a high-precision ball screw system, which ensures that it can cut with high accuracy.
- Easy to use: The X-Carve Pro comes with Easel Pro software, which is easy to use for beginners and experienced users alike. The software also includes a library of projects that you can use as templates.

### Cons

- Price: The X-Carve Pro is a relatively expensive CNC router.
- Noise: The X-Carve Pro can be quite noisy when in use.
- Dust collection: The X-Carve Pro does not come with a dust collection system, so you will need to purchase one separately.

## Specifications

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<b>Working area</b>	40 x 24 x 3 inches
<b>Spindle</b>	1.5 kW
<b>Ball screw system</b>	High-precision

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## Product Description

The X-Carve Pro is a versatile CNC machine that can be used for a variety of woodworking projects. It features a large working area of 40 x 24 x 3 inches, a powerful 1.5 kW spindle, and a high-precision ball screw system. The X-Carve Pro is also very easy to use, thanks to its included software and tutorials.

Overall, the X-Carve Pro is a versatile and powerful CNC router that is perfect for a variety of woodworking projects. It is easy to use and has a large working area. However, it is also relatively expensive and can be quite noisy.

## 15. Avid CNC Pro

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Avid CNC Pro (Reference: [avidcnc.com](https://avidcnc.com))

## Pros & Cons

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### Pros

- Large working area: The Avid CNC Pro has a large working area of 1200 x 800 x 100 mm, which makes it perfect for large woodworking projects.
- Powerful spindle: The Avid CNC Pro has a powerful 3.2 kW spindle, which makes it capable of cutting through a variety of materials, including wood, acrylic, and metal.
- High-precision ball screw system: The Avid CNC Pro uses a high-precision ball screw system, which ensures that it can cut with high accuracy.
- Easy to use: The Avid CNC Pro comes with intuitive software and a user-friendly interface, making it easy to use for beginners and experienced users alike.
- Expandable: The Avid CNC Pro is modular and expandable, so you can easily add more components to it as your needs grow.

### Cons

- Price: The Avid CNC Pro is a relatively expensive CNC router.

- **Weight:** The Avid CNC Pro is quite heavy, making it difficult to transport.
- **Noise:** The Avid CNC Pro can be quite noisy when in use.
- **Dust collection:** The Avid CNC Pro does not come with a dust collection system, so you will need to purchase one separately.

## Specifications

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<b>Working area</b>	1200 x 800 x 100 mm
<b>Spindle</b>	3.2 kW
<b>Ball screw system</b>	High-precision

## Product Description

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The Avid CNC Pro is a high-end CNC router that is perfect for demanding woodworking projects. It features a large working area of 1200 x 800 x 100 mm, a powerful 3.2 kW spindle, and a high-precision ball screw system. The Avid CNC Pro is also very easy to use, thanks to its included software and tutorials.

Overall, the Avid CNC Pro is a high-performance CNC router that is perfect for demanding woodworking projects. It is easy to use and has a large working area. However, it is also relatively expensive and can be quite noisy.

## 16. Carbide 3D Shapeoko XXL CNC Router

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Carbide 3D Shapeoko XXL CNC Router (Reference: [eu.robotshop.com](https://eu.robotshop.com))

## Pros & Cons

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### Pros

- **Large Working Area:** Offers one of the largest working areas in its class, enabling large-scale projects.
- **Versatility:** Capable of working on various materials, not just wood, broadening its utility.
- **Ease of Use:** Known for its ease of assembly and user-friendly software, suitable for beginners and experts.
- **Sturdy Construction:** Solid build quality ensures durability and stability during operations.
- **Community and Support:** Strong user community and good customer support from Carbide 3D.

### Cons

- **Belt-Driven System:** While effective, it may not offer the same level of precision as ball screw systems in some applications.
- **Spindle Options:** Comes with a standard router, but those needing more power may need to upgrade or install a different spindle.
- **Noise Level:** Like most CNC routers, it can be quite noisy during operation.
- **Dust Management:** Does not come with an integrated dust collection system, which may need to be addressed separately.
- **Initial Setup:** Though generally user-friendly, the initial setup and calibration can be time-consuming for beginners.

## Specifications

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<b>Working area</b>	33" x 33" x 3"
<b>Spindle</b>	Carbide Compact Router or users can mount their spindle (up to 69mm diameter)
<b>Ball screw system</b>	Not applicable (uses V-wheels and belt drive system)

## Product Description

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The Carbide 3D Shapeoko XXL CNC Router is a large-format, robust CNC machine designed for both hobbyists and professionals looking for precision and reliability in woodworking and other materials. Known for its expansive working area, the Shapeoko XXL allows users to undertake larger projects that smaller CNC machines cannot accommodate. This machine is part of the Shapeoko line, which is well-regarded in the CNC community for its blend of performance and affordability.

The Shapeoko XXL is praised for its rigid structure and durability, featuring a sturdy frame and a belt-driven system that provides good accuracy and speed for a variety of applications. It's also user-friendly, with a straightforward assembly process and an intuitive software interface, making it a popular choice for those new to CNC routing as well as experienced users.

## 17. Axiom Precision AR8 Pro+ CNC Router

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Axiom Precision AR8 Pro+ CNC Router (Reference: [3dprintronics.com](https://3dprintronics.com))

### Pros & Cons

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#### Pros

- High Precision and Accuracy: Equipped with a ball screw system on all axes, providing high precision in cutting and routing.

- **Powerful Spindle:** The 3 HP liquid-cooled spindle can handle a wide range of materials with ease.
- **Large Working Area:** Offers a generous working area, suitable for larger projects.
- **Durable Construction:** Built on a solid steel frame, ensuring stability and durability.
- **Advanced Features:** Includes advanced features like tool calibration and software compatibility, enhancing its functionality.

**Cons**

- **Price Point:** Higher cost compared to entry-level models, making it more of an investment.
- **Complexity:** May have a steeper learning curve due to its advanced features.
- **Size and Weight:** Its size and weight require a dedicated space and may not be suitable for casual or small-scale users.
- **Cooling Requirements:** The liquid-cooled spindle requires additional setup and maintenance.
- **Power Requirements:** The powerful spindle and overall machine operation might demand higher power consumption.

**Specifications**

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<b>Working area</b>	24" x 48" x 6"
<b>Spindle</b>	3 HP Liquid-cooled Electro Spindle
<b>Ball screw system</b>	Precision Ball Screws on all axes

**Product Description**

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The Axiom Precision AR8 Pro+ CNC Router is a high-end, professional-grade machine designed for precision woodworking, metalworking, and other detailed crafting applications. It stands out in the market for its robust construction and advanced technological features, making it a top choice for professionals and serious hobbyists seeking high precision and reliability in their CNC projects. The AR8 Pro+ is part of Axiom's Pro Series, which is known for its exceptional build quality, precision, and durability.

This CNC router is equipped with a powerful spindle and is built on a rigid steel frame, ensuring stability and accuracy during operation. It's designed to handle a wide range of materials with ease and precision. The AR8 Pro+ also features advanced software

compatibility, providing users with the flexibility to create intricate and detailed designs. Its user interface is intuitive, making the machine accessible to users with varying levels of experience.

## **Things to Think About Before Buying: A Buyer's Guide**

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What qualities distinguish a superb CNC router for woodworking, and which CNC router kit is the best for various skill levels? Review the buying guide below to learn more and to have a better understanding of the extra features that are frequently included on CNC machines before spending a lot of money on one.

### **Processor**

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The three axes (X-axis, Y-axis, and Z-axis) CNC machine comprises numerous spindle speeds, tiny CNCs, and YZ machines, and is the most popular tool because of its affordability and accuracy. The spindle maintains its position while in operation, making it an excellent CNC equipment for beginners or students.

### **4-Axis**

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The three axes of a 4-axis router are combined with an A-axis, which enables the spindle to move left and right while processing three surfaces simultaneously to produce planar and three-dimensional engraving. This tool is perfect for creating intricate 3D items and patterns out of wood or even soft metals.

### **Rotating Axes**

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The rotating spindle tool used by CNC routers enables them to treat four surfaces at once. This is especially helpful for cylindrical projects like detailed furniture accents or ornate wooden statues that will be finished in three dimensions.

### **Motor**

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Servo and stepper motors are the two types of motors used in CNC equipment.

#### **Servo Motor**

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The servo motor can cut wood precisely, withstand high speeds, and withstand overload for a longer-lasting tool. It's also more steady and silent, making it perfect for detailed designs. The CNC tool will be more productive the faster the motor spins.

#### **Stepper Motor**

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The stepper motor is the less expensive option and works well for simple plane engraving. Stepper motors are trustworthy, accurate, and simple to regulate. They perform well for the majority of woodworking projects as well.

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## **Drive**

Screw drives and rack drives are the two basic types of transmission drive systems used in CNC router machines.

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### **Screw Drive**

With slower speeds and shorter tool life, the screwdriver is the more fundamental of the two. The screw drive may grow loose and require frequent tightening if improperly placed. Smaller wood carving projects generally employ this kind of motor.

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### **Rack Drive**

The rack drive offers a considerably more precise transmission and is capable of handling more complex tasks. This drive is more costly, lasts longer, and is speedier. For efficient engraving depth, a laser module can employ this kind of drive.

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## **Spindle**

Spindles can be air-cooled or have a water cooling system.

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### **Air-Cooled Spindle**

An air-cooled spindle is less expensive, simpler to maintain, and more user-friendly because it merely employs a fan to cool the spindle down.

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### **Water-Cooled Spindle**

When the spindle speed is too high, a water-cooled system uses water to cool the spindle down. In general, it lasts longer, is more accurate, and is quieter than a fan-cooling system.

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## **Table Size and Bed**

Two different types of tables are included with router tables: an aluminum table and a vacuum table.

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### **Aluminum Tables**

The metal table works well for projects that are cylindrical or have other unusual shapes, although it does require that items be secured to the table.

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### **Vacuum Tables**

A vacuum table removes the need for clamps by vacuuming the part right onto the surface. Since there is less trembling when in use, engraving may be done with more precision.

## **Collection of Dust**

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When it comes to cleanup, having a dust collecting system on one of these machines is a wonderful benefit. A dust port on some CNC machines enables the tool to collect dust during carving.

## **Download The 17 Best CNC Machines & Routers for WoodWorking in 2024 PDF**

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