

Hi CNC Enthusiast,

By now, hopefully you have a really good understanding of what you can do with a CNC router and what is involved with its operation. In this email, I will give you a closer look at the STEPCRAFT CNC systems. I know what you are thinking ... *"Up until now this course was filled with very good information, but now he is going to try to sell me something."* Rest assured that I want nothing more than for you to choose a STEPCRAFT system as long as we can meet your needs. However, this email is more to educate you about the products we offer and some of the advantages that we have over other brands. In my opinion, this is still very much an educational email because if you have decided that a CNC is right for you, then you need to know what to look for as you shop around.

## Why Multi-Function Is So Important

Most CNC systems on the market can do one thing ... CNC cutting/milling. This is fine if that is all you want to do, but if you can find a system that can not only do an amazing job at CNC cutting/milling and can also be expanded upon over time to add various functionality to your workshop or business, then would you agree that is much better? While there are some systems on the market that offer what they call "multifunction", but these systems are limited to the addition of a 3D printer or perhaps a simple laser engraver.

STEEPCRAFT offers **12 different add-ons** to our CNC Systems giving you the most flexibility out of any CNC system on the market and we are adding more attachments all the time. These include:

1. [MM-1000 Milling Spindle](#)
2. [HF-500 Computer-Controlled Spindle](#)
3. [3D Print Head](#)
4. [Laser Cutter/Engraver](#)
5. [4th Axis Rotary Machining](#)
6. [Engraving Point](#)
7. [Plotting Pen](#)
8. [Wood Burning Pen](#)
9. [Automatic Tool Changer](#)
10. [Drag Knife \(for vinyl and graphics cutting\)](#)
11. [Hot Wire Cutter \(for cutting foam\)](#)
12. [3D Touch Probe \(for digital scanning and parts locating\)](#)

A true multifunction system will give you the capabilities of owning several different machines with only a small incremental cost and without taking up substantially larger storage space. The best part of the STEPCRAFT attachments is that they perform just as well as a dedicated system.

## The ONLY 4 Things You Need To Get Started

While having so many options and accessories in our product line is a good thing and offers the most flexibility possible, it can also be overwhelming for a beginner who might not know exactly what they need. The good news is that there are only 4 things that you absolutely need to get started.

**1. Base Machine:** The STEPCRAFT D-Series offers machines in 5 separate sizes, ranging from the smallest 210 to the largest 840. The performance on the 300, 420, 600 and 840 are all basically the same, with the only major difference being the workspace dimensions. For a chart of the machine's physical and work area sizes, please [CLICK HERE](#). Choosing the machine size that will not only work for you today but also into the future is, by far, the most important decision that you have to make as there are no upgrade kits to expand the size at a future date. Everything else we sell can be changed or added at any time. So make sure you look for a machine that will meet all of your needs.

**2. Spindle:** Once you have selected the machine size, you need to determine what spindle you will need to process the materials that you wish to use. STEPCRAFT offers 4 main spindle choices:

- **[MM-1000 Milling Spindle](#)** - this is our most powerful spindle for our D-Series CNC line. With 1000 watts of power, it is more than enough to mill any type of wood, composite or plastic and is perfect for non-ferrous metals like aluminum, brass and copper. Additionally, the [Automatic Tool Changer](#) for the MM-1000 is a very nice add-on.
  - **Advantages:** Very powerful, heavy-duty spindle bearings, designed for CNC applications, relatively quiet, works with stock STEPCRAFT tool holder bracket, Automatic Tool Changer available.
  - **Disadvantages:** Not computer speed control for RPM
- **Dewalt DW611 or Bosch Colt Routers** - these are the most common spindles in the hobby and DIY CNC market. STEPCRAFT has attachments so you can mount either to any of the base machines.
  - **Advantages:** less expensive, replacements available at big box stores.
  - **Disadvantages:** requires a bracket swap if you want to switch between the router and other attachments, the exhaust blows downward towards the work piece which makes a mess, more runout (rotational

inaccuracy) than a dedicated CNC spindle, fewer bearing and shorter bearing life and not computer-controlled for router RPM.

- **[HF-500 Computer-Controlled Spindle](#)** - This is a STEPCRAFT-specific spindle with 500 watts of available power. It is perfect for hobby and other precision work. It will process the same materials as the MM-1000, it just processes them slower.
  - **Advantages:** Fully computer-controlled (RPM and on/off), precision bearings, very accurate, [Automatic Tool Changer](#) available.
  - **Disadvantages:** Most expensive option, not as much power as the MM-1000
- **[Dremel Rotary Tool](#)** - For simple hobby and other light-duty applications, you can use a Dremel handheld rotary tool as a spindle attachment for your CNC.
  - **Advantages:** Least expensive option, many hobbyists already have one, available at many big box stores
  - **Disadvantages:** Light duty, only recommended for thin materials like thin plywood, balsa wood, thin plastics, etc., Only uses 1/8" shank bits, not really designed for CNC use with light duty bearings, so over time they will wear out with heavy use.

**3. Software:** As mentioned in the previous email, the power and capability of the CNC is only limited by the software capability and your imagination. You need to determine what type of CNC work that you wish to do, 2D, 2.5D or full 3D and choose the appropriate CAD/CAM software solution. Some basic guidelines are:

- **2D & 2.5D projects:** Vectric Cut 2D is a good, inexpensive solution. You can do your designs as well as your tool path work within the same program and the Vectric software is known for being very easy to learn.
- **2D, 2.5D and 3D Carving Projects:** If you are looking to do all three, then you might consider Vectric VCarve Desktop or VCarve Pro.
- **4th Axis CNC Machining:** At the time of this email there are three solutions for 4th axis machining: Vectric VCarve Pro, Fusion 360 and Deskproto.
- **3D Design and CAM:** Fusion 360 is the most powerful of the programs that we offer. Fusion offers full 3D design capability and a very powerful CAM package all built into one program. The only real downside is the learning curve is much greater than Vectric programs.

**4. End Mills/Cutting Bits:** The last thing you need to get started with a CNC system are end mills or cutting bits that you will use in the spindle to cut/carve your projects. If you refer back to the course email from Day 3, I explained the most common types of cutting bits available for CNC use.

# Making The Buying Process Simple - Complete System Packages

In our effort to make the buying process as simple as possible, we have created several pre-configured packages that offer a wide variety of project capabilities depending on your needs and your budget. You can view these packages by [CLICKING HERE](#):

Hopefully these last 5 *Intro to CNC Course* emails have given you the basics as to what you can do with a CNC and have taken you all the way to what components and options you will need to get started in the world of CNC. It is much easier than you might have thought and my team and I are here every step of the way to ensure your success.

## Common Questions In Tomorrow's Email

As you can imagine, we get tons of questions every week. In tomorrow's course email, I will cover some of the most frequent questions with hopes that I can help move you one step closer to your CNC journey. Please feel free to reach out to me at any time by emailing at [info@stepcraft.us](mailto:info@stepcraft.us) or by calling me or my team at 203-556-1856.

Sincerely,

A handwritten signature in black ink, appearing to read 'ERICK ROYER', with a long, sweeping horizontal line extending to the right.

Erick Royer

Director

[www.Stepcraft.us](http://www.Stepcraft.us)