

# ShopBot Buddy<sup>®</sup> CNC

If you're looking for a compact CNC solution that delivers affordable, full-production performance in the digital fabrication of wood, plastic, aluminum, and other materials, then ShopBot's Buddy tool could be the right tool for your needs. Using advanced technology for CNC cutting, drilling, carving, and machining, ShopBot's Buddy is easy to learn and use. Buddys have a small footprint, and can be positioned easily into your production flow. That makes them useful on the shop floor. They can be configured and reconfigured for specific production needs— Buddys are the agile production CNC solution.

**Fully assembled and ready to work when rolled out of the shipping crate, the Buddy design makes use of a rigid, stationary gantry over a moving table.**

The gantry is a heavy custom extrusion, precisely machined for sturdy linear rails. The steel and solid aluminum Z-axis also rides on linear rails. The Buddy is available in 32" or 48" widths (actual cutting/machining widths are 33" and 49") and have a front-back distance of 24". The front-back length can be optionally expanded to 48" with a longer PowerStick™ (actual cutting and machining distances are 26" and 50", respectively for this axis). The PowerStick is our award-winning motion and drive substrate of the moving table; PowerStick technology allows quick swaps between multiple tables and fixturing systems.



For more depth of cutting, Buddys are available with extended-height clearance while 3D cutting. The Buddy 32 and 48 are available with extended-height tablesides and a 14" Z-axis. The 14" Z-axis makes the Buddy the perfect tool for mold making, carving, and prototyping. See the specification table for summaries of the work envelope for various Buddy configurations.

## All ShopBot Buddy CNC Tools Include:

- Tough precision linear bearing on Y- and Z- axes with hardened steel rails and "V"-bearings for the moving-table, X-axis
- Ships with a standard, 24" work-area PowerStick for the moving table (this PowerStick itself is 48" in the front to back length)
- Reliable rack-and-pinion power transmission on each axis
- Sealed industrial control box
- Emergency stop disconnect switch and spindle interlock remote pendant
- Z-zero touch-off plate and XYZ proximity switches
- Dust skirt ready to connect to your dust collector
- ShopBot Control System software to run your CNC
- Bundled with Vectric's VCarve Pro to create CNC projects
- Support resources and documentation
- ShopBot Handbook Notebook
- Two-year warranty

### PRStandard & PRSalpha Dimensions (Length x Width x Plunge)

	Buddy 32*	Buddy 48*
<b>Cut/Movement Area**</b>	25" x 33" x 8" (.64m x .84m x .2m)	25" x 49" x 8" (.64m x 1.27m x .2m)
<b>Footprint</b>	L36" x W56" x H67" (.91m x 1.42m x 1.70m)	L36" x W76" x H67" (.91m x 1.93m x 1.70m)

\*For the BT32 & BT48, the cutting table under your work moves to provide motion on the X-axis.

\*\*Cutting width is decreased by 10" for each spindle when using a second Z-axis.

Give us a call at **888-680-4466** to discuss your production needs.

We'll help you choose the right tool to get the job done.



**888-680-4466 • ShopBotTools.com**

# PRStandard Specifications

Our **PRStandard series** of full-sized gantry tools provides an affordable entry to CNC for those who are ready to get started with CNC productivity. These tools are ideal for many different users: moderate production shops, educational settings, hobbyists, signmakers, and woodworkers, just to name a few. PRStandard tools have the same rigid gantry, table frames, and durable mechanical components as our PRAlpha series.

<b>Drive Motor:</b> Open loop steppers with 3.6:1 gearboxes. <i>Without positional feedback, if attempting to cut too fast or an obstruction is hit, steps could be lost and not noticed until the part file has completed or the operator stops.</i>
<b>XY Move Speed</b> (with full cutting force): Variable, max. 360 in/min (9144 mm/min)
<b>Z Move Speed</b> (with full cutting force): Variable, max. 120 in/min (3048 mm/min)
<b>XY Positioning Speed:</b> Variable, max 480 in/min (12192 mm/min)
<b>Z Positioning Speed:</b> Variable, max 480 in/min (12192 mm/min)
<b>Step Resolution:</b> 0.0006" (0.015mm)
<b>Linear Cutting Force:</b> ≈50lbs. at 60 in/min
<b>X, Y, and Z Axis Drive System:</b> Rack and Pinion
<b>Input Voltage:</b> 110v or 220v single-phase and 230v 3-phase power options are available, depending on tool and configuration.*
<i>Eight Input Channels (switch closure or 5-volt logic input), Eight Output Channels (5-volt logic level current).</i>

Mechanical parts such as table, gantry, and Z-axis are the same for both types of machines.

\*Connecting either the PRAlpha or PRStandard requires the services of a licensed electrician. Please check the website or contact ShopBot for the wiring information for the set-up you are considering.

# PRAlpha Specifications

With enough production capability for a three-shift factory, **ShopBot PRAlpha tools** are our toughest, most sophisticated, gantry-based CNC routers. They reach rapid transit speeds of 1800 inches per minute and cutting speeds of up to 720 inches per minute. The PRAlpha series of full-sized gantry tools deliver high performance, high efficiency production, as well as fast position and cutting.

<b>Drive Motor:</b> Closed loop steppers with 7.2:1 gearboxes. <i>With constant positional feedback to the drivers, if an obstruction is hit or cutting too fast, the drivers will attempt to correct the position of the motors before activating an alarm, stopping the machine and displaying an alarm on the monitor. Once reset and homed, cutting should be resumable.</i>
<b>XY Move Speed</b> (with full cutting force): Variable, max. 720 in/min (18288 mm/min)
<b>Z Move Speed</b> (with full cutting force): Variable, max. 360 in/min (9144 mm/min)
<b>XY Positioning Speed:</b> Variable, max 1800 in/min (45720 mm/min)
<b>Z Positioning Speed:</b> Variable, max 900 in/min (22860 mm/min)
<b>Step Resolution:</b> .0004" (0.010mm)
<b>Linear Cutting Force:</b> ≈150lbs. at 60 in/min
<b>X, Y, and Z Axis Drive System:</b> Rack and Pinion
<b>Input Voltage:</b> 220v single-phase, 230v 3-phase and 380/460V 3-phase power options are available, depending on tool and configuration.*
<i>Eight Input Channels (switch closure or 5-volt logic input), Eight Output Channels (5-volt logic level current).</i>

## SOFTWARE

No computer degree is needed to run a ShopBot! **Each new ShopBot includes VCarve Pro** CAD/CAM software, selected and bundled for project designing and tool-pathing. The ShopBot Control System software that runs your CNC is also included.

**The ShopBot Control System Software is compatible with many software programs.**

Compatible programs include: Fusion 360 • AutoCAD • Rhino 3D • SketchUp • Aspire • Cabinet Vision • EnRoute • KCD • MasterCAM • MillWizard • OneCNC • Shape 3D • Vector CAD CAM • Visualmill • CabinetParts Pro • DeskProto

## ACCESSORIES and ADD-ONS

- Plotter Pen
- Drag Knife Bit
- Diamond Drag Engraving Bit
- ShopBot's 3D Digitizing Probe
- Rotary Indexing Head
- Vacuum Pump .3hp Kit

See our website for more details, or ask your salesperson about what accessories and add-ons are right for your needs.

## FREE TECHNICAL SUPPORT

Whether you're new to digital fabrication or a veteran user of CNC technology, ShopBot is here to support your efforts. We provide **free technical support 7 days a week** from our headquarters in Durham, North Carolina. We also

To contact tech support:  
[support@shopbottools.com](mailto:support@shopbottools.com)

have a vibrant online community at [talkshopbot.com](http://talkshopbot.com), sharing tips and advice with other users of digital fabrication technology.



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We make the tools for making the future.