

# ShopBot PRSAlpha CNC

If you're looking for a CNC solution for production that delivers high performance, high volume, speed and reliable power for all cutting tasks, ShopBot's PRSAlpha series of full-sized gantry tools will be your system of choice. With enough production capability for a three-shift factory, ShopBot PRSAlpha tools are our toughest, most sophisticated, gantry-based CNC routers.

Using advanced technology for CNC cutting, drilling, carving and machining, the PRSAlpha series tools deliver rapid transit speeds of 1800 inches per minute and cutting speeds of up to 720 inches per minute – 40% faster than similar machines.

Easy to configure and re-configure, learn and use, the PRSAlpha CNC delivers affordable, full-production performance in digital fabrication of wood, plastic, aluminum, and other materials.

Our PRSAlpha tools are available with either 8" or 14" of Z travel, and in addition to standard sizes, can be built to any dimension up to 10' x 30' and with plunge depths up to 26 inches. Other customizable components are available for the PRSAlpha, including dual Z options with two Z axes on the main gantry.



## All ShopBot PRSAlpha Gantry Tools Include:

- Tough precision linear bearings on the moving gantry and hardened steel rails for the X-axis
- Reliable rack-and-pinion power transmission on each axis
- Fast, closed-loop alphaStep motors fitted with low-backlash, tapered-hob gear heads on all three axes — alphaStep system monitors motor shaft positions with feedback maintaining tight synchronicity between signal and motion
- Sealed industrial control box
- Step resolution of .0004"
- Emergency stop disconnect switch and spindle interlock remote pendant
- Z-zero 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
- Fully-assembled gantry module ships along with steel and aluminum table components. The engineering of our structurally integrated table allows on-site assembly and the advantage of placement of the tool in work areas with limited accessibility—while still having a factory squared, aligned, and tested machining system
- We also offer on-site set-up services, as well as training and production process consulting, as options
- Support resources and documentation
- ShopBot Handbook Notebook
- Two-year warranty

### PRSAlpha Dimensions (Length x Width x Plunge)

	48-48	96-48	96-60	120-60	144-60
<b>Cut/ Movement Area**</b>	57" x 49" x 8" (1.45m x 1.24m x .2m)	105" x 49" x 8" (2.67m x 1.24m x .2m)	105" x 61" x 8" (2.67m x 1.55m x .2m)	129" x 61" x 8" (3.28m x 1.55m x .2m)	153" x 61" x 8" (3.89m x 1.55m x .2m)
<b>Footprint</b>	L72" x W79" x H67" (1.83m x 2.01m x 1.70m)	L120" x W79" x H67" (3.05m x 2.01m x 1.70m)	L120" x W91" x H67" (3.05m x 2.31m x 1.70m)	L144" x W91" x H67" (3.66m x 2.31m x 1.70m)	L168" x W91" x H67" (4.27m x 2.31m x 1.70m)

\*\*Actual cutting width is decreased by 10" 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.

**ShopBot**®  
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## ShopBot PRSalpha Specifications

<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>	

Connecting the PRSalpha 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.

## 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

- 6" or 12" Rotary Indexer
- Air Drill
- Tangential Knife
- Automatic Tool Changer (ATC Upgrade)
- Vacuum Hold Down Systems: Becker Blower, Cyclone, Hurricane, Storm
- Vacuum Hold Down Kit
- Hose Cradle Kit
- Dust Collection
- 3D Digitizing Probe

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 have a vibrant online community at talkshopbot.com, sharing tips and advice with other users of digital fabrication technology.

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

Looking for something similar to the PRSalpha that better suits your CNC needs? Ask us about our **PRSstandard** and **PRSalpha ATC** CNC machines.

The ShopBot logo features the brand name in a bold, blue, sans-serif font. The letter 'o' in 'Bot' is stylized with a small robot head icon inside it. A thick blue horizontal line runs beneath the text.

888-680-4466 • [ShopBotTools.com](http://ShopBotTools.com)

We make the tools for making the future.