

ShopBot Carolina™ CNC

The ShopBot Carolina™ is a full-size gantry CNC built for the maker, the sign shop, the small studio, and the educator — anyone ready to put serious CNC capability to work without a serious price tag. With cutting speeds of up to 480 inches per minute and rapid speeds of 720 inches per minute, the Carolina delivers the speed, precision, and reliability you expect from a ShopBot gantry machine.

The Carolina is capable of cutting, 3D carving, drilling, or machining a variety of materials — including wood, plastic, high density foam, and aluminum.

The table of the ShopBot Carolina is a streamlined, modular design that emphasizes stability and accessibility. Table sides and rails are level with the tool bed so materials can be loaded and unloaded easily. All Carolina gantry tools have 8" of Z travel.

Table sizes are available from 48" – 96" and gantry beam widths are from 48" – 60".

Custom table sizes, accessories and add-ons are available, including metric bits and collets.



All ShopBot Carolina PRS5 CNC Machines Include:

- Low-backlash, tapered-hob gear heads and easy to maintain rack-and-pinion power transmission on each axis deliver a level torque curve for consistent performance even at high speeds.
- Precision linear rail and bearings on Y-axis and Z-axis for smooth motion; hardened steel track on X-axis resistant to damage from cutting debris.
- 1HP 110V spindle: Includes ER20 collets in your choice of sizes — capable of holding bits with up to 1/2" shank
- 2.2HP, 4HP, and 5HP spindles: Includes 1/4" and 1/2" ER25 collets (2 each) — capable of holding bits with up to 5/8" shank
- Cutting speeds of up to 480 inches per minute (depending on cutting bit and material) and rapid speeds of 720 inches per minute.
- Emergency stop disconnect switch and spindle interlock remote pendant.
- Step Resolution of 0.0006"
- Z-Zero Touch-Off Plate and X,Y and Z Limit switches.
- Dust Skirt ready to connect to your dust collector.
- Shipped as four ready-to-assemble modules. On-site assembly and training available.
- ShopBot's own control software.
- Powerful CAD/CAM Software from Vectric (VCarve Pro comes standard, upgrades to Aspire available).
- Free live phone support for original owners; online resources available to all at ShopBotTools.com; paid support plans available for second-hand machines.
- ShopBot CNC Handbook
- Two-year warranty

ShopBot Carolina PRS5 Dimensions (Length x Width x Plunge)

	48-48	96-48	96-60
Cut/Movement Area	56" x 49" x 8" (1420mm x 1245mm x 200mm)	103" x 49" x 8" (2616mm x 1245mm x 200mm)	103" x 61" x 8" (2616mm x 1550mm x 200mm)
Footprint	72" x 79" x 67" (1830mm x 2000mm x 1700mm)	120" x 79" x 67" (3050mm x 2000mm x 1700mm)	120" x 91" x 67" (3050mm x 2310mm x 1700mm)

Give us a call at **888-680-4466** to discuss your CNC needs. We'll help you choose the right machine to get the job done.



888-680-4466 • ShopBotTools.com

ShopBot Carolina PRS5 Specifications

Drive Motor: 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>	
XY Move Speed (with full cutting force):	Variable, max. 480 in/min (12,192 mm/min)
Z Move Speed (with full cutting force):	Variable, max. 360 in/min (9,144 mm/min)
XY Positioning Speed:	Variable, max 720 in/min (18,288 mm/min)
Z Positioning Speed:	Variable, max 540 in/min (13,716 mm/min)
Step Resolution:	0.0006" (0.015mm)
Linear Cutting Force:	≈50lbs. at 60 in/min
X, Y, and Z Axis Drive System:	Rack and Pinion
Input Voltage:	110V or 220V single-phase and 230V 3-phase power options available, depending on spindle configuration. 1HP spindle: 110V; 2.2HP, 4HP, and 5HP spindles: 220V and above.
<i>Eight Input Channels (switch closure or 5-volt logic input), Eight Output Channels (5-volt logic level current).</i>	

Connecting the Carolina PRS5 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" Rotary Indexer
- 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 FOR ORIGINAL OWNERS

Whether you're new to digital fabrication or a veteran user of CNC technology, ShopBot is here to support your efforts. We provide free live technical support from our headquarters in Durham, North Carolina, and have a vibrant online community at talkshopbot.com where users share tips and advice. Online documentation and resources are free to all at ShopBotTools.com.

Paid support plans are also available for second-hand machine owners.

To contact tech support:
support@shopbottools.com

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



888-680-4466 • ShopBotTools.com

We make the tools for making the future.