

# ShopBot PRS5 Alpha ATC CNC

The PRS5 Alpha ATC is the affordable CNC solution that is destined to become the production powerhouse of your shop. The Automatic Tool Changer (ATC) shortens production time by automatically changing cutters between tool paths, eliminating the need for the CNC operator to change and zero tools individually.

ShopBot's PRS5 Alpha models feature a closed-loop motor system, using sensors and real-time feedback control to accurately adjust its operation. With its precise movement and performance, the PRS5 Alpha ATC provides full-production performance when cutting, 3D carving, drilling, or machining a variety of materials—including wood, plastic, high density foam and aluminum.



The table of the PRS5 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 PRS5 gantry tools are available with 8", 14" or 26" of Z travel. Table sizes are available from 48" – 192" and gantry beam widths are from 32" – 108". Custom table sizes, accessories and add-ons are available, including metric bits and collets.

## All ShopBot PRS5 Alpha ATC CNC Machines Include:

- 5 HP HSD Automatic tool change spindle with pneumatically actuated draw bar; compatible with ISO30 tool holders.
- 9 position "low profile" tool bar. Tools drop below cutting area between tool changes to allow material to be loaded/unloaded from either side of machine.
- 9 ISO30 tool holders compatible with ER32 collets – capable of holding bits with up to 3/4" shank.
- Closed Loop control system using Oriental Motor's alphaStep technology monitors position on all axes during cutting to eliminate position loss.
- Low-backlash, tapered-hob gear heads on all drive motors create 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.
- Easy to maintain rack-and-pinion power transmission on each axis.
- Step Resolution of 0.0004"
- Best in class cutting speeds of up to 720 inches per minute (depending on cutting bit and material) and rapid speeds of 1,800 inches per minute.
- Sealed Industrial UL Certified Control Box.
- Emergency stop disconnect switch and spindle interlock remote pendant.
- Z-Zero Touch-Off Plate and XY 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).
- Lifetime service for your machine with live phone support and detailed documentation on the web.
- ShopBot Handbook Notebook
- Two-year warranty

## PRS5 Alpha ATC Dimensions (Length x Width x Plunge)

	48-48	96-48	96-60	120-60	144-60
<b>Cut/Movement Area</b>	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)	127" x 61" x 8" (3225mm x 1550mm x 200mm)	151" x 61" x 8" (3835mm x 1550mm x 200mm)
<b>Footprint</b>	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)	144" x 91" x 67" (3660mm x 2310mm x 1700mm)	168" x W91" x H67" (4270mm x 2310mm x 1700mm)

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

**ShopBot®**

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## ShopBot PRS5 Alpha ATC 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>Twelve Input Channels (switch closure or 5-volt logic input), Twelve Output Channels (5-volt logic level current).</i>	

Connecting the PRS5 Alpha ATC 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
- 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](http://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 PRS5 Alpha ATC that better suits your CNC needs? Ask us about our **PRS5 Standard** and **PRS5 Alpha** CNC machines.



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We make the tools for making the future.