

The logo for ShopSABRE, featuring the word 'Shop' in a bold, italicized sans-serif font and 'SABRE' in a regular sans-serif font, both in dark blue. The text is underlined with a thin blue line.

**ShopSABRE**

• ROUTERS • PLASMA CUTTERS •

A white-bordered rectangular box containing the text 'RC SERIES CATALOG' in large, white, bold, sans-serif capital letters. The background of the box is a blurred image of several metal drill bits of various sizes, with a blue and yellow color scheme.

**RC SERIES  
CATALOG**

A dark blue rectangular area containing white text. The text describes the products offered in the catalog.

**Professional CNC Router & Plasma Cutting Tables**  
*for Wood, Plastic, Metal, and More!*

# American Technology at Entry Level Pricing



*You the owner/operator should be able to go to the machine, turn it on, and go to work. No squaring or alignment should be required. Lower quality machines like Chinese Imports and Kit Machines might play the smoke and mirrors game but in the end, you will find yourself shopping again!*

**You can run them 24 hours a day 5 days a week  
or even more if your needs require.**

## HEAVY WALL STRUCTURAL STEEL TUBE AND PLATE FRAMEWORK

ShopSabre uses only top-rated North American steel tubes and steel plate. We do not use any extruded aluminum or sheet metal construction in our machine frames. Our systems are Heavy Wall Structural tube steel, fully welded with no customer assembly required. Each machine is Jig welded, Precision Milled, and Heat Treated to assure you get the most accuracy.

## SHOPSABRE USES ONLY HIGHPRECISION COMPONENTS

We use 25MM linear guide rails with triple wiper linear guide bearing blocks on X, Y, and Z Axis. We use 2 bearing blocks on each rail to assure the cut forces are equally distributed over the rail to reduce the amount of wear and noise.



The triple sealed bearing blocks assure that no matter how much debris and dust build up on the rails you will not get failure to the bearings. The design also makes the machine a self-cleaning system without the worry of wiping down the rails or watching for buildup. On our ShopSabre RC Series Routers the motion on the XY Axis is Rack and Pinion Driven with ShopSabre exclusive Floating Drive Technology. The Z Axis is upgraded and driven by high precision Ball Screws with the largest diameters in our market. The ShopSabre Ball Screws are Ball Matched Angular Contact Bearing to assure the largest accuracy possible. The ShopSabre CNC drives are all driven by High Torque North American Servo Motors with Closed Loop True Encoder Technology.



## PROFESSIONAL-GRADE CNC CONTROLLER

ShopSabre uses the best of both worlds when it comes to a controller. We use an Industrial Controller technology that has been conveniently installed into a Windows compatibility to give you the most control over your CNC system with the ease of running a computer. Our system does not connect to the machine with a cheap printer port or USB cable. We use a true CNC grade Industrial Connection via a 37 Pin direct connection.

The ShopSabre has a Solid-State Hard drive for **AT MACHINE STORAGE** and you can load your CAD/CAM software on the machine computer if you would like, Eliminating the need to walk to a workstation to make changes to a file if necessary. ShopSabre also makes the machine completely networkable so you can utilize your businesses Internet Connection or Network for File Transfer, Storage, or On-line diagnosis/assistance.

The ShopSabre requires **NO** special training or machine setup. It has a dedicated built in microprocessor that **ONLY** drives your CNC machine, while the PC processor runs the PC and any programs you might have running. The ShopSabre CNC controller has USB drive ports to assure you can plug in your flash drives and external hard drives as necessary.

The ShopSabre Controller has **EVERY** capability that our competitors with standalone controllers have, and many more that competitors cannot offer (even on competing machines costing \$100,000.00+). The ShopSabre Controller is dust and dirt protected and designed to be used in a working environment. The Controller updates with Windows so you will never run into a problem with compatibility, and all controller software version updates are **FREE** for the lifetime of the equipment.

## SHOPSABRE HAS AN ANSWER FOR ANY BUDGET.

We can build a CNC system that fits entry level needs from Porter Cable Routers all the way to a Fully Functional Tool Changer system. We provide 3.25HP Porter Cable Routers, 2.2Hp HSD Spindles, 3.7HP HSD Quick Change Spindles, 4Hp and 9Hp HSD Manual Change Spindles, 5Hp and 10HpHSD Auto Tool Changer Spindles, and of course, the 13HP HSD Tool Changer Spindles. We can special order even larger spindles for those of you who need the power. All our spindles come standard with a Variable Frequency Drive (VFD) to control spindle RPM ranging from 1,000-24,000 depending on the model (ask sales for details).

ShopSabre also has Tool Changers that are expandable in the field meaning you can take a 5 Position system and upgrade to a 10 Position without sending the machine back to us for work. Don't be fooled by competitor's quotes, many provide false Spindle HP Ratings for less than 100% duty cycle or only provide you with the Tool Changer head and 1 tool position and charge you extra for the cones.

## SHOPSABRE DOES NOT CUT CORNERS

If you purchase a 5 position Tool Changer you get 5 complete positions, which include the tool forks, collets, cones and the wrenches with vice. Yes—even the wrenches and vice are included. This goes for any number of positions. ShopSabre also includes our advanced Tool Measure Technology with **EVERY** CNC Router systems so you are not limited on tooling accuracy between changes whether manually changing or auto tool changing.

# SHOPSABRE BENEFITS LIST

ShopSabre machines are fundamentally more robust than any machines in the class. This is made possible by starting with FEA Engineering and Design and then manufacturing our Frames and machines here in the United States.

- » ShopSabre puts additional time and money into assuring that each CNC system is 100% **TESTED** and Calibrated prior to leaving our facility so you won't be forced to calibrate in the field. The ShopSabre is designed to drop into your building and go to work the same day. Don't pay expensive fees to have someone on-site to setup your machine; it can be done before it ever leaves the factory. ShopSabre CNC keeps installation simple, easy, and stress free.
- » ShopSabre puts more time and effort into assure each Frame, mounting bracket, Spindle Plate, and Drive Component is machined to exact specs for increased accuracy and better fitments to assure you do not get any binding or excessive wear.
- » ShopSabre CNC uses High Grade Continuous Flex Robotic CNC wiring that is specifically designed for the type of work a CNC system does. It can bend and move all day without having any issues, and the anti-interference coating assures the wires are less likely to have interference from other electronic equipment in your shop for the highest accuracy possible. Many competitors use cheap wires that can be purchased off the shelf for less money, but they still charge comparable pricing. Don't be fooled by companies who don't build quality into their systems.
- » ShopSabre CNC is upgradable and has expansion capabilities for the growing shop. If you want to start with the basics and move to the bells and whistles down the road, almost every option (with a few exceptions) can be added after the sale in the field.
- » ShopSabre CNC designs our systems to be easy to work on so you do not need a ShopSabre technician to come into your facility to help with everything you encounter. You benefit from low operational cost and a big return on investment.
- » If you do find yourself in need of help, ShopSabre CNC offers the best support on the market with our **FREE** lifetime tech support and assistance as a part of ShopSabre "SabreNation" – because we are confident that our machines will last a lifetime. We also include remote diagnosis, Online Training, and access to our Exclusive SabreNation University Videos. We know our machines are the best but we want you to have the same confidence each and every time you turn the machine on.
- » ShopSabre sales are not paid on commission, the only reason for them to recommend an option is truly to benefit your project and machine capabilities. ShopSabre sales consultants are trained on the technology and industry and not only understand our product but understand our industry better than our competitors. ShopSabre has no reason to encourage you to spend more money than you need to up front to perform your job but also won't cut corners to make a quick sale. We sell on facts and the facts should sell the technology, equipment, and options.
- » Don't be fooled by the other systems on the market. We are so confident of our machines that we extend an invitation to tour our facility and view our ShopSabre CNC systems in various stages of manufacturing. With prices starting under \$20,000 you can't afford not to check us out!

# RC SERIES



## POPULAR INDUSTRIES

- Schools
- Garage/Hobbyist
- Sign Makers
- Light to Medium Duty Shops

## PRODUCT DESCRIPTION

This machine gives you American Made Quality at an Import Cost! This CNC System is everything you could want in a CNC for Entry Level cost and so much more. It's not only American Engineered, Designed, Manufactured and Supported like all of ShopSabre products but it's built with name brand components and engineered to be the best machine in the class. Ideal for the Hobbyist or Price Sensitive Market This machine provides you the most solid frame construction for the pricing and is well over built from its large steel tube frame all the way to the heavy-duty Tube Steel Gantry. This machine offers rigidity, weight, and structural design many times double of its competition and comes 100% Welded, Machined, and Calibrated so, assembly is not required.

This machine like most entry level solutions does come with Rack and Pinion XY Axis and Ball Screw on the Z Axis. The RC Series features ShopSabre exclusive "Floating Drive Technology" for reduced maintenance and wear on the XY Axis. The RC is also powered 100% by high torque Name Brand Closed Loop Brushless servo motors in XYZ utilizing Planetary Gears in XY. Many of us have heard of or experienced firsthand the Chinese market, with that in mind ShopSabre came out with a solution to keep quality and service in mind while giving you a competitively priced solution with advanced technology.

The RC series is popular in Wood, Plastic, Foam, and many more materials with low to medium production in mind. You will not find a more durable robust piece of equipment for less money without cutting corners.

## STANDARD OPTIONS

- » Fully Assembled, Tested, and Pre-Calibrated for Easy Installation
- » Access to "SabreNation" - Life-Time Support via Phone, Email, and PC Connectivity
- » Access to ShopSabre Basic Training Course and SabreNation University(Ask for Details)
- » Fully Assembled Structural Tube Steel Frame and Gantry
- » Vectric VCarve Pro Cad/Cam software
- » ShopSabre CNC WINCNC Controller Hardware and Software with 37 Pin HD Communication Cable
- » Machine Operator PC with included SSD Hard Drive Control Tower with Windows OS - Monitor/ Keyboard included
- » Fully Configured Control Box Machine Mounted (Left Side)
- » 3.25HP Porter Cable Router with Machine Integrated Mounting Bracket
- » ShopSabre Super Z Axis Stiffener System
- » Precision Linear Guide Rails and Bearings on X, Y, and Z Axis
- » Large Diameter Ball Screw Drive on Z Axis
- » Upgraded Industrial Grade Rack and Pinion on X and Dual Y Axis with ShopSabre Floating Drive Technology on Y Axis
- » Dual Drive Y Axis with Planetary Gear Drives and Reputable Servo Motors
- » High Quality CNC Grade Wiring with Cable Guards and Carriers
- » Tool Measure Switch for Fast and Accurate Tool Changes
- » 2D and 3D Capable (4th Axis Available)
- » Accepts G-Code or DXF Files direct

## MACHINE SPECS

Traversing Speed	1500IPM
Cutting Speed	Up to 500IPM
Resolution	.0005"
Repeatability	+/- .002"

## CUTTING AREA

RC4	55" x 49" ATC Reduces to 51" Wide
RC8	55" x 98" ATC Reduces to 51" Wide

## CONSTRUCTION

Table	Welded Steel Construction
Gantry	Welded Precision Ground Steel Construction
Linear Rails	25mm Precision HiWin Rails
Foot Print	RC4: 79" x 68" x 70" RC8: 79" x 116" x 70"
Weight	RC4: 1800 lbs RC8: 2300 lbs
Power Requirements	20amp / 110 Volt



## LINEAR GUIDES

This machine like all our equipment is built with 25MM Industrial Linear Guide Rails and Bearings reducing the maintenance and wear you would find on smaller bearing systems. These bearings are the top of the line and built for longevity and easy maintenance.



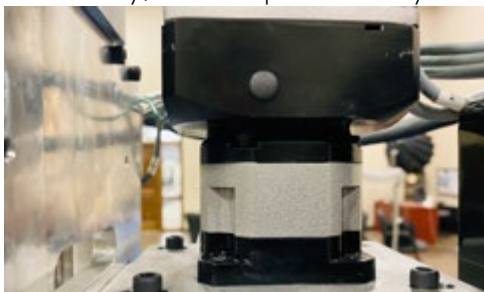
## INDUSTRIAL MOTORS

The motors on this machine are anything but low power. On all 3 Axis (XYZ) you get High Power Precision Servo Motors with Encoder Technology. On the Long Axis (Y Axis) we use Twin Servo motors giving you maximum speeds, higher accuracy, and added safety all while reducing maintenance cost.



## PLANETARY GEAR DRIVES

This direct drive system is the most accurate drive technology available for use with Rack and Pinion. We cut no corners and put over-sized drives on all axis to assure highest performance. This includes our "Floating" dual drive Y Axis giving you more power, accuracy, and dependability.



## CONTROLLER

Our Controller is Industrial in strength yet easy to operate with simple point and click technology you won't need to remember difficult code or screen switching. Everything is done in one place with keyboard and mouse control! No Special Operators Required – Anyone can learn this system



## STEEL FRAMES

These machines are FEA Engineered and Designed, 100% Welded Structural Tube Steel Frame including 6 Oversized Tube Legs and a Precision Aerospace Milled Structural Steel Gantry. These machines are Tested to assure the machine is accurate and true which will provide you better cuts and more accurate products than the competitors technology.



# RC SERIES

## CONFIGURATION

- » Welded structural steel frame with 6 Leg Design, stressed relieved for performance
- » Welded Steel Gantry with precision machining and stress relieved technology including Tube Steel Uprights.
- » Fully FEA Engineered and Designed for Better Performance
- » X Axis: Planetary Gear Driven with Industrial Rack and Pinion and Linear Guides Rails and Bearings
- » Y Axis: Dual Planetary Gear Driven with Industrial Rack and Pinion and Linear Guides Rails and Bearings
- » Z Axis: Direct Drive Ball Screw Drive and Linear Guide Rails and Bearings
- » The X and Y Axis feature ShopSabre Exclusive "Floating" Drive Technology
- » All Motors are High Powered Name Brand Servos with Closed Loop Encoder Technology
- » Machines are 100% American Designed, Engineered, Supported, and Manufactured!

## STANDARD FEATURES

- » 8" Gantry Clearance with 9" of Z Travel
- » 1500 IPM Rapid Movement with Servo option
- » Industrial Ball Screw Drives on Z Axis
- » Industrial Rack and Pinion with Planetary Gears and ShopSabre Floating Drive Technology on X Y Axis
- » Upgraded Z Axis Technology for Rigid Tooling and Machining
- » 3.25HP Porter Cable Router with Industrial Mounting Bracket
- » Precision Linear Guide Rails and Bearings in All Axis
- » Machine Mounted Continuous Flex Robotic CNC Grade Wiring

- » Auto Tool Measuring Technology
- » X, Y, and Z limit Switches with Homing Position and Accuracy
- » ShopSabre Quick Dust Skirt
- » Emergency Stop Switch
- » Vetric VCarve Pro CAD/CAM Software
- » Industrial ShopSabre WINCNC Controller with at Machine CAD/CAM Capabilities, SSD Hard Drive, Ethernet and USB connections with online, phone, and email support

## POPULAR OPTIONS AND FEATURES

### (OTHER OPTIONS MAY BE AVAILABLE)

- » HSD Manual Changes Collet Spindles (ATC may be available by Special Request)
- » Rotary 4th Axis (Lathe) System
- » Vacuum Hold Down Systems with 2 or 4 Zone Grid depending size
- » Industrial rated 1PH and 3PH Vacuum Pumps (F4, Becker and FPZ)
- » Tooling Packages
- » Software Packages
- » Dust Collectors

ShopSabre CNC IS offers packages for Sign Makers, Woodworkers, Fabrication Shops, Nested Based Manufacturing, Cabinet Makers, Furniture Makers, Music Industry, Automotive Industry, and Many More.

**Don't See something you were looking for,  
Just Ask!**





# A BUSINESS BORN OF NECESSITY, HARD WORK, AND INSPIRATION

## BACKGROUND

Years ago Jim Bombardo, founder of ShopSabre, had an idea to build a CNC machine to do crafts for his wife's business. Jim knew that if he did not have a machine capable of producing parts, he would have many long hours of back breaking work to do by hand. With a background in engineering and software, he started the project of building his own CNC machine.

After the initial days and weeks of research, Jim knew that he had to have a system that was an industrial design which would provide fewer headaches and years of problem-free service. His first machine was a full ball screw driven machine with industrial components throughout. Now he could produce parts for hours with ease and great precision.

After running the machine for some time, friends and acquaintances saw it and were amazed by its fully welded construction, power, precision and overall quality. After getting offers to sell it and hours of convincing, Jim sold the machine and decided he would build another for himself. Armed with experience and new ideas, the second machine went together much quicker, and Jim was once again convinced to sell it.

During the construction of the third machine, Jim had done further research in the CNC market and was amazed that no one offered an industrial quality machine under \$60,000. The only machines on the market were small bolt-together machines, and the components being used were simply hobbyist in quality. After seeing everything and doing this research, Jim decided to take this third machine to the Woodworkers show in Atlanta.

During the show he received a lot of attention and accolades for the machine design. When the show was finished they had over a dozen request for orders. Every client was willing to wait for the machine as they understood the quality and components put into each one.

After arriving back home, a facility was constructed for the manufacturing of the new CNC machines, and ShopSabre was born. Jim had started with himself, four sons, and his wife.

ShopSabre is a self-funded company and the machines are constructed from the ground up with every component being closely monitored to ensure it works flawlessly. ShopSabre's philosophy is simple: Customer Service is Everything. Each machine is tested for hours before it leaves to ensure power, precision, quality and reliability.

Currently there are over 5,000 machines around the world in over 29 countries. ShopSabre CNC has experienced enormous growth in the past few years, and has received recognition from some of the largest manufacturers of cabinets, aerospace parts and equipment, signs and many other industries. Business owners and engineers are seeing that you do not have to spend \$100k or more on a machine that can produce precision parts three shifts a day every day of the week.

ShopSabre is continuing to be on the cutting edge of CNC technology with the release in January '08 of its fastest and most powerful machine under \$100,000. ShopSabre's ability to monitor every part of the build cycle and every industrial component put into the machine each one is built to perfection before it leaves regardless if it is a router, spindle, laser, plasma, tangential knife or other product.

Jim is still personally involved in the construction and assembly of nearly every machine. With new products in the works and growth continuing at an astonishing rate, ShopSabre will continue to be a leader in affordable CNC machines.

# Buy your Second Machine the First Time

**ShopSABRE**  
• ROUTERS • PLASMA CUTTERS •

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