

# Shop SABRE

• ROUTERS • PLASMA CUTTERS •

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



*IS Series Catalog*



Our systems are not designed to be one or two project a week machines.

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

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. Chinese Imports and Kit Machines might play the smoke and mirrors game but in the end you will find yourself shopping again.

### **Solid steel tube and plate framework**

ShopSabre uses only top-rated steel tubes and steel plate. We do not use any extruded aluminum or angle iron in our machine frames. Our systems are solid steel welded and no customer assembly is required.

### **ShopSabre uses only high-precision components**

We use 25MM linear guide rails with triple wiper linear guide bearing blocks. 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 build up. On our ShopSabre Routers the motion on all 3 of our axes are driven by high precision Ball Screws with the highest diameters in our market. The ShopSabre Ball Screws also have Anti-Backlash ball nuts mounted in angular contact bearing blocks to assure the highest accuracy possible. The ShopSabre CNC drives are all driven by A/C Digital Super Servo Drives with matching Amplifiers.

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## Professional-grade CNC controller

ShopSabre uses the best of both worlds when it comes to a controller. We use an Industrial Controller that has been conveniently installed into a PC Controller 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 connection.

The ShopSabre has over 300GB of AT MACHINE STORAGE available and you can load your CAD software on the machine computer, eliminating the need to walk to a workstation to make changes to a file.

The ShopSabre requires NO special training. It has a 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 4 USB drive ports to assure you can plug in your flash drives and external hard drives.

The ShopSabre CNC system comes with Ethernet and Network capabilities. It 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 PC 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 updates are FREE for the lifetime of the equipment.

## ShopSabre has an answer for any budget

We can build a CNC system that only has mounting brackets so you can provide your own cutting head, or we can put on a Fully Functional Tool Changer. We provide 3.25HP Porter Cable Routers, 2Hp HSD Spindles, 4Hp HSD Spindles, 5 Hp HSD Auto

Tool Changer Spindles, 9Hp HSD Spindles, and of course the 10HP HSD Tool Changer Spindles. We have 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 2,000-24,000 depending on the model (ask sales for details).

ShopSabre also has Tool Changers that range from 3 tools all the way to 20 tools depending on your needs. Don't be fooled by competitor's quotes. Many only provide you with the Tool Changer head and 1 tool position.

## ShopSabre does not cut corners

If you purchase a 5 position Tool Changer you get 5 complete positions, which include all the wrenches, collets, cones and tool forks. Yes—even the wrenches are included. This goes for any number of positions. ShopSabre also can attach a Tool Measure switch with ANY number of tool positions so you are not limited to the number of tools you can have.

## ShopSabre Benefits List

- \* ShopSabre puts additional time and money into assuring that each CNC system is 100% TESTED prior to leaving our facility so you won't be the tester in the field. The ShopSabre is designed to drop into your building and go to work.
- \* ShopSabre puts more time and effort into assure each mounting bracket and spindle plate is machined to exacting specs for increased accuracy and better fitments to assure you do not get any binding or excessive wear.
- \* ShopSabre CNC uses High Grade 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 wire 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.
- \* Unlike many competitors that offer Laser calibrations by request, we do this as a part of EVERY build to assure our machines are as accurate as possible.
- \* ShopSabre CNC is fully upgradable. 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 come into your facility to help. You benefit from low operational cost and a big return on investment.
- \* If you do find yourself in need of help, ShopSabre CNC offers FREE LIFETIME TECH SUPPORT and assistance — because we are confident that our machines will last a lifetime.
- \* ShopSabre sales are not paid on commission so the only reason for them to recommend an option is truly to benefit your project and machine capabilities. ShopSabre has no reason to encourage you to spend more money than you need to up front to perform your job.
- \* 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 machines at work. With prices starting under \$18,000 you can't afford not to check us out!



# IS Series



## Machine Specs

Traversing Speed	2100IPM Standard
Cutting Speed	1000IPM Standard
Resolution	.0003-.0005
Repeatability	.001"

## Cutting Area

IS408 - 55" x 100" x 12"	
IS510 - 65" x 125" x 12"	
IS612 - 75" x 145" x 12"	
Construction:	
Table	Welded Precision Ground Steel Construction
Gantry	Welded Precision Ground Steel Construction
Linear Rails	25mm Precision HiWin Rails
Foot Print	IS408: 90" x 133" x 98"
	IS510: 96" x 155" x 98"
	IS612: 105" x 185" x 98"
Weight	3500-4500 lbs
Power Requirements	20amp / 220 Volt

## Popular Industries

- Proto-type Manufacturing
- Nested Based Manufacturing
- Sign Makers
- Engineering
- R&D/Job Shops
- Cabinet/door/instrument Manufacturing
- Medium Duty to High Production Shops

## PC Control and Software

- PC included
- WinCNC hardware with 37 pin HI definition cable, accepts .dxf or standard G-Code

## Product Description

This machine Simply put is an Industry Changer! This CNC System is everything you could want in a CNC today and so much more. It's not only American Built & Supported like all of ShopSabre products but it's built with the top of the line components and engineered to be the best and top of the line. This machine design and specs are very similar to what you would find in machines retailing for well over \$80,000. This machine provides you the most solid frame construction for the pricing and is well over built from its massive steel tube stands and frames all the way to the Massive oversized Tube Steel Gantry uprights and Tube Steel Gantry Bridge. This machine weighs in at almost twice the weight of its competition and comes 100% Welded so assembly is not required. This machine like many high end Mills and Routers is powered 100% by Ball Screw drive systems including a Dual Drive Ball Screw Y Axis powered by massive Name Brand 1Kilowatt A/C Closed Loop Brushless servo motors. Unlike the competitors Dual Drive Rack and Pinion this system will be highly dependable and won't lose accuracy the older it gets. With the IS Series you can't go wrong whether your project be Nested Based or one off this machine has the capabilities and precision to give you the edge over your competitors.

## Standard Options

Fully Assembled and Tested
Life-Time Support Via Phone, Email, and PC Connectivity
Vectric VCarve Pro Cad/Cam software
WINCNC Controller Hardware & Software
PC Control Tower with Windows software and 19" Monitor
Fully Configured Control Box with Operators Control Stand
Precision Linear Guide Rails and Bearings on X, Y, and Z Axis
Large Diameter Ball Screw Drives on X, Y, and Z axis
Dual Drive Y Axis with 2 High Powered 1 Kilowatt
A/C Brushless Closed Loop Servo Motors
Cable Guards and Carriers
CNC Grade Cables built in the USA
2D & 3D Capable
Tool Measure Switch
Accepts G-Code or DXF Files direct
Hi-Definition Control Cabling for Machine Communication

### Linear Guides

*This machine like all our equipment is built with Large 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. You get two 1 Kilowatt motors on the Y Axis alone giving you maximum speeds, increased cutting ability, and dependability that cannot be match. Mitsubishi Manufactured, A/C Digital Closed Loop Brushless motors increase ability and provide a maintenance free solution.*



### Control Stand

*Mobile yet industrial, this control stand houses all the electronics and gives your operator a clean and easy operating center.*



### 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!*



### Steel Frames

*These machines are 100% Welded Steel Frames, Large Over-Sized Tube Bases, and Powerful Steel Gantries. The machines are all precision ground to assure the machine is accurate and true which will provide you better cuts and more accurate products.*



### Ball Screw Drives

*This system is very similar to what you see from higher priced systems. We cut no corners and put over-sized Industrial Ball Screw drives on all axis. This includes dual drive Y Axis giving you more power, accuracy, and dependability.*



# ShopSABRE

## IS Router Series

### Configuration:

- *Welded steel structural frame, stressed relieved & precision machined*
- *Welded Steel Gantry with precision machining*
- *Tube Steel gantry uprights*
- *X Axis: Mitsubishi Servo Driven with Ball Screw Drive and Linear Guide Rails and Bearings*
- *Y Axis: Mitsubishi Dual Servo Driven with Dual Ball Screw Drives and Linear Guide Rails and Bearings*
- *Z Axis: Mitsubishi Servo Driven with Ball Screw Drive and Linear Guide Rails and Bearings*
- *All Motors are High Powered Industrial Mitsubishi A/C Brushless Digital Servo Motors with Amplifiers*
- *Machines are 100% American Built*
- *The Y Axis (Long Axis) is Dual Drive with 1Kilowatt Motors*

### Standard Features:

- *12" Gantry Clearance with 16" of Z Travel*
- *2100IPM Rapid Movement on X & Y Axis*
- *Industrial Ball Screw Drives on All Axis*
- *Precision Linear Guide Rails and Bearings*
- *Machine Mounted High End Wiring*
- *Auto Tool Measuring Switch*
- *X,Y, and Z limit Switches with Homing Position*
- *Dust Skirt*
- *Emergency Stop Switch*
- *Vetric VCarve Pro CAD/CAM Software*
- *Nesting Capabilities*
- *Industrial WINCNC Controller with at Machine CAD Capabilities, 320GB of File Storage, Ethernet & USB connections with online, phone, and email support*

### Popular Options & Features (Other Options may be available):

- *HSD Spindles including HSK Spindle Clamp System*
- *Auto Tool Changers Ranging from 3-10 Positions (Custom Available)*
- *Vertical Drill Spindles*
- *Table Reference Pins (Pop-Up Pins)*
- *Rotary Lathe System*
- *Vacuum Hold Down Systems with 4 Zone Grid and High Flow Pumps (Becker & 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 Many More.*

A business born of necessity,  
hard work, and inspiration

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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 more quickly, 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, two brothers, four sons, two cousins 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 1,000 machines around the world in over 19 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.

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Central Standard Time

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