

The ShopBot Desktop MAX

The power and precision of the ShopBot Desktop – in a larger format.

With a tool bed measuring 36" x 24", the Desktop MAX is great for an endless variety of cutting, drilling, and carving operations on a variety of materials including: wood, MDF, plastics, foams, vinyl, and aluminum. It's great for rapid prototyping, and taking your projects all the way to finished products

Choose from the versatile easy-to-remove aluminum tool deck, enabling a variety of end-machining processes or the Universal Vacuum hold down deck kit for quick hold down of larger sheet goods.



SPECIFICATIONS

Desktop MAX with Industrial Spindle [HSD 1hp spindle]

- XYZ Movement: 38" x 25" x 5.5" (965.2mm x 635mm x 139.7mm)
- Cutting Volume: 36" x 24" x 3.5" (914.4mm x 609.6mm x 88.9mm) [e.g. with 2" long cutter]
- Footprint with Spindle: 48" x 39" x 30"(h) [Spindle VFD fits to right side of gantry]
- Weights:
 - 127 lbs [no deck, no cutter]
 - 171 lbs [total weight with aluminum deck and spindle]
 - 216 lbs [total weight with universal vacuum hold down deck kit and spindle]
- Crate dimensions: 44.5" x 55.75" x 37.5", weight: 217 lbs, loading dock, forklift or lift gate service is recommended
- Frame: Machined aluminum members that are bolted together
- Linear Bearings: Fully supported precision linear guides and blocks on each axis [THK]
- 2 Deck Options: Aluminum "T" slot extrusion, with MDF spoil board [optional, removable] OR Universal Vacuum Hold Down Deck with ShopBot Vacuube™ kit, with plywood plenum and MDF spoil board
- Drive System: 4 Motors with integral, teflon-coated precision lead screw with anti-backlash technology on each axis (2X, 1Y, 1Z)
- Integral Guard and Dustskirt
- Cut Speed: 4 inches per second (100mm/sec)
- Jogging Speed: 6 inches per second (150mm/sec)
- Resolution: 0.00025" (.00635mm)
- Electrical System Requirements: 120V @ 15Amps
- ShopBot Control System software to run your CNC
- Each new ShopBot comes bundled with two powerful software programs to create CNC projects
- Includes simple, quick start set-up guide

Model	Nominal Cutting Area*	Total Tool Movement Area*	Footprint**
#18001 Desktop MAX 36-24 with Aluminum Deck	36" x 24" x 3.5" .91m x .61m x .089m	38" x 25" x 5.5" .97m x .64m x .14m	Spindle 48" x 39" x 30" 1.22m x .99m x .76m
#18005 Desktop MAX 36-24 with Universal Vacuum Hold Down Deck Kit	36" x 24" x 3.5" .91m x .61m x .089m	38" x 25" x 5.5" .97m x .64m x .14m	Spindle 48" x 39" x 30" 1.22m x .99m x .76m

*Nominal Cutting area and Total Movement Area refer to the areas that can be covered using a single z-axis.

**Spindle VFD fits to the right side of the gantry.

Desktop MAX with Aluminum Deck and Industrial Spindle

The Desktop MAX with Aluminum Deck (general purpose deck) comes standard with an attached MDF spoil board and is considered our most versatile deck option for a wide variety of machining options. Because the Desktop MAX is completely

open underneath and the aluminum deck can be partially or completely removed, you can add widely available dovetailing or end-milling attachments. See the *Hold Down at a Glance* chart to the right for more information on hold down.



Shown here: Aluminum "T" Slot Deck partially removed for end-milling attachment

Desktop MAX with Universal Vacuum Hold Down Deck and Industrial Spindle

The Desktop MAX with Universal Vacuum Hold Down Deck kit includes a plywood plenum, MDF spoil board, and the ShopBot Vacuube™ for quick hold down of sheet goods. This deck option is not optimal for cutting small parts. There is additional environmental noise due to the vacuum motor and hearing protection is highly recommended (82db). See the *Hold Down at a Glance* chart to the right for more information on hold down.



Desktop MAX Mini Enclosure

The Desktop MAX Mini Enclosure allows you to keep hands safely out of your Desktop cutting area, and help keep chips and dust off your floor. Easily attaches to ShopBot Desktop MAX (either deck option) with included hardware. Enclosure is made from Duraplex - Impact resistant acrylic. Color shown in product rendering is for display purposes only, actual product is clear.



For other Desktop MAX accessories, see the last page or visit our website.

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Hold Down at a Glance

Use this chart for reference on hold down options for our Desktop MAX model tools that are best suited for your projects.

	Aluminum "T" Slot Deck (general purpose deck)	Universal Vacuum Hold Down Deck Kit	Gasketed Vacuum Hold Down System (mounts to Aluminum T-Slot Deck)
			
Flexibility	Most Flexible – Allows for multiple hold down options.	Somewhat Flexible – Allows for some other hold down options to be used in conjunction with vacuum hold down.	Specific Usage – Requires the use of special fixtures for any part to be cut.
Material Setup Speed	Slowest of Available Options – Material has to be manually attached each time. Production volume would remain low unless a specialized clamping fixture is fitted.	Pretty Fast – For the vast majority of items, a blank would be placed on the bed and then the vacuum would be turned on. Production volume can be relatively high and can have a decent variety of parts with one setup. (Various signs, furniture parts, anything with medium-to-large sized parts cut out of flat stock would require no special setup.)	Fastest – With the use of specialized fixtures, a blank would be placed on the bed and then the vacuum would be turned on. Production volume can be EXTREMELY high with this method.
Type of Hold Down	Screws, nylon nails, tabs in the toolpath, toggle clamps mounted in the t-slots, wedge clamps, and various other types of clamps.	Vacuum hold down, which can be supplemented with screws, tabs in toolpaths, and nylon nails for smaller parts that might break free.	Vacuum hold down. The addition of threaded holes to bolt down blanks for specific setups can be used if needed.
Type/Size of Parts	Small parts, large parts, and anything in-between, as long as there is an appropriate hold down method being used.	Optimal for large parts. Without the additional hold down from screws, nylon nails, or tabs, there is a size limitation of about 10 square inches for the smallest part. Anything smaller than that means that there is a risk of pieces breaking free of the vacuum seal. Ideal for larger items like signs or anything cut from flat stock.	Almost any size – as long as a fixture is used for it. Parts smaller than 2-3 square inches might require the addition of tabs or screws because parts of this size may break the vacuum seal.
Recommended Materials	Any material the machine is capable of cutting. (Woods, plastics, composites, non-ferrous metals.)	Recommended for cutting flat stock (sheets of wood, plastic, composites) ONLY. Not recommended for metal cutting without supplemental screws.	Any material the machine is capable of cutting. (Woods, plastics, composites, non-ferrous metals.)
Markets	Hobbyists, makers, maker pros, schools, woodworking, instrument making, furniture making, and prototyping. Can be used in production environments, but only with specialized clamping fixtures.	Anyone who uses mostly flat stock. Hobbyists, makers, maker pros, schools, woodworking, furniture making, or production environments. Particularly useful for signmakers.	Production environments with medium-to-large size runs of identical parts. Also appropriate for use when cutting identical-size blanks or when not cutting all the way through, i.e. Engraving/VCarving a variety of things on a standard set of blanks.
Miscellaneous	No additional environmental noise with this deck option.	A fairly significant amount of additional environmental noise is produced due to the vacuum motor. Hearing protection is HIGHLY recommended.	A small amount of additional environmental noise generated due to the vacuum pump. It is typically not much louder than the sound a spindle cutting makes.

SOFTWARE

No computer degree is needed to run a ShopBot! **Each new ShopBot includes** design software packages selected and bundled for project designing and tool-pathing. If you are primarily working in sheet goods, want to do v-carvings, and/or new to CNC? You may want to start with **VCarvePro ShopBot Edition**. If you are primarily working in solids or blocks, already experienced with CAD, and/or have an engineering background? You may want to start with **Fusion 360**. These two powerful software packages include CAD/CAM to take your ideas to project designs to tool-pathing. The ShopBot Control System software that runs your CNC is also included.

We also offer software packages for use in signmaking, cabinet making and more. **Aspire by Vectric** is one of our most popular—great for designing and machining carved decorative panels and doors, custom millwork, moldings, signage, dimensional logos, jewelry, custom gifts and much more.

ShopBot Design Software Suite is compatible with many software programs, including: • AutoCAD • Rhino 3D • SketchUp • ArtCAM • Vector Art 3D • Cabinet Vision • EnRoute • KCDw • MasterCAM • MillWizard • OneCNC • Shape 3D • Vector CAD CAM • Visualmill • CabinetParts Pro • DeskProto • eCabinet System

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

YOUR BUSINESS NETWORK

Digital fabrication and online communication — together they are playing an important role in reshaping manufacturing in the U.S. and around the world. The *distributed manufacturing* model, which brings on-demand production and the end user closer together, is also growing fast. ShopBot Tools is a leader in supporting these developments.

Our free online community, 100kGarages.com, can connect you with business opportunities around the country and the globe.

100kGarages.com
connect. collaborate. create.

ACCESSORIES

- The **Plotter Pen Bit** allows you to draw like a plotter. Draw signatures, logos or other images. Print large parts to scale before cutting expensive material.
- The **Drag Knife Bit** enables you to cut adhesive-backed sign vinyl, paper, cardboard and thin plastics (up to 1/32"). Create vehicle graphics, professional-quality signs, banners, magnets or parts from thin plastics.
- The **Diamond Drag Engraving Bit** allows you to engrave plastic, metal, glass and stone. Engrave signatures, logos or artwork. Create custom brass name tags for trophies/plaques or permanently engrave serial numbers and ID.
- You can also add **ShopBot's 3D Digitizing Probe** to make a copy of an object in 3D. Duplicate an existing 3D shape or a piece of decorative trim or molding. Very useful for luthiers, furniture makers and restoration work.
- The **Desktop Rotary Indexing Head** is similar to a lathe in that it allows you to horizontally rotate a part being cut or machined, except that it allows fully indexed control of the rotation. This way, you can carve anything you want in the round (resolution = 0.03 degrees)
- The **Vacuum Pump .3hp Kit** is a high pressure, low volume system that is ideal for repetitive projects made of non-porous materials. A closed gasketed setup without leaks is essential for best hold-down performance.

Visit our website or call 888-680-4466
to order your Shopbot Desktop MAX

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