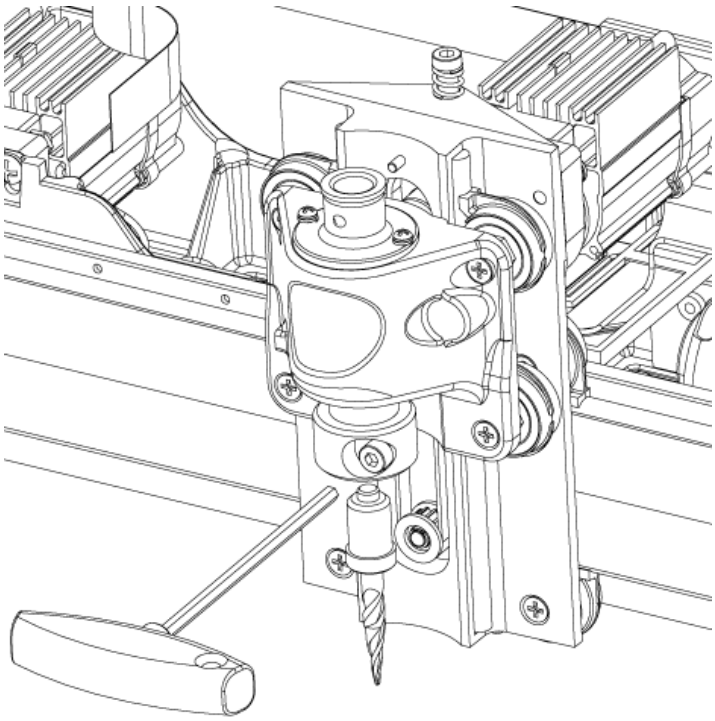
CarveWright Spindle Systems Manual

Model A2132

A Spindle System By CARVEWRIGHT™



Manual Revision 2.18

This manual is revised regularly. Please visit us at www.carvewright.com to download the latest version of this manual.

CAUTION: Read and follow all Safety Rules and Operating Instructions before using this product.

Please keep the box and packaging foam from the CarveWright machine. This box will be used for shipping in the event that the unit needs servicing.

Owner Assistance Line: 713-473-6572
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www.carvewright.com

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CarveWright Spindle Systems

The CarveWright™ System, with its computer-controlled 3-D carving and general woodworking capabilities, is a revolutionary breakthrough in bench-top power tool design. Central to the performance and versatility of the CarveWright machine is the bit changing system. There are two different spindle systems available for the CarveWright; the now discontinued Quick Release Chuck (or Quick Change) and the CarveTight™ Spindle System. This manual covers only the operation of the CarveTight™ Spindle System.

Pay close attention to the configuration of your machine before reading as the systems are very different.

CarveTight Spindle System

The CarveTight spindle system allows the user to switch between any CarveWright supplied 1/4" or 1/2" shank bit quickly and easily. The system consists of a 1/2" straight bore spindle shaft and an off-center friction paw that grabs the bit. The bits are inserted into the shaft and the paw is tightened with a 4mm Allen wrench.

Machines purchased with the CarveTight system come with a tapered 1/16” carbide carving bit and a straight 1/8” cutting bit, both pressed into a 1/2" OD straight bushing that can be inserted directly into the CarveTight spindle. All solid carbide bits will require these bushing which are pressed onto them at the factory.

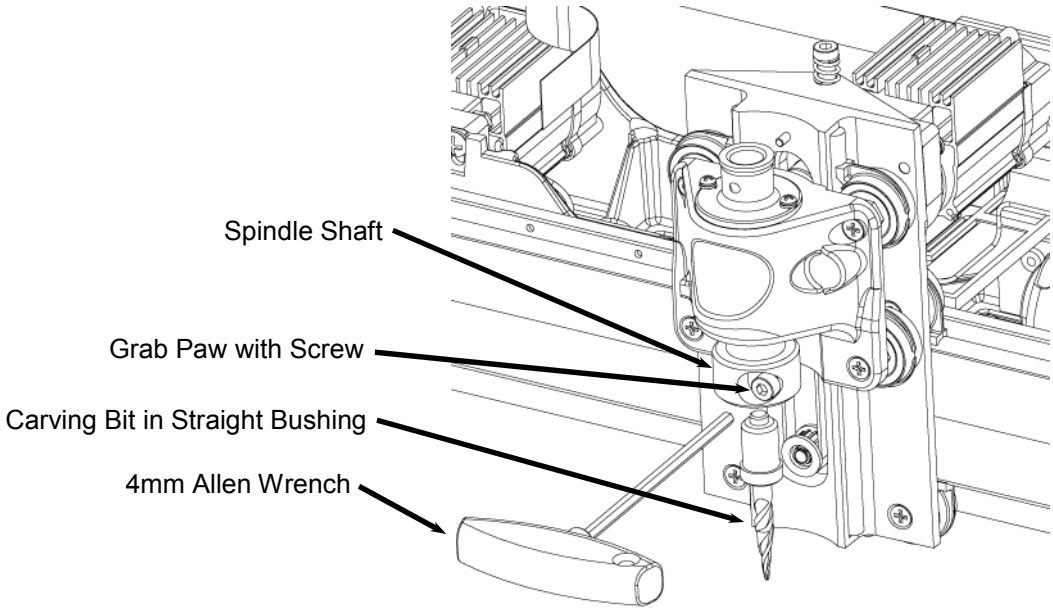

FIGURE 1: CARVETIGHT SPINDLE SYSTEM

As mentioned above, the CarveTight spindle accommodates both 1/4" and 1/2" shank bits. Steel shank decorative bits with a 1/2” shank diameter can be inserted directly into the bore of the spindle. Bits with a 1/4" steel shank will first need to be inserted into a split collet before being inserted into the spindle bore.

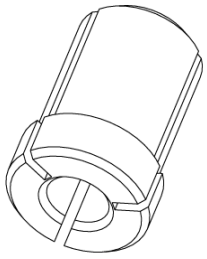

FIGURE 2: CARVETIGHT 1/4" SPLIT COLLET

Any bit that does not come with a pressed on bushing will require a rubber stop collar. These stop collars provide a roughly constant depth reference from use-to-use of the bit. When using a bit with a stop collar, make sure to insert it until the stop collar touches the bottom of the spindle (in the case if the 1/2" shank bit) or the bottom of the split collet (in the case if the 1/4" shank bit).

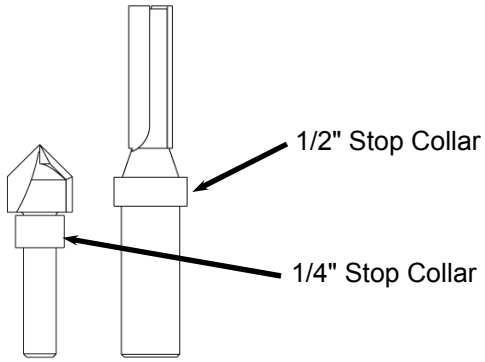

FIGURE 3: CARVETIGHT 1/4" SPLIT COLLET

WARNING: Never use the split collet with a solid carbide bit. The collet is not able to grab the hard carbide sufficiently to keep it from spinning in the collet or from pulling out of the collet. Using a collet with a carbide bit can lead to project, bit and machine damage that will not be covered under warranty.

CarveWright Approved Bits

The CarveWright System has many bits available to choose from. The entire line of approved CarveWright bits is available through the CarveWright web site.

WARNING: Piloted bits can NOT be used in the machine machine even if the pilot bearings have been removed..

WARNING: Use only CarveWright branded bits with the machine. The machine is calibrated to work with bits within certain specifications, and if these specifications are not met the results can be undesirable. It is possible to overstress the machine with nonstandard bits, which could be both damaging to the machine and hazardous.

WARNING: Never cut deeper than the length of the sharpened cutting surface of your bit. The maximum cut depths are set within the software to prevent users from exceeding these bit limits. Do not try to “trick” the machine by placing an incorrect bit into the spindle as this may result in damage to the bit and/or machine. For example, when doing cutouts make sure that you load the specified bit and always keep the project “Under Rollers”. Loading a 1/16” cutting bit into the spindle when it is expecting a 1/8” bit will likely result in a broken bit.

CarveWright Approved and Branded Bits

BCR03125P **1/32" Carving Bit**

For fine detail Carvings
Tapered, three flute, ¼ inch shaft, solid carbide, 1/32 inch ballnose, carving bit. This bit is used for fine detail carving/raster operations.

BCR062P **1/16" Carving Bit**

The Default Carving Bit
Tapered, three flute, ¼ inch shaft, solid carbide, 1/16 inch ballnose, carving bit. This is the DEFAULT bit for carving/raster operations.

BCT062P **1/16" Cutting Bit**

For shallow intricate cuts
Straight, three flute, ¼ inch shaft, solid carbide, 1/16 inch endmill, cutting bit. This bit is used for fine detail and intricate cutout operations.

BCR125P **1/8" Cutting Bit**

For cuts in soft or medium hard materials
Straight, three flute, ¼ inch shaft, solid carbide, 1/8 inch endmill, cutting bit. This bit is used for normal cutout operations in soft to moderately hard materials.

BCT125P **1/8" Carving Bit**

For Carving Foam and Soft Materials
Straight, three flute, ¼ inch shaft, solid carbide, 1/8 inch ballnose, carving bit. This bit allows for carvings in ONLY soft materials such as basswood or foam.

BCT187P **3/16" Cutting Bit**

For cuts in hard or dense materials
Straight, three flute, ¼ inch shaft, solid carbide, 1/32 inch endmill, cutting bit. This bit is used for cutout operations in hard and dense materials.

BCR187P **3/16" Carving Bit**

For Faster Carving of Large Projects
Straight, three flute, ¼ inch shaft, solid carbide, 3/16 inch ballnose, carving bit. This bit allows for faster carving for larger projects. Since this bit has no taper, it leaves straight edges.

LBCR062P **1/16" Long Carving Bit**

For fine detail Deep Carvings
Tapered, three flute, ¼ inch shaft, solid carbide, 1/16 inch ballnose, long carving bit. This bit is used for fine detail deep (up to 2.125" deep) carving/raster operations.

LBCR125P **1/8" Long Carving Bit**

For Deep Carving In Hard Materials
Tapered, three flute, ¼ inch shaft, solid carbide, 1/8 inch ballnose, long carving bit. This bit is used for fine detail deep (up to 2.125" deep) carving/raster operations in harder materials.

P005-00053 **1/4" Split Collet**

Used with steel shank 1/4" bits in conjunction with the stop collars to hold the bit in place. One split collet can be shared among your 1/4" steel shank bits.

BBN25 **1/4" Ball Nose**

Two flute, 1/4 inch steel shank, carbide tipped, with 1/4 inch diameter ball end. Ball nose bits are extremely versatile bits that can be used for decorative line routing, routing profiles, edge work and engraving.

BBN50 **1/2" Ball Nose**

Two flute, 1/4 inch steel shank, carbide tipped, with 1/4 inch diameter ball end. Ball nose bits are extremely versatile bits that can be used for decorative line routing, routing profiles, edge work and engraving.

BVG60 **60º V Bit**

Two flute, 1/4 inch steel shank, carbide tipped, 60º V bit, with Sharp point. They are used for decorative line routing, routing profiles, Centerline Text and chip style Vector Group carvings.

BVG90 **90º V Bit**

Two flute, 1/4 inch steel shank, carbide tipped, 90º V bit, with Sharp point. They are used for decorative line routing, routing profiles, Centerline Text and chip style Vector Group carvings.

BST375 **3/8" Straight Bit**

Two flute, 1/2 inch steel shank, carbide tipped, straight bit, with 3/8 inch diameter. These bits are used for jointing, pocket cutting, and edge work.

BRO125 **1/8" Roman Ogee**

Two cutter, 1/4 inch steel shank, carbide tipped, Roman Ogee bit, with 1/8 inch radius. These bits are used for decorative panel and edge work.

BRO187 **3/16" Roman Ogee**

Two flute, 1/2 inch steel shank, carbide tipped, Roman Ogee bit, with 3/16 inch radius. These bits are used for decorative panel and edge work.

BCO375 **3/8" Classic Ogee**

Two flute, 1/4 inch steel shank, carbide tipped, Classical Ogee bit, with 3/8 inch radius. These bits are used for decorative panel and edge work.

BCO50 **1/2" Classic Ogee**

Two flute, 1/2 inch steel shank, carbide tipped, Classical Ogee bit, with 1/2 inch radius. These bits are used for decorative panel and edge work.

BRD25 **1/4" Round Over**

Two flute, 1/2 inch steel shank, carbide tipped, round over bit, with 1/4 inch radius. These bits are used for bead, veining, and edge work.

BRD50 **1/2" Round Over**

Two flute, 1/2 inch steel shank, carbide tipped, round over bit, with 1/2 inch radius. These bits are used for bead, veining, and edge work.

General Tips and Helpful Reminders

USE ONLY QUALITY TOOLS. Be sure cutters are sharp and not damaged. Use only approved cutting bits.

WHEN CARVING IN PLASTIC, there are several issues to keep in mind.

Carving plastics can be very hard on the machine if the proper material is not used of if the chips are not regularly removed from the machine.

- Only Polycarbonate or Cast Acrylic plastics are approved for use in this machine. Most other common plastics melt during cutting and will damage the machine if used.
- The maximum cut depth for plastics is 0.1 inches per pass.
- If possible remove any thin protective plastic from the surface to avoid wrapping it around the spinning bit.

WARNING: CUT ONLY WOOD, PLASTIC, OR WOOD-LIKE MATERIALS. Do not cut metal, glass, stone, tile or any other hard materials.

WARNING: WHENEVER USING THE 1/8" CUTTING BIT, it is strongly recommended that the *Stay Under Rollers* option be set to Yes. It is likely that the 1/8" cutting bit will be broken during operations near either end of the workpiece or undesirable stair stepping can occur.

For more information please visit
www.carvewright.com

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