

# KNOW YOUR BITS

A GUIDE TO CHOOSING THE BEST CABINETY TOOLS FOR THE JOB





**KNOWING THESE POPULAR CABINET CUTTERS IS PART OF MAKING YOU A CNC PRO. USE THIS AS REFERENCE WHEN PLANNING YOUR CNC CABINET TOOLING.**

**CLICK THE BIT FOR MORE INFO.**

## CABINET CNC ROUTER BITS



Compression



Down Cut



Up Cut



Mortise  
Compression



Fly Cutter

### COMPRESSION CUT

Compression bits (up-down bits) offer the benefits of both up and down cut bits. The bit is a standard down cut, but its tip is an up cutter; therefore, when cutting materials like melamine, MDF, laminates and plywood, you will end up with a great edge on both sides of your material. This is a “go to” bit in the CNC cabinet industry. To get the great finish you expect from compression cutters, try changing the cut direction for some materials using compression bits. It’s also important to **NOT use this for dados or slots**, because its up-cutting tip leaves a frayed top surface.

**Not recommended for drilling.**



### DOWN CUT

Down-cutting bits press the chips and the material back into the cut. The properties of the down-cut design gives the top of material a great finish and the bottom a regular finish. These bits are **preferable for cutting dados and slots** in your cabinets or drawer boxes. The benefits of down-cut bits are affordability and that they do a great job at pocket-cutting holes that will not go all the way through.

**Not recommended for drilling.**





## UP CUT

Up-cutting bits pull chips (and the material) up. They are preferable if you want to clear chips from your cuts to prevent overheating the bits and making cuts through the material. The properties of the up-cut design gives the top of the material a good finish and the bottom a great finish. For melamine or finished cuts needing a great finish on both sides, Up Cut bits are not recommended. The advantage of up-cuts bits are affordability and they help remove a lot of material through your dust collection during cutting. **Not recommended for drilling.**



## MORTISE-COMPRESSION CUT

Mortise compression bits (up-down bits) offer the benefits of compression and down cutting for dados. The bit is a standard down cut, but its 3/16" tip is engineered to be less than the typical dado and slot cutting depths; therefore, when cutting materials like melamine, MDF, laminates and plywood, you will end up with a great edge on both sides of your material and a great top finish for dados or slotting. This is quickly becoming a "go to" bit in the CNC cabinet industry, making its higher price point justifiable with its multi-purpose capabilities. **Not recommended for drilling.**



## FLY-CUT

Fly-cut bits (also commonly known as spoil board cutters, planner cutting, or pocket cutters) all perform the same purpose of removing a large radius of material in a short amount of time. As a "go to" cutter for CNC cabinet cutting, it is used for planning the spoil board surface to ensure flatness and vacuum hold down pressure. Fly-cutting bits are also used for pocketing MDF doors, drawer fronts and custom wood creations. Note while selecting the best size for your CNC process, a smaller 1.5" or 2" cutter might give you multiple capabilities, and a larger radius of 2.5" or 3" might limit its use to just spoil board surfacing.





## CABINET CNC BORING & DRILLS



### BRAD POINT BORING

Brad point boring bits are another “go to” for the CNC cabinet production shop. Designed to bore and not go through the material, brad point borings are used for shelf holes and hardware alignment installation using 5mm Pozi screws with drawer slides. The black coated version is for the right direction and used alone in CNC spindles. The orange coated bit is for the left direction. The left direction is needed if you are using a multi directional drill block. If using in the spindle use a 10mm boring adapter.

### V THROUGH BORING

V Through boring bits are designed to go through your material leaving a great finish on both sides of the material. It's commonly used for center partitions and other specific purposes during your production. Standard brad points do a great job on top of the material and a fair job at the bottom. Use a 10mm boring adapter if using it in the spindle.



## BORING LARGE

Larger brad point boring bits used for boring hardware holes (not all the way through) including hinge cups and cabinet hardware can be done fast and efficient compared to pocketing using a down cutter. In addition, boring bits can be used on a multi drill block--freeing up valuable space on your ATC tool bar. It is recommended that any boring bit over 20mm be used on the spindle and not a drill block. Use a 10mm boring adapter if using on the spindle.

## CNC DRILLING

CNC drilling for the cabinet maker can be an assembly super star. Using a 1/8" drill hole (*aka* assembly hole), for example, tells the assembler to install a fastening screw at each drill location. This type of CNC automation is done in your cabinet software and takes a lot of the thinking and measuring out of the assembly process. To avoid flex during consistent drilling, use a bit with a stronger shank base and a drilling depth close to your expected thickest material.

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