

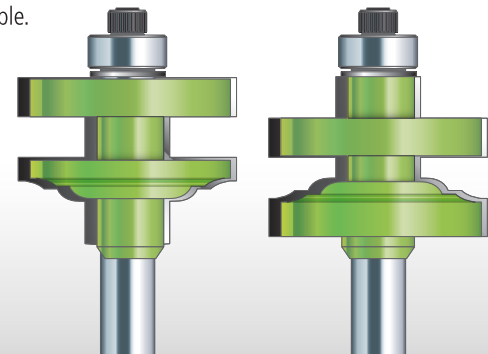
INTRODUCTION TO Router Bits

JOINERY ROUTER BITS

From the editors of
CANADIAN
Woodworking
& HOME IMPROVEMENT

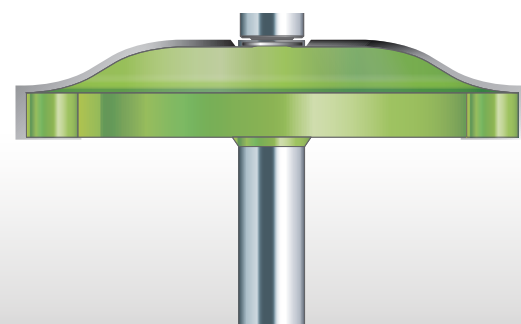
RAIL & STILE

Also known as frame and panel bits or cope and stick bits, they're available in many profiles. These bits machine the male and female portion of the joints that connect door and panel rail and stiles. Generally for material between 3/4" and 1" thick. Must be used in a router table.



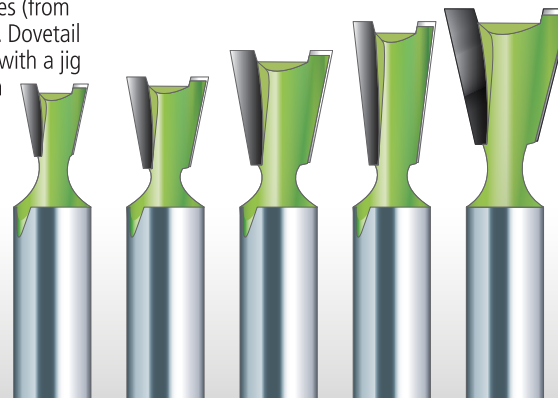
PANEL RAISING

Used to produce a panel with an edge thin enough to be captured by the profile of a rail and stile of a panel or door. Available in many profiles. Best used in a router table.



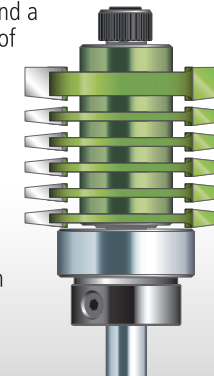
DOVETAIL

Available in a wide range of widths (from about 1/4" to 1"), lengths and angles (from about 7° to 14°). Dovetail bits can be used with a jig to create through and half blind dovetail joints, as well as with a straight edge / router table to create sliding dovetail joints.



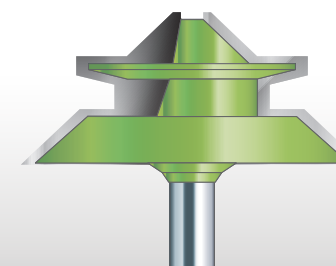
FINGER JOINT

A finger joint typically joins wood end-to-end with a strong joint. The fingers of the resulting joint come into contact with one another and a large amount of surface area is created. It's often used on end grain, though it can be used on side grain too. These bits are usually used in a router table.



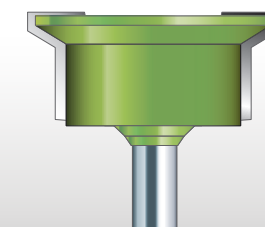
45° LOCK MITRE

Used with a router table and fence, this bit machines a 45 degree mitre joint with a small spline and groove towards the center of the joint. The spline fits into the groove, locates the joint precisely and creates an even stronger joint between the two workpieces.



DRAWER LOCK

Essentially a rabbet joint for joining drawer corners, but with the addition of a small groove and tenon that accurately mate, ensuring the joint is not only seated properly, but is stronger than a regular rabbet joint. This bit should be used in a router table equipped with a fence.



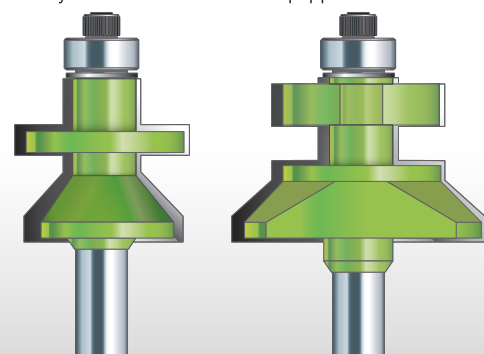
- Many common woodworking joints can be created with a router
- Machining joints with a router is generally best when the amount of material removed by the router is minimal; multiple passes sometimes helps, but in some instances this is impossible
- Best to use 1/2" diameter shanks for routing joints, as the bit is less likely to break
- A router table is sometimes necessary to create some of these joints
- There are times when jigs are needed in order to properly create some of these joints

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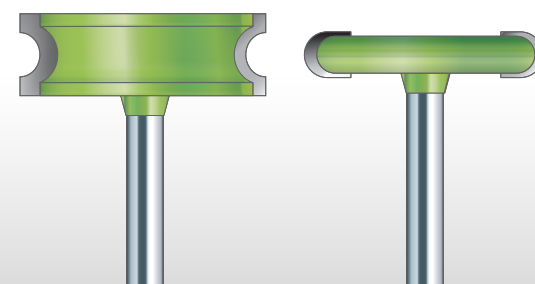
V-JOINT TONGUE & GROOVE

Often used to produce a slightly decorative edge on, as well as securely join, lengths of wood for back panels or solid wood flooring. A 45 degree chamfer is left between adjoining boards. Though they often have a bearing, these bits are generally used in a router table equipped with a fence.



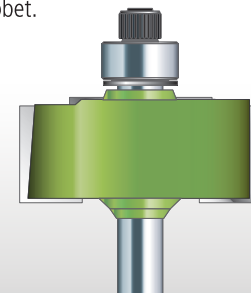
FLUTE AND BEAD

Also called 'canoe bits', these bits machine a gentle radius on the edges of workpieces that allows mating parts to be edge jointed at a bit of an angle, similar to the long strips that make up the exterior of a traditional cedar strip canoe. These bits should never be used freehand.



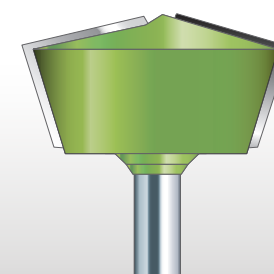
RABBET

A simple bit that can be used freehand or in a router table. A bearing traces the profile of the workpiece, while the cutters machine a rabbet in the upper edge of the workpiece. Different sized bearings adjust the width of the resulting rabbet.



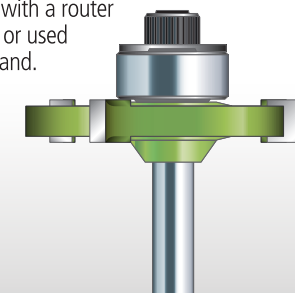
BIRD'S MOUTH

Typically used to create joinery for straight or tapered columns, these bits are great for creating joinery with columns of 6, 8, 12 or 16 sides. The joints make column assembly easier and more accurate. These bits should always be used with a router table and fence.



3-WING SLOTTING CUTTERS

Used to machine a groove in mating pieces to assist with alignment and strength. Once the grooves have been cut a spline needs to be cut and inserted into the grooves. The spline and grooves can be glued to increase the strength of the joint. These bits can be used with a router table or used freehand.



STRAIGHT

Not a dedicated joinery bit, though straight bits can be used to create many joints including rabbets, dadoes, grooves and mortises. Straight bits are available in a wide range of diameters and lengths, and can be used freehand or in a router table.

