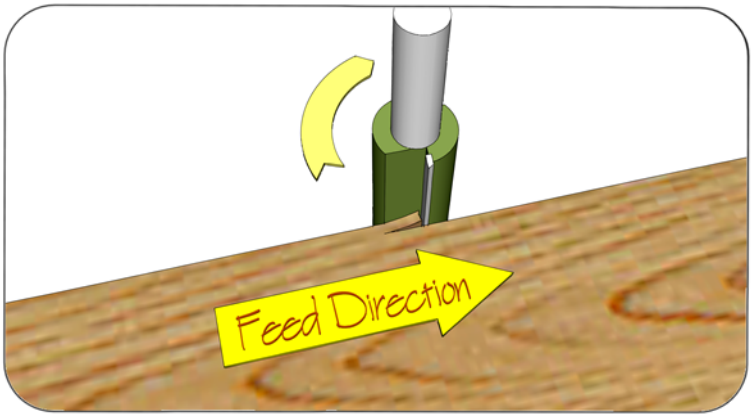
Climb Cutting with The Router Boss

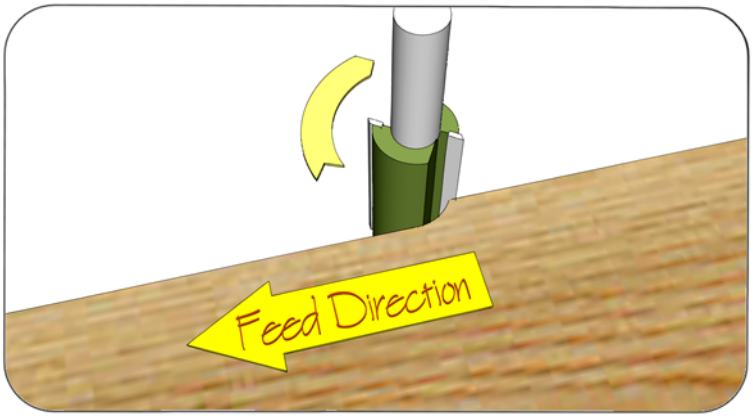
The traditional wisdom regarding feed direction when using a router is to feed the work into the cutter opposite the direction of rotation. From a safety point of view, this is a good idea when hand holding the router or when using a router table because the router won't grab the work and pull it out of your hands which might pull your hands into the cutter. The downside to cutting this direction is that the quality of the surface is generally not as good as it is if the feed direction is reversed. This is because the cutting edge tends to lift and tear out the fibers ahead of the cut.



Normal feed direction with router right side up. If you are hand feeding work with the Router Boss, you should feed in this direction to prevent the work from being pulled from your hands and potentially pulling your hands into the cutter.

(note: in this illustration the work is moving while the router is stationary)

Feeding the work in the same direction as the cutter spins is known as climb cutting. Cutting this way yields a better surface finish because it is compressing the fibers and shearing across them instead of lifting them. Although this isn't a safe procedure when the work is hand held, it is a safe operation on the Router Boss when the work is sucured to the sliding bar with any of the various mounting options. With both the work and the router held securely, there is no need to get your hands close to the cutter. The feed mechanism controls the movement of the work past the cutter.



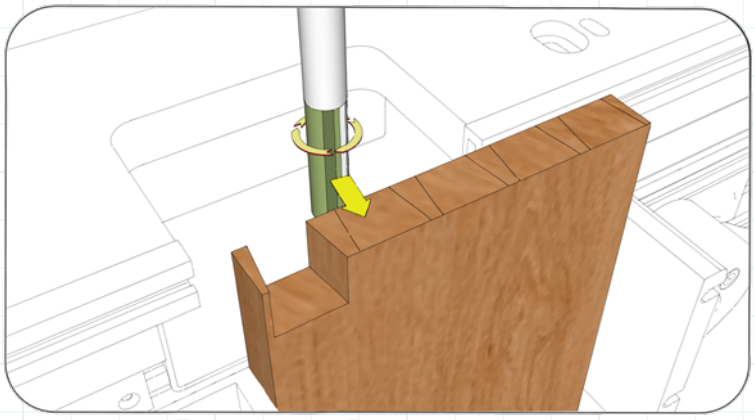
Climb cutting with the router right side up as on the Router Boss. Do this only if the work is secured to the sliding bar.

(note: in this illustration the work is moving while the router is stationary)

Dovetail Pins

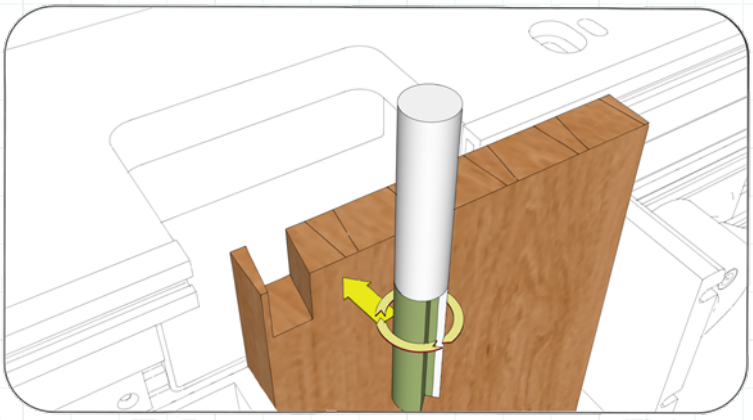
Use climb cutting when cutting pins for dovetail joints. Pull the router out and to the left when cutting the right face of the pins. This will result in a better surface finish on the side of the pin.

Cutting this way will also tend to push the router base plate against the guiding wings on the front left and right rear sides.



(note: in this illustration the router is moving while the work is stationary)

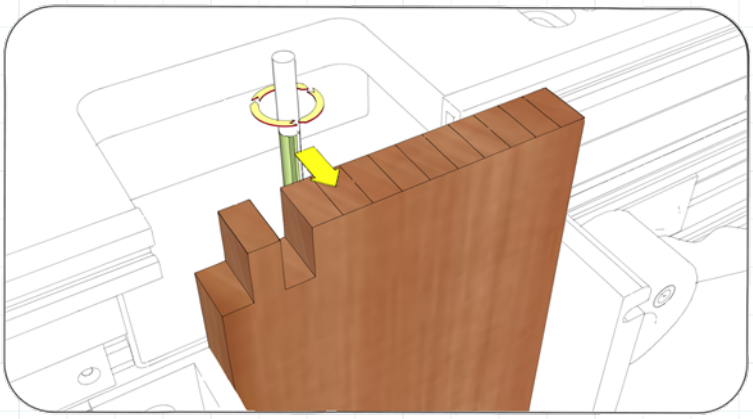
Cut the left side of the pins by pushing the router away from you from your right to left. The router base plate will again be pulled toward the guiding wings at the front right and left rear.



(note: in this illustration the router is moving while the work is stationary)

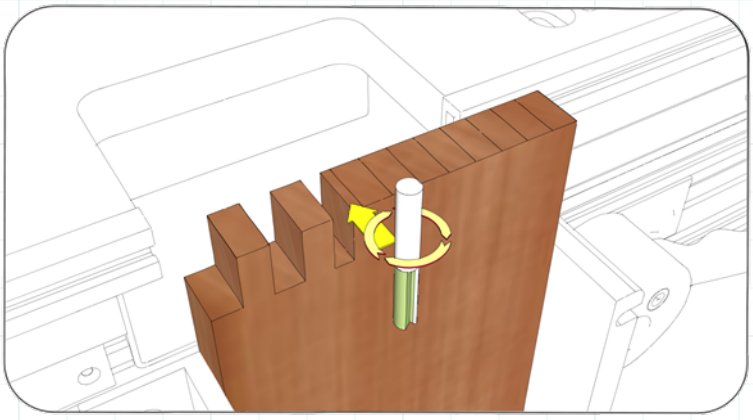
Box Joints

Use climb cutting when cutting fingers for box joints. Cut the right side of the finger on the pull stroke to get a better surface finish.



(note: in this illustration the router is moving while the work is stationary)

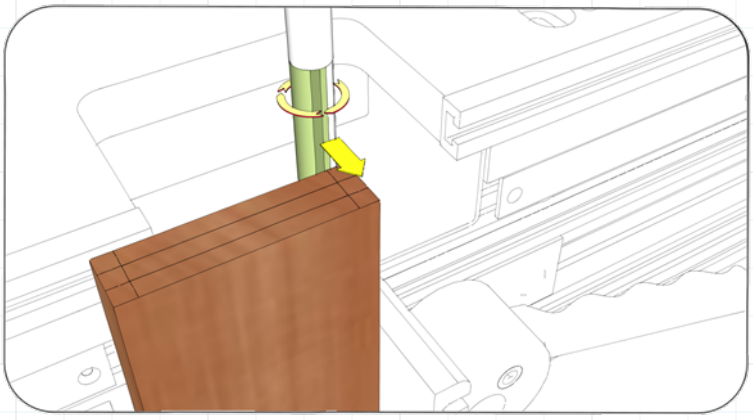
Cut the left side of the fingers by pushing the router away from you. If the fingers are the same width as the cutter, push the router back through the gap you just cut before advancing the work to the next cutting position. The climb cut will clean up the face.



(note: in this illustration the router is moving while the work is stationary)

Tenons

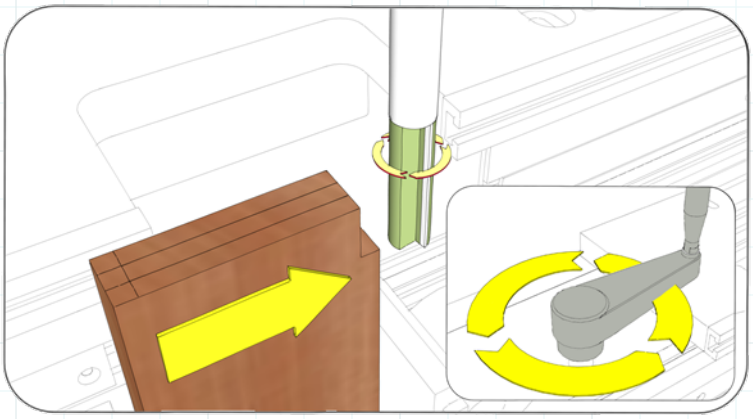
Use climb cutting when cutting tenons. Cut the right side of the tenon, as you are viewing it mounted on the Router Boss by pulling the router toward you.



(note: in this illustration the router is moving while the work is stationary)

With the router locked down so it can't move, crank the work to the right to cut the near face of the tenon.

Cut the left side of the tenon by pushing the router away from you and the far face by cranking the work back to the left.



(note: in this illustration the work is moving while the router is stationary)