

Ironflower Tips-Carbide Grind Guide

Plunge cuts are a pain. You want to have the left and right cut exactly aligned with each other and the probability of screwing up goes up with every belt change. You could buy an expensive belt grinder to try to control belt wobble but the quality of belts, the use of the belts, and the tension on the belts all can contribute to belt wobble. There is a solution - and a fairly cheap one.



Get two 1.65" long pieces of 1/2" x 1/2" x 1/8" angle iron (a few bucks at a big box store gets you 36"). Buy a set of carbide milling inserts (10 in a package) from any machinist supply store

(<http://www.useenco.com>
example : #328-5588 @ ~\$10)
and a couple of 6x32 bolts
(#510-0252 gets you 100 for ~\$6). Clamp the angle iron pieces together (as shown) and drill & tap two holes for 6x32 bolts.

Method One (do NOT do this)

Position the inserts on the front faces of the angle and secure with a bolt. The basic components are shown here.



Use a spring clamp to hold some scrap steel and a piece of the angle together such that gravity will hold the inserts in the correct position (side-by-side, a long side to the scrap) and dribble a bit of super glue on the edges of the insert to temporarily hold the inserts in place.



Go to the drill press and first use a #26 drill (which just fits in the hole in the insert) to make a "pit". Then switch to a #32 drill to make a hole precisely centered in the insert's hole.



Tap the holes for a 6x32 bolt



Bolt the inserts into place, place the guide on the knife (as shown), and then realize that the bolt heads will prevent the guide from getting right next to the side of the grinder's platen. Damm! Gotta rethink this!



Method Two

What will hold the inserts in place and can resist heat and water? Right - JB Weld. Sooo...



Use that spring clamp and it's brother to hold the inserts in position while the JB sets up.



Place the guide on the blade in the desired position and....



Go grind. Since the cost of one of these guides is trivial - like under \$3, you can make several if you typically do more than one knife at a time. Pretty slick, no?

