

Helicarb® Grinding Instructions (for R960 Grinders, 2008 & later)

Note: Instructions are for a typical cutter. The cutter shown may not look identical to your cutter.

1. Great Lakes Custom Tool recommends the use of **safety glasses at all times.**
2. When the cutter is mounted on the machine, be sure to follow **LockOut/TagOut** procedures and use all appropriate personal protection equipment.

The Helicarb blades are to be ground in the cutter head using a Weinig Rondamat Grinder. Other makes and models of grinders may also be used.

Setting up the Grinder

Change the insert on the Rondamat Grinder knife rest. Remove the 2 screws holding the straight insert. Remove the straight insert and replace it with the angled insert. Reinstall the mounting screws. The **angled knife rest insert** can be purchased as follows:

GLCT Part Number----- 810-23426-0000

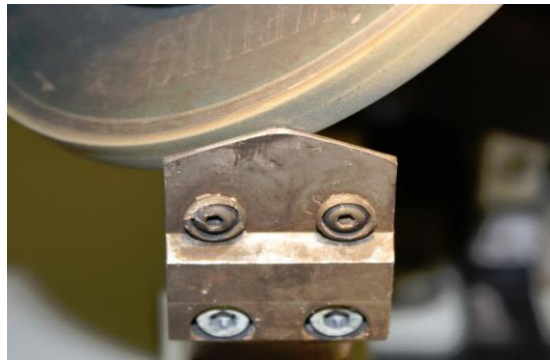
Weinig Part Number-----930-013024HEL

Use a **diamond wheel** to grind the Helicarb twisted carbide blade. The recommended Weinig diamond grinding wheel to use is 10mm thick with a square edge.
Weinig Part Number---920-072006

Set the back clearance angle on the grinder to 15°-18°.



Helicarb Powerlock cutter



Grinding the Blade

Mount the Helicarb Powerlock tool in the grinder. Use **gloves or a shop towel to protect your hands**. Other Helicarb tools with straight bores, or hydro sleeves are mounted differently, but are all ground in the same manner.

Move the cutter to place the end of the blade on the grinder knife rest. Secure the compound slide with the radial clamp. Turn on the grinding wheel. Set the diamond **grinding wheel speed at 3000 rpm**. Recheck that the back clearance angle is set at 15°-18° and that the wheel is tilted to 60° side clearance.

Bring the cutter in towards the grinding wheel until you hear it touch. Start the coolant flow and make a light pass.

Always grind the Helicarb cutter with the helix sliding up onto the knife rest to help keep the blade down on the knife rest while grinding. A right hand helix powerlock cutter will be mounted with the HSK end on the right as you are facing the grinder. The blade should be ground from the right end to the left end.

A left hand helix powerlock cutter will be mounted with the HSK end on the left as you are facing the grinder. The blade should be ground from the left end to the right end.

Remove .001" to .002" stock in each grinding pass. Grind each wing once and then inspect and determine if additional passes are required.

Grinderman's helpful hint:

Use a marker and blackout the knife edge before grinding. This will provide a reference for quicker matching of the previous angle, plus allow you to easily see if you have actually ground away the old edge.

The grinding wheel must not contact the cutter body. When the grinding wheel is close to touching the cutter body, it is time to either change the Helicarb blades or add a shim under the blade. (See Instruction sheet A00153 for the shimming instructions.)

After the blades are all sharpened, remove the cutter from the grinder.

