

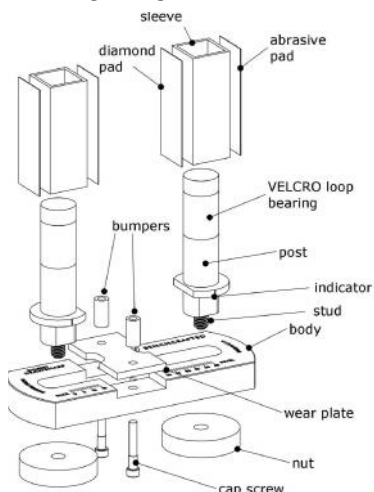
# GALBERT

## DRAWKNIFE HONE-O-MATIC

# DRAWSHARP

### OWNER'S MANUAL

Thank you for purchasing the Drawsharp, invented by chairmaker Peter Galbert, designed with and built by Benchcrafted. The Drawsharp makes drawknife sharpening a quick, easy and repeatable process, yielding beautifully polished edges otherwise difficult to achieve with other methods. Everything you need is in the tin, including enough abrasives for dozens of sharpening sessions. Refill kits are available at Benchcrafted.com.



#### Component List:

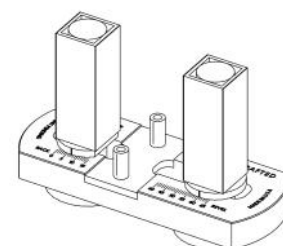
- Body
- Wear Plate
- Nut (2)
- Cap screw (2)
- Bumper (2)
- Post (2)
- Stud (2)
- Sleeve (2)
- VELCRO® loop bearing (2)
- Diamond pad (2)
- PSA abrasive paper pad (10)

#### ASSEMBLY INSTRUCTIONS

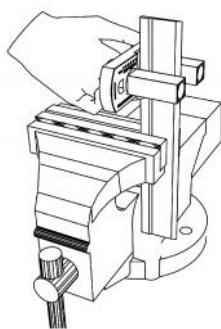
Insert the cap screws through the body and slip the wear plate over the screws, threading the two bumpers onto the screws. Tighten the cap screws with an allen wrench. When the wear plate wears with use, flip it over and use the other side.

Remove the backing paper from the VELCRO bearing and adhere the VELCRO into the recess in each post. Use an allen wrench to thread a stud into each post until the yellow locking element engages fully.

Do this with the post inserted in the body's slot



for resistance. Insert each post into the slot in the body and thread a nut onto each stud from below. The flat portion of the post's collar should face the bumpers. Apply one abrasive paper pad to each sleeve opposite each diamond pad. Each sleeve should have one of each abrasive on it: a diamond pad on one side of the sleeve, and the abrasive paper pad on the opposite side of the same sleeve. One sleeve will be used to sharpen the drawknife's bevel, the other it's back. So each sleeve needs to have both types of abrasive on it.

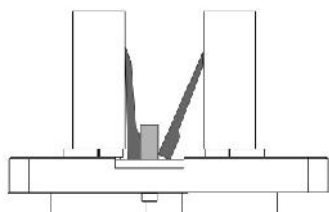


#### PREPPING YOUR KNIFE

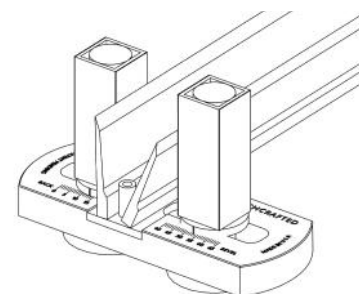
Before using the Drawsharp you'll need to check the back edge (the "spine") of the drawknife to make sure it's smooth enough to work with the Drawsharp. If the spine needs attention, use a file and some fine sandpaper to smooth and polish and round the edges of the spine so it slides smoothly in the Drawsharp. Evaluate the present condition of the edge of the tool. Most knives that have been sharpened with other methods will be ready to hone with the Drawsharp. If you are "rehabbing" a knife with a misshapen or knicked edge, refer to videos on our website for instruction on grinding. The best cutting geometry will begin with a knife that has a bevel ground to approximately 27 degrees. If your knife is ground with a bevel beyond 30 degrees, you might consider grinding it before honing, to lower the angle.

#### SETTING THE DRAWSHARP

The Drawsharp works on the same principle as typical honing guides: presenting the tool's edge to the abrasive in a controlled, repeatable fashion. The distance from the bumpers to the posts (and thus the sleeves and abrasive) determines the sharpening angle. Here's how to set the posts. Place the drawknife in a vise so the blade is vertical as shown (handles not shown for clarity). The cutting edge should be facing away from the Drawsharp body. You'll note that the bumpers are not in the exact middle of the body. The shorter side of the body will be set for the back of the blade and the long side for the bevel. This is marked "back" and "bevel" on the body. Place the Drawsharp onto the spine of the drawknife until the blunt edge is resting on the wear plate and against one side of the bumpers as shown.



It doesn't matter which side (bevel or back) you start with, just make sure you place the knife on the correct side for setting the back post and bevel post. Loosen the nut and with the spine of the knife in contact with the wear plate and bumpers, slide the post until the bevel (or back) is flat against the diamond abrasive pad on the sleeve. Tighten the nut. Now place the Drawsharp so the knife is on the other side of the bumpers to set the other post. With the posts in this position, the entire bevel and back would be presented to the abrasive. What you want is a slight micro bevel so you're polishing only the very cutting edge. To position the posts to create this micro



bevel, note the position of the posts' indicator mark on the scale, then move each post AWAY from the bumpers ONE mark only. The numbers on the scales and the distances between the marks are purely arbitrary. They don't represent sharpening angles or distances. They are simply a means for identifying post settings for a particular drawknife. This makes setting the Drawsharp for different drawknives quick, once the initial setting is determined. The gap in numbers between the scales is intentional. It helps prevent possible confusion between the two settings. If you're curious about sharpening angles, you can measure the angle of the micro bevels by setting the Drawsharp on the bench top with the posts pointing up, and the drawknife placed in the Drawsharp as when setting the post position. To measure the micro bevel angle of the back of the drawknife, use a bevel square. Place the square's blade right on the back of the knife with the stock laying on the benchtop. The difference between that angle and 90 degrees is the

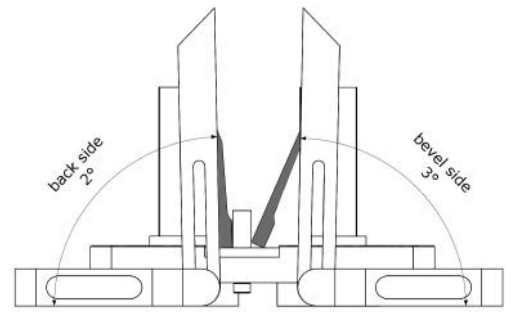
micro bevel angle. To measure the micro bevel angle of the drawknife's bevel, place the blade of the bevel square flat on the drawknife's bevel. The difference between that angle and 90 degrees is the micro bevel angle. For most drawknives, a 3 degree micro bevel on the bevel side and a 2 degree on the back works well. Now that the tool is set, note where each post registers on the scale for later reference.



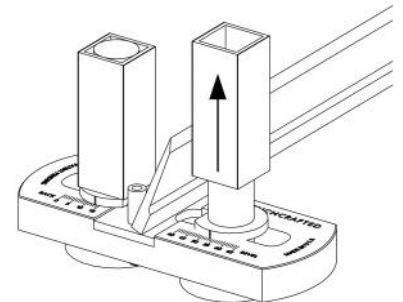
**Hold the drawknife like you'd hold a violin, only a little lower, like a country fiddle**

### USING THE DRAWSHARP

To hone the edge, hold the drawknife like a violin (i.e. in your left hand if you're right-handed, etc.), with the blade facing away from you and the Drawsharp in your other hand as shown being sure that the Drawsharp is oriented properly, i.e., if the drawknife's bevel is up, then the post on the bevel side should be on top, above the drawknife.



Apply some light honing oil (Camellia or equivalent) to the blade. Keeping the blade and abrasive lubricated during the honing process is vital to good honing. Place the Drawsharp onto the spine of the drawknife, pressing the knife's edge into the corner formed by the wear plate and bumpers, then rotate the Drawsharp until the abrasive (the diamond pad) makes light contact with the cutting edge of the drawknife. Now slide the Drawsharp along the length of the knife and back again, keeping the drawknife riding on the bumpers for the entire stroke. Take light strokes on the bevel side until you feel a burr along the entire edge of the opposite face. Move the Drawsharp so the spine of the drawknife is now on the opposite side of the bumpers and repeat on the back, rotating the Drawsharp the opposite way to contact the other post's abrasive sleeve.



**Raise the sleeve to expose fresh abrasive. Flip end for end to expose even more abrasive.**

Once the burr is turned back to the bevel side, repeat the process. Now that the diamond abrasive has formed the edge, it should only take a stroke or two to turn the burr back to the other face. Repeat this using one or two light strokes per side to reduce the size of the burr and scratch pattern. Rotate the sleeves 180 degrees so the finer, paper abrasive pads face the bumpers and repeat the process. Continue working both sides of the knife on the same portion of the sandpaper, which will cause the grit to break down to finer particles and polish the blade well beyond the 600 grit rating of the paper. Because the paper pads are slightly thinner than the diamond, a "mini-micro" bevel is formed, ensuring you're polishing all the way to the very cutting edge. If your blade is not even in width, as many older blades are, that the stroke on the sandpaper should be started in the wider sections and pushed towards the narrower until the mini microbevel is established. Otherwise, the blade may cut into the paper. Light strokes are the key. Let the abrasive do the work. Once the burr has been turned back and forth once, start a series of single strokes on each side of the knife, turning the burr back and forth. Repeat this with increasingly light pressure and honing oil until you feel the burr greatly diminished or gone. If you need to expose fresh abrasive to the cutting edge for the next session, simply pull up on the sleeve to present a fresh area. The cutting angle will not change. Once you've used up the abrasive all the way to the bottom, remove and flip the sleeve over to utilize the rest of the pad. To finish the process, strop both sides of the edge with a piece of softwood or leather charged with honing compound as you normally would. If the edge is not satisfactory, i.e., you didn't remove all the scratches from the diamond pad with the abrasive paper, repeat the process starting with the diamond pad, focusing on using light strokes. The key to using the diamond pad is a very light touch. Resist the urge to bear down as you would with waterstones. Diamond performs best with ample lubrication and motion versus intense pressure. In subsequent honings, focus most of the work on the bevel side (which is easy to grind) and only hone the back with the fine diamond pad to turn the burr back to the bevel.

### DRAWKNIFE REHAB

Some drawknives, especially a "new" one from a flea market or tool dealer may need more attention than the included abrasives can handle. For this we offer a rehab kit which includes two additional sleeves outfitted with medium and coarse grit diamond pads. For knives in worse shape that require more aggressive honing, start with the coarser pad to establish a consistent edge and establish a burr all along the edge. Now rotate the sleeve to the medium pad and work the edge. As with the fine diamond pad included with the Drawsharp, light pressure with ample lubrication is the key to success. Obviously, if your drawknife edge is in really bad shape, with large nicks in the edge or severely blunted, you'll need to establish a new, uniform edge at the grinder. Please visit our website for information and techniques on grinding drawknives.

### REPLACING THE ABRASIVES

When you've used up the sandpaper pads on each post, you'll need to replace them with a fresh pair. 10 pads are included with the Drawsharp, and replacements are available directly through our website. To get the paper off, heat the paper slightly with a lighter or other heat source to soften the adhesive. You just want a little heat here, don't go overboard. The paper will peel off. Clean the surface with solvent, let dry and apply a new sheet. The diamond pad should last for many years with normal use.

-Benchcrafted