



SHARPER SOLUTIONS. MEASURABLE RESULTS.

RAZOR EDGE
SYSTEMS

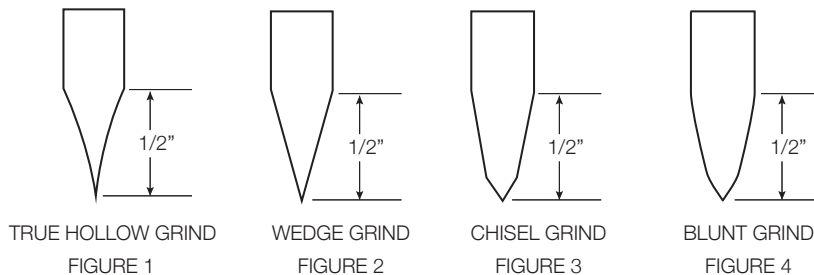
SHARPENING INSTRUCTIONS

NOTICE: It is important that these instructions are carefully studied and followed to achieve the best results.

GENERAL INFORMATION

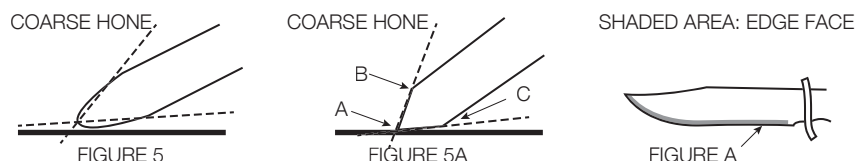
Before going into the actual sharpening, it is most important to understand the edge, or relief of the knife we are going to sharpen. A good relief will sharpen very quickly and can achieve a very high-quality edge. A knife with a poor relief will be very difficult to sharpen and have a poor edge as in figure 4. Unfortunately, many quality knives are manufactured with poor relief. The edges on these knives can be tapered back easily to a wedge grind (Fig. 2) by using the coarse hone. Remember, your knife is only as good as its relief.

1. The true hollow grind will produce the ultimate in an edge. (Fig 1)
2. The wedge grind will produce a very satisfactory edge. The thinner it is tapered back, the more desirable the edge will be. (Fig 2)
3. The chisel grind should be tapered back to a wedge grind, or hollow ground. (Fig.3)
4. The blunt grind should also be tapered or hollow ground. (Fig.4)



WHAT WE ARE TRYING TO DO

Before we go any further let's understand what we are working toward accomplishing. The goal is to ultimately prepare the edge for the sharpening process for achieving a very sharp edge. It is important to understand figures 1 – 5A are highly magnified and exaggerated drawings of the cutting edge. A knife edge resembling the Blunt Grind, (Fig 4) must be thinned out to resemble the wedge grind (Fig 2) Note how this has been done in Fig. 5A. Lines AB and AC are the flat sides we have ground down with the coarse hone to obtain a better relief. They are called "edge faces," (Fig. A) and are easy to see under a good light. If during the sharpening process the edge face appears to be any wider than sewing thread you can improve your edge by removing the Razor Edge guide and tapering back the relief on your knife, as indicated by the dotted lines on Fig. 5A.





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Tapering the relief is not necessary for all blades and can be skipped if desired; however, you may not end up with the sharpest edge and the actual sharpening process may take longer. Tapering the knife relief is accomplished by following these easy steps:

1. Lay the knife flat against the hone then raise the spine (back of the knife) off the hone
2. Grind the full length of the edge in a circular or back and forth motion to remove the unnecessary metal and thin the cutting edge to the desired thickness. Repeat this process on the opposite side of the knife. When finished the edge should now be ready for the sharpening process.

RAZOR EDGE GUIDE AND CUB GUIDE ANATOMY

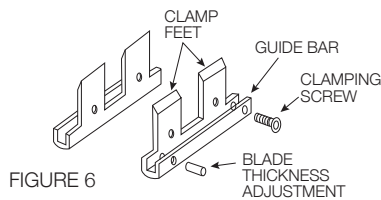


FIGURE 6

CORRECT GUIDE ADJUSTMENT

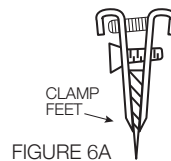


FIGURE 6A

CORRECT



FIGURE 6B

INCORRECT

The two blade thickness adjustment screws are designed to adjust to the thickness and taper of a knife blade. The clamp feet should lie flat on the blade (Figure 6A), rather than contact in one spot (Figure 6B). If the mounted blade resembles 6B screw in the small allen screws until the clamp lays flat against the blade.

MOUNTING THE GUIDE

There are two methods for clamping a knife. First method is the table mount method. Lay the knife guide on a surface, slide the knife into the clamping position per instructions for your size knife blade, and tighten it down using the largest allen wrench. The second method is by holding the clamp in the hand, positioning the knife into the correct clamping position and tightening it down. Even though there are many types and sizes of knives if you follow the mounting instructions as closely as you can for the example that most resembles your blade you will have great results.

TABLE MOUNT METHOD



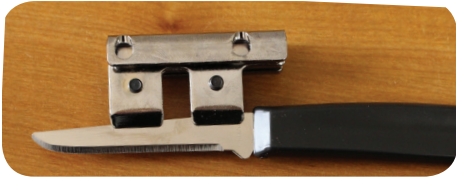
HAND MOUNTING METHOD (3 PICTS)



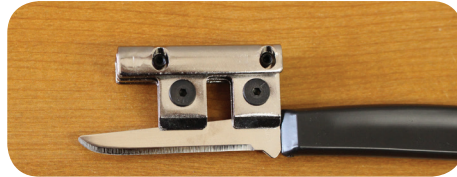
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Mounting the Cub Guide will vary per knife due to varying blade sizes. What is most important is, 1) The clamp feet are parallel to the blade edge, 2) One inch or more of the blade tip protrudes beyond the guide bar and, 3) As much of the blade as possible is protruding from the clamp feet (up to approximately $\frac{3}{4}$ "). Cub Guide is mounted with the long end of the guide bar toward the knife tip (Exam 1a), but can be mounted the opposite direction for very short blades so that the tip of the knife can still be sharpened. (Exam 1b)



EXAMPLE 1a



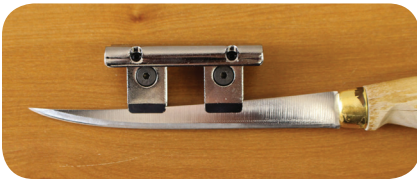
EXAMPLE 1b



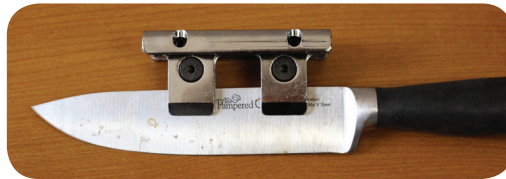
EXAMPLE 2

Razor Edge Guide (Blades over 3 $\frac{1}{2}$ ")

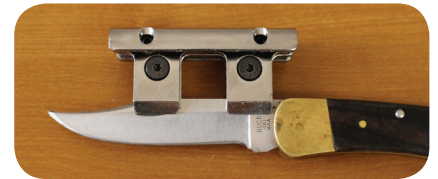
For sharpening long, thin blades such as file knives, 1) Mount the guide in approximately the center of the knife or approximately 2" from the tip with clamp feet parallel to the cutting edge, 2) Clamp enough of the blade to get a firm hold. (Example 3) Rule of thumb for most other blades over 3 $\frac{1}{2}$ " is 1) The guide should be mounted approximately 1 $\frac{1}{2}$ " from the tip with the guide feet parallel to the knife edge and 2) Approximately $\frac{1}{2}$ " - $\frac{3}{4}$ " of the knife should be protruding from the clamp feet. This distance may be more depending on the depth of the blade.



EXAMPLE 3



EXAMPLE 4



EXAMPLE 5

Chef Knives

Extra-large blades, such as the chef knife, will not follow the typical sharpening pattern due to the blade depth. The 10" chef knife, as an example, is best sharpened in two sections but can be done without moving the guide if using 8" hones. The guide will need to be mounted approximately 2" from the tip and the guide feet approximately $\frac{3}{4}$ " from the cutting edge.



EXAMPLE 6

OBTAINING THE BURR

Burr definition: A protruding, ragged edge created by the coarse hone and rolled upward and away from the side of the knife edge that is in contact with the hone (fig_7). The burr is created with the coarse hone and may be too small to see but can be felt using your finger nail or finger (fig 8).

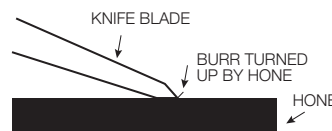


FIGURE 7

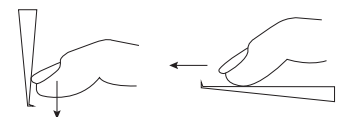


FIGURE 8

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Obtaining a burr the full length of the blade is critical to achieving a sharp edge. To begin, place the rubber pad under the hone. Using the coarse hone and with the knife mounted securely in the clamp, begin grinding in a circular or back and forth motion from handle to tip. Keep the guide in contact with the hone at all times as this provides a constant and consistent angle. Obtaining a burr may happen quickly or take up to 5 minutes or more depending on the relief of the knife edge. When the burr is obtained on the first side, flip the knife over and repeat the process on the second side. Make sure the burr is felt from handle to tip. To grind tip area simply raise knife handle keeping the guide bar in contact with hone at all times. (Figure 9)



FIGURE 9

FINAL HONING

After obtaining a burr on the second side it is now time to put on the edge using the fine hone. Starting at the far end of the hone, place the guide bar on the hone BEFORE the edge touches the hone. If the edge contacts the hone before the guide the edge can be ruined. Starting nearest the handle, draw the blade across the hone finishing at the tip. Flip the knife over and repeat with alternating strokes always going INTO the cutting edge as shown in Figure 10 until the edge feels smooth (10 or more strokes on each side). VERY IMPORTANT to make sure the guide bar always contacts the hone before the blade does.

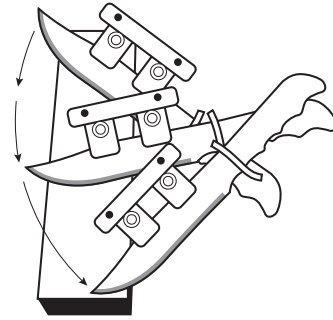


FIGURE 10

DOUBLE EDGING - The Ultimate Sharpness

After final honing the knife will be very sharp, but can be greatly improved with the following simple steps. Loosen and move the Guide down towards the cutting edge about 1/16" and out towards the tip of the blade approximately 1/16". (Fig10) Using ONLY the fine stone alternate strokes with very light pressure - 10 on each side.

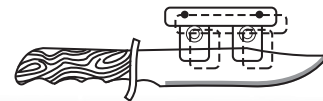


FIGURE 11

If you have followed the procedure, you have a true Razor Edge. Caution! Handle your knife with care.

Note: The best edges will be obtained using dry stones. Always use the rubber pad provided with the hone to prevent slippage.



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