

The Art of the Edge: A Guide to Sharpening Custom Knives

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Introduction: The Essence of a Sharp Blade

A custom knife is more than just a tool; it's a piece of craftsmanship, an extension of the hand, and a reliable companion for a multitude of tasks. Whether it graces a chef's kitchen, joins a hunter in the field, or serves as an everyday carry tool, its performance hinges on one critical factor: the sharpness of its edge. A dull knife is not only inefficient, crushing delicate ingredients or struggling through tough materials, but it is also a safety hazard, requiring excessive force that can lead to slips and injury.



This guide is dedicated to the art and science of maintaining that perfect edge. We will explore the fundamental difference between sharpening—the process of removing metal to create a new edge—and honing, which simply realigns an existing edge. Understanding how to properly care for your custom knife, tailoring the technique to its

specific design, steel, and intended purpose, is the key to unlocking its full potential and ensuring a lifetime of reliable service.

The Geometry of Sharpness - Understanding Angles

The heart of sharpening lies in a single, crucial variable: the angle. The sharpening angle, defined as the angle between the blade's surface and the sharpening tool, dictates the trade-off between sharpness and durability.



- **Low Angles (e.g., 15° per side):** A lower angle creates a very fine, razor-sharp edge. This is ideal for tasks demanding extreme precision, such as filleting fish or making delicate cuts. However, this fine edge is inherently weaker and will dull more quickly under strenuous use.
- **High Angles (e.g., 25° per side):** A higher angle results in a more robust, durable edge. While it may not achieve the same level of slicing finesse as a lower angle, it will withstand chipping and rolling far better when chopping or cutting through tough materials.

Choosing the correct angle for your custom knife is a balancing act determined by its primary function, the type and hardness of its steel, and your personal preference.

Recommended Angles for Custom Knives

While every custom knife is unique, the following ranges provide a research-backed starting point for achieving optimal performance.

- **Custom Culinary Knives (15-20 degrees per side):** For the precision required in the kitchen, a 30-40 degree inclusive angle is standard. An angle of 17-20 degrees per side offers a superb balance for most chef's knives, allowing for clean slices on everything from tomatoes to herbs. Custom Japanese-style knives may utilize even lower angles (around 15°) for surgical sharpness, but this often necessitates more frequent maintenance due to the edge's fragility.
- **Custom Hunting & Outdoor Knives (20-25 degrees per side):** The rigors of the field demand a tougher edge. A 40-50 degree inclusive angle provides the durability needed for tasks like skinning game, processing firewood, or cutting through tough hide and even bone. A custom skinning knife set at 22 degrees per side, for example, combines effective sharpness with the resilience needed for outdoor abuse.
- **Custom Everyday Carry (EDC) & Utility Knives (20-25 degrees per side):** Aligning with hunting knives, custom EDC blades are built for versatility and reliability. Whether opening packages, cutting cord, or performing unexpected daily tasks, the focus is on edge retention. An angle between 22 and 25 degrees is typical, providing a dependable edge that lasts.

The Sharpener's Toolkit

The method you choose for sharpening is just as important as the angle. Each tool offers a different experience and level of control, suited to various skill levels and knife types.



Sharpening Tool	Description & Process	Ideal For
Whetstones	The traditionalist's choice, these stones (also called water or oil stones) offer the ultimate control. After soaking the stone (if it's a water stone), you place it on a stable, non-slip surface. You then draw the knife across the stone at a consistent angle, working from coarser grits to remove metal to finer grits to polish the edge.	The purist who demands absolute precision. They are ideal for all custom knives, especially high-value ones where angle control is paramount.
Honing Rods/Steels	A maintenance tool, not a sharpener. A honing rod realigns the microscopic teeth of an already sharp edge. Hold the rod vertically and draw the knife down and across its surface at a 20-degree angle, alternating sides.	Frequent, regular maintenance between sharpening sessions, especially for custom culinary knives, to keep the edge in perfect alignment.
Electric Sharpeners	The convenient, modern option. These devices use motorized abrasive wheels set at pre-defined angles. You simply pull the knife through the guided slots.	Beginners or those who prioritize speed and ease of use over precision. They can be aggressive and remove more metal than necessary.
Pull-Through Sharpeners	These compact, manual devices use V-shaped carbide or ceramic slots to quickly create an edge at a fixed angle. They are simple to use but can create a rougher, "jagged" edge.	Quick touch-ups in the field or for those who want a simple, no-fuss solution. Not recommended for high-end custom knives.
Sandpaper / Mousepad	A DIY method where sandpaper of various grits is glued to a flat, cushioned surface like a mousepad. The knife is drawn across the sandpaper, simulating a whetstone.	An effective and inexpensive method that can produce a convex edge, but it requires practice to maintain a consistent angle.

The Sharpening Ritual: A Step-by-Step Process

Patience and consistency are the keys to a perfect edge. Follow this ritual for effective, safe sharpening.

1. **Preparation:** Select your sharpening tool. If using a whetstone, ensure it has been soaked for the recommended time (typically 10-45 minutes, or until no more air bubbles emerge). Place it on a damp towel or a secure base to prevent slipping.
2. **Establish the Angle:** Determine your target angle based on the knife's type and intended use. Using a guide can be helpful for beginners. The "Sharpie trick" is a great way to check your angle: color the entire bevel of the edge with a permanent marker. As you make your first few strokes, check the bevel. If you are only removing ink from the very edge, your angle is too high. If you are only removing it from the shoulder of the bevel, your angle is too low. Adjust until you are removing the ink from the entire bevel evenly.
3. **Sharpen One Side:** Holding the knife at your chosen angle, draw the blade across the stone in a smooth, consistent motion, from the heel to the tip. Apply gentle, even pressure. Continue on this one side until you raise a "burr"—a tiny sliver of metal that forms along the opposite side of the edge. You can feel it by carefully sliding your fingernail off the edge.
4. **Sharpen the Other Side:** Flip the knife over and repeat the process on the second side. It should take fewer strokes on this side to raise a burr.
5. **Refine and Polish:** Move to a finer grit stone to remove the burr and polish the edge. Use alternating strokes with very light pressure. A honing rod can also be used at this stage to remove the last remnants of the burr and align the edge.
6. **Test the Edge:** The ultimate test. A truly sharp knife should cleanly slice through a sheet of paper held by one corner, or effortlessly glide through the skin of a tomato without tearing it.
7. **Maintain the Edge:** Don't wait until your knife is dull to give it attention. Regular honing will dramatically extend the time between full sharpening sessions.

Special Considerations & Care

- **Custom Serrated Knives:** Sharpening serrations requires a specialized, tapered sharpening rod that fits into the individual scallops of the blade. Standard flat sharpeners will not work. For intricate or valuable serrated knives, professional sharpening is often the wisest choice.
- **Custom Ceramic Knives:** These blades are incredibly hard and brittle. They can only be sharpened with diamond abrasives. Given their fragility and the risk of chipping, professional service is highly recommended.
- **Safety First:** Always sharpen with the blade's edge facing away from you. Keep

your fingers clear of the path of the blade. After sharpening, carefully wipe the blade clean of any metal filings.

- **Storage Matters:** Protect your newly sharpened edge. Store your custom knives in a wooden knife block, a leather or kydex sheath, or on a magnetic strip. Never toss them unprotected into a drawer with other metal objects.

By mastering these techniques and treating your custom knives with the respect they deserve, you will ensure that every cut is as clean, safe, and satisfying as the first.

