

## Frequently Asked Questions

The questions below are often asked about professional chefs knives. Answers have been kept short for your convenience.

1. **What type of steel is best for knife blades?**

High Carbon Stainless steel (also known as surgical steel) is the very best steel for knife blades. Today's surgical steel is the result of years of research and development by the steel industry.

The best steel for knife blades has high carbon content, and contains the following alloys:  
Chromium – for resistance to rust and corrosion  
Molybdenum and Vanadium – for uniform hardness.

2. **Some older chefs still mention carbon steel knife blades (this blade will rust/corrode if not immediately washed and dried after use). How come?**

Carbon knife blades were the best available to a professional chef until the early 1950s. Once quality high carbon stainless steel blades became available in the 1950s, it took considerable time, effort and money to promote the qualities that eventually won acceptance for them. Today, stainless steel blades have replaced carbon steel blades.

3. **What does the term stainless steel really mean?**

Stainless steel is a generic term for a family of corrosion resistant alloy steels containing 10.5% or more of chromium.

4. **What is the key advantage to stainless steel?**

Stainless steel's one unique advantage over carbon steel is its high resistance to corrosion/rusting.

Why does stainless have this advantage? A chromium-rich oxide film forms naturally on the surface of the stainless steel. This film forms at the molecular level and is invisible to the human eye. This film is described as passive (i.e. it does not react to or influence other materials), tenacious (it clings to the layer of steel and is not transferred elsewhere) and is self repairing (if damaged or removed, chromium from the steel will be exposed to the air, forming more chromium oxide to replace the lost or damaged oxide film). So a stainless steel blade will remain stainless, it will never "wear through" to a base alloy, even though it may be re-sharpened and used day in and day out.

For more information go to [www.canadacutlery.com/product/facts\\_about\\_history1.pdf](http://www.canadacutlery.com/product/facts_about_history1.pdf) pages three and four.

5. **How is a quality knife manufactured?**

There are just two manufacturing processes: Hot Drop Hand-Forging and Stamping. Both are described below.

**Hot Drop Hand Forging Process**

The simplest way to think about the hot drop hand forging process is to think of it as the traditional way of making knives. As a result, a lot of hand work and the skill of a master cutler are required to make a knife. (You can view this process on video, by clicking on Video Clip 1 [www.canadacutlery.com/movies/logo-001.mpg](http://www.canadacutlery.com/movies/logo-001.mpg) ).

**Stamped Process**

Cutlery steel is prepared, by machine, at the steel mill. This eliminates much of the hand work that is part of the hand forging process. The steel mill produces large sheets of stainless steel to the grade specified by the cutlery manufacturer and delivers it this way to the knife manufacturer.

At the manufacturing plant, the shape of the knife blade is cut or stamped, by machine, from the sheet of steel. Hundreds or even thousands of knife blades will be cut out or stamped mechanically using the very latest in robotic technology. The remaining processes, such as grinding, tempering, polishing, sharpening and finishing are completed using a combination of highly skilled labor and modern machinery. Ultimately, the stamped process is faster, less labor intensive, more consistent and more cost efficient than the hand forging process.

For more information about manufacturing go to [www.canadacutlery.com/product/facts\\_on\\_knives.pdf](http://www.canadacutlery.com/product/facts_on_knives.pdf) and scroll to page two.

6. **Can you explain why there are different types of knife blade edges?**

Sure can! Think of a knife as a tool, with a specific task to do. Different tasks require different blade edges.

**Scalloped or Wavy Edge**

This edge allows the knife blade to slice easily through surfaces that are firm on the outside but soft on the inside. Knives with this edge are ideal for cutting tomatoes, hard boiled eggs, and types of breads that are crusty on the outside and soft on the inside.

**Serrated Edge**

This knife blade easily “saws” through objects that are firm throughout. It is ideal for cutting solid European type breads.

**Granton or Undulated Edge**

The “undulation” on the blade creates air pockets at the blade to prevent food from sticking to the knife blade. This edge is ideal for slicing ham or beef roasts, or whenever a perfect slice is desired.

## **Decorator Edge**

Some blade edges are especially designed for creating artistic food presentations. The decorating edge is ideal for sculpturing fruits and vegetables. Decorator edges are used by professionals who have a passion for food and its preparation.

For more information about blade edges go to [www.canadacutlery.com/product/facts\\_on\\_knives.pdf](http://www.canadacutlery.com/product/facts_on_knives.pdf) and scroll to page two.

### 7. **Can you explain the differences between “hollow ground” and “tapered” knife blades?**

A “tapered” knife blade is shaped like a “V”. When you look at this knife, you see that the blade slowly and evenly tapers from its widest point (its back) to a very fine cutting edge. This blade cuts through food easily and smoothly and is easy to manually sharpen.

A hollow ground knife blade does not taper evenly from its back to its cutting edge, rather at the point where the hollow grinding begins; there is actually a bulge in the blade. You can feel this bulge when you run your finger over it. One disadvantage to a hollow ground knife is this bulge; as more force must be put into the cutting action to push the food away from the blade in order to clear the bulge.

### 8. **There are a number of different types of sharpening steels. What makes them different from each other? Can you explain the differences to me?**

The finish or what is also known as the “cut” on the surface of the sharpening steel is the clue to telling various steels apart. Think of the “cut” as the pattern you see in the steel’s blade (the metal rod is called a blade).

#### **“Coarse or Spiral Cut” for Dull Blades**

If the “pattern” in the steel appears to circle the blade in many small circles, then the steel is known as a “Coarse or Spiral Cut” Steel. The coarseness provided by this steel makes it ideal for putting an edge on a very dull knife blade.

#### **“Precision Cut” for Maintenance**

When the “pattern” runs from one end of the steel blade to the other end, the steel is known as a “Precision Cut” Steel. This type of steel is perfect for maintaining a sharp knife blade. If this steel is used often on a knife blade (before or after almost every use), the knife blade never really has the chance to become dull.

#### **“Polished Cut” for Honing**

When the blade of the steel has an almost mirror like finish and is perfectly smooth, (in other words, it has no pattern), it is known as a “Polished” Steel. This steel is perfect for honing a knife blade.

#### **“Doublesharp” does double duty**

The popular “Doublesharp” steel incorporates both the spiral and precision cut patterns previously mentioned. In other words, the pattern spirals around the steel blade, but does so from one end of the steel blade to the other. This is CCI’s most popular steel, and for good reason, it incorporates two functions in one steel. This steel is ideal for restoring very dull knife blades.

## **Diamond Steels – more expensive, but popular**

Expensive, but that's expected – as this steel is coated with ultra-fine 100% diamond abrasives. This steel lightly hones as it realigns a knife edge.

9. **Why are some steels oval in shape, while others are round?**

There is no magic here; rather the oval shape simply provides a larger sharpening surface.

10. **What is the right length of sharpening steel?**

Sharpening steels should be at least as long as the knife blade being sharpened. If a chef uses knives with blades anywhere from 8" – 12" long, just one size of steel is required. Either a 12" or 14" sharpening steel would be appropriate. The length of steel chosen would simply reflect the chef's personal preference.

You can find additional information about sharpening steels on page one of "Facts About Sharpening Steels" on the CCI website education page. [www.canadacutlery.com/product/facts\\_on\\_steels.pdf](http://www.canadacutlery.com/product/facts_on_steels.pdf)

11. **Why is Solingen the name most people associate with the best quality professional knives?**

More than six hundred years of producing cutlery has a lot to do with it! The availability of water power was the main reason why blade makers were attracted to Solingen, Germany over 600 years ago.

In the early 1800's new laws put an end to the privileges of the guilds. This created tremendous freedoms for the various trades and industrious individuals had the opportunity to profitably develop their businesses as never before. By the 1830's efforts were made to centralize cutlery manufacturing. Factories and complexes where many production processes all took place under one roof began to emerge. Salaried workers began to replace self-employed craftsmen. Productivity and employment escalated.

Efficient steam power was being used by the middle of the 19th century and by 1852 there were ten steam-driven grinding mills in the Solingen area. Steam hammers made the process of forging blades far easier and more efficient than ever before. The Industrial Age created the mass production of knives. Solingen became a famous cutlery town in the process and is still known for the heritage created by the early tradesmen and industrialists.

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