



## TECH BULLETIN: 12.28.04

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# DIFFERENT BRUSHES, DIFFERENT RESULTS

Brushing is a critical part of waxing and deserves much careful thought and analysis, just as other areas of waxing. Brushing is one of the final things the waxer does to their skis before they are skied on. Additionally, it is the delicate process of removing sometimes very hard paraffin from a soft plastic ski base: no small feat. This is definitely something that deserves your utmost attention!

There are 4 main categories of brushes now: Nylon, Metal, Nylon Polishing, and Horsehair. These brushes are quite different from each other and each have their own strength and purpose.

**NYLON BRUSH:** The nylon brush is the “all around brush”. If a beginner skier were to only buy one brush, this is the one! As this brush has the thickest diameter bristles of any brush type, it is known for its general wax removal capabilities. Large diameter bristles remove large particles of wax from the ski base, particularly with softer waxes. However, due to the large size of these bristles, wax deep down in the structure of the ski base is not effectively removed. This job is reserved for finer bristled brushes. The Nylon Brush can be used scrubbing the brush back and forth, or in one direction.

**METAL BRUSHES:** Metal Brushes have underwent many changes over the past decades. In the past they were used to create structure in a metal scraped base. The metal brushes of years past used very stiff metal bristles which actually cut the ski base, removing base material and creating hairs. Today, brushes creating structure is not appropriate as we now use stonegrinding to create structure. Today’s cutting edge metal brush, the **Copper Brush** refreshes a ski base, removes wax, and cleans. The Copper Brush does all of this without damaging the ski base in any way. Be careful, some companies doubt the value of a very soft metal brush such as copper, but a stiffer metal brush simply has no place touching a ski base in today’s waxing world. The Copper Brush should be used before waxing to refresh (or open) the base as well as clean it. It should also be used to brush out hard, cold weather waxes such as Blue. It is important to note that any metal brush should only be moved from tip to tail.

**NYLON POLISHING BRUSH:** The Nylon Polishing Brush is the most recent significant innovation in the world of brushing. These brush bristles are similar in size to the Horsehair Brush and are about ¼ to 1/5 the size of the standard Nylon Bristles. This brush is preferable for finishing off all paraffin based waxes (System-3, LF, and HF waxes). The bristles of this brush reach the “nooks and crannies” of the structure in the base, effectively removing fine particulate of wax. At the same time this brush does an excellent job of shining or polishing the base which will improve ski speed in most conditions. A dedicated Nylon Polishing brush is also the perfect brush for brushing Fluorocarbons. When treating a ski base with any Fluorocarbon (not fluorinated waxes such as HF) the fluorocarbon simply bonds to the base surface and does not penetrate the base. Brushing a fluorocarbon with an overly aggressive brush can remove a great deal of the fluorocarbon from the base. In review, the polishing brush should be used to finish off all paraffin based waxes and for brushing fluorocarbons.

**HORSEHAIR BRUSH:** Horsehair Brush Bristles are quite fine, about ¼ to 1/5 the size of a standard Nylon bristle (or the same size as the polishing brush bristles). At the same time, they are quite stiff and aggressive. These stiff, fine bristles make this brush work well for removal of hard, cold weather waxes. One must be careful with this brush not to over brush as this brush is aggressive enough to strip the base surface of wax and create a very dull finish.