

## Tom's Musings — "Uni"-versity

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So, with a new Wintersteiger Omega RS 150 machine and all its bells and whistles, I wanted to see if I could come up with another "uni" grind idea.

It's Minnesota; it's mostly cold snow; it's old snow; it's abrasive snow; and—in a lot of cases now—it's man-made snow. Cold meaning 20 degree to below zero air temps. Abrasive meaning dry, fresh, and pointy; or old, icy, and chunky transformed snow. Man-made meaning pellets of ice.

What am I trying to accomplish?—what shape, depth, length, and width biased kind of structure will it take to slide well on those kinds of snow.

Previously, for that broad temp and snow type range, I've produced a variety of specific grind options—"uni+," "uni," "fine," and "F3." But now, with this new machine and all of its parameter options, I'm looking to see if I can improve on those.

I'll tinker around and input an idea into the machine's computer. The computer screen provides me with a general image and shape data for the grind idea.

If I like it, I'll cut it and run it—send a blanked ski over the newly etched stone and see what I get. A good analogy would be printmaking: etch a plate with an idea, ink the plate, lay print paper over the plate, run it through a press, pull the paper off and see what you have.

With the Wintersteiger Micro 1, running an idea and giving it the eye and fingernail test for the structure I was looking for didn't give me much to find visually. Being in the middle of the country without the influence of a big body of water, or the weather dumping moist snow like on the Pacific side of the Rockies, we mostly see plenty of cold, Canadian air (with some exceptions). Therefore, there is little need for much structure. However, there is a larger need to remove bad p-tex resulting from the constant application of cold weather waxes and the abrasiveness of the snow we ski on.

I'm not revealing anything new by stating that, in our colder climate, you'll find that too much structure or too heavy a structure or too sharp a structure can create the wrong amount of friction, resulting in a slow ski. In the past, with my original "uni" grind, I was looking for just enough structure to produce snow melt, creating a moisture film for glide; to have enough structure to encourage snow to tumble beneath the ski rather than lodge too deep in a structure; to soften the structure with hand work to reduce the edginess of the freshly etched line.

This new "CU1 42" grind produced by the Omega RS 150 is easy to discern with the eye. The structures' repeating footprint remains minimal, but busy enough to encourage snow crystals to tumble and to create a slight layer of moisture for glide. Sharpness in the structure is reduced by adding a small amount of depth to the Omega RS 150's diamond cutting bit in its return back across the etched stone. This knocks the tops off the pattern, reducing the need to completely

detune the engraved grind by hand. And this grind's pattern offers a wider range of use, eliminating the need for a variety of grinds in those temps below freezing.

Reincorporating the old Micro 1 in the grinding process, with its slightly more aggressive stone, provides the necessary capability to remove scabbed polyethylene from the ski base, taking care of the dirty work before the Omega RS 150 does the delicate work.

— Tom Novak, Head Stonegrinder at Finn Sisu