

## Tom's Musings — The 2018–2019 Season: Grinding Evolves

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Grinds. Less continues to be more.

Being in the Upper Midwest with cold snows, the lines we etch into a ski base are typically minimal, 0.01 to 0.02mm in depth. Linear structures continue to dominate for classic skis, while broken line structures (mostly) continue to dominate for skate skis. Interestingly, here at Finn Sisu, successful broken line skate ski structures have somewhat evolved to mimic a linear structure shape in that the groove width and length, and their spacing, have become narrower and longer.

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More than I would normally expect, a common variable called “grinding speed” appears to influence results. Playing with stone speed when grinding is nothing new, but when looking back at grind data, the cutting speed (meters/second) has been exactly the same on all recently, and some previously, tested successful structures.

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The shape of needles in the diamond dressing bit has recently evolved. A square synthetic five diamond needle shape has been added to the stonegrinder's tool kit. In the past, a needle was composed of natural diamond chips stacked, one behind the other, in one, three, or five rows. As of late, a solid, synthetic, rhomboid-shaped diamond needle of three or five rows has been introduced. This new square bit produces a slightly rounder, wider groove whereas the rhomboid bit produces a sharper, finer groove. Grind testing this winter produced good results using the square needle shape, with one of the structures making our grind menu.

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Grind structure is always evolving. As an example, over the last five seasons, structure evolution resulted from each previous season's best grind ideas being tweaked to create the next season's best. But, with that being said, there will always be grind ideas out of left field, yet to be explored.

— Tom Novak, Head Stonegrinder at Finn Sisu