

## SKI technology explained

*Rocker, or reverse camber, is finding its way into more and more skis.*

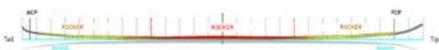
Excerpted Peter Kray, onthesnow.com.



Are you looking to buy new skis this season. To ensure you don't walk into a shop unprepared this fall, what follows is a Dictionary of Ski Construction Terminology.

### Rocker

Truth be told, rocker has existed since skis were first built with tips. The rise in a ski's shovel is technically rocker, and it helps the ski do everything from deflect cut-up snow and death cookies to provide a transition point on which to tip the ski into its arc.



Rocker, as it's marketed today, is simply an exaggerated rise in the ski's tip. Same with the tail of a ski, where increased rocker can make it easier to transition out of a turn.

Also commonly called early rise, reverse camber, and even pre-bent, rocker's exaggerated rise can make it dramatically easier to roll a ski into the turn without having to aggressively pressure the tip.

The more subtle the rocker or early rise, the more effectively a ski will grip the snow once it is put on edge.

The more pronounced the rocker, the more likely a ski is designed for hitting the kind of powder you find riding

snowcats or hiking out the backcountry.

### Camber

Camber is the upward flexing arc beneath a ski, and is the very design rocker is "reversing." By pressuring down on the camber, skiers exert pressure — and control — out to the ski's tail and tip.



Though some skis are built with only reverse camber or no camber, most new skis use some combination of rocker and camber as they seek the perfect blend of float and flex.

### Width

Even with all of that flexing and floating going on, a ski's width and sidecut still figure into the triumvirate of any design's most important ingredients. A ski's waist width — measured directly underfoot — still seems to be the most reliable barometer of what kind of terrain it is designed to hit.

Narrower skis are typically built for hardpack and lift-served conditions, where smoother surfaces make it easier to roll from edge to edge.

Fatter skis provide stability and a wider platform to even out the inconsistencies of deeper snow, especially in the windblown or wetter stuff.

### Sidecut

Sidecut, a.k.a. profile or shape, is a means of measuring the difference in a ski's width at the tip, waist and tail. Sidecut is frequently described as sidecut radius.

Imagine extending the arc of a ski's sidecut into a full circle. The radius of that circle is called a ski's "sidecut radius."

The smaller the radius, the sharper the turn — the more quickly a ski can turn, maintaining a shorter arc.

On the flipside, the less sidecut a ski has — or the larger the radius — the more comfortable it will feel in a longer or more relaxed turn radius. ◆

## more TERMS

### Core Construction

Ski manufacturers can radically alter a ski's weight and performance by using any number of wood, foam, metal and fiberglass layers between the ski's base and its topsheet. Foam cores tend to result in a lighter ski. Metal laminates tend to result in a stiffer ski. Heavier woods can contribute to a damper, more durable core, while lighter woods can improve a ski's spring and flex.

### Cap Construction

Cap construction, in which the top layer of the ski "caps" the core materials

from edge to edge, is often used in less expensive ski production. In many top-level skis, the materials are layered like a "sandwich." A mix can provide a combination of the torsional rigidity of a sidewall combined with the weight and cost savings of a cap.

### Bottom Line

There is a wealth of new skis hitting the slopes aimed at improving your experience. And while it's easy to get caught up in all the terminology, it's more fun to focus on the benefits. Check out the latest skis at [onthesnow.com](http://onthesnow.com).

If you've still got doubts, get out and try a couple pairs yourself. You'll be glad you did. ◆