

Choosing Skate Skis: Making Sense of the Atomic Pro Deal

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Picking skate ski gear can seem daunting especially to someone new to the sport. I wrote this to help folks sort through the choices.

The Atomic Line

The Atomic line has five different skate skis, the Worldcup, Race Skate, Pro Race Skate, Pro Skate and Pro Skate Combi. The names are a bit confusing, but here's how they line out.

- The Worldcup is their top of the line elite caliber ski introduced during the 2006 Olympics and refined since with a redesigned tip that makes it perform better in soft tracks. The side cut is 40/44/42/43 mm. This ski comes in hard and soft flex and warm or cold bases. This ski has the most options to choose from to fine-tune your ski selection and at 995 grams is extremely lightweight.
- The Race Skate is their high performance ski, which is ideal for citizen and high school racers. As the top of the line technology advances many of the innovations trickle down to this level of ski. Three or four years ago this would have been a top of the line ski. Weighing 1184 grams it is a very lightweight and responsive ski. The side cut is 41/44/42/43 mm. These are not available in warm or cold bases but they do have hard or soft flexes.
- The Pro Race Skate is a recreational skate ski good for novice and intermediate skiers. These skis come in one flex and one base type.
- The Pro Skate is a beginner skate ski and come in one flex and one base type.
- Pro Skate Combi is a combination skate and classic ski that splits the difference between skate and classic ski flex. It is a good ski for beginners who may not be ready (or wish) to use skate technique all the time or someone who wants one ski for both skate and classic techniques.

Note: The pro prices we get make the top of the line ski fairly affordable. The Worldcup retails for over \$400, but unless you are serious about racing you'll be getting features that won't make much of a difference in your skiing. The high-end skis are extremely light and more fragile than those at the lower price points.

Ski Flexes and Lengths

The Atomic skis present some options for choosing flex. For skating skis the flex of a ski is related to the forces created when you push off in the skate phase of the stride. Ski flex and length is determined primarily by your weight (see the charts below) and skiing ability. You may also want to consider the type of snow conditions you ski on (hard tracks vs soft tracks). Elite and expert skiers can be quite discerning when selecting skis and often rely on bench pressure testing to select a pair of skis. Bench testing is done in a ski shop. When we order from the factory we don't get skis that have been bench tested and selected specifically for our weight. The information here and the size charts that follow provide a guide for the rest of us.

Flex:

- The Worldcup and Race Skate come in two flexes, hard and soft, the other skis in the line don't so if you're looking to buy those you can skip this section. You'll notice in the size charts that there is overlap in the skier weight categories. This is to adjust ski flex and possibly length to skier ability and to some degree to snow conditions. For example with two skiers of the same weight, say 140 pounds both would choose a Race Skate ski at 186 cm length. If one is an expert he/she should choose a hard flex and if one were a novice/intermediate he/she should choose a soft flex. The soft flex is better for skiers with less refined technique and hard flex for technically more proficient and aggressive skiers. In another example these factors may lead to a different length ski for example a 160-pound skier may choose a 186 cm hard or a 192 cm soft. The shorter hard flex may be more appropriate for a novice/intermediate than the longer soft flexed ski. Some skiers prefer longer skis and can handle the extra length. Longer lengths can become problematic on up hills especially steep up hills where you may step on the tails of your skis.
- Factoring in snow conditions. The Atomic skis are known to work well in soft track conditions. While generally a soft flex works better on soft snow and a hard flex is preferred for hard track the overall design of the Atomic skis makes them work well on soft tracks. I have found the Atomic skis to also work quite well on very hard tracks. The snow conditions as they relate to flex aren't a huge factor in choosing flex, but something to consider if you'll be skiing in predominantly soft or hard snow conditions.

Bases

- Bases have structural differences to maximize performance on “warm” or “cold” snow. Warm snow is snow closer to the freezing point and higher humidity conditions. Cold snow is colder and usually drier. If you’re not an avid racer (and don’t need a quiver full of skis) and you are skiing primarily in the central or northern Rockies choose a cold base. This base will work fine in March when the snow warms up and will give better performance in December/January when it’s cold.

Skier height

- Not much of a factor these days, but if you are particularly tall or short for a given weight range you may want to adjust ski length up or down depending on where you fall on the size chart. Slightly shorter skis can be easier to handle for novices and as I said some advanced skiers can handle slightly longer skis.

Ski Sizing Charts

Atomic Worldcup Skate (proper fit for World Cup skis is best done at a reputable Nordic ski shop that can calculate ski mid flex and half weight values for the individual)

This chart provides a basic guide for choosing World Cup skis

Length	Skier Weight - soft	Skier Weight - hard
174	100 - 125	117 - 143
180	110 - 143	132 - 165
186	132 - 159	150 - 176
192	154 - 192	181 - 220

This chart (from Skinny Skis) for choosing World Cup skis emphasizes flex more than length.

General Rule Skier height and weight	Length
< 5’ 2”	174
Light skiers 5’ 2 – 5’ 6	180
Serious elite women around 5’ 4”	186
Women < 5’ 4” and > 140 lbs	186 hard
5’ 5” – 5’ 6” & >125 lbs	186
Men < 5’ 7”	186
> 5’ 7”	192

Now Select flex

- 1) Divide the skier's weight in pounds by 2.22 to get the weight in kilograms
- 2) Divide the weight in kilograms by 2.
- 3) For SOFT TO UNIVERSAL TRACKS add 19-22 to the number found in step 2.
The midflex number should fall in this range.
- 4) For UNIVERSAL TRACKS add 21-30 to the number found in step 2.
- 5) For HARD TRACKS or sprinting add 30 or higher to the numbers found in step 2.

Atomic Race Skate

Length	Weight
172 soft	85-105
172 hard	100-115
178 soft	105-125
178 hard	110-125
184 soft	120-140
184 hard	130-160
190 soft	150-170
190 hard	>165

Atomic Pro Race Skate and Pro Skate			Atomic Pro Skate Combi		Atomic Pro Classic	
Length	Skier Weight Range		Length	Skier Weight Range	Length	Skier Weight Range
172	100 - 143		189	90 - 120	182	121 - 154
178	110 - 165		196	115 - 140	189	121 - 154
184	132 - 176		203	140 - 165	196	132 - 165
190	154 - 220		210	165+	203	154 - 210
					210	132 - 220

Ski pole length

Skating poles should come up to between your mouth and your nose. A simple formula for determining pole length is height (in inches) x 2.3. Classic technique poles can be 10 to 15 cm shorter or to about the top of your shoulder. Don't use classic length poles for skating or skating poles for classic your technique will suffer badly.

Ski pole length (courtesy of Swix) Note this chart yields pole lengths a few centimeters shorter than the formula.

Height in ft/inches	Height in cm	Skate Pole Length	Classic Pole Length
4'11"	150	130	120
5'0"	152	132	122
5'1"	155	135	125
5'2"	157	137	127
5'3"	160	140	130
5'4"	162	142	132
5'5"	165	145	135
5'6"	167	147	137
5'7"	170	150	140
5'8"	172	152	142
5'9"	175	155	145
5'10"	178	157	147
5'11"	180	160	150
6'0"	182	162	152
6'1"	185	165	155
6'2"	187	167	157
6'3"	190	170	160
6'4"	192	172	162
6'5"	195	175	165
6'6"	198	175	170

Boots and Bindings

Atomic boots use the SNS (Salomon Nordic System). They offer two types of skate bindings Pilot and Profil. Each requires the matching boot (a Pilot boot won't work with a Profil binding). The Pilot binding offers the best performance though a novice or intermediate skier may not be able to discern the differences. The Atomic Pilot skate boots are compatible with older Pilot skate bindings.

If you've bought boots and bindings through Atomic in the past (when they used the NNN system) those boots are not compatible with SNS.

If you still have questions give me a call or send an email.

Drew