



EDINA ALPINE EQUIPMENT BUYING GUIDE 2016 - 2017

This equipment buying guide is intended as a general reference for our athletes, primarily those that may be new to ski racing. Individual circumstances may result in exceptions to these guidelines. Always consult with your coach if questions arise.

Buying Slalom Race Skis

Ski manufacturers make skis for specific skiing situations/use: powder, moguls, terrain parks, beginners, racers, etc. Ski racing is separated into four different events—Slalom (SL), Giant Slalom (GS), Super-G and Downhill - and each event has a ski made specifically for the type of turns required. The Minnesota State High School League and Edina Alpine race slalom (SL) exclusively. As a result, Edina Alpine athletes are best served with a slalom race ski. A GS ski is not responsive enough for a SL race course.

Athletes competing in USSA/FIS events must adhere to specific requirements for ski length and sidecut. While Minnesota State High School League generally follows [FIS rules](#), they currently do not place a specific constraint on equipment aside from helmet use.

If this is your first year competing and you only own recreational skis, we strongly recommend acquiring a dedicated SL race ski. SL race skis are specifically designed to redirect a racer's momentum quickly and efficiently while holding an edge under extreme forces. Recreational skis simply will not hold a turn in these situations, especially as your ability improves.

When possible, try to a ski before you buy it.

Junior Race Skis VS Adult Race Skis

It's important to determine whether you need a junior (jr) race ski or an adult race ski. Junior SL skis are typically designed differently from their adult counterparts and use different materials in their construction. Adult race skis are sturdier, heavier, and stiffer flexing than jr race skis. A less experienced, lightweight skier may find it difficult to turn efficiently on an adult race ski. Conversely, a heavier and more aggressive skier will "overpower" a jr race ski causing the ski to wash out during turns and possibly even break if too much force is applied.

As a general rule, only athletes weighing less than 125 pounds should consider a junior race ski. However, more aggressive lightweight athletes may need to be on an adult ski. Athletes over 135 pounds and more aggressive skiers, should be on an adult race ski.

To further complicate the process, not all race skis have the same flex and there is no industry standard measure a the flex of a given ski. Depending on the manufacturer, some SL skis are stiffer and others are softer flexing. Less experienced athletes and aggressive lightweight skiers should look for "softer" flexing adult ski. An experienced salesperson at a ski shop should be able to point you to the softer ski brands. Unless you're an exceptionally good skier with size and strength, avoid World Cup race stock skis.



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Ski Length

An athlete's weight and ability, more than height, determine the proper length of ski needed. Nonetheless, height is a factor. With that in mind, here are some guidelines. Females should not be on a ski longer than 155cm. Males should not be on a ski longer than 165cm. Adult SL skis are usually between 150 to 165 centimeters in length with a very short sidecut for the sharp turns necessary in a course. Junior SL race skis often have a maximum length of 150cm.

To determine the length you need, hold the ski vertically with the tail resting on the ground. The ski tip should generally be around your nose. If the ski tip is over your head, it is probably too long. If the tip is at or below your chin, it is probably too short.

Used Skis

Buying used race skis can prove cost effective but there are some caveats. When considering used skis, confirm the following:

Plenty of side edge left to sharpen/tune the skis. If the metal edge on the side of the ski is flush with the "sidewall" of the ski, keep looking. In addition, ensure the edge is securely attached to the sidewall of the ski. On occasion, the edge can become separated in small sections from the sidewall of the ski. Inspect the edges closely for any separation. If separation exists, don't buy it.

Condition of the bases. Inspect the bases. Are there gouges? Tiny ones are acceptable. Deep ones are not.

Top sheet is not separating/delaminating. The top sheet should be firmly connect to the base. If there is an issue, it will almost always be apparent at the tip of the ski. If the ski is separating, don't buy it. The tops of the skis do not need to be perfect, but the cleaner the top skin, the more likely the ski was cared for.

Condition of the bindings. Make sure the bindings are firmly attached. They should not wobble. your boots will fit into the bindings as they are mounted. If you have a size 12 boot and the previous owner wore a size 8, the bindings may not adjust to fit your larger boot without remounting. In such a case, a ski shop will need to remount the bindings on the skis, which adds an expense that perhaps makes the transaction less economical.



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Buying Race Boots

Boots are the most important piece of equipment you will purchase. This is where you should not skimp in terms of both time and money. As with skis, boots are made for all types of skiers and their many ways of enjoying the sport; from beginners to racers. Although it is not essential for Edina Alpine athletes to ski in a race boot, it will likely serve your needs better over the long term than any other style of boot. Again, manufacturers make both junior and adult versions. As with skis, junior race boots are not just miniaturized adult boots. They are designed differently for lighter, less aggressive skiers. Check with a good ski shop as to whether you are a candidate for a junior race boot. If so, you will save some money.

Here are some additional considerations when choosing a ski boot:

Getting The Right Fit

Fit is not the same as comfort. Boots should not be painful, but they also should not feel like slippers when you first put them on. If they do, they're most likely sized too large. A boot that is too large will allow the foot to move around inside the boots when trying to execute a turn, resulting in foot fatigue and imprecise movements. A good ski shop can usually modify boots to relieve minor pressure points. In the end, your boots must be comfortable enough to ski in for long periods of time.

Note: Most top-level racers buckle their boots TIGHT for their runs in a course. Once at the bottom of a course, they will hurry to loosen their boot buckles for the ride up the chair. Different brands fit people differently. What your friend or sibling has may or may not work for you. Take the time to try boots from different manufacturers to determine which ones fit your feet best.

Determining The Correct Size

It's very unlikely that your boot size will match your shoe size. The first thing to do when sizing a boot is to determine the boot shell size.

1. Remove the liner from the boot.
2. Place your foot (wearing only one ski sock) in the shell.
3. Move your foot forward in the shell until your toes just barely touches the front of the boot. You do not need to buckle the shell.
4. With your foot forward in the shell, check the spacing between your heel and the back of the shell. If you can fit one finger in the space, but not two, you have a "race fit." If two fingers fit the space, you have a "recreational fit". Any space greater than that and you will want to try on a smaller sized shell.

Once the proper shell size is determined, place the liner back in the boot and put on both boots.



EDINA ALPINE EQUIPMENT BUYING GUIDE 2016 - 2017

Note: Check the shell size on both feet. For some people, one foot may be as much as a full size larger than the other. In such a case, you will probably need to go with the size that fits the larger foot, unless the shop is confident that they can “stretch/modify” the smaller shell size to fit the larger foot.

Selecting The Correct Flex

This just may be the largest and most unrecognized issue with young ski racers. It has a huge impact on a skier's performance. Far too many racers ski with boots that are too stiff. Consequently, they have trouble getting pressure to the front of the ski when initiating a turn. Race boots are manufactured with a manufacturer determined flex rating: i.e., 90, 110, 130, 150. The higher the number, the stiffer the boot. However, flex ratings are not standardized across brands. Consequently, a 130 flex in a boot from Brand A could be similar to the stiffness of a 150 flex boot from Brand B. You must try them on and compare different flex between brands to determine which one is right for you. The more boots you try on, the more you will learn how differently boots flex.

Ski boots must flex at the ankle. Keep your boots flat on the ground while pushing your shins as far forward as you can into the front of the boot cuff. Adjust buckle tightness and make sure the power strap on the boot is tight. Does the boot flex forward? You should be able to see the shell flex (but not crush) where the cuff meets the lower portion of the boot. If not, the boot is probably too stiff. If boots can't flex in the warm confines of a ski shop, they will not flex in the cold on the hill.

Can a boot be too soft? Yes. Boots that are too soft will transfer energy from your muscles to the ski less efficiently, rendering the skis less responsive. If you can “crush” the shell of the boot, try a boot with a higher flex rating.

Heel Hold

Your heel must stay firmly in the heel pocket of the boot when flexing. If it rises, try tightening the boot. If it still rises, you will either need to have a ski shop modify the boot or look for a different boot. Wearing a second pair of socks is not a fix; never wear more than one pair of socks.

Calf Snugness

The cuff of the boot should fit snugly around your calf muscle so that when you press your shin forward into the front of the boot, the back of the boot moves forward as well. When flexing the boot, there should not be a gap between the back of your calf and the inside of back of the boot.

Shop Around

If there is ever a time to rely on the expertise of a ski shop, it is when purchasing a boot. Be sure you retain the services of the shop's most experienced boot fitters. If the salesperson does not generally follow the guidelines stated above, you are not getting good service. Try



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different brands. Walk around in them. Flex them. Wear them for at least 20 minutes with buckles tight, buckles loose. Boots can last two or three years...or longer, provided your feet don't grow too much. Purchase the best boot for your ability and foot shape.

Used Boots

Buying used boots can be done but should generally be considered the last resort. A used boot is broken in to the previous owners foot. As a result, this can cause issues with fit.

Some cautions:

1. Remove the liners. Note whether the shell and liner were modified in anyway. If so, this could leave fewer options to modify the boot for your needs.
2. Examine the soles of the boots. If the toes and heels are "rounded" as though they have been walked in on rough surfaces. If so, it may cause difficulty for bindings to operate correctly and/or create unnecessarily alignment issues.
3. Examine the condition of the buckles. Are any bent? Rivets missing? If so, ski shops can probably replace buckles but expect to fork out more money, which may make the purchase less economical.

(Originally written by Minneapolis Alpine Ski Team and modified/updated by Edina Alpine on September 21, 2016)