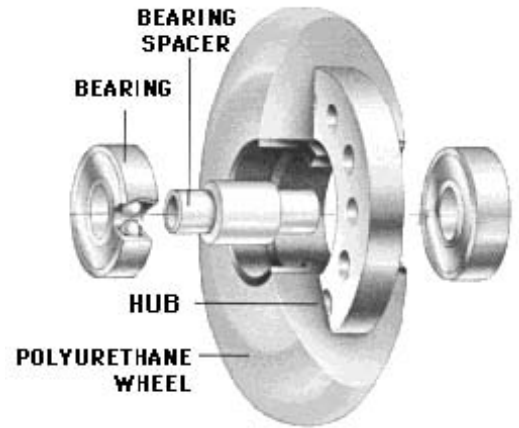




Inline Wheels FAQ

This sections contains useful information of inline wheels and maintenance.

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Technical Info

Most inline wheels are made from polyurethane. Wheels are classified based on diameter, hardness, rebound, profile and core. Some are even classified by weight.

However, most often you will see only the diameter and hardness printed on the wheels (e.g. 76mm 78A or 70mm 82A, etc.). You can tell the profile and core by visual inspection.

Wheel Diameter

The diameter of the wheel means simply how tall the wheel is. The most common diameters range from 43mm to 80mm (and now 100mm on some speed skates). The most common sizes you'll come across for recreational skates are 72 and 76mm. Speed skaters tend to use 80mm (or even 100mm) wheels, although 76mm's are used too, depending on the skates, racing course and distance. Vert/ramp skaters use small wheels with a high durometer to do rail slides. These range from 43mm to 76mm, depending on the skating situation (vert, ramp, rails, etc.).

Generally, racing skates will fit up to 80mm wheels, high-end skates up to 77mm (sometimes 80mm now), and the rest of the models up to 72mm. Although these are the designated max-sizes, skates can often take slightly taller wheels than the official specifications.

In general, larger wheels will let you cruise faster but take longer to spin up. Larger wheels also tend to be less maneuverable than smaller wheels. Smaller wheels can be cheaper, but in general don't last as long since they have less material to wear down overall.. However since many of the small wheels are for stunts, they all tend to be sold in higher durometers anyway (they slide better), so they won't necessarily wear out that quickly.



Durometer

Durometer is a relative hardness measure frequently used for rubber and plastic products. There are several scales, with the "A" scale (hence the 78A, etc.) used for wheels. The number is the rating from 0-100, with 0 being no resistance and 100 being very hard.

As a general rule, 78A is the most common hardness used for recreational skates. It offers a good balance between quality of ride and length of wear.

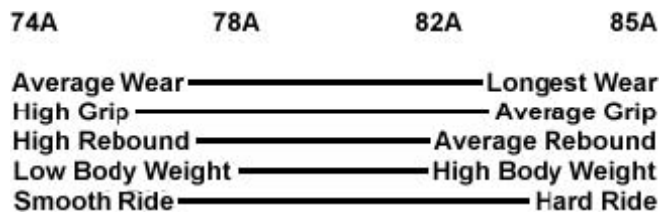
Outdoor hockey players need to be looking at 82A - 88A.

Recreational wheels generally run from 74A to 82A. For outdoors, the softer the wheel, the better the shock absorption. The trade-off is that softer wheels wear out faster. Harder wheels, since they have less drag, are preferred on indoor surfaces which are usually very smooth (e.g. hockey).

Some skaters vary their wheel durometer depending on the temperature outside. Cold weather will mean the ground is harder so soft wheels are more suitable. In really warm weather the road might start literally melting, in which case a high durometer setup would be more preferable.

Indoor hockey favours softer, very grippy wheels 72A to 76A would be the normal range. 74A would be the most popular durometer on wood and sports court surfaces.

Aggressive skates will be using 88A or harder for ramp, street and grinding.



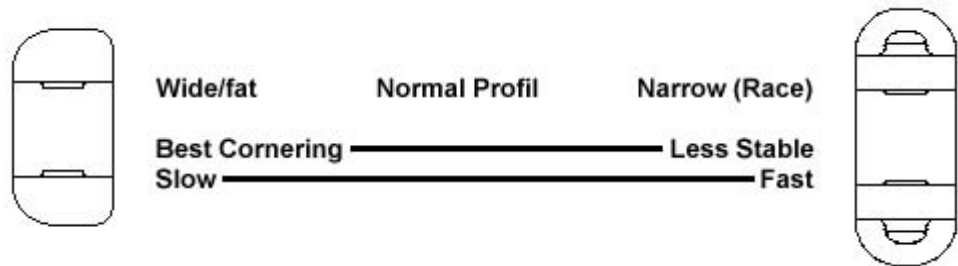
Rebound

A higher rebound will provide more response on each stroke. Rebound is referred to as low, medium or high. The rebound labeling seems to have been phased out as not many people seem to compare wheels based on this feature.

Profile

The profile of a wheel is defined by the cross-section of the wheel where it meets the ground. All wheels are 24mm thick as an industry standard, but the variation in a wheel's "footprint" is what provides different functionality. The larger the footprint, the greater the traction and stability.

Many made-for-hockey wheels tend to have a wide footprint for those sharp turns. Racing wheels on the other hand, tend to be more tapered near the edges. More recently, FR Progressors has developed an asymmetrically-profiled wheel, to help align on curbs or rails. It's the wheel in the left. A normal aggressive wheel looks like the one on the right.



Hubs/Cores

The hubs or cores (either term is okay) are very important to the overall performance of the wheel. The core is everything other than the wheel material. The core holds the bearings and connects to the wheel material. Some wheels are open core (spokes showing), closed core (spokes covered), or no cores (real small wheels don't really need cores.) If the bearing core is slightly too large (as it often is for shoddy wheels), it will not hold the bearings tightly enough. This can allow the wheel to become

Misalignment is a serious problem, not only because it causes drag, but because it heats up the wheel. This will soon cause it to separate from the hub and expand, and eventually destroy the wheel.

The first sign is that the wheels creak as you switch your weight on the skate. If you remove the wheel from the frame, you can see an arc clear of dirt and dust where the wheel was rubbing. If you notice this, put your hands on your wheels after a long fast skate

"cocked" so that it rubs against the frame. Only one and see if any of them are much warmer than the wheel needs to be out of alignment to mess things others. If so, they are probably rubbing. up.

Closed Core

Tri-Spoke Core

Racing Core

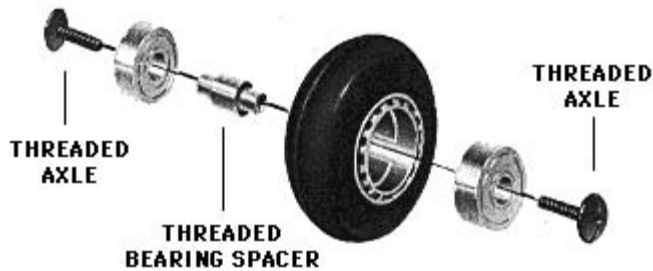
**High Wheel Weight
Longest Wear**

**Low Wheel Weight
Average Wear**

Axle Kits

Another important aspect of your wheels is the axles. There are several axle replacement/upgrade kits designed to let your wheels roll much faster than your stock axles will allow. These kits are usually made of aluminium or steel. They consist of is two axle bolts per wheel, each screwing into the threaded spacer in the wheel (the part that is sandwiched between the bearings).

This prevents over tightening, which is common with regular axle systems, and will allow your wheels/bearings to spin freely. When putting your wheels back, make sure the wheels are just snug enough so they don't move around. Anything more just increases the friction on your bearings.



Maintenance

Wheels of any durometer will wear out, given enough mileage. There's only so much polyurethane on your wheels, while there's thousands of miles of asphalt out there. Much less wear occurs for indoor skating, however. In general, your wheels are due for maintenance when your skates are much slower and not rolling as smoothly as when new. The inside edges will wear more quickly, which you will eventually notice:

There are several patterns for wheel rotation. The one you use isn't crucial, since there's no "magic" rotation formula that works for all situations. The main point is to maintain an even wear on your wheels. Often times you may find yourself swapping wheels at random until you get a good wearage distribution on your skates.

Some common rotation patterns:

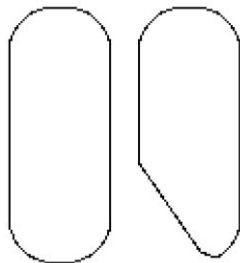
The front wheel is "1" and the back wheel is either 3, 4, or 5.

For 3-wheel skates: 3->2, 2->1, 1->3

For 4-wheel skates: 4<->2, 3<->1
OR 4->3 3->2 2->1 1->4

For 5-wheel skates: 5->3, 4->2, 3->1, 2->5, 1->4

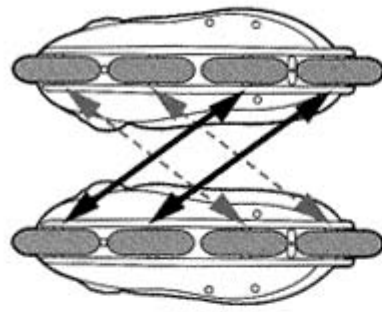
OR 5->3, 4->5, 3->2,
2->4



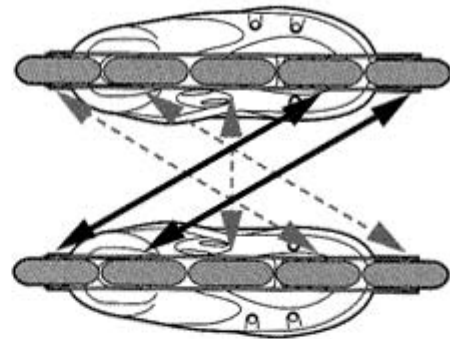
There are two things you can do to get the most from your wheels: rotate and flip. Rotating your wheels means to switch the positions of the wheels. Different positions (like the heel or toe wheels) receive varying amounts of wear. By rotating the wheels, you can even out the wear on each wheel. Flipping your

While you're rotating and flipping your wheels, you might as well wipe off your skates, rails, wheels and bearings with a damp cloth. Some people wipe down their skates every time they go out, even if they don't do any rotation, but I recommend you do it at least every time you rotate your wheels. This keeps the

wheels means to turn each wheel so that the worn edge now faces the outside. This lets you wear down the other edge of the wheels.



amount of dirt on your skates and wheels to a minimum, which helps keep grit out of your bearings.



Rockering Your Skates

Rockering your skates mean a big thing about control, cornering ability, speed, grinding, stability, maneuvering, and lot more. Here's a list of some ways you can setup up your wheels:

Rockered: This setup places the two center wheels lower than the outside wheels. This is the least used wheel setup, and is only utilized by some of the top vert skaters who feel that it gives them added control in the transition on ramps. This setup is great for improving cornering ability, but it cuts down on stability and speed because of the narrow wheel base. It is also next to useless for grinding, because it has no space between the middle wheels.

Standard Flat: This is the setup that most skates come with-- large (70mm), soft (80A) wheels lined up evenly with each other. This type of setup is good for jumps, stairs, and ramps because of the stability of the long and flat base. The large, soft wheels also give a smooth and fast ride. However, this setup isn't used very often because it is not well-suited for the foundation of aggressive skating- grinding. The small space between the two middle wheels (except on skates with a split setup such as K2 and Roces) makes it impossible to grind unless wraparound grind plates are used. And since wraparounds don't offer a big groove to lock in with, they don't give a stable grind.

All Small: This setup is similar to the standard flat setup, but with one major difference-- instead of large, soft wheels, smaller and harder ones are used. (55mm, 90A) This setup solves the grinding problem of the standard flat setup by using the smaller wheels to make a nice sized gap for grinding. Also, since the setup is flat, it gives good stability. However, by using all small wheels, the ride is a bit rougher and slower than the standard flat setup.

Flat Rocker: A flat rocker incorporates the speed of a standard wheel setup, the grinding ability of a small wheeled setup, and the stability of a flat base. To achieve a setup like this, the outer wheels should be about 55mm, and the inner wheels at around 52mm. The middle wheels are then rockered down to make them level with the outer wheels. The major disadvantage of this setup is that the medium sized middle wheels don't offer a big enough grinding space for large rails or curbs.

Anti Rocker: This is the mainstay of aggressive skating. This setup consists of large (65mm) wheels on the outside, and tiny (45mm) grinding wheels in the middle. Using the large outer wheels retains some speed and smoothness, while the tiny middle wheels supply a huge grinding space that allows the skater to grind virtually anything and everything. The only big disadvantage to this setup is the loss of stability. By removing the two middle wheels, the skater loses some control and maneuvering ability. The majority of aggressive skaters see this as an acceptable tradeoff, however.