Roller Skate Wheel Guide

When choosing skate wheels there are a number of factors to consider. This includes what type of skating is being done, the surface that is being skated on, the skaters size, and the skater's experience. Due to the variability of these factors, there really is no 'one size fits all' or defined set rules to picking out wheels that will be perfect for every situation. What works for one person may not work for another. However, a good general pick that works for roller derby is 59mm height and 38mm width wheel, with a durometer ranging from 88A - 98A, depending on the floor. A durometer of 78A for outdoor skating would be advised. For more detailed information, keep reading… there is more to wheels than you might think!

Durometer

The durometer rating refers to the hardness of the wheel. An outdoor wheel, which is generally one of the softer roller skate wheels, will typically be 78A. The durometer can go up into the low 100s, with higher numbers denoting harder wheels. Skaters find the durometer rating for most wheels on the side, where "A" always follows the number for urethane wheels. So, in short, 78A wheels are softer than 98A wheels. Softer wheels are more grippy and also good for rolling over rough road and debris, where harder wheels are better when the surface might have a little tackiness or grip and you don't want your wheels catching on the floor.

You want to try to match the hardness of the wheels to the level of grip on the floor. If the floor is slippery, you'll want softer, more grippy wheels. If the floor is sticky/grippy, you will need harder, more slippery wheels.

Beginners often do better with a little softer wheels because it helps them feel a little more in control, but there are some skills that do require the ability to have slide, so outdoor wheels are not always best to use indoors.

- 78A (really soft): Super grippy, used almost exclusively outdoors.
- 84A (soft): Hybrid (indoor/outdoor) wheels are usually 84A. They are great for really slippery floors and can be used outdoors. Often a good choice for your first wheels since they are grippy, affordable and versatile.
- 86A - 88A (soft): Super Grippy, great for slippery floors like polished concrete or slippery wood (community centers, gymnasiums). The softest indoor wheels available are between 86A and 88A.
- 90A - 93A (medium hard): Average Grip. Great for reasonably grippy floors, including grippy polished concrete or sportcourt.
- 94A - 96A (hard): Low level of grip. Great for stickier floors like good quality sportcourt.
- 97A-100A (super hard): Only appropriate on super sticky floors like rubberized gym floors or some roller rink floors.

**Wheel Sizes**

Wheel size can vary considerably depending on the width (profile) and the height of the wheel. Smaller wheels are often better for artistic or dance due to the ability to easily maneuver them. The wider and larger wheels are great for indoor speed and outdoor traction. A wider wheel can often be better for beginners since it gives a larger surface area to balance on.

**PROFILE (WIDTH) EXPLAINED:**

The profile (width) of a wheel affects how much surface area is in contact with the floor. Generally speaking, this will affect the grip and speed of the wheel. Wider wheels are more stable but also heavier and less agile, while narrower wheels are less stable, more agile and lighter. Preference and end use typically come into play when making choices on width. (different manufacturers may have different widths - this is a selection)

- 31mm (super narrow): Wheels like these offer amazing agility and are often super light but do not offer as much stability or grip as wider wheels. Not good for beginners.
- 35mm (narrow): A nice step between 31mm and 38mm wheels. Once again probably not the best choice for beginners.
- 38mm (slim): A very popular width for derby as they provide a great balance of agility and stability. Great for all skill levels.
- 44mm (wide): Very stable but a little clumsy. Due to the larger surface area, wide wheels provide better grip than narrower wheels (for the same diameter and durometer). Good for beginner skaters.

**WHAT DIAMETER WHEELS ARE BEST FOR DERBY?**

Wheel size generally refers to the diameter of the wheel. Manufacturers make wheels in different sizes. The type of wheels that skaters need depends on the type of skating. In general, taller wheels are faster, but also less stable and heavier. Therefore, smaller wheels are lighter and more stable, but tend to be slower. The most popular wheels used for roller derby are either 59mm or 62mm tall. If you are a beginner we recommend you stick to one of these sizes.

- 59mm (derby): great wheel size for derby. 59mm wheels are slightly smaller than the standard (62mm) which makes them lighter and more stable yet still fast enough.
- 62mm (derby): Standard derby size - most common wheel size for indoor wheels.
- Wheels bigger than 62mm are generally used for outdoor skating. Tall wheels are fast but too unstable for derby skating.

Recreational skating falls in the middle. Widths range from 30mm-42mm and height from 55mm to 70mm. Beginner skaters usually choose smaller wheels because they limit speeds, preventing accidents in the learning process. When purchasing wheels, a skater should take into account the skates' frame capacity, the size of the wheels that the skate frame can handle. This information is on the skates or in the skate manual.

WHICH DERBY WHEELS ARE BEST FOR HEAVY WEIGHT SKATERS? (OVER 200LBS)

More Grip: Heavy weight skaters will get more grip from their wheels than average or light weight skaters will. You may wish to go one step harder in durometer to compensate. For example if, on your floor, skaters with an average build tend to ride 90A to 93A, then you may wish to try wheels between 93A and 95A.

*Some heavy weight skaters choose to go two or more hardness levels. Start with one step and take it from there.

Wheel Flex - Rigid Cores: When skating some of your stride's energy is lost into the flexing of the urethane tire and core of your wheels. This is called "wheel flex" and can make it feel like you are skating in molasses. Due to extra body weight, heavy skaters suffer from this phenomenon worse than others, so it's important for heavier skaters to get wheels with larger rigid cores. Solid aluminum cores are the best, but any high quality super rigid core will do the trick.

WHICH DERBY WHEELS ARE BEST FOR LIGHT WEIGHT SKATERS? (UNDER 120LBS)

Less Grip: Light weight skaters will get less grip from their wheels than average or heavy weight skaters. You may wish to go one step softer in durometer to compensate. For example if, on your floor, skaters with an average build tend to ride 90A to 93A, then you may wish to try wheels between 88A to a 90A.

WHY DOES THE WHEEL CORE MATERIAL MATTER?

Solid Aluminum: In terms of performance these cores are the very best available. They are ultimately rigid and offer superior energy transfer. They tend to be a little on the pricey side. The only downside of this type of core is the weight.

Nylon Cores: Most affordable wheels have spoked nylon cores. These are light but less rigid. This means poorer energy transfer during skating, which translates into a slower more sluggish feeling. As explained above this is especially true for heavier skaters.
**Hollow Cores**: These are somewhat in-between spoked nylon cores and aluminum cores. Usually around the $100 price point for a full set, these wheels are light with minimal wheel flex. The capped cores are nice and rigid even for heavier weight skaters. These cores are made of various materials including nylon, fiberglass and other high quality plastics.

Wheels can vary in prices, but a good set of wheels can last a long time, and can even be re-treaded if they wear down. A good set of wheels can cost around $30 - $50 for a set of 4 without bearings. Keep in mind when purchasing wheels that they need bearings - so purchase wheels that have bearings already in them, or you need to buy bearings as well (which generally start ~$25 for a set of 8 wheels, and can get up into the $$$ if you want to spend the money)

**Sources on where to purchase wheels** (and potentially other items):

*Hit This! Derby Gear* (store in Salem - by appointment) [https://www.hitthisderbygear.com](https://www.hitthisderbygear.com)

They are a great local resource and can fit you properly with skates if needed.

*Derby Warehouse* - online store - Sick Town has a discount code that can be used to save 10 - 15% on certain items (unfortunately, not everything) - use SICKIESK8 at [https://www.derbywarehouse.com](https://www.derbywarehouse.com)

*Facebook group* - Roller Derby Recyclables - you need to join - a page where people buy and sell all things related to skating (not necessarily just roller derby). It’s a good place to potentially find deals, but it’s also a place you could over-pay if you don’t know pricing… so do some research! I don’t advise purchasing skates here unless you know how the sizing of that brand works, and you are familiar with how they fit you. However, you might be able to get some used wheels at a good price.

*Amazon* is always an option. Know your brands and qualities.

*The Uprise or Play it Again Sports* are local stores and may carry wheels.

There are a number of online stores that will carry equipment… just do proper research.

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Some of the information in this document is collected and adapted from rollergirl.ca and oliisskateshop.co.uk