

# HOCKEY STICK & SKATE SPECS

Josh Kern



## STICK FACTS

### CURVE

Most hockey sticks come with a low lie, mid-toe curve, grip feel, and with an open-faced curve. This allows the blade to be universal, so players can use their full blade from heel to toe quickly and efficiently but still have plenty of room on the backhand side. Blades are curved at the heel, toe or middle of the blade. There are many different curve pattern names amongst the leading stick manufacturers: **BAUER - P28, CCM - P28, WARRIOR - W28**



### SHAFT FLEX & SIZE

When choosing a new stick, the first thing you should do is bend it (this is called flexing your stick). You want to get a good feel for the “flex” of the shaft. The proper stick flex should allow a player to bend the shaft without too much effort. A stick flex that is too stiff will decrease the puck feel. All one-piece sticks can be cut shorter or have an extension add to make the length longer. This changes the flex of the stick. **The shorter a stick is cut, the stiffer it becomes.** There are many different shaft sizes and shapes per flex so be sure the shaft size is a good fit.

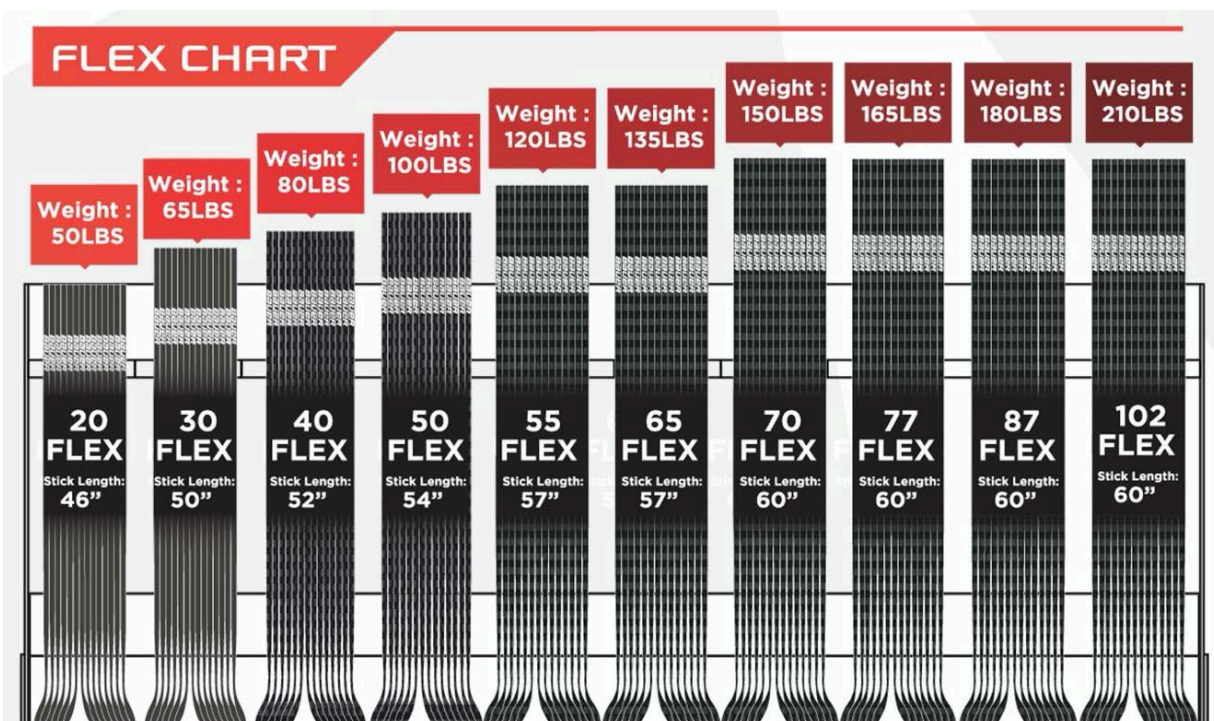
LOW KICK POINT  
Quickest Release



MID KICK POINT  
Maximum Power



VARIABLE KICK POINT  
Most Versatile



# HOCKEY STICK & SKATE SPECS

Josh Kern



## KICK POINTS

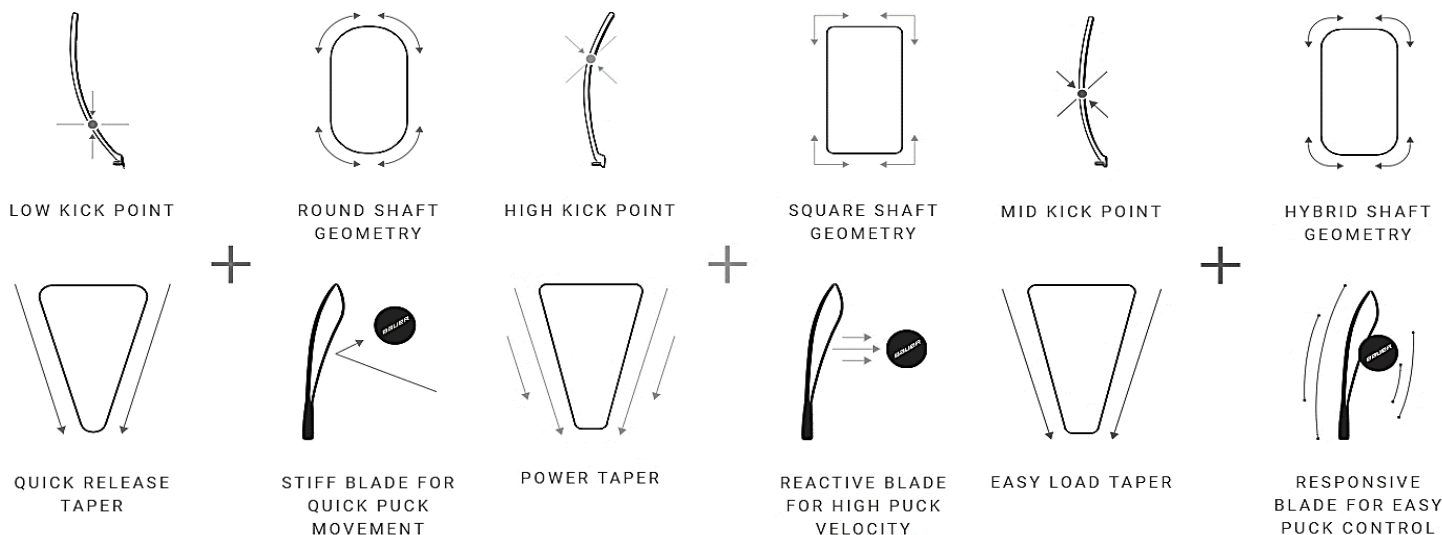
The kick point is where the shaft flexes when enough pressure is applied to bend it.

- **High & Mid kick** point sticks have a more traditional flex that allows the stick to be loaded from the bottom hand. This gives you a larger loading and potentially a higher velocity release.
- **Low kick** points on a shaft produces a quicker release. The loading of the stick happens sooner since there is less distance for the stick to bend before it recoils back and whips. This lower kick point is often created with shafts that have tapered ends near the blade.

### QUICK RELEASE FORMULA

### POWER FORMULA

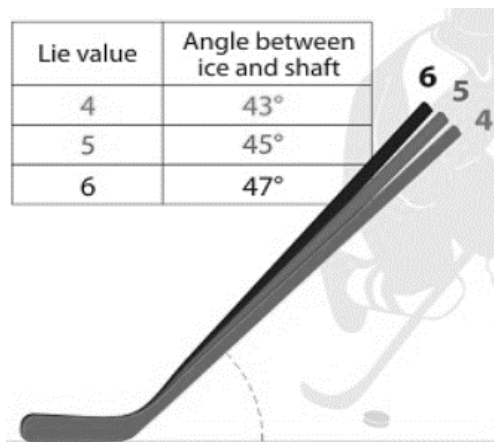
### VERSATILITY FORMULA



## LIE (6.0, 5.0, 4.0 – high to low)

The hockey stick lie is the angle between the blade and the end of the shaft. Lower lie angle sticks are good for players who skate very low to the ice. Higher lies are for players who skate upright and carry the puck close to their skates. If only the toe of your blade is touching the ice then you are using the wrong lie. You want the mid-heel of the blade on the ice and so that the blade can flex with power. Today, many sticks on the market are now made with a universal lie, meaning most players use a 5.0 stick lie.

Lie value	Angle between ice and shaft
4	43°
5	45°
6	47°



## GRIP & KNOB

In today's market, most players purchase a grip shaft. Players typically tape the knob of their hockey sticks to give themselves better feel and control of their stick and to even out their overall stick lie. You can also purchase a butt-end knob that is made from rubber and offers many different styles for players and goalies. Players at the younger levels due to their hand size, should not use any type of knob as you want your top hand positioned at the very end of your stick, **not choking up at all.**



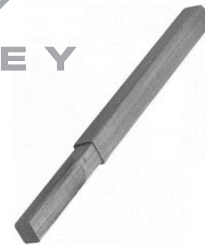
# HOCKEY STICK & SKATE SPECS

Josh Kern



## BUTT-END PLUG

Butt-end plugs are wood extensions that are glued into the butt-end of a composite shaft and are used to increase the length of a hockey stick. End plugs come junior and senior sizes and are pre-glued already on the end to be heated and inserted into the shaft.



## WEIGHT

The weight of your stick is very important as you need to maneuver it into position quickly. You don't want to be lugging around a stick that is too heavy, this is especially important for youth and junior players (the lighter the stick is, the more expensive it gets). A lighter stick allows you to shoot and pass quicker while getting a good feel for the puck.

## LENGTH

Stand without skates on and place the toe of the stick on the ground between your feet. Position the stick against your body so that the stick touches above your nose (between your eyes). Make a mark and this is where you should cut the stick. When you have your skates on, **your stick should then come between the bottom of your nose and chin**. Hockey stick rules aren't set in stone...you need to find a hockey stick that is comfortable for your own personal style of play. Don't worry about all the guidelines that you hear, use a stick that you are comfortable and productive with.

## TAPING

Sit down in an upright position and place the stick between your legs. Then grab your stick with one hand at the point where the shaft and the blade meet. Peel back a piece of hockey tape. Start at the top of the blade closest to the shaft (heel) of the stick. Your tape should spiral (wrapping around from top to bottom vertically) from the heel to the toe of the blade overlapping between a 1/2 and a 1/4 of the width of the tape for every rotation around the blade. The tape should be applied thinly and evenly across the entire blade. Most players like to cover the toe of the blade and then take a pair of scissors to remove the remaining tape left at the very end of the blade. When removing your old tape from the blade you can either use your hands, scissors or tape tiger (see pic above).

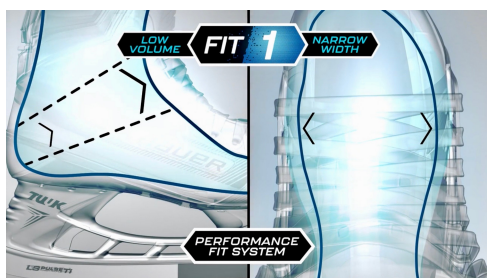


## SKATE FACTS

### TYPE OF SKATE

There are (2) two main skate manufacturers: Bauer and CCM. The fundamental differences in the manufacturing company's skates is the position of your foot and weight distribution in the skate and its relative position to the ice. Each skate company offers different models (narrow, wide, height, stiffness, etc.) that are designed for the type of foot you have (high arch, flat footed, wide ankle base, etc.).

- **Bauer skates** currently has three skate lineups. The **Vapor lineup** is an anatomical fit, designed to get players up on their forefoot for quick cornering and ultimate maneuverability. The line is also designed for players with a low arch. The **Supreme lineup** is designed with straight line speed and maximum power transfer in mind, and for players with a medium arch. The **Nexus line** blends the Supreme and Vapor technologies, and is built for players with high arches and wider feet.
- **CCM skates** also has three distinct lineups. The **Jetspeed lineup** boasts a one piece boot for a super lightweight skate and great power transfer. The **Ribcor lineup** has just been revamped for this year and we will have to wait to see some reviews before we dive into detail too much. The **Super Tacks** lineup is more about comfort and fit but still delivers amazing performance.



# HOCKEY STICK & SKATE SPECS

Josh Kern



## SIZING

Players that are committed to improving their skating will purchase the name brand skates that offer a stiffer feel. Skates that will fit your player with no more than 1/4" to 1/2" allowed between the heel of your foot and the back of the boot (**you should be able to slightly touch your big toe at the top of your boot**). Insure that your player is fitted correctly, or it affects their ability to skate.

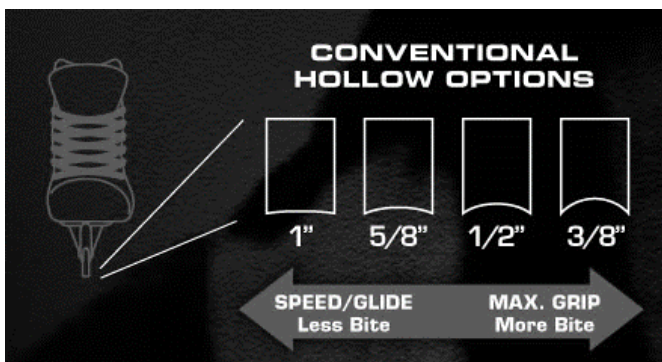
## SHARPENING

All skates possess three edges: inside, outside, and flat. It is important to have your skates sharpened at the right cut, hollow, or sharpness of the edge. The most common radius of hollow (ROH) choice for hockey players is 1/2". The next most common in the NHL is 5/8" or 1/2" ROH. Beginner and recreational skaters should use 1" ROH depending on the type of ice (outdoor/indoor soft or hard). For a better glide and increased speed, skaters select a higher ROH's (1" or higher). More friction and control, skaters choose lower ROH's (3/8" or lower). Goalies (not all of them) keep their skates somewhere between a 3/4" and 1-1/2" ROH.



**The common sharpening depths** (also known as a hollow) are designated in fractional inches such as 3/8", 7/16", 1/2", 5/8". Beginners should use a 5/8" cut so that you are able to feel every edge (inside, outside, and flat).

- **Deep Hollow** (3/8", 1/2", 5/8") allows for a more pronounced edge, which makes for tighter turns and more bite for stopping. The flipside is the deeper hollow makes the blade sink deeper into the ice causing more drag and less glide. Players with a deep hollow must work harder because of the friction between ice and blade. The more pronounced edges of a deeper hollow may chip easier and require more maintenance. Players who maneuver in traffic or stop and start a lot may feel more secure with a little extra edge and may prefer a deeper hollow.
- **Flat Hollow** (3/4", 7/8", 1") is more conducive to heavier players. The less-pronounced edge allows for more glide because the blade doesn't sink as deeply into the ice. Players using less hollow will use less energy. The flatter hollow blades are easier to sharpen and need less maintenance. There certainly is a general misconception that sharp skates can only be achieved with a deep hollow.



## TYING

When purchasing a new pair of skates make sure they have been heat molded before lacing them up for the first time. Once they have been molded to their feet it will make the skates easier to lace-up. There are two types of laces you can use: waxed or wax-free. If you use the waxed laces it will make the skates tighter and easier to lace-up. If you use the wax free laces, it's just as easy to lace-up but you get a looser feel. You want your skates to be tight but not too tight. Make sure that the skates are comfortable but are tight enough around the ankles for maximum support. **Do not wrap your laces around your skates.** This prevents your ankles from bending and moving. Purchase the correct skate stiffness and size of laces.

# HOCKEY STICK & SKATE SPECS

Josh Kern



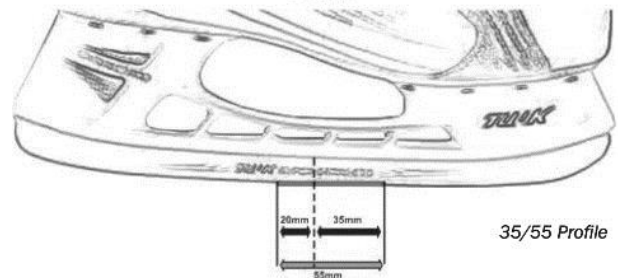
## PROFILING

The biggest improvement a player can attain from their equipment is quite possibly a properly profiled and sharpened pair of skates. When profiling skates you create a flat point of blade or Gliding surface. This flat area can be lengthened or shortened according to your style of skating or body position. This gliding surface allows you to push off with more thrust and attain more stability when turning aggressively.

By profiling flatter blade contact with the ice, you can distribute your body weight more evenly over a longer surface as well as reducing downward pressure into the ice. This means that friction between the blade and the ice is being reduced as we sit more on top of the ice and sink less into it. This allows you to glide further between strides as well as generating increased energy. A shallow hollow will allow easier turning ability and better gliding characteristics. You sink less into the ice with a flatter hollow, with a profiled blade. This will allow you to maintain maximum control and thrust. An example of a shallower hollow would be a 3/4". A profiled skate with a deep hollow would create drag and be detrimental to quick turns as well as creating stress on the knees and ligaments.

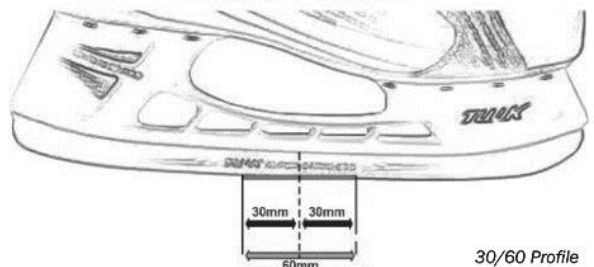
### Forward Lean Position

Notice that the blade is ground flat more forward of blade center to reflect a skater that utilizes a more forward lean style. This would indicate the region of blade that is most used for push-off and gliding. If the blade flat sits too far forward the player will not be able to transition off of the flat during the toe extension cycle of the stride.



35/55 Profile

### Neutral Position



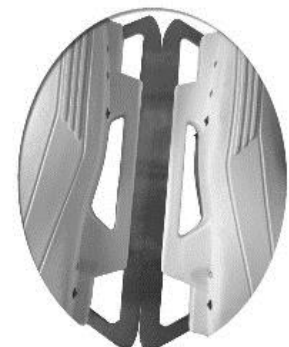
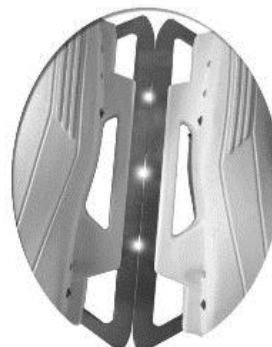
30/60 Profile

Notice that the blade is ground flat in equal measurements in front of and back of blade center to reflect a skater that utilizes a more upright skating style. This would indicate the region of blade that is most used for push-off and gliding as being directly under the arch of the skater.

### Why Profile Goal Skates?

Goal Skates before Profile

After Profiling



Blade Size	Players Position	Profile Setting
10-13	Forward	15-25
10-13	Defence	15-30
1-3	Forward	15-25
1-3	Defence	15-30
4-6	Forward	20-35
4-6	Defence	20-40
4-6	Leaning Forward	25-35
4-6	Leaning Defence	25-40
7-8	Forward	25-40
7-8	Defence	25-45
7-8	Leaning Forward	30-40
7-8	Leaning Defence	30-45
9-10	Forward	25-45
9-10	Defence	25-50
9-10	Leaning Forward	35-50
9-10	Leaning Defence	30-50
11-12	Forward	30-50
11-12	Defence	30-60
11-12	Leaning Forward	40-60
11-12	Leaning Defence	35-60