

## Stick Technologies

by Dan Torretta – 6/8/20

Round grips, oval grips, curved shafts, Kick Zones, Tip Curves...there are so many options when it comes to variations of floorball sticks. Hopefully, I'll be able to clear up any confusion about these technologies and what they try to accomplish. Once again I have to disclaim that I'll only be going into the brands that FloorballPlanet carries (Salming, Fat Pipe, Oxdog, and Exel), but in most cases all the companies have their own version of the same innovation so nothing should be left out. I'll start with the latest trend -- ultra-lightweight sticks.

Currently in the floorball world there seems to be an arms race centered around who can make the lightest possible stick. I weighed the lightest stick of each brand in the shortest length that FloorballPlanet carries and here are the results:

Fat Pipe Raw Concept 96cm: 6.9 oz

Oxdog Hyperlight 96cm: 6.3 oz

Salming Powerlite X 96cm: 6.9 oz

Exel Gravity 101cm: 7.8 oz

Oxdog's Hyperlight is the clear winner coming in more than a half ounce lighter than the rest. Is it right for you though? I have heard complaints that these sticks are TOO light, specifically from players who primarily play defense. These players generally take shots from further away from the goal and don't feel they get enough power behind the shot because of the lack of weight. The players that can most take advantage of the light weight are wingers who are up in front of the net and rely on quick hands to deke around defenders and the goalie. There are also wheelchair floorball players who like to have the lightest possible stick because it helps them play their style of floorball better than heavier sticks.

Let's move on to the debate about grip shape. The types of grips I'm aware of are round, oval, D-Oval, and square. They're all pretty self-explanatory, the only difference between oval and D-Oval is a slight difference in shape at the top. In my experience D-Oval and regular oval don't feel any different. If you like oval grips, then either one will suffice. The oval grip shape is achieved in a couple different ways. The most common is that the shaft is made as an oval shape instead of a circle. Salming traditionally offers round shafts but their OvalFusion transitions from an oval at the top of the grip to round farther down the shaft. Fat Pipe puts foam tape on the top and bottom of a circular shaft to transform it into an oval. This feels wider than a stick that has an oval-shaped shaft. There is also an "oval grip kit" available which can be either plastic or foam tape. Simply place the material on the top and bottom of the shaft like what Fat Pipe does and your stick will become an oval grip. I personally don't like this version because changing your grip tape becomes more difficult trying to not rip the foam tape as you take off the old grip (unless you have extra foam tape as well in which case you can rip it all up and start from scratch). The square shape is a bit more of a niche geared toward hockey players. Generally, the argument is round vs oval and everything else is a twist on the classic oval shape. Whether you should use round or oval is pure preference, I find that once a person makes up their mind about one, they hate the other.

The next technology we'll cover is the Stick Balance System (SBS). This is exclusive to Oxdog sticks, and only some models carry them (when it was first released almost every model had it). With these sticks you're given a 20 gram weight in the cap of the stick which can easily be removed with a Philips head screwdriver and replaced

with a lightweight plastic piece. The idea is that you can change the weight of your stick (albeit very slightly) and change the balance point. Honestly almost everyone I talked to about it didn't feel a difference. Most players left the weight in the cap because it was there when they bought the stick. The plastic piece got lost more often than not, so players that wanted to take the weight out didn't replace it with anything leaving an empty slot in the cap. There might be some diehards that swear by this system, but I think it was a flop. I like to see companies experiment though, so I don't hold it against Oxdog for trying. I definitely wouldn't buy a stick for the SBS, but I also wouldn't avoid it if you happen to like a stick that has it.

The most intriguing stick technologies, in my opinion, are shaft modifications. This includes stiffeners and curves that all try to accomplish the same thing: harder shots. I'll break down the curves first. Exel and Oxdog have the most noticeable curved shafts. Both offer sticks with a huge bow.



This differs greatly from Fat Pipe's version which is a much more subtle bow, and from Salming's "Tipcurve" which is a slight 1-5 degree curve above the blade. Oxdog also offers a tip curve on some stick models.



Despite the drastic difference in appearance the final result is the same – provide the optimum angle between the blade face and the floor. The curve makes sure that even when you're running with the ball, the blade is always facing forward, not angled down toward the floor. The idea is that you get more of the blade behind your shot which in theory gives you more power. Some players think it works and others don't notice a difference. One drawback is that you have to start your shot a little further behind you than you normally would, otherwise the ball gets launched 20 feet above the net because of the unusual angle. This is also true when passing. If you try to use these kinds of sticks for the first time in a game situation, you may find that all of your passes are at your teammate's chest and knees.

Another shaft variation is stiffeners. These include Fat Pipe's K.O., Salming's X-Shaft and KickZone, and Exel's helix pattern. The idea is simple, if the shaft is stiffer, it will whip back faster when you put flex in it resulting in

more power. With the K.O. stick and KickZone the flex point changes. You can see this in the pictures below. Putting flex in this stick will make it bend higher up the shaft than most sticks without this technology. I assume the logic is that if there's more "stick" behind the shot you'll get more power. Again, this is something that each player will have to try for themselves to determine if it works for them.



As you can see in the pictures above, flex plays a huge role in how the stick feels and performs. A softer flex is generally better for newer players or ones that like to pass the ball more, and a stiffer flex is better for harder shots. On the left I'm putting flex in the Fat Pipe K.O. which is a 28 flex, and on the right I'm putting flex in the Salming Aero Z which is a 32 flex. The K.O. is the better shooting stick because the shaft "whips" faster back into place than the softer 32 flex of the Aero Z. However, with the Aero Z, you'll find that you can "feel" the ball better on your stick because the soft flex allows you to feel more vibration when the ball touches the blade. As a player gets more experienced they will be able to instinctively know where the ball is at all times so it's more beneficial to use a stiffer flex. The flex is determined by a universal test across all brands that involves putting 300 Newtons of force on the shaft to see how many millimeters it bends. 32 millimeters of movement in the Aero Z shaft means a 32 flex, and 28 millimeters of movement in the K.O. shaft means a 28 flex. You can see clearly how much difference there is in just 4 millimeters.

Because there are so many different features available in floorball sticks I always have to laugh when someone asks me which stick is the "best." There is no right answer plain and simple. There are too many variations that some people will love and others will hate. And still others will wonder what is the point of a certain feature because they don't notice a difference. That's all OK, it's part of what makes this sport so much fun. Next time you see FloorballPlanet at a tournament come over to say hi and test all the technologies for yourself to see what works best for you.

If you'd like to ask questions or have me go into more detail about a certain part of this article please email me at [dan@floorballplanet.com](mailto:dan@floorballplanet.com)