



Alise Larson, Hunter High School. Photo by Steve Kinslow

The Consumer's Guide to *Bumper Plates*

A brief history of these essential training tools

BY **BOB ROWBOTHAM**, PRESIDENT, BFS

Strength coaches are always looking for the next big thing in exercise equipment – that special apparatus that will give their athletes an edge. As the president of a company that manufactures exercise equipment, over the past 30 years I've seen my share of strength training equipment that ranges

from the revolutionary to the ridiculous. I've also seen that in their quest to find that secret weapon that will enable their athletes to achieve physical superiority, coaches sometimes neglect the basic tools of the weightroom, such as bumper plates.

Ever since BFS was founded in

1976, we have been promoting the use of bumper plates. Initially there was quite a bit of opposition to them due to their relatively high prices, but now that the manufacturing prices have dropped and the value of bumper plates is clear, it's rare to find any serious strength training gym that does not have several

sets. The problem is that there are so many types of bumper plates on the market now that if you don't do a little research before you buy, you may not get the product you actually need and often you will pay more than you should.

Before giving you some practical guidelines on how to shop for bumper plates, let's explore some of the history of this great product.

Steel vs. Rubber

The development of bumper plates came out of necessity to protect the floor and the barbell when barbells were dropped during Olympic lifting exercises such as the snatch and the clean and jerk. This worked okay, but consider that back then, much lighter weights were lifted than those being hoisted today.

In 1956 strength legend Paul Anderson – weighing over 300 pounds – won the Olympic Games with lifts that included a snatch of 319 pounds and a clean and jerk of 413 pounds. This performance earned Anderson the title of “Strongest Man in the World.” In comparison, the current women’s world records are a 319-pound snatch and a 412 clean and jerk – in fact, I read that in a recent international competition a 15-year-old girl, weighing 191 pounds,

Until the 1970s, weightlifting competitions used iron plates with wide rims. Shown is Alexander Krychev of Bulgaria competing in the 1970 World Championships.

snatched 297 pounds and clean and jerked 370 pounds! As for the men, at a bodyweight of 132 pounds, Naim Suleymanoglu won the 1988 Olympics with a snatch of 335 pounds and a clean and jerk of 418 pounds – lifts that exceeded Anderson’s despite the fact that Suleymanoglu weighed nearly 200 pounds less than Anderson.

In contrast to today’s bumper plates, weightlifting competition plates were iron plates that had wide rims, a design intended to disperse the force when the weights were returned to the platform. Weightlifters were also instructed to carefully lower the weights after lifting them, and at one time spotters were often used to “catch” the weights should a lifter lose control of the barbell. Today, with the snatch



record approaching 500 pounds and the clean and jerk 600 pounds, catching weights is no longer an option in major competitions. Further, rather than having solid wood platforms, it's preferable to have training platforms with a rubber area where the weights rest and where they are dropped to minimize the stress on the bar.

As you will see by studying the BFS catalog, we offer several types of Olympic barbells. Generally, there are three types: those used for powerlifting, those for Olympic lifting, and those that are a sort of hybrid of the two. In a study on the mechanical properties of barbells that was published in the September 2010 issue of the *Journal of Strength and Conditioning Research*, the authors provide this excellent description of the Olympic bar: “The modern weightlifting bar consists of a cylindrical metal shaft, with revolving metal sleeves fitted on the ends of the shaft. The revolving sleeve weightlifting bar allows the shaft to rotate independently of the weights placed on the sleeve, which is

Rubber-rimmed plates are economical, but tend not to hold up as well as solid rubber bumpers.



Lucia Angliaru photo by Steve Kinslow.

essential for performance of the snatch, and clean and jerk exercises.”

In international competition, the length of a men’s barbell should be 2,200 mm; for a women’s, 2,010 mm. The diameter of a men’s bar should be 28 mm; for a women’s, 25 mm. The weight of a men’s bar is 20 kilos (44 pounds); for a women’s, 15 kilos (33 pounds). Because the US still opts out of the metric system, at BFS all our barbells and plates are listed in pounds; for example, our standard Olympic bar weighs 45 pounds, and our Olympic plates come in sizes such as 25, 35 and 45 pounds. Many years ago we tried to sell kilo plates, but the demand just wasn’t there – we ended up having to sell several hundred of these kilo bumper plates at our cost to avoid continuing to have to pay taxes on them at the end of the year. Let me expand on this point a bit.

I’m often asked why we don’t

carry a wider variety of products. For example, why not carry two dozen types of barbells rather than a dozen? There are two reasons: First, we have to pay for these products up front – it’s not like we can store an exercise bike in our inventory and then ship it back to the manufacturer if it doesn’t sell within the year (plus, we manufacture about 75 percent of our own equipment, so we are the manufacturer!). And second, having to pay taxes on inventory on the same product every year would quickly eat into our profits, and this expense would have to be transferred to the customer. With all the tight budgets in today’s economy, especially in the school system, an increase in prices would not be welcomed.

To get around this problem, many of our competitors simply make products to order, which means a customer may have to wait months to receive their order. Also, many of our com-

petitors purchase their products from China, which results in further delay, as often they must purchase a certain quantity of products before they are shipped. What’s more, often Chinese manufacturers do not manufacture a product until it is ordered – there

is no inventory. And what about delays? I recall one story of an exercise equipment company ordering specially made barbells from an overseas manufacturer – during the first shipment the boat sank, and on the second shipment the bars were not properly protected and they all rusted.

At BFS we have a 70,000-square-foot warehouse, and with over three decades in the business we know how to manage inventory. Thus, if you have a 10,000-square-foot weightroom and need equipment, we can often ship the entire order to you within 48 hours! Of course, custom-made equipment takes longer, but because we have our own manufacturing plant just 10 minutes away from our warehouse, we can get custom orders out extremely quickly.

What all this means is that rather than offering more choices, we’ve determined what the most popular features are in a bumper plate and found a price that our customers are willing to pay. I’ve seen that a pair of 44-pound (20-kilo) competition bumper plates from another manufacturer costs nearly triple the cost of a pair of our 45-pound stock bumper plates. Our customers simply won’t pay the higher cost. In fact, at one time we carried Eleiko barbells, which are unquestionably the top of the line and used in international competitions. Their best barbell costs \$1,400!

It’s not a good idea to mix and match bumpers as often they have different sizes – it’s best to stick with one brand.



Coach Chloe Van Tussenbroek watches the clean technique of Hunter High School’s Jordon Cedarstrom. The composite bumpers shown are often very expensive and may place excessive stress on the bar,



It's a wonderful piece of craftsmanship, but not for our market.

Best Bumper Guide

To keep this discussion simple, there are basically three types of bumpers: solid, rubber rimmed, and composite such as polyurethane. Let's start with the composite bumpers.

We once carried a polyurethane bumper that was a great product, especially the 10-pound training plates, but they were simply too expensive. There is another composite that is extremely hard and holds up to tremendous stresses, but we recommend them only for training purposes and only the lightweight bumpers. We say this because these plates don't absorb force well; instead, they transfer the stress to the barbell.

A rubber-rimmed plate consists of an iron disc that is covered with a few inches of rubber attached to the rim. As with the hard composite plates, these bumpers transfer the stress to the bar. In fact, one school that used the plates had to replace six barbells in just eight months due to broken sleeves. In comparison is the experience of *BFS* Editor in Chief Kim Goss, who was a strength coach at the Air Force Academy for eight years. In his final year Goss had nearly 900 athletes using the weightrooms. The varsity weightroom had 40 Olympic barbells, and not once was there a barbell that needed to be replaced – so when a school has six bars broken in eight months, you know there's a problem.

The best solution was a solid bumper. One type we tried was made from the rubber used in recycled tires – the problem was that some of the steel shavings would cut the athletes who were using the bumpers (and there was an additional risk that the shavings could get on the platform and bounce up into an athlete's eye when the plates were dropped. One Division



Solid rubber bumper plates are economical and provide maximum protection for the barbell and floor. The lighter 10- and 15-pound plates should be used for training purposes.



Jazmyn Davidson,
Hunter High School

1 college strength coach told me that three of their players had to be sent to the doctor in one week to have shavings removed from their eyes due to this problem). Yes, those bumpers would have cost us slightly less to purchase, but there was too much of a liability issue for us to sell them.

Another company we tried had very wide bumpers that bounced high when dropped. The problem was that often these plates bounced back and hit athletes in the shin or the knee. Also, these plates were so wide that only a few could fit on the end of a barbell – they looked impressive, but when the weights got over 300 pounds you'd have to combine them with steel weights, as they simply wouldn't fit on the sleeve.

Ultimately, the bumpers we found that work best have a brass ring in the middle with a tight tolerance. I've seen bumpers that do not have this design (essentially being a round piece of rubber with a hole in it), but our customers have told us these do not hold up well. And although it's possible that the ring can come loose, that is most likely due to abuse: for example, using a 25-pound bumper plate and then adding several smaller 25-pound disks on the sleeve instead of using the heavier bumper plates and multiple bumper plates. Having just one pair of bumper plates may seem to be a great way to save

money, but in the long run it will cost you.

We went through several manufacturers over the years; that's a common challenge for most companies – you never know what you are getting. For example, we had to stop doing business with one company that had manufactured our dumbbells because we found their quality decreased significantly when they started using a lower quality of steel. Likewise, in shopping around we found bumpers that initially would leave black smears when touched and had a terrible smell – fixing these problems required a citrus-based degreaser (along with a lot of elbow grease), but we need a product that is ready to use from the get-go. For nearly a decade we have used the same bumper manufacturer, and they have an exceptional level of quality control.

Although it might appear we have three separate solid rubber bumpers (black, colored and custom-made), the difference is only in appearance – they are all the same product. It simply costs more to dye a bumper or place custom-made logos on the product, and this cost has to be absorbed by the customer.

That's a brief history of bumper plates. It's taken us over 30 years to get to this point, but the result is we offer a quality bumper plate at a great *BFS* price. **BFS**