

With the help of some Photoshop magic, here are a few of the numerous exercises that can be performed on the BFS 4-Stack Functional Trainer.

The Next Step in *Functional Training*

How a revolutionary multi-use station can provide a solution to crowded weightrooms

“Space: the Final Frontier...” These words, immortalized by TV character Capt. James T. Kirk in the hit series *Star Trek*, were meant to apply to the ultimate satisfaction of human curiosity through the exploration of outer space. But they also apply to the struggles in facility planning that every strength coach has to deal with; after all, it’s highly unlikely you’ll hear a strength coach complain, “I have too much space and not enough equipment!”

For the most part, high school weightrooms are too small for the number of athletes who want to use

them. The reasons include the increasing emphasis on weight training for all athletes, especially female athletes, and the decreasing number of qualified volunteers to help with these training sessions. But due to a struggling economy that prevents schools from expanding or constructing weightrooms, the amount of equipment in existing facilities tends to exceed the limits of safety.

There are many published guidelines for helping coaches design weightrooms and fitness facilities. For detailed design standards and recommendations for facility design and exercise equipment standards, the bible in this area is

the *Annual Book of ASTM Standards*. Founded in 1898, ASTM International is a nonprofit organization that consists of committees working to provide standards for materials, products, systems and services. The recommendations in ASTM’s annual publication provide much of the primary authoritative reference material in many lawsuits concerning liability issues in exercise facilities.

Treadmills, for example, should have about three feet of space at the sides of the machines and six feet behind the machines – several deaths have occurred when treadmill users fell off and hit their heads on walls because

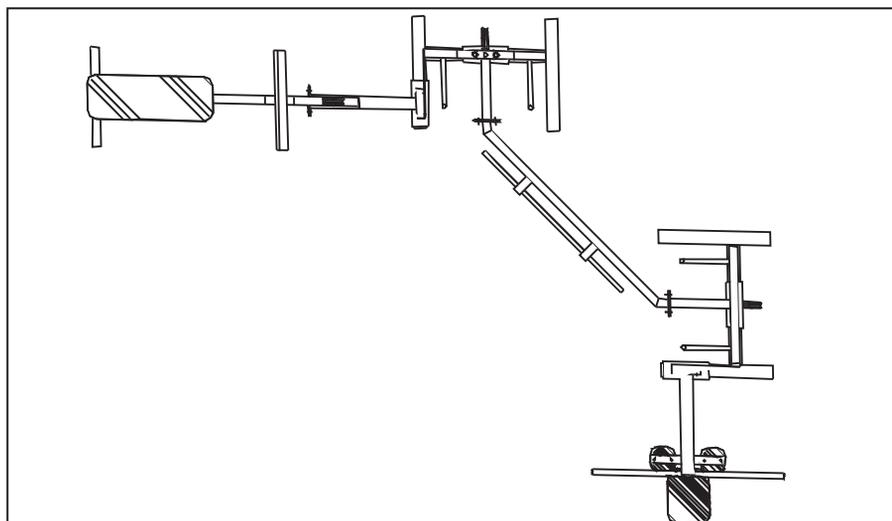
the treadmills were positioned too close to the walls behind them. Likewise, lack of sufficient area to allow for traffic flow can result in individuals interfering with those who are using the equipment – a person who bumps into the side of a barbell when someone is bench pressing could cause the lifter to dislocate a shoulder. For a squat, a serious knee or back injury is possible.

One valuable service the companies that sell exercise equipment can offer is providing 2D – or better yet, 3D – weightroom illustrations. These illustrations should be drawn to scale to show exactly how a weightroom can look, thereby ensuring proper use of available space and the best design for safe traffic flow.

Anyone who is purchasing equipment must be careful to consider the intentions of the person who is using the computer program to design the weightroom. If they are selling you equipment, they may disregard safety standards and simply try to maximize the available space to put as much of their equipment in it as possible.

Regardless of who is consulting with you on the weightroom layout, it is your responsibility to make certain there is adequate space for the equipment to be used safely. And that may mean checking with the manufacturers, rather than the marketers or distributors, to determine what the actual spacing needs are and other important installation factors, such as whether or not a piece of equipment must be bolted down to be used safely.

Some weight training machines have a counterbalance system with levers that extend behind them, and special precautions must be taken for these machines. For example, there certainly should be warning labels on the machine from the manufacturers, such as “Steer clear of moving parts” or



The unique three-corner design of the 4-Stack Functional Trainer makes efficient use of corner space.

“Stand back while in use,” but that’s not enough. The coach and every athlete using your gym must understand how these machines work.

And finally, one way to help reduce the risk of injury is the use of warning signs. Have warning signs posted all over the place, not just on the equipment. Also have general weightroom rules posted on your walls.

New Designs of Weight Training Equipment

The hottest new trend in weightroom equipment and organization is to have one station do it all for core lifts and some major auxiliaries. The elite half rack is one example, as is the 8-foot Power Rack and Platform, stations that combine a lifting platform with a power rack.

What are the advantages of these stations? Each core lift has a unique time constraint. For example, it takes longer to complete a given number of sets on the parallel squat than it does on the bench press. Therefore, if you have four squat stations and four bench stations with a system of rotating from one to another, you can run into problems. The athletes doing the bench

finish their sets before the athletes who are squatting. What do you do to keep the situation productive? Well, the athletes who finish first could stretch, do a burnout set or do an auxiliary lift. But consider that a one-station, do-it-all concept is more efficient. Coaching is easier because everyone is doing the same lift. Your time management is more precise and controlled. The athletes can be more intense and competitive when everyone is performing the same lift.

One issue, however, is what to do with the corners of the weightroom. Often weightroom designs have trouble utilizing these areas efficiently because the racks and platforms have a rectangular design. BFS has come up with a solution: the BFS 4-Stack Functional Trainer.

Corner Sense

Functional training, the latest buzzword to hit the strength and conditioning profession, refers to using exercises that simulate activities that appear in sports or in routine activities, and also refers to exercises that help correct or prevent muscle imbalances that occur from playing a specific sport.



The basic tools of functional training include cables, preferably those attached to adjustable pulleys. Cables that attach to high pulleys, for pulldown and pressdown exercises, and low pulleys, for rows, also fall into this category. Chin-up bars are also considered useful tools for many functional training exercises.

Because many cable exercises require the use of two cable systems, and because a machine's design must prevent it from tilting, these cable crossover units tend to be quite large and take up a large, horizontal footprint of space. To make room for these large units, often the choice has to be made to sacrifice a lifting

platform or power rack. The 4-Stack Functional Trainer provides another option.

The 4-Stack Functional Trainer is designed to be placed in the corner of a room. It consists of low- and high-pulley stations, two adjustable vertical pulleys and a chin-up bar. The design is such that three people can



The two adjustable vertical pulleys, with stabilizer bars, enable the user to perform an endless variety of unilateral and bilateral exercises.



The fixed high pulley is designed for pulldown and press exercises. The fixed low pulley is designed for rowing exercises.

train at the same time. Also, the variety of pulley apparatus enables virtually any special functional training exercise to be performed, and stabilizing handles allow for proper positioning during single-limb exercises.

One of the unique aspects of this heavy-duty functional training station is that the high- and low-pulley units are connected with a crossbar to which a chin-up bar (with wide-grip attachment) is connected for chin-ups, pull-ups and hanging leg raise exercises. In the center are two adjustable pulleys. The result

is a tremendous variety of exercises that can be performed in a minimal amount of space. Shown is a sample 3D diagram of how this unit can fit into a weightroom, along with demonstrations of several exercises that can be performed using it.

As the demand for weight training programs increases, coaches, teachers and administrators must find creative ways to use every inch of available floor space. The BFS 4-Stack Functional Trainer makes this task much easier. Welcome to the space age! **BFS**



Pull-ups and chin-ups can be performed on the crossbar that connects the two major units of the machine. The crossbar comes with V-shaped handles for wide-grip exercises.

1+2+3+4

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