

---

# THE CrossFit JOURNAL

---

## DIY Sandbags

A sandbag is really just a bag of sand. Jeff Rice explains how to save a few bucks by making your own.

---

By Jeff Rice Flower City CrossFit

May 2011

---



All images courtesy of Jeff Rice

The benefits of using sandbags as part of your CrossFit training were well covered in Josh Henkin's *CrossFit Journal* article [It's in the Bag](#) (July 2009). Sandbags are large, irregular, heavy objects—like many things one might encounter in real life. And because the heavy things that fill the world don't always come with 28-millimeter-diameter steel bars attached to them, any functional training program would be well served by including lifting and moving irregular objects like sandbags.

Many sources exist for commercially produced sandbags. The problem I have had with these commercial products is that they have always seemed fairly expensive compared to their complexity. Spending over \$50 for what is essentially a duffle bag filled with sand has never sat well with a do-it-yourselfer like me. With that in mind, I set out to make my own sandbags using inexpensive and readily available materials.

### Objectives

I had four primary goals in mind when I set out to make my own sandbags. The sandbags needed to be:

- **Simple to construct.**
- **Inexpensive (shooting for less than \$20 each).**
- **Durable.**
- **Adjustable in approximately 10-lb. increments.**

To create a sandbag that met all these requirements, my planning began around finding a sturdy canvas bag. Fortunately, there are an abundance of military-surplus and new canvas duffle bags available from either online retailers or from local military-surplus stores. The bags shown in this article are from Rothco and are 21 inches by 36 inches. These heavy canvas bags can be found online [here](#) for \$10-\$15 each.

The next step was finding a way to put sand into the bags in 10-lb. increments in some kind of a container that would withstand the abuse of being repeatedly dropped. I obviously wanted to avoid something that would break and leak sand all over the gym floor. For this I settled upon heavy-duty contractor bags that were 3 millimeters thick. Contractor bags are available at most hardware or home-improvement stores and will cost in the neighborhood of 50 cents per bag. While you're at the hardware store, pick up a roll or two of duct tape, as that is the final material needed to assemble these sandbags.



*Training with sandbags will prepare you to deal with the world's many awkward objects.*



Figure 1: Materials and tools.

### Supplies

Here is the complete list of supplies (with approximate costs) and tools needed to assemble the sandbags. The materials in the list will make one sandbag that is adjustable up to 70 lb. (see Figure 1).

### The Assembly Process

Begin assembling the bag by measuring out 10 lb. of sand into a bucket. It's helpful, once you've measured out 10 lb. of sand, to run some tape around your bucket at the level of the sand (Figure 2). This will make subsequent measurements go much faster.

Item	Cost
36" canvas duffel bag	\$12
70 lb. sand	\$5
Duct tape	\$3
7 contractor bags	\$4
Scissors	-
Scale	-
Small bucket	-
Total cost	\$24



*Figure 2: Pouring and measuring the sand. The author put the tape line on the bucket so he could get approximately 10 lb. in without weighing.*

Next, dump the sand into a contractor bag (Figure 3). Once the sand is in the bag, shake the sand to the bottom of the bag and spread it as evenly as possible across the bottom.



*Figure 3: Dump sand into bag. Focus on midline stabilization, and keep the core tight.*



*By carefully constructing your sandbags, you can avoid a mess when an athlete drops one during a workout.*



**Figure 4: Roll up the bag.**

Once you have the sand evenly spread across the bottom of the bag, carefully roll it up, keeping the bag as tightly rolled as possible (Figure 4).

Next, use duct tape to secure the rolled-up bag (Figure 5). Start by taping the ends of the bag, being sure to completely cover the ends of the bag with tape. When the sandbags are dropped, the most likely point of failure is the ends of the roll where the bag has not been rolled on top of itself.



**Figure 5: Tape the bag, starting with the ends.**

Next, tape the rolled-up bag in three or more segments along its length. Don't get overzealous and tape the entire bag! Leaving some gaps makes the roll more flexible and thus makes the completed sandbag more flexible and challenging to lift.



**Figure 6: Tape the roll in about three places along the length between the ends. Note that the ends of the roll are totally taped over to prevent bursting there.**



**Figure 7: Fill 'er up!**

Once you have several rolls completed, it's time to fill the duffel bag (Figure 7). Note that there will likely be some variation in the weight of each roll of sand. This is not an exact science. But then again, not everything you lift in the real world comes in perfect 10-lb. increments!

The canvas bag I chose was 36 inches long, which worked out well because it is the same length as the width of the contractor bags and thus the finished rolls of sand. The rolls fit just about perfectly from end to end, giving the completed bag a pretty good weight distribution.



***With cheap do-it-yourself sandbags, any affiliate can introduce a little odd-object training to its members.***



**Figure 8: Time for some functional movements!**

### Conclusion

Workouts using the completed sandbags can be scaled simply by adding or removing individual rolls of sand. If a 70-lb. “sandbag Fran” is a bit much, pull out a couple of rolls.

The 36 x 21 canvas duffel bag I used can comfortably hold nine or more rolls of sand, though I have not stress-tested it with more than 70 lb. This combination of the Rothco duffel bag and 70 lb. of sand rolls holds up well to repeated drops and abuse. Your results will vary depending on the quality of the duffel bag you chose.

Sandbags can be a great tool for building coordination and strength that translate to the real world. This simple project will give you another great tool for building functional fitness without breaking the bank, so you can save your hard-earned cash for equipment you can't make at home.



### About the Author

*Jeff Rice is the owner and founder of [Flower City CrossFit](#) in Rochester, N.Y. In addition to being a CrossFit affiliate owner, he is an avid triathlete and dad, and he is always looking for excuses to build stuff for his gym.*

