

Saddle Seat Stool

Make this and folks will say “Wow!”

This distinctive stool is extremely comfortable. The cut-out finger openings make it easy to handle, and the metal swivel allows for easy rotation. It will not be found easily on the internet, so why not make one yourself and enjoy the compliments you will receive.



Saddle Seat Stool

the swivel. ***This is a much easier project.***

A standard “bar stool” or “counter stool” is 24 inches high, typically made of hardwood and can be purchased online as a set of 2 for less than \$55.00. An internet search for “unfinished wood counter stools” will reveal many sources. You probably can find them locally as well.

Ok, so now comes one of the interesting parts. Just what shape and size do we want for your saddle seat? I played around with a measuring tape, checked various wood chairs, and made a cutout of cardboard that I bent into a rough shape. After a while I came up with a desired size of 22 inches long, 11 ½ inches wide at the middle and a 2 ½ inch depth of bend.

The seat needed to have an appealing curvature, so I planned to narrow it down to 8 inches at both ends.

There are claims for health benefits for a saddle seat versus a conventional ergonomic chair design. <http://Backdesigns.com/> claims: *“Saddle seats and perch stools allow you to get closer to your work, bend forward, and reach further with less strain. Open hip position promotes good leg circulation, aids deeper breathing, and improves balance, coordination and strength.”*

I don't dispute these claims, however, I built it because this design is unusual and very appealing ***and I saw a way to make it simpler and easier.***

The Design

It is made by purchasing a standard stool and then building a saddle seat on top of it!

In other words, you don't need to learn how to turn the wood legs on a lathe, or, make the complicated holes that the rounded legs braces fit into, etc. You just need to make the seat and connect it to the purchased stool with

Also, the seat needs to swivel while supporting your whole body weight, so I choose a heavy duty seat swivel for this task.

Now, the easiest way to make seat bent shape is to use multiple thin thicknesses of plywood and glue them to each other and over a mold. ¼ inch plywood in the form of Baltic birch or equivalent can be readily obtained at your local home and garden store. It has a nice hardwood quality finish and looks great. Also, this thickness is readily bent into the desired shape.

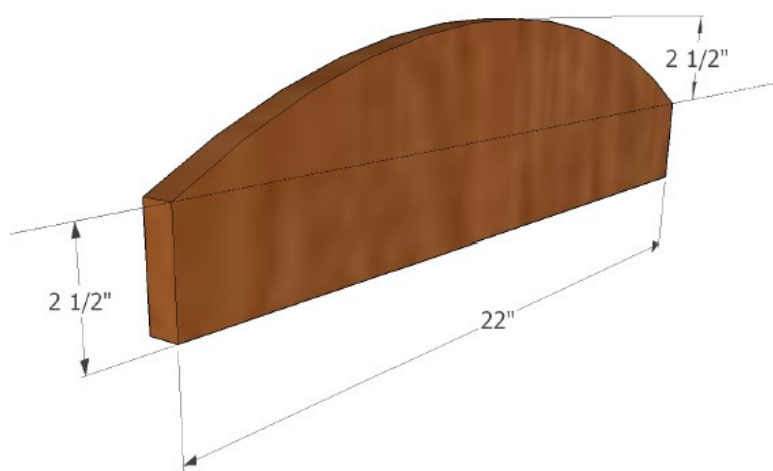
| Sources of Supply | |
|--|---------------------------------------|
| Baltic birch hardwood plywood (¼ inch thickness) | Homedepot.com; Lowes.com; Rockler.com |
| MDF (medium density fiberboard) (3/4 inch thickness) | Homedepot.com; Lowes.com |
| Swivel | Rockler.com |

How to build It

1 First cut 3 identical form pieces of MDF according to the dimensioned sketch. Use a thin (¼ inch thick) by 28 inch long pine batten or spline, and, clamp it three places (both ends of curve and top of curve) to form the upper curve of the form. Trace this line on your MDF stock and cut it with a saber saw or band saw.

After you've cut the first form, sand it smooth, and, trace it on your MDF stock for the remaining two forms.

Dimensioned MDF Form



3 Identical MDF Forms



2 Next cut the four plywood panels. These are cut 23 inches long by 12 inches wide to have excess material to shape the seat.

3 Forms Clamped



The 3 forms are positioned as shown and the 4 plywood panels are added one by one with an application of glue between each layer. It is always best to test this setup by clamping everything together **without glue first** to get a feel for the task. Once satisfied with the setup, you can glue and clamp everything together.

Additional Clamps



Many clamps are required to hold everything in place. As shown it is not necessary to get all layers to line up exactly, because this seat will be trimmed in a later step.

Clamps seen from bottom



Basic "Seat"



Once the glue has dried and the clamps

It will retain its shape without anything holding it; that is the beauty of bending thin pieces of wood around a form. This technique has been used in the furniture business for a long time and is very effective.

3 Now we want to create the proper shape of the seat: wider in the middle than the ends, and, making the cutout opening suitable for grabbing with your hand.

Spline for Seat Outline



Using a spline, the outline of the seat is traced onto the plywood. Any good quality strip of wood that is approximately 24 inch long and $\frac{1}{4}$ inch by $\frac{1}{4}$ inch can be used for this spline. It should be held in place by 3 separate clamps prior to tracing the outline; this provides a curve pleasing to the eye. As shown, the spline is set close to the edge of the “seat” in the middle (approximately 11 $\frac{1}{2}$ inch wide, and, is set at 8 inch at each end). Leave room a for clean cut through all 4 plywood layers.

At this point the outline of the finger handle cutouts are also traced (I made them 1 inch wide and set back 1 $\frac{1}{2}$ inch from the closest edge).

Finger Handle Trace



Cut the outline of the seat with your jigsaw or band saw. You may use a belt sander, or, sand this cut by hand to obtain a nice smooth surface.

4 The next step is to cut the finger handle cutouts on both ends. Here a drill press with a hole saw is best. But you can cut these out with your hand drill. The main idea is to cut each end with a hole saw and then cutout the wood between holes with your saber saw to finish the finger slot. Once both finger cutouts are complete, sand all edges of your seat.

Drilling Finger Cutouts



Final Shape of Seat



Next smooth and round the top edge of the seat. Here it is best to use a router with a 1/2" round over bit with bearing, to provide a smooth top edge. The final results of your efforts will now look like this.

I considered adding a thin veneer strip all around the seat edge, but that would add unnecessary complication, and, really not improve the look. The rounded edge of the 4 ply plywood looks fine and highlights the top surface of the wood.

Heavy duty swivel



5 The remaining task is to fit the saddle seat to the stool. I choose a heavy duty seat swivel for this task. The chosen swivel is shown.

Fitting the swivel is next. It should be centered on both the seat and the stool top. Find and mark the centers on both pieces and line up and mark the holes in the swivel.

A trick here is to recognize that the swivel fits to a curved surface on top. Also that the top should be screwed in and the bottom bolted in place. So drill through holes in the stool. Before you screw the top on, put each bolt in place in the bottom (you won't be able to put the bolts in place once the top is screwed on). When you screw the top on, remember to have the same distance all around, between the top plate of the swivel and the bottom of the saddle seat. This will balance the seat and avoid having it look lopsided.

Attached swivel



6 Sand the chair and seat, and finish it to your needs. I applied 5 coats of satin finish varnish.

You are done. You can be proud of this piece of furniture!