SOLID WORKS PROJECT

KitchenAid Mixer

EDSGN 100 Section 22
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Solid Works Model of a Kitchen Aid Mixer

Figure 1: The isometric view of the mixer shows the front of the mixer.

Figure 2: The other side of the assembly shows the way light would reflect on the mixer in reality.

Figure 3: Viewing the assembly straight on reveals more gloss, shine, and the texture of the bowl.

Figure 4: Removing the bowl allows a closer look at the whisks attached to the top of the mixer.
Figure 5: Pictured above is the drawing view of the final solid words assembly, along with some of the overall dimensions.
Solid Works Narrative:

I chose to create an electric mixer because I’ve always loved to bake. Ever since I was little I asked my parents to get me an electric mixer even though the things I was baking didn’t require one in the slightest. However, once I was older, I truly wanted one as I made all of my friends’ birthday cakes. Finally for my graduation present, I got one! Pictured below is the actual mixer I received as a present and ultimately created for this project.

When it comes to features I used to create the mixer, I used the Boss extrude tool very often. I used it to create the middle section of the top of the mixer, as well as the entirely of the bottom half of the top of the mixer. The Boss Extrude tool also came into play when making the handle of the mixer, the part of the mixer where the bowl fits in, and the attachment on the bottom of the bowl that ultimately snaps into the mixer. To create half spheres on either side of the top of the mixer, I used the revolve tool to revolve the half circle down to create the spherical edge. Lofts ended up being an integral part of my project. Although I tried to originally create the bottom body of the mixer using extrudes and cuts, I found that creating multiple planes and connecting the shapes created a more

Figure 6: Pictured above is a real kitchen aid mixer. This is the same model that my solid works project is based off of.

seamless and realistic look. The loft tool also aided me in creating the bowl. When it came to using cut-extrudes, this mainly came into play when I wanted to make realistic holes in the mixer where other parts would fit in. Lastly, I used sweeps to create the metal wires of the whisks. Overall, the hardest part of this model was to create the body of the mixer. It took a lot of trouble shooting and re-adjusting of planes in order to make the curve of the neck of the mixer look realistic. New features that I used included making planes at different angles in conjunction with creating temporary axes in order to create all of the wires on the whisks. Also, at the end of the solid works project, I realized I created the whisk “wire side” up, which is not how it hooks into a mixer. The whisk was also incredible tiny in relation to the bowl and mixer. To fix these two issues, I used the body/move tool to flip the whisk upside-down, and used the scale feature to make the entire whisk larger at once, rather than having to go back and edit each individual wire and the handle. During the SolidWorks portion of class, I definitely learned patience, troubleshooting, and creativity. There was never a single way to create something which was very frustrating in the beginning. However, as time went on, it became more apparent what tools would be a good option to do what as well as all of the possibilities each tool had.