“Make it Real” Online Challenge

By Team 8878B

Team Info:

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What functionality does your new component improve, and what issue does it solve?

When our team works on our robot, we find ourselves needing a component of this. This allows us not to get c-channels drilled, which is permanent to the c-channel. This could allow for test fits, and whatnot. This would also allow people without access to a drill to use high strength axles. This would also allow for both quicker maintenance and quicker building with high strength axles, as nothing is really needed. This improves the versatility of high strength axles. Overall, we feel that this just makes sense.

How is your new part used, and how does it fit into an existing robot design?

This basically allows normal high strength axle usage. This just makes it more convenient, and more of a practical option. This would fit seamlessly into current robot designs, as no real specific changes would be needed to be made to use them. Any place where they are needed they are used.

Which version of Autodesk design software did you use, and which features did you utilize to create and model your part?

We used the program OnShape to make this. This is an amazing web development software, and allows for almost all of the features that one might find on something like autodesk. This is completely free, to everyone. I used the filet tool to round the edges, and mostly just used the extrude and sketch tools. There was no need to do anything complicated, as this is a simple design.

What did you learn from this project, and how will what you learned help you in the future?

I would say that I learned that you should not overcomplicate things. I spent a long time thinking about possible ideas, but after dialing it down a notch, I was able to think of this. I thought of real life problems that we had when building, and this came to me. I would also say putting effort into smaller things. This seems very insignificant, but I tried my best to make it look as nice as possible, as I do not have much experience with 3d Modeling.