

## **It's a 3D World**

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There was a time when all part and mold designs were done with a pencil. The part concept was given to a design engineer, who developed several design proposals from the sketch. Once the final design concept was approved, it was used to draw the mold design. This was a tedious and time consuming process. Every feature of the part had to be manually converted into the steel that would form it. Some of the more complicated designs would take many weeks. Since all dimensions had to be manually converted for the effects of material shrink there was always a potential for errors.

In the past years the design process has moved to 3D modeling. This makes it much easier to go from part to mold design and then to manufacturing. The 3D model can be easily converted into a shrink model for the tool build. The converted model is used to create the mold design. The designed mold components can then be imported into a CAM system for machining of the mold. Many of these systems are integrated for easy data transfer.

You must make sure that your model is correct because any mistakes may end up in the final part. A 2D part drawing will need to be created for inspection purposes and to list requirements which are not covered by the 3D model. Please make sure to dimension all areas which are important to the function of the part. Include all critical features and areas which mate with other parts. Make sure the part does not have dimensions which are not important to the function of the part. The geometry exists in the 3D model and it is not required to provide these additional dimensions. It only adds cost to the design and inspection process. It also increases the timeline of the project.

Please provide a 3D model when you submit an RFQ. This will help to get you a faster and more accurate price for your project.