

NCAD Products
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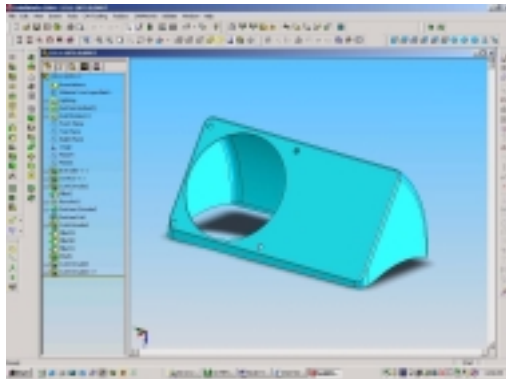


Thermoforming (Vacuum-Forming)

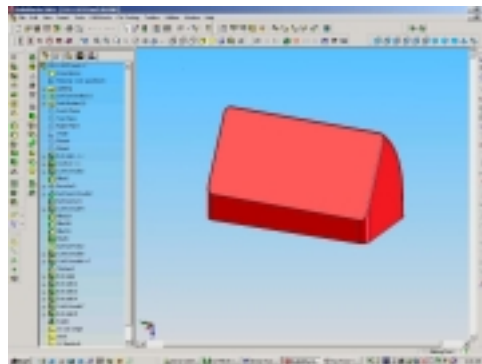
Vacuum forming is the process of transforming a flat plastic sheet into a contoured plastic part. The forming process starts by heating a flat sheet of plastic hot enough to make it pliable with no memory. Once the sheet is pliable it is draped over a mold plug or cavity "Tool". The air remaining between the pliable sheet and the mold is evacuated with a vacuum system, pulling the hot pliable plastic to the contour of the mold. The plastic sheet is allowed to cool. Once the plastic is cooled it is removed from the tool. The plastic sheet is now a contour part. The excess plastic is trimmed from the contour part desired.

Vacuum-Forming In Depth Example

The process begins with a part. This part can be a customer design or NCAD can assist you with your product design if help is needed.



The part design is manipulated into a tool design that can be used to form parts. Draft and shrinkage are engineered into the design for a better part result.

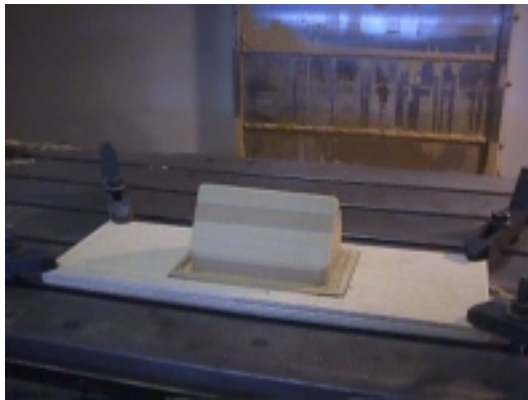


NCAD Products, Inc. can make any project a turnkey job.

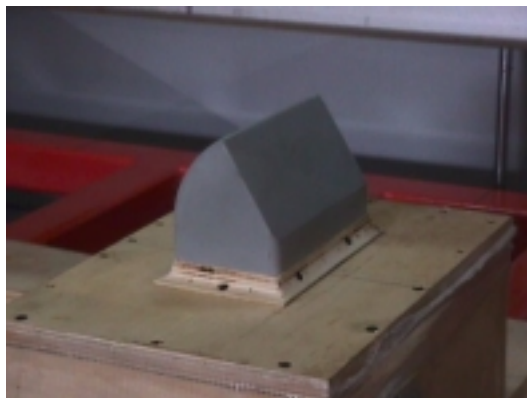
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Once the tool design is complete, we use the latest software technology to translate the design data into tooling paths for one of our large-format CNC machining centers. These state of the art machines run unattended around the clock, automatically changing cutters when needed. Because of the 24/7 operation and the speed of this method we are able to better serve our customers needs, by supplying parts quickly.



After the tool is cut it is mounted to a vacuum box or plenum. The vacuum holes are added in specific area that the plastic sheet must close in around.

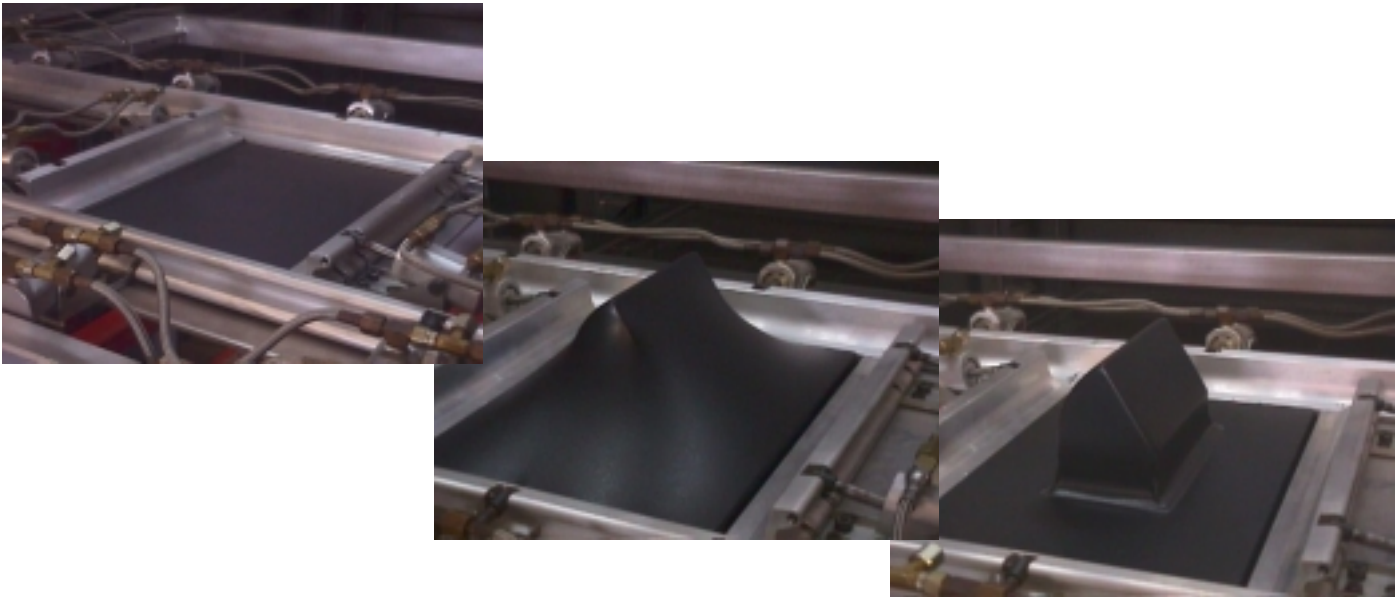


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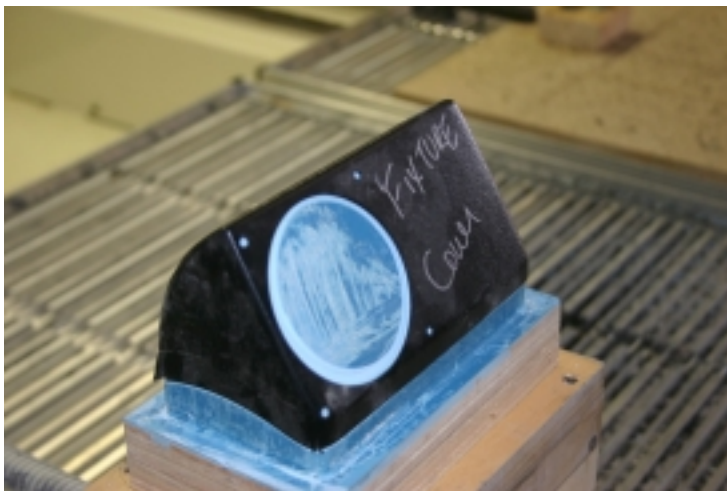
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The hot pliable plastic sheet is pulled over the tool and then the air is evacuated between the sheet and the tool-utilizing vacuum.



After the forming is completed we utilize our CNC technology using a 5-axis router to cut the part out from the excess plastic sheet used in the forming process.



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The part is complete.



Would any post finish work be required? At NCAD Products we have the ability to offer assembly services as well as custom painting. Whatever your needs are, we are willing to assist you wherever we can.

The vacuum-formed part is ready to ship.

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