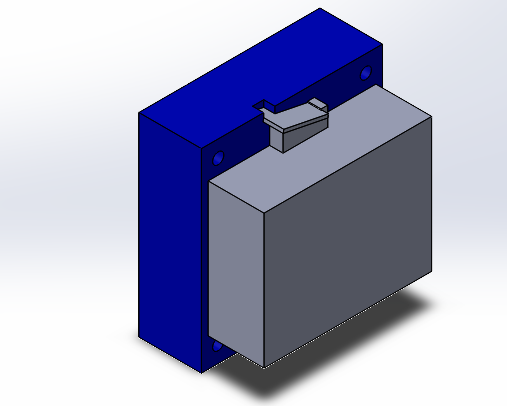
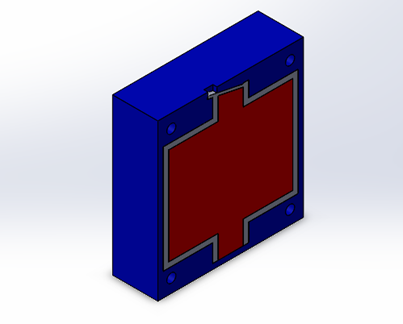
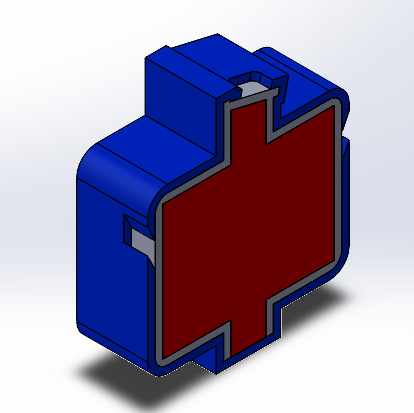
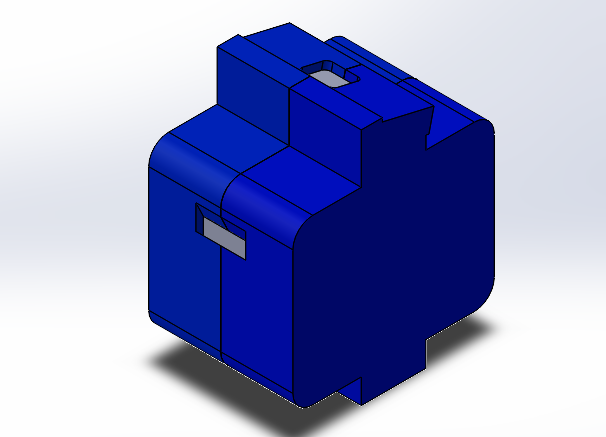
**FIRST DESIGN**

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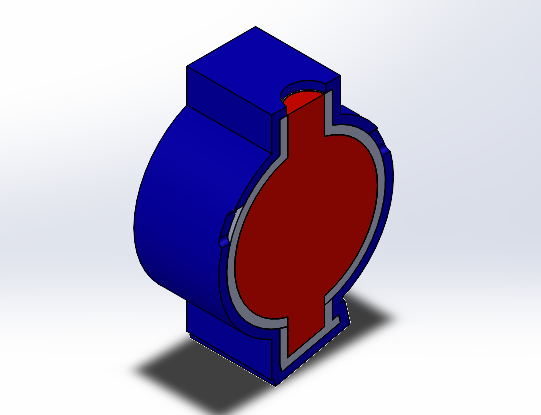
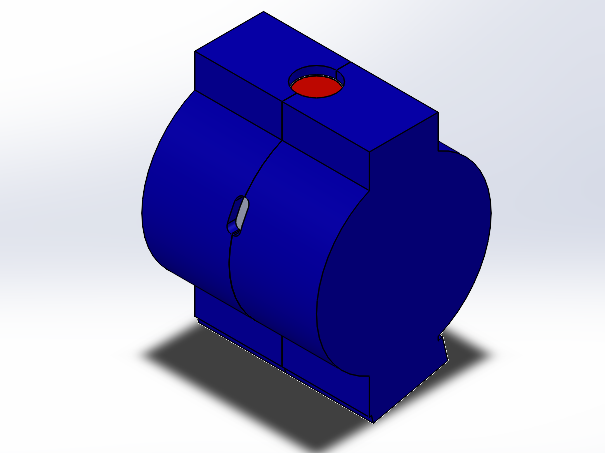
* When we first started our design, we thought of making our mold in an angular shape, since we did not know much about silicone casting. However, as a result of the necessary research, we realized that it would be difficult to remove the silicone from the corners after the silicone was cast, and we decided to change the design.
* As can be seen in our design on the cover, the exit of blood from the chamber is designed to be unidirectional. We also designed it to give a share of the exit space.
* We designed the mold so that there are male and female molds on the parting surface of the mold.

**SECOND DESIGN**

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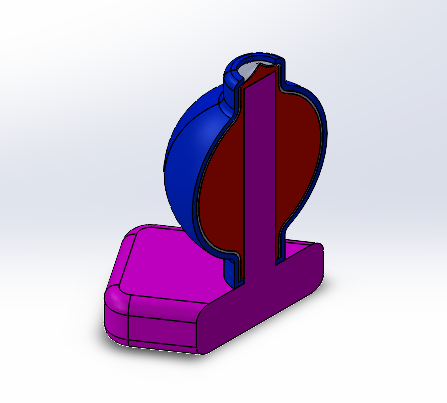
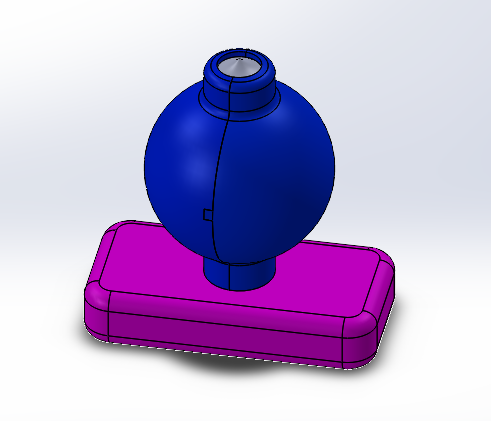
* The only difference from the first design is that the corners are rounded. This was because we realized that it would be difficult to remove the silicone from the corners after the silicone was cast.
* Two runner designs were made from the sides.
* In order to save material in mold design, unnecessary parts were removed from the design.

**THIRD DESIGN**



* The only difference from the second design is that we decided to make the chamber circular instead of rectangular. The biggest reason we do this is to make it easier for the silicone to come out of the molds.

**FOURTH DESIGN**

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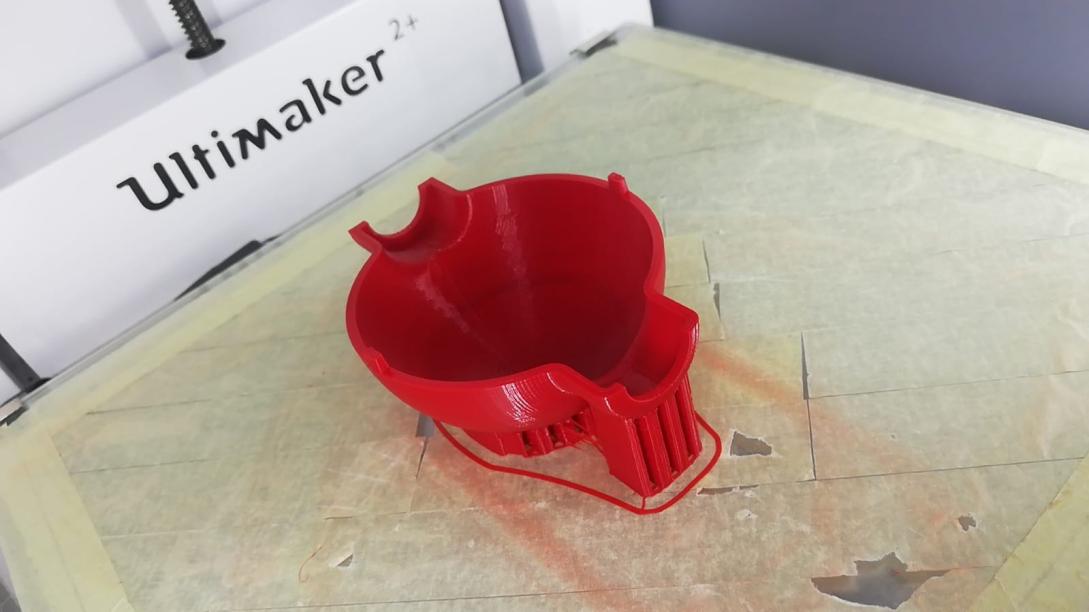
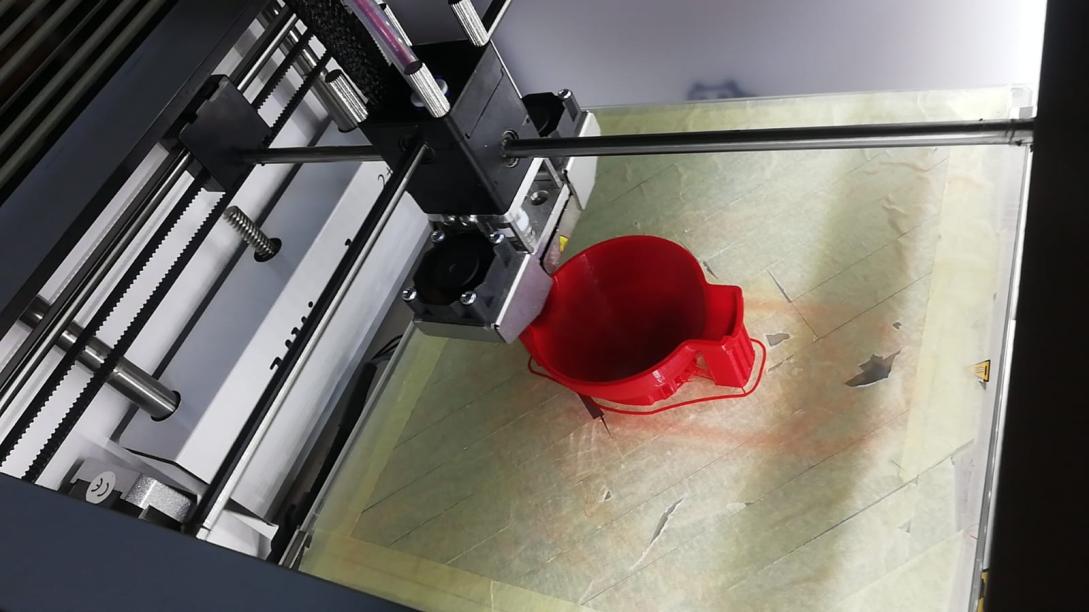
* In this design, an additional part is designed from the outside to fix the core.
* We revised the design on the cover. We thought to ensure the flow by making cuts on the thin-walled silicone on the cover.

**FIRST PROTOTYPE**

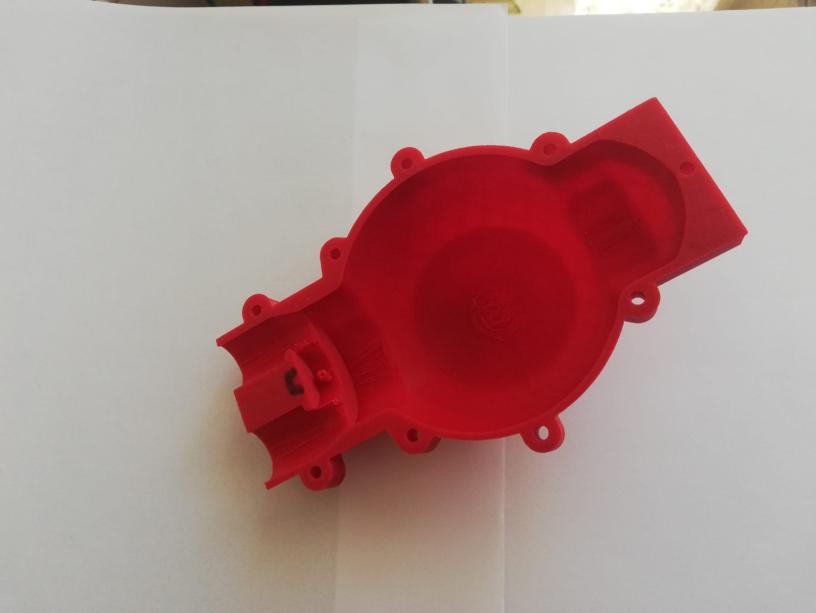
The photo shown on the right is of our first prototype.

While producing our piece, we paid attention to the following items:

* First, we decided that the chamber of the heart should be circular in shape. The reason for this was that we thought that it would be difficult to remove the silicone from the corners if it was designed in an angular shape.
* We have decided to apply the core we used to create the interior space in the design, fixed from the outside.
* We thought that the recesses and protrusions on the mold release surface would be suitable for efficient closing of the mold.
* We have designed the valve of our chamber in a suitable way so that it can be opened in one direction.

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**SECOND PROTOTYPE**

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* Unlike our other designs, we created enough pin slots on the mold release surfaces.
* In this design, we decided to make a casting mouth.
* Since the piece we wanted to produce during casting was not very large, we had to ensure that this air we mentioned would get out somehow, as we were worried that the poured liquid silicone would compress the air it replaced when it was filled into the cavities. We achieved this by making a similar runner next to the casting mouth of the part.

**THIRD PROTOTYPE**

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The revisions to the 3rd prototype produced are the following:

* In order to fix the part, a fixing element was designed in the core and accordingly, the mold was revised.
* A feeder has been designed so that silicone can be poured easily into narrow sections during silicone casting.

