

MOULDING STEPS

Step 1: Make sure the parts of the mould are clean. If not, clean with soap and let it dry.

Step 2: Spray release agent on the surfaces that will be in contact with the silicone.



Step 3: Connect the parts of the mould with bolts and nuts.



Step 4: Pour the silicone in the paper cup according to the required ratio and amount as given in the table.

Part	Amount
Bladder	34 g Dragon Skin 10 part A 34 g Dragon Skin 10 part B 17 g Slacker App. 6 drops of yellow liquid pigment
Bladder plate	20 g Dragon Skin 10 part A 20 g Dragon Skin 10 part B App. 4 drops of yellow liquid pigment
Vagina	25 g Dragon Skin 10 part A 25 g Dragon Skin 10 part B 5.5 g silicone oil App. 6 drops of mauve liquid pigment
Cervix	5.5 g Dragon Skin 10 part A 5.5 g Dragon Skin 10 part B App. 1 drop of mauve liquid pigment
Vulva	25 g Dragon Skin 10 part A 25 g Dragon Skin 10 part B App. 6 drops of brown liquid pigment

NOTE: For the vagina, first stir the A and B parts a few times before adding the silicone oil and the colour pigment.



Step 5: Stir the silicone mixture for about 2-3 minutes.



Step 6: Pull the plunger out of the syringe and close off the hub of the barrel, then fill the syringe with the silicone mixture where the plunger is normally placed. The table provides an overview of the used syringe for each mould.

Part	Used syringe
Bladder	50 mL catheter tip (tip diameter about 7 mm)
Bladder plate	50 mL catheter tip (tip diameter about 7 mm)
Vagina	50 mL catheter tip (tip diameter about 7 mm)
Cervix	20 mL Luer tip (tip diameter about 4 mm)
Vulva	50 mL catheter tip (tip diameter about 7 mm)

NOTE: For the bladder, first fill the syringe with halve of the silicone mixture, perform step 7, 8 and 9 and repeat when the syringe is empty with the other halve of the mixture. For the cervix, if there are multiple moulds available and step 1 to 3 are performed on all moulds, it is easier to mix the amount for 2, 3 or 4 cervixes at the same time, this amount still fits in the syringe.

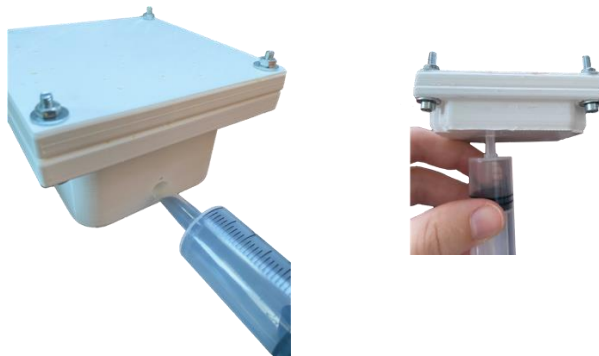


Step 7: Put the plunger back in, turn the syringe upside down and open the hub of the barrel. Release the air and then put your finger on the tip (hub) of the barrel and apply vacuum by pulling the plunger down in a pumping motion, until most bubbles are gone.



Step 8: Remove the finger and release the air out of syringe by pushing the plunger.

Step 9: Put the syringe in the indicated hole in the mould and slowly push the plunger to fill the mould with silicone.



Step 10: Make sure to fill the mould entirely, keep pushing after the silicone comes out of the air holes, to make sure when trapped air is released there is still enough silicone inside the mould, so there will be no air bubbles present in the silicone.



Step 11: Close off the hole for the syringe in the mould and pound the bottom of the mould on the table a few times to release air bubbles.



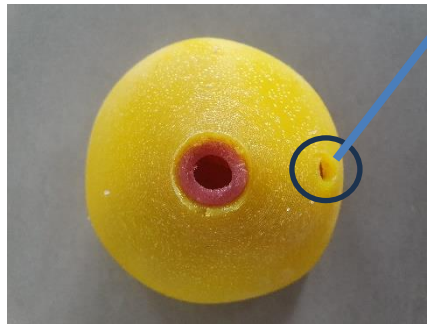
Step 12: Let the silicone cure for at least 8 hours and release the silicone parts out of the moulds.

FABRICATION STEPS SILICONE PARTS

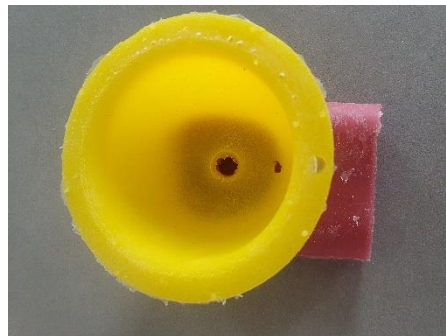
Step 1: Apply a thin layer of silicone glue over the entire area about 2 cm around the fistulas hole, at the thickened edge the glue layer must be a bit thicker.



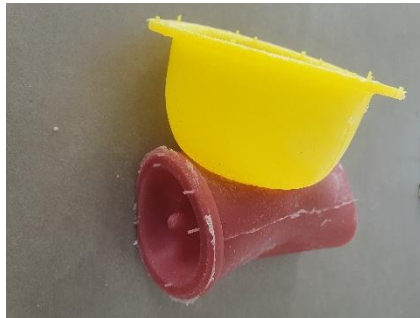
Step 2: Evert the bladder and stretch the bladder's hole for the fistula over the thickened edge of the vagina and apply pressure. Keep the orientation of the urethra opening parallel to the length direction of the most lengthy part of the vagina.



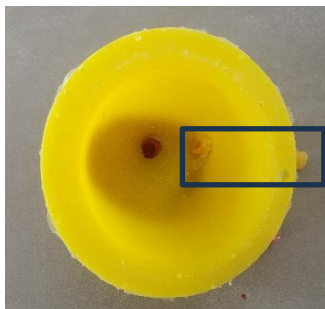
Step 3: Fold the vagina in the everted bladder (keep it if necessary in position using an elastic band). Let it dry for a few hours and unfold the bladder.



Step 4: Apply silicone glue in the edge of the cervix and place the vagina in the edge. Let it dry for a few hours.



Step 5: Cut the urethra to 5 cm and apply a layer of cyanoacrylate glue around it, then place in the indicated location in the bladder. Add a bit more glue around the inner and outer edges, and let it dry for 10 minutes.



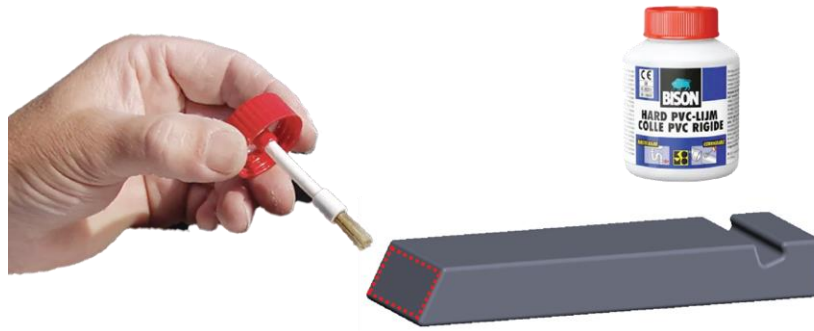
urethra

Step 6: Apply glue on the circular edge of the bladder, place the bladder plate on top of this and lay it flat on the side of the plate to be able to apply pressure for about 10 minutes. Let it dry for a few hours.

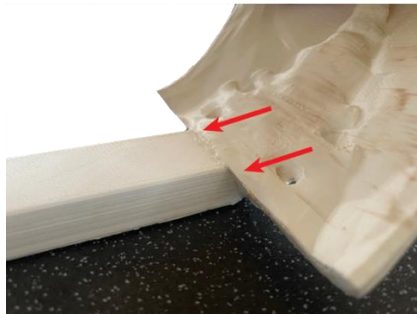


FABRICATION STEPS FRAMEWORK

Step 1: Clamp dorsal frame part of the framework at the table and apply hard PVC glue.



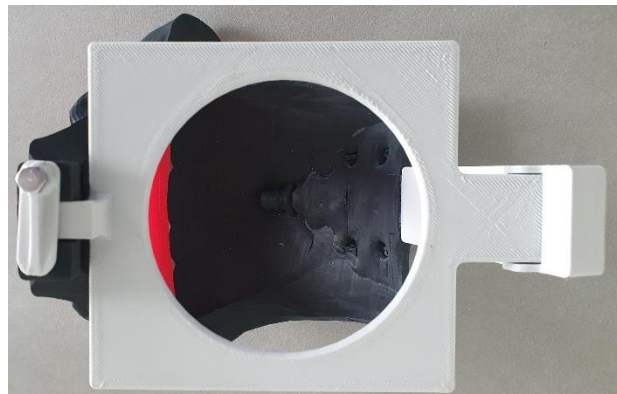
Step 2: Push the 3D printed bone part against dorsal frame part and apply pressure for 10 minutes.



Step 3: Slide bladder support frame in dorsal frame part.

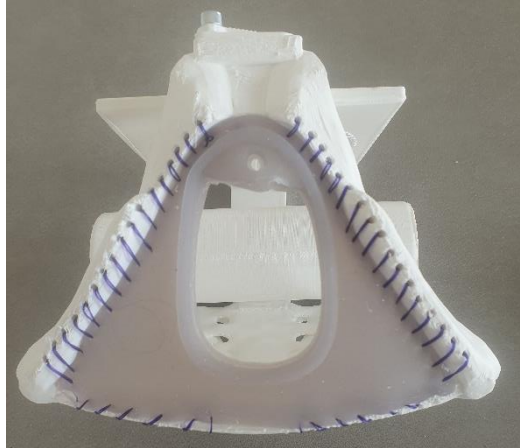


Step 4: Mount frame to pelvic part to using the hatch (fixed with a bolt to the pelvic part)



PLACING SILICONE PARTS IN FRAMEWORK

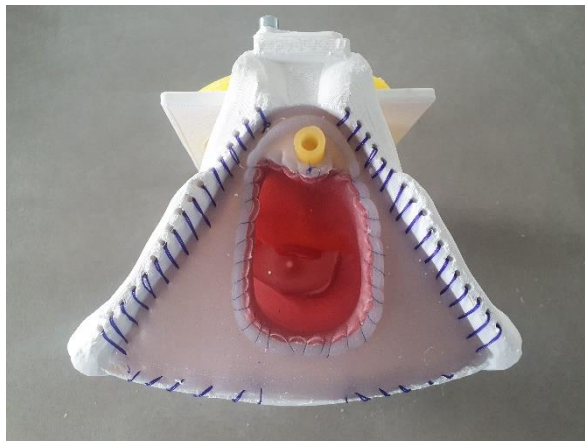
Step 1: Stich the vulva to the pelvic fram using the preprinted holes.



Step 2: Place the bladder with the urethra and vagina in the framework and push the urethra through the indicated hole in the vulva.



Step 3: Stich the vagina to the vulva using a continuous suture.



END RESULT:



