



Free Form Seating

This series of images will demonstrate how Free Form Seating can be used to create a one-piece, full-body seating system, start to finish within one day.

Beginning with the client in the morning and doing the shape capture, right through to forming the shell and making a cover.

This series of images shows the techniques and processes used.



Transferring into a shape capture bag. Once happy with the seated posture of the client, we started the plaster.

Step 2.

Full Body Custom Seating in a Day



Plaster mold done and ready for the Free Form sheet within 30 minutes.



Stapling bubble wrap to simulate the thickness that adding the cover will have.
It also keeps things clean and easy to work with.

Step 4.

Full Body Custom Seating in a Day



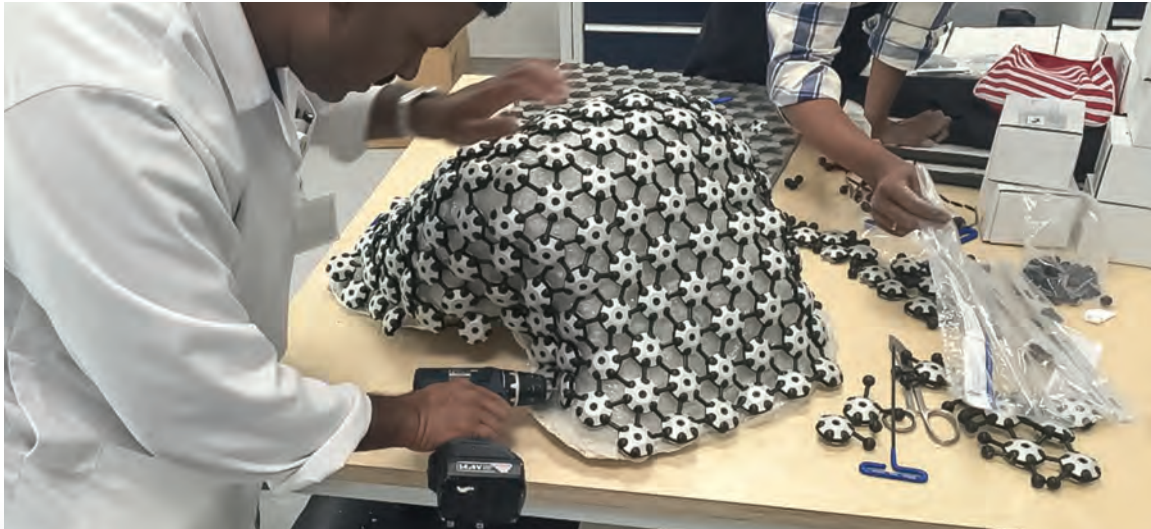
Starting from a full sheet, pre-torqued to allow for shaping.
We push the Free Form material into the cavities and make sure to match the shape.



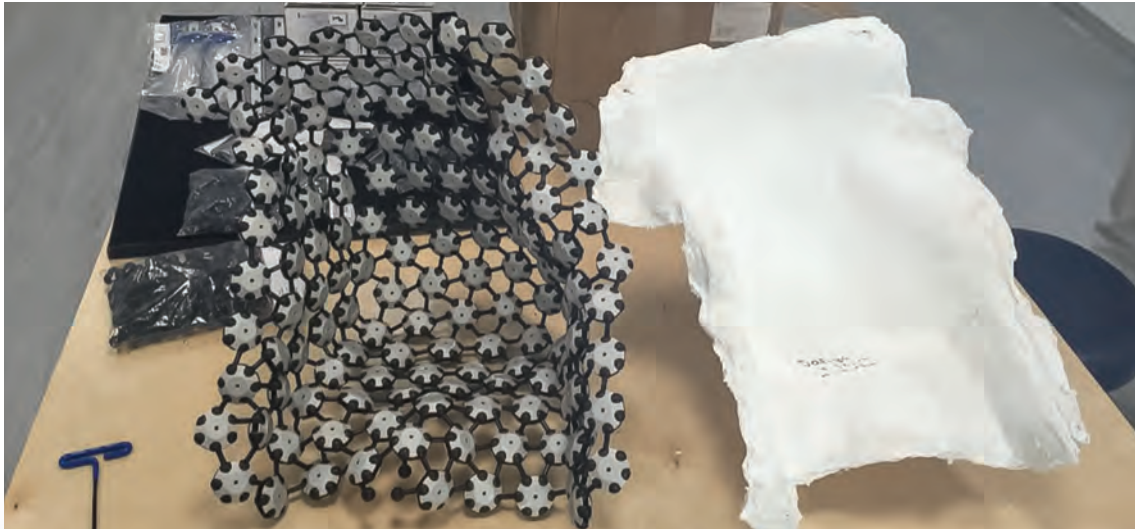
Here we are removing modules from one section and adding to where more support was needed. Forming Free Form to the plaster mold took about an hour until we were satisfied. You can see how the modules can be rotated to decrease the space between them and contour tight curves.

Step 6.

Full Body Custom Seating in a Day



Once we were happy with the configuration, we used a power drill to tighten the shape. This is not the final tightening. The final tightening should be done manually with the included hex key.



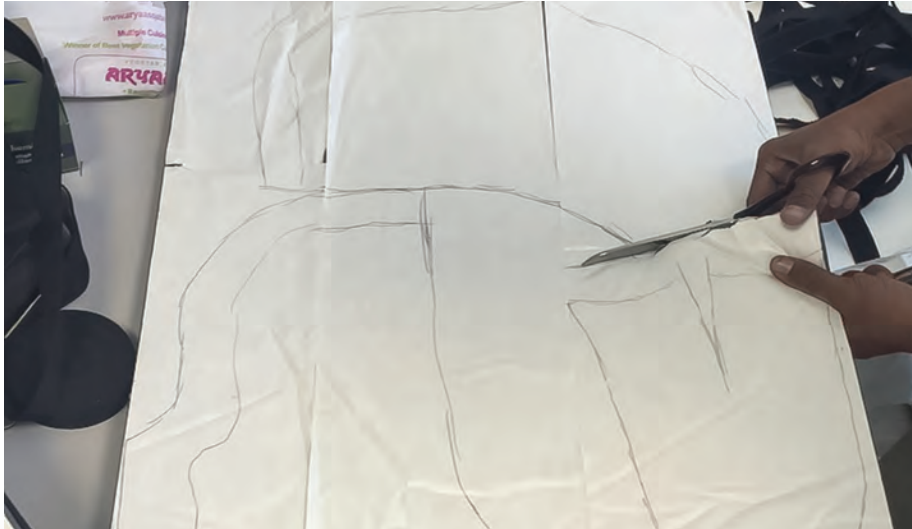
Plaster Mold beside the finished Free Form Shell. Ready for the padding and cover.

Step 8.

Full Body Custom Seating in a Day



Using wide masking tape to trace the patterns for the cover.



Using the supplied three-layered foam (Veltex - 1/8 EVA - 3/4 Urethane with an adhesive under the white tape) we trace out our foam pieces.

Step 10.

Full Body Custom Seating in a Day



We used the same patterns to sew together an air mesh cover.



Ready for the initial fitting. The extra padding around the edge is there in case we need to add more modules for support. We didn't need to for this client and trimmed it so that it folded over the edge of the shell. The velcro sensitive backing of the padding sheet sticks to the Free Form shell. Velcro dots the same diameter as the inner clamp are included with the Free Form Full Fit Kit. This allows the cover to be taken on and off and cleaned.

Step 12.

Full Body Custom Seating in a Day



After 5-10 minutes of adjustments, the client was satisfied. We finished the edging and the system was complete. He went home with a full-body system that will continue to grow and change with him. He wanted the entire system concealed so we used a sheet of Lycra to cover the underside and attached it with Velcro. This particular client also wanted to have the option of a Roho insert in the ischial well. He has the ability to place the insert either under the air mesh or on top. We mounted it to his manual chair with our quick release Independent Mounting system. This allows him to take it off his manual wheelchair easily and quickly. We chose air mesh for the top cover because of the heat and moisture dissipation in the hot climate. Dartex, Lycra and other materials can also be used. Many types of foam, air and gel can also be used to cover the shell.





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