



Starting from a Free Form Sheet – Tips and Tricks

Free Form is a versatile material that can be used in many different ways. There is no right or wrong method for fitting Free Form. Use whichever method is the most effective and easiest for the situation and the client.

The beauty of Free Form is that you CAN make mistakes. And then you can fix them with your included Hex keys. If something is not fitting how it is desired, it can be adjusted.

Make sure all components for your FIT Kit are included.

Fitting/Contouring/Shaping

Free Form Sheets can be configured in 4 different ways:

1. PLASTER MOULD

A plaster mould can be taken of the client's shape and then Free Form can be shaped on the mould. The plaster mould is usually made from a VacuForm or similar shape capture bag. This is typically the quickest and most accurate method. Please contact us for more information on this method if needed.

2. MEASUREMENTS

The sheet can be configured based on the client's measurements.

3. USE EXISTING SEAT AS A GUIDELINE

The sheet can be configured/contoured based on the client's existing seating system.

4. DIRECT FIT

Free Form can be adjusted with the client in the system. This is called Direct Fit. Usually it is best to have the client's weight supported with a lift and sling system.

For one-piece, full body systems, we recommend the plaster mould method. It is typically the easiest and quickest method. It is usually the least stress on the client as well.

Custom Backs can also be made using the plaster mould technique but a direct fit technique is also effective and fairly quick.

For Back supports, we recommend configuring the sheet with measurements and the client's current system. A plaster mould can also be helpful for complex back/trunk shapes.

Once the plaster mould is hard, place the Free Form Sheet on top of the outside surface and gently form the Sheet around the mould. The Sheet is pre-torqued to allow for shaping by hand. Remove excess material where it extends beyond the mould. Add extra material to fill in areas where the sheet doesn't reach the edge of the mould. Some material may need to be removed to contour complex shapes.

Using the T-Handle Hex key for leverage, manipulate the angle of the clamps to create a smooth contour.

Once the Free Form Shell is complete, tighten the clamps enough so that they hold the shape. This can be done with an electric drill set at a high torque setting. Torque settings vary by drill manufacturer. It can be beneficial to not fully tighten the clamps yet. When completing the fitting with the client in the Free Form system, it is easier to make adjustments when the clamps are not fully torqued.

Place the foam padding system into the shell and trim the excess. The padding can be held in place using the supplied Velcro Coins. The Velcro Coins adhere to the inner clamp.

Do not trim too much for the padding. Leave excess padding in case more Free Form shell is needed to support the client's shape. It is also beneficial to extend the padding 1-2 inches beyond the shell so it wraps over the edges, creating a smooth top edge.

Mounting

Free Form can be mounted in a variety of ways. There is the Centre Mount Hardware which is included in the Back Kits and the Independent Mount Hardware which is included in the FIT KITS. We also make adapters for strollers and mobility devices without back canes. Our Mounting clamps fit round, square or oval tubing.

The Independent Mounts can be mounted to shell wherever is most appropriate. The plate that mounts to the Free Form shell is steel and can be bent to the appropriate contour. It will mount to the shell at two points with the extended screws and washers. Remove the screw in the module that you would like to mount the Independent Mount to and use an extended screw with the washer to mount the steel plate of the Independent Mount to the module. The steel plate of the Independent Mount can be angled. Three screws clamp the collar to the plate. Once loosened, the plate can be angled. Be sure to tighten the three screws on the collar once the angle is set.

The tension of the quick release lever on the Independent mounts can be adjusted by turning the nut on the bottom with a wrench.

When mounting a one-piece full body Free Form system to a wheelchair with a tubular frame, use the vertical adapters for the horizontal tubes. This will allow the system to be removed and attached by pulling straight up.

When mounting the Free Form to a flat seat, use the aluminum stays or stand-off mounts. Attach the aluminum stays to the flat seat and bend them upward to contour and support the shell. This will not allow quick release but is a useful way of mounting to stroller plates that are quick release already. The stand-off mounts allow for a pivoting mount to brace the Free Form Shell.

Once happy with the position of the Free Form system on the wheelchair, ensure all screws are tight and the system can be removed and attached easily. The screws for the modules should be as tight as you can physically tighten them by hand. Make adjustments to the alignment of the mounting hardware as necessary so everything aligns for a smooth quick release.

Check the support and how it forms to the client's shape. Checking the fit can be done visually through the shell and by feeling through the clamps, on the inside, for pressure. If adjustments are needed, make them now. Add more clamps or remove clamps if necessary. Check the fit of the system by feeling through the shell. Also check the client's skin for any redness after 20 minutes. Make adjustments to the shape as necessary.

ALUMINUM STAYS

Aluminum Stays are used to rigidify the Free Form Shell and to add strength where it might be needed. They attach using the supplied extended screws and washers directly to the modules. Areas where they can be useful are vertically near the headrest plate or horizontally on lateral supports.

For any questions please don't hesitate to contact us at sales@symmetric-designs.com or 1-250-537-2177