

Majicast

Quick User Guide

Assembly process overview



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prosthetics

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DESCRIPTION

The Majicast system is a hydrostatic, weight-bearing casting platform designed to support the fabrication of Amparo's direct-fit lower-limb prosthetic sockets. It captures the residual limb's shape and volume under full patient load, producing a reproducible and anatomically accurate socket form.

By applying uniform hydrostatic pressure, the system ensures precise shaping and optimal load transfer, while a proprietary soft tissue control mechanism stabilizes distal tissues, minimizing shear and soft-tissue deformation.

The system is compatible with Amparo sockets and integrates seamlessly into clinical or mobile prosthetic workflows. Its portable design and telescopic top tank enable safe, efficient, in-clinic or mobile fittings, streamlining the socket fabrication process and supporting both temporary and definitive sockets.



Key Features

Hydrostatic, Weight-Bearing Fitting

The system uses the patient's body weight to generate uniform pressure during single-leg stance, ensuring accurate shaping and optimal load transfer, improving long-term socket stability.

Soft Tissue Control

A proprietary mechanism stabilizes distal tissues, providing anatomically correct shaping while minimizing shear and soft-tissue deformation. This ensures a comfortable, pressure-balanced socket and safe load transfer to the residual limb.

Telescopic Top Tank

Allows safe and easy limb insertion and removal during the fitting process.

Portable & On-the-Go Capability

It requires only a water tap source, enabling in-clinic or mobile fittings without plumbing or additional power supply. Once filled, it does not require to be connected to a water source for operational use.

Reliable, Repeatable Outcomes

Ensures consistent socket fits across multiple patients, clinicians, and clinics, supporting high-quality, reproducible care.

Remoldable and Fast Fitting

Compatible with Amparo direct-fit sockets, which can be reheated and reshaped to adapt to the patient's evolving needs, minimizing refits and maximizing comfort. By eliminating plaster casting, Majicast streamlines the fitting process and enables custom-fit definitive sockets in under two hours.

BEFORE USING THE MAJICAST

Before performing a fitting, ensure that the Majicast system is properly assembled, fully prepared, and that all required materials and equipment are available.

Standard Setup (Default Delivery)

The Majicast is delivered fully assembled and ready for use. In most cases, the only assembly required is the installation of the Patient Handle.

To complete the setup:

1. Insert the handle connectors into the tubes. Ensure the Allen key openings are facing laterally.
2. Position the Patient Handle.
3. Secure it to the handle connectors using the provided screws and a 4 mm Allen key.

Once the Patient Handle has been installed, the Majicast is ready for preparation. Continue with the water filling procedure described on page 20.



The complete assembly procedure is also included in the next pages for situations where the Majicast has been partially disassembled (for example, for transportation, servicing, or component replacement).

Required Materials and Equipment for Assembly

- [MJC] Majicast
- [MJC-ACC] Majicast Accessories
- Screwdriver

Assembly

1. Place the Majicast box on a flat, stable surface.



2. Remove all belts and plastic wrapping from the box.

3. Remove the top lid of the box, followed by the cardboard sleeve.



4. With two people, lift the Majicast unit out of the base by holding it at the middle section of the Majicast, as illustrated in the image.



5. Using a 4 mm allen key, remove the pre-installed screws (see image).

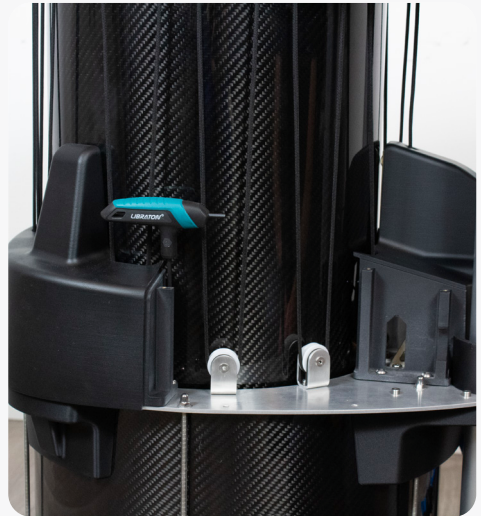




During this step, it is **mandatory** to have the top tank at its highest position (if needed, release the system by pulling down the pulling mechanism and raise the top manually).



Be very careful during this step. Avoid dropping screws into the gap between the two tanks, as this may cause jamming or damage to the top tube. If a screw falls inside, attempt to retrieve it using a magnetic tool. If this is not successful, remove the covers to access and remove the screw. Check the complete User Guide for more information.



6. Remove the top cover (see image).



7. Membrane Installation (if not pre-installed)

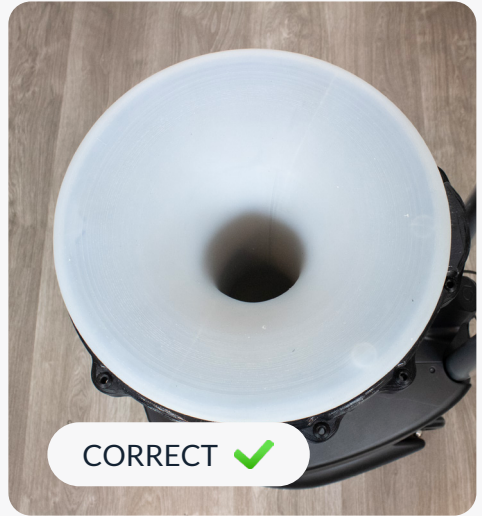
- Take the membrane and insert it into the Majicast.



- Align the membrane fixing screw with its counterpart inside the unit, position it centrally, and rotate the membrane until it locks into place (see image).



- Ensure the membrane is not twisted.



8. Pull the membrane brim outward evenly.



9. Secure the membrane in place using the thin rubber band supplied in the box.



- Carefully pull the membrane until the edge sits flush against the flat surface of the brim template.



10. Place the hose clamp with sleeve on top of the thin rubber band.



11. Position the locking mechanism between the tubes.



12. Secure the locking mechanism in place using a screwdriver.



13. Reinstall the top cover. Fix it in place using the provided screws (M6x30mm) and a 4 mm Allen key (10 screws total).

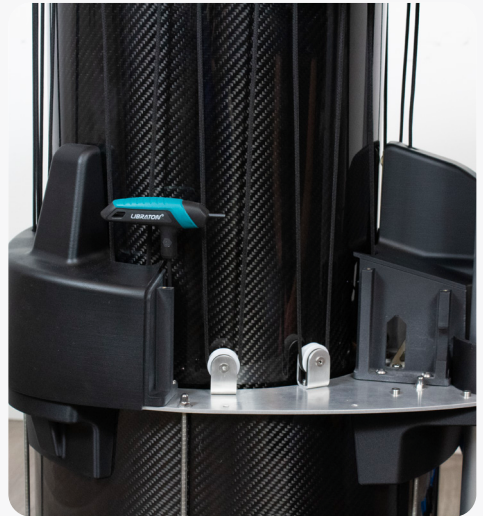




During this step, it is **mandatory** to have the top tank at its highest position (if needed, release the system by pulling down the pulling mechanism and raise the top manually).



Be very careful during this step. Avoid dropping screws into the gap between the two tanks, as this may cause jamming or damage to the top tube. If a screw falls inside, attempt to retrieve it using a magnetic tool. If this is not successful, remove the covers to access and remove the screw. Check the complete User Guide for more information.



14. Insert the handle connectors into the tubes. Ensure the Allen key openings are facing laterally.



15. Position the handle.



16. Secure it to the handle connectors using the provided screws and a 4 mm Allen key.



FILLING WITH WATER

Once the Majicast assembly is complete, fill the system with water as follows:

1. Connect the green filling hose at one end to the quick connection attached to the filling hose of the Majicast and at the other end to the water source.
2. Attach the additional length of blue bleeding tubing to the bleeding valve.



3. Place the open end of the bleeding tubing into a receptacle to catch the small volume of water that is released during the bleeding process. Then open the bleeding valve.



4. Open the valve of the green filling hose.



5. Place a wedge (folded towel, book, etc.) under the front of the base so the device is tilted slightly backward. This allows easier bleeding of air from the system.



6. Lower the top tank to the lowest position using the pulley cord.



7. Turn on the tap and begin filling the Majicast with water at moderate pressure.



Before starting, ensure the bleeding valve (at the back of the base) is open.

8. Listen for air escaping from the bleeding valve.
9. The most reliable method for filling the Majicast is to use scales to control the water volume.
 - Tilt the Majicast onto its wheels and place the scales underneath so the unit rests on them during filling.



- Fill the tank with water until the total weight reaches approximately 55 kg.



10. Once the total weight reaches approximately 55 kg, turn off the water supply (both the tap and the Majicast valve). At this point, press on the membrane with your hands, working the air towards the bleeding outlet at the top upper inner brim of the Majicast.



11. Press on the membrane until all of the air has been removed from the system and a small amount of water exits the bleeding valve.



If, after pressing the membrane, some air still remains in the system, please refer to the Troubleshooting Tips section of the complete User Guide, which explains how to remove the remaining air using a syringe.

12. Then close the bleeding valve.
13. At this point, if more water is required to properly fill the system, then keep the bleeding valve closed and simply open the tap at the water source to add more water to the system.
14. Close the valve on the green tube and remove the wedge from under the front of the base.
15. Release the pulley mechanism and raise the top tank fully.
 - The membrane should be open enough to insert the limb and socket.



When the top tank is raised, small air bubbles may rise to the upper part of the system. This is normal. If needed, repeat the bleeding process to fully remove any remaining air and top up the system with additional water.

System Check

- Ensure that the system has been fully bled of air and that no air is trapped at the top of the membrane
- Confirm that all valves are closed before beginning the fitting.
- Ensure the system is stable and level on the floor, with no wobbling.

SAFETY AND MAINTENANCE

- For professional use only.
- Supervise patient during all weight-bearing steps.
- Inspect system before each use.
- Clean the Majicast membrane after every fitting using warm water ($\leq 100^{\circ}\text{F}/38^{\circ}\text{C}$) and mild soap. Do not use abrasive cleaners or solvents.
- Check the elastic membrane and top tank for wear or damage.
- **Water removal:** It is recommended to drain the water at least once per month, or more frequently if the system is used intensively or in humid environments.
- When not in use, it is **mandatory** to store the Majicast with the top tank in its highest position, to reduce stress on its components.

MALFUNCTION OR DAMAGE

If cracking, deformation, or malfunction occurs contact:
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 www.amparo-prosthetics.com

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