Gphantom

My First Gphantom Manual

This manual contains information and instructions about the My First Gphantom model.

LEARN. PRATICE. IMPROVE.

Gphantom

Thank you for choosing Gphantom!

We are a company specialized in developing solution for medical training. Here we will help you handle and optimize the durability of your product. If you are looking for specific models for your training, please contact us.

Your **My First Gphantom** is eligible for the Loyalty Program Gphantom.

See conditions.

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Receiving your Gphantom

“My First Gphantom” is a simulator developed to meet the initial needs of students in ultrasound-guided venous access training. With compact dimensions of 15x8x2 cm, it simulates a venous structure, equipped with connections that allow the withdrawal of artificial “blood” through syringes, in addition to supporting the passage of catheters and guide wires. Ideal for repeated and safe practices, this model offers an immersive and didactic experience, facilitating the learning of essential skills for venous access in a controlled environment.

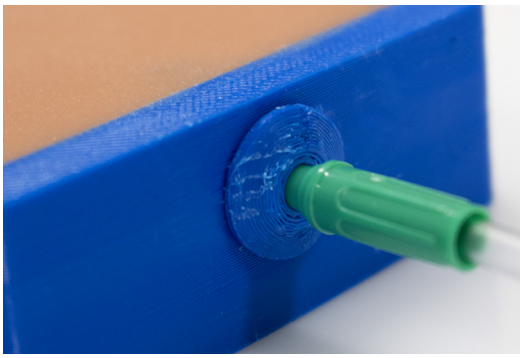
Receiving your Gphantom

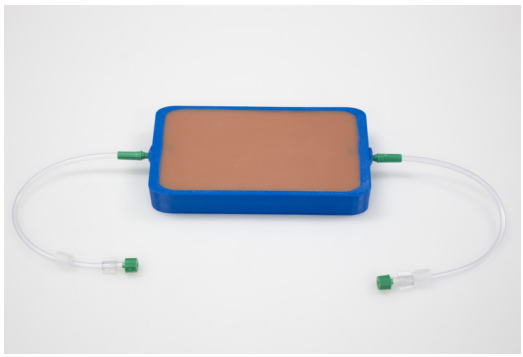
The packaging of your Gphantom Kidney contains:

- Model packed in bubble wrap;
- Transport bag;
- QR code card to access manuals;
- 1 equipment extender..

Starting your training

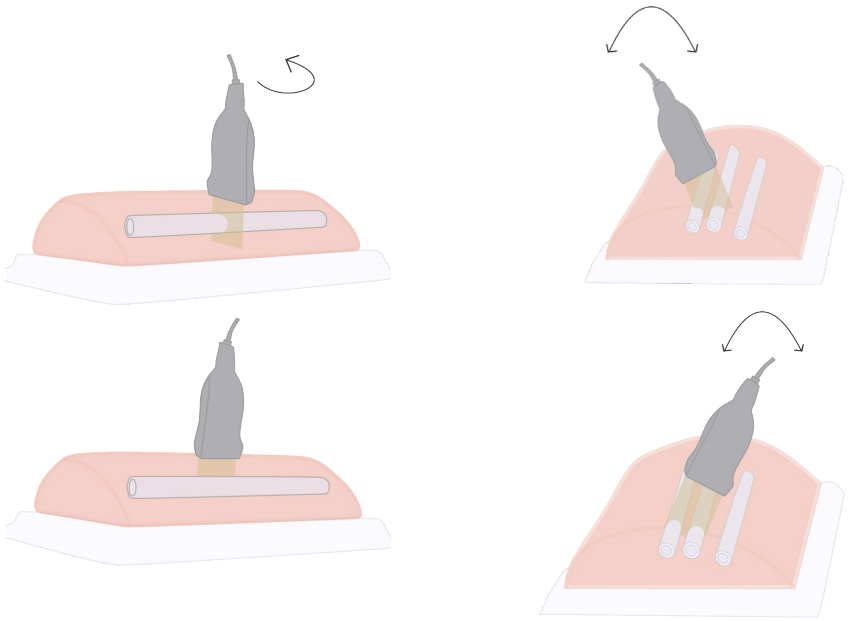
- Remove the model from the packaging, keeping the product on the original base.
- Prepare your ultrasound system and equipment;
- Separate needles and other necessary materials;
- Access our ebook (ebook.gphantom.com.br) to make the most of your training.





Ultrasound scanning

- Position the model correctly to use ultrasound on it.
- Apply a small layer of contact gel to the product or the transducer, in an amount sufficient to slide the transducer easily across the model. Add more gel if necessary.
- Adjust the ultrasound control system according to your protocol.
- Position the image according to your need.
- The structures are imaged in different planes, depending on the positioning and angle of the transducer in relation to the tissue. Optimizing a B-Mode image depends on several factors, such as equipment adjustments and transducer positioning. Therefore, it is important to understand the relationship between the ultrasound image plane and the morphology of the imaged tissue. For more information, return to our online ebook presented at the beginning of this manual.
- The correct positioning of the transducer, which allows obtaining precise images with optimized brightness, occurs with the probe in a perpendicular position to the tissue. When the transducer is tilted, forming an angle less than 90° with the tissue surface, the image brightness reduces and the representation of the structure is distorted.



Needling

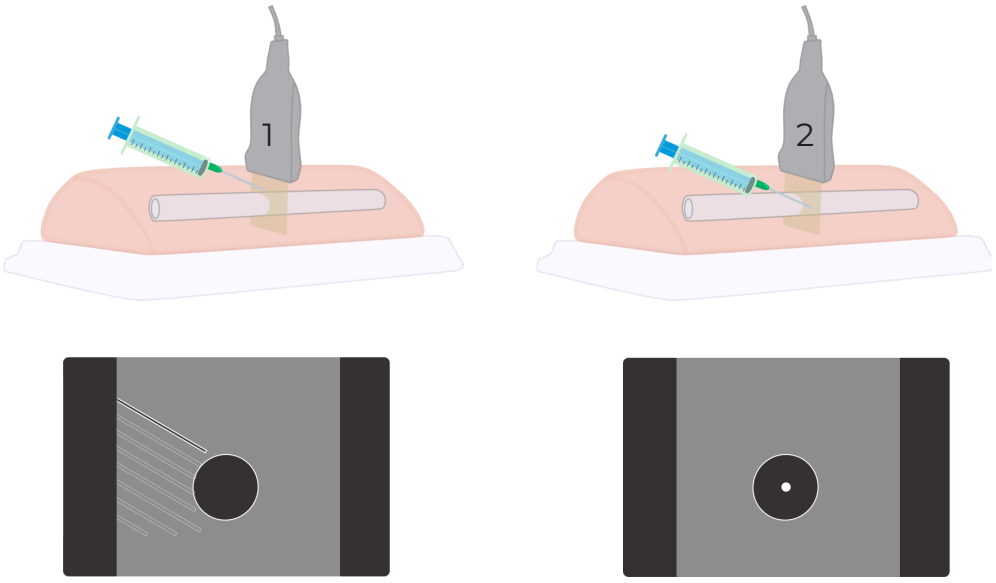
- For best needle mark recovery results, we recommend using needles up to 23G. However, it is possible to use Gphantom for Core-Biopsy training, taking advantage of the length of the training block models. Even though the use of larger gauge needles reduces the useful life of the Gphantoms, our needle mark recovery technology continues to work on the models, ensuring good durability.

1. IN PLANE

- In the in-plane approach, the entire length of the needle is visualized, in a longitudinal view. It is possible to obtain a continuous visualization of the trajectory of the needle and its tip.

2. OUT OF PLAN

- In the out-of-plane approach, the needle is inserted orthogonally to the imaging plane, obtaining a transverse image of the position of its tip, which is visualized as a bright point.



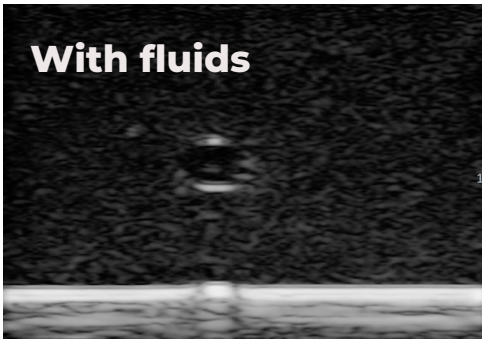
Fluid Replacement

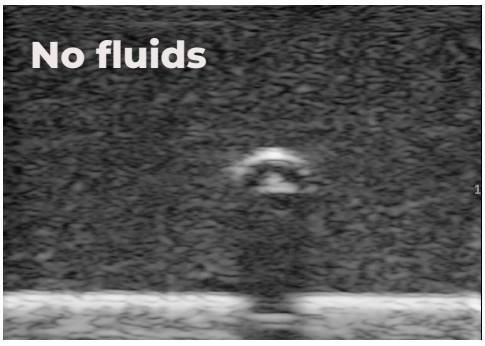
- Eliminate all air from the needle before infusing simulated anesthetics into the model.

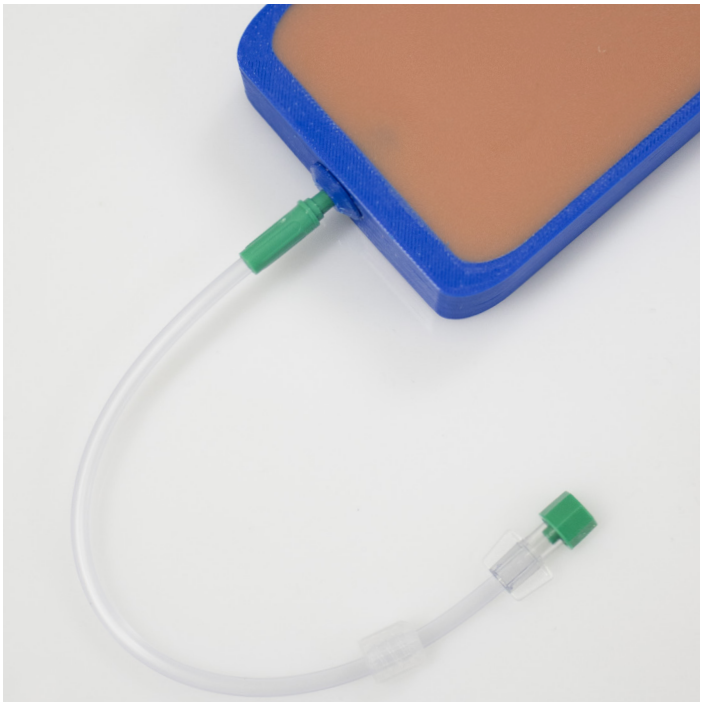
NOTE: Accidentally infusing air into the model during training may cause air to remain in the tissue or needle path. Remove trapped air by injecting the same access point with fluid until the air is expelled from the system.

- Inject the fluid, preferably use saline solution, otherwise use water.

- After the injection procedure is complete, remove the fluid from the model by pulling the syringe plunger to withdraw the infused fluid.



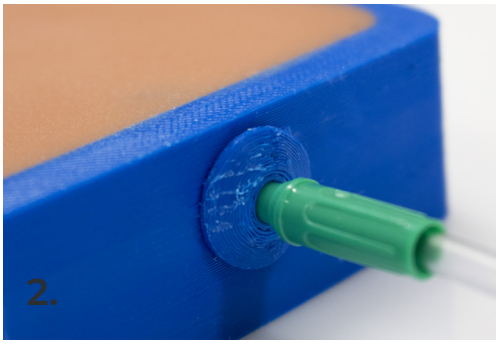


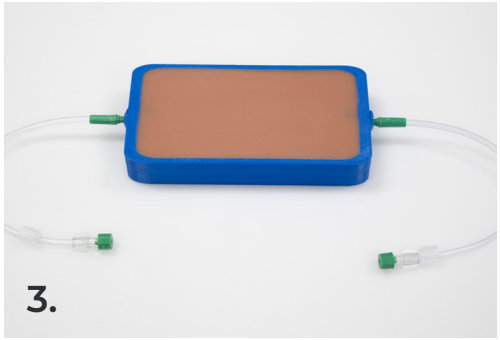


Fluid Replacement

To start fluid replacement, follow these steps:

1. Have 2 equipment extenders on hand;
2. Connect a device extender to the syringe and phantom, without forcing;
3. Place a second syringe into the other phantom connection;
4. Open one of the extenders and leave it facing up;
5. Insert the liquid into the phantom gently, press the syringe until the liquid comes out of the other equipment extender;
6. Close the extenders.





Handling and Maintenance

- Only perform the procedures supported by each product as described in this guide;
- Only use needles to access fluids;
- Do not use or store other sharp objects, such as scissors, scalpels or box cutters, next to your Gphantom;
- Do not insert any objects or tools into the model except medical equipment, accessories, or supplies intended for use with this model;
- Do not use chemical solvents on models;
- Always store your product in its packaging and in a cool place, away from the sun;

- Exposing your Gphantom to temperatures above 30°C for long periods may cause changes in the product's properties. After training, clean the product with a paper towel, removing excess ultrasound gel, and then wash it under running water, without removing it from the base;
- Do not store Gphantom with excess gel, as this may cause the proliferation of microorganisms that could damage the product;
- Do not use detergents or sponges, as these will damage the product!

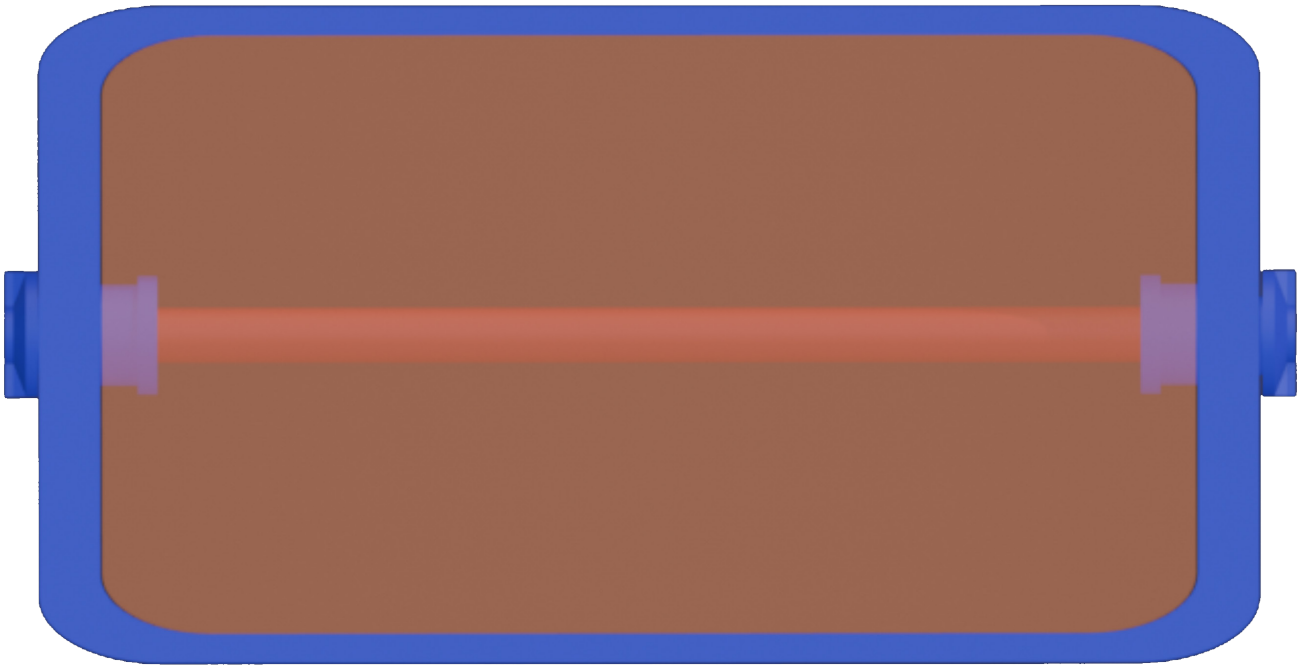
Cleaning

- Clean the training model only with water and a light soap solution, if necessary, wash under running water. Do not submerge the model or use large amounts of liquid to wash it.
- Do not remove the product from the original base.

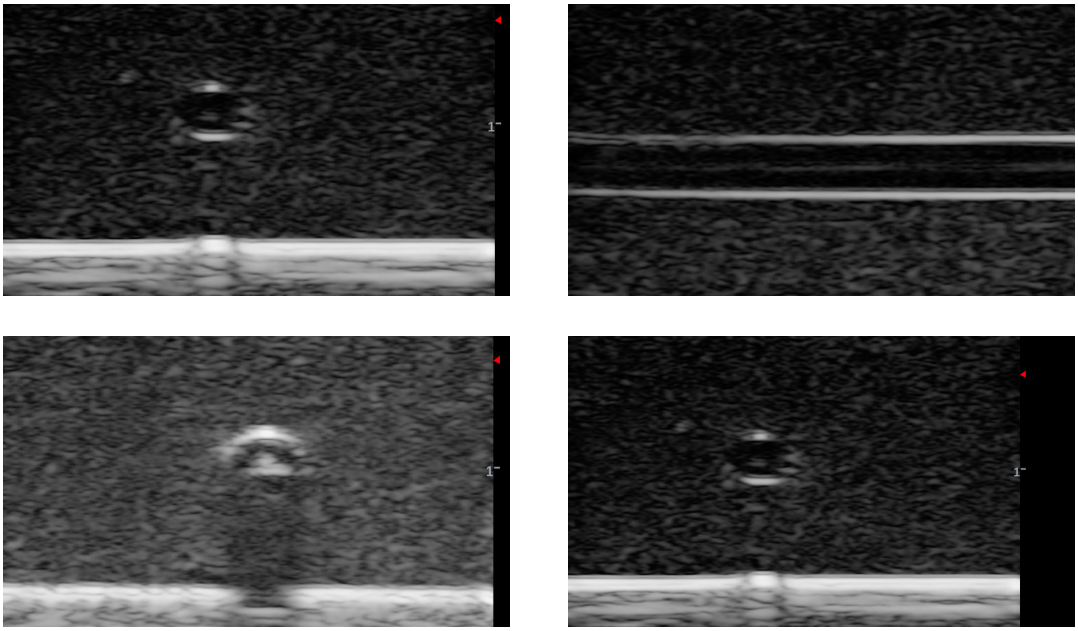
Storage and Transport

- Always store the product in a cool place, away from the sun.
- Transport the product in its packaging.
- Make sure there is nothing inside the packaging that could damage your product.

Internal structures



Product code	PBD050521
Length	15 cm
Height	8 cm
Width	2 cm



B-mode ultrasound images of the model.

CONTACT

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Gphantom

Consult the feasibility of custom development
of a Gphantom product for your needs.

Gphantoms have a 3-month warranty against manufacturing defects from the issuance of the invoice.