pro delphus
Simuladores Cirúrgicos

Hand simulator with forearm for venous puncture training

HOP

INSTRUCTIONS MANUAL

INTRODUCTION

The HOP (Hands On Puncture) is an exclusive development of Pro Delphus, being the most realistic venipuncture simulator in the world. Its design meets the need for doctors, nurses and health professionals in teaching venipuncture procedures.
Mounted on a reusable acrylic support, the HOP is equipped with a peristaltic pump, allowing speed control and vascular pulse, and a container to accommodate artificial blood.

Its vessels are anatomically integrated in the subcutaneous cellular space, which deepen in their path, allowing activities of various complexity.
If a sequential puncture schedule is followed, it allows hundreds of procedures, without leaving marks of the needle punctions.

This model does not contain Silicone or Latex in its composition. It is molded in Neoderma®, a thermos retractable rubber developed and produced exclusively by Pro Delphus Simulators.

With the HOP simulator, the learning curve will be shortened, allowing practical teaching with extreme reality. It has never been easier to simulate venoclysis with excellence and effectiveness!

CLEANING AND CONSERVATION

After each training, carefully clean your simulator.

For the acrylic base, just use a paper towel or neutral soap and water with a soft sponge.

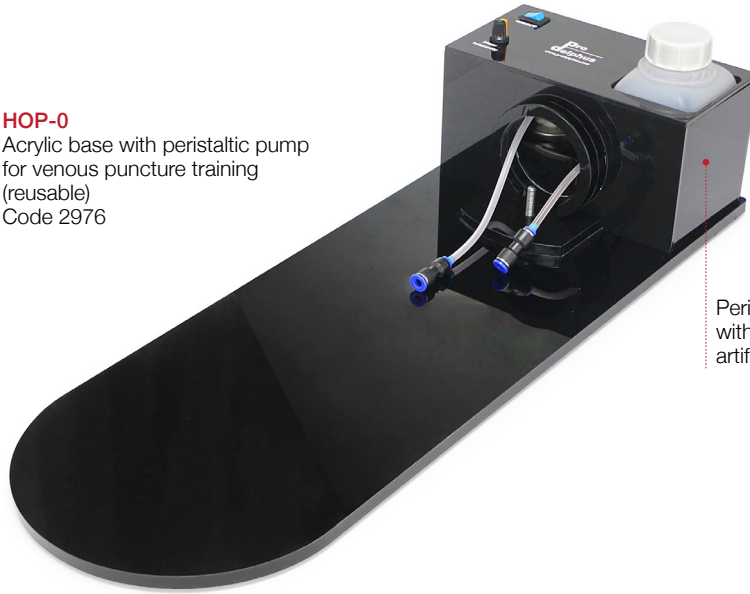
To clean the outside of the surgical units (Neoderma® rubber), use water and neutral soap only, with the help of a soft, non-abrasive sponge. Then dry it with a clean, lint free fabric towel.

For a better conservation, store the simulator at room temperature (between 10º - 30º C / 50º F - 86º F) and avoid direct exposure to sunlight.

We recommend treating your simulator with the same delicacy that a human being is treated, which will increase its useful life. The surgical unit should be recycled after excessive training sessions.

COMPONENTS AND SPARE PARTS

HOP-0
Acrylic base with peristaltic pump
for venous puncture training
(reusable)
Code 2976



Peristaltic pump
with container for
artificial blood

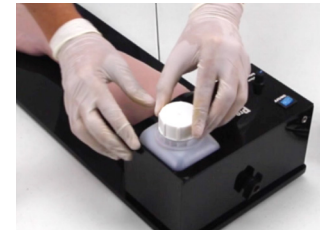
HOP-1
Hand and forearm training unit

IMPORTANT: the power plug included on the peristaltic pump is of Brazilian standard (type C, which has two round pins). An adapter will be needed if using outside Brazil.

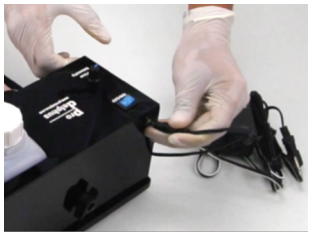
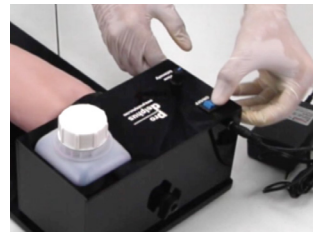
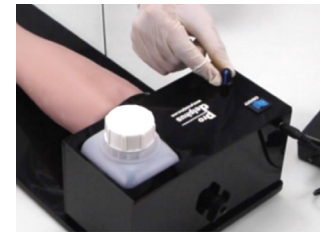
ASSEMBLY PROCESS

The first step before using your HOP simulator is to set up the peristaltic pump and artificial blood to allow the bleeding flow onto the arm.





Fill up the artificial blood recipient up to 50%. Make sure to close the container with both lids. Do NOT fill it over 50%, it may cause a circulation problem with the pump.

Connect the power supply to the back of the acrylic base, then to the power outlet. Turn on the simulator and control the speed of the blood flow, as needed.

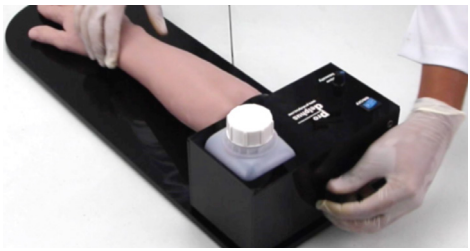
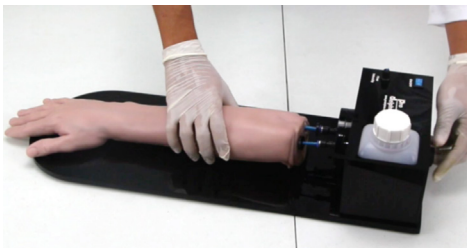
ARTIFICIAL BLOOD

Ingredients
100 ml Glycerin
300 ml Saline solution
1/2 tbsp Food coloring red bordeaux
10 ml Bleach

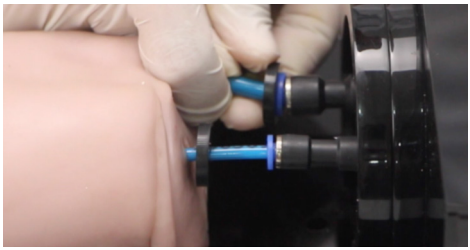
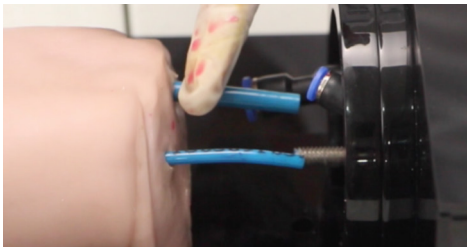
Directions
Mix all ingredients together in a measuring cup (500 ml)

This recipe makes 500 ml. For one liter, just double it!
The color may differ from brands, just adjust it by putting more or less food coloring, as needed.

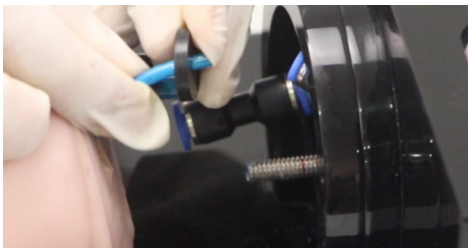
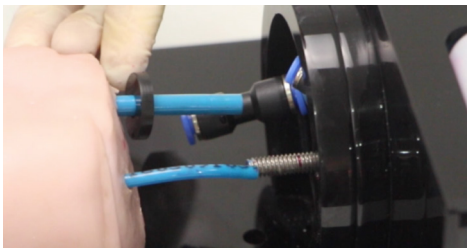
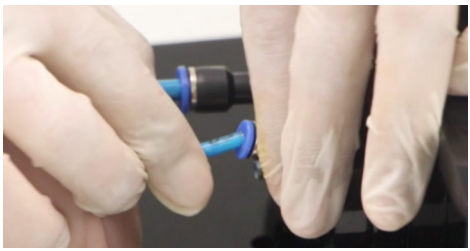
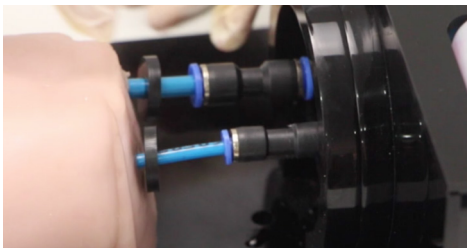
STEP-BY-STEP: REPLACING THE SURGICAL UNIT

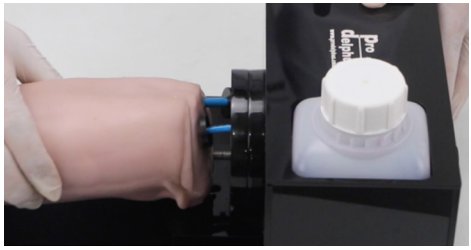
In order to replace the surgical unit (HOP-1) after exaustive usage or to for a different difficulty, first loose the screw by the knob on the back of the base until the arm is released. DON'T pull the surgical unit until it is fully released.

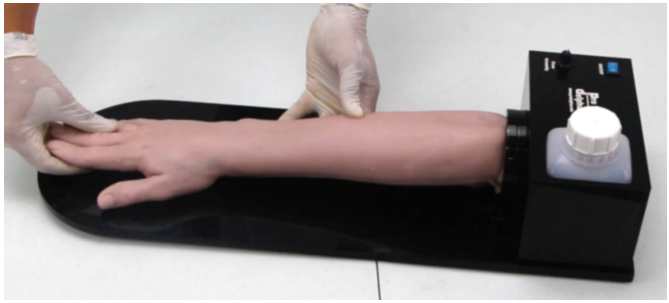



Disconnect each one of the blood flow vessels from the base pressing the black rubber ring and pulling it to the opposite direction of the arm. Then move the current arm out of the base. Don't forget to clean the base before replacing the unit.

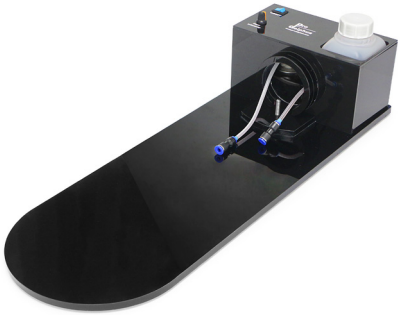
Place the new arm on the base and insert the black rubber washer in each vessel before attaching it back to the receiver by pressing them inwards.





Insert the screw onto the arm and tighten the knob until the arm is secure to the base. That's it! Your HOP simulator is ready for training again.

COMPONENTS AND SPARE PARTS



HOP-0
Acrylic base with peristaltic pump for venous puncture training (reusable)
Code 2976

HOP-1AF
Hand and forearm training unit- easy access
Code 2977

HOP-1AD
Hand and forearm training unit - difficult access
Code 3001

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Our products are developed, designed and made in Brazil