Clean Transcardial

Perfusion System



CTPS

User manual

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Compatible Accessories & Consumables

Before operating the CTPS Perfusion Platform, ensure that the appropriate accessories and consumables are available. Please refer to the specifications below to ensure compatibility with the system.

1 Perfusion needles



23G standard needles or 23G butterfly needles

Recommended for proper flow and perfusion pressure

2 High-pressure extension line



1 mm inner diameter (ID)

Connects the pump to the perfusion needle

3 Medical 3-way diverter valve



Allows selection between PBS and PFH during perfusion

4 Soft tubing



6 mm inner diameter (ID)

Connects the PBS and PFH bottles to the pump

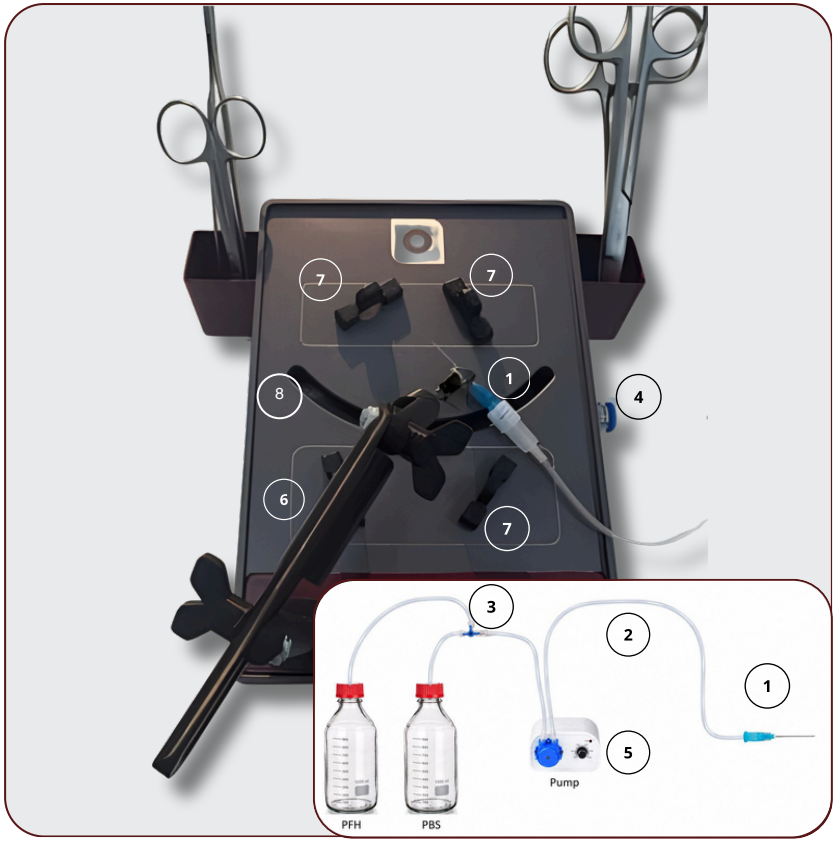
5 Peristaltic pump (optional)



Kamoer NKCP, 24 V, adjustable flow rate: 19-65 mL/min

Recommended for controlled fluid delivery

Platform Setup Overview



*Recommended pump-driven perfusion setup

1 Perfusion needles

2 High-pressure extension line

3 Medical 3-way diverter valve

4 Soft outflow tubing

5 Peristaltic pump (optional)

6 Needle holding crane

7 Magnetic holders (white for forelimbs, black for hindlimbs)

8 Fluid draining system

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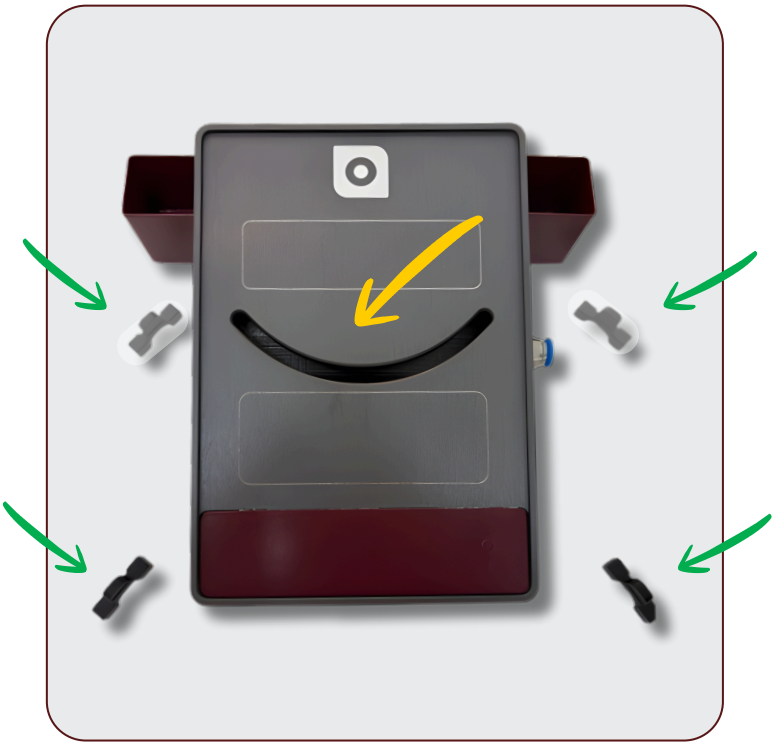
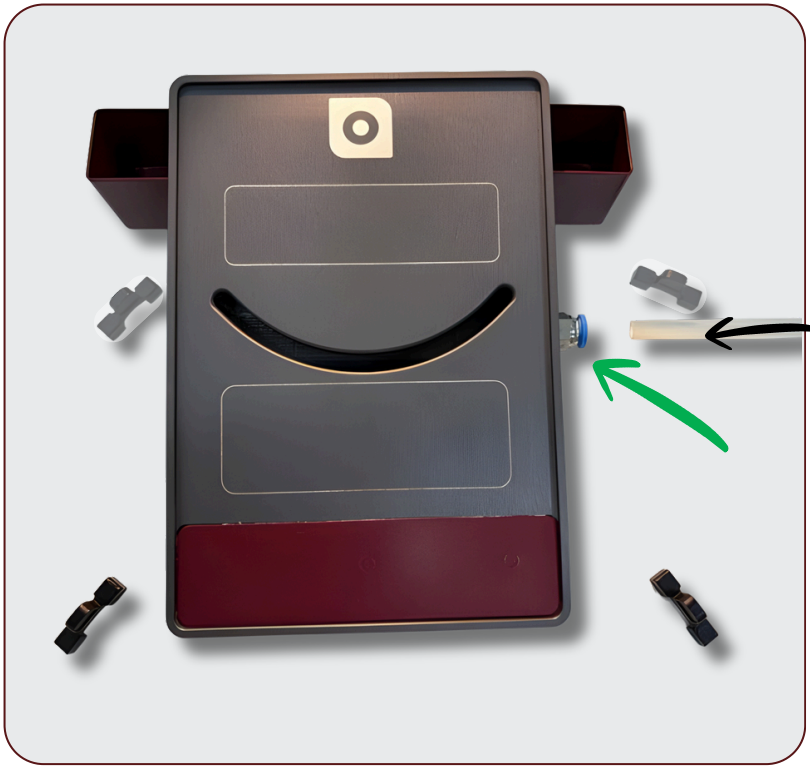


Step 1

Prepare the table and position the magnetic holders (white for forelimbs, black for hindlimbs), as shown in the picture (green arrows).

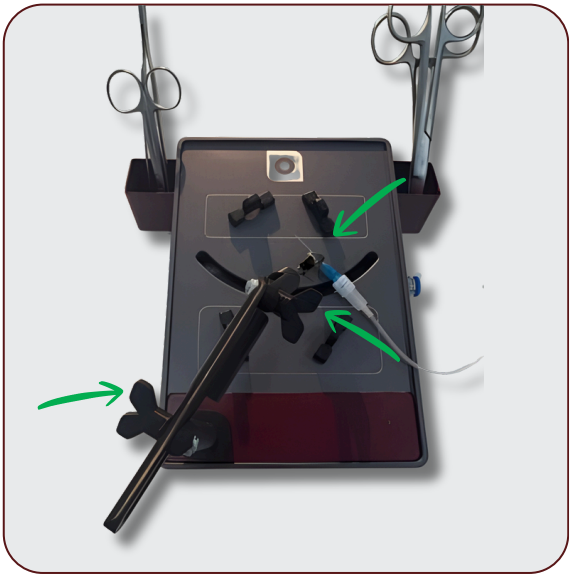
Note: The yellow arrow indicates the fluid drainage system from the animal.



Step 2

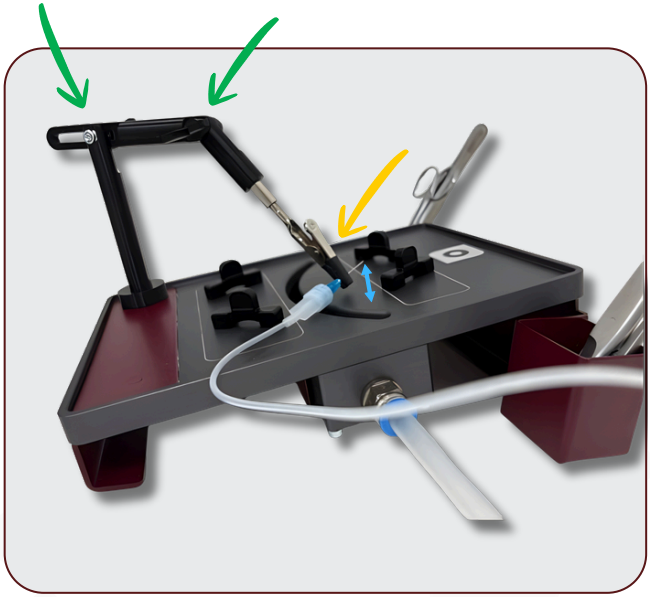
Connect the outflow tubing (black arrow) to the outflow port of the table (green arrow).

Note: The outflow tubing drains the fluids and should be connected to the provided fluid-collection bottle.



Step 3

Prepare the holding crane by adjusting the screws (green arrows) to match the final position on the animal.

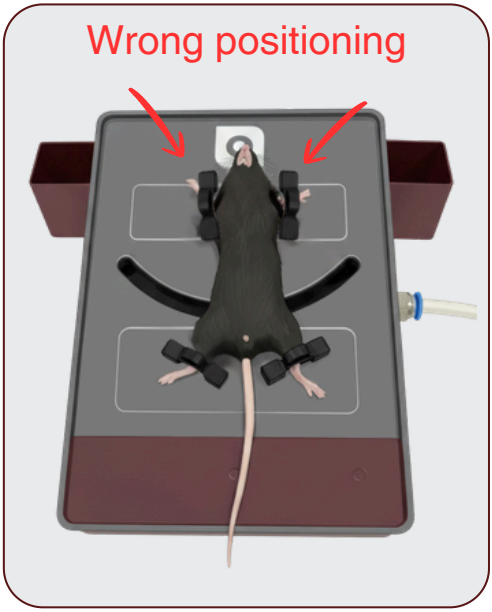


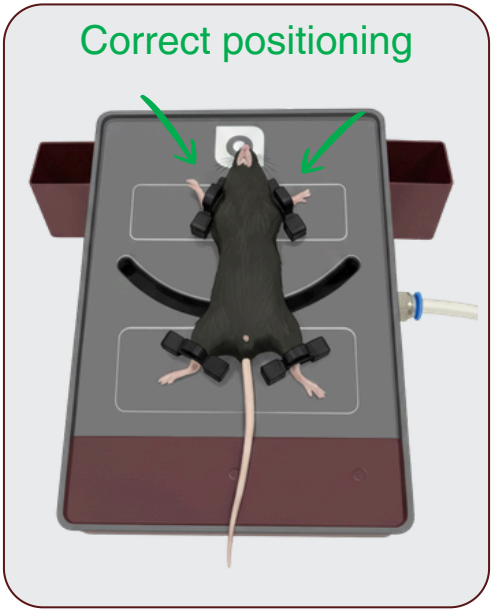
Note:
The holding tooth (yellow arrow) should be positioned so that the needle is aligned with the level of the heart.

Optional: Prepare the necessary tools in the holding racks.

Step 4

Place the animal on the perfusion table and stabilize its extremities using the magnetic holders.



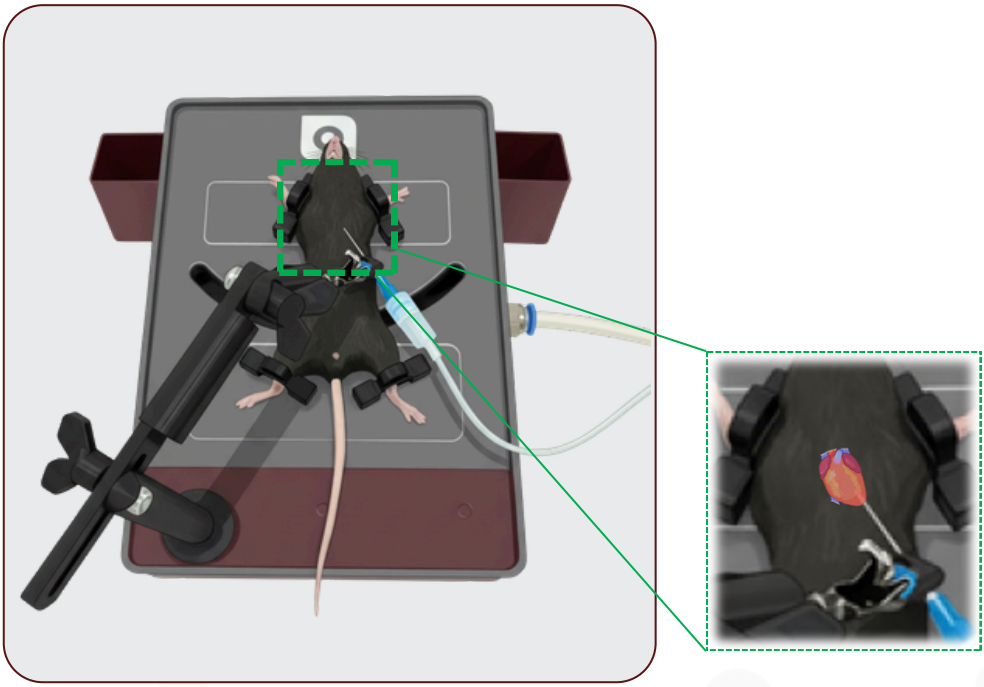


Note:

Position the holders proximally and at an angle, as shown in the figure. Refer to the figures for correct (green arrow) and incorrect (red arrow) positioning.

Step 5

Verify, once before starting your batch of perfused animals, that the holding crane and needle are correctly aligned with the projected heart position (see magnified view). This speeds up and simplifies positioning of the holding crane during the perfusion procedure (see Step 6).



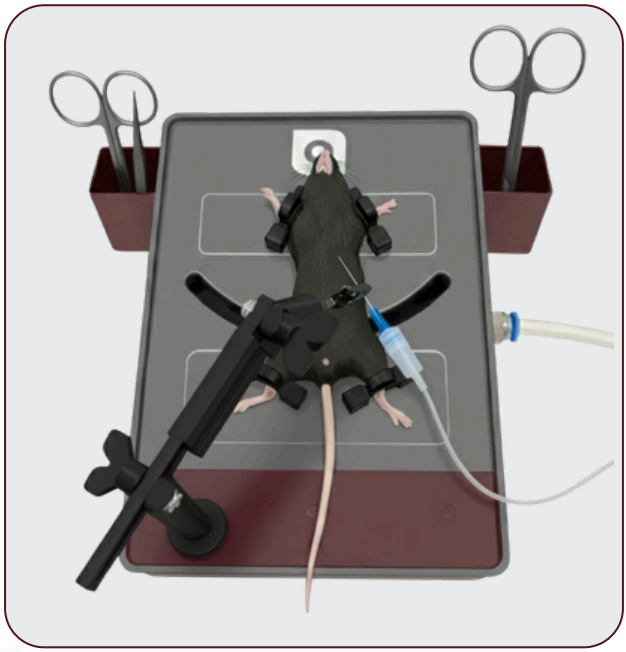
Important:

We strongly recommend using a **23G needle** to ensure proper flow and adequate perfusion pressure.

Step 6

The correct final positioning of the system, including the secured needle and tools, is shown in the figure. To begin the perfusion procedure:

- Remove the needle from the holding tooth.
- Move the holding crane to the side.
- Start the perfusion operation.



Note:

You may use any perfusion system suitable for fluid perfusion. For optimal perfusion pressure and consistent results with minimal effort, we recommend our pump-driven “add-on” perfusion system.

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For more information

www.bioemtech.com

info@bioemtech.com

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