

# USER MANUAL



Set up and operational instructions of the Holsim Intramuscular Block when mounted in the Interlocking Porcine.



## Intramuscular Injection Model With Blood Taking

Revision A:  
Porcine Intramuscular  
injection model

Product SKU:  
P300-000

Last Updated:  
25 September 2023



# Parts List

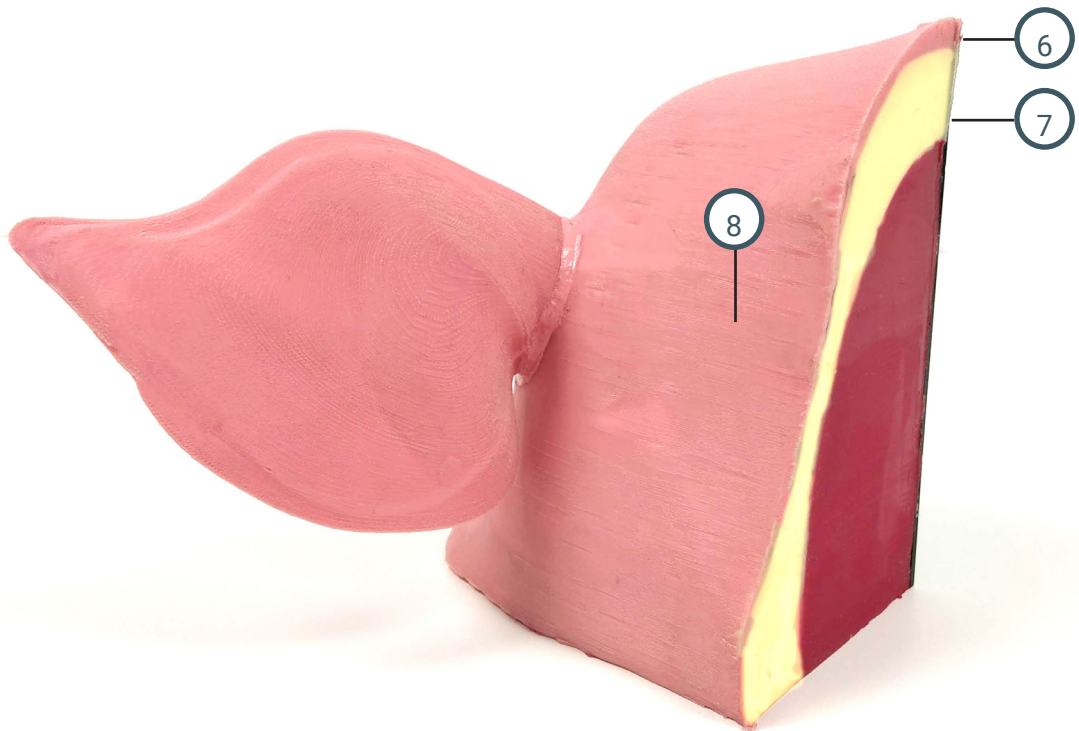
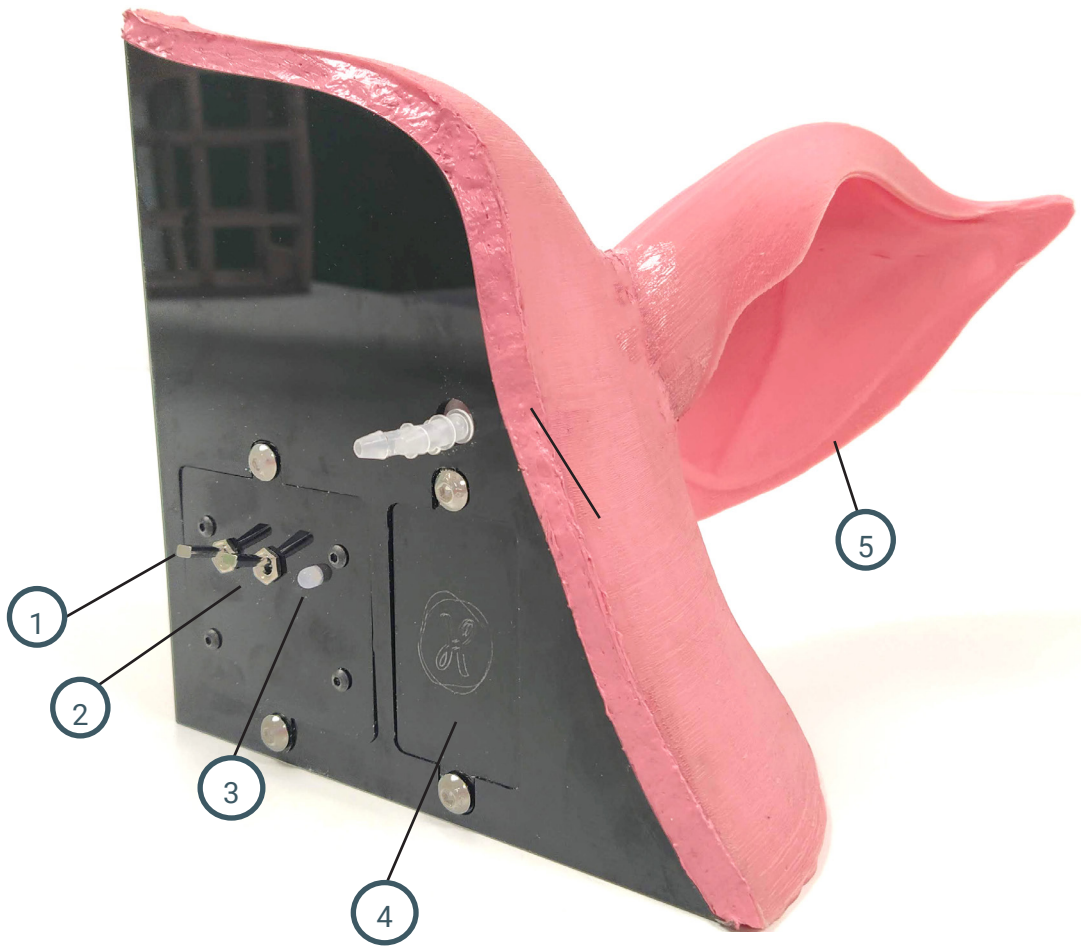
## Equipment Required:

- Interlocking Porcine Model (Preferably)
- Desk or Table (Alternative to Interlocking Model)
- Appropriate Needle for Injection  
We recommend using a 1" or 1.5", 16-18 gauge needle for this model.

## Set Up

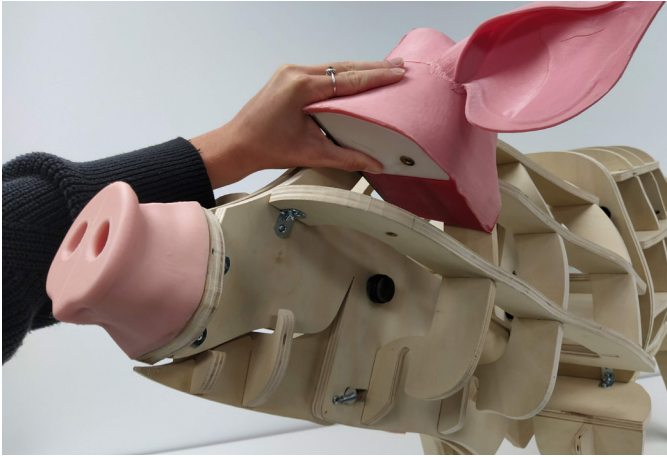
1. Power Switch
2. Buzzer Switch
3. LED Light
4. Battery Compartment
5. Ear
6. Skin Layer
7. Subcutaneous Tissue Layer
8. Muscle Layer
9. Injection Area

For all parts or repairs, please contact Holsim through our website [www.holsim.co.nz](http://www.holsim.co.nz)





# Set Up



## 1 Sit IM block into pig head

- Sit the Intramuscular Block (IM Block) onto the head of the pig as shown in photo.



## 2 Secure in place

- Align the hole in the plywood with the insert in the IM Block and screw in the knurl screw until tight.



## 3 Switch power on

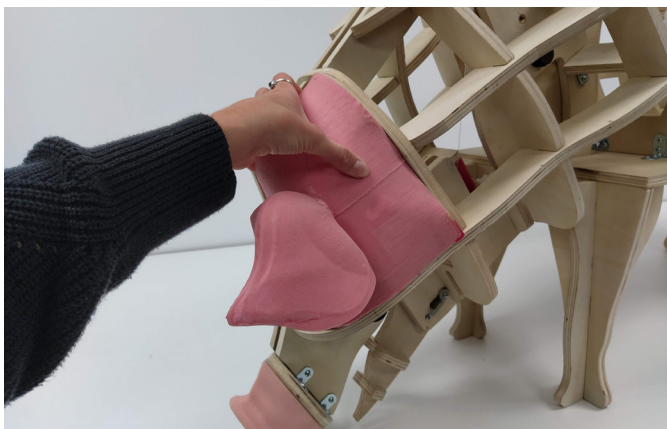
- Turn the power on by flicking the left hand switch down. The LED light should turn on and glow red.



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#### Switch buzzer on

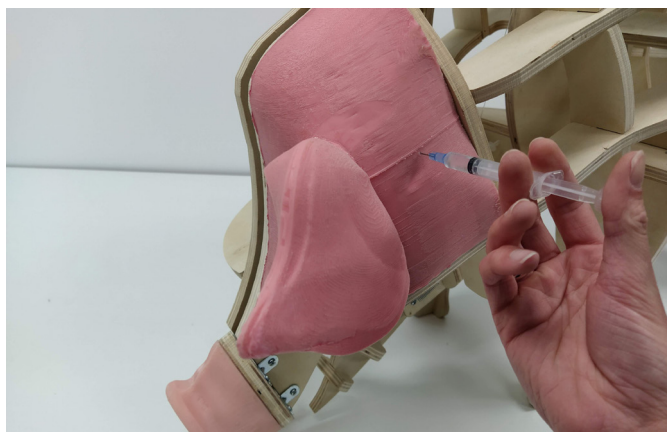
- Turn the buzzer on by flicking down the right hand switch next to the power switch.
- Note: If you would like to challenge your students more, leave the buzzer off until the student believes their needle is in the correct position of injection. Then switch the buzzer on and see if it sounds.



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#### Palpate injection area

- Palpate the area for injection. This should be up to 70mm behind the ear and just below the ear, in front of the shoulder.



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#### Insert needle at 90 degrees

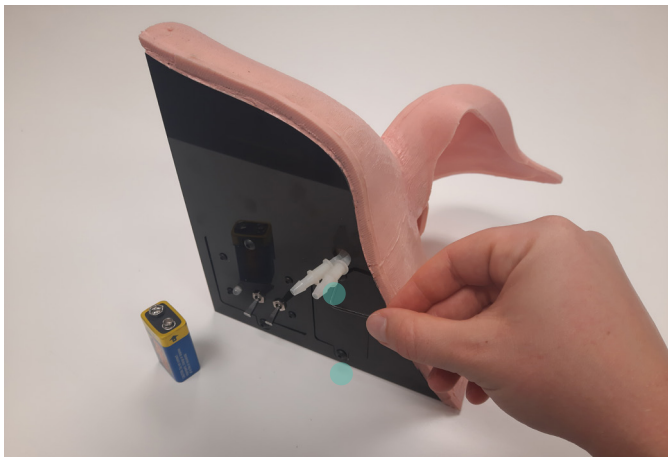
- Insert the needle at 90 degrees, pushing through the skin and past the subcutaneous tissue layer, into the muscle.
- If the correct place it reached, the buzzer will sound and the LED will change from red to green.



# The Battery Replacement

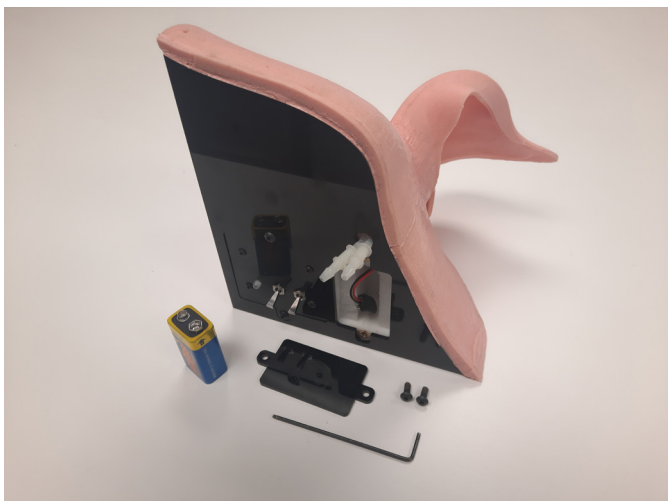
## Equipment Required:

- Porcine Intramuscular Injection Model
- 1x 9V Battery
- Allen Key

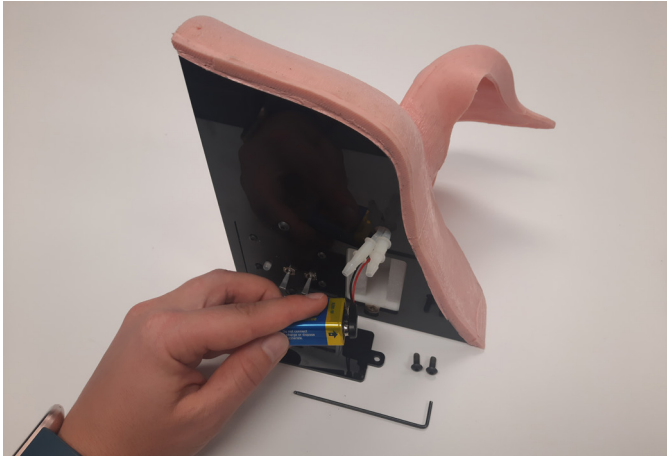


### 8 Undo the 2 outer screws

- Undo the 2 screws indicated

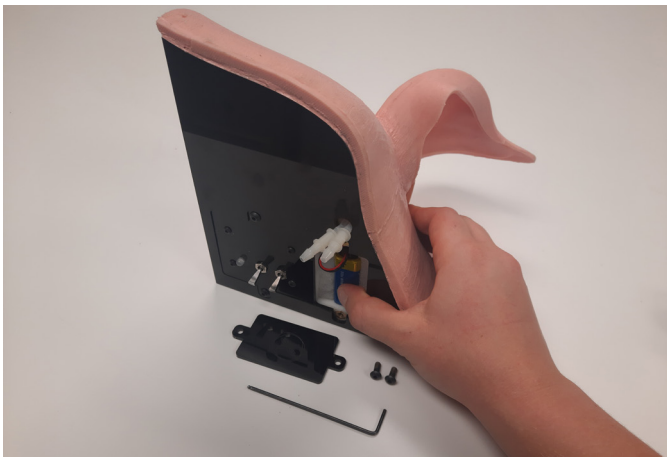


### 9 Open acrylic battery cover



## 10 Attach battery

- clip battery to terminal



## 11 located battery

- Place battery between foam padding



## 12 Close acrylic battery cover and tighten screws

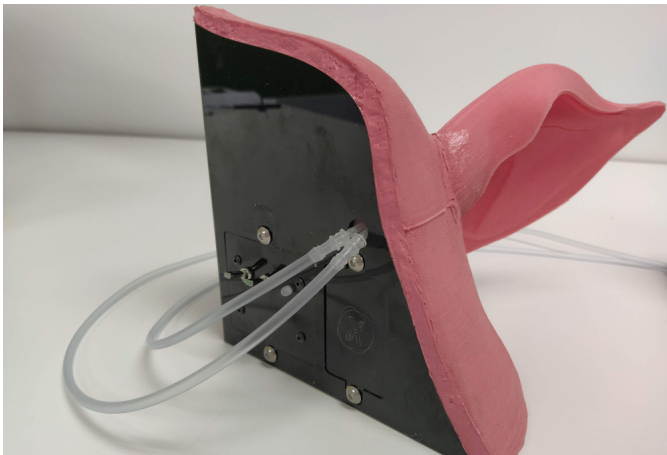


# Blood Taking



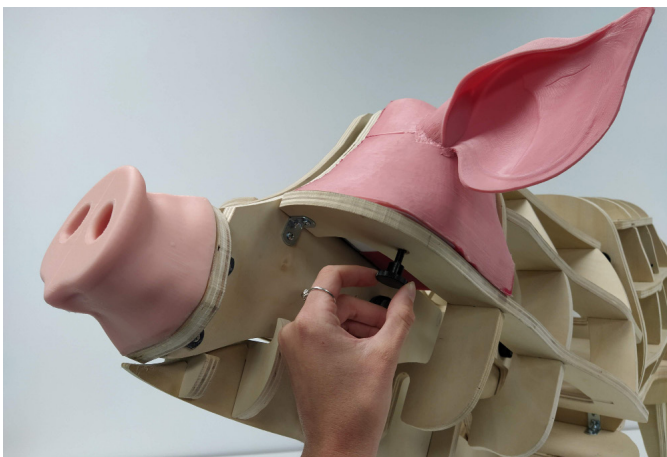
## 1 Thread tubes through pig

- Push the Holsim Blood Pump tubes through the back side of the pig head as shown.



## 2 CONNECT BLOOD PUMP

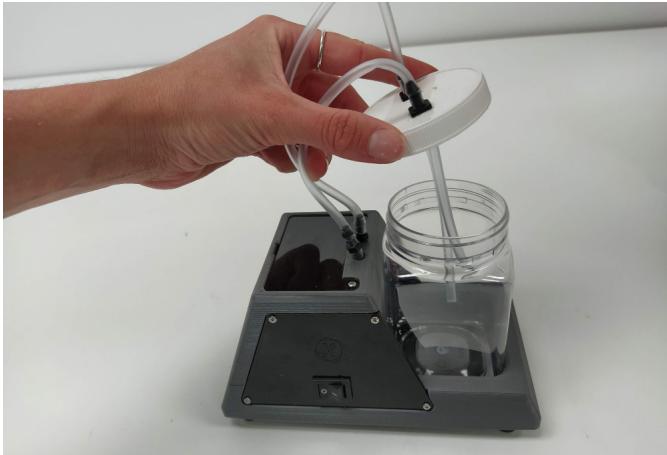
- Connect the Holsim Blood Pump tubing to the auricular vein connectors at the back side of the Intramuscular Block (IM Block.) \*Note: It does not matter which tube connects with which connector.



## 3 SIT THE IM BLOCK IN PLACE

- Sit the IM Block onto the head of the pig as shown in the photo.
- Secure by aligning and screwing in the

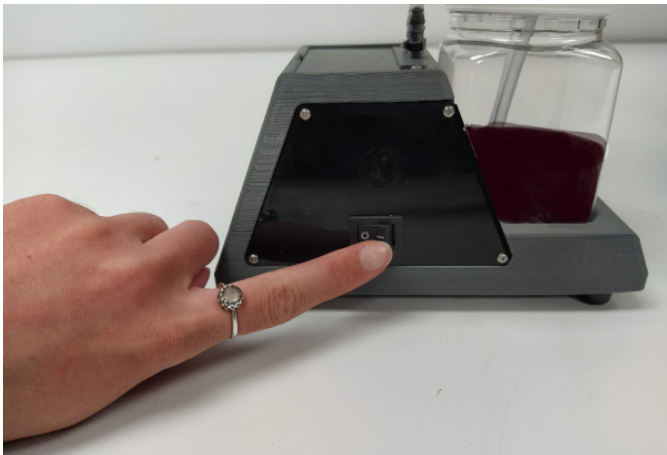




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#### SET UP THE BLOOD PUMP

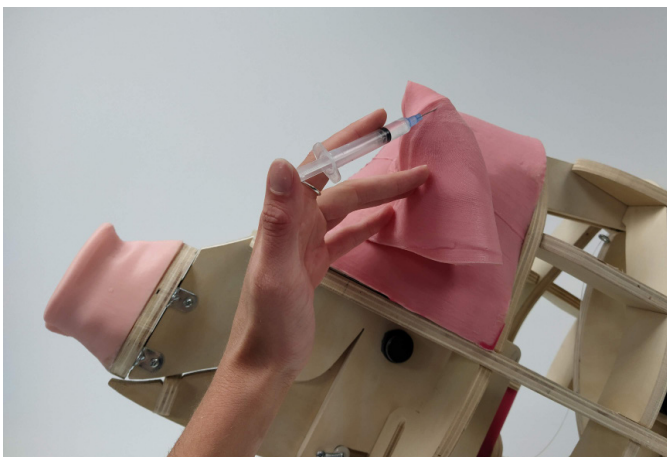
- Unscrew the lid and pour the Holsim Artificial Blood into the Holsim Blood Pump jar with tubing.
- Replace lid and tighten.



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#### SWITCH PUMP ON

- Switch the blood pump on.
- The blood should slowly pulse through the tubing, into the auricular vein and back round into the jar.



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#### INSERT NEEDLE AT 25 DEGREES

- Stroke the outside of the ear to dilate the vessels in the ear and make the vein raise.
- Palpate the vein and fold the ear back on itself.
- Insert the needle on the back of the ear at 25 degrees to the skin.

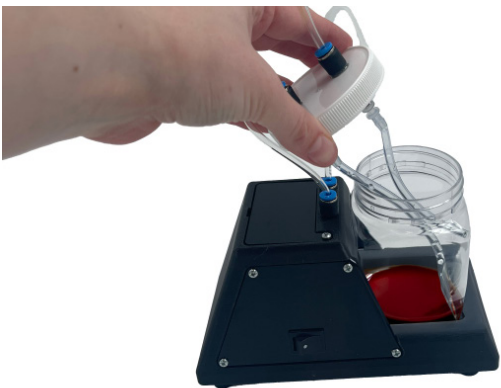


# The Clean up



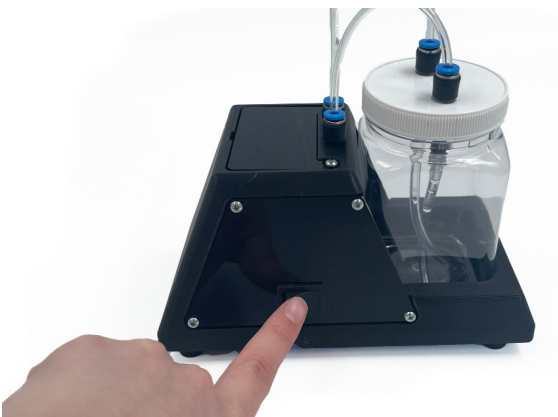
## 1 Undo jar lid

- Once the blood sample has been obtained, undo the jar lid with the pump connectors on it and hold the tubes above the blood in the jar.



## 2 Drain tubing

- With the jar tubing out of the blood, the pump will pulse the remaining blood in the tubes into the jar without sucking any more blood up.



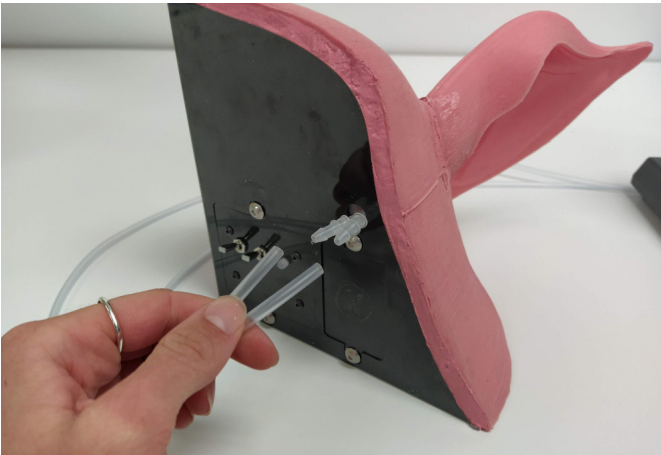
## 3 Turn pump off

- Once all the blood has drained from the tubing switch the pump off.



#### 4 Flush tubing with water

- It is best to flush the tubing out with water to have them clean before storing the pump.
- You can do this by replacing the jar of blood with one of water. turn the pump on to flush the tubing and vein.



#### 5 Disconnect Pump

- Once clean, turn the pump off.
- Disconnect the blood pump tubing from the auricular vein connectors.



#### 6 Clean ear and store

- Wipe any blood from the ear surface and allow tubing to dry.
- Store ear and blood pump in a clean airtight container.

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