

Caution:

Don't mark on the phantom with pen or leave printed materials contacted on its surface.
Ink marks on the phantom will be irremovable.

PH-79

X-Ray Training Phantom

PBU-POSE

Instruction
manual

Contents

- Please read before training
 - General information P.1 ~ P.3
- Preparation
 - Assembly manual P.4 ~ P.9
- Anatomical Landmarks P.10



X-Ray Training Phantom PBU-POSE

PH-79 "X-ray Training Phantom PBU-POSE" is a whole-body phantom for general imaging that specializes in positioning and is significantly lighter than the "Whole Body Phantom PBU-50". The shoulder, elbow, hip, and knee joints are flexible, and each joint can be assembled / disassembled. For the separate parts and joints, the shape of the bone is truthfully reproduced to the human shape. It is constructed without any metal parts, so it doesn't interfere with the imaging.

The phantom is separable into 10 parts facilitating a variety of application. A positioning stand for the head part comes with the set.

Please Note

Please do not use it for any purpose other than its intended purpose. In addition, please note that we are not responsible for any damage or accident caused by using different to the method described in the instruction manual.

Features

- Equipped with anatomical landmarks on the body surface necessary for positioning.
- You can put on and take off clothes, transfer to a wheelchair, and take images while sitting in a wheelchair.
- Designed for the training of positioning for bone imaging, the muscle / fat layer is intentionally not represented.
- The imaging conditions are assumed to be 1/2 to 1/3 of the usual clinical conditions, which can reduce the exposure to the operator's scattered radiation and the load on the device.

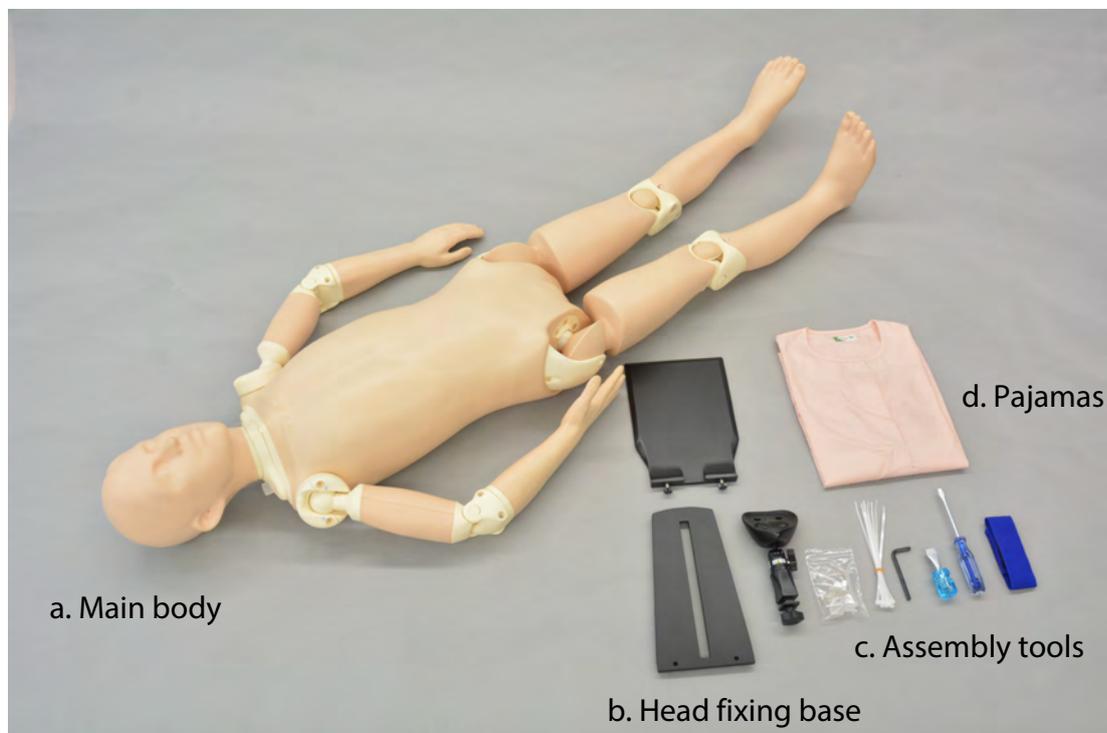


Caution

- ① Since it is made of a special soft resin, it may be damaged if dropped or given a strong impact.
- ② Never tighten the threaded parts too much as they may cause damage .
- ③ Never force the phantom in certain position as it may cause damage to the phantom.
- ④ Do not allow printed matter to come into direct contact with the model's surface. Ink is absorbed by the resin and can not be removed.
- ⑤ Do not write on the surface of the model with felt-tip pens, ballpoint pens, etc. Ink is absorbed by the resin and can not be removed.
- ⑥ Wipe the model with water or a mild detergent, and apply baby powder after drying. Never use organic solvents such as thinner or alcohol.
- ⑦ It may discolor if it not used for a long time and it can change over time, but it doesn't alter the usability.
- ⑧ After use, avoid storing in hot and humid places or in direct sunlight. It may cause deformation or deterioration.
- ⑨ When storing, do not burden the joints.
- ⑩ Do not protract only the limbs or neck when handling the phantom. These handling may cause crack or fracture.

Set Contents and Names of Each Part

Before using, please make sure that all the components are included.



- | | | |
|---------------------|-------------------|----------------------|
| a. Main body | c. Assembly tools | (Imaging data) |
| b. Head fixing base | d. Pajamas | (Instruction manual) |

Specifications

Model : PBU-POSE

Intended application: Positioning phantom for plain radiography

Length: approx.165cm

Weight: approx. 18kg

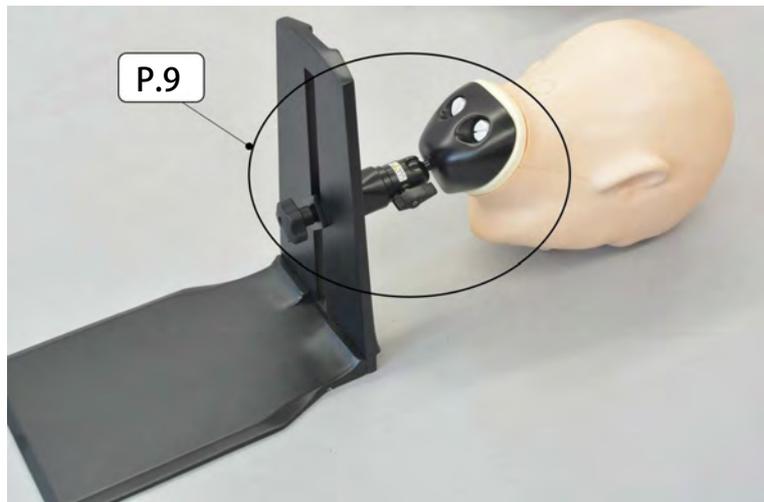
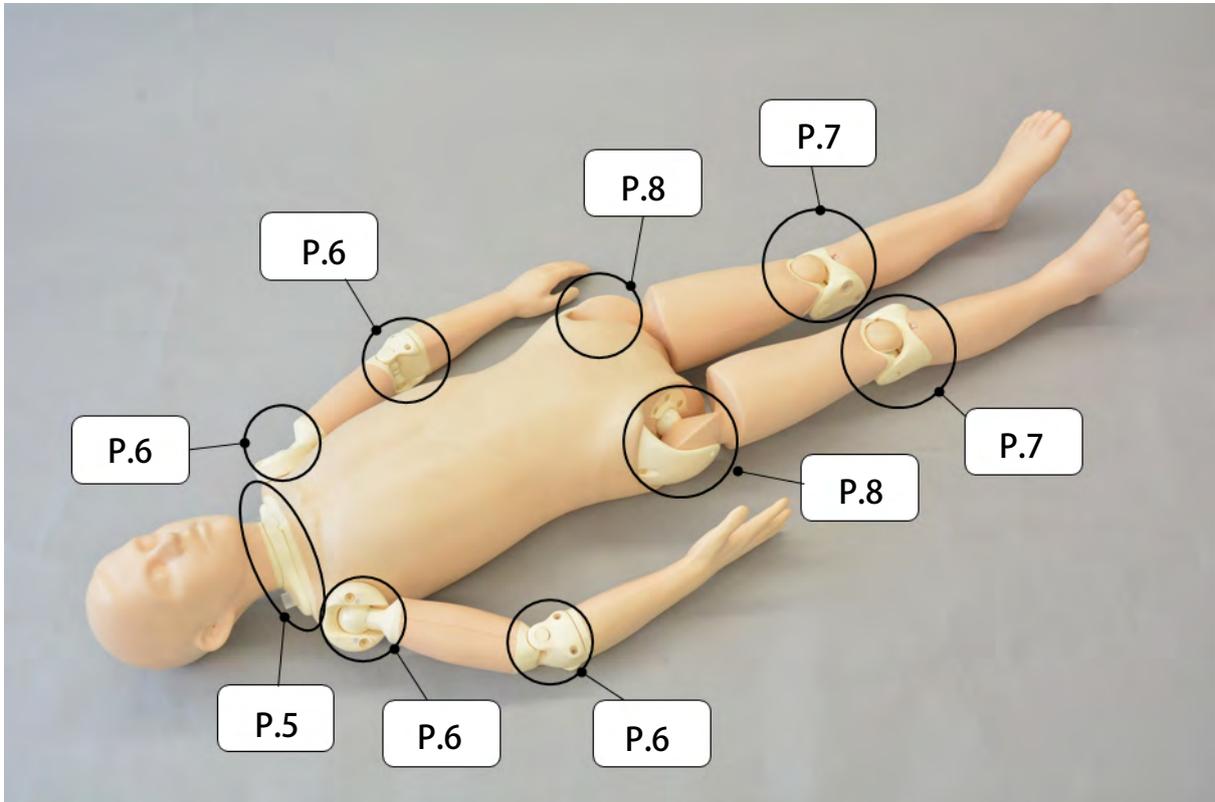
Can be dismantled at: shoulders elbows, hip joints, knees, neck (10 parts)

Embedded organs: heart and kidneys

Material: Soft tissue (urethane resin), bone equivalent material (epoxy resin)

PBU-POSE Components

| Parts # | Parts name | QTY | Parts # | Parts name | QTY |
|---------|---|-----|---------|---|-----|
| 1 | Head | 1 | 21 | Connector for left hip joint | 1 |
| 2 | Neck-head connection plate | 1 | 22 | Supporting plate for right hip joint | 1 |
| 3 | Trunk | 1 | 23 | Supporting plate for left hip joint | 1 |
| 4 | Right upper arm | 1 | 24 | Connector for right knee | 1 |
| 5 | Left upper arm | 1 | 25 | Connector for left knee | 1 |
| 6 | Right forearm | 1 | 26 | Screw bolt for neck connection M12×20 | 2 |
| 7 | Left forearm | 1 | 27 | Screw bolt for neck connection M10×15 | 2 |
| 8 | Right thigh | 1 | 28 | Screw bolt for shoulder connection Screw bolt for parts # 22.23 M 8×13 | 10 |
| 9 | Left thigh | 1 | 29 | Screw bolt for elbow joint M 6×60 | 4 |
| 10 | Right lower leg | 1 | 30 | Screw nut for elbow joint M 6 | 4 |
| 11 | Left lower leg | 1 | 31 | Screw bolt for hip joint M8×35 | 6 |
| 12 | Right patella | 1 | 32 | Screw bolt for knee joint M12×18 | 4 |
| 13 | Left patella | 1 | 33 | Connection tape for the patellae | 2 |
| 14 | Connector for shoulder A (Right or left) | 2 | 34 | Height adjustment panel | 1 |
| 15 | Connector for shoulder B (Right or left) | 2 | 35 | Base panel | 1 |
| 16 | Connector for right elbow (lateral side) | 1 | 36 | Neck connector | 1 |
| 17 | Connector for right elbow (medial side) | 1 | 37 | Neck connector fixture | 1 |
| 18 | Connector for left elbow (lateral side) | 1 | 38 | Screw for fixture | 1 |
| 19 | Connector for left elbow (medial side) | 1 | 39 | Screw bolt M6×18 | 2 |
| 20 | Connector for right hip joint | 1 | 40 | Hand positioning belt | 1 |



The number indicated on the photos above correspond to the page numbers in this manual.

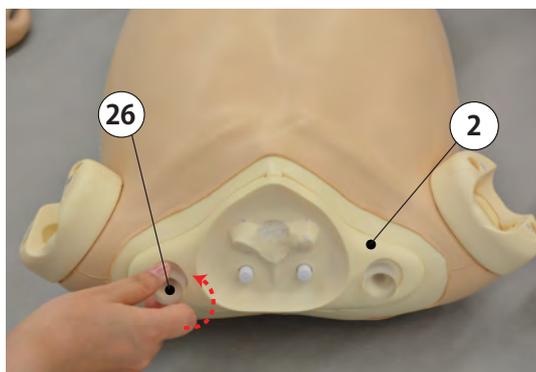
※Please note, that the appearance of each part may differ from the actual product

※ The circled numbers in the assembly images are parts numbers on the components table on page 3.

< NECK AND HEAD >

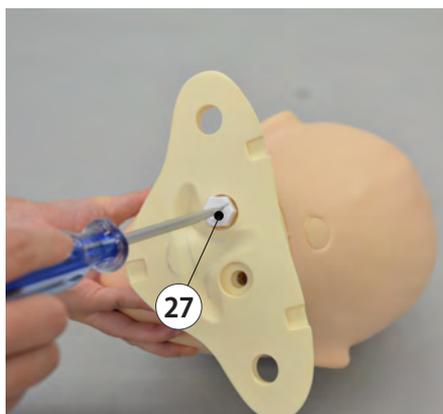
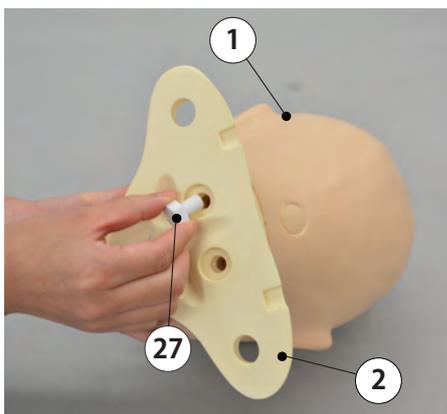
1. Remove the two bolts for the neck connection (part #26) and remove the neck head connection plate (part #2) from the trunk.

(26) Screw bolt for neck
M12×20



[Neck sub-assembly]

2. Screw the neck head connection plate (part #2) on the head (part #1) and fix it with two head / neck connection bolts (part #27).



(27)
Screw bolt for neck connection
M10×15×2

[Connection of the head and the trunk]



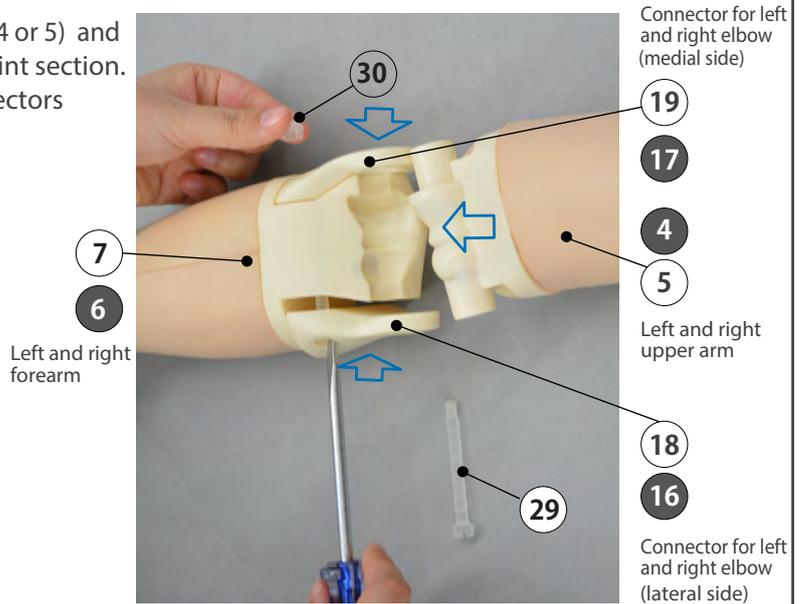
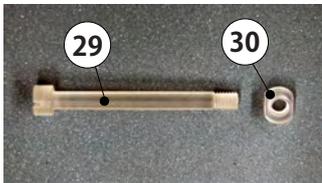
3. Mount the assembled parts (parts #1 and #2) to the trunk and secure each side with a screw bolt (part #26).

Assembly manual

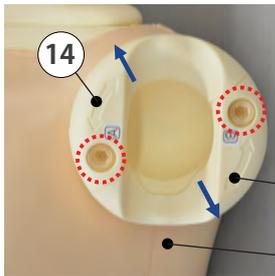
< Elbow Joints (the photo shows left elbow joint) >

1. Assemble upper arm parts (part #4 or 5) and forearm parts (part #6 or 7) at joint section. Fix these parts with elbow connectors (part #16 or 18 and #17 or 19).

- 29 Screw bolt for elbow joint M 6x60x4
- 30 Screw nut for elbow joint M 6x4



< Shoulders (Photo shows left shoulder) >



1. Remove the two clear bolts (part #28) and remove the external shoulder connector parts A (part #14) and connector parts B (part #15).

- 28 Screw bolt for shoulder connection M 8x13x4



2. Then attach the upper arms (parts #4 and #5) at the ball joint to the trunk and place over the two connectors for the shoulder (parts #14 and #15). Secure the connectors with the clear bolts (part #28). Follow these steps for both left and right side of the trunk.



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Screw the bolts after confirming the position of the screw hole.
 Be careful not to mix up part #4 and 5. The shape of right and left arms are different.



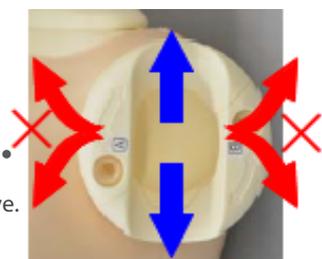
4 5
Left and right upper arm



14 15
Connector for shoulder



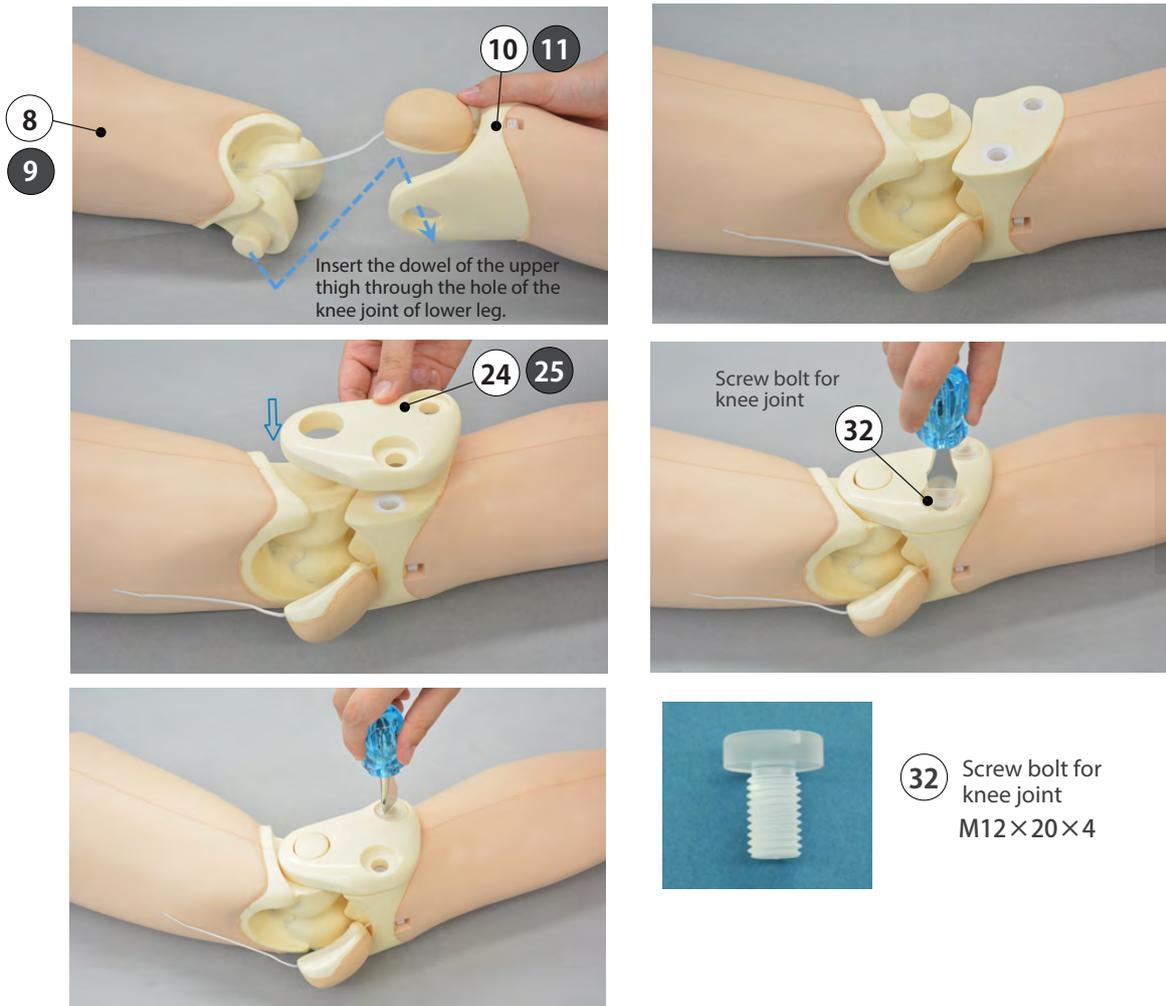
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When changing the direction or angle of the arm, note the direction of the groove on the shoulder part. Move the arm along the direction of the groove.
 Tilting the arm diagonally against the groove may cause the damage to the arm.



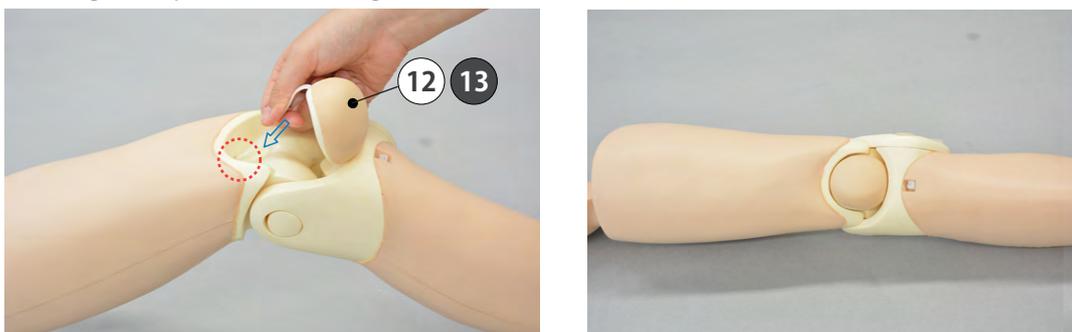
Assembly manual

< Knees (photos show right knee) >

1. Connect the thigh (#8, 9) and lower leg (#10, 11) at the knee joint. Insert the dowel of the upper thigh through the hole of knee joint of lower leg. Set the connector for knee (#24, 25) to the medial side then screw the two knee joint bolts (#32) to fix it.



2. After fixing the knee joint, bend the knee and insert the connection tape of the patella (#12, 13) to the guide aperture of the thigh.



Assembly manual

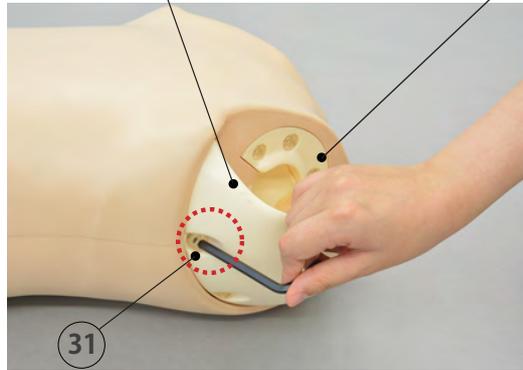
< Hip Joints (photo shows right hip joint) >

1. Remove the three bolts (part #31) to remove the hip joint connectors (parts #20 and #21). The supporting plates (parts #22 and #23) are already attached at the time of delivery.

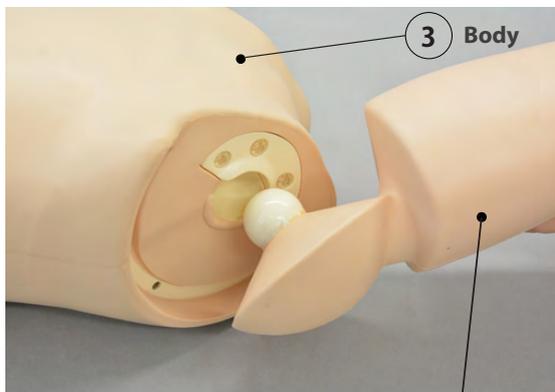
31
Screw bolt for hip joint
M8×35×6



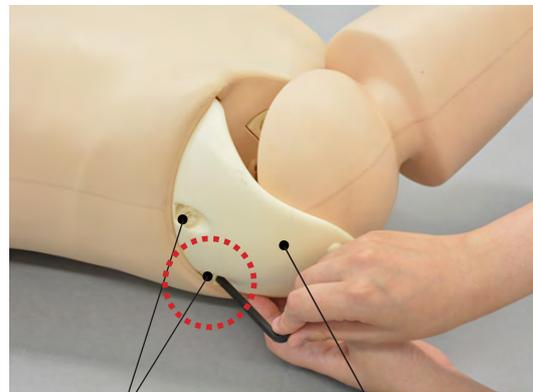
Connector for left and right hip joint **20 21**
Left and right leg connection reinforcement parts **22 23**



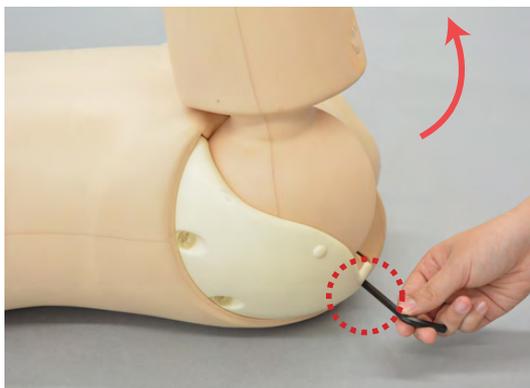
2. Mount the thighs (part#8, 9) so that the femur heads fits in the hip sockets and hold them in place with hip joints connectors (part# 20,21). Each hip joint connector is fixed to the trunk with three screws. Start from the screw in the center and move to the sides. Hold the thigh upright when you fix the screw at the rear end. Be careful not to confuse parts for left and for right.



Left and right thigh **8 9**



Connector for left and right hip joint **20 21**

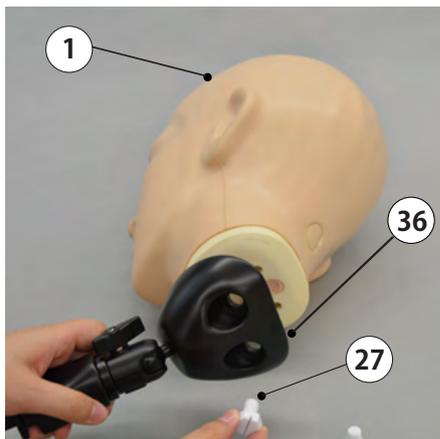


.....
Fix the bolts from the center, and lift the legs forward to fix the bolts on the butt side. The shape of the thigh is different on the left and right, so be careful not to mix it up.

Assembly manual

< HEAD AND STAND >

1. Mount the head phantom to the neck connector (part#36) and fix it with two screws.

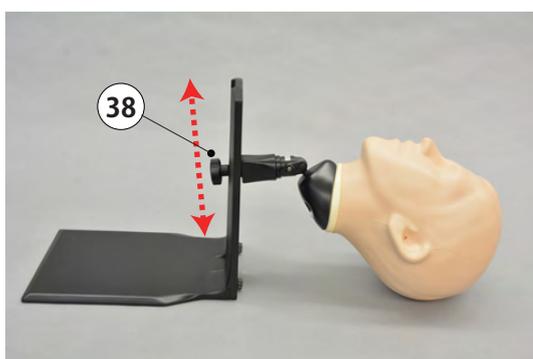
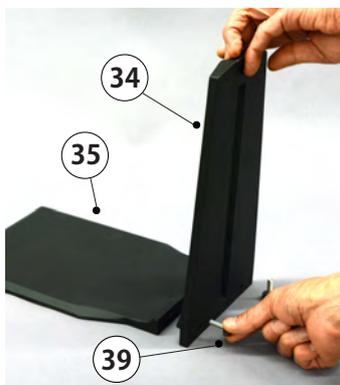


27 Screw bolt for neck connection M10x15x2



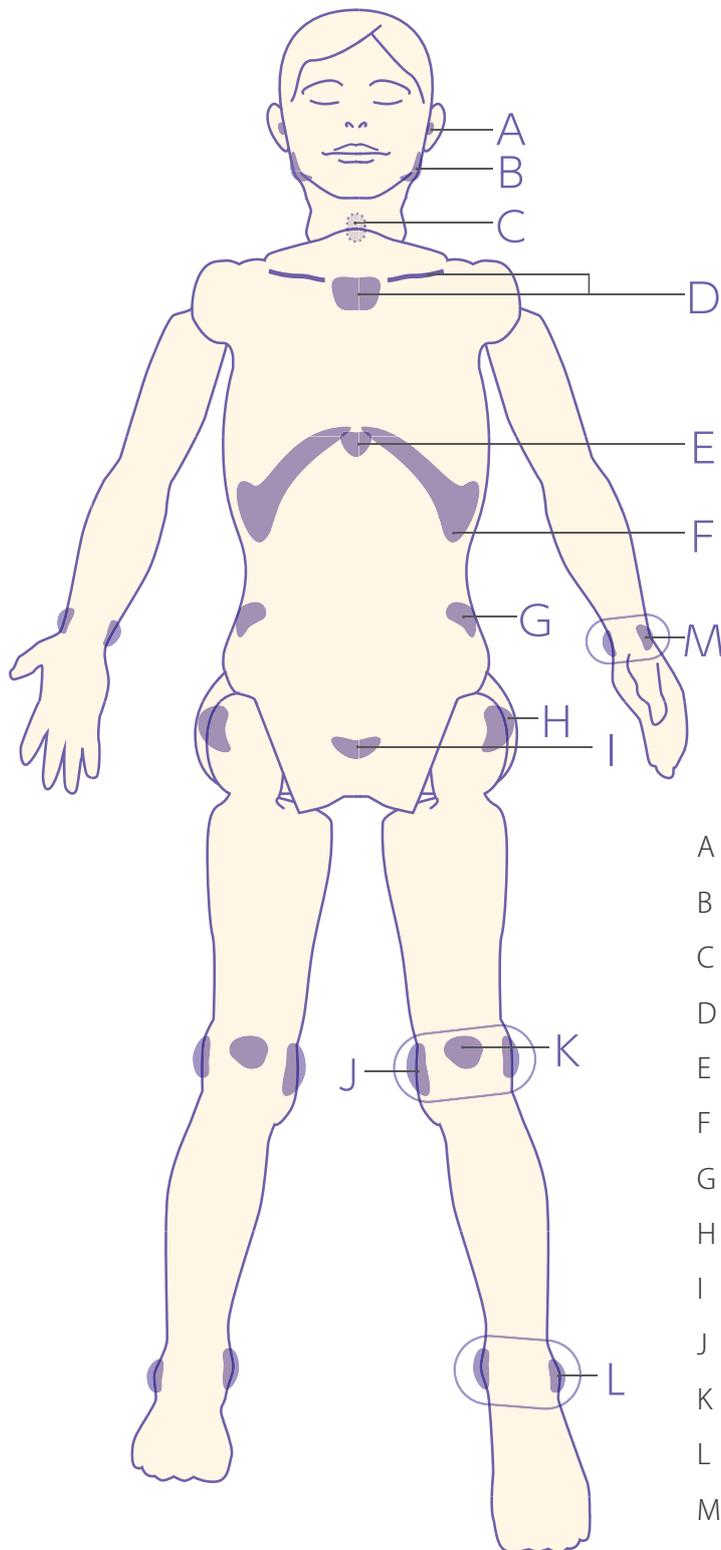
39 Screw bolt M6x18x2

2. Assemble the two panels. Attach the height adjustment panel (#34) to the base panel (#35) at right angle and fix with two screws. Then, insert the end of the neck connector (#36) in the slit in the panel and fix it with the fixture (#37).



3. The phantom is ready.
Adjust the height of the neck as needed, by loosen the fixture and slide it through the slit. Tighten the fixture again at the designated height.

Anatomical Landmarks



- A external auditory foramen
- B mastoid
- C 7th cervical spine
- D sternum manubrium, clavicle xiphoid
- E process
- F lower costal arch
- G iliac crest
- H large trunker
- I superior border of pubic symphysis
- J medial and lateral epicondyle of femur
- K patella
- L medial and lateral malleoli
- M radial and ulnar styloids (wrist)



Caution

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• If you have any questions, please contact the dealer you purchased the product or Kyoto Kagaku Co., Ltd. below.

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