

# BUBBLE HELMET VISUAL GUIDE

## Neck Seal Preparation

1. Using a tape measure or a ribbon, measure the circumference of the patient's neck. Fold the tape/ribbon in half for neck seal sizing.
2. Lay flat the uncut neck seal and mark the level of the neck seal that corresponds with the folded tape/ribbon.
3. Cut the neck seal approximately two centimetres below the mark using sharp scissors in a slight horizontal curve line.



## Straps Measurement

1. Approximate the straps length to patients' body habitus.
2. Attach straps to the velcros on the hood in 90-degree intervals with a 45-degree offset from the frontal plane, such that the straps are mounted in an "X" configuration about the circumference of the hood.

## Hood Assembly

1. Attach the provided ports into the helmet or use recommended medical ports attachments.
  - a. If using **wall oxygen**, prepare the outflow port with an attachment for HEPA filter and PEEP Valve and prepare the attachment of the inflow ports.
  - b. If using **BiPAP/CPAP/ Ventilator**, prepare appropriate attachment for the inflow port, HEPA filter and close the outflow ports using a respiratory port cap with 22 ID or alternative. The outflow ports can also be used to provide additional air or oxygen flow.
2. Ensure that the respiratory circuits work and set at the lowest setting.
3. Disconnect the inflow circuit from the port for easier donning.



## Donning (Single-Provider with Cooperative Patient)

1. Ensure that the helmet is facing forward. All appropriate connectors and attachments are complete.
2. Stretch the neck seal opening using the fingertips of both hands to approximately the width of the patient's head.
3. Ensure to protect the patient's face from the neck seal during the donning procedure by asking the patient to place a finger or a hand in front of their forehead to assist with this by guiding the neck seal down from the top of their head to their neck. If this is not possible, proceed with two-provider donning protocol.
4. Ensure there are no prominent creases between the neck seal and the patient's neck. Attach the respiratory circuit into the inflow port (at the low setting).
5. Attach the straps under the patient's arm. Adjust the length of the straps until the base of the hood is at the same level as the patient's chin and the neck seal creates an infolding under positive pressure.
6. The device is now set up and ready to use.



## Donning (Two-Provider)

1. Ensure that the helmet is facing forward. All appropriate connectors and attachments are complete.
2. Two providers standing on each side of the patient, hold the neck seal opening using the fingertips of both hands at equidistant to each other. Expand the opening to fit the patient's head.
3. Ensure that there is enough space in the front to protect the patient's face from the neck seal during the donning procedure.

4. Place the Bubble Helmet with the expanded neck seal opening over the patient's head and around their neck.
5. Follow steps 4-6 from the previous section to finish the setup.

## Doffing

1. Halt the airflow of wall oxygen/ CPAP/BiPAP/Ventilator.
2. Unbuckle both the underarm straps.
3. Pinch the neck seal and pull it forward to create an opening between the neck seal and the patient's neck. Use the opposite hand to grab the neck seal from underneath.
4. Use both hands to create a large enough opening of the neck seal and pull it forward and up. Lift the helmet in one smooth movement off the patient's head. Take care not to apply pressure to the patient's face.
5. Dispose of the hood immediately in the appropriate waste container as per local hospital regulation.
6. In case of emergency, you may use scissors to cut the hood for quick access.

