

## 3M Air-Mate<sup>™</sup> High Efficiency Powered Air Purifying Respirator (PAPR) and MaxAir Controlled Air Purifying Respirator (CAPR)

### **MaxAir CAPR Pictures**



### Assemble and Don Battery and Belt





1. Place a fully charged Battery's over the Belt with the Clip Detent touching the Clip, Metal-to Metal. Belt will be placed under any PPE gown when worn.



2. Place the Belt comfortably around the waist with the Battery near the side-back of the right hip and lock the buckles together.

### Assemble The Cuff or Shroud to The Helmet



1. Align FCC front "clip" horizontally,snap Lens Front Alignment Hole over the clip.



2. Snap one Lens Side Attachment Hole over FCC Side Attachment Post. Repeat for other side.



3. Pull Lens Peel Tab up and across to remove Lens Protective Cover from Lens.



2260-05 Single Shroud



#### Don the Assembled Helmet and Headcover





- 1. Connect Power 2. Loosen Headband Cord to Battery.
  - Ratchet Knob for easy placement on Head.



3. Pull top edge of Cuff down and place Chin into Cuff, pull Helmet down onto Head



4. Slide fingers between Cuff and face from temples down to position Cuff.1



1 Ensure less than one-half inch between Evebrows and Helmet front bottom so Safety LEDs are easily seen.





1 Ensure slight tension between Face and Cuff, or use SM size.

NOTE

The ML (Medium/Large) size fits most people; the SM (Small) size is for individuals with very small head sizes.

### **Complete Donning**



- 1. Tighten Headband Knob securely comfortable for all activities.
- 2. SHROUDS ONLY: Pull Shroud Body down

over Shoulders.



3. FOR DOUBLE SHROUD: Tuck inner Shroud Body inside outer Gown.



 With Shroud Body fully down secure Neck and Body ties.

\* In sterile procedural areas, tuck in both the inner & outer shroud under the sterile gown.

### **Doff and Disassembly**

Reverse Donning and Assembly steps. Disconnect Battery from Helmet Power Cord Connect Battery to Charger.



### **Ready for Next Use**

Dispose of single use items per institutional protocol for contaminated waste.

Wipe down all reusable item surfaces with alcohol based or quat wipes.



## **3M PAPR Pictures**





# Air-Mate HEPA PAPR Components

## Head/Hood Cover





## **Breathing Tube**



## **Blower/Filtration Unit**

## **Battery Charger**



Includes Belt & Airflow Indicator



# Intended Use

- Motor blower draws contaminated air through a high efficiency particle (HEPA) filter and blows filtered air up into head covering
- When properly used, helps reduce respiratory exposure to airborne particles such as dust, mist, biological and radiological aerosols
- PAPR with head cover reduces exposure by factor of 25, PAPR with hood reduces exposure by factor of 1000
- HEPA filters do not reduce exposure to gases or vapors
- Do not use in oxygen deficient environments
- Use for patients in Airborne Precautions



## Always Check PAPR Before Use and Monthly

- ✓ PAPR is in good repair
- ✓ Back cover not cracked, warped or otherwise damaged
- ✓ Waist belt not ripped, torn, frayed or damaged
- ✓ Belt remains attached to PAPR
- ✓ Hose not punctured, ripped, torn or no longer flexible
- ✓ Hose available for each PAPR
- ✓ Battery charger LED light on
- ✓ Battery pack not damaged, cracked or no longer takes a charge
- ✓ Airflow indicator not damaged or worn
- ✓ PAPR Airflow Check: Indicator reaches eye level and stays up for 2 minutes
- ✓ PAPRs not stored in enclosed space
- ✓ Filter not wet or damaged

## **PAPR** Donning Instructions









Step 1: Unplug the PAPR from the cord connecting it to the battery charger and electrical outlet. Step 2: Inspect the airflow tube for cracks. Pay close attention to the end that connects to the head cover. Step 3: Check to ensure that the airflow tube is securely connected to the PAPR. Look for any signs of damage. Step 4: Remove the tissue paper covering the clear plastic face mask.

## **PAPR Donning Instructions**









Step 5: Turn the PAPR on by pressing the black rubber button. Step 6: To check the airflow, place the "egg float" into the upright end of the airflow tube. Step 7: The lower band will rise above the edge of the airflow tube if the air supply is adequate.

Step 8: Connect the airflow tube to the plastic circle at the back of the head/hood cover.

## **PAPR** Donning Instructions



Step 9: Place the PAPR with airflow tube up against your lower back and fasten the belt buckle.



Step 10: Guide the airflow tube upward behind your and put the head/hood cover on. There are headbands inside the head/hood cover that fit snugly on your head.



Step 11: Adjust the head/hood cover so that the elasticized edge of the face seal fits under your chin. It is now safe to enter the isolation room.

## **PAPR Doffing Instructions**

## \*Remove PAPR in a non-contaminated area









Step 1: Exit patient room, remove gloves (if applicable) and wash hands. Step 2: Put on a new pair of gloves. Step 3: Remove unit and turn off. Remove the head/hood cover.

Step 4: Disconnect the head/hood cover from the airflow tube with care by firmly grasping both pieces by the hard plastic parts that connect them. Gently but firmly pull apart.

## **PAPR Doffing Instructions**







Step 5: After each use, wipe down the head/hood cover with hospitalapproved disinfectant wipe and leave saturated for the time specified on the container. Step 6: Wipe down the inside first and then the outside of the head/hood cover. Allow to air dry.

Step 7: Remove gloves and wash hands.



Step 8: Place dry head/hood cover into a hospital provided mesh bag.

Note: During the pandemic, head/hood covers may be disinfected after each use and reused between multiple people to preserve supplies.

## **PAPR Doffing Instructions**







Step 9: When use of the PAPR has been discontinued, wipe down the PAPR, belt, hose and cart with a hospitalapproved disinfectant wipe and leave saturated for the time specified on the container.

Step 10: Once cleaned thoroughly and airdried, place cleaned PAPR, belt and hose on cart and return to designated area on unit.

Step 11: Reconnect PAPR to charger.

## Care and Storage - PAPR & Head Cover

- Each area is responsible for the care and maintenance of their PAPR carts and PAPR units
- Head/hood covers can be re-used by the same employee for the duration of the structural integrity of the hood (Note: During the pandemic, the hood/head cover can be disinfected after use and re-used by multiple staff to preserve supplies)
- Return PAPRs and cart to designated area on unit
- If airflow is inadequate, the PAPR malfunctions, or there are cracks in the airflow tube, contact your supervisor.

## **Battery Replacement**







Step 1: To replace the battery, remove the back cover and filter from the PAPR unit. Step 2: Insert the battery pack into its compartment and press it down to seat it in place. This action will engage the battery terminals in the socket on the side of the battery pack. Step 3: Slide the battery pack clip under the slot on the housing to hold in place. Confirm that the filter gasket is properly installed in the groove on the housing.



Step 4: Replace the filter with arrows pointing in towards the battery pack. Snap the back cover into place.

## **Battery Replacement**



Step 5: Charge the battery before use of the PAPR. Place the charger horizontally on a flat surface and plug the station into a regulated 120v 60Hz outlet.



Step 6:

The green LED light will turn on. Insert the charging lead into the socket on the side of the blower unit. The LED light will turn off, indicating that the battery pack is attached and being charged in a high rate mode.



Step 7: After approximately 8 hours (depending on the amount of charging required), the LED light will turn back on, indicating that the charger has switched to a trickle rate mode.

## **Battery Use and Maintenance**

- Batteries may be left on trickle rate mode to maintain optimum capacity for up to 2 weeks
- To preserve battery life, the packs should be fully charged initially, then charged overnight once per week or one hour each day to maintain a full charge
- Do not charge multiple battery packs in an enclosed cabinet without ventilation

## **Battery Use and Maintenance**

- For infrequently used batteries, battery capacity should be checked regularly by running the PAPR blower unit for 2 minutes to see if the air flow indicator remains at eye level
- Always charge batteries at a temperature of 77° F (25° C) or less
  - ✓ At higher temperatures, the battery pack may not accept a full charge
  - ✓ If a battery pack feels hot, let it cool for ½-hour before charging.

# **Important Notes**

- Always make sure that the power unit is on and air is flowing before entering the isolation area!
- The high efficiency filter must be changed when:
  - 1. The unit does not pass the air flow test with a properly charged battery
  - 2. If the filter has been physically damaged

<u>Note:</u> In a relatively clean environment such as healthcare, it may take a long time before the filter becomes clogged to the point of significantly reducing airflow. Also, filtration efficiency may increase as the filter becomes loaded.

## References

Refer to the Use of PAPR (Powered Air Purifying Respirator), CAPR (Controlled Air Purifying Respirator), and N-95 Particulate Respirator, IC-041 on PolicyStat for more information, links to training videos, and printable instructions for donning and doffing each type of respirator.