

Protecting Healthcare workers
from:
Microorganisms capable of
causing disease

Traxure Precision PAPR Mask 6000



The TraXure Precision PAPR mask is a battery-powered blower that provides airflow through a filter, cartridge, or canister to a full-face mask. The positive air pressure created in the mask protects the user as follows:

Because more air enters the mask than exits the mask it leads to a higher pressure inside the mask. The net result of diffusion is the movement of anything from a region of higher concentration to a region of lower concentration. This will inhibit contaminated air or airborne pathogens to enter the mask. The amount or type of airborne pathogen will determine the type of filter, cartridge or canister required for the PAPR. High-efficiency particulate air (HEPA) filters have a similar filtration as P100 (ie, they filter at least 99.97% of particles 0.3 μm in diameter and are oil proof)* These are the filters of choice for infection control airborne precautions. Because different filters will influence the flow rate and pressure of air into the mask the TraXure Precision PAPR 6000 mask is fitted with a regulator that maintains the airflow and pressure at optimal levels. The TraXure Precision PAPR mask is indicated for use by Health-care professionals working in an environment; or caring for a patient with an airborne disease and potentially harmful aerosols.

*(Bollinger M. NIOSH Respirator Selection Logic. 2004. < www.cdc.gov/niosh/docs/2005-100/)



Mask



- Bracket for attaching loops
- LED light powered by the rechargeable battery pack
- Clear Vision - tempered glass lens
- Comfortable fit
- Exhalation filter
- Fully Reusable



Pump



- 8 hour plus Lithium ion battery pack (Rechargeable)
- Pressure regulator allows for Custom Filters
- Standard universal filter connection (22G)
- Various filters available Filter Connections 22F/15M-22M/15F luer port
- RFID fitted for security and tracking



Aerosol



- Droplet nuclei $<5\mu\text{m}$ in diameter (WHO)
- Typically produced by a sneeze, cough or respiration
- Larger droplets can also behave like aerosols resulting in a higher infection dose
- NB \rightarrow Aerosol is a relative term and not an absolute term*
 - Ambient airflow like ventilation induced airflow can sustain droplets for considerable distance
- Some medical disciplines generate airborne pathogens
 - High powered electrical tools, Scopes, suction devices etc.

*Tellier, R., Li, Y., Cowling, B.J. et al. Recognition of aerosol transmission of infectious agents: a commentary. *BMC Infect Dis* **19**, 101 (2019). <https://doi.org/10.1186/s12879-019-3707-y>

Some Infectious Agents transferred with aerosol



- Influenza (FLU) (0,08 - 0,12 μm)
 - Seasonal
 - Pandemic
 - Avian
 - Swine
- Ebola (14 x 0,08 μm)
- Methicillin-resistant Staphylococcus aureus (MRSA) (7 - 12 μm)
- Tuberculosis (TB) (1-5 μm)
- Coronaviruses (0,065 – 0,125 μm)
 - SARS is known as SARS-CoV, while the virus that causes **COVID-19** is known as SARS-CoV-2
 - Middle East Respiratory Syndrome (MERS)

SARS-CoV-2



- Usually enter our bodies through:
 - The Eyes,
 - Nose,
 - Mouth,
- Self-Inoculation
 - Hands with virus touching the face
- Aerosol



ISO13485