

## **Innovation and Rapid Mobilization Bring New PAPR Hood to Healthcare Workers on the Frontlines**

The shortage of personal protective equipment (PPE) during the coronavirus (COVID-19) outbreak in the United States had a devastating impact on healthcare workers, people, and companies nationwide.

Healthcare workers on the frontlines of the infectious disease were met with despair and fear. Patients and families experiencing the impacts of the virus firsthand were faced with doubt and distress. Medical supply and manufacturing companies were challenged to rise to the occasion with creative solutions and innovative methods for expediting design, engineering, manufacturing, and distributing critical supplies.

When met with exceptional demand, one company quickly identified that its current PPE supply and production levels would prohibit them from accommodating the demands of the healthcare market. The company, ILC Dover, a world leader in the innovative design and production of engineered products employing high-performance flexible material, rapidly responded to the issue. It deployed its R&D team to design a new powered air purifying respirator (PAPR) hood for workers on the frontlines of the pandemic and expedited the regulatory approval and manufacturing processes.

### **New PAPR Hood Provides Rapid Relief**

The new healthcare respirator is called Sentinel EZ BioHood™ and was designed to work with ILC Dover's Sentinel XL® blower system. The launch of Sentinel EZ BioHood™ to the marketplace was a tremendous demonstration of responsibility, innovation, and rapid mobilization in a time of crisis.

The accelerated process was made possible by the National Institute for Occupational Safety and Health (NIOSH), which stepped up in a major way, expediting their typical month-long regulatory approval process to one week for the hood.

“The entire process, from design to National Institute for Occupational Safety and Health (NIOSH) approval, took only five weeks. The normal NIOSH approval process alone is typically several months,” explained Doug Durney, PPE Product Line Director at ILC Dover. “Sentinel EZ BioHood™ is manufactured in-house at ILC Dover's headquarters in Frederica, Delaware, using existing materials and equipment.”

### **Designing with a Function-First Mindset**

In fast-paced, high-pressure hospital scenarios, healthcare workers must be able to easily put on and take off PAPRs without any risk of contamination. ILC Dover engineers designed the new hood in response to noted issues with existing PAPRs in the marketplace and customer requests, including:

- Is the hood intuitive and easy to train for first-time use?

- Can it be worn by providers with facial hair, head coverings, or varying facial structures?
- Does it need to be fit-tested?
- Will patients be able to see my face clearly, and vice versa?
- Can I wear and use a stethoscope while wearing the PAPR?
- Will it be comfortable to wear all day long?

With these concerns and questions in mind, engineers designed Sentinel EZ BioHood™ with a function-first mindset. Unlike other PAPR hoods, it offers a host of benefits to wearers: It has a breathable neck cuff, can be worn comfortably for long periods of time, and provides exceptional visibility, enabling healthcare workers to provide effective and continued care to patients. The hood's unique design makes it intuitive to use, easy to clean, store, and workers do not need to be fit-tested to wear it effectively.

Beyond comfort and ease-of-use, the hood offers 100x the protection of an N-95 mask, providing superior respiratory protection to healthcare workers and enabling them to provide continued care.

Physician Deborah Wingel, who runs a busy primary care practice commented, “When I learned more about ILC Dover PAPR systems, I felt it would be the perfect solution to our problems with protecting healthcare workers from COVID-19. This product offers us 100x the protection of an N95 mask, and I can engage directly with my patients through the clear shield. It requires certain protocols to put on and remove it, but it is worth it to me. It will give me peace of mind while examining my daily patients.”

The main features and benefits of Sentinel EZ BioHood™ include:

- Superior Personal Protection Equipment
- Comfortable to Wear for Long Periods of Time
- No Fit-Testing Required for Wearers
- Easy to Store
- Wide Range of View

## **A Culture of Response for Critical Industries**

Beyond personal protection, ILC Dover is a world-leader in the innovative design and production of engineered flexible protective solutions for pharmaceutical and biopharmaceutical, flood protection, personal protection, bulk packaging, and aerospace industries. The company's visionary solutions have improved efficiency while safeguarding people, product, and infrastructure in hazardous conditions through flexible protective solutions since 1947.

Fran DiNuzzo, President and CEO of ILC Dover commented, “ILC Dover is no stranger to creating solutions under immense pressure. The company protected American astronauts on the moon and kept healthcare workers safe during Ebola and SARS outbreaks. In addition to the work we are doing to support healthcare workers, we support pharmaceutical customers

developing revolutionary medicines; customers who are focused on food production and supply key products for the critical defense and the security of the nation. Our culture of innovation is designed to respond with highly engineered solutions in each customer's moment of need.”

For more information on Sentinel EZ BioHood™ or ILC Dover, visit [ilcdover.com](http://ilcdover.com).

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