

WHY PAPR MAY BE THE RIGHT CHOICE FOR YOUR WORKPLACE



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Disposable respirators have been thrust into the limelight since the beginning of the pandemic. However, in healthcare facilities and some industrial environments, respiratory protection has always been critical. While disposable N95 respirators and other types of particulate protection are in high demand, Powered Air Purifying Respirators (PAPRs) are gaining traction quickly as a reliable, cost-effective and sustainable alternative to disposable and other reusable respirators.

What is a PAPR and how does it work?

A PAPR (Powered Air-Purifying Respirator) is defined by [OSHA](#) as an air-purifying respirator that uses a blower to push air through purifying elements, such as a filter or cartridge. More than that though, it's an all-in-one system that delivers respiratory, face and eye protection, and depending on the headpiece – even head protection. Typically, a PAPR unit consists of an air-purifying filter, cartridge, or canister that removes specific air contaminants, and features a motor or blower, a headpiece or hood, plus a breathing tube. With a PAPR, the sum is truly greater than all of its parts.

Compared to an N95 disposable respirator or a reusable half mask, a PAPR unit is wearable, battery-powered and portable, and sits comfortably on your back or waist. The loose-fitting hood offers workers increased comfort, eliminates the need for fit-testing, and allows for optional facial hair.

PAPR's components can also be cleaned, reused and even shared, which makes this solution appropriate for long-term usage, providing a sustainable alternative to disposables.

Key differentiators to consider before choosing PAPR

1. Higher Assigned Protection Factor – The assigned protection factor of a PAPR unit ranges from 25 to 1000 times the permissible exposure limit. Loose fitting hoods with full length shoulder shrouds and full-face air purifying respirators provide the user with the higher protection factor of 1000 in almost all applications, [according to OSHA](#) standards. This is added safety that allows a user to work in an environment with a higher concentration of contaminants. The maximum use concentration varies by contaminant.

In Europe different EU countries have set different APF for the same respirator type. The European APF for loose-fitting PAPRs (class TH3) is in the range 40 to 200 compared with 25 in the US. In the UK PAPR with hood or helmet EN 12941 and PAPR with tight fitting mask EN 12942 with class TH1-2-3 would have APF of 10-20-40 respectively.

2. No Fit Testing – Wearing a PAPR eliminates the need for a fit testing to evaluate qualitatively or quantitatively the fit of a respirator on an individual. If the PAPR is used with loose-fitting facepieces, like hoods or helmets, it provides an option for use by people with facial hair or [markings that could prevent a good seal between the wearer's face and respiratory equipment](#).

3. Increased Comfort – A PAPR may be [less taxing from a physiological/breathing resistance perspective](#) than other respirators. The user breathes more naturally, since the blower delivers a steady airflow into the headgear.

Case Study: Why the Orlando Fire Department Chose PAPR

After almost a year into the COVID-19 pandemic, at the end of 2020, the Orlando Fire Department was looking for an alternative PPE. Specifically, the firefighters wanted to find a respiratory solution that would help protect them during the pandemic.

Because safety is essential for firefighters at all times, their most important concern is always to make sure they and the people they are helping are protected.

They were looking for a longer-term solution than disposable face masks which have been in short supply and better left for healthcare professionals who need them most.

They also needed a solution which would leave their face visible, so people can see the potentially life-saving information the firefighter is communicating.

In the end, they chose PAPRs for each firefighter, and they're prepared to get a lot of use out of them. "We deployed powered air-purifying respirators (PAPRs) on all our apparatus to reduce exposure to COVID-19 with each member having their own headgear," they announced on their [Twitter](#) and [Facebook](#) pages.

Interested in PAPR?

If you need more information whether PAPR is the right solution for you and your team, you may download whitepaper, or check out [Honeywell's range of reusable Powered Air-Purifying Respirators](#) , otherwise request a call from a respiratory specialist.

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