



Personal Protective Equipment

Honeywell Augments Neck-Up PPE with Award-Winning Earpiece, Headgear

James Langford | Aug 04, 2022

Making workers—and workplaces—safer requires perpetual innovation and improvement, a truism that drives the Honeywell developers behind two award-winning new pieces of safety equipment.

The first is the **North Primair 900 Series Headgear**, a comfortable, efficient and easy-to-use safety solution that provides high quality respiratory protection, helping ensure worker safety as well as regulatory compliance. Recently, it was named respiratory Product of the Year in *Occupational Health & Safety* magazine's **annual awards** in late July.

The other is the **Impact In-Ear Pro**, a device with a noise reduction rating of 29 decibels that uses electronic hear-through to simultaneously protect workers while allowing critical communication. The winner in the magazine's hearing protection category, it comes with optional Bluetooth connectivity and controls that let users connect with smart devices, improve communications, and customize their experience.

Honeywell, based in Charlotte, North Carolina, makes "innovation an absolute priority," building on new product introductions as well as breakthrough initiatives, Chief Executive Officer Darius Adamczyk told investors at the **company's annual presentation** in March.

Items introduced in the past three years accounted for 31 percent of Honeywell's total sales in 2021, up from just 21 percent in 2017 and may reach 33 percent in 2023, he said.

Donning and Doffing

A pivotal innovation with the new Primair 900 is the ease with which users can take it on and off, explains Rahil Hasan, Honeywell's director of personal protective equipment marketing for the Americas. Wearers can also lift the visor, if needed, without having to remove the device.

The headpiece connects with the PA700 belt-mount powered air-purifying respirator, or PAPR, to counter breathing hazards. The PA700 is designed to be ergonomic for maximum worker comfort; it's also easy to clean and decontaminate and has industry-leading battery life.

"Donning and doffing is one of the big things on this," Hasan says. "This is enabled by the ratchet

suspension system also utilized in our top-selling North Hard Hats."

While federal workplace safety standards require oil and gas, chemical and manufacturing workers to wear powered air-purifying respirators in certain environments to protect them from toxic dust, vapors and gas, studies have shown that they tend to cut corners on compliance when the equipment is uncomfortable, fits poorly or is difficult to take on and off.

"Keeping workers safe on the job requires innovative, user-centered personal protective equipment to drive user compliance, so that workers will wear their gear consistently and correctly to avoid workplace injuries."

Kristin Ware
Honeywell

That behavior presents a significant risk of severe injury or even death to workers and the possibility of costly fines for employers. The U.S. Occupational Safety and Health Administration issued more than 2,000 citations for violations of *Standard 1910.134*, the rule governing respirators, in the year through September 2021. The agency also imposed \$4.46 million in penalties, with the largest hitting the healthcare and manufacturing industries. They were charged \$2.19 million and \$1.3 million, respectively.



The North Primair 900 Series Headgear is designed for easy donning and doffing. Photo courtesy of Honeywell.

"Keeping workers safe on the job requires innovative, user-centered personal protective equipment to

drive user compliance, so that workers will wear their gear consistently and correctly to avoid workplace injuries, Kristin Ware, senior product marketing manager for Honeywell Respiratory Protection, says in a statement.

Hearing Loss

While also designed for comfort and convenience, the ***Impact In-Ear Pro*** addresses a different challenge: drowning out loud sounds that can damage the eardrums of workers in machine shops and factories while still enabling necessary communication with supervisors and co-workers.

It's a product of Honeywell's emphasis on combating hearing loss, which has become widespread among U.S. industrial employees, Hasan says.

The injury's prevalence among factory workers climbed 1 percent in the 30 years through 2015, according to the ***National Institute for Occupational Safety and Health***, compared with a reduction of 1 percent across all U.S. industries. Despite that trend, more than a quarter of the 46 percent of manufacturing workers exposed to hazardous noise levels admitted not wearing hearing protection devices.



The Impact In-Ear Pro, in use above, has a noise reduction rating of 29 decibels. Photo courtesy of Honeywell.

The consequences are apparent in statistics, which show hearing loss affects about 18 percent of all factory workers. Some 20 percent of those tested have hearing difficulties severe enough to interfere in their day-to-day activities, and 14 percent have impairment in both ears.

The Impact In-Ear Pro, Honeywell says, complies with OSHA regulations for preventing that.

Agency Standard 1910.95 requires employers to provide hearing protection devices for workers exposed to noises ranging from 115 decibels for 15 minutes or more to 90 decibels for eight hours or more.

For comparison, normal breathing measures about 10 decibels, and sounds up to 60 decibels—the volume of typical conversation or an air conditioner—typically don't cause hearing damage, according to the U.S. Centers for Disease Control and Prevention.

A gas-powered lawnmower measures about 85 decibels and can cause hearing damage after two hours, while standing near an emergency siren, which measures about 120 decibels, can lead to ear pain and ear injury.

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Violations of the OSHA standard cost U.S. businesses \$988,000 in penalties in the year through September 2021, and \$247,000 of those were imposed on fabricated metal product manufacturers, the highest total of any industry.

"Hearing loss is at a pandemic level," Hasan says. "Our focus has been on what we can do about it and how we can make it so that workers going into a noisy facility for 10 hours a day, whether they're exposed to a screeching machine or whatever, can conserve their hearing."

The Impact In-Ear Pro, also compliant with American National Standards Institute guidelines for hearing protection systems, is designed in bright colors for added safety, has a flexible ear hook and comes with a compact travel case and a variety of earplug sizes.

"It drowns out the noise," Hasan says, "and still lets you hear someone talking in a noisy environment."

Which jobs in your business pose hearing hazards for employees? Tell us in the comments below.

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