

Honeywell
HOWARD
LEIGHT



VeriShield™
Smart Hearing Solution

Noise-Induced Hearing Loss – Prevention and Protection

Occupational noise-induced hearing loss (NIHL) has long been a serious risk for workers and a major challenge for safety professionals. To improve safety metrics, understanding the importance of NIHL is greater than ever, as is the awareness for protection to be personalized if it is to be truly effective.

Unlike most other occupational health and safety injuries, NIHL is pain-free, invisible, usually gradual, and therefore often goes unnoticed until the damage is done. However, many public institutions recognize it as the most prevalent occupational disease in the world.

The good news is, NIHL is also easily **preventable**.

Even so, prevention demands a clear understanding of the challenges before you can design a hearing conservation program and issue hearing protection.



Prevention Problems

Working conditions can be dynamic and unpredictable. So noise risks can arise suddenly and in unforeseen ways.

In addition, every worker is unique, with different susceptibilities to NIHL. In the past it has been considered acceptable to make general assessments of groups of workers carrying out similar tasks in certain environments. However, there is a growing understanding that this approach ignores individuals' job risk profiles, personal susceptibility to hearing loss, and changes to the noise environment which were not assessed during any initial noise-mapping activity.

It is increasingly clear that one type of hearing loss prevention approach does not fit everyone in every scenario. Therefore, the best way to protect individuals exposed to the risk of NIHL is a personalized solution.

Protection Problems

The simplest solution may seem to be protective equipment that reduces exposure to all noise – but this brings its own risks:

- The wearer feels isolated
- The wearer is less aware of their surroundings and situation
- These risks may lead them to remove the protection to avoid short-term dangers - risking long-term permanent hearing loss

Even when hearing protection devices are provided and worn, the actual protection achieved for each individual may not be the same as the level stated by the manufacturer. Proper fit and protection can be compromised by a number of factors including:

- **Eyewear** – if it has thick temples, eyewear can break the seal of the ear cushion
- **Hats** – if worn under an earmuff will affect the seal around the ear
- **Hairstyles** – long hair or facial hair will interfere with an earmuff's fit
- **User Error** – an improper seal after putting on a hearing protection device

Whatever the issue that results in a failure of prevention or protection, the ultimate difficulty is that the resulting hearing loss will not be detected until *after* it's happened.

And then it's too late.

Prevention and Protection Solutions

One of the most effective ways to reduce the risk of NIHL is to change worker behavior.

This can mean:

- Identifying individuals most likely at risk of NIHL
- Sharing insight with them about their behavior
- Designing personalized hearing conservation programs to meet their needs

Honeywell VeriShield™ Smart Hearing Solution – the new hearing loss prevention solution

Occupational NIHL is something you need to be aware of, protect against and monitor at all times. VeriShield™ Smart Hearing Solution makes that possible – and easy – because now you can see exactly what your workers are hearing.

A continuous personal noise exposure monitoring solution, Honeywell VeriShield™ Smart Hearing Solution provides real-time visibility of individual workers' protection levels and noise exposure *under the hearing protector*, with web and mobile app data services wirelessly linked to Honeywell VeriShield™ 300 Series Headsets.

By giving safety professionals access to continuous real-time exposure data, our software puts you exactly where you need to be, without leaving your desk. It enables personalized hearing conservation provisions for every worker, for improved safety regulations compliance.



VeriShield™ Smart Hearing Solution (VSHS)

Protecting your employees, improving your efficiency, and reducing your costs. VeriShield™ Smart Hearing Solution helps you meet all three challenges of your job in relation to hearing loss.

Operating in conjunction with VeriShield™ 300 Series Headsets, VeriShield™ Smart Hearing Solution continuously collects data from the hearing protection equipment and integrates it into a unified platform for viewing.

You can visualize, analyze, report and share vital data on individuals, teams, sites and across the whole organization, to show:

- noise exposure
- noise peaks, patterns and unusual occurrences – enabling identification of when additional protection is required
- historical noise exposure data – enabling easier identification of potential hearing shifts and more proactive and personalized hearing conservation measures
- equipment use – helping to identify who has not been using PPE as required, and who needs additional training
- over-exposure alarms – identifying any workers who have ignored the personal in-headset alarms
- PPE function and effectiveness – ensuring maintenance is carried out in a timely manner

Who should use it?

VeriShield™ Smart Hearing Solution (VSHS) equips safety professionals with actionable insights that enables them to provide personalized hearing conservation solutions for every worker. By taking the guesswork out of worker noise exposure, VSHS offers workers improved safety while allowing companies to create more efficient work schedules.

It is ideal for use by all workers or groups of workers who:

- are exposed to high noise levels
- work in a changing and unpredictable noise environment
- work in a variety of noise environments throughout the day (e.g. maintenance engineers)
- have recorded hearing damage
- The VSHS Web Portal is optimized for the latest versions of the Google Chrome web browser. We suggest users regularly update their web browser for best results
- The VSHS Mobile App works with both iOS and Android mobile operating systems

VeriShield™ Smart Hearing Solution components

There are three complementary components which make up the VSHS solution:

- **Hearing Protection Headset**
Provides hearing protection and collects noise exposure data. Noise exposure data is individual, and both environmental as well as under the hearing protector
- **Mobile App**
Displays noise exposure data for workers and supervisors, and sends data to the cloud
- **Web Portal**
Analyzes, stores, and presents the data in a user-friendly interface, and provides actionable insights for safety professionals

A simple subscription service will allow you to benefit from all the components of the solution.

VeriShield™ 300 Series Headsets

Hearing protection is the first function of the VeriShield™ 300 Series, but not the last. A choice of equipment formats and connectivity options allows you to choose the device best suited to your needs.

Regardless of which 300 series headset you choose, it will have:

- Sound exposure monitoring with integrated noise exposure sensors (internal and external noise levels)
- Passive noise attenuation
- Over-exposure to noise is communicated by audio and visual alerts on the headset
- Transfer of exposure data to the mobile app via Bluetooth LE
- Connectivity to the VSHS data service and web app
- Hear-through function also includes output level limiting
- Integrated fit testing
- Rechargeable batteries

VeriShield™ Headband (VS321) and Hard Hat (VS321-H) Headsets

The VeriShield™ Headband and Hard Hat Headsets are over-ear noise protection headsets. In addition to the above features shared among all VeriShield™ 300 Series Headsets, they can also play music by connecting a phone to the headset via a wired 3.5mm jack.

VeriShield™ In-Ear (VS332i) Headset

The VeriShield™ In-Ear Headset is ideal for environments where earmuffs can be uncomfortably hot, as well as for workers who prefer a lighter-weight, slim-profile hearing protection solution, or who are used to wearing earplugs.

Unique features of this headset include:

- Enables work in confined spaces and around machinery, and offers greater compatibility with other PPE
- Choice of two attenuating ear tips (high and medium-to-low) in multiple sizes
- Voice calls and streaming music via Bluetooth Classic-enabled mobile devices
- Built-in microphone for voice communication, with an alternative boom microphone option for noisy environments

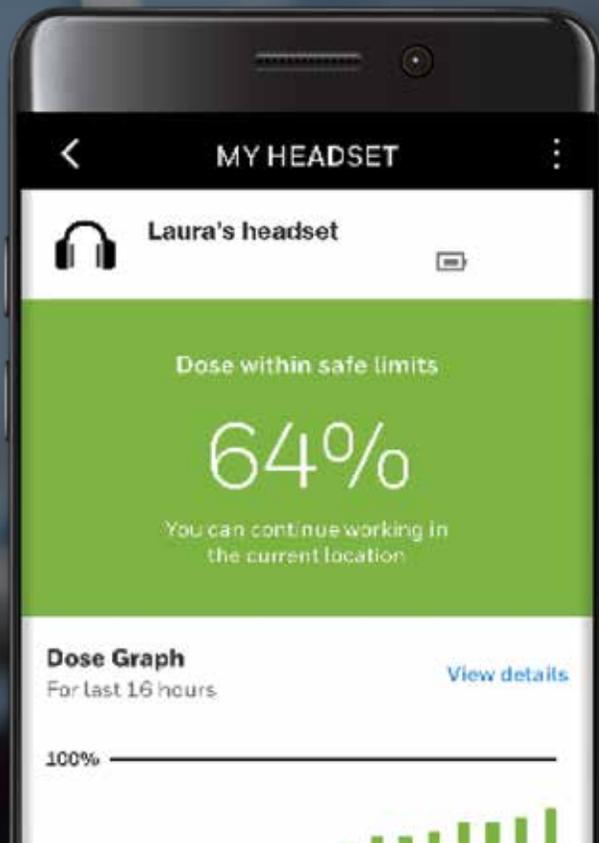


VeriShield™ Smart Hearing Solution Mobile App

Using the mobile app not only enables supervisors to monitor the noise-level exposure of their teams or individual workers, but also lets the workers themselves view their noise exposure.

Data is gathered from the integrated sensors in the VeriShield™ 300 Series Headsets and is then converted into a visual display of exposure. This will be visible both on the supervisor's mobile phone for all headsets within range, and on the wearer's own mobile phone.

Easy-access controls provide control of app features such as reset dose, fit testing, calibration, firmware updates and headset / cloud database synchronization.





Safety Suite Software Web Portal

Data on noise-level exposure only has value when it is analyzed, reported, shared, and acted upon. Safety Suite is the central component of the VSHS solution, where data is collected and analyzed to provide actionable insights for safety professionals.

1 Data collection

Noise-level exposure information is collected from the VeriShield™ 300 Series Headsets and stored in the cloud

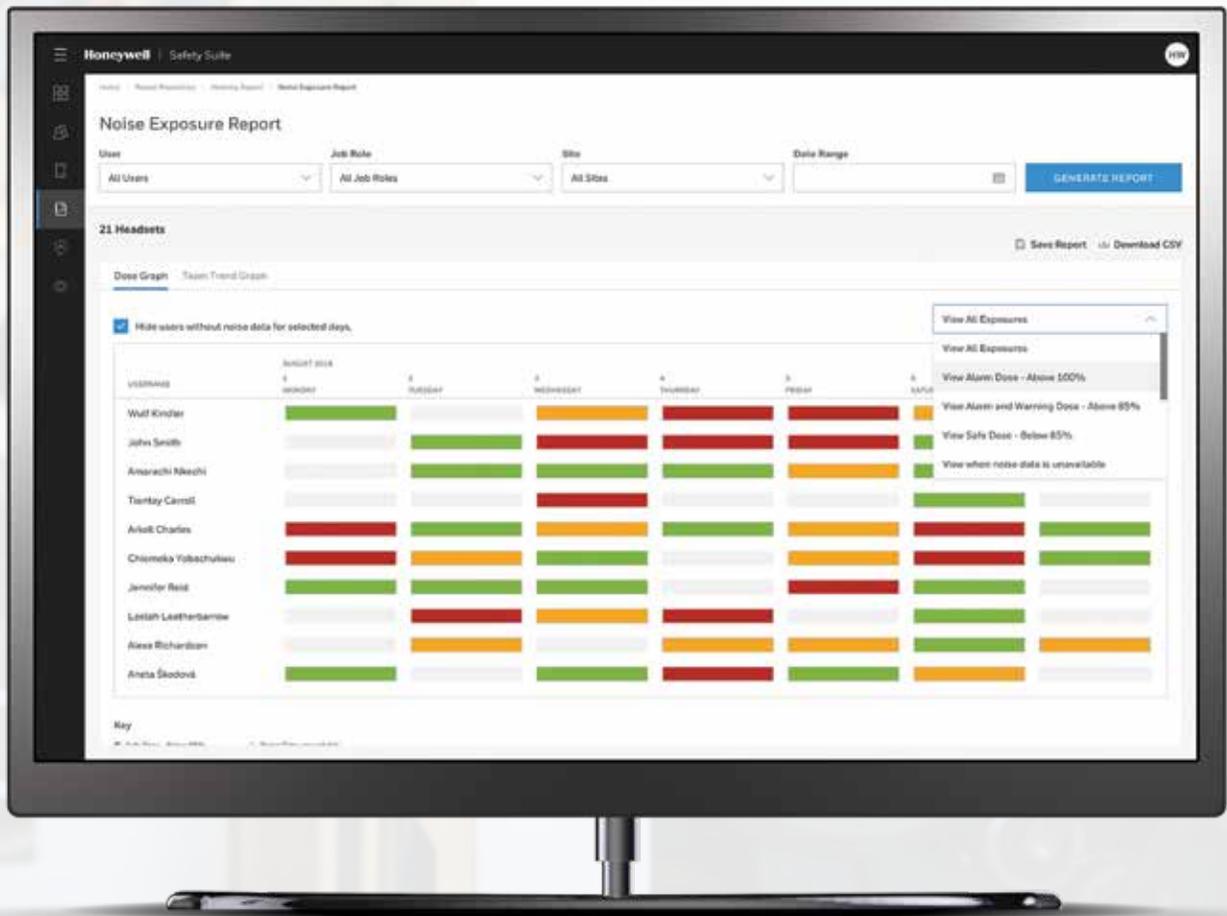
2 Data processing

The data collected is processed into a form where it can be more easily interpreted and analyzed

3 Data analysis

The data is analyzed to generate actionable insights and enable:

- report creation to motivate users to wear hearing protection
- identification of at-risk workers, for corrective action assistance
- work environment analysis to provide inputs for engineering controls
- easy access to historical noise exposure records in the event of safety audits or legal claims
- automatic reports for user notification
- identification of trends, for early indications of future issues





For more information

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