

About Howard Leight

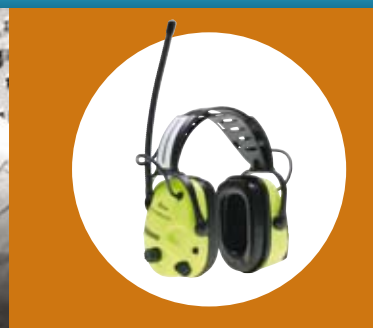
Howard Leight is a leading global provider of passive and intelligent hearing protection solutions, and champion of progressive Hearing Conservation Programs. For over 30 years, Howard Leight has pursued the prevention of occupational hearing loss through innovation in hearing protection design, technology, performance and comfort, and the promotion of hearing safety education. Howard Leight is a division of Sperian Protection. Please visit us online at www.howardleight.com

Sperian Protection (UK) Limited

Unit 3 Elmwood, Chineham Park
Basingstoke, RG24 8WG - United Kingdom
Tel: +01256 693200 - Fax: +01256 693300
uksales@sperianprotection.com - www.sperianprotection.com

Sperian Protection - Immeuble Edison Paris Nord 2

33 rue des Vanesses - BP 55288 Villepinte
95958 Roissy CDG Cedex - France
Tel. : +33 (0)1 49 90 79 79 - Fax : +33 (0)1 49 90 71 38
info-export@sperianprotection.com - www.sperianprotection.com



Product Selection Guide



It's a matter
of choice.



Hearing Conservation is about more than supplying your employees with earplugs or earmuffs that block the most noise. It is about finding the solution that's right for your people.

At Howard Leight, we realize that the people who depend on our products to protect their hearing are as diverse as you can imagine. And the ways people select the right hearing protection are just as diverse. We've designed this Selection Guide with these guidelines in mind.

What's most important to you and your employees? Reusability vs. hygiene? Long-term comfort? SNR? Detectability? Convenience? Unique industry requirements? You'll find all of Howard Leight®'s hearing protection products indexed in ways that help you find the solution you need, your way.

The right fit for every user, every environment

This product selection guide helps you learn more about the products you currently use and explore new options.

Noise-Induced Hearing Loss is 100% Preventable.

Hearing Conservation

Understand the basics of hearing conservation, regulations that impact your decision making and best practices designed to make your Hearing Conservation programme more effective.

Pages 2-7



Earplugs

Already know that earplugs work well for your environment? Explore our full line of products to discover options for fit, SNR, materials and more.

Pages 7-20



Earmuffs

Need to understand all the options for your employees? Discover a range of wearing styles, choices for enhancing communications and a wide range of special features for every environment.

Pages 21-37



Search By...

Does your industry or application have special requirements? Our Search By sections will help guide your product selection.

Pages 38-43



Attenuation Charts

Review the full attenuation charts for all our products.

Pages 45-47

VeriPRO™

Determine each employee's actual attenuation in minutes.

Pages 48

Still looking for the right hearing protector? Visit the Hearing Protector Selector at howardleight.com for more solutions!

Noise-induced hearing loss is 100% preventable.

Unlike most occupational injuries, there is no visible evidence of noise-induced hearing loss (NIHL). It is not traumatic and often goes unnoticed when it first occurs. Noise-induced hearing loss accumulates over time, its effects realized long after the damage has been done. NIHL is **permanent and irreversible**. With proper education, motivation and protection, however, it is also **100% preventable**.

According to the World Health Organization, noise-induced hearing loss is the most common permanent and preventable occupational illness in the world. In the European Union, NIHL is the most commonly reported occupational injury. 20% of EU workers are exposed to hazardous noise half their working time, 10% exposed full time (source: EU OSHA).

Howard Leight is committed to providing new motivational and training tools to build an effective Hearing Conservation Programme that works for your employees. Visit howardleight.com throughout the year to learn more and receive these tools.

When is noise considered hazardous?

Anytime you must shout at someone an arm's length away to be heard.

While exposure to hazardous noise is common, prevention of NIHL is simple:

consistent use of properly fitted hearing protection when exposed to hazardous noise. That is the goal of every Hearing Conservation Programme.

Noise-induced hearing loss is not solely a workplace issue.

It can happen off the job, too. Many employees use power tools, attend loud rock concerts and sporting events, or participate in shooting sports. All are opportunities for exposure to hazardous noise. Prevention is the key, on and off the job.

Indicators of Noise-Induced Hearing Loss

Although there are no visual signs, there are a few simple indicators of NIHL. Identification in its early stages can help prevent further damage.

High-Frequency Hearing Loss

When hearing impairment begins, the high frequencies are often lost first, which is why people with NIHL often have difficulty hearing high pitched sounds such as human voices, alarms and signals. Compared to other sounds, they will seem muffled or distorted.

With normal hearing, conversations are understandable if they are loud enough. When someone suffers from noise-induced hearing loss, simply turning up the volume does not make speech clearer. The clarity is adversely affected regardless of how loud the volume.

Gradual Progression

NIHL rarely happens overnight. Rather, it accumulates over time with every unprotected exposure to hazardous noise, usually in both ears. This progression can be detected through healthy hearing practices, including the performance of annual audiograms on all employees in your Hearing Conservation Programme. Audiograms can identify whether your employees are experiencing a degradation in hearing, which indicates permanent damage and requires further preventative action.

Common Symptoms

Those suffering from noise-induced hearing loss will experience tinnitus (ringing in the ears) or muffled hearing. Non-auditory effects of NIHL may include increased stress, high blood pressure, sleep problems and/or headaches.

Create a successful Hearing Conservation Programme through best practices.

As manufacturing, construction and other industrial endeavors are on the rise in Europe, so are the number of people exposed to harmful levels of noise in the workplace. Over 29% of all employees are exposed to hazardous levels of noise in at least one-quarter of their time in the workplace, and 11% are exposed at all times¹ – and these trends are increasing.

While noise-induced hearing loss is permanent and irreversible, it is completely preventable. The new European Union Directive 2003/10/EC, aims to prevent employee exposure to harmful noise, while promoting a healthier and more productive workforce.

The following outlines the provisions of the Directive, including best practices in implementing a successful Hearing Conservation Programme.

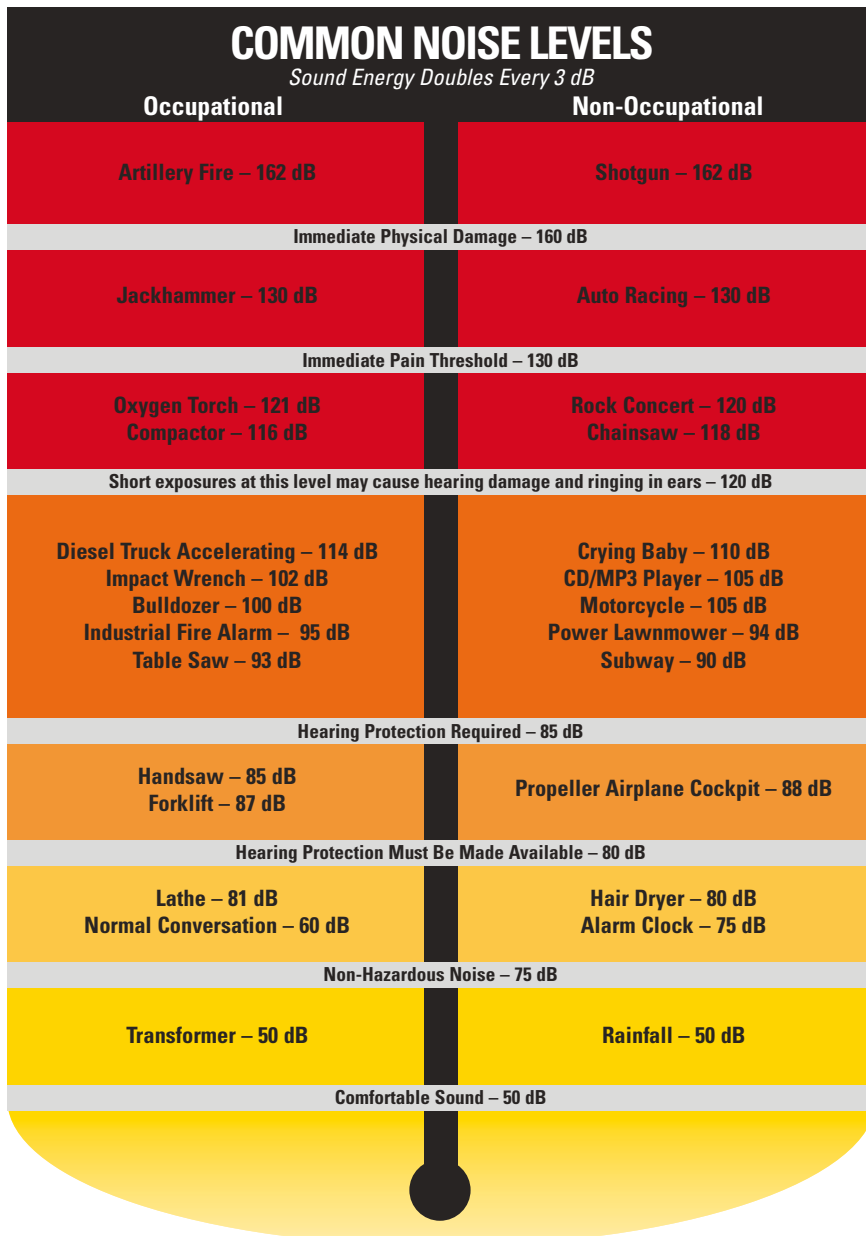
| | Determination and assessment of risk | Avoiding and reducing exposure | Personal protection |
|---|--|--|--|
| Required by European Union Directive 2003/10/EC | <p>Assessment – A noise exposure assessment must be obtained for all employees exposed to 80 dBA LEq. But not every employee must be personally monitored through dosimetry. Representative samples may be taken, if it can be shown that noise exposures are equivalent to other employees in the same area or performing the same task.</p> <p>Professional Service – Noise levels throughout the workplace must be measured through representative sampling by a competent service.</p> | <p>Engineering Controls – Apply engineering controls at the noise source or along the noise path to reduce exposures. These controls may include vibration dampeners, absorptive panels, barriers, muffler, or variations in force or drive speed of motors.</p> <p>Maintenance – Perform regular maintenance on machinery to prevent additional noise.</p> <p>Administrative – Implement administrative controls to limit the exposure time for employees. These controls may include rotating employees in noisy areas, providing quiet breaks for noise-exposed employees, or moving processes such as maintenance or cleaning to quieter workshops.</p> | <p>Voluntary Usage – A variety of hearing protectors must be made available to employees exposed to the Lower Action Level of 80 dBA (8-hour exposure).</p> <p>Mandatory Usage – Employees must utilise hearing protectors when noise exposure meets or exceeds the 85 dBA Upper Action Level (8-hour exposure).</p> <p>Usage – Employer must ensure proper use of hearing protection amongst noise-exposed employees.</p> |
| Best practices that promote and motivate hearing conservation | <p>Document Changing Conditions – Whenever you make a change in equipment or process, you need to document this change, even if the noise level is reduced.</p> <p>Post a Noise Map – A noise map in common areas is an effective way to notify employees of area noise and related changes.</p> <p>Document Exposure – Each employee's TWA noise exposure should be recorded in his/her personnel file.</p> | <p>Buy Quiet – Purchase new products or machinery with enhanced noise control.</p> <p>Maintain – Noise is often a machine's cry for maintenance. Repairs can reduce noise levels.</p> <p>Block or Isolate the Source – Erect barriers, or relocate noisy equipment (or their operators) behind heavy walls. Doubling the distance from a noisy piece of equipment effectively reduces the sound energy by half (about a 3 dB drop in noise level).</p> <p>Schedule Employees – Administrative controls include such actions as giving noise-exposed employees breaks in quiet areas, or rotating employees into noisy jobs for short durations.</p> | <p>Offer a True Variety – Make available to all your employees at least one style of single-use, multiple-use, and banded earplugs, and one earmuff.</p> <p>Personal Attenuation Rating (PAR) – Determine employees' earplug fit effectiveness by using field verification systems, such as VeriPRO™. Find out if they are receiving optimal protection, require additional training on earplug fitting, or need to try a different model.</p> <p>Make HPDs Convenient – Increase accessibility to hearing protection by installing earplug dispensers near time clock or by placing earmuffs at supervisor stations.</p> |



| | Health surveillance | Worker information and training | Consultation and participation of workers |
|---|---|---|---|
| Required by European Union Directive 2003/10/EC | <p>Audiometry – Preventive audiometric testing must be made available to employees whose exposure exceeds the lower exposure action levels.</p> <p>Recordkeeping – Employer is responsible for maintaining up-to-date health surveillance records.</p> <p>Access – Employees have access to health surveillance records upon request.</p> | <p>Training – Employees must receive information on risks of noise exposure, methods of avoiding/reducing exposure, exposure limits/values per Directive, assessment/measurement of noise, proper use of hearing protectors, detecting/reporting signs of noise exposure, circumstances of health surveillance, and safe working practice to avoid noise exposure.</p> | <p>Participation – Employees can actively participate in the decisions affecting their hearing health.</p> |
| Best practices that promote and motivate hearing conservation | <p>Retain Records – This will help your audiologist compare audiograms serially over time.</p> <p>Get Follow-Up Reports – Ensure that your testing service provides understandable follow-up reports.</p> <p>Review Results Immediately – Studies show that reviewing audiometric test results with employees right after testing yields a more positive impact.</p> | <p>Provide One-on-One Training – This individualized attention will make for a more memorable training experience.</p> <p>Offer Ongoing Education – Distribute informational flyers and hang motivational posters in common areas and near hearing protection sources. Offer “toolbox” trainings throughout the year.</p> | <p>Teamwork – Assembling a cross-departmental team for your Hearing Conservation programme can enhance support, provide input and help implementation in a variety of areas. Include staff from safety and health, employees in your hearing conservation program, medical personnel, purchasing, human resources and senior management.</p> |

Understanding the Risks

Employees are generally unaware of the potentially harmful noise levels they are exposed to every day — both on the job and off. The Howard Leight® Noise Thermometer is a highly effective visual tool that helps employees understand noise risks in everyday activities and European hearing protection requirements.



Main Components of European Union Directive 2003/10/EC

Action Level - 80 dBA

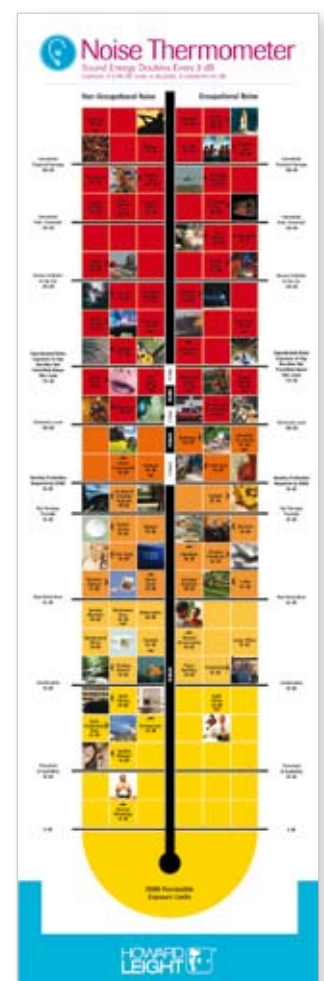
Monitor all noise levels
Annual audiometric testing for exposed workers
Annual training for exposed workers
Variety of suitable hearing protectors must be made available at no cost to the employee

Permissible Exposure Limit - 85 dBA

Hearing protectors required for noise-exposed workers

Permissible Exposure Limit - 85 dBA TWA

| | | | | | | | | | |
|--|-------------------|----|----|----|----|----|-----|----|-----|
| Hearing protectors required for all exposures over these levels: | Hours Per Day | 8 | 6 | 4 | 3 | 2 | 1.5 | 1 | 0.5 |
| | Sound Level (dBA) | 85 | 86 | 88 | 89 | 91 | 92 | 94 | 97 |



Download a copy of the Howard Leight Noise Thermometer at howardleight.com or order copies to hang in your facility by calling us.



Earplugs

It's all about choice.

A commitment to hearing protection means considering all the features that make one earplug different from another: material, shape, size and SNR. Howard Leight makes it easy to compare products and ensure that all your employees receive the right fit and protection.

Selecting the right protection for your employees means more than choosing the earplug with the highest SNR.

Fit.

Fitting ear canals of all shapes and sizes doesn't have to be difficult.

The right earplug should feel comfortable in the ear canal without compromising protection. Howard Leight® earplugs offer a combination of advanced design and material science that ensures the proper fit for every employee.

Selection.

Why so many earplugs?

Because people, their ears and their environments are all so different. Howard Leight offers the widest range of styles to accommodate almost any situation.

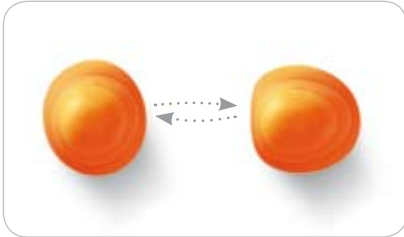
Protection.

Hearing protection only works when people use it.

Howard Leight earplugs provide a range of Single Number Ratings that target hearing protection without compromising overall employee safety.

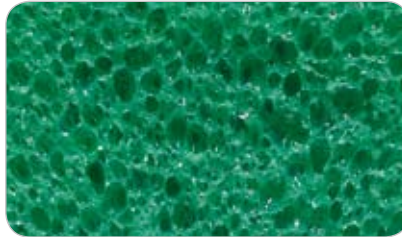
Conforming Material Technology™

(CMT) A marvel of user-friendly design, the CMT in SmartFit® utilises body heat to adapt to each wearer's ear canal for a comfortable, personalised fit.



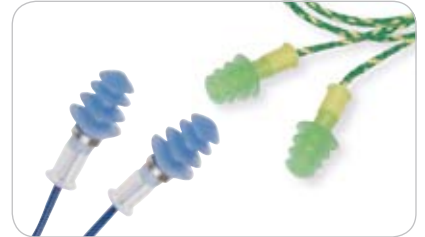
Polyurethane Foam

Our patented open-cell polyurethane foam formulation used in Single-Use earplugs delivers a comfortable fit without compromising protection.



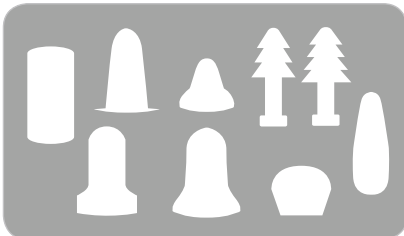
Sized Earplugs

One size doesn't always fit all. That's why Howard Leight® offers many Multiple-Use earplugs in a variety of sizes.



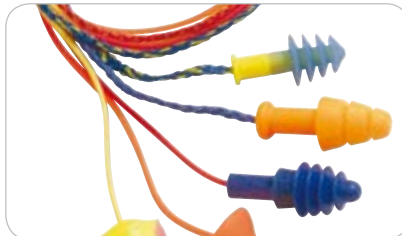
Shapes

To provide the best fit for every ear, Howard Leight earplugs are available in a range of shapes to match your individual comfort preference.



Cording Options

In many environments, employees need to remove earplugs during the course of the day. Our range of corded products makes removing and refitting more convenient.



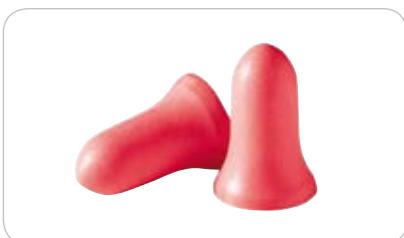
Dispensers

Dispensers are an economical and convenient way to ensure easy access to hearing protection. Use them everywhere you find hazardous noise.



Highest Attenuation

For those exposed to high levels of hazardous noise, our Max® earplug's SNR 37 offers the highest attenuation available.



Lower Attenuation

Avoid overprotection in marginal noise environments with lower SNR earplugs, like our new Clarity® multiple-use earplugs (SNR 22).



Intermittent Noise

For employees who are in and out of noisy areas, banded earplugs are a convenient solution; they can be put on and removed in a snap.



Earplug Overview

Every ear has different requirements for fit. Every environment has different requirements for protection. That's why Howard Leight provides a wide range of earplug choices.



Single-Use

Ideal for work situations that demand a high degree of comfort, frequent changes or where hygiene presents a problem for reuse.



Multiple-Use

Ideal for environments where employees can retain and store earplugs for reuse over time.

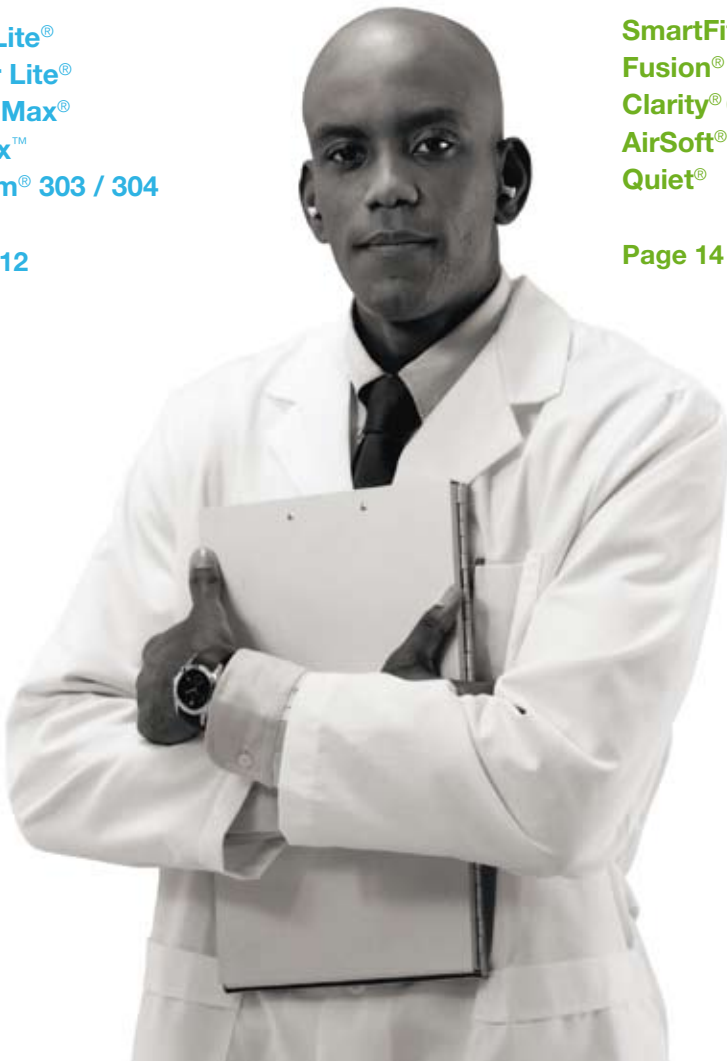


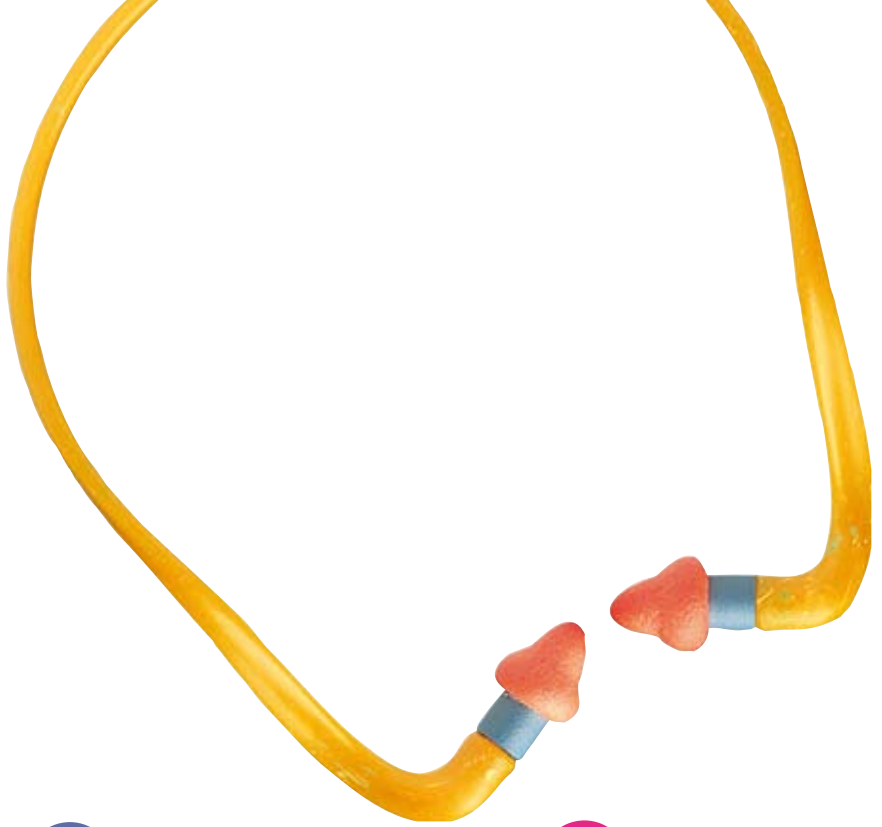
Max®
Max Lite®
Laser Lite®
Multi Max®
Matrix™
Bilsom® 303 / 304

Page 12

SmartFit®
Fusion®
Clarity® 656
AirSoft®
Quiet®

Page 14





Detectable

Specially created for environments where contamination from foreign objects is unacceptable.



Dispensers

Save time and space, reduce waste and increase convenience with earplug dispensers.



Banded

An alternative style of hearing protection for those who work in areas of intermittent noise.

Laser Trak®
SmartFit® Detectable
Fusion® Detectable

Page 16

Leight® Source 400
Leight® Source 500
Leight® Source 100

Page 17

QB1HYG®
QB2HYG®
QB3HYG®
PerCap®

Page 18



Single-Use

An economical and convenient choice for work situations that demand a high degree of comfort, frequent changes or where hygiene presents a problem for reuse.

All disposable uncorded earplugs delivered: **200 pair box, 2000 pair case**.
All disposable corded earplugs delivered: **100 pair box, 1000 pair case** (Except Bilsom 303 / Bilsom 304).

Max®
SNR 37



Highest SNR in Single-Use

The world's most-used polyurethane foam earplug

Bell shape for maximum in-ear comfort

Contoured design for easy insertion, resists tendency to back out of the ear canal

Polyurethane foam enhances comfort, especially for long-term wear

Smooth, soil-resistant skin prevents dirt build-up

Art. No / Style / Packaging

| | | |
|-----------|----------|---------|
| 33 011 61 | Uncorded | Polybag |
| 33 011 30 | Corded | Polybag |

Max Lite®
SNR 34



Comfort for smaller ear canals

Ideal for people with smaller ear canals

Low-pressure polyurethane foam expands gently for comfortable, long-term wear

Contoured T-shape for easy handling and fit

Smooth, soil-resistant skin prevents dirt build-up

Art. No / Style / Packaging

| | | |
|-----------|----------|---------|
| 33 011 20 | Uncorded | Polybag |
| 33 011 21 | Corded | Polybag |

Laser Lite®
SNR 35



Highly visible protection

Vibrant colors for high visibility

Self-adjusting polyurethane foam expands to fit virtually every wearer

Contoured T-shape for easy insertion and fit

Smooth, soil-resistant skin prevents dirt build-up

Art. No / Style / Packaging

| | | |
|-----------|----------|---------|
| 33 011 05 | Uncorded | Polybag |
| 33 011 06 | Corded | Polybag |

Industries and Applications

Agriculture + Farming
Automotive
Aviation
Building Construction
Forestry
Furniture Manufacturing
General Contracting

Heavy Construction
Landscaping
Lumber/Wood Products
Manufacturing
Metal Fabrication
Military + Law Enforcement
Mining

Petrochemical
Pulp + Paper
Sporting
Steel
Transportation Equipment
Utility/Waste Management

Multi Max® SNR 35



One earplug, two sizes

Improves individual fit while simplifying inventory

Self-adjusting polyurethane foam expands to fit virtually every wearer

Smooth, soil-resistant skin prevents dirt build-up

Art. No / Style / Packaging

33 011 09 Uncorded Polybag

Matrix™ SNR 23



No-roll insertion

Patented no-roll design makes insertion fast and easy

Smooth outer skin and reduced diameter provide long-term comfort

Instant protection upon proper insertion – no need to wait for foam to expand

Uniform attenuation profile blocks out noise while voice frequencies can be heard more naturally

Three attenuation levels targeted for specific noise levels

Art. No / Style / Packaging

| | | |
|-----------|-------------------|---------|
| 10 112 36 | Orange / Uncorded | Polybag |
| 10 112 37 | Green / Uncorded | Polybag |
| 10 112 38 | Blue / Uncorded | Polybag |
| 10 125 21 | Orange / Corded | Polybag |
| 10 125 20 | Green / Corded | Polybag |
| 10 127 20 | Blue / Corded | Polybag |

SNR 23



SNR 27



SNR 29



Bilsom® 303 / 304 SNR 33



Energised for personal comfort and performance

Tapered design for a more personalised fit

New! Leight Stripe™ formulation : a skilled blend of yellow and white polyurethane foam that feels softer in both your hand and in your ear

Easy to roll-down and insert properly

Resists tendency to back-out of the ear canal

Less expansion pressure for long-term comfort

Smooth, soil-resistant skin prevents dirt build-up on earplugs

Available in two sizes to ensure a proper and comfortable fit

Art. No / Style / Packaging

| | | | |
|----------------------------|---------------|--------------|----------------|
| 10 050 73 Large / Uncorded | Polybag | 200 pair box | 2000 pair case |
| 10 050 74 Small / Uncorded | Polybag | 200 pair box | 2000 pair case |
| 10 071 92 Large / Uncorded | 10 pair pouch | 200 pair box | 2000 pair case |
| 10 071 93 Small / Uncorded | 10 pair pouch | 200 pair box | 2000 pair case |
| 10 001 06 Large / Corded | Polybag | 100 pair box | 500 pair case |
| 10 001 07 Small / Corded | Polybag | 100 pair box | 500 pair case |

304 S



304 L





Multiple-Use

Ideal for environments where employees can retain and store earplugs for reuse over time — reducing waste and saving money.

SmartFit®
SNR 30



Revolution in personalised fit

Patented Conforming Material Technology™ (CMT) uses body heat to adapt earplug to the individual shape of each wearer's ear canal

Delivers superior comfort and a truly individual fit

Simplifies inventory control — a single product fits almost every wearer

Detachable cord system and HearPack® storage case

Art. No / Style / Packaging

| | | |
|-----------|------------------------|----------------------------|
| 10 112 39 | Detachable Fabric Cord | HearPack |
| | | 50 pair box, 500 pair case |

Fusion®
SNR 28



All-day comfort, easy handling

Patented dual-material design combines firm core for easy handling with soft flanges for comfort and fit

FlexiFirm® stem is easy to grasp, ensuring easy insertion into the ear canal

SoftFlanges™ create comfortable seal in the ear canal for superior comfort and protection

Unique detachable cord system adapts to virtually any application

Two sizes fine-tunes fit for personal comfort and safety (blue/regular, green/small)

Art. No / Style / Packaging

| | | |
|-----------|--------------------------|----------------------------|
| 10 112 82 | Standard (blue) / Corded | HearPack |
| | | 50 pair box, 500 pair case |
| 10 112 81 | Small (green) / Corded | HearPack |
| | | 50 pair box, 500 pair case |

Small



Clarity® 656
SNR 22



Enhanced communication

Patented Sound Management Technology™ (SMT) filter technology blocks low and medium frequencies while higher frequencies (voice, signals, alarms) can be heard more naturally, with less distortion

Prevents employee isolation by enhancing communication

Lower attenuation ideal for marginal noise environments of 95 dB or lower, preventing overprotection

Woven cord adjusts to user needs and reduces sound transmission, cord adjuster adapts length to suit personal preference or application

Reusable case with hook allows wearers to attach to belt loop, apron, bag or other work tools

Two sizes fine-tunes fit for personal comfort and safety

Art. No / Style / Packaging

| | | |
|-----------|--------------------------|----------------------------|
| 10 053 29 | Standard (blue) / Corded | Reusable Case |
| | | 10 pair box, 100 pair case |
| 10 053 28 | Small (green) / Corded | Reusable Case |
| | | 10 pair box, 100 pair case |

Small



Industries and Applications

Agriculture + Farming
Assembly/Light Manufacturing
Automotive
Aviation
Building Construction
Food + Beverage

Forestry
General Contracting
Landscaping
Lumber/Wood Products
Manufacturing
Metal Fabrication

Military
Petrochemical
Pulp + Paper
Printing
Utility/Waste Management
Warehousing

AirSoft® SNR 30



Optimized for comfort

Delivers optimal protection and increased long-term comfort

Advanced air pocket design features internal noise-blocking fins

Four-flange profile creates better seal in the ear canal

Less pressure in the ear canal eliminates that “plugged up” feeling

Rounded flanges fit better in the ear canal

Firm stem facilitates easy insertion and removal

Outstanding noise-blocking protection – highest attenuation in Multiple-Use

Art. No / Style / Packaging

| | | |
|-----------|------------------|--|
| 10 155 60 | Uncorded | Flip-Top Box 100 pair box, 1000 pair case |
| 10 155 61 | Red PVC cord | Flip-Top Box 100 pair box, 1000 pair case |
| 10 155 63 | White Nylon Cord | Flip-Top Box 100 pair box, 1000 pair case |

Quiet® SNR 28



Easy handling, better fit

Patented no-roll design is easy to handle and fit

Contoured shape comfortably matches contours of the ear canal

Smooth, non-irritating skin provides all-day comfort, easy to clean for long-term use

Built-in insertion stem makes insertion quick and easy

Art. No / Style / Packaging

| | | |
|-----------|----------|--|
| 33 011 70 | Uncorded | Flip-Top Box 100 pair box, 1000 pair case |
| 33 011 72 | Corded | Flip-Top Box 100 pair box, 1000 pair case |

Reusable cases for long-term use

For employees who are able to store their earplugs between use, we offer a choice of durable storage cases that improve hygiene and protect earplugs from damage.



Cords for Added Convenience

Some workers need to remove their earplugs during the course of a day's work. We offer a variety of products with cords that make removing/refitting earplugs more convenient and reduce product loss.





Detectable

Specially created for environments where contamination from foreign objects is unacceptable.

Industries

and Applications

Food + Beverage Processing

Lumber/Wood Products

Pulp + Paper

Tobacco

Laser Trak® SNR 35



High attenuation in Single-Use

Visual and metal detectability plus long-term comfort

Non-ferrous metal grommet and bright colors easily detected by visual and automated inspection

Self-adjusting polyurethane foam expands to fit virtually any wearer

Contoured T-shape for easy insertion and wear

Smooth soil-resistant skin prevents dirt build-up

Art. No / Style / Packaging

| | | |
|-----------|--------|------------------------------|
| 33 011 67 | Corded | Polybag |
| | | 100 pair box, 1000 pair case |

SmartFit® Detectable SNR 30



Revolution in personalised fit

Patented Conforming Material Technology™ (CMT) adapts to the shape of the surrounding ear canal when inserted and returns to its original shape when removed

Delivers superior comfort and a truly individual fit

Simplifies inventory control — a single product fits almost every wearer

Blue color provides high visibility in visual detection

Metal ring on stem detectable by automated equipment

Art. No / Style / Packaging

| | | |
|-----------|-------------------|----------------------------|
| 10 125 22 | Attached Polycord | Polybag |
| | | 50 pair box, 500 pair case |

Fusion® Detectable SNR 28



Total protection, comfort and fit

Patented dual-material design

FlexiFirm® stem is easy to grasp, ensuring easy insertion into the ear canal

SoftFlanges™ create comfortable seal in the ear canal for superior comfort and protection

Metal stem ring easily detected by automated equipment

Blue color provides high visibility in detection

Two sizes fine-tunes fit for personal comfort and safety (regular, small)

HearPack® case for storage between use

Art. No / Style / Packaging

| | | |
|-----------|----------------------------------|----------------------------|
| 10 112 34 | Standard (translucent blue stem) | HearPack |
| | / Corded | 50 pair box, 500 pair case |
| 10 112 35 | Small (clear stem) | HearPack |
| | / Corded | 50 pair box, 500 pair case |

Small





Dispensers

Save time and space, and reduce waste with earplug dispensers. For big or small operations, dispensers offer an economical, hygienic and user-friendly source for hearing protection.

Leight® Source 400 Bag Refills



Versatile earplug dispenser

Tabletop or wall-mount plastic dispenser provides a user-friendly source for earplugs

Durable plastic design is an economical choice for dispensing earplugs

Twist knob to dispense earplugs

Catch basin prevents earplugs from falling to the ground

Holds 400 pairs of Howard Leight Single-Use earplugs: Max®, Max Lite®, Laser Lite®, Multi Max®, Matrix™, Bilsom® 303

Art. No / Style / Packaging

10 130 40 Leight Source 400 delivered empty Box

Bulk refill options

Following is a complete listing of compatible products and packaging options for use with Leight Source 400 Dispensers.

Leight Source 400 Bulk refill bag (200 pair/bag)

| | |
|-------------------|-------------------|
| Max | Matrix |
| 10 130 46 | 10 130 42 Orange |
| Max Lite | 10 130 41 Green |
| 10 130 48 | 10 129 11 Blue |
| Laser Lite | Bilsom 303 |
| 10 130 47 | 10 061 86 size L |
| Multi Max | 10 061 87 size S |
| 10 130 45 | |



Leight® Source 500 Box Refills



Permanent mounted dispenser

Heavy-duty anodized aluminum withstands constant use

Mount on wall for easy access

Crank handle to dispense earplugs

Ideal for large factories and process industries

Holds 500 pairs of Howard Leight earplugs: Max, Max Lite, Laser Lite, Multi Max, Matrix, Quiet®, Bilsom 303

Art. No / Style / Packaging

33 012 73 Leight Source 500 delivered empty Box

Bulk refill options

Following is a complete listing of compatible products and packaging options for use with Leight Source 500 Dispensers.

Leight Source 500 Bulk refill box (500 pair/box)

| | |
|-------------------|-------------------|
| Max | Matrix |
| 33 011 65 | 10 127 23 Orange |
| Max Lite | 10 127 22 Green |
| 33 012 72 | 10 127 21 Blue |
| Laser Lite | Quiet |
| 33 012 71 | 33 012 75 |
| Multi Max | (200 pair/box) |
| 33 012 61 | Bilsom 303 |
| | 10 175 73 size L |
| | 10 175 74 size S |



Leight® Source 100



Dispenser of 100 pairs of Bilsom 303 earplugs

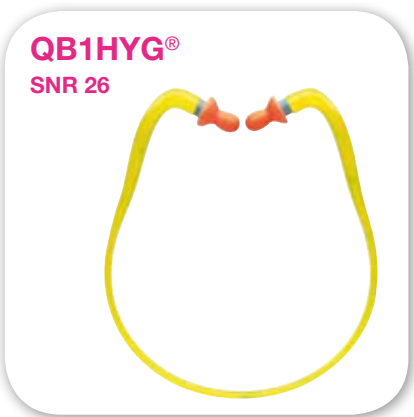
Art. No / Style / Packaging

10 058 52 Leight Source 100 of Bilsom 303 L
10 058 50 Leight Source 100 of Bilsom 303 S



Banded

An alternative for those who work in intermittent noise or for managers and visitors who move in and out of noisy areas.



Inner-aural protection

Smooth, ergonomic pods fit in the ear canal for maximum protection

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes pair of replacement pods for extended use

Art. No / Style / Packaging

| | | |
|-----------|------------------|--|
| 33 012 82 | Inner-Aural Band | Resealable Bag 10 pair box, 100 pair case |
| 33 012 81 | Replacement Pods | Polybag 50 pair box, 200 pair case |



Supra-aural protection

Soft pods rest partially in the ear for a balance of comfort and protection

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes pair of replacement pods for extended use

Art. No / Style / Packaging

| | | |
|-----------|------------------|--|
| 33 012 80 | Supra-Aural Band | Resealable Bag 10 pair box, 100 pair case |
| 33 011 81 | Replacement Pods | Polybag 50 pair box, 200 pair case |



Semi-aural protection

Super-soft lightweight pods rest outside the ear for superior comfort

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes pair of replacement pods for extended use

Art. No / Style / Packaging

| | | |
|-----------|------------------|--|
| 33 012 79 | Semi-Aural Band | Resealable Bag 10 pair box, 100 pair case |
| 33 011 83 | Replacement Pods | Polybag 50 pair box, 200 pair case |



Industries and Applications

Assembly/Light Manufacturing
Aviation
Food + Beverage Processing
General Contractor

Landscaping
Manufacturing
Metal Fabrication
Petrochemical

Pulp + Paper
Supervisors
Warehousing



Folding semi-aural protection

Super-soft lightweight pods rest outside the ear for superior comfort

Compact, folding design easy to store in pocket

Lightweight and portable – designed especially for environments with intermittent noise hazards

Multiple positions provide flexibility: over-the-head, under-the-chin or behind-the-neck wear

Art. No / Style / Packaging

| | | |
|-----------|------------------|--|
| 10 059 52 | Folding Band | Resealable Bag 1 pair pocket pack, 10 pair case |
| 10 059 80 | Replacement Pods | Polybag 10 pair box |



Banded earplugs and other PPE

Banded earplugs are a good choice for workers who need to use other PPE, such as safety eyewear, hard hats or respirators.



Pods remove for easy maintenance

Replacement pods, available in multiple packs, improve hygiene and extend use.



Designed for good hygiene

Patented band design prevents ear pods from touching dirty or contaminated surfaces when set down.



Earplug Fitting Instructions

Keys to Successful Hearing Protection with Earplugs

Wear

Read and follow all earplug fitting instructions

Selection

Avoid overprotection in minimal noise environments – in selecting the best earplug for your situation, consider noise levels and your need to communicate with co-workers or hear warning signals on the job



Maintenance

Inspect earplugs prior to wear for dirt, damage or hardness – discard immediately if compromised

For proper hygiene, discard Single-Use earplugs after use

With proper maintenance, Multiple-Use earplugs can last for 2-4 weeks; clean with mild soap/water and store in a case when not in use

Clean and replace pods on Banded earplugs regularly

| Single-Use | Single-Use | Multiple-Use | Banded | The Do's and Don'ts of Howard Leight® Earplugs |
|--|---|---|---|--|
| No-Roll foam  Matrix™ | Roll-Down foam  Max® |  SmartFit® |  QB2HYG® |  Proper Fit If either or both earplugs do not seem to be fitted properly, remove the earplug and reinsert. |
| 1  Reach over your head with a free hand, pull your ear up and back, and insert the earplug well inside your ear canal. | 1  With clean hands, roll the entire earplug into narrowest possible crease-free cylinder. | 1  While holding the stem, reach a hand over your head and gently pull top of your ear up and back. | 1  Position band under your chin as shown above. Use your hands to press the ear pods well into the ear canal using an inward motion. | |
| 2  Earplugs should be inserted as shown in this drawing. Stop pushing earplug when your finger touches your ear. | 2  Reach over your head with a free hand, pull your ear up and back, and insert the earplug well inside your ear canal. | 2  Insert the earplug so all flanges are well inside your ear canal. | 2  Protection levels are improved by pulling your ear up and back when fitting as shown. | |
| 3  If properly fitted, the end of the earplugs should not be visible to someone looking at you from the front. | 3  Hold for 30 – 40 seconds, until the earplug fully expands in your ear canal. If properly fitted, the end of the earplugs should not be visible to someone looking at you from the front. | 3  If properly fitted, the tip of the earplug stem may be visible to someone looking at you from the front. | 3  In a noisy environment, lightly press the band inward with your fingertips as shown. You should not notice a significant difference in noise level. | |
| | | | | Removal Gently twist earplug while slowly pulling in an outward motion for removal. |
| | | | | Acoustical Check In a noisy environment, with earplugs inserted, cup your hands over your ears and release. Earplugs should block enough noise so that covering your ears with your hands should not result in a significant noise difference. |

Download a copy of our Earplug Instruction Poster at howardleight.com or order copies to hand in your facility by calling us.



Earmuffs

The ultimate in safety and protection.

Every day, employees count on Howard Leight® earmuffs to block noise and manage sound in some of the world's most acoustically challenging environments. Utilizing Bilsom® Technology, we offer a range of earmuffs with varying product features and attenuation levels targeted to the demands of different users and environments.

We offer the widest range of advanced earmuff protection so that every employee can work comfortably and safely.

Fit.

Our engineers know that wearers value both comfort and protection.

We engineer all our products to balance comfort, safety and performance for employees in all kinds of environments.

Selection.

Why so many choices?

We offer the most innovative product features and widest range of choices for every user, in every environment.

Protection.

Your employees need the right level of protection.

Not enough and they're vulnerable to hearing damage.

Too much and they become isolated from their environment.

Our innovations deliver protection at both extremes.

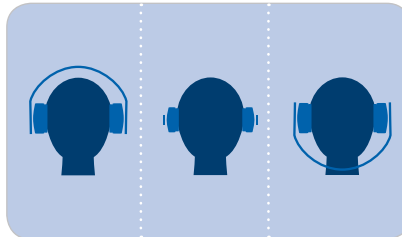
Ultraslim Earcups

Avoid overprotection in lower levels of hazardous noise and improve employee safety, without the bulk and weight of standard earmuffs.



Multiple-Position Headbands

More personalised comfort with options for over-the-head, behind-the-neck or under-the-chin. Great for use with other PPE.



Earmuff Accessories

Accessories available for climate protection, accessibility and maintenance allow you to customize for any job.



Variety of Wearing Styles

A choice of styles provides options for every individual comfort preference and allows easy integration with other PPE.



Dielectric Construction

Robust, non-deforming construction protects employees in electrical environments. Available in Thunder®, Viking®, Mach™1, QM24+® and Clarity®.



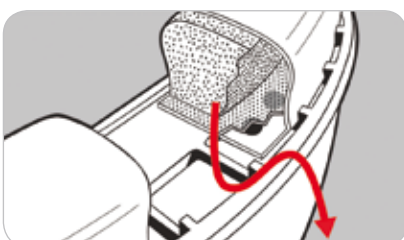
High Visibility

Improve employee safety in low-lighting or outdoor applications. We offer the widest variety of high-visibility earmuffs in the industry.



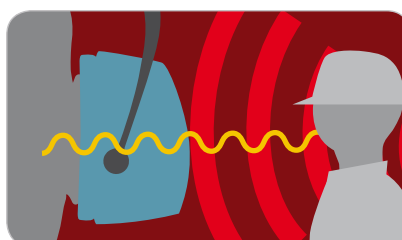
Air Flow Control™ (AFC) Technology

This patented technology delivers optimal attenuation across all frequencies without increasing earcup size or weight. Standard on most Noise Blocking earmuffs.



Sound Management Technology™ (SMT)

Patented SMT blocks harmful noise while allowing surrounding sounds like alarms, warnings and co-workers' voices to be heard more naturally.



Electronic Earmuffs

AM/FM Radio earmuffs block hazardous noise and provide superior radio sound quality for increased employee motivation and productivity.



Earmuff Overview

Our products meet the demands of challenging environments by combining advanced technology with performance and comfort features that put people first.



Noise Blocking

From maximum attenuation to maximum value, we set the standard for noise blocking and hearing protection.

Leightning®
Leightning® Hi-Visibility
Thunder®
Viking®
Mach™ 1
QM24+®

Page 26





Sound Management

Our patented passive and electronic technologies block noise while allowing alarms, warnings and even co-workers' voices to be heard more naturally.

Clarity®
Impact®
Impact® Sport

Page 32



Radio

Add music and routine jobs become more satisfying. Protect employees from noise – and provide a built-in AM/FM radio.

AM/FM Radio
Radio Hi-Visibility
Electo®

Page 34



Earmuff Kits

Offer users a turnkey solution for head and hearing protection.

Forestry Kit
Garden Kit

Page 35



Accessories

Explore a range of accessories for added convenience, comfort and hygiene.

Page 36





Leightning®

Maximum protection and contemporary design

The Leightning series delivers high performance and robust steel wire durability that withstands daily use and abuse without compromising comfort. Features patented Air Flow Control™ technology for optimal attenuation across all frequencies and snap-in ear cushions for easy maintenance.

Features

Robust steel headband withstands demanding use and tough environments

Patented Air Flow Control™ for optimal attenuation across all frequencies, without increased size or weight

Snap-in ear cushions make replacement quick and easy

Padded foam headband for long-wearing comfort with minimal pressure on the head

Multiple attenuation levels for targeted attenuation across a variety of environments

Telescopic height adjustment remains fixed during use

Superior comfort – ultraslim styles are ideal when compact earmuffs and reliable protection are required

L3
SNR 34



L3H
SNR 31



L3N
SNR 32



L2
SNR 31



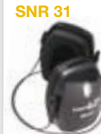
L1
SNR 30



L1H
SNR 28



L2N
SNR 31



L1N
SNR 29



L0N
SNR 22



Headband

Comfortable over-the-head design ideal for many applications

Art. No / Description

| | |
|-----------|----|
| 10 109 22 | L1 |
| 10 109 23 | L2 |
| 10 109 24 | L3 |

Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Pair of adapters 3712, 3711 & 3721 included

Art. No / Description

| | |
|-----------|-----|
| 10 125 39 | L1H |
| 10 125 41 | L3H |

Neckband

Sleek, behind-the-head design works with face shields, visors, hard hats and other PPE

Includes attached elastic headband strap for better positioning

L0N features ultraslim, lightweight earcups, ideal for use with welding helmets

Art. No / Description

| | |
|-----------|-----|
| 10 134 60 | L0N |
| 10 119 94 | L1N |
| 10 119 95 | L2N |
| 10 119 96 | L3N |

Leightning[®] Hi-Visibility

Maximum attenuation
and high visibility

With all the features of Leightning[®] earmuffs, Leightning Hi-Visibility models have added features designed for environments or conditions where protection and visibility are paramount. Bright green earcups provide high visibility and contrast and an exclusive reflective headband that illuminates when exposed to light.

L3HV
SNR 34



Headband

Comfortable over-the-head design
ideal for many applications

Art. No / Description

10 139 41 L3HV

L2F
SNR 32



L1HHV
SNR 28



Helmet

Earcups snap in place during use and
swing back when not needed

Earcups work with a wide range of
popular hard hats

Pair of adapters 3712, 3711 & 3721
included

Art. No / Description

10 150 21 L1HHV

L0F
SNR 25



L2FHV
SNR 32



Folding

Convenient folding design for easy
storage

Belt storage case also available

Art. No / Description

10 139 42 L2FHV

Folding

Convenient folding design for
easy storage

Belt storage case also available

Art. No / Description

10 134 61 L0F
10 119 97 L2F



Thunder[®]

Top-of-the-line protection
and comfort

The Thunder series is engineered with all-day comfort in mind. Its dielectric construction withstands use and abuse, while protecting employees in electrical environments. Patented Air Flow Control™ technology provides optimal attenuation across all frequencies and snap-in ear cushions for easy maintenance.

Features

Dielectric construction suitable for all workplaces, especially electrical environments

Patented Air Flow Control™ for optimal attenuation across all frequencies, without increased size or weight

Uniform headband pressure for all head sizes, providing better comfort for long-term wear

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

Snap-in ear cushions make replacement quick and easy

T3
SNR 36



T1H
SNR 29



T1F
SNR 31



T2
SNR 33



T1
SNR 30



T2H
SNR 30



Headband

Comfortable over-the-head design, ideal for many applications

Inner-ventilated headband minimizes pressure on the head; breathes easier in warm/humid climates (T2 and T3 only)

Art. No / Description

| | |
|-----------|----|
| 10 109 28 | T1 |
| 10 109 29 | T2 |
| 10 109 70 | T3 |

Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Pair of adapters 3712, 3711 & 3721 included

Art. No / Description

| | |
|-----------|-----|
| 10 125 33 | T1H |
| 10 125 34 | T2H |

Folding

Convenient folding design for easy storage

Belt storage case also available

Art. No / Description

| | |
|-----------|-----|
| 10 116 00 | T1F |
|-----------|-----|

T2HV SNR 33



Hi-Visibility

Bright green earcups provide high visibility and contrast

Reflective headband illuminates under light for increased visibility and safety

Art. No / Description

10 158 20 T2HV

Air Flow Control™ Technology

Patented Bilsom® Technology solves the problem of poor low-frequency attenuation

Traditional earmuffs traditionally attenuate very well in high frequencies, but poorly in the low frequencies. With our patented Air Flow Control (AFC) technology, we found a way to deliver superior low-frequency attenuation and more consistent performance across the whole frequency range without increasing the size or weight of the earmuff.

How it works:

Inside the snap-in AFC ear cushion, a series of holes allows the cushion to breathe more effectively and channels the air out of the base cushion, much like a car shock absorber. This controlled flow of air dampens low-frequency vibrations while maintaining excellent high frequency attenuation.

Air Flow Control is a standard feature on all Lightning®, Lightning® Hi-Visibility, Thunder® and Viking® series earmuffs.

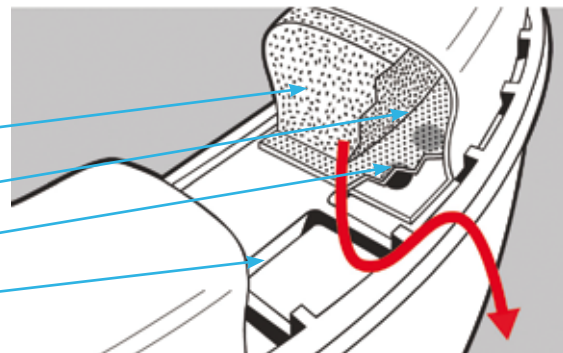
Air Flow Control Earmuff cross-section

Foam

Non-Woven Area

Ear Cushion Holes

Baseplate Chamber





Viking®

Multiple-position headband
for alternative use

Viking earmuffs give employees the flexibility to wear their earmuffs in three positions, making it easy to use with other PPE. Its robust dielectric construction withstands use and abuse and provides protection in electrical environments. Features patented Air Flow Control™ technology and snap-in cushions for easy maintenance.

Features

Multiple-position headband allows for a variety of wearing styles; a great alternative to cap-mounted earmuffs – wear when using other PPE

Patented Air Flow Control™ technology delivers optimal attenuation across all frequencies, without increasing earcup size or weight

Inner-ventilated headband reduces pressure on head; breathes easier in warm/humid climates

Snap-in ear cushions make replacement quick and easy

Elastic headband strap for better positioning when worn behind-the-head or under-the-chin

Non-deforming, dielectric construction suitable for electrical environments

V3
SNR 32



V1
SNR 30



Multiple-Position

Allows wearer to select position: over-the-head, behind-the-head or under-the-chin

Art. No / Description

| | |
|-----------|----|
| 10 109 25 | V1 |
| 10 111 70 | V3 |

Earmuffs and Eyewear: The thinner the frame, the better the attenuation.

The attenuation of an earmuff depends on a tight seal between the ear cushion and the head. Research conducted at the Howard Leight Acoustical Laboratory shows that safety eyewear with a thin frame (a width of 2 mm or less at the temples, where the earmuff cushion meets the frame), caused no significant decline in attenuation. However, eyewear with wider frames caused noticeable gaps in the seal and lowered attenuation – up to 5 dB – particularly at low frequencies.



Economical protection

Mach™ 1

Economical protection for short-term use. Lightweight dielectric construction offers protection at a low price.

QM24+®

Ultra-lightweight, multiple-position, dielectric earmuff designed for extended wear at an affordable price.

Features

Extremely lightweight construction provides comfort for all-day wear

Dielectric construction suitable for electrical environments

Features

Multiple-position headband for over-the-head, behind-the-head or under-the-chin wearing

Alternative to cap-mounted earmuffs when using other PPE

Dielectric construction suitable for electrical environments

Dual Protection: Proceed with caution.

Dual protection is often the only method for achieving maximum protection in the most hazardous noise environments – but it has its limitations. It is required in mining operations for exposures over 105 dBA (8-hour TWA per MSHA) and recommended by NIOSH for exposures over 100 dBA (8-hour TWA). However, some research suggests that dual protection is overused. In less extreme environments, a properly fitted high attenuating earplug or earmuff may be the best solution to providing the right level of protection.

Mach 1 SNR 23



Headband

Art. No / Description

10 104 21 Mach 1

QM24+ SNR 26



Multiple-Position

Art. No / Description

33 021 52 QM24+



Clarity®

Advanced Sound Management Technology
enhances communication

Using Bilsom's patented Sound Management Technology™ (SMT), Clarity series earmuffs improve employee safety by blocking harmful noise while allowing voice and signal frequencies to be heard more naturally.

Features

SMT's uniform attenuation allows wearer to hear co-workers, instructions and other important sounds more naturally while blocking out harmful noise

Dielectric construction suitable for all workplaces, especially electrical environments

Uniform headband pressure for all head sizes, providing better comfort for long-term wear

Quick-Click height adjustment remains fixed during wear

Snap-in ear cushions make replacement quick and easy

C1F SNR 26



C3 SNR 33



C3H SNR 30



C2 SNR 30



C1 SNR 25



C1H SNR 26



Headband

Comfortable over-the-head design, ideal for many applications.

Inner-ventilated headband minimizes pressure on the head, breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Art. No / Description

| | |
|-----------|----|
| 10 111 42 | C1 |
| 10 111 46 | C3 |

Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Pair of adapters included
3711, 3712 & 3721

Art. No / Description

| | |
|-----------|-----|
| 10 112 62 | C1H |
| 10 112 64 | C3H |

Multiple-Position

Allows wearer to select position over-the-head, behind-the-head or under-the-chin.

Art. No / Description

| | |
|-----------|----|
| 10 111 45 | C2 |
|-----------|----|

Folding (above)

Convenient folding design for easy storage.

Belt storage case also available

Art. No / Description

| | |
|-----------|-----|
| 10 111 43 | C1F |
|-----------|-----|

Impact®

Electronic sound
amplification

Impact earmuffs enhance awareness through advanced sound amplification technology. Wearers hear important sounds in their environment – co-workers, alarms and warning signals – at a safely amplified level. Ideal for the hearing-impaired. Helps eliminate the feeling of isolation.

Features

Amplifies ambient sound to safe 82 dB – response technology reverts to passive hearing protector if noise reaches 82 dB

Sound amplification increases communication and awareness – employees can hear alarms/warning signals, co-workers' voices

Directionally placed stereo microphones amplify and enhance sound for more natural hearing

Snap-in ear cushions make replacement quick and easy

Automatic shut-off after 4 hours

Includes 2 AA batteries for 140 hours of use

Impact SNR 28



Headband

Inner-ventilated headband minimizes pressure on the head, breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

Art. No / Description

10 103 76 Impact

Impact H SNR 27



Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Pair of adapters included 3711, 3712 & 3721

Art. No / Description

10 106 32 Impact H

Impact® Sport

Impact Sport has the basic features of Impact, with added features designed for sport shooting and field use.

Features

Wearers can hear important ambient sounds, including other shooters and environmental noise

Low-profile design with cut-out for full clearance of firearm eliminates interference while shooting

AUX input allows connection to external MP3 or other audio devices for listening off the field

Impact Sport SNR 25



Folding

Patented Air Flow Control™ technology for optimal attenuation across all frequencies

Convenient folding design for easy storage

Automatic shut-off after 4 hours

Includes 2 AAA batteries for 350 hours of use

Belt storage case also available

Art. No / Description

10 135 30 Impact Sport

Bilsom®
TECHNOLOGY



Radio

Add music and routine jobs become more satisfying. Our AM/FM Radio earmuffs deliver superior reception and sound while lightweight designs and unique headband ensure superb comfort for all-day wear.

Features

High-quality AM/FM radio reception
Radio volume does not exceed 82 dB
Inner-ventilated headband minimizes pressure on the head; breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in demanding environments

Snap-in ear cushions make replacement quick and easy

Includes 2 AA batteries for 140 hours of use

AM/FM Radio SNR 28



Headband

Comfortable over-the-head design, ideal for many applications

Quick-Click height adjustment remains fixed during wear

Art. No / Description

10 103 75 AM/FM Radio

Radio Hi-Visibility SNR 31



High Visibility

Bright green earcups and a reflective headband provide high visibility, contrast and safety

AUX input connects to MP3 players and other audio devices

Features patented Air Flow Control™ Technology for optimal attenuation across all noise frequencies, without increasing size or weight of the earcup

Includes 3.5mm connection cable

Art. No / Description

10 152 10 Radio Hi-Visibility

Electo®

Combines the entertainment benefit of advanced sound amplification technology with important communications – other co-important warning signals – at a safely to the radio.

Features

Sound amplification increases environmental awareness – employees can hear alarms/warning signals, co-workers' voices

AM/FM radio volume does not exceed 82 dB; separate controls for amplification and radio volume

Electo SNR 28



Headband

Comfortable over-the-head design, ideal for many applications

Inner-ventilated headband reduces pressure on head; breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

Art. No / Description

10 103 74 Electo

Earmuff Kits

our AM/FM Radio earmuff with
logy. Allows wearers to hear
workers' voices, alarms and
amplified level, while listening

Designed for forestry and professional landscapers alike, our new
Forestry and Garden Kits offer users a turnkey solution for
hearing and head protection.

Directionally placed stereo
microphones amplify and enhance
sound for more natural hearing

Snap-in ear cushions make
replacement quick and easy

Includes 2 AA batteries for 140
hours of use

Features

Forestry kit fully equipped with:
Leightning® L1H earmuffs, bright
orange polyethylene helmet

Highly visible

Lightweight and vented on the top

Featuring a rain gutter

Fully equipped with a 6 points
harness

Features

Garden Kit fully equipped with:
Leightning® L1 headband

Clip-on visor with brow guard (pre-
assembled for convenience)

Mesh faceshield for a lightweight
design

Detachable brim and sun peak
protecting from the Elements

Electo H SNR 27



Helmet

Earcups snap in place during use and
swing back when not needed

Earcups work with a wide range of
popular hard hats

Pair of adapters included 3711, 3712 &
3721

Art. No / Description

10 106 31 Electo H

Forestry Kit SNR 28



Mesh faceshield (Art. No 10 178 00):

Durable, flexible and easy to adjust
(flip-up-and-down)

Detachable brim / sun peak

Integrated neckguard protecting from
debris and sun/rain

Art. No / Description

10 172 91 Forestry Kit

Garden Kit SNR 30



Art. No / Description

10 172 92 Garden Kit

Spare parts for Forestry and Garden Kits

Art. No / Description

10 172 93 Mesh Face Shield without visor
10 178 00 Mesh Face Shield complete with visor
10 172 94 Clear Face Shield

Earmuff Accessories

Our Earmuff Accessories provide a combination of comfort and convenience, ensuring that Howard Leight protectors perform well in the most demanding environments.



Polar Hood™ New!

This balaclava-style hood with bright green accents provides protection from cold while maintaining optimal attenuation and high-visibility. Patented side panels help eliminate gaps between earcup and ear, reducing hazardous noise exposure. Ideal for airport ground crews, construction workers and other employees exposed to cold weather conditions. For use with all Howard Leight earmuffs. Fits under most hard hats.

Art. No / Description

| | |
|-----------|--------------------------------|
| 10 168 71 | Polar Hood – Small/Medium |
| 10 168 70 | Polar Hood – Large/Extra Large |

Slim Belt Clip **New!**

A simple and convenient solution for attaching earmuffs to belt or pocket when not in use. Lightweight, low profile design.

Art. No / Description

10 167 30 Slim Belt Clip



Folding Belt Case

Durable nylon with belt loops and easy-to-open Velcro® flap. Folds flat. Fits Lightning® L2F, Lightning® Hi-Visibility L2FHV, Thunder® T1F, Clarity® C1F and Impact® Sport earmuffs.

Art. No / Description

10 002 51 Folding Earmuff Belt Case



OptiSorb®

Washable, 100% cotton sleeve slides over earcup to absorb sweat or provide warmth. For comfort and improved hygiene in most climates. Fits all Howard Leight® earmuffs.

Art. No / Description

33 021 01 OptiSorb



Cool Pads

Apply to ear cushions to improve overall comfort and hygiene. A dermatologically tested material absorbs 15 times its weight in moisture and keeps ears warm in cold climates. Fits all Howard Leight earmuffs.

Art. No / Description

10 003 64 100 pair dispenser pack
10 003 65 5 pair pack

Hygiene Kits

For extended earmuff performance and life as well as improved hygiene, these snap-in ear cushions and foam inserts should be replaced every 6 months, more often with heavy use. Each kit comes with one pair of ear cushions and one pair of foam inserts.

Art. No / Description

10 060 80 Clarity® C1/C1F/C1H
10 060 81 Clarity C3/C3H
10 109 74 Thunder® T1/T1H/T1F
10 109 75 Thunder T2/T2H/T2HV
10 109 76 Thunder T3/T3H
10 119 98 Lightning® L1/L1H/L1N/L0N/L1HHV/Viking® V1
10 119 99 Lightning L2/L2H/L2N/L2F/L2FHV
10 120 00 Lightning L3/L3H/L3N/L3HV/Viking V3
10 080 00 Radio/Radio HV/Electro®/Electro H/Impact®/Impact H/
10 152 80 Impact Sport
33 012 83 QM24+®

Helmet Adapters

Howard Leight offers a large selection of easy-to-snap-on adapters to accommodate a variety of hard hats. The durable plastic and metal styles withstand demanding conditions.

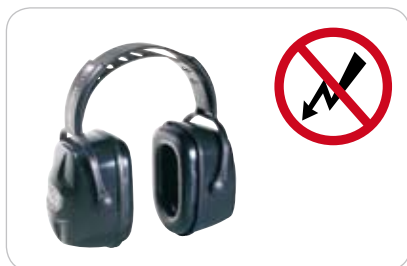
Art. No / Style / Description

10 002 40 3702 Universal adapter
10 002 41 3710 Bolt-on adapter
10 002 42 3711 Former centurion
10 002 43 3712 New centurion, Balance, Bullard, JSP Mark IV&Mark V, MSA, Voss, Opus, Auboueix Iris&Kara, Peltor G22&G3000
10 002 45 3714 Protector tuffmaster
10 002 46 3715 Auboueix Brenus&Carolyn
10 002 47 3716 Schubert
10 002 48 3717 JSP Mark II&MarkIII&Invincible
10 002 49 3718 AO, Bullard, MSA V-Guard, North
10 002 50 3719 JSP
10 052 92 3721 Protector 300/600/650, Sofop oceanic II & Oryon, Petzl Vertex

Search by Special Feature

Diverse conditions and employee populations can limit and focus product selection. The following are key special features among earplugs and earmuffs that target special requirements.

Dielectric



Working under conditions with dielectric requirements? Most Howard Leight® earplugs are free from metal components. And many of our earmuffs feature a robust non-deforming dielectric construction that withstands use and abuse, while protecting your employees in electrical environments.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earmuffs

Thunder® series, Viking® series, Mach™ 1, QM24+® and Clarity® series

High-Visibility



High-visibility products improve overall employee safety for some outdoor or low lighting environments. Brightly colored earplugs improve visibility for both safety and compliance checks. Howard Leight Hi-Visibility earmuffs not only feature bright green earcups, but also reflective headbands for additional visual reference.

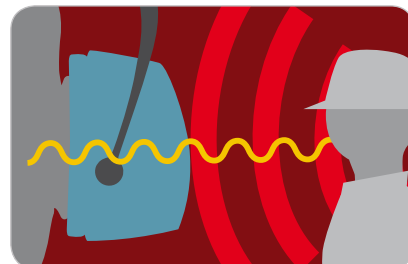
Earplugs

Laser Lite, QB1HYG® and QB2HYG®

Earmuffs

Leightning® Hi-Visibility L1HHV/L2FHV/L3HV, Thunder® Hi-Visibility T2HV and Radio Hi-Visibility

Sound Management



Sometimes blocking sound isn't enough. You need to block noise out and let information in. Howard Leight offers a variety of earplugs and earmuffs that deliver Uniform Attenuation, blocking out noise while alarms, warnings and even co-workers' voice frequencies can be heard more naturally. Earmuffs that feature Sound Amplification enhance users' awareness of their environment to safe levels and revert to passive protection in hazardous noise.

Earplugs

Uniform Attenuation:
Single-Use - Matrix™ Orange/Green/Blue
Multiple-Use - Clarity® 656

Earmuffs

Uniform Attenuation:
Clarity® series

Sound Amplification:
Impact® series
Impact® Sport
Electo® series

Climate



Indoors or outdoors, it is important to select the appropriate HPDs for your physical environment and ensure comfort over a work shift.

Hot Climates

In hot/humid environments, employees may be most comfortable in Single-Use, Multiple-Use or Banded earplugs.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Cold Climates

Colder climates generally require earmuffs to protect from exposure to hazardous noise and inclement weather.

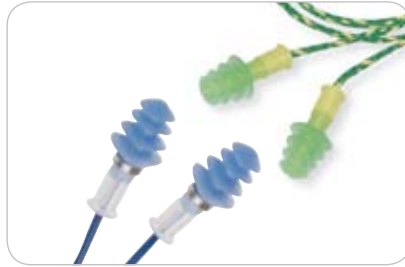
Earmuffs

All Noise Blocking, Sound Management and Radio models

Earmuff Accessories

Polar Hood™ and Cool Pads

Small Sizes



Employees with smaller ear canals should be fitted with low-pressure or self-adjusting polyurethane foam earplugs, or Multiple-Use earplugs that are available in a variety of sizes.

Earplugs

| | |
|--------------------|------------------------|
| Bilsom® 303/304 | Soft polyurethane foam |
| Fusion® | Small/Regular |
| Clarity® | Small/Regular |
| Fusion® Detectable | Small/Regular |

Other PPE



Avoid compromising overall employee safety when utilizing other types of personal protective equipment (PPE).

Safety Spectacles

Thick frames (6mm) can cause a gap between the head and earmuffs, reducing optimal attenuation by 2 – 5 dB. Switch to thin temple frames or use any of our Single-Use, Multiple-Use or Banded Earplugs.

Hard Hats

Use Cap-Mounted earmuffs that slot onto helmets when possible. For full-brim helmets, select Multiple-Position or Neckband earmuffs, or Banded earplugs. All of our Cap-Mounted earmuffs come with hard hat adapters.

Earmuffs

Cap-Mounted:

Lightning® L1H/L2H/L3H, Lightning Hi-Visibility L1HHV, Thunder® T1H/T2H and Clarity® C1H/C3H

Neckband:

Lightning L0N/L1N/L2N/L3N

Respirators

Choose any segment/style of earplugs, or ultraslim Neckband earmuffs that allow clearance between earcup and hood.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earmuffs

Neckband: Lightning L0N

Search by Industry

From experience working with a variety of industries and customers worldwide, we offer top product recommendations in key industries. If your industry is not listed, use these insights to help with your decision.

Automotive



Automobile + Vehicle Manufacturing, Auto Repair, Automotive Aftermarket

Employees throughout the automotive industry are exposed to a wide range of constant and intermittent hazardous noise, often over long periods of time. For these exposures, both comfort and convenience are priorities. Selecting polyurethane foam Single-Use or conforming Multiple-Use earplugs enhances comfort, while Banded earplugs or earmuffs are ideal for employees who are intermittently exposed to noise. Also, dispensers offer a convenient earplug source for any workforce

Earplugs

Max®, Max Lite®, Laser Lite®, SmartFit®, AirSoft®, Quiet®, QB1HYG®, QB2HYG®, Leight® Source 400 and Leight® Source 500

Earmuffs

Leightning® L0F/L3, Thunder® T1/T2, Viking® V1, Clarity® C1 and Impact®

Aviation



Airport Ground Crews, Gate Agents, Aircraft Mechanics, Aircraft Manufacturing, Aeronautics

As mobile employees, airport workers are exposed to a wide range of hazardous noise levels, often intermittently. Banded earplugs and earmuffs are the best line of defense, as they are easily accessible. Polar Hoods in cold climates help protect against inclement weather. Corded earplugs are ideal for gate agents, especially worn around the neck when not in use. Aircraft mechanics and those in aeronautics are often exposed to high levels of noise and should utilise high attenuation HPDs.

Earplugs

Max®, Laser Lite®, SmartFit®, Fusion®, QB1HYG®, QB2HYG® and PerCap®

Earmuffs

Leightning® L2F/L3, Leightning® Hi-Visibility L2FHV, L3HV, Thunder® Hi-Visibility T2HV, Thunder® T3 and Clarity® C3

Earmuff Accessories

Slim Belt Clip, Folding Earmuff Belt Case and Polar Hood™

Construction



Steel Work, Masonry, Carpentry, Pipefitting, Electrical, HVAC, Painting, Welding, Roofing

Construction workers face a wide range of hazards (falls, electrocution, debris, chemicals) in addition to hazardous noise exposure. Ensure overall employee safety by selecting HPDs that do not compromise other PPE and offer a high degree of visibility. Also, avoid overprotection by selecting HPDs with attenuation suited for your employees' exposure, especially in marginal noise environments.

Earplugs

Max®, Laser Lite®, SmartFit®, Fusion®, AirSoft®, Quiet®, Clarity® 656 and QB2HYG®

Earmuffs

Any Noise Blocking Earmuff and Clarity series

Energy Production



Oil + Gas Production, Chemical Manufacturing, Mining, Energy Production, Utilities

Employees in these industries face a wide variety of worksite hazards (respiratory hazards, falls, explosions) in addition to exposure to hazardous noise. Employees are required to wear other PPE (safety spectacles, helmets, respirators, gas monitors). They also face the additional risk of hearing loss due to exposure to ototoxic chemicals (solvents, heavy metals). Make sure your employees are properly protected with HPDs that work with other PPE and are dielectric in explosive environments.

Earplugs

Max®, Laser Lite®, SmartFit®, Fusion®, AirSoft®, Clarity® 656 and QB2HYG®

Earmuffs

Leightning® L0N/L2H/L3N, Leightning® Hi-Visibility L1HHV/L2FHV/L3HV, Thunder® T2/T3H, Viking® V3 and Clarity® C3H

Earmuff Accessories

Slim Belt Clip, Cool Pads and Polar Hood™

Process Industries



Food + Beverage Processing, Food Service, Pulp + Paper, Tobacco

Many process industries utilise control procedures such as visual and metal detection to avoid contamination of the final product. We recommend attached corded or banded earplugs in contrasting colors (especially blue) and/or styles that are metal detectable. Earmuffs should match the noise level for your specific application as well as work with other PPE your employees may use.

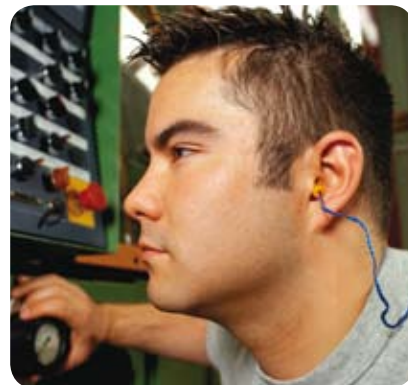
Earplugs

Laser Trak®, AirSoft®, SmartFit® Process Industry, SmartFit® Detectable, SmartFit® Blue, Fusion™ Detectable and PerCap®

Earmuffs

Leightning® L0F/L2/L3/L2H/L0N/L3N and Clarity® C1

Industrial Manufacturing



Consumer Goods, Light Assembly/Manufacturing, Furniture, Textiles, Printing, Warehousing

Those who work in industrial manufacturing need protection against hazardous noise and a highly comfortable HPD. If it's not comfortable, it won't be worn properly or at all. We recommend HPDs that ensure proper protection and superb comfort over time. Our polyurethane foam Single-Use earplugs and Multiple-Use earplugs, featuring Conforming Material Technology™, deliver on both. Our earmuffs also deliver a wide range of attenuation and comfort features that put industrial employees first.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earplug Dispensers

Leight® Source 400 and Leight® Source 500

Earmuffs

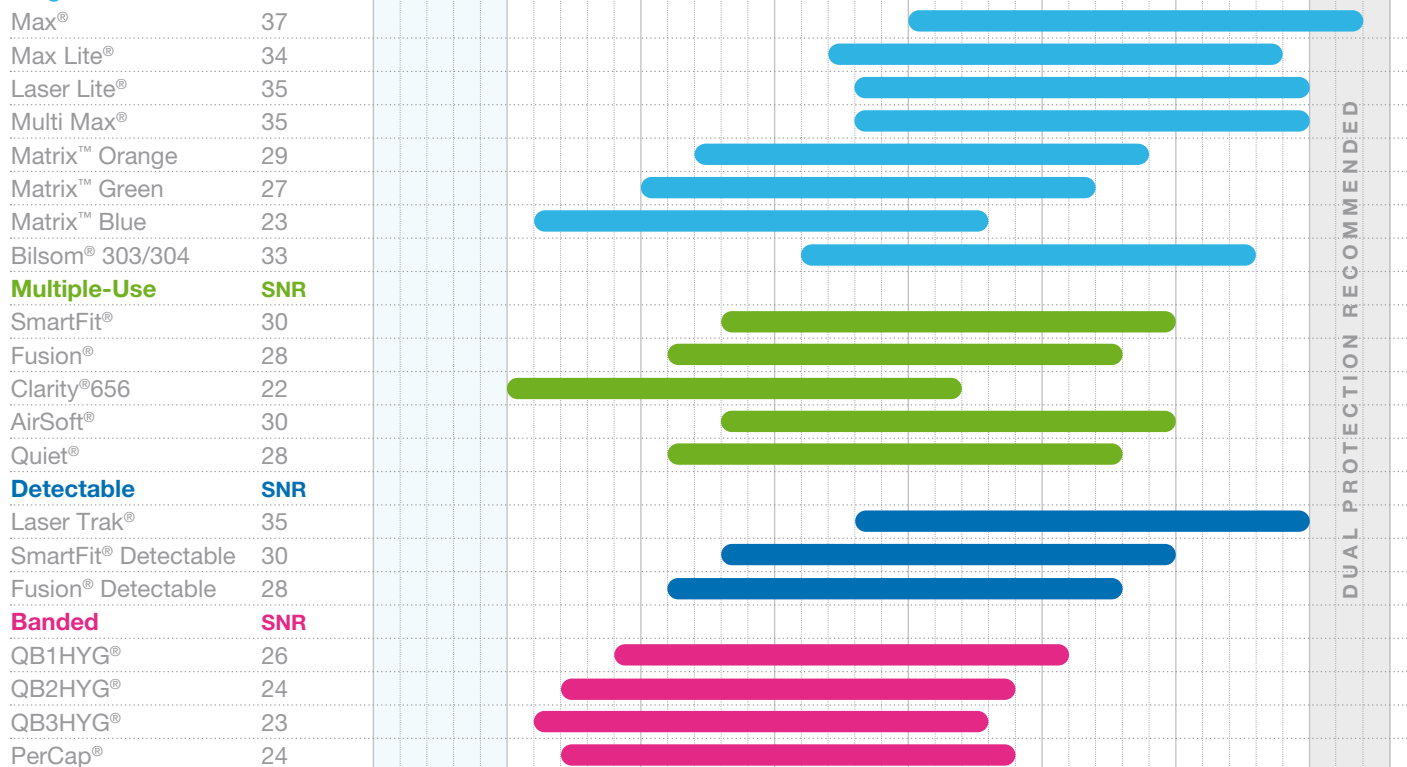
Leightning L2/L3, Thunder T1/T1F/T3, Clarity C1 and Radio HV

Search by Exposure Level

Start with the level of noise to which your employees are exposed. Then use the index below to identify the earplug and earmuff options with attenuation levels that are right for their work environment.

Noise Exposure dBA 80 85 90 95 100 105 110 115 - 118

Single-Use SNR



80 dB
Hearing Protection
must be made
available at 80 dB

85 dB
Hearing Protection is
required for exposures
of 85 dB or higher

DUAL PROTECTION RECOMMENDED

Keep these tips in mind as you choose:

1

Match product choices to the specific attenuation levels for your environment

2

Too much protection may put employees at risk, especially in low levels of hazardous noise

3

Optimal protection is based on proper earplug fit

4

Make sure employees receive proper training on how to use their earplugs or earmuffs

80 dB
Hearing Protection
must be made
available at 80 dB

85 dB
Hearing Protection is
required for exposures
of 85 dB or higher

Noise Exposure dBA

80

85

90

95

100

105

110

115 - 118

Noise Blocking

SNR

Leightning® L0F 25

Leightning® L0N 22

Leightning® L1 30

Leightning® L1H 28

Leightning® L1HHV 28

Leightning® L1N 29

Leightning® L2 31

Leightning® L2F 32

Leightning® L2FHV 32

Leightning® L2N 31

Leightning® L3 34

Leightning® L3H 31

Leightning® L3HV 34

Leightning® L3N 32

Thunder® T1 30

Thunder® T1F 31

Thunder® T1H 29

Thunder® T2 33

Thunder® T2H 30

Thunder® T2HV 33

Thunder® T3 36

Viking™ V1 30

Viking™ V3 32

Mach™ 1 23

QM24+® 26

Sound Management

SNR

Clarity® C1 25

Clarity® C2 30

Clarity® C3 33

Clarity® C1H 26

Clarity® C3H 30

Clarity® C1F 26

Impact® 28

Impact® H 27

Impact® Sport 25

Radio

SNR

AM/FM Radio™ 28

Radio™ HV 31

Electo® 28

Electo® H 27

DUAL PROTECTION RECOMMENDED

Earmuff Fitting Instructions

Keys to Successful Hearing Protection with Earmuffs

Wear

Read and follow all earmuff fitting instructions

Remove all hair under ear cushions

Selection

Avoid overprotection in minimal noise environments – consider noise levels and need to communicate with co-workers or hear warning signals on the job

Maintenance

Regularly inspect earcups and ear cushions for cracks and leaks – discard if earcups are visibly damaged or compromised

Clean earcups and ear cushions regularly with mild soap and water

Replace ear cushions and foam inserts every 6 months under normal wear, every 3 months with heavy use or in humid/extreme climates

| Headband | Folding | Multiple-Position | Cap-Mounted | Neckband |
|---|--|--|---|---|
|  <p>Thunder® T3</p> |  <p>Leightning® L2F</p> |  <p>Viking™ V3</p> |  <p>Clarity® C3H</p> |  <p>Leightning® L1N</p> |
| <p>1</p>  <p>Place earcups over each ear.</p> | <p>1</p>  | <p>1</p>  <p>Place the earcups over each ear.</p> | <p>1</p>  <p>Attach adapters to each side of the hard hat by sliding them into the slots.</p> | <p>1</p>  |
| <p>2</p>  <p>Adjust the headband by sliding the headband up or down.</p> |  <p>Fold out the earcups as shown.</p> | <p>2</p>  <p>Adjust the headband by sliding the headband up and down.</p> | <p>2</p>  <p>Attach each earmuff into its adapter by sliding the earmuff housing down into the adapter.</p> |  <p>Adjust the length of the headband strap between the earcups so the earmuff fits well on top of the head.</p> |
|  | <p>2</p>  <p>Place earcups over each ear.</p> | <p>3</p>  <p>Multiple-Position earmuffs can be worn either over-the-head, behind-the-head or under-the-chin.</p> | <p>3</p>  <p>Place the hard hat on the head and adjust the earmuffs by sliding the cups up and down.</p> | <p>3</p>  <p>Place earcups over each ear.</p> |
| | <p>3</p>  <p>Adjust the headband by sliding the headband up or down.</p> | <p>4</p>  <p>When the earmuff is worn with the headband behind-the-head or under-the-chin, the headband strap must be attached to the slot in the upper part of the earcup as shown.</p> | <p>4</p>  <p>Ensure that the earmuff is firmly attached by lifting the arm up and down.</p> |  |

Download the Earplug Instruction Poster at howardleight.com or order copies to hang in your facility by calling us.

Attenuation Data

Attenuation according to EN 352/ISO 4869

Media: Mean value in dB - SD: Standard deviation in dB - APV: Assumed protection in dB

Single-Use Earplugs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|-----------------|-------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Max® | Media | 34.6 | 37.1 | 37.4 | 38.8 | 38.2 | 37.9 | 47.3 | 44.8 | 37 | 36 | 35 | 34 |
| | SD | 3.0 | 4.5 | 4.3 | 3.7 | 3.5 | 4.0 | 3.5 | 7.2 | | | | |
| | APV | 31.6 | 32.6 | 33.1 | 35.1 | 34.7 | 33.9 | 43.8 | 37.6 | | | | |
| Max Lite® | Media | - | 35.5 | 36.7 | 39.0 | 37.4 | 33.8 | 41.9 | 43.3 | 34 | 32 | 32 | 31 |
| | SD | - | 6.3 | 7.1 | 6.6 | 6.1 | 3.7 | 3.8 | 4.7 | | | | |
| | APV | - | 29.2 | 29.6 | 32.4 | 31.3 | 30.1 | 38.1 | 38.6 | | | | |
| Laser Lite® | Media | 33.4 | 34.1 | 35.5 | 37.6 | 34.9 | 35.7 | 42.5 | 44.1 | 35 | 34 | 32 | 31 |
| | SD | 4.6 | 4.7 | 4.6 | 4.1 | 5.0 | 2.8 | 2.9 | 4.2 | | | | |
| | APV | 28.8 | 29.4 | 30.9 | 33.5 | 29.9 | 32.9 | 39.6 | 39.9 | | | | |
| Matrix™ Orange | Media | 17.6 | 21.8 | 26.1 | 28.7 | 29.5 | 34.9 | 37.2 | 39.8 | 29 | 31 | 25 | 22 |
| | SD | 5.1 | 4.7 | 5.4 | 5.2 | 5.3 | 3.8 | 2.7 | 4.0 | | | | |
| | APV | 12.5 | 17.1 | 20.7 | 23.5 | 24.2 | 31.1 | 34.5 | 35.8 | | | | |
| Matrix™ Green | Media | 17.3 | 21.0 | 24.5 | 27.3 | 27.9 | 33.8 | 36.1 | 40.8 | 27 | 29 | 23 | 20 |
| | SD | 5.4 | 5.3 | 6.7 | 6.6 | 4.8 | 3.7 | 5.2 | 6.5 | | | | |
| | APV | 11.9 | 15.7 | 17.8 | 20.7 | 23.1 | 30.1 | 30.9 | 34.3 | | | | |
| Matrix™ Blue | Media | 11.9 | 14.8 | 17.4 | 22.9 | 25.5 | 30.3 | 36.7 | 37.5 | 23 | 26 | 20 | 15 |
| | SD | 3.2 | 4.5 | 4.8 | 6.2 | 4.4 | 5.0 | 5.1 | 6.4 | | | | |
| | APV | 8.7 | 10.3 | 12.6 | 16.7 | 21.1 | 25.3 | 31.6 | 31.1 | | | | |
| Multi Max® | Media | 34.5 | 37.7 | 37.8 | 39.8 | 36.2 | 35.9 | 41.5 | 42.9 | 35 | 33 | 32 | 32 |
| | SD | 6.7 | 7.6 | 6.7 | 6.8 | 5.1 | 3.9 | 4.2 | 6.1 | | | | |
| | APV | 27.8 | 30.1 | 31.1 | 33.0 | 31.1 | 32.0 | 37.3 | 36.8 | | | | |
| Bilsom® 303/304 | Media | 28.4 | 37.3 | 37.9 | 39.1 | 36.0 | 34.6 | 42.5 | 46.4 | 33 | 32 | 29 | 29 |
| | SD | 6.4 | 9.0 | 9.2 | 9.7 | 7.9 | 4.6 | 4.9 | 4.7 | | | | |
| | APV | 22.0 | 28.3 | 28.7 | 29.4 | 28.1 | 30.0 | 37.6 | 41.8 | | | | |

Multiple-Use Earplugs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|-----------------|-------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Quiet® | Media | 26.1 | 29.0 | 28.8 | 29.1 | 29.5 | 33.1 | 43.3 | 44.5 | 28 | 29 | 25 | 23 |
| | SD | 6.1 | 6.9 | 6.4 | 7.2 | 5.1 | 5.3 | 6.9 | 3.4 | | | | |
| | APV | 20.0 | 22.1 | 22.4 | 21.9 | 24.4 | 27.8 | 36.4 | 41.1 | | | | |
| AirSoft® | Media | 31.0 | 29.8 | 28.6 | 30.5 | 32.5 | 33.6 | 35.4 | 39.1 | 30 | 29 | 27 | 25 |
| | SD | 4.6 | 5.0 | 5.6 | 5.5 | 4.3 | 4.2 | 7.2 | 4.6 | | | | |
| | APV | 26.4 | 24.8 | 23.0 | 25.0 | 28.2 | 29.4 | 28.2 | 34.5 | | | | |
| Fusion® | Media | 24.6 | 28.3 | 28.6 | 27.9 | 29.4 | 31.0 | 40.0 | 40.9 | 28 | 29 | 25 | 24 |
| | SD | 6.0 | 5.1 | 5.6 | 5.0 | 5.6 | 3.7 | 5.6 | 5.5 | | | | |
| | APV | 18.6 | 23.2 | 23.0 | 22.9 | 23.8 | 27.3 | 34.4 | 35.4 | | | | |
| SmartFit® | Media | 30.9 | 31.4 | 28.8 | 32.5 | 33.8 | 35.6 | 39.3 | 41.9 | 30 | 32 | 27 | 23 |
| | SD | 6.2 | 7.3 | 8.9 | 8.1 | 7.3 | 4.3 | 6.0 | 5.0 | | | | |
| | APV | 24.7 | 24.1 | 19.9 | 24.4 | 26.5 | 31.3 | 33.3 | 36.9 | | | | |
| Clarity® 656 | Media | 23.3 | 23.0 | 21.3 | 21.5 | 24.3 | 30.8 | 28.6 | 39.4 | 22 | 24 | 19 | 17 |
| | SD | 5.4 | 5.9 | 6.2 | 5.3 | 5.5 | 3.9 | 6.3 | 6.4 | | | | |
| | APV | 17.9 | 17.1 | 15.1 | 16.2 | 18.8 | 26.9 | 22.3 | 33.0 | | | | |

Detectable Earplugs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|---------------------|-------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Laser Trak® | Media | 33.4 | 34.1 | 35.5 | 37.6 | 34.9 | 35.7 | 42.5 | 44.1 | 35 | 34 | 32 | 31 |
| | SD | 4.6 | 4.7 | 4.6 | 4.1 | 5.0 | 2.8 | 2.9 | 4.2 | | | | |
| | APV | 28.8 | 29.4 | 30.9 | 33.5 | 29.9 | 32.9 | 39.6 | 39.9 | | | | |
| SmartFit Detectable | Media | 30.9 | 31.4 | 28.8 | 32.5 | 33.8 | 35.6 | 39.3 | 41.9 | 30 | 32 | 27 | 23 |
| | SD | 6.2 | 7.3 | 8.9 | 8.1 | 7.3 | 4.3 | 6.0 | 5.0 | | | | |
| | APV | 24.7 | 24.1 | 19.9 | 24.4 | 26.5 | 31.3 | 33.3 | 36.9 | | | | |
| Fusion Detectable | Media | 24.6 | 28.3 | 28.6 | 27.9 | 29.4 | 31.0 | 40.0 | 40.9 | 28 | 29 | 25 | 24 |
| | SD | 6.0 | 5.1 | 5.6 | 5.0 | 5.6 | 3.7 | 5.6 | 5.5 | | | | |
| | APV | 18.6 | 23.2 | 23.0 | 22.9 | 23.8 | 27.3 | 34.4 | 35.4 | | | | |

Attenuation according to EN 352/ISO 4869

Media: Mean value in dB - SD: Standard deviation in dB - APV: Assumed protection in dB

Banded Earplugs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|-----------------|-------|------|------|------|------|------|------|------|------|-----|----|----|----|
| QB1HYG® | Media | 24.8 | 28.1 | 26.5 | 24.5 | 25.1 | 31.7 | 42.5 | 40.9 | 26 | 28 | 22 | 21 |
| | SD | 4.3 | 3.2 | 5.6 | 5.7 | 3.3 | 4.0 | 1.8 | 4.7 | | | | |
| | APV | 20.5 | 24.9 | 20.9 | 18.8 | 21.8 | 27.7 | 40.7 | 36.2 | | | | |
| QB2HYG® | Media | 22.5 | 24.7 | 22.7 | 18.7 | 22.5 | 30.8 | 35.8 | 34.6 | 24 | 26 | 20 | 19 |
| | SD | 5.4 | 4.4 | 4.8 | 1.8 | 3.6 | 4.9 | 3.8 | 5.8 | | | | |
| | APV | 17.1 | 20.3 | 17.9 | 16.9 | 18.9 | 25.9 | 32.0 | 28.8 | | | | |
| QB3HYG® | Media | 23.5 | 22.3 | 20.6 | 16.8 | 22.7 | 30.6 | 34.2 | 33.7 | 23 | 25 | 19 | 17 |
| | SD | 4.3 | 4.2 | 3.7 | 2.4 | 4.0 | 3.5 | 3.8 | 6.1 | | | | |
| | APV | 19.2 | 18.1 | 16.9 | 14.4 | 18.7 | 27.1 | 32.4 | 27.6 | | | | |
| PerCap® | Media | 21.4 | 22.5 | 21.5 | 19.0 | 22.6 | 30.3 | 35.7 | 38.8 | 24 | 27 | 20 | 18 |
| | SD | 4.8 | 3.5 | 3.6 | 2.9 | 2.7 | 3.1 | 4.2 | 4.3 | | | | |
| | APV | 16.6 | 19.0 | 17.9 | 16.1 | 19.9 | 27.2 | 31.5 | 34.5 | | | | |

Noise Blocking Earmuffs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|---|------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Thunder® T1 | Mean | 16.4 | 18.3 | 23.3 | 26.6 | 32.9 | 33.8 | 36.0 | 37.9 | 30 | 32 | 28 | 21 |
| | SD | 5.4 | 4.3 | 2.7 | 2.3 | 2.3 | 2.9 | 2.3 | 3.2 | | | | |
| | APV | 11.0 | 14.0 | 20.6 | 24.3 | 30.6 | 30.9 | 33.7 | 34.7 | | | | |
| Thunder T2 | Mean | 20.3 | 20.5 | 28.0 | 31.9 | 38.5 | 37.1 | 37.6 | 38.0 | 33 | 34 | 31 | 25 |
| | SD | 4.2 | 3.6 | 2.8 | 3.5 | 2.7 | 3.4 | 3.1 | 5.2 | | | | |
| | APV | 16.1 | 16.9 | 25.2 | 28.4 | 35.8 | 33.7 | 34.5 | 32.8 | | | | |
| Thunder T2HV | Mean | 20.3 | 20.5 | 28.0 | 31.9 | 38.5 | 37.1 | 37.6 | 38.0 | 33 | 34 | 31 | 25 |
| | SD | 4.2 | 3.6 | 2.8 | 3.5 | 2.7 | 3.4 | 3.1 | 5.2 | | | | |
| | APV | 16.1 | 16.9 | 25.2 | 28.4 | 35.8 | 33.7 | 34.5 | 32.8 | | | | |
| Thunder T3 | Mean | 21.5 | 23.6 | 30.8 | 34.6 | 40.3 | 38.3 | 43.1 | 40.3 | 36 | 37 | 34 | 26 |
| | SD | 3.6 | 5.3 | 4.5 | 3.0 | 2.2 | 3.4 | 3.4 | 3.6 | | | | |
| | APV | 17.9 | 18.3 | 26.3 | 31.6 | 38.1 | 34.9 | 39.7 | 36.7 | | | | |
| Thunder T1F | Mean | 17.6 | 19.9 | 25.3 | 28.6 | 34.3 | 35.7 | 37.4 | 37.8 | 31 | 33 | 28 | 22 |
| | SD | 4.9 | 4.7 | 4.7 | 4.7 | 3.1 | 2.9 | 3.4 | 3.8 | | | | |
| | APV | 12.7 | 15.2 | 20.6 | 23.9 | 31.2 | 32.8 | 34.0 | 34.0 | | | | |
| Thunder T1H | Mean | 15.9 | 18.7 | 22.5 | 23.4 | 32.4 | 34.4 | 35.5 | 37.9 | 29 | 32 | 26 | 20 |
| | SD | 2.7 | 3.8 | 3.9 | 2.5 | 2.2 | 2.3 | 2.3 | 4.7 | | | | |
| | APV | 13.2 | 14.9 | 18.6 | 20.9 | 30.2 | 32.1 | 33.2 | 33.2 | | | | |
| Thunder T2H | Mean | 16.9 | 20.1 | 24.9 | 25.4 | 34.0 | 33.9 | 36.2 | 38.1 | 30 | 32 | 28 | 23 |
| | SD | 2.9 | 3.3 | 2.8 | 2.4 | 2.3 | 2.9 | 3.2 | 4.6 | | | | |
| | APV | 14.0 | 16.8 | 22.1 | 23.0 | 31.7 | 31.0 | 33.0 | 33.5 | | | | |
| Leightning® L1 | Mean | 17.9 | 20.3 | 22.9 | 28.3 | 32.9 | 32.3 | 39.3 | 35.1 | 30 | 31 | 28 | 23 |
| | SD | 5.3 | 2.5 | 2.8 | 1.7 | 2.9 | 3.8 | 2.8 | 4.0 | | | | |
| | APV | 12.6 | 17.8 | 20.1 | 26.6 | 30.0 | 28.5 | 36.5 | 31.1 | | | | |
| Leightning L2 | Mean | 20.0 | 20.1 | 24.5 | 29.3 | 34.4 | 32.4 | 35.9 | 35.6 | 31 | 31 | 29 | 23 |
| | SD | 4.5 | 4.0 | 2.9 | 3.2 | 2.6 | 3.0 | 2.6 | 3.2 | | | | |
| | APV | 15.5 | 16.1 | 21.6 | 26.1 | 31.8 | 29.4 | 33.3 | 32.4 | | | | |
| Leightning L3 | Mean | 23.6 | 24.6 | 27.8 | 32.6 | 37.4 | 35.2 | 38.8 | 35.8 | 34 | 33 | 32 | 27 |
| | SD | 6.4 | 3.6 | 2.0 | 2.0 | 3.3 | 3.2 | 3.1 | 3.3 | | | | |
| | APV | 17.2 | 21.0 | 25.8 | 30.6 | 34.1 | 32.0 | 35.7 | 32.5 | | | | |
| Leightning L3HV | Mean | 23.6 | 24.6 | 27.8 | 32.6 | 37.4 | 35.2 | 38.8 | 35.8 | 34 | 33 | 32 | 27 |
| | SD | 6.4 | 3.6 | 2.0 | 2.0 | 3.3 | 3.2 | 3.1 | 3.3 | | | | |
| | APV | 17.2 | 21.0 | 25.8 | 30.6 | 34.1 | 32.0 | 35.7 | 32.5 | | | | |
| Leightning L0N | Mean | - | 10.7 | 17.2 | 19.9 | 22.0 | 26.6 | 35.6 | 39.9 | 22 | 24 | 19 | 14 |
| | SD | - | 4.3 | 4.1 | 1.8 | 3.5 | 4.4 | 3.1 | 3.0 | | | | |
| | APV | - | 6.4 | 13.0 | 18.1 | 18.4 | 22.1 | 32.5 | 36.9 | | | | |
| Leightning L1N | Mean | 18.3 | 17.9 | 21.9 | 27.9 | 32.7 | 32.1 | 35.4 | 35.8 | 29 | 31 | 27 | 21 |
| | SD | 5.5 | 3.5 | 3.2 | 3.0 | 2.9 | 2.9 | 3.5 | 3.8 | | | | |
| | APV | 12.8 | 14.4 | 18.7 | 24.9 | 29.8 | 29.2 | 31.9 | 32.0 | | | | |
| Leightning L2N | Mean | 18.3 | 18.0 | 24.3 | 29.8 | 35.4 | 34.9 | 35.3 | 34.5 | 31 | 31 | 29 | 22 |
| | SD | 3.9 | 2.9 | 2.9 | 1.8 | 2.8 | 4.4 | 3.0 | 4.4 | | | | |
| | APV | 14.4 | 15.1 | 21.4 | 28.0 | 32.6 | 30.5 | 32.3 | 30.1 | | | | |
| Leightning L3N | Mean | 21.0 | 21.6 | 27.8 | 32.1 | 36.5 | 32.4 | 38.3 | 37.4 | 32 | 31 | 31 | 26 |
| | SD | 3.5 | 3.2 | 2.8 | 2.3 | 3.0 | 3.6 | 4.1 | 5.0 | | | | |
| | APV | 17.5 | 18.4 | 25.0 | 29.8 | 33.5 | 28.8 | 34.2 | 32.4 | | | | |
| Leightning L0F | Mean | - | 13.2 | 19.7 | 21.7 | 25.0 | 29.1 | 35.1 | 40.0 | 25 | 27 | 21 | 17 |
| | SD | - | 3.0 | 3.7 | 2.8 | 3.5 | 2.5 | 2.3 | 2.6 | | | | |
| | APV | - | 10.2 | 16.1 | 18.9 | 21.5 | 26.6 | 32.8 | 37.4 | | | | |
| Leightning L2F | Mean | 19.6 | 21.1 | 25.8 | 30.5 | 35.7 | 33.6 | 37.8 | 37.3 | 32 | 32 | 30 | 24 |
| | SD | 4.3 | 3.6 | 2.1 | 2.6 | 3.0 | 3.1 | 2.7 | 3.6 | | | | |
| | APV | 15.3 | 17.5 | 23.7 | 27.9 | 32.7 | 30.5 | 35.1 | 33.7 | | | | |
| Leightning L2FHV | Mean | 19.6 | 21.1 | 25.8 | 30.5 | 35.7 | 33.6 | 37.8 | 37.3 | 32 | 32 | 30 | 24 |
| | SD | 4.3 | 3.6 | 2.1 | 2.6 | 3.0 | 3.1 | 2.7 | 3.6 | | | | |
| | APV | 15.3 | 17.5 | 23.7 | 27.9 | 32.7 | 30.5 | 35.1 | 33.7 | | | | |
| Leightning L1H | Mean | 14.3 | 17.6 | 21.6 | 25.1 | 32.6 | 32.9 | 36.6 | 35.5 | 28 | 31 | 25 | 19 |
| | SD | 4.1 | 3.8 | 3.9 | 4.4 | 3.4 | 3.1 | 4.8 | 3.9 | | | | |
| | APV | 10.2 | 13.8 | 17.7 | 20.7 | 29.2 | 29.8 | 31.8 | 31.6 | | | | |
| Leightning L1HHV | Mean | 14.3 | 17.6 | 21.6 | 25.1 | 32.6 | 32.9 | 36.6 | 35.5 | 28 | 31 | 25 | 19 |
| | SD | 4.1 | 3.8 | 3.9 | 4.4 | 3.4 | 3.1 | 4.8 | 3.9 | | | | |
| | APV | 10.2 | 13.8 | 17.7 | 20.7 | 29.2 | 29.8 | 31.8 | 31.6 | | | | |
| Leightning L3H | Mean | 17.5 | 22.3 | 25.3 | 29.0 | 34.9 | 31.8 | 37.9 | 34.6 | 31 | 30 | 29 | 24 |
| | SD | 3.6 | 3.6 | 2.6 | 2.6 | 3.0 | 3.2 | 4.3 | 3.6 | | | | |
| | APV | 13.9 | 18.7 | 22.7 | 26.4 | 31.9 | 28.6 | 33.6 | 31.0 | | | | |
| Viking® V1 Over head - Behind neck - Under chin | Mean | 17.9 | 14.1 | 20.6 | 25.8 | 32.0 | 32.1 | 33.7 | 34.4 | 30 | 32 | 28 | 21 |
| | SD | 2.4 | 2.3 | 3.1 | 2.5 | 2.8 | 2.5 | 3.1 | 2.5 | | | | |
| | APV | 15.5 | 11.8 | 17.5 | 23.3 | 29.2 | 29.6 | 30.6 | 31.9 | | | | |
| Viking V3 Over head - Behind neck - Under chin | Mean | 16.3 | 20.0 | 24.6 | 29.8 | 36.0 | 33.9 | 38.3 | 37.3 | 32 | 33 | 30 | 24 |
| | SD | 2.9 | 2.3 | 1.6 | 2.1 | 2.8 | 2.9 | 2.3 | 4.0 | | | | |
| | APV | 13.4 | 17.7 | 23.0 | 27.7 | 33.2 | 31.0 | 36.0 | 33.3 | | | | |
| Mach™ 1 | Mean | 14.4 | 13.3 | 11.7 | 17.6 | 31.8 | 30.9 | 34.7 | 31.4 | 23 | 29 | 20 | 13 |
| | SD | 3.8 | 2.9 | 1.8 | 2.4 | 2.9 | 2.8 | 2.4 | 4.9 | | | | |
| | APV | 10.6 | 10.4 | 9.9 | 15.2 | 28.9 | 28.1 | 32.3 | 26.5 | | | | |



Sound Management Earmuffs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|--|------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Clarity® C1 | Mean | 12.6 | 15.7 | 23.9 | 27.8 | 23.3 | 25.8 | 29.0 | 31.0 | 25 | 24 | 22 | 20 |
| | SD | 4.5 | 3.3 | 2.7 | 2.8 | 2.9 | 2.0 | 3.0 | 2.6 | | | | |
| | APV | 8.1 | 12.4 | 21.2 | 25.0 | 20.4 | 23.8 | 26.0 | 28.4 | | | | |
| Clarity C1H | Mean | 12.9 | 15.3 | 22.1 | 24.6 | 24.5 | 29.5 | 29.3 | 33.5 | 26 | 26 | 23 | 19 |
| | SD | 4.0 | 3.0 | 3.0 | 2.3 | 2.6 | 2.9 | 2.7 | 3.2 | | | | |
| | APV | 8.9 | 12.3 | 19.1 | 22.3 | 21.9 | 26.6 | 26.6 | 30.3 | | | | |
| Clarity C1F | Mean | 12.8 | 14.9 | 24.2 | 27.7 | 25.2 | 28.6 | 29.3 | 28.7 | 26 | 25 | 24 | 19 |
| | SD | 4.0 | 3.8 | 3.8 | 2.6 | 2.1 | 2.9 | 3.4 | 4.2 | | | | |
| | APV | 8.8 | 11.1 | 20.4 | 25.1 | 23.1 | 25.7 | 25.9 | 24.5 | | | | |
| Clarity C2 Over head - Behind neck - Under chin | Mean | 16.9 | 20.7 | 29.5 | 32.2 | 31.0 | 32.1 | 35.8 | 31.1 | 30 | 30 | 29 | 25 |
| | SD | 4.4 | 3.1 | 3.2 | 2.3 | 2.7 | 2.0 | 3.5 | 3.8 | | | | |
| | APV | 12.4 | 17.6 | 26.3 | 29.9 | 28.3 | 30.0 | 32.3 | 27.3 | | | | |
| Clarity C3 | Mean | 21.1 | 25.6 | 33.3 | 37.5 | 34.9 | 32.2 | 38.8 | 33.5 | 33 | 31 | 32 | 29 |
| | SD | 4.1 | 3.1 | 2.5 | 2.9 | 2.9 | 1.9 | 4.0 | 4.4 | | | | |
| | APV | 17.0 | 22.4 | 30.8 | 34.6 | 32.0 | 30.3 | 34.8 | 29.1 | | | | |
| Clarity C3H | Mean | 15.4 | 22.8 | 27.4 | 31.3 | 30.5 | 28.2 | 35.0 | 34.6 | 30 | 28 | 28 | 24 |
| | SD | 3.5 | 4.3 | 3.2 | 2.8 | 1.8 | 2.3 | 3.6 | 3.0 | | | | |
| | APV | 11.9 | 18.5 | 24.2 | 28.5 | 28.7 | 25.9 | 31.4 | 31.6 | | | | |
| Impact® | Mean | - | 15.5 | 21.6 | 29.7 | 28.5 | 30.5 | 39.3 | 42.7 | 28 | 30 | 25 | 20 |
| | SD | - | 2.1 | 2.8 | 3.8 | 3.6 | 2.7 | 4.6 | 3.7 | | | | |
| | APV | - | 13.4 | 18.8 | 25.9 | 24.9 | 27.8 | 34.7 | 39.0 | | | | |
| Impact H | Mean | 13.3 | 14.7 | 20.7 | 29.8 | 27.7 | 27.1 | 36.4 | 39.2 | 27 | 27 | 25 | 19 |
| | SD | 4.0 | 3.6 | 2.3 | 2.9 | 2.7 | 2.6 | 3.3 | 5.1 | | | | |
| | APV | 9.3 | 11.1 | 18.4 | 26.9 | 25.0 | 24.5 | 33.1 | 34.1 | | | | |
| Impact Sport | Mean | 15.1 | 15.7 | 19.1 | 22.9 | 27.0 | 24.4 | 38.4 | 40.9 | 25 | 30 | 25 | 20 |
| | SD | 4.5 | 3.0 | 3.1 | 2.9 | 2.3 | 3.3 | 3.0 | 3.4 | | | | |
| | APV | 10.7 | 12.7 | 15.9 | 20.0 | 24.7 | 21.1 | 35.4 | 37.5 | | | | |



Radio Earmuffs

| Frequency in Hz | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR | H | M | L |
|-----------------|------|------|------|------|------|------|------|------|------|-----|----|----|----|
| Radio | Mean | - | 15.5 | 21.6 | 29.7 | 28.5 | 30.5 | 39.3 | 42.7 | 28 | 30 | 25 | 20 |
| | SD | - | 2.1 | 2.8 | 3.8 | 3.6 | 2.7 | 4.6 | 3.7 | | | | |
| | APV | - | 13.4 | 18.8 | 25.9 | 24.9 | 27.8 | 34.7 | 39.0 | | | | |
| Radio HV | Mean | 19.2 | 20.8 | 24.4 | 29.5 | 31.5 | 32.8 | 39.6 | 40.2 | 31 | 31 | 28 | 23 |
| | SD | 3.0 | 2.5 | 3.3 | 2.6 | 3.2 | 3.5 | 3.6 | 3.3 | | | | |
| | APV | 16.3 | 18.3 | 21.1 | 26.9 | 28.2 | 29.4 | 36.0 | 36.9 | | | | |
| Electo® | Mean | - | 15.5 | 21.6 | 29.7 | 28.5 | 30.5 | 39.3 | 42.7 | 28 | 30 | 25 | 20 |
| | SD | - | 2.1 | 2.8 | 3.8 | 3.6 | 2.7 | 4.6 | 3.7 | | | | |
| | APV | - | 13.4 | 18.8 | 25.9 | 24.9 | 27.8 | 34.7 | 39.0 | | | | |
| Electo H | Mean | 13.3 | 14.7 | 20.7 | 29.8 | 27.7 | 27.1 | 36.4 | 39.2 | 27 | 27 | 25 | 19 |
| | SD | 4.0 | 3.6 | 2.3 | 2.9 | 2.7 | 2.6 | 3.3 | 5.1 | | | | |
| | APV | 9.3 | 11.1 | 18.4 | 26.9 | 25.0 | 24.5 | 33.1 | 34.1 | | | | |

On-site verification has never been easier

VeriPRO makes it easy to get an accurate, real-world picture of your employees' hearing protection. Find out whether they are receiving optimal protection, require additional training on how to fit their earplugs, or need to try a different model. VeriPRO uses sophisticated software in a user-friendly format to find out the Personal Attenuation Rating (PAR) your employees are receiving from their earplugs.

Developed in conjunction with the House Ear Institute (www.hei.org), VeriPRO's three-part process checks the effectiveness of an employee's earplug fit in each ear over a range of frequencies. This information is then captured in individual and group reports, accessible by the safety manager.

By verifying earplug effectiveness and providing an ideal opportunity for education, VeriPRO becomes an integral part of a successful Hearing Conservation Programme.



VeriPRO is a simple and effective way to implement better Hearing Conservation practices in any workplace

Measures real world attenuation by using unmodified earplugs

Simple software installation and hardware set-up

Fast, accurate, easy-to-understand results displayed within minutes

Captures and stores historical information on employee PAR

Fulfills European Directive 2003/10/EC requirements for training

Works with any earplug

Want VeriPRO part of your Hearing Conservation Programme?

Visit us at
www.howardleight.com/veripro
to learn more!

