



> > > HEARING PROTECTION



HOWARD  
LEIGHT   
by SPERIAN





Bacou-Dalloz, world market leader in personal protective equipment (PPE), became Sperian Protection and is adopting a new unifying identity. As a symbol of the Group's strategy of international expansion and new momentum, Sperian will be the umbrella brand name bringing together the entire brand portfolio around shared values.

In addition, the Sperian brand portfolio will now include two experts' brands specialising in their own protection area: Miller for Fall Protection and Howard Leight for Hearing Protection.

Howard Leight leading is our flagship for hearing protection products and will incorporate the Bilsom Technology endorser on all earmuffs developed over the past 40 years.



The right fit for every user, every environment.

From our beginnings as a one man operation more than 30 years ago, Howard Leight® has grown into one of the largest global manufacturers of hearing protectors in the industrial market and the recognized innovator in protection and people-oriented fit. Howard Leight offers the widest variety of earplugs and bands, ranging from the highest attenuating Max® single-use earplug, to SmartFit's® Conforming Material Technology™ - delivering a more personalized fit - to our convenient Leight Source dispensers.

For nearly 40 years, Bilsom has built a legacy of acoustical engineering excellence. Our innovative earmuffs are tested to the limit every day in some of the most challenging environments in the world. We will continue to honor the Bilsom legacy today and tomorrow by introducing technologically advanced earmuffs under the Howard Leight brand, and will incorporate the "Bilsom Technology" endorser on all earmuffs.

Whether you need to protect workers from long-term exposure to harmful noise or facilitate communication among co-workers in hazardous noise environments, Bilsom Technology identifies special expertise that delivers innovative and reliable solutions for earmuffs.

This transition gives us the opportunity to better leverage Bilsom Technology's acoustical science and design know-how across the entire hearing protection portfolio, and provide our customers with the most comfortable, user-friendly earplugs and earmuffs available.

From our complete offering of earplugs and earmuffs, technical innovations to educational initiatives, Howard Leight offers a suite of resources to make Hearing Conservation happen.

# Hearing Directive 2003/10/EC

As manufacturing, construction and other industrial endeavours are on the rise in Europe, so is the number of people exposed to harmful levels of noise in the workplace. Over 29% of all workers are exposed to hazardous levels of noise in at least one-quarter of their time in the workplace, and 11% are exposed at all times - and these trends are increasing. (Third European survey on working conditions 2000).

While noise-induced hearing loss is permanent and irreversible, it is completely preventable. The new European Union Directive 2003/10/EC, which goes into effect on 15 february 2006, aims to prevent worker exposure to harmful noise, while promoting a healthier and more productive workforce.

## What action should be taken to comply with the new directive?

1. Assess noise levels to determine if they exceed the new action levels.
2. Endeavor to reduce hazardous noise exposures at their source by means of engineering or administrative controls.
3. If noise cannot be reduced to safe levels, use hearing protectors (earplugs or earmuffs) to protect noise-exposed workers.

## Action levels and exposure limits

Protective measures are required at these exposure levels.

Protective Measures	Daily 8 H Exposure	Peak Exposure
<b>Lower Exposure Action Level</b> 1. Variety of hearing protectors must be made available to noise-exposed workers (voluntary usage) 2. Audiometric screening must be made available to workers whose exposure indicates a risk to health 3. Training must be provided in the risks of noise, correct use of hearing protectors, detection of hearing damage, provisions of health surveillance and safe working practices to minimize noise exposure	<b>80 dBA</b>	<b>135 dBC</b>
<b>Upper Exposure Action Level</b> 1. Variety of hearing protectors must be made available to noise-exposed workers, and usage is enforced 2. Audiometric evaluation by a doctor must be made available to exposed workers 3. Warning signs must be posted in noisy areas	<b>85 dBA</b>	<b>137 dBC</b>
<b>Exposure Limit Value</b> 1. Maximum allowable noise level in the ear with all protective measures in place 2. Protected noise exposures under hearing protection may not exceed this level 3. Include the attenuation provided by hearing protectors when estimating this value	<b>87 dBA</b>	<b>140 dBC</b>

### Standards

EN 352/1	Earmuffs headband
EN 352/2	Earplugs
EN 352/3	Helmet-mounted earmuffs
EN 352/4	Electronic earmuffs
EN 352-6	Earmuffs with electrical audio input
prEN 352-8	Entertainment audio earmuffs
EN 458	Recommendations regarding the selection, use, care and maintenance of hearing protection equipment (HPE)



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## It's all about choice.

Selecting the right protection for your workers means more than choosing the earplug with the highest SNR. A better way to ensure that hearing protection is used consistently and properly is to select earplugs by Comfort Profile.

That means considering all the features that make one earplug work and fit differently than another: material, shape, size and SNR. Howard Leight by Sperian makes it easy to compare products and ensures that all your workers receive the right fit and protection.

## Find It Fast

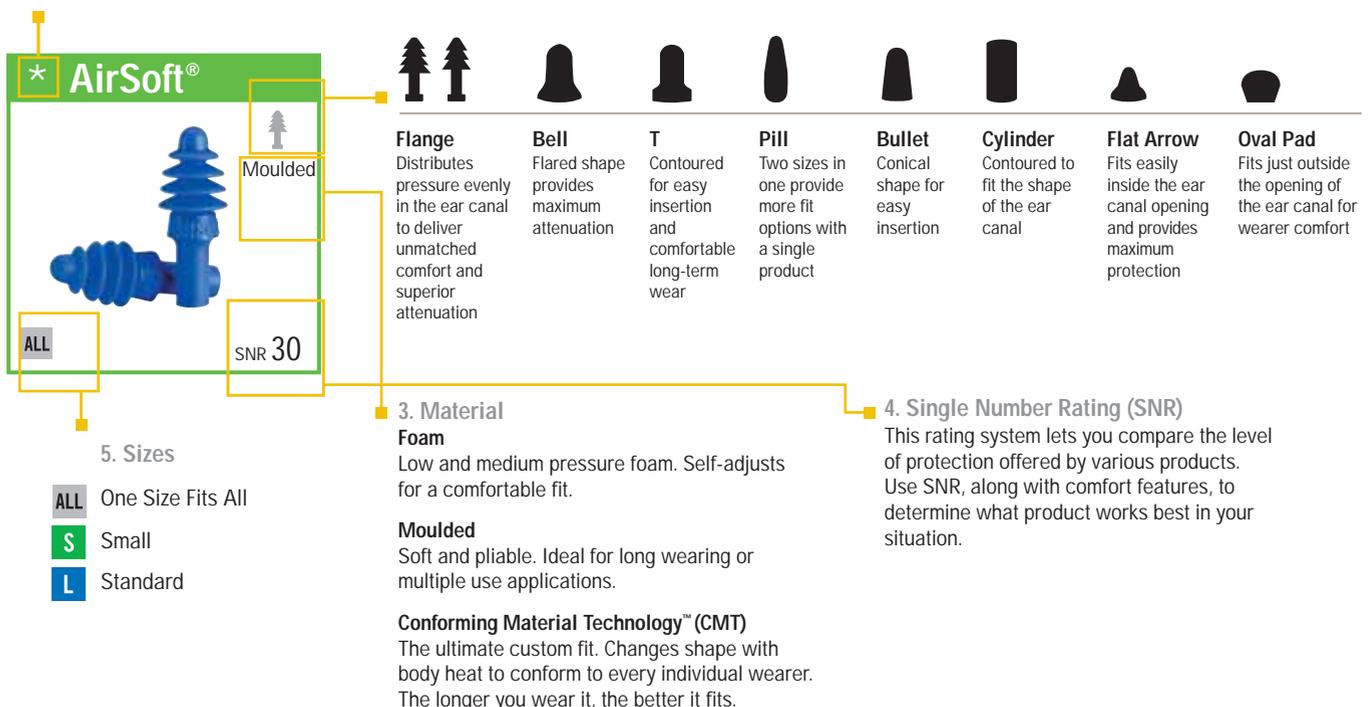
Need to compare products or find a specific feature? Our FastSpecs make it easy.

### 1. New Designs

Look to these products for the latest innovations in performance and comfort.

### 2. Shape

Because every ear is different, Howard Leight earplugs are available in a range of shapes.





# Disposable Earplugs

Disposable shouldn't mean single choice. Howard Leight offers a comprehensive choice of disposable products that include the comfort features your employees deserve, plus the highest SNR available. An economic 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)

## Max®



### High SNR & great comfort

- The world's most used polyurethane earplug
- Improved design easier to insert, counters tendency to back out of the ear
- Bell shape delivers maximum in-ear comfort
- Smooth, soil-resistant skin prevents dirt build-up

Max uncorded: **33 011 61**

Max corded: **33 011 30**

## Max Lite®



### Comfort for smaller wearers

- Ideal size for workers with smaller ear canals
- Low pressure foam expands gently for comfortable long-term wear
- Contoured T-shape for easy handling and wear

Max Lite uncorded: **33 011 20**

Max Lite corded: **33 011 21**

## Laser Lite®



### The bright idea in protection

- Vibrant colours make protection visible – and fun
- Self-adjusting foam expands to fit virtually every wearer
- Contoured T-shape for easy insertion and wear

Laser Lite uncorded: **33 011 05**

Laser Lite corded: **33 011 06**

## MultiMax®



### Two sizes in one product

- Improves individual fit, while simplifying inventory
- Smooth, soil-resistant skin prevents dirt build-up
- Self-adjusting foam expands to fit virtually every wearer

MultiMax uncorded: **33 011 09**



### No-roll foam

- Patented no-roll design makes insertion easy
- Smooth outer skin and reduced diameter provide long-term comfort
- Delivers instant protection upon proper insertion - no need to wait for foam to expand
- Three attenuation levels for targeted attenuation (Orange SNR 29, Green SNR 27, Blue SNR 23)
- Uniform attenuation profile blocks loud noise while voice frequencies can be heard more naturally

Matrix Orange uncorded: **10 112 36**

Matrix Green uncorded: **10 112 37**

Matrix Blue uncorded: **10 112 38**

Matrix Orange corded: **10 125 21**

Matrix Green corded: **10 125 20**

Matrix Blue Corded: **10 127 20**



### Conical shape for easy insertion

- Smooth tapered shape for easy insertion and removal
- Soft polyurethane foam plug adjusts comfortably in the ear
- Smooth outer surface for better hygiene
- Available in 2 sizes to ensure a proper and comfortable fit

Bilsom 303 Large: **10 050 73** (1 pair pouch, 200 pair box, 2000 pair case)

Bilsom 303 Small: **10 050 74** (1 pair pouch, 200 pair box, 2000 pair case)

Bilsom 303 Large: **10 071 92** (10 pair pouch, 200 pair box, 2000 pair case)

Bilsom 303 Small: **10 071 93** (10 pair pouch, 200 pair box, 2000 pair case)

Bilsom 304 Large (corded): **10 001 06** (1 pair pouch, 100 pair box, 500 pair case)

Bilsom 304 Small (corded): **10 001 07** (1 pair pouch, 100 pair box, 500 pair case)



# Earplugs Dispensers

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



## Leight® Source 500 Earplug Dispenser

The Leight Source 500 Earplug Dispenser is made of heavy-duty anodised aluminium and designed for wall-mounting. The system dispenses earplugs with a simple turn of the handle. Ideal for large factories and process industries that have zero tolerance for packaging waste. Holds 500 pairs of Howard Leight disposable earplugs, including Max, Max Lite, Laser Lite, MultiMax and Matrix.

Leight Source 500 pair dispenser: **33 012 73** (delivered empty)  
Leight Source Refills: 500 pair refill, 2000 pair case :  
Max: **33 011 65** Matrix Orange: **10 127 23**  
Max Lite: **33 012 72** Matrix Green: **10 127 22**  
Laser Lite: **33 012 71** Matrix Blue: **10 127 21**  
MultiMax: **33 012 61**  
Leight source Refill : 200 pair refill, 2000 pair case :  
Quiet: **33 012 75**



## Leight® Source 400 Earplug Dispenser

The Leight Source 400 Earplug Dispenser can be mounted to the wall or set on a table-top or workstation. Fully transparent, it can be refilled before it is empty. Catch basin prevents earplugs from falling on the ground. Dispenser parts are 100% reusable. Dispense earplugs by a simple twist of the knob. Holds 400 pairs of Howard Leight disposable earplugs, including Max, Max Lite, Laser Lite, MultiMax and Matrix.

Leight Source 400 pair dispenser : **10 130 40** (delivered empty)  
Leight Source Refills : 200 pair refill, 2000 pair case :  
Max: **10 130 46** Matrix Orange: **10 130 42**  
Max Lite: **10 130 48** Matrix Green: **10 130 41**  
Laser Lite: **10 130 47** Matrix Blue: **10 129 11**  
MultiMax: **10 130 45**



## Bilsomat 400 and Bilsomat 100 for Bilsom 303 earplugs

### Bilsomat 400 for Bilsom 303 earplugs

Bilsomat 400 with 400 pairs of Bilsom 303 earplugs

**10 062 02** for 303 Large

**10 062 03** for 303 Small

Bilsomat 400 refill with 200 pair pouch, 2000 pair case of Bilsom 303 earplugs

**10 061 86** for 303 Large

**10 061 87** for 303 Small

### Bilsomat 100 for Bilsom 303 earplugs

Dispenser of 100 pairs of Bilsom 303 earplugs

**10 058 52** for 303 Large

**10 058 50** for 303 Small





# Reusable Earplugs

Reusable Earplugs last for weeks, reduce waste and save money. Simply clean with soap and water. Ideal for environments where workers can retain and store earplugs for reuse.



## A revolution in personal fit

- Advanced material uses body heat to adapt 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
- HearPack® storage case; unique detachable cord system

SmartFit corded: **10 112 39** (HearPack / 50 pair box, 500 pair case)



## Total protection, comfort and fit

- FlexiFirm® core for easy handling
- SoftFlange™ design for comfort and fit
- Unique detachable cord system
- HearPack® storage case

Fusion standard size corded: **10 112 82** (HearPack / 50 pair box, 500 pair case)

Fusion small size corded: **10 112 81** (HearPack / 50 pair box, 500 pair case)



## Easy handling and better fit

- Patented “no-roll” design is easy to handle and fit
- Contoured shape comfortably matches contours of the ear canal
- Built-in insertion stem

Quiet uncorded: **33 011 70** (flip-top box / 100 pair box, 1000 pair case)

Quiet corded: **33 011 72** (flip-top box / 100 pair box, 1000 pair case)

Quiet 200 pair refill for Leight Source 500 dispenser (200 pair box, 2000 pair case): **33 012 75**



## An industry standard optimized

- Advanced air pocket design features internal noise-blocking fins
- Four flange profile creates better seal in the ear canal
- Tapered shape fits better in the ear canal
- Firm stem facilitates easy insertion and removal

Airsoft uncorded: **10 155 60** (flip-top box / 100 pair box, 1000 pair case)

Airsoft white nylon cord: **10 155 63** (flip-top box / 100 pair box, 1000 pair case)

Airsoft red PVC cord: **10 155 61** (flip-top box / 100 pair box, 1000 pair case)



## Clarity® technology in an earplug

- Patented design features built-in miniature membrane provide uniform and moderate attenuation
- Uniform attenuation profile blocks loud noise while voice frequencies can be heard more naturally
- Super soft flanges for a perfect fit and great comfort
- Rigid stem for easy insertion, fitting and removal
- Handy plastic storage case

Clarity 656 Large: **10 053 29** (10 pair box, 100 pair case)

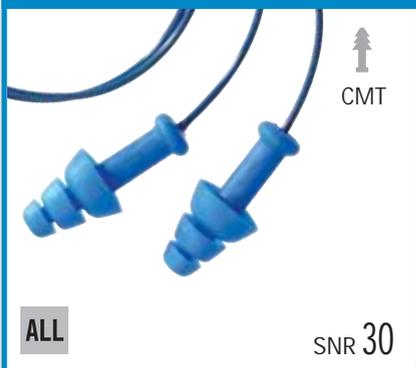
Clarity 656 Small: **10 053 28** (10 pair box, 100 pair case)



# Detectable Earplugs

Our comprehensive selection of detectable earplugs are designed for visibility and detectability. Available in disposable and reusable options. Specially created for environments where contamination from foreign objects is unacceptable.

## SmartFit® Detectable



### Long wearing comfort in reusable detectable

- Delivers superior comfort and a truly individual fit
- Simplifies inventory control – a single product fits almost every wearer
- Blue color provides high visibility in detection
- Detectable ring on stem and metalized cord detectable by automated equipment

SmartFit Detectable corded : 10 125 22 (polybag / 50 pair box, 500 pair case)

## Fusion™ Detectable



### Total protection, comfort and fit in reusable detectable

- Patented dual material design
- FlexiFirm® core for easy handling; SoftFlanges™ for comfort and fit
- Metalized cord and shaft ring easily detected by automated equipment
- Cleans with warm water, lasts for weeks
- HearPack® storage case

Fusion Detectable standard size corded : 10 112 34 (HearPack / 50 pair box, 500 pair case)

Fusion Detectable small size corded : 10 112 35 (HearPack / 50 pair box, 500 pair case)

## Laser Trak®



### Highest SNR available in disposable detectable

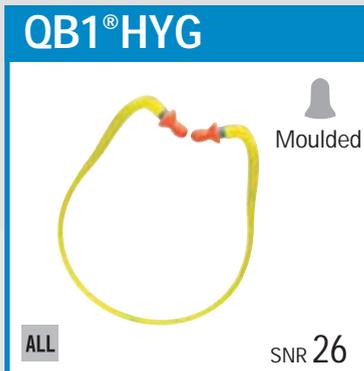
- Self-adjusting foam expands to fit virtually any wearer
- Non-ferrous metal and bright colours – easily detected by visual and automated inspection

Laser Trak corded: 33 011 67 (100 pair box, 1000 pair case)



# Banded Earplugs

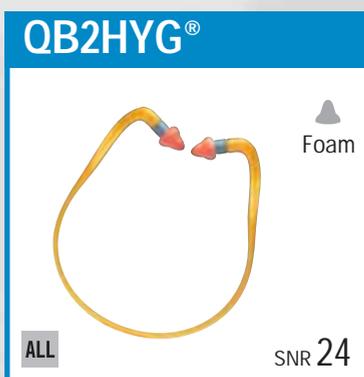
We offer a variety of performance features, including a patented band design that prevents earpads from touching dirty or contaminated surfaces when set down. Great for managers or for use in environments with intermittent sound hazards.



## Inner-aural protection

- Smooth, ergonomic pods fit in the ear 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

QB1 HYG: **33 012 82** (10 pair box, 100 pair case)  
Replacement pods: **33 012 81** (50 pair box, 200 pair case)



## Supra-aural protection

- Soft pods rest partially in the ear for a balance of protection and comfort
- Patented band design prevents ear pods from touching dirty or contaminated surfaces
- Lightweight and portable

QB2 HYG: **33 012 80** (10 pair box, 100 pair case)  
Replacement pods: **33 011 81** (50 pair box, 200 pair case)



## Semi-aural protection

- Super soft pods rest outside the ear for outstanding comfort
- Patented band design prevents ear pods from touching dirty or contaminated surfaces
- Lightweight and portable – designed especially for environments with intermittent noise hazards

QB3 HYG: **33 012 79** (10 pair box, 100 pair case)  
Replacement pods: **33 011 83** (50 pair box, 200 pair case)



## Exclusive folding band design for convenience

- Semi-aural protection, super soft pods rest outside the ear canal opening
- Multiple position wear - over-the-head, under-the-chin or behind-the-neck - provides flexibility in wear
- Compact, folding design easy to store in pocket
- Ideal for workers who are exposed to intermittent noise

PerCap: **10 059 52** (1 pair pocket pack, 10 pair box)  
Replacement pods: **10 059 80** (10 pair box)



HOWARD  
LEIGHT



by SPERIAN

Bilsom  
TECHNOLOGY

# Hearing safety tools for the most demanding work environments.

Every day, workers count on Howard Leight by Sperian, using Bilsom technology products to block noise and manage sound in some of the world's most acoustically challenging environments. Bilsom products meet these demands through a combination of advanced technology, performance and comfort features that put people first.

## Find It Fast

Need to compare products or find a specific feature? Our FastSpecs make it easy.

### 1. New Designs



**3. Single Number Rating (SNR)**  
This rating system lets you compare the level of protection offered by various products.

### 2. Wearing Position



**Over-head**  
Designed for traditional over-the-head wear.



**Multiple position**  
Multiple options for wear: over-the-head, behind-the-neck or under-the-chin.



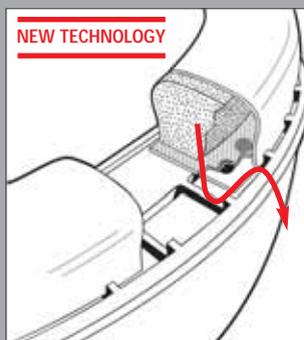
**Helmet-mounted**  
Snap mounts for use on hard hats.



**Foldable**  
Convenient folding headband for easy storage.



**Neckband**  
Behind-the-head design for convenient use with other PPE.



## AIR FLOW CONTROL™

Patented high performance technology Bilsom's patented Air Flow Control™ technology delivers optimal attenuation across all frequencies, without increasing earmuff size or weight. As sound travels through the air in the earmuff, a patented baseplate chamber and high-tech nonwoven layer manage the flow of air inside the earmuff to control how sound reaches the ear. The result is better, more consistent overall attenuation for almost all industrial noise environments. Air Flow Control is a standard feature on all Lightning, Thunder and Viking series earmuffs.





# Noise Blocking Earmuffs

When you need to block the noise, Howard Leight by Sperian gives you the tools to do the job. From the maximum attenuation available in an earmuff to economical designs, we set the standard for noise blocking and hearing protection. Our Thunder®, Lightning®, Viking™, and Mach 1 earmuffs provide a choice of features and protection, ideal for many workers and environments.



**NEW TECHNOLOGY**

## Thunder®

Top of the line protection and comfort  
Now with patented Air Flow Control™

- Maximum protection from an earmuff
- 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
- Inner-ventilated headband minimizes pressure on the head, breathes easier in warm/humid climates (T2 and T3 only)
- Quick-Click height adjustment
- Snap-in ear cushions make replacement quick and easy
- Dielectric construction suitable for all workplaces, especially electrical environments

### Thunder® Headband Earmuffs

- Thunder T1 Earmuff : 10 109 28
- Thunder T2 Earmuff : 10 109 29
- Thunder T3 Earmuff : 10 109 70
- Thunder Hi-Visibility T2HV Earmuff : 10 158 20

### Thunder® Helmet Earmuffs

- For use with wide variety of popular helmets
- Earcups snap-lock in place and swing back when not in use
- Extensive range of adapters available
- Thunder T1H Helmet Earmuff (with adapters 3712, 3711 & 3721) : 10 125 33
- Thunder T2H Helmet Earmuff (with adapters 3712, 3711 & 3721) : 10 125 34

### Thunder® Folding Earmuff

- Convenient folding headband design for easy storage
- Quick-Click height adjustment for personalised fit
- Belt storage case available separately
- Thunder T1F Folding Earmuff : 10 116 00

### Hygiene Kits

- Hygiene kit for T1, T1H, T1F : 10 109 74
- Hygiene Kit for T2, T2H, T2HV : 10 109 75
- Hygiene Kit for T3 : 10 109 76



# Noise Blocking Earmuffs

## Leightning®

NEW TECHNOLOGY

Maximum comfort and contemporary design  
Now with patented Air Flow Control™

- Robust steel headband withstands demanding use
- Exclusive snap-in cushions make replacement fast and easy
- Exclusive padded foam headband delivers long wearing comfort
- Contemporary design improves wearer compliance
- Telescopic height adjustment remains fixed during use
- L0 Ultraslim earmuffs
  - Ultraslim, lightweight design rests comfortably on the head, delivers high degree of comfort
  - Ideally suited for situations where compact earmuffs and reliable noise-blocking protection is required
- Hi-Visibility series
  - Bright green earmuffs for high visibility and contrast on the job.
  - Exclusive reflective headband highly visible under light for increased visibility and safety, especially in low lighting
  - Ideal to wear at night, in low lighting and under inclement weather conditions



### Leightning® Headband Earmuffs

- Leightning L1 Earmuff: 10 109 22
- Leightning L2 Earmuff: 10 109 23
- Leightning L3 Earmuff: 10 109 24
- Leightning L3HV Hi-Visibility Earmuff: 10 139 41

## Viking™

NEW TECHNOLOGY

Multiple-position headband  
Now with patented Air Flow Control™

- Multiple-position headband allows wearer to select position over-the-head, behind-the-head, under-the-chin
- Alternative to cap-mounted earmuffs – wear with hard hats, face shields, respirators and other PPE
- 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
- Snap-in ear cushions make replacement quick and easy
- Attached elastic headband strap for better positioning
- Dielectric construction suitable for all workplaces



- Viking V1 : 10 109 25
- Viking V3 : 10 111 70

### Hygiene Kits

- Hygiene Kit for V1 : 10 119 98
- Hygiene Kit for V3 : 10 120 00





### Hygiene Kits

Hygiene kit for:  
 L0N, L0F, L1, L1H, L1HHV, L1N: **10 119 98**  
 L2, L2FHV, L2N, L2F: **10 119 99**  
 L3, L3HV, L3H, L3N: **10 120 00**



### Leightning® Helmet Earmuffs

- For use with wide variety of popular helmets
  - Earcups snap-lock in place and swing-back when not in use
  - Extensive range of adapters available
- Leightning L1H Helmet Earmuff  
 (with adapters 3712, 3711 & 3721): **10 125 39**  
 Leightning L1HHV Hi-Visibility Helmet Earmuff  
 (with adapters 3712, 3711 & 3721): **10 150 21**  
 Leightning L3H Helmet Earmuff  
 (with adapters 3712, 3711 & 3721): **10 125 41**

### Leightning® Neckband Earmuffs

- Sleek, anatomic behind-the-head design
  - Use with faceshields, visors, helmets and other PPE
  - Includes elastic headband strap for better positioning
- Leightning L0N Neckband Earmuff: **10 134 60**  
 Leightning L1N Neckband Earmuff: **10 119 94**  
 Leightning L2N Neckband Earmuff: **10 119 95**  
 Leightning L3N Neckband Earmuff: **10 119 96**

### Leightning® Folding Earmuffs

- Convenient folding headband design for easy storage
  - Belt storage case available separately
- Leightning L0F Folding Earmuff: **10 134 61**  
 Leightning L2F Folding Earmuff: **10 119 97**  
 Leightning L2FHV Hi-Visibility Folding Earmuff: **10 139 42**

### Mach™ 1

Economical protection for short-term use

- Economical design provides adequate protection at a low cost
- Extremely lightweight construction provides comfort for all-day wear
- Dielectric construction suitable for all workplaces

Mach 1 : **10 104 21**



# Sound Management Earmuffs

Sometimes blocking sound isn't enough. You need to block noise and let information in. Our Sound Management earmuffs use patented electronic and non-electronic technologies that block noise while letting alarms, warning signals and co-workers' voice frequencies be heard more naturally.

## C1



SNR 25



## C1H



SNR 26



## C1F



SNR 26



## C2



SNR 30



## C3



SNR 33



## C3H



SNR 30



## Clarity™

### Advanced Sound Management Technology enhances on-the-job communication

- Uniform attenuation allows wearer to hear co-workers, instructions and other important sounds more naturally while blocking out harmful noise
- Does not isolate worker from environment, improves overall safety especially in sensitive environments
- Dielectric construction suitable for all workplaces, especially electrical environments
- Uniform headband pressure for all head sizes, providing better comfort for long-term wear
- 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
- Snap-in ear cushions make replacement quick and easy

### Clarity™ Headband Earmuffs

Clarity C1 Earmuff : 10 111 42  
 Clarity C2 Earmuff : 10 111 45  
 Clarity C3 Earmuff : 10 111 46

### Clarity™ Helmet Earmuffs

- For use with wide variety of popular helmets
- Earcups snap-lock in place and swing-back when not in use
- Extensive range of adapters available

Clarity C1H Helmet Earmuff  
 (with adapters 3711, 3712 & 3721): 10 112 62  
 Clarity C3H Helmet Earmuff  
 (with adapters 3711, 3712 & 3721): 10 112 64

### Clarity™ Folding Earmuff

- Convenient folding headband design for easy storage
- Belt storage case available separately
- Quick-Click height adjustment for personalized fit

Clarity C1F Folding Earmuff : 10 111 43

### Hygiene Kits

Hygiene kit for C1, C1H, C1F: 10 060 80  
 Hygiene kit for C2, C3, C3H: 10 060 81



## Forestry Kit



SNR 26

## Clarity® Forestry Kit

Forestry helmet fully equipped with:

- Helmet Earmuff Clarity C1H
- Helmet yellow LG1100 Centurion in polypropylene
- Adapters for Centurion helmet (ref: 10 002 42)
- Wire mesh visor

Forestry Kit: 10 055 00

Hygiene Kit: 10 060 80

Wire mesh visor replacement: 10 002 53

## Impact™

Electronic noise filtering + sound amplification

- Directional stereo microphones amplify and enhance sound for more natural hearing
- Ideal for hearing impaired workers
- Limits sound amplification to 82dB(A)
- 700 hour battery life, automatic shut off function
- New easy access battery compartment

## Impact™



SNR 28

## Impact™ H



SNR 27

### Impact™ Headband Earmuff

Impact: 10 103 76

### Impact™ Helmet Earmuff

Impact H: 10 106 32

### Hygiene Kit

Hygiene Kit for Impact, Impact H: 10 080 00

## Impact™ Sport **NEW**



SNR 25

## Impact™ Sport

Ultraslim sound amplification earmuff for shooting

Especially designed for professional and recreational shooters and hunters

- Amplifies ambient sounds to safe 82 dBA
- Enhances user awareness of environment
- Allows wearer to hear important communications including other shooters and environmental sounds
- Directionally-placed microphones provide more natural hearing
- Response technology acts as a passive hearing protector for sound above 82 dBA

Impact™ Sport : 10 135 30

Hygiene kit for Impact Sport: 10 152 80



# Radio Earmuffs

Add music and routine jobs become more satisfying. Our Radio earmuffs provide protection from noise – and let you listen to music from a built-in FM/AM radio.

## Radio



SNR 28

### Radio

Listen to built-in FM/AM radio while you work

- Built for both indoor and outdoor work environments
- Limits sound radio volume to 82dB(A)
- 140 hour battery life from two AA batteries

Radio: 10 103 75  
Hygiene Kit Radio: 10 080 00

\*

## Radio HV



SNR 31

### Radio Hi-Visibility

With patented Air Flow Control™

Bright green earcups and reflective headband provide high visibility, day or night

- Built-in AM/FM radio and AUX input jack for connection to MP3 players or other audio devices
- High sound quality and excellent stereo reception
- Limits sound radio volume to 82dB(A)
- 140 hour battery life from two AA batteries
- Includes 3.5mm cable for connection to other devices

Radio Hi-Visibility: 10 152 10  
Hygiene Kit Radio HV: 10 080 00

## Electo®



SNR 28

## Electo® H



SNR 27

### Electo®

Protection, sound amplification and built-in FM/AM radio

- Separate controls for radio and sound amplification
- Directional microphones amplify and enhance voice sounds
- Limits sound amplification and radio volume to 82dB(A)
- 130 hour battery life from two AA batteries

Electo : 10 103 74  
Electo H : 10 106 31  
Hygiene Kit : 10 080 00





# Accessories

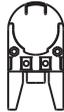
3702



3710



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3721



## Adapters

### For helmets without slots:

Universal adapter **10 002 40** - 3702

Bolt-on adapter **10 002 41** - 3710

### Blade adapters:

Former centurion **10 002 42** - 3711

New centurion, Balance, Bullard, JSP Mark IV&Mark V, MSA, Voss, Opus, Auboueix

Iris&Kara, Peltor G22&G3000 **10 002 43** - 3712

Protector tuffmaster **10 002 45** - 3714

Auboueix Brenus&Carolyn **10 002 46** - 3715

Schubert **10 002 47** - 3716

JSP Mark II&MarkIII&Invincible **10 002 48** - 3717

AO, Bullard, MSA V-Guard, North **10 002 49** - 3718

JSP **10 002 50** - 3719

Protector 300/600/650, Sofop oceanic II

& Oryon, Petzl Vertex **10 052 92** - 3721



## Slim Belt Clip

Easy to attach to the belt or other parts of clothing. Slide the Headband of the Bilsom earmuff into the belt-clip and you have handy storage solution when the earmuff is not in use and then very easy to get hold of once you enter noisy areas again.

**10 167 30**



## COOL II Pads

Sweat absorbing earmuff pad for increased comfort and hygiene. Made of dermatologically tested material, it is able to absorb 15 times its own weight in water. Bilsom® COOL fits most brands of earmuffs on the market.

5 pair paper envelope : **10 003 65** - 100 pair dispenser pack : **10 003 64**



## Belt Case

The practical design of this robust bag with its velcro inside makes it popular to use together with Bilsom C1F, L2F, T1F, L0F, L2FHV and contributes to increasing user acceptance and reaching 100% wearing time.

**10 002 51**



## Optisorb

Made of cotton, the OPTISORB slips easily over earmuff cushions absorbing perspiration in hot working environments or conserving warmth in the cold. The washable reversible Optisorb ensure comfort in any weather.

**33 021 01**



## Hygiene Kits

Spare part kit containing ear cushions and foam closing pads.

Ref.	Description
<b>10 109 74</b>	Hygiene kit for T1, T1H, T1F
<b>10 109 75</b>	Hygiene kit for T2, T2H, T2HV
<b>10 109 76</b>	Hygiene kit for T3
<b>10 119 98</b>	Hygiene kit for L0N, L0F, L1, L1H, L1N, L1HHV
<b>10 119 99</b>	Hygiene kit for L2, L2N, L2F, L2FHV
<b>10 120 00</b>	Hygiene kit for L3, L3H, L3N, L3HHV
<b>10 119 98</b>	Hygiene kit for V1 with AFC
<b>10 120 00</b>	Hygiene kit for V3 with AFC
<b>10 060 80</b>	Hygiene kit for C1, C1H, C1F
<b>10 060 81</b>	Hygiene kit for C2, C3, C3H
<b>10 080 00</b>	Hygiene kit for Impact, Impact H, Radio, Electo, Electo H, Radio HV
<b>10 152 80</b>	Hygiene kit for Impact Sport



## Polar hood

Balaclava-style hood provides protection from cold climates while ensuring optimal earmuff attenuation.

Adjustable design includes front zipper for ventilation and foldaway visor. Bright green trim enhances visibility and safety outdoors.

Compatible with all Howard Leight earmuffs, fits under most hard hats.

size S/M : **10 168 71**

size L/XL : **10 168 70**



## Audiometric Cabin

Cabin is delivered dismantled, it is simple and quick to assemble. Both the window and the door can be positioned either on the left or on the right for more flexibility. Excellent sound attenuation particularly at the critical frequency 500 Hz for reliable hearing test results. Exterior dimensions : Width 950 mm, Depth 1050 mm, Height 2100 mm. The cabin features large observation window, comfortable patient bench seat, interior light, and efficient ventilation fan.

Attenuation	Hz	125	250	500	1000	2000	4000	8000
	dB	25	33	47	51	51	56	61

**10 003 63**

# Attenuation data



Attenuation according to EN 352/ISO 4869 - Media: Mean value in dB - SD: Standard deviation in dB - APV: Assumed protection in dB

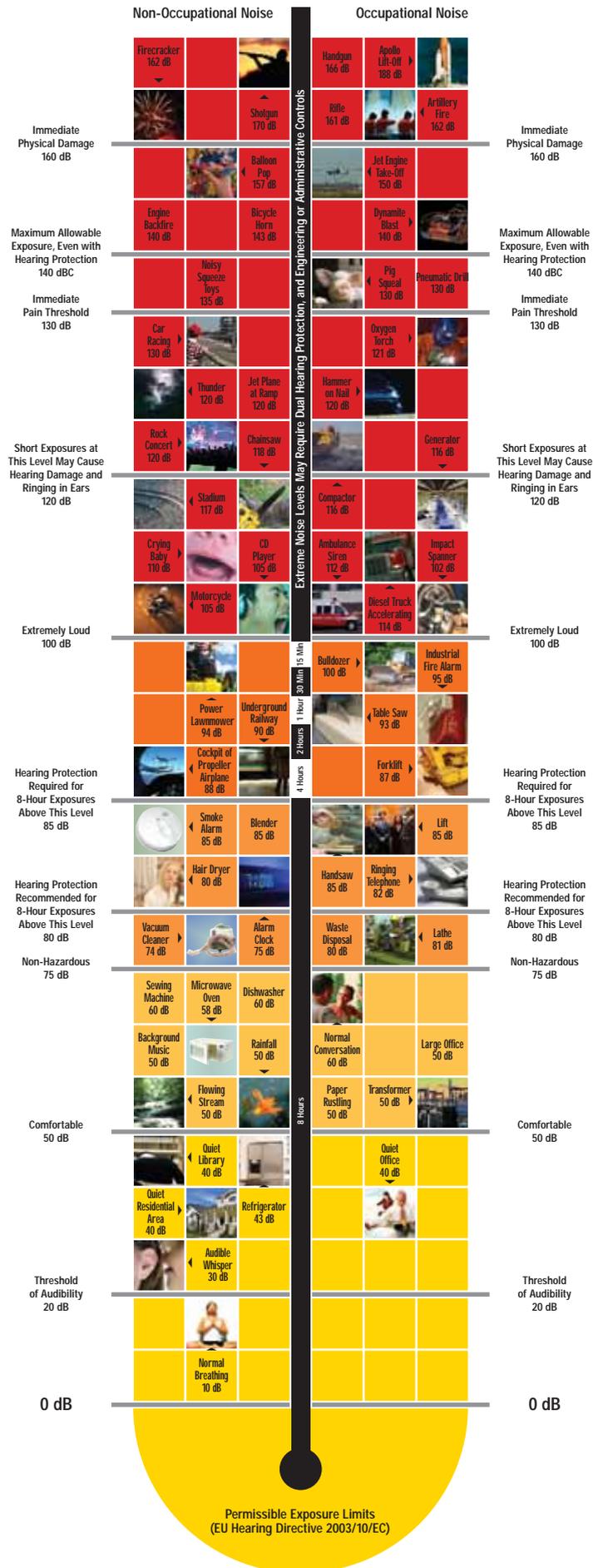
		Frequency in Hz	63	125	250	500	1000	2000	4000	8000	SNR	H	M	L
Disposable earplugs	Max	Media	34.6	37.1	37.4	38.8	38.2	37.9	47.3	44.8	37	36	35	34
		SD	3.0	4.5	4.3	3.7	3.5	4.0	3.5	7.2				
		APV	31.6	32.6	33.1	35.1	34.7	33.9	43.8	37.6				
	Max Lite	Media	-	35.5	36.7	39.0	37.4	33.8	41.9	43.3	34	32	32	31
		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					
MultiMax	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					
		Frequency in Hz	63	125	250	500	1000	2000	4000	8000	SNR	H	M	L
Reusable earplugs	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					
		Frequency in Hz	63	125	250	500	1000	2000	4000	8000	SNR	H	M	L
Detectable earplugs	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				
		Frequency in Hz	63	125	250	500	1000	2000	4000	8000	SNR	H	M	L
Banded earplugs	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					

			Frequency in Hz							SNR	H	M	L		
			63	125	250	500	1000	2000	4000	8000					
Noise Blocking Earmuffs	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	2.9	2.3					3.2
		APV	11.0	14.0	20.6	24.3	30.6	30.9	33.7	34.7					38.0
	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	18.8	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	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	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											

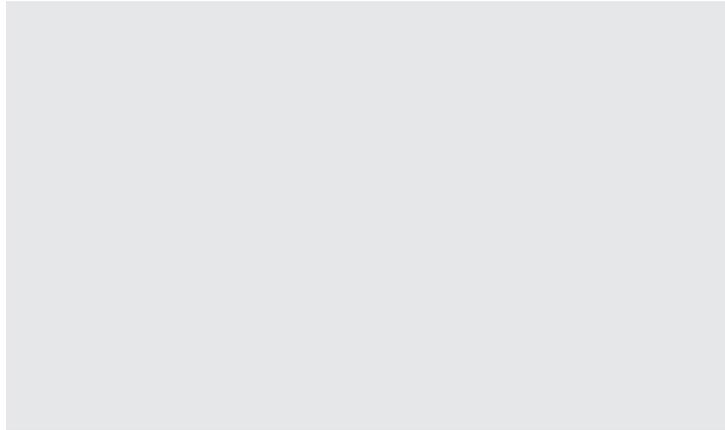
# Noise Thermometer

Sound Energy Doubles  
Every 3 dB

Example:  
if a 90 dB noise is doubled,  
it measures 93 dB







All Howard Leight by Sperian hearing protectors are CE-certified and have been tested in accordance with the relevant EN352 standards.



From our beginnings as a one-man operation more than 30 years ago, Howard Leight Industries has grown into one of the largest manufacturers of in-ear hearing protection in the industrial market and the recognised innovator in protection and fit. Howard Leight offers the widest variety of earplugs, bands and dispensers. Utilizing Bilsom Technology, Howard Leight earmuffs raise the bar on innovative design, performance and comfort.

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