SECURE™

PROFESSIONAL HEARING PROTECTION

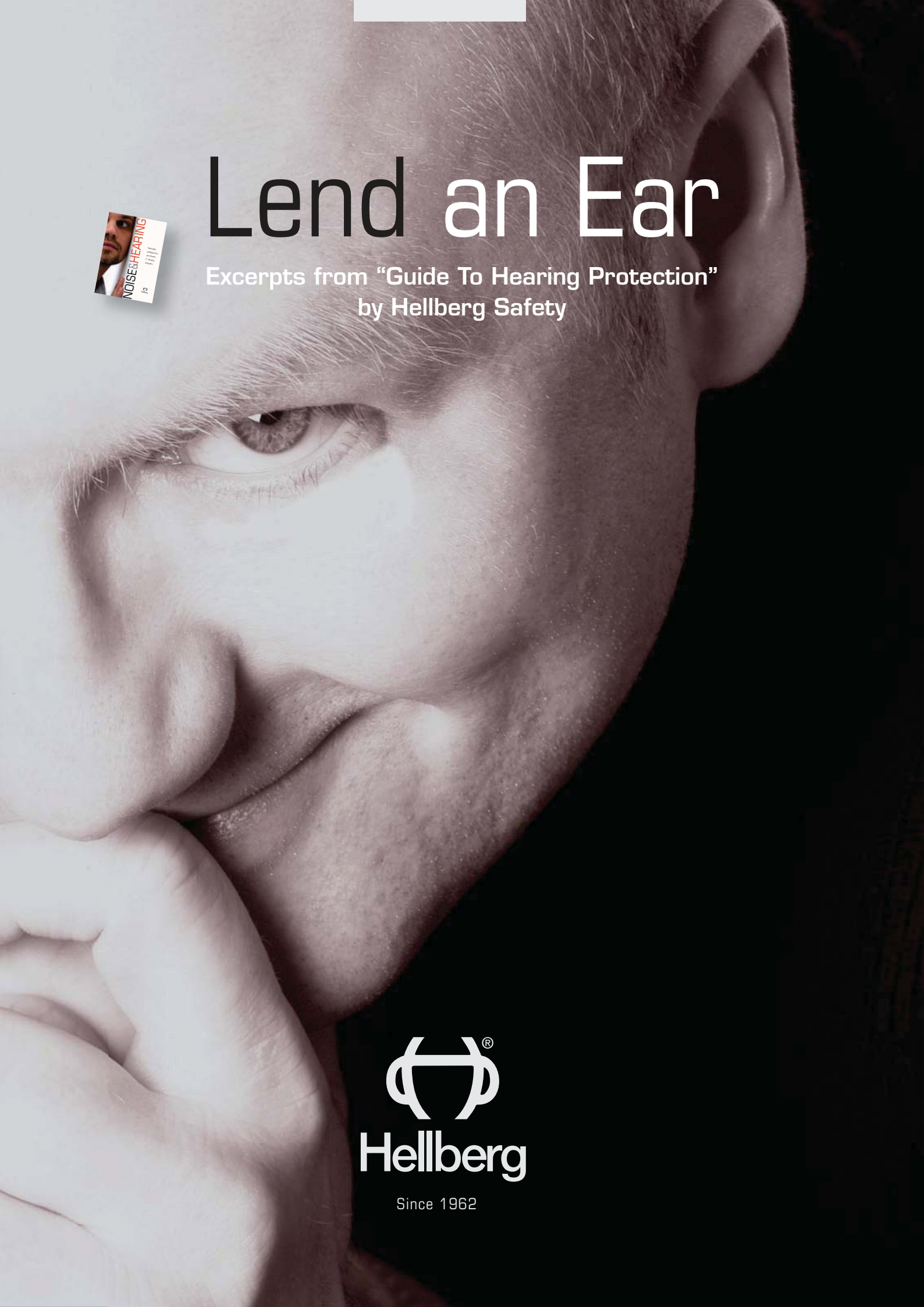
LAUNCH PACK

Hellberg

Since 1962

Hellberg

Since 1962

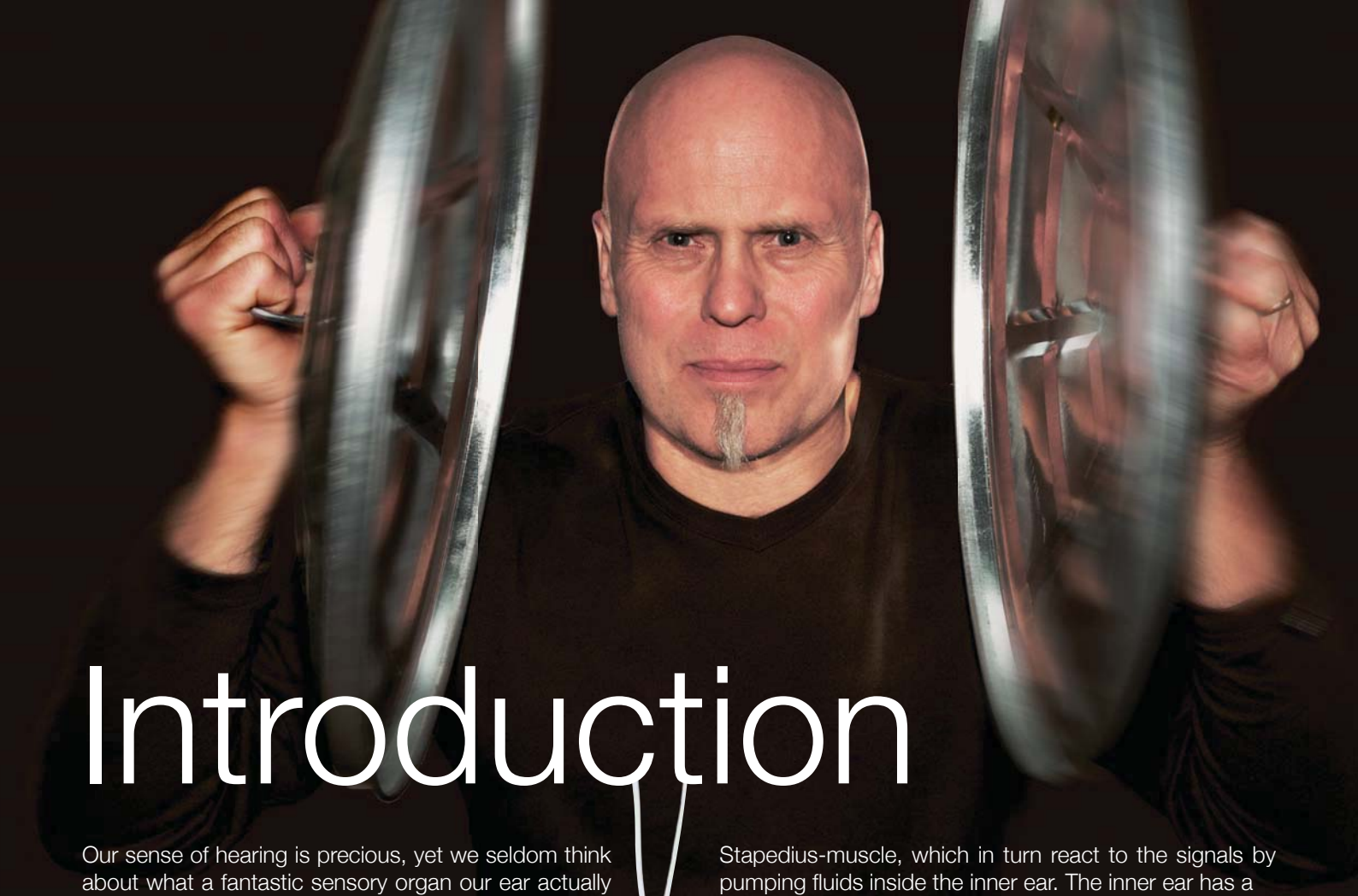


Lend an Ear

Excerpts from "Guide To Hearing Protection" by Hellberg Safety

Hellberg®

Since 1962



Introduction

Our sense of hearing is precious, yet we seldom think about what a fantastic sensory organ our ear actually is. Our ability to communicate with friends, listening to music, or experiencing a child´s first laughter is something we take for granted. Unfortunately, for a significant part of the population, this ability is partially or entirely lost, because of exposure to loud noise. Hearing loss cannot be restored but avoiding damage to your hearing is in most cases a matter of choosing the proper protection.

Noise is one of the most common yet under rated health risks in the workplace. As much as every fourth work related injury is noise related. Many people exposed to harmful noise levels on a daily basis, never or seldom wear proper protection. The problem is often ignored, since hearing damage rarely cause physical pain. The risk for permanent injury is therefore significant. Typical work environments where noise levels are above safe limit are pulp and paper, construction, mining, forestry and gardening, agricultural, airport crew and most types of industry work. Recent researches have even documented harmful noise levels in preschools.

The Ear

The human ear is a fascinating and very sensitive organ. It consists of several small parts that together bring us our wonderful sense of hearing. When a sound wave enters our outer ear, it is lead into the ear canal, hitting the micro thin eardrum which starts to vibrate in sync with the sound waves. These vibrations then create a mechanical reaction involving three small bone parts, – the Hammer, the Anvil and the Stirrup. The Stirrup is attached to the Stapedius-muscle, which in turn react to the signals by pumping fluids inside the inner ear. The inner ear has a multitude of fine hair cells, which react to the flowing and starts a chemical reaction. In this process, small electrical impulses are transmitted to the brain, which we interpret as sound.

From our industrialized society, we are exposed to a lot of noises, many of them greatly mismatched to our fine hearing. By exposing the ear to high levels of noise, the small hair cells of our inner ear get damaged. They become puffy and lose their elasticity. Over time, hair cells will die and hearing loss occur.

Definition Of Sound

Sound is caused by vibrations from a sound source such as a machine, loudspeaker, or the human voice box. Sound is measured in Frequency (Hertz, Hz) and Sound pressure level (Decibel, dB).

Frequency

The most common sounds, like that of human speech (800-4000Hz), are found in the High and Middle frequency range. Low frequency sounds (below 500Hz) are usually generated by large engines, ventilation systems, etc.
The human ear can hear sounds in a range between 20 and 20 000 Hz. As we grow older, the ageing process itself, or exposure to high noise levels, causes a decline in our hearing, making it harder to identify high frequency sounds.

Sound pressure

The lowest sound pressure level distinguishable by the human ear is 0 dB, and anything above 130 dB is likely to cause pain.

Noise
What we call “noise”, is usually described as sounds we experience as unpleasant or disturbing. High level of noise is hazardous to your hearing. Noise can also lead to stress symptoms, discomfort, pain, and increased risk for heart disease.
Harmful noise is everywhere. Loud music, a rock concert, motorsports, target practice or hunting, even mowing the lawn – it could all damage your hearing. These noises are often considered harmless, but they represent significant risk, and call for protection. All noises add to your daily quota of exposure, therefore it is important to wear proper hearing protection at all times.

Noise & Risk

When estimating the risk of hearing damage there are three important factors to consider; exposure time, frequency (Hz) and sound pressure (dB).

The exposure time is measured during 8 hours, to simulate a standard work environment. A filter (dB A) is used, taking into consideration the normal tolerance curve of the human ear and giving a good estimation of the risk level.

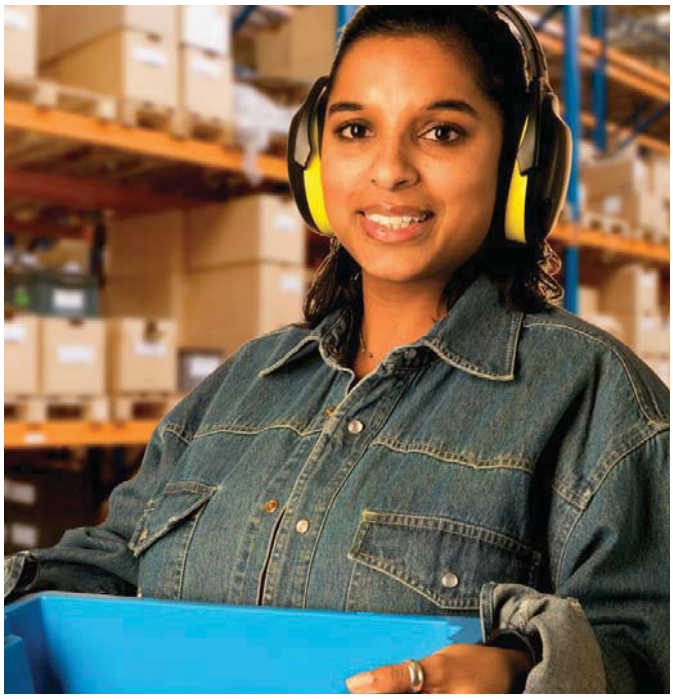
High frequency noise is the most damaging to your hearing, and should therefore be your primary concern. Low frequency noise is usually less damaging, but can be dangerous because it masks human speech, alarm signals and it can cause symptoms like dizziness and nausea.
Some low frequencies are difficult to block out even with proper hearing protection, because it can transmit directly into the inner ear.

The European Union has established a legal limit of 80 dB (A) over an 8 hours workday. Beyond this limit, protective measures must be taken. As the noise levels increase, the length of time you can safely stay in the environment, is reduced. As an example: 8 hour exposure to 80 dB (A) is equivalent to only 4 hours in a level of 83 dB (A). An increase of 3 dB (A) means you must reduce your time in the environment, by 50 percent if unprotected. The same consideration applies, if you are exposed to two similar sound sources. Two machines, both emitting 80 dB (A) of noise, equals a total of 83 dB.

In addition to harmful noise of the steady and longer term kind, peak noises can be equally dangerous. Peak noises are typically those from firearms, hammers, nails guns and other air tools. Since our brain needs approximately 0,3 seconds to judge the magnitude and level of an incoming sound, peaks shorter than this can be very dangerous to your hearing. In fact, these peak noises could cause irrevocable damage to the inner ear in one single occurrence.
Peak noises are measured with a “C”-filter (dB C).

Harmful Noise Levels
Origins and Noise Profile

Electrical Machines 90-110 dB (A), High Frequency
Wood cutter 90-110 dB (A), High Frequency
Airport 100-140 dB (A), High Frequency
Gunshot 140-180 dB (C), Burst, High Frequency
Chain saw 90 -110 DB (A), Middle to High Frequency
Ventilation fan 90-110 dB (A), Low Frequency
Diesel engine 90-120 dB (A), Low Frequency



Ear Muff Types

Passive
Hearing Protection

The most common hearing protection is what we call Passive Hearing Protection in headband style or helmet mounted, with different levels of attenuation to fit all needs.

Electronic
Hearing Protection

Electronic Hearing Protectors add additional features and conveniences, for increased comfort and safety such as:

Built-in AM/FM radio.

Connection to MP3 player.

Active Microphones that amplify sounds like voices and alerts, while protecting against harmful noise.

Choosing **The One For You**

The ultimate hearing protection should be worn 100 % of the time exposed to harmful noise. The ear muff you choose, should be comfortable to wear, and result in a sound level around 75-80 dB(A) inside the ear cup. Greater attenuation may lead to feeling of isolation or missing out alarm signals and communication.
The level of protection is indicated on the packaging and/or product. If the noise level is unknown, a thorough analysis must be performed.

EU-Legislation
Overview

A new set of rules for Noise in the Workplace from the European Union, was implemented February 15th, 2006, to protect employees against exposure to noise hazards in the workplace.
The report informs both employer and employee of the responsibility for a healthy work environment, what can be done to reduce the potential hazard, and how you can protect yourself against injury. It also clearly states that an appropriate selection of hearing protection products, must be available to all employees of noisy workplaces.

These are the general guidelines:

Lower Action Level 80 dB (A) * – 135 dB (C) **
In areas where the noise level matches or exceeds this Lower Action Level, all employees must have access to protection.

Upper Action Level 85 dB (A) – 137 dB (C)
In areas where the noise level matches or exceed this Upper Action Level, all employees must use appropriate protection.

Max Exposure Level 87 dB (A) – 140 dB (C)
No worker should – under no circumstance – be exposed to noise levels exceeding this max level. All personnel working in this noise levels must use protection to lower the noise to levels safe within the Lower Action Level.

* dB (A) = representative noise level (8 hour average)
** dB (C) = peak noise level (peaks,less than 1sec duration)

Hellberg®
Since 1962

Introduction

Every day people are being exposed to dangerous noise levels, at work, at school or in their leisure time, leading to irrevocable hearing loss due to poor knowledge or inferior products. But the understanding and awareness of hearing protection and of the legalized standards is increasing all the time and with this comes a well needed boost in the quality demands of hearing protection products.
The challenge of developing products to meet the growing needs and demands of the market is very much enjoyable. It gives us at Hellberg Safety a great opportunity to show our profound knowledge and innovations in product development and design.
Hellberg Safety has well over 40 years of knowledge in hearing conservation and product development and ever since it was founded back in 1962 the goal has been to set the very highest standards in comfort, design and performance.
A hearing protector must be used 100% of the time when exposed to harmful noise. Even a very short time unprotected may lead to severe damage to the hearing and therefore the attraction of removing the hearing protection due to discomfort or feeling of isolation must be eliminated.
We at Hellberg Safety only use high quality materials tested in our own laboratory for optimal sound attenuation performance. The comfort, design appeal and overall user acceptance are independently tested in “real-life” situations, all to ensure you get a product that is comfortable, safe and reliable whatever the environment.
The SECURE™ series offers a complete range of highly comfortable hearing protection solutions no matter the requirements. Choose from various types of hearing protection all in three safety levels, clearly indicated in bright safety colors for easy identification and selection. The slim profile design increases stability and reduces the risk of snagging in confined areas. With its modern eye catching design and glossy finish, SECURE™ appeals to all generations of professional users with high demands of quality, performance and design. And of course, all products are fully compatible with the SAFE™ Visor System by Hellberg Safety® for a seamless combination of head, face and hearing protection.

Features & Benefits

Features	Benefits
SECURE offers a complete range of hearing protection products	Selection is easy providing hearing protection solutions no matter the application.
Durable, innovative and ergonomic design	Places SECURE products at the cutting edge of technology, performance and value for money.
Optimized low clamping force on all models.	Regardless of protection level required, SECURE earmuffs maximize comfort and wear time.
Di-electric	All components are non conductive. This ensures the SECURE products are suitable and safe for use near electricity power sources.
Soft, wide ear cushions with smart "snap-in" system	Maintains a high level of comfort and performance. Easy to replace cost effective earmuff cushions refresh and extend product working life.
Smooth size adjustment	Easy and stable adjustment for optimized comfort and seal.
Unique and innovative "snap in" replaceable soft headband cushion	Enhances headband and overall comfort.
Slim stirrup design	Increased stability. Reduces the risk of getting caught in branches and confined areas.
Light weight	Compliments the ergonomic design, enhancing comfort and wearer acceptance.
Product color coding	Easy identification and performance selection.
High quality impact resistant cups	Increased safety, durability and protection from high quality plastic material.
Can easily be combined with visors from Hellbergs extended range. See; *Hellberg SAFE System*.	Increased safety levels. Suitable for most applications such as industry, construction, foresty and gardening.

Headband

A great companion the entire working day. The durable headband construction with its soft head cushion and easy size adjustment provides a comfortable and perfect fit for all head sizes.

Integration to SAFE Face protection System

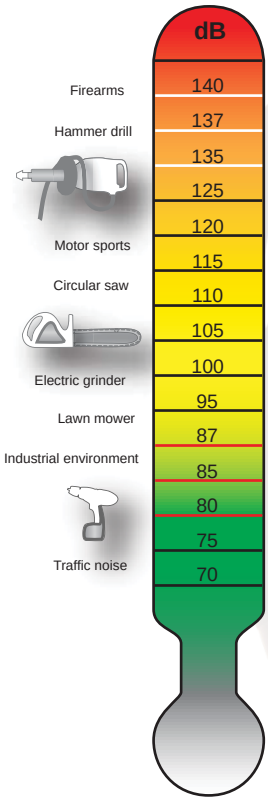
Headband Earmuff - Technical datasheet

SECURE 1, #41001-001
For low-medium noise levels (dB)

SECURE 2, #41002-001
For medium-high noise levels (dB)
Best choice in high frequency noice

SECURE 3, #41003-001
For high noise levels (dB)
Best choice in low frequency noice

The Secure headband style earmuff is a great companion the entire working day. The durable headband construction with its soft head cushion and easy size adjustment provides a comfortable and perfect fit for all head sizes. New “snap-in” ear cushions with minimal sweat retention and soft foam filling increases the high comfort and are easily replaced, for a fresh long-lived product. Easily converted to a Visor-Muff-Combination with Hellbergs face protection system SAFE.



Attenuation data EN 352-1:2002 *Tested by: PZT GmbH, Notified Body: 1974*

SECURE 3 Headband EN 352-1:2002
Weight 277 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	20,5	17,5	24,8	32,7	43,8	36,4	35,9	38,1				
Std. dev	5,4	3,0	2,4	2,6	3,7	3,5	3,1	4,1	34	31	22	33
APV	15,1	14,5	22,4	30,1	40,1	32,9	32,8	34,0				

SECURE 2 Headband EN 352-1:2002
Weight 248 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	18,2	13,6	21,8	30,7	39,4	35,8	37,6	40,0				
Std. dev	5,4	3,4	2,7	3,1	3,0	2,9	2,8	4,8	35	28	18	30
APV	12,8	10,2	19,1	27,6	36,4	32,9	34,8	35,2				

SECURE 1 Headband EN 352-1:2002
Weight 227 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	13,8	10,9	15,6	25,4	31,1	30,8	33,8	33,5				
Std. dev	4,7	2,3	2,2	3,4	3,0	2,3	3,1	2,6	30	23	15	26
APV	9,1	8,6	13,4	22,0	28,1	28,5	30,7	30,9				

Headband Earmuff - Technical datasheet

Material specification

Part	Material
1 - Earcup	ABS
2 - Spacer	ABS
3 – Ear cushion	Polyether and PVC-foil
4 – Foam liner	Polyether
5 - Headband cushion	Polyether
6 - Buckle	POM
7 - Headband	POM

Accessories & Spare parts

VMC - Visor Muff Combination	Description	Part no.	
Secure 2 earmuff with Polycarbonate visor	Secure 2 earmuff complete with polycarbonate visor and attachments for headband	44102-001	
Secure 2 earmuff with Nylon mesh visor	Secure 2 earmuff complete with nylon mesh visor and attachments for headband.	44202-001	
VMC attchment (attachment only)	Attchment for visor mounting on headband style earmuffs.	41090	
Hygiene kit			
Secure 1 & 2 Hygiene kit Secure 3 Hygiene kit	New foam liners, ear cushions and headband cushion. Hygiene kit should be exchanged at least twice per year.	99400 99401	
Fresh sweat absorber	Self-adhesive hygiene pads. Absorb heat and sweat, making the earmuff more comfortable to wear in warm and humid conditions	99900-001	

Helmet mount

The ideal choice for any work that requires head and hearing protection, such as; construction, forestry, heavy industry, mining, oil & gas etc.

Integration to SAFE Face protection System

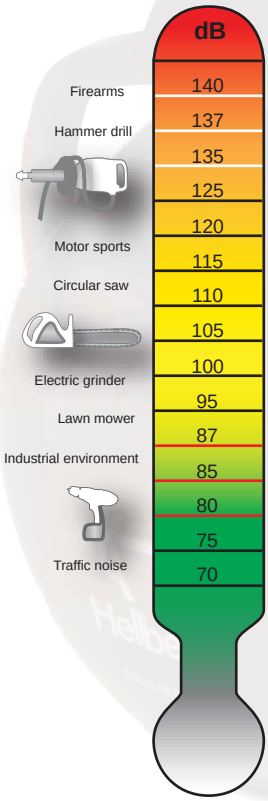
Helmet mount Earmuff - Technical datasheet

SECURE 1, #42001-001
For low-medium noise levels (dB)

SECURE 2, #42002-001
For medium-high noise levels (dB)
Best choice in high frequency noice

SECURE 3, #42003-001
For high noise levels (dB)
Best choice in low frequency noice

The Secure helmet mounted earmuff is the ideal choice for any work that requires head and hearing protection, such as; construction, forestry, heavy industry, mining, oil & gas etc. Its durable construction withstands rough environments and the slim design reduces the risk of snagging in branches or confined areas. Combined with Hellbergs face protection system SAFE you get a full “above-the-shoulder” protection.



Attenuation data EN 352-3:2002 *Tested by: PZT GmbH, Notified Body: 1974*

SECURE 3 Helmet mount EN 352– 3:2002
Weight 296 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	16,4	17,7	23,3	31,8	41,6	36,4	34,2	35,2				
Std. dev	4,3	3,3	4,2	3,5	3,4	3,8	3,9	5,7	32	29	21	31
APV	12,1	14,4	19,3	28,3	38,2	32,6	30,3	29,5				

SECURE 2 Helmet mount EN 352– 3:2002
Weight 264 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	15,0	15,0	21,0	28,1	35,3	34,0	34,0	37,3				
Std. dev	4,1	2,6	3,1	3,5	4,0	3,8	4,5	4,4	31	27	19	29
APV	10,9	12,4	17,9	24,6	31,3	30,2	29,5	32,9				

SECURE 1 Helmet mount EN 352– 3:2002
Weight 252 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	15,0	15,0	14,7	24,7	33,1	26,8	32,2	34,6				
Std. dev	4,2	3,1	2,9	2,9	3,2	2,7	2,8	3,7	27	23	16	25
APV	10,8	11,9	11,8	21,8	29,9	24,1	29,4	30,9				

Approved Helmet Combinations

Helmet	Product	Size S, M, L
IRIS 2	Secure 1,2,3	S, M
Balance HD	Secure 1,2,3	S, M
Protector HC 600	Secure 1,2,3	S, M
Protector HC 300	Secure 1,2,3	S, M

Helmet mount Earmuff - Technical datasheet

Material specification

Part	Material
1 - Earcup	ABS
2 - Spacer	ABS
3 - Cushion	Polyether and PVC-foil
4 - Foam Liner	Polyether
5 - Buckle	POM
6 - Arm	POM
7 - Spring housing	POM 10% gf
8 - Screw for housing	Stainless steel
9 - Slot adaptor	PA 66 10% gf
10 - Steel spring	Stainless spring steel

Accessories & Spare parts

Visor Carrier	Description	Part no.	
Visor carrier	Visor carrier for mounting of Hellbergs visor range on helmet earmuffs. Strd and Low peak versions - see "SAFE visor system"	Strd - 20901-001 Low - 20901-010	
Visor carrier FLEX	Visor carrier for mounting of Hellbergs visor range on helmet earmuffs. The FLEX gives extra seal and fits helmets without brim. Strd and Low peak versions - see "SAFE visor system"	Strd - 20901-501 Low - 20901-510	
Visor post 30mm	Visor post for mounting of visor carrier with out earmuffs - see "SAFE visor system"	29904-001	
Hygiene kit			
Secure 1 & 2 Hygiene kit Secure 3 Hygiene kit	New foam liners and ear cushions. Hygiene kit should be exchanged at least twice per year.	99400 99401	
Fresh sweat absorber	Self-adhesive hygiene pads. Absorb heat and sweat, making the earmuff more comfortable to wear in warm and humid conditions	99900-001	

Neckband

A perfect solution when you need hearing protection in conjunction with baseball style bump caps, helmets without attachment slots or head mounted face protection etc.

Integration to SAFE Face protection System

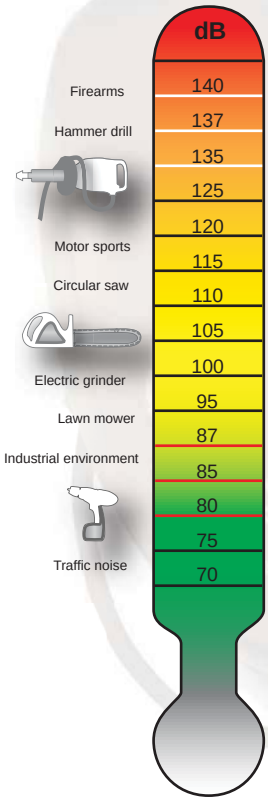
Neckband Earmuff - Technical datasheet

SECURE 1, #43001-001
For low-medium noise levels (dB)

SECURE 2, #43002-001
For medium-high noise levels (dB)
Best choice in high frequency noice

SECURE 3, #43003-001
For high noise levels (dB)
Best choice in low frequency noice

The Secure neckband style earmuff offers great versatility to the user. A perfect solution when you need hearing protection in conjunction with bump caps, helmets without attachment slots or head mounted face protection etc. The strong and flexible neckband balances the weight over the neck, keeping an even and comfortable pressure over the ears.



Attenuation data EN 352-1:2002 *Tested by: PZT GmbH, Notified Body: 1974*

SECURE 3 Neckband EN 352-1:2002
Weight 240 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	18,1	18,7	25,2	32,2	42,6	36,1	28,9	38,0				
Std. dev	5,8	4,3	2,7	3,1	4,1	2,7	3,4	4,5	35	31	22	33
APV	12,3	14,4	22,5	29,1	38,5	33,4	35,5	33,5				

SECURE 2 Neckband EN 352-1:2002
Weight 215 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	17,9	16,4	21,9	29,0	40,2	35,9	36,2	39,0				
Std. dev	5,4	4,1	3,8	4,0	4,9	3,3	5,8	6,1	33	27	19	30
APV	12,5	12,3	18,1	25,0	35,3	32,6	30,4	32,9				

SECURE 1 Neckband EN 352-1:2002
Weight 192 g

Frequency Hz	63	125	250	500	1000	2000	4000	8000	H	M	L	SNR
Mean Attenuation	12,6	11,7	15,9	22,5	30,5	31,2	34,5	33,8				
Std. dev	4,1	2,7	1,9	2,7	2,8	3,5	3,2	4,7	29	23	16	26
APV	8,5	9,0	14,0	19,8	27,7	27,7	31,3	29,1				

Neckband Earmuff - Technical datasheet

Material specification

Component	Material
1 - Earcup	ABS
2 - Spacer	ABS
3 - Cushion	Polyether and PVC-foil
4 – Foam liner	Polyether
5 - Textile headband	Nylon with Velcro
6 - Neckband attachment	POM
7 - Steel neckband	Stainless steel with heat shrinking tube

Accessories & Spare parts

Compatible Face Protection	Description	Part no.	
Browguard/Headgear with polycarbonate visor	Face and brow protection complete with polycarbonate visor. Suitable when you need to protect your face from flying particles or splashes.	65100-001	
Browguard/Headgear only	Suitable when you need to protect your face from flying particles or splashes. Fits Hellbergs large range of visors.	61100-001	
Hygiene kit			
Secure 1 & 2 Hygiene kit Secure 3 Hygiene kit	New foam liners and ear cushions. Hygiene kit should be exchanged at least twice per year.	99400 99401	
Fresh sweat absorber	Self-adhesive hygiene pads. Absorb heat and sweat, making the earmuff more comfortable to wear in warm and humid conditions	99900-001	

Attenuation data - EN352 (SNR)

SECURE1 Headband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	13,8	10,9	15,6	25,4	31,1	30,8	33,8	33,5				
St.dev.	4,7	2,3	2,2	3,4	3,0	2,3	3,1	2,6	30	23	15	26
APV	9,1	8,6	13,4	22,0	28,1	28,5	30,7	30,9				

SECURE2 Headband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	18,2	13,6	21,8	30,7	39,4	35,8	37,6	40,0				
St.dev.	5,4	3,4	2,7	3,1	3,0	2,9	2,8	4,8	35	28	18	30
APV	12,8	10,2	19,1	27,6	36,4	32,9	34,8	35,2				

SECURE3 Headband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	20,5	17,5	24,8	32,7	43,8	36,4	35,9	38,1				
St.dev.	5,4	3,0	2,4	2,6	3,7	3,5	3,1	4,1	34	31	22	33
APV	15,1	14,5	22,4	30,1	40,1	32,9	32,8	34,0				

SECURE1 Neckband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	12,6	11,7	15,9	22,5	30,5	31,2	34,5	33,8				
St.dev.	4,1	2,7	1,9	2,7	2,8	3,5	3,2	4,7	29	23	16	26
APV	8,5	9,0	14,0	19,8	27,7	27,7	31,3	29,1				

SECURE2 Neckband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	17,9	16,4	21,9	29,0	40,2	35,9	36,2	39,0				
St.dev.	5,4	4,1	3,8	4,0	4,9	3,3	5,8	6,1	33	27	19	30
APV	12,5	12,3	18,1	25,0	35,3	32,6	30,4	32,9				

SECURE3 Neckband EN 352-1:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	18,1	18,7	25,2	32,2	42,6	36,1	28,9	38,0				
St.dev.	5,8	4,3	2,7	3,1	4,1	2,7	3,4	4,5	35	31	22	33
APV	12,3	14,4	22,5	29,1	38,5	33,4	35,5	33,5				

SECURE1 Helmet mount EN 352-3:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	15,0	15,0	14,7	24,7	33,1	26,8	32,2	34,6				
St.dev.	4,2	3,1	2,9	2,9	3,2	2,7	2,8	3,7	27	23	16	25
APV	10,8	11,9	11,8	21,8	29,9	24,1	29,4	30,9				

SECURE2 Helmet mount EN 352-3:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	15,0	15,0	21,0	28,1	35,3	34,0	34,0	37,3				
St.dev.	4,1	2,6	3,1	3,5	4,0	3,8	4,5	4,4	31	27	19	29
APV	10,9	12,4	17,9	24,6	31,3	30,2	29,5	32,9				

SECURE3 Helmet mount EN 352-3:2002												
Frequency Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**H**	**M**	**L**	**SNR**
Mean attenuation	16,4	17,7	23,5	31,8	41,6	36,4	34,2	35,2				
St.dev.	4,3	3,3	4,2	3,5	3,4	3,8	3,9	5,7	32	29	21	31
APV	12,1	14,4	19,3	28,3	38,2	32,6	30,3	29,5				

dB-meter

For high noise levels (dB)
Best choise in low frequency noise

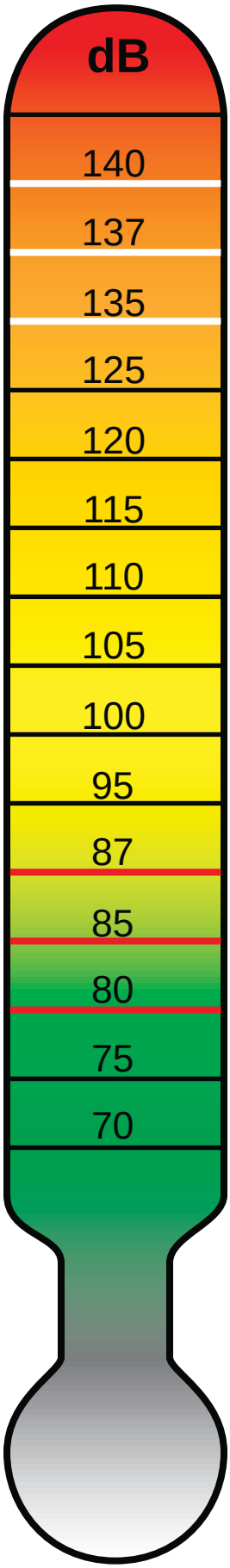
SECURE 3

For medium and high noise levels (dB)
Best choise in high frequency noice

SECURE 2

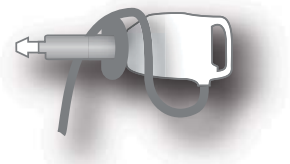
For low and medium noise levels (dB)

SECURE 1



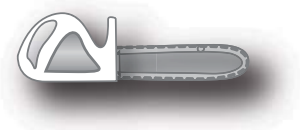
Firearms

Hammer drill



Motor sports

Circular saw



Electric grinder

Lawn mower

Industrial environment

Traffic noise

Lower Action Level 80 dB (A) * – 135 dB (C) **
In areas where the noise level matches or exceeds this Lower Action Level, all employees must have access to protection.

Upper Action Level 85 dB (A) – 137 dB (C)
In areas where the noise level matches or exceed this Upper Action Level, all employees must use appropriate protection.

Max Exposure Level 87 dB (A) – 140 dB (C)
No worker should – under no circumstance – be exposed to noise levels exceeding this max level. All personnel working in this noise levels must use protection to lower the noise to levels safe within the Lower Action Level.

* dB (A) = Equivalent noise level (8 hour average)

** dB (C) = Peak noise level (peak duration less than 1sec)

SAFE visor system by Hellberg Safety

Now there is a solution for everyone!

The SAFE visor system offers customized visors solutions for applications such as forestry, gardening, agricultural, construction, joinery, industry, foundry, chemical handling, and electrical work.
The uniform design makes it possible to mount most of the visors on any of the Hellberg SAFE visor carriers for headband earmuffs, safety helmet or browguard
All visors are well proven in real life, tested and approved to applicable standards, and with the Hellberg selection chart it is easy to choose the right visor for your need.

Features & Benefits

Feature	Benefit
SAFE visor system offers a complete range of face protection products.	Providing face protection solutions no matter your need.
Uniform multi-fit design	Extended possibilities to fit the visors to any Hellberg SAFE visor carrier.
The Hellberg selection chart makes it easy to choose the right visor for your application.	

Hellberg Safety AB has been manufacturing and developing professional safety products since 1962 and has profound competence and knowledge in hearing- and face protection.

Visor system for safety helmets

Hellberg provides a seamless combination of hearing- , face- and head-protection. The range of 4 visor carriers, Standard and FLEX, and multiple choices of slot-adaptors adds compatibility to most safety helmets on the market.
The Standard carrier with its robust frame and light weight make a perfect application for the construction-, industry- or machinery worker.
The FLEX carrier is developed to prevent rain, dust and other particles from falling in to the wearer's eyes. Equipped with an extra rubber part that seals off the gap between carrier and helmet brim, it's the no 1 choice for workers in areas like forestry, heavy industry and mining.

VMC – Visor Muff Combination

The VMC system mounts quick and easy to any Hellberg headband-style hearing protection. The comfortable neck strap holds the protection firmly in place. Perfect for working outdoors, brush cutting, gardening or landscaping.

Browguard

The Hellberg browguard is a face protection solution for when you don't need a safety helmet or hearing protection but require protection from spray or splashes. Heavy-duty design, still light weight and comfortable and fully adjustable to various head sizes.

The forestry workers best friend!

Hellberg's etched meshvisor has recently attracted a lot of attention in several forestry magazines. The unique hexagon etching provides up to 85% light transmission. This means a safer and more comfortable work, plus it gives you a few extra hours in the forest without being subject to safety risks late afternoons in dim light.

Hellberg visor selection chart

Choose a visor for your need


20912-001


20915-001


20923-001


20930-001


20940-001


20939-001


20933-001


20967-001


20931-001


20942-001

	VISOR						CARRIER			APPLICATIONS									
Part No	Material	Tested to EN	ANSI	Lenght	Thickness	Light-transmission				Brush-cutting	Forestry	Grinding	Construction	Radient heat/ Foundry	Electrial work <400V	Chemical splash	Molten metal splash	Sunshade
20912	Steel mesh	EN 1731	Z87	200mm		67-70%	✓	✓	✓	✓	✓							
20915	Etched mesh**	EN 1731	Z87	200mm		82-85,5%	✓	✓	✓	✓	✓							
20923	Nylon mesh	EN 1731	Z87	200mm		58-61%	✓	✓	✓	✓	✓							
20930	PC Clear	EN 166/1B9 CE	Z87+	200mm	1mm		✓	✓	✓	✓		✓	✓				✓	
20940	PC Clear anti-fog	EN 166/1BN9 CE	Z87+	250mm	1mm		✓	✓	✓	✓		✓	✓				✓	
20939	PC Clear chinguard	EN 166/1B9 CE		220mm	1mm		✓	✓	✓	✓		✓	✓				✓	
20933	Acetate Clear anti-fog	EN 166/1FN CE		200mm	1mm			✓	✓							✓		
20967	PC Clear electric arc*	EN 166/1B89 CE		200mm	1,5mm			✓	✓						✓		✓	
20931	PC shade DIN2***	EN 166/5-2,5 1B9 CE		200mm	1mm		✓	✓	✓	✓		✓						✓
20942	Goldplated	EN 166/4-6 1B CE		250mm	1mm			✓	✓					✓				

Always add prefix -001 to the part no when ordering.

PC = Polycarbonate
**protection against electric arc's up to 400 volts*
***the unique hexagon shaped etching provides a light transmission of up to 25% more than a regular woven mesh visor.*
****Must not be used when welding.*

SAFE visor system by Hellberg Safety

Part no:	20912-001
Type of visor:	Steel mesh
Light transmission:	67-70%
Length:	185mm
Weight:	52g
Approvals and markings:	EN 1731/S CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Forestry work, grass/bush trimming etc.

Part no:	20915-001
Type of visor:	Etched mesh
Light transmission:	82-85,5%
Length:	185mm
Weight:	42g
Approvals and markings:	EN 1731/S CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Forestry work, grass/bush trimming etc.

Part no:	20923-001
Type of visor:	Nylon mesh
Light transmission:	58-61%
Length:	185mm
Weight:	36g
Approvals and markings:	EN 1731/S CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Forestry work, grass/bush trimming etc.

SAFE visor system by Hellberg Safety

Part no:	20930-001
Type of visor:	Polycarbonate clear
Length:	200mm
Thickness:	1mm
Weight:	74g
Approvals and markings:	EN 166/1B9 CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Grass/bush trimming, grinding, construction, molten metal, industry

Part no:	20940-001
Type of visor:	Polycarbonate clear, antifog
Length:	250mm
Thickness:	1mm
Weight:	96g
Approvals and markings:	EN 166/1BN9 CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Grass/bush trimming, grinding, construction, molten metal, industry

Part no:	20939-001
Type of visor:	Polycarbonate clear, chinguard
Length:	220mm
Thickness:	1mm
Weight:	110g
Approvals and marknings:	EN 166/1B9 CE
Fits following carrier:	-mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Grass/bush trimming, grinding, construction, molten metal, industry

SAFE visor system by Hellberg Safety

Part no:	20933-001
Type of visor:	Acetate clear, antifog
Length:	200mm
Thickness:	1mm
Weight:	90g
Approvals and markings:	EN 166/1FN CE
Fits following carrier:	-mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Chemical splashes, industry

Part no:	20967-001
Type of visor:	Polycarbonate clear, resistance to electric arc
Length:	200mm
Thickness:	1,5mm
Weight:	116g
Approvals and markings:	EN 166/1B89 CE
Fits following carrier:	-mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Electrical work <400V, molten metal

Part no:	20931-001
Type of visor:	Polycarbonate tinted, DIN2
Length:	200mm
Thickness:	1mm
Weight:	74g
Approvals and markings:	EN 166/5-2,5 1B9 CE
Fits following carrier:	-mounting on headband -mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Grass/bush trimming, sunshade, grinding,

Part no:	20942-001
Type of visor:	Polycarbonate tinted DIN2, goldplated
Length:	250mm
Thickness:	1mm
Weight:	98g
Approvals and markings:	EN 166/4-6 1B CE
Fits following carrier:	-mounting on safety helmet -mounting on browguard
Suitable for work/applications:	Radiant heat, foundry


SECURE™
PROFESSIONAL HEARING PROTECTION
Hellberg®
Since 1962