

3M Personal Safety Division
3M™ Peltor™ X Series



PELTOR™



3M™ PELTOR's highest
levels of Comfort, Durability
and Protection

The Power to Protect Your World.™



WE LIVE IN A LOUD WORLD

Our key aim is to reduce the number of noise induced hearing loss cases in the workplace through simple and innovative solutions. The development of the new 3M™ Peltor™ X Series ear muffs are our next step to fulfill this ambitious goal. Protection, Comfort and Design are the key pillars to our product development programme. The 3M™ Peltor™ X Series ear muffs are based on groundbreaking attenuation techniques never seen before for unparalleled attenuation with a stream-lined design. With our vast experience spanning over 60 years in developing innovative hearing protectors we have taken comfort, style and design to the next level in developing the attractive new 3M™ Peltor™ X Series ear muffs to meet the needs of extensive industrial application.

The new 3M™ Peltor™ X Series ear muffs offer a wide range of attenuation levels that helps meet majority of industrial application.

3M™ Peltor™ X1 ear muffs (SNR 27 dB)

For protection against light industry noise, lawn mowing, power drilling etc.

3M™ Peltor™ X2 ear muffs (SNR 31 dB)

For protection against moderate to high noise levels including many industrial application, roadworks, construction etc.

3M™ Peltor™ X3 ear muffs (SNR 33 dB)

For protection against noise in forestry industry, airport, heavy engineering etc.

3M™ Peltor™ X4 ear muffs (SNR 33 dB in a slim cup)

For use against high noise levels in a wide range of industries.

3M™ Peltor™ X5 ear muffs (SNR 37 dB)

For use against extremely high noise environment which often requires double protection, e.g. mining, quarrying, paper mills etc.



The Physical Agents (Noise) Directive 2003/10/EC requires employers to make hearing protectors available for use when the noise level in the workplace is as low as 80dB(A). The use of hearing protectors is rigorously enforced when the noise level reaches 85dB(A) or above.

The new innovative design coupled with increased comfort featured in the Peltor X Series ear muffs helps the user to wear them at all times when exposed to the noise hazard.



The importance
of wearing your hearing protectors

100%

of exposure time



Safety

In order to be effective, a hearing protector should be used 100% of the time in noisy environments. Even taking it off for a short time dramatically reduces its effectiveness and greatly increases risk of hearing damage.

99% usage – Just five minutes carelessness per day significantly reduces the effect of the hearing protector.

90% usage – Virtually no protection.

DESIGN

- » Protected wire head band - building on the success design of the current 3M™ Peltor™ Optime range
- » Light-weight dual mould cups with maximum space inside to help minimise heat and moisture build-up
- » Integrated design for more robustness
- » Colour coded for ease of selection
- » Electrical insulated headband
- » Easy to clean

COMFORT

- » Easy to adjust the headband
- » Wire headband with constant pressure over prolonged wearing periods
- » Twin headband design helps reduce heat build-up, provides good fit and balance



PROTECTION

- » Streamlined cups without compromising attenuation
- » Compatible with a range of 3M eyewear and respirators (validated by internal testing)
- » New smart sealing ring

3M™ PELTOR's highest levels of Comfort, Durability and Protection

3M™ Peltor™ X Series – A new Standard

DESIGN, COMFORT and ATTENUATION TECHNIQUES.

3M developed the new 3M™ Peltor™ X Series ear muffs based on these three pillars. In the addition to simplicity of use and ease of identification the new range ear muffs are now the new reference point in terms of over-the-ear protection.


Our customers are a constant inspiration to help develop new products driving unmatched user experience.



3M™ Peltor™ Optime: A market reference
3M™ PELTOR's highest levels of Comfort, Durability and Protection

3M Hearing Protection Solutions made innovately easy



SNR 27 dB 

Standard attenuation, slim design 3M™ Peltor™ X1 ear muffs



Enter the world of the new 3M™ Peltor™ X Series ear muffs with the 3M™ Peltor™ X1 ear muffs.

- » Slim-line cups for good attenuation that meets the needs of most industrial application. SNR 27dB.
- » Lightweight design.
- » Simple colour coding: green indicating first level of attenuation within this range.

Plus all other features around protection, comfort and design making it highly versatile.

3M™ Peltor™ X1A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,6	11,9	15,4	24,5	34,3	32,8	37,4	37,4
Standard Deviation (dB)	3,6	2,0	2,6	2,6	2,3	3,3	2,5	3,8
Assumed Protection (dB)	12,0	9,9	12,8	22,0	31,9	29,5	34,9	33,5

SNR = 27 dB H = 32 dB M = 24 dB L = 16 dB

3M™ Peltor™ X1P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14,7	11,4	15,8	24,5	32,5	32,0	35,6	35,1
Standard Deviation (dB)	3,3	3,7	2,4	2,9	2,9	3,7	2,5	4,9
Assumed Protection (dB)	11,4	7,7	13,4	21,6	29,7	28,3	33,1	30,1

SNR = 26 dB H = 30 dB M = 23 dB L = 15 dB



Bo Hammar about 3M™ Peltor™ X1 and design




"The new range, 3M™ Peltor™ X, are nice and soft to wear."

"I remain in constant but moderate noise environment in my work place. I know just a few brands of hearing protectors on the market but I have only ever used 3M™ Peltor™ Optime. I prefer to continue using hearing protectors from 3M™ Peltor™. The new range, 3M™ Peltor™ X, are nice and soft to wear. I really like the design and the colour. It's an added bonus that they can be used together with my glasses. I like all models."

Bo Hammar, Steel & Silver AB
Responsible for health/safety/environment



SNR 31 dB 

Medium attenuation, slim design

3M™ Peltor™ X2 ear muffs



3M™ Peltor™ X2 ear muffs offer the same characteristics as our X1 version with the addition of the following benefits:

- » Yellow colour coding to help select the correct product for moderate to high attenuation.
- » Improved attenuation, SNR 31dB.

3M™ Peltor™ X2A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	19,0	14,1	22,2	31,1	39,7	36,6	37,0	37,9
Standard Deviation (dB)	4,5	2,2	2,1	2,7	3,2	3,2	3,7	3,4
Assumed Protection (dB)	14,5	11,9	20,1	28,4	36,6	33,5	33,3	34,5

SNR = 31 dB H = 34 dB M = 29 dB L = 20 dB


3M™ Peltor™ X2P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,9	13,8	20,2	30,0	37,7	35,4	34,9	35,8
Standard Deviation (dB)	4,6	2,8	2,1	3,2	2,6	3,0	3,0	4,7
Assumed Protection (dB)	11,3	11,0	18,1	26,8	35,1	32,4	31,9	31,1

SNR = 30 dB H = 33 dB M = 28 dB L = 19 dB





SNR 33 dB 

High attenuation, low weight 3M™ Peltor™ X3 ear muffs



The 3M™ Peltor™ X3 are the first of our new ear muffs to utilise a newly designed spacer to help improve attenuation without the need for double cup design thus increasing the space inside the cup for greater comfort and wearability.

What makes the X3 version so special?

- » High attenuation from single cup design, SNR 33dB.
- » Extremely light-weight and slim compared with similar attenuation products.
- » Colour coded red for ease of identification and usage in a high noise environment.

New design brings new benefits which includes comfort and protection.

3M™ Peltor™ X3A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21,5	22,8	25,1	27,0	40,0	35,8	38,5	38,9
Standard Deviation (dB)	3,0	2,1	3,1	1,7	2,8	2,2	2,7	2,9
Assumed Protection (dB)	18,4	20,7	22,0	25,4	37,2	33,6	35,8	35,9

SNR = 33 dB H = 35 dB M = 30 dB L = 25 dB

3M™ Peltor™ X3P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18,9	20,0	24,2	27,4	40,1	36,0	39,7	37,0
Standard Deviation (dB)	3,3	2,8	1,7	2,1	3,0	3,0	3,5	3,7
Assumed Protection (dB)	15,6	17,2	22,6	25,3	37,1	33,1	36,2	33,3

SNR = 32 dB H = 34 dB M = 30 dB L = 24 dB



Zaid Gabro about 3M™ Peltor™ X and protection




Zaid Gabro, Proplate
A young Swedish employer

"3M™ Peltor™ X Series, give me great comfort and the most important, ideal protection."

"At my work, the noise is constantly very high. I'm aware of the need of hearing protectors and I use them all the time at work. I prefer the heavy duty like the X3 version from the new 3M™ Peltor™ X Series, they give me great comfort and the most important, ideal protection. The ear muffs are cool, they are not so heavy and feel good to wear all day. The design is okay, but that is not so important, the main reason for me to choose them is the good protection. The extra-slim muffs (X4) feel so light yet so effective which make you wonder whether they really do protect! If they do, I want to try them."



SNR 33 dB 

Extremely slim, high performance 3M™ Peltor™ X4 ear muffs



Historically higher attenuating ear muffs meant large and bulky cups but not anymore. The Peltor™ X4 ear muffs version can attenuate sound by as much as 33 dB whilst maintaining a sleek, low profile aesthetically pleasing design.

- » Special colour coding for ease of selection.
- » Extremely slim and light-weight cups provide excellent compatibility when used with other 3M personal protective equipment products.
- » Fluorescent yellow-green colour ensures good

visibility when working outdoor thus helping improve safety.

- » New specially formulated damping pads and innovative foam contained in sealing ring provide excellent acoustic protection, particularly against sounds dominated by low frequencies.

3M™ Peltor™ X4A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	19,6	17,8	22,1	30,6	39,5	37,3	43,8	42,1
Standard Deviation (dB)	4,1	2,3	2,5	1,8	2,9	4,1	2,8	4,0
Assumed Protection (dB)	15,5	15,5	19,6	28,8	36,6	33,2	41,1	38,2

SNR = 33 dB H = 36 dB M = 30 dB L = 22 dB


3M™ Peltor™ X4P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16,6	16,8	21,8	30,6	40,1	36,7	43,1	41,9
Standard Deviation (dB)	3,6	2,5	2,1	1,9	2,3	3,7	2,7	4,7
Assumed Protection (dB)	12,9	14,3	19,7	28,7	37,8	32,9	40,4	37,2

SNR = 32 dB H = 36 dB M = 30 dB L = 21 dB





SNR 37 dB 

Unparalleled attenuation without the need for double protection involving ear muffs and ear plugs.

3M™ Peltor™ X5 ear muffs



New ground breaking technology that has helped achieve exceptionally high performance.

This technology is applied not only to headband version but also to helmet mounted ear muffs.

- » Unique attenuation as a result of optimum combination of specially formulated foam technology featured in the cups and sealing rings together with the spacer and cup design.
- » Despite the larger cups the product remains relatively lightweight with excellent balance and wearer comfort.
- » Colour coded black for ease of use in extremely high noise environment.

3M™ Peltor™ X5A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23,0	22,3	28,8	39,7	44,2	39,8	43,0	40,2
Standard Deviation (dB)	3,1	2,4	2,4	2,7	3,4	4,6	2,8	2,9
Assumed Protection (dB)	19,8	19,9	26,4	37,0	40,9	35,2	40,2	37,3

SNR = 37 dB H = 37 dB M = 35 dB L = 27 dB

3M™ Peltor™ X5P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,4	22,0	26,9	38,2	43,5	38,7	41,0	40,4
Standard Deviation (dB)	3,3	3,1	2,2	2,8	3,4	4,5	2,5	3,3
Assumed Protection (dB)	17,1	18,9	24,7	35,4	40,2	34,2	38,5	37,2

SNR = 36 dB H = 36 dB M = 34 dB L = 26 dB



Magnus Forsblom about 3M™ Peltor™ X and comfort



"I don't care about specific brands, I just want the best. The best? It's 3M™ Peltor™!"

Magnus Forsblom, Astra Zeneca
Responsible for PPE (Personal Protection Equipment)
at a factory with 1700 workers.

"The noise at my work is not constant but intermittent and gets higher around specific machines at the industrial floor". Every single aspect of protection and safety is very important to me. We have specific demands apart from comfort, for example that the earmuffs are easy to clean. It is also very important that there is no risk for loose parts to fall from the earmuffs into the production line.

3M™ Peltor™ X are comfortable to wear, I feel no pressure at my head and they are not too tight. They are durable and are easy to clean frequently. I tried the 3M™ Peltor™ X2 muffs, they are easy to adjust, has good solid design, look and feel good on – factors that make them very appealing and easier to use more regular.

Compared to other earmuffs, it's like night and day.

I don't care about specific brands, I just want the best. The best? It's 3M™ Peltor™!"



A market Reference

Optime – A market reference

The 3M™ Peltor™ Optime series has been viewed as a reference point in the hearing protection industry since 2002. The range includes three earmuffs, Optime™ I, Optime™ II and Optime™ III. From low-weight flexible protection to high performance hearing protection developed for use in extremely noisy environment.

3M™ Peltor™ Optime offers very versatile protection meeting the needs of majority of workplace application. The wide comfortable sealing rings are filled with a unique combination of liquid and foam, which gives effective sealing and low contact pressure, ensuring good comfort even during long periods of use.



3M™ Peltor™ Optime: A market reference
3M™ PELTOR's highest levels of Comfort, Durability and Protection



3M™ Peltor™ Optime ear muffs

The 3M™ Peltor™ Optime I ear muffs feature a lightweight low profile design which helps improve comfort and wearability. The large space inside the cups helps reduce moisture and heat build-up. These products provide ideal protection that meets the needs of majority of industrial workplace noise hazards. They can also be used for protection against noise from outdoor sports and leisure activities.



Optime I™ - H510A ear muffs - standard headband



Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.1	11,6	18,7	27,5	32,9	33,6	36,1	36,8
Standard Deviation (dB)	4,0	4,3	3,6	2,5	2,7	3,4	3,0	3,8
Assumed Protection (dB)	10,1	7,3	15,1	25,0	30,1	30,2	33,2	32,0

SNR = 27 dB H = 32 dB M = 25 dB L = 15 dB

Optime I™ - H510P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	13,1	11,2	13,4	26,9	33,9	32,0	33,5	36,9
Standard Deviation (dB)	2,3	2,0	1,9	1,8	1,9	2,4	1,8	1,8
Assumed Protection (dB)	10,8	9,2	11,5	25,1	31,9	29,6	31,7	35,1

SNR = 26 dB H = 32 dB M = 23 dB L = 15 dB

3M™ Peltor™ Optime II have been developed for demanding noise environments particularly where the sound levels are dominated by mid to low frequencies.

The Peltor Optime II helps meet the needs of a wide range of industrial workplace noise including heavy engineering, construction, manufacturing, airport, for example.



Optime II™ - H520A ear muffs - standard headband



Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16,2	14,6	20,2	32,5	39,3	36,4	34,4	40,2
Standard Deviation (dB)	1,9	1,6	2,5	2,3	2,1	2,4	4,0	2,3
Assumed Protection (dB)	14,3	13,0	17,7	30,2	37,2	34,0	30,4	37,9

SNR = 31 dB H = 34 dB M = 29 dB L = 20 dB

Optime II™ - H520P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,1	14,1	19,4	32,0	39,9	36,2	35,4	39,2
Standard Deviation (dB)	2,1	2,3	2,7	2,7	2,4	2,6	4,4	2,6
Assumed Protection (dB)	13,0	11,8	16,7	29,3	37,5	33,6	31,0	36,6

SNR = 30 dB H = 34 dB M = 28 dB L = 19 dB

3M™ Peltor™ Optime III are designed for protection against high noise levels particularly dominated by low frequencies. Example of application include mining, quarrying, paper mills, gas turbine etc. The product features a double cup design that helps improve attenuation at low frequencies and minimise resonance inside the cup.



Optime III™-H540A ear muffs - standard headband



Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,8	17,4	24,7	34,7	41,4	39,3	47,5	42,6
Standard Deviation (dB)	3,1	2,1	2,6	2,0	2,1	1,5	4,5	2,6
Assumed Protection (dB)	17,7	15,3	22,1	32,7	39,3	37,8	43,0	40,0

SNR = 35 dB H = 40 dB M = 32 dB L = 23 dB

Optime III™-H540P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,1	17,1	24,5	34,8	40,2	39,6	46,7	43,1
Standard Deviation (dB)	3,3	2,3	2,8	2,2	2,0	1,8	4,2	2,5
Assumed Protection (dB)	16,8	14,8	21,7	32,6	38,2	37,8	42,5	40,6

SNR = 34 dB H = 40 dB M = 32 dB L = 22 dB

3M™ Peltor™ X1 ear muffs

X1A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,6	11,9	15,4	24,5	34,3	32,8	37,4	37,4
Standard Deviation (dB)	3,6	2,0	2,6	2,6	2,3	3,3	2,5	3,8
Assumed Protection (dB)	12,0	9,9	12,8	22,0	31,9	29,5	34,9	33,5

SNR = 27 dB H = 32 dB M = 24 dB L = 16 dB

X1P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14,7	11,4	15,8	24,5	32,5	32,0	35,6	35,1
Standard Deviation (dB)	3,3	3,7	2,4	2,9	2,9	3,7	2,5	4,9
Assumed Protection (dB)	11,4	7,7	13,4	21,6	29,7	28,3	33,1	30,1

SNR = 26 dB H = 30 dB M = 23 dB L = 15 dB

3M™ Peltor™ X2 ear muffs

X2A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	19,0	14,1	22,2	31,1	39,7	36,6	37,0	37,9
Standard Deviation (dB)	4,5	2,2	2,1	2,7	3,2	3,2	3,7	3,4
Assumed Protection (dB)	14,5	11,9	20,1	28,4	36,6	33,5	33,3	34,5

SNR = 31 dB H = 34 dB M = 29 dB L = 20 dB

X2P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,9	13,8	20,2	30,0	37,7	35,4	34,9	35,8
Standard Deviation (dB)	4,6	2,8	2,1	3,2	2,6	3,0	3,0	4,7
Assumed Protection (dB)	11,3	11,0	18,1	26,8	35,1	32,4	31,9	31,1

SNR = 30 dB H = 33 dB M = 28 dB L = 19 dB

3M™ Peltor™ X3 ear muffs

X3A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	21,5	22,8	25,1	27,0	40,0	35,8	38,5	38,9
Standard Deviation (dB)	3,0	2,1	3,1	1,7	2,8	2,2	2,7	2,9
Assumed Protection (dB)	18,4	20,7	22,0	25,4	37,2	33,6	35,8	35,9

SNR = 33 dB H = 35 dB M = 30 dB L = 25 dB

X3P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18,9	20,0	24,2	27,4	40,1	36,0	39,7	37,0
Standard Deviation (dB)	3,3	2,8	1,7	2,1	3,0	3,0	3,5	3,7
Assumed Protection (dB)	15,6	17,2	22,6	25,3	37,1	33,1	36,2	33,3

SNR = 32 dB H = 34 dB M = 30 dB L = 24 dB

3M™ Peltor™ X4 ear muffs

X4A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	19,6	17,8	22,1	30,6	39,5	37,3	43,8	42,1
Standard Deviation (dB)	4,1	2,3	2,5	1,8	2,9	4,1	2,8	4,0
Assumed Protection (dB)	15,5	15,5	19,6	28,8	36,6	33,2	41,1	38,2

SNR = 33 dB H = 36 dB M = 30 dB L = 22 dB

X4P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16,6	16,8	21,8	30,6	40,1	36,7	43,1	41,9
Standard Deviation (dB)	3,6	2,5	2,1	1,9	2,3	3,7	2,7	4,7
Assumed Protection (dB)	12,9	14,3	19,7	28,7	37,8	32,9	40,4	37,2

SNR = 32 dB H = 36 dB M = 30 dB L = 21 dB

3M™ Peltor™ X5 ear muffs

X5A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	23,0	22,3	28,8	39,7	44,2	39,8	43,0	40,2
Standard Deviation (dB)	3,1	2,4	2,4	2,7	3,4	4,6	2,8	2,9
Assumed Protection (dB)	19,8	19,9	26,4	37,0	40,9	35,2	40,2	37,3

SNR = 37 dB H = 37 dB M = 35 dB L = 27 dB

X5P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,4	22,0	26,9	38,2	43,5	38,7	41,0	40,4
Standard Deviation (dB)	3,3	3,1	2,2	2,8	3,4	4,5	2,5	3,3
Assumed Protection (dB)	17,1	18,9	24,7	35,4	40,2	34,2	38,5	37,2

SNR = 36 dB H = 36 dB M = 34 dB L = 26 dB

3M™ Peltor™ optime™ I ear muffs

Optime™ I - H510A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14.1	11,6	18,7	27,5	32,9	33,6	36,1	36,8
Standard Deviation (dB)	4,0	4,3	3,6	2,5	2,7	3,4	3,0	3,8
Assumed Protection (dB)	10,1	7,3	15,1	25,0	30,1	30,2	33,2	32,0

SNR = 27 dB H = 32 dB M = 25 dB L = 15 dB

Optime™ I - H510P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	13,1	11,2	13,4	26,9	33,9	32,0	33,5	36,9
Standard Deviation (dB)	2,3	2,0	1,9	1,8	1,9	2,4	1,8	1,8
Assumed Protection (dB)	10,8	9,2	11,5	25,1	31,9	29,6	31,7	35,1

SNR = 26 dB H = 32 dB M = 23 dB L = 15 dB

Optime™ I - H510B ear muffs - neckband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	13,3	10,9	17,1	25,4	31,5	32,6	36,3	34,8
Standard Deviation (dB)	4,1	3,5	2,8	1,8	2,6	4,3	3,4	3,6
Assumed Protection (dB)	9,1	7,3	14,3	23,6	28,9	28,3	32,9	31,1

SNR = 26 dB H = 30 dB M = 24 dB L = 15 dB

Optime™ I - H510F ear muffs - foldable headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	14,6	12,2	18,7	27,1	32,9	35,0	36,5	34,4
Standard Deviation (dB)	3,8	3,4	3,2	3,0	2,1	4,0	2,9	3,9
Assumed Protection (dB)	10,8	8,7	15,5	24,1	30,8	31,0	33,6	30,6

SNR = 28 dB H = 32 dB M = 25 dB L = 16 dB

3M™ Peltor™ optime™ II ear muffs

Optime™ II - H520A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16,2	14,6	20,2	32,5	39,3	36,4	34,4	40,2
Standard Deviation (dB)	1,9	1,6	2,5	2,3	2,1	2,4	4,0	2,3
Assumed Protection (dB)	14,3	13,0	17,7	30,2	37,2	34,0	30,4	37,9

SNR = 31 dB H = 34 dB M = 29 dB L = 20 dB

Optime™ II - H520P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,1	14,1	19,4	32,0	39,9	36,2	35,4	39,2
Standard Deviation (dB)	2,1	2,3	2,7	2,7	2,4	2,6	4,4	2,6
Assumed Protection (dB)	13,0	11,8	16,7	29,3	37,5	33,6	31,0	36,6

SNR = 30 dB H = 34 dB M = 28 dB L = 19 dB

Optime™ II - H520B ear muffs - neckband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	15,9	14,7	20,4	32,3	39,6	36,2	35,4	40,2
Standard Deviation (dB)	2,1	1,8	2,6	2,5	2,2	2,4	4,2	2,4
Assumed Protection (dB)	13,8	12,9	17,8	29,8	37,4	33,8	31,2	37,8

SNR = 31 dB H = 34 dB M = 29 dB L = 20 dB

Optime™ II - H520F ear muffs - foldable headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	16,1	14,5	20,3	32,6	39,1	35,1	34,7	39,8
Standard Deviation (dB)	2,0	1,8	2,6	2,4	2,5	2,3	2,7	2,5
Assumed Protection (dB)	14,1	12,7	17,7	30,2	36,6	32,8	32,0	37,3

SNR = 31 dB H = 34 dB M = 28 dB L = 19 dB

3M™ Peltor™ optime™ III ear muffs

Optime™ III - H540A ear muffs - standard headband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,8	17,4	24,7	34,7	41,4	39,3	47,5	42,6
Standard Deviation (dB)	3,1	2,1	2,6	2,0	2,1	1,5	4,5	2,6
Assumed Protection (dB)	17,7	15,3	22,1	32,7	39,3	37,8	43,0	40,0

SNR = 35 dB H = 40 dB M = 32 dB L = 23 dB

Optime™ III - H540P3 ear muffs - helmet mounted version

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,1	17,1	24,5	34,8	40,2	39,6	46,7	43,1
Standard Deviation (dB)	3,3	2,3	2,8	2,2	2,0	1,8	4,2	2,5
Assumed Protection (dB)	16,8	14,8	21,7	32,6	38,2	37,8	42,5	40,6

SNR = 34 dB H = 40 dB M = 32 dB L = 22 dB

Optime™ III - H540B ear muffs - neckband

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	20,9	17,5	24,5	34,5	41,4	39,5	47,3	42,0
Standard Deviation (dB)	3,3	2,3	2,7	2,0	2,2	2,0	4,4	2,8
Assumed Protection (dB)	17,6	15,2	21,8	32,5	39,2	37,5	42,9	39,2

SNR = 35 dB H = 40 dB M = 32 dB L = 23 dB

3M™ PELTOR's highest levels of Comfort, Durability and Protection

3M™ Peltor's most advanced technology creating our highest levels of Comfort, Durability and Protection.



A market Reference

3M™ Peltor™ Optime ear muffs have been a reference in the hearing protector industry since 2002.

X1 (SNR 27 dB)

For protection against light industry noise, lawn mowing, power drilling etc.



X2 (SNR 31 dB)

For protection against moderate to high noise levels including many industrial application, roadworks, construction etc.



X3 (SNR 33 dB)

For protection against noise in forestry industry, airport, heavy engineering etc.



X5 (SNR 37 dB)

For use against extremely high noise environment which often requires double protection, e.g. mining, quarrying, paper mills, gas turbines etc.



X4 (SNR 33 dB in a slim cup)

For use against high noise levels in a wide range of industries



Lawnmowing



Riveting



Demolition



Jet take off

80

90



100



110



+ 120

130

140

dB(A)



3M™ Peltor™ Optime™ I (SNR 27 dB)

Ideal for protection against low to moderate noise levels in a wide range of industrial or leisure activities.



3M™ Peltor™ Optime™ II (SNR 31 dB)

For protection against moderate to high noise levels - particularly suited for noise dominated by high and medium frequencies.



3M™ Peltor™ Optime™ III (SNR 35 dB)

Designed for protection against high noise levels - particularly those dominated by low frequencies.

Hearing Protection Solutions made Innovatively Easy



detection

3M™ is harnessing a chain reaction of new ideas that deliver innovatively easy solutions to complex hearing protection challenges. Detecting and monitoring noise exposures as an integral part of risk assessment in your work environment is the first step in protecting your workers.



protection

Select appropriate 3M hearing protectors that employees are motivated to wear. 3M has a broad selection of hearing protectors for a wide range of environments.



validation

3M E-A-Rfit™ Validation System brings the science of fit to help build confidence in your employee's level of hearing protection as part of training and motivation.

Training and Education

3M can help to educate, motivate and train safety officers and workers around all aspects of the hearing risk.

www.3M.eu/peltorx

3M™ Peltor™ is a world leader in the field of hearing protectors. Over 50 years of developing and manufacturing hearing protectors has put us at the forefront of safety, comfort, protection and aesthetics. The 3M™ Peltor™ hearing protectors are designed with the worker in mind.

Our key aim is to minimize the number of reported case of noise induced hearing loss in the world. Our stated objective is to develop hearing protectors that are comfortable, wearer acceptable and worn for the entire duration of noise exposure period. Innovative design, wide range of attenuation together with increased comfort make it more wearer acceptable.

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