Technical Data Sheet
Revision 2, October 2026

3M™ PELTOR™ Optime™ Earmuffs

Product description

The 3M™ PELTOR™ Optime™ Earmuffs are available in headband, neckband, foldable or helmet mounted version. These products are designed to provide moderate to high levels of attenuation that meets the needs of an extensive range of industrial applications.

Providing attenuation values ranging from SNR 26dB to SNR 34dB, they can meet the needs of a wide range of noisy environments.

The helmet mounted version is designed to fit a range of carriers (see below for further details). The word carrier used in this document refers to head protection, face protection and/or non-protective devices.



3M™ PELTOR™ Optime™ I Earmuffs (Headband)



3M™ PELTOR™ Optime™ II Earmuffs (P3E Attachable)



3M™ PELTOR™ Optime™ III Earmuffs (Headband)



3M™ PELTOR™ Optime™ III Earmuffs (Neckband)

Images are for illustration only and may not reflect exact markings on product received.

Key features

- Low profile light-weight design (lightest version 141g)
- Soft wide foam cushions helps reduce pressure around the ears and improves comfort and wearability
- Stainless steel headband design helps maintain constant pressure during wear time
- The cushions and foam inserts, available as Hygiene Kits, are easy to replace if they become worn or damaged, helping extend the life of the product
- Attachable version fits directly to many carriers without the need for a change of adapter
- 3M™ PELTOR™ Optime™ III Earmuffs feature a double cup design that helps improve attenuation at lower frequencies
- Some models are available in a high visibility colour for enhanced visibility in at risk environments

Standards and approvals

Hereby, 3M Svenska AB declares that the product is in compliance with appropriate Directives or Regulations to fulfil the requirements for the CE marking. The full text of the Declaration of Conformity is available at the following internet address: www.3M.com/PELTOR/DOC.

A copy of the Declaration of Conformity and additional information required in the Directives or Regulations can also be obtained by contacting 3M in the country of purchase.

Personal Safety Division User Instruction Selector is available at; 3M.com/userinstructions

Please note this site is subject to updates and may not have all user instructions available. If you cannot find your online user instruction, please reference the printed user instruction that was shipped with the product.

3M strongly recommends personal fit testing of hearing protectors. Research suggests that users may receive less noise reduction than indicated by the attenuation label value(s) on the packaging due to variation in fit, fitting skill, and motivation of the user. Refer to applicable regulations and guidance on how to adjust attenuation label value(s). In the absence of applicable regulations, it is recommended that the attenuation label value(s) be reduced to better estimate typical protection.

Material listing

	Headband, neckband and foldable version	**Attachable version**
Headband/neckband and cover/sleeve	Stainless steel wire, PVC, Acetal	N/A
Helmet attachment arm	N/A	Stainless steel, acetal, polyamide
Cups	ABS (acrylonitrile butadiene styrene)	ABS
Insert (liner)	Polyurethane foam	Polyurethane foam
Cushions and cushion covers	Polyurethane foam and PVC	Polyurethane foam and PVC
Cushion cover	PVC (polyvinyl chloride)	PVC

Approved carrier combinations

Carrier Manufacturer	**Carrier Model**	**Attachment Manufacturer**	**Attachment adapter**	**3M™ PELTOR™ Optime™ I Earmuffs**	**3M™ PELTOR™ Optime™ II Earmuffs**	**3M™ PELTOR™ Optime™ III Earmuffs**
3M™	3M™ Peltor™ G3000	3M	E	M, L	M, L	M, L
3M™	3M™ G3501	3M	E	S, M, L	M, L	M, L
3M™	3M™ Headgear G500	3M	E	M, L	S, M, L	M, L
3M™	3M™ Hard Hat H700 Series	3M	E	M, L	L	L
3M™	3M™ SecureFit™ Safety Helmet X5500 Series	3M	E	S, M, L	S, M, L	M, L
3M™	3M™ SecureFit™ Safety Helmet X5000 Series	3M	E	S, M, L	S, M, L	M, L
3M™	3M™ Speedglas™ Welding Helmets 9100 MP	3M	AF	L	L	L
3M™	3M™ Speedglas™ Welding Helmets 9100 MP-Lite	3M	AF	L	L	L
3M™	3M™ Versaflo™ M-Series Faceshield M-207	3M	AF	L	L	L

Carrier Manufacturer	Carrier Model	Attachment Manufacturer	Attachment adapter	3M™ PELTOR™ Optime™ I Earmuffs	3M™ PELTOR™ Optime™ II Earmuffs	3M™ PELTOR™ Optime™ III Earmuffs
3M™	3M™ Versaflo™ M-Series Faceshield M-307	3M	AF	L	L	L
Auboueix	Iris 2	3M	E	S, M, L	M, L	M, L
Auboueix	KARA	3M	E	M, L	M, L	M, L
Busch PROtective	ATR-1 H1	Busch PROtective's	Busch PROtective's			
Busch PROtective	ATR-1 H2	Busch PROtective's	Busch PROtective's			
Busch PROtective	ATR-1 H3	Busch PROtective's	Busch PROtective's			
Camp	Ares	3M	E	M, L	M, L	M, L
Camp	Skylor Plus	3M	E	M, L	M, L	M, L
Centurion	Concept	3M	E	M, L	M, L	L
Centurion	E:Protect Nexus	3M	E	L	L	L
Centurion	Nexus Core	3M	E	M, L	L	L
Centurion	Spectrum	3M	E	L	L	L
JSP	EVO®2	3M	E	M, L	M, L	M, L
JSP	EVO®3,	3M	E	M, L	M, L	M, L
JSP	EVO®5 DUALSWITCH™	3M	E	M, L	M, L	L
JSP	EVO®8	3M	E	L	L	L
JSP	EVO® VISTAlens®	3M	E	M, L	L	L
JSP	EVOLite®	3M	E	M, L	M, L	L
MSA	V-Gard® 500	3M	E	L	L	L
MSA	V-Gard®	3M	E	L	L	L
MSA	V-Gard®H1	3M	E	M, L	M, L	M, L
PETZL	STRATO® / STRATO® Vent	3M	E	S, M, L	M, L	M, L
PETZL	VERTEX® / VERTEX® Vent	3M	E	S, M, L	M, L	M, L
UVEX	uvex pheos	3M	E	M, L	M, L	M, L
UVEX	uvex pheos alpine	3M	E	M, L	M, L	M, L
UVEX	uvex pronamic alpine	3M	E	M, L	M, L	M, L
UVEX	uvex super boss	3M	E	L	L	L
UVEX	uvex thermo boss	3M	E	L	L	L
VOSS	INAP-Master	3M	E	M, L		

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Accessories/replacement

The cushions and inserts on the 3M™ PELTOR™ Optime™ range can be replaced with the hygiene kits listed below to maintain consistent protection, hygiene, and comfort. Earmuffs, and in particular cushions, may deteriorate with use and should be examined at frequent intervals for cracking and leakage, for example. When used regularly, replace the ear cushions and foam liners at least twice a year to maintain consistent protection, hygiene, and comfort.

Hygiene kits

Earmuff model	**Hygiene kit**
3M™ PELTOR™ Optime™ I Earmuffs (H510A, H510F, H510B, H510P3)	HYX1
3M™ PELTOR™ Optime™ II Earmuffs (H520A, H520F, H520B, H520P3)	HYX2
3M™ PELTOR™ Optime™ III Earmuffs (H540A, H540B, H540P3)	HY54

In addition, HY100 sweat pads are also available that can be placed on the cushions to help absorb moisture and sweat.

Attenuation values and weights - Optime I

3M™ PELTOR™ Optime™ I Earmuffs (H510A headband)								**EN 352-1:2020**				
	Frequency (Hz) *f*							**H**	**M**	**L**	**SNR**	**Weight**
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**					
Mf (dB)	10.1	16.0	29.1	34.6	36.8	39.8	36.2	36.9	26.8	17.3	29.1	151 g
SD (dB)	2.6	1.6	2.2	2.1	2.5	2.1	4.1	1.4	1.5	2.0	1.6	
APVf (dB)	7.6	14.4	26.9	32.5	34.4	37.7	32.1	35	25	15	27	

3M™ PELTOR™ Optime™ I Earmuffs (H510B neckband)								**EN 352-1:2020**				
	Frequency (Hz) *f*							**H**	**M**	**L**	**SNR**	**Weight**
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**					
Mf (dB)	11.6	15.7	28.0	33.2	36.8	39.5	35.8	36.4	26.5	17.7	28.9	141 g
SD (dB)	3.2	1.8	2.4	3.0	2.5	2.8	3.4	1.8	1.6	2.3	1.8	
APVf (dB)	8.4	13.9	25.6	30.2	34.3	36.7	32.4	35	25	15	27	

3M™ PELTOR™ Optime™ I Earmuffs (H510F folding headband)								EN 352-1:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	9.6	15.4	27.2	33.0	35.7	38.3	34.5	35.3	25.9	16.7	28.1	171 g
SD (dB)	2.4	2.1	2.6	2.7	2.5	2.8	5.6	2.4	1.9	2.1	1.9	
APVf (dB)	7.1	13.2	24.6	30.3	33.1	35.5	28.9	33	24	15	26	

3M™ PELTOR™ Optime™ I Earmuffs (H510P3 attachable)								EN 352-3:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	9.4	15.7	27.0	32.4	35.1	38.3	33.5	35.0	25.9	16.8	28.1	176 g
SD (dB)	2.9	2.1	2.7	2.1	2.6	2.1	4.2	1.8	1.7	2.3	1.8	
APVf (dB)	6.5	13.7	24.3	30.3	32.5	36.2	29.3	33	24	14	26	

Attenuation table key:

f = Test frequency

Mf = Mean attenuation value

SD = Standard deviation

APVf (Mf - SD) = Assumed Protection Value

H = High-frequency attenuation value (predicted noise level reduction for noise with LC – LA = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +2dB)

L = Low-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +10dB)

SNR = Single Number Rating (the value that is subtracted from the measured C-weighted sound pressure level, LC in order to estimate the effective A-weighted sound pressure level inside the ear).

Attenuation values and weights - Optime II

3M™ PELTOR™ Optime™ II Earmuffs (H520A headband)								EN 352-1:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	13.7	20.7	33.0	38.1	36.8	39.9	35.2	37.3	30.7	21.3	32.4	195 g

3M™ PELTOR™ Optime™ II Earmuffs (H520A headband)								EN 352-1:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
SD (dB)	2.7	1.8	2.0	1.6	3.3	3.1	4.3	1.9	1.3	2.1	1.4	
APVf (dB)	11.0	18.9	31.0	36.5	33.4	36.8	30.9	35	29	19	31	

3M™ PELTOR™ Optime™ II Earmuffs (H520B neckband)								EN 352-1:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	13.8	20.5	33.1	37.4	37.1	40.1	37.1	38.1	30.6	21.3	32.6	185 g
SD (dB)	2.8	1.6	2.4	2.4	2.9	2.7	3.0	1.9	1.5	2.1	1.6	
APVf (dB)	11.0	18.8	30.7	35.0	34.2	37.3	34.1	36	29	19	31	

3M™ PELTOR™ Optime™ II Earmuffs (H520F folding headband)								EN 352-1:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	12.4	20.7	31.6	38.5	36.3	36.5	35.4	36.7	30.2	20.5	31.8	214 g
SD (dB)	2.5	2.0	2.0	2.2	2.7	2.3	3.6	1.9	1.7	2.2	1.6	
APVf (dB)	9.9	18.7	29.6	36.2	33.5	34.2	31.7	35	28	18	30	

3M™ PELTOR™ Optime™ II Earmuffs (H520P3 attachable)								EN 352-3:2020				
	Frequency (Hz) *f*							H	M	L	SNR	Weight
	125	250	500	1000	2000	4000	8000					
Mf (dB)	13.0	21.0	33.1	36.7	37.0	38.2	35.1	37.1	30.5	21.0	32.2	219 g
SD (dB)	2.2	2.0	2.2	2.4	2.8	2.4	2.8	1.5	1.4	1.8	1.3	
APVf (dB)	10.8	19.1	30.9	34.3	34.2	35.7	32.4	36	29	19	31	

Attenuation table key:

f = Test frequency

Mf = Mean attenuation value

SD = Standard deviation

APVf (Mf - SD) = Assumed Protection Value

H = High-frequency attenuation value (predicted noise level reduction for noise with LC – LA = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +2dB)

L = Low-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +10dB)

SNR = Single Number Rating (the value that is subtracted from the measured C-weighted sound pressure level, LC in order to estimate the effective A-weighted sound pressure level inside the ear).

Attenuation values and weights - Optime III

3M™ PELTOR™ Optime™ III Earmuffs (H540A headband)								**EN 352-1:2020**				
	Frequency (Hz) *f*							**H**	**M**	**L**	**SNR**	**Weight**
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**					
Mf (dB)	18.1	24.5	36.4	37.9	36.4	39.3	37.6	37.4	33.7	25.5	35.1	293 g
SD (dB)	2.2	1.8	2.4	1.8	2.9	3.3	3.7	2.5	1.2	1.4	1.3	
APVf (dB)	15.9	22.6	34.0	36.1	33.6	36.0	33.8	35	32	24	34	

3M™ PELTOR™ Optime™ III Earmuffs (H540B neckband)								**EN 352-1:2020**				
	Frequency (Hz) *f*							**H**	**M**	**L**	**SNR**	**Weight**
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**					
Mf (dB)	17.6	24.8	36.2	38.0	36.5	39.4	38.0	37.6	33.6	25.5	35.1	281 g
SD (dB)	2.6	2.3	2.2	3.3	3.5	3.2	2.9	2.6	1.7	2.2	1.6	
APVf (dB)	15.0	22.6	34.0	34.7	33.1	36.2	35.1	35	32	23	34	

3M™ PELTOR™ Optime™ III Earmuffs (H540P3 attachable)								**EN 352-3:2020**				
	Frequency (Hz) *f*							**H**	**M**	**L**	**SNR**	**Weight**
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**					
Mf (dB)	17.7	24.6	36.0	36.9	34.6	41.0	38.0	36.6	33.2	25.5	34.7	317 g
SD (dB)	2.4	1.9	2.9	2.8	2.8	2.2	3.4	2.1	1.6	1.9	1.4	
APVf (dB)	15.3	22.7	33.2	34.0	31.8	38.8	34.6	35	32	24	33	

Attenuation table key:

f = Test frequency

Mf = Mean attenuation value

SD = Standard deviation

APVf (Mf - SD) = Assumed Protection Value

H = High-frequency attenuation value (predicted noise level reduction for noise with LC – LA = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +2dB)

L = Low-frequency attenuation value (predicted noise level reduction for noise with LC – LA = +10dB)

SNR = Single Number Rating (the value that is subtracted from the measured C-weighted sound pressure level, LC in order to estimate the effective A-weighted sound pressure level inside the ear).

Important Notice

Product selection and use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable national and/or European regulations and standards. Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, limited remedy, and disclaimer: A limitation of liability applies to the 3M product(s). For warranty statement and limitation of liability, refer to your supply agreement or the 3M terms and conditions of sale.

3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use.

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