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3M™ PELTOR™ Optime™ Earmuffs

Technical datasheet

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 industrial safety helmets (see below for further details).

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

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
- Replaceable cushions and inserts are available separately to extend the life of your earmuffs
- Helmet mounted version fits directly to many industrial safety helmets without the need of any 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

3M™ PELTOR™ Optime™ II Earmuffs (Helmet Mounted)

Standards and approvals:

Hereby, 3M Svenska AB declares that the product is in compliance with appropriate Directives or Regulations to fulfill the requirements for the CE and/or UKCA 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.

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.

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

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

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:

Brand	Model number	P3 Adapter code	3M™ PELTOR™ Optime™ I Earmuffs	3M™ PELTOR™ Optime™ II Earmuffs	3M™ PELTOR™ Optime™ III Earmuffs
3M	SecureFit™ X5500 (Basic combination)	E	S, M, L	S, M, L	M, L
3M	SecureFit™ X5000	E	S, M, L	S, M, L	M, L
3M	G3000	E	M, L	M, L	M, L
3M	G3501	E	S, M, L	M, L	M, L
3M	G500 Headgear	E	M, L	S, M, L	M, L
3M	G22	E	M, L	M, L	M, L
3M	H-700	E	M, L	L	L
3M	Versaflo™ M-207	AF	L	L	L
3M	Versaflo™ M-307	AF	L	L	L
3M	Speedglas™ 9100MP (M-300)	AF	L	L	L
3M	Speedglas™ 9100 MP-Lite (M-200)	AF	L	L	L

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.

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	
	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	
	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	
	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 352-1:2020

	Frequency (Hz) *f*							H	M	L	SNR	
	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	
	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
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	
	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	
	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 352-1:2020

	Frequency (Hz) *f*							H	M	L	SNR	
	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	
	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
Sf (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	
	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 352-1:2020

	Frequency (Hz) *f*							H	M	L	SNR	
	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 & 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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