



## 3M™ Peltor™ Optime™ I Range Passive Ear Muffs

### Product Description

The 3M™ Peltor™ Optime™ I range passive ear muffs are available in headband, neckband, foldable or helmet mounted version. These products are designed to provide moderate level of attenuation that meets the needs of majority industrial applications.

When correctly selected and worn these products help reduce exposure to hazardous levels of noise and loud sounds.

The helmet mounted version is designed to fit a wide range of industrial safety helmets (see below for further details).

**NOTE:** A high visibility version is also available

### Key Features

- Modern, stylish slim line cup design
- Liquid sealing rings for improved comfort
- Unique low profile headband design helps maintain constant pressure thus providing confidence in protection
- Large space inside cup helps reduce moisture and heat build-up
- Soft wide cushions helps reduce pressure around the ears and improves comfort and wearability
- Easy to replace cushions and inserts helps keep them hygienically clean
- Easy to understand attenuation symbol to help ensure correct product selection
- Helmet mounted version fits directly to many industrial safety helmets without the need of any adapter

### Applications

The 3M™ Peltor™ Optime™ I range ear muffs are ideal for protection against noise arising from a wide range of applications in the workplace and leisure activity. Examples of typical applications include:-

- Agriculture
- Automotive
- Chemical & pharmaceutical manufacture
- Construction
- Light engineering
- Metal processing
- Woodworking

### Standards and Approval

The 3M™ Peltor™ Optime™ I range ear muffs are tested and CE approved against the European Standard EN352-1:1993 (headband, neckband and foldable version) and EN352-3: 2002 (helmet mounted version). These products meet the Basic Safety Requirements as laid out in Annex II of the European Community Directive 89/686/EEC. These products have been examined at the design stage by the Finnish Institute of Occupational Health (FIOH), Topeliuksenkatu 41aA, FIN-00250 Helsinki, Finland (Notified Body number 0403) and INSPEC International Limited, 56 Leslie Hough Way, Salford, Greater Manchester M6 6AJ, UK (Notified Body number 0194).

Helmet Manufacturer	Model	Combination size range according to EN352-3	
		P3 Adaptor	H510 (Optime I)
3M	Airstream AH1, AH4	AE	NL
3M	Airstream AH7,	AE	NL
3M	Airstream HT-701, HT-702, HT-705	AE	NL
3M	Airstream HT-707	AE	NL
3M	G500 Headgear	E	SNL
3M	Versaflo M-106, M-107	AF	NL
3M	Versaflo M-306, M-307	AF	NL
3M	G2000	K,E	SNL
3M	G22 (Basic Combination)	E	SNL
3M	G3000	E	SNL
Auboueix	Brennus	F	SNL
Auboueix	Fondelec	F	SNL
Auboueix	Iris	E	NL
Auboueix	Iris 2	E	NL
Auboueix	KARA	E	SNL
Sofop Taliaplast	Oceanic	E	NL
Sofop Taliaplast	Opus	E	NL
Berendsen Safety	Balance HD	N	SNL
Centurion	1125/ARCO Plus	H	SNL
Centurion	1100/ARCO Type 2	H	SNL
Centurion	1540/ARCO	A	NL
Centurion	Concept	E	SNL
Evert Larsson	Robust	E	SNL
Evert Larsson	Balance	E	NL
Evert Larsson	Balance AC	E	NL
JSP	EVOLITE	E	NL
JSP	MK6R/MK7R	E	SNL
JSP	MK8	E	L
Kemira	Top Cap	A	SNL
LAS	LP2002	E	SNL
LAS	LP2006	E	SNL
MSA	Super V-Gard II	E	SNL
MSA	V-Gard	E	SNL
Peltor	G2000	K,E	SNL
Peltor	G22 (Basic Set)	E	SNL
Peltor	G3000	E	SNL
Petzl	Vertex	E	SNL
Protector	Style 300*	E	SNL
Protector	Style 600	E	SNL
Protector	Tuffmaster II	E,G	NL
Romer	Bravo 2 Nomaz	B	SNL

Helmet Manufacturer	Model	Combination size range according to EN352-3	
		P3 Adaptor	H510 (Optime I)
Romer	Marcus Top 2 Atlas Nomaz	B	SNL
Romer	N2 Atlas Nomaz	BB	SNL
Romer	Profi Expo	E	SNL
Romer	Profi Nomaz	E	SNL
Romer	Top Expo Atlas	B	SNL
Schuberth	BEN	BB	SNL
Schuberth	BER80/WPC80	EA	SNL
Schuberth	BER S	E	SNL
Schuberth	BOP R	B	SNL
Schuberth	PIONIER	B	SNL
Schuberth	SH91/WP91	EB	SNL
Schuberth	SW1	EB	NL
Uvex	Airwing	E	SNL
Voss	Inap 88	E	SNL
Voss	Inap Master	E	NL
Voss	Inap Star	E	NL
Voss	Inap PCG	G	NL

\*Protector Style 300 includes all 300-versions of this helmet.

## Materials

The following materials are used in the manufacture of this product.

### Headband, Neckband and Foldable version:

Component	Material
Headband/Neckband/Foldable	Stainless Steel Wire, PVC, Acetal
Headband padding	PVC
Cups	ABS
Insert	Polyether
Cushions	Polyether
Cushion cover	PVC

### Helmet mounted version:

Helmet attachment arm	Stainless Steel Wire, Acetal, Polyamid
Cups	ABS
Inserts	Polyether
Cushions	Polyether
Cushion cover	PVC

# Attenuation Values

## 3M™ Peltor™ Optime™ I Ear muffs - Head Band Version (H510A)

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	35.8
Std deviation (dB)	4.0	4.3	3.6	2.5	2.7	3.4	3.0	3.8
Assumed Protection Value (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

## 3M™ Peltor™ Optime™ I Ear muffs - Neck Band Version (H510B)

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
Std deviation (dB)	4.1	3.5	2.8	1.8	2.6	4.3	3.4	3.6
Assumed Protection Value (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

## 3M™ Peltor™ Optime™ I Ear muffs - Foldable Version (H510F)

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
Std deviation (dB)	3.8	3.4	3.2	3.0	2.1	4.0	2.9	3.9
Assumed Protection Value (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™ I Ear muffs - Helmet Mounted Version (H510P3)

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
Std deviation (dB)	2.3	2.0	1.9	1.8	1.9	2.4	1.8	1.8
Assumed Protection Value (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

## Key

APVf = Assumed Protection Value

Mf = Mean attenuation value

sf = Standard deviation

H = High-frequency attenuation value (predicted noise level reduction for noise with  $L_c - L_A = -2\text{dB}$ )

M = Medium-frequency attenuation value (predicted noise level reduction for noise with  $L_c - L_A = +2\text{dB}$ )

L = Low-frequency attenuation value (predicted noise level reduction for noise with  $L_c - L_A = +10\text{dB}$ )

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

## Accessories/Replacement

The cushions and inserts on the Optime range I can be replaced with the 3M™ Peltor™ HY51 Hygiene Kit for improved comfort and reassured protection.

The 3M™ Peltor™ HY100A and HY100A-01 Hygiene Pads can be placed on the cushions to help absorb moisture and sweat.

## Important Notice

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