Technical Datasheet

Peltor™ Optime™ III

Product Description

The Peltor Optime III range passive earmuffs are available in headband, neckband or helmet mounted version. These products are designed to provide high level of attenuation, particularly sound dominated by low frequencies, in some key applications where extreme noise levels are encountered.

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: High visibility version is available in the Optime III range.

Key Features

- Modern, stylish cup design
- Unique low profile headband design helps maintain constant pressure thus providing confidence in protection
- Double casing technology helps minimise resonance effect
- Good speech intelligibility
- 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 help 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 for an adapter.

Helmet mounted approved combination:

Helmet Manufacturer	Model	Combination size range according to EN352-3	
		P3 Adaptor	H540 (Optime III)
3M	1465	E	NL
Auboueix	Brennus	F	SNL
Auboueix	Fondelec	F	SNL
Auboueix	Iris	E	NL
Auboueix	Iris 2	E	NL
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	NL
Centurion	1540/ARCO	A	NL
Evert Larsson	Robust	E	NL
Evert Larsson	Balance	E	NL
Evert Larsson	Balance AC	E	NL
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

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

Helmet Manufacturer	Model	Combination size range according to EN352-3	
		P3 Adaptor	H540 (Optime III)
Peltor	G3000	E	SNL
Petzl	Vertex	E	SNL
Protector	Style 300*	E	SNL
Protector	Style 600	G	SNL
Protector	Tuffmaster II	E,G	NL
Romer	Bravo 2 Nomaz	B	SNL
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 Star	E	NL
Voss	Inap PCG	G	NL

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Applications

The Peltor Optime III range earmuffs are ideal for protection against special applications where extremely high levels of noise (dominated by low frequencies) are generated. Examples of typical applications include:-

- Airport
- Cement manufacture
- Marine engine room
- Mining
- Power station
- Printing

Standard & Approval

The Peltor Optime III range earmuffs are tested and CE approved against the European Standard EN352-1:1993 (headband and neckband 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).

Materials

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

	Component	**Material**
Headband and Neckband version	Headband/Neckband/Foldable	Stainless Steel Wire, PVC, Acetal
	Headband padding	PVC
	Cups	ABS
	Inserts	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

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Attenuation values

Optime III Headband Version (H540A)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	20.8	17.4	24.7	34.7	41.4	39.3	47.5	42.6
sf (dB)	3.1	2.1	2.6	2.0	2.1	1.5	4.5	2.6
APVf (dB)	17.7	15.3	22.1	32.7	39.3	37.8	43.0	40.0

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

Optime III Neckband Version (H540B)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	20.9	17.5	24.5	34.5	41.4	39.5	47.3	42.0
sf (dB)	3.3	2.3	2.7	2.0	2.2	2.0	4.4	2.8
APVf (dB)	17.6	15.2	21.8	32.5	39.2	37.5	42.9	39.2

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

Optime III Helmet Mounted Version (H540P3)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	20.1	17.1	24.5	34.8	40.2	39.6	46.7	43.1
sf (dB)	3.3	2.3	2.8	2.2	2.0	1.8	4.2	2.5
APVf (dB)	16.8	14.8	21.7	32.6	38.2	37.8	42.5	40.6

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

Accessories/Replacement Parts

The cushions and inserts on the Optime III range can be replaced with the HY54 Hygiene Kit for improved comfort and reassured protection.

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

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) = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with L(C) – L(A) = +2dB)

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

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).

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