### Sordin Sharp STAYING ALERT AT WORK

Bluetooth FM radio (() Ambient sound

### SORDIN

Surrounded by noise, you're in your true element. Protected against harmful sound peaks, while picking up every sound you need to hear with perfect clarity."

# Staying alert at WOrk

Sordin Sharp is our brand new electronic hearing protector. A high-end product for professional use, which allows you to do your thing and perform at your best.

Connect Sordin Sharp to your employees' smartphones and you have a company communications network for interaction between colleagues.

Sordin Sharp is also about spicing up your workday. Listen to FM radio, stream a playlist or enjoy an audiobook, switching easily between modes.

And because you're hopefully going to keep your Sordin Sharp on for most of the day, we made it super-comfortable to wear with optional foam or gel sealing rings.



# Like noise Wasn't there

Sordin Sharp reduces noise to harmless levels, while allowing you to hear all the important sounds around you naturally. Including your colleagues talking.

Whatever the kind of noise you're exposed to at work, Sordin Sharp will suppress it to safe and comfortable levels. Thanks to Sordin Sharp's efficient noise attenuation, it's almost like noise wasn't there at all.

However, Sordin Sharp is not about silencing the soundscape surrounding you. Because you need to be able to pick up the important sounds clearly and comfortably, those that affect your job performance and safety.

It's about hearing what you want to hear, while keeping out the annoying and harmful noise peaks. A balance struck beautifully by Sordin Sharp.

#### **Picking up voices**

You can hear your colleagues talking in a normal conversational tone with your earmuffs on. You'll discern every syllable with perfect clarity while remaining undisturbed by the noise around you.

#### Amplifying quiet sounds

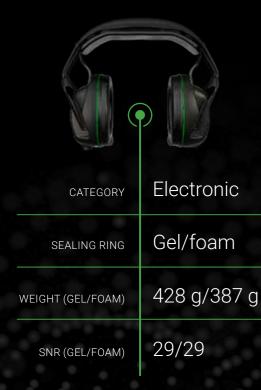
By turning up the volume, you can locate even very quiet sounds. This can improve workplace safety in unexpected ways. For example, you'll hear quiet forklifts and other electric vehicles more easily with your Sordin Sharp on.

# Which Sordin Sharp are you?

Sordin Sharp comes highly standardized. Just specify if you are going to use your hearing protector with a helmet or not, and what sealing rings you prefer.

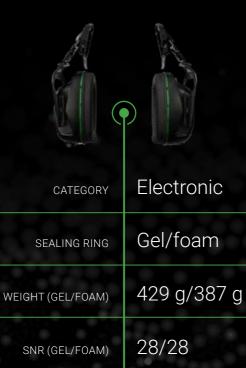
#### Headband versions

A wide headband with a ventilated padding provides a firm and comfortable fit. Easily adjustable headband for individual fit. Large space for the ears inside the cup.



#### Helmet versions

A patented spring design offers excellent comfort. Three distinct wearing positions. Excellent grip makes it easy to adjust the cups even when wearing gloves.



#### Foam rings

made of PU foam.

Sealing rings made of PU (polyurethane) foam, covered by TPE (thermoplastic elastomer) foil. Inserts

#### **Gel rings**

Sealing rings made of silicone gel, covered by PVC (polyvinyl chloride) foil. Inserts made of PU foam.

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#### **Hygiene kits**

Hygiene kits are available for both foam and gel rings, each including one pair of sealing rings and one pair of inserts.

# \* Bluetooth® Business and pleasure

Designed specifically for professional use, Sordin Sharp comes with a robust design and several work enhancing features.

But isn't efficiency always at the expense of personalization – and fun? Not necessarily. Let's look at a typical Sordin Sharp workday in a factory, for example.

Say you're managing a support team in a production facility. You begin your day by phoning your team members in a multipart call to go through today's tasks.

As soon as you're done instructing your people, you switch to your private phone to stream your favorite playlist or audiobook. Or FM radio.

A work procedure like this is available from day 1 with Sordin Sharp. All it takes are two or more hearing protectors and a smartphone for each team member.

And if your work environment is very noisy, just add Sordin's noise-cancelling boom microphone.

#### **Only fantasy limits**

The communications capabilities of Sordin Sharp are limited only be fantasy. Just imagine what two simultaneously connected smartphones could do for collaboration at work. Or one smartphone and one two-way radio.

#### Bluetooth<sup>®</sup> MultiPoint

Sordin Sharp comes with Bluetooth<sup>®</sup> MultiPoint as standard. You can therefore personalize your input and output audio sources – spicing up your workday by streaming music or listening to FM radio – and participate in dynamic work teams with colleagues, partners or customers.

# You're in charge, simple as that

You're in charge of your Sordin Sharp. Because you choose the input mode – FM radio, Bluetooth<sup>®</sup> connectivity or ambient sound. So, a well-deserved pause is only a push of a button away.

You toggle easily between modes by using push buttons on the outside of your right-hand cup. The buttons are easy to use, even wearing gloves.

Every push of a button is confirmed through voice feedback, making it easy for you to navigate back and forth between modes and functions.



## The features that keep you alert

All features except those indicated with \* are valid both for the headband and the helmet version of Sordin Sharp.

#### Headband version\*

The headband comes with a ventilated textile sleeve for maximum comfort all day. Replacement sleeves available as accessories.

#### Helmet version \*

Easy to connect to different helmet models using a standard adapter. A patented spring offers optimum pressure and comfort.

#### Low weight design

FM radio Scan and store your favorite radio channels.

Sordin Sharp is considerably lighter than competing earmuffs with similar functionality.

#### Built-in high quality battery

The Li-ion battery gives you several days of operating time before recharging.



#### **Ambient sound**

Stay connected with the surrounding environment, while being protected from hazardous noise.

#### **Built-in microphones** A slim design allows you to work freely.

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Accessories

Connect accessories such as a boom microphone for use in noisy environments.

Selectable sealing rings Choose between foam or gel sealing rings, replacement parts available as hygiene kits.

#### **Rechargeable battery** Recharge Sordin Sharp's built-in battery using a standard USB-C cable (included).

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#### **Built-in antenna**

Discretely mounted, no protruding parts.

#### Power saver

Automatic power off, no risk of unintentionally discharging the battery.

#### Voice feedback

Helps you to easily control the functions of the hearing protector.

#### **Robust design**

Cups of high-performance ABS plastic for light weight and excellent impact strength.

#### **Bluetooth**

#### **Bluetooth® MultiPoint**

Lets you connect with one or two mobile phones, or one mobile phone and one two-way radio.

### Specifications

#### MATERIALS

Cups	ABS, TPE
Attenuation foam	PU foam
Foam sealing rings	ABS, PP, TPE, PU foam
Gel sealing rings	ABS, PVC foil, silicone gel
Headband	РОМ
Cup supporting arm	РА

Support band	TPE
Adapter, holder	PA
Spring cover	PP
Spring	Stainless steel
Screws	Stainless steel
Textile sleeve	PA, TPU, PE foam

#### **TECHNICAL INFORMATION**

Batteries	Built-in rechargeable Li-ion battery (2,000 mAh). Estimated operating time: 36 hours. 60 min charging gives minimum 8 hours usage time. USB-C cable for charging included. (Only charge the batteries between temperatures 0°C to +40°C.)
Operating conditions	-20°C to +55°C
Weight headband / helmet version	Foam: 387 gram / 387 gram Gel: 428 gram / 429 gram
Complies with following environmental directives	RoHS, WEEE
Bluetooth profiles	Bluetooth 5 certified with A2DP (streaming), and HSP HFP (headset) support
IP class	IP 44 (Sharp) IP 67 (noise-cancelling boom microphone – accessory)

#### **PRODUCT VARIANTS**

Product no	Version	Cup color	Ring
84000-04-S	Sordin Sharp headband version, foam, black	Black	Foam
84000-04-G-S	Sordin Sharp headband version, gel, black	Black	Gel
84520-04-S	Sordin Sharp helmet version, adapter 20, foam, black	Black	Foam
84520-04-G-S	Sordin Sharp helmet version, adapter 20, gel, black	Black	Gel

#### ACCESSORIES

60050-S	Hygiene kit, foam sealing rings – 1 pair of foam rings, 1 pair of inserts (Foam ring: TPE (thermoplastic elastomer) covered PU (polyurethane) foam. Inserts: PU foam.)
60051-S	Hygiene kit, gel sealing rings – 1 pair of gel rings, 1 pair of inserts (Gel ring: TPU (thermoplastic polyurethane) covered silicone gel. Inserts: PU foam.)
60125-S	Textile sleeve for Sordin Sharp headband version
60126-S	Boom microphone (Optional communication boom microphone for best noise suppression in high-noise environments.)

#### **EN APPROVALS**

#### TESTS AND CERTIFICATES

Tested and certified to EN 352-1:2002, EN 352-3:2002, EN 352-4/A1:2005 and EN 352-8:2008 IEC 62368-1 (EN 62368-1+A11), IEC 62133-2:2017 and 2014/53/EU Radio Equipment Directive RED Certificate: CE 737872 (headband and helmet versions). Notified body: BSI Netherlands (NB 2797)

#### ATTENUATION DATA

Headband version, foam sealing ring				H=35 dB	M=26 dB	L=19 dB   \$	SNR=29 dB
Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean attenuation, $M_f$ (dB)	17.2	17.9	24.6	30.8	35.9	43.9	42.6
Standard deviation, s <sub>f</sub> (dB)	2.3	2.4	2.1	2.4	2.5	3.8	2.3
APV (M <sub>f</sub> -s <sub>f</sub> ) (dB)	14.9	15.5	22.6	28.3	33.4	40.1	40.3

#### Headband version, gel sealing ring

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean attenuation, $M_{f}$ (dB)	16.6	18.0	25.3	31.3	37.0	44.9	44.9
Standard deviation, s <sub>f</sub> (dB)	2.9	1.7	2.4	2.7	2.7	3.7	2.8
APV $(M_f - s_f)$ (dB)	13.7	16.4	22.9	28.6	34.4	41.2	42.1

#### Helmet version, foam sealing ring

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean attenuation, $M_{f}$ (dB)	18.8	18.7	24.5	30.0	36.2	45.0	40.8
Standard deviation, s <sub>r</sub> (dB)	3.0	3.2	3.1	2.9	2.6	4.7	4.9
APV (M <sub>f</sub> -s <sub>f</sub> ) (dB)	15.8	15.4	21.4	27.1	33.6	40.4	36.0

#### Helmet version, gel sealing ring

Frequency (Hz)	125	250	500	1000	2000	4000	8000
Mean attenuation, $M_f$ (dB)	17.1	17.5	25.5	31.9	36.5	47.2	46.7
Standard deviation, $s_f(dB)$	3.4	2.7	3.1	3.3	3.0	2.7	2.8
APV $(M_f - s_f)$ (dB)	13.7	14.8	22.4	28.7	33.5	44.5	43.9

#### APPROVED HELMET COMBINATIONS

Helmet model	Adapter no	Approved sizes		
Petzl Vertex	20	S, M, L		
Petzl Strato	20	S, M, L		
Kask Zenith	20	S, M, L		
MSA V-Gard H1	20	S, M, L		
3M SecureFit X5000VE	20	S, M, L		
JSP EVO Vista	20	S, M, L		

### CE

#### H=35 dB | M=26 dB | L=19 dB | SNR=29 dB

#### H=33 dB | M=25 dB | L=19 dB | SNR=28 dB

#### H=35 dB | M=25 dB | L=18 dB | SNR=28 dB

CRITERION LEVELS (DB)

Model	Н	М	L
Headband version	116.6	105.5	97.1
Helmet version	116.3	104.9	95.3



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