

# Oticon breaks a law of physics

with a life-changing technological breakthrough



Introducing  
Oticon Opn S™

**oticon**  
PEOPLE FIRST

# First Oticon created a **new paradigm in hearing care**

Now, we are breaking a law of physics. With Oticon Opn S, we take the open sound experience to the next level

The revolutionary Oticon Opn broke with the conventional way of supporting people with hearing loss in noisy environments. Instead of applying narrow directionality and closing down surrounding sounds, it opened up their world. Fast and precise enough to provide access to all relevant sounds in a 360° soundscape, Oticon Opn delivered what the brain needs to make sense of sound.

Now, we break a law of physics and deliver even further improvements in speech understanding and listening effort. With Oticon Opn S, we take the open sound experience and the unique benefits of BrainHearing™ to the next level!





# What is **this law of physics**?

According to the laws of physics, a microphone too close to a speaker, creates feedback

Hearing aid users are often unable to attain the prescribed gain in an open fitting due to the risk of feedback\*. Hearing care professionals are therefore often restricted in their fitting and forced to make compromises as the limitations of conventional technology do not allow them to fit optimally.

## OPTIMAL GAIN

You want to give optimal gain to every user

## OPEN FITTING

You want to give users the comfort of an open dome and avoid own voice problems and occlusion

## FEEDBACK

But this is often not possible due to the risk of feedback





## Until now, this law has trapped hearing care **in a world of compromise**

- Sound clarity and audibility compromised by reduced gain
- Comfort compromised by closed fittings



# With the introduction of the **OpenSound Optimizer™**, Oticon breaks a law of physics

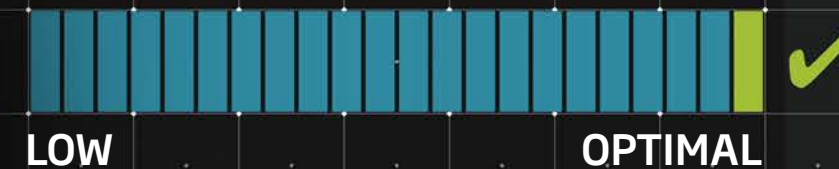
This law-breaking feature has made it possible for us to do things simply not possible before. The OpenSound Optimizer analyzes the amplified sound at an astonishing 56,000 times/sec. In fact, it is so fast it can detect and prevent feedback proactively, even before it occurs. This new ground-breaking feature enables you to open up your client's world with up to six additional decibels of gain, in an open fitting – all without the risk of feedback\*.

The OpenSound Optimizer represents a breakthrough in accessing speech details with more natural sound and increased comfort. Even in the most challenging listening environments it takes speech amplification to the next level, resulting in great improvements to speech understanding, without compromising clarity and sound quality.

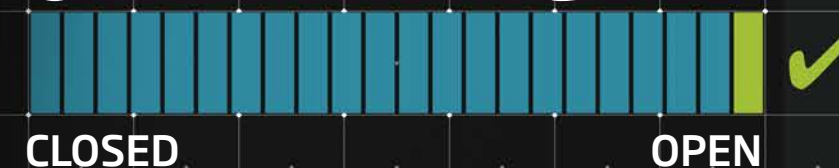
**With optimal gain, open fittings and no feedback, the OpenSound Optimizer brings users the next level of the open sound experience.**



## GAIN



## OPEN FITTING



## FEEDBACK





# OpenSound Optimizer

## – from feedback management to feedback prevention

### Old world

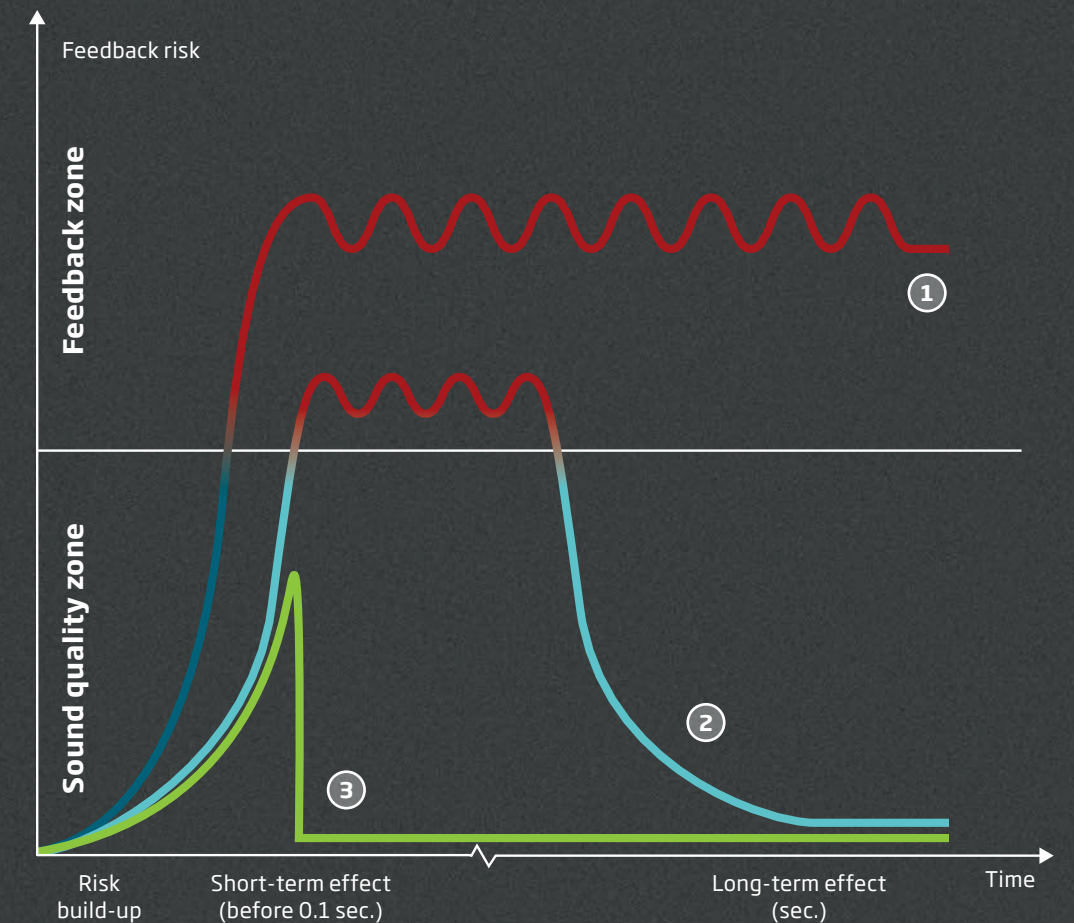
Traditional anti-feedback systems take about a second to detect and react to the build-up of feedback.

Because of the limitations of current technology, the management of feedback has been a long-term challenge for the hearing aid industry. Too slow to react when feedback builds, these traditional and reactive technologies manipulate the sound signal and reduce gain in order to manage the feedback loop and return to stable gain. The result is not only discomfort when feedback rises – or the compromise on sound quality and speech understanding – it also affects the brain's ability to naturally focus on the surrounding sounds.

### New world

30 times faster detectors and a patented breaker signal in the OpenSound Optimizer prevents feedback from occurring\*.

At Oticon, we do not accept the old world compromise. Driven by new, ultra-fast detectors, the OpenSound Optimizer can prevent feedback, even before it occurs. By applying a unique and patented feedback breaker signal, designed to take the brain's perception of sound into account, Oticon Opn S delivers up to six dB more stable gain, thus preserving audibility and quality of sound.



- ① Hearing aid without feedback management**  
No anti-feedback system, no detectors: Audible and uncomfortable feedback rises and persists, dramatically reducing speech understanding.
- ② Hearing aid with conventional technology**  
Traditional anti-feedback with slow detectors: With this reactive technology, feedback rises and becomes audible. Utilizing gain reduction and other measures, the hearing aid slowly returns to stability. Audibility, sound quality and speech understanding are compromised.
- ③ Oticon Opn S**  
OpenSound Optimizer with ultra-fast detectors: Proactively identifies feedback risk and engages breaker signal in risk areas before feedback builds and affects sound quality. Audibility and speech are preserved.



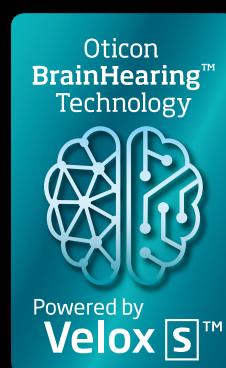
# This innovation requires a new level of processing power

## Introducing the new Velox S™ platform

The brand-new Velox S platform in Oticon Opn S unleashes the full potential of the open sound paradigm. The fastest, most advanced platform we have ever developed, it fuels Oticon Opn S with unprecedented computation power to - once again - create a life-changing difference to users.

### **New Velox S - Oticon's most advanced and powerful platform ever**

- Increased memory enables groundbreaking improvements to the Velox platform
- New detectors monitor changes in the acoustic environment with 56,000 measurements per second, enabling the OpenSound Optimizer
- New signal processing algorithms for proactive feedback management
- New automatics drive the updated OpenSound Navigator™
- Designed for optimized rechargeable battery performance







# Breakthrough technology in Oticon Opn S gives you a whole new level of fitting freedom

Without the restrictions of handling feedback when it comes to creating a stable, comfortable listening experience, Oticon Opn S offers you full fitting freedom without the compromises of conventional technology.

- The freedom to deliver optimal gain
- The freedom to provide more open fittings

This technological quantum leap ensures that the user is fitted optimally to give them the maximum benefit of their Oticon Opn S hearing aids. And, because the technology also optimizes the fitting procedure, you will have more time for more counselling and building your business.



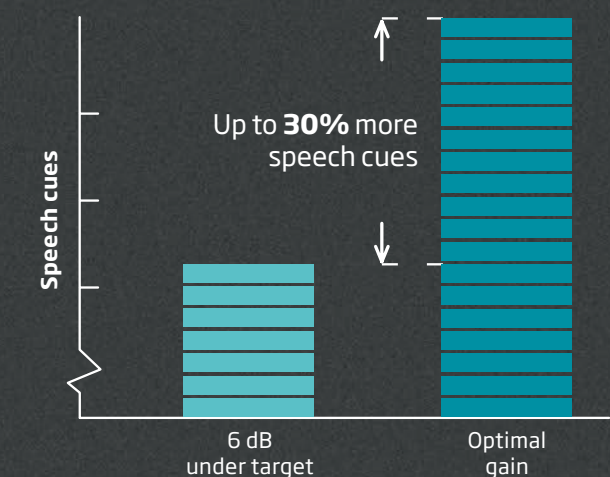
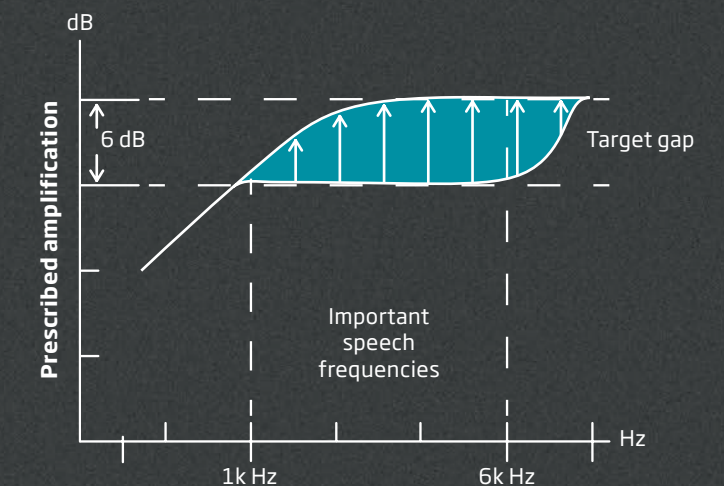
# OpenSound Optimizer delivers up to 30% more speech cues to the brain



## 6 dB more gain, means up to 30% more speech cues

With traditional feedback technology, meeting the prescribed target match without compromising on either gain or comfort is often challenging. This is why clinical practice today allows for a target deviation of 5 dB, leading to many users leaving the clinic under fitted. The result is that the brain is deprived of speech cues crucial to its ability to make sense of sound, potentially leading to a reduction in speech understanding, as well as an increase in listening effort.

With the OpenSound Optimizer, all this has changed. By offering the possibility to amplify speech with up to 6 additional dB, in an open fitting, Oticon Opn S can provide the brain with up to 30% more speech cues\*.



\* Speech intelligibility index, ANSI S3.5



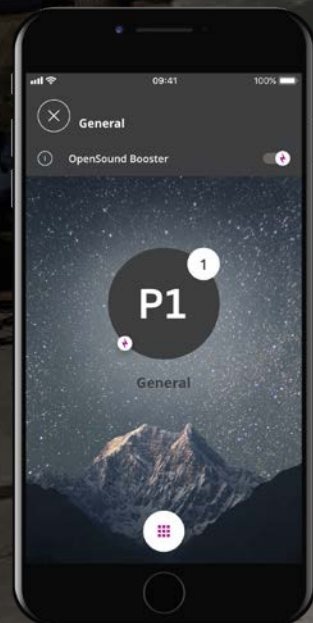
# Oticon Opn S introduces a boost to the open sound experience

## Offering even more possibilities to meet individual user needs

Oticon Opn S, comes with an even better version of the ground-breaking OpenSound Navigator. A new Very High setting, that can be activated in Oticon Genie 2 software, offers even more help in everyday situations to those users who need it most.

## Empowering users with the new OpenSound Booster

Furthermore, users can now select this extra support from the OpenSound Navigator, regardless of their pre-defined setting. Whenever they feel they need an extra boost of help, they simply activate the OpenSound Booster, available in the Oticon ON App.

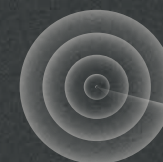


With the OpenSound Navigator, we introduced a new paradigm in hearing care. It works so fast and precisely that it can attenuate unwanted noise – even between words in an open soundscape. At ultra-fast speed, it continually rebalances the soundscape while still providing constant access to all relevant sounds and speech. This is how Oticon Opn S makes it easier for the brain to decide who and what to listen to, and switch attention when needed.



### OpenSound Navigator

Three steps to the open sound experience in a split second



### 1: Analyze

Scans the full 360° sound environment more than 100 times per second to identify noise and separate it from speech.



### 2: Balance

Rapidly reduces the levels of loud noise coming from specific directions, while preserving speech.



### 3: Noise removal

Rapidly attenuates remaining diffuse noise, even between individual words.



# With Oticon Opn, we set a new industry standard. **Oticon Opn S takes it even further**

Delivering even better speech understanding and further reduction in listening effort

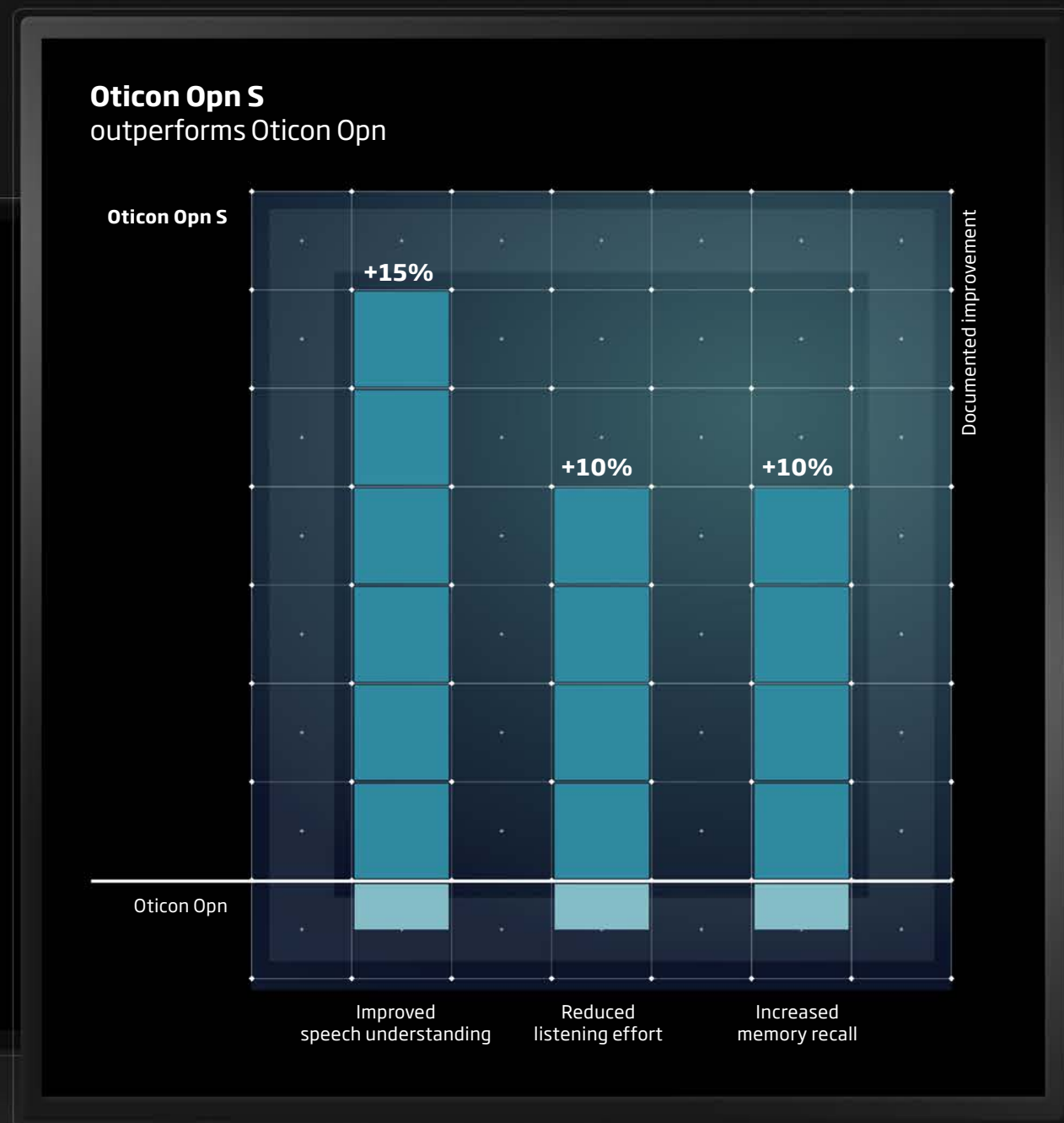
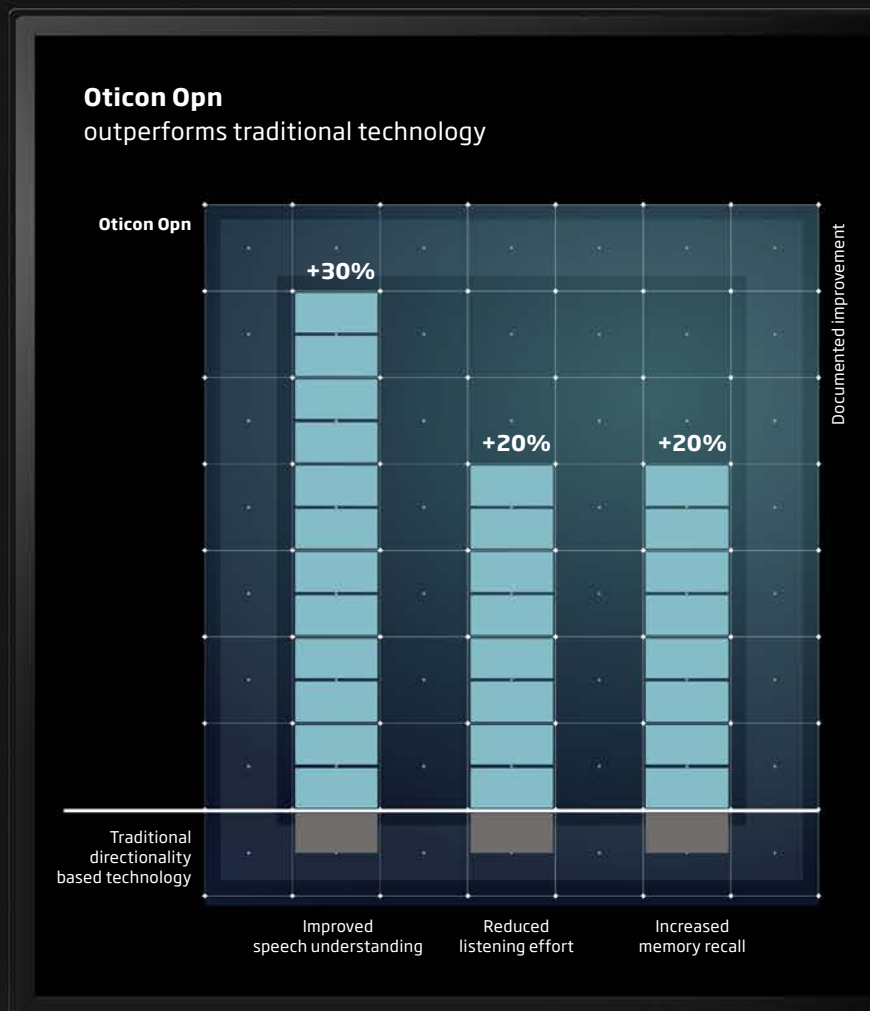
One law we will never break is making hearing aids that work with the brain and deliver what it needs to make sense of sound. This is BrainHearing™.

With the introduction of Oticon Opn and the open sound experience, we proved how this unique approach outperformed traditional hearing aid technology when it came to understanding multiple speakers in noisy environments, while at the same time significantly reducing listening effort.

**With the OpenSound Navigator and OpenSound Optimizer working together, Oticon Opn S takes BrainHearing benefits to new heights\*.**



Traditional technology focuses on speech coming from the front, while closing all other sounds down



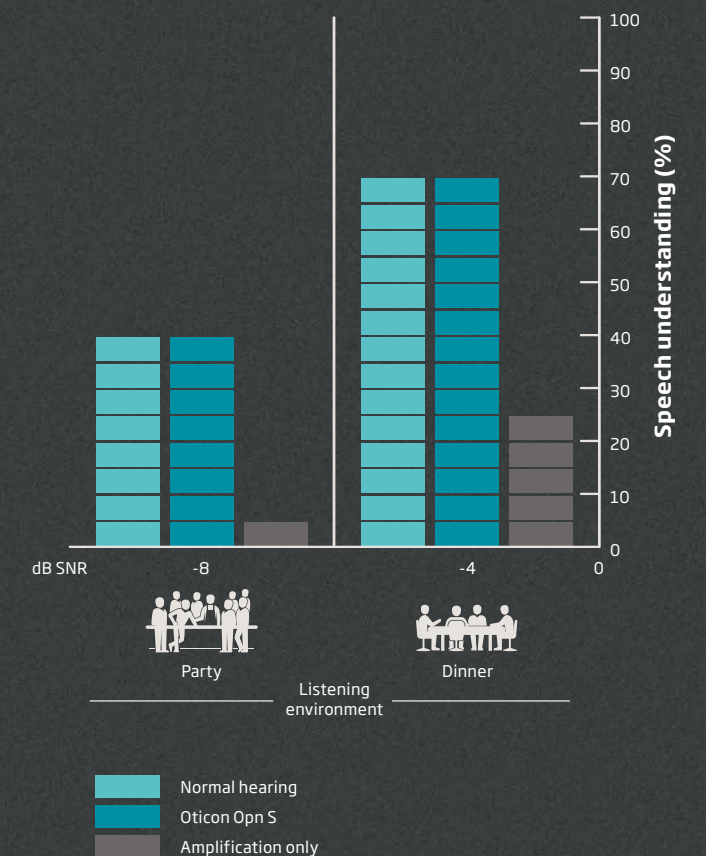


# Oticon Opn S delivers speech understanding on par with normal hearing in noisy environments

## Closing another gap to normal hearing

Powered by the OpenSound Optimizer and the OpenSound Navigator, Oticon Opn S takes speech understanding to the next level and closes a gap to normal hearing\*.

The biggest challenge for people with hearing loss is being able to thrive in noisy environments with multiple speakers. With up to 6 dB more gain, open fittings and the open sound experience, Oticon Opn S users can experience speech understanding in these difficult listening environments at the level of people with normal hearing.



\* Juul Jensen 2018, Oticon Whitepaper, Oticon Opn S1



# Introducing the **new rechargeable miniRITE R**

A full day's power. Every day

The new miniRITE R offers a unique combination of the open sound experience, superior connectivity and a state-of-the-art rechargeable lithium-ion solution in an elegant and discreet design.

**In addition, this new style offers:**

- Super fast three-hour charging time for a full day of power, including streaming
- Quick recharge - 30 minutes for an additional six hours of power
- Contact-free and reliable, inductive charging
- Intuitive-to-use, stable and stylish charger

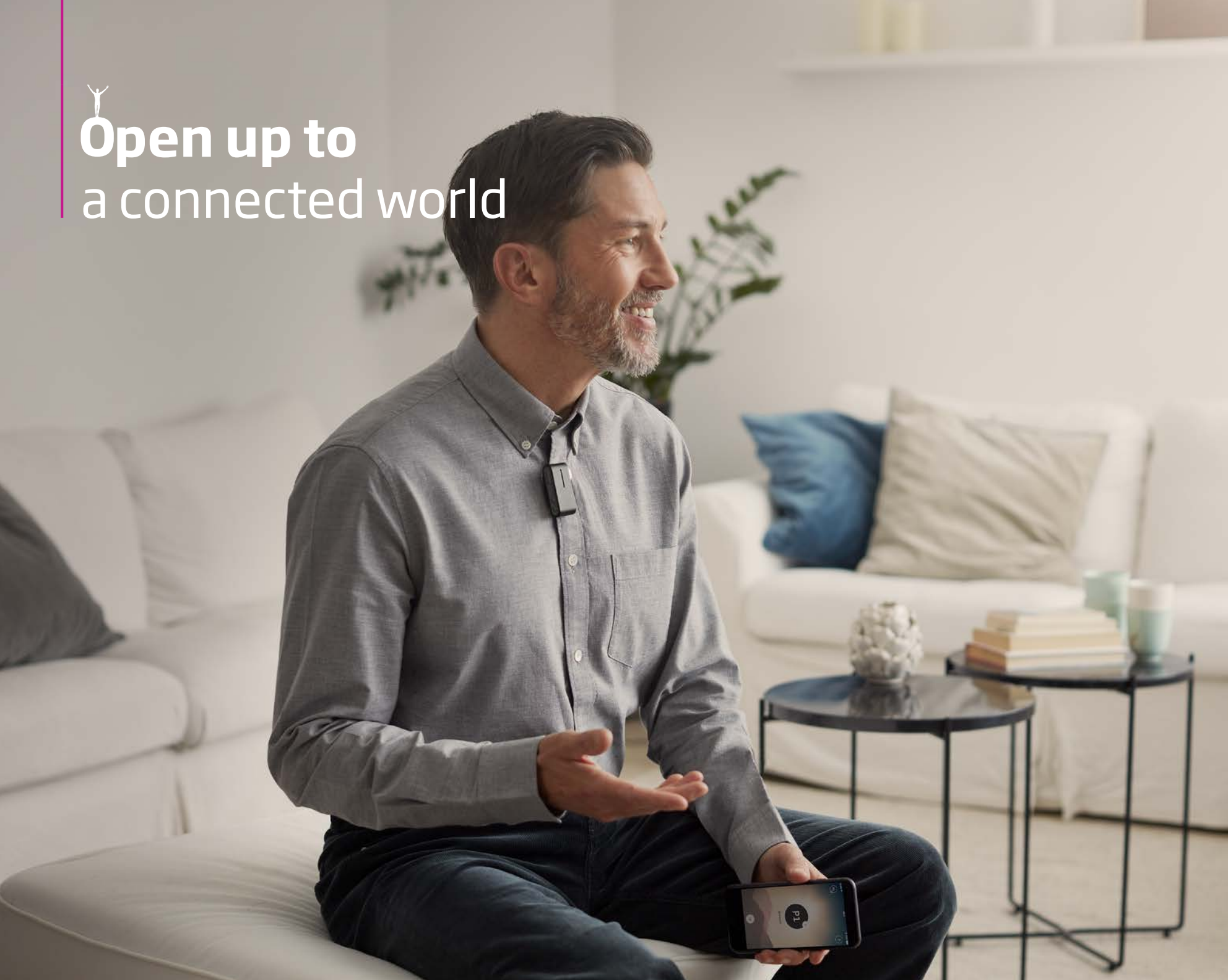


Lithium-ion battery performance varies depending on hearing loss, lifestyle and streaming behaviour.





# Open up to a connected world



## An extensive range of connectivity possibilities:



### TV

The TV Adapter 3.0 enables sound to be streamed from a TV directly to multiple pairs of Oticon Opn S hearing aids



### Oticon ON App

Discreetly switch between programs, adjust the volume, use HearingFitness™ and much more. The Oticon ON App also provides access to the Internet of Things via IFTTT.com



### ConnectClip

Use ConnectClip as a remote microphone, turn the hearing aids into a wireless stereo headset or use it as a remote control to adjust the volume and change programs



### Music

Enjoy music in both hearing aids in stereo. Stream directly from iPhone, iPad and iPod touch or use ConnectClip with any Bluetooth-enabled device



### Computer

Create a wireless headset and chat over Skype, Lync, etc. Pair ConnectClip directly to the computer via Bluetooth or use the BT-D 800 USB dongle



### Landline phone

Answer calls that are made to a stationary telephone wirelessly. Phone Adapter 2.0 attaches to conventional telephones and streams calls to the hearing aids via ConnectClip

### IFTTT

### Internet connectivity

The If This Then That (IFTTT) network makes life easier and more fun by connecting Oticon Opn S hearing aids with the wide range of Internet-connected devices we use in everyday life. Visit [ifttt.com/oticon](http://ifttt.com/oticon) for inspiration



### Remote Control

Discreetly regulate volume, switch programs or simply mute the hearing aids with a touch of a button

## Hands-free streaming from all smartphones with ConnectClip

With Oticon Opn S, your clients can stream high-quality sound to both hearing aids from any modern smartphone, including iPhone® and Android™.

Oticon Opn S pairs with our ConnectClip microphone accessory via 2.4 GHz Bluetooth® low energy technology, enabling hands-free calls and more.

## Oticon Opn S with 2.4 GHz Bluetooth low energy enables:

- Streaming stereo sound to both ears
- High-quality sound - wide audio streaming frequency range (7.5 kHz)
- Low battery consumption
- Fast, clear streaming - free from unwanted noise
- Connects Oticon Opn S directly to iPhone, iPad® and iPod touch®

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Made for  
**iPhone | iPad | iPod**

Works with  
**any modern  
smartphone**



# Boost hearing with Oticon Opn S and the Oticon ON App

The Oticon ON App is built to empower users with a wide range of features and functionalities that add to the outstanding audiology of Oticon Opn S

The Oticon ON App makes it easy for users to control their hearing aids with just a touch of their fingertips.

The app allows users to adjust volume level, streamed sound and tinnitus relief sounds, switch between programs and more. It also offers a “find my hearing aid” search feature, a client information and education guide, links to hearing aid instructions and battery status.

What’s more, the app links Oticon Opn S to the Internet of Things and the possibility to connect to and control a wide range of devices in their lives, as well as enabling access to HearingFitness.

## Empowering users with the OpenSound Booster

The level of support offered by the OpenSound Navigator is reflected by the surrounding sound environment. With the OpenSound Booster, the user is empowered to trigger extra on-demand support, when they feel they need it the most.





# HearingFitness™

## - hearing keeps you fit

HearingFitness helps your clients get the best out of their Oticon Opn S hearing aids

Oticon's pioneering connectivity has allowed us to take a bold step into e-health technology. Like an exercise app, HearingFitness in the Oticon ON App gives hearing aid users advice and encouragement on ways to hear better, protect their hearing, and improve their health.

It is the start of data-driven hearing care, and it enables more personalized hearing care than ever before.

HearingFitness is inspired by striking new evidence that shows how satisfactory treatment of hearing loss in mid-life potentially could reduce the risk of dementia more than any other action - including quitting smoking and exercising more\*.

Welcome to the smarter future of hearing at [oticon.ca/hearingfitness](https://oticon.ca/hearingfitness)

### HearingFitness™ highlights

- **Suggests optimal programs** for the sound environment
- **Gathers anonymous data** to inform product improvement
- **Rewards positive development** of listening behaviour
- **Gives gentle nudges** based on data insights
- **Helps set hearing goals** and track progress towards them
- **Gives a clear overview** of hearing aid usage



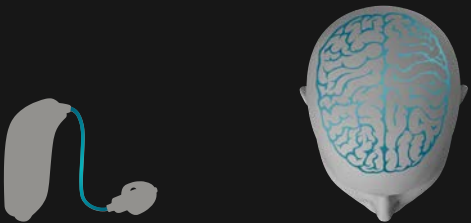

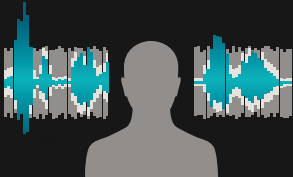





# Three levels of BrainHearing support

BrainHearing support is delivered by a unique combination of technologies working together to reduce listening effort and provide the brain with better conditions to perform. All members of the Oticon Opn S family deliver the unique open sound experience and access to multiple speakers. However, they do differ in the amount of support they give the brain in terms of rapid noise

reduction, sound localization, speech clarity, and the personalization of the listening experience.

Regardless of end-user age and lifestyle, Oticon always recommends Oticon Opn S 1 for maximum support across different listening environments.

		    				
Product	BrainHearing support	Open access to all speakers	Rapid noise reduction	Localization of sounds	Speech clarity	A personalized listening experience
Oticon Opn S 1	Level 1	Yes	• • •	• • •	• • •	• • •
Oticon Opn S 2	Level 2	Yes	• •	• •	• •	• •
Oticon Opn S 3	Level 3	Yes	•	•	•	•
Supporting features:		<ul style="list-style-type: none"><li>• OpenSound Navigator</li><li>• OpenSound Optimizer</li><li>• Spatial Sound LX</li></ul>	<ul style="list-style-type: none"><li>• OpenSound Navigator</li><li>• Frequency bands</li></ul>	<ul style="list-style-type: none"><li>• Speech Guard LX</li><li>• Spatial Sound LX</li><li>• Clear Dynamics</li><li>• Bandwidth</li></ul>	<ul style="list-style-type: none"><li>• OpenSound Navigator</li><li>• OpenSound Optimizer</li><li>• Speech Guard LX</li><li>• Clear Dynamics</li><li>• Bandwidth</li></ul>	<ul style="list-style-type: none"><li>• Fitting bands</li><li>• YouMatic™ LX</li><li>• Soft Speech Booster LX</li></ul>



# A high performing family delivers an outstanding range of open sound opportunities

Four attractive styles and a wealth of features



**OpenSound Navigator™**  
Less effort. Remember more.  
Better hearing.



**OpenSound Optimizer™**  
Optimal gain and open fittings,  
without feedback risk.



**Spatial Sound™ LX**  
Locate, follow and shift focus to the  
most interesting sounds.



**YouMatic™ LX**  
Tailors OpenSound Navigator to individual  
needs and preferences.



**Speech Guard™ LX**  
Improves speech understanding in noisy  
environments, making it easier to follow  
and engage in conversation



**Speech Rescue™ LX**  
Makes high frequency sounds  
more audible.



**Soft Speech Booster LX**  
Improves soft speech understanding up to  
20% - without turning up the volume.



**Clear Dynamics**  
Better sound quality with less distortion in  
loud environments.

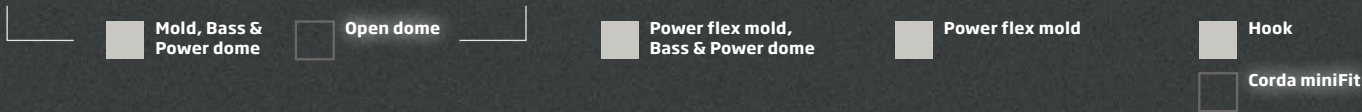
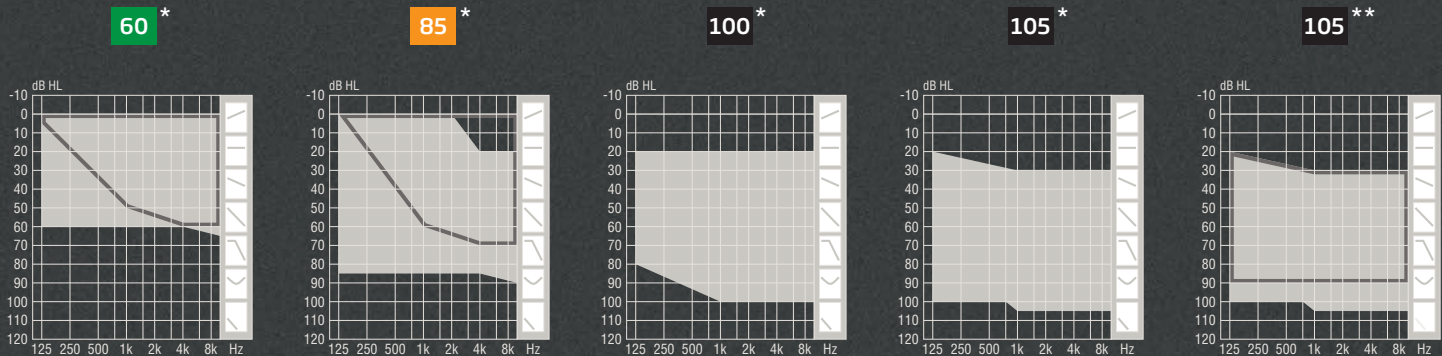


**Wind Noise Management**  
Improves access to speech in situations  
with wind noise.



**Tinnitus SoundSupport™**  
Relief sounds for tinnitus clients.

## Fitting ranges across styles



\* Applicable for both Oticon Opn S 1 miniRITE, miniRITE T and miniRITE R.  
\*\* Applicable for BTE PP.  
Fitting range details for Oticon Opn S 2 & Oticon Opn S 3 are available in the technical data sheets.





[oticon.ca/opn-s](https://oticon.ca/opn-s)

**Manufacturer:**  
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Kongebakken 9  
DK-2765 Smørum  
Denmark  
[www.oticon.global](https://www.oticon.global)

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