

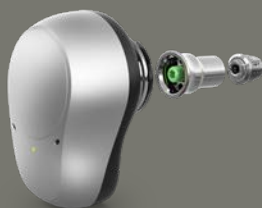
Bone Anchored Hearing System

# Ponto™ System

## A few minutes to change your life



Choose Sound.  
Choose Ponto



oticon  
MEDICAL

# 10 years of life-changing hearing care

Ten years ago, the first users switched on their Ponto sound processors and opened up a world of sound. Ever since, Oticon Medical has been working tirelessly to further develop the Ponto™ System. By combining advanced technologies and research, with insights gained from our close relationships with users and clinics, we have introduced significant improvements to the field.

Today, more than 200,000 users around the world rely on bone anchored hearing solutions for work, school and play. The Ponto System offers a simple and safe procedure with proven results and our commitment to providing innovative products and solutions to enhance the life of bone anchored users continues.



Be part of the journey.

Choose Sound. **Choose Ponto**



## BrainHearing™

– Helping the brain make sense of sound



## MIPS

A unique perspective on tissue preservation with minimal soft tissue intervention



## Ponto BHX Implant

Bone bonding – fast and strong osseointegration

## A small procedure with huge benefits

Today a bone anchored procedure is done in minutes and changes users' lives. The procedure is truly minimally invasive and smoother than most candidates can imagine.



*I have had multiple surgeries on my ear before. This time it was nothing, it was completely a breeze.”*

Robb, Conductive hearing loss



## Proven hearing excellence

The right choice of sound processor can result in decreased listening effort, increased speech understanding and the right support in complex listening situations. Here advanced technology can really make a difference.



*The Ponto is just so much more. It's just more. **The sound, the clarity of the sound, and the naturalness** if you can say that.”*

Jamina, Single-sided deafness



## Designed for simple, easy care

The Ponto System provides a safe, simple treatment promoting great results – proven over more than 10 years.



*I would highly recommend it. It has made a huge impact on my life... I don't know it's there. Once it's healed, you don't really need to do anything different.”*

Louise, Single-sided deafness



### Ponto Abutments

A unique design for Direct Sound Transmission



### Ponto 4

Truly connected with OpenSound Navigator™ in the smallest size to date



### Ponto 3 SuperPower

The most powerful abutment-level sound processor in the market



# Impact beyond better hearing

The choice of hearing system will impact the user's everyday life. We want to help users to invest their cognitive resources in understanding, remembering, interacting, and enjoying, rather than 'just' hearing. We cannot make all situations noiseless and easy, but our solutions should reward the user with increased performance when more effort is put into an important situation.

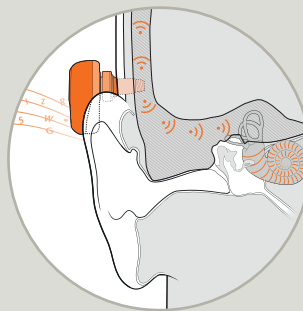
## BrainHearing™

BrainHearing is Oticon Medical's guiding star in the development of hearing systems. It is about a fundamental understanding of how hearing works – and how the brain makes sense of sound with less effort.



## Up to 20 dB more output

Direct Sound Transmission systems, such as the Ponto System, with a direct connection to the bone can provide an extra 10–20 dB output in the mid to high frequency range.<sup>1</sup> This range contains the most important sound information for speech understanding.

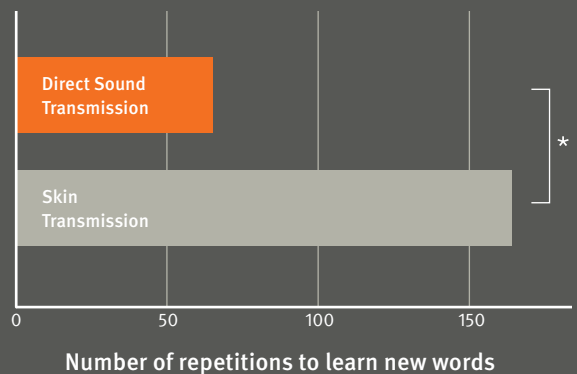


Direct Sound Transmission



## 2.5 x faster learning<sup>2</sup>

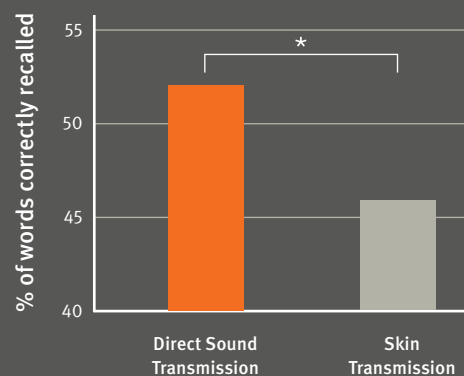
To develop vocabulary, a child should have access to the fullest possible spectrum of speech sounds and the most complete and clear auditory signal. Results show that children learn new words 2.5 times faster using a system with Direct Sound Transmission compared to a solution with Skin Transmission.<sup>2</sup>





## 13% better recall<sup>3</sup>

In order to make sense of speech and elaborate on a reply in conversations, we need to continuously store words, concepts and opinions in our short and long term memory. Direct Sound Transmission provides high quality sound to support the brain's cognitive processes. Fewer resources are needed to process the signal, and more resources can be used for remembering.<sup>3</sup>



# A small procedure with huge benefits

Today bone anchored surgery is done in minutes and with outcomes that are clearly life-changing.



## A unique approach to tissue preservation

The Minimally Invasive Ponto Surgery, MIPS, is a suture-free procedure performed with a minor incision and without scar formation around the site. The procedure only removes the soft tissue that corresponds to the shape of the Ponto Abutment.

## Minimizing post-op complications

MIPS is performed with minimal skin incision and with less interference to tissue than other bone anchored surgical techniques. This reduced level of intervention aims to minimize post-op complications.





98% of users report improved quality of life after Ponto surgery<sup>4</sup>



## Tailor-made surgical components

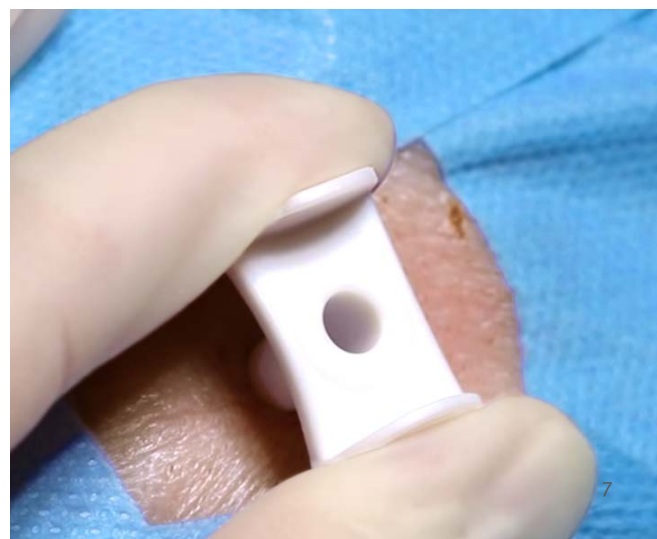
MIPS is supported by a complete kit of surgical components designed to minimize the post-op complications and provide tactility and surgical control during procedure.



“

*Tissue preservation has been a great improvement for patients. With MIPS, the cosmetic outcomes are even better.”*

Malou Hultcrantz, Professor, MD, PhD



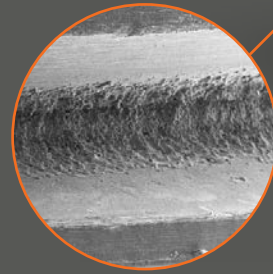
# Bone bonding – fast and strong osseointegration

With a unique combination of Biohelix™ and the OptiGrip™ geometry, the Ponto BHX Implant provides great stability from day one. It combines macro geometry for high initial stability and micro and nano surface structure that promotes fast and strong bone formation.<sup>5</sup>

“

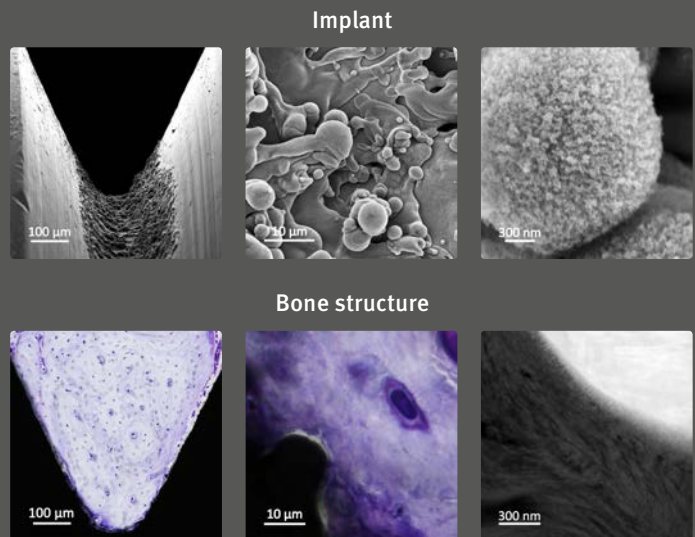
*Nanometer roughness plays an important role in osseointegration. The improvement in biomechanical capacity is even greater than I imagined.”*

R. Brånemark, Associate Professor MD Msc. PhD

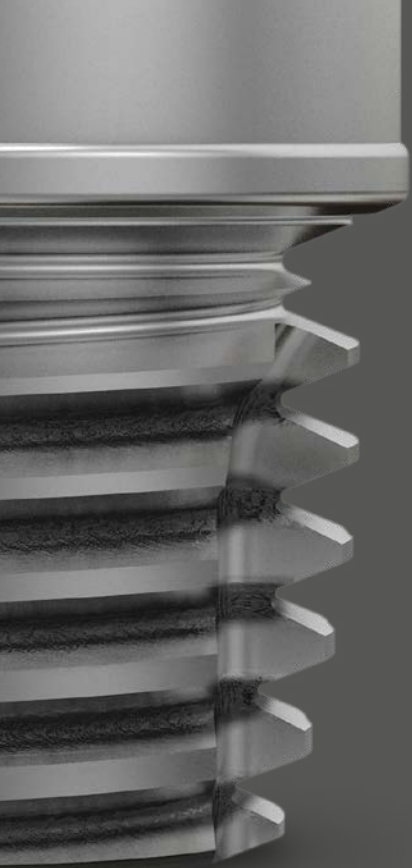


## First laser-ablated titanium surface

The unique Biohelix™ laser ablation technology enables a site-specific modification at the root of the threads of the proven OptiGrip™ geometry. This creates a three-level surface topography matching the natural bone structure at macro-, micro-, and nano-scale.

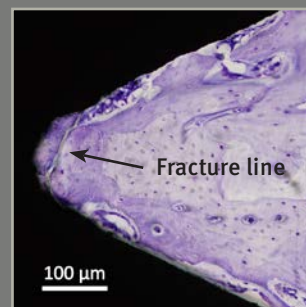
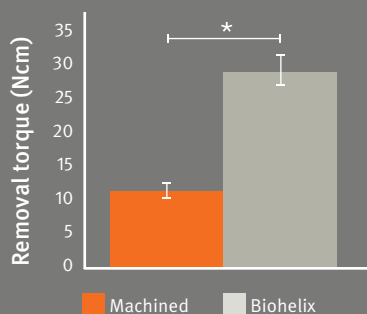






## Stronger than bone

Biohelix™ increases the strength of the bone-to-implant surface by more than 150%.<sup>5</sup> Studies prove that the bone bonding to the BHX implant is in fact stronger than the bone itself.

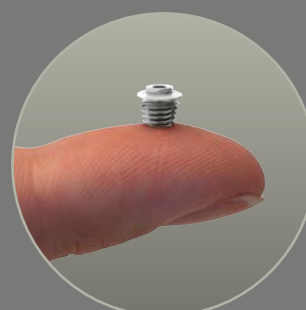
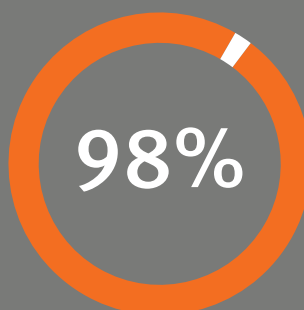


Mean removal torque, which is a measure of the degree of osseointegration, increased by 153% for Ponto BHX implants compared to the machined-only implants at 8 weeks of healing.<sup>5</sup>

Mineralized bone grows directly on the surface of a laser-ablated titanium implant. Removal torque tests prove that fracture occurs within the bone.<sup>5</sup> This indicates bone bonding at nano level.

## Implant Survival Rate

A systematic literature review reporting on 10 years' experience with the Ponto™ System demonstrated an overall implant survival rate of 98%.<sup>4</sup>



# Designed for tissue preservation

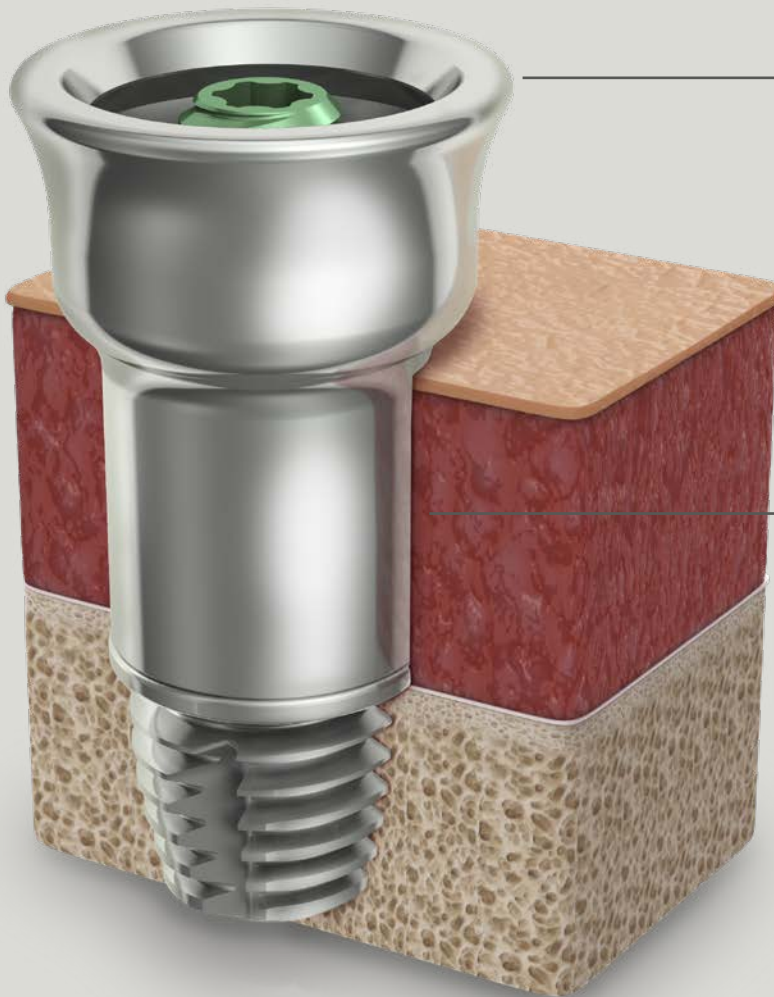


## • The proven surface

The Ponto abutment family features a pure titanium (Ti) surface. This is the proven surface for tissue preservation surgery.<sup>6</sup>

## • Perfect fit

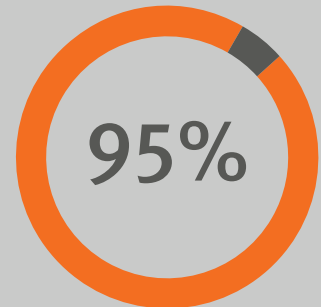
The geometry of the Ponto abutments, with its even supportive surface and perfectly matched interface, is ideal for MIPS/tissue preservation surgery. This leaves no pockets or pathways where soft tissue needs to grow back or where bacteria can collect.



*We now predominantly use the new Oticon Medical abutments, the shape of which seems ideally suited for soft-tissue preservation.”*

Shyam Singam, DLO, FRCSI<sup>7</sup>

Designed for  
simple, easy care



In 95% of follow-up visits  
no skin-related aftercare  
treatment\* is required<sup>4</sup>

The Ponto abutment family is a proven, skin-friendly concept. A systematic literature review reporting on 10 years' experience with the Ponto System demonstrates a low need for skin-related aftercare treatment.<sup>4</sup>

*\*Holgers score  $\geq 2$  indicates need for skin-related aftercare treatment.*



## A family of abutments

As no two individuals are alike, Ponto abutments are available in four different lengths for different skin thicknesses. This means tissue reduction is rarely necessary.

## Ponto – Freedom of choice

We strongly believe that users should be free to choose whichever bone anchored hearing solution suits their needs. That is why, wherever possible, we strive to offer universal interfaces.





# Ponto 4

## Open Sound. Open life

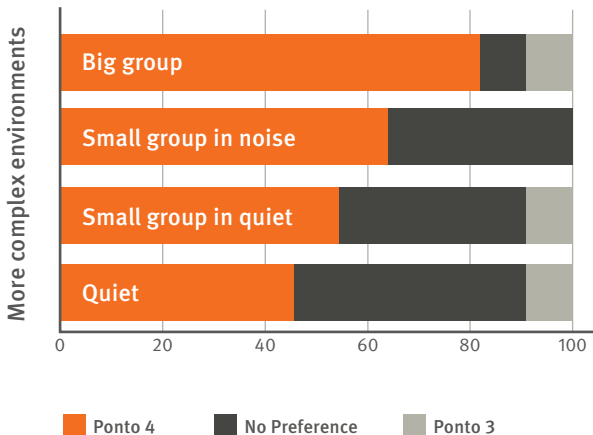
“

*Background noise is transformed into background sounds. When I went to an event with my family, the background was not noisy – I heard my family clearly at the table and also the sound coming through the speaker. It is no longer as difficult to understand....”*

Lone, Ponto 4 user



In a complex listening environment more than 80% prefer Ponto 4<sup>8</sup>



### A paradigm shift in bone anchored hearing

Built on the Velox S™ platform, Ponto 4 features the groundbreaking OpenSound Navigator™ that offers speed and precision for constant access to 360° sound. The result is a truly open and balanced sound experience in complex listening situations for significant improvement in speech understanding.<sup>8</sup>



Ponto 4  
1:1 scaling

## Smallest design in the market

27% smaller than the previous generation, the uncompromising design of Ponto 4 combines discretion with performance while meeting the high standards of durability for which Ponto is renowned.



# Ponto 3 SuperPower The Definition of Power

Ponto 3 is the world's most powerful abutment-level sound processor family, providing premium sound quality — even to users with a larger hearing loss.



Ponto 3 SuperPower  
1:1 scaling



*Loudness does not help someone hear. What I realized I have isn't loudness, but clarity. Now I understand people. Now I have clarity."*

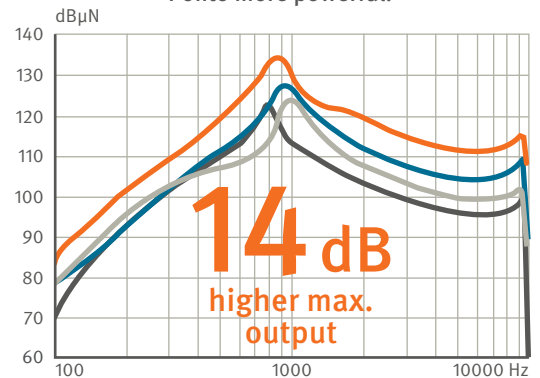
Nancy, Ponto 3 SuperPower user



## Powerful sound quality

Ponto 3 SuperPower is the most powerful abutment-level device on the market. Higher output across the entire bandwidth provides access to an increased dynamic range. This enables users of Ponto 3 SuperPower to enjoy a broader sound experience.

Our commitment to making Ponto more powerful.



Maximum Force Output level at 90 dB SPL input

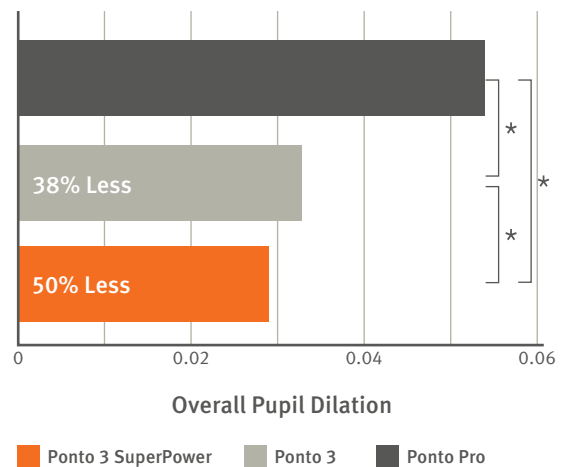
- Ponto 3 SuperPower
- Ponto 3
- Ponto 3 Power
- Ponto Pro





## Significantly less effort<sup>9</sup>

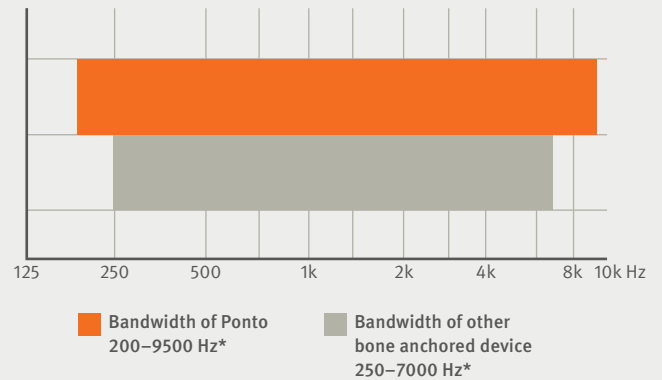
A bone anchored hearing device with a higher maximum output can transmit a larger range of less distorted sound to the brain. Results show that a significant decrease in listening effort can be achieved with the Ponto 3 SuperPower, as indicated by reduced pupil dilation.<sup>9</sup>



# Ponto sound processors

## 38% wider frequency bandwidth

The widest frequency bandwidth in the industry

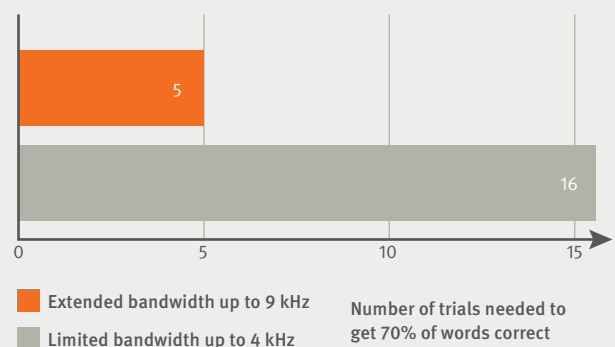


\*Linear comparison of the data from manufacturers' official data sheets. The perceptual performance has not been evaluated.

## The importance of extended bandwidth

To develop language skills, children need access to the clearest, most complete auditory signal and the widest dynamic range. A study suggests that children listening to words under extended bandwidth conditions learnt new words three times as quickly compared to children listening to the same words given a limited bandwidth.<sup>10</sup> This knowledge highlights the importance of extended bandwidth and provides valuable insight to our sound processor development.

Children learn new words  
3 times quicker with extended bandwidth<sup>10</sup>



The study included both normal hearing and hearing-impaired children who were exposed to limited and extended bandwidth. The study was performed on hearing aids. No direct conclusion can be drawn for Ponto bone anchored devices.



# Uncompromised Design



Ponto 4



Ponto 3 SuperPower



**Ponto 4 is the smallest bone anchored device in the market – 27% smaller than the previous generation, combining discretion with performance.**

## Featuring:

- Velox S™ platform and ground-breaking OpenSound Navigator™ technology
- LED light
- Tamper-resistant battery drawer
- Metal spring coupling
- IP 57
- Hydrofob coating
- True connectivity through the Oticon ON App and the IFTTT network

**Ponto 3 SuperPower is the most powerful abutment-level sound processor on the market.**

## Featuring:

- Inium Sense platform and FreeFocus
- Volume control
- Program button
- Tamper-resistant battery drawer
- Metal spring coupling
- IP 57
- Hydrofob coating
- Wireless streaming through the Oticon Medical Streamer

## Tried, tested and ready for daily life

As part of Demant, a world-leading healthcare group, Oticon Medical can draw on the technological advances of Oticon and enjoy its advanced testing facilities. Ponto sound processors have an IP57 classification and have been thoroughly tested in over 30 different reliability tests. From humidity and drop tests to compatibility tests, the results prove that Ponto supports an active lifestyle – all day, every day.







## Ponto 4 – The world’s first truly connected

Ponto 4 is the world’s first bone anchored sound processor that can be connected to the internet. The Oticon ON App, IFTTT network and wireless technology provides endless opportunities in hearing healthcare — for a future of connected hearing.

With Oticon’s 2.4 GHz connectivity products, Ponto 4 can connect wirelessly at school, at theatres, 1:1 at restaurants or to FM and Telecoil systems.



For information on compatibility, please visit [www.oticonmedical.com/wireless-compatibility](http://www.oticonmedical.com/wireless-compatibility).



Apple, the Apple logo, iPhone, iPad, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc. Android, Google Play, and the Google Play logo are trademarks of Google LLC.





# Freedom to connect



## Ponto 3 SuperPower – Power to participate

The Oticon Medical Streamer offers users of Ponto 3 SuperPower a discreet solution for connecting their devices using the ConnectLine App. The concept is easy – one device and one App to access and control the most important communication devices, looped environments, FM systems and much more. All without compromising on power.



*Both the Oticon On App and the ConnectLine App are available for download on the App Store and on Google Play.*



# Empowered by sound



*I tried Ponto on a Softband for about a fortnight, and I really liked it. It was a big improvement for me.”*

Louise, Single-sided deafness

## Try it first

The innovative Ponto Softband and headband give children and adults the opportunity to try out and experience the Ponto sound quality. The Softband is adjustable in size to fit snugly and comfortably on the user's head.



Unilateral Softband



Bilateral Softband



Ponto SoundConnector™ on cap



Headband



Ponto Softband Bilateral

## Choose from an array of solutions

The Ponto Softband offers the widest selection of colours, an array of wearing options and features new material for comfortable all-day use. For the best audiological outcomes and to minimise the skin-dampening effect, always consider using a SuperPower processor in combination with softband.

Ponto Softband is available in 14 colors



Headband



Ponto SoundConnector™



# Fitting with precision

With Genie Medical, the hearing care professional has the flexibility to make personal adjustments for each patient. It is based on the proven Oticon Genie 2, the benchmark of the hearing aid industry, with several million fittings worldwide. All designed to give audiologists the tool and the confidence to give users the optimal fitting.

## Feedback Manager

The Feedback Manager measures and defines the maximum amplification setting to minimise feedback.

## Individual hearing levels

The BC in-situ audiometry tool allows audiologists to measure individual bone conduction hearing thresholds directly via the sound processor.

## Verification

The Verification and Technical Measurement tools in Genie Medical help to objectively measure the sound processor in a variety of settings using a skull simulator.



## References

1. Verstraeten, N, Zarowski, AJ, Somers, T, Riff, D, Offeciers, EF (2008). Comparison of the audiological results obtained with the bone-anchored hearing aid attached to the headband, the testband and to the ‘snap’ abutment. *Otology & Neurotology* 30: 70–75.
2. Pittman, A L (2019). Bone Conduction Amplification in Children: Stimulation via a Percutaneous Abutment versus a Transcutaneous Softband. *Ear and hearing* 40(6): 1307–1315.
3. Lunner, T, Rudner, M, Rosenbom, T, Ågren, J, Ng, E H N (2016). Using speech recall in hearing aid fitting and outcome evaluation under ecological test conditions. *Ear Hear* 37 Suppl 1: 145S–154S.
4. Lagerkvist, H, Carvalho, K, Holmberg, M, Petersson, U, Cremers, C, Hultcrantz, M. Ten years’ experience with the Ponto bone anchored hearing system – a systematic literature review. (under review).
5. Shah, F A, Johansson, M L, Omar, O, Simonsson, H, Palmquist, A, Thomsen, P. (2016). Laser-modified surface enhances osseointegration and biomechanical anchorage of commercially pure titanium implants for bone-anchored hearing systems. *PLoS One*, 11(6).
6. Johansson, M, Holmberg, M, Hultcrantz, M. (2014). Bone anchored hearing implant surgery with tissue preservation – a systematic literature review. Oticon Medical white paper M52107.
7. Singam, S, Williams, R, Saxby, C, Houlihan, F P (2014). Percutaneous bone-anchored hearing implant surgery without soft-tissue reduction: Up to 42 months of follow-up. *Otol Neurotol* 35(9): 1596–1600.
8. Bianchi, F, Weile, J N et al. (2020). OpenSound Navigator™ for Ponto, Oticon Medical white paper 215170.
9. Bianchi, F, Wendt, D, Wassard, C, Maas, P, Lunner, T, Rosenbom, T, Holmberg, M (2019). Benefit of higher maximum force output on listening effort in bone-anchored hearing system users: A pupillometry study. *Ear Hear* 40: 1220–1232.
10. Pittman, A L (2008). Short-term word-learning rate in children with normal hearing and children with hearing loss in limited and extended high-frequency bandwidths. *Journal of Speech, Language, and Hearing Research* 51: 785–797.

*Not all hearing loss patients are candidates for a bone anchored solution. All surgical procedures include an element of risk, and it is impossible to guarantee success. Outcomes may vary. Testimonials represent the opinion of the concerned individuals only and may not be the experience of others. Not all products are available in all markets. Product availability and indications are subject to regulatory approval in respective markets.*



## Because sound matters

Oticon Medical is a global company in implantable hearing solutions, dedicated to bringing the magical world of sound to people at every stage of life. As part of the Demant group, a global leader in hearing healthcare with 14,500 people in over 130 countries, we have access to one of the world's strongest research and development teams, the latest technological advances and insights into hearing care.

Our competencies span more than a century of innovations in sound processing and decades of pioneering experience in hearing implant technology. We work collaboratively with patients, physicians and hearing care professionals to ensure that every solution we create is designed with users' needs in mind. We share an unwavering commitment to provide innovative solutions and support that enhance quality of life for people wherever life may take them. Because we know how much sound matters.



 **Oticon Medical AB**  
Datavägen 37B  
SE-436 32 Askim  
Sweden  
Tel: +46 31 748 61 00