The ultra-compact Neuro Zti implant results from more than 25 years experience in cochlear implant development, manufacturing know-how and material science expertise. The Neuro Zti provides a powerful and future-ready electronic architecture. Its proven electrode arrays are designed to provide the best solution to fit the patient’s cochlear anatomy, medical history and surgical needs.

The ultra-compact design “Zti” is derived from Zirconia and Titanium - two innovative, biocompatible materials widely utilized in the medical field. They make the Neuro Zti design highly resistant to impact, meeting the 4.5 industry standard. The toughened Zirconia cover of the Neuro Zti means can resist up to 5 jolts. The Zirconia material is transparent to radio waves allowing direct communication with the sound processor. The dedicated implant antenna on the fine cable is pre-implanted and integrated into the core of the receiver. As a result, the Neuro Zti is able to deliver the smallest surgical footprint in the industry. The Neuro Zti ultra-compact design also means greater cosmetic freedom with respect to its placement on the head - closer to the ear, which may result in a more natural fit for the sound processor.

Low trauma fixation system
The Neuro Zti implant features a second generation low-trauma fixation system to secure the implant in place. The shape-conforming flexible wings with titanium inserts allow the Neuro Zti implant to easily adapt to any skull surface. The Neuro Zti design eliminates the need for bone-bed drilling and reduces cosmetic impact.

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 a member of one of the world’s largest groups of hearing health care companies, we share a close link with Oticon and Distrelec to the latest advancements in research and technologies. Our competencies span a range of innovations in sound processing and decades of pioneering experience in hearing implant technology.

By working collaboratively with patients, physicians and hearing care professionals, we ensure that every solution we create is designed with user needs in mind. We share an unwavering commitment to provide innovative solutions and support that enhance quality of life for people wherever they are in the world. Because we know how much sound matters.
Electrode arrays versions Neuro ZtiCLA and Neuro ZtiEVO

Neuro ZtiCLA
The CLASSIC electrode array has an optimized stiffness profile that makes it compatible with typical and difficult insertions. It is straight with a shape-conforming structure and has dimensions that facilitate deep cochlear insertion (26mm). The soft-end of the electrode array is designed to reduce cochlear trauma. The push-rings at the base provide a “safe” point to manipulate and hold the array. They enable improved array insertion as well as mechanical sealing of the cochlea designed to minimize the risk of infection and/or CSF (cerebrospinal fluid) leakage.

Neuro ZtiEVO
The atraumatic electrode array
The EVO electrode array is designed to preserve the fragile structures of the cochlea, particularly important when there is residual hearing. Its smooth surface, small diameter, thin end and flexibility are designed to ensure a smooth, trauma-free insertion so that the cochlear structures are preserved as much as possible. Similar to the CLASSIC array, the EVO has push-rings at the base to make it easier to seal the array’s entry point into the cochlea to help minimize the risk of infection and/or CSF leakage.

Oticon Medical’s electrode
The Neuro Zti full-band electrodes are manufactured using a precise and highly-reproducible micro-machining process. The full-band shape is designed to allow an optimized orientation in the cochlea, to offer a reduced impedance and a low-charge density stimulation.

Neuro ECAP
The Neuro Zti electronic platform contains a dedicated DSP for measuring and analysing neural responses. Neuro ECAP leverages the power of the ACAP DSP to allow the clinician to efficiently measure electrophysiological responses from the cochlea. Such measures may be useful for device function verification, understanding patient outcomes and for creating mapping for patients where limited behavioural data are available. Basic and advanced electrophysiology capability are available.

Surgical tools and accessories

Bibliography