

Nucleus® CI512 cochlear implant

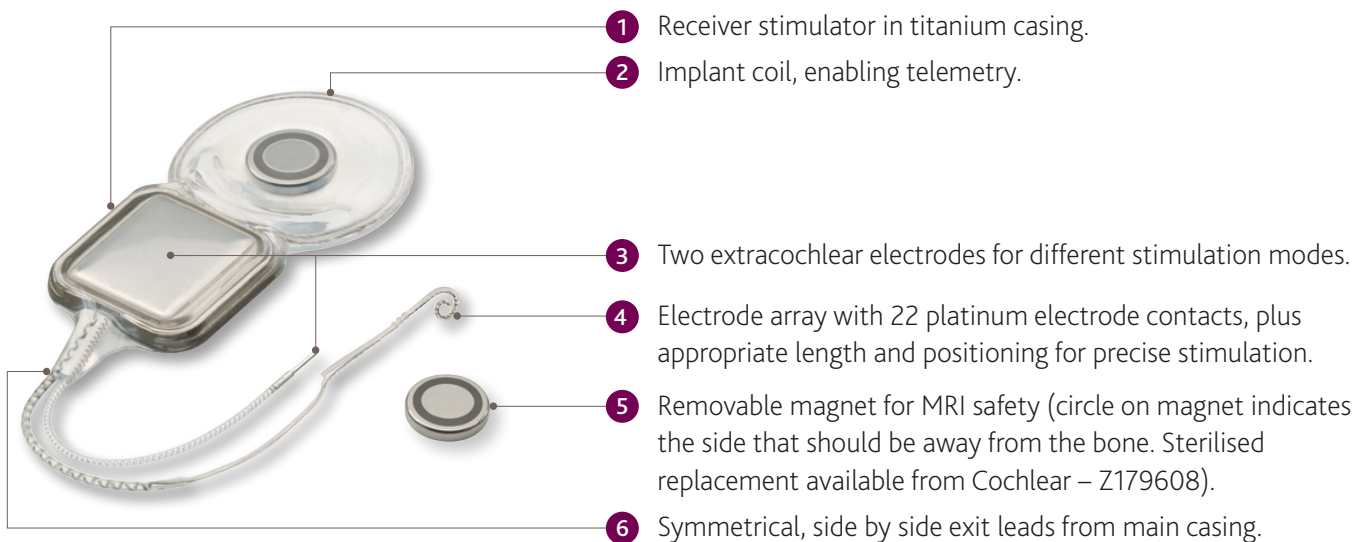
Technical Specifications

From the company that continually sets the benchmark in implant reliability, the Cochlear™ Nucleus® CI512 cochlear implant draws on over 25 years of experience, and has been developed in close collaboration with surgeons around the world.

The Nucleus CI512 implant features a streamlined design and is:

- The world's thinnest cochlear implant – 40% thinner than Nucleus Freedom™.
- 2 ½ times stronger than Nucleus Freedom*.
- Designed for precise stimulation and leading performance.

Components of the Nucleus CI512 implant



Overall dimensions of the Nucleus CI512 implant

The world's thinnest cochlear implant - only 3.9 mm thin.



Specifications are nominal, accurate at the time of printing, and subject to change without notification.

* As measured by impact testing.

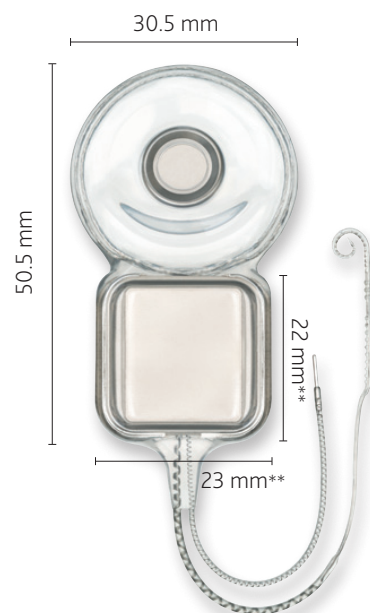
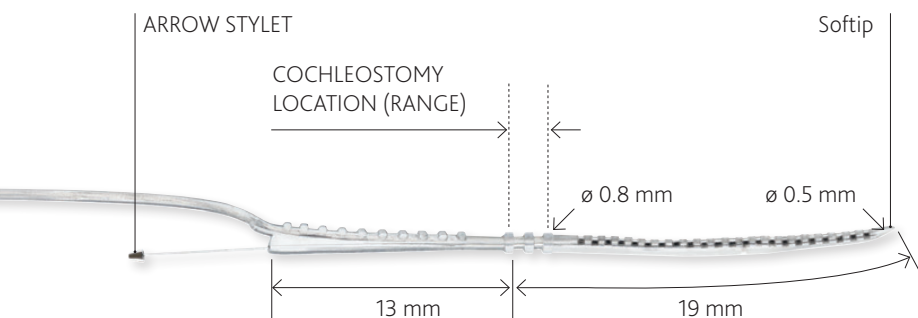
RECEIVER STIMULATOR

General Features

- Weight - 8.8 g (including electrode array).
- Resistant against external impact up to 2.5 Joules¹.

MRI

- MRI safe up to 3 Tesla
(for further details refer to the Surgeon's guide 211651)².



** Specified dimensions for Receiver Stimulator titanium casing.

ELECTRODE ARRAY

Contacts

- 22 half-banded platinum electrodes, moulded in a perimodiolar shape.
- Electrode contacts arranged in non-uniform spacing from 0.4 to 0.8 mm and spaced over 15 mm active array.
- More robust lead to withstand the rigours of lifetime implantation.

General Features

- Platinum arrow stylet holds the electrode straight during insertion with Advance Off-Stylet™ (AOS™) surgical technique.
- AOS surgical technique and Softip™ electrode to minimise lateral wall insertion force.
- Two extracochlear electrodes - one titanium plate at the implant receiver stimulator and a separate 0.6 mm diameter cylindrical electrode.
- A white marker between 10th and 11th array contact indicates insertion depth when the tip is close to the lateral wall of the cochlea.

Dimensions

- 19 mm intracochlear length, including Softip.
- Electrode diameter at apical end - 0.5 mm.
- Electrode diameter at basal end - 0.8 mm.

MICROELECTRONIC PLATFORM

General Features

- Power efficient, custom design.
- Amplitude range: 10 uA to 1.75 mA.
- Stimulation rates up to 31.5 kHz.
- Pulse width: 12 us to 400 us per phase.
- Implant ID to uniquely identify implants and to avoid unintended stimulation.

Stimulation Modes

- Monopolar, bipolar mode and common ground stimulation, biphasic current pulses.

Telemetry Capability

- Ultra-low-noise floor (~1 µV), which enables advanced AutoNRT™ telemetry capabilities.
- Includes fully integrated Electrophysiology telemetry modes - NRT, AutoNRT, ESRT, ABR, CEP and intraoperative NRT.

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1 DIN EN45502-2-3 draft document; VDE 0750-10-3:2007-02; Active implantable medical devices - Part 2-3: Particular requirements for cochlear implant systems; German version prEN 45502-2-3:2006.

2 MRI field strength approval varies by country. Check your warnings and precautions document. Magnet must be removed before all MRI procedures in the USA.