For Professionals

MED EL

SYNCHRONY Cochlear Implant

Unparalleled MRI Safety

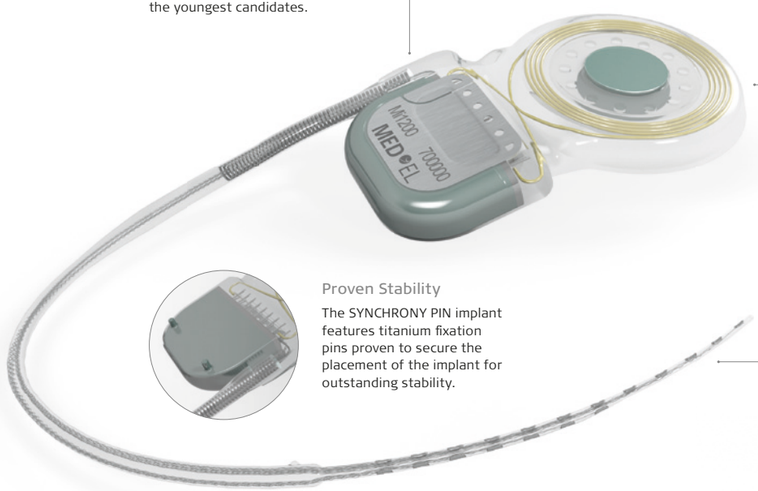
hearLIFE

SYNCHRONY Cochlear Implant*

MRI Safe at 3.0 Tesla—Without Magnet Removal

Smallest Titanium Implant

The smallest, thinnest, and lightest titanium cochlear implant available—making it the ideal choice for even the youngest candidates.



3.0 Tesla Safe Magnet

MRI safe even at 3.0 T with the magnet in place, the magnet housing can optionally be removed to minimise image distortion on MRI head scans.

Proven Stability

The SYNCHRONY PIN implant features titanium fixation pins proven to secure the placement of the implant for outstanding stability.

Atraumatic Electrode Arrays

Engineered to preserve delicate cochlear structures, MED-EL's flexible electrode arrays provide complete coverage of the cochlea for superior hearing performance.

Triformance | For More Natural Hearing

Triformance delivers the most natural hearing possible for your patients by combining Complete Cochlear Coverage and Structure Preservation with FineHearing sound coding technology.

Complete Cochlear Coverage

Stimulation of the cochlea from the base to the apical region provides recipients with the full spectrum of sound for a more natural hearing experience.
Only long, flexible electrode arrays that facilitate structure preservation can be inserted fully into the cochlea, achieving Complete Cochlear Coverage for optimal hearing outcomes.

Structure Preservation

Specifically engineered for Structure Preservation to ensure cochlear integrity, FLEX electrode arrays are the most atraumatic electrode arrays available. Uniquely designed not to deviate into other scalae and ideal for both round window and cochleostomy surgical approaches, FLEX electrode arrays are recommended for safe, complete electrode insertion, ensuring a hearing future.

FineHearing™

FineHearing is the only sound coding technology that delivers a richer perception of sound in all frequencies, including deep bass tones. Our cochlear implant recipients benefit from a fuller, more accurate perception of sound through FineHearing's precise control of essential sound information—in both quiet and noisy environments.

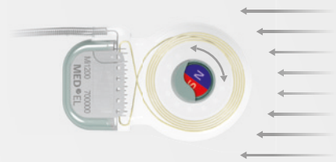
CCC Complete Cochlear Coverage
The Full Spectrum of Sound

SP Structure Preservation
Ensuring a Hearing Future®

FH FineHearing™
For a Richer Hearing Experience

Superior MRI Safety

The implant magnet can freely rotate and self-align within its titanium housing, greatly reducing implant torque and the risk of demagnetisation during MRI scans. The rotatable, self-aligning design enables high-resolution 3.0 Tesla MRI scans without the need for magnet removal. The implant magnet is MRI safe even at 3.0 Tesla—the highest MRI safety available.



Self-Aligning Magnet
The rotatable implant magnet is self-aligning, greatly reducing implant torque for greatly increased patient comfort during MRI scans.

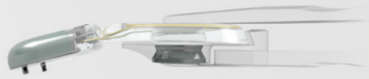
Exceptionally Secure Design

The revolutionary conical design of the removable magnet housing greatly reduces the risk of magnet dislocation or migration. The implant features a polymer stiffening ring within the silicone implant body to further secure the magnet housing. The magnet can only be removed from the bottom side of the implant, making dislocation of the magnet due to trauma almost impossible.

Secure Magnet Housing
A number of safety features makes it nearly impossible to accidentally dislodge the magnet housing.

Removable Magnet

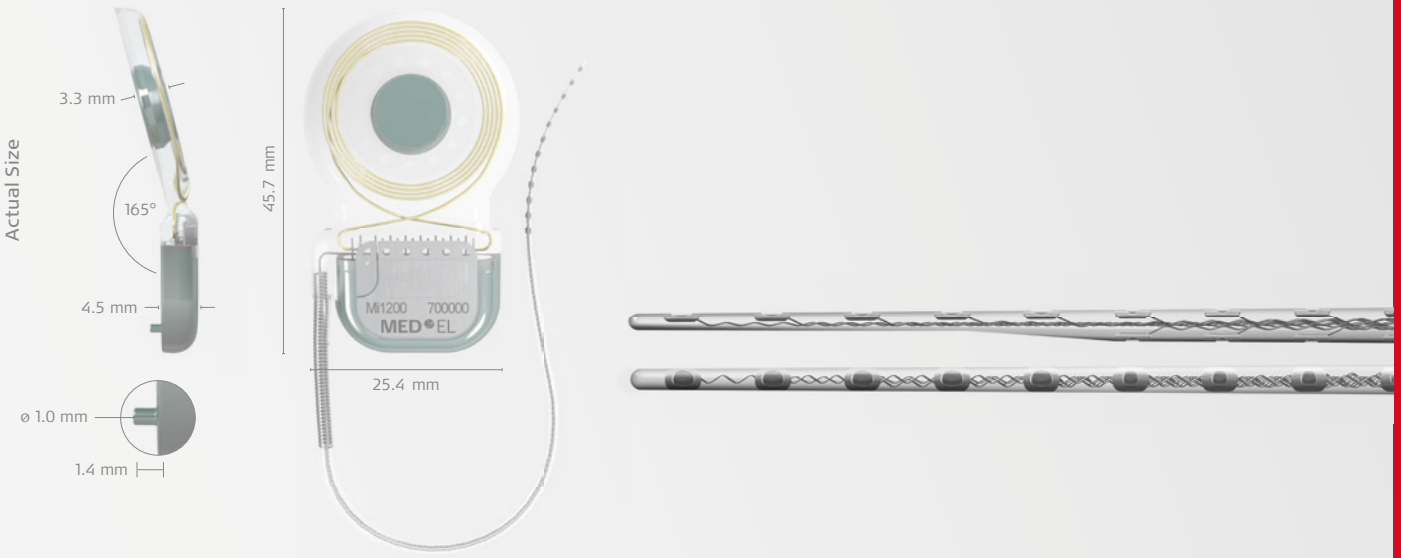
The implant magnet can optionally be substituted with a non-magnetic spacer for MRI head scans with minimal image distortion. The removable magnet housing features a protective coating to prevent unwanted cellular adhesion, simplifying the removal and replacement of the implant magnet. The incision for magnet exchange is made beside the implant, rather than directly over the implant, allowing uninterrupted hearing.



Removable Magnet
The magnet can optionally be removed to minimise image distortion on MRI head scans.

Technical Data

SYNCHRONY Implant (Mi1200)*



SYNCHRONY Implant (Mi1200)*

Stimulation Features
- Sequential non-overlapping stimulation on 12 electrode channels
- Simultaneous (parallel) stimulation on 2 to 12 electrode channels
- 24 independent current sources
- Stimulation rates of up to 50,704 pulses per second
- Range of pulse phase duration: 2.1–425.0 µs/phase
- Time resolution (nominal values): 1.67 µs
- Current range (nominal value): 0–1200 µA per pulse phase

Pulse Shapes
- Biphasic, symmetric triphasic and triphasic precision pulses

Comprehensive Diagnostic Toolkit
- Status Telemetry
- Impedance and Field Telemetry (IFT)
- Auditory Nerve Response Telemetry (ART™)
- Electrically Evoked Auditory Brainstem Response (EABR)
- Electrically Evoked Stapedius Reflex Threshold (ESRT)

Housing Design
- Impact resistance ≥ 2.5 Joule
- Unique fixation pins for additional stability
- Recommended flattening depth for the stimulator: 0.9 mm
- Stimulator: 17.3 mm x 25.4 mm x 4.5 mm (typical)
- Coil: 29.0 mm diameter x 3.3 mm thick (typical)
- Weight: 7.6 g

Safety Features
- Output Capacitors for Each Channel
- Unique Implant ID (IRIS)

MRI Conditions
- MRI conditional at 0.2, 1.0, 1.5 and 3.0 Tesla
- No magnet removal required even at 3.0 Tesla

Removable Magnet
- Magnet removable for minimised image distortion
- Rotatable magnet within hermetic titanium housing
- Self-aligning to external magnetic field
- Conical shape for secure placement

Electrode Arrays

FLEX Series
The softest and most flexible electrode arrays, designed for Structure Preservation and Complete Cochlear Coverage. Featuring 19 platinum electrode contacts and FLEX-tip technology for atraumatic insertion.

FLEX SOFT
- 26.4 mm stimulation range
- Diameter at basal end: 1.3 mm
- Dimensions at apical end: 0.5 x 0.4 mm

FLEX 28
- 23.1 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.4 mm

FLEX 24
- 20.9 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.3 mm

FLEX 20*
- 15.4 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.3 mm

FORM Series
Designed specifically for malformed cochleae and for instances where leakage of cerebrospinal fluid (CSF) is expected. Featuring 24 platinum electrode contacts and SEAL technology designed to aid closing of the cochlear opening.

FORM 24
- 18.7 mm stimulation range
- Diameter at basal end: 0.8 mm
- Diameter at apical end: 0.5 mm

FORM 19
- 14.3 mm stimulation range
- Diameter at basal end: 0.8 mm
- Diameter at apical end: 0.5 mm

Classic Series
Features 24 platinum electrode contacts. Available in Standard, Medium, and Compressed.

Auditory Brainstem Implant (ABI) Electrode Array
Features 12 active contacts on a soft pre-shaped silicone paddle. MRI conditional at 0.2, 1.0, and 1.5 Tesla.

*The SYNCHRONY Implant and FLEX20 Electrode Array are currently pending regulatory approval.

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