SYNCHRONY 2 Cochlear Implant
Made for Exceptional Performance
SYNCHRONY 2 Cochlear Implant
Intuitive Handling and Superior Performance

Structure Preservation
If an electrode array deviates from the scala tympani to the scala vestibuli, it damages critical nerve structures and results in significantly lower hearing performance. Our incredibly flexible free-fitting arrays are designed to gently adapt to the shape of each individual cochlea to protect the delicate natural structures.

Complete Cochlear Coverage
Our long, flexible arrays can be safely inserted all the way to the apical region to provide natural tonotopic stimulation across two full turns of each individual cochlea. This enables a closer to natural hearing experience and significantly better hearing outcomes.\(^1\)

Natural Sound Coding
FineHearing is the only cochlear implant sound coding that mimics the natural time-coding for low frequencies and provides place-pitch match throughout the cochlea. By mimicking natural sound coding, FineHearing provides much more natural sound quality.

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Central Electrode Lead
Symmetrical central electrode lead design for simplified surgical placement.

Angled Fantail Transition
Angled transition for anatomical fit and secure electrode lead placement.

Smallest Titanium Implant
Compact design ideal for minimally invasive surgical techniques with small incision.

Green Marker Dot
Coloured marker enables better visibility of insertion depth of the electrode array.

Optimized Electrode Lead
Streamlined electrode lead for improved handling and easier lead management.

PIN Housing Variant
Titanium fixation pins easily secure the placement of the implant for long-term stability.

The unique SYNCHRONY magnet freely rotates to self-align in an MRI scan, making it conditionally MRI safe for 3.0 Tesla MRI scans. The robust conical housing enables secure optional magnet removal for clearer brain imaging adjacent to the implant.

Excellent Surgical Handling
The best just got better: SYNCHRONY 2 builds on the proven performance, MRI safety, and reliability of SYNCHRONY to deliver intuitive surgical handling.

3.0 Tesla MRI Safety

- No Surgery
- No Discomfort
- No Hearing Downtime
**Technical Data**

**SYNCHRONY 2 Cochlear Implant (Mi1250)**

**Stimulation Features**
- Sequential non-overlapping stimulation on 12 electrode channels
- Simultaneous (parallel) stimulation on 2 to 12 electrode channels
- 24 independent current sources
- Stimulation reference electrode on titanium housing
- Stimulation rates of up to 50,704 pulses per second
- Range of pulse phase duration: 2.1-425 µs/phase
- Time resolution (nominal values): 1.67 µs
- Current range (nominal value): 0–1200 µA per pulse phase

**Pulse Shapes**
- Biphasic, symmetric tripolar and tripolar precision pulses

**Comprehensive Diagnostic Toolkit**
- Status Telemetry
- Impedance and Field Telemetry (IFT)
- Electrophysiology measurements reference electrode on titanium housing
- Auditory Nerve Response Telemetry (ART®)
- Electrically Evoked Auditory Brainstem Response (EABR)
- Electrically Evoked Stapedius Reflex Threshold (ESRT)
- Electric Acoustic Evoked Potential (EAEAP)

**Housing Design**
- Impact resistance ≥ 2.5 joule
- Unique PIN variant with fixation pins for additional stability
- Hermetically sealed titanium housing
- Stimulator: 18.8 mm x 24 mm x 4.5 mm
- Coil: 29.0 mm diameter x 3.3 mm thick (typical)
- Weight: 7.7 g

**Safety Features**
- Independent safety capacitors for each electrode channel
- Unique Implant ID (IRIS)
- Biocompatible according to ISO standard 10993-1
- Latex-free

**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. All FLEX series electrodes feature a green orientation marker for improved visibility and positioning during insertion.

**FLEXSOFT**
- 26.4 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.4 mm

**FLEX24**
- 23.1 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.4 mm

**FLEX20**
- 20.9 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**
- 26.4 mm stimulation range
- Diameter at basal end: 0.8 mm
- Diameter at apical end: 0.5 mm

**CLASSIC Series**
Features 24 platinum electrode contacts.

**STANDARD**
- 26.4 mm stimulation range
- Diameter at basal end: 1.3 mm
- Diameter at apical end: 0.5 mm

**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. All FLEX series electrodes feature a green orientation marker for improved visibility and positioning during insertion.

**FLEX24**
- 23.1 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.4 mm

**FLEX20**
- 20.9 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.3 mm

**COMPRESSED**
- 12.1 mm stimulation range
- Diameter at basal end: 0.7 mm
- Diameter at apical end: 0.5 mm

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*x* Whereby “free” means “not made with latex” according to current FDA guidance: “Recommendations for Labeling Medical Products to Inform Users that the Product or Product Container is not Made with Natural Rubber Latex”, 2014. 
**x** It has been demonstrated that no known hazards exist in specified MRI environments under conditions as described in the SYNCHRONY 2 Cochlear Implant product labelling. Recipients with a SYNCHRONY 2 Cochlear Implant may be safely MRI scanned at 0.2, 1.0, 1.5, and 3.0 Tesla following the conditions detailed in the medical procedures manual.