Candidacy

The EAS Hearing Implant System is designed for individuals with Partial Deafness. Partial Deafness is defined as a milder to moderate sensorineural hearing loss in the low frequencies that becomes a profound hearing loss in the high frequencies.

Speech Scores

The candidate’s monosyllabic word score should be ≤60% at 65 dB SPL in the level aided condition.

Additional Candidate Criteria
- No progressive hearing loss
- No acoustic otitis
- No hearing loss as a result of meningitis, otosclerosis, or ossification
- No malformations or obstructions of the earcanal
- No ear air and ear conductive data
- No external air conduction data for the ear processor
- No internal conduction data for the ear processor
- No external air conduction for the ear processor

Restore the Hearing Potential

EAS is designed to restore hearing in the full range of sound frequencies. This audiogram illustrates the potential improvement to hearing that can be realised with the acoustic and electric components of EAS.

Technical Data

DUET 2 Audio Processor

- Programmable volume control
- Sensitivity control
- Programming software control
- Performance graph
- LED indicator for setting and device firmware

Sound Coupling Strategy
- High-Definition CIS (HD-CIS)
- LED indicator for setting and device firmware

CONCERTO Implant

- Auditory Nerve Response Telemetry (ART™)
- Biphasic, symmetric triphasic pulse shapes
- Time resolution (nominal values): 1.67 μs
- Pulse width per phase: 2.08–425.0 μs/ph
- Maximum pulse rate: 50,704 pulses
- Sequential and parallel stimulation

FlexT™ Electrode Array

- 12 stimulation channels
- Ø at apical end: 0.5 x 0.3 mm
- Ø at the marker: 0.8 mm
- Contact spacing: 1.9 mm
- Active stimulation range: 20.9 mm
- Array length: 24.0 mm

Application

- Acoustic amplification
- Auditory Nerve Response Telemetry

Technical Features

- Time resolution: 1.67 μs
- Pulse width per phase: 2.08–425.0 μs/ph
- Maximum pulse rate: 50,704 pulses
- Sequential and parallel stimulation

Safety Features

- Auditory Nerve Response Telemetry (ART™)
- Biphasic, symmetric triphasic pulse shapes
- Time resolution (nominal values): 1.67 μs
- Pulse width per phase: 2.08–425.0 μs/ph
- Maximum pulse rate: 50,704 pulses
- Sequential and parallel stimulation

Hearing Energy

- Length: 45.0 μs
- Length at stimulation: 45.0 μs
- Width at stimulation: 25.0 μs
- Width at rest: 25.0 μs
- Frequency: 8 kHz
- Thickness at cell: 5.0 μm
- Number of cells: 3
- Diameter: 3.0 μm
- Weight: 7 g

References

4. Helbig et. al (2011), Combined electric acoustic stimulation with the PULSARCI100 implant system using the FLEX-T™ electrode array, Acta Oto-Laryngologica, Pp. 585-595
6. FLEX-T™ Electrode Array for the PULSAR® CONCERTO Implant
- Diameter: 3.0 μm
- Number of cells: 3
- Diameter: 3.0 μm
- Weight: 7 g

EAS Hearing Implant System

The Ideal Solution for Partial Deafness

For Adults and Children of All Ages!

www.med-EL.com

EAS® Hearing Implant System
The EAS® Hearing Implant System

Acoustic Amplification & Electric Stimulation, For All Frequencies of Sound

EAS is built on the science of hearing preservation and designed for the user’s present and future well-being. Its acoustic amplification supports natural residual hearing in the low frequencies, while electric stimulation recreates the perception of high-frequency sounds.

MED-EL has pioneered combined electric and acoustic stimulation for more than a decade. The EAS Hearing Implant System, now in its second generation, is clinically proven to improve sound quality and speech understanding in both quiet and noisy environments.1,2,3

DUET 2 Audio Processor

The Second Generation of a Proven Technology

DUET 2 is powered by today’s most advanced sound processing technologies, and offers the best possible hearing performance today as well as compatibility with future sound coding strategies. Its integrated ear mould provides for acoustic amplification, and the coil sends electrical pulses to the implant.

- Separate processing of electric and acoustic signals
- User preference to reduce directional interference
- Integrated Automatic Sound Management
- (i)MM system
- Integrated triaxial
- Weight: 14g, with batteries
- Up to 7 days of battery life

CONCERTO Implant

World’s Smallest & Lightest

Acoustic Amplification

The acoustic component amplifies low-frequency sounds so they can be detected by the residual hearing in the apical region.

Electric Stimulation

The cochlear implant replicates high-frequency sounds with electric stimulation of the basal region.

FLEX™24 Electrode Array

Designed for Atraumatic Implantation, Providing Superior Performance

The FLEX™ electrode array is especially designed for the EAS system. When combined with hearing preservation surgical techniques, it can protect delicate cochlear structures and preserve natural residual hearing.

- Flex Tip® technology provides increased mechanical flexibility with a tapered tip, single contacts at the basal end, and wave-shaped wires
- 24 electrical contacts optimised for maximal channel interaction and maximum flexibility
- Acoustic fitting and shape design allows the electrode array to self-orient during insertion
- Full-length tapered design is thin and smooth along the entire insertion length to ensure optimal strength

The FLEX24™ electrode array consists of three components: the array, the DUET 2 Audio Processor and the CONCERTO™ implant.

Preferential Channel Identification

The CONCERTO™ implant is a small and easy-to-use means for the user to change settings without removing the processor from the head.

- Changes volume, sensitivity, program, and input selection
- Dedicated buttons for each function
- Can control two audio processors independently, for bilateral use

Hearing Preservation

For Now and in the Future

MED-EL engineers understand the importance of protecting delicate neural structures within the cochlea. Our unique electrode may help to preserve residual hearing and thereby retain the ability to naturally hear sound, both now and in the future.

Ensuring a Hearing Future®