Naída CI *Q90 EAS*
By Advanced Bionics

**technical
specifications**

AB

Naída CI Q90 EAS

By Advanced Bionics

redefining the bar

for *Electro Acoustic Stimulation*

Proven **AB and Phonak technology** combined

in one device for **more natural sound** and

a **better hearing experience.**

IMPORTANT NOTE: The initial release of Naida CI Q90 EAS System requires Naida CI Q90 EAS sound processor and SoundWave™ EAS 0.9 software to support the electro-acoustic fitting. Processor colours marked with * will not be available with initial release and use of features and accessories marked with * require programming with next generation SoundWave Fitting Software. Pending regulatory approval.

Mechanical Properties	
Measurements	**Size H x W x D in mm**
Processor Only	26 x 9 x 19
– with Off-the-Ear Power Adapter	40 x 9 x 19
– with PowerCel™ 110 Mini Battery	45 x 9 x 19
– with PowerCel 170 Mini Battery	50 x 9 x 19
– with PowerCel 110 Battery	49 x 9 x 19
– with PowerCel 170 Battery	55 x 9 x 19
– with PowerCel 230 Battery	59 x 9 x 19
– with Zinc Air Battery Pak	53 x 9 x 19
Weight	**in Grams (g)**
Processor Only	6
– with Off-the-Ear Power Adapter	8
– with PowerCel 110 Mini Battery	11
– with PowerCel 170 Mini Battery	12
– with PowerCel 110 Battery	11
– with PowerCel 170 Battery	13
– with PowerCel 230 Battery	13
– with Zinc Air Battery Pak	13 (includes 2 batteries)
Program Button	Push-button access up to 5 programs per side for up to 10 programs on a single processor
Processor Tri-Colour Status LED *(green, orange, red)*	Indicators for battery status, program number, microphone status, error status and left/right processor identification using AB myPilot
Processor Internal Alarm	Alerts for low battery indications and for changes to program and volume
Volume Control	10 clicks to top of volume range 10 clicks to bottom of volume range Combined volume adjustments with processor controls, Phonak ComPilot and AB myPilot
Sensitivity	Selectable in software and adjustable through AB myPilot
Operating Temperature	0° C to 45° C
Humidity Range	95% (non-condensing)
Compatibility	
Implant	HiRes 90K™ Advantage, HiRes 90K™, and CII Bionic Ear*
Headpieces	Universal Headpiece (UHP) , AquaMic™ headpiece (for use with AquaCase™ enclosure)*
Headpiece and Microphone Specifications	
Universal Headpiece	With omni-directional microphone
AquaMic™ Headpiece*	With waterproof headpiece microphone
Cable Colours	Black, Beige, Brown, White
Microphones	Dual microphone (front and back processor microphone)
Microphone Features	Omnidirectional, UltraZoom feature, ability to listen to multiple microphone sources at once
Frequency Range	150 Hz to 10,000 Hz

Power Specifications

Battery Options and Operating Time (hrs)

Description	Average hrs	Up to hrs
– Zinc Air Battery Pak	31	56
– PowerCel™ 110 Mini Battery	12	17
– PowerCel 170 Mini Battery	18	27
– PowerCel 110 Battery	12	17
– PowerCel 170 Battery	18	27
– PowerCel 230 Battery	25	36
– AAA PowerPak	129	183
Lithium-Ion Battery Charger	Charger for 4 Lithium-Ion PowerCel batteries	
	Tri-coloured LED indicators	
	USB or DC powered	

Processing Specifications

Audio Sound Capture	16 bit, 96 dB
Input Dynamic Range	20 dB to 80 dB programmable
Effective Audio Sampling Rate	17.4 kHz
Automatic Gain Control	Cambridge dual-loop AGC
Volume Control	Up to + / - 100% electrical dynamic range
Sensitivity Control	Programmable + / - 10 dB
Stimulation Rate	Up to 83,000 pps
Spectral Bands	Up to 120 bands (software limited)
Supported Strategies	HiRes™ Optima-S, HiRes Optima-P, HiRes-S with Fidelity 120™, HiRes-P with Fidelity 120, HiRes-S*, HiRes-P*, CIS*, MPS*
UltraZoom Feature	Dual-microphone technology designed to focus on sound from a speaker located in front of the listener
auto UltraZoom* Feature	Technology designed to enter and exit UltraZoom automatically in response to sound environment
WindBlock* Feature	Designed to reduce wind noise for improved listening experience in windy conditions
EchoBlock* Feature	Designed to improve listening experience in reverberant environments
SoundRelax* Feature	Designed to soften sudden, loud noises
Speech Enhancement Algorithm	ClearVoice™ technology available with HiRes Fidelity 120™ software (S and P) and HiRes™ Optima sound processing (S and P)
Telemetry	1 Mbps bandwidth continuous bi-directional Forward 49 MHz, Backward 10.7 MHz
Battery Life Estimation	At fitting time, SoundWave™ software will calculate and display the battery life estimation by program for each battery option based on patient specifics
Processor Colour Options	Velvet Black, Sand Beige, Chestnut, Silver Gray, Alpine White*, Petrol*, Princess Pink*, Ruby*, Caribbean Pirate*, Resin Black*, and Resin Beige*

Acoustic Component Specifications

Description	Size	Exposed Cable Length in mm	Average Weight in Grams Without Domes
Naída Acoustic Earhook Appropriate side (left or right) and size (00, 0, 1, 2, 3) must be determined by clinician using the measurement tool	Size 00	29	0.8
	Size 0	32	0.8
	Size 1	36	0.8
	Size 2	40	0.8
	Size 3	44	0.8

Acoustic Component Specifications

Description	Color	Material	Size L x W x H in mm
Receiver Unit Cable	Clear	Pebox 7233 SP01	16 x 4.7x 4 mm
Closed Domes	Smokey	Silicon 29146C	
Power Domes	Smokey	Silicon 29146C	
Wax Guards (Cerustop)	Tip: White Stick: Black	Eltex® MED PH23T630 / Plexiglas 8N	

Fitting Software Specifications

Fitting Formulas	AB-Phonak, NAL-RP, and DSL v.5
Acoustic Frequency Range	Up to 1600 Hz
Acoustic and Electric Cutoff Frequency (Default)	The point at which the subject's thresholds exceed 70 dB HL with flexibility in acoustic and electric stimulation crossover
Maximum Acoustic Gain	53 dB
Maximum Power Output (MPO)	117 dB SPL
Adjustable Acoustic Channels	5

Accessories Specifications

AB myPilot Remote Control*	Unilateral and bilateral access to volume, program, sensitivity, status readout, and source specific Listening Check
Phonak ComPilot Accessory	Stream music, calls, FM and other media unilaterally, bilaterally and bimodally with Phonak compatible hearing instrument. Ability to make volume and program adjustments
Phonak TVLink II Accessory	Connects to any television and streams high-quality audio via the ComPilot. Can be used to stream TV audio unilaterally, bilaterally, or bimodally with a compatible Phonak hearing instrument
Phonak RemoteMic Accessory	Wireless microphone that works with the ComPilot unilaterally, bilaterally, or bimodally to make one-on-one conversations over distance easier
Listening Check	Portable diagnostic device for checking input sources
Phonak DECT Phone*	Streams cordless phone calls directly to the processor. This phone also has the ability to stream to a compatible Phonak hearing instrument
Phonak EasyCall Accessory*	Stream cell phone calls directly to the processor. This phone also has the ability to stream to a compatible Phonak hearing instrument
ROGER™ System	**Roger™ 17 Receiver*:** Design-integrated receiver for the Naída CI sound processor that wirelessly receives the speaker's voice or streamed audio from Roger microphones
	Roger™ Pen: Fully automated adaptive wireless microphone and streaming device that transmits sound directly to the processor(s) via the Roger 17 receiver or compatible hearing aids. It can also be used alongside other Roger Clip-On Mic accessories and Roger Pen accessories in a microphone network
	Roger™ Clip-On Mic: Wireless microphone that is worn by the recipient's speaking partner for one-on-one communication in noise and over distance

HiRes 90K™ Advantage Implant Electronic Technical Specifications

Information Update Rate	90 kHz
Stimulation Rate	Up to 83,000 pps (software limited)
Independent Output Circuits	16
Spectral Bands	Up to 120 sites of stimulation (software limited)
Telemetry	Bi-directional and continuous communication link Forward: 49 MHz (AM) Backward: 10.7 MHz (FM)
IntelliLink™	Implant and program association
Diagnostics	Neural response imaging* (NRI not supported in SW EAS 0.9), impedance measurements, ESRT, Integrity Testing
ADC Resolution Sampling Rate	Resolution: 9 bits, Sampling Rate: 25 KHz

Implant Materials and Dimensions

Titanium Case	5.5 mm total profile, 2.5 mm above bone profile with 3 mm bone depth housing
Housing	28 mm x 56 mm flexible silicone
Weight	12 grams
Magnet	Removable for 0.3 T and 1.5 T MRI scans
Telemetry Coil	Gold-braided wire and platinum-shielded wire in flexible silicone
Ground	2 – Case ground and ring electrode ground
Impact Resistance Value	6 joules [1]

HiFocus™ Mid-Scala Electrode
 Naída CI Q90 EAS System is also compatible with HiFocus™ 1j Electrode and HiFocus Helix™ Electrode

Construction	16 platinum contacts, integrated ground on lead, platinum iridium wires, flexible silicone carrier
Contact Spacing	1 mm
Insertion Depth	18.5 mm
Active Length	15 mm
Surgical Approach	Round window or cochleostomy, freehand or with insertion tool
Recommended Cochleostomy	0.8 mm
Markers	Blue indicators to ensure proper technique for tool/freehand insertion and proper insertion depth
Insertion Tool	Yes
Reloadable	Up to two times

1. Holtkamp V. Cochlear Implants Under Impact Loading. Evaluation of Accident Scenarios, Determination of Load Limits, and Development of a Standardizable Test Procedure. Dissertation accepted by the Senate of Hannover Medical School, May 19, 2004.

AB **PHONAK**

AB

Your Life. **Our Commitment.**™

Our commitment to putting patients first
and providing the best possible hearing performance
remains at the forefront of all that we do.

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