

# Quantum™ 20

## 13 BTE series

### Signature features

#### 20 channels

#### Next generation automatic with SmartFocus

Clients can experience superior automatic performance with the optimal blend of 3 listening environments plus a unique specialized treatment of music. In addition, the integration of SmartFocus™ further improves speech understanding in noise or provides optimal comfort automatically

#### Pinna Effect

This feature uses sophisticated calculations to recreate natural directionality

#### Natural Sound Balance

An adaptive feature to minimize artifacts that can occur when amplified sound combines in the ear canal with direct sound. Natural Sound Balance continuously monitors these sounds and makes precision adjustments to preserve a clear, balanced signal

#### Automatic Adaptation Manager

Allows for an automatic and smooth adjustment period for the client; providing the best possible first fit acceptance combined with maximum long-term benefit for speech understanding

#### Next generation feedback manager

Harnessing the power of Unitron's new Era™ platform, the next generation feedback manager offers maximum usable gain by suppressing feedback transients before they become audible

#### Self learning and LearnNow

Capable of learning client preferences for SmartFocus and volume control in all programs. Clients are able to accelerate the learning by using the LearnNow™ feature

#### Wireless technology

**Binaural Phone** – streams audio to the non-phone ear, allowing for binaural hearing while using a phone

**DuoLink** – program, volume and SmartFocus adjustments conducted on one hearing instrument are automatically transferred to the other ear

**uDirect (optional)** – wireless interface between hearing instruments and Bluetooth® enabled devices (eg. cell phones)

**uTV™ (optional)** – streams audio from a TV or audio source to the uDirect

#### Remote controls (optional)

Choice of remote controls for essential or fully featured functionality;

- Unitron remote control
- Smart Control

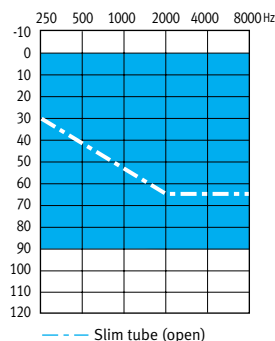
#### Smart Alert System (optional)

A unique solution that provides awareness of household alerts

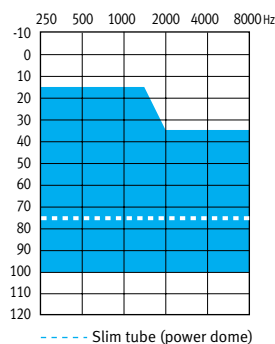
### Additional features

- 3 manual + 3 wireless streaming programs
- IntelliVent technology available on earmolds and sleeve molds
- Multiband adaptive directional microphone
- AntiShock™
- MyMusic™
- Speech enhancement LD
- Noise reduction
- Wind noise manager
- Data logging
- Easy-t
- Easy-DAI
- Optional wireless programming with iCube

### Fitting guides



Quantum 20 S (standard)



Quantum 20 HP (high power)

Quantum 20 is suitable for fitting mild to severe hearing losses and can fit audiogram configurations ranging from reverse to precipitously sloping.



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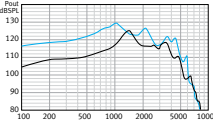
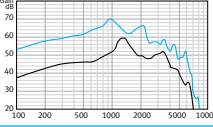
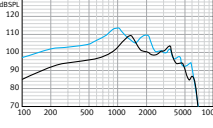
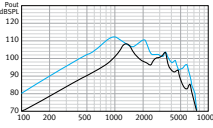
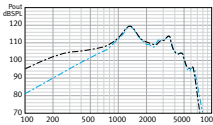
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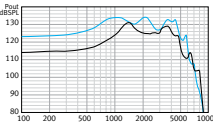
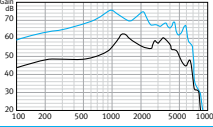
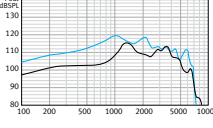
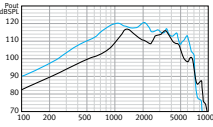
# Quantum 20 13 BTE series

Quantum 20 S slim tube (optional)    Quantum 20 S (standard)    Quantum 20 HP (high power)    Quantum 20 HP slim tube (optional)

## ANSI 3.22 2003/IEC 118-7 2CC COUPLER TECHNICAL DATA

	Reference test frequency - IEC 118-7 (kHz)	2.5	1.6	1.6	2.5
	<b>OSPL90</b>				
	Maximum (dB SPL)	124	129	133	130
	Nominal (dB SPL)	122	126	130	127
	ANSI HFA (dB SPL)	109	119	125	112
	at RTF (dB SPL)	105	121	123	109
	<b>Full on gain (input 50 dB SPL)</b>				
	Maximum (dB)	53	60	70	65
	ANSI HFA (dB)	40	51	64	50
	at RTF (dB)	36	53	60	47
	<b>Basic frequency response (ANSI 2003)</b>				
	Frequency range (Hz)	100-6700	100-6700	100-6000	100-6900
	Reference test gain (dB)	32	42	47	35
	Current drain at RTG (mA)	1.3	1.3	1.3	1.3
	Typical battery life (h)	240	240	240	240
	Equivalent input noise at RTG (dB SPL)	20	19	19	20
	Total harmonic distortion at 500 Hz/800 Hz/1600 Hz (%)	1/1/1	2/2/1	3/1.5/1	1/1/1
	<b>Induction coil sensitivity (ANSI 2003, 31.6 mA/m)</b>				
	HFA SPLITS/STS-RSETS (dB SPL/dB)	90/0	103/0	107/0	93/0
	EMC immunity by ANSI c63.19-2001 EMC, omni/telecoil	M4/T4	M4/T4	M4/T4	M4/T4
	<b>Quantum S: mic at 70 dB SPL vs induction coil at 100 mA/m</b>				
	Legend: - - Mic - - Induction coil				

## IEC 118-0 OES COUPLER TECHNICAL DATA

	Reference test frequency - IEC 118-0 (kHz)	2.5	1.6	1.6	2.5
	<b>OSPL90</b>				
	Maximum (dB SPL)	126	131	135	131
	at 500 Hz (dB SPL)	119	116	125	131
	at RTF (dB SPL)	119	130	130	124
	<b>Full on gain (input 50 dB SPL)</b>				
	Maximum (dB)	58	64	75	70
	at RTF (dB)	50	63	67	60
	<b>Basic frequency response</b>				
	Frequency range (DIN 45605) (Hz)	100-5300	100-7000	100-6200	100-6700
	Reference test gain (dB)	44	55	55	49
	Current drain at RTG (mA)	1.3	1.3	1.3	1.3
	Typical battery life (h)	240	240	240	240
	Equivalent input noise at RTG (dB SPL)	12	19	19	12
	Total harmonic distortion at 500 Hz/800 Hz/1600 Hz (%)	2/2/1	3/3/1	4/2.5/1.5	2/2/1
	<b>Induction coil sensitivity</b>				
	at RTF (graph shown for 31.6 mA/m at RTG) (dB SPL)	105	114	116	108
	Maximum (1 mA/m at full on gain) (dB SPL)	86	95	104	99
	at RTF (1 mA/m at full on gain) (dB SPL)	81	94	99	91
	EMC immunity by IEC 60118-13, field strength 75/50 V/m, omni	26/45	26/45	26/52	26/52
	IRIL low/high band (dB SPL)				

### Legend

— Quantum 20 S  
— Quantum 20 HP

## TEST CONDITIONS

Earhook: filtered; Battery size: 13; Source: voltage 1.3 V; Tubing: length 25 mm, inside diameter 1.93 mm  
Measurement data obtained with hearing aid set to linear, omni mode with all adaptive features disabled.

Domes should never be fit on patients with perforated eardrums, exposed middle ear cavities, or surgically altered ear canals.

In the case of such a condition, we recommend use of a customized earmold.

Sound pressure level of these hearing aids exceeds 132 dB SPL.

We reserve the right to change specification data without notice as improvements are introduced.