

# Max™ 20 SPm

## BTE hearing instrument series

### Performance profile

20 channels

### Super power specific features

#### Power Adaptation Manager

Allows the gradual decrease of amplification over time. Starting from the frequency response clients expect, which can sometimes be excessive and above prescribed target, this feature will automatically, slowly and steadily reduce gain and MPO to a safer level to maximize speech intelligibility and long-term hearing health

#### Frequency compression

By shifting sounds away from areas where hearing is most damaged and compressing them into the audible range, clients experience a fuller range of sounds for improved awareness and speech intelligibility

#### SmartFocus SP

The performance of directional microphones, speech enhancement, noise reduction and gain have been purposely optimized and work synergistically in relation to one another to provide the best speech understanding or comfort for those with severe to profound hearing losses, without compromising awareness

#### Bass enhancer

Provides additional low frequency gain boost in one easy software control

### Signature features

#### Automatic Program

Clients can experience superior automatic performance with the optimal blend of 3 listening environments plus a unique specialized treatment of music

#### Feedback manager

Feedback manager offers maximum usable gain by suppressing feedback transients before they become audible

#### Wireless technology

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

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

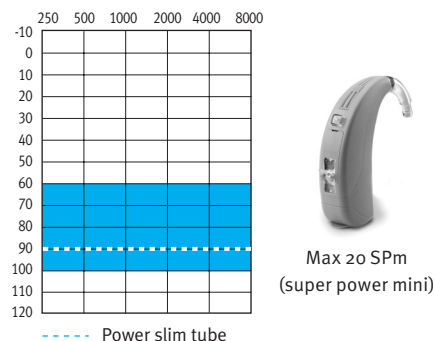
**uDirect™ 2 (optional)** – wireless interface between hearing instruments and Bluetooth® enabled devices (eg. cell phones)

**uTV™ 2 (optional)** – streams audio from a TV or audio source to the uDirect 2

### Additional features

- 3 manual + 3 wireless streaming programs
- Multiband adaptive directional
- Self learning and LearnNow™
- Pinna Effect
- AntiShock™
- Wind noise manager
- Easy-DAI
- Easy-t and telecoil
- MyMusic™
- Speech enhancement LD
- Noise reduction
- Data logging
- Optional remote controls
- Optional Smart Alert™ System
- Optional wireless programming with iCube
- IntelliVent technology available on custom ear pieces

### Fitting guide



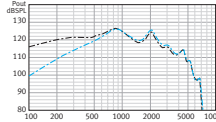
Max 20 SPm is suitable for fitting severe to profound hearing losses and can fit audiogram configurations ranging from reverse to precipitously sloping.

# Max 20 SPm BTE series

Max 20 SPm power tube      Max 20 SPm filtered earhook      Max 20 SPm unfiltered earhook

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

Reference test frequency - IEC 118-7 (kHz)		1.6	1.6	1.6
<b>OSPL<sub>90</sub></b>				
Maximum (dB SPL)		140	133	140
Nominal (dB SPL)		137	132	137
ANSI HFA (dB SPL)		122	127	130
at RTF (dB SPL)		119	126	126
<b>Full on gain (input 50 dB SPL)</b>				
Maximum (dB)		75	68	75
ANSI HFA (dB)		60	64	67
at RTF (dB)		57	63	64
<b>Basic frequency response (ANSI 2003)</b>				
Frequency range (Hz)		< 100-6300	< 100-5800	<100-5800
Reference test gain (dB)		45	51	53
Current drain at RTG (mA)		1.7	2.1	2.1
Typical battery life (h)		180	150	150
Equivalent input noise at RTG (dB SPL)		19	19	19
Total harmonic distortion at 500 Hz/800 Hz/1600 Hz (%)		2/2/1	4/2/1	4/2/1
<b>Induction coil sensitivity (ANSI 2003, 31.6 mA/m)</b>				
HFA SPLITS/STS-RSETS (dB SPL/dB)		106/1	112/1	114/1



Mic at 70 dB SPL vs induction coil at 100 mA/m  
— Mic  
- - Induction coil

### Electromagnetic compatibility

EMC immunity by ANSI c63.19-2001 EMC, omni/telecoil	M2/T2	M2/T2	M2/T2
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## IEC 118-0 OES COUPLER TECHNICAL DATA

Reference test frequency - IEC 118-o (kHz)		1.6	1.6	1.6
<b>OSPL<sub>90</sub></b>				
Maximum (dB SPL)		141	138	141
at RTF (dB SPL)		128	131	133
<b>Full on gain (input 50 dB SPL)</b>				
Maximum (dB)		80	73	80
at RTF (dB)		65	70	70
<b>Basic frequency response</b>				
Frequency range (DIN 45605) (Hz)		< 100-6500	< 100-6100	< 100-6200
Reference test gain (dB)		53	57	58
Current drain at RTG (mA)		1.3	1.3	1.3
Typical battery life (h)		240	240	260
Equivalent input noise at RTG (dB SPL)		19	19	19
Total harmonic distortion at 500 Hz/800 Hz/1600 Hz (%)		3/3/2	4/3/2	5/3/2
<b>Induction coil sensitivity</b>				
at RTF (graph shown for 31.6 mA/m at RTG) (dB SPL)		115	119	120

### Electromagnetic compatibility

EMC immunity by IEC 60118-13, field strength 75/50 V/m, omni IRIL low/high band (dB SPL)	27/46	27/46	27/46
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## LEGEND

- Max 20 SPm filtered earhook
- Max 20 SPm unfiltered earhook

## TEST CONDITIONS

Battery size: 13; Source: voltage 1.3 V; Tubing: length 25 mm, inside diameter 1.93 mm; Power tube length: 1  
Measurement data obtained with closed configuration using an HA-2 coupler (ANSI-3.7-1995) or occluded ear simulator (EN 60711, coupling arrangement according to fig.4 in the test standard), and set to linear, omni mode with all adaptive features disabled.  
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.