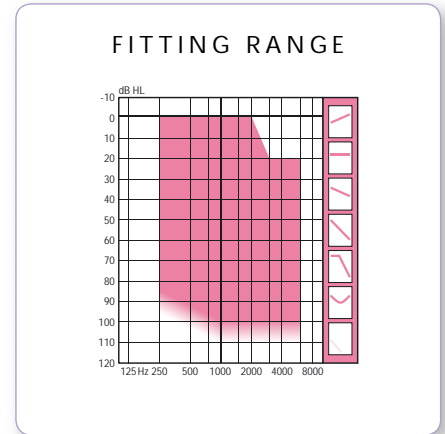


*Oticon Safran is a new, complete family of advanced digital hearing instruments. It is especially designed to provide a richer and fuller sound picture that brings forward all the nuances of sound. To do so, it incorporates state of the art technology and strategies for hearing loss compensation to ensure that your clients' expectations for rich, life-like sound quality are met in any situation. Safran is suitable for any type of hearing loss ranging from mild to severe for adults as well as children.*



## SAFRAN KEY FEATURES

### Artificial Intelligence

AI is deployed to continuously evaluate and automatically select the best possible outcome from multiple processing alternatives.

### TriMode Adaptive Directionality

Automatic adaptive directionality working in 3 modes: Surround, Split and Full.

### Noise Management

Safran utilizes a speech-weighted modulation index-based noise reduction system in 8 frequency channels.

### Safran Identities and rationales

3 identities based on Voice Aligned Compression (VAC) are available: Dynamic, Active and Gradual. DSL v5.0 m[i/o] for children and adults.

### Activity Analyzer

Safran's Activity Analyzer enables logging of total use, program and volume control use as well as logging of the user's sound environment - the Envirogram™.

### Automatic Adaptation Manager








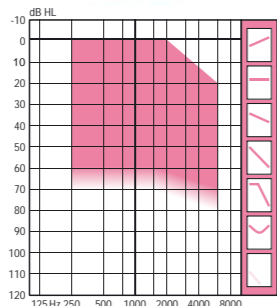
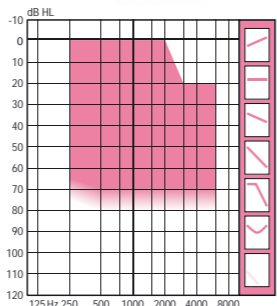
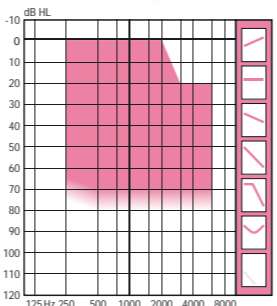
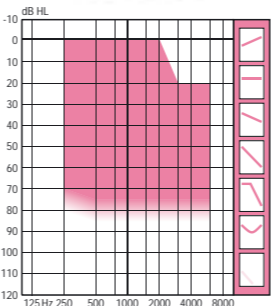
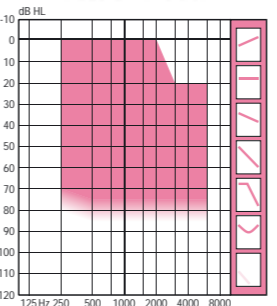
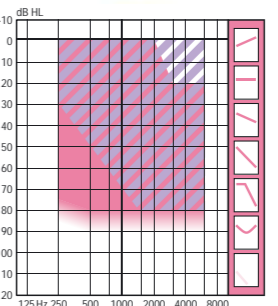
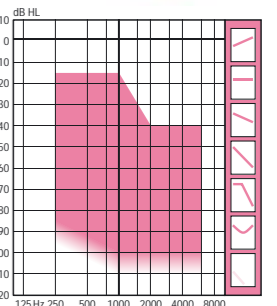
Smooth Adaptation enabled by automatic adjustment of gain over time to the desired target level.

### Corda/Open Fitting

Safran can be fitted with Corda to provide an open fitting with excellent sound quality. Open Dome, Plus Dome and custom earmold options are available.

### Standard Features

- Artificial Intelligence (AI)
- TriMode Adaptive Directionality
- Noise Management (Speech Weighted)
- Voice Aligned Compression
- DSL v5.0 m[i/o] rationale
- WideRange bandwidth
- Activity Analyzer - Envirogram™
- Automatic Adaptation Manager
- OpenEar Acoustics™
- Dynamic Feedback Cancellation
- Automatic microphone matching
- Fully automatic operation
- Up to 4 customizable programs
- Sound indicators for programs and low battery warning
- Standby function
- Onset Delay

		CIC / MIC	ITC 10	ITC 312	HS / LP 312	FS 13	BTE	BTE Power
								
								
OSPL90	Ear simulator	114 dB SPL	115 dB SPL	120 dB SPL	122 dB SPL	123 dB SPL	122 dB SPL	134 dB SPL
(peak)	2cc coupler	103 dB SPL	104 dB SPL	110 dB SPL	112 dB SPL	113 dB SPL	112 dB SPL	126 dB SPL
Full-on gain	Ear simulator	47 dB	47 dB	51 dB	56 dB	61 dB	62 dB	68 dB
(peak)	2cc coupler	37 dB	37 dB	41 dB	47 dB	52 dB	54 dB	62 dB
Programs		1-4	1	1-4	1-4	1-4	1-4	1-4
TriMode Adaptive Directionality		-	Yes	Yes	Yes	Yes	Yes	Yes
Telecoil		-	-	-	Optional	Optional	Yes	Yes
Auto Phone		-	Optional	Optional	Optional	Optional	-	-
Volume control		-	-	-	Optional	Yes	Optional	Yes
Corda (thin tube)		-	-	-	-	-	Yes	-
Battery size		10	10	312	312	13	13	13
Battery life, typical		100 hrs	70 hrs	120 hrs	120 hrs	220 hrs	220 hrs	170 hrs


**FITTING**

Safran instruments are programmed using the Genie Fitting Software 7.0 or higher compatible with NOAH 2.0 or higher. Uses programming cables #3 AND:























**Custom instruments**  
FlexConnect

**BTE instruments**  
Programming Shoe

**CUSTOM INSTRUMENTS**

Skin colors				
	Beige	Light brown	Medium brown	Dark brown
Wax protection	NoWax	Micro WaxBuster	WaxBuster	

**BTE INSTRUMENTS**

Classic colors									
	Beige	Light brown	Dark brown	Light grey	Dark grey				
Cool colors									
	Black	Transparent	Yellow	Orange	Pink	Purple	Blue	Green	
New exclusive colors and baby colors									
	Pearl white	Silver Grey	Steel grey	Golden beige	Copper	Orchid	Ice blue	Baby blue	Baby pink
Sound hooks	0 dB	-5 dB	-9 dB	Pediatric hooks	0 dB	-5 dB	-9 dB		
Eyeglass adaptors	0 dB	-5 dB	-9 dB						
Tamper resistant battery door	Available in all colors								
DAI and FM shoes	AP 800	FM 8							



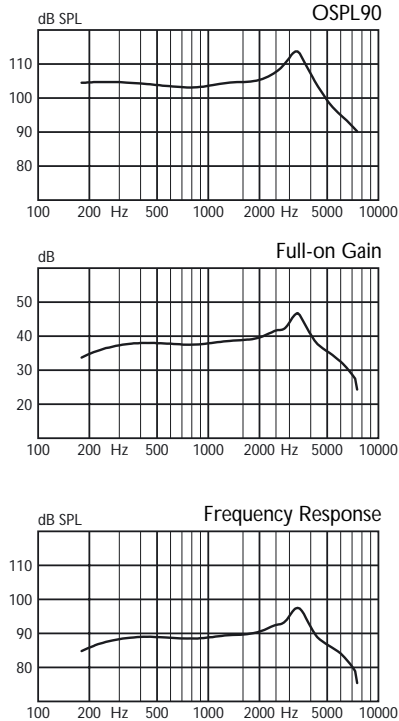
Scale 1:1

**Technical Information**

All measurements are made on instruments without wax protection. Omnidirectional mode is used unless otherwise stated.

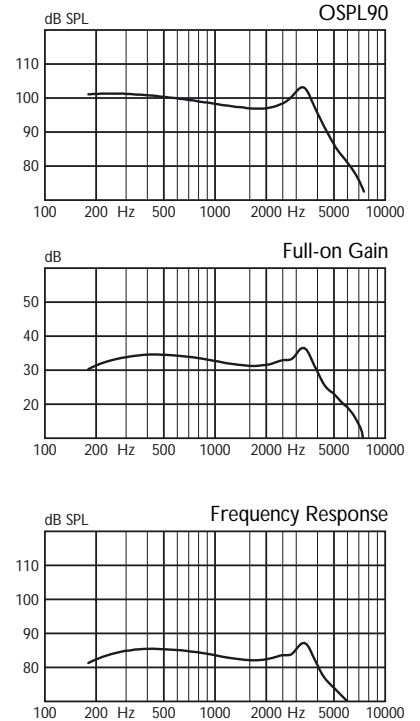
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	114 dB SPL	103 dB SPL
	1600 Hz	105 dB SPL	97 dB SPL
	Average	104 dB SPL	98 dB SPL
Full-on gain	Peak	47 dB	37 dB
	1600 Hz	39 dB	31 dB
	Average	38 dB	32 dB
Frequency range		100-7600 Hz	100-7300 Hz
Telecoil output (1600 Hz)	1 mA/m field	-	-
	10 mA/m field	-	-
	SPLITS	-	-
Total harmonic distortion (Input 70 dB SPL)	500 Hz	1.0 %	1.0 %
	800 Hz	1.0 %	0.5 %
	1600 Hz	1.5 %	1.0 %
Equivalent input noise level (A)	Omni	20 dB SPL	20 dB SPL
	Dir	-	-
Battery consumption	Quiescent	0.7 mA	0.7 mA
	Typical	0.7 mA	0.7 mA

Estimated battery life (Size 10, IEC PR70)	Typical	100 hours
	Minimum	80 hours
IRIL (IEC 60118-13)	GSM / DECT	-31 / 22 dB SPL



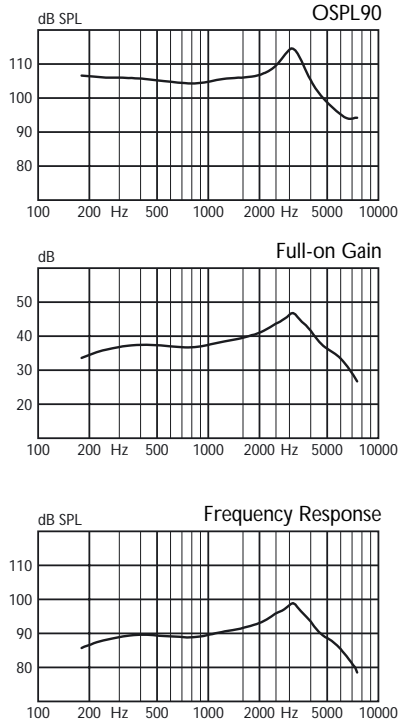
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**Technical Information**

All measurements are made on instruments without wax protection. Omnidirectional mode is used unless otherwise stated.

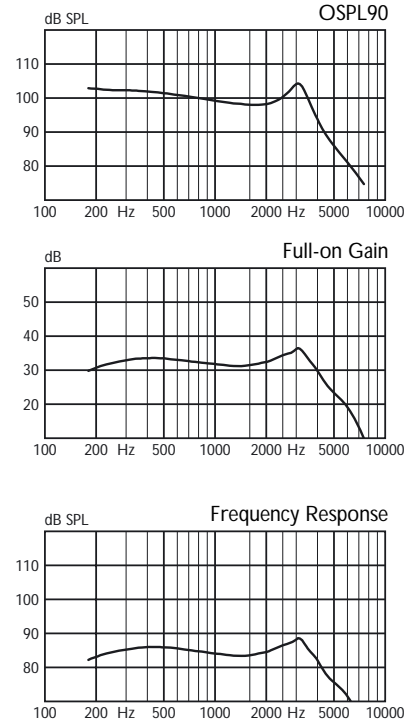
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	115 dB SPL	104 dB SPL
	1600 Hz	106 dB SPL	98 dB SPL
	Average	106 dB SPL	99 dB SPL
Full-on gain	Peak	47 dB	37 dB
	1600 Hz	39 dB	31 dB
	Average	38 dB	33 dB
Frequency range		100-7600 Hz	100-7100 Hz
Telecoil output (1600 Hz)	1 mA/m field	-	-
	10 mA/m field	-	-
	SPLITS	-	-
Total harmonic distortion	500 Hz	0.5 %	0.5 %
(Input 70 dB SPL)	800 Hz	0.5 %	0.5 %
	1600 Hz	0.5 %	0.5 %
Equivalent input noise level (A)	Omni	18 dB SPL	18 dB SPL
	Dir	32 dB SPL	33 dB SPL
Battery consumption	Quiescent	1.0 mA	1.0 mA
	Typical	1.0 mA	1.1 mA

Estimated battery life	Typical	70 hours
(Size 10, IEC PR70)	Minimum	60 hours
IRIL (IEC 60118-13)	GSM / DECT	-29 / -9 dB SPL



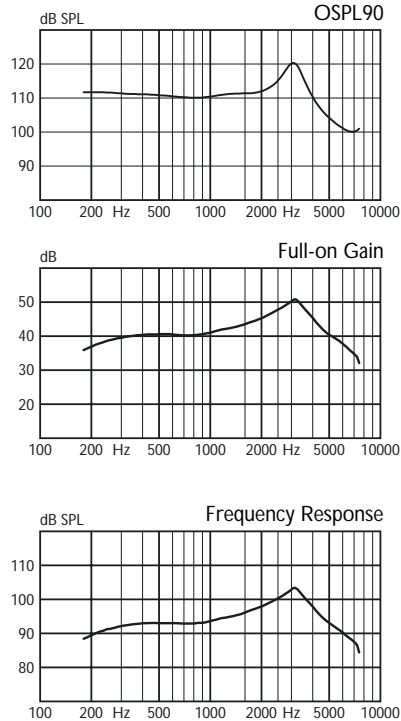
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**Technical Information**

All measurements are made on instruments without wax protection. Omnidirectional mode is used unless otherwise stated.

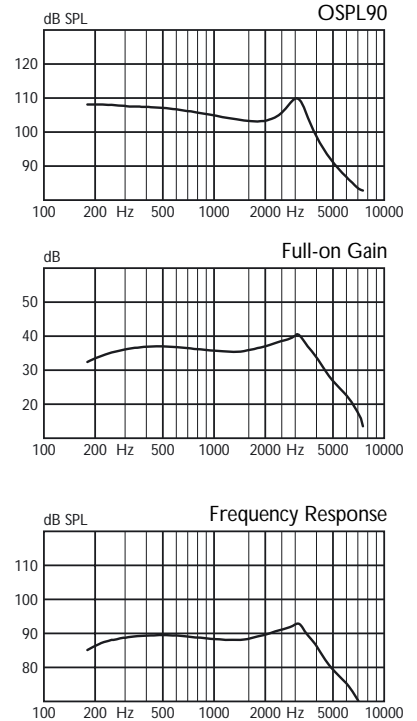
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	120 dB SPL	110 dB SPL
	1600 Hz	111 dB SPL	103 dB SPL
	Average	111 dB SPL	105 dB SPL
Full-on gain	Peak	51 dB	41 dB
	1600 Hz	44 dB	36 dB
	Average	42 dB	37 dB
Frequency range		110-7600 Hz	100-7200 Hz
Telecoil output (1600 Hz)	1 mA/m field	-	-
	10 mA/m field	-	-
	SPLITS	-	-
Total harmonic distortion (Input 70 dB SPL)	500 Hz	0.5 %	0.5 %
	800 Hz	0.5 %	0.5 %
	1600 Hz	1.0 %	0.5 %
Equivalent input noise level (A)	Omni	19 dB SPL	20 dB SPL
	Dir	32 dB SPL	29 dB SPL
Battery consumption	Quiescent	1.1 mA	1.1 mA
	Typical	1.1 mA	1.2 mA

Estimated battery life (Size 312, IEC PR41)	Typical	120 hours
	Minimum	100 hours
IRIL (IEC 60118-13)	GSM / DECT	-28 / -7 dB SPL



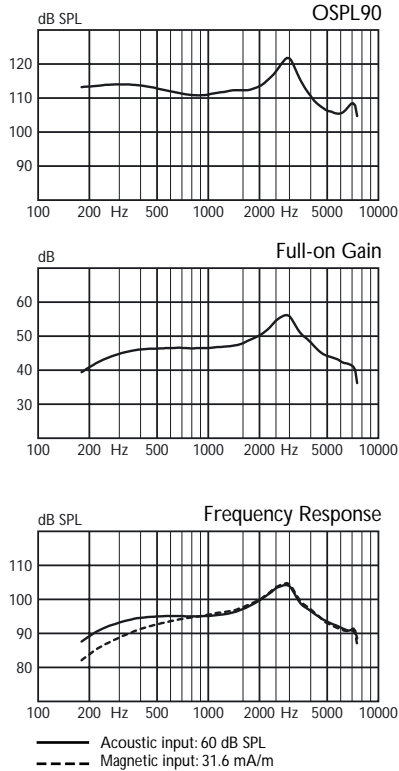
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**Technical Information**

All measurements are made on instruments without wax protection. Omnidirectional mode is used unless otherwise stated.

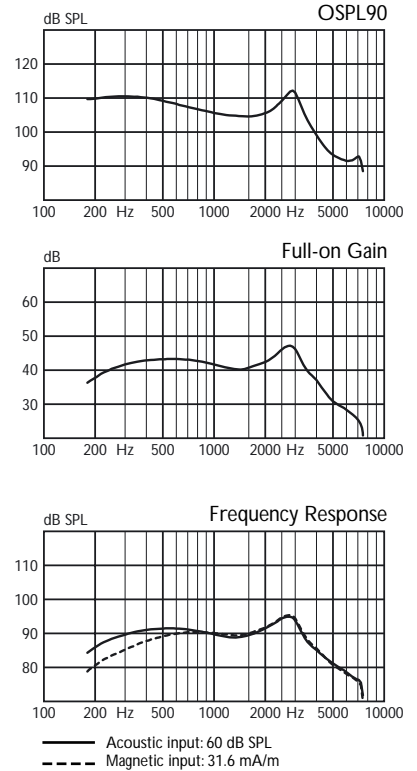
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	122 dB SPL	112 dB SPL
	1600 Hz	112 dB SPL	105 dB SPL
	Average	112 dB SPL	106 dB SPL
Full-on gain	Peak	56 dB	47 dB
	1600 Hz	48 dB	41 dB
	Average	47 dB	43 dB
Frequency range		130-7600 Hz	120-7200 Hz
Telecoil output (1600 Hz)	1 mA/m field	79 dB SPL	-
	10 mA/m field	99 dB SPL	-
	SPLITS	-	87 dB SPL
Total harmonic distortion (Input 70 dB SPL)	500 Hz	2.0 %	1.5 %
	800 Hz	1.5 %	1.0 %
	1600 Hz	1.5 %	1.0 %
Equivalent input noise level (A)	Omni	19 dB SPL	19 dB SPL
	Dir	34 dB SPL	31 dB SPL
Battery consumption	Quiescent	1.1 mA	1.1 mA
	Typical	1.1 mA	1.2 mA

Estimated battery life (Size 312, IEC PR41)	Typical	120 hours
	Minimum	100 hours
IRIL (IEC 60118-13)	GSM / DECT	-36 / -16 dB SPL



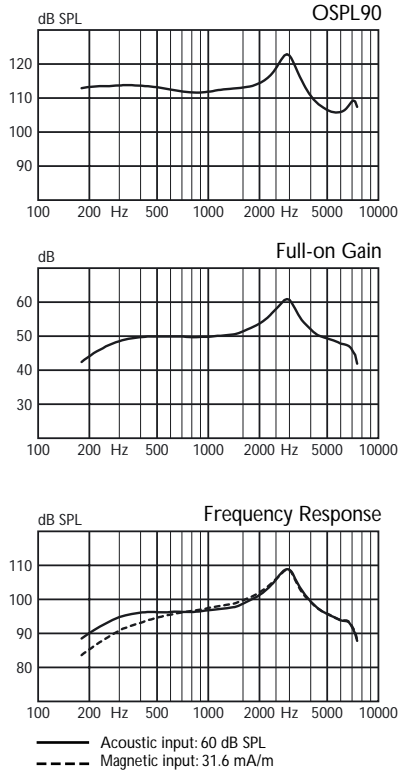
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**Technical Information**

All measurements are made on instruments without wax protection. Omnidirectional mode is used unless otherwise stated.

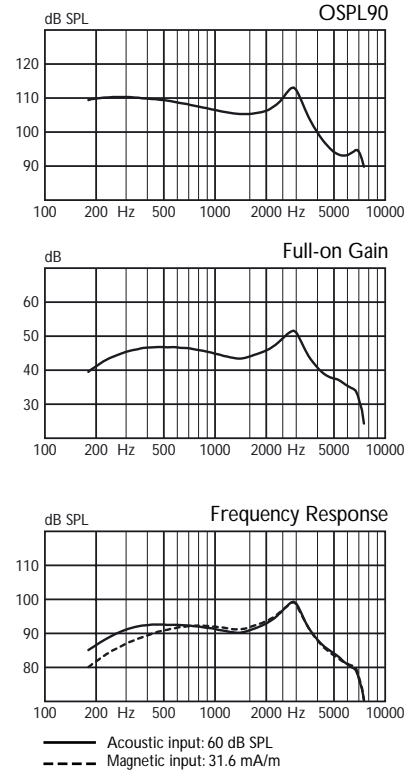
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	123 dB SPL	113 dB SPL
	1600 Hz	113 dB SPL	106 dB SPL
	Average	113 dB SPL	107 dB SPL
Full-on gain	Peak	61 dB	52 dB
	1600 Hz	52 dB	44 dB
	Average	51 dB	46 dB
Frequency range		135-7600 Hz	100-7300 Hz
Telecoil output (1600 Hz)	1 mA/m field	83 dB SPL	-
	10 mA/m field	103 dB SPL	-
	SPLITS	-	91 dB SPL
Total harmonic distortion (Input 70 dB SPL)	500 Hz	2.0 %	1.5 %
	800 Hz	1.0 %	1.0 %
	1600 Hz	2.0 %	1.5 %
Equivalent input noise level (A)	Omni	20 dB SPL	17 dB SPL
	Dir	33 dB SPL	33 dB SPL
Battery consumption	Quiescent	1.1 mA	1.1 mA
	Typical	1.1 mA	1.2 mA

Estimated battery life (Size 13, IEC PR48)	Typical	220 hours
	Minimum	180 hours
IRIL (IEC 60118-13)	GSM / DECT	-25 / -8 dB SPL



Scale 1:1

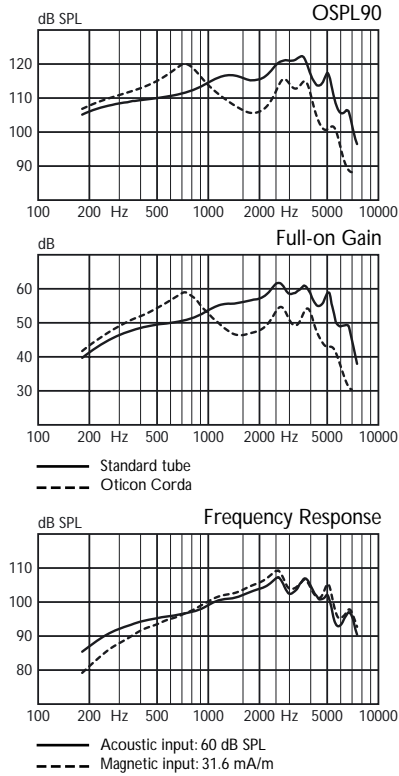
**Technical information**

Omnidirectional mode is used unless otherwise stated.

Values in brackets are measured using Oticon Corda size 1B.

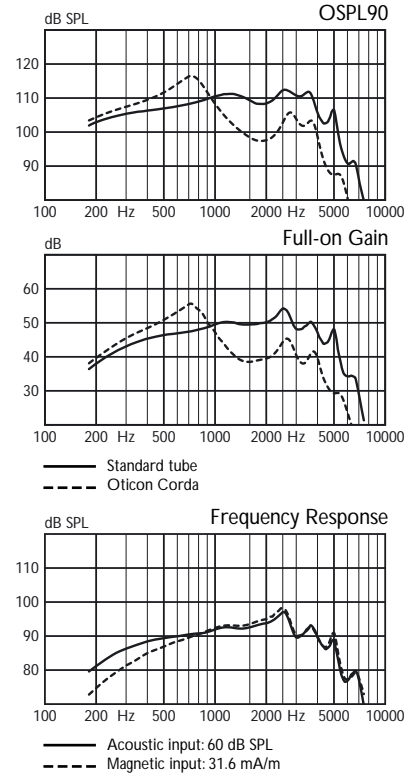
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	122 (120) dB SPL	112 (116) dB SPL
	1600 Hz	116 (106) dB SPL	109 (98) dB SPL
	Average	114 (112) dB SPL	110 (103) dB SPL
Full-on gain	Peak	62 (59) dB	54 (56) dB
	1600 Hz	56 (46) dB	49 (39) dB
	Average	54 (52) dB	51 (43) dB
Frequency range		190-7300 Hz	130-6900 Hz
Telecoil output (1600 Hz)	1 mA/m field	87 dB SPL	-
	10 mA/m field	107 dB SPL	-
	SPLITS, Right / Left ear	-	94 / 93 dB SPL
Total harmonic distortion	500 Hz	0.5 %	0.5 %
(Input 70 dB SPL)	800 Hz	0.5 %	0.5 %
	1600 Hz	0.5 %	0.5 %
Equivalent input noise level (A)	Omni	16 dB SPL	12 dB SPL
	Dir	23 dB SPL	20 dB SPL
Battery consumption	Quiescent	1.1 mA	1.1 mA
	Typical	1.1 mA	1.1 mA

Estimated battery life	Typical	220 hours
(Size 13, IEC PR48)	Minimum	180 hours
IRIL (IEC 60118-13)	GSM / DECT	-48 / -8 dB SPL



Scale 1:1

**Technical information**

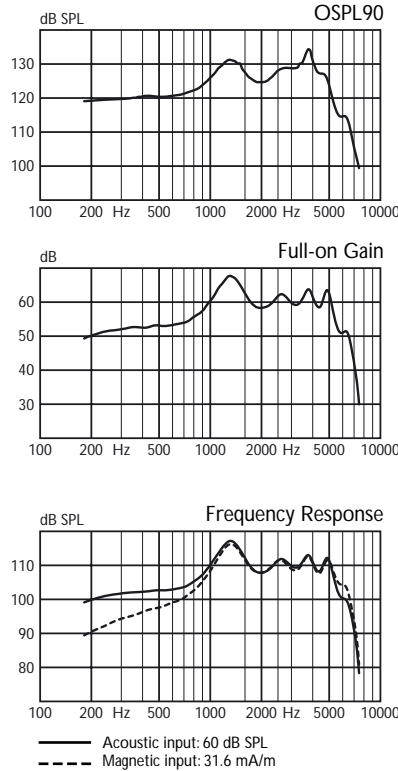
Omnidirectional mode is used unless otherwise stated.

**Warning to the hearing instrument dispenser**

The maximum output capability of the hearing instrument may exceed 132 dB SPL (IEC 711). Special care should be exercised in selecting and fitting the instrument as there may be risk of impairing the remaining hearing of the hearing instrument user.

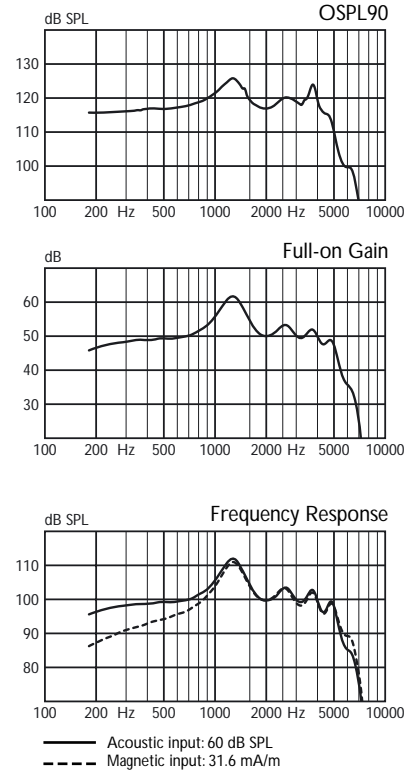
**EAR SIMULATOR**

Measured according to IEC 60118-0 and 60711.



**2CC COUPLER**

Measured according to ANSI S3.22 and S3.7.



OSPL90	Peak	134 dB SPL	126 dB SPL
	1600 Hz	127 dB SPL	120 dB SPL
	Average	124 dB SPL	121 dB SPL
Full-on gain	Peak	68 dB	62 dB
	1600 Hz	62 dB	55 dB
	Average	57 dB	54 dB
Frequency range		100-7000 Hz	100-6300 Hz
Telecoil output (1600 Hz)	1 mA/m field	92 dB SPL	-
	10 mA/m field	112 dB SPL	-
SPLITS, Right / Left ear		-	100 / 99 dB SPL
Total harmonic distortion (Input 70 dB SPL)	500 Hz	2.0 %	1.5 %
	800 Hz	1.5 %	1.0 %
	1600 Hz	1.0 %	0.5 %
Equivalent input noise level (A)	Omni	13 dB SPL	16 dB SPL
	Dir	23 dB SPL	26 dB SPL
Battery consumption	Quiescent	1.4 mA	1.4 mA
	Typical	1.4 mA	1.4 mA

Estimated battery life (Size 13, IEC PR48)	Typical	170 hours
	Minimum	140 hours
IRIL (IEC 60118-13)	GSM / DECT	-33 / -3 dB SPL

# People first



*We believe that it takes more than technology and audiology to create the best hearing instruments. That's why we put the individual needs and wishes of people with hearing loss first in our development of new hearing care solutions.*