

**TBS25**

*Dedicated Test Chamber*



*For superior attenuation  
in a compact design*



**Interacoustics®**

leading diagnostic solutions

# TBS25

## Dedicated Test Chamber

# Superior attenuation

### The ultimate test chamber

TBS25 is a dedicated test chamber with exceptional performance and signal reproduction. It offers a compact solution in situations where maximum attenuation is critical and space considerations are relevant. It can be used with the Equinox and Affinity platforms for hearing aid testing and with a variety of proprietary and non standard equipment.

### Very high noise rejection

Low frequency noise is prevalent and a problem in many buildings. It originates from sources such as distant traffic, doors, air-conditioning and machines. It travels relatively unrestricted through walls and floors and can be a significant problem when testing hearing aids.

Low frequency noise rejection has traditionally been achieved with large sand filled test chambers. However, new materials and construction techniques have enabled the TBS25 to outperform these larger chambers by between 25dB and 40dB at low frequencies. High frequency noise rejection remains equal to that of the best traditional test chambers.

### Non-linear hearing aids

Non-linear circuits are sensitive to ambient noise and can trigger performance changes not related to the input signal. Automatic noise reduction features, such as averaging, cannot overcome this effect, so the only solution is to provide sufficient attenuation to block unwanted noise.

The noise rejection of the TBS25 will allow measurement of hearing aid performance down to input levels of 35dB SPL in nearly all situations.

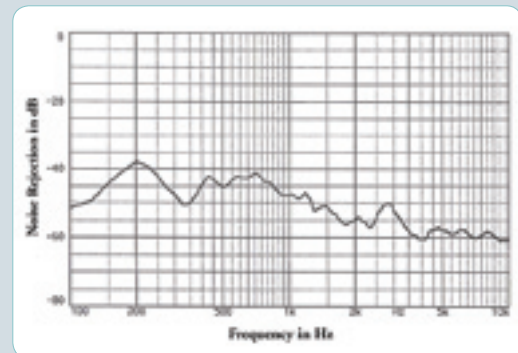
### The future - complex signals

The TBS25 is also an investment for the future. Future testing of hearing aids is expected to involve more complex stimuli and demand a higher acoustic performance from the test chamber than needed for pure tones.

The basic acoustic performance of the TBS25 is unsurpassed, providing very low acoustic distortion and lack of break-up or overshoot. It has a frequency response of 50Hz to 8000Hz  $\pm 1.5$  dB with no electronic signal correction. Compare this to ANSI S3.42-1992 which calls for 200Hz to 5000Hz  $\pm 3$ dB after electronic signal correction.

### Easy to use

Great care has been taken to make the unit as easy to handle as possible without jeopardizing acoustic performance. The compact size and table-top design make it easy to place and use. Internal cable routing eliminates the need for awkward external cables between coupler and reference microphones and the analyzer. A special sound proof passage is provided for any situations that may require external cables.



Typical noise attenuation when subjected to a diffuse noise field. Performance may differ in actual installation.

### **Directional microphones**

The TBS25 approximates free field conditions above 500Hz and has the speaker in the same vertical plane as the hearing aid. This facilitates testing of directional microphones.

### **Telecoils**

A built-in loop is provided for testing telecoil function.

### **Battery current**

Battery eliminators can be connected inside the TBS25 to measure battery current.

### **Electrical signals**

Two auxiliary inputs are available to connect a hearing aid to electrical signal sources such as an electronic programming system. Most remote electromagnetic controls for the hearing aid will still function while the aid is in the test chamber.

### **Gas-spring lid**

The closing mechanism on the heavy test chamber lid ensures easy operation without affecting acoustic performance. Two gas springs cushion movement during the single movement of the handle.

### **Maintenance**

Parts of the test chamber that encounter extensive wear (eg. the test bed) can be replaced via service kits.

### **Other features**

- Software controlled
- NOAH link & compatibility
- Dynamic range 35dB -110dB



### **TBS25**

- *Very high noise rejection*
- *Non-linear hearing aids*
- *Directional microphones*



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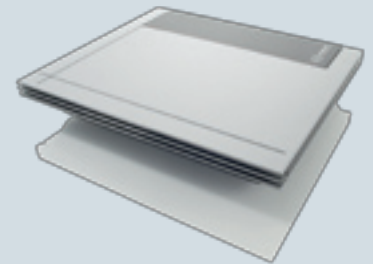
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# Technical Specifications

<b>Noise rejection:</b>	Depending on placement and acoustic surroundings. 20Hz-300Hz: 45dB-70dB Above 300 Hz: 45dB-55dB
<b>Acoustic distortion:</b>	100dB SPL at any frequency between 100Hz and 8kHz the typical distortion is: 2nd: < 0,05%, 3rd: < 0,3% Lower distortion at lower intensities. TDH at 70dB SPL: Too low to be measured by traditional techniques.
<b>Input:</b>	1 watt: 110dB SPL at test point. Max input: 4.5 watts continuous. 40 watts short term.
<b>Impedance:</b>	Nominal 8 ohm. (max. 25 ohm).
<b>Sound presentation:</b>	Via high quality loudspeaker.
<b>Accuracy of hearing aid response curves:</b>	Determined by quality of reference microphone
<b>Frequency range:</b>	These specifications indicate typical performance, prior to any applied electronic correction. 50Hz - 8kHz $\pm$ 1.5dB. -3dB points at 35Hz and 10kHz. 6dB/octave cut off below 35Hz. 24dB/octave cut off above 10kHz. Neither slope suffers from disturbing resonance.
<b>Uniformity of sound field:</b>	In measuring area typically +1dB 20Hz-10kHz.
<b>Dynamic range:</b>	Available levels determined by specifications of connected equipment. Upper limit: Above 110dB SPL continuous. Lower limit: Determined by ambient noise level. 50dB SPL test level at 75dB ambient noise changes measurement less than 0.5dB. 35dB SPL test level at 70dB ambient noise has a signal to noise ratio exceeding 10dB.
<b>Acoustic environment:</b>	Approximates to Free Field conditions above 500 Hz. Horizontal sound radiation.
<b>External / internal connections:</b>	Reference microphone, coupler, battery adapter, loop, 2 x auxiliary, speaker, additional cables through sound proof passage
<b>Dimensions and weight:</b>	(LxWxH): 40x36.5x26 cm/15.7x14.4x10.2 inch. Net weight: 22 kg/48.5 lbs..
<b>Included parts:</b>	3 TCC25 connection cables 1 TCL25 loop connection cable 1 TSC25 loudspeaker cable Cable kit for TBS25/Affinity or Equinox CE manual Operation manual

## Can be used with:

- Affinity
- Equinox



## Sales and service in your area:

### Interacoustics A/S

Phone: +45 6371 3555 · Fax: +45 6371 3522  
E-mail: [info@interacoustics.com](mailto:info@interacoustics.com)  
DK-5610 Assens, Denmark  
Web: [www.interacoustics.com](http://www.interacoustics.com)

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