

## Adjustable, custom made hearing protector

A lot of attention is paid to the attenuation curves featured on the packaging or the instruction leaflet when making a good choice of a proper hearing protector. Vital for the performance efficiency is that this factor is dependent on the frequency of wearing and the attenuation when worn. A good fit is very important for wearer comfort and the frequency of wearing and it is for these reasons that the Variphone® hearing protector is fully custom made.

The unique 2-canal design of the Variphone® allows tuning of the attenuation quality controls fast and efficiently including regular check ups. The adjustable valve allows the attenuation to be set to reduce the noise load to a safe level.

The fine tuning of the attenuation, with accuracy of 1 dB results in retaining the best ability to communicate.



# Variphone®

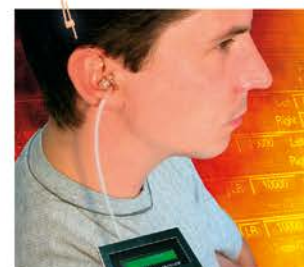
■ Mf / 90 ■ Mf / 100 ■ Mf / 110 ■ Mf / 120

### Process flow

A team of technicians are available to arrange visits at a location convenient for you. After an ear inspection an ear impression can be made which is sent to our laboratories for the manufacturing of an individual Variphone® hearing protector.

A second visit by a technician is necessary for the fitting procedure and fulfilling the standard quality controls.

Before the Variphone® can be used it will be tested on functionality (leaktight test) followed by a very precise adjustment for a calibrated amount of attenuation. These quality controls, which will take only a few minutes per person, are part of the standard procedure and will be done on location.



| Attenuation according DIN ISO 4869 (1993) |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| Frequency (hz)                            | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| M <sub>f</sub> / dB (adjustment 90)       | 16.3 | 18.6 | 21.7 | 25.5 | 30.2 | 31.0 | 37.5 |
| M <sub>f</sub> / dB (adjustment 100)      | 21.4 | 22.9 | 26.4 | 28.8 | 32.7 | 34.2 | 38.7 |
| M <sub>f</sub> / dB (adjustment 110)      | 22.7 | 24.4 | 26.0 | 30.4 | 33.1 | 37.7 | 41.8 |
| M <sub>f</sub> / dB (adjustment 120)      | 28.8 | 28.8 | 30.5 | 34.2 | 33.6 | 37.7 | 42.4 |
| S <sub>f</sub> / dB (adjustment 90)       | 4.6  | 3.4  | 3.1  | 3.6  | 3.1  | 4.5  | 3.3  |
| S <sub>f</sub> / dB (adjustment 100)      | 4.6  | 2.7  | 3.5  | 4.3  | 3.9  | 2.4  | 5.5  |
| S <sub>f</sub> / dB (adjustment 110)      | 5.5  | 4.1  | 3.3  | 3.7  | 3.6  | 2.4  | 5.2  |
| S <sub>f</sub> / dB (adjustment 120)      | 3.6  | 2.8  | 4.1  | 5.2  | 4.6  | 4.0  | 3.7  |
| APV <sub>f</sub> / dB (adjustment 90)     | 11.7 | 15.2 | 18.6 | 21.9 | 27.1 | 26.5 | 34.2 |
| APV <sub>f</sub> / dB (adjustment 100)    | 16.8 | 20.2 | 22.9 | 24.5 | 28.8 | 31.8 | 33.2 |
| APV <sub>f</sub> / dB (adjustment 110)    | 17.2 | 20.3 | 23.5 | 26.7 | 29.5 | 25.3 | 36.6 |
| APV <sub>f</sub> / dB (adjustment 120)    | 25.2 | 26.0 | 26.4 | 29.0 | 29.0 | 33.7 | 38.7 |

M<sub>f</sub> / dB = mean attenuation S<sub>f</sub> / dB = standard deviation APV<sub>f</sub> / dB = assumed protection value

### Accessories

Every Variphone® hearing protector will be delivered in a durable storage pouch together with a detailed instruction leaflet, cleaning cloth and earwax remover.

### Options

- Various colours
- Cord
- Ball bearing
- Soft canal tip



### Specifications

**Classification:** 2 canal design with adjustable attenuation  
**Design:** Standard IC (in canal) design  
**Material:** Hypoallergenic acrylic  
**Weight:** ± 4 gr  
**Identification:** unique numbering  
**Special parts:** Adjustable valve, leaktest canal, red and blue caps (L-R coding)

### Approvals

DIN ISO 4869 (1993)  
 DIN EN 352-2  
 0121 CE 93  
 89/686/EWG  
 SABS (South Africa)  
 NAL (Australia)



| Adjustment     | 90 | 100 | 110 | 120 |
|----------------|----|-----|-----|-----|
| SNR-value / dB | 25 | 28  | 29  | 31  |
| H-value / dB   | 27 | 29  | 31  | 31  |
| M-value / dB   | 21 | 25  | 26  | 29  |
| L-value / dB   | 17 | 22  | 22  | 27  |

SNR = single noise rating

H-value= mean attenuation in mainly high-frequent noise (>2000 Hz)

M-value= mean attenuation in mid-frequent noise (500 < x < 2000 Hz)

L-value= mean attenuation in low-frequent noise ( x < 500 Hz)

BIA, 9305564 St. Augustin (1993)



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