

## 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.



—  $M_f/90$  —  $M_f/100$  —  $M_f/110$  —  $M_f/120$

### 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 CE93  
 89/686/EEG  
 SABS (South Africa)  
 NAL tested (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)

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