



**CO-ORDINATION OF NOTIFIED BODIES**  
**PPE Regulation 2016/425**

PPE-R/04.036  
Version 01

**RECOMMENDATION FOR USE**

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Origin : VG 4 Hearing protection (submitted by BIA, Germany)	<input checked="" type="checkbox"/> Vertical Group	21.04.2018
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Question related to <input type="checkbox"/> PPE Regulation	<input checked="" type="checkbox"/> EN/prEN: EN 13819-2:2002	<input type="checkbox"/> Other:
Article:	Annex:	Clause: 4.1.4
Key words: Insertion loss, asymmetric design, electronic earmuffs		
Question: The insertion loss is used to test variations of sound attenuation of the test specimens and to test the effect of conditioning (drop test, head band flexing, water immersion, ...) because conditioned and non-conditioned specimens are tested together. EN 13819-2 does not separate between left and right cups. For specific purposes manufacturers produce electronic earmuffs which show different sound attenuation. This is intended by the manufacturer, e.g. left cup with lower sound attenuation and right cup with higher attenuation and restored communication signals. The mean is taken over all cups and the criterion is given in EN 352-1 resp. -3 as follows: The standard deviation shall not be greater than 4,0 dB in four or more adjacent one-third-octave bands, and not greater than 7,0 dB in any individual one-third-octave band. This criterion may be not fulfilled by the mentioned special earmuffs although the product shows a good design for a specific purpose.		
Solution: The criterion of EN 352-1 resp. -3 to be used for the insertion loss may be applied separately to left and right cups in specific cases. In such a case the manufacturer has to include a statement (warning) in the user information specifying the special purpose of his product together with all the impacts on the users' safety resulting from the asymmetrical design of the hearing protector.		