

HEARING PROTECTION

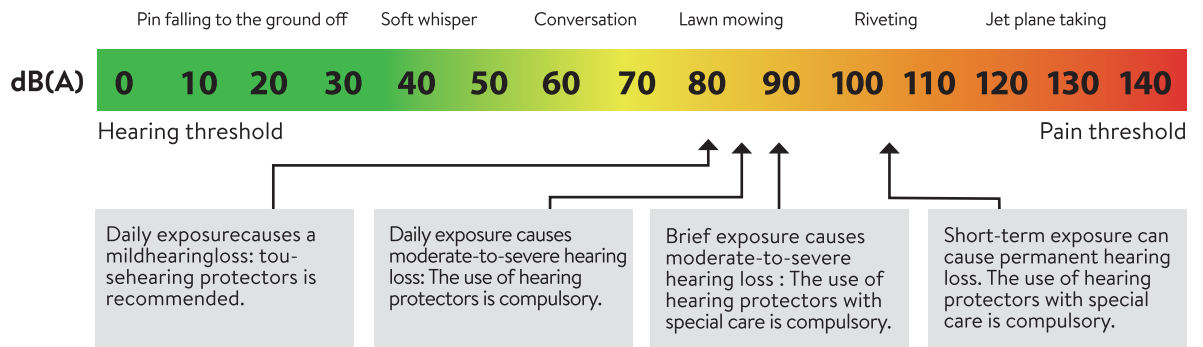
When the level of noise in a given job exceeds the maximum established safety level and it is not possible to eliminate the risk by means of collective protection, the use of individual hearing protection equipment is required. Hearing protectors fulfill the purpose of attenuating the uncomfortable noise in the work environment.

Noise Exposure Limits:

The daily exposure of a worker to noise is expressed in dB (decibels), measurement referred and calculated on an 8-hour working day. In those cases where exposure to noise, without taking into account the use of hearing protection, are:

- **Greater than 80dB**, the person is legally exposed to noise and therefore preventive measures must be taken. Hearing protectors will have to be made available.
- **Greater than 85dB**; the use of hearing protectors is obligatory.

The threshold value of 87 dB must not be exceeded at any time and considers the use of hearing protection.



Estimated noise level:

Four methods exist to estimate the prudent sound level (A) effective at ear level. The preferred method is the frequency band method, and then, in this order, the HML method, the HML control and the SNR method.

SNR: indicates the average value of insulation or protection at various frequencies:

ASNR value of 29 dB for example indicates that a 100 dB noise reduces to 71 dB.

HML values indicate the reduction of noise in three different frequency ranges, H (High), M (Medium) and L (Low).

Main regulations for IPG hearing protection

- EN352-1 Earmuffs
- EN352-2 Ear plugs
- EN352-3 Earmuffs attached to hard hats
- EN352-4 Level dependent earmuffs

TYPE	DESCRIPTION	APPLICATION FIELD
EARMUFFS	They cover the ears and are adjustable by means of pads. They are interconnected by a pressure strap or plastic or metal band: They are usually lined with a sound-absorbent material: The band may be a headband, neck strap, under-the-chin strap or a universal strap.	<ul style="list-style-type: none"> · Activities in intermittent noise environments. · Situation in which a high level of attenuation is not necessary. · For workers who develop ear infections on repeated occasions.
EAR PLUGS	They are introduced into the ear canal or cavity of the ear, designed to block its entrance. They can be disposable (single use) or reusable (more than one use).	<ul style="list-style-type: none"> · Prolonged exposures. · Environments of extreme heat and / or humidity. · When high attenuations are needed. · Users who must use the hearing protection with other protective components, like safety glasses, face shields.