

The OSHA Noise Standard requires hearing protective devices when workers' full-shift noise exposure are greater than 90 decibels. There are several types of hearing protection available that can effectively reduce workers' noise exposures.

Types of Hearing Protection

You should consider the work environment and other necessary PPE when selecting hearing protectors. The frequency of use should also be considered. Hearing protection does not block out sound entirely, but instead reduces the level, as though someone has simply turned down the volume.



Kinds of hearing protection include:

- Soft insert earplugs (typically foam),
- Molded earplugs, and
- Ear muffs.

Some headphones have been developed to provide limited hearing protection. Check with the manufacturer before using these headphones to make sure they provide an appropriate noise reduction rating for your workplace and always keep the volume at a safe level.

Noise Reduction Rating

The Noise Reduction Rating (NRR) is the amount of noise reduced when a hearing protective device is worn properly. It is important to know that the NRR is a laboratory derived, best case scenario reduction, so earplugs with a NRR of 30 will never reduce ambient sound 30 decibels in actual use. You can determine the effective noise reduction of a hearing protective device using the following equation: $(NRR-7)/2$. That NRR 30 plug will effectively provide a noise reduction of 11.5 decibels.

Double Hearing Protection

You may have a situation at work where you cannot reduce sound levels below 90 decibels with just earplugs or ear muffs. In these cases, you may choose to use earplugs and ear muffs together. While both of these devices will have their individual NRR, they do not add perfectly; instead, you add 5 to the NRR of the device with the higher rating.

If hearing protection alone is not able to reduce noise exposures to less than 90 decibels, methods to reduce the noise generated or specific work policies to reduce exposure should be investigated.