

# 3M™ Push-to-Fit earplugs

### Push-to-fit convenience

3M invented the push-to-fit earplug category, starting with the 3M™ E-A-R™ Express™ earplugs, in the 1990's, to help make inserting earplugs easier. With earplugs that are easier to insert and comfortable, workers are typically more likely to wear their earplugs to help protect their hearing.

3M™ Push-to-Fit earplugs deliver a hybrid of our expertise in polyurethane foam technology combined with unique stem designs to provide the comfort of foam earplugs without the need to roll down the foam tip. The fitting stem helps with insertion of the foam tip into the ear canal, and helps keep the foam clean even with dirty hands. The fitting stem works with gloved hands, too.



### The range

The range of 3M™ Push-to-Fit Earplugs includes 3M™ E-A-R™ Express™ Earplugs, 3M™ E-A-R™ Push-Ins™ Earplugs, and 3M™ No-Touch™ Earplugs. Available in a selection of shapes, sizes, and foam materials to help fit a variety of ear canal shapes and sizes, increasing the likelihood that most will find a model that fits them. 3M recommends that fit testing be part of the selection process to help select the model that will help provide the appropriate level of protection needed for the workplace exposure levels.

3M <sup>™</sup> E-A-R <sup>™</sup> Express <sup>™</sup> Earplugs								
Product ID	3M ID	Description	SNR*					
EX-01-001	7000103732	3M E-A-R Express Corded	One-hand insertion: 28 dB					
EX-01-002	7000103733	3M E-A-R Express Uncorded	Two-hand insertion: 28 dB	80				

3M <sup>™</sup> E-A-R <sup>™</sup> Push-Ins <sup>™</sup> Earplugs							
Product ID	3M ID	Description	SNR*				
EX-01-020	7000052713	3M E-A-R Push-Ins Corded	One-hand insertion: 31 dB		<b>₽</b>		
EX-01-021	7000052714	3M E-A-R Push-Ins Uncorded	Two-hand insertion: 35 dB				

3M <sup>™</sup> No-Touch <sup>™</sup> Earplugs								
Product ID	3M ID	Description	SNR					
PN-01-004	7000052849	3M No-Touch Corded	Two-hand insertion: 34 dB	O <sup>1</sup> 4				

# **Fitting**

Manufacturers typically specify fitting earplugs using a two-hand approach where one hand is used for holding the earplugs whilst the other hand is used to pull the pinna (outer ear) upwards and outwards to help open the ear canal for easy insertion of the earplug.

Dependent on the working environment, users may have a preference in how earplugs are fitted. If the users are wearing gloves, or have dirty hands, they may prefer to insert earplugs using only one hand. If an alternative method of fitting is used, it is imperative that full REAT measurements are repeated and reported in the test report which may then be used as part of the CE certification process that helps the user make an informed choice about different fitting methods.

In 2019 3M was the first manufacturer to make a substantiated one-hand insertion claim, as well as the standard two-hand insertion claim. The 3M<sup>™</sup> E-A-R<sup>™</sup> Express<sup>™</sup> Earplugs and 3M<sup>™</sup> E-A-R<sup>™</sup> Push-Ins<sup>™</sup> Earplugs have now also been tested in accordance with the requirements of EN 352-2:2020 using two-hand and one-hand fitting methods. Full attenuation data including SNR, HML and octave band values for each of the two methods of fitting is available and included in the actual CE certificate.

### The two-hand insertion method

To properly insert push-to-fit earplugs, follow the traditional method of using 2 hands, one to pull on the outer ear to help straighten the ear canal and the other to push the earplug into the ear:

- Insert rounded ear tip into ear canal while pulling ear outward and upward with opposite hand (Fig. 1)
- ► Hold pressure on stem for a few seconds while inserting. If needed, push stem from a different direction to make insertion easier (Fig. 2)



## Check fit after inserting earplug:

► The entire ear tip should be inside the ear canal





#### The one-hand insertion method

- ► Insert rounded ear tip into ear canal while holding stem with thumb and finger (Fig. 1)
- Hold pressure on stem for a few seconds while inserting. If needed, push stem from a different direction to make insertion easier (Fig. 2)





- Pull earplug stem gently. Earplug should not come out of the ear easily. If it does, remove earplug and repeat fitting
- Listen to steady loud noise with earplugs in both ears. Cover both ears with tightly cupped hands.
  Noise should sound about the same whether ears are covered or not

For either the one-hand or two-hand insertion methods, 3M recommends fit testing to help determine the likely attenuation an individual may get.

3M strongly recommends fit testing of hearing protectors. Research suggests that many users will receive less noise reduction than indicated by the SNR due to variation in hearing protector fit, fitting skill and motivation of the user. Refer to your applicable regulations for guidance on how to adjust label values and estimate attenuation. In addition, 3M™ E-A-Rfit™ Dual-Ear Validation System can support your fit testing needs for improved wear and compliance.

**Personal Safety Division** 

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