



DEFENSE TECHNOLOGY

Frequently Asked Questions

TKO® Breaching Rounds



What is a TKO® round?

A TKO® 12-Gauge Breaching Round is a frangible slug manufactured by Defense Technology. It is used by tactical teams as an alternative method of breaching, most commonly referred to as ballistic breaching.

How do you use a TKO® round?

First and foremost DT recommends that any agency using this type of equipment is properly trained and well practiced before deploying with it operationally. Ballistic breaching requires familiarization with the construction of doors, location of locks and hinges and proper technique. As a general precaution, eye protection, ear protection, and protective clothing garments are essential. Many of the product cautions are further addressed in your question regarding the proper application procedures.

What equipment will I need to use a TKO® round?

- TKO® Breaching Rounds (Training & Operational)
- 12-Gauge Shotgun w/ Stand-Off Device
- Required Personal Safety Equipment
- Tension Device (For some applications, such as removing burglar bars)

What is the proper application of a TKO® round?

Ballistic breaching is not a routine matter. Although you will find exceptions, most teams utilize it as an alternative when other techniques cannot be used or have failed. It has advantages such as weight and space portability, greater and continuous shock effect, and if you are highly skilled it may even be quicker than mechanical breaching. Once you have the necessary equipment and training, the following are considerations for application:

- A breacher, regardless of the technique, must *always be provided cover*. One cannot perform any breaching technique without another officer covering. A breacher should be dedicated to the purpose of establishing a suitable point of entry quickly, not tasked with multiple roles.
- *One can only defeat locks, hinges, bolt attachments, etc. when their location is known*. One must be able to see the attaching mechanism or have a template to hit them at their exact location.

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- To disrupt the attaching mechanism and decrease the risk of injury one must *acquire the proper deployment angle*. The technique is NOT to shear the door away from the attachment, it is to directly impact the lock or hinge and disrupt it. Even when the attachment is disrupted other breaching techniques (a foot, a shove, or a hammer) may be required to complete the job. Acquiring the proper deployment angle is the most important safety procedure to follow to minimize the risk of the projectile causing serious injury or death.
- *Target Intelligence is essential*. To be effective and reduce the risks associated with deployment, one should have structural diagrams; know the material composition of the doors or windows to be breached, and the occupants.

What is the proper deployment angle?

The TKO® should be launched into the door at an angle, 45° out from the door and 45° downward or upward. The doorframe should always become the backstop for the round.

Has their ever been any research done on ballistic breaching rounds?

There is not a great amount of research on this product. The genesis of using ballistic projectiles to breach a door can be traced back to British Special Forces. Following the use of 12-gauge slugs and buck shot, a frangible slug, similar to the TKO® round was developed. That round came to be known as the “Haton Round.” Ultimately, it was a more effective and safer alternative to lead shot and slugs. This technique and this type of product have been used by law enforcement in the United States since the 1970’s.

All products of this nomenclature are composed of a metallic powder, which is chemically bonded to form a slug. When the slug hits a hard surface it disintegrates into a fine powder. In research conducted in 1992 by the NASA Image Sciences Division along with the Houston Police Department, SWAT team, frangible slugs were filmed with high-speed cameras. With an experienced operator launching the slug into a wooden door, mounted on a wooden frame, NASA engineers estimated that secondary projectiles (wood from the door and frame, throws, throw plate and screws) coming through a breached door were traveling 20 to 30 feet per second. The frangible slug, launched into the door at a 70° angle, became negligible powder.