

**REVIEWED**

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# Door breaching

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**Door breaching** is a process used by military, police, or emergency services to force open closed and/or locked doors. A wide range of methods are available, one or more of which may be used in any given situation. These methods may be divided up into **mechanical breaching**, **ballistic breaching**, **explosive breaching**, and **thermal breaching**.<sup>[1]</sup>



Reproduction medieval battering ram at Château des Baux, France

## Contents

- 1 Mechanical breaching
- 2 Ballistic breaching
- 3 Explosive breaching
- 4 Thermal breaching
- 5 Examples of breaching tools and operations
- 6 See also
- 7 References

## Mechanical breaching

Mechanical breaching can be minimally destructive, through the use of lock picks. This method is relatively slow and requires a trained operator, but does not damage the lock or door. Using specialized tools (i.e.: A-tool, K-tool) a lock cylinder can also be quickly dismantled still in the door and unlocked. This also allows the door to be closed and relocked. Mechanical breaching also includes hydraulic breaching, which uses a special hydraulic ram to bust in the door. The hydraulic ram may be powered manually, pneumatically, or electrically. More dynamic methods (kinetic breaching) use force to break the lock or door. The common methods are to use a lever, such as a Halligan bar or crowbar, or to use a tool to concentrate a large amount of force on the door, such as a sledgehammer, hydraulic jack, or battering ram.<sup>[2]</sup>

## Ballistic breaching

Ballistic breaching uses a projectile weapon to breach an opening. Weapons used can range from small arms to the 120mm cannon of a main battle tank with a HEAT round, which will breach most obstacles easily, though the force involved may violate the rules of engagement.<sup>[3]</sup> A less damaging ballistic breach needs to destroy either the latch and lock, or the hinges of the door, and the ideal choice for this is the shotgun. While in theory other firearms can be used, handguns are usually underpowered<sup>[4]</sup> and rifles are less effective than the shotgun and pose a far higher risk of ricochet and collateral injury.<sup>[3]</sup> Most shotgun ammunition can be used for breaching, though the risk of injury varies with type. Of the available shotgun ammunition, shotgun slugs pose the highest risk, as they will retain significant energy to cause lethal wounds well after they have penetrated the door. Buckshot is far safer, and birdshot even safer, as the multiple small projectiles disperse quickly after penetration, reducing the chances of causing a lethal wound. The safest option is a frangible round such as the



British police using an Enforcer battering ram to breach a door

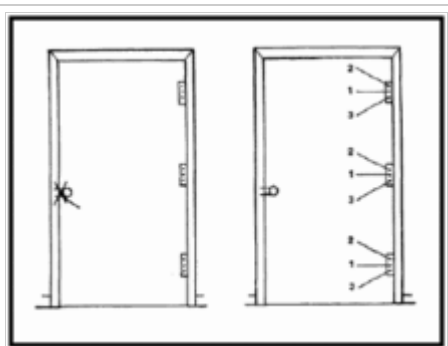
TESAR or Hatton round, which turns to dust upon penetrating the door, and disperses completely upon exit.<sup>[1]</sup>

Breaching a door with the fewest number of shots possible both is faster and reduces the chance of collateral damage. Attacking the latch and lock is easiest, as it requires fewer shots and is easiest to target, whereas attacking the hinges requires more shots, and the hinges may be hidden from the outside. Careful aim is required; shots to the lock side are fired at a point halfway between the lock or handle and the door frame in order to hit the bolt holding the door shut.

According to US urban warfare doctrine, the breaching operation is performed with the muzzle in contact with the door, or as close as possible, and angled downwards at a 45 degree angle. This process provides the best chance of hitting the desired point, while minimizing risk to occupants of the room being breached. Muzzle attachments are available on some specialized breaching shotguns to facilitate this operation, by holding the barrel securely in place while providing a slight standoff to allow powder gases to escape.<sup>[1][5]</sup>

Magazine capacity and operating mechanism are also important considerations

in a breaching shotgun, because to quickly breach a door requires the ability to quickly fire multiple shots. For a breach on the latch side, US doctrine calls for two shots to be fired, and then an attempt made to open the door. If the door cannot be opened, the process would need to be quickly repeated. If the hinges must be breached, then doctrine calls for a total of three shots, one per hinge followed by an attempt to open the door.<sup>[1]</sup>



Suggested target locations for breaching a door at the latch (left) and the hinges (right)



A battering ram is used to breach a training door

## Explosive breaching

Explosive breaching can be the fastest method, though it is also the most dangerous, to both the breachers and the room occupants. Depending on the situation, explosive breaching is potentially slower than a ballistic breach due to the large standoff required when using explosives, if there is no cover available.<sup>[3]</sup> Breaching can be performed with a specially formed breaching charge placed in contact with the door, or with various standoff breaching devices, such as specialized rifle grenades like the SIMON breach grenade.<sup>[6]</sup>

Breaching using explosives is primarily an operation performed by highly trained explosives experts, such as combat engineers or sappers. Explosive breaching charges can range from highly focused methods, such as detcord, plastic explosives, or strip shaped charges that explosively cut through doors or latches, to large satchel charges, containing 20 pounds (9 kg) of C-4, that can breach even reinforced concrete bunkers.<sup>[7]</sup>

## Thermal breaching

Thermal breaching is one of the least common techniques and also one of the slowest. It involves the use of a

cutting torch to cut through metal doors.<sup>[8]</sup>

## Examples of breaching tools and operations

### Mechanical breaching



The adze and pick end of a typical Halligan bar



A manually operated hydraulic spreader-cutter of a type used by rescue workers to force open doors



An externally powered spreader-cutter tool



A Halligan tool and an axe, both common tools used by firefighters to breach doors to fight a fire

### Ballistic breaching



A U.S. Marine performs a ballistic breach of a padlocked door using a combat shotgun



A ballistic breach at night of a padlocked door; this shotgun has a pistol grip rather than a full stock to make it more compact



The breaching shotgun can be carried on a long sling, to allow easy transition to a primary weapon



KAC Masterkey is a system that consists of a Remington 870 12 gauge pump-action shotgun mounted on a M16 or M4 assault rifle in an underbarrel configuration. This removes the need to carry a separate breaching shotgun.

### Explosive breaching



U.S. Marines place an explosive breaching charge on a door, positioned to separate the door from its hinges



U.S. Marines take cover behind a protective shield during an explosive breach of a door

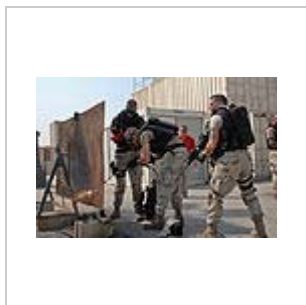


A US M100 Grenade Rifle Entry Munition (a SIMON derivative) detonates against a door



Preparing an explosive charge - Coiled det cord taped to an IV bag.

### Thermal breaching



Crewmembers from a U.S. Coast Guard cutter practice exothermal breaching techniques



A member of a U.S. Navy visit, board, search, and seizure (VBSS) team conducts a thermal breaching procedure



A member of the U.S. Coast Guard Maritime security Response Team uses a torch to cut through a ship's watertight door

## See also

- Hydraulic rescue tools
- Mouse-holing

- No-knock warrant

## References

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4. See Mythbusters Special 9
5. The "Mossberg 500 Tactical Cruiser" ([http://www.mossberg.com/images/Mossberg\\_Guns/930/New/54125.jpg](http://www.mossberg.com/images/Mossberg_Guns/930/New/54125.jpg)).is equipped with a standoff door breaching barrel
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