

## Shotguns

A shotgun is defined by law as 'a smooth bored gun (not being an airgun) which:

- a) has a barrel not less than 24" long and does not have any barrel with a bore exceeding 2 inches in diameter; and
- b) either has no magazine or has a non-detachable magazine incapable of holding more than two cartridges; and
- c) is not a revolver gun.

In most cases, shotguns will fall into one of three broad categories:

- a) A single barrelled shotgun - one barrel, no magazine, capable of holding only one cartridge at a time and therefore only capable of firing a single shot without being reloaded.
- b) A double barrelled shotgun - two barrels, placed either horizontally (a 'side by side') or one above the other (an 'over and under')
- c) A semi-automatic shotgun - one barrel, with a magazine capable of holding one or two extra cartridges in addition to one in the chamber. When the first shot is fired, the spent cartridge case is ejected by one of several methods and one of the cartridges in the magazine is automatically fed into the chamber ready to be fired when the trigger is next pulled.

Size / Calibre:

The term used to describe the barrel diameter of shotguns is 'bore'. The 'bore' size of guns is based on an old tradition that the diameter of the bore would fit a solid lead ball, which was a standard fraction of one pound of lead. For example, a '12-bore' was the diameter which would fit a lead ball weighing exactly one twelfth of a pound. Similarly, a 20-bore would fit a ball weighing one twentieth of a pound, and so on.

Although old-fashioned, these measures are still in common usage today. There are two common exceptions - a '.410', where the barrel diameter is 0.410 of an inch, and the less common 9 mm, which is self-explanatory

Although shotguns have been made ranging from 28-bore to 4-bore, the most common calibres in current use are, in increasing order of size, .410, 20-bore (becoming more popular again after almost dying out), 16-bore and 12-bore, with the 12-bore being by far the most common at present, and 28. It is still possible to find 10- and occasionally an 8-bore, but these guns are very heavy to use, and were designed for wildfowling.

### Other Variations

In traditional shotguns, the double-barrelled guns, there are two main classes - 'Ejectors', which have a mechanism in the action which throws out spent cartridges automatically when opened to reload, and 'Non-ejectors', which only pull the spent cartridge far enough out of the chamber to allow the shooter to pull them out manually. As you would expect, Ejector guns are more expensive than Non-ejectors.

There are several different types of action in these guns. The most common is described as a 'Boxlock', where the mechanical parts of the action (trigger mechanism, springs, etc.) are contained in a box-shaped action.

There are also 'Sidelocks', where the mechanics are contained partly inside the hollowed out wood of the stock, and covered by removable plates to allow easy access for cleaning. Sidelocks are generally more expensive than boxlocks.

A further variation is described as a 'Round Action', and is only made by a few specialised gunmakers. In this case, the mechanics are partly inside the 'box', which is rounded instead of rectangular, and partly within the hollowed-out stock, but in this case there are no side-plates.

## Ammunition

Referred to as 'cartridges', the ammunition for a shotgun comprises short tubes with metal ends. The metal end contains a small explosive charge, which explodes when the cartridge is fired. This small explosion ignites a larger quantity of propellant inside the cartridge, which expands and creates an immense pressure inside the cartridge. This pressure cannot go back or sideways because it is confined by the gun, so it expands forward, pushing the lead pellets in front of it and out of the barrel. This whole process takes only a tiny fraction of a second - so fast, in fact, that it appears to be instant. The pressure created is immense, and the pellets leave the gun at speeds of over 1000 feet per second.

There is a wide range of cartridges available, containing varying amounts of propellant and varying weights of pellets, designed for different types of shooting. The size of the pellets also varies, from tiny balls the size of a grain of sugar up to around the size of a pea.

## Chokes

This topic is one which confuses many people, and it is really quite simple.

The inside of a shotgun barrel is a tube with a constant diameter. Except, that is, for the 'choke', which is at the open end of the barrel, and is simply a reduction in the diameter for a short length right at the end. The purpose of this 'choke', or reduction in diameter, is to concentrate the pellets just as they leave the gun, to give a tighter 'pattern' of pellets. That's it! Nothing hard about it...

Why do we have 'choke'? That's simple too. As soon as the pellets leave the barrel, they begin to spread. Over distance, they will spread so far apart that the gaps between them are so big that the target could be right in the middle of the pattern and still not be hit by enough pellets to kill it cleanly.

On the other hand, since we generally want to eat the game we have shot, we don't want more pellets than are needed to ensure a clean kill, so we use this 'choke' arrangement to control the spread of the pellets so that the number which hit the target are not excessive.

The widest spread of pellets is achieved by using no choke at all, and this is called 'true cylinder'. A very slight degree of choke is known as 'improved cylinder, a little more becomes 'quarter choke', then 'half choke or modified', 'three quarter choke or improved modified' and finally the tightest, 'full choke'.

For game shooting, the more open chokes are most suitable, while for vermin control, where we are not concerned about putting a high number of pellets in the target, the tighter chokes are used.

There is one point which cannot be stressed enough in shotgun shooting - pattern fails before penetration. This is a scientific fact, and means that even when your pattern has spread so much that it is unreliable, the individual pellets still have enough energy to penetrate and wound a target. Fluke shots sometimes kill game which is really out of range, where a single pellet strikes a vital organ, but it is much more common for game to be wounded by long-range shots.

For practical purposes, 15-20 yards is the closest distance you can shoot quarry without blowing it to pieces, and 45 yards should be regarded as the absolute maximum range of any shotgun.