

Shotgun Chokes - Expanded Version

By Chuck Hawks

Standard British	<u>Constriction (12 gauge)</u>	<u>Pattern percentage</u>
Cylinder	.000 in	40%
Improved Cylinder	.005 in	50%
1/4 choke	.010 in	55%
1/2 choke	.020 in	60%
3/4 choke	.030 in	65%
Full choke	.040 in	70%
 Standard American*		
Cylinder	.000 in	40%
Skeet	.005 in	53%
Improved Cylinder	.010 in	57%
Modified	.020 in	67%
Improved Modified	.030 in	73%
Full choke	.040 in	75%
 Italian		
Cylinder	.000 in	40%
Skeet	.002 in	-
Improved Cylinder	.005 - .010 in	50 - 57%
Modified	.020 in	60%
Improved Modified	.030 in	65%
Full choke	.036 - .039 in	70 - 80%
 European/ Continental		
CL (Cylinder)	.00 mm	40%
**** (Imp. Cyl.)	.25 mm	50%
*** (1/2 choke)	.50 mm	60%
** (3/4 choke)	.75 mm	65%

*(Full choke)	1.0 mm	70%
---------------	--------	-----

Briley

Cylinder	.000 in	-
Skeet	.005 in	-
Improved Cylinder	.010 in	-
Light Modified	.015 in	-
Modified	.020 in	-
Improved Modified	.025 in	-
Light Full choke	.030 in	-
Full choke	.035 in	-
Extra Full choke	.040 in	-

Winchester

Cylinder	.000 in	25 - 35%
Skeet #1	-	33%
Improved Cylinder	.005 in	35 - 45%
Skeet #2	.007 in	50%
Modified	.012 in	45 - 55%
Improved Modified	.022 in	55 - 65%
Full choke	.036 in	65 - 75%

Jack O' Connor**

Cylinder	-	35 - 40%
Skeet #1	-	35 - 40%
Improved Cylinder	-	45 - 50%
1/4 choke / Sk. #2	-	50 - 55%
Modified	-	55 - 65%
Improved Modified	-	65 - 70%
Full choke	-	70 - 80%

* from Stan Baker Co.

** from *The Shotgun Book*

Shotgun choke is a constriction in the end (usually the last 3" or so) of a shotgun barrel which focuses the shot into a tighter stream--much like a nozzle on the end of a water

hose, which does exactly the same thing for exactly the same reason. It is not the bore diameter of a shotgun barrel that determines the pattern percentages it shoots, nor the gauge. It is just that few thousandths of an inch of extra steel that is left in the (inside) end of the barrel when it is bored.

As can be seen from the table above, there is no great uniformity or agreement between various experts and manufacturers as to how many points of constriction, or even what pattern percentage, constitutes a particular degree of choke.

Pattern percentages are normally taken at a distance of 40 yards. The number of pellets striking within a 30 inch circle, drawn so as to encompass as many pellet holes as possible, is counted and compared with the number of pellets contained in an identical unfired shell. The result is expressed as a percentage. For example, according to Jack O'Connor, 60% of the pellets striking in a 30 inch circle at 40 yards with a particular load would indicate a "Modified" choke with that load, REGARDLESS OF WHAT IS STAMPED ON THE BARREL.

Part of the confusion, no doubt, results from the fact that any given shotgun barrel is likely to pattern differently with various shells. Many anomalies occur between what is stamped on shotgun barrels and how they pattern with different loads. Trap loads, typically 1 1/8th ounce of hard #7 1/2 or #8 lead shot, often pattern tighter than 1 1/8th ounce "field" loads of softer and larger #4 or #6 lead shot. Steel and Tungsten shot typically patterns tighter than lead or bismuth shot. In both cases this is because the former is harder and deforms less than the latter on its trip down the barrel.

Probably the most useful way to pattern a shotgun is to test all the barrels or choke tubes you have at the distance you expect to break most targets (or kill most birds), with the load you intend to use. Then select for use the choke that gives the largest and most even patterns, without an excessive number of "holes" through which the target could escape. A variation would be to test a selection of appropriate loads through the barrel/choke combination that you intend to use, again looking for the largest and most even pattern without excessive holes. This system won't tell you what your pattern percentage is, but it will tell you which choke is most efficient for your purpose, and you don't have to do any counting.