

What Is 75% Diameter and How Do You Determine It?

The pattern analysis program Shotgun-Insight® offers, as one of its many features, a calculated statistic called “75% diameter” which enables shooters to assign a number to the otherwise-fuzzy concept of “pattern spread.” It is the calculated diameter, in inches, of a circle which would contain 75% of the shot in the pattern being studied.

How would you use 75% diameter information?

For a trapshooter, it's a useful added check on the performance of a gun and its ammunition.

A long-yardage gun can be expected to produce patterns with 75% diameters of about 27 or 28 inches, plus or minus about an inch, at 40 yards, assuming nice weather at usual elevations. Patterns smaller than that are fine. On the other hand, if your patterns' 75% diameters are much larger than that, it is a matter of concern at long-yardage handicap. Try better ammo; premium shells from any of the big three may fix the problem. If your patterns' 75% diameters are still a good deal larger than 28 inches, even when you use top-quality ammunition, find out why.

The 75% diameter statistic is more relevant to skeet and sporting clays shooters.

Often they want a larger pattern for some situation and they buy an imaginatively-promoted choke tube (or two) to get that promised larger pattern. Shotgun-Insight's 75% diameters will tell them if they got what they expected — they might be surprised by what they find out!

The 75% diameter measurement is also useful for those who just want to know more about choke-constrictions and the patterns they produce.

There is a widespread belief that modified chokes produce much larger patterns than full chokes. Do they? Or maybe you would like to know if a claim that a particular bore and choke combination, or some company's choke-tubes, or some internet-chemist's powder & wad recipe actually widens patterns without compromising pattern percentage. “75% diameter” is your route to the truth. Many interesting questions about patterns and shotgun performance can be directly addressed using the 75% diameter statistic.