

THE REAL FULL CHOKE

Dear Technoid,

You recently wrote concerning choke constrictions and the patterns required to meet specific choke designations. You said that Full choke was generally considered to produce a 70% pattern at 40 yards and that .035" was the standard constriction for that choke.

Is this data correct?

R.

Dear R.

Well it depends, but generally yes. There is certainly plenty of precedence for the above numbers.

My first reference to Full choke shooting 70% at 40 yards is Charles Lancaster's "the Art of Shooting" first published in England in 1889. Churchill also uses this number as does the dean of English gun writers G.T.Garwood (Gough Thomas) in his books of the '60s. Thomas was the Gun Editor of the Shooting Times magazine. Macdonald Hastings in The Shotgun (1981) also gives this 70% Full choke number. So does the Stanbury/Carlisle book Shotgun Marksmanship (1962). These are all British writers and they probably took it from Greener's seminal work The Gun, published first in 1835. Greener's book sort of set the standard for all shotgunning today.

However, there is certainly no universality of opinion on this side of the Atlantic. Americans are much more independent. Lionel Atwill in the semi-informative Orvis Guide to Sporting clays lists full choke as having .040" constriction and producing 70-80% patterns in 30" at 40 yards. Close enough. I do not have Stan Baker's chart at hand, but I believe that he is in the same ball park, as is Jesse Briley. Warren Johnson's most excellent "Choke Chooser" uses a number of 75%. Don Zutz is also in the 75% area (I believe anyway. I cannot dig up his stuff right now.). No one in the US really agrees and the number sometimes is a bit higher than 70%, but not much. The smart guys give a range so that they cannot be pinned down.

The most recent US article that I can find supports the 70% at 40 yards argument. Marshall Williams in his September 1996 Shotgun Sports article "Shotgun Patterns in the American Rifleman" states that the standard test for a full choke has always been 70% and alludes to the NRA Technical staff using this number.

It was very interesting to read that in the NRA's tests of 63 12 gauge shotguns marked "Full" choke, 27 of the guns patterned tighter than 70%, 30 of the guns patterned more open than 70% and 6 guns patterned dead on at 70%. These numbers were from the Williams article. This seems to give strong support to the 70% figure in actuality. Note that the people who SELL screw chokes often give higher numbers, but the NRA who TESTS chokes uses the 70% figure and bears this out in testing.

This doesn't mean that there aren't plenty of guns marked Full that don't throw much better than 70%. There are. But there are also plenty that throw under, as we can see from the NRA testing numbers.

As to constrictions: I spoke to Briley at some length a while ago about what constriction in a Briley choke had the best chance of producing the tightest patterns over a wide variety of #7 1/2 target loads. He said that .035" was the best bet for uniformity. .040" sometimes produced tighter patterns, sometimes not. .035" was his suggestion for the most reliable full choke performer. For Briley's substitute factory chokes, he designates .035" as Full.

My personal experience has been that .035" from MY barrels, using a high quality trap load from a major manufacturer, will throw closer to 75% than 70%. Sometimes it can be higher. There is absolutely no way of knowing what all the NRA guns marked as Full Choke actually miked, but you can be pretty sure that they were all over the place.

So, I think that my data concerning the full choke is, if not completely correct, certainly defensible. There is no unanimity of opinion, but the preponderance supports the 70% number.

Then, of course, there is the biggest reason to support of those numbers- the Technoid says so!

Regards,
Bruce Buck
Shotgun Report's Technoid