

Corbin ULD-TIP Metal Tip Long Range Bullets

Ultra Low Drag (High BC) bullets with very pointed metal tip inserts are made using a normal die set with a special point forming die having two ejectors, used in sequence. The same core swage, core seater or rebated boat tail dies are used, but the standard point forming die is set aside, and the PF-1-ST (for -S press) or the PF-1-HT (for Mega Mite or Hydro Press) ULD-TIP die is used to finish the bullet and seat the metal tip.

The ULD-TIPs come in two sizes, designated TIP-30 and TIP-50, sold in packages of 500.

The TIP-30 has the following parameters:

OAL .715-in, Base of cone diameter .209-in, Stem diameter .100-in, Cone length .435,
Stem length .280-in, Cone angle 14-deg., Wt. 14.5 grains
The TIP-30 is used for calibers from .284 to .416 (the TIP-50 can be used for .338 and up).

The TIP-50 has the following parameters:

OAL .812-in. Base of cone diameter .260-in. Stem diameter .110-in. Cone length .500-in.
Stem length .312-in. Cone angle 14-deg.. Wt. 24.2 grains
The TIP-50 is generally used on 50 caliber and above, but can be used down to .338.

The core and jacket are swaged as usual, but the core length must be such that the seated core comes to a specified distance from the end of the jacket, in order to allow for the tip stem to be gripped firmly and aligned in a hole in the core, and to prevent excess core material from pushing the tip too far out of the jacket when the ogive is formed.

To make lighter weights, use a shorter jacket or place Corbin "Bullet Balls" in the jacket first to move the lead forward to the correct position (specified in instructions with the die set).

The PF-1-ST and PF-1-HT dies have two ejector punches (internal punch for a PF die is the ejector). Both are fitted to the larger-than-usual ejection pin hole to create a pressure seal. The first ejector has a probe tip, which projects a specific distance into the die cavity, to create a small hole in the lead core that is precisely on center and the right diameter to grip the ringed stem on the tip insert.

The bullet ogive is formed using the 1st ejector. After processing a reasonable number of bullets, the ejector is replaced with one having a cavity tip. The tip is then pushed by hand into the bullet. Then the bullet with tip started is placed in the die, and the ram is stroked to seat the tip and finish the ogive. If the core length (weight) is correct, the jacket will come smoothly to the base of the tip's cone with no lead showing, and will be held firmly by the lead core around its stem.

Note that the length of the ejector punches is held to within 0.001 inches of the depth of the die cavity, to insure that when the ram is all the way up, the end of the ejector will be flush with the end of the die cavity. This is called a "synchronized" punch, and the "sync" length is written on the die and on the punch for purposes of replacement. The diameter of the punch, and its sync length, are critical information for ordering replacements.

Note: early literature refers to aluminum tips, but experience has proven that chromate plated steel tips offer easier swaging, higher BC, less deformation in handling and feeding, and better corrosion resistance for long term storage. All current production tips are zinc chromate plated steel and can be attracted by a magnet (positive test).