



# ULD Tip Seating Point Form Die



- PF-1-ST
- PF-1-HT

**Purpose:** The point forming die puts a smoothly curved nose (ogive) on the bullet. The semi-blind hole eliminates the step or shoulder that would be created by using a punch.

The bullet is ejected by means of a punch operated by the ram and press stop pin or ko bar on the down stroke. The special ULD (Ultra Low Drag) ogive shape matches the shape of a machined tip insert (ULD Tip). The tip is installed and formed as part of the bullet using the special PF-1-ST or PF-1-HT die, providing extremely high BC bullets with good balance. Two operations are used in this die.

**Specifications:**  
 Caliber \_\_\_\_\_  
 Base \_\_\_\_\_  
 Eject.diam \_\_\_\_\_  
 Sync.1 \_\_\_\_\_  
 Sync.2 \_\_\_\_\_



**Identification:** The die and punches are marked "PT". They are also marked with the caliber and the size of the ejection pin. The diameter of the external punch is a close fit to the die cavity. There are two ejection punches. One has a reduced solid tip, and one has a cavity shaped like the tip of the metal insert. This die can be added to any set and used instead of the standard point forming die, to make metal tip bullets.

**Operation:** Install the ejector pin with the projecting nose into die and screw the die into the press ram. Install the external punch in the punch holder. Put the seated core and jacket into the die tip first (down). Carefully adjust the punch holder so that the ogive is formed at the top of the stroke with a small hole in the core, to accept the stem of the tip insert. The amount of lead core used is critical (compared with jacket length) to support and align the tip. Form a quantity of bullets, and change the internal (ejection) punch for the one with the cavity. Reinstall the die and punch. Set a tip insert into the punch cavity, insert the bullet, and seat the tip into the bullet to finish it.

## ULD Tip Seating Point Form Die (type -ST or HT)

### Operation:

1. Swage the core as usual, but to a length that allows about .320-inch empty space toward the jacket mouth in a .510 bullet, and proportional space in other calibers (to allow lead to move forward and grip the stem without extruding around the tip).

2. Seat the core in the jacket as usual. There should be a small amount of empty space from core to jacket mouth.

3. Install the PF-1-HT die. Use the solid ejector punch to form a hollow cavity shape as you form the ogive. Bring the open jacket mouth to about 0.020 inches larger than the largest part of the tip insert (its base). The hole in the core accepts and holds the stem of the tip insert in the next operations...

4. Remove the solid ejector punch and install the punch which has a cavity shaped to support the insert by the sharp end.

5. Push the metal tip into the bullet by hand, just to keep it from falling out when you turn the bullet over. Put the bullet into the die, aligning the metal tip with the punch cavity. Press the bullet all the way home. Do not use any more pressure than necessary to seat the tip and finish the ogive. The bullet is now done.

### Note:

The exact amount of lead core is critical for a given length of jacket, in order to have just enough support for the tip (and to hold firmly on the tip insert's stem). Too much lead spurts out the end of the jacket and prevents the tip from being inserted. Too little fails to come far enough toward the bullet end to create and maintain the tip-grabbing cavity.

The length of the first ejection punch (t-1) is critical and is matched with two length numbers (and diameter) to the die. These are the "sync" numbers or lengths, required to make new punches for an existing die. The cavity-forming punch is exactly set to the depth of the die cavity and cannot be used in other dies even of the same caliber. Always provide the sync numbers if ordering new punches for replacement.

