

CORBIN TECHNICAL BULLETIN

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Making Sharper Open Tip Bullets with the LT-1 Die

The open tip of a bullet formed in a point forming die must be about the size of the ejection pin, or larger, to keep the jacket from simply flowing up the ejection pin hole. The ejection pin needs to be robust enough to withstand the force of ejecting the bullet without bending, and to have enough surface area so it won't penetrate the bullet with normal ejection pressure. This limits how small an ejection pin can be made and provide good service life, with some safety margin for mistakes such as insufficient lubrication.

To nudge the open tip slightly smaller, one can use the LT-1 lead tip forming die, which is normally used to form a sharper, more ballistically efficient tip in the lead core projecting from the end of the jacket. Instead, the angle of the cavity in the punch is made slightly less sharp than the actual ogive of the jacket, perhaps only 1/2 a caliber less to as much as a caliber less. If this operation is to be done frequently, the punch should be made of a hardened tool steel that will handle the pressure better over time.

The open tipped bullet (sometimes called a "hollow point", although we reserve this term for bullets that have an actual cavity formed in the core itself, whether lead extends beyond the jacket or not) is pushed gently into the specially designed lead tip die (which we designate as a LT-1-MC or LT-1-RC, meaning -M type, Custom punch, or -R type, Custom punch (depending on which kind of press they fit). Only gentle force is used. The slightly more blunt curve of the punch cavity guarantees that the very end of the jacket will contact the punch first, and force will be vectored inward to help push the jacket tip closer together.

At some point, the pressure required for further closing will cause the jacket to yield further down the ogive, and it will form a step or ring where the edge of the punch is forced too firmly against the jacket curve. Back off slightly so that the tip is closed as much as possible without causing this ring to be crushed into the jacket ogive, and you will have a neat way to form tighter tips on either the bullets you make yourself, or on any other bullet you acquire that happens to have the right ogive shape.

To use the tool with other ogive shapes, simply order another punch. You do not need the complete die every for each shape, just for a change in caliber (diameter). Of course, a 30-30 and a 7.62mm and a .30-06 are all the same diameter even if the caliber is different, but for purposes of bullet making we refer to caliber as the diameter, not the marketing name of the entire cartridge.

This tool is sometimes sold by itself as a "tip closing die" or a "bullet sharpening die", and is used by handloaders and bullet makers to improve the ballistic coefficient of open tip bullets. We need sample bullets in order to make the cavity optimum for your application (unless you are ordering it as part of a bullet swage die set).