



## CS-1 Core Seat Die

### Specifications:

Caliber \_\_\_\_\_  
 Jacket \_\_\_\_\_  
 Base \_\_\_\_\_  
 Other \_\_\_\_\_

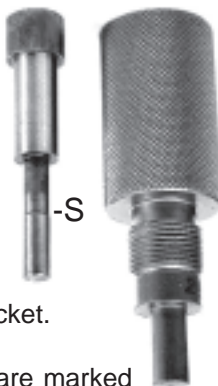
### Type:

-R  
 -M  
 -S  
 -H



-H

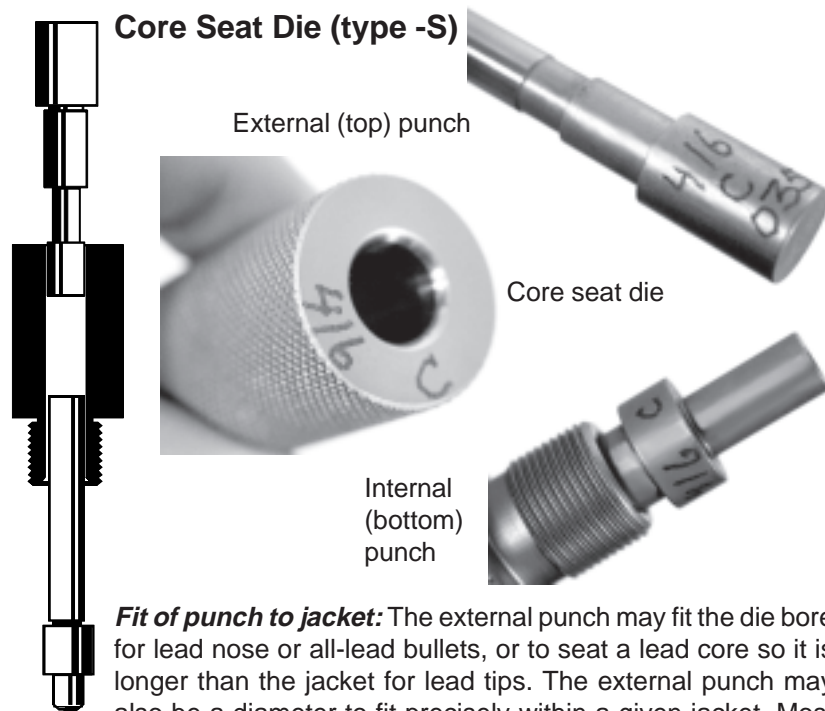
**Purpose:** The core seat die compresses the lead core inside a jacket and expands the jacket to nearly finished diameter. The core seating punch shape is impressed into the core, and can be shaped to make hollow cavities, semi-wadcutter nose shapes, or flat. Using the core seat die insures a tight fit of the core and jacket.



-S

**Identification:** The die and punches are marked "C". They are also marked with the caliber. The external punch may be marked with a jacket wall or a specific punch diameter. The diameter of the punch either fits the ID of the jacket (for open tips), or the ID of the die (for lead tips). The internal punch is a snug fit to the die bore, and may have a flat end or a domed or pointed shape (to make dish, cup, or hollow base bullets). Never force a jacket or core into the die. Type -S dies have 5/8-24 threads to fit the CSP-1 press ram. Type -H dies have 1-12 threads to fit the CSP-2 and HydroPress ram. External punches fit into the floating punch holder in Corbin presses. The type -R dies fit into the 7/8-14 head of reloading presses and the external punch fits the slotted press ram.

**Operation:** Install the die in the press (-S and -H dies fit the press ram). Install the external punch in the punch holder (or ram, for -R dies). Put a core and jacket (if used) into the die. Raise the ram to the top of its stroke. The punch holder or -R die should be set high enough so the core does not touch the external punch. Adjust the punch holder (or -R die) downward to contact the core. Lower the ram, and carefully adjust the punch holder (or -R die) so that the jacket expands just to the diameter of the die bore. Any greater pressure only stresses the die and can lead to breakage. A very light pressure is normally sufficient. If the jacket stays in the die, it is expanded to bore diameter. If it sticks on the punch, the core weight or jacket wall may not match the punch diameter.



### Core Seat Die (type -S)

External (top) punch

Core seat die

Internal (bottom) punch

**Fit of punch to jacket:** The external punch may fit the die bore for lead nose or all-lead bullets, or to seat a lead core so it is longer than the jacket for lead tips. The external punch may also be a diameter to fit precisely within a given jacket. Most jackets have a taper to their wall thickness, growing thicker toward the base. A given diameter of punch will seal the pressure only when the punch OD is the same as the jacket ID, within 0.0002 or less inches. Straighter walls with less taper can use a wider range of core weights with the same punch, compared to more tapered jackets.

If the punch does not fit snugly in the jacket at the point where your particular weight (length) of core will ultimately be compressed, the jacket and ultimately the bullet diameter may be undersized. If the punch is too large, it will dig into the jacket wall. The force will tend to crush or shorten the jacket without pressurizing the core properly. The lack of core pressure fails to expand the jacket to proper diameter. If the punch is too small, it will allow lead to leak around it and relieve pressure, also failing to expand the jacket correctly. A punch made to fit near the jacket mouth (for heavy or lead tip bullets) will be too large to reach down inside the jacket when you select a lighter weight (short core). A punch made to fit further down into a tapered jacket will be too small for use with that jacket and a much longer (heavier) core. Several core seating punches may be needed to fit a wide range of weights or different jacket walls. Problems with core seating will show up later in the point forming operation, with incorrect diameter or excess bullet taper, wrinkles or waves in the shank. Only light pressure is normally required.