



## CS-1-R Core Seating Die

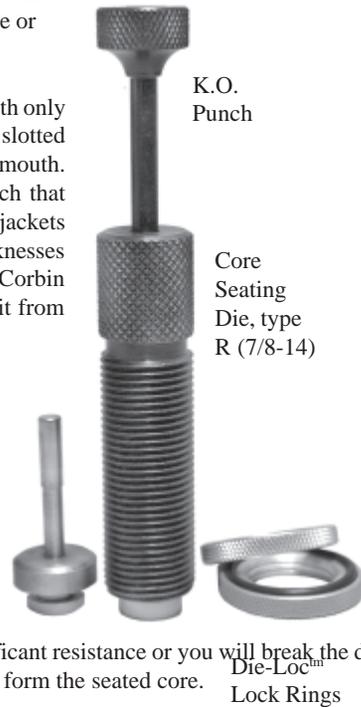
The CS-1-R Core Seating Die is used to compress a piece of lead of the correct weight (and length) in to a bullet jacket. The jacket is expanded to the diameter of the die by the lead pressure. Only enough force is used to expand the jacket to die diameter. Any more may break the die or bend the punch. Very light effort is required.

The die is put into the top of the reloading press with only a few threads engaged. The punch slips into the slotted ram. The punch must be a snug fit into the jacket mouth. If more than one punch is provided, use the punch that fits best in the jacket you are using. Commercial jackets and rimfire case jackets have different wall thicknesses and use different external punches. Wipe a little Corbin Swage Lube on the outside of the punch to keep it from sticking in the jacket.

With the core inserted in the jacket, place the jacket over the punch. Wipe a film of Corbin Swage Lube over the outside of the jacket. Raise the ram of the press all the way up and then screw the die down until it can't be turned any further by hand. Lower the ram, and give the die a quarter turn further down. Raise the ram, and repeat this until the jacket measures just below finished diameter or you encounter an increase in resistance. Do not continue to swage if you meet significant resistance or you will break the die or bend the punch. It does not take much effort to form the seated core.

To eject the seated core and jacket, put the knurled headed knock-out rod into the top of the die, and tap it firmly with a plastic mallet. Catch the bullet with the other hand as it ejects from the die. Measure the bullet and see if it is around .001 or less inches than the final desired size. If not, you may need to use a different core seating punch, use more lead core, or increase the swaging pressure slightly.

You can also use a CS-1-R core swage to make lead tip bullets by using a punch that fills the die bore rather than fitting into the jacket, and using a lead core long enough to project beyond the jacket after seating. You can also make semi-wadcutter style lead or jacketed bullets or gas checked bullets by using a punch that has the nose shape machined into its end. This always leaves a shoulder or step at the end of the punch, which is why it cannot be used to make a bullet with the jacket curved around the nose (edge of the jacket would contact the end of the punch and fold one of them). The PF-1-R point forming die, which has a bullet-shaped cavity, is used to smoothly curve a jacketed or lead bullet into a stepless curved nose or ogive shape. This is used in the next step. Exact weight cores can be swaged with the optional CSW-1-R core swaging die.



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## CSW-1-R Core Swage Die

The CSW-1-R Core Swage Die is used to compress a piece of lead in length, expand its diameter to fit inside a jacket, and bleed off surplus volume from that which you set by the position of the die relative to the top of the press stroke. It is both a weight control tool, giving very precise core weights, and a core shaping tool to produce flat ends and straight sides on the core. Only enough force is used to expand the core and bleed off a few grains of lead. Any more may break the die or bend the punch. Very light effort is required. ONLY pure SOFT LEAD should ever be used! Hard lead may break the die or bend the punch if you press firmly enough to make it extrude through the bleed hole.

The die is put into the top of the reloading press with only a few threads engaged. The punch slips into the slotted ram. (The punch has a small bleed hole through its center. The lead will be extruded into this hole; cutting off the extra "wire" of lead results in consistent remaining core weight.) Wipe a film of Corbin Swage Lube over the outside of the core, and put it into the die. Raise the ram of the press all the way up and then screw the die down until it can't be turned any further by hand. Lower the ram, and give the die a quarter turn further down. Raise the ram, and swage, then eject the core and weigh it. Repeat this until the core weighs what you want. Then lock down the die and process all the other cores you have cast or cut slightly heavier (from 3-10 grains more) than the desired final weight. Core weight plus jacket weight is bullet weight: for a 55 grain bullet, set the scale at 55 grains, put the jacket into the scale pan, and then adjust the core weight until the scale balances.

To eject the core, put the knurled headed knock-out rod into the top of the die, and tap it firmly with a plastic mallet. Catch the core with the other hand as it ejects from the die. Use a box knife or fingernail trimmers to clip off the thin "wire" of extruded lead before weighing the core. Save the trimmings to make fragmenting bullet cores!

The core swage die is an optional tool to get better weight control than you can cut or cast the cores. Accurate remaining weight depends on (1) having more than enough lead to start with, (2) holding the pressure slightly at the end of the stroke, so the lead can finish flowing, and (3) always having exactly the same volume or distance between the internal and external punch at the end of the stroke. If your ram is not being used at the very end of the stroke, you will get varying weights. The ram must reach its maximum height every time you swage a core, in order to get consistent volume inside the die, which gives you consistent weight. Springing and compression or shifting of parts in the reloading press may cause some variation in the core weight; an actual bullet swaging press eliminates many of these errors.



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