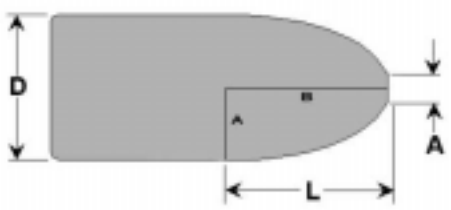
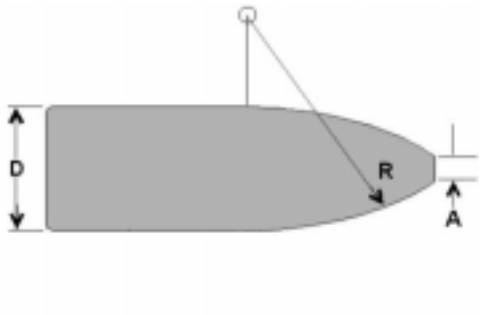
CORBIN Elliptical (round nose) point form specifications



Elliptical ogives are used for Corbin's "round nose" bullet dies. To determine the dimensions for any caliber of elliptical ogive, construct an ellipse with the minor axis length equal to the caliber, and the major axis length equal to twice the "E-number", which is the length of the ogive along the bullet axis in calibers. In the drawing, the "D" diameter is the caliber, A is the meplat (size of the ejection pin used in the die), and L is the length of the ogive (given in calibers, as in "1-E" or "3/4-E"). The small A is the minor half axis (half the caliber) of the ellipse. The small letter B is the major half axis (the length of the ogive). The ellipse is then divided in half at the minor axis, and the remaining portion is the ogive of the bullet. The solid ogive shape is half a prolate spheroid.

Example: 224 caliber bullet with 1-E ogive is made of half an ellipse with a minor axis of .224 and a major axis of .448 inches, where D = .224, small A = .112, small B = .224, L = .224. Typically, the meplat A would be .070-.071 inches in a .224 die to allow sufficient columnar strength in the ejection pin. It can be as small as .061 or as large as the client desires. Most rifle ogives are 1-E. Most handgun ogives are 3/4-E. A half-ball shaped nose, used in factory equivalent .600 Nitro and 9.3 Makarov pistol, has a half-caliber length, 0.5-E. It is physically impossible to have an elliptical ogive less than 0.5-E. Ogives longer than 2-E are impractical for most calibers. A few very heavy Kynoch-type bullets have 1.5-E ogives.

CORBIN Spitzer (tangential ogive) point form specifications



Tangential ogives are used for Corbin's "spitzer" (sharp pointed) bullet dies. To determine the dimensions for any caliber of tangential ogive, construct a curve with radius length equal to the "S-number", which specified in calibers, said curve beginning tangent with the shank of the bullet (zero degree angle with the line forming the shank) and having its point of origin on a line that is perpindicular to the shank. Swing the arc toward the central axis of the bullet until it crosses the axis. This segment of the circle is half the ogive. Duplicate the same curve on the opposite side of the bullet to complete the drawing. In the drawing, the "D" diameter is the caliber, A is the meplat (size of the ejection pin used in the die), and R is the length of the radius (given in calibers, as in "6-S" or "8-S").

Example: 224 caliber bullet with 1-S ogive has an ogive radius of .224 inches. The typical rifle ogive is 6-S for most factory bullets, because it provides an optimal range of weights consistent with reasonable ballistic co-efficient. Longer ogives, such as 8-S and 10-S, require longer shanks to provide reasonable stability, which in turn limits the minimum weight with a given density core. The difference in appearance changes less for the same numeric difference as the ogive becomes longer. The difference between 1-S and 2-S, or between 2-S and 4-S, is apparent to anyone. The difference between 4-S and 6-S is still significant. The difference between 6-S and 8-S is apparent on comparison, but the difference between 8-S and 10-S is harder to see, and between 10-S and 12-S is difficult to detect. Curves beyond 12-S are nearly identical unless the bullet is brought to an impractically small tip size. Any differences become academic. The minimum possible radius is 1/2-S, which is the same curve as a 1/2-E ogive. Corbin makes the even-number ogives as standards, since the change between two sequential integer ogives is usually insignificant to performance.