



Murray Percival *"We know how..."*

Cutting Tool Head Shapes

Generally speaking, the more metal there is on the cutting end of a precision cutting tool the longer the life of the tool. Oval head tools, with a lot of metal in the head, are best able to handle the repeated shock of the cutting load. To increase tool access to the work piece, metal is removed to produce a tapered head and tapered relieved head designs. It is like sharpening the point of the tool. But there is a tradeoff. As a tool head becomes more pointed it loses strength and may fail sooner.



The most popular tool is the robust Oval Head which has its backside, the cutting edge side, angled at 16 degrees from a horizontal circuit board or work piece. The top of these oval head cutters are only slightly pointed, or relieved, in the semi-relief versions to preserve its characteristic durability. The [Tronex](#) Tapered Head are cutters sharpened with material removed from the two sides of the head. They have a semi-relief top. The Tronex Tapered Relieved Head is made by a full-relief metal removal on the top of head. Tronex also combines an oval shape with full relief in the Oval-Relieved Head. The tapered head, tapered relieved, and oval-relieved cutters have the same 16 degree cutting edge angle as with the sturdy oval head.

A special characteristic of a [Tronex](#) cutter head shape is the point bevel designed into all four of the head shapes. This small bevel, or angle, is applied on the relief side at the very tip of the cutter. The result is a strong, but very pointed tip.

[Tronex](#) Angulated cutters have a cutting edge that is 8mm in length. Many operators like to cut at the very tip. Every Tronex cutter is built and tested to cut exceptionally well at the tip. However, Tronex tools are designed, built, and tested to cut very well over at least 75% of the entire edge length.

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