

# Pliers and Cutters - With Red Cushion Grip Handles



- The exceptional strength and performance of Xcelite® pliers and cutters are the result of forged alloy steel construction, precision machining, and scientific proportioning
- Handles designed to fit the hand comfortably and to provide maximum leverage
- Cleanly machined and perfectly aligned jaws grip tightly and surely while easy cutting is assured by hand-honed, mated cutting edges
- For extra working comfort all models have permanent, red plastic-coated “Cushion-Grip” handles except Combination Slip Joint pliers
- These high quality pliers and cutters are featured in Xcelite® Attaché Tool Cases



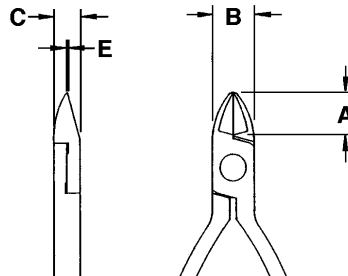
NOTE: When using cutting pliers always wear safety glasses to protect eyes from wire clippings



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## Diagonal Pliers 54CG

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- For work in close quarters
- Standard beveled edges
- Forged alloy steel construction, precision machining and scientific proportioning
- Red plastic-coated cushion grip provides maximum leverage

Cat No.	UPC No.	Packed	Length		A		B		C		E		Pack Wt.		Shelf Pack
			Inch	mm	Inch	mm	Inch	mm	Inch	mm	lb	g			
54CG	037103481580	Boxed	4	100	13/32	10	7/16	11	9/32	7	1/32	0.8	12.5	354	6
54CGV	037103481597	Carded	4	100	13/32	10	7/16	11	9/32	7	1/32	0.8	12.5	354	6

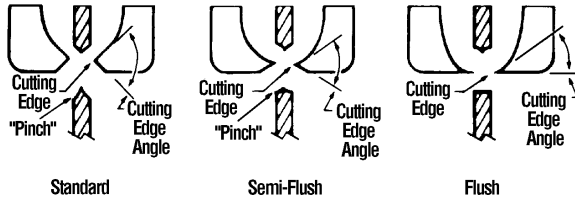
# Electronic Assembly Tools Plier Selection Information

## General

When selecting electronic cutting pliers, you should attempt to minimize your cost per cut by selecting the proper tool for each application. The type of cut, cutting area access, cutting edge quality and user preference will influence your choice.

## Type of Cut

Electronic pliers are available with cutting edge angles that produce standard, semi-flush and flush cuts. These terms refer to the amount of "pinch" left on the tip of a wire after it has been cut



**Standard** cutting edges should be used for applications that are not sensitive to either the amount of shock transmitted through the wire to the component (during cutting) or to the amount of "pinch" left on the wire tip (after cutting).

**Semi-flush** edges can be employed for most applications. They reduce shock transmittal and wire tip "pinch."

**Flush** edges should be selected only for delicate applications, which require minimal shock transmittal and wire tip "pinch." Flush cutters produce a clean cut, which facilitates soldering and increases connection reliability. With small cutting edge angles, the life of flush cutters is substantially less than that of semi-flush cutters. The larger the cutting edge angle, the more cuts you can expect from the tool. For electronic assembly work, the semi-flush cutter is often the most cost-effective choice.

## Cutting Area Access

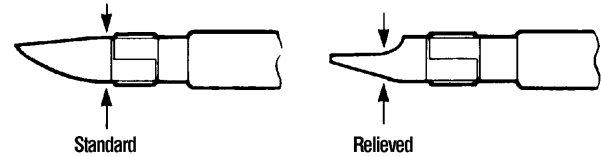
Access to cutting areas can determine the shape and thickness of the cutting head. Tight clearances around the cutting area, the need to reach over in-place components or to work from directly above, and visibility requirements are all factors which will affect your choice of a tool. However, it is important to recognize that head shape and thickness are directly related to cutting edge life



## Head Shape

Always select a cutter with the largest head that will meet your particular cutting requirements. It is a proven fact that more material behind the cutting edges gives more cuts and longer life.

Oval head cutters are the most versatile. They have the most material behind the cutting edges, and last longest. Tapered and angled head cutters should be selected only when access to the cutting area is limited. These cutters have less head mass, and provide proportionally fewer cuts.



## Head Thickness

Head thickness is related to cutting life in the same way as head shape. Cutting pliers with thicker heads also last longer. Whenever possible, use pliers with standard head thickness. Relieved head designs should be chosen only to accommodate difficult access problems.

## Cutting Edge Quality

The quality of a pair of cutting pliers can be determined by visual inspection. The blades should meet smoothly and evenly at the tips. From a point just behind the tips to the joint, an increasing amount of light should be visible



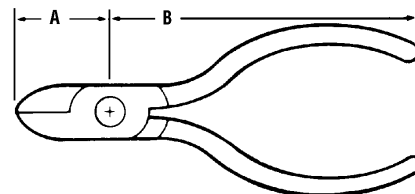
A precision tip interface assures clean cutting of fine wires, while the "no contact" area behind the tips extends cutter life by allowing the tips to continue to meet as they wear.

## User Preference

Other considerations can be a matter of personal preference. Handle shape, grip color, grip material, spring tension and leverage ratio are usually related to user comfort.

Proper spring tension will allow pliers to open and close with minimum effort. Finally, pliers with high leverage ratios provide the greatest ease of use and the longest life.

## Leverage Ratio



Leverage ratio is obtained by dividing dimension A into dimension B.