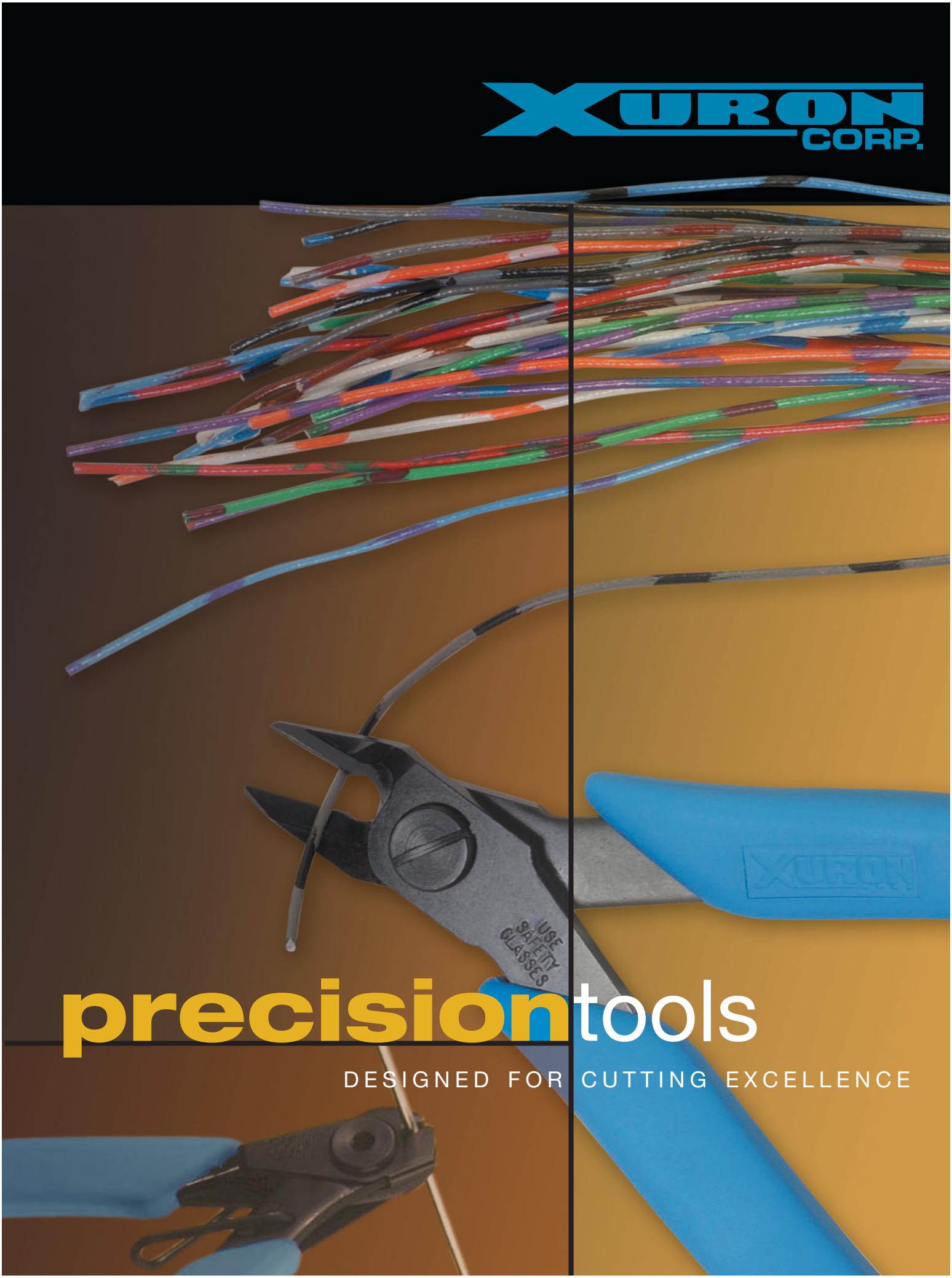
XURON CORP.

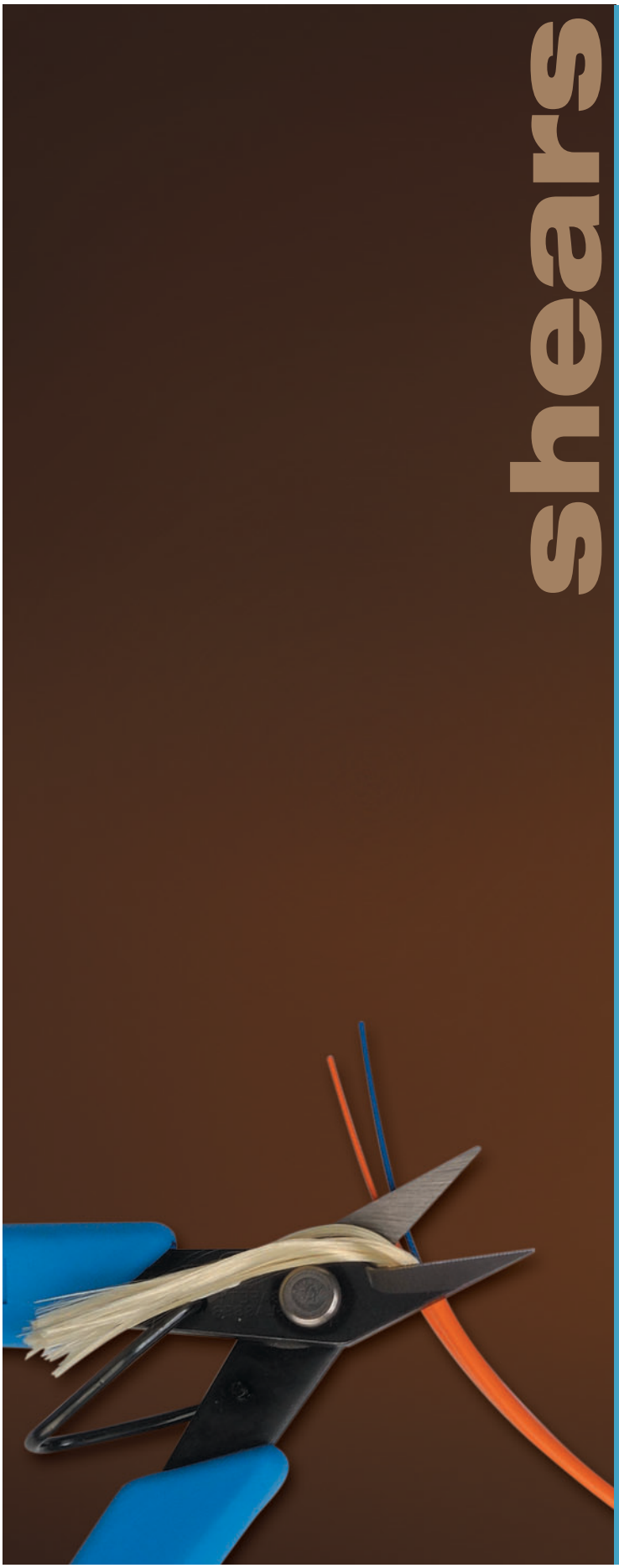


precision tools

DESIGNED FOR CUTTING EXCELLENCE

SHEAR FACTS

Arlex®



shear facts Q&A.

Q. Why do Micro-Shear® flush cutters cut so well?

A. The term Micro-Shear® flush cutter is a registered trademark of XURON CORP. and is applied only to our products which utilize our patented, blade by-pass shear cutting action.

Conventional wire cutters utilize a compression-type cut, with the advancing cutting edges forcing the metal of the wire out of their way.
Micro-Shear® flush cutters utilize a shearing cut, with the by-pass cutting edges slicing cleanly through the metal (see illustration at bottom of adjacent page).

Shear cutting greatly reduces mechanical shock delivered to the component and requires only about half the effort to cut a wire as compared to conventional compression-type wire cutters.

Q. What's the difference between a Micro-Shear® flush cutter and a conventional wire cutter?

A. All primary cutting surfaces on our 170-II, 410 and LX Series Micro-Shear® flush cutters are generated on high precision, three microprocessor-controlled, self diagnostic grinding equipment. The grinding on every blade is as precisely identical to that on every other blade as their computer controlled tolerances allow. It is also exactly the same type of grinding as used on such fine tools as LINDSTROM® and EREM®.

We're not suggesting any company use XURON Micro-Shear® flush cutters instead of these other great tools, but why should you sacrifice that level of quality just because your requirements call for "economically priced" tools?

Q. Why do Micro-Shear® flush cutters last so long?

A. XURON Micro-Shear® flush cutters ensure durability by design. Let's use a little basic physics to illustrate how:

If you generate 10 pounds of pressure on the grips of a conventional, compression-type wire cutter to cut a wire, that 10 pounds of force must be dissipated somewhere (Law of Conservation of Energy). Part of it is dissipated into the severed section of wire, which is why it sails across the room. A portion travels down the lead wire and is dissipated into the component or solder joint,

SHEAR FACTS

Arlex®

which can cause damage. The balance is dissipated into the opposing cutting edge of the cutter, which is why they get dull.

Using a Micro-Shear® flush cutter requires only about half the pressure (approximately 5 pounds) to cut the same wire. Part of the force is dissipated into the severed section of the wire. But if you're using our patented lead retainer the wire won't sail across the room. Because of our shearing cut very little is dissipated into the component or solder joint; the rest is dissipated into the opposing cutting jaw. Because of our blade by-pass, edge-to-edge contact is eliminated and the life of our Micro-Shear® flush cutter's precision cutting edges is extended.

Q. What is the difference between a stamped tool and a drop-forged tool?

A. Precision stamped Micro-Shear® flush cutters have more in common with precision drop-forged tools than with conventional drop-forged tools.

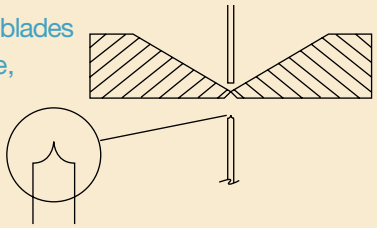
The most obvious difference is that the blank shape of a drop-forged tool is created from hot metal. A stamped tool does not require heat at this stage. Beyond this point the differentiation becomes less distinct.

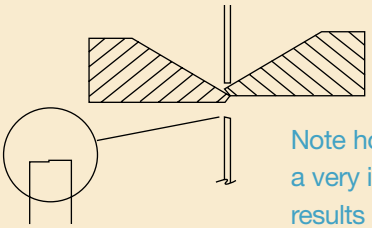
In conventional drop-forging a crude, basic shape is created. With precision drop-forging a more refined shape with reference points for subsequent grinding operations is created. Conventional drop-forged tools typically then undergo hand-guided grinding operations. With precision drop-forged tools these grinding operations are usually done with computer controlled machines utilizing the reference marks on the blank.

When we manufacture precision stamped Micro-Shear® flush cutters a refined shape, complete with reference points for our computer controlled grinding operations, is generated in the stamping process.

All tools, regardless of the method of manufacture, have to be heat treated. In the electronics industry return springs and cushion grips are required. The distinction between drop-forged and stamped tools is further blurred since, due to the high density areas electronics pliers are required to be able to work in, one of the more popular head configurations on drop-forged tools is the "relieved head." On these tools additional grinding operations remove head stock to reduce the tool's profile, increasing access and maneuverability. The result Is a head shape very similar to our standard XURON Micro-Shear® flush cutter.

Compression cutter blades meet edge-to-edge, causing a spiked cut and an eventual dulling of the tool.





This is a cross section view of a XURON Micro-Shear® flush cutter from the tip end. Note how the blades by-pass – this is a very important patented feature that results in a clean square cut with no spikes.

170-II SERIES

170-II Series Micro-Shear® Flush Cutters

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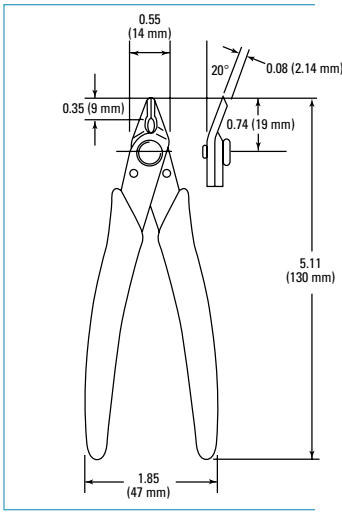
170-II Series shears offer numerous ergonomic enhancements in an "economically priced" tool. Their effort-reducing Micro-Shear® cutting action requires only about half the effort to cut a wire as that required by conventional compression-type cutters. The 170-II Series feature advanced ergonomic shape, Xuro-Rubber™ grips, a glare eliminating black finish, light weight and our patented, lifetime warranted, *Light Touch*™

170-II Micro-Shear® Flush Cutter

Our world famous, patented original Micro-Shear® flush cutter sets the standard imitators can't meet. We invented it. We perfected it. We were awarded the patent (U.S. Pat. 3774301).

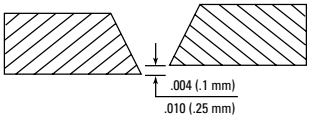
Shear cutting greatly reduces cutting effort while providing the shear cut desirable in electronics assembly work. Less cutting effort means fewer fatigue related injuries and complaints.

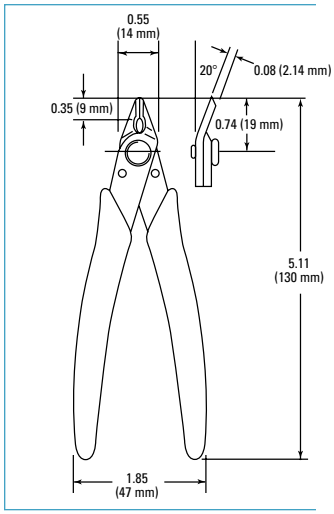
The ergonomically shaped, non-slip Xuro-Rubber™ grips, glare eliminating black finish and light weight ensure operator comfort. Ultra slim profile increases access in high density areas. Flush cuts soft wire up to 18 AWG (1.0 mm).



170-IIA Full Flush Cutting Micro-Shear® Flush Cutter

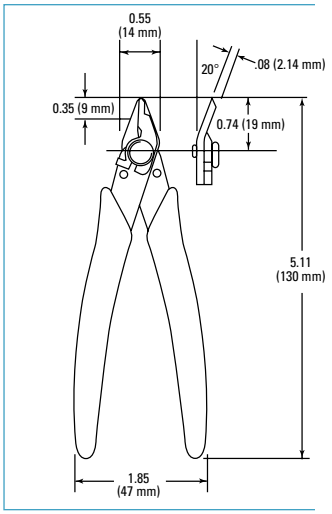
The 170-IIA is an ultra flush cutting version of our 170-II, for fine work. Very lightly bevelled cutting edges allow for minimal blade by-pass (see diagram) ensuring the finest flush cut possible while still retaining the MIcro-Shear® blade by-pass type of cut. Glare eliminating black finish and ergonomically shaped, non-slip Xuro-Rubber™ grips ensure operator comfort. Cuts soft wire up to 20 AWG (0.8mm). The 170-IIA Is a good choice for plastics de-gating.





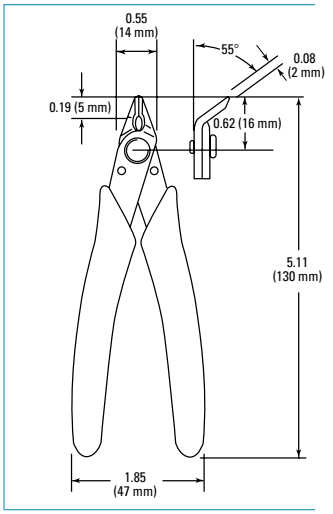
170-IIF Micro-Shear® Flush Cutter

The 170-IIF features a low profile, non-slip, factory-installed lead retainer to help prevent flying leads and component shorting from stray leads.



280-II Angled Micro-Shear® Flush Cutter

The 280-II allows easier cutting in difficult areas.. A 55° angled head provides excellent sight lines when used in either the vertical or horizontal position. A slim profile increases accessibility to hard to reach surfaces. Light weight, glare eliminating black finish, non-slip Xuro-Rubber™ grips ensure operator comfort. Flush cuts soft wire up to 20 AWG (0.8 mm).



TOOL OPTIONS

Xuron Tools Options

Model	Page #	Materials Rating	Ultra Flush (A)	Flush	Semi Flush (B)	Lead Retainer	Static Control Grips	Extended Handle Length
9100 Oval Head Shear Cutter	4	12 AWG (2.0mm) soft wire		•		•	•	•
9180 Kevlar® Shear* Scissor Type	4	Either Kevlar® fiber or soft wire up to 12 AWG (2mm), as well as soft sheet metal up to .030" (0.8mm)					•	
9180NS Shear Scissor Type	4	12 AWG (2.0mm) soft wire as well as soft sheet metal up to 030" (0.8 mm)					•	
9200 Tapered Head Shear Cutter	5	14 AWG (1.6mm) soft wire		•		•	•	•
9250ET Shear Cutter	5	18 AWG (1.02mm) soft wire		•			•	
LX Shear Cutter	6	18 AWG (1.02mm) soft wire		•		•	•	
LXT Tapered Head Shear Cutter	6	20 AWG (0.8mm) soft wire		•			•	
2175 Shear Cutter	6&7	12 AWG (2.05mm) soft wire	•	•	•	•	•	
2193 Hard Wire Shear	7	12 AWG (2mm) soft wire as well as music and spring wire up to 0.040" (1.0mm)		•			•	
2193F Hard Wire Shear	7	12 AWG (2mm) soft wire as well as music & spring wire up to 0.60" (1.5mm)		•		•	•	
410 Shear Cutter	8	18 AWG (1.02mm) soft wire	•	•		•	•	
410T Tapered Head Shear Cutter	8	20 AWG (0.8mm) soft wire		•			•	
420 Angled Head Shear Cutter	9	20 AWG (0.8mm) soft wire		•			•	
420T Tapered Head Shear Cutter	9	22 AWG (.64mm) soft wire		•			•	
440 Mini-Shear - scissor type	9	20 AWG (0.8 mm) soft wire as well as 0.005" (.127 mm) mylar, plastic and shielded cable					•	
170-II Shear Cutter	10	18 AWG (1.02mm) soft wire	•	•		•	•	
280-II Angled Head Shear Cutter	10	20 AWG (0.08mm) soft wire		•			•	
8500 Bio-Shear® Shear Cutter	11	18 AWG (1.02mm) soft wire		•		•	•	
635 Shear Rise Cutter	11	20 AWG (0.08mm) soft wire		•			•	
670 Cut & Crimp Tool	11	20 AWG (0.08mm) soft wire					•	
670HD Heavy Duty Cut & Crimp Tool	11	18 AWG (1.02mm) soft wire					•	
501 Wire Stripper/ Cutter	13	10-26 AWG (2.59-.405mm) soft wire		•			•	
505 Wire Stripper/ Cutter	13	12-26 AWG (2.05-.405mm) - solid wire (soft)		•			•	
505ST Wire Stripper/ Cutter	13	12-26 AWG (2.05-.405mm) - stranded wire (soft)		•			•	
590 Pneumatic Cutter	17	16 AWG (1.3mm) soft wire		•		•		
590LP Low Profile Pneumatic Cutter	17	20 AWG (0.08mm) soft wire		•				

*Usage Note: If using the 9180 to cut Kevlar® fiber, best results are achieved when it is used for this purpose exclusively.