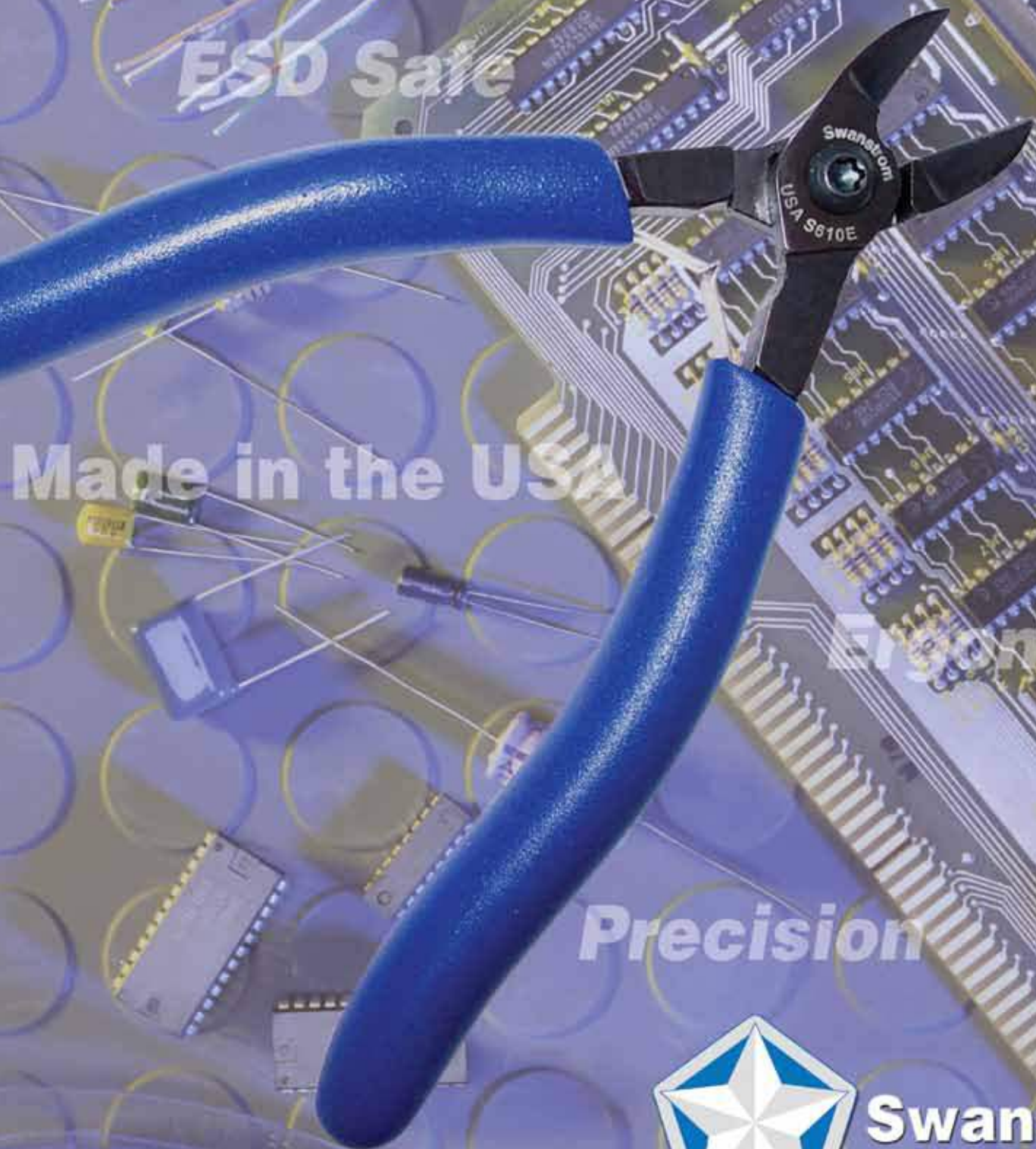


# Swanstrom Tools for Electronics

ESD Safe



Made in the USA

Ergonomic

Precision



**Swanstrom  
Tools USA**



# Swanstrom Tools USA

## OUR MISSION

*To profit with our partners by increasing productivity with precision quality ergonomic tools.*

## OUR PROMISE

We promise our customers simply the finest, most ergonomic and durable tools for their industrial requirements, and to serve them accurately, on time, and with the highest ethical standards.

## OUR QUALITY AND ERGONOMICS

Our specialties are long life, user friendly tools, for high tech industries and people who use tools intensely. Swanstrom Tools soon prove themselves to operators, engineers, ergonomists, buyers and distributors.

Strength and long life starts in our steel. Smoother bearings, sharper blades, beautiful ergo black finishes and

Soft Touch™ handles set our tools apart from the competition. Precision shaping, honing and other finishes conform exactly to each user's unique requirements.

Factory use proves our long edge and bearing life. Comfort of our ESD safe textured foam is immediately obvious and best for users' product quality and people, thereby reducing their tool costs, workers comp costs, and total costs.

## OUR WARRANTY

We warrant these products free of defects in material or workmanship for a tool lifetime of normal use, often many years. Any product failing to satisfy the customer should be reported to our Sales Manager, who will quickly get the customer satisfied while directing the complaints, tools, and questions to quality manager for thorough analysis.

If inspection shows that the product failed to meet new tool specifications, we will repair, replace, or credit (our option). Abused or altered tools are not covered.

## Feature

Super cutters are forged out of high chromium, high carbon, 52100 grade ball bearing steel.

Swanstrom pioneered ergonomic handles for the electronic hand tool industry.

All Swanstrom Super, Spartan, and STUSA forged tools are manufactured in the USA.

Ergonomic handle designs combined with many choices of edges and bevels.

Super cutters have induction hardened (HRC65) cutting edges.

Factory reconditioning of all Super Tools and many competitors tools with fast turn-around time.

Scrivet joints™.

Specialty tool design and manufacture.

Super Tools feature adjustable leaf springs and option of positive adjustable stops.

Multiple spring options available for Super Tools.

All Swanstrom Super Tools are ESD safe.

We offer leadcatchers.

## Benefit

Best steel for combined durability (wear) and reliability (life).

Ergonomic handles reduce the probability of CTD's.

American jobs for American workers.

Provides ease of operator use.

Long life, more cuts.

Facilitates ISO 14000 compliance. Extends life of tool. Reduces cost per cut.

Allows for easy readjustment of joint.

Tools for unique applications.

Provides flexibility for the operator.

Leaf springs - adjustable.  
Coil springs - field replaceable.

Appropriate for bench use in static sensitive areas.

Prevents cut wire from falling into components.



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### Connecting with Swanstrom:

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Credit Cards accepted: American Express, MasterCard and Visa  
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## Ergonomic Considerations

Ergonomic tools allow people to work safely and cost effectively. Tools should be selected based on the operator and task to be performed.

Size, weight and handle form and opening should be comfortable to the employee. Generally, smaller sized tools are more comfortable for smaller hands and larger tools are more effective with larger hands.

Swanstrom electronic tools are available in sizes 3 to 7 dependent upon tool type.

### Handles

- Traditional Shorts for less repetitive work areas with restricted access. A traditional style handle can also be an operator's preference. Typical width: 2.0"

- Double Ergonomic (E) disperse and minimize pressure. Extended handle lengths are available. Typical width: Sizes 4 & 5: 1.75"; Size 6-1.95"; Size 7-2.13"

- Pistol Grip (EPR or EPL) are excellent for highly repetitive tasks. They help maintain normal wrist alignment, reducing potential for carpal tunnel and disperse pressure on the hand; Pistol grips further reduce strain and fatigue by allowing all four fingers to be used.



### Handle Features

- Handle diameter distributes the pressure over a larger hand surface and eases pick up.
- Double action leaf springs are soft touch and adjustable, minimizing the force and pressure on the hand.
- Static Dissipative Soft Touch™ foam handles distribute hand pressure evenly while protecting sensitive components from electro-static discharge.

### Spring Choices Include:

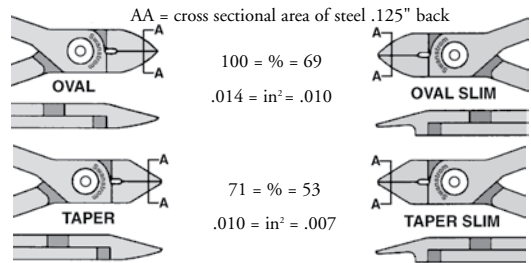
- Double adjustable leaf
- Coils

## Head, Tip, and Edge Options

The many tool heads, angles and tip shapes, and edges allow tool choices based on arm and hand position to maximize visibility, ergonomics, and economics. Generally a tool with a larger head lasts longer.

### Tip Shape

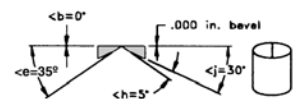
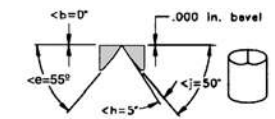
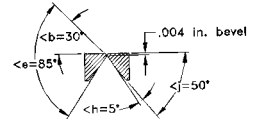
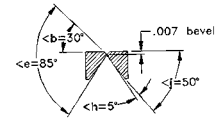
- Oval - the most durable
- Oval Slim - for getting into smaller spaces
- Taper - also for getting into very small spaces
- Taper Slim - most versatile but weaker tips



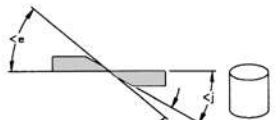
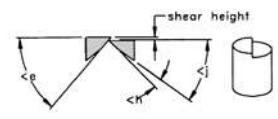
- Angle end and curved nose cutters - the most task specific.
- Leverage and Tip Control - operator effort minimized by using the shortest jaw length possible for the task.

### Edge Type

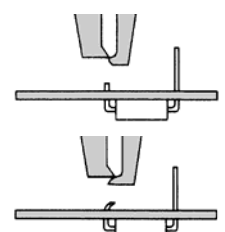
- Bevel - cuts where pinch or spike is not critical, longest life, most pressure to cut
- Flush - reduces pinch, spike and squeeze pressure
- Super Flush - produces minimal spike and shock transmittal, more ergonomic, less squeeze



- Super Flush, Super Sharp - produces least spike, most ergonomic and easiest to squeeze
- Near Shear - leaves a slight deformation and step left on the cut, reduces force required to cut.
- Pure Shear - no spike, small side deformation, easiest cut



- Stand-Off Shear - minimizes shock, leaves no spike and produces consistent "stand off" lead lengths
- Stand-Off Bend/Cut



All Handles are ESD Safe (Static Dissipative)

## Tool Life Expectancy

Tool attributes that give Swanstroms longest life:

- High chrome, high carbon alloy steel for bearings and edges. Aircraft grade bearing quality E52100 steel hardenable to HRC 65 and subsequently tempered.
- Edge angles for ease of cut and edge life (10 choices).
- Longer handles for leverage and pressure distribution.
- Wider bodies for better bearing properties and strength.
- Very hard cut edges for edge life (HRC 65, tempered).
- Scrivets™ for lubricity, adjustability, cleanliness.
- Stainless adjustable leaf springs welded in place.

Tools are scientifically inspected and tested at key production stages. Touch tests are performed on tool edges, tip, joints and springs to ensure ideal function.

Many years of lab and field testing prove that Swanstrom cutters used within design limits, give well over 1,000,000 clean cuts on common lead material such as .020 tinned copper.

## Tool Maintenance:

For better tool life, perform proper easy local maintenance.

- Oil joints regularly. An occasional single drop is wise.
- Oil joint and Scrivet™ before adjustment.
- Protect spring-to-handle weld if adjusting leaf spring.
- Cut only material the tool is designed to cut.
- Use proper size tools for parts being cut. Use larger tools for larger and harder parts.
- Keep tools with stops adjusted for type of material cut.
- Keep tools sharp and well serviced. Use Swanstrom Tool Service. (all brands)

## Don'ts:

- Don't force a tight, stiff joint. (oil it)
- Don't cut material for which tool was not designed.
- Don't pull on springs without protecting the weld under the plastic (rotate-bend for more pressure).
- Don't improperly grind. Heat and the wrong touch will quickly damage tool beyond repair, may soften the edges, and void warranty.
- Don't forget Swanstrom Tool Service. 1-800-287-8872



All Serviced Tools Are Returned ESD Safe  
(Static Dissipative)

## Abbreviations for Tool Head Descriptions

|                  |     |               |     |                |      |
|------------------|-----|---------------|-----|----------------|------|
| Anvil            | A   | High Leverage | HL  | Short Nose     | SN   |
| Bevel/Semi Flush | BSF | Jaw Relief    | JR  | Slim           | SL   |
| Bend Cut         | BC  | Long Nose     | LN  | Smooth         | SM   |
| Bypass           | BP  | Long Slim     | LS  | Snipe Nose     | SNP  |
| Concave          | CV  | Micro         | MI  | Special Radius | SR   |
| Convex           | CX  | Mini          | M   | Step           | ST   |
| Curved           | C   | Near Shear    | NS  | Stress Relief  | STR  |
| Double           | D   | Needle Nose   | NN  | Submini        | SU   |
| Double End       | DE  | Nipper        | N   | Super Flush    | SPRF |
| Extra Long       | EL  | Oval          | OV  | Taper          | T    |
| Fine             | FN  | Oval Slim     | OS  | Taper Relieved | TR   |
| Fine Tip         | FT  | Relieved      | RE  | Tip Cut        | TC   |
| Flat Nose        | FLN | Round         | R   | Ultra Fine     | UF   |
| Flat/Round       | F/R | Round Nose    | RN  | V Notch        | V    |
| Flush            | F   | Scissor       | SC  | Variable Jaw   | VJ   |
| Full Flush       | FF  | Serrated      | SER |                |      |
| Hose Clamp       | HC  | Shear         | S   |                |      |

Special radiused edges to meet DOD 2000 Specs are available by adding the suffix SR to the part number.

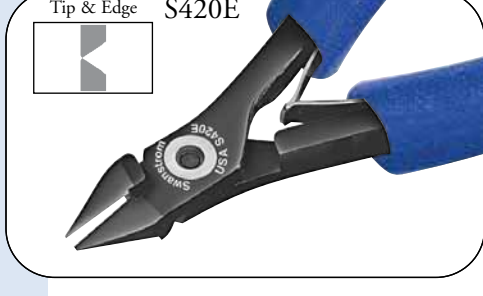
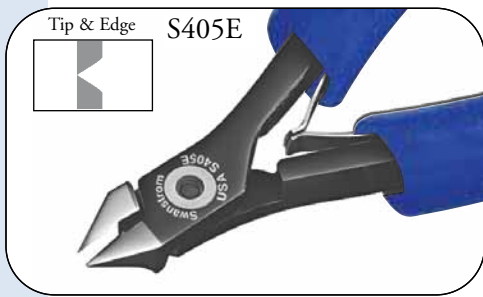
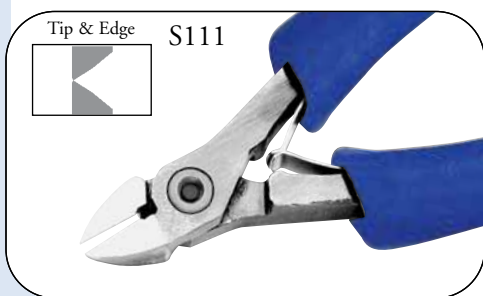
## Cutting Capacities

| Gage | in    | mm  | Part Numbers   |
|------|-------|-----|--|
| 32   | 0.007 | 0.2 | S185E  |
| 24   | 0.020 | 0.6 | S171E, S171, S219E, S219, S223E, S223  |
| 22   | 0.025 | 0.6 | S170E, S170, S212E, S212, S215E, S215, S218E, S218, S224E, S224, S225E, S225, S482E, S482  |
| 20   | 0.032 | 0.8 | S202E, S202, S203E, S203, S205B, S213E, S213, S233E, S233, S234E, S234, S291, S402E, S402, S423E, S423, S432E, S432, S483E, S483, S485E, S485, S491E, S491, S492E, S492, S605E, S605 |
| 18   | 0.040 | 1.0 | S201E, S201, S205E, S205, S405E, S405, S412E, S412, S413E, S413, S414E, S414, S420E, S420, S421E, S421, S422E, S422, S430E, S430, S431E, S431, S435E, S435, SC15E                    |
| 16   | 0.050 | 1.3 | S410E, S410, S411E, S411, S415E, S415, S416E, S416, S512E, S512, S513E, S513, S514E, S514, S516E, S516, S520E, S520, S521E, S521   |
| 14   | 0.060 | 1.6 | S510E, S510, S511E, S511, S515E, S515, S534E, S534, S535E, S535, S612E, S613E, S614E, S616E, S620E, S621E  |
| 12   | 0.080 | 2.0 | S610E, S611E, S615E, SC5E, SC17E, ST5E, SV5E, SV5ESP   |
| 11   | 0.090 | 2.3 | S700E, S710E   |
| 9    | 0.114 | 2.9 | S350E, S350, S351E, S351   |
| 2    | 0.258 | 6.6 | SC7E, ST7E, SV7E   |



# Swanstrom Super Diagonal Cutters

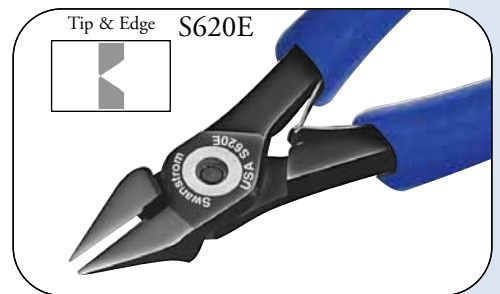
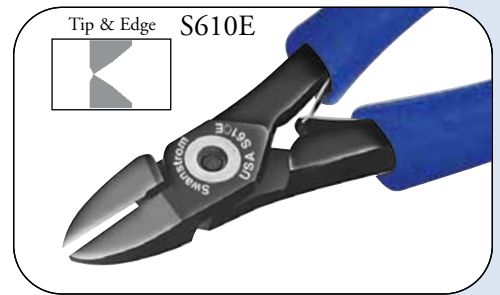
Super Diagonal Cutters



| Tool Numbers |       | Description |      |      |      | Overall Length |      | Jaw Length | Cutter Length | Tip Width | Tip Thick |
|--------------|-------|-------------|------|------|------|----------------|------|------------|---------------|-----------|-----------|
| ergo         | short | head        | edge |      | ergo | short          |      |            |               |           |           |
| S111E        | S111  | OV          | F    | .004 | in   | 5.65           | 4.25 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 108  | 13         | 10            | 6         | 0.80      |
| S112E        | S112  | OV          | SF   | .000 | in   | 5.65           | 4.25 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 108  | 13         | 10            | 6         | 0.80      |
| S115E        | S115  | T           | F    | .004 | in   | 5.65           | 4.25 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 108  | 13         | 10            | 4         | 0.80      |
| S116E        | S116  | T           | SPRF | .000 | in   | 5.65           | 4.25 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 108  | 13         | 10            | 4         | 0.80      |
| S121E        | S121  | TR          | SPRF | .000 | in   | 5.65           | 4.25 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 108  | 13         | 10            | 4         | 0.80      |
| S405E        | S405  | TS SN       | SPRF | .000 | in   | 5.46           | 4.61 | 0.34       | 0.21          | 0.25      | 0.03      |
|              |       |             |      | .000 | mm   | 139            | 117  | 9          | 5             | 6         | 0.80      |
| S410E        | S410  | OV          | BSF  | .007 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .180 | mm   | 144            | 122  | 13         | 10            | 6         | 0.80      |
| S411E        | S411  | OV          | F    | .004 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 122  | 13         | 10            | 6         | 0.80      |
| S412E        | S412  | OV          | SPRF | .000 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 122  | 13         | 10            | 6         | 0.80      |
| S413E        | S413  | OS          | F    | .004 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 122  | 13         | 10            | 6         | 0.80      |
| S414E        | S414  | OS          | SPRF | .000 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.23      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 122  | 13         | 10            | 6         | 0.8       |
| S415E        | S415  | T           | F    | .004 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 122  | 13         | 10            | 4         | 0.80      |
| S416E        | S416  | T           | SPRF | .000 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 122  | 13         | 10            | 4         | 0.80      |
| S420E        | S420  | TR          | F    | .004 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .100 | mm   | 144            | 122  | 13         | 10            | 4         | 0.80      |
| S421E        | S421  | TR          | SPRF | .000 | in   | 5.65           | 4.80 | 0.53       | 0.40          | 0.17      | 0.03      |
|              |       |             |      | .000 | mm   | 144            | 122  | 13         | 10            | 4         | 0.80      |
| S422E        | S422  | OV SU       | SPRF | .000 | in   | 5.63           | 4.78 | 0.50       | 0.38          | 0.20      | 0.03      |
|              |       |             |      | .000 | mm   | 143            | 121  | 13         | 10            | 5         | 0.80      |
| S423E        | S423  | OS TC       | SPRF | .000 | in   | 5.63           | 4.78 | 0.50       | 0.30          | 0.20      | 0.03      |
|              |       |             |      | .000 | mm   | 143            | 121  | 13         | 8             | 5         | 0.80      |
| S430E        | S430  | OV HL       | BSF  | .007 | in   | 5.53           | 4.68 | 0.40       | 0.28          | 0.20      | 0.03      |
|              |       | Mini        |      | .180 | mm   | 140            | 119  | 10         | 7             | 5         | 0.80      |
| S431E        | S431  | OC HL       | F    | .004 | in   | 5.53           | 4.68 | 0.40       | 0.28          | 0.20      | 0.03      |
|              |       | Mini        |      | .100 | mm   | 140            | 119  | 10         | 7             | 5         | 0.80      |
| S432E        | S432  | OV HL       | BSF  | .000 | in   | 5.53           | 4.68 | 0.40       | 0.28          | 0.20      | 0.03      |
|              |       | Mini        |      | .000 | mm   | 140            | 119  | 10         | 7             | 5         | 0.80      |
| S435E        | S435  | T HL        | SPRF | .000 | in   | 5.51           | 4.66 | 0.38       | 0.26          | 0.19      | 0.03      |
|              |       | Mini        |      | .000 | mm   | 140            | 118  | 10         | 7             | 5         | 0.80      |
| S510E        | S510  | OV          | BSF  | .007 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.24      | 0.05      |
|              |       |             |      | .180 | mm   | 147            | 125  | 16         | 13            | 6         | 1.30      |
| S511E        | S511  | OV          | F    | .004 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.24      | 0.05      |
|              |       |             |      | .100 | mm   | 147            | 125  | 16         | 13            | 6         | 1.30      |
| S512E        | S512  | OV          | SPRF | .000 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.24      | 0.05      |
|              |       |             |      | .000 | mm   | 147            | 125  | 16         | 13            | 6         | 1.30      |
| S513E        | S513  | OS          | F    | .004 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.24      | 0.05      |
|              |       |             |      | .100 | mm   | 147            | 125  | 16         | 13            | 6         | 1.30      |
| S514E        | S514  | OS          | SPRF | .000 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.24      | 0.05      |
|              |       |             |      | .000 | mm   | 147            | 125  | 16         | 13            | 6         | 1.30      |
| S515E        | S515  | T           | F    | .004 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.17      | 0.05      |
|              |       |             |      | .100 | mm   | 147            | 125  | 16         | 13            | 4         | 1.30      |
| S516E        | S516  | T           | SPRF | .000 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.17      | 0.05      |
|              |       |             |      | .000 | mm   | 147            | 1.25 | 16         | 13            | 4         | 1.30      |
| S520E        | S520  | TR          | F    | .004 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.17      | 0.05      |
|              |       |             |      | .100 | mm   | 147            | 125  | 16         | 13            | 4         | 1.30      |
| S521E        | S521  | TR          | SPRF | .000 | in   | 5.78           | 4.93 | 0.63       | 0.50          | 0.17      | 0.05      |
|              |       |             |      | .000 | mm   | 147            | 1.25 | 16         | 13            | 4         | 1.30      |

# Super Diagonal Cutters

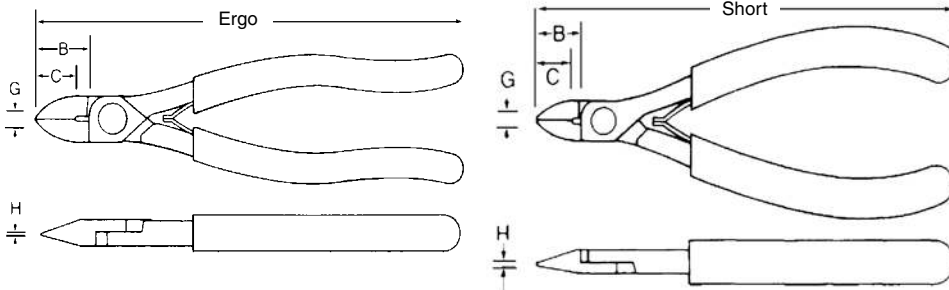
| Tool Numbers |       | Description |      |      |      | Overall Length |      | Jaw Length | Cutter Length | Tip Width | Tip Thick |
|--------------|-------|-------------|------|------|------|----------------|------|------------|---------------|-----------|-----------|
| ergo         | short | head        | edge |      | ergo | short          |      |            |               |           |           |
| S534E        | S534  | T HL        | F    | .004 | in   | 5.60           | 4.75 | 0.44       | 0.32          | 0.22      | 0.05      |
|              |       |             |      | .100 | mm   | 142            | 121  | 11         | 8             | 5         | 1.30      |
| S535E        | S535  | T HL        | SPRF | .000 | in   | 5.60           | 4.75 | 0.44       | 0.32          | 0.22      | 0.05      |
|              |       |             |      | .000 | mm   | 142            | 121  | 11         | 8             | 5         | 1.30      |
| S610E        | S610  | OV          | BSF  | .007 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.26      | 0.06      |
|              |       |             |      | .180 | mm   | 161            | 137  | 20         | 15            | 7         | 1.50      |
| S611E        | S611  | OV          | F    | .004 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.26      | 0.06      |
|              |       |             |      | .100 | mm   | 161            | 137  | 20         | 15            | 7         | 1.50      |
| S612E        | S612  | OV          | SPRF | .000 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.26      | 0.06      |
|              |       |             |      | .000 | mm   | 161            | 137  | 20         | 15            | 7         | 1.50      |
| S613E        | S613  | OS          | F    | .004 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.26      | 0.06      |
|              |       |             |      | .100 | mm   | 161            | 137  | 20         | 15            | 7         | 1.50      |
| S614E        | S614  | OS          | SPRF | .000 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.26      | 0.06      |
|              |       |             |      | .000 | mm   | 161            | 137  | 20         | 15            | 7         | 1.50      |
| S615E        | S615  | T           | F    | .004 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.18      | 0.05      |
|              |       |             |      | .100 | mm   | 161            | 137  | 20         | 15            | 5         | 1.30      |
| S616E        | S616  | T           | SPRF | .000 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.18      | 0.05      |
|              |       |             |      | .000 | mm   | 161            | 137  | 20         | 15            | 5         | 1.30      |
| S620E        | S620  | TR          | F    | .004 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.18      | 0.05      |
|              |       |             |      | .100 | mm   | 161            | 161  | 20         | 15            | 5         | 1.30      |
| S621E        | S621  | TR          | SPRF | .000 | in   | 6.33           | 5.40 | 0.80       | 0.60          | 0.18      | 0.05      |
|              |       |             |      | .000 | mm   | 161            | 161  | 20         | 15            | 5         | 1.30      |
| S63E         | S63   | OS SN       | FF   | .002 | in   | 6.23           | 5.30 | 0.70       | 0.50          | 0.28      | 0.04      |
|              |       |             |      | .050 | mm   | 158            | 135  | 13         | 8             | 11        | 1         |
| S700E        | S700  | OV          | BSF  | .007 | in   | 7.34           | 6.10 | 0.50       | 0.30          | 0.44      | 0.07      |
|              |       |             |      | .180 | mm   | 186            | 155  | 13         | 8             | 11        | 1.80      |
| S710E        | S710  | OV          | BSF  | .007 | in   | 7.74           | 6.50 | 0.90       | 0.70          | 0.33      | 0.07      |
|              |       |             |      | .180 | mm   | 197            | 165  | 23         | 18            | 8         | 1.80      |



Super Diagonal Cutters

## Ergonomic Handles

## Traditional Handles



"G" measured .125 from tip.

- Ergo** Overall Length
- Short** Overall Length
- B** Jaw Length
- C** Cutter Length
- G** Tip Width
- H** Tip Thickness



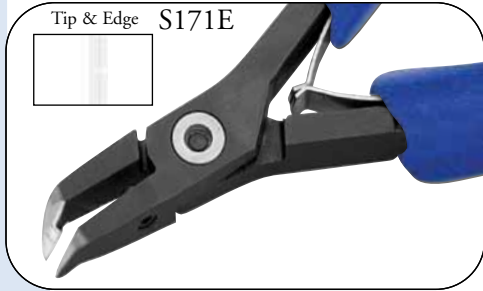
All tools ESD Safe (Static Dissipative)  
Protects circuit components. Does not insulate. Do not use on live circuits!





# Angle End and Tip Cutters

Reverse Angle, Angle End, and Tip Cutters



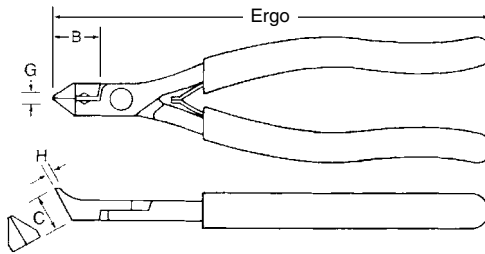
## Reverse Angle Cutters

| Tool Numbers |       | Description |      |         |      | Overall Length |      | Jaw Length | Cutter Length | Tip Width | Tip Thick |
|--------------|-------|-------------|------|---------|------|----------------|------|------------|---------------|-----------|-----------|
| ergo         | short | head        | edge |         | ergo | short          |      |            |               |           |           |
| S170E        | S170  | long        | SF   | .000 in | 5.74 | 4.88           | 0.61 | 0.20       | 0.15          | 0.03      |           |
|              |       |             |      | .000 mm | 146  | 124            | 15   | 5          | 4             | 0.80      |           |
| S171E        | S171  | long        | SF   | .000 in | 5.73 | 4.88           | 0.60 | 0.17       | 0.13          | 0.02      |           |
|              |       |             |      | .000 mm | 146  | 124            | 15   | 4          | 3             | 0.50      |           |

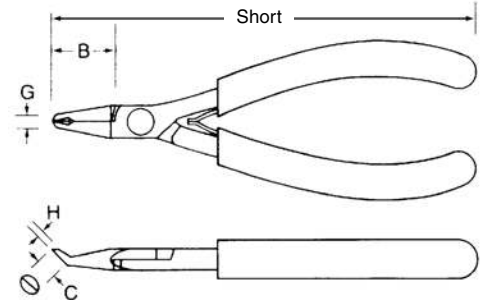
## Angle End Cutters

| Tool Numbers |       | Description |      |         |      | Overall Length |      | Jaw Length | Cutter Length | Tip Width | Tip Thick |
|--------------|-------|-------------|------|---------|------|----------------|------|------------|---------------|-----------|-----------|
| ergo         | short | head        | edge |         | ergo | short          |      |            |               |           |           |
| S215E        | S215  | SU LN 45°   | SF   | .000 in | 5.84 | 4.99           | 0.71 | 0.25       | 0.19          | 0.07      |           |
|              |       |             |      | .000 mm | 148  | 127            | 18   | 6          | 5             | 1.80      |           |
| S218E        | S218  | M 45° T     | SF   | .000 in | 5.72 | 4.87           | 0.59 | 0.23       | 0.17          | 0.05      |           |
|              |       |             |      | .000 mm | 145  | 124            | 15   | 6          | 4             | 1.30      |           |
| S223E        | S223  | MI 45° LN   | SF   | .000 in | 5.80 | 4.95           | 0.67 | 0.16       | 0.15          | 0.05      |           |
|              |       |             |      | .000 mm | 147  | 126            | 17   | 4          | 4             | 1.30      |           |
| S224E        | S224  | LN 45° JR   | SF   | .000 in | 5.89 | 5.04           | 0.76 | 0.19       | 0.18          | 0.08      |           |
|              |       |             |      | .000 mm | 150  | 128            | 19   | 5          | 4             | 1.90      |           |
| S225E        | S225  | LN 45°      | SF   | .000 in | 5.84 | 4.99           | 0.71 | 0.26       | 0.18          | 0.11      |           |
|              |       |             |      | .000 mm | 148  | 127            | 18   | 7          | 5             | 2.80      |           |
| S482E        | S482  | MI 45° N    | SF   | .000 in | 5.59 | 4.74           | 0.46 | 0.23       | 0.20          | 0.04      |           |
|              |       |             |      | .000 mm | 142  | 121            | 12   | 6          | 5             | 1         |           |
| S483E        | S483  | T 60° N     | SF   | .000 in | 5.76 | 4.91           | 0.60 | 0.45       | 0.18          | 0.03      |           |
|              |       |             |      | .000 mm | 146  | 125            | 15   | 11         | 5             | 0.80      |           |
| S485E        | S485  | R 60° N     | SF   | .000 in | 5.76 | 4.91           | 0.60 | 0.45       | 0.25          | 0.03      |           |
|              |       |             |      | .000 mm | 146  | 125            | 15   | 11         | 6             | 0.80      |           |
| S491E        | S491  | 60° N       | F    | .004 in | 5.76 | 4.91           | 0.60 | 0.45       | 0.25          | 0.03      |           |
|              |       |             |      | .100 mm | 146  | 125            | 15   | 11         | 6             | 0.80      |           |
| S492E        | S492  | 60° N       | SF   | .000 in | 5.76 | 4.91           | 0.60 | 0.45       | 0.25          | 0.03      |           |
|              |       |             |      | .000 mm | 146  | 125            | 15   | 11         | 6             | 0.80      |           |

### Ergonomic Handles



### Traditional Handles



"G" measured .125 back from tip on 60° angle cutter.

"G" measured at widest point on 45° angle cutter.

- Ergo** Overall Length
- Short** Overall Length
- B** Jaw Length
- C** Cutter Length
- G** Tip Width
- H** Tip Thickness



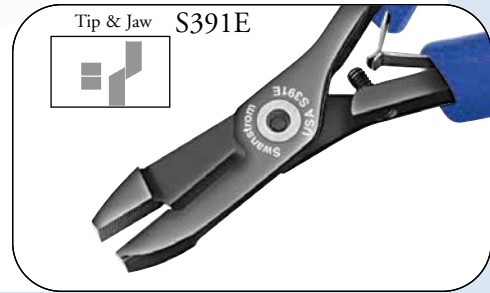
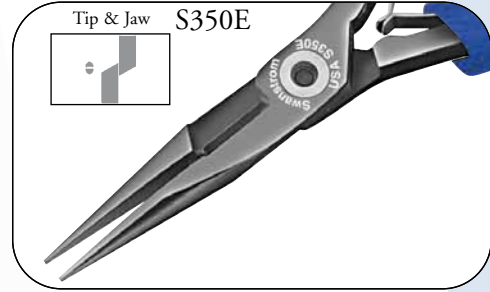
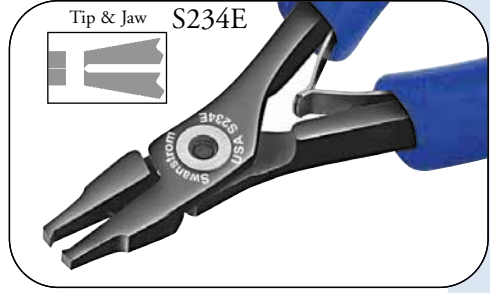
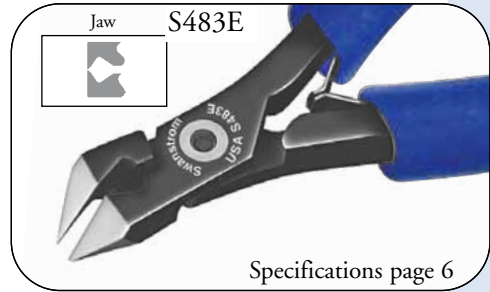
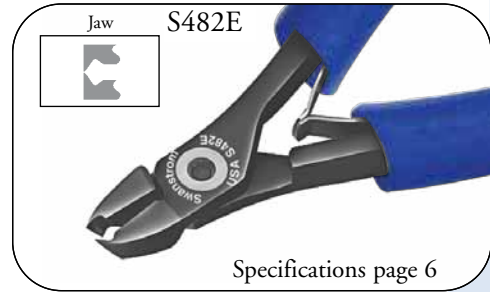
# Transverse End and Long Nose Tip Cutters

## Transverse End Cutters

| Tool Numbers |       | Description |      |  |      | Overall |      | Jaw Length |      | Cutter Length | Tip Length | Tip Width | Thick |
|--------------|-------|-------------|------|--|------|---------|------|------------|------|---------------|------------|-----------|-------|
| ergo         | short | head        | edge |  | in   | mm      | ergo | short      |      |               |            |           |       |
| S233E        | S233  | LN          | SF   |  | .000 |         | 5.88 | 5.03       | 0.75 | 0.10          | 0.20       | 0.10      |       |
|              |       |             |      |  | .000 | mm      | 149  | 128        | 19   | 2.5           | 5          | 2.50      |       |
| S234E        | S234  | SN          | F    |  | .004 |         | 5.88 | 5.03       | 0.75 | 0.11          | 0.15       | 0.11      |       |
|              |       |             |      |  | .100 | mm      | 149  | 128        | 19   | 2.50          | 4          | 2.50      |       |

## Long Nose Tip Cutters

| Tool Numbers |       | Description |      |  |      | Overall |      | Jaw Length |      | Cutter Length | Tip Length | Tip Width | Thick |
|--------------|-------|-------------|------|--|------|---------|------|------------|------|---------------|------------|-----------|-------|
| ergo         | short | head        | edge |  | in   | mm      | ergo | short      |      |               |            |           |       |
| S212E        | S212  | FN RE       | SF   |  | .000 |         | 5.99 | 5.14       | 0.86 | 0.17          | 0.15       | 0.10      |       |
|              |       |             |      |  | .000 | mm      | 152  | 131        | 22   | 4             | 4          | 0.25      |       |
| S213E        | S213  | RE          | SF   |  | .000 |         | 5.99 | 5.14       | 0.86 | 0.17          | 0.17       | 0.1       |       |
|              |       |             |      |  | .000 | mm      | 152  | 131        | 22   | 4             | 4          | 2.40      |       |
| S219E        | S219  | UF RE       | SF   |  | .000 |         | 5.99 | 5.14       | 0.86 | 0.17          | 0.13       | 0.08      |       |
|              |       |             |      |  | .000 | mm      | 152  | 131        | 22   | 4             | 3          | 2         |       |
| -            | S291  | LN SER A    |      |  |      |         | in   | -          | 5.28 | 1.00          | 0.25       | 0.08      |       |
|              |       |             |      |  |      |         | mm   | -          | 134  | 25            | 6          | 2         |       |
| S350E        | S350  | SM          | S    |  |      |         | in   | 6.86       | 6.01 | 1.70          | 0.50       | 0.08      |       |
|              |       |             |      |  |      |         | mm   | 174        | 153  | 43            | 13         | 2         |       |
| S351E        | S351  | SER         | S    |  |      |         | in   | 6.86       | 6.01 | 1.70          | 0.50       | 0.08      |       |
|              |       |             |      |  |      |         | mm   | 174        | 153  | 43            | 13         | 2         |       |
| S391E        | -     | SER         | S    |  |      |         | in   | 6.16       | -    | 1             | 0.50       | 0.23      |       |
|              |       |             |      |  |      |         | mm   | 156        | -    | 25            | 13         | 6         |       |



S219E



All tools ESD Safe (Static Dissipative)  
Protects circuit components. Does not insulate. Do not use on live circuits!

Transverse End and Long Nose Tip Cutters



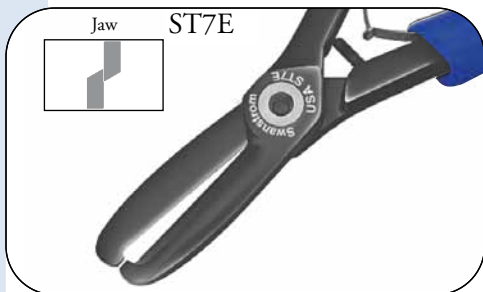
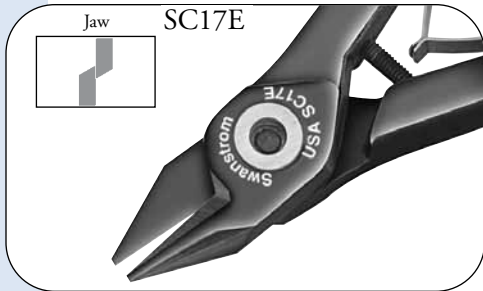
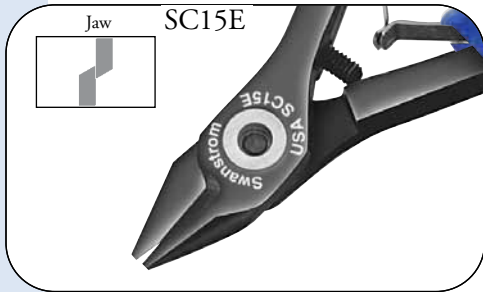
## Shear Cutters and Strippers

### Shear Cutters

| Tool Numbers | Description Overall |      |          | Jaw Length ergo | Cutter Length | Tip Length | Tip Width    | Thick        |
|--------------|---------------------|------|----------|-----------------|---------------|------------|--------------|--------------|
|              | head                | edge |          |                 |               |            |              |              |
| SC5E         | OvSC                | S    | in<br>mm | 6.41<br>163     | 1.25<br>32    | 1.25<br>32 | 0.35<br>9    | 0.05<br>1.30 |
| SC7E         | OvSC                | S    | in<br>mm | 8.29<br>211     | 1.45<br>37    | 1.45<br>37 | 0.35<br>9    | 0.10<br>2.50 |
| SC15E        | T SC                | S    | in<br>mm | 5.66<br>144     | 0.50<br>13    | 0.50<br>13 | 0.06<br>1.4  | 0.05<br>1.30 |
| SC17E        | T SC                | S    | in<br>mm | 7.50<br>190     | 0.70<br>18    | 0.70<br>18 | 0.08<br>1.90 | 0.07<br>1.80 |
| ST5E         | R ST                | S    | in<br>mm | 6.66<br>169     | 1.50<br>38    | 1.25<br>32 | 0.33<br>8    | 0.20<br>5    |
| ST7E         | R ST                | S    | in<br>mm | 8.47<br>215     | 1.63<br>41    | 1.50<br>38 | 0.35<br>9    | 0.22<br>6    |

### Strippers

| Tool Numbers | Description Overall |      |          | Jaw Length ergo | Cutter Length | Tip Length | Tip Width | Thick        |
|--------------|---------------------|------|----------|-----------------|---------------|------------|-----------|--------------|
|              | head                | edge |          |                 |               |            |           |              |
| SV5E         | T V                 | S    | in<br>mm | 5.79<br>147     | 0.63<br>16    | 0.50<br>13 | 0.32<br>8 | 0.22<br>6    |
| SV5E-SP      | T V BP              | S    | in<br>mm | 5.79<br>147     | 0.63<br>16    | 0.50<br>13 | 0.32<br>8 | 0.22<br>6    |
| SV7E         | Ov                  | S    | in<br>mm | 8.29<br>211     | 1.45<br>37    | 1.45<br>37 | 0.35<br>9 | 0.10<br>2.50 |

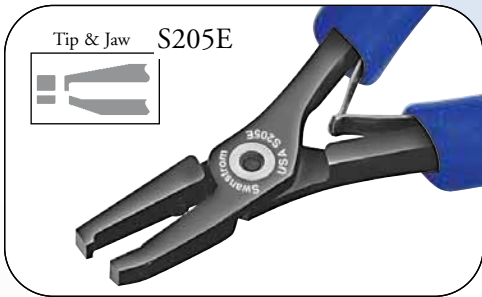
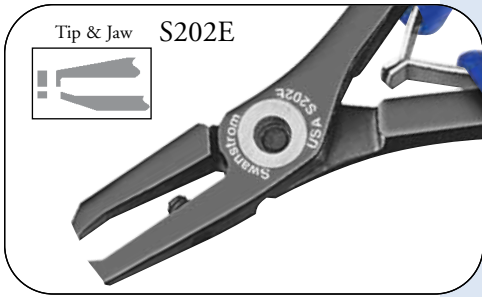
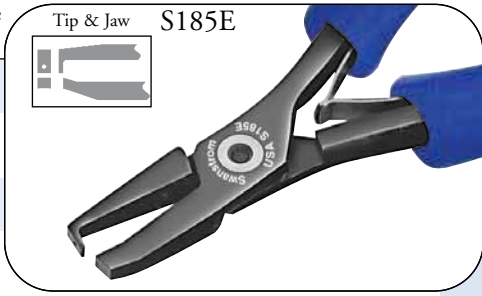


All tools ESD Safe (Static Dissipative)  
Protects circuit components. Does not  
insulate. Do not use on live circuits!

# Stand-Off Cutters

## Stand-Off Cutters

| Tool Numbers |       | Description             |      |      | Overall Length |      | Jaw Length | Cutter Length | Tip Width | Tip Thick | Stand-Off Distance |
|--------------|-------|-------------------------|------|------|----------------|------|------------|---------------|-----------|-----------|--------------------|
| ergo         | short | head                    | edge | ergo | short          |      |            |               |           |           |                    |
| S185E        | -     | LSH                     | S    | in   | 5.93           | -    | 0.78       | 0.13          | 0.32      | 0.03      | 0.03               |
|              |       | (lead stabilizing hole) |      |      |                | mm   | 151        | -             | 20        | 3         | 8 3                |
| S201E        | S201  | 45°                     | S    | in   | 5.83           | 4.98 | 0.70       | 0.18          | 0.25      | 0.18      | 0.04               |
|              |       |                         |      |      | mm             | 146  | 126        | 18            | 5         | 6         | 5                  |
| S202E        | S202  | UF LN                   | S    | in   | 5.92           | 5.07 | 0.79       | 0.10          | 0.215     | 0.09      | 0.04               |
|              |       |                         |      |      | mm             | 150  | 129        | 20            | 3         | 5         | 2.20               |
| S203E        | S203  | LN                      | A    | in   | 6.09           | 5.24 | 0.96       | 0.10          | 0.18      | 0.03      | 0.04               |
|              |       |                         |      |      | mm             | 155  | 133        | 24            | 2.5       | 5         | 3.20               |
| S205E        | S205  | LN                      | S    | in   | 5.92           | 5.07 | 0.79       | 0.18          | 0.235     | 0.18      | 0.04               |
|              |       |                         |      |      | mm             | 150  | 129        | 20            | 5         | 6         | 4.60               |
| S205EB       | S205B | BC                      | S    | in   | 5.92           | 5.10 | 0.79       | 0.18          | 0.235     | 0.18      | 0.04               |
|              |       |                         |      |      | mm             | 150  | 129        | 20            | 5         | 6         | 4.60               |
| S605E        | S605  | LS                      | S    | in   | 6.52           | 5.67 | 1.36       | 0.092         | 0.193     | 0.09      | 0.03               |
|              |       |                         |      |      | mm             | 166  | 144        | 35            | 2         | 5         | 2.3                |



S605E

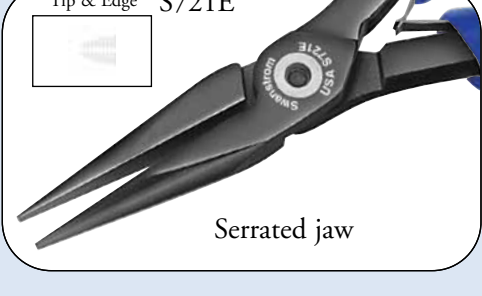
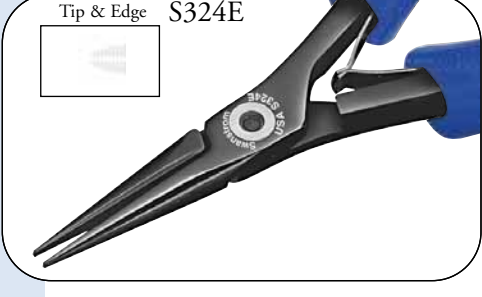
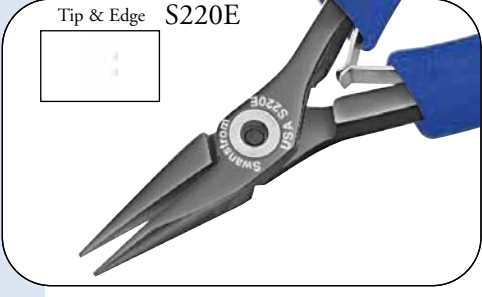
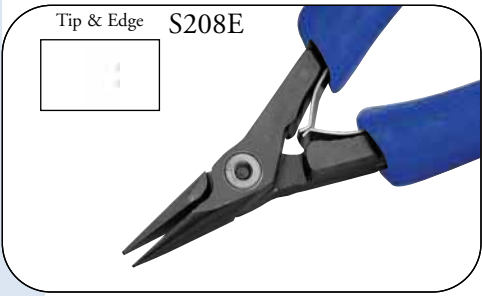
Stand-Off Cutters





# Snipe (short) and Long Nose Pliers

Snipe (short) and Long Nose Pliers

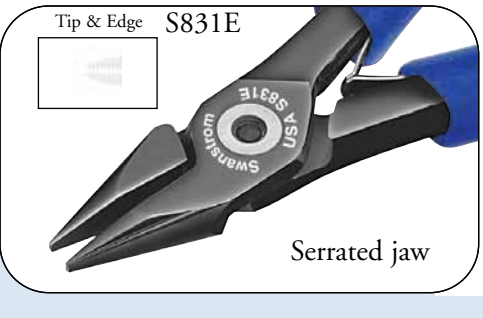


**Snipe Nose Pliers**

| Tool Numbers |       | Tool Description |     |    | Overall Length |       | Jaw Length | Tip Width | Tip Thick |
|--------------|-------|------------------|-----|----|----------------|-------|------------|-----------|-----------|
| ergo         | short | head             | jaw |    | ergo           | short |            |           |           |
| S108E        | S108  | MI               | SM  | in | 6.00           | 4.61  | 0.88       | 0.05      | 0.03      |
|              |       |                  |     | mm | 152            | 117   | 22         | 1.10      | 0.80      |
| S109E        | S109  | MI               | SER | in | 6.00           | 4.61  | 0.88       | 0.05      | 0.03      |
|              |       |                  |     | mm | 152            | 117   | 22         | 1.10      | 0.80      |
| S206E        | S206  | MI               | SM  | in | 5.58           | 4.73  | 0.45       | 0.05      | 0.03      |
|              |       |                  |     | mm | 142            | 120   | 11         | 1.10      | 0.80      |
| S208E        | S208  | SU               | SM  | in | 5.93           | 5.08  | 0.80       | 0.05      | 0.03      |
|              |       |                  |     | mm | 151            | 129   | 20         | 1.10      | 0.80      |
| S209E        | S209  | SU               | SER | in | 5.93           | 5.08  | 0.80       | 0.05      | 0.03      |
|              |       |                  |     | mm | 151            | 129   | 20         | 1.10      | 0.80      |
| S210E        | S210  | SNP              | SM  | in | 5.93           | 5.08  | 0.80       | 0.06      | 0.03      |
|              |       |                  |     | mm | 151            | 129   | 20         | 1.50      | 0.80      |
| S211E        | S211  | SNP              | SER | in | 5.93           | 5.08  | 0.80       | 0.06      | 0.03      |
|              |       |                  |     | mm | 151            | 129   | 20         | 1.50      | 0.80      |
| S242E        | S242  | C                | SM  | in | 6.03           | 5.18  | 0.90       | 0.07      | 0.04      |
|              |       |                  |     | mm | 153            | 132   | 23         | 1.80      | 1         |
| S243E        | S243  | C                | SER | in | 6.03           | 5.18  | 0.90       | 0.07      | 0.04      |
|              |       |                  |     | mm | 153            | 132   | 23         | 1.80      | 1         |

**Long Nose Pliers**

| Tool Numbers      |       | Description |     |    | Overall Length |       | Jaw Length | Tip Width | Tip Thick |
|-------------------|-------|-------------|-----|----|----------------|-------|------------|-----------|-----------|
| ergo              | short | head        | jaw |    | ergo           | short |            |           |           |
| S220E             | S220  | LN          | SM  | in | 6.13           | 5.28  | 1.00       | 0.06      | 0.03      |
|                   |       |             |     | mm | 156            | 134   | 25         | 1.50      | 0.80      |
| S221E             | S221  | LN          | SER | in | 6.13           | 5.28  | 1.00       | 0.06      | 0.03      |
|                   |       |             |     | mm | 156            | 134   | 25         | 1.50      | 0.80      |
| SS221E            | -     | LN          | SCR | in | 6.13           | -     | 1.00       | 0.06      | 0.03      |
| (stainless steel) |       |             |     | mm | 156            | -     | 25         | 1.50      | 0.80      |
| S320E             | S320  | LN          | SM  | in | 6.86           | 6.01  | 1.70       | 0.06      | 0.03      |
|                   |       |             |     | mm | 174            | 153   | 43         | 1.50      | 0.80      |
| S321E             | S321  | LN          | SER | in | 6.86           | 6.01  | 1.70       | 0.06      | 0.03      |
|                   |       |             |     | mm | 174            | 153   | 43         | 1.50      | 0.80      |
| S323E             | -     | LN          | SER | in | 6.86           | -     | 1.70       | 0.06      | 0.06      |
|                   |       |             |     | mm | 174            | -     | 43         | 1.60      | 1.60      |
| S324E             | S324  | SL          | SM  | in | 6.21           | 5.36  | 1.08       | 0.06      | 0.06      |
|                   |       |             |     | mm | 158            | 136   | 27         | 1.50      | 1.50      |
| S325E             | S325  | SL          | SER | in | 6.21           | 5.36  | 1.08       | 0.06      | 0.06      |
|                   |       |             |     | mm | 158            | 136   | 27         | 1.50      | 1.50      |
| S328E             | S328  | EL          | SM  | in | 6.94           | 6.09  | 1.78       | 0.08      | 0.08      |
|                   |       |             |     | mm | 176            | 155   | 45         | 2         | 2         |
| S329E             | S329  | EL          | SER | in | 6.94           | 6.09  | 1.78       | 0.08      | 0.08      |
|                   |       |             |     | mm | 176            | 155   | 45         | 2         | 2         |
| S630E             | S630  | LN          | SM  | in | 7.53           | 6.55  | 1.85       | 0.08      | 0.06      |
|                   |       |             |     | mm | 191            | 166   | 47         | 2         | 1.50      |
| S631E             | S631  | LN          | SER | in | 7.53           | 6.55  | 1.85       | 0.08      | 0.06      |
|                   |       |             |     | mm | 191            | 166   | 47         | 2         | 1.50      |
| S721E             | -     | LN          | SER | in | 8.94           | -     | 2.13       | 0.13      | 0.13      |
|                   |       |             |     | mm | 227            | -     | 54         | 3         | 3         |
| S831E             | -     | LN          | SER | in | 7.94           | -     | 1.10       | 0.09      | 0.09      |
|                   |       |             |     | mm | 202            | -     | 28         | 2.40      | 2.40      |



# Flat, Needle, and Curve Nose Pliers

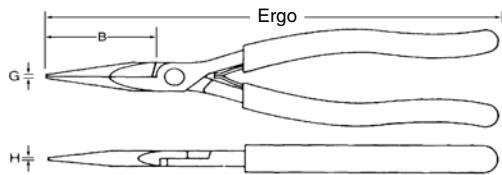
## Flat Nose Pliers

| Tool Numbers  |       | Tool Description |     |    | Overall Length |       | Jaw Length | Tip Width | Tip Thick |
|---------------|-------|------------------|-----|----|----------------|-------|------------|-----------|-----------|
| ergo          | short | head             | jaw |    | ergo           | short |            |           |           |
| S200E         | S200  | FLN              | SM  | in | 6.13           | 5.28  | 1.00       | 0.05      | 0.12      |
|               |       |                  |     | mm | 156            | 134   | 25         | 1.30      | 3         |
| S300E         | S300  | FLN              | SM  | in | 6.86           | 6.01  | 1.70       | 0.05      | 0.12      |
|               |       |                  |     | mm | 174            | 153   | 43         | 1.30      | 3         |
| S380EPR-      |       | FLN              | SM  | in | 7.64           | -     | 1.00       | 0.05      | 0.12      |
| (pistol grip) |       |                  |     | mm | 194            | -     | -          | 25        | 1.30      |
| S800E         | -     | FLN              | SER | in | 8.21           | -     | 1.25       | 0.14      | 0.40      |
|               |       |                  |     | mm | 209            | -     | 32         | 3.50      | 10        |

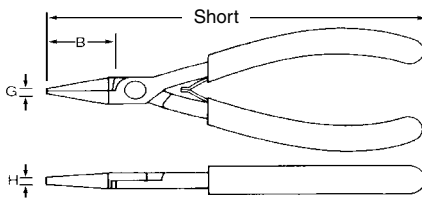
## Needle Nose Pliers

| Tool Numbers |       | Tool Description |     |    | Overall Length |       | Jaw Length | Tip Width | Tip Thick |
|--------------|-------|------------------|-----|----|----------------|-------|------------|-----------|-----------|
| ergo         | short | head             | jaw |    | ergo           | short |            |           |           |
| S230E        | S230  | NN               | SM  | in | 6.13           | 5.28  | 1.00       | 0.06      | 0.03      |
|              |       |                  |     | mm | 156            | 134   | 25         | 1.50      | 0.80      |
| S231E        | S231  | NN               | SER | in | 6.13           | 5.28  | 1.00       | 0.06      | 0.03      |
|              |       |                  |     | mm | 156            | 134   | 25         | 1.50      | 0.80      |
| S240E        | S240  | C                | SM  | in | 5.93           | 5.08  | 0.80       | 0.06      | 0.03      |
|              |       |                  |     | mm | 151            | 129   | 20         | 1.5       | 0.80      |
| S330E        | S330  | NN               | SM  | in | 6.86           | 6.01  | 1.70       | 0.06      | 0.03      |
|              |       |                  |     | mm | 174            | 153   | 43         | 1.50      | 0.80      |
| S331E        | S331  | NN               | SER | in | 6.86           | 6.01  | 1.70       | 0.06      | 0.03      |
|              |       |                  |     | mm | 174            | 153   | 43         | 1.50      | 0.80      |
| S331E-1      | -     | NN               | SER | in | 6.86           | -     | 1.70       | 0.09      | 0.06      |
|              |       |                  |     | mm | 174            | -     | 43         | 2.30      | 1.50      |
| S330AE       | S330A | EL               | SM  | in | 7.35           | 6.50  | 2.19       | 0.06      | 0.06      |
|              |       |                  |     | mm | 187            | 165   | 56         | 1.60      | 1.60      |
| S340E        | S340  | C                | SM  | in | 6.56           | 5.71  | 1.40       | 0.06      | 0.03      |
|              |       |                  |     | mm | 167            | 145   | 36         | 1.50      | 0.80      |
| S340AE       | -     | 90° EL           | SM  | in | 6.21           | -     | 1.05       | 0.06      | 0.06      |
|              |       | C                |     | mm | 158            | -     | 27         | 1.60      | 1.60      |
| S341E        | S341  | C                | SER | in | 6.21           | 5.71  | 1.40       | 0.06      | 0.03      |
|              |       |                  |     | mm | 158            | 145   | 36         | 1.50      | 0.80      |
| S660E        | S660  | NN               | SM  | in | 7.53           | 6.45  | 1.85       | 0.08      | 0.80      |
|              |       |                  |     | mm | 191            | 164   | 47         | 2         | 1.50      |
| S661E        | S661  | NN               | SER | in | 7.53           | 6.45  | 1.85       | 0.08      | 0.06      |
|              |       |                  |     | mm | 191            | 164   | 47         | 2         | 1.50      |

### Ergonomic Handles



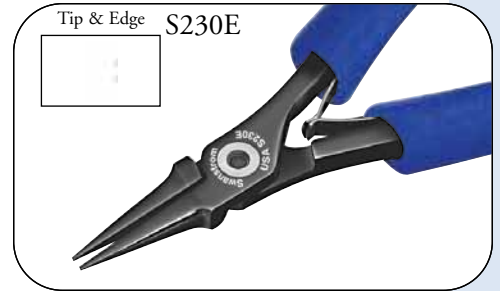
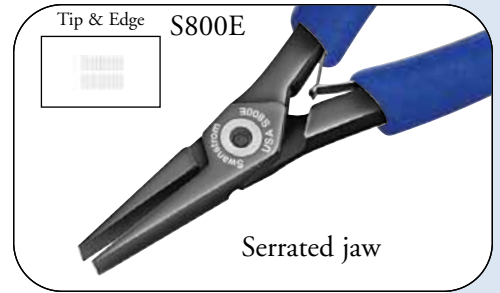
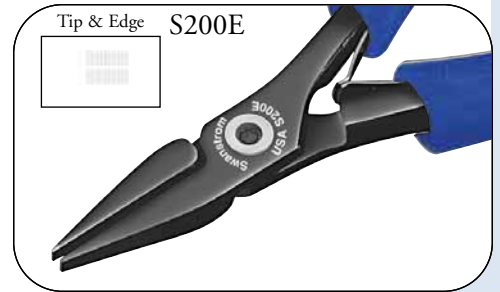
### Traditional Handles



**Ergo** Overall Length  
**Short** Overall Length  
**B** Jaw Length  
**G** Tip Width  
**H** Tip Thickness



All tools ESD Safe (Static Dissipative)  
 Protects circuit components. Does not insulate. Do not use on live circuits!

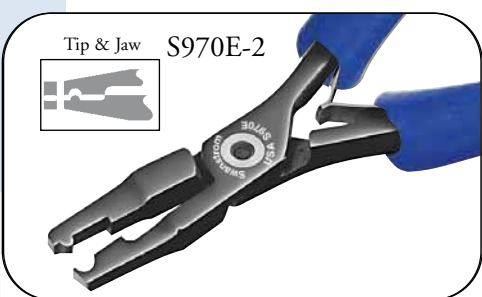
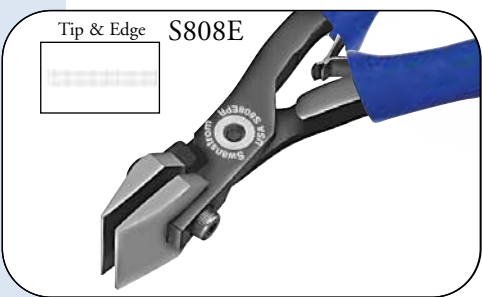
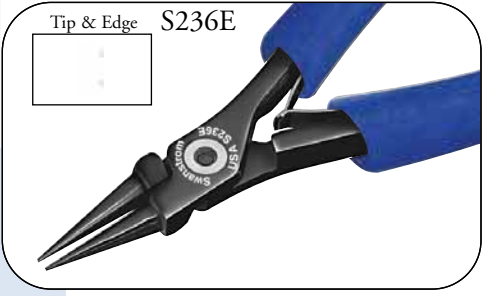


Flat, Needle, and Curve Nose Pliers



# Round Nose, Straightening, and Forming Pliers

Round Nose, Straightening, and Forming Pliers

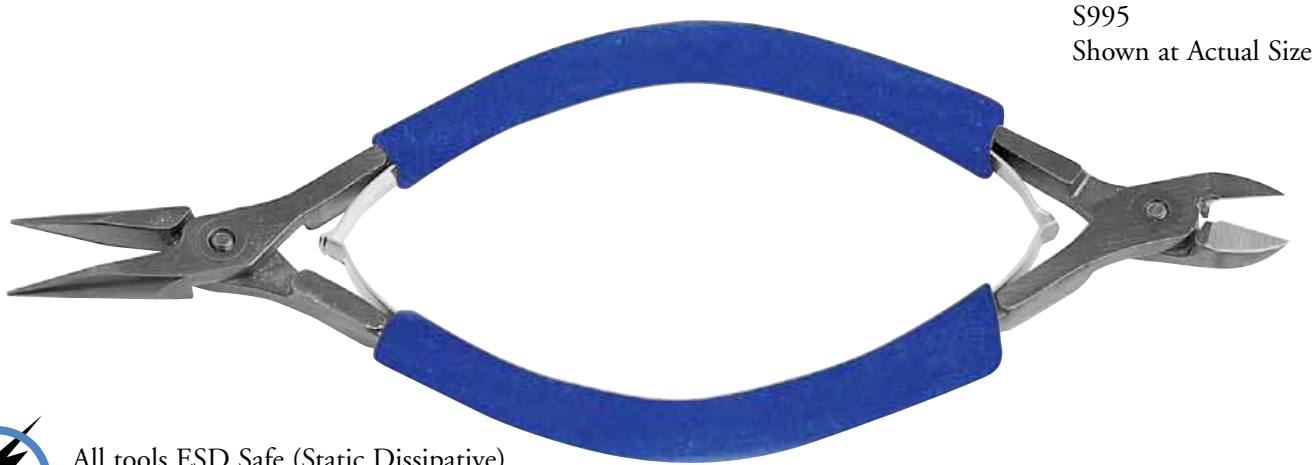


| Round Nose Pliers |      | Description |     | Overall Length |       | Jaw Length | Tip Width | Tip Thick |      |
|-------------------|------|-------------|-----|----------------|-------|------------|-----------|-----------|------|
| Tool Numbers      |      | head        | jaw | ergo           | short |            |           |           |      |
| S236E             | S236 | RN          | SM  | in             | 6.13  | 5.28       | 1.00      | 0.06      | 0.03 |
|                   |      |             |     | mm             | 156   | 134        | 25        | 1.50      | 0.80 |
| S238E             | S238 | RN          | SM  | in             | 5.60  | 4.75       | 0.63      | 0.06      | 0.03 |
|                   |      |             |     | mm             | 142   | -          | 16        | 1.50      | 0.80 |

| Straightening Pliers |   | Description |     | Overall Length |       | Jaw Length | Tip Width | Tip Thick |      |
|----------------------|---|-------------|-----|----------------|-------|------------|-----------|-----------|------|
| Tool Numbers         |   | head        | jaw | ergo           | short |            |           |           |      |
| S808E                | - | -           | SM  | in             | 6.06  | -          | 0.90      | 0.06      | 0.75 |
|                      |   |             |     | mm             | 154   | -          | 23        | 1.50      | 19   |

| Forming Pliers |      | Description |     | Overall Length |       | Jaw Length | Tip Width | Tip Thick |      |
|----------------|------|-------------|-----|----------------|-------|------------|-----------|-----------|------|
| Tool Numbers   |      | head        | jaw | ergo           | short |            |           |           |      |
| S195E          | -    | LN          | -   | in             | 6.26  | -          | 1.00      | 0.09      | 0.03 |
|                |      |             |     | mm             | 159   | -          | 25        | 2.30      | 0.80 |
| S970E-2        | -    | STR         | S   | in             | 6.25  | -          | 1.09      | 0.27      | 0.13 |
|                |      |             |     | mm             | 159   | -          | 27        | 6.90      | 3.30 |
| S980E          | S980 | CV/CXSM     |     | in             | 5.88  | 5.03       | 1.00      | 0.11      | 0.14 |
|                |      |             |     | mm             | 149   | 128        | 25        | 2.80      | 3.60 |
| S986E          | -    | F/R         | SM  | in             | 6.13  | -          | 1.00      | 0.11      | 0.14 |
|                |      |             |     | mm             | 156   | -          | 25        | 2.80      | 3.60 |
| S990E          | S990 | STR         | -   | in             | 6.19  | 5.34       | 1.03      | 0.17      | 0.13 |
|                |      |             |     | mm             | 157   | 136        | 26        | 4.30      | 3.30 |
| S991E          | -    | D STR       | -   | in             | 6.39  | -          | 1.23      | 0.75      | 0.38 |
|                |      |             |     | mm             | 162   | -          | 31        | 19        | 9.50 |

| Double Ended Pliers |                       | Description |       | Overall Length |       | Jaw Length |      | Tip Width |      | Tip Thick |  |
|---------------------|-----------------------|-------------|-------|----------------|-------|------------|------|-----------|------|-----------|--|
| Tool Numbers        |                       |             |       |                |       |            |      |           |      |           |  |
| S995                | DE                    | in          | 7.50  | 0.53           | 0.88  | 0.23       | 0.45 | 0.03      | 0.03 |           |  |
|                     | Cutter/Plier          | mm          | 191   | 13             | 22    | 6          | 1.10 | 0.80      | 0.80 |           |  |
| S996                | Round                 | Flat        | Round | Flat           | Round | Flat       |      |           |      |           |  |
|                     | DE                    | in          | 7.75  | 0.75           | 0.80  | 0.06       | 0.05 | 0.03      | 0.11 |           |  |
|                     | Round Nose /Flat Nose | mm          | 197   | 19             | 20    | 1.50       | 1.30 | 0.80      | 2.80 |           |  |



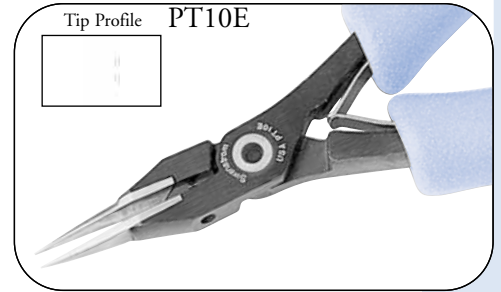
All tools ESD Safe (Static Dissipative)  
Protects circuit components. Does not insulate. Do not use on live circuits!



# Plazers

| Plazers Part | Jaw/Head Type     |    | Overall length | Jaw Length | Width at Joint | Thick at Joint | Handle Width |
|--------------|-------------------|----|----------------|------------|----------------|----------------|--------------|
| PT10         | Straight Smooth   | in | 5.50           | 1.27       | 0.40           | 0.25           | 2            |
|              |                   | mm | 140            | 32         | 10             | 6              | 51           |
| PT11         | Straight Serrated | in | 5.50           | 1.27       | 0.40           | 0.25           | 2            |
|              |                   | mm | 140            | 32         | 10             | 6              | 51           |
| PT30         | Bent Smooth       | in | 5.10           | 0.93       | 0.40           | 0.25           | 2            |
|              |                   | mm | 130            | 24         | 10             | 6              | 51           |
| PT31         | Bent Serrated     | in | 5.10           | 0.93       | 0.40           | 0.25           | 2            |
|              |                   | mm | 130            | 24         | 10             | 6              | 51           |
| PT10E        | Straight Smooth   | in | 6.40           | 1.27       | 0.40           | 0.25           | 1.75         |
|              |                   | mm | 163            | 32         | 10             | 6              | 44           |
| PT11E        | Straight Serrated | in | 6.40           | 1.27       | 0.40           | 0.25           | 1.75         |
|              |                   | mm | 163            | 32         | 10             | 6              | 44           |
| PT30E        | Bent Smooth       | in | 6.10           | 0.93       | 0.40           | 0.25           | 1.75         |
|              |                   | mm | 155            | 24         | 10             | 6              | 44           |
| PT31E        | Bent Serrated     | in | 6.10           | 0.93       | 0.40           | 0.25           | 1.75         |
|              |                   | mm | 155            | 24         | 10             | 6              | 44           |

Swanstrom, first in the world to bring tweezer precision, stainless, anti-magnetic, and ESD safe ergo handles to bear on the work without the uncomfortable pinch position for operator.



PT10E  
Shown at Actual Size

Unique pressure control set screw



All tools ESD Safe (Static Dissipative)  
Protects circuit components. Does not insulate. Do not use on live circuits!

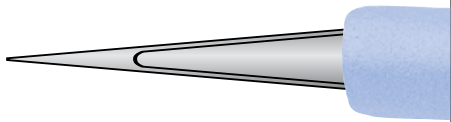


Swanstrom, first in the world to ergonomicize tweezers, and thereby render them ESD safe.

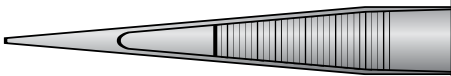
| Part    | Description                 | Size in | Size mm |
|---------|-----------------------------|---------|---------|
| AA-SAH  | Fine Strong Tips            | 4.75    | 120     |
| AC-SAH  | Thick Short Tips            | 4.25    | 110     |
| MM-SAH  | Strong Multi Purpose        | 5.00    | 125     |
| OO-SAH  | Strong Thick Smooth Tips    | 4.75    | 120     |
| OOD-SAH | Strong Thick Serrated Tips  | 4.75    | 120     |
| 2H      | Fine Point Tapered Tips     | 4.50    | 115     |
| 2A-SAH  | Rounded Flat Tips           | 4.50    | 115     |
| 3-SAH   | Fine Tips                   | 4.75    | 120     |
| 3C-SAH  | Narrow Fine Tips            | 4.25    | 110     |
| 5A-SAH  | Extra Fine, Very Sharp Tips | 4.50    | 115     |
| 5-SAH   | Extra Fine, Very Sharp Tips | 4.50    | 115     |
| 7-SAH   | Curved, Very Fine Tips      | 4.50    | 115     |
| 7-SADH  | Curved, Serrated Tips       | 4.50    | 115     |
| 21-SAH  | Strong Rounded Tips         | 6.25    | 159     |
| 24-SAH  | Fine Bent Tips              | 6.00    | 152     |

Swanstrom's standard foamed tweezers are ESD safe. For no foam drop suffix "H". For serrations add suffix "D"

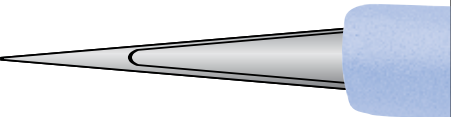
AA-SA



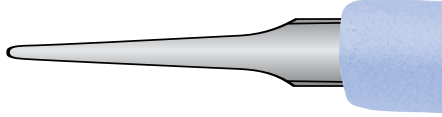
AC-SA



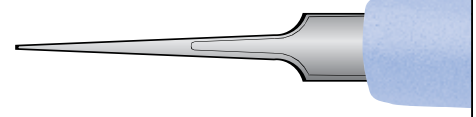
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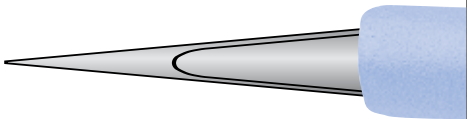
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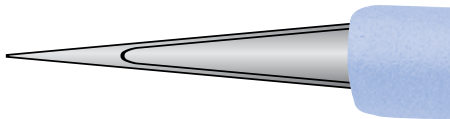
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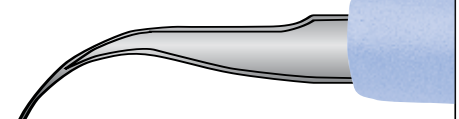
OO-SA



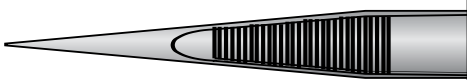
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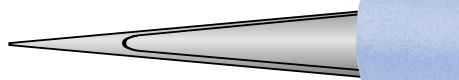
7-SA



OOD-SA



3C-SA

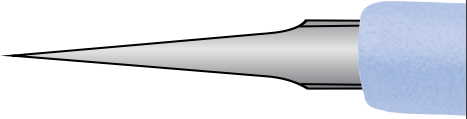


21-SA



Serrated jaw

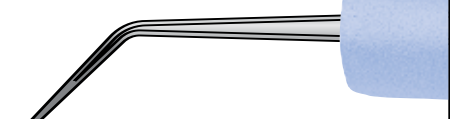
2



5A-SA

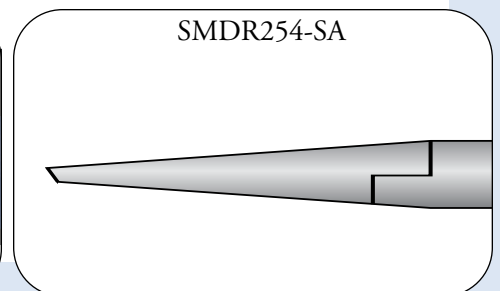
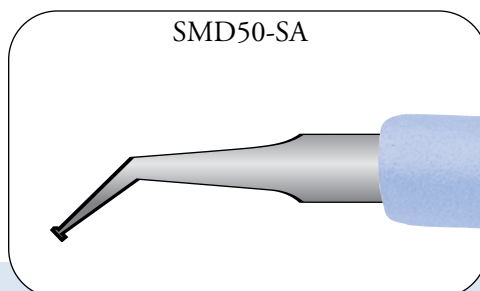
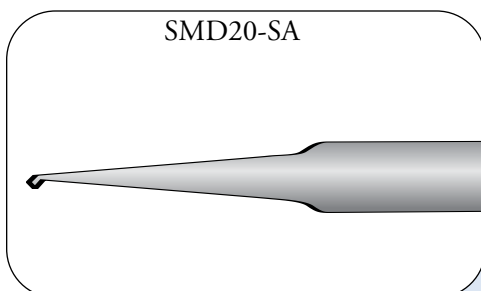
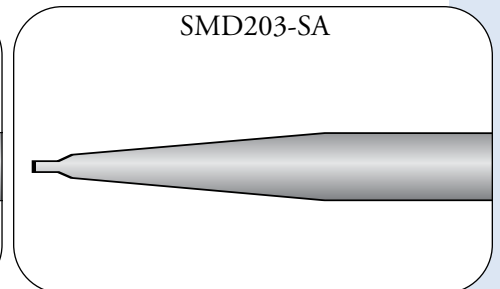
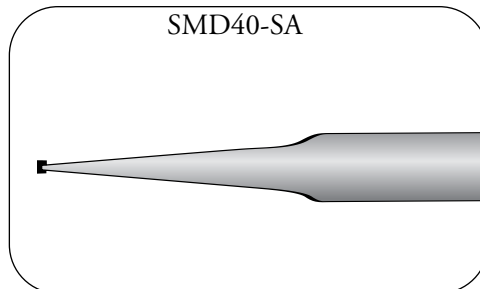
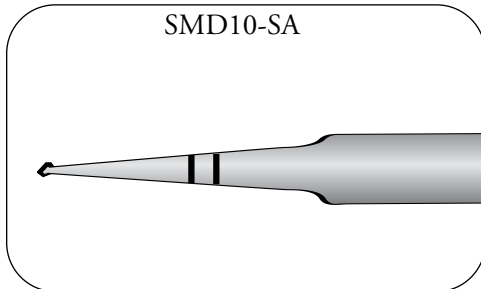
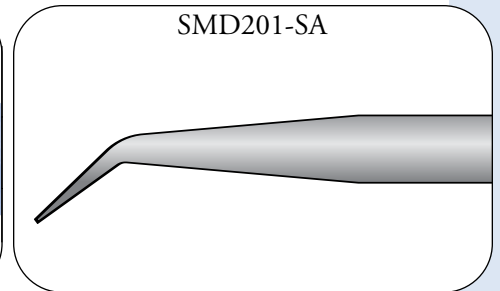
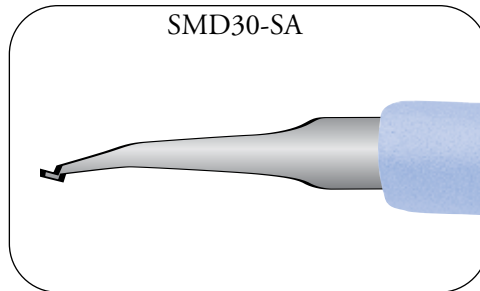
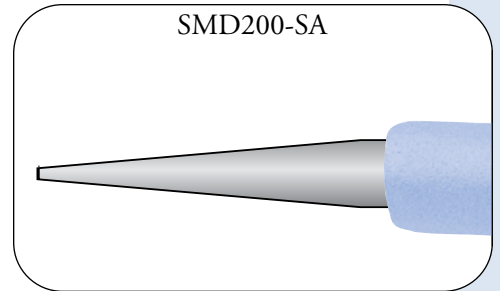
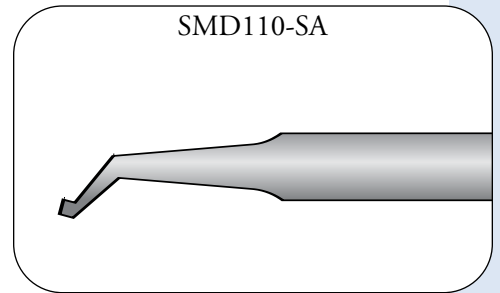
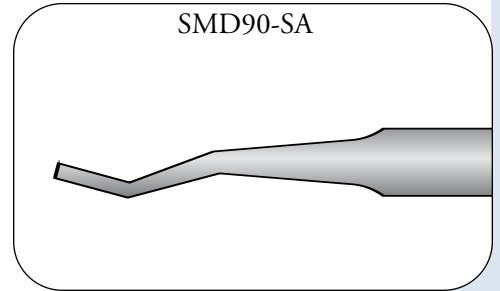
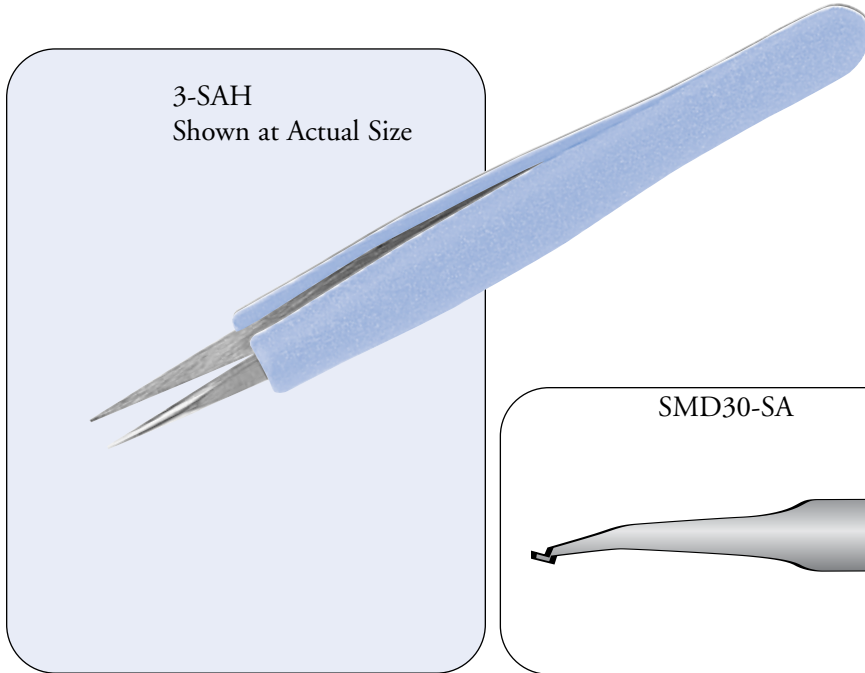


24-SA



# SMD Tweezers

| Part       | Description                       | Size in Size mm |     |
|------------|-----------------------------------|-----------------|-----|
| SMD10-SA   | Groove Tips w/ Anti Crush Control | 4.75            | 120 |
| SMDR10-SA  | Groove Tips w/ Anti Crush Control | 4.75            | 120 |
| SMD20-SA   | Groove Tips                       | 4.75            | 120 |
| SMD30-SA   | Horizontal Tips                   | 4.75            | 120 |
| SMDR30-SA  | Horizontal Tips, Reverse Action   | 4.75            | 120 |
| SMD40-SA   | Vertical Placement                | 4.75            | 120 |
| SMD50-SA   | 45° Angle Tips                    | 4.75            | 120 |
| SMD90-SA   | Placing at 60°                    | 4.75            | 120 |
| SMD110-SA  | Tips Relieved                     | 4.75            | 120 |
| SMD200-SA  | Fine Relieved Tips                | 4.75            | 120 |
| SMD201-SA  | Curved Fine Relieved Tips         | 4.75            | 120 |
| SMD203-SA  | Narrow Relieved Tips              | 4.75            | 120 |
| SMDR254-SA | Angled Flat Tip w/ Inside Relieve | 4.50            | 115 |



SMD Tweezers



# Swanstrom Tools USA



®

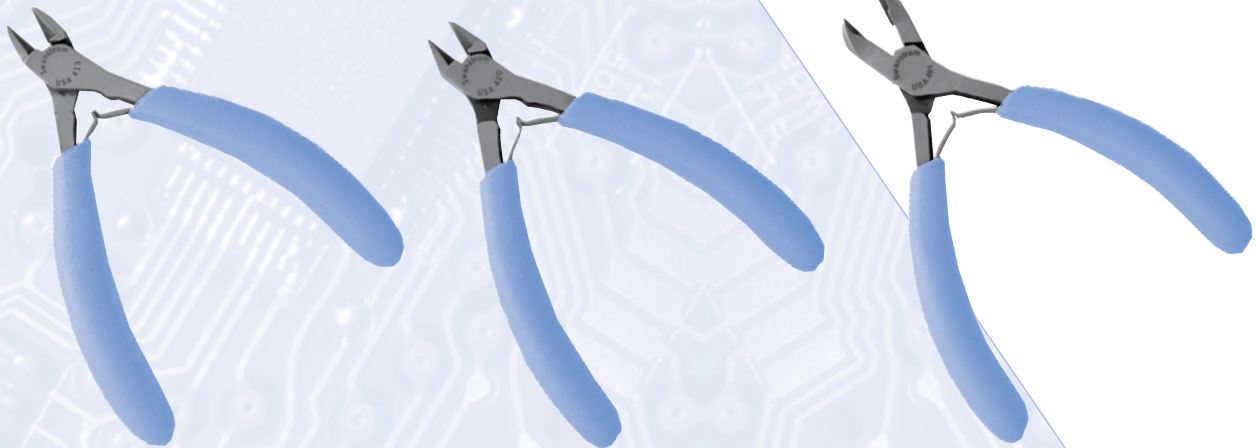
## Spartan SERIES



### SWANSTROM QUALITY, PRECISION AND VALUE IN AN ECONOMICAL PACKAGE

The spartans of ancient Greece enjoyed a well earned reputation for strength, endurance and frugality. These qualities are embodied in the Spartan Series Tools from Swanstrom Tools USA. Designed to maximize performance by utilizing top grade materials and engineering excellence; Spartan Tools are a sensible choice in today's economy.

- Forged from high chromium, high carbon steel
- Precision honed cutting edges
- Electronically inducted, heat treated cutting edges
- Cutting edges hardened to Rc58
- ESD safe handle
- Leaf Springs are spot welded for durability and reliability



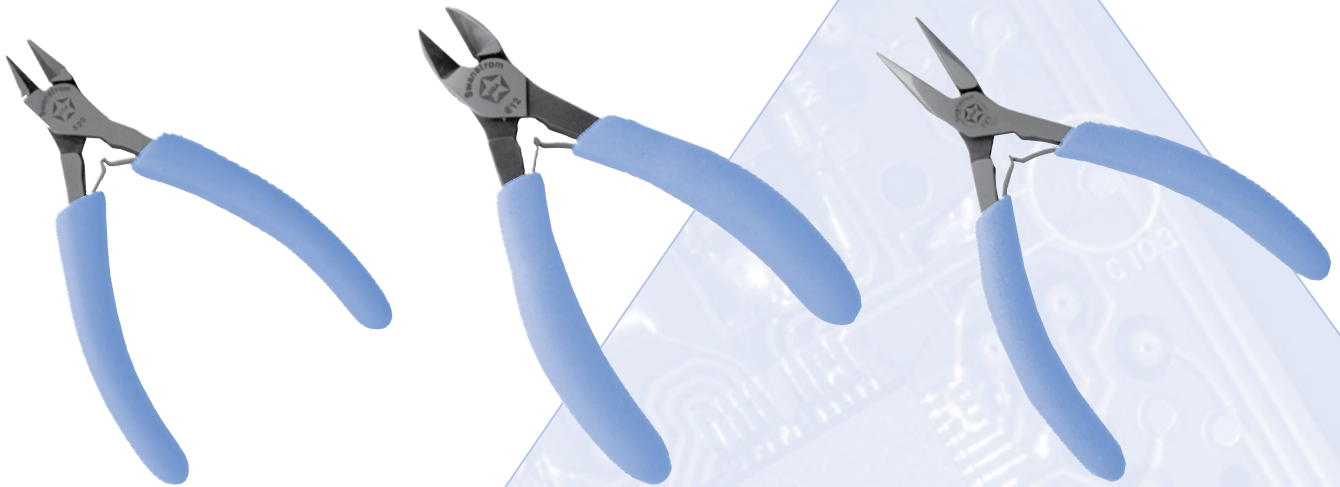
#### 4" CUTTERS

|     | Head & Cut Type      | Body Width | Cutter Length | Cutting Capacity |
|-----|----------------------|------------|---------------|------------------|
| 410 | Oval, Bevel          | .440       | .380          | 16 gauge         |
| 411 | Oval, Flush          | .440       | .380          | 16 gauge         |
| 413 | Oval Slim, Flush     | .440       | .380          | 18 gauge         |
| 415 | Taper, Flush         | .440       | .380          | 16 gauge         |
| 420 | Taper Slim, Flush    | .440       | .380          | 18 gauge         |
| 491 | 60° Taper Tip, Flush | .440       | .460          | 20 gauge         |

# Swanstrom Tools USA



## Spartan SERIES



### 5" CUTTERS

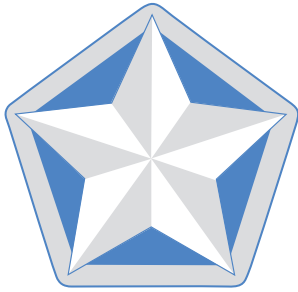
|     | Head & Cut Type   | Body Width | Cutter Length | Cutting Capacity |
|-----|-------------------|------------|---------------|------------------|
| 510 | Oval, Bevel       | .500       | .500          | 14 gauge         |
| 511 | Oval, Flush       | .500       | .500          | 14 gauge         |
| 520 | Taper Slim, Flush | .500       | .500          | 16 gauge         |

### 6" CUTTERS

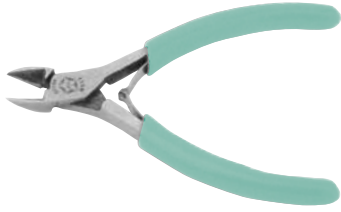
|     | Head & Cut Type | Body Width | Cutter Length | Cutting Capacity |
|-----|-----------------|------------|---------------|------------------|
| 610 | Oval, Bevel     | .600       | .600          | 12 gauge         |
| 611 | Oval, Flush     | .600       | .600          | 12 gauge         |
| 616 | Taper, Flush    | .600       | .600          | 14 gauge         |

### PLIERS

|     | Head Shape/<br>Style | OAL  | Tip Width | Jaw Length | Edge/<br>Jaw |
|-----|----------------------|------|-----------|------------|--------------|
| 221 | Long Nose            | 5.30 | .060      | 1.00       | Serrated     |
| 230 | Needle Nose          | 5.30 | .060      | 1.00       | Smooth       |
| 320 | Long Nose            | 6.01 | .060      | 1.70       | Smooth       |
| 325 | Long Nose, Slim      | 5.43 | .060      | 1.08       | Serrated     |
| 331 | Needle Nose          | 6.01 | .060      | 1.70       | Serrated     |



- Engineered for small hands and intricate work
- Forged steel for strength, durability, and long life
- Machined with precision for tight tolerances
- Hardened electronically, tempered for toughness
- Honed to precise cut requirements
- Stainless steel leaf springs welded in place
- Cushioned grips for operator comfort
- ESD SAFE for component protection



**MX54**

**Oval head semi-flush diagonal cutters**



- Strongest tips and beveled edge for long life
- Induction hardened edges optimize cutting ease and life
- OAL 4.25" Jaw 0.60"



**MX54-9**

**Oval head diagonal flush cutters**



- Strong tips and long life
- Induction hardened edges optimize cutting ease and life
- Flush cut for a sharper edge requiring less squeeze and reduces spike
- OAL 4.25" Jaw 0.60"



**MX54-3**

**Oval relieved/slim diagonal flush cutters**



- For intricate and repetitive work between and under closely spaced components
- Induction hardened edges optimize cutting ease and life
- Flush cut for a sharper edge requiring less squeeze and reduces spike
- OAL 4.25" Jaw 0.60"

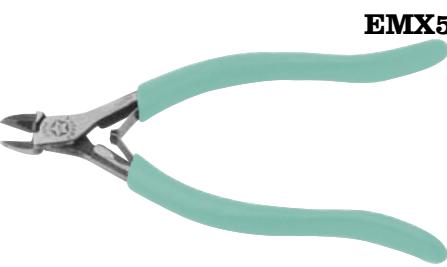


**MX54-5**

**Taper head diagonal flush cutters**



- For intricate work between closely spaced components
- Induction hardened edges optimize cutting ease and life
- Flush cut for a sharper edge requiring less squeeze and reduces spike
- OAL 4.25" Jaw 0.60"

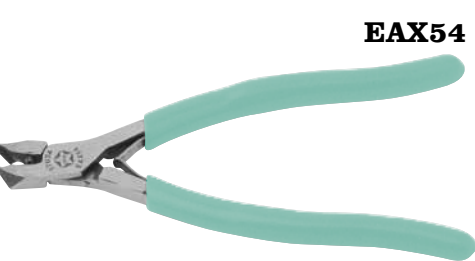


**EMX54-3**

**Oval relieved/slim diagonal flush cutters with ergonomic handles**



- For intricate and repetitive work between and under closely spaced components
- Induction hardened edges optimize cutting ease and life
- E denotes ergonomic (double curve) handles to spread pressure across the palm and relieve carpal tunnel pocket pressure
- Most comfortable hand, wrist and arm positions
- Flush cut for a sharper edge requiring minimum squeeze and reduces spike
- OAL 5.60" Jaw 0.60"

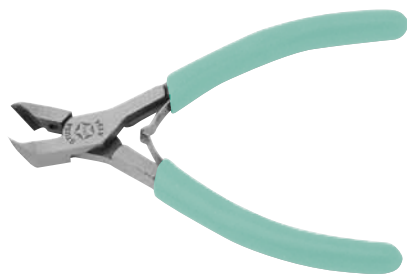


**EAX54**

**Angle end flush cutters with ergonomic handles**



- Angled 60°/30° for ergonomic work positions
- Induction hardened edges optimize cutting ease and life
- E denotes ergonomic (double curve) handles to spread pressure across the palm and relieve carpal tunnel pocket pressure
- For most comfortable hand, wrist and arm positions
- Flush cut for sharper edge, minimum squeeze, maximum ease
- OAL 5.70" Jaw 0.63"

**AX54****Angle end flush cutters**

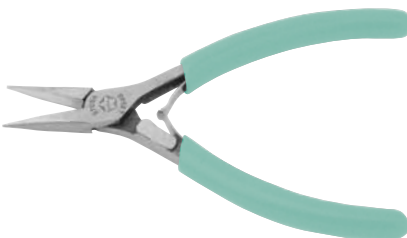
- Angled 60°/30° for most ergonomic work positions
- Induction hardened edges optimize cutting ease and life
- Flush cut -for a sharp edge requiring less squeeze and reduces spike
- OAL 4.75" Jaw 0.63"

**LX4****Submini needle nose serrated pliers**

- Where short handles are a must
- Each jaw has fine parallel serrations and beveled edges
- OAL 4.50" Jaw 0.92"

**LX4G****Submini needle nose smooth pliers**

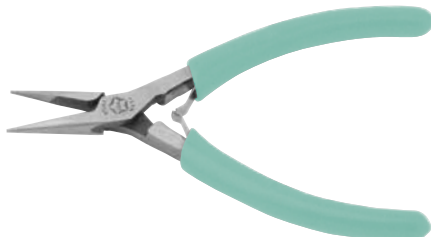
- Where short handles are a must
- Each jaw is smooth with beveled edges
- OAL 4.50" Jaw 0.92"

**LX54****Thin long nose serrated pliers**

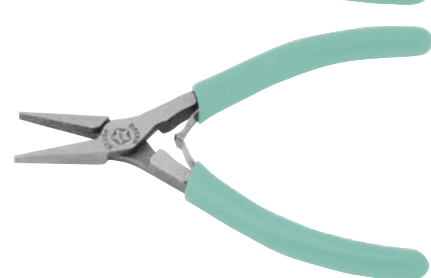
- Each jaw has fine parallel serrations and beveled edges
- OAL 5.25" Jaw 1.02"

**LX54G****Thin long nose smooth pliers**

- Each jaw is smooth with beveled edges
- OAL 5.25" Jaw 1.02"

**NX54****Slim needle nose serrated pliers**

- Each jaw is serrated with beveled edges
- OAL 5.25" Jaw 1.02"

**NX54G****Slim needle nose smooth pliers**

- Each jaw is smooth with beveled edges
- OAL 5.25" Jaw 1.02"

**DX54G****Flat nose smooth pliers**

- Strongest gripping plier
- Ideal for straightening flat leads
- OAL 5.25" Jaw 1.02"

**RX54****Round nose smooth jaw pliers**

- Used to form perfectly round loops without deformation
- OAL 5.25" Jaw 1.02"

**CX54G****Curve nose smooth jaw pliers**

- A very ergonomic alternative to long nose pliers
- Each jaw is smooth with beveled edges
- Permits most comfortable arm position for working
- OAL 5.25" Jaw 1.03"





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