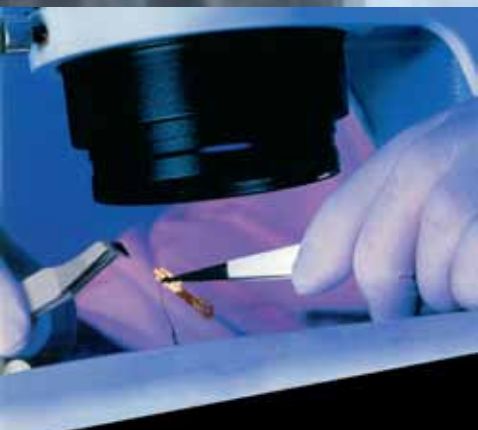


# EXCELTA<sup>®</sup>

CORPORATION



55<sup>TH</sup> ANNIVERSARY  
C A T A L O G

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# PRECISELY RIGHT FOR OVER YEARS 55



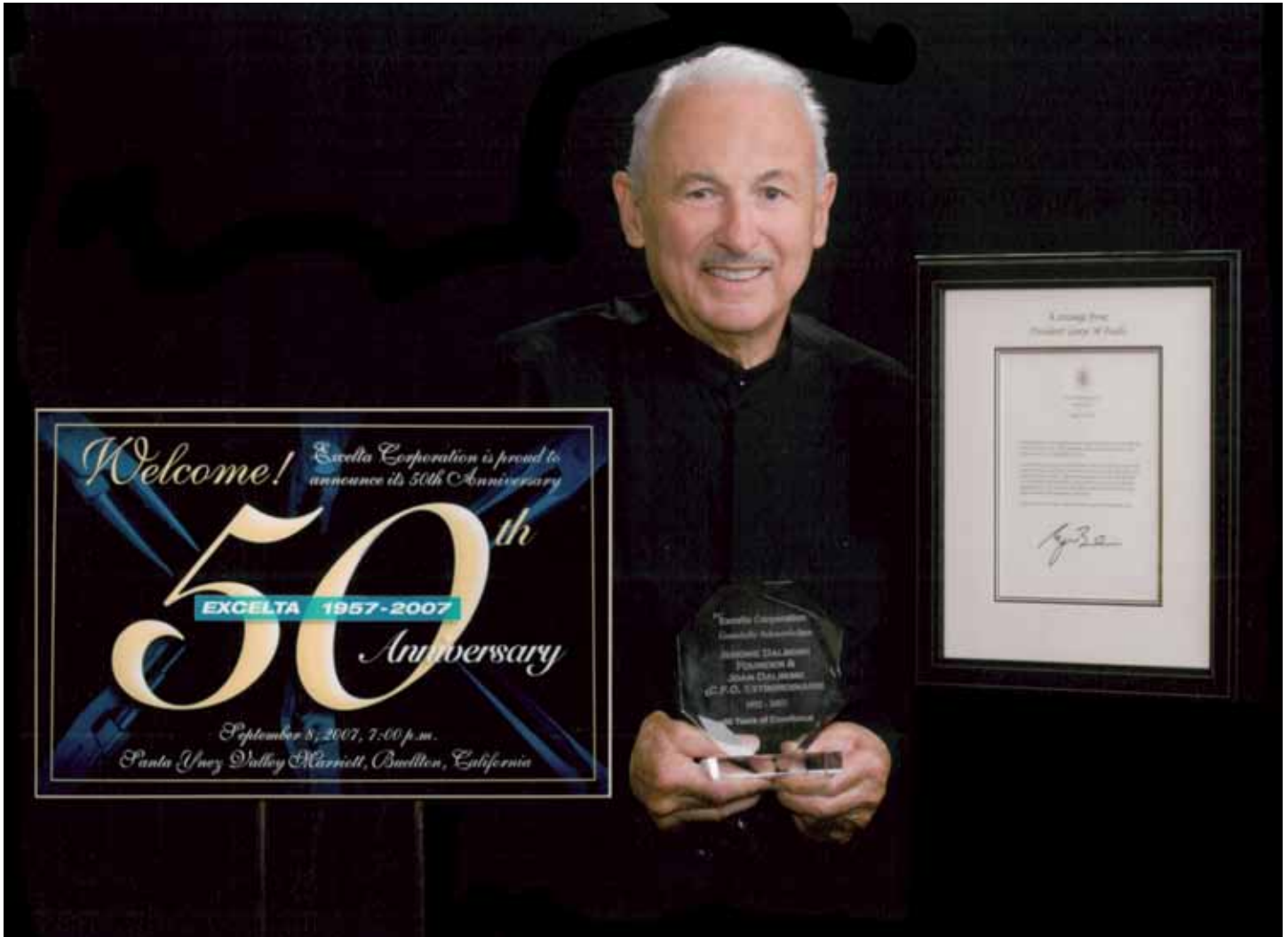
Excelta began by introducing watchmaker tools to the aerospace industry in the mid 1950's. Today we manufacture and market tweezers, forceps, pliers, cutters and small precision tools through our distribution network to the Military, Consumer Electronic, Medical Device Manufacturing, Electronic Assembly and Repair Industries.

Excelta's expertise provides assembly solutions for customers involved with precision hand assembly. Our product offering has evolved from simple chain nose pliers and a few tweezers to over 1,200 assembly aids. Through our "Special/Custom Applications Department" we are able to adapt tools to the specific needs of our customers. Excelta maintains a position of highest quality while delivering innovative solutions. We pride ourselves on staying one step ahead in providing quality tools for tomorrow's needs.

Excelta's precision hand tools are *Precisely Right* for your critical application.

# Dedicated to *Jerome Dalseme*

FOUNDER - EXCELTA CORPORATION



This catalog is dedicated to our father Jerome Dalseme, for his love of tools and leaving a legacy which has kept Excelta Corporation on the cutting edge of supplying and manufacturing precision hand tools for over 55 years.

*With love and gratitude,  
your daughters,  
LYNN BONZER & JANIS PAPIRO*



**THE WHITE HOUSE**

WASHINGTON

August 23, 2007

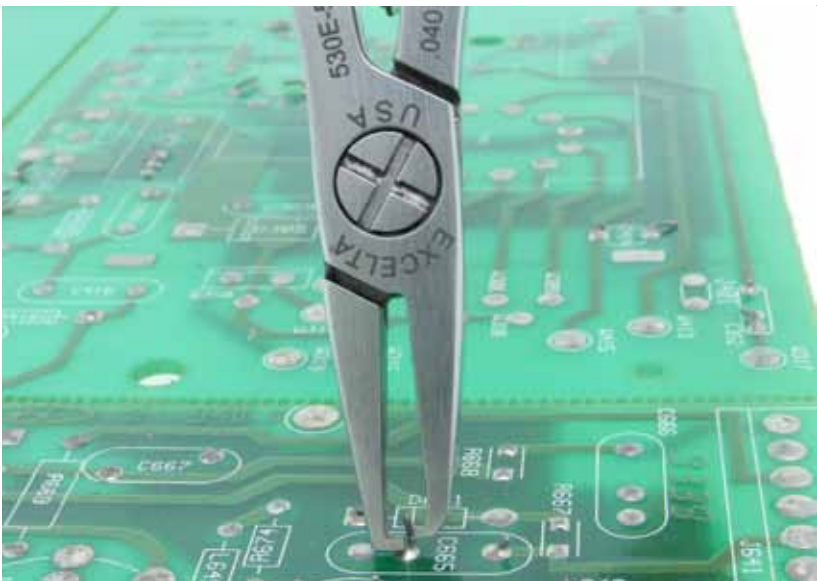
Congratulations to the employees of Excelta Corporation as you celebrate your 50th anniversary. This milestone reflects your dedication to your customers and the community you serve.

America's businesses are the driving force behind our Nation's robust and growing economy, and our workers are the most talented, innovative, and productive in the world. I appreciate your hard work and contributions to your industry and our Nation. Your years of service have expanded opportunities for our citizens, encouraged economic development, and helped America stay prosperous and strong.

Laura and I send our best wishes for many years of continued success.

A handwritten signature in black ink, appearing to read "Barack" followed by a flourish.

*Excelta has made it easy to find  
the tool Precisely Right for the job.*



Our **FIVE STAR SYSTEM** takes the guesswork  
out of selecting the right tool.



**5 Levels of Quality**

**5 Levels of Pricing**

We offer a wide range of materials and designs for any application.



For the most critical applications, the Excelta Five Star line offers ultra-precision with the most advanced materials available.



For demanding applications, the Excelta Four Star line meets and exceeds high precision requirements.



The Excelta Three Star line offers the widest range of products designed for Military, Semiconductor and Electronic assembly.



When precision is required and price is a concern, the Excelta Two Star line fills most requirements for consumer electronics.



The Excelta One Star line offers quality products at the most economical price.

Call us at Excelta Corporation or contact your local Excelta Sales Representative to find tools “*Precisely Right*” for you.

*Simply Look for the Stars*

A close-up photograph showing a hand wearing a blue nitrile glove using silver tweezers to carefully handle a small green seedling in a black plastic tray filled with dark brown soil. A white rectangular label is visible in the background, partially obscured by the tweezers. The background is softly blurred, showing other seedlings in the tray.

**EXCELTA<sup>®</sup>**



**TWEEZERS AND FORCEPS**





★ ★ ★ ★ ★  
**ULTRA PRECISION**

Made in Switzerland from 40% cobalt alloy steel, harder than stainless steel, antimagnetic, excellent resistance to corrosion and resistant to temperatures up to 500° C (932° F). Used with very high magnification.



★ ★ ★ ★  
**EXTREME PRECISION**

Made in Switzerland from medical grade stainless steel, mirror polished tips for safe handling of even the most delicate parts, antimagnetic and anti-acid. Used with high magnification.



★ ★ ★  
**HIGH PRECISION**

Precision grade tweezers made from Neverust® Stainless Steel are manufactured in Switzerland with high precision points. The perfect choice when working under 5x to 10x magnification.



★ ★  
**FINE PRECISION**

Standard Grade "PI" tweezers are manufactured in Italy with fine precision points at a lower cost. Used with low magnification.

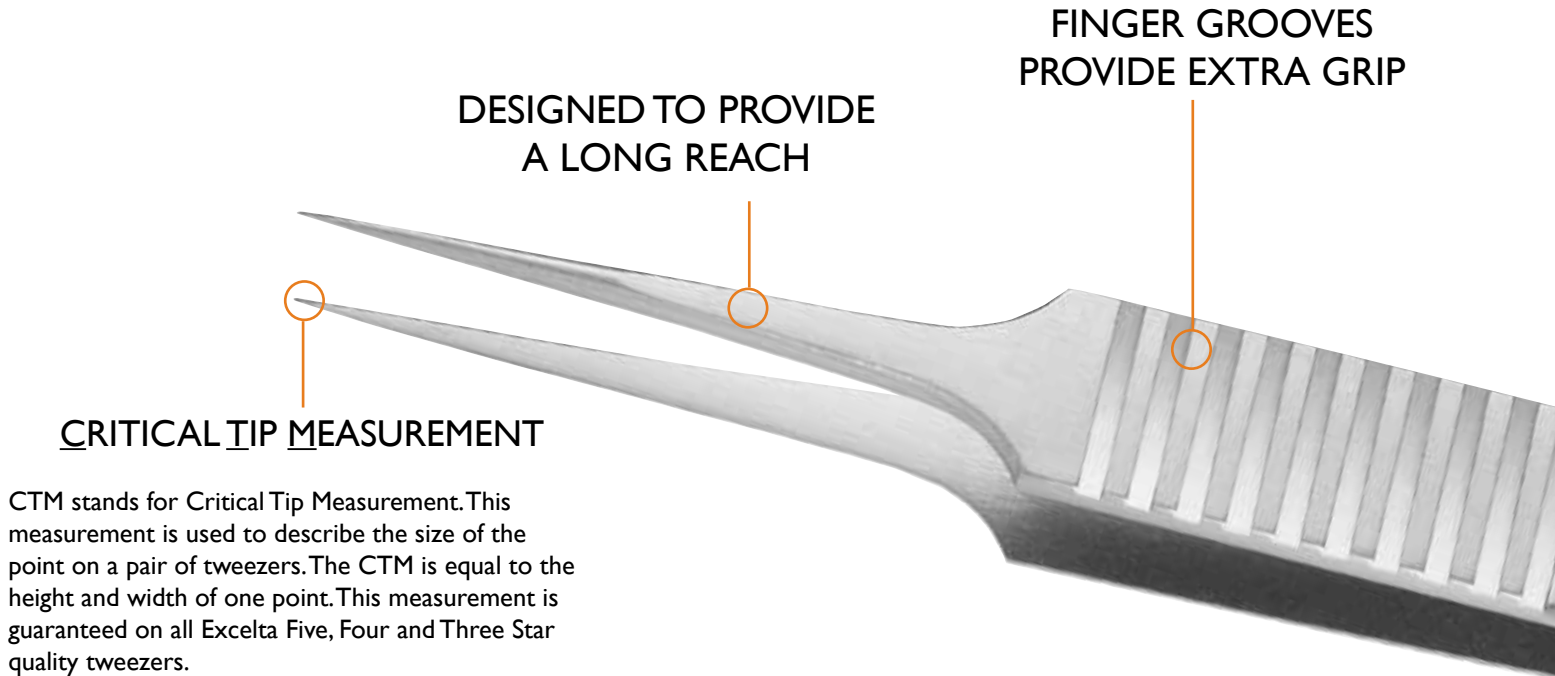


★  
**GENERAL PRECISION**

General Precision Grade "SE" tweezers are manufactured for general purpose work when magnification is not required.

# COBALTIMA®

## TWEEZERS AND FORCEPS



## WHY COBALTIMA®?

COBALTIMA® - The perfect combination of strength and durability. Superior to the best stainless steel, these tweezers and forceps have points insensitive to fatigue that maintain their elasticity. The hardness of the points is progressive; reaching its peak in the deployment-zone where we have measured a Rockwell C hardness of 63/64 for model 5-CO.

## CHEMICAL COMPOSITION

CO	Ni	Mo	Cr	Ti	Nb	Al	Fe
40	16	7	20	-	-	-	Bal

# MADE IN SWITZERLAND

★ ★ ★ ★ ★ ULTRA PRECISION

40% COBALT ALLOY STEEL

MADE IN SWITZERLAND

5-CO

EXCELTA  
★★★★★

EXCELLENT RESISTANCE  
TO CORROSION

RESISTANT TO TEMPERATURES  
UP TO 500° C (932° F).

**Temperature of Fusion**

(°C) 450–1460

**Volunteer Mass**

(g.cm<sup>3</sup>) 8.3

**Electrical Resistivity at 20°**

(Ω Cm) 90/95

**Thermo Co-efficient Between 0 and 3000°C**

softened (°C)  $4 \cdot 10^{-4}$

crushed (°C)  $20,8 \cdot 10^{-3}$

**Magnetic Properties**

antimagnetic

# COBALTIMA<sup>®</sup>

TWEEZERS / FORCEPS

MADE IN SWITZERLAND

★★★★★ ULTRA PRECISION

**2-CO** ★★★★★

**4 ¼" long**

### TAPERED TIP TWEEZERS WITH STRONG FINE POINTS

The stronger points on this design can be used to bend small wires and components.  
CTM = .010" wide x .004" high



Tip Shape



**3C-CO** ★★★★★

**4 ¼" long**

### STRAIGHT TIP TWEEZERS WITH VERY FINE POINTS

Very popular design for handling and placing of small parts.  
CTM = .003" wide x .002" high



Tip Shape



**3-CO** ★★★★★

**4 ¼" long**

### STRAIGHT TIP TWEEZERS WITH VERY FINE POINTS

Our most popular design for all types of micro assembly.  
CTM = .003" wide x .002" high



Tip Shape



**4-CO** ★★★★★

**4 ¾" long**

### TAPERED TIP TWEEZERS WITH EXTRA FINE POINTS

The tapered tips on this design provide a long reach into limited access areas.  
CTM = .003" wide x .001" high



Tip Shape



**5-CO** ★★★★★

**4 ¾" long**

### TAPERED TIP TWEEZERS WITH MICRO FINE POINTS

This design has our finest points for handling the smallest parts.  
CTM = .002" wide x .001" high



Tip Shape



Our special Cobalt Steel is harder than stainless steel antimagnetic and has excellent resistance to corrosion and temperatures up to 500°C. The radiused inside edges protect parts from scratching, while the outside finger grooves provide extra grip and feel when handling very small parts.

**5A-CO ★★★★★ 4 ½" long**

**OFFSET TIP TWEEZERS WITH MICRO FINE POINTS**

The offset design offers better visibility in dense areas.  
CTM = .003" wide x .001" high




Tip Shape 

**7-CO ★★★★★ 4 ½" long**

**CURVED TIP TWEEZERS WITH VERY FINE POINTS**

Our most popular design for working under high magnification.  
CTM = .003" wide x .002" high



Tip Shape 

**7B-CO ★★★★★ 4 ½" long**

**SERRATED CURVED TIP TWEEZERS WITH VERY FINE POINTS**

The added serrations provide additional grip when handling small parts.  
CTM = .003" wide x .002" high



Tip Shape 

**5I-CO ★★★★★ 4 ½" long**

**BENT TIP TWEEZERS WITH MICRO FINE POINTS**

The bent tips are helpful when reaching into confined areas.  
CTM = .002" wide x .001" high



Tip Shape 

# COBALTIMA® TWEEZERS / FORCEPS

## MINIATURE TWEEZERS


★★★★★ ULTRA PRECISION

Miniature COBALTIMA® tweezers were specifically designed for work under a microscope and engineered to fit small hands. The radiused inside edges protect parts from scratching.

**M-2A-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH  
FLAT TIPS AND ROUND POINTS  
CTM = .040" wide x .004" high




Tip Shape 

**M-7-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH  
CURVED TIPS AND VERY FINE POINTS  
CTM = .003" wide x .002" high




Tip Shape 

**M-3-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH  
STRAIGHT TIPS AND FINE POINTS  
CTM = .003" wide x .002" high




Tip Shape 

**M-5I-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH  
ANGLE TIPS AND VERY FINE POINTS  
CTM = .002" wide x .001" high




Tip Shape 

**M-5-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH TAPERED  
TIPS AND VERY FINE POINTS  
CTM = .002" wide x .001" high




Tip Shape 

**MN-0C-CO** ★★★★★ **3 1/8" long**

REVERSE ACTION TWEEZERS WITH  
STRAIGHT TIPS AND FINE POINTS  
CTM = .006" wide x .004" high




Tip Shape 

**M-6-CO** ★★★★★ **3 1/8" long**

MINIATURE TWEEZERS WITH  
ANGLE TIPS AND SHARP POINTS  
CTM = .003" wide x .002" high




Tip Shape 

**MN-2A-CO** ★★★★★ **3 1/8" long**

REVERSE ACTION TWEEZERS WITH  
FLAT TIPS AND ROUND POINTS  
CTM = .060" wide x .004" high



Tip Shape 

# “MP” FORCEPS

MIRROR POLISHED TIPS  
★★★★ EXTREME PRECISION

## WHY HIGH POLISH?

- Designed to handle delicate parts without scratching
- Smoother than standard radius edged Forceps
- Antimagnetic
- Anti-Acid
- Stainless Steel
- Neverust®

“Mirror Polish” series of forceps are made in Switzerland by highly skilled craftsmen who produce the finest tip forceps in the world.

Forged from medical grade stainless steel, these forceps are antimagnetic and anti-acid.

Special mirror polish on the tips removes any sharp edges for safe handling of even the most delicate components.

## CRITICAL TIP MEASUREMENT

This measurement is used to describe the size of the point on a pair of tweezers or forceps. The CTM is equal to the height and width of one point. This measurement is guaranteed on all Excelta Four Star quality forceps.



# “MP” FORCEPS

MIRROR POLISHED TIPS  
★★★★ EXTREME PRECISION

“MP” Forceps are Made in Switzerland from the finest non-corrosive Stainless Steel Antimagnetic, the tips are mirror polished to prevent nicking and scratching.


## **1-SA-MP** ★★★★★ **4 ½” long**

### STRAIGHT TIP FORCEPS WITH FINE SLENDER POINTS

Designed for delicate applications. Finely honed and polished tips for flaw-free edges.

CTM = .007” wide x .004” high



Tip Shape 


## **2A-SA-MP** ★★★★★ **4 ¾” long**

### FLAT TIP FORCEPS WITH ROUND POINTS

Special polishing process ensures edge quality and promotes durability.

CTM = .060” wide x .008” high



Tip Shape 

## **3C-SA-MP** ★★★★★ **4 ¼” long**

### STRAIGHT TIP FORCEPS WITH FINE POINTS.

The shorter body helps when working under magnification.

CTM = .006” wide x .004” high



Tip Shape 


## **5-SA-MP** ★★★★★ **4 ¼” long**

### TAPERED TIP FORCEPS WITH VERY FINE POINTS

High polished superfine tips with superb balance make these an excellent addition to any dissection kit.

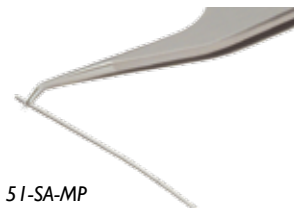
CTM = .003” wide x .002” high



Tip Shape 



# “MP” FORCEPS



51-SA-MP

MIRROR POLISHED TIPS  
★★★★ EXTREME PRECISION

TWEEZERS

**5A-SA-MP ★★★★★** 4 ½” long

### OFFSET TIP FORCEPS WITH VERY FINE POINTS

The offset design offers easy access in confined areas.

CTM = .004” wide x .003” high



Tip Shape

**51-SA-MP ★★★★★** 4 ½” long

### ANGLED TIP FORCEPS WITH VERY FINE POINTS

The most popular design used for delicate manipulation of ultra small parts.

CTM = .003” wide x .002” high



Tip Shape

**7-SA-MP ★★★★★** 4 ½” long

### CURVED TIP FORCEPS WITH FINE POINTS

Curved tips allow for maximum visibility under magnification.

CTM = .006” wide x .004” high



Tip Shape

**SS-SA-MP ★★★★★** 5 ½” long

### LONG STRAIGHT TIP FORCEPS WITH FINE POINTS

The extra long length and slimmer body is useful when working in limited access areas.

CTM = .003” wide x .002” high



Tip Shape

# MINIATURE TWEEZERS & FORCEPS

★★★ HIGH PRECISION


Our Miniature Tweezers & Forceps were specifically designed for work under a microscope and engineered to fit small hands. Available in Neverust®, Stainless Steel or Carbon Steel.

**M-AC ★★★**

**3 3/8" long**

STRAIGHT SMOOTH INSIDE TIPS  
WITH MEDIUM POINTS CARBON STEEL  
CTM = .02" wide x .01" high




Tip Shape 

**M-00D-SA ★★★**  
**M-00D ★★★**

**3 3/8" long**

STRAIGHT TIPS WITH MEDIUM POINTS  
NEVERUST® (-SA) / CARBON STEEL  
CTM = .02" wide x .01" high




Tip Shape 

**M-H-SA ★★★**  
**M-H-S ★★★**

**3 1/2" long**

TAPERED TIPS WITH STRONG POINTS  
NEVERUST® (-SA) / STAINLESS STEEL (-S)  
CTM = .02" wide x .01" high



Tip Shape 

**M-2-SA ★★★**

**3 1/8" long**

MINIATURE TWEEZERS WITH ANGLE TIPS  
AND SHARP POINTS NEVERUST® (-SA)  
CTM = .01" wide x .01" high




Tip Shape 

**M-2A-SA ★★★**

**3 1/8" long**

MINIATURE TWEEZERS WITH FLAT TIPS  
AND ROUND POINTS NEVERUST® (-SA)  
CTM = .05" wide x .01" high




Tip Shape 

**M-3-S ★★★**

**3 1/8" long**

MINIATURE TWEEZERS WITH STRAIGHT TIPS  
AND FINE POINTS STAINLESS STEEL (-S)  
CTM = .01" wide x .01" high




Tip Shape 

**M-4A-S ★★★**

**3 1/8" long**

MINIATURE TWEEZERS WITH TAPERED TIPS  
AND VERY FINE POINTS STAINLESS STEEL (-S)  
CTM = .01" wide x .01" high




Tip Shape 

**M-5-SA ★★★**  
**M-5-S ★★★**

**3 1/8" long**

MINIATURE TWEEZERS WITH  
ANGLE TIPS AND SHARP POINTS  
NEVERUST® (-SA) / STAINLESS STEEL (-S)  
CTM = .01" wide x .01" high



Tip Shape 

# REVERSE ACTION TWEEZERS

★★★ HIGH PRECISION  
★ GENERAL PRECISION

Our Reverse Action Tweezers are designed to hold parts without finger strain.  
Available in Neverust® or Stainless Steel.

**31-SA-C ★★★**

**4 ¾" long**

## REVERSE ACTION TWEEZERS FOR GENERAL PURPOSE ASSEMBLY

The tips are bent at a 45-degree angle for better visibility when handling small parts.  
CTM = .02" wide x .01" high



Tip Shape



**29-SA ★★★**  
**29-S-SE ★**

**6" long**

## STAINLESS STEEL REVERSE ACTION TWEEZERS WITH FIBER HANDLES

These tweezers have straight tips. Part number 29-SA has smooth inside tips, 29-S-SE has serrated inside tips.  
CTM = .08" wide x .05" high



Tip Shape



**30-SA ★★★**  
**30-S-SE ★**

**6" long**

## STAINLESS STEEL REVERSE ACTION TWEEZERS WITH FIBER HANDLES

These tweezers have angled tips. Part number 30-SA has smooth inside tips, 30-S-SE has serrated inside tips.  
CTM = .08" wide x .04" high



Tip Shape



**31B-SA-SE ★**

**6 ½" long**

## REVERSE ACTION SCREW HOLDING TWEEZERS

The special groove in the tips hold small screws, useful when needing help getting them started.  
Also useful when working in dense and hard to reach areas.



Tip Shape



# REVERSE ACTION TWEEZERS

★★★ HIGH PRECISION  
★ GENERAL PRECISION

**DN-1-SN** ★★★★★ **4 ¾" long**  
**DN-3C-SA-SE** ★ **4 ¼" long**

## REVERSE ACTION TWEEZERS WITH STRAIGHT TIPS AND SLENDER POINTS

The light tension is great for holding parts without added finger strain.

CTM = .01" wide x .01" high



**DN-2A-SN** ★★★★★ **4 ¾" long**  
**DN-2A-SA-SE** ★

## REVERSE ACTION TWEEZERS WITH TAPERED TIPS AND FLAT ROUND POINTS

Used for handling fine wires and components.

CTM = .06" wide x .01" high



**DN-5-SN** ★★★★★ **4 ¼" long**

## REVERSE ACTION TWEEZERS WITH TAPERED TIPS AND EXTRA FINE POINTS

Excellent for use in die attaching and wire bonding for micro-electronic assembly.

CTM = .01" wide x .01" high



**DN-7-SN** ★★★★★ **4 ½" long**  
**DN-7-SA-SE** ★

## REVERSE ACTION TWEEZERS WITH CURVED TIPS AND FINE POINTS

This design allows maximum visibility under magnification.

CTM = .01" wide x .01" high



**31-SA** ★★★ **4 7/8" long**

## REVERSE ACTION TWEEZERS FOR GENERAL PURPOSE ASSEMBLY

This style is useful when sorting and handling various components.

CTM = .02" wide x .01" high



# TITANIUM ALLOY TWEEZERS

## NON-MAGNETIC TWEEZERS

★★★★ EXTREME PRECISION

- Made from lightweight Titanium Alloy
- Great for all soldering applications, solder will not adhere to the tips
- Non-Magnetic – zero magnetic retentivity
- Non-Corrosive – high resistance to most acids
- Heat resistant – up to 430°C (806°F)

**3C-TA ★★★★★**

**4 ¼" long**

### TITANIUM ALLOY TWEEZERS WITH STRAIGHT TIPS AND FINE POINTS

Very popular design used for micro-assembly.

CTM = .006" wide x .004" high



Tip Shape



**5-TA ★★★★★**

**4 ½" long**

### TITANIUM ALLOY TWEEZERS WITH TAPERED TIPS AND EXTRA-FINE POINTS

The very fine tips are perfect when working under high magnification.

CTM = .003" wide x .002" high



Tip Shape



**7-TA ★★★★★**

**4 ½" long**

### TITANIUM ALLOY TWEEZERS WITH CURVED TIPS AND VERY-FINE POINTS

The curved tips allow for better visibility when working in tight areas.

CTM = .006" wide x .004" high



Tip Shape



# CUTTING TWEEZERS

## STAINLESS STEEL

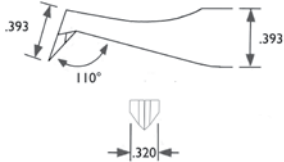
★★★★★ ULTRA PRECISION  
★★★★★ EXTREME PRECISION

**15A-HT ★★★★★**

**4 ½" long**

### CARBIDE BLADE CUTTING TWEEZERS

Carbide Inserts on Stainless Steel body. Our finest cutting tweezers.  
Cutting Capacity 0.010" Hard Wire / 0.015" Soft Copper Wire

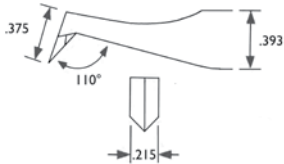


**15A-GW-S ★★★★★**

**4 ½" long**

### GENERAL PURPOSE CUTTING TWEEZERS

General purpose cutting tweezers. Stainless Steel.  
Cutting Capacity 0.010" Soft Copper Wire

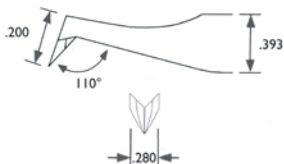


**15A-RW-S ★★★★★**

**4 ½" long**

### ROUND TIP CUTTING TWEEZERS

Fine round tip cutting tweezers. Stainless Steel.  
Cutting Capacity 0.010" Soft Copper Wire

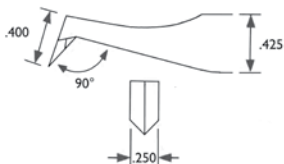


**15A-S ★★★★★**

**4 ½" long**

### RADIUS EDGE CUTTING TWEEZERS

General purpose cutting tweezers with radius edges. Stainless Steel.  
Cutting Capacity 0.010" Soft Copper Wire



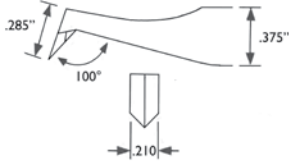
# CUTTING TWEEZERS

CARBON STEEL  
★★★ HIGH PRECISION

TWEEZERS

**14A-GW ★★★**

**4 3/8" long**



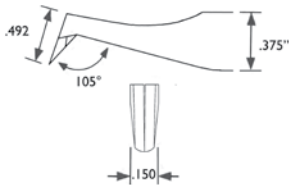
**SLIM HIGH PRECISION CUTTING BLADES**

New thinner body is designed to be lightweight and easy to handle.  
Cutting Capacity 0.010" Soft Copper Wire



**14A-N ★★★**

**4 1/2" long**



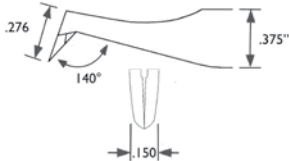
**LONG PRECISION CUTTING BLADES**

Angled tips can be used horizontally or vertically.  
Cutting Capacity 0.005" Soft Copper Wire



**52-MW ★★★**

**4 1/2" long**



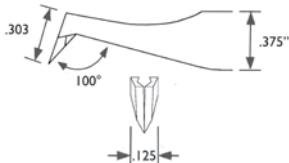
**HIGH PRECISION MICRO STRAIGHT TIPS**

Excellent for working in dense access areas. Non-Reflective ESD Safe Epoxy Coating. Cutting Capacity 0.005" Soft Copper Wire



**54-MW ★★★**

**4 1/4" long**



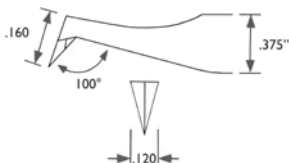
**HIGH PRECISION MICRO ANGLED TIPS**

Designed for maximum visibility when working under magnification. Non-Reflective ESD Safe Epoxy Coating. Cutting Capacity 0.008" Soft Copper Wire



**55-MW ★★★★★**

**4 1/4" long**



**ULTRA FINE CUTTING BLADES**

The very finest cutting blades available. Non-Reflective ESD Safe Epoxy Coating. Cutting Capacity 0.005" Soft Copper Wire



# CUTTING TWEEZERS

UNCOATED CARBON STEEL

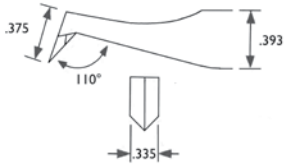
★ ★ ★ HIGH PRECISION  
★ ★ FINE PRECISION

**I5A-GW-M ★★**

**4 ½" long**

### GENERAL PURPOSE CUTTING TWEEZERS

General purpose cutting tweezers. Carbon steel.  
Cutting Capacity 0.010" Soft Copper Wire



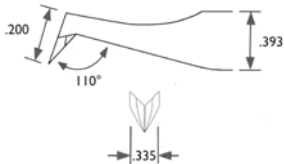
**I5A-GW-M-OF**, Optimum Flush Cutting Blades  
**I5A-GW-M-PB**, Parallel Cutting Blades

**I5A-RW-M ★★**

**4 ½" long**

### FINE ROUND TIP CUTTING TWEEZERS

Fine rounded tips. Carbon steel.  
Cutting Capacity 0.010" Soft Copper Wire



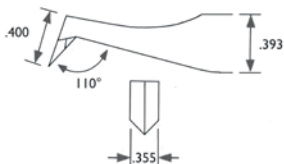
**I5A-RW-M-OF**, Optimum Flush Cutting Blades  
**I5A-RW-M-PB**, Parallel Cutting Blades

**I5A-GW-PE ★★**

**4 ½" long**

### GENERAL PURPOSE CUTTING TWEEZERS

General purpose cutting tweezers. Carbon steel.  
Cutting Capacity 0.010" Soft Copper Wire



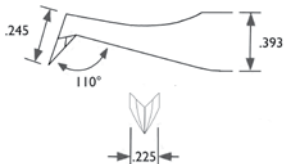
**I5A-GW-PE-OF**, Optimum Flush Cutting Blades  
**I5A-GW-PE-PB**, Parallel Cutting Blades

**I5A-RW-PE ★★**

**4 ½" long**

### FINE ROUND TIP CUTTING TWEEZERS

Fine rounded tips. Carbon steel.  
Cutting Capacity 0.010" Soft Copper Wire



**I5A-RE-PE-OF**, Optimum Flush Cutting Blades  
**I5A-RE-PE-PB**, Parallel Cutting Blades



# CUTTING TWEEZERS

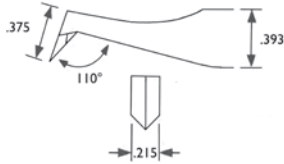
COATED CARBON STEEL

★★★ HIGH PRECISION

TWEEZERS

**I5A-GW ★★★**

**4 ½" long**



### GENERAL PURPOSE CUTTING TWEEZERS

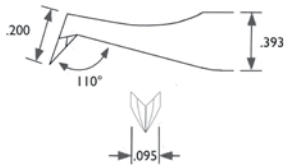
General purpose cutting tweezers. Carbon steel with ESD safe epoxy coating.  
*Cutting Capacity 0.010" Soft Copper Wire*



**I5A-GW-OF**, Optimum Flush Cutting Blades  
**I5A-GW-PB**, Parallel Cutting Blades

**I5A-RW ★★★**

**4 ½" long**



### FINE ROUND TIP CUTTING TWEEZERS

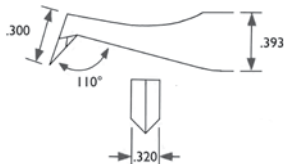
Fine rounded tips. Carbon steel with ESD safe epoxy coating.  
*Cutting Capacity 0.010" Soft Copper Wire*



**I5A-RW-OF**, Optimum Flush Cutting Blades  
**I5A-RW-PB**, Parallel Cutting Blades

**I5A-C ★★★**

**4 ½" long**



### SHORT FINE BLADE CUTTING TWEEZERS

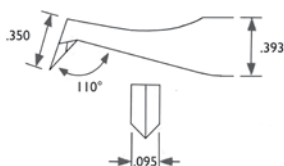
Small fine blades. Carbon steel with ESD safe epoxy coating.  
*Cutting Capacity 0.010" Soft Copper Wire*



**I5A-C-OF**, Optimum Flush Cutting Blades  
**I5A-C-PB**, Parallel Cutting Blades

**I5A-SW ★★★**

**4 ½" long**



### RADIUS FACE CUTTING TWEEZERS

Designed to provide greater visibility. Carbon steel with ESD safe epoxy coating.  
*Cutting Capacity 0.010" Soft Copper Wire*



**I5A-SW-OF**, Optimum Flush Cutting Blades  
**I5A-SW-PB**, Parallel Cutting Blades

# ELECTRONIC STYLE TWEEZERS

The following pages feature electronic style tweezers. Most styles are available in three quality levels and materials. The stars are used to designate the quality level.

## ★★★ Three Star High Precision Grade

Three Star High Precision Grade tweezers are manufactured in Switzerland, with high precision points, the perfect choice when working under 5x to 10x magnification.



## ★★ Two Star "PI" Fine Precision Grade

Two Star Fine Precision Grade "PI" tweezers are manufactured in Italy, with fine precision points at a lower cost.



## ★ One Star "SE" General Precision Grade

One Star General Precision Grade "SE" tweezers are manufactured for general purpose use when magnification is not required.



## Materials

**Stainless Steel Antimagnetic** – Part number code "SA" NEVERUST® tweezers have superior antimagnetic, anti-acid and anti-corrosion properties. "SA" material is the most popular material used for electronic assembly.

**Stainless Steel** – Part number code "S" stainless steel tweezers have a higher carbon content and will produce a harder tip than the "SA" series. "S" series can rust under extreme exposure.

**Carbon Steel** – Part number code not applicable. The tips are flame hardened for long life and are highly magnetic with low rust resistance.

# ELECTRONIC STYLE TWEEZERS

★★★ HIGH PRECISION  
★★ FINE PRECISION  
★ GENERAL PRECISION

## #5 DESIGN

4 1/4" long

PART #	MATERIAL	STARS	CTM
5-SA	NEVERUST®	★★★	.01" x .01"
5-S	Stainless Steel	★★★	.01" x .01"
5	Carbon Steel	★★★	.01" x .01"
5-SA-PI	S/S Antimagnetic	★★	
5-S-PI	Stainless Steel	★★	
5-SA-SE	S/S Antimagnetic	★	
5-S-SE	Stainless Steel	★	

TAPERED TIPS WITH HIGH PRECISION POINTS



Tip Shape



## #5A DESIGN

4 1/2" long

PART #	MATERIAL	STARS	CTM
5A-SA	NEVERUST®	★★★	.01" x .01"
5A-S	Stainless Steel	★★★	.01" x .01"
5A-SA-PI	S/S Antimagnetic	★★	
5A-SA-SE	S/S Antimagnetic	★	
5A-S-SE	Stainless Steel	★	

OFFSET FINE TIPS WITH HIGH PRECISION POINTS



Tip Shape



## #5B DESIGN

4 1/4" long

PART #	MATERIAL	STARS	CTM
5B-SA	NEVERUST®	★★★	.01" x .01"
5B-SA-PI	S/S Antimagnetic	★★	

OBLIQUE TIPS WITH HIGH PRECISION POINTS



Tip Shape



## #5C DESIGN

4 1/4" long

PART #	MATERIAL	STARS	CTM
5C-SA	NEVERUST®	★★★	.01" x .01"

CIRCUMVENTED OBLIQUE TIPS WITH HIGH PRECISION POINTS



Tip Shape



# ELECTRONIC STYLE TWEEZERS

★★★ HIGH PRECISION  
★★ FINE PRECISION  
★ GENERAL PRECISION

## #4 DESIGN

4 ¼" long

PART #	MATERIAL	STARS	CTM
4-SA	NEVERUST®	★★★	.01" x .01"
4-SA-PI	S/S Antimagnetic	★★	
4-SA-SE	S/S Antimagnetic	★	

TAPERED TIPS WITH VERY-FINE POINTS



Tip Shape



## #50 DESIGN

4 ½" long

PART #	MATERIAL	STARS	CTM
50-SA	NEVERUST®	★★★	.01" x .01"

30° OFFSET OBLIQUE ANGLE TIPS WITH MICRO-FINE POINTS



Tip Shape



## #51 DESIGN

4 ½" long

PART #	MATERIAL	STARS	CTM
51-SA	NEVERUST®	★★★	.01" x .01"
51-S	Stainless Steel	★★★	.01" x .01"

45° OFFSET OBLIQUE ANGLE TIPS WITH MICRO-FINE POINTS



Tip Shape



## #1 DESIGN

4 ½" long

PART #	MATERIAL	STARS	CTM
1-SA	NEVERUST®	★★★	.01" x .01"
1-S	Stainless Steel	★★★	.01" x .01"
1-SA-PI	S/S Antimagnetic	★★	
1-PI	Carbon Steel	★★	
1-SA-SE	S/S Antimagnetic	★	
1-S-SE	Stainless Steel	★	

SLENDER TIPS WITH FINE POINTS



Tip Shape



## #2 DESIGN

4 ¾" long

PART #	MATERIAL	STARS	CTM
2-SA	NEVERUST®	★★★	.02" x .01"
2-S	Stainless Steel	★★★	.02" x .01"
2-SA-PI	S/S Antimagnetic	★★	
2-SA-SE	S/S Antimagnetic	★	
2-S-SE	Stainless Steel	★	

TAPERED TIPS WITH MEDIUM POINTS



Tip Shape



# ELECTRONIC STYLE TWEEZERS

★★★ HIGH PRECISION  
★★ FINE PRECISION  
★ GENERAL PRECISION

TWEEZERS

## #3 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
3-SA	NEVERUST®	★★★	.01" x .01"
3-S	Stainless Steel	★★★	.01" x .01"
3-SA-PI	S/S Antimagnetic	★★	
3-S-PI	Stainless Steel	★★	
3-SA-SE	S/S Antimagnetic	★	
3-S-SE	Stainless Steel	★	

VERY FINE TIPS WITH PRECISION POINTS



Tip Shape



## #3C DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
3C-SA	NEVERUST®	★★★	.01" x .01"
3C-S	Stainless Steel	★★★	.01" x .01"
3C	Carbon Steel	★★★	.01" x .01"
3C-SA-PI	S/S Antimagnetic	★★	
3C-S-PI	Stainless Steel	★★	
3C-PI	Carbon Steel	★★	
3C-SA-SE	S/S Antimagnetic	★	
3C-S-SE	Stainless Steel	★	
3C-SE	Carbon Steel	★	

VERY FINE TIPS WITH PRECISION POINTS



Tip Shape



## #SS DESIGN 5 1/2" long

PART #	MATERIAL	STARS	CTM
SS-SA	NEVERUST®	★★★	.01" x .01"
SS-S	Stainless Steel	★★★	.01" x .01"
SS-SA-PI	S/S Antimagnetic	★★	
SS-SA-SE	S/S Antimagnetic	★	
SS-S-SE	Stainless Steel	★	

LONG STRAIGHT TIPS WITH PRECISION POINTS



Tip Shape



## #3CB DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
3CB-S	Stainless Steel	★★★	.01" x .01"

ANGLED TIPS WITH FINE PRECISION POINTS



Tip Shape



# ELECTRONIC STYLE TWEEZERS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #7 DESIGN

4 ½" long

CURVED TIPS WITH HIGH PRECISION POINTS

PART #	MATERIAL	STARS	CTM
7-SA	NEVERUST®	★★★	.01" x .01"
7-S	Stainless Steel	★★★	.01" x .01"
7-SA-PI	S/S Antimagnetic	★★	
7-S-PI	Stainless Steel	★★	
7-PI	Carbon Steel	★★	
7-SA-SE	S/S Antimagnetic	★	
7-S-SE	Stainless Steel	★	



Tip Shape



## #7B DESIGN

4 ½" long

CURVED TIPS WITH FINE SERRATED POINTS

PART #	MATERIAL	STARS	CTM
7B-SA	NEVERUST®	★★★	.01" x .01"
7B-S	Stainless Steel	★★★	.01" x .01"
7B-SA-PI	S/S Antimagnetic	★★	
7B-SA-SE	S/S Antimagnetic	★	



Tip Shape



## #6 DESIGN

4 ⅞" long

ANGLED TIPS WITH FLAT SHARP POINTS

PART #	MATERIAL	STARS	CTM
6-SA	NEVERUST®	★★★	.01" x .01"
6-S	Stainless Steel	★★★	.01" x .01"
6-SA-PI	S/S Antimagnetic	★★	
6-PI	Carbon Steel	★★	
6-SA-SE	S/S Antimagnetic	★	
6-S-SE	Stainless Steel	★	



Tip Shape



## #65A DESIGN

5 ½" long

LONG OBLIQUE ANGLE TIPS WITH PRECISION POINTS

PART #	MATERIAL	STARS	CTM
65A-SA	NEVERUST®	★★★	.01" x .01"



Tip Shape



# ELECTRONIC STYLE TWEEZERS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #66 DESIGN 5 1/2" long

PART #	MATERIAL	STARS	CTM
66-SA	NEVERUST®	★★★	.01" x .01"

CIRCUMVENTED ANGLED TIPS WITH PRECISION POINTS



Tip Shape



## #60 DESIGN 5 1/4" long

PART #	MATERIAL	STARS	CTM
60-SA	NEVERUST®	★★★	.01" x .01"

LONG STRAIGHT TIPS WITH PARALLEL POINTS



Tip Shape



## #64 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
64-SA	NEVERUST®	★★★	.01" x .01"

STRAIGHT TIPS WITH FINE PRECISION POINTS



Tip Shape



## #0A DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
0A	Carbon Steel	★★★	.01" x .01"

STRAIGHT ROUND TIPS WITH FINE SHARP POINTS



Tip Shape



# ELECTRONIC STYLE TWEEZERS

★★★ HIGH PRECISION  
★★ FINE PRECISION  
★ GENERAL PRECISION

## #0 DESIGN

4 3/4" long

PART #	MATERIAL	STARS	CTM
0-SA	NEVERUST®	★★★	.01" x .01"
0	Carbon Steel	★★★	
0-SA-SE	S/S Antimagnetic	★	

STRONG TIPS WITH PRECISION POINTS



Tip Shape



## #00 DESIGN

4 1/2" long

PART #	MATERIAL	STARS	CTM
00-SA	NEVERUST®	★★★	.02" x .01"
00-S	Stainless Steel	★★★	.02" x .01"
00	Carbon Steel	★★★	.02" x .01"
00-SA-PI	S/S Antimagnetic	★★	
00-PI	Carbon Steel	★★	
00-SA-SE	S/S Antimagnetic	★	
00-SE	Carbon Steel	★	

MEDIUM TIPS WITH STRAIGHT STRONG POINTS



Tip Shape



## #000 DESIGN

4 3/4" long

PART #	MATERIAL	STARS	CTM
000-SA	NEVERUST®	★★★	.02" x .01"
000-SA-PI	S/S Antimagnetic	★★	

MEDIUM TIPS WITH STRAIGHT STRONG POINTS AND  
INSIDE RADIUS EDGES



Tip Shape



## #0C DESIGN

3 1/2" long

PART #	MATERIAL	STARS	CTM
0C-SA	NEVERUST®	★★★	.01" x .01"
0C	Carbon Steel	★★★	
0C-SA-PI	S/S Antimagnetic	★★	
0C-SA-SE	S/S Antimagnetic	★	

STRAIGHT PRECISION TIPS WITH FINE POINTS



Tip Shape





# ELECTRONIC STYLE TWEEZERS


- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #00B DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
00B-SA	NEVERUST®	★★★	.02" x .01"
00B-SA-PI	S/S Antimagnetic	★★	
00B-SA-SE	S/S Antimagnetic	★	

STRAIGHT STRONG TIPS WITH FINE POINTS




Tip Shape 

## #00C DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
00C-SA	NEVERUST®	★★★	.02" x .01"
00C	Carbon Steel	★★★	
00C-SA-SE	S/S Antimagnetic	★	

SEMI-FINE TIPS WITH STURDY POINTS




Tip Shape 

## #00D DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
00D-SA	NEVERUST®	★★★	.02" x .01"
00D	Carbon Steel	★★★	
00D-SA-PI	S/S Antimagnetic	★★	
00D-SA-SE	S/S Antimagnetic	★	

STRAIGHT STRONG TIPS WITH SERRATED POINTS

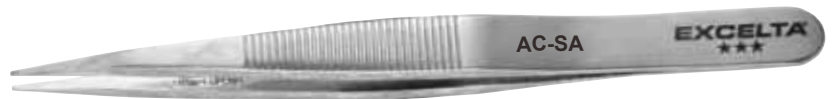



Tip Shape 

## #AC DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
AC-SA	NEVERUST®	★★★	.03" x .02"
AC	Carbon Steel	★★★	.03" x .02"
AC-SA-PI	S/S Antimagnetic	★★	
AC-PI	Carbon Steel	★★	
AC-SA-SE	S/S Antimagnetic	★	

STRAIGHT STRONG TIPS WITH MEDIUM FINE POINTS



Tip Shape 

# ELECTRONIC STYLE TWEEZERS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION


## #2A DESIGN

4 3/4" long

TAPERED TIPS WITH FLAT ROUND POINTS

PART #	MATERIAL	STARS	CTM
2A-SA	NEVERUST®	★★★	.06" x .01"
2A-S	Stainless Steel	★★★	.06" x .01"
2A	Carbon Steel	★★★	.06" x .01"
2A-SA-PI	S/S Antimagnetic	★★	
2A-SA-SE	S/S Antimagnetic	★	
2A-S-SE	Stainless Steel	★	



Tip Shape 


## #52A DESIGN

4 3/4" long

TAPERED TIPS WITH FLAT ROUND POINTS  
AND ANTI-CRUSH FEATURE

PART #	MATERIAL	STARS	CTM
52A-SA	NEVERUST®	★★★	.06" x .01"



Tip Shape 


## #F DESIGN

4 3/4" long

TAPERED TIPS WITH FLAT SQUARE POINTS

PART #	MATERIAL	STARS	CTM
F-SA	NEVERUST®	★★★	.06" x .01"
F-SA-PI	S/S Antimagnetic	★★	



Tip Shape 


## #2AB DESIGN

4 1/2" long

CURVED TIPS WITH FLAT ROUND POINTS

PART #	MATERIAL	STARS	CTM
2AB-N	Nickel	★★★	.06" x .01"
2AB-SA-PI	S/S Antimagnetic	★★	
2AB-SA-SE	S/S Antimagnetic	★	



Tip Shape 

# ELECTRONIC STYLE TWEEZERS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #12A DESIGN

4 3/4" long

PART #	MATERIAL	STARS	CTM
12A-SA	NEVERUST®	★★★	.06" x .01"

TAPERED TIPS WITH FLAT ROUND POINTS



Tip Shape



## #25 DESIGN

4 3/4" long

PART #	MATERIAL	STARS	CTM
25-SA	NEVERUST®	★★★	.14" x .02"

STRAIGHT TIPS WITH LARGE FLAT ROUND POINTS



Tip Shape



## #19 DESIGN

6 1/2" long

PART #	MATERIAL	STARS	CTM
19-S	Stainless Steel	★★★	.03" x .03"

LONG STRAIGHT TIPS WITH MEDIUM SERRATED POINTS



Tip Shape



## #20 DESIGN

5 1/2" long

PART #	MATERIAL	STARS	CTM
20-S	Stainless Steel	★★★	.04" x .03"
20-SA-PI	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH MEDIUM SERRATED POINTS



Tip Shape



# GENERAL PURPOSE TWEEZERS WITH STRONG TIPS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #20A DESIGN

4 ½" long

PART #	MATERIAL	STARS	CTM
20A-S-SE	Stainless Steel	★	

STRAIGHT TIPS WITH MEDIUM SERRATED POINTS



Tip Shape



## #21 DESIGN

STRAIGHT TIPS WITH BROAD SERRATED POINTS

PART #	MATERIAL	STARS	CTM	LENGTH
21-6-SA	NEVERUST®	★★★	.08" x .04"	6"
21-8-SA	NEVERUST®	★★★	.10" x .06"	8"
21-SA-PI	S/S Antimagnetic	★★		6"
21-SA-SE	S/S Antimagnetic	★		6"
21-SA-SE-12	S/S Antimagnetic	★		12"



## #22 DESIGN

5 ½" long

ANGLE TIPS WITH MEDIUM FINE SERRATED POINTS

PART #	MATERIAL	STARS	CTM
22-SA	NEVERUST®	★★★	.04" x .02"
22*	Carbon Steel	★★★	.04" x .02"



\* Nickel Plated

Tip Shape



## #24 DESIGN

ANGLE TIPS WITH BROAD SERRATED POINTS

PART #	MATERIAL	STARS	CTM	LENGTH
24-6-SA	NEVERUST®	★★★	.02" x .02"	6"
24-8-SA	NEVERUST®	★★★	.08" x .06"	8"
24-SA-PI	S/S Antimagnetic	★★		6"
24-SA-SE	S/S Antimagnetic	★		6"



Tip Shape



# GENERAL PURPOSE TWEEZERS WITH STRONG TIPS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #24 DESIGN 6 ½" long

PART #	MATERIAL	STARS
24-SA-SE-PH	S/S Antimagnetic	★

ANGLED TIPS WITH BLUNT SERRATED POINTS  
AND VINYL GRIPS



## #24A DESIGN 4 ½" long

PART #	MATERIAL	STARS
24A-S-SE	Stainless Steel	★

CURVED TIPS WITH MEDIUM SERRATED POINTS



## #P DESIGN 4 ¾" long

PART #	MATERIAL	STARS	CTM
P-S	Stainless Steel	★★★	.01" x .01"

STRAIGHT TIP TWEEZERS WITH FINE PRECISION  
POINTS



## #231 DESIGN 4 ¾" long

PART #	MATERIAL	STARS	JAW
231A-SA-SE	S/S Antimagnetic	★	Serrated
231-SA-SE	S/S Antimagnetic	★	Smooth

STRAIGHT TIPS WITH MEDIUM POINTS



# GENERAL PURPOSE TWEEZERS WITH STRONG TIPS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #MM DESIGN 5" long

PART #	MATERIAL	STARS	CTM
MM*	Carbon Steel	★★★	.02" x .02"
MM-SA-PI	S/S Antimagnetic	★★	
MM-SA-SE	S/S Antimagnetic	★	
MM-SE	Carbon Steel	★	

STRAIGHT TIPS WITH STURDY POINTS



\* Nickel Plated

Tip Shape



## #10G DESIGN 4 3/8" long

PART #	MATERIAL	STARS	CTM
10G-SA	NEVERUST®	★★★	.01" x .01"

MEDIUM SERRATED TIPS



## #8 DESIGN 4 1/4" long

PART #	MATERIAL	STARS
8-SA-PI	S/S Antimagnetic	★★

STRAIGHT WIDE BODY TWEEZERS WITH FLAT SHARP POINTS



## #AH DESIGN 5" long

PART #	MATERIAL	STARS
AH-SA-SE	S/S Antimagnetic	★

WIDE DIAMOND SHAPE SERRATED TIPS



# GENERAL PURPOSE TWEEZERS WITH STRONG TIPS

- ★★★ HIGH PRECISION
- ★★ FINE PRECISION
- ★ GENERAL PRECISION

## #AA DESIGN 4 7/8" long

PART #	MATERIAL	STARS	CTM
AA-SA	NEVERUST®	★★★	.01" x .01"
AA-S	Stainless Steel	★★★	.01" x .01"
AA*	Carbon Steel	★★★	.01" x .01"
AA-SA-PI	S/S Antimagnetic	★★	
AA-SA-SE	S/S Antimagnetic	★	
AA-S-SE	Stainless Steel	★	
AA-SE	Carbon Steel	★	

STRAIGHT TIPS WITH MEDIUM POINTS



\* Nickel Plated

## #AA DESIGN 5" long

PART #	MATERIAL	STARS
AA-SA-SE-PH	S/S Antimagnetic	★

STRAIGHT TIPS WITH MEDIUM POINTS AND VINYL GRIPS



## #RR DESIGN 5 1/2" long

PART #	MATERIAL	STARS	CTM
RR	Carbon Steel*	★★★	.03" x .02"

STRAIGHT TIPS WITH MEDIUM POINTS



\* Nickel Plated

## #GG DESIGN 5" long

PART #	MATERIAL	STARS	CTM
GG-SA	NEVERUST®	★★★	.01" x .01"

TAPERED TIPS WITH MEDIUM POINTS



# SMALL PARTS HANDLING TWEEZERS

## SPECIAL DESIGNS

- ★ ★ ★ HIGH PRECISION
- ★ GENERAL PRECISION

### SMALL TIP TWEEZER 4 1/4" long

PART #	MATERIAL	STARS	HOLE SIZE
38	Carbon Steel	★★★	.008"
40	Carbon Steel	★★★	.015"
40-S	Stainless Steel	★★★	.015"

SMALL DIAMETER HOLE



Enlarged to show tip detail of Part No. 40-S



### #35 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
35A-SA	NEVERUST®	★★★	.29" x .01"
35A-SA-SE	S/S Antimagnetic	★	

BROAD, FLAT TIPS



### #815-SA-SE ★ 4 1/2" long

#### ROUND TIP TWEEZERS

These tweezers can handle many types of round components and electronic devices. The inside hole diameter is 0.060" (1.5mm). S/S Antimagnetic.



#### 815B-SA-SE ★

Same as above with 45° offset tips.

### 135A-SA ★★★ 4 3/4" long

#### BROAD TIP TWEEZERS

Used for picking up delicate parts by the edges from a flat surface. Tips close parallel at .750". NEVERUST®.





# SMALL PARTS HANDLING TWEEZERS

## SPECIAL DESIGNS

- ★ ★ ★ HIGH PRECISION
- ★ GENERAL PRECISION

**32A-SA ★★ ★ 4 ½" long**

**ROUND TIP TWEEZERS**

Holds components firmly, offering easy positioning on many types of resistors and diodes. The 45 degree angle allows maximum surface clearance. In a closed position, the inside diameter is .156" (4.0 mm.) NEVERUST®.



**42A-SA ★★ ★ 4 ½" long**

**ROUND TIP TWEEZERS**

Holds components firmly, offering easy positioning. Can be used on many types of cylindrical components. The 45 degree angle allows maximum surface clearance. In a closed position, the inside diameter is .253" (6.5mm.) NEVERUST®.



**27-SA ★★ ★ 4 ¼" long**

**FLAT TIP TWEEZERS**

Very useful when straightening components or lead wires. NEVERUST®.  
CTM = .25" X .02"



**#36 DESIGN 4 ¾" long**

**45 DEGREE OFFSET BROAD TIPS**

PART #	MATERIAL	STARS	CTM
36A-SA	NEVERUST®	★★★	.25" x .02"
36A-SA-SE	S/S Antimagnetic	★	



# SURFACE MOUNT HANDLING TWEEZERS

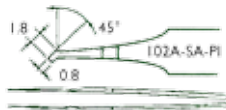
SPECIAL DESIGNS  
★★ FINE PRECISION

ALL TIP DIMENSIONS ARE METRIC

## **102A-SA-PI ★★ 4 ½" long**

### CHIP HANDLING PADDLE TIP TWEEZERS

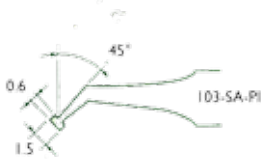
The wider point has been designed for easy manipulation of most chips and miniature components. Anti-crush device has been added to reduce chip breakage. S/S Antimagnetic



## **103-SA-PI ★★ 4 ¼" long**

### S.M.D. PADDLE TIP TWEEZERS

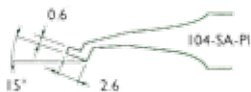
The 45° angle tips are very helpful for placing SOT-23 and SOT-89 packages. S/S Antimagnetic



## **104-SA-PI ★★ 4 ½" long**

### S.M.D. PADDLE TIP TWEEZERS

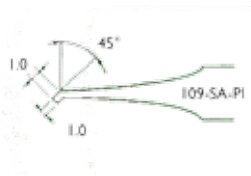
The wide paddle points provide perfect control when manipulating and placing SOT-89 transistors and monolithic chip capacitors. S/S Antimagnetic



## **109-SA-PI ★★ 4 ¼" long**

### S.M.D. PADDLE TIP TWEEZERS

The small points are set at a 45° angle for working in dense areas. S/S Antimagnetic



# SURFACE MOUNT HANDLING TWEEZERS

## SPECIAL DESIGNS

★★★ HIGH PRECISION

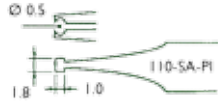
★★ FINE PRECISION

ALL TIP DIMENSIONS ARE METRIC

### 110-SA-PI ★★ 4 ¼" long

#### S.M.D. PADDLE TIP TWEEZERS

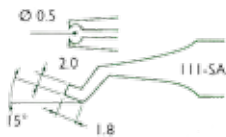
The small groove on the inside of the points provides better control when placing small parts and wires.  
S/S Antimagnetic



### 111-SA ★★★ 4 ½" long

#### S.M.D. PADDLE TIP TWEEZERS

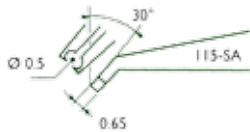
The angle of the tips and the small 0,5mm hole will firmly hold many types of SMD components.  
NEVERUST®



### 115-SA ★★★ 4 ¼" long

#### S.M.D. PADDLE TIP TWEEZERS

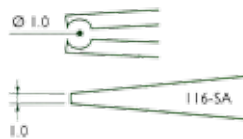
The 0,5mm groove on the inside of the tip is designed on a 30° angle for holding and placing cylindrical devices.  
NEVERUST®



### 116-SA ★★★ 4 ¼" long

#### S.M.D. PADDLE TIP TWEEZERS

Tips have a 1mm groove for handling small cylindrical devices.  
NEVERUST®



### 121-SA ★★★ 5 ½" long

#### CHIP HANDLING PADDLE TIP TWEEZERS

The thin flat tips are cut at 45° making these tweezers useful when picking parts from a "Gel Pak".  
NEVERUST®



# SURFACE MOUNT HANDLING TWEEZERS

SPECIAL DESIGNS

★★★ HIGH PRECISION

ALL TIP DIMENSIONS ARE METRIC

## I22-SA ★★★ 4 1/2" long

### CHIP HANDLING PADDLE TIP TWEEZERS

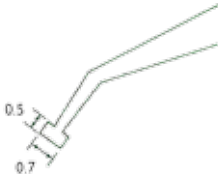
The strong flat tips will firmly hold components when de-soldering.  
NEVERUST®



## I23-SA ★★★ 4 1/2" long

### CHIP HANDLING PADDLE TIP TWEEZERS

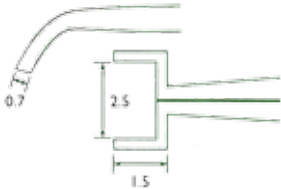
The smaller size tips will handle many types of S.M.D. resistors and capacitors.  
NEVERUST®



## I24-SA ★★★ 4 1/4" long

### S.M.D. PADDLE TIP TWEEZERS

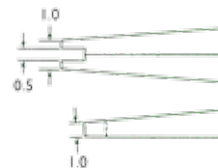
The unique shape tips on these tweezers are helpful in placing SOT-23 and TO-236 packages.  
NEVERUST®



## I25-SA ★★★ 4 1/4" long

### S.M.D. PADDLE TIP TWEEZERS

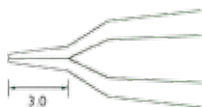
The tips on these tweezers have a 0,5mm slot in the end which is great for picking and placing of 402 resistors.  
NEVERUST®



## I26-SA ★★★ 4 1/4" long

### CHIP HANDLING FINE TIP TWEEZERS

The fine tip and parallel closing jaws are very useful for routing jumper wires on PC boards.  
NEVERUST®

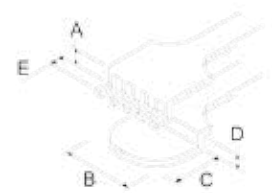


# W A F E R HANDLING TWEEZERS

MADE IN ITALY

★★★ HIGH PRECISION

★★ FINE PRECISION



Our Wafer Handling Tweezers include a special engaging slot for easy handling of wafers.

Made in Italy from Stainless Steel Antimagnetic. "B" models have a 20° bend in body to improve handling.

TWEEZERS

## 3" WAFER HANDLING TWEEZERS - 4 3/4" Long



### 390-SA-PI ★★★

A	4.0 MM	.157"
B	6.5 MM	.257"
C	5.0 MM	.197"
D	3.5 MM	.138"

### 390B-SA-PI ★★★

A	4.0 MM	.157"
B	6.5 MM	.257"
C	5.0 MM	.197"
D	3.5 MM	.138"
E	1.5 MM	.060"

### 390L-SA-PI ★★★

A	4.0 MM	.157"
B	6.5 MM	.257"
C	5.0 MM	.197"
D	3.5 MM	.138"
E	1.5 MM	.060"

### 390T-SA-PI ★★★

A	7.2 MM	.285"
B	6.5 MM	.257"
C	5.0 MM	.197"
D	3.5 MM	.138"

### 391-SA-PI ★★★

A	4.0 MM	.157"
B	6.5 MM	.257"
C	5.0 MM	.197"
D	3.5 MM	.138"
E	1.5 MM	.060"

## 4" WAFER HANDLING TWEEZERS - 4 7/8" Long



### 490-SA-PI ★★★

A	4.0 MM	.157"
B	12.0 MM	.472"
C	7.0 MM	.275"
D	3.1 MM	.125"

### 490B-SA-PI ★★★

A	4.0 MM	.157"
B	12.0 MM	.472"
C	7.0 MM	.275"
D	3.5 MM	.138"
E	3.1 MM	.125"

### 490L-SA-PI ★★★

A	4.0 MM	.157"
B	12.0 MM	.472"
C	7.0 MM	.275"
D	3.5 MM	.138"
E	3.1 MM	.125"

### 490T-SA-PI ★★★

A	4.0 MM	.157"
B	12.0 MM	.472"
C	7.0 MM	.275"
D	3.5 MM	.138"

### 491-SA-PI ★★★

A	4.0 MM	.157"
B	12.0 MM	.472"
C	7.0 MM	.275"
D	3.5 MM	.138"
E	3.1 MM	.125"

## 5" WAFER HANDLING TWEEZERS - 5" Long



### 590-SA-PI ★★★

A	4.0 MM	.157"
B	16.2 MM	.638"
C	9.0 MM	.355"
D	2.7 MM	.106"

### 591B-SA-PI ★★★

A	4.0 MM	.157"
B	16.2 MM	.638"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

### 590L-SA-PI ★★★

A	4.5 MM	.180"
B	16.2 MM	.638"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

### 590T-SA-PI ★★★

A	6.5 MM	.257"
B	16.2 MM	.638"
C	9.0 MM	.355"
D	2.7 MM	.106"

### 591-SA-PI ★★★

A	4.0 MM	.157"
B	16.2 MM	.638"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

## 6" WAFER HANDLING TWEEZERS - 5" Long



### 690-SA-PI ★★★

A	3.8 MM	.150"
B	19.8 MM	.780"
C	9.0 MM	.355"
D	2.7 MM	.106"

### 691B-SA-PI ★★★

A	3.0 MM	.118"
B	19.8 MM	.780"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

### 690L-SA-PI ★★★

A	3.5 MM	.140"
B	19.8 MM	.780"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

### 690T-SA-PI ★★★

A	6.5 MM	.257"
B	19.2 MM	.780"
C	9.0 MM	.355"
D	2.7 MM	.106"

### 691-SA-PI ★★★

A	3.0 MM	.118"
B	19.8 MM	.780"
C	9.0 MM	.355"
D	2.7 MM	.106"
E	3.1 MM	.125"

## 8" WAFER HANDLING TWEEZERS - 7" Long

### 891-SA ★★★

A	3.8 MM	.150"
B	28.5 MM	1.120"
C	11.5 MM	.450"
E	2.15 MM	.100"



### 890L-SA ★★★

A	3.8 MM	.150"
B	28.5 MM	1.120"
C	11.5 MM	.450"
E	2.15 MM	.100"



# ERGO-TWEEZE®

## ERGONOMIC TWEEZERS

### ESD SAFE CUSHION GRIPS

★★★★★ ULTRA PRECISION  
 ★★★ HIGH PRECISION  
 ★★ FINE PRECISION

#### Performance With The Ergonomic Advantage!

##### #AA DESIGN 5" long

PART #	MATERIAL	STARS	CTM
AA-SA-ET	NEVERUST®	★★★	.01" x .01"
AA-SA-PI-ET	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH MEDIUM POINTS



Tip Shape



##### #SS DESIGN 5 1/2" long

PART #	MATERIAL	STARS	CTM
SS-SA-ET	NEVERUST®	★★★	.01" x .01"

LONG STRAIGHT TIPS WITH PRECISION POINTS



Tip Shape



##### #00 DESIGN 4 1/2" long

PART #	MATERIAL	STARS	CTM
00-SA-ET	NEVERUST®	★★★	.02" x .01"
00-SA-PI-ET	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH MEDIUM POINTS



Tip Shape



##### #00D DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
00D-SA-ET	NEVERUST®	★★★	.02" x .01"
00D-SA-PI-ET	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH MEDIUM SERRATED POINTS



Tip Shape



# ERGO-TWEEZE®

## ERGONOMIC TWEEZERS

### ESD SAFE CUSHION GRIPS

★★★★★ ULTRA PRECISION  
 ★★★ HIGH PRECISION  
 ★★ FINE PRECISION

TWEEZERS


**Soft foam cushion grips provide relief from hand fatigue and Carpel Tunnel Syndrome.**

#### #1 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
1-SA-ET	NEVERUST®	★★★	.01" x .01"

STRAIGHT TIPS WITH FINE POINTS




Tip Shape 

#### #2 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
2-SA-ET	NEVERUST®	★★★	.01" x .01"

TAPERED TIPS WITH MEDIUM POINTS




Tip Shape 

#### #2A DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
2A-SA-ET	NEVERUST®	★★★	.06" x .01"
2A-SA-PI-ET	S/S Antimagnetic	★★	

TAPERED TIPS WITH FLAT ROUND POINTS




Tip Shape 

#### #3 DESIGN 4 3/4" long

PART #	MATERIAL	STARS	CTM
3-CO-ET	COBALTIMA®	★★★★★	.003" X .002"
3-SA-ET	NEVERUST®	★★★★	.01" x .01"
3-SA-PI-ET	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH VERY-FINE POINTS



Tip Shape 

# ERGO-TWEEZE®

## ERGONOMIC TWEEZERS

### ESD SAFE CUSHION GRIPS

★★★★★ ULTRA PRECISION  
 ★★★ HIGH PRECISION  
 ★★ FINE PRECISION

**Wider, Softer, Designed With You In Mind! Better Control!**

#### #3C DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
3C-CO-ET	COBALTIMA®	★★★★★	.004" X .002"
3C-SA-ET	NEVERUST®	★★★★	.01" x .01"
3C-SA-PI-ET	S/S Antimagnetic	★★	

STRAIGHT TIPS WITH VERY-FINE POINTS



Tip Shape



#### #4 DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
4-SA-ET	NEVERUST®	★★★	.01" x .01"

TAPERED TIPS WITH VERY-FINE POINTS



Tip Shape



#### #5 DESIGN 4 1/4" long

PART #	MATERIAL	STARS	CTM
5-CO-ET	COBALTIMA®	★★★★★	.002" X .001"
5-SA-ET	NEVERUST®	★★★★	.01" x .01"
5-S-ET	Stainless Steel	★★★★	.01" x .01"
5-SA-PI-ET	S/S Antimagnetic	★★	

TAPERED TIPS WITH HIGH PRECISION POINTS



Tip Shape



#### #5A DESIGN 4 5/8" long

PART #	MATERIAL	STARS	CTM
5A-SA-ET	NEVERUST®	★★★	.01" x .01"
5A-SA-PI-ET	S/S Antimagnetic	★★	

OFFSET TIPS WITH FINE POINTS



Tip Shape





# ERGO-TWEEZE®

## ERGONOMIC TWEEZERS

### ESD SAFE CUSHION GRIPS

★★★★★ ULTRA PRECISION  
 ★★★ HIGH PRECISION  
 ★★ FINE PRECISION

TWEEZERS

**A Breakthrough in Handling.**

#### #5B DESIGN 4 ¼" long

PART #	MATERIAL	STARS	CTM
5B-SA-ET	NEVERUST®	★★★	.01" x .01"
5B-SA-PI-ET	S/S Antimagnetic	★★	

BENT TIPS WITH FINE POINTS



Tip Shape

#### #6 DESIGN 4 ½" long

PART #	MATERIAL	STARS	CTM
6-SA-ET	NEVERUST®	★★★	.01" x .01"
6-SA-PI-ET	S/S Antimagnetic	★★	

ANGLED TIPS WITH FLAT SHARP POINTS



Tip Shape

#### #7 DESIGN 4 ½" long

PART #	MATERIAL	STARS	CTM
7-CO-ET	COBALTIMA®	★★★★★	.003" X .002"
7-SA-ET	NEVERUST®	★★★	.01" x .01"
7-SA-PI-ET	S/S Antimagnetic	★★	

CURVED TIPS WITH EXTRA FINE POINTS



Tip Shape

#### #5I DESIGN 4 ½" long

PART #	MATERIAL	STARS	CTM
5I-CO-ET	COBALTIMA®	★★★★★	.002" X .001"
5I-SA-ET	NEVERUST®	★★★	.01" x .01"
5I-SA-PI-ET	S/S Antimagnetic	★★	

BENT TIPS WITH VERY-FINE POINTS



Tip Shape

# CERAMIC TIP TWEEZERS

MADE IN SWITZERLAND

★★★★ EXTREME PRECISION  
★★★ HIGH PRECISION

Zirconia ceramic is six-times harder than stainless steel, non-magnetic and chemically inert. Solder will not adhere to the surface. It has a working temperature over 1090° C (2000° F) with a stainless steel body and replaceable tips. Non-metal tips for safe handling of delicate parts. Clean room safe.



Replacement Tip  
Kits available.

**D-275A-CE** ★★★★★ **4 ¾" long**

### WHITE CERAMIC TIP TWEEZERS

White Ceramic tips screwed onto NEVERUST® body. Tip size .012" wide.

Replacement Tip Kit D-275-RTX



**DN-277-CE** ★★★★★ **4 ¾" long**

### WHITE CERAMIC TIP REVERSE ACTION TWEEZERS

White Ceramic tips screwed onto NEVERUST® body. Tip size .020" wide.

Replacement Tip Kit D-275-RTX



**277-CE** ★★★ **5" long**

### WHITE CERAMIC TIP TWEEZERS

White Ceramic tips screwed onto nickel silver non-magnetic body. Tip size .040" wide.

\* Non-Replaceable Tips



# CERAMIC TIP TWEEZERS

MADE IN SWITZERLAND

★★★ HIGH PRECISION

Zirconia ceramic is six-times harder than stainless steel, non-magnetic and chemically inert. Solder will not adhere to the surface. It has a working temperature over 1090° C (2000° F) with a stainless steel body and replaceable tips. Non-metal tips for safe handling of delicate parts. Clean room safe.



Replacement Tip  
Kits available.

**2A-CE ★★★**

**5 ¾" long**

### WHITE CERAMIC FLAT ROUND TIP TWEEZERS

White Ceramic tips screwed onto NEVERUST® body. Tip size .080" wide.

Replacement Tip Kit P/N is 2A-CE-RTX



**3-CE ★★★**

**5 ¾" long**

### WHITE CERAMIC TIP REVERSE ACTION TWEEZERS

White Ceramic tips screwed onto NEVERUST® body. Tip size .015" wide.

Replacement Tip Kit P/N is 3-CE-RTX



**7-CE ★★★**

**5 ¾" long**

### WHITE CERAMIC CURVED TIP TWEEZERS

White Ceramic tips screwed onto NEVERUST® body. Tip size .025" wide.

Replacement Tip Kit P/N is 7-CE-RTX



# PEEK TIP TWEEZERS

MADE IN SWITZERLAND

★★★★★ ULTRA PRECISION

PEEK is a high temperature thermoplastic with excellent chemical resistance. Inert to all common solvents, it resists a wide range of inorganic liquids. It has a working temperature of 249° C (480° F) and a NEVERUST® body.



Replacement Tip Kits available.

**162A-RT ★★★★★ 5" long**

### ESD SAFE PEEK FINE TIP TWEEZERS

On NEVERUST® body with .020" tip size.

Replacement Tip Kit P/N is 162A-RTX



**162B-RT ★★★★★ 5" long**

### ESD SAFE PEEK SMALL TIP TWEEZERS

On NEVERUST® body with .040" tip size.

Replacement Tip Kit P/N is 162B-RTX



**162C-RT ★★★★★ 5" long**

### ESD SAFE PEEK MEDIUM TIP TWEEZERS

On NEVERUST® body with .080" tip size.

Replacement Tip Kit P/N is 162C-RTX



**762A-RT ★★★★★ 5" long**

### ESD SAFE PEEK CURVED TIP TWEEZERS

On NEVERUST® body with .020" tip size.

Replacement Tip Kit P/N is 762A-RTX



# COPOLYMER TIP TWEEZERS

MADE IN SWITZERLAND

★★★★ EXTREME PRECISION

Copolymer tips have a surface resistivity of  $10^{10}$  Ohm cm, temperature resistant to 90° C (195° F) and are silicon and chloride free. Stainless steel antimagnetic body with screw on replaceable tips. ESD and clean room safe.



Replacement Tip  
Kits available.

**I79A-RT** ★★★★★ **5" long**

### COPOLYMER FINETIP TWEEZERS

Black Copolymer tips screwed onto NEVERUST® body with outside finger serrations. Tip size .020" wide.

Replacement Tip Kit P/N is I79A-RTX



**I79D-RT** ★★★★★ **5" long**

### COPOLYMER FLAT TIP TWEEZERS

Black Copolymer tips screwed onto NEVERUST® body with outside finger serrations. Tip size .080" wide.

Replacement Tip Kit P/N is I79D-RTX



**I79DN-RT** ★★★★★ **5 1/2" long**

### COPOLYMER REVERSE ACTION FLAT TIP TWEEZERS

Black Copolymer tips screwed onto NEVERUST® body. Tip size .080" wide.

Replacement Tip Kit P/N is I79D-RTX



**M-I79A-RT** ★★★★★ **3 1/4" long**

### MINIATURE COPOLYMER FINETIP TWEEZERS

Black Copolymer tips screwed onto NEVERUST® body. Tip size .020" wide.



# CARBOFIB TIP TWEEZERS

MADE IN ITALY  
★★★ HIGH PRECISION

Carbofib is a teflon base material with 30% carbon fibers added. Carbofib is conductive with a surface resistivity of  $10^3$  Ohm cm, and temperature resistant up to 121° C (249° F). Stainless steel antimagnetic body with screw on replaceable tips. Designed for safe handling of delicate parts.



Replacement Tip Kits available.

## **I59-RT ★★★ 5" long**

### EXTRA FINE CARBOFIB TIP TWEEZERS

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .012" wide.

Replacement Tip Kit P/N is I59-RTX



*Also Available in Reverse Action - Part No. I59-RTN*

## **I59A-RT ★★★ 5" long**

### FINE CARBOFIB TIP TWEEZERS

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .020" wide.

Replacement Tip Kit P/N is I59A-RTX



## **I59B-RT ★★★ 5" long**

### SMALL CARBOFIB TIP TWEEZERS

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .040" wide.

Replacement Tip Kit P/N is I59B-RTX



# CARBOFIB TIP TWEEZERS

MADE IN ITALY  
★★★ HIGH PRECISION

## **159C-RT ★★★ 5" long**

### **MEDIUM CARBOFIB TIP TWEEZERS**

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .080" wide.

Replacement Tip Kit P/N is 159C-RTX



## **159D-RT ★★★ 5" long**

### **FLAT CARBOFIB TIP TWEEZERS**

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .060" wide.

Replacement Tip Kit P/N is 159D-RTX



*Also Available in Reverse Action - Part No. 159D-RTN*

## **159E-RT ★★★ 5" long**

### **LARGE CARBOFIB TIP TWEEZERS**

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .120" wide.

Replacement Tip Kit P/N is 159E-RTX



## **759-RT ★★★ 5" long**

### **CURVED CARBOFIB TIP TWEEZERS**

Black Carbofib tips screwed onto S/S Antimagnetic body. Tip size .020" wide.

Replacement Tip Kit P/N is 759-RTX

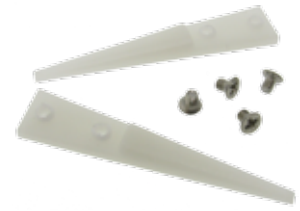


*Also Available in Reverse Action - Part No. 759-RTN*

# WHITE DELRIN TIP TWEEZERS

MADE IN ITALY  
★★★ HIGH PRECISION

Delrin tips have outstanding resistance to chemicals and solvents. They are electrically insulative and resistant to temperatures up to 85° C (185° F). Stainless steel antimagnetic body with screw on replaceable tips. Excellent for clean room use.



Replacement Tip  
Kits available.

**I59B-RTW ★★★ 5" long**

### WHITE DELRIN TIP TWEEZERS

White Delrin tips screwed onto S/S Antimagnetic body. Tip size .040" wide.

Replacement Tip Kit P/N is I59B-RTWX



**I59C-RTW ★★★ 5" long**

### WHITE DELRIN FLAT TIP TWEEZERS

White Delrin tips screwed onto S/S Antimagnetic body. Tip size .080" wide.

Replacement Tip Kit P/N is I59C-RTWX



**I59D-RTW ★★★ 5" long**

### WHITE DELRIN MEDIUM TIP TWEEZERS

White Delrin tips screwed onto S/S Antimagnetic body. Tip size .060" wide.

Replacement Tip Kit P/N is I59D-RTWX





# CONDUCTIVE PLASTIC HANDLING TWEEZERS

★★ FINE PRECISION

TWEEZERS

**3C-ESD ★★**

**4 5/8" long**

CONDUCTIVE PLASTIC TWEEZERS WITH SHARP POINTS

Temperature resistant to 100°C (212° F). Surface Resistivity of 10<sup>5</sup> Ohm.



**609-ESD ★★**

**4 5/8" long**

CONDUCTIVE PLASTIC TWEEZERS WITH 1/8" WIDE POINTS

Temperature resistant to 100°C (212° F). Surface Resistivity of 10<sup>5</sup> Ohm.



**35A-ESD ★★**

**4 1/2" long**

CONDUCTIVE PLASTIC TWEEZERS WITH 1/4" WIDE POINTS

Temperature resistant to 100°C (212° F). Surface Resistivity of 10<sup>5</sup> Ohm.



**6-ESD ★★**

**4 3/4" long**

CONDUCTIVE PLASTIC TWEEZERS WITH ANGLED TIPS AND SHARP POINTS

Temperature resistant to 100°C (212° F). Surface Resistivity of 10<sup>5</sup> Ohm.



**2A-ESD ★★**

**4 5/8" long**

CONDUCTIVE PLASTIC TWEEZERS WITH TAPERED TIPS 1/16" FLAT POINTS

Temperature resistant to 100°C (212° F). Surface Resistivity of 10<sup>5</sup> Ohm.



# PLASTIC HANDLING TWEEZERS

MADE IN USA  
★ GENERAL PRECISION

## Glass Filled Delrin and Acetal Tweezers

**61★**      **4 5/8" long**  
GLASS FILLED DELRIN TWEEZERS  
9/32" Wide Points

**808★**      **4 1/2" long**  
GLASS FILLED DELRIN TWEEZERS  
Sharp Angled Points

**7-LER★**      **4 1/2" long**  
GLASS FILLED DELRIN TWEEZERS  
Sharp Points

**609★**      **4 1/2" long**  
GLASS FILLED DELRIN TWEEZERS  
1/8" Wide Points

**300★**      **4 5/8" long**  
GLASS FILLED DELRIN TWEEZERS  
3/32" Wide Points

**P2A★**      **4 5/8" long**  
GLASS FILLED DELRIN TWEEZERS  
7/64" Flat Points

**7A-LER★**      **4 1/2" long**  
ACETAL TWEEZERS  
Clean Room Safe, anti-static  
tweezers with sharp Points

**609A★**      **4 1/2" long**  
ACETAL TWEEZERS  
Clean Room Safe, anti-static  
tweezers with 1/8" wide Points



# SPECIAL TWEEZERS

FOR UNIQUE APPLICATIONS

★★★★★ ULTRA PRECISION  
★★★ HIGH PRECISION

Other designs are available upon request.  
Call (866) 392-3582 for information.

TWEEZERS

**116-CF ★★★★★** 4 3/4" long

### S.M.D. CARBOFIB TWEezer

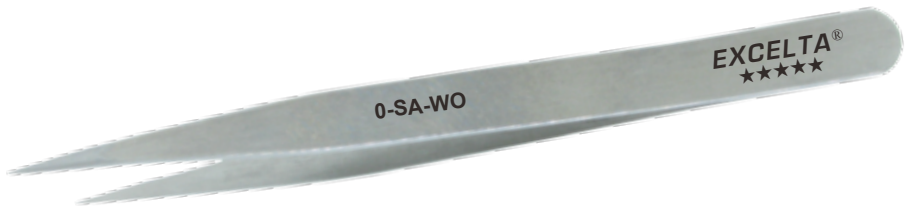
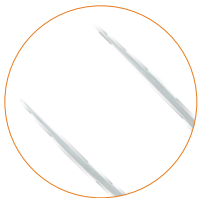
Carbofib tips mounted on a Stainless Steel body featuring a .039" (1,0mm) hole in the tip. Excellent in handling cylindrical devices without scratching or nicking.



**0-SA-WO ★★★★★** 4 3/4" long

### WIDE-OPENING PARALLEL JAW TWEezer

These tweezers feature blades that are parallel at 1/2". Makes for a sure grip when handling larger objects.



**15A-ST-PE ★★★★★** 4 1/2" long

### STRIPPING TWEezer

Designed to strip Teflon® and other coated wire exactly to the AWG size without nicking. Available in sizes 30AWG and smaller. When ordering indicate wire gauge at the end of catalog part number. (Example 15A-ST-PE-36)



**TRISISTA 3 ★★★** 6 1/2" long  
**TRISISTA 7 ★★★** 6 1/2" long

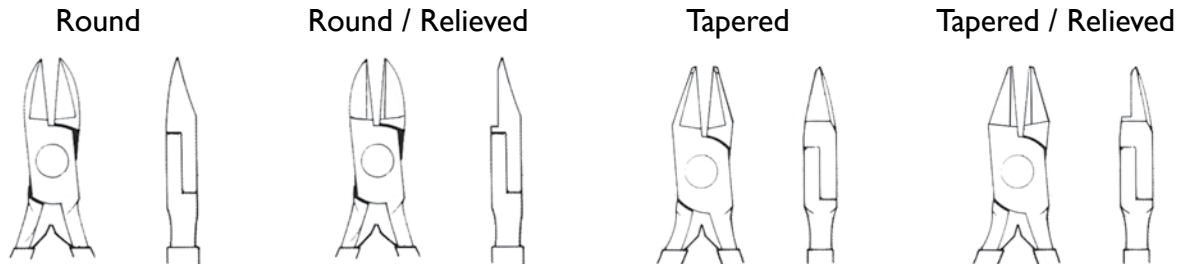
### JEWELERS TWEezer

Tweezers feature double serrated inside tips. Trisista 3 has a matte black finish to eliminate glare.



# EXCELTA®

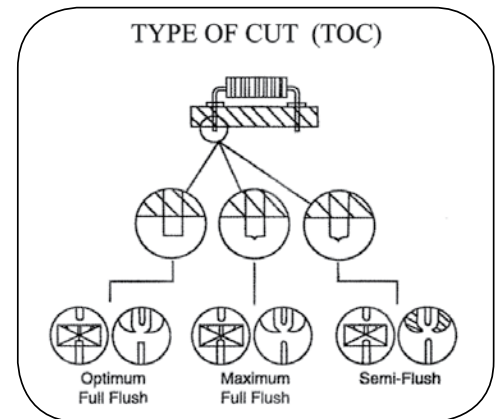
## PRECISION WIRE CUTTERS



**The Head Shape** of the ogival or round head is the most common head for a cutting tool. It allows for the maximum amount of “metal” behind the cutting edge delivering an extremely long tool life.

The tapered head was developed to allow the cutting tool to get into those “hard to reach” areas. It was designed more along diagonal lines with less “metal” behind the cutting edge.

**The “Type of Cut”** refers to the outside angle of the cutting blades. A semi-flush cutter (cutting edge at 45° with a .010” bevel) will produce more cuts than a maximum flush cutter. A maximum flush cutter (cutting edge at 45° with a .005” bevel) will produce more cuts than an optimum flush cutter (cutting edge out with no bevel). Be sure to choose the type of cut to suit your cutting needs.



**The Grip** on a hand tool should fit comfortably in your hand.

You can choose from our soft foam cushion grips or molded grips, both ergonomically designed and ESD Safe.



Teal Molded Grips -  $10^9\Omega/\text{sq}$   
Excelta Part No. GP-TEAL5



Teal Double-Dip Grips  $10^{10}\Omega/\text{sq}$   
Excelta Part No. GP-DDLP



Teal Foam Cushion Grips  $10^{10}\Omega/\text{sq}$   
Excelta Part No. GP-FOAM

# LAZER LINE<sup>®</sup> CUTTERS

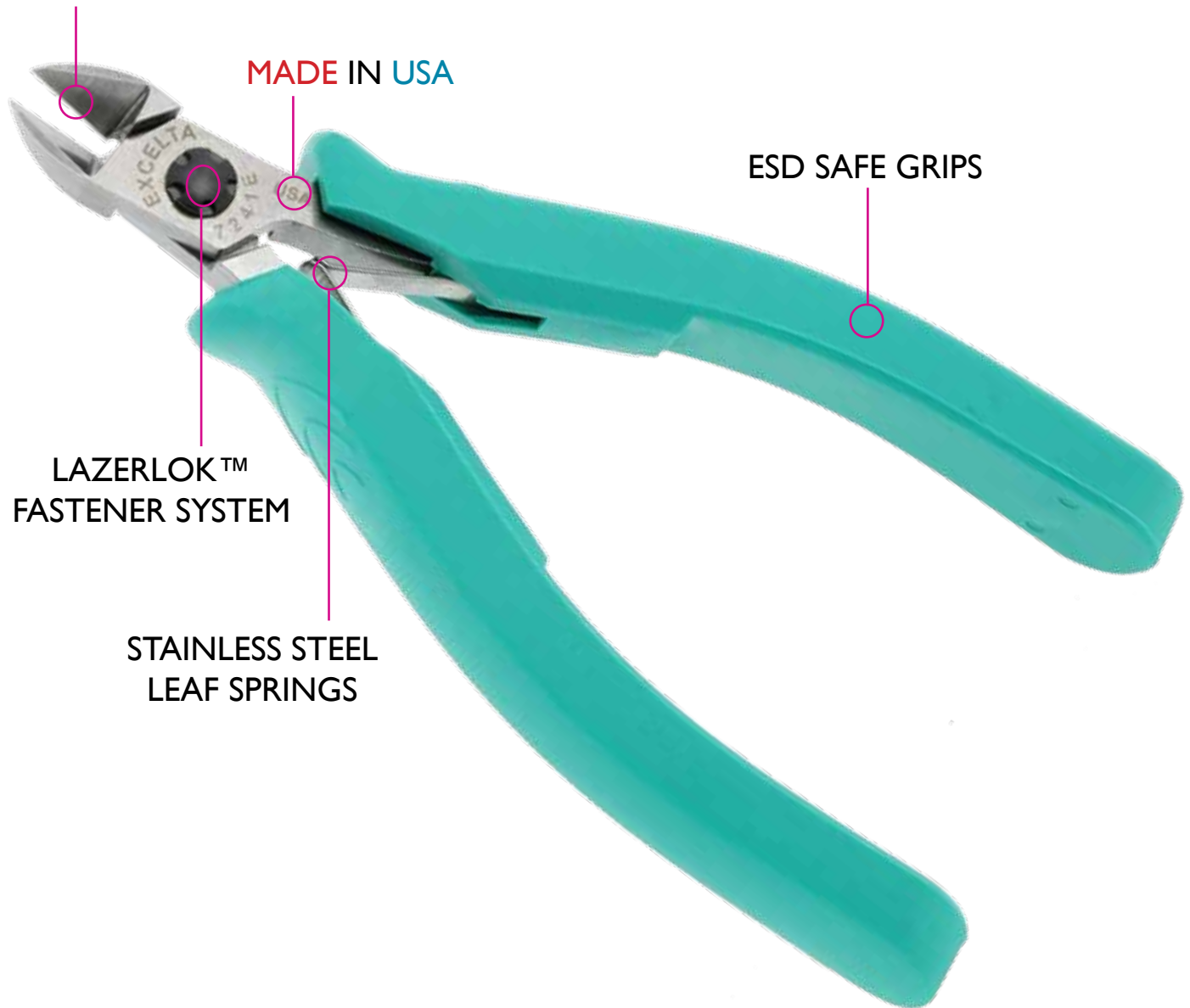
★★★★★ ULTRA PRECISION



TWEEZERS

Excelta has pioneered the combined use of Laser technology with the most advanced CNC machining to produce the finest grade cutter available. We start with premium steel made in the USA, laser cut for consistency, and CNC machined to exact specifications. The cutting blades are induction hardened to 63 - 65 Rockwell C for durability and precision hard-milled for sharpness to produce state of the art tools, *Precisely Right* for all your cutting needs.

EDGES ARE INDUCTION  
HARDENED TO RHC 63-65



MADE IN USA

ESD SAFE GRIPS

LAZERLOK<sup>™</sup>  
FASTENER SYSTEM

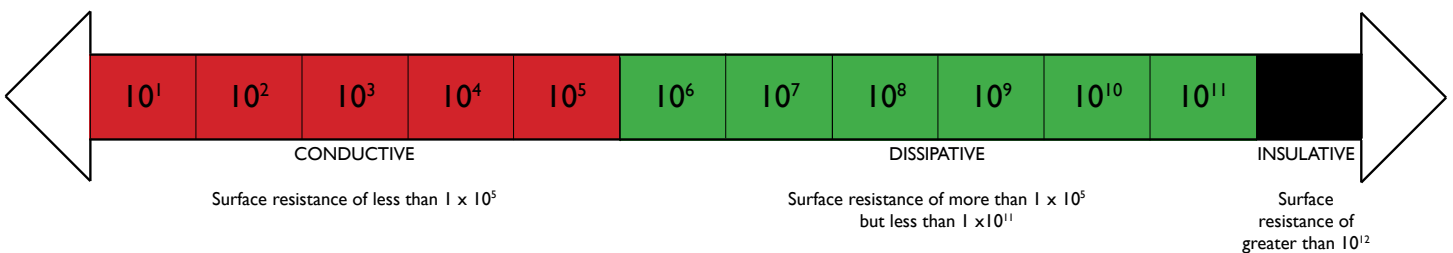
STAINLESS STEEL  
LEAF SPRINGS

# CUTTER CORRELATION CHART

Reference #	Cut	Wire Type	.010"	.012"	.016"	.020"	.025"	.032"	.040"	.050"	.064"
			30 AWG	28 AWG	26 AWG	24 AWG	22 AWG	20 AWG	18 AWG	16 AWG	14 AWG
2876EHT	SF	Soft									
		Hard									
2896EHT	SF	Soft									
		Hard									
2897EHT	SF	Soft									
		Hard									
2899EHT	SF	Soft									
		Hard									
7104E / 7204E	MF	Soft									
7130E / 7230E	SF	Soft									
7230EH	SF	Hard									
7131E / 7231E	MF	Soft									
7231EH	MF	Hard									
7132E / 7232E	OF	Soft									
7134E / 7234E	MF	Soft									
7135E / 7235E	OF	Soft									
7137E / 7237E	MF	Soft									
7237EH	MF	Hard									
7138E / 7238E	OF	Soft									
7140E / 7240E	SF	Soft									
7141E / 7241E	MF	Soft									
7241EHT	MF	Hard									
7142E / 7242E	OF	Soft									
7143E / 7243E	SF	Soft									
7144E / 7244E	MF	Soft									
7145E / 7245E	OF	Soft									
7146E / 7246E	SF	Soft									
7147E / 7247E	MF	Soft									
7247EHT	MF	Hard									
7148E / 7248E	OF	Soft									
7150E / 7250E	SF	Soft									
7151E / 7251E	MF	Soft									
7152E / 7252E	OF	Soft									
7170E / 7270E	OF	Soft									
7171E / 7271E	OF	Soft									
7172E / 7272E	MF	Soft									
7174E / 7274E	OF	Soft									
7175E / 7275E	MF	Soft									
7182E / 7282E	MF	Soft									
7282EH	MF	Hard									
7282EHT	MF	Hard									
7183E / 7283E	OF	Soft									
7149E / 7249E	OF	Soft									
9240E	SF	Soft									
9241E	MF	Soft									
9242E	OF	Soft									
9243E	SF	Soft									
9244E	MF	Soft									
9245E	OF	Soft									
9246E	SF	Soft									
9247E	MF	Soft									
9248E	OF	Soft									

## ESD, Insulative, Conductive, Dissipative or Anti-Static. What do these terms mean?

ESD is an acronym for electrostatic discharge. Many times it is used incorrectly as a term for something that is "electrostatic discharge safe." The terms Insulative, Conductive, and Dissipative are all terms which subdivide ESD into more detail.



# 7000 SERIES

## PRECISION WIRE CUTTERS

# SMALL HEAD CUTTERS

★★★★★ ULTRA PRECISION

MADE IN THE USA

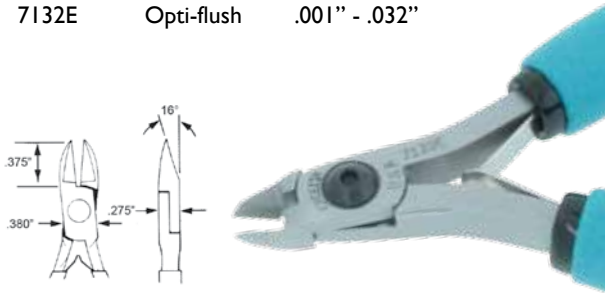


TWEEZERS

### LONG ERGONOMIC HANDLES

#### 5 3/4" Small Round Head

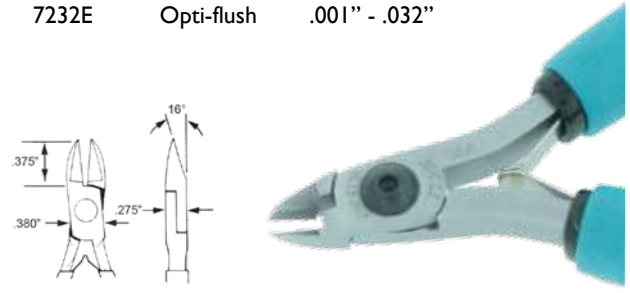
PART #	CUT TYPE	CUTTING CAPACITY
7130E	Semi-flush	.008" - .040"
7131E	Max flush	.005" - .040"
7132E	Opti-flush	.001" - .032"



### STANDARD HANDLES

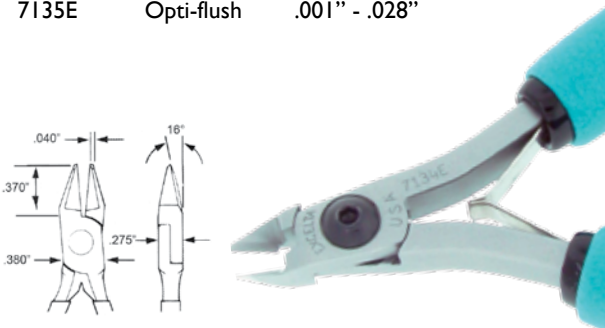
#### 5" Small Round Head

PART #	CUT TYPE	CUTTING CAPACITY
7230E	Semi-flush	.008" - .040"
7231E	Max flush	.005" - .040"
7232E	Opti-flush	.001" - .032"



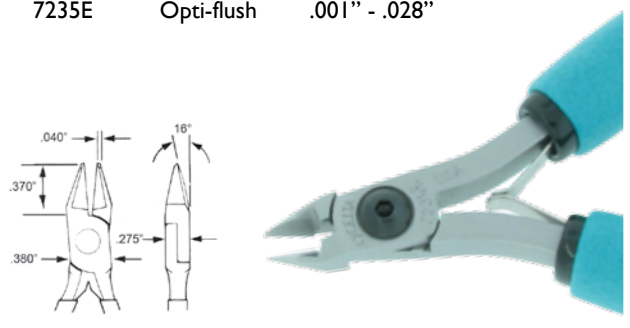
#### 5 3/4" Small Tapered Head

PART #	CUT TYPE	CUTTING CAPACITY
7134E	Max flush	.005" - .032"
7135E	Opti-flush	.001" - .028"



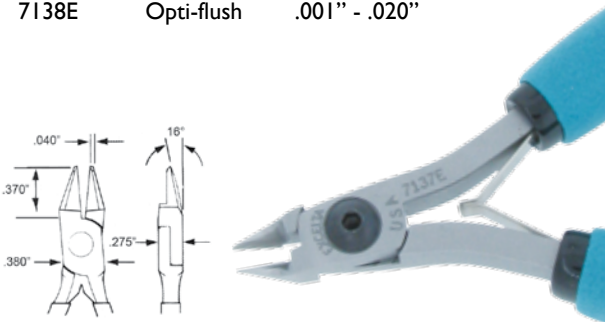
#### 5" Small Tapered Head

PART #	CUT TYPE	CUTTING CAPACITY
7234E	Max flush	.005" - .032"
7235E	Opti-flush	.001" - .028"



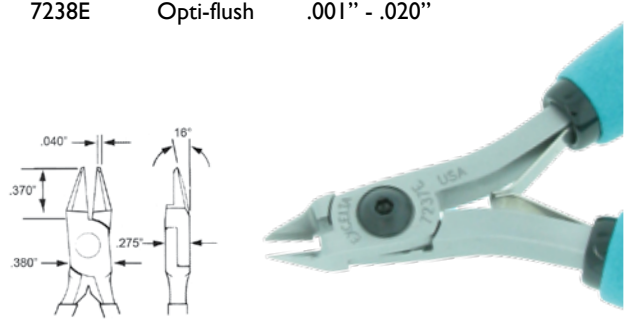
#### 5 3/4" Small Tapered / Relieved Head

PART #	CUT TYPE	CUTTING CAPACITY
7137E	Max flush	.005" - .028"
7138E	Opti-flush	.001" - .020"



#### 5" Small Tapered / Relieved Head

PART #	CUT TYPE	CUTTING CAPACITY
7237E	Max flush	.005" - .028"
7238E	Opti-flush	.001" - .020"



# 7000 SERIES PRECISION WIRE CUTTERS

## MEDIUM HEAD CUTTERS

★★★★★ ULTRA PRECISION

Excelta has pioneered the use of Laser technology with advanced CNC machining to produce the finest cutters available. We start with premium steel, laser cut for consistency and CNC machined to exact specifications. The cutting blades are induction hardened to RHc 63 - 65 and precision hard-milled for sharpness.

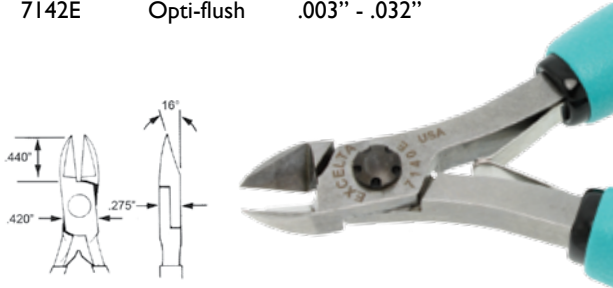
**MADE IN USA**

LONG ERGONOMIC HANDLES

STANDARD HANDLES

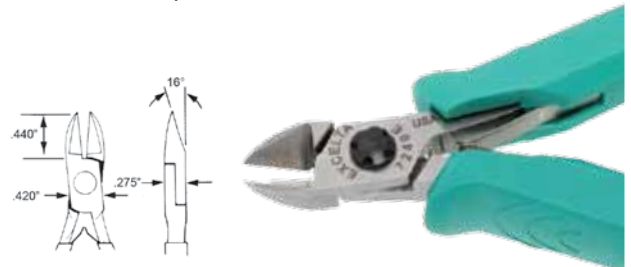
### 5 3/4" Medium Round Head

PART #	CUT TYPE	CUTTING CAPACITY
7140E	Semi-flush	.008" - .042"
7141E	Max flush	.005" - .040"
7142E	Opti-flush	.003" - .032"



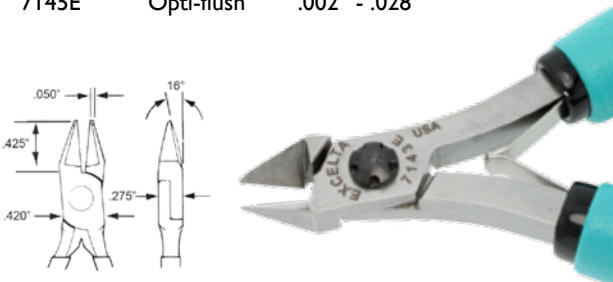
### 5" Medium Round Head

PART #	CUT TYPE	CUTTING CAPACITY
7240E	Semi-flush	.008" - .042"
7241E	Max flush	.005" - .040"
7242E	Opti-flush	.003" - .032"



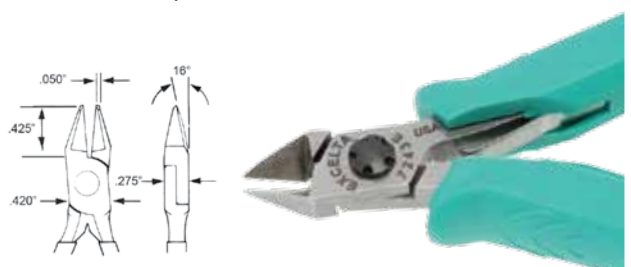
### 5 3/4" Medium Tapered Head

PART #	CUT TYPE	CUTTING CAPACITY
7143E	Semi-flush	.008" - .036"
7144E	Max flush	.005" - .036"
7145E	Opti-flush	.002" - .028"



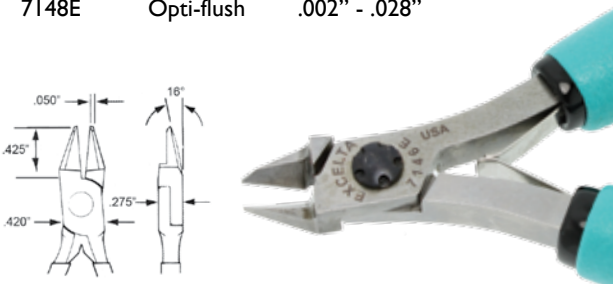
### 5" Medium Tapered Head

PART #	CUT TYPE	CUTTING CAPACITY
7243E	Semi-flush	.008" - .036"
7244E	Max flush	.005" - .036"
7245E	Opti-flush	.002" - .028"



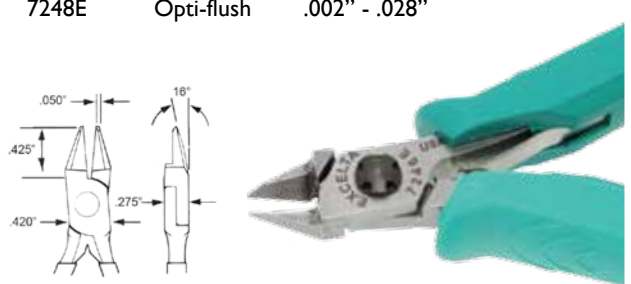
### 5 3/4" Medium Tapered / Relieved Head

PART #	CUT TYPE	CUTTING CAPACITY
7146E	Semi-flush	.008" - .036"
7147E	Max flush	.005" - .036"
7148E	Opti-flush	.002" - .028"



### 5" Medium Tapered / Relieved Head

PART #	CUT TYPE	CUTTING CAPACITY
7246E	Semi-flush	.008" - .036"
7247E	Max flush	.005" - .036"
7248E	Opti-flush	.002" - .028"





# 7000 SERIES

## PRECISION WIRE CUTTERS

# ANGULATED HEAD CUTTERS

★★★★★ ULTRA PRECISION

TWEEZERS

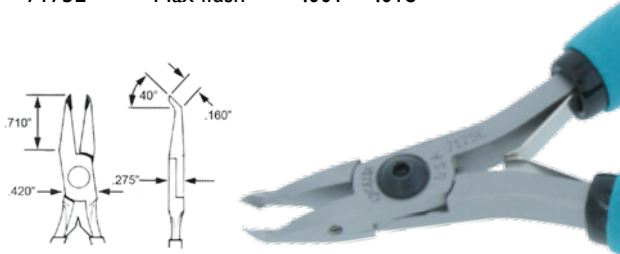
**MADE IN USA**

LONG ERGONOMIC HANDLES

STANDARD HANDLES

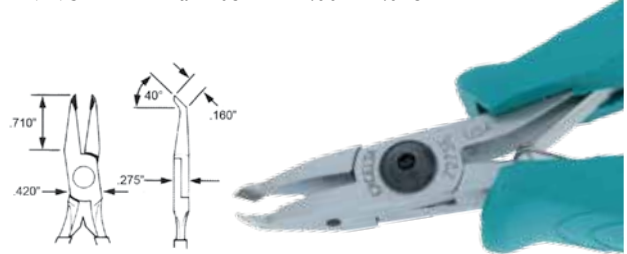
### 6" Miniature Angulated Head

PART # 7175E CUT TYPE Max flush CUTTING CAPACITY .001" - .018"



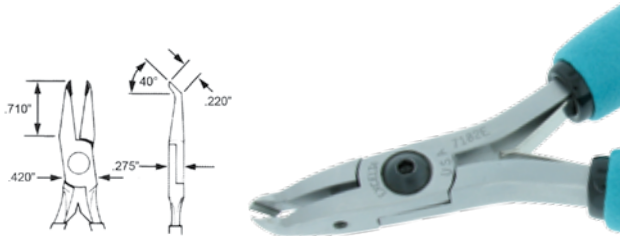
### 5 1/4" Miniature Angulated Head

PART # 7275E CUT TYPE Max flush CUTTING CAPACITY .001" - .018"



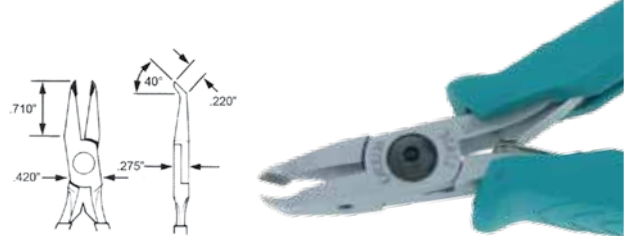
### 6" Medium Angulated Head

PART # 7182E CUT TYPE Max flush CUTTING CAPACITY .003" - .025"



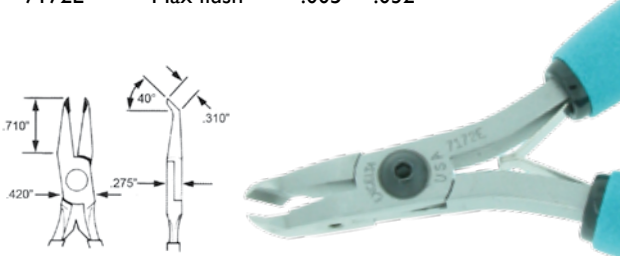
### 5 1/4" Medium Angulated Head

PART # 7282E CUT TYPE Max flush CUTTING CAPACITY .003" - .025"



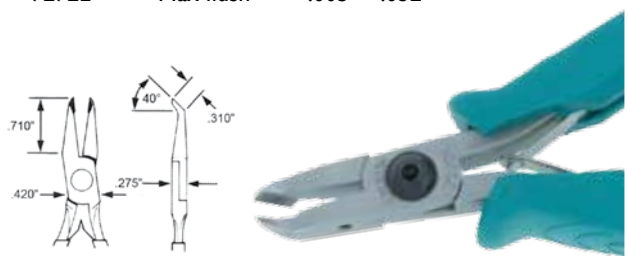
### 6" Large Angulated Head

PART # 7172E CUT TYPE Max flush CUTTING CAPACITY .005" - .032"



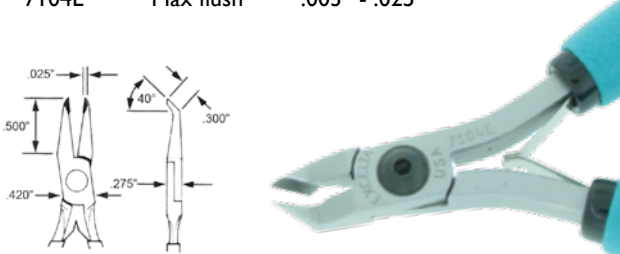
### 5 1/4" Large Angulated Head

PART # 7272E CUT TYPE Max flush CUTTING CAPACITY .005" - .032"



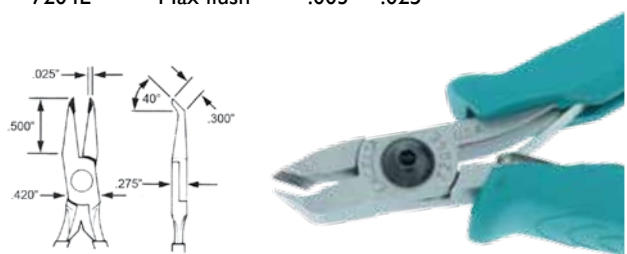
### 6" Large Angulated/Tapered Head

PART # 7104E CUT TYPE Max flush CUTTING CAPACITY .003" - .025"



### 5 1/4" Large Angulated/Tapered Head

PART # 7204E CUT TYPE Max flush CUTTING CAPACITY .003" - .025"



# 7000 SERIES

## PRECISION WIRE CUTTERS

# FINE TIP CUTTERS

★★★★★ ULTRA PRECISION

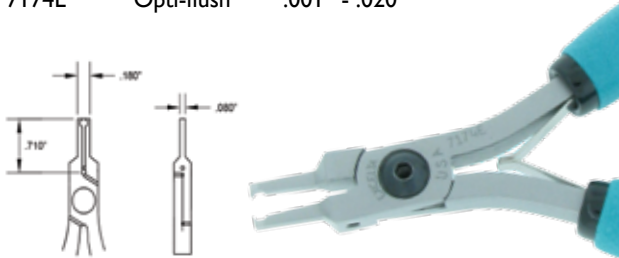
**MADE IN USA**

LONG ERGONOMIC HANDLES

STANDARD HANDLES

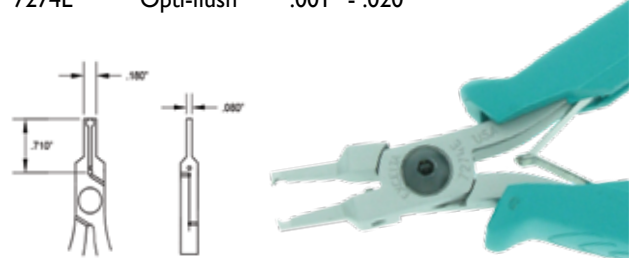
### 6" Transverse End Cutter

PART # 7174E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



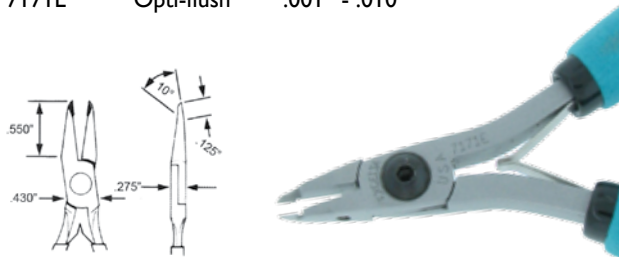
### 5 1/2" Transverse End Cutter

PART # 7274E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



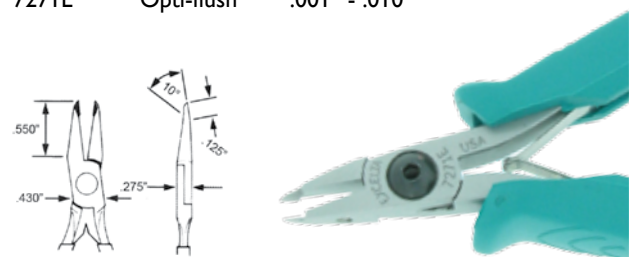
### 5 3/4" Small Fine Tip Cutter

PART # 7171E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .010"



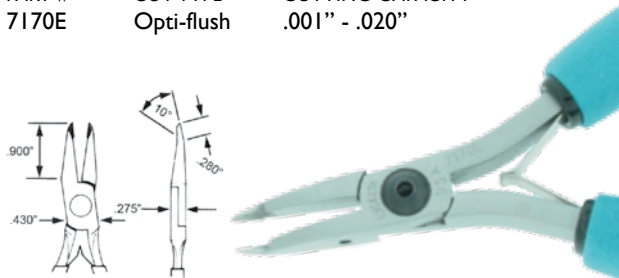
### 5 1/4" Small Fine Tip Cutter

PART # 7271E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .010"



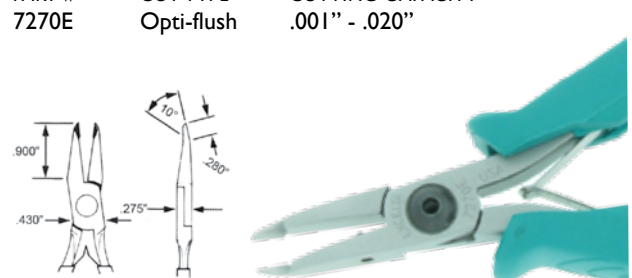
### 6 1/4" Medium Fine Tip Cutter

PART # 7170E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



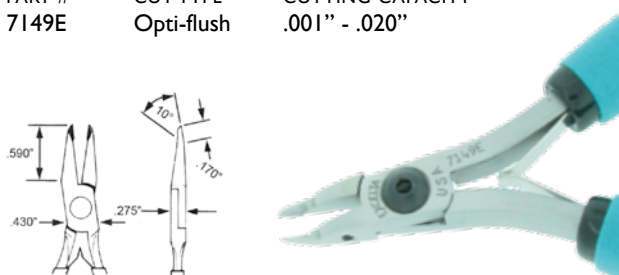
### 5 3/4" Medium Fine Tip Cutter

PART # 7270E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



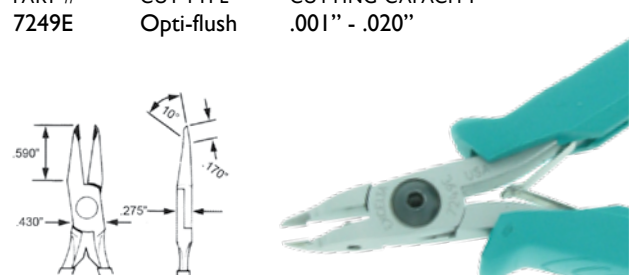
### 5 3/4" Relieved Fine Tip Cutter

PART # 7149E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



### 5 1/2" Relieved Fine Tip Cutter

PART # 7249E  
CUT TYPE Opti-flush  
CUTTING CAPACITY .001" - .020"



# 7000 SERIES HARD WIRE CUTTERS

## CARBIDE INSERT CUTTERS

★★★★★ ULTRA PRECISION

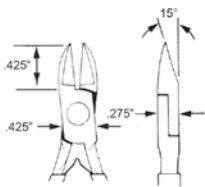
**MADE IN USA**

Carbide insert cutters are made from carbon steel cutter blanks with tungsten carbide inserts. The extremely hard cutting edge (79/81 Rockwell "C") is excellent for cutting most types of medical and hard wires. All carbide insert cutters feature a maximum flush cut.

TWEEZERS

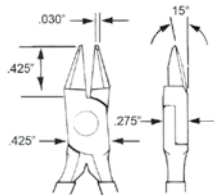
### 5" Medium Round Head Carbide Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7241EHT	Max flush	.008" - .020" <i>Hard Wire</i>



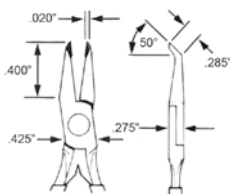
### 5" Medium Tapered/Relieved Head Carbide Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7247EHT	Max flush	.008" - .020" <i>Hard Wire</i>



### 5" Angulated Head Carbide Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7282EHT	Max flush	.005" - .020" <i>Hard Wire</i>



# 7000 SERIES HARD WIRE CUTTERS

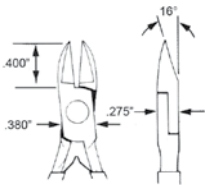
# TUNGSTEN ALLOY CUTTERS ★★★★★ ULTRA PRECISION

Tungsten Alloy cutters are made from a special blend of tungsten cobalt, vanadium and chromium. A unique heat treating process makes a very hard, tough cutting edge (66/68 Rockwell "C").

**MADE IN USA**

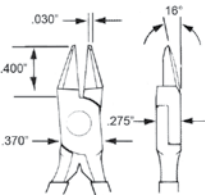
### 4 3/4" Miniature Head Tungsten Alloy Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7230EH	Semi-flush	.001" - .020" <b>Hard Wire</b>
7231EH	Max flush	.003" - .010" <b>Hard Wire</b>



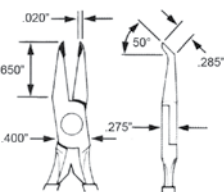
### 4 3/4" Miniature Tapered/Relieved Tungsten Alloy Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7237EH	Max flush	.003" - .010" <b>Hard Wire</b>



### 5" Angulated Head Tungsten Alloy Cutter

PART #	CUT TYPE	CUTTING CAPACITY
7282EH	Max flush	.003" - .007" <b>Hard Wire</b>



# 9000 SERIES

## SLIM LINE WIRE CUTTERS

# SMALL HEAD CUTTERS

★★★★ EXTREME PRECISION

- Cutting Blades Hardened to RHC 63 - 65
- Low profile Narrow Head Design
- Handles Are Designed For Comfort in Smaller Hands
- Stainless Steel Leaf Springs

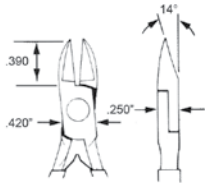


**MADE IN USA**

TWEEZERS

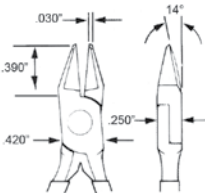
### 5" Medium Round Head

PART #	CUT TYPE	CUTTING CAPACITY
9240E	Semi-flush	.010" - .040"
9241E	Max flush	.005" - .040"
9242E	Opti-flush	.002" - .032"



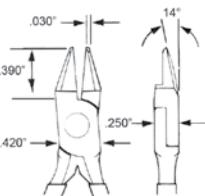
### 5" Medium Tapered Head

PART #	CUT TYPE	CUTTING CAPACITY
9243E	Semi-flush	.010" - .040"
9244E	Max flush	.005" - .032"
9245E	Opti-flush	.002" - .025"



### 5" Medium Tapered / Relieved Head

PART #	CUT TYPE	CUTTING CAPACITY
9246E	Semi-flush	.010" - .040"
9247E	Max flush	.005" - .032"
9248E	Opti-flush	.002" - .025"



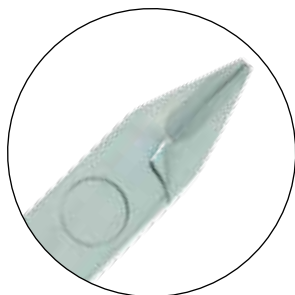
# 2800 SERIES WIRE CUTTERS

## CARBIDE INSERT CUTTERS

★ ★ FINE PRECISION



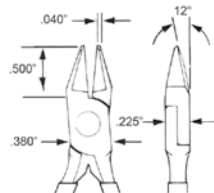
The Excelta 2-Star precision Multi-Purpose Cutters are made from the finest materials and are designed with quality and value in mind. These tools feature Stainless Steel construction for excellent corrosion resistance and carbide inserts for maximum blade life. Semi-Flush Cut with ESD Safe soft foam cushion grips.



2876EHT Carbide Insert  
(actual size)

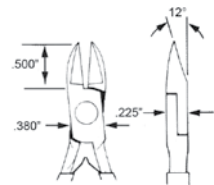
### 4 1/4" Small Tapered Head Cutter

PART #	CUT TYPE	CUTTING CAPACITY
2876EHT	Semi-flush	.010" - .025" Soft Wire .008" - .010" Hard Wire



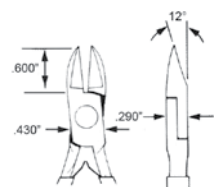
### 4 1/2" Small Round Head Cutter

PART #	CUT TYPE	CUTTING CAPACITY
2899EHT	Semi-flush	.010" - .030" Soft Wire .008" - .012" Hard Wire



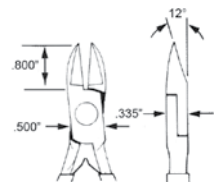
### 4 1/2" Medium Round Head Cutter

PART #	CUT TYPE	CUTTING CAPACITY
2897EHT	Semi-flush	.010" - .032" Soft Wire .010" - .020" Hard Wire



### 5 1/2" Large Round Head Cutter

PART #	CUT TYPE	CUTTING CAPACITY
2896EHT	Semi-flush	.012" - .064" Soft Wire .012" - .032" Hard Wire



# MULTI-PURPOSE CABLE AND WIRE CUTTERS

★★★ HIGH PRECISION

★★ FINE PRECISION

## 7" Tube and Cable Cutter

51-T ★★

Stainless steel cutting blades provide a smooth clean cut on plastic tubing and soft cables.

*Shear Cut, Cutting Capacity 3/8"*



## 6" Precision Cable Cutter

51I-6 ★★★

Recommended for cutting stranded cables and wires up to 1/2". Locking device keeps cutting jaws in closed position when not in use.

*Shear Cut, Cutting Capacity 1/2"*



## 6" Depanelizing Tool

51I-6-DP ★★★

The thin jaws on these cutters are designed to cut the tabs on PC boards. The longer handles provide more leverage when cutting.

*Designed to fit a 1/16" or larger slot.*



# EXCELTA®

## PRECISION PLIERS

With 7 lines to choose from, Excelta makes it easy to select one *Precisely Right* for your application.

Excelta makes a wide range of pliers for general electronics repair and fine mechanical work. Precision lap and box joints ensure precise jaw alignment. ESD safe grips and available ergonomic handles makes finding the exact plier you need easier than ever.

★★★★★ **700 Series**  
**Medium Head Pliers**

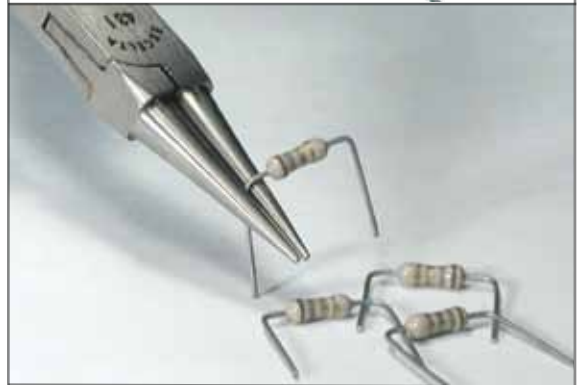
- Made In USA
- Induction Hardened Tips
- Carbon Steel
- ESD Safe Molded Grips

★★★ **Excelta Series**  
**Small Head Pliers**

- Stainless Steel
- Soft Foam Cushion Grips

★★ **“S” Handle Series**  
**Medium Head Pliers**

- Stainless Steel
- Ergonomic “S” Handle Grips
- Soft Foam Cushion Grips





★★★★★ ULTRA PRECISION

★★★ HIGH PRECISION

★★ FINE PRECISION

★★

**2600 Standard Line  
Small Head Pliers**

- Stainless Steel
- Soft Foam Cushion Grips



★★

**2800 Standard Line  
Medium Head Pliers**

- Stainless Steel
- ESD Safe Molded Grips



★★

**2900 Standard Line  
Large Head Pliers**

- Stainless Steel
- Soft Foam Cushion Grips



★★

**Miniature Pliers**

- Stainless Steel
- Self-Opening



# 700 SERIES

## HIGH PRECISION PLIERS

# MEDIUM HEAD PLIERS

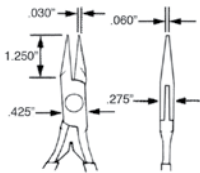
★★★★★ ULTRA PRECISION

Excelta professional grade pliers have several unique features:

- *Lap Joint design insures superior performance*
- *ESD Safe Molded Grips are standard*
- *Polished, hand-finished jaws are 100% free of burrs*
- *Induction hardened tips for long life*
- *Made in USA*

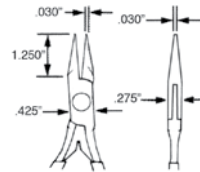
### 5" Chain Nose

PART #	JAW FINISH
744	Smooth
744D	Serrated



### 5" Round Nose

PART #	JAW FINISH
743	Smooth



# EXCELTA LINE

## FINE PRECISION PLIERS

STAINLESS STEEL

★★★ HIGH PRECISION

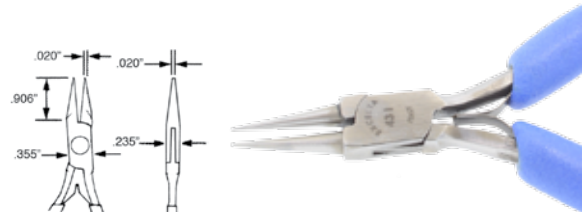
### 4 1/2" Medium Chain Nose

PART #	JAW FINISH
11-I	Smooth
11-DI	Serrated



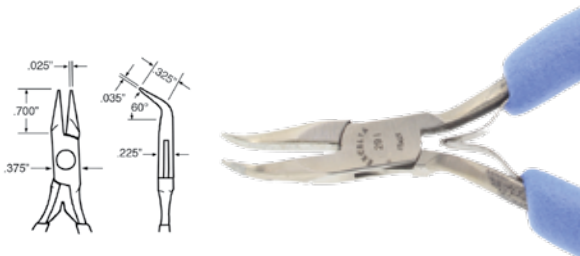
### 4 1/2" Medium Round Nose

PART #	JAW FINISH
43-I	Smooth



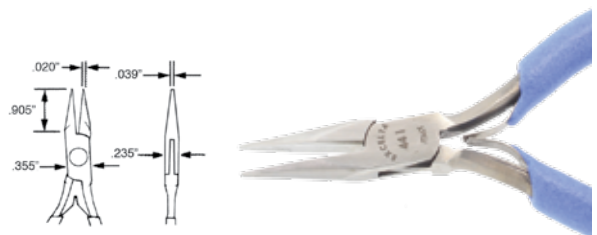
### 4 1/2" 60° Small Bent Nose

PART #	JAW FINISH
29-I	Smooth



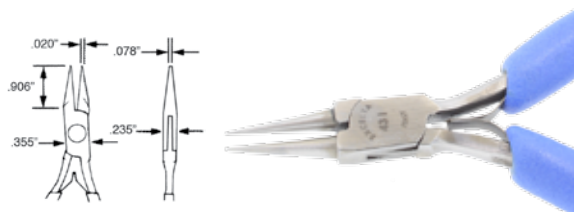
### 4 1/2" Small Chain Nose

PART #	JAW FINISH
44-I	Smooth



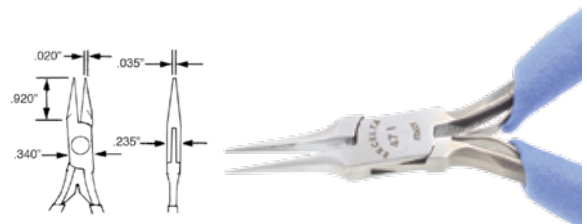
### 4 1/2" Small Flat Nose

PART #	JAW FINISH
42-I	Smooth



### 4 1/2" Small Needle Nose

PART #	JAW FINISH
47-I	Smooth



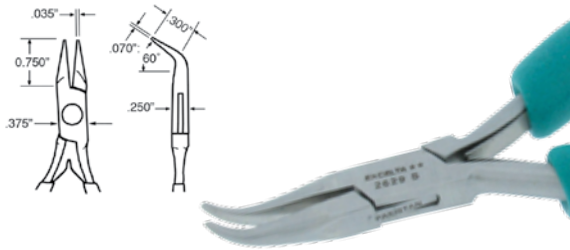
# S-HANDLE ERGONOMIC PLIERS

STAINLESS STEEL

★★ FINE PRECISION

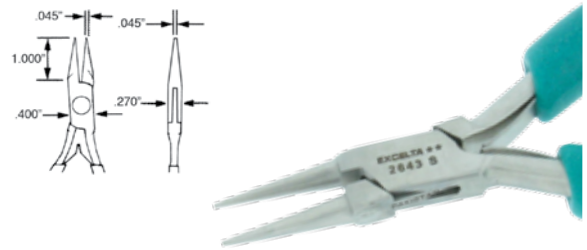
## 6" Curved Tip Chain Nose

PART # 2629S  
JAW FINISH Smooth



## 6" Round Nose

PART # 2643S  
JAW FINISH Smooth



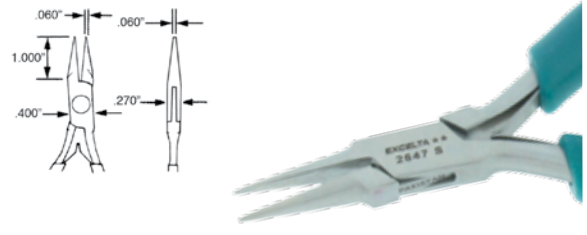
## 6" Flat Tip "Duck Bill"

PART # 2642S  
JAW FINISH Smooth



## 6" Needle Nose

PART # 2647S  
JAW FINISH Smooth



## 6" Chain Nose

PART # 2644S  
JAW FINISH Smooth



ERGONOMIC DESIGN FOR  
COMFORT AND SAFETY

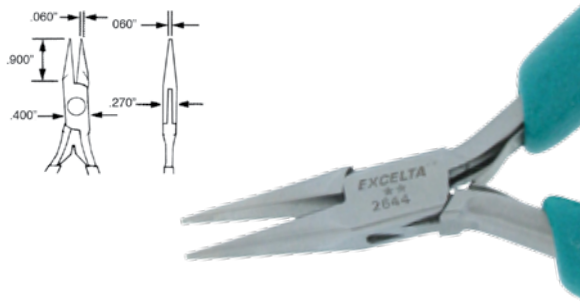
# SMALL HEAD STANDARD LINE PLIERS

STAINLESS STEEL

★★ FINE PRECISION

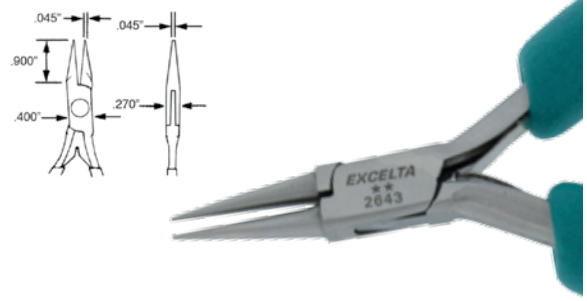
## 4 3/4" Chain Nose

PART #	JAW FINISH
2644	Smooth
2644D	Serrated



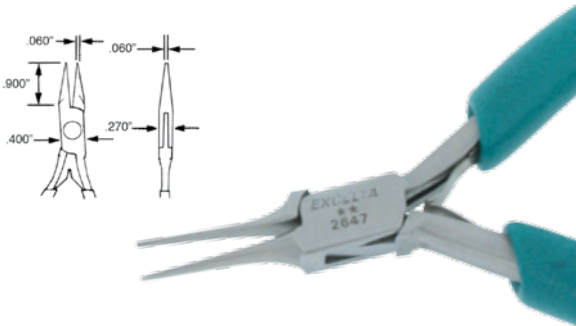
## 4 3/4" Round Nose

PART #	JAW FINISH
2643	Smooth



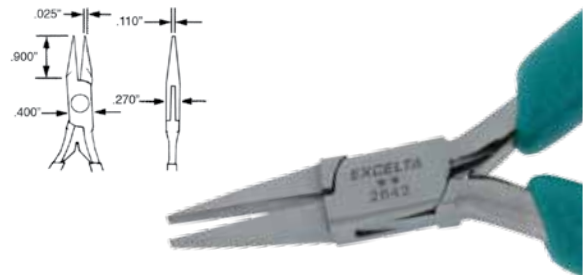
## 4 3/4" Needle Nose

PART #	JAW FINISH
2647	Smooth



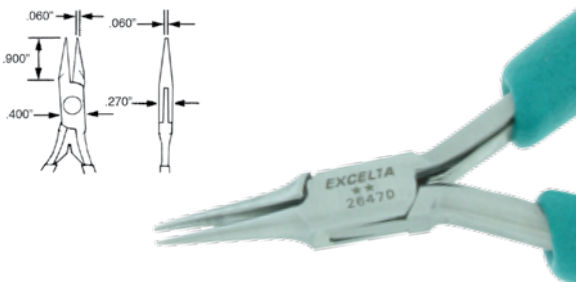
## 4 3/4" Flat Nose

PART #	JAW FINISH
2642	Smooth



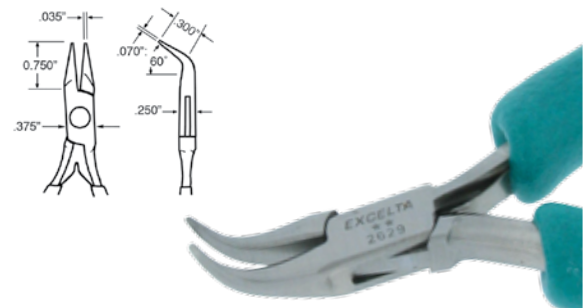
## 4 3/4" Needle Nose

PART #	JAW FINISH
2647D	Serrated



## 4 3/4" Bent Nose

PART #	JAW FINISH
2629	Smooth



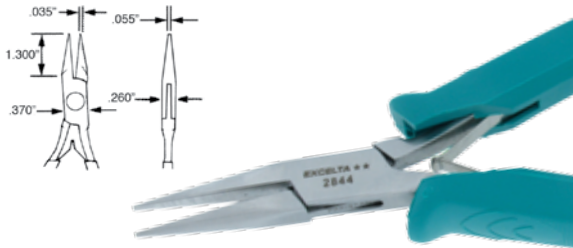
# MEDIUM HEAD STANDARD LINE PLIERS

STAINLESS STEEL

★★ FINE PRECISION

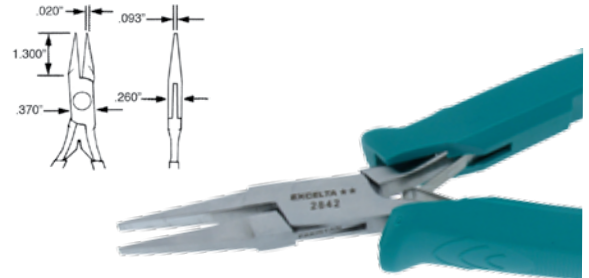
## 5 3/4" Chain Nose

PART #	JAW FINISH
2844	Smooth
2844D	Serrated



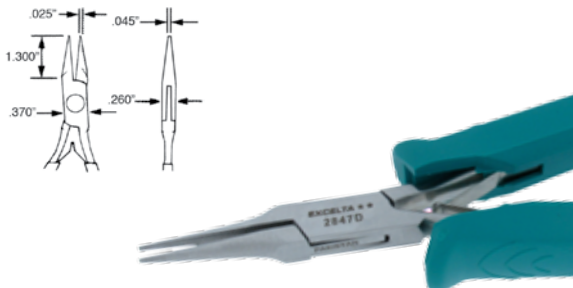
## 5 3/4" Flat Nose

PART #	JAW FINISH
2842	Smooth
2842D	Serrated



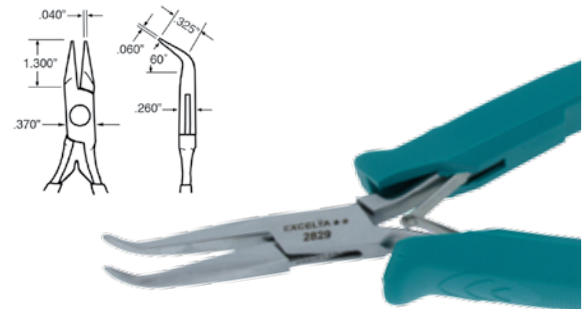
## 5 1/2" Needle Nose

PART #	JAW FINISH
2847	Smooth
2847D	Serrated



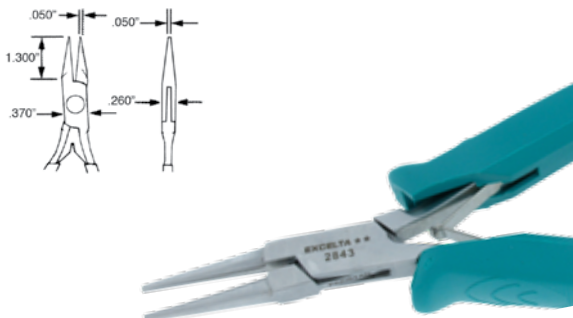
## 5 3/4" 60° Bent Nose

PART #	JAW FINISH
2829	Smooth



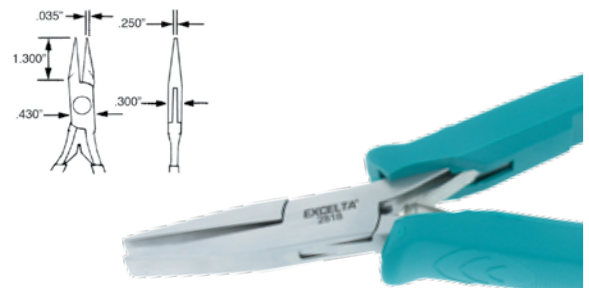
## 5 3/4" Round Nose

PART #	JAW FINISH
2843	Smooth



## 5 3/4" "Duck Bill" Nose

PART #	JAW FINISH
2818	Smooth



# MEDIUM HEAD LONG HANDLE PLIERS

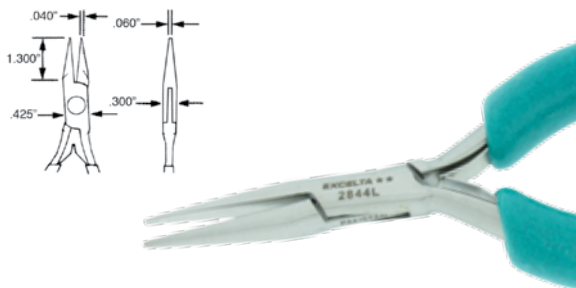
STAINLESS STEEL

★★ FINE PRECISION

TWEEZERS

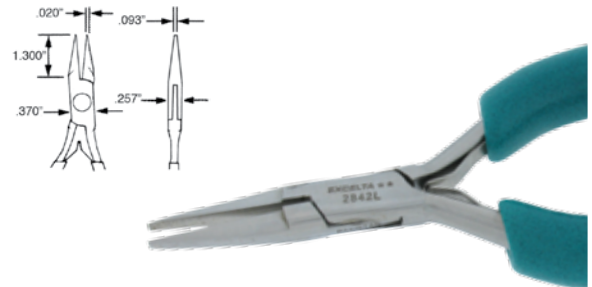
## 6" Chain Nose

PART # 2844L  
JAW FINISH Smooth



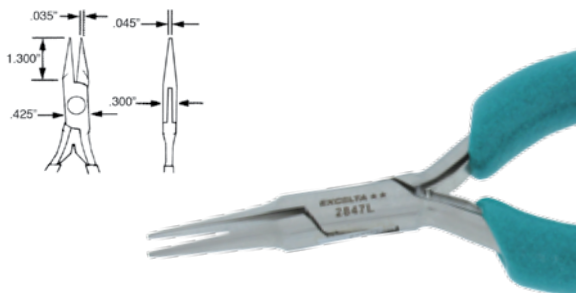
## 6" Flat Nose

PART # 2842L  
JAW FINISH Smooth



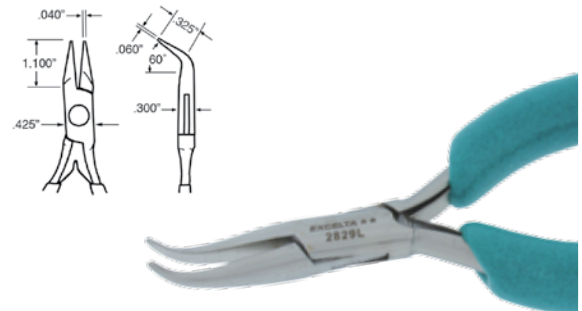
## 6" Needle Nose

PART # 2847L  
JAW FINISH Smooth



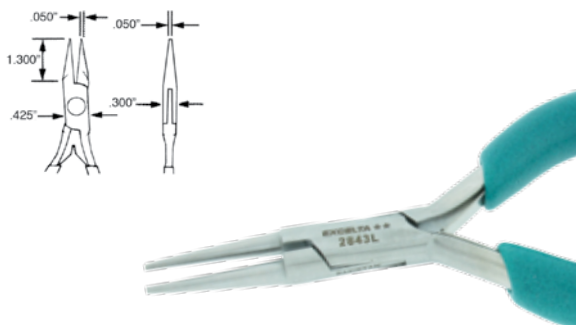
## 6" 60° Bent Nose

PART # 2829L  
JAW FINISH Smooth



## 6" Round Nose

PART # 2843L  
JAW FINISH Smooth



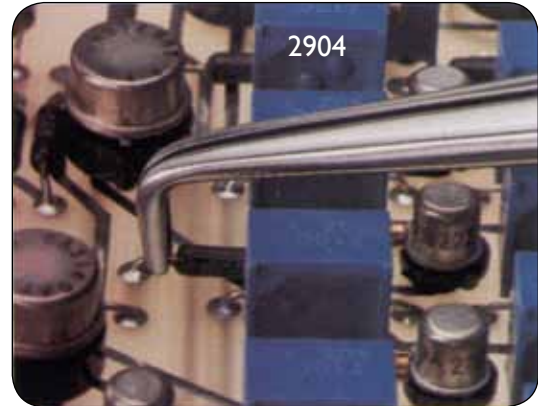
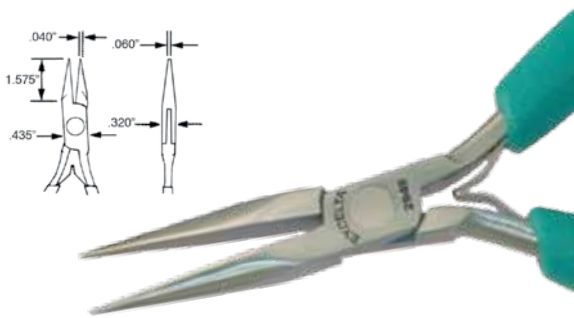
# LARGE HEAD STANDARD LINE PLIERS

STAINLESS STEEL

★★ FINE PRECISION

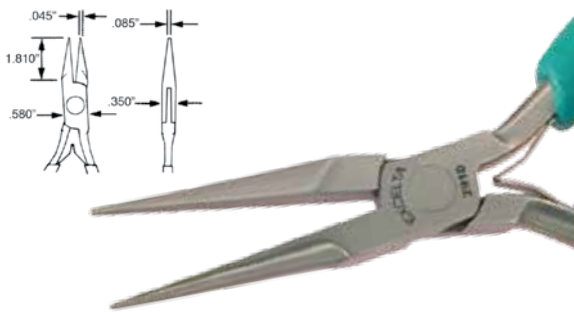
## 6 1/4" Chain Nose

PART #	JAW FINISH
2949	Smooth
2949D	Serrated



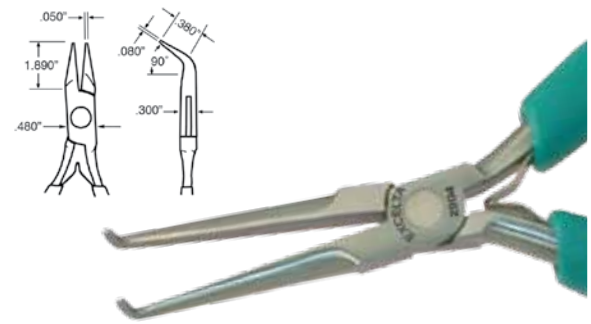
## 6 1/2" Needle Nose

PART #	JAW FINISH
2910	Smooth
2910D	Serrated



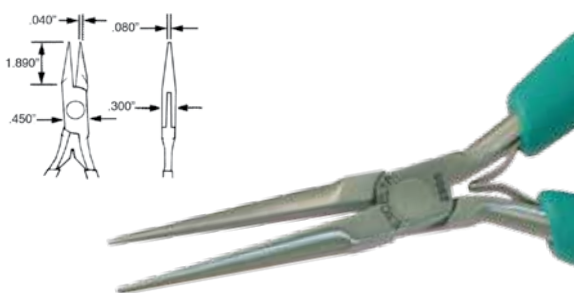
## 6 1/2" 90° Bent Nose

PART #	JAW FINISH
2904	Smooth
2904D	Serrated



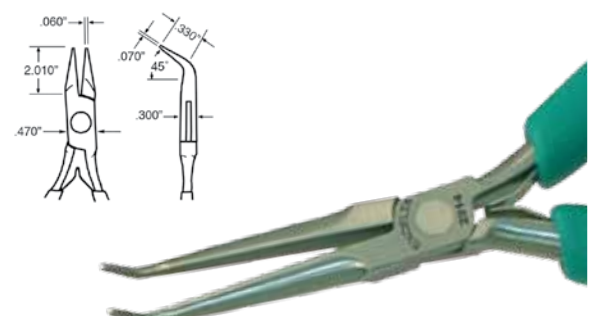
## 6 1/2" Needle Nose

PART #	JAW FINISH
2905	Smooth
2905D	Serrated



## 6 1/2" 45° Bent Nose

PART #	JAW FINISH
2914	Smooth
2914D	Serrated





# MINIATURE PLIERS

## STAINLESS STEEL

★★ FINE PRECISION

381 ★★

3" long

Curved Tip Chain Nose pliers tips are excellent when working in very difficult and confined areas. The jaw length is  $\frac{1}{4}$ ".



384 ★★

3" long

3" Angulated Needle Nose Pliers with small tip width and thinness enable this tool to work well in confined areas. The jaw length is  $\frac{1}{4}$ ".



382 ★★

3" long

3" Straight Tip Chain Nose pliers with small fine tips for those very delicate assembly jobs. The jaw length is  $\frac{1}{4}$ ".



385 ★★

3" long

3" Round Nose Pliers can be used to form small wires and leads. The jaw length is  $\frac{1}{4}$ ".



383 ★★

3" long

3" Straight Tip Needle Nose pliers are designed for light work where space and accessibility is limited. The jaw length is  $\frac{1}{4}$ ".



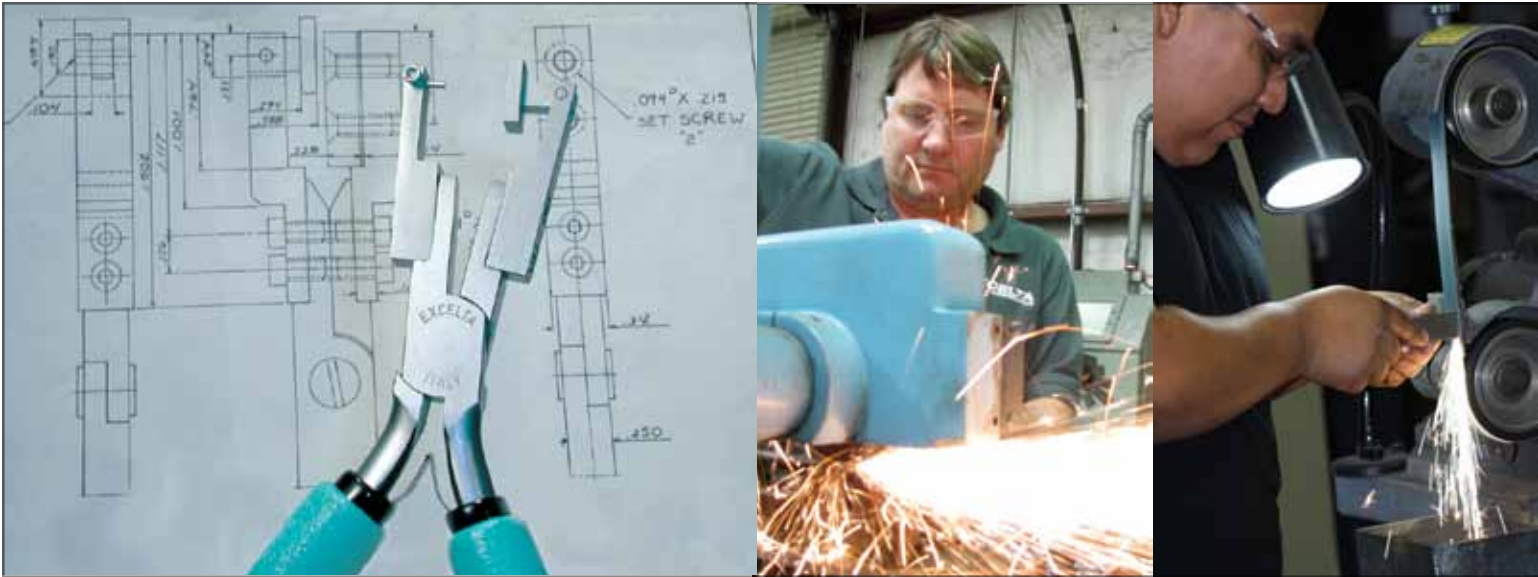
386 ★★

3" long

3" Flat Nose Pliers are designed to prevent nicking and marring of delicate component leads. The jaw length is  $\frac{1}{4}$ ".



# EXCELTA®



## CUSTOM DESIGN SPECIALS

**As the leader in tool technology,**

Excelta knows every application is unique. Our Custom Design facility can work from your schematic to manufacture any tool to your specifications. Or, if you prefer, our experienced designers can diagnose your needs and design the tool that is *“Precisely Right”* for your unique application.



Whether you need a single tool to handle special parts under unique conditions, or a supply of custom tools to crimp, cut, place or extract parts, Excelta's Custom Design Service has the experience, ingenuity and capability to meet your needs.

The following pages include Excelta tools that have been designed with a very special application in mind. If you don't see the tool you're looking for, contact our Custom Design Department at (805) 686-4686 or log on to [www.exceltacustomtools.com](http://www.exceltacustomtools.com) and we will design the custom tool to fit your application.

# CUSTOM DESIGNED TOOLS

## ANTI-SHOCK SHEAR CUTTERS

★★★★★ ULTRA PRECISION

**530E-US ★★★★★**

**5" long**

### ANTI-SHOCK SHEAR CUTTER

The shear action cut reduces shock on delicate components and solder connections. The "Stand-Off" keeps the cutting blade from cutting into the solder connections. Tip width .140". Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .040"*



**530E-15-US ★★★★★**

**6" long**

### ADJUSTABLE ANTI-SHOCK SHEAR CUTTER

The "Stand-Off" length can be adjusted from .040" to .250". Recommended cutting capacity 22 AWG (.025" diameter.)



**530EA-US ★★★★★**

**5" long**

### SUPER NARROW ANTI-SHOCK SHEAR CUTTER

The shear action cut reduces shock on delicate components and solder connections. The "Stand-Off" keeps the cutting blade from cutting into the solder connections. Tip width .050". Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .040"*



**530E-4-US ★★★★★**

**5 3/4" long**

### LONG JAW ANTI-SHOCK SHEAR CUTTER

The shear action cut reduces shock, designed with a long thinner tip to fit between connector pins. Tip width is .100". Recommended cutting capacity 24 AWG (.020" diameter.)  
*Standard Cut Length .040"*



**530E-5-US ★★★★★**

**5 1/4" long**

### NARROW ANTI-SHOCK SHEAR CUTTER

The shear action cut reduces shock on delicate components and solder connections. The "Stand-Off" keeps the cutting blade from cutting into the solder connections. Tip width .090". Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .040"*

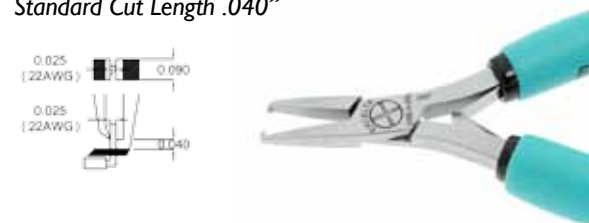


**530E-5-USL ★★★★★**

**6" long**

### NARROW ANTI-SHOCK SHEAR CUTTER WITH ERGONOMIC HANDLE

The shear action cut reduces shock on delicate components and solder connections. The "Stand-Off" keeps the cutting blade from cutting into the solder connections. Tip width .090". Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .040"*



# CUSTOM DESIGNED TOOLS

## ANTI-SHOCK SHEAR CUTTERS

★★★★★ ULTRA PRECISION

TWEEZERS

**907-4 ★★★★★**

**6" long**

### THIN JAW ANTI-SHOCK SHEAR CUTTER

The thinner jaw gives greater accessibility into high-density areas. Very useful for cutting connector pins in confined areas. Tip width .100". Recommended cutting capacity 20 AWG (.032" diameter.)  
*Standard Cut Length .030"*



**907-1 ★★★★★**

**6" long**

### LARGE ANTI-SHOCK SHEAR CUTTER

Reduces shock on delicate solder connections and sensitive components. Tip width .170". Recommended cutting capacity 20 AWG (.032" diameter.)  
*Standard Cut Length .040"*



**903 ★★★★★**

**5 1/2" long**

### HEAVY-DUTY ANTI-SHOCK SHEAR CUTTER

Shear cutter designed for heavy-duty cutting of connector pins and large component leads. Tip width .180". Recommended cutting capacity 18 AWG (.040" diameter.)  
*Standard Cut Length .040"*



**907-5 ★★★★★**

**5 1/4" long**

### CONNECTOR PIN SHEAR CUTTING PLIERS

This cutter is designed with grooves on the outside of the jaws to fit between connector pins and provide a clean cut. Tip width .100". Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .025"*



**903A ★★★★★**

**5 1/2" long**

### NARROW SHEAR CUTTER

Heavy-duty shear cutter with thin tips for cutting between component leads. Tip width .100". Recommended cutting capacity 18 AWG (.040" diameter.)  
*Standard Cut Length .040"*



**903A-L ★★★★★**

**6 1/2" long**

### NARROW SHEAR CUTTER WITH ERGO HANDLE

Heavy-duty shear cutter with thin tips for cutting between component leads. Tip width .100". Recommended cutting capacity 18 AWG (.040" diameter.)  
*Standard Cut Length .040"*



# CUSTOM DESIGNED TOOLS

## ANTI-SHOCK SHEAR CUTTERS

★★★★★ ULTRA PRECISION

**907-42A ★★★★★**

**5 ½" long**

### MULTI-LEAD SHEAR CUTTER

This tool will cut up to 8 leads in one easy motion. Anti-Shock shear cut will not damage solder fillet.  
*Standard Cut Length .040"*



**500-108-US ★★★★★**

**5" long**

### SHEAR CUTTING AND BENDING PLIERS

Designed to bend leads to 45 degrees, then cut the lead to .060" keeping component in place when soldering. Recommended cutting capacity 22 AWG (.025" diameter.)



**509-42A-US ★★★★★**

**5 ¼" long**

### MULTI-LEAD SHEAR CUTTER

This tool is designed to cut one complete row of 8 D.I.P./I.C. leads in one motion.  
*Standard Cut Length .040"*



**549E-US ★★★★★**

**5 ¼" long**

### ANGULATED HEAD SHEAR CUTTER

The shear action cut reduces shock on delicate solder connections or components. The angle of the cutting head helps to increase visibility. Recommended cutting capacity 22 AWG (.025" diameter.)  
*Standard Cut Length .040"*



**530E-I-US ★★★★★**

**5" long**

### SHEAR CUTTER AND BENDING PLIERS

Designed to cut leads .060" from the P.C. board, then bend the lead to 30 degrees keeping components in place when soldering. Recommended cutting capacity 22 AWG (.025" diameter.)

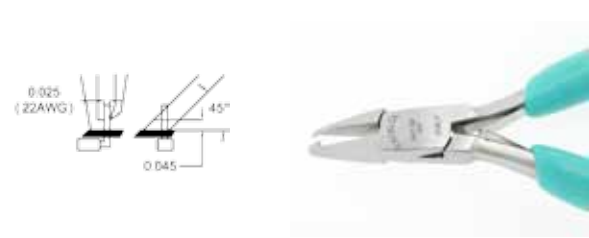


**907-59 ★★★★★**

**5 ¾" long**

### ANGULATED HEAD SHEAR CUTTER

The shear action cut reduces shock on delicate solder connections or components. The angle of the cutting head helps to increase visibility. Recommended cutting capacity 18 AWG (.040" diameter.)  
*Standard Cut Length .045"*



# CUSTOM DESIGNED TOOLS

## FORMING AND CUTTING

★★★★★ ULTRA PRECISION

TWEEZERS

**500-88-US** ★★★★★

**5" long**

### FORMING PLIERS WITH SHEAR CUTTER

Designed to form a consistent stand off and cut the lead to length on most popular radial lead components. Recommended for .025" diameter or smaller leads and wires.



**907-88** ★★★★★

**6" long**

### STRESS RELIEF FORMING PLIER / CUTTER

Designed to form a stand off and cut lead to length on most popular radial lead components. Recommended for .030" diameter or smaller leads and wires.



**500-89-US** ★★★★★

**5 1/2" long**

### DOG LEG LEAD FORMING PLIER / CUTTER

Designed to increase or decrease the center dimension on radial lead components. The added shear cutter saves component prep time. Recommended for .025" or smaller leads and wires.



**900-88B** ★★★★★

**5 3/4" long**

### STRESS RELIEF FORMING PLIER / CUTTER

Tool designed to form stress relief and cut lead to specific dimension in one easy step. Recommended for .020" diameter or smaller leads and wires.



**500-89B-US** ★★★★★

**5 1/2" long**

### DOG LEG LEAD FORMING PLIER / CUTTER

Designed to increase or decrease the center dimension on radial lead components. The added shear cutter saves component prep time. Recommended for .025" or smaller leads and wires.



**907-89** ★★★★★

**5 3/4" long**

### DOG LEG LEAD FORMING PLIER / CUTTER

Heavy-duty pliers designed to increase or decrease the center dimension on radial lead components. The added shear cutter saves component prep time. Recommended for .030" or smaller leads and wires.



# CUSTOM DESIGNED TOOLS

## FORMING AND CUTTING

★★★★★ ULTRA PRECISION

**907-88C** ★★★★★

**6" long**

### STRESS RELIEF FORMING PLIERS / CUTTERS

The smaller design of this tool will "Stand-Off" the component closer to the P.C. Board. The added shear cutter saves on component prep time. Recommended for .025" diameter or smaller leads and wires.



**500-92-US** ★★★★★

**5 1/2" long**

### TO-92 LEAD FORMING PLIERS

The slots on the outside jaw helps these pliers fit between the leads of a TO-92 and flare them out .050" forming a "Stand-Off" in the lead wires.



**907-89B** ★★★★★

**5 3/4" long**

### DOG LEG LEAD FORMING PLIER / CUTTER

Heavy-duty pliers designed to increase or decrease the center dimension on radial lead components.



**500-11-US** ★★★★★

**5 1/2" long**

### OFF-SET LEAD FORMING PLIERS

Used to form a single lead on TO-220 style transistor. The lead can be formed .100" up or down to "Off Set" the lead. Great when components are mounted vertically on P.C. boards.



**900-11** ★★★★★

**6 1/2" long**

### INDIVIDUAL LEAD FORMING PLIERS

This tool is used to form an individual lead of a TO-220 or TO-247 type transistor with a .200" offset at .075" from the component body.



**554-TXC-US** ★★★★★

**5 1/2" long**

### SHEAR CUTTING AND FORMING PLIERS

These pliers will form one lead in and one lead out at the same time on most Radial type components. The added shear cutter saves component prep time. Recommended for .025" diameter or smaller leads and wires.





# CUSTOM DESIGNED TOOLS

## FORMING PLIERS

★★★★★ ULTRA PRECISION

TWEEZERS

**554A-US ★★★★★**

**5" long**

### STRESS RELIEF FORMING PLIERS

Designed to form stress relief for transistor and resistor leads. Tool design will make consistent stand off in a variety of components. Recommended for .025" and smaller wire.



**954A ★★★★★**

**6" long**

### STRESS RELIEF FORMING PLIERS

Designed to form a consistent stress relief in a variety of components. Similar to the 554A-US, made on a larger frame these pliers can form leads and wires up to .030" diameter.



**554B-US ★★★★★**

**5 1/2" long**

### STRESS RELIEF FORMING PLIERS

Tool design will form a consistent relief in a variety of components. Recommended for .020" or smaller wire.



**954B ★★★★★**

**6" long**

### STRESS RELIEF FORMING PLIERS

Designed to form a consistent stand off in a variety of components. Similar to the 554A-US, made on a larger frame these pliers can form leads and wires up to .035" diameter.



**554F-US ★★★★★**

**5 1/2" long**

### STRESS RELIEF FORMING PLIERS

Our smallest forming pliers used to form a stand off on component leads of .020" diameter or smaller.



**554-US ★★★★★**

**5 3/4" long**

### MULTIPLE LEAD FORMING PLIERS

Stress relief forming pliers for multiple leads on resistors and transistors. Opening stop is adjustable for wire diameter.



# CUSTOM DESIGNED TOOLS

## FORMING PLIERS

★★★★★ ULTRA PRECISION

**909-4 ★★★★★**

**5" long**

### STRESS RELIEF FORMING PLIERS

Stress relief forming pliers for transistors and resistor leads. Tool design is versatile in a variety of applications. Recommended for .035" wire or smaller.



**554BJ-US ★★★★★**

**4 ¾" long**

### STRESS RELIEF FORMING PLIERS

Designed to form "Stand-Off" on 3 or 5 leads of TO-220 transistor. The angle of the head allows for longer leads to be formed. Recommended for .025" or smaller leads and wires.



**909-4B ★★★★★**

**6 ¼" long**

### STRESS RELIEF FORMING PLIERS

May be used for many types of components. The smaller dimensions keep components close to P.C. board. Recommended for .030" or smaller leads and wires.



**554TX-US ★★★★★**

**5 ½" long**

### STRESS RELIEF FORMING PLIERS

Tool will form stress relief in most radial lead components. Designed to form one lead in and one lead out in a single operation. Recommended for .025" diameter or smaller wire.



**554AJ-US ★★★★★**

**4 ¾" long**

### STRESS RELIEF FORMING PLIERS

Designed to form "Stand-Off" on 3 or 5 leads of TO-220 transistors. The angle of the head allows for longer leads to be formed. Recommended for .030" or smaller leads and wires.



**554-TXB-US ★★★★★**

**5" long**

### STRESS RELIEF FORMING PLIERS

Tool will form stress relief in most radial lead components. Designed to form one lead in and one lead out in a single operation. Recommended for .025" diameter or smaller leads and wires.



# CUSTOM DESIGNED TOOLS

## FORMING AND CUTTING

★★★★★ ULTRA PRECISION

TWEEZERS

**554N-US ★★★★★ 5 ½" long**

**MULTIPLE LEAD FORMING PLIERS**

Stress relief forming pliers for multiple lead components. The "Off Set" design makes this tool versatile for many types of components. Opening stop is adjustable for wire diameter.



**900-3RB ★★★★★ 6" long**

**LOCK-IN LEAD FORMING PLIERS**

Pliers will form an "S" bend on a component lead, enabling the component to stay in place when soldering. These pliers are recommended for leads and wires up to .035" in diameter.



**554-3RB-US ★★★★★ 5 ¼" long**

**LOCK-IN LEAD FORMING PLIERS**

Pliers will form an "S" bend on a component lead, enabling the component to stay in place when soldering. Recommended for .025" diameter or smaller leads and wires.



**900-3RT ★★★★★ 5" long**

**LOCK-IN LEAD FORMING PLIERS**

Pliers will form an "S" bend on a component lead, enabling the component to stay in place when soldering. These pliers are recommended for leads and wires up to .035" in diameter.



**554-3RT-US ★★★★★ 5 ½" long**

**LOCK-IN LEAD FORMING PLIERS**

Pliers will form an "S" bend on a component lead, enabling the component to stay in place when soldering. Recommended for .025" diameter or smaller leads and wires.



**500-95B-US ★★★★★ 5 ½" long**

**DOG LEG LEAD FORMING PLIERS**

The design of this tool will form a "Dog Leg" bend in the lead wire. This tool can be used to increase or decrease the center dimensions of the radial lead components. Recommended for .030" or smaller leads and wires.



# CUSTOM DESIGNED TOOLS

## FORMING PLIERS

★★★★★ ULTRA PRECISION

**500-104-US ★★★★★ 5" long**

### TRANSISTOR FORMING PLIERS

Used in forming 3 leads on a TO-220 style transistor. The two outside leads will be bent .200", while the center lead is bent .300" from the body of the component.



**500-103-US ★★★★★ 5 1/2" long**

### TRANSISTOR FORMING PLIERS

Designed to form TO-220 style transistors with 3 or 5 leads. Component leads are formed .200" from the body of component.



**500-104B-US ★★★★★ 5" long**

### TRANSISTOR FORMING PLIERS

An elaborate design for forming 5 leads on a TO-220 component in one easy operation. Tool will ensure uniformity of difficult lead alignment.



**500-103B-US ★★★★★ 5 1/2" long**

### TRANSISTOR FORMING PLIERS

Same as above but with a longer (.600") forming area for wider components.



**907-104 ★★★★★ 5 1/2" long**

### TRANSISTOR FORMING PLIERS

Used in forming 3 leads on a TO-220 style transistor. The two outside leads will be bent .150", while the center lead is bent .250" from the body of the component.



**900-10 ★★★★★ 5 1/2" long**

### TRANSISTOR FORMING PLIERS / CUTTER

This tool will cut and form 3 or 5 leads on a TO-220 style component. Leads will be formed to the bottom of component body for surface mounting.



# CUSTOM DESIGNED TOOLS

## FORMING AND CUTTING

★★★★★ ULTRA PRECISION

TWEEZERS

**500-13A-US ★★★★★ 5" long**

**.375" FLATPACK FORMING PLIERS / CUTTER**  
Tool will form a "Gull Wing" and cut multiple leads to length on various types of flat packs. Recommended for .010" or smaller lead thickness. Contact us for quotes on special sizes.



**500-210-US ★★★★★ 5 1/2" long**

**MULTIPLE LEAD FORMING PLIERS**  
Designed to bend the leads on LED and other multiple lead components. Leads are formed to 90-degree, and .100" from the component body without damage. Recommended on .025" diameter leads and wires.



**500-13B-US ★★★★★ 5 1/4" long**

**.250" FLATPACK FORMING PLIERS / CUTTER**  
Tool will form a "Gull Wing" and cut multiple leads to length on various types of QFP and SOIC packages. Recommended for .010" or smaller lead thickness.



**500-210A-US ★★★★★ 4 3/4" long**

**ADJUSTABLE MULTIPLE LEAD FORMING PLIERS**  
Designed to form transistor leads with .100" center spacing. Leads are formed at 90-degree for through-hole mounting. The distance from the component body to the bend is adjustable from .100" to .300".



**907-13A ★★★★★ 5 1/2" long**

**.500" FLATPACK FORMING PLIERS / CUTTER**  
Heavy-duty tool will form a "Gull Wing" and cut multiple leads to length on various types of Flat Packs. Recommended for .010" or smaller lead thickness. Contact us for quotes on special sizes.



**500-12-US ★★★★★ 5 1/2" long**

**MULTIPLE LEAD TRANSISTOR FORMING PLIERS**  
Used to form an "Off Set" in the 2nd and 4th lead on TO-220-5 (5 leads) transistors. This "Off Set" is useful when standing up components mounted vertically on P.C. Boards.



# CUSTOM DESIGNED TOOLS

## FORMING AND CUTTING

★★★★★ ULTRA PRECISION

**900-100** ★★★★★

**6 ½" long**

### ROLL PIN INSERTION PLIERS

Designed to insert the card key roll pin, thus reducing production time. 0.046" pin is replaceable.



**907-7** ★★★★★

**6" long**

### ANTI-SHOCK SHEAR CUTTER / BENDER

Cuts component leads at .060" then bends the lead keeping the component in place when soldering. Recommended cutting capacity 20 AWG (.032" diameter).



**900-100A** ★★★★★

**6 ½" long**

### ROLL PIN EXTRACTION PLIERS

Designed to remove the card key roll pin, thus reducing production time. 0.086" pin is replaceable.



**907** ★★★★★

**6" long**

### ANTI-SHOCK SHEAR CUTTER / SWAGER

Cuts component leads to .030" and swages the end of the lead to prevent it from falling out of P.C. board. Recommended cutting capacity 20 AWG (.032" diameter).



**907-101** ★★★★★

**6" long**

### TERMINAL HANDLING PLIERS

Designed to insert or extract the hard to reach terminal plugs. The inside jaw has a cutout to prevent nicking or pulling on the lead wire.



**930E-1** ★★★★★

**5 ½" long**

### ANTI-SHOCK SHEAR CUTTER / BENDER

Cuts component leads at .060" then bends the lead keeping the component in place when soldering. Recommended cutting capacity 20 AWG (.032" diameter).



# CUSTOM DESIGNED TOOLS

## LEAD STRAIGHTENING PLIERS

★★★★★ ULTRA PRECISION

TWEEZERS

**531-US ★★★★★**

**5 ¾" long**

### SOFTIP NYLON JAW PLIERS

Nylon jaws are useful in straightening leads and wires when metal-to-metal contact is not desired. Nylon jaws are screwed on and can be replaced when needed.



**508D-US ★★★★★**

**5 ½" long**

### SOFTIP DELRIN WIDE JAW PLIERS

Black Delrin heads eliminate scratching and marring of delicate leads. The jaws are ¾" wide, ESD safe and temperature resistant up to 175°C. Delrin jaws are screwed on and can be replaced when needed.



**531A-US ★★★★★**

**5 ¾" long**

### SOFTIP DELRIN JAW PLIERS

Black Delrin material is ESD safe and temperature resistant up to 175°C. Delrin jaws are screwed on and can be replaced when needed.



**508-US ★★★★★**

**5 ½" long**

### METAL JAW STRAIGHTENING PLIERS

This unique tool will straighten multiple leads in one easy operation. The jaws are .825" wide.



**532-US ★★★★★**

**5 ¾" long**

### SOFTIP DELRIN THIN JAW PLIERS

The tapered jaw with a small tip is useful in areas where space is limited. Black Delrin material is ESD safe and temperature resistant up to 175°C. Delrin jaws are screwed on and can be replaced when needed.



**508C-US ★★★★★**

**5 ½" long**

### METAL JAW STRAIGHTENING PLIERS

The jaws of these pliers are designed to fit between rows of connector pins. The jaws are .825" wide.



# CUSTOM DESIGNED TOOLS

## FORMING AND STRIPPING

★★★★★ ULTRA PRECISION

**533-US ★★★★★**

**6" long**

### SOFTIP ROUND-FLAT FORMING PLIERS

These pliers have one round metal jaw and one flat Delrin jaw. Excellent for forming leads and wire when scratching and marring cannot be tolerated. The Delrin jaw is screwed on and can be replaced when needed.



**554J-US ★★★★★**

**6" long**

### "J" HOOK FORMING PLIERS

This tool forms a "J" hook in leads up to a .031" diameter with an inside diameter of .060" and an outside diameter of .125"



**500-101-US ★★★★★**

**5 1/4" long**

### SMALL CONVEX/CONCAVE FORMING PLIERS

Excellent for forming small wires and leads. The jaw tapers from front to back for forming various lead diameters.

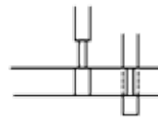


**502E-US ★★★★★**

**5 1/2" long**

### HIGH PRECISION STRIPPING PLIERS

Our most precision pliers for stripping Teflon coated wires. To order, specify the wire gauge size by indicating the gauge at the end of the reference number. (Example 502E-US-30 for 30 AWG) Available in 22, 24, 26, 28, and 30 AWG.



**500-101A-US ★★★★★**

**5 1/4" long**

### SMALL CONVEX/CONCAVE FORMING PLIERS

Designed for forming a "J Hook" on wires and leads. The jaw tapers from front to back for forming various lead diameters.



**510E-US ★★★★★**

**5 1/2" long**

### ADJUSTABLE V-NOTCH STRIPPER

Precision wire stripper with locking setscrew can be adjusted for stripping 18-30 AWG wire.





# CUSTOM DESIGNED TOOLS

## PLIERS AND CUTTERS

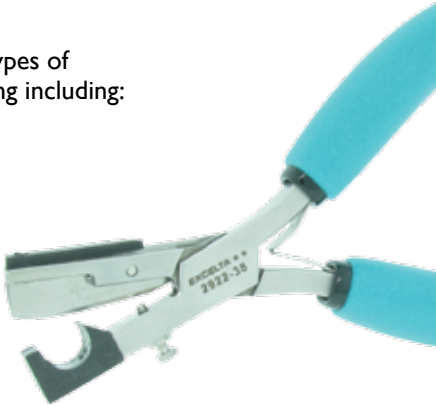
★★★★★ ULTRA PRECISION  
★★ FINE PRECISION

TWEEZERS

**2922-18** ★★ 1/8" Tubing  
**2922-14** ★★ 1/4" Tubing  
**2922-38** ★★ 3/8" Tubing

Cuts most types of medical tubing including:

Bio-Sil®  
Tygon®  
Autoprene®  
Viton®  
Polyethelene  
Polypropylene  
Polyurethane  
Nylon  
Vinyl  
Rubber  
Silicone



- Clean, square cuts for inserting fittings, couplings and quick release valves.
- Available Cutting capacities up to 3/8" OD.
- Replaceable Stainless Steel blade.
- Ergonomic soft cushion grips.

These stainless steel, reverse action pliers have been specifically designed to expand the end of flexible tubing for inserting into plastic or metal fittings and connections.

**379A** ★★ **5" long**

Expands a 1/8" tube to a 3/16" opening.



**379A** ★★ **5" long**

Expands a 3/32" tube to a 1/8" opening.



**379C** ★★ **5" long**

Expands a 1/16" tube to a 3/32" opening.

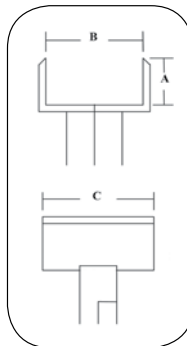


## ★★★★★ Insertion/Extraction Pliers

Our 505 Series pliers have been designed to handle DIP/IC packages. The chart will help you quickly find the size you are looking for.

Custom size pliers available upon request.

P/N	A	B	C	PINS
<b>505-US</b>	.180	.400	1.063	18 - 22
<b>505A-US</b>	.180	.600	1.260	24
<b>505B-US</b>	.180	.600	2.080	40
<b>505BG-US</b>	.180	.600	1.398	28
<b>505C-US</b>	.180	.300	.788	14 - 16
<b>505D-US</b>	.180	.300	.358	6 - 8
<b>505E-US</b>	.180	.300	1.260	24
<b>505F-US</b>	.180	.300	.257	4
<b>505G-US</b>	.180	.600	1.660	32
<b>505J-US</b>	.180	.300	.966	20
<b>505K-US</b>	.180	.300	1.398	28



# EXCELTA®

## SMALL HAND TOOLS



### *Precisely Right*

Excelta offers a wide range of small hand tools designed to fit your special application needs. Our line of precision tools are perfect for electronics and bio-chemistry, lead-free soldering operations, and for use in research labs.



<b>Medical Grade Scissors</b>	<b>99</b>
<b>Scalpel Handles &amp; Blades</b>	<b>99</b>
<b>Lexers</b>	<b>100</b>
<b>Multi-Purpose Scissors</b>	<b>101 - 103</b>
<b>Spatulas</b>	<b>104</b>
<b>Pin Vices</b>	<b>104</b>
<b>Probes</b>	<b>105 - 107</b>
<b>Hemostats</b>	<b>108</b>
<b>Scratch Brushes</b>	<b>109</b>
<b>Specialty Brushes</b>	<b>110 - 112</b>
<b>Mirrors and Magnifiers</b>	<b>112 - 113</b>

# MEDICAL GRADE TOOLS

## SCALPELS AND SCISSORS

★★★★ EXTREME PRECISION

★★★ HIGH PRECISION

TWEEZERS

361 ★★★★★

3 ¼" long

### Extra Fine Blade Medical Scissors

Stainless Steel with 1" Curved Blade. Ideal for ultra miniature work and in confined areas. Made in Switzerland.



362 ★★★★★

3 ¼" long

### Fine Blade Medical Scissors

Stainless Steel with 7/8" Curved Blade. Thin blades for close tolerance cutting. Made in Switzerland.



363 ★★★★★

3 ¾" long

### Round Blade Medical Scissors

Stainless Steel with 1 ¼" Curved Blade. A heavy duty miniature scissor for general use. Made in Switzerland.



364 ★★★★★

3 ¾" long

### Fine Blade Medical Scissors

Stainless Steel with 1 ¼" Curved Blade. Ideal for delicate applications where small strong blades are required. Made in Switzerland.



175-11 ★★★★★

### The Safety Scalpel

Smaller handle to fit between your thumb and index finger. It's easy to use and comes with a number 11 style blade and safety cover.



177 ★★★★★

### 5" Scalpel Handle

Made of Stainless Steel with outside finger serrations for positive gripping and easy use. Clean room safe.



177A ★★★★★

**Scalpel Blade Remover** is safe and easy to use.

For use with 177 Scalpel Handle.



177-10 ★★★★★

### Large Round Stainless Steel Scalpel Blade



177-11 ★★★★★

### Angled Stainless Steel Scalpel Blade



177-12 ★★★★★

### Curved Stainless Steel Scalpel Blade



177-15 ★★★★★

### Fine Stainless Steel Scalpel Blade



# LEXERS

CARBIDE INSERTS

STRAIGHT AND CURVED TIPS

★★★★ EXTREME PRECISION

New extreme precision Lexer scissors feature Stainless Steel construction with Tungsten Carbide inserts. Available with either straight or curved cutting blades, these scissors have gold plated handles for easy identification.

371A ★★★★★

6" long



371B ★★★★★

6" long



# MULTI-PURPOSE PRECISION SCISSORS

MADE IN JAPAN

★★★★ EXTREME PRECISION

375A ★★★★★

4" long

### Curved Blade Scissors

Stainless Steel with black plastic grips. These scissors have very fine blades for exceptionally close cutting and feature professionally honed cutting edges. 1" cut length.



373A ★★★★★

4 1/4" long

### Straight Blade Safety Scissors

Stainless Steel with blue vinyl grips. These scissors have small blades for close cutting and feature professionally honed cutting edges and round blunt tips for safety. 1 1/2" cut length.



370A ★★★★★

7" long

### Power Shears

Stainless Steel with black soft grip handles. These shears are perfect for heavy materials with an extremely powerful cut. The fully hardened blades have outside serrations on one side. 3/4" cut length.



# SCISSORS

## STAINLESS STEEL

## STRAIGHT CURVED AND ANGLED

★★ FINE PRECISION

### Self-Opening Precision Scissors

The precision cutting blades are ideal for delicate cutting applications. Stainless steel blade is hardened to Rockwell C-50.

PART #	OVERALL LENGTH	BLADE LENGTH
346	4 1/2"	5/8"
346A	3 3/4"	1/2"
346B	3 1/2"	3/8"



### Short Fine Blade Scissors

Short thin cutting blades for delicate work and close tolerance cutting.

PART #	OVERALL LENGTH	BLADE LENGTH & STYLE
288	3 1/4"	3/4" Straight Blades
289	3 1/4"	3/4" Curved Blades



### Self-Opening Precision Scissors

The precision cutting blades angle at 45 degrees, allowing perfect visibility with good clearance.

PART #	OVERALL LENGTH	BLADE LENGTH
349	4 1/2"	5/8"
349A	3 3/4"	1/2"
349B	3 1/2"	3/8"



### Medium Fine Blade Scissors

Most popular precision-made scissors for general use. Overall length is 3 3/4". Blade length is 1".

PART #	OVERALL LENGTH	BLADE LENGTH & STYLE
290	3 3/4"	1" Straight Blades
291	3 3/4"	1" Curved Blades



### Long Blade Scissors

Very popular for long cuts

PART #	OVERALL LENGTH	BLADE LENGTH
297	3 1/2"	1 1/4"
298	4"	1 1/2"
298A	4 1/2"	1 3/4"
298B	5"	2"



### 60° Angle Slim Blade Scissors

Blade angle offers good surface clearance.

PART #	OVERALL LENGTH	BLADE LENGTH
270	4 1/2"	1 1/4"



# SCISSORS

## STAINLESS STEEL

### STRAIGHT CURVED AND ANGLED

★★ FINE PRECISION

TWEEZERS

**271 ★★**

**4 ¾" long**

Straight blades with extra-long handles provide better cutting leverage. Blade length is 1 ¼".



**299-P ★★★**

**5 ½" long**

Features molded handles with tempered Stainless Steel blades. Serrations on one-edge makes this scissor great for cutting Kevlar. Wider finger holes and smooth opening makes for easy operation. Blade length 1 ¾".



**309 ★★**

**4" long**

Used for cutting soft wire. Blade length is 1 ¼".



**299D-G ★★**

**6" long**

The Ergonomic design of the handles has no finger holes like traditional scissors. With added return springs and padded grips, these scissors can be used for long periods of time without hand fatigue.



#### Trimmer Scissors

Used for pattern cutting and general-purpose use. Chrome-plated.

PART #	OVERALL LENGTH	BLADE LENGTH
339	6"	2 ¾"
340	7"	3 ¼"
341	8"	4"



**299 ★★**

**5" long**

Heavy duty, general-purpose scissors with serrated outside blade edges. Blade length is 1 ¾".



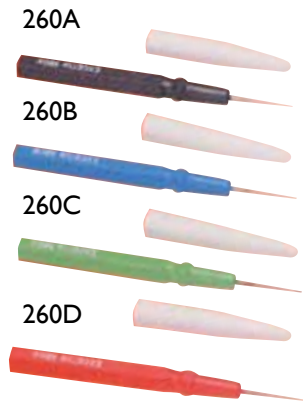
# SMALL HAND TOOLS

## SPATULAS AND PIN VICES

★★★ HIGH PRECISION

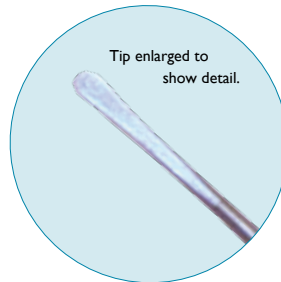
### Miniature Spatulas 2 ½" Plastic Handle

REF. NO.	TIP SIZE	STYLE
260A ★★★	.010"	Black
260B ★★★	.015"	Blue
260C ★★★	.020"	Green
260D ★★★	.025"	Red



### Miniature Spatulas 2 ½" ESD Safe Aluminum Handle

REF. NO.	TIP SIZE	STYLE
260A-ESD ★★★	.010"	Black
260B-ESD ★★★	.015"	Blue
260C-ESD ★★★	.020"	Green
260D-ESD ★★★	.025"	Red



**220 ★★★** 4 ¼" long

#### Double-Ended Pin Vise

One end has a square 0 to .025" opening chuck, the other end is a round .035" to .115" opening chuck.



**227B ★★★** 4" long

#### Brass Handle Pin Vise

0 to .025" opening chuck.



**227A ★★★** 3 ½" long

#### Brass Handle Pin Vise

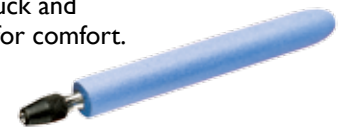
with 0 to .015" opening chuck.



**227B-ET ★★★** 4" long

#### Brass Handle Pin Vise

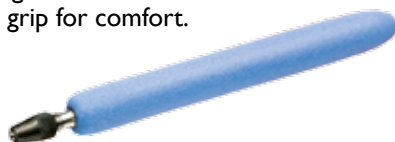
0 to .025" opening chuck and ergonomic foam grip for comfort.



**227A-ET ★★★** 3 ½" long

#### Brass Handle Pin Vise

0 to .015" opening chuck and ergonomic foam grip for comfort.



**227C-ET ★★★** 4" long

#### Brass Handle Pin Vise

with .010" probe tip and ergonomic foam grip for comfort.



**227C-P**  
Replacement Probes



Our line of multi-purpose probes are the perfect tools for electronics and bio-chemistry, lead-free soldering operations, dosing chemicals in labs, removing solder masking agents, rubber latex and adhesive coatings. Probes are made from PEEK, a high temperature thermoplastic which is inert to all common solvents, it resists a wide range of inorganic liquids. PEEK has a working temperature of 249° C (480° F) and is electrically conductive.

**336A-SD ★★★ 5 ½" long**

**Rounded body with one fine tip and one flat strong point**



**336B-SD ★★★ 5 ½" long**

**Square body with one curved fine tip and one flat strong tip**



**336C-SD ★★★ 5 ½" long**

**Square body with one flat fine tip and one flat fine sharp tip**



334 ★★★

**11 pc Full Set Precision Double-Ended Angled and Curved Probes.**  
Hardened Stainless Steel, 5 1/2" Overall Length.



# SMALL HAND TOOLS

## PROBES AND SCRIBES

★★★ HIGH PRECISION

TWEEZERS

### Diamond Tip Scribes ★★★ 4 ½" long

Fine Tips with Aluminum Handles.

REF. NO.	TIP SIZE	STYLE
475A	20 mil	Straight
475B	20 mil	Angle



### Micro Tip Probes ★★★ 6 ½" long

Stainless Steel. Smallest Tips Available.

REF. NO.	TIP SIZE	STYLE
332A	1 mil	Straight
332B	1 mil	45°
332C	1 mil	25°
332D	1 mil	90°
332E	1 mil	Hook



### Short Tip Micro Probes ★★★ 4 ¾" long

Stainless Steel.

REF. NO.	TIP SIZE	STYLE
335A	1 mil	Straight
335B	1 mil	90°



### Fine Tip Probes ★★★ 3" long

Stainless Steel probes designed for working under magnification.

REF. NO.	TIP SIZE	STYLE
331A	10 mil	Straight
331B	10 mil	Angle
331C	10 mil	Curved
331D	10 mil	Hook



### Fine Tip Probes ★★★ 3" long

General purpose Stainless Steel probes with standard handle.

REF. NO.	TIP SIZE	STYLE
330A	10 mil	Straight
330B	10 mil	Angle
330C	10 mil	Curved
330D	10 mil	Hook
330E	10 mil	Angle Chisel
330K Probe Kit		one each 330 A-D
333A	10 mil	Knife



# HEMOSTATS

STAINLESS STEEL

## LOCKING HANDLES

★★★ FINE PRECISION

**35-SE ★★**

**5" long**

**Locking Hemostat with  
Straight Serrated Jaws**

Clean room safe.



**35-PH ★★**

**5" long**

**Locking Hemostat with  
Straight Serrated Jaws**

Vinyl-coated handle.



**36-SE ★★**

**5" long**

**Locking Hemostat with  
Curved Serrated Jaws**

Clean room safe.



**36-PH ★★**

**5" long**

**Locking Hemostat with  
Curved Serrated Jaws**

Vinyl-coated handle.



**37-SE ★★**

**6" long**

**Locking Hemostat with  
Straight Serrated Jaws**

Clean room safe.



**37-PH ★★**

**6" long**

**Locking Hemostat with  
Straight Serrated Jaws**

Vinyl-coated handle.



**38-SE ★★**

**6" long**

**Locking Hemostat with  
Curved Serrated Jaws**

Clean room safe.



**38-PH ★★**

**6" long**

**Locking Hemostat with  
Curved Serrated Jaws**

Vinyl-coated handle.



# SMALL HAND TOOLS

## BRUSHES & BRUSH KITS

★★ FINE PRECISION

TWEEZERS

264 ★★

5 ¼" long

### Fiberglass Cleaning Brush

Refillable with long thin handle. Used in very confined areas, which are not accessible with larger diameter brushes. Brush is 1/20" diameter.



Refills available. Use reference no. 264A.

263 ★★

4 ¼" long

### Fiberglass Scratch Brush

Retractable and refillable, with plastic handle. Very useful when cleaning and polishing. Brush is 5/16" diameter.



Refills available. Use reference no. 263A.

Scratch Brushes ★★

4 ¾" long

Retractable and refillable with plastic handle. Can be used for fine deburring, polishing, rust removal, or cleaning and erasing in chemical etching processes. Excellent for pre-solder and contact cleaning. Brush is 1/8" diameter.

REF. NO.	BRUSH MATERIAL	REFILL ONLY REF. NO.
265	Brass	265A
266	Steel	266A
267	Fiberglass	267A
268	Nylon	268A



ESD Safe Bench Brushes ★★ 10" long

Made of high grade bristles with a wooden handle. There are four rows of bristles 4 ½" long and ½" wide, which will not shed.

Available in three degrees of hardness:

- 187 – Soft
- 189 – Half Soft
- 190 – Half Hard



262 ★★

### Brush Kit

Kit consists of the following:  
1 each brush holder, 265A brass refill, 266A steel refill, 267A fiberglass refill, 268A nylon refill. Supplied in plastic case.



186 ★★

8 ½" long

### Nylon Bench Brush

White Nylon bristles with a wooden handle. 4 rows of bristles 3 ¾" long and ½" wide.



214-H ★★

4 ½" long

### Applicator Brush

Double-ended applicator brush with a short flat end and an extra stiff chiseled end. Bristles are soft Horse Hair.



215-H ★★

4 ½" long

### Applicator Brush

Double-ended applicator brush with a short flat end and an extra stiff chiseled end. Bristles are soft Horse Hair.



### Instrument Cleaning Brushes

Designed for general cleaning in tight areas. The handle is 1/4" in diameter, with a tip size of 1/8" wide and 3/16" long. The fibers are mechanically clamped into the Stainless Steel tube and inserted in the Delrin handle. Available with straight or bent tips.



### Heat Resistant Brushes

The Nylon fibers are epoxy set into the Delrin handles with a high temperature adhesive to resist deterioration in an autoclave. The soft non-shedding Nylon fibers are perfect for working on delicate parts. Brushes should be cleaned prior to clean room use.



- 210S-P** 5 3/4" Straight tip with Hog Hair Bristles
- 210B-P** 5 1/2" Bent tip with Hog Hair Bristles.
- 210S-H** 5 3/4" Straight tip with Horse Hair Bristles.
- 210B-H** 5 1/2" Bent tip with Horse Hair Bristles.
- 210S-N** 5 3/4" Straight tip with Nylon Bristles.
- 210B-N** 5 1/2" Bent tip with Nylon Bristles.
- 210S-S** 5 3/4" Straight tip with Stainless Steel Bristles.
- 210B-S** 5 1/2" Bent tip with Stainless Steel Bristles.

#### Materials

**Hog Hair:** Strong and stiff with natural taper and split end. Water resistant and heat tolerant to 500°F.

**Horse Hair:** Soft and slightly stiff. Used for scratch-free dry brushing. Heat resistant to 370°F.

**Nylon:** Resilient and durable. Impervious to solvents and common chemicals. Resistant to bacteria and heat resistance to 250°F.

**Stainless Steel:** Resistant to heat, rust and corrosion. Used for wet or dry applications.

- 211A-N** 4 1/2" Long and 3/16" diameter handle with K" long and 3/16" wide bristles.
- 211B-N** 4 1/2" Long and 1/4" diameter handle with 1/2" long and 1/4" wide bristles.
- 211C-N** 4 1/2" Long and 3/8" diameter handle with 1" long and 3/8" wide bristles.
- 211D-N** 4 1/2" Long and 1/2" diameter handle with 1" long and 1/2" wide bristles.

#### Material

**Nylon:** Resilient and durable. Impervious to solvents and common chemicals. Resistant to bacteria and heat resistant to 250°F. Nylon 6.12 is FDA approved.

#### ESD Safe Brushes

Made with Stainless Steel handles and Horse Hair bristles to provide ESD protection. The bristles are mechanically clamped into the handle for maximum fiber retention without the use of adhesives that could contaminate the work area.



- 212A-H** 3 1/2" Long and 1/8" diameter handle with 1/8" long and 1/8" wide bristles.
- 212B-H** 4 3/4" Long and 3/16" diameter handle with 5/16" long and 1/4" wide bristles.
- 212C-H** 4 3/4" Long and 5/16" diameter handle with 3/8" long and 3/8" wide bristles.
- 212D-H** 6" Long and 3/8" diameter handle with 1" long and 7/16" wide bristles.

#### Material

**Horse Hair:** Soft and slightly stiff. Used for scratch-free dry brushing. Heat resistance to 370°F.

#### Clean room Safe Brushes

Made with Stainless Steel handles and new Statigo9 fiber bristles. The bristles are mechanically clamped into the handle for maximum fiber retention without the use of adhesives that could contaminate the work area. New Statigo9 fibers are similar to Nylon fibers, except they are ESD Safe with a surface resistivity of  $10^6$ .



- 213A-N** 3 1/2" Long and 1/8" diameter handle with 1/8" long and 1/8" wide bristles.
- 213B-N** 4 3/4" Long and 3/16" diameter handle with 5/16" long and 1/4" wide bristles.
- 213C-N** 4 3/4" Long and 5/16" diameter handle with 3/8" long and 3/8" wide bristles.
- 213D-N** 6" Long and 3/8" diameter handle with 1" long and 7/16" wide bristles.

#### Material

**Statigo9:** A static dissipative acetal that is as durable as nylon, thick enough to perform mechanical work, does not shed or slough and is clean room compatible.

# SMALL HAND TOOLS

## BRUSHES, MIRRORS, SPATULAS

★★ FINE PRECISION

**194-ESD** ★★

**6" long**

### Soft Cleaning Brush

Two rows of soft bristles. ESD Safe round plastic handle. Brush head is 1/2" long and 3/16" wide.



**195-ESD** ★★

**6 1/2" long**

### Stiff Cleaning Brush

Stiff bristles clamped into holder. ESD Safe round plastic handle. Brush head is 3/4" long and 1/8" wide.



**196-ESD** ★★

**5 3/4" long**

### Soft Cleaning Brush

One row of soft bristles. ESD Safe flat plastic handle. Brush head is 1 1/2" long and 1/8" wide.

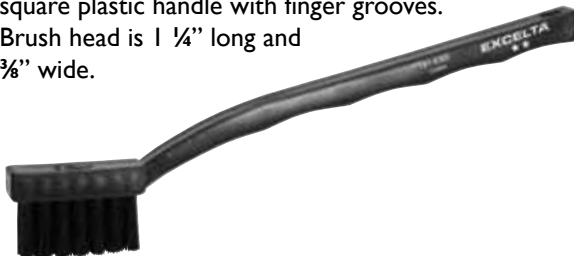


**197-ESD** ★★

**6 3/4" long**

### Toothbrush Style Brush

Three rows of medium stiff bristles. ESD Safe square plastic handle with finger grooves. Brush head is 1 1/4" long and 3/8" wide.



**342** ★★

**7" long**

Made of polished Stainless Steel these spatulas are double-ended with a round handle. Both ends have a rounded blade 1 1/8" long and 3/16" wide.



**343** ★★

**7" long**

Made of polished Stainless Steel these spatulas are double-ended with a round handle. One end has a rounded blade 1 1/4" long and 5/16" wide, the other end has a square blade 3/8" long and 1/4" wide with a sharp edge for scraping.



**345** ★★

**8 1/2" long**

Made of Stainless Steel with a wooden handle. Can be used for mixing and potting. Blade length is 4 3/4" long and 5/8" wide.



### Inspection Mirrors

Outer surfaces are heavily chrome plated. All models feature insulated vinyl grips. The clear-view mirrors are copper-backed and electro-plated.

PART. NO.	SHAPE	LENGTH	DIAMETER
<b>415</b>	Round	8"	1 1/4"
<b>416</b>	Oval	8 1/2"	1" x 2"
<b>417</b>	Round	7 1/2"	7/8"





#### 455A ★★★

**The Super Optvisor** has a magnifying power of 2.2 and can be used for precise viewing with the added 3.3 power lens. The exclusive clear-view lens has no center post to increase viewing. Shatter-resistant precision and optical lens bring the smallest detail up to a larger and sharper image. Comes with an adjustable headband and can be worn over regular glasses.



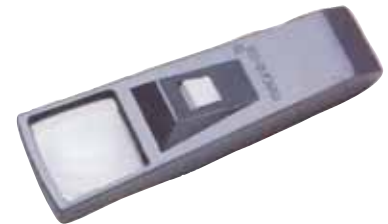
#### 401 ★★★

**Magna-Lite Illuminated Optical Magnifier**  
5X power hand held magnifier. Lens dimension is 1 ¼" square. Perfect for quality control and inspection personnel. Comes in an unbreakable black plastic case.



#### 407 ★★★

**Magna-Lite Illuminating Optical Magnifier**  
10X power hand held magnifier. Lens dimension is 1 ¼" square. Perfect for quality control and inspection personnel. Comes in an unbreakable black plastic case.



### Eyeloupes

Used for magnification in assembly or inspection. Two element optical glass construction. Bright, sharp focus loupes with 360° clear acrylic base to admit light from all directions and a wide range of view.



**405**

★★★★★

5 power Eyeloupe



**410**

★★★★★

10 power Eyeloupe



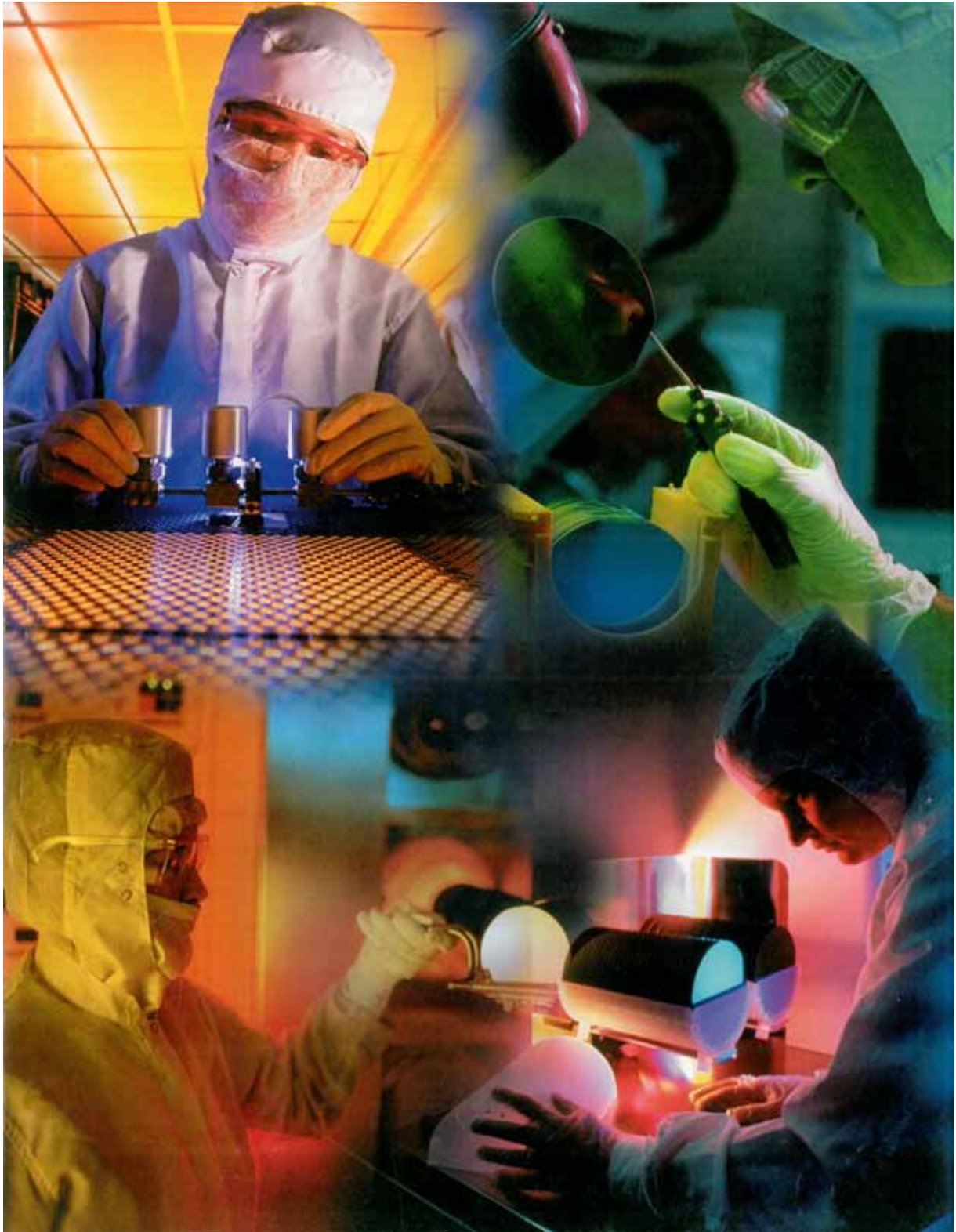
**422**

★★★★★

22 power Eyeloupe

# EXCELTA®

## VACUUM TOOLS



★★★★★ ULTRA PRECISION

★★★★ EXTREME PRECISION

★★★ HIGH PRECISION

Hi-Performance vacuum systems are ideal for handling wafers, disk media, flat panels, or any item with a flat hard surface.

*Excelta offers a wide variety of vacuum tools to choose from:*



#### ★★★★★ Roto-Pic® Vacuum Systems

The Roto-Pic® is designed to reduce manual handling of both chips and wafers. Round nose wheel rotates 360° so components can be picked up and aligned with ease.



#### ★★★★ Continuous Vacuum Systems

These compact units will handle most of the surface mount components used in industry today. The long life diaphragm vacuum pump generates over six inches of mercury. The unit connects to ground automatically with a three wire power cord.



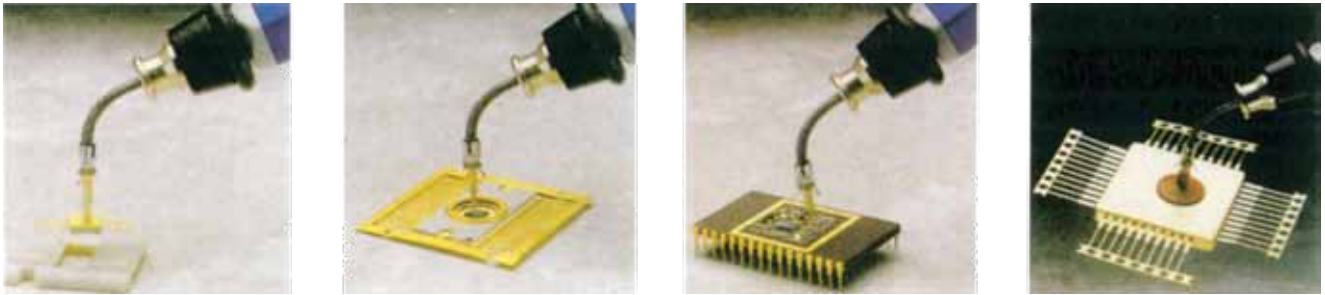
#### ★★★ Pen Vac's

This is an excellent tool for pick-and-place of many standard and odd size SMT components. Pen-Vacs measure 6" long by 1/2" round, with a convenient rear storage compartment and pocket clip.



#### ★★★★★ Porta-Wand® Vacuum Systems

The rechargeable battery operated vacuum handling tool features a 9.6V detachable rechargeable battery pack. The built-in filters ensure better than Class I performance.



The most revolutionary vacuum pick-up available. Designed to reduce manual handling of both chips and wafers, the Roto-Pic has a smooth positive hold-and-release slide bar. The round nose wheel rotates 360° so components can be picked up and aligned with ease. Easily replaceable tips come in a variety of sizes and silicon rubber cups can be inserted on Roto-Pic for pick-up and manipulation.

## VACUUM KITS

### **2000RK Roto-Pic Vacuum Kit**

Complete vacuum handling system includes one each of the following kits:

**2000R, 2000P, 2000WP, 2000DA**

### **2000R Vacuum System Kit**

Contains one each of the following:

**2000A, 2000V, 2000C**

### **2000P Probe Kit**

Contains one each of the following probes:

**2020, 2021, 2022, 2023, 2024**

### **2000WP Vacuum Cup Kit**

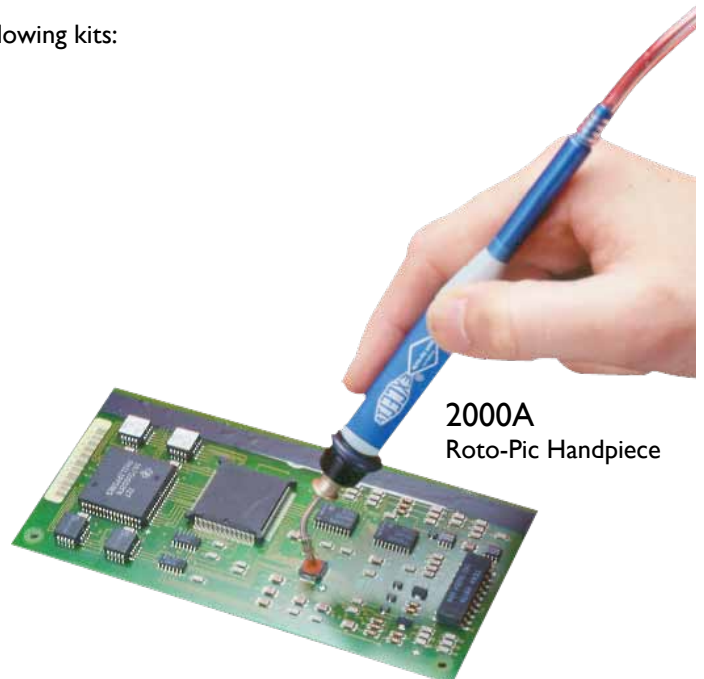
Contains one each of the following cup assemblies:

**2050, 2051, 2052, 2060, 2071**

### **2000DA Vacuum Tip Kit**

Contains one each of the following tip assemblies:

**2040, 2041, 2043, 2044, 2080**



2000A  
Roto-Pic Handpiece

### Roto-Pic Vacuum System

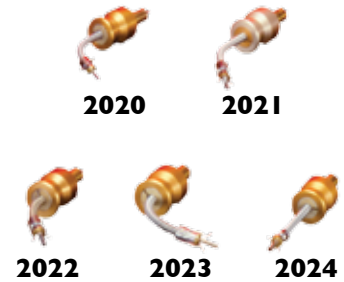
Ref.No	Description
2000A	Roto-Pic Handpiece
2000V	Vacuum Pump
2000C	3' Plastic Hose



### Vacuum Probes

For use with the Roto-Pic Handpiece (2000A)

Ref.No	Description
2020	45°
2021	60°
2022	45° short
2023	90°
2024	180° straight



### Vacuum Cup Assemblies

High temperature vacuum cups made of silicon rubber with brass fitting. Use with Roto-Pic Probes and Handpiece.

Ref.No	Description
2050	3/8" Cup
2051	1/2" Cup
2052	1/4" Cup
2060	Circo-Vac Cup
2071	Verto-Vac w/ high temp support



### Small Tip Assemblies

Vacuum Tips for handling small parts, for use with Roto-Pic Probes and Handpiece.

Ref.No	Inside Diameter	Tip Material
2040	.006"	Teflon
2041	.005"	Polyethylene
2043	.012"	Polyethylene
2044	.035"	Polyethylene
2080	.004"	Stainless Steel



### 4000-GP ★★★★★

#### General Purpose Vacuum System

A general-purpose vacuum handling tool that plugs directly into 110VAC. This compact unit will handle most of the surface mount components used in the industry today. The long life diaphragm vacuum pump generates over six inches of mercury. The unit connects to ground automatically with a three wire power cord.

#### The 4000-GP comes complete with the following features:

- Whisper-quiet operation.
- 4 feet of coiled vacuum hose.
- Vacuum pick-up handpiece.
- No-skid rubber feet.
- Produces vacuum of over six inches of mercury.
- Side mounted handpiece holder.
- Set of nine vacuum tips: **PVS-CB-12, PVS-CB-14, PVS-CB-18, PVS-CB-38, PVB-CB-332, PVB-CB-316, PVB-CB-14, PVB-CB-18, PVB-CB-38.**



4000-GP

### 4000-HP ★★★★★

#### High Performance Vacuum System

High performance vacuum handling system will handle small to large size components. The precision pump and motor generate over fifteen inches of mercury. The compact tower design takes up a very small footprint on the work surface. An electric eye penholder on the side automatically shuts the unit off when the vacuum pen is placed in it. A jack on the rear of the 4000-HP allows the use of the optional foot switch to control vacuum during pick and place operations.

#### The 4000-HP comes complete with the following features:

- Quiet operation.
- 4 feet of coiled vacuum hose.
- Vacuum pick-up hand piece.
- Automatic vacuum pump ON/OFF control.
- No-skid rubber feet.
- ESD connection on rear of unit.
- Produces vacuum of over fifteen inches of mercury.
- Set of nine vacuum tips: **PVS-CB-12, PVS-CB-14, PVS-CB-18, PVS-CB-38, PVB-CB-332, PVB-CB-316, PVB-CB-14, PVB-CB-18, PVB-CB-38.**



4000-HP

#### Individual System Components

**4000-FS** Foot Switch for 4000-HP

**4000-H** Handle for 4000-HP/GP

**4000-RF** Replacement Filter for 4000-HP



4000-H

#### PV-2A-ESD ★★★

##### Pen-Vac Standard

This is an excellent tool for pick-and-place of many standard and odd size SMT components. The Pen-Vac Standard is 6" long by ½" round, with a convenient rear storage compartment and pocket clip.

The kit contains the following 6 Buna-N static dissipative vacuum cups and probes: **PVB-CB-18, PVB-CB-14, PVB-CB-38, PVS-CB-18, PVS-CB-14, PVS-CB-38.**

#### PV-2-ESD ★★★

##### Pen-Vac Standard

This Pen-Vac Standard comes with the handpiece and convenient rear storage compartment and pocket clip.

The kit contains the following 2 Buna-N static dissipative vacuum cups and probes: **PVB-CB-14, PVB-CB-18.**

#### PV-3A-ESD ★★★

##### Pen-Vac Pro

The Pen-Vac PRO is 5" long by ½" round. The plastic static dissipative body provides ESD protection at a lower cost.

The kit contains the following 6 Buna-N static dissipative vacuum cups and probes: **PVB-CB-18, PVB-CB-14, PVB-CB-38, PVS-CB-18, PVS-CB-14, PVS-CB-38.**

#### PV-HV ★★★

##### Handi-Vac®

This 3" vacuum-bulb pick-up-tool is simple and easy to use. When the vacuum bulb is squeezed, place the soft suction cup on the part to be handled, then relax your squeeze and the part is firmly gripped. A second squeeze releases the part.

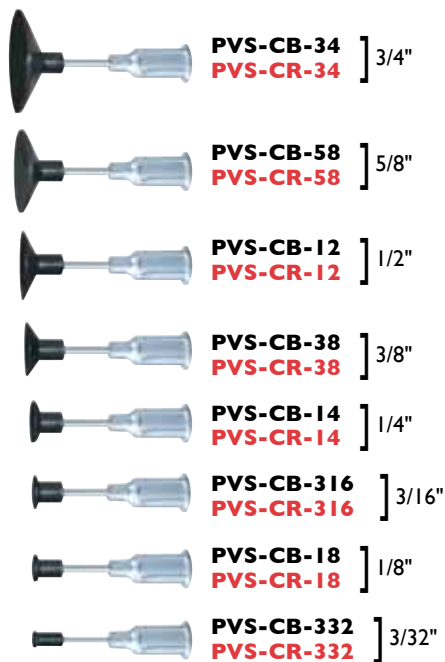
The Handi-Vac kit comes with the handpiece, and the following 4 Buna-N static dissipative vacuum cups and probes: **PVB-CB-18, PVB-CB-14, PVS-CB-18, PVS-CB-38.**



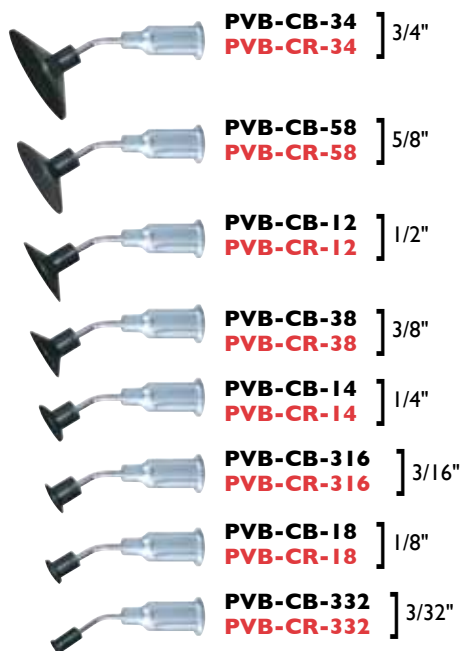
### Finest Quality Replacement Cups + Tips

- Cup Sizes from  $\frac{3}{32}$ " to 1"
- Black Cups are Buna-N Static Safe Non-marking (Working Temperature  $-5^{\circ}$  -  $250^{\circ}$ F)
- Red Cups are High Temperature Silicon Rubber (Working Temperature  $-65^{\circ}$  -  $480^{\circ}$ F)
- Interchangeable with Pen-Vac Junior, Pen-Vac Standard, Pen-Vac Pro and Handi-Vac

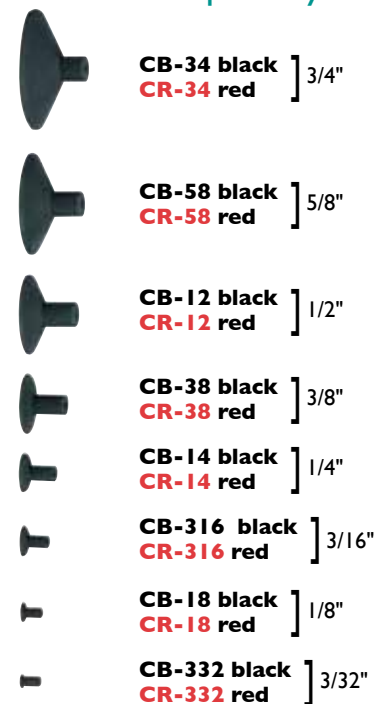
#### Straight Probes



#### Angulated Probes



#### Vacuum Cups Only



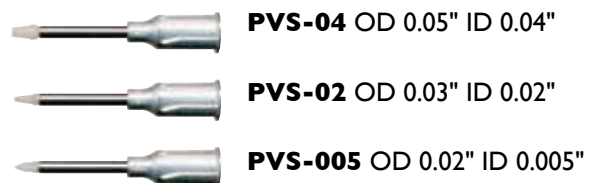
### Small Tips

Designed for handling very small parts. Tips are made in ESD Safe Delrin Plastic so there is no chance of static or mechanical damage. **Small tips should be used with continuous vacuum systems only.**

#### Angulated Tips



#### Straight Tips





- PV-500-W4 ★★★★★ Kit with 4" Wafer Tip**
- PV-500-W6 ★★★★★ Kit with 6" Wafer Tip**
- PV-500-W8 ★★★★★ Kit with 8" Wafer Tip**
- PV-500-W12 ★★★★★ Kit with 12" Wafer Tip**



### Porta-Wand® Elite

Rechargeable Battery Operated Vacuum Handling Tool

Kit comes with a detachable 9.6V NiMH rechargeable battery pack, an in-stand charger and one wafer tip as listed below. The **detachable battery pack** contains the rear exhaust filter for the entire tool to ensure better than Class I performance. The battery pack can be recharged when attached to the tool or when separated from the tool. Ideal for handling wafers, disk media, flat panels, or any item that has a flat hard surface. A power-on indicator flashes when the battery pack needs to be recharged or interchanged with a fully charged battery pack. A push-button provides easy on/off control with a lock-to-on position. An intake air filter is replaceable from the front of the tool. Every Porta-Wand is tested to meet Class I clean room particle contamination requirements. A serialized particle counter printout is provided with every tool.

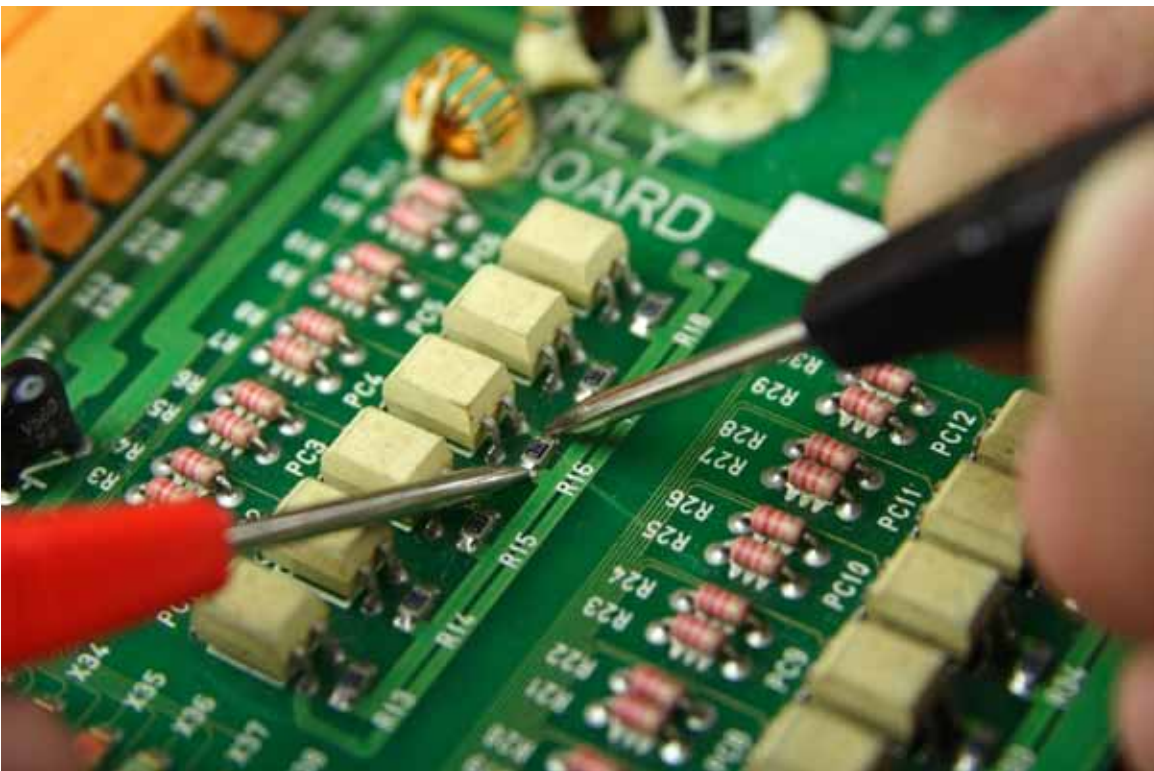
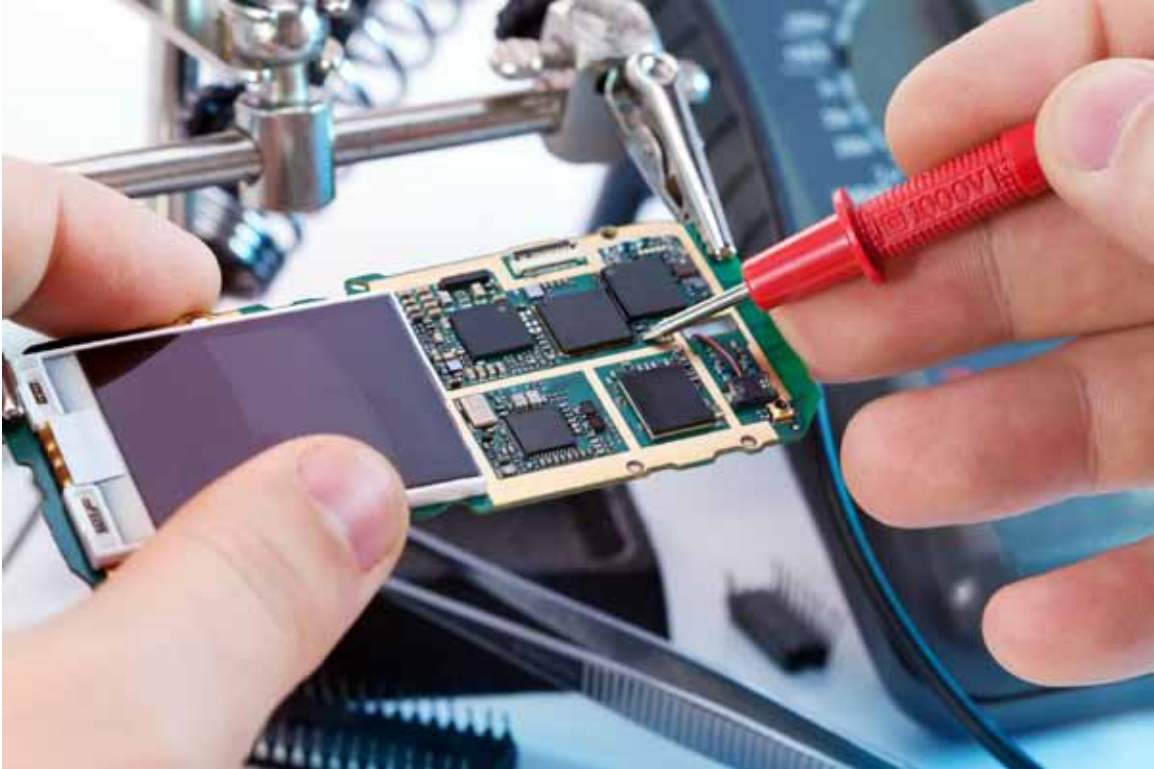


### Replacement Molded Wafer Tips (ESD Safe)

- PV-W4 ★★★★★ 4" Replacement Wafer Tip**
- PV-W6 ★★★★★ 6" Replacement Wafer Tip**
- PV-W8 ★★★★★ 8" Replacement Wafer Tip**
- PV-W12 ★★★★★ 12" Replacement Wafer Tip**

# EXCELTA<sup>®</sup>

TEST AND MEASURING



#### PB-1 ★★★

As a continuity tester, Pocket-Beeper affords the operator quick discernment of point-to-point continuity testing by a clear audible tone. As a transistor and diode tester, the Pocket-Beeper analyzes “in circuit” junctions for go/no go normality.

The Model PB-1 indicates leakage, short or open conditions of transistors. Pocket-Beeper’s portability, combined with its unique self-contained design and rugged enclosure, makes it ideal for production and field service applications.

#### Applications:

- Point-to-point continuity
- Rapid in-circuit scanning of transistors and diodes
- Detects shorts, open and leakage in components
- Positive go/no go testing
- Field servicing and maintenance

#### Features:

- Automatic power shut-off when not in use
- Audibly indicates conditions
- Low power drain for long battery life
- Will not harm any solid-state device or delicate circuits

#### Specifications:

- Power (internally supplied) 1.5 VDC “C” dry cell
- Probe signal voltage 1.6 volts peak-to-peak
- Dimensions: 4" high X 1 H" deep X 2 M" wide.
- Ambient temperature range +10°F to +120°F
- Weight: 12 ounces maximum

#### Replacement Probes: PB-1-L



# INTELLITWEEZE® R-C-L METER

★★★★★ *High Precision TM-150*  
★★★★★ *Ultra Precision TM-500*



The IntelliTweezer® is a quick and easy way of testing and troubleshooting many types of components. With the use of only one hand, this lightweight unit will quickly measure resistance, capacitance, inductance, continuity and polarity.

## Measures Resistance, Capacitance, and Inductance

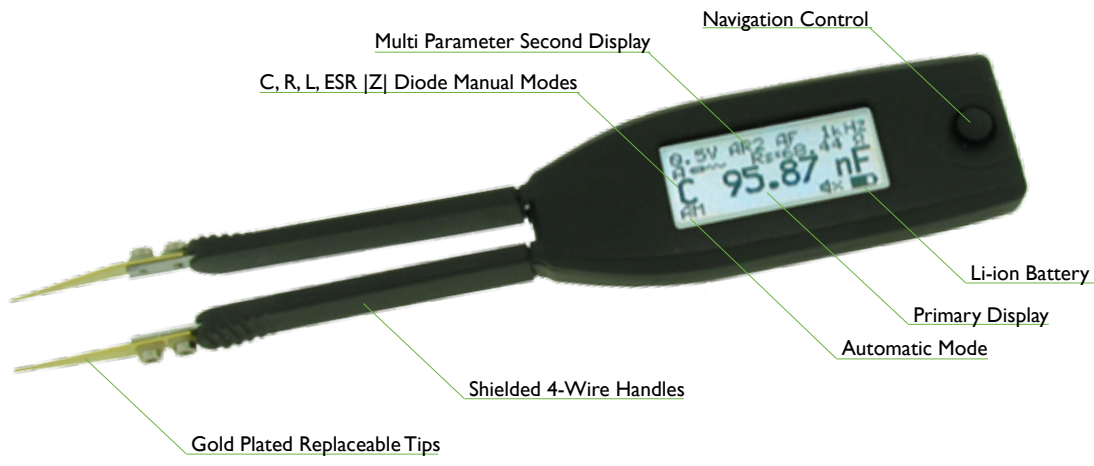
The primary display shows the present reading. The secondary display (above the primary display) shows the present reading of additional parameters when the primary display shows other features (L,C). The bar graph provides an analog indication of the measure input.

## Measures Continuity

The beeper sounds for resistance below the threshold, or to indicate momentary open circuit.

## Measures Diode Polarity

Manual setting for testing polarity on diodes.



### PHYSICAL SPECIFICATIONS

Operating Temperature:	0 °C to +55 °C
Battery Type:	3.7V LiPO rechargeable 150mAH
Battery Life (continuous ):	80 Hours typical, 2 hours charging cycle
Electromagnetic Compatibility (EMC):	FCC 15 part B, SE
Size:	14.0 x 2.5 x 3.0 cm (3.94 x 0.9 x 1.5 in)
Weight:	53 grams (1.9 oz)
Warranty:	1 year

### TECHNICAL SPECIFICATIONS

AC test mode Test frequency:	1 kHz, 10 kHz, 120Hz, 100 Hz
Test frequency accuracy:	50 PPM (0.005%)
Test signal level:	0.25/0.5/1.0 +/- 5% Vrms Sine Wave
Source impedance:	62.5Ω/1kΩ/16kΩ +/- 1%

### MEASUREMENT RANGES & PRECISION

	★★★★★ TM-500	★★★★★ TM-150
Resistance	Range: 0.05 Ω to 9.9 MΩ Precision: up to 0.2%	Range: 0.05 Ω to 9.9 MΩ Precision: up to 0.7%
Capacitance:	Range: 0.5 pF to 4999 μF Precision: up to 0.2%	Range: 0.5 pF to 4999 μF Precision: up to 2.0%
Inductance:	Range: 0.5 μH to 999 mH Precision: up to 0.5%	Range: 0.5 μH to 999 mH Precision: up to 1.0%
Quality factor Q:	Range: 0.001 to 1000	Range: 0.001 to 1000
Dissipation factor D:	Range: 0.001 to 1000	Range: 0.001 to 1000

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2629	77	2914D	80	7232E	63
7131E	63	2922-14	97	7234E	63
7132E	63	2922-18	97	7235E	63
2629S	76	2922-38	97	7237E	63
2642	77	2949	80	7237EH	68
2642S	76	2949D	80	7238E	63
2643	77	4000-FS	118	7240E	64
2643S	76	4000-GP	118	7241E	64
2644	77	4000-H	118	7241EHT	67
2644D	77	4000-HP	118	7242E	64
2644S	76	4000-RF	118	7243E	64
2647	77	7104E	65	7244E	64
2647D	77	7130E	63	7245E	64
2647S	76	7134E	63	7246E	64
2818	78	7135E	63	7247E	64
2829	78	7137E	63	7247EHT	67
2829L	79	7138E	63	7248E	64
2842	78	7140E	64	7249E	66
2842D	78	7141E	64	7270E	66
2842L	79	7142E	64	7271E	66
2843	78	7143E	64	7272E	65
2843L	79	7144E	64	7274E	66
2844	78	7145E	64	7275E	65
2844D	78	7146E	64	7282E	65
2844L	79	7147E	64	7282EH	68
2847	78	7148E	64	7282EHT	67
2847D	78	7149E	66	9240E	69
2847L	79	7170E	66	9241E	69
2876EHT	70	7171E	66	9242E	69
2896EHT	70	7172E	65	9243E	69
2897EHT	70	7174E	66	9244E	69
2899EHT	70	7175E	65	9245E	69
2904	80	7182E	65	9246E	69
2904D	80	7204E	65	9247E	69
2905	80	7230E	63	9248E	69
2905D	80				

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