



1.1. BACKGROUND

1856

The production started in Eskilstuna, Sweden. It is still the oldest continuous producer of hand tools existing today.







All Lindström pliers are produced today in **our own factories** in the north of Spain.

The manufacturing process and location has changed over time, but one thing that will never change is the performance of the cutting edge!



1.2. MANUFACTURING

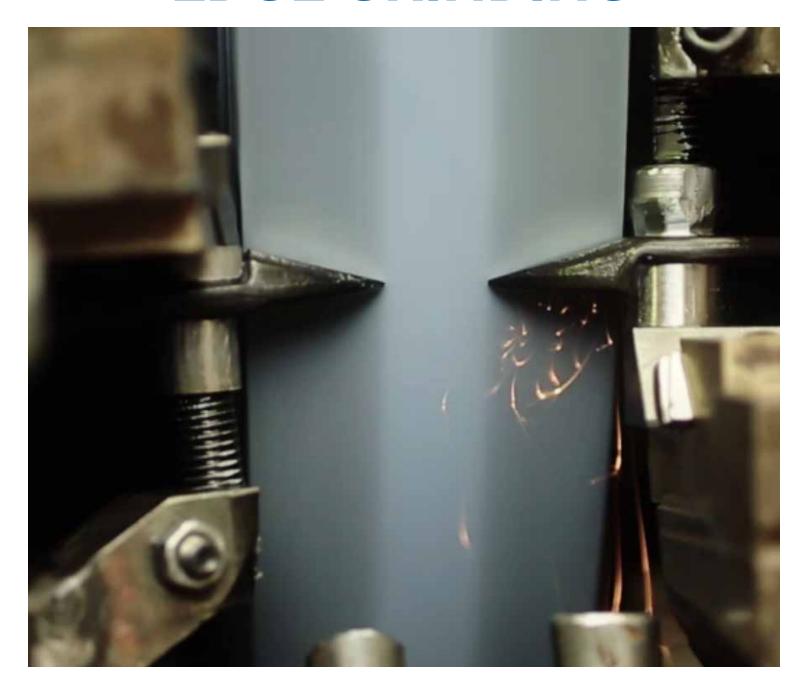
There are many steps in the manufacturing process...

but there are two extremely important steps to obtain a product with the highest quality:

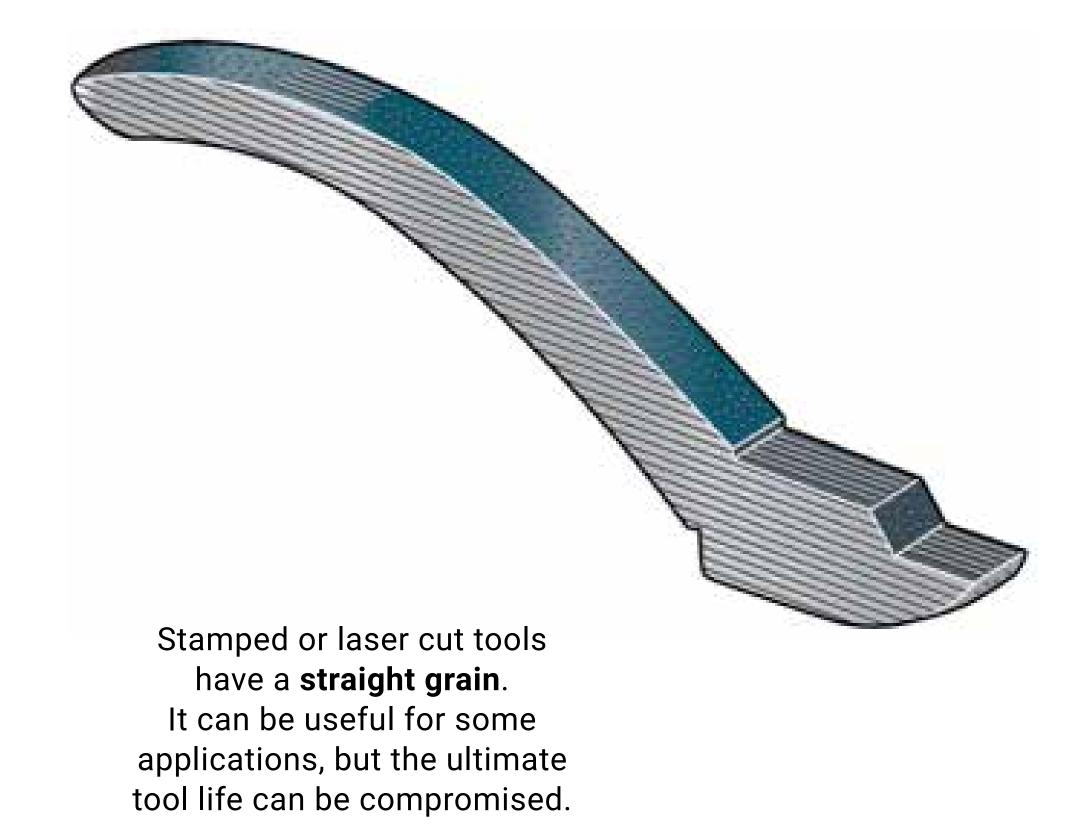
HOT FORGING

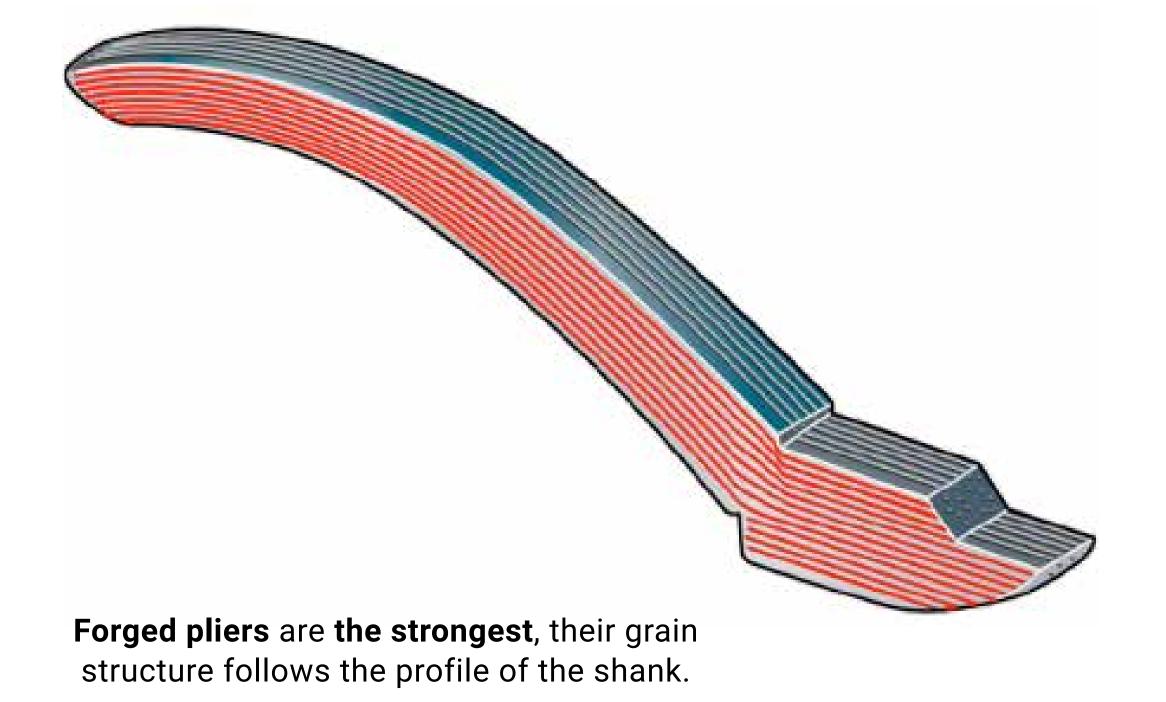


EDGE GRINDING



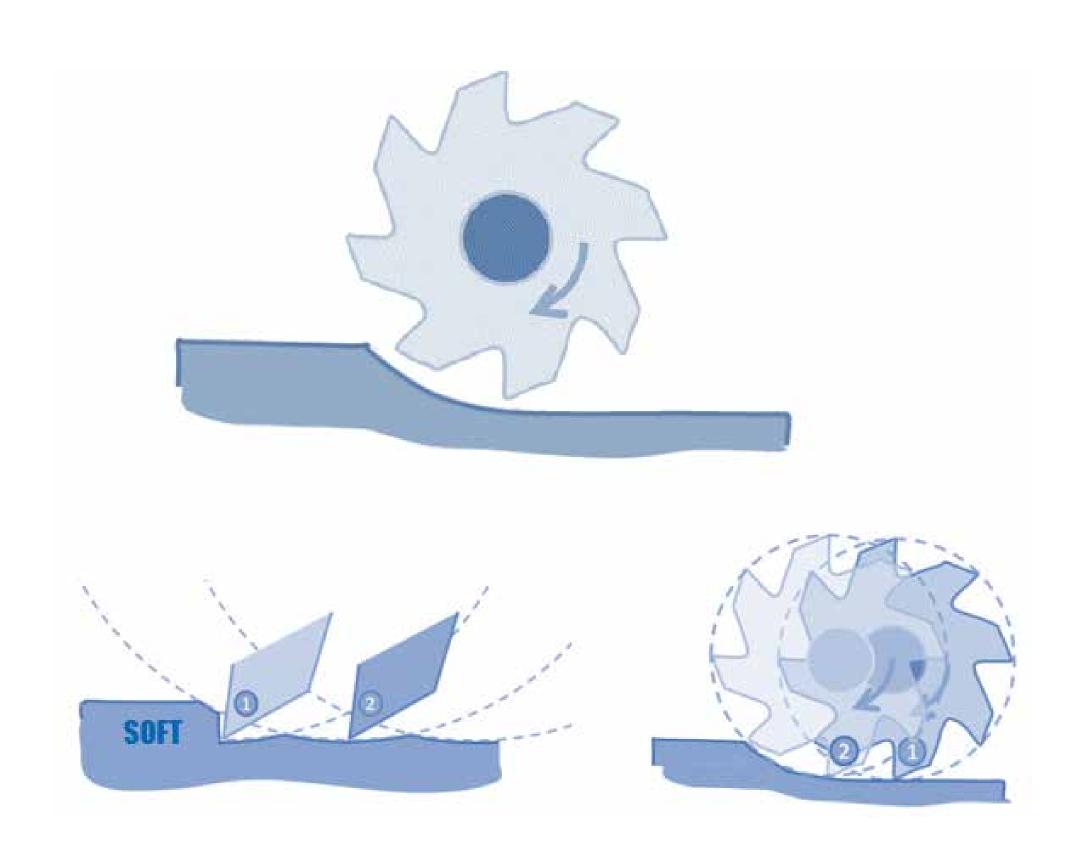
1.2. MANUFACTURING





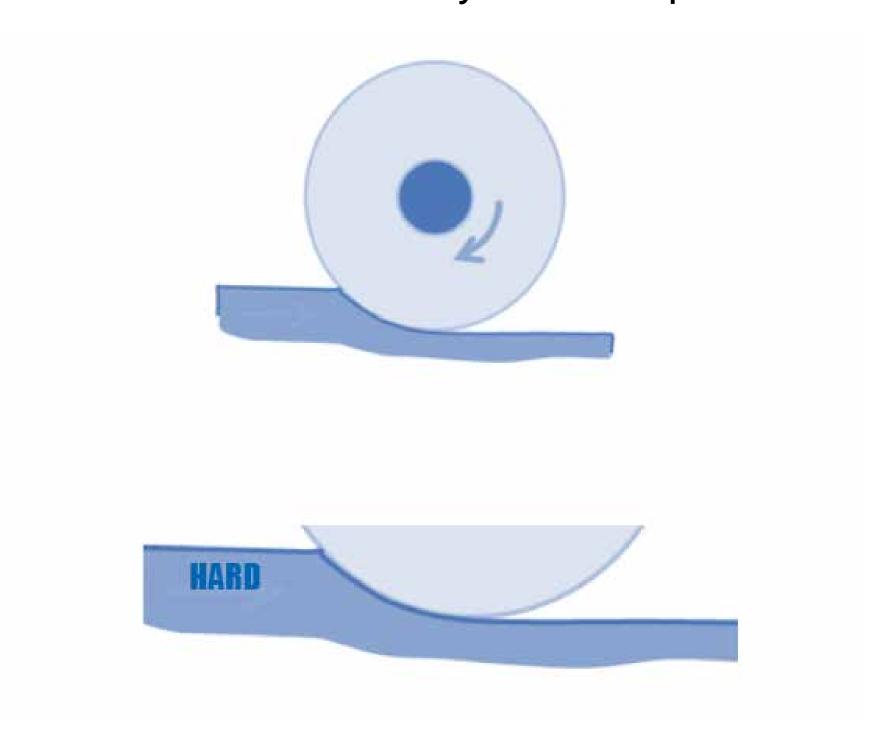
Lindström pliers are all hot forging!

1.2. MANUFACTURING



Milling, is made in steps and on soft material. This gives a rough surface.

But with **Grinding**, the machining is made on hardened material, so you get a perfect surface and extremely accurate precision.





ENDURANCE

Even if the starting point of a plier is made of a hot ground and hot forged shank the quality has to be checked.

From time to time, the pliers are tested in a test rig. The pliers must stand 1,000,000 cuts before the blade and screw joint have folded.



CUSTOMIZATION

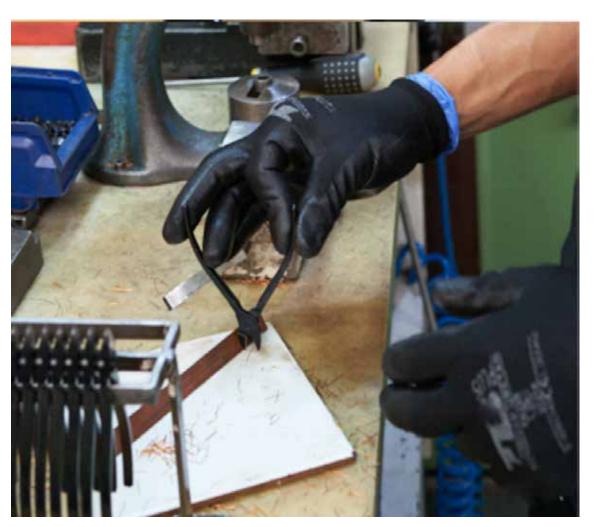
TEST CUTTING

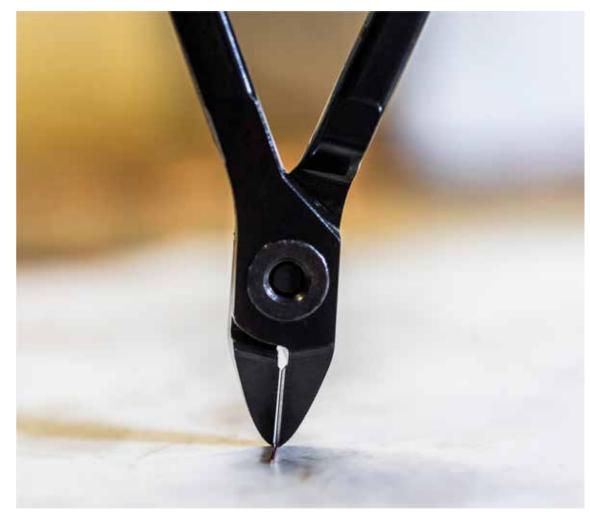
100% of the pliers are tested with:

- > A cupper wire on three different positions of the edge.
- > One cut right at the tip against a hard surface.

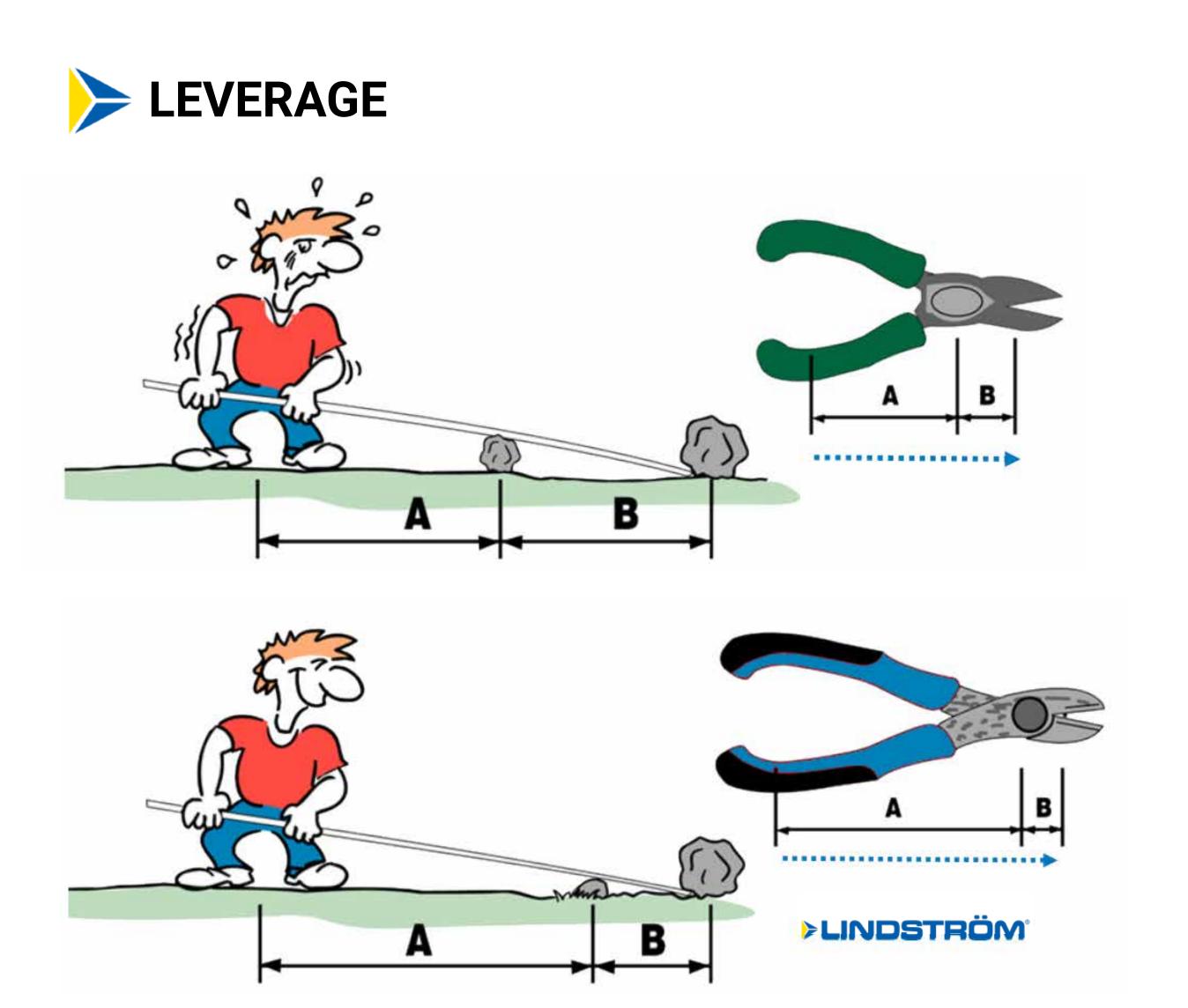
WE DON'T ACCEPT ANY "CHEWING", IT HAS TO HAVE CLEAR CUTS











The relation **A/B** is of utmost importance.

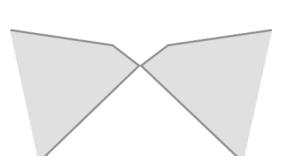
The higher the leverage, the lower the hand force required!

JOINT

1.4. PLIER THEORY

If the joint is too tight, it is hard to open the pliers.

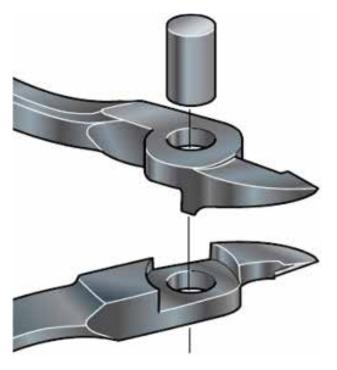
If the joint is too loose, the cutting edges will overlap and not cut.





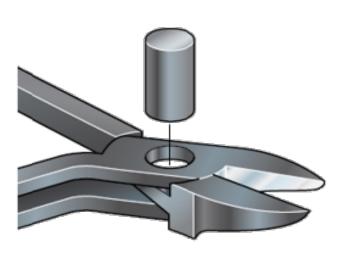
Screw joint gives the highest precision and easy run with no play from full open to close!

Lap Joint with Rivet



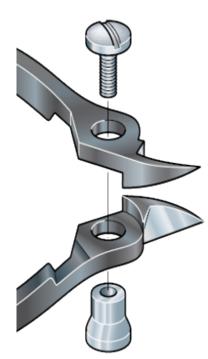
Most common and the cheapest joint.

Box Joint



Gives stable joint.

Lap Joint with Screw



Gives the joint the highest precision and most comfortable run.



CUSTOMIZATION

1.4. PLIER THEORY

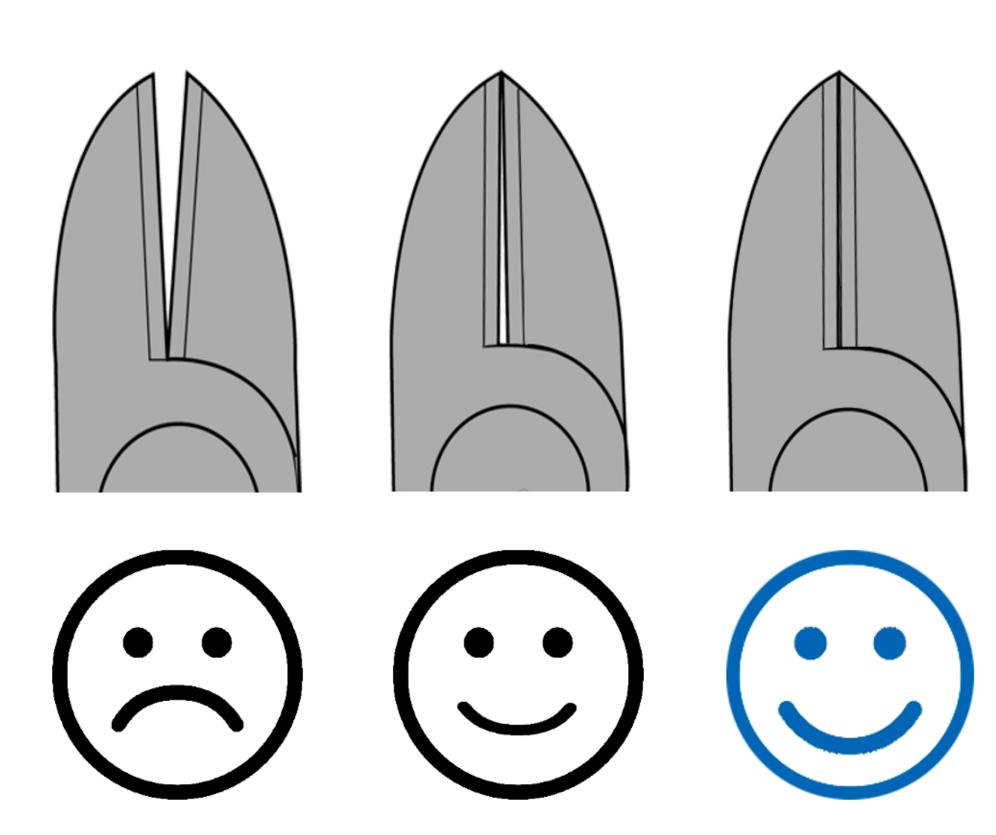
CUTTING EDGE

When holding a plier towards a light you will see a light between the edges.

The best plier is the one with a gap close to the rivet.

This plier will close when you compress the shanks even if the edge is a bit worn!

OBS! Exaggerated sketches!

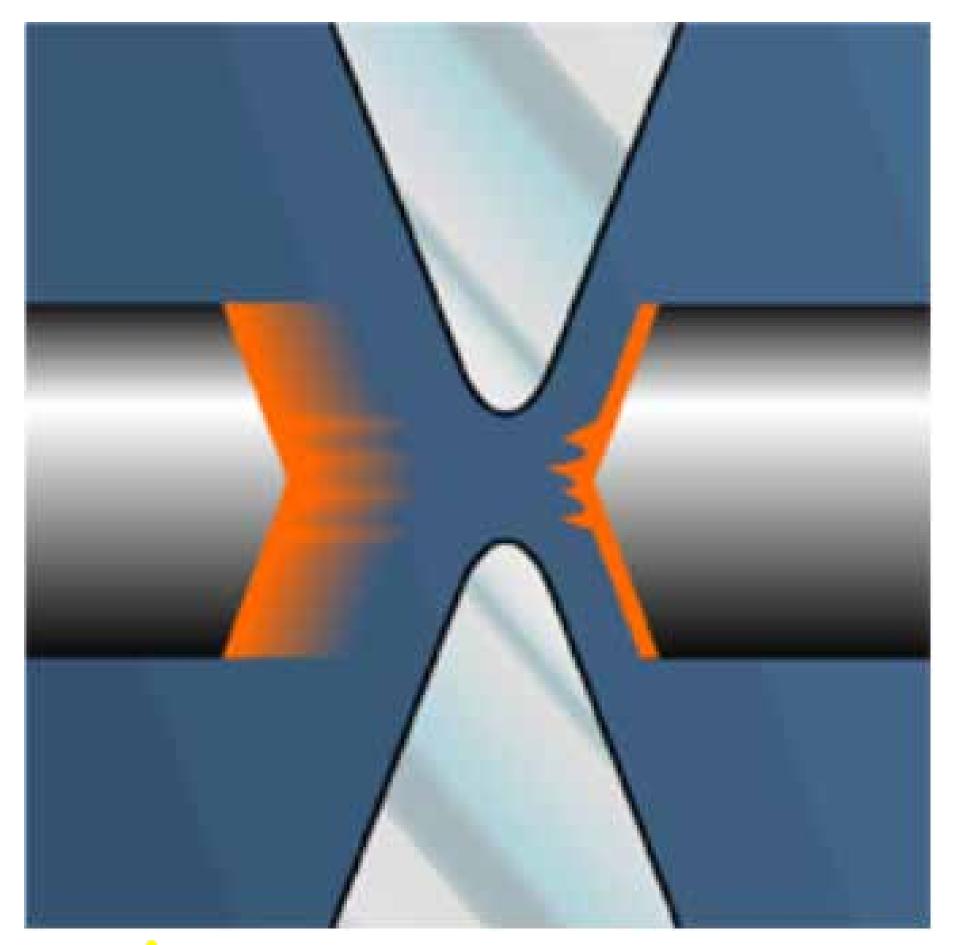




THE CUT

When cutting a wire, the wire bursts before the edges meet. This creates a reaction force in the leads which makes the two ends fly away in each direction.

The sharper the edge, the less reaction force!

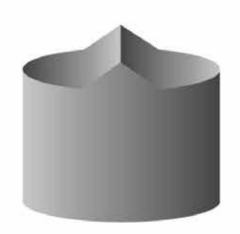




LINDSTRÖM EDGES

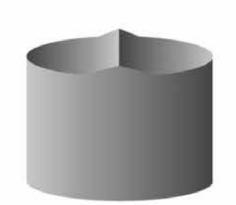
1.5. PLIER PARTS

Different edges give different pinch in the leads and create different reaction forces in the lead.



Micro-Bevel®

- Designed to meet high quality requirements of our customers.
- Leaves a low profile cut result, important for solderability and connectivity.
- Unique design with wide cutting range to suit an unmatched variety of uses.



Flush

- Cut result leaves a narrow and short peak along the "pinch" line, decreasing the surface area at the cut.
- > Improves solderability.
- Excellent for reducing leadshock.
- Very popular for the Medical **Device and Jewelry** manufacturing.



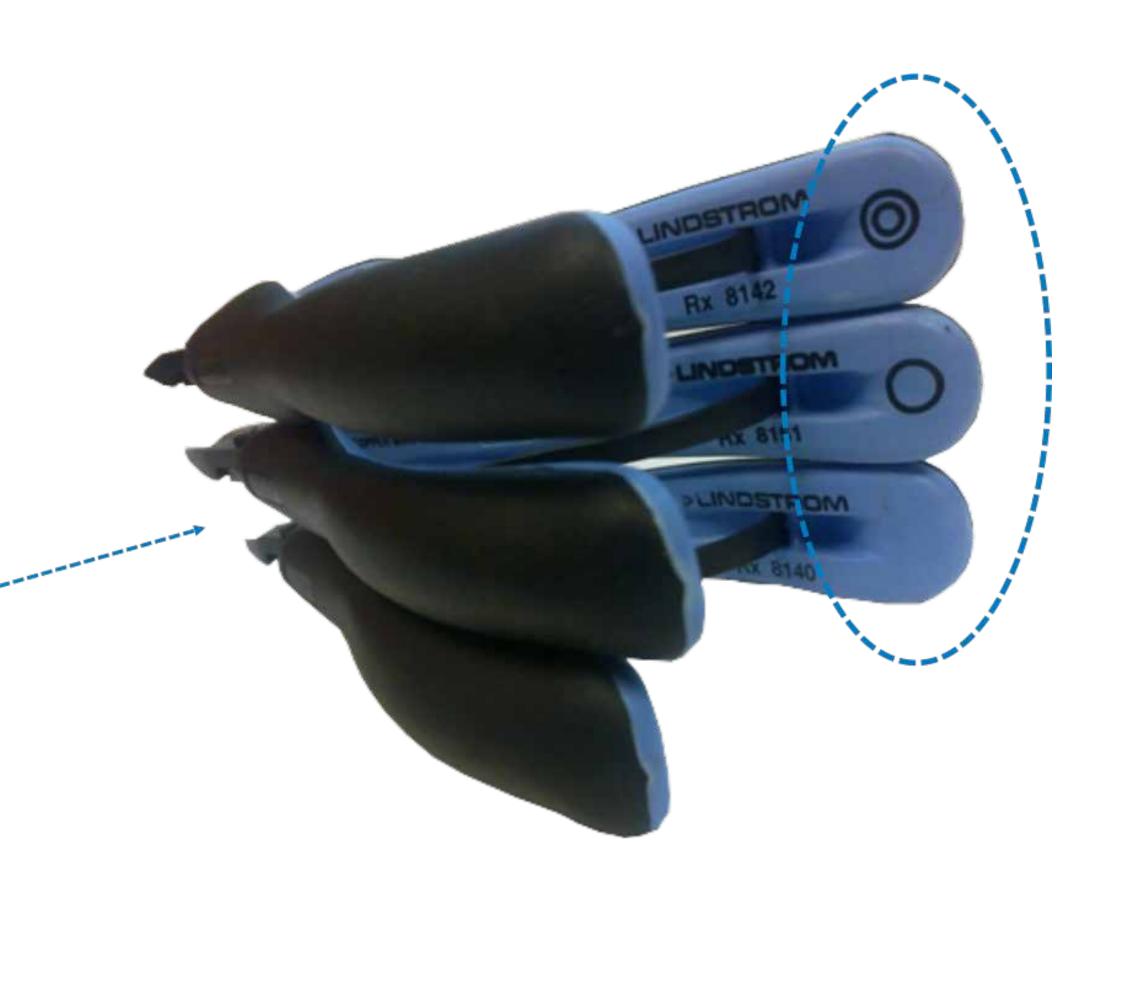
Ultra-Flush®

- > The finest cut result available with the smoothest lead-end result.
- Exceptional solderability.
- Ultimate choice for minimising component and lead-shock.
- Perfect for use in close tolerance electronics, aerospace, defense and medical device manufacturing.
- Used when avoiding mechanical shock transmission is the priority.

LINDSTRÖM EDGES

To make it easier to detect which edge the plier is equipped with, there is a symbol in the handle.



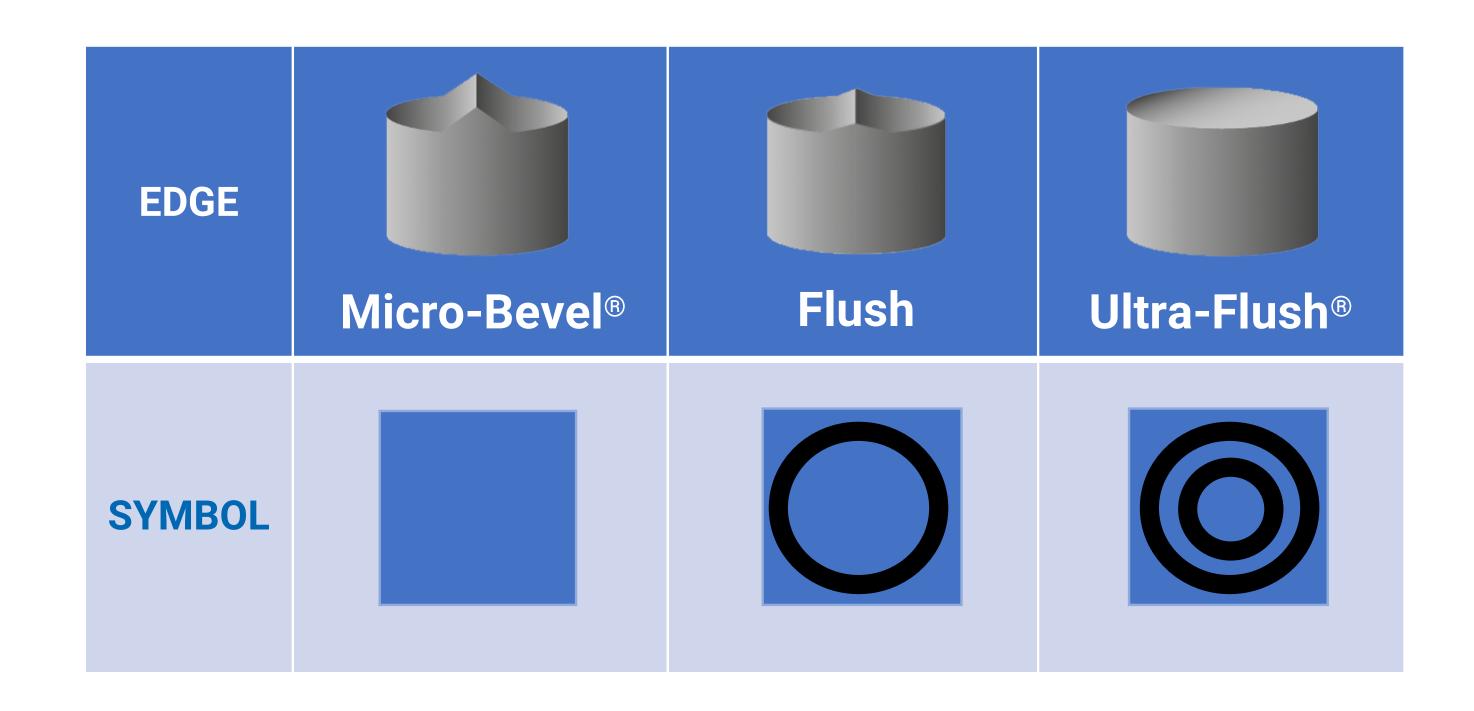


CUSTOMIZATION

LINDSTRÖM EDGES

Different edges have different symbols in the handles.

It is not only the **RX Series** which is marked with the symbol but also the 80 and Supreme Series.



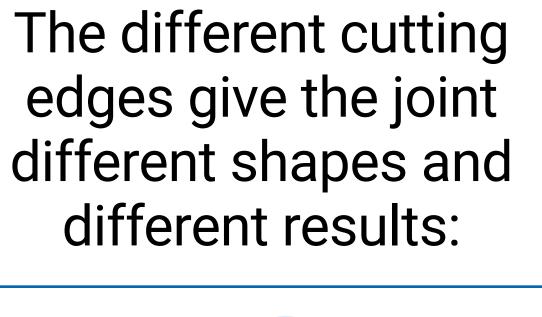


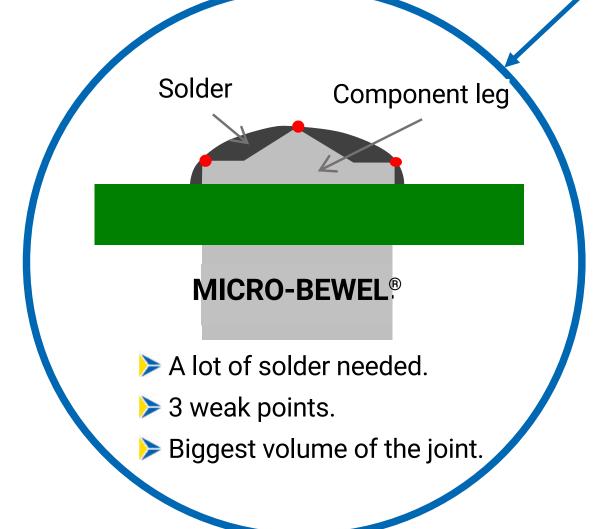


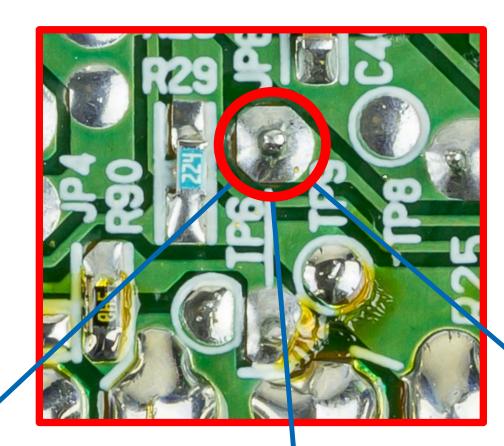
Supreme Series

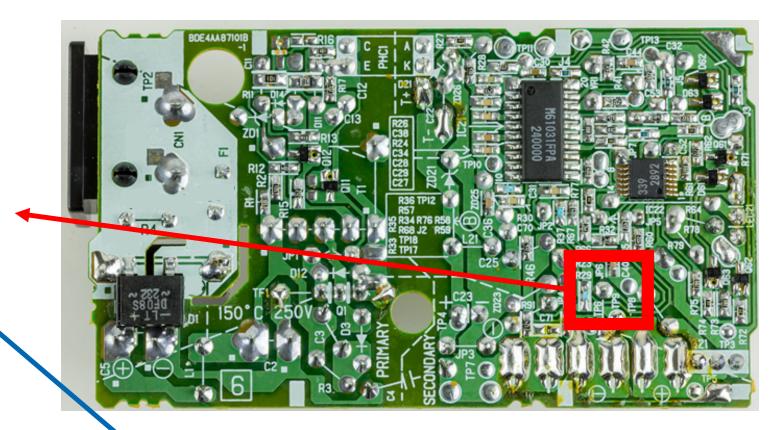
LINDSTRÖM EDGES

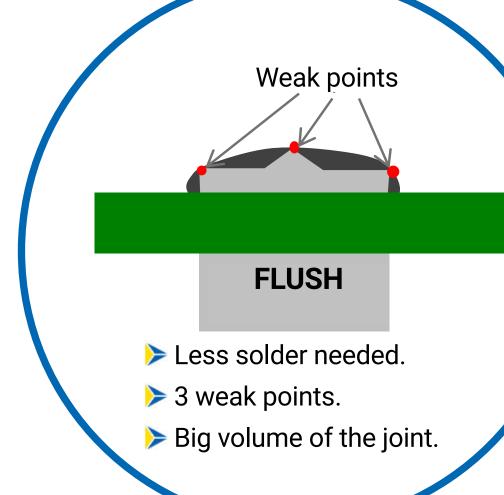
different results:

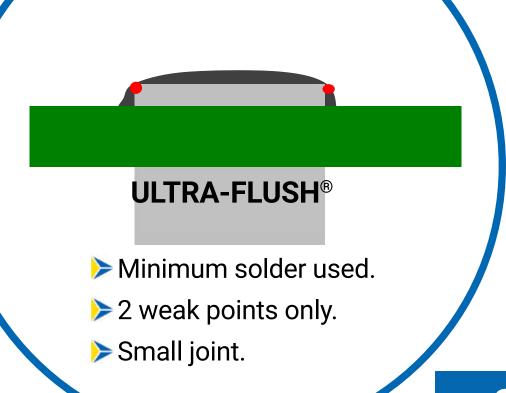












Safest connection!

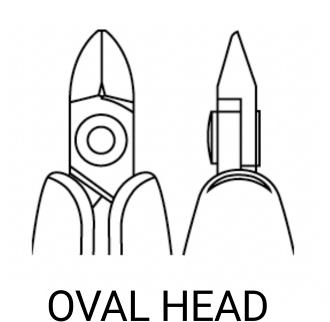
LINDSTRÖM EDGES

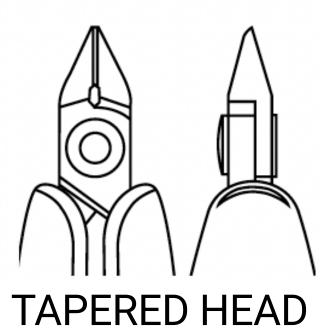
As each plier have a head, some pliers are aimed to:

- > CUT
- > HOLD
- **BEND**



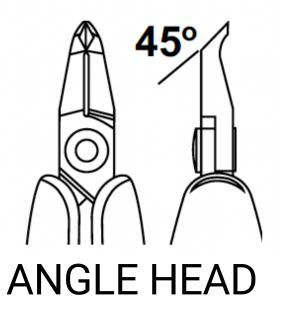
Regardless what your purpose is, LINDSTRÖM HAS THE HEAD WHICH WILL MEET YOUR DEMAND!

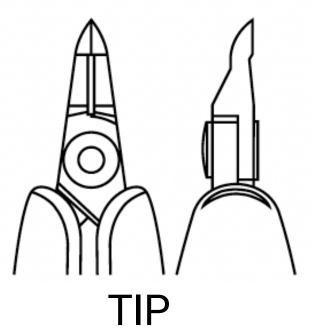






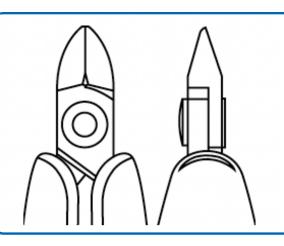






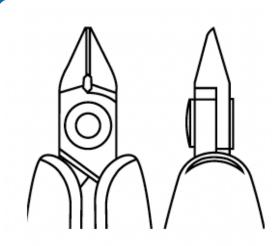
THE HEAD **Cutting pliers**





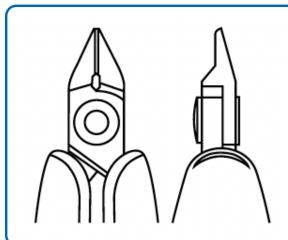
OVAL HEAD

Combines strength and flexibility, withstands and distributes the impact of cutting.



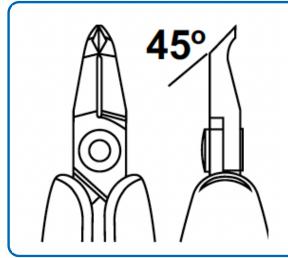
TAPERED HEAD

More accessible to broaden the range of tasks the tool can fulfill.



TAPERED AND RELIEVED HEAD

The smallest of the standard cutting heads with maximum accessibility.

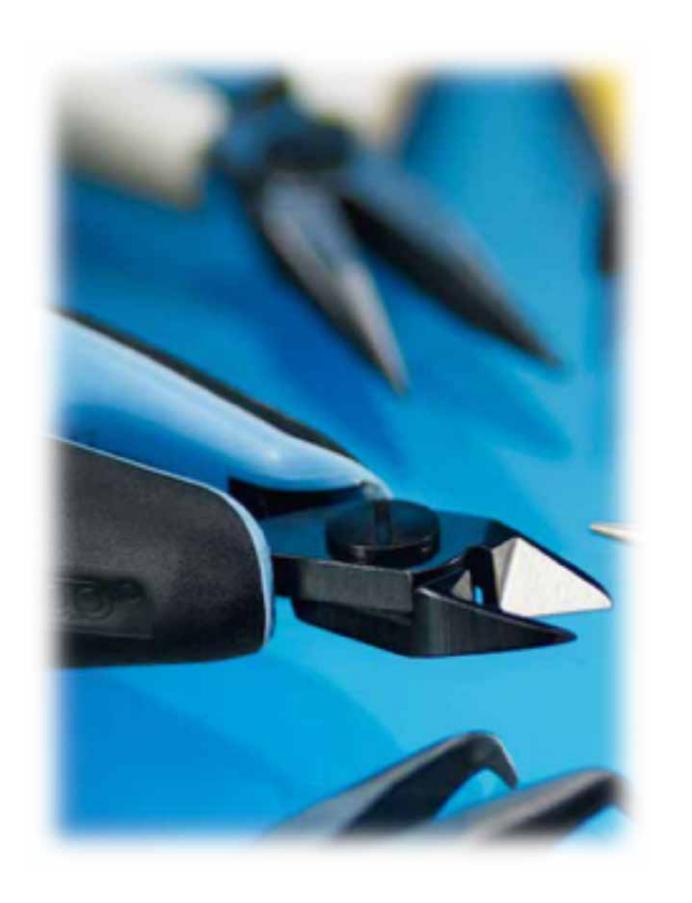


ANGLE HEAD

For tasks with difficult access, it allows the operator to work in different positions.

THE HEAD **Cutting pliers**

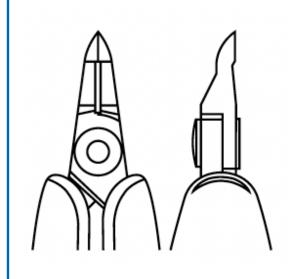
1.5. PLIER PARTS





UNIQUE HEAD

Unique cutting head developed together with specific end-user to solve critical applications. Lindström exclusive heads only available within our range.



TIP

The smallest of the standard cutting heads with maximum accessibility.

THE HEAD Sizes





XS Extra Small



(b) 5.0 / 0.20



S Small

(a) 10.0 / 0.39 (b) 6.0 / 0.24

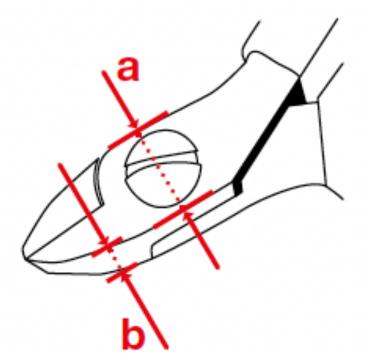


(b) 6.0 / 0.24



L Large

(a) 16.0 / 0.63 (b) 8.0 / 0.31



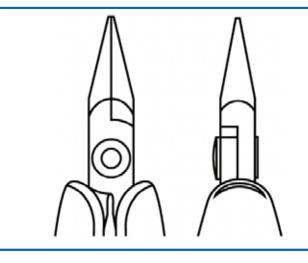
SIZE

Width (a) (mm / inch)
Thickness (b) (mm / inch)

THE HEAD Holding pliers

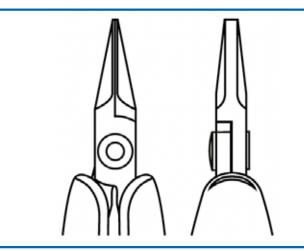
1.5. PLIER PARTS





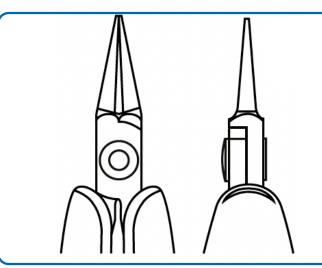
Snipe Nose

Shorter version of the chain nose, with the best gripping strength. Used where power and torsion are paramount for the application.



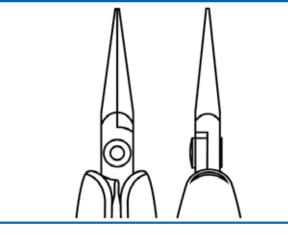
Flat Nose

Flat square shape with parallel jaws provide the most surface area of standard pliers shapes. Favored by chainmaille artists.



Round Nose

Round jaws taper from 7 mm to 1.0 mm at the tips. Handy for closing loops and the finest wire work.

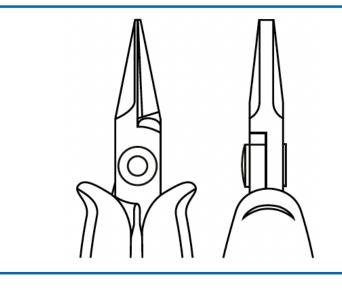


Needle Nose

Slimmer, more tapered version of chain nose design. Allows wire loop work farther into the jaws for better grip and control.

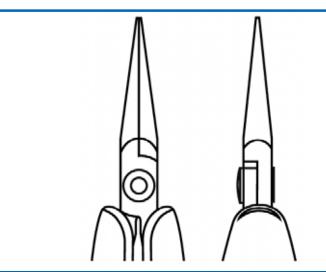
THE HEAD **Holding pliers**





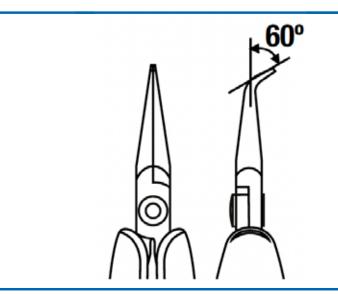
Round/Flat Nose

A perfect combination of the Round Nose and Flat Nose. Handy for use in making fine curved wire work.



Chain Nose

Versatile tips with Lindström's standard perfect joint and tip alignment. Named for the work it does so well.



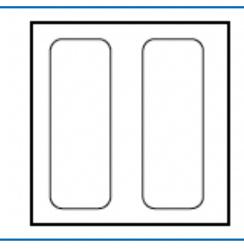
Bent Nose

Classic variation of the chain nose, with 60° bend at the tips. Suited for positioning components or precise chain work.

Tip shape (end view)

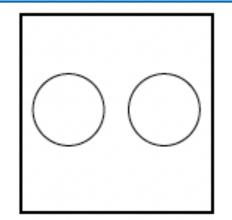
1.5. PLIER PARTS





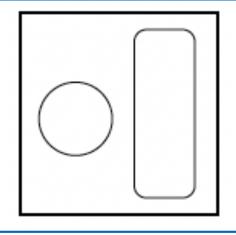
Flat tip

Squared and parallel ends of the jaws. A balance of strength and beauty, evident of tool making craftsmanship.



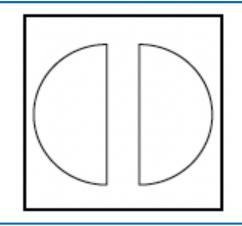
Round tip

End view of the tips are perfect circles. Lindström's precision screw joint is the reason these fine tips achieve alignment.



Round/Flat

Like a tiny ball peen hammer and anvil, these tips are all business.



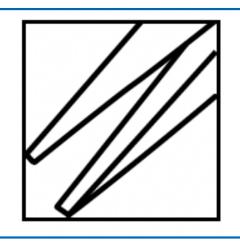
Chain nose tip

Designed to bend wire, these tips align like D-shaped pinchers.



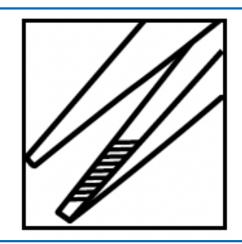
Jaw surface or edge





Smooth surface

Finely milled and polished just enough to retain grip on wire.



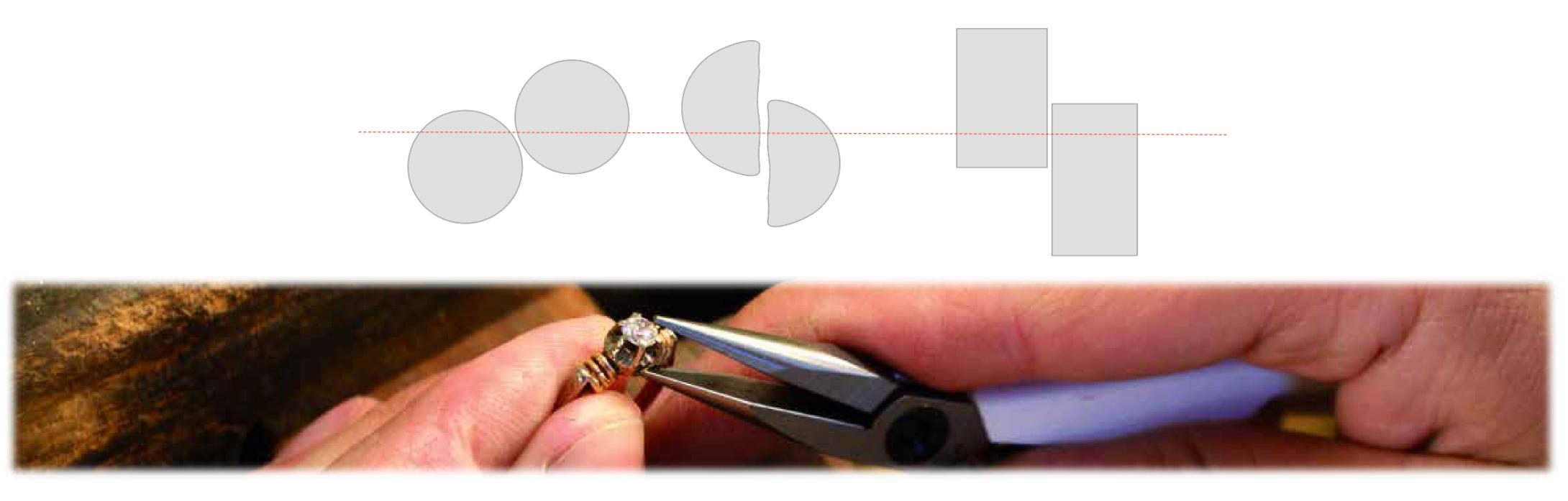
Serrated surface

Finely honed serrations allow extra "bite" for handling tricky materials. Cross-hatch serrations prevent objects from rolling into a groove.



Holding pliers

As for the cutting pliers, the joint is also crucial for **the performance of holding pliers**. If there is too much play in the joint, tips misalign when closing the pliers strongly!



CUSTOMIZATION

1.6. ESD SAFE

ESD Safe: Electrostatic Discharge



This is the symbol that identifies ESD Safe products.

You will find it in the catalogues, packaging and marked on all pliers (not on tweezers).

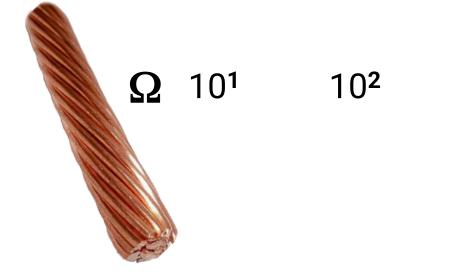
A product which is **ESD Safe** is something between insulated and conductive.

ESD Safe protects the components, not the person who holds the plier!

 10^{13}

1014

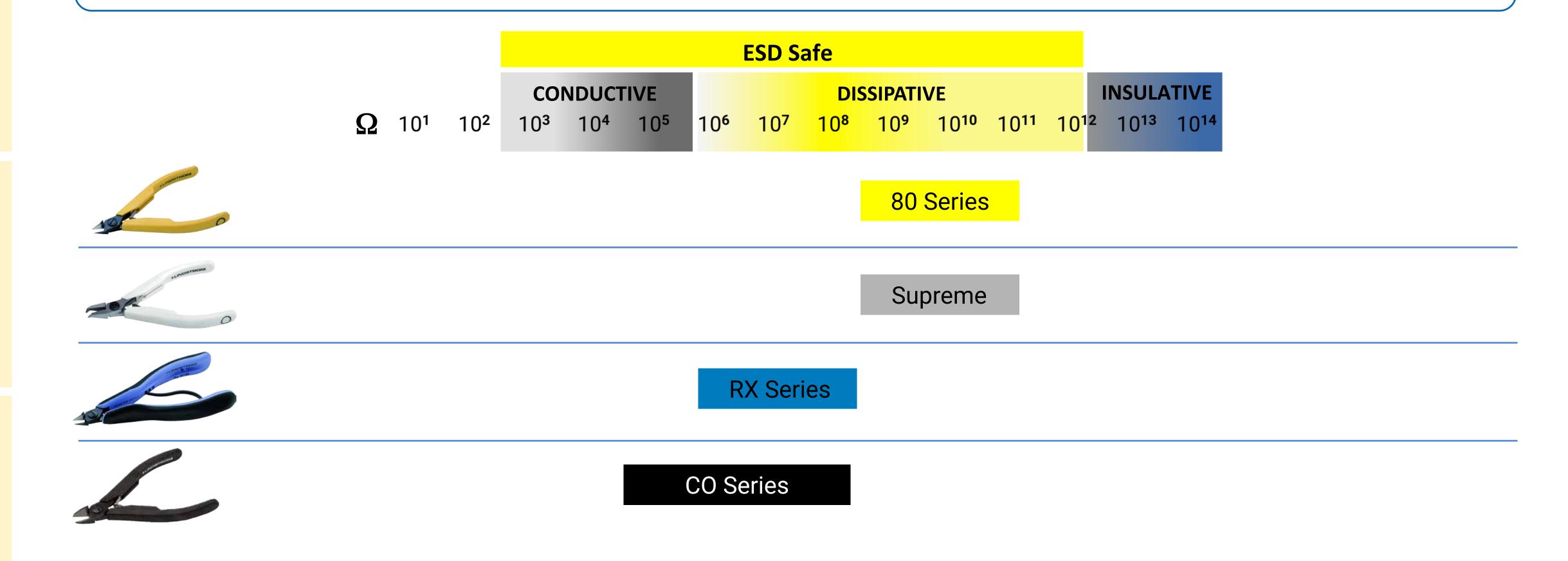
Resistivity in Ohm (Ω)





- At the left side of the scale, the material is 100% conductive.
- At the right side, the material is almost 100% insulated.
- The resistivity for ESD Safe is in the area between insulated and conductive.

ESD Safe products are also divided into **Conductive** and **Dissipative**. There is also an area called **Insulative**, but that is not ESD Safe. There are Dissipative or Conductive pliers, **but RX and CO overlap** and are both dissipative and conductive!



2. ASSORTMENT

RX SERIES 80 SERIES The top of the range The broadest range of cutting pliers , LINDSTRÖM **MEDICAL SERIES SUPREME SERIES** Holding pliers and a Precision cutters for hard wide range of special pliers wire applications

2.1. ERGO™/ RX SERIES



But...what is the ERGO™ Process?





Ergonomics is the science that understands and optimizes the interaction between people and their environment according to the principle of adapting the task to the person.

To develop tools in a scientific way we are following a specific program called the **ERGO™ Process**.

It has **11 different steps** in total to make sure the result will be the best tool for the end-user, but the most important key stones in the process are:

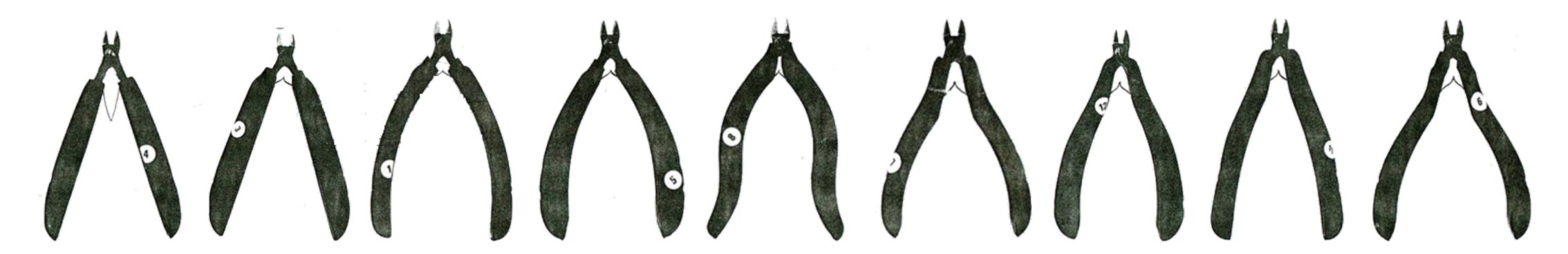


2.1. ERGO™/ RX SERIES

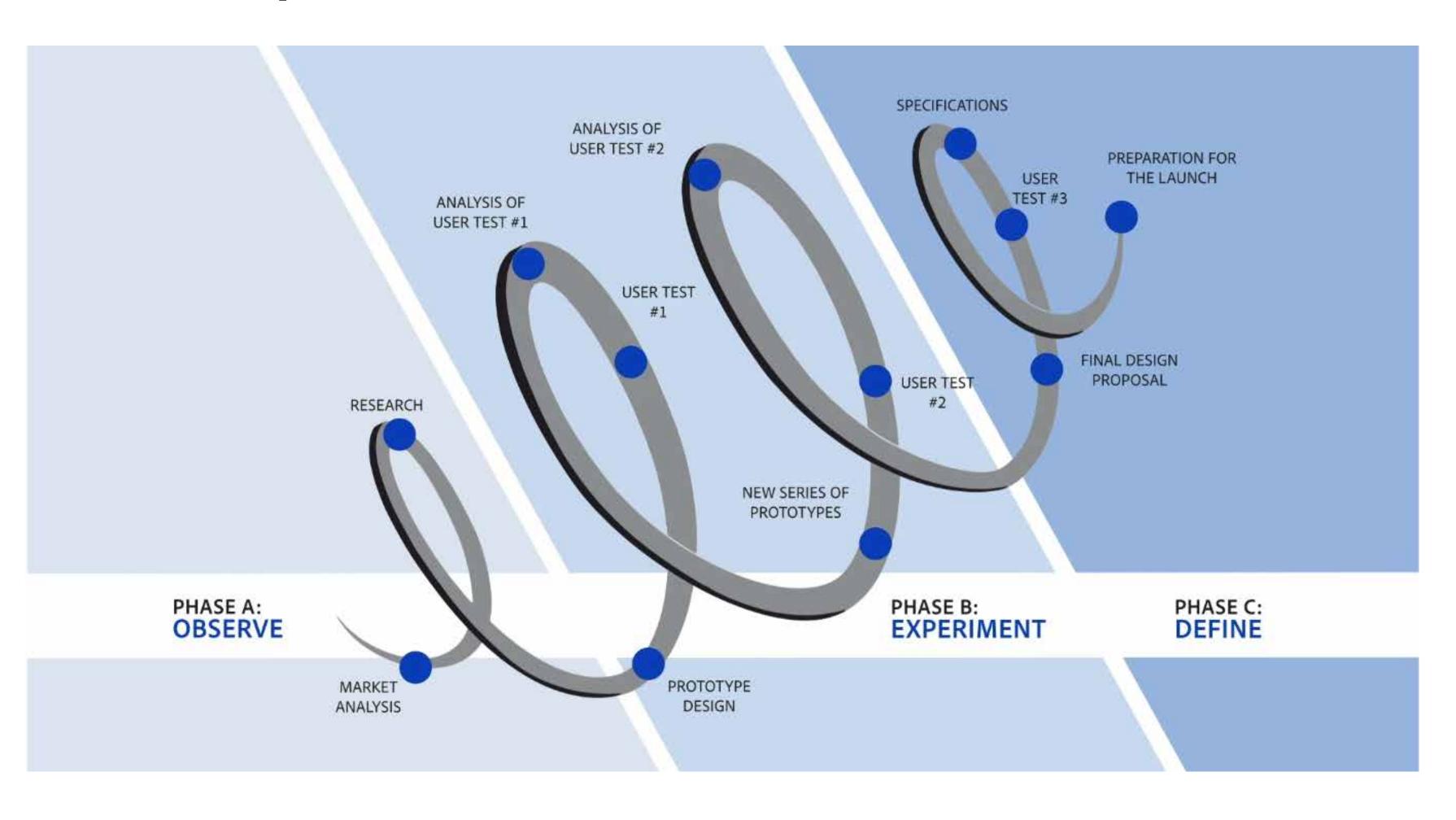




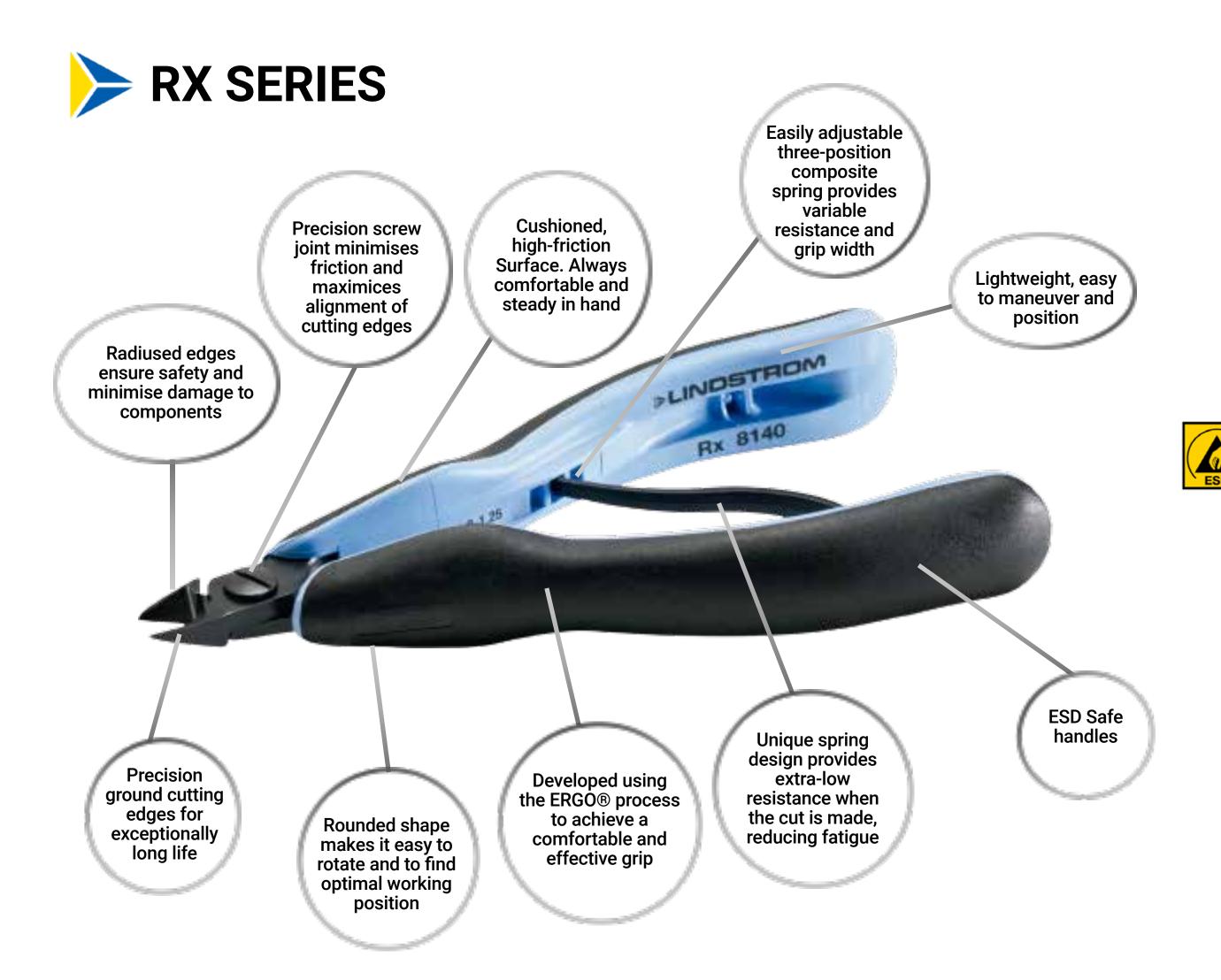




Phases of the ERGO™ process:







Our scientific ERGO® Development Program (the "11-Point Program") has resulted in many successful and scientifically evaluated ergonomic tools.

While many others just talk about ergonomics, we deliver scientifically validated solutions.

All Lindström cutters and pliers are ESD Safe and safely dissipate electrostatic charges, reducing the possibility of damage to sensitive components. Warning! Lindström cutters and pliers should never be used on electrified equipment.



RX 8150 oval head cutter. Ideal for cutting leads, jewelry wire, and general assembly applications.



RX 7891 chain nose pliers, 32 mm jaw lenght, serrated with radiused edges.



The forged shanks do not go all through the handle.

This reduces the total weight of the RX pliers and makes it more user friendly, a finding in the ERGO™ process.

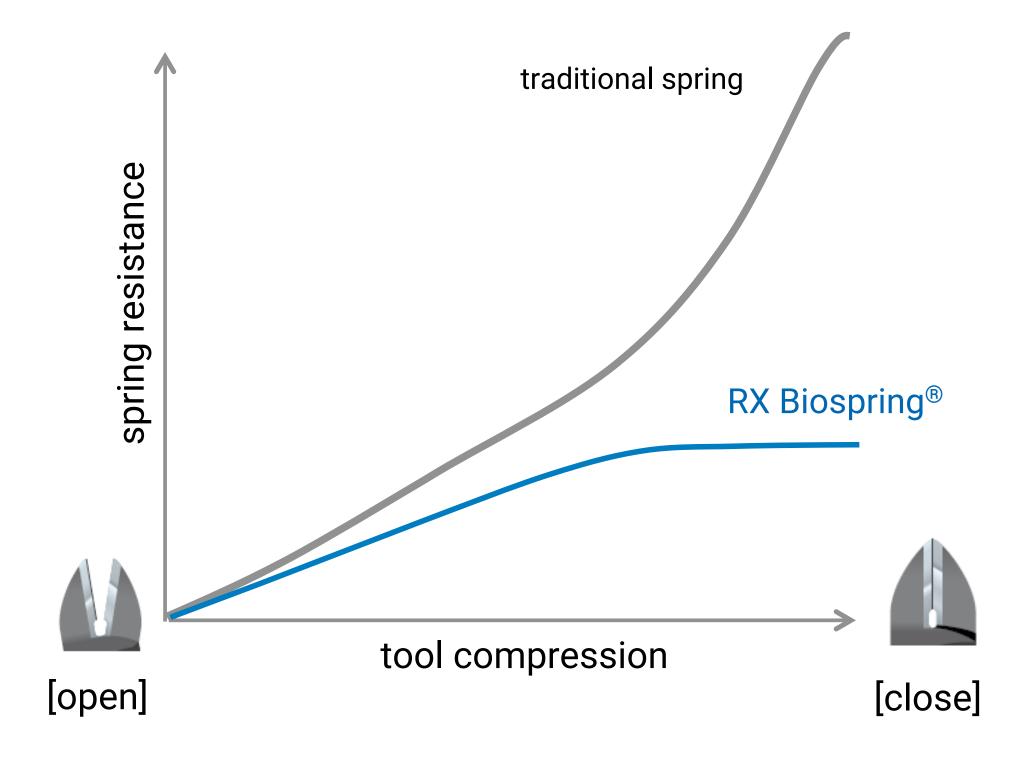


CUSTOMIZATION

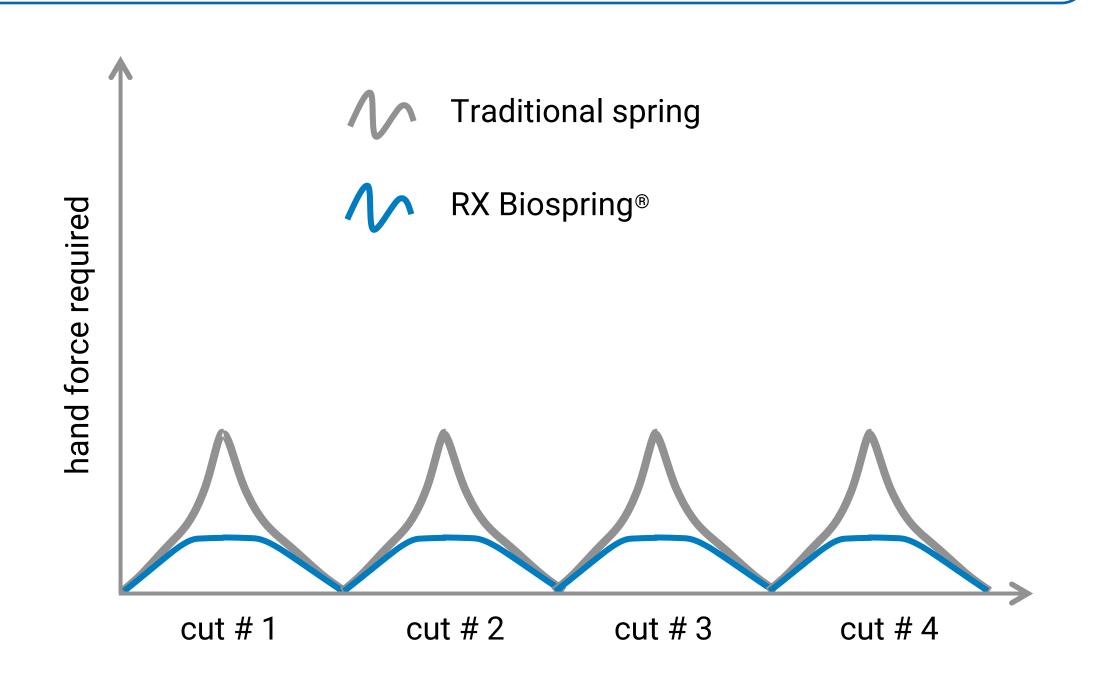
RX SERIES

Biospring[®]

RX Biospring[®] compared to traditional springs



Think of how many times a user opens and closes the pliers a day. The RX Biospring® really makes the difference!





The RX Biospring® can be easily adjusted to any of the three positions for different resistance and shank widths:



1. Pull the shanks apart.



Select the port.



Place the end of the spring in the port.



4.
Press
the shanks
together.

2.1. ERGO™/ RX SERIES



> PULL THE SHANKS APART

SELECT THE SLOT YOU WANT

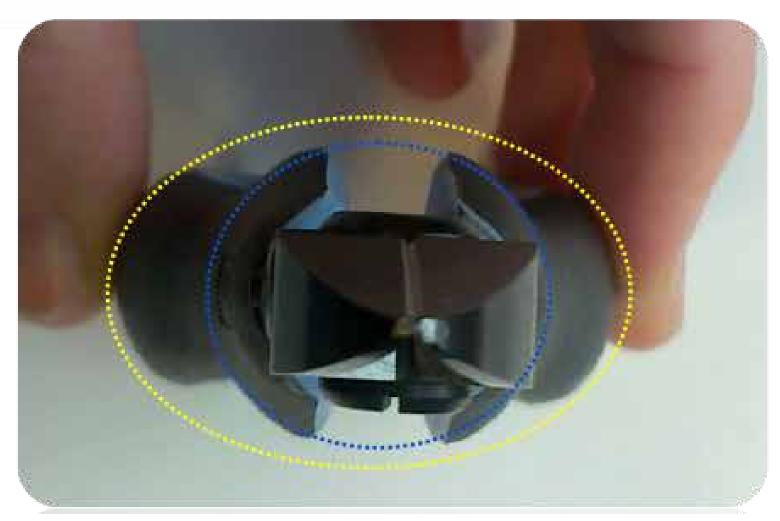
PLACE THE END OF THE SPRING IN THE SELECTED SLOT

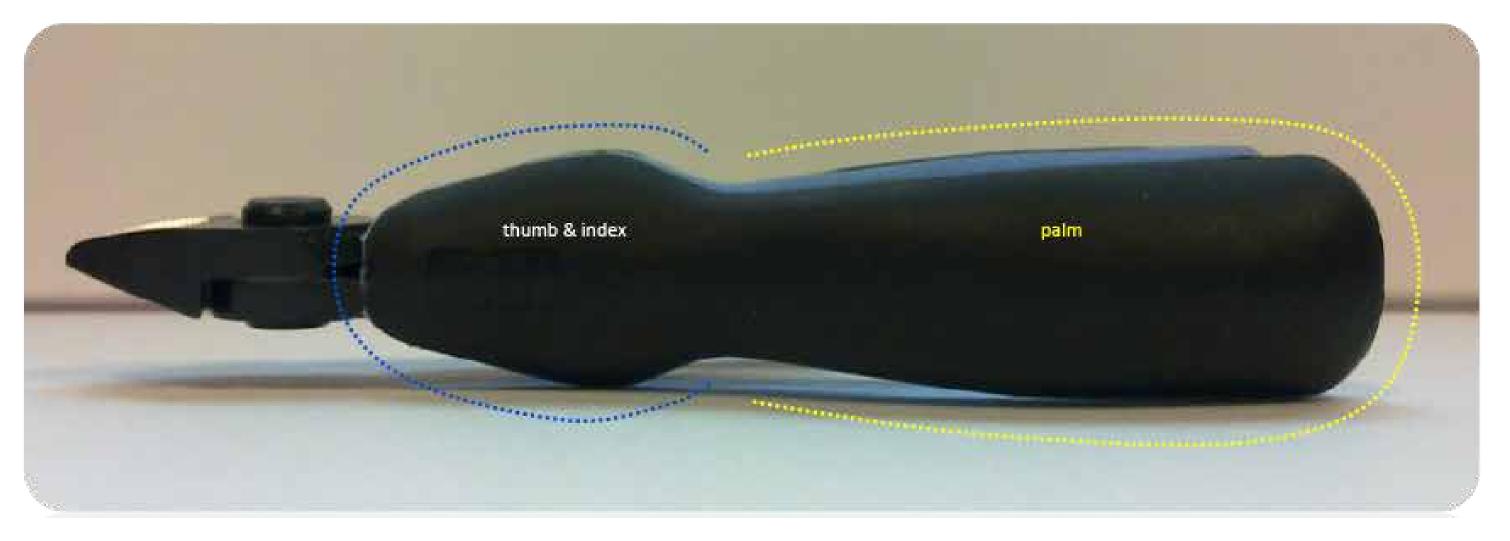
> PRESS THE SHANKS TOGETHER

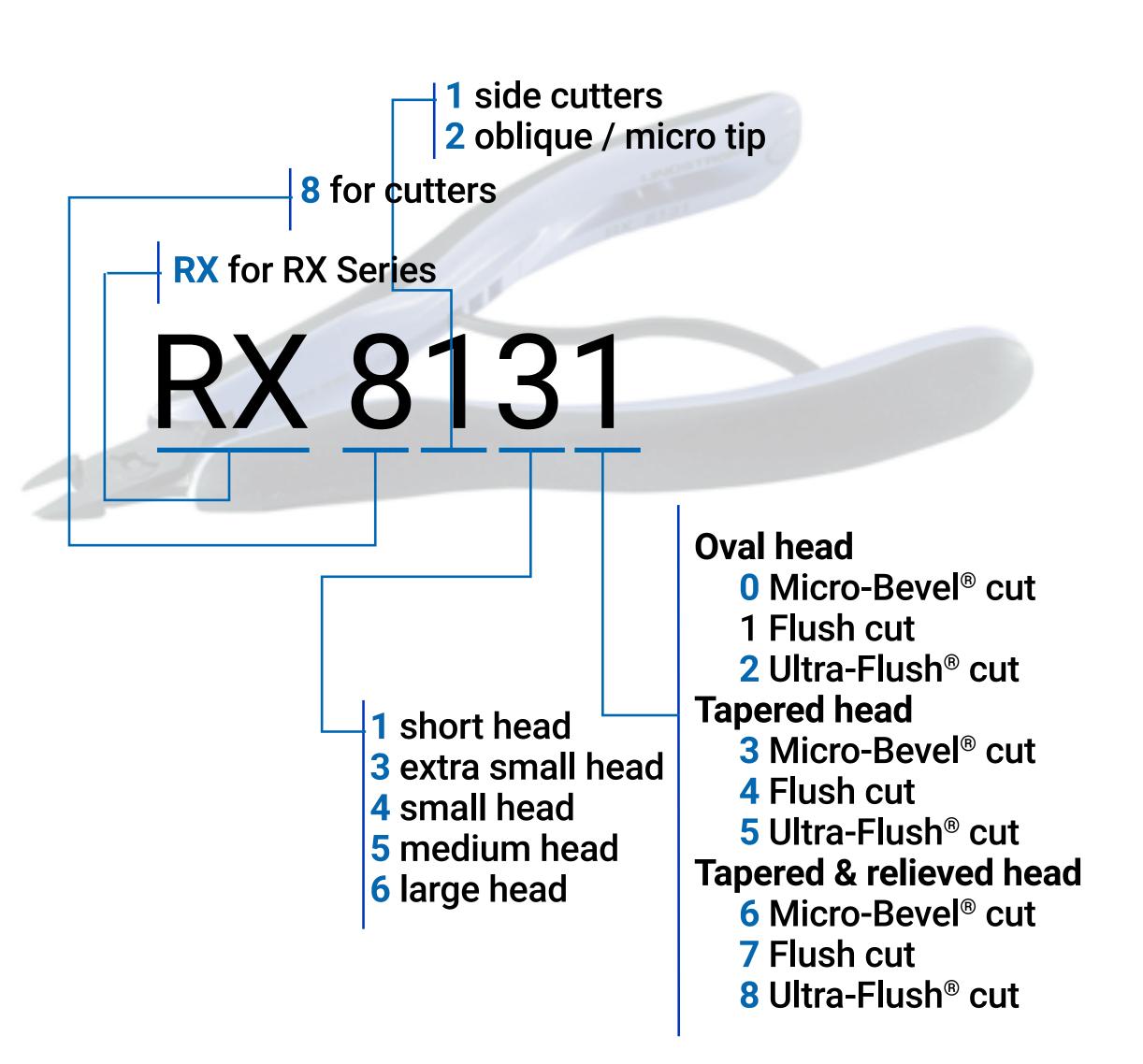


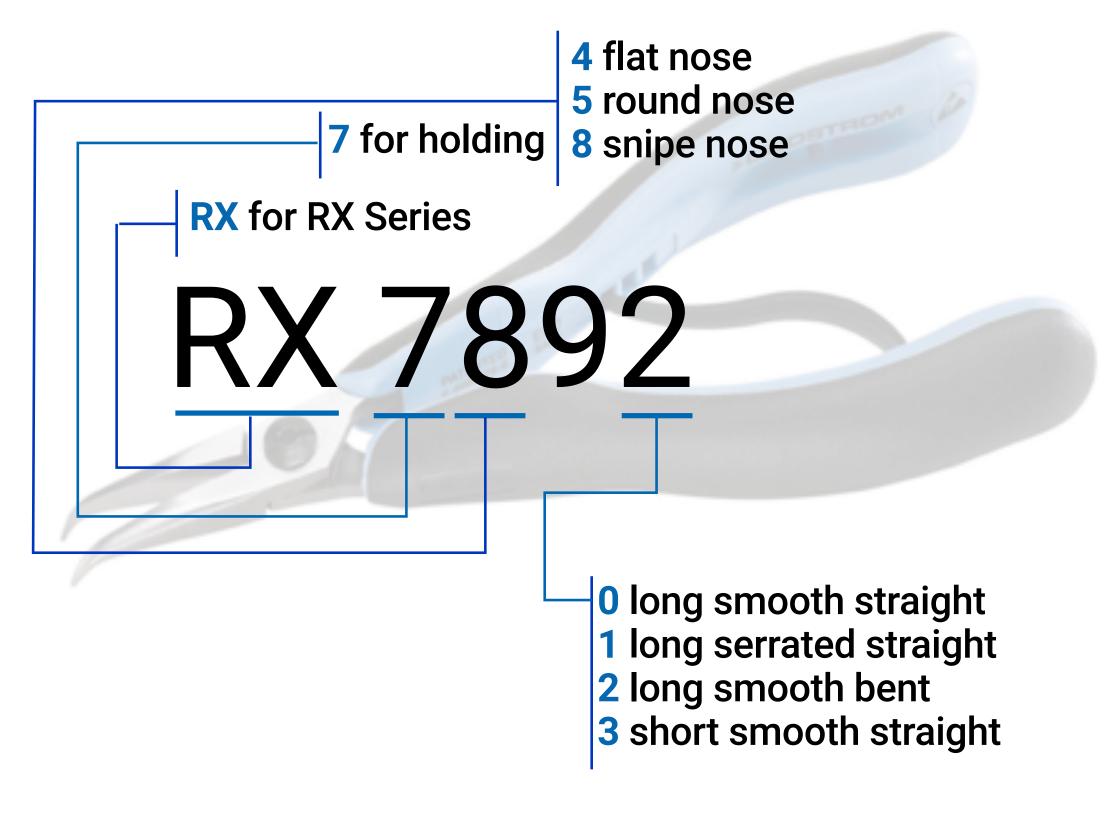
Microtouch™

- > The upper part makes the rotation easier.
- > The **lower part** reduces pressure points.











The broadest assortment in cutting pliers for the traditional end user.

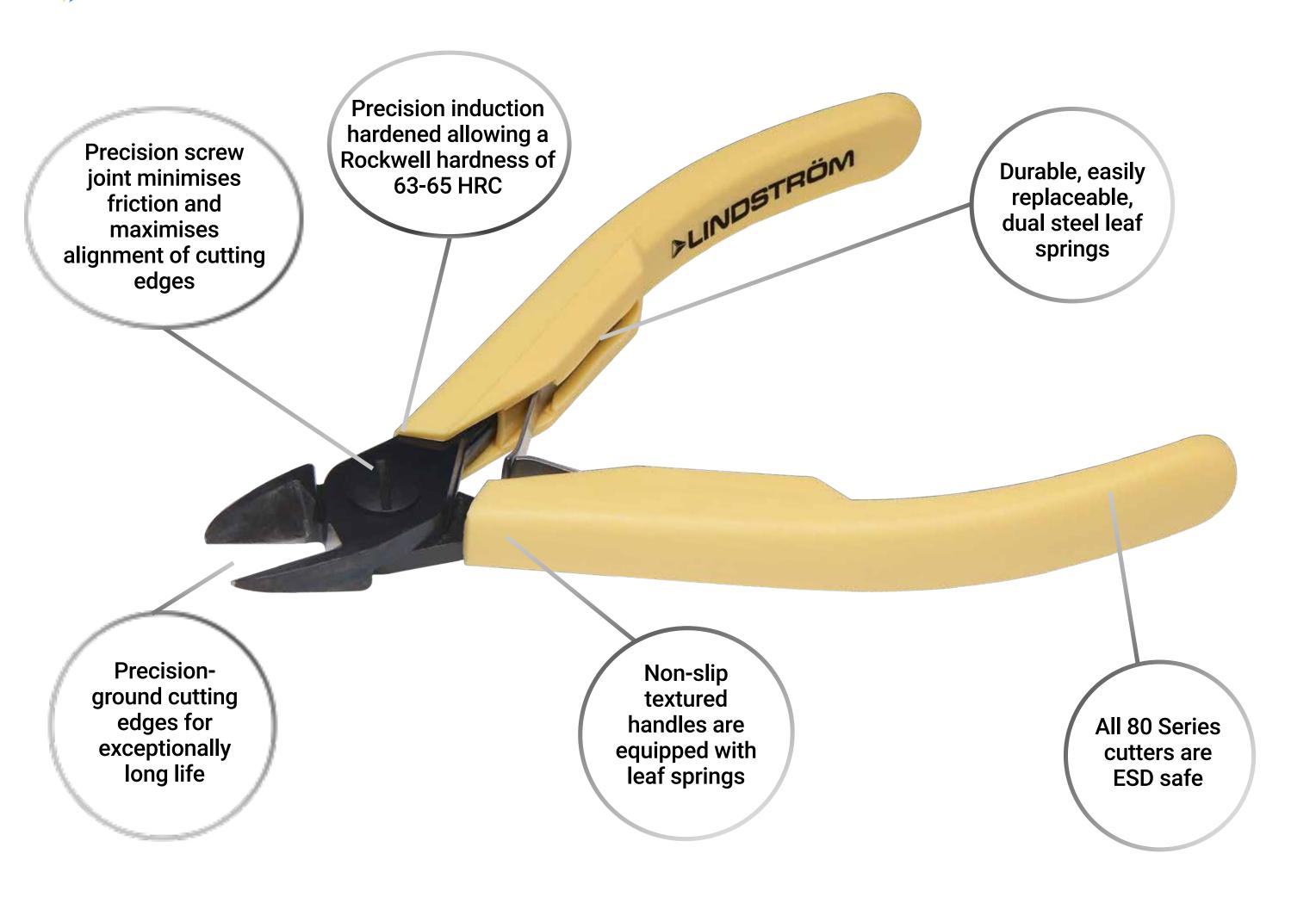


Available with both Dissipative and Conductive handles.



CUSTOMIZATION

> 80 SERIES

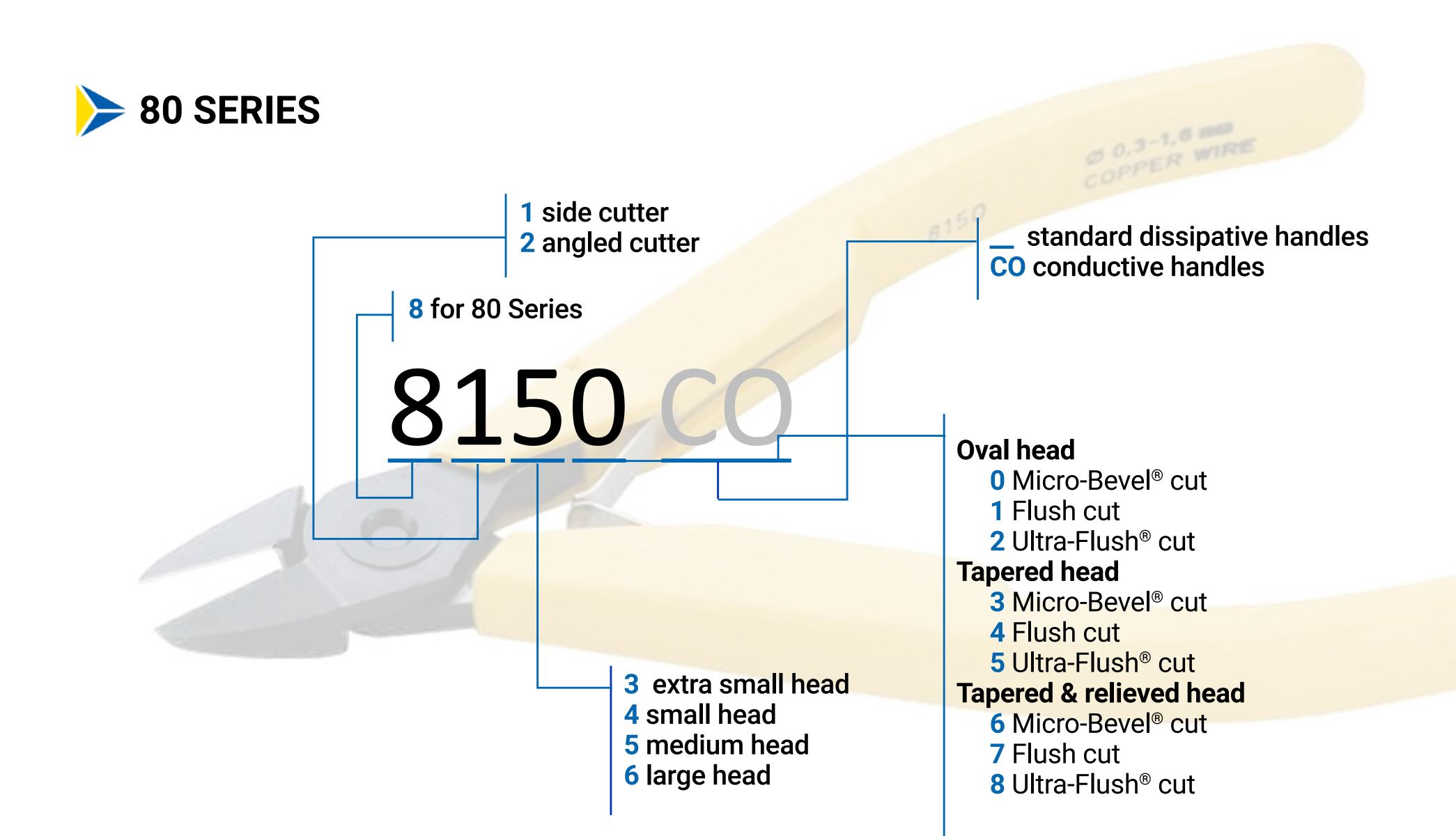




8144 tapered head cutter, ideal for assembly work where accessibility is a consideration.



8140 oval head cutter, ideal for wire harness work and standard printed circuit board assembly.



> SUPREME SERIES

2.3. SUPREME SERIES

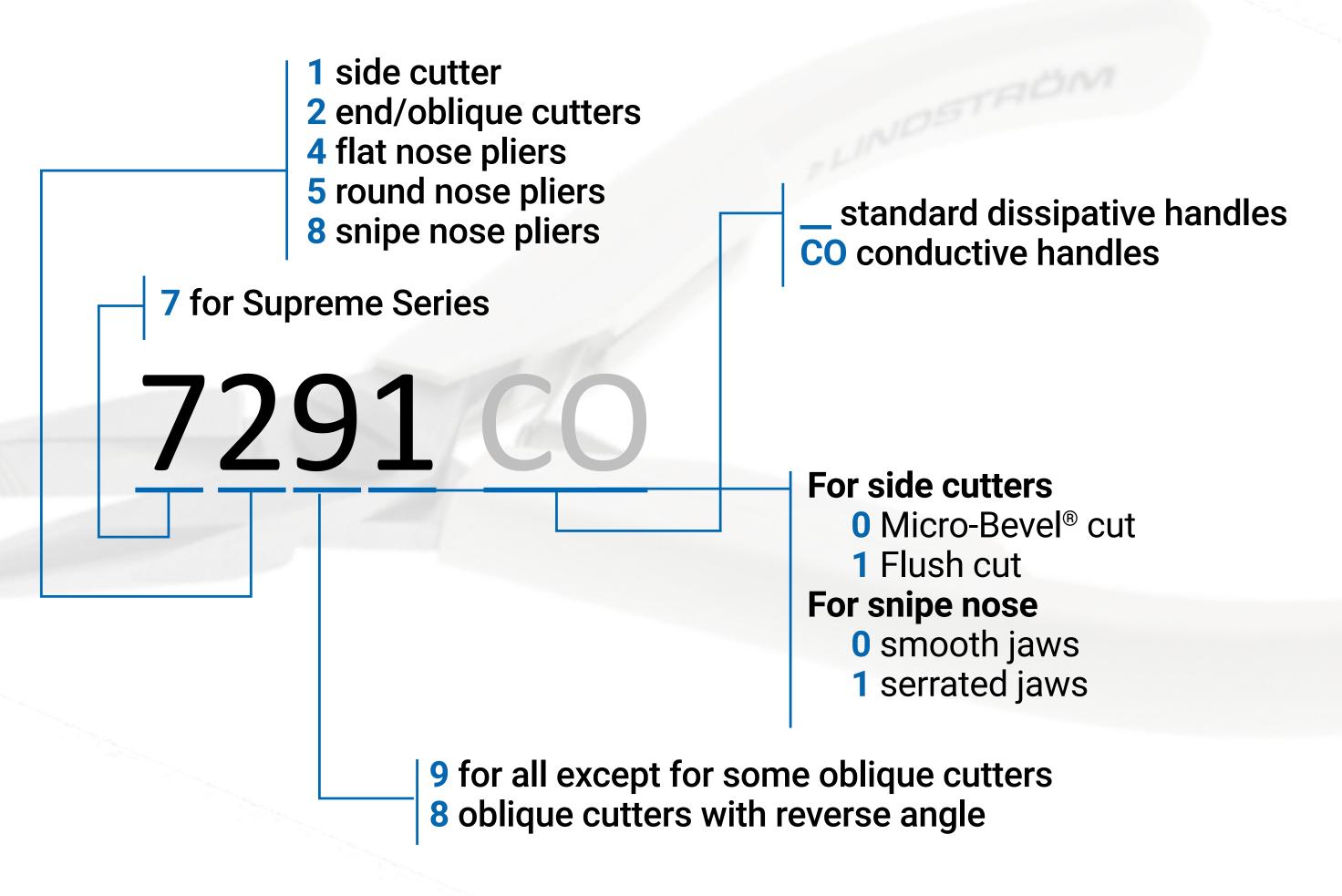
- Good performance for the traditional end user.
- The assortment contains 8 cutting pliers and 7 holding pliers.
- Available with both Dissipative and Conductive handles.





> SUPREME SERIES

2.3. SUPREME SERIES

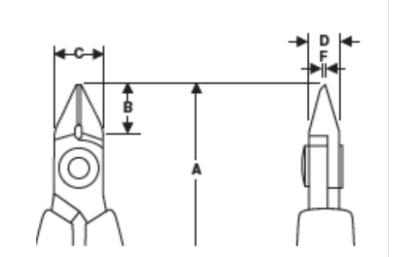






Tapered Head

80 Series: ESD safe synthetic mono material with leaf springs

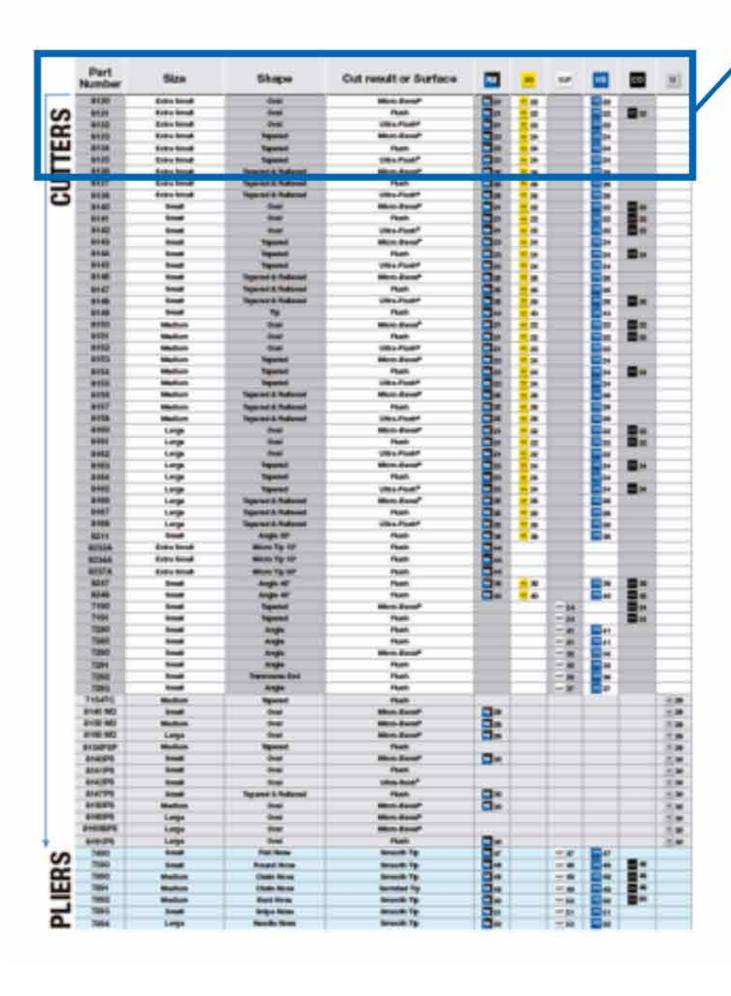


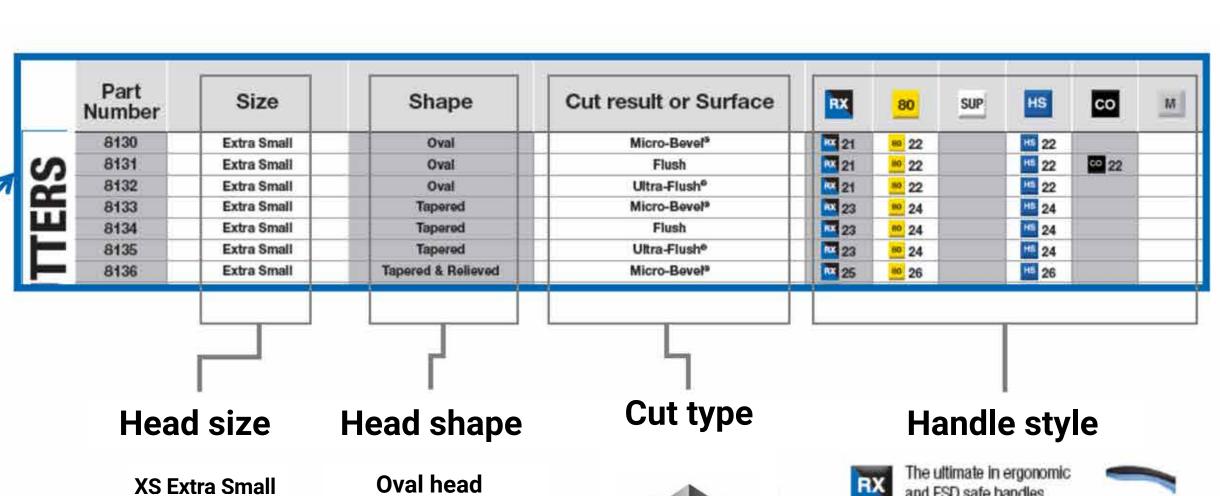


Part No.		÷⊕→	A mm/in	B mm/in	C mm/in	D mm/in	F mm/in	(⊈) mm / in		g	Ω
8133	Tapered	XS	108.0 / 4.25	8.0 / 0.31	8.0 / 0.31	5.0 / 0.2	0.8/0.03	0.2-1.0 / 0.008-0.04	Micro-Bevel®	43	Dissipative
8134	Tapered	XS	108.0 / 4.25	8.0 / 0.31	8.0 / 0.31	5.0 / 0.2	0.8 / 0.03	0.1-0.8 / 0.004-0.03	Flush	43	Dissipative
8135	Tapered	XS	108.0 / 4.25	8.0 / 0.31	8.0 / 0.31	5.0 / 0.2	0.8 / 0.03	0.1-0.5 / 0.004-0.02	Ultra-Flush®	43	Dissipative
8143	Tapered	S	110.0 / 4.33	10.5 / 0.41	8.0 / 0.39	6.0 / 0.24	0.8 / 0.03	0.2-1.25 / 0.01-0.05	Micro-Bevel®	46	Dissipative
8144	Tapered	S	110.0 / 4.33	10.5 / 0.41	8.0 / 0.39	6.0 / 0.24	0.8 / 0.03	0.2-1.25 / 0.01-0.05	Flush	46	Dissipative
8145	Tapered	S	110.0 / 4.33	10.5 / 0.41	8.0 / 0.39	6.0 / 0.24	0.8/0.03	0.1-1.0 / 0.00-0.04	Ultra-Flush®	46	Dissipative
8153	Tapered	М	112.5 / 4.43	13.0 / 0.51	12.5 / 0.50	6.0 / 0.24	1,2/0.05	0.3-1.6 / 0.01-0.06	Micro-Bevel®	49	Dissipative
8154	Tapered	М	112.5 / 4.43	13.0 / 0.51	12.5 / 0.50	6.0 / 0.24	1,2/0.05	0.2-1.6 / 0.01-0.06	Flush	49	Dissipative
8155	Tapered	М	112.5 / 4.43	13.0 / 0.51	12.5 / 0.50	6.0 / 0.24	1.2/0.05	0.2-1.25 / 0.01-0.05	Ultra-Flush®	49	Dissipative
8163	Tapered	L	125.0 / 4.92	16.0 / 0.63	16.0 / 0.63	8.0 / 0.31	1.6 / 0.06	0.4-2.0 / 0.02-0.08	Micro-Bevel®	88	Dissipative
8164	Tapered	L	125.0 / 4.92	16.0 / 0.63	16.0 / 0.63	8.0 / 0.31	1.6 / 0.06	0.3-2.0 / 0.01-0.08	Flush	88	Dissipative
8165	Tapered	L	125.0 / 4.92	16.0 / 0.63	16.0 / 0.63	8.0 / 0.31	1.6 / 0.06	0.3-1.6 / 0.01-0.06	Ultra-Flush®	88	Dissipative
8144 CO	Tapered	S	110.0 / 4.33	10.5 / 0.41	10.0 / 0.39	6.0 / 0.24	0.8/0.03	0.2-1.25 / 0.01-0.05	Flush	46	Conductive
8154 CO	Tapered	М	112.5 / 4.43	13.0 / 0.51	12.5 / 0.50	6.0 / 0.24	1.2/0.05	0.2-1.6 / 0.01-0.06	Flush	49	Conductive
8163 CO	Tapered	L	125,0 / 4.92	16.0 / 0.63	16.0 / 0.63	8.0 / 0.31	1.6 / 0.06	0.4-2.0 / 0.02-0.08	Micro-Bevel®	88	Conductive
8165 CO	Tapered	L	125.0 / 4.92	16.0 / 0.63	16.0 / 0.63	8.0 / 0.31	1.6 / 0.06	0.3-1.6 / 0.01-0.06	Ultra-Flush®	88	Conductive

TOMIZATION
OMIZAT
OMIZAT
NS1
Ö









S Small



M Medium



L Large





Tapered head



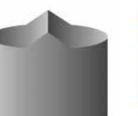
Tapered and Relieved head



Angle head







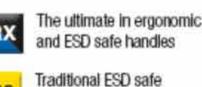
MB/Micro-Bevel®



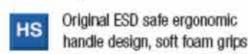
F/Flush



UF/Ultra-Flush®

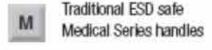




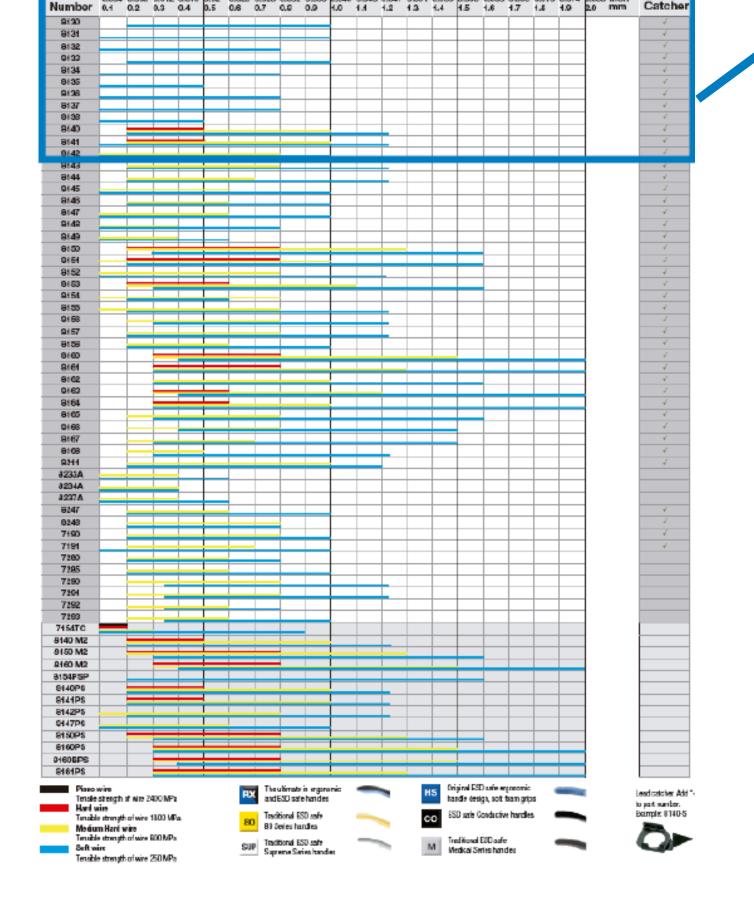


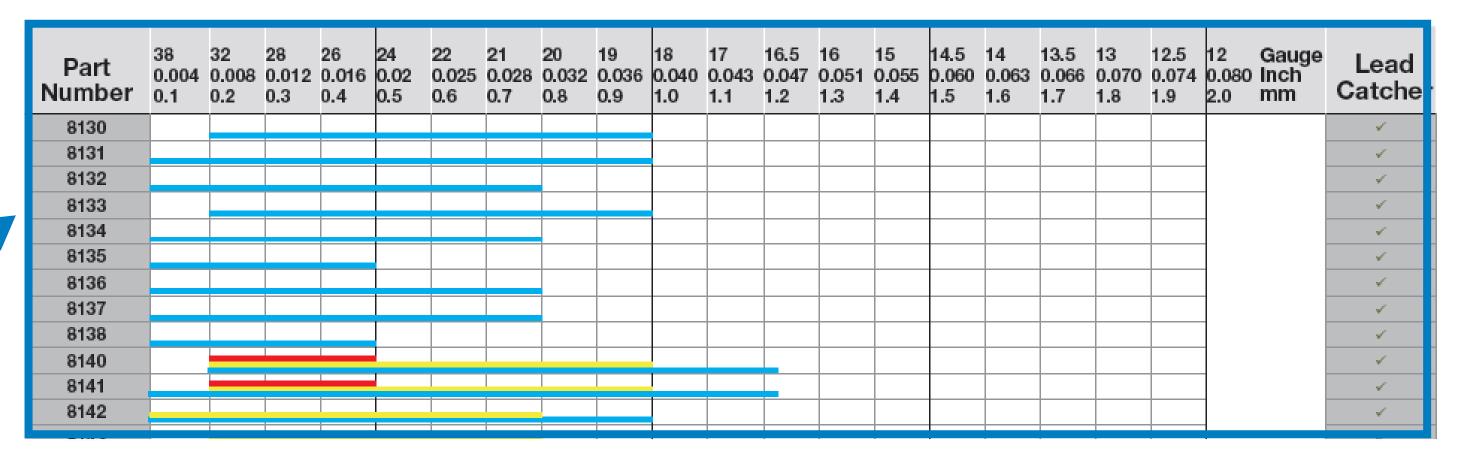
Supreme Series handles





CATALOGUE





Diameter of the wire to cut in Gauge, Inches and millimeter.

Piano wire

Tensile strength of wire 2400 MPa

Hard wire

Tensible strength of wire 1800 MPa

Medium Hard wire

Tensible strength of wire 800 MPa

Soft wire

Tensible strength of wire 250 MPa

Lead catcher. Add *-S" to part number. Example: 8140-S





ONLINE TOOL FILTER

2.4. HOW TO CHOOSE

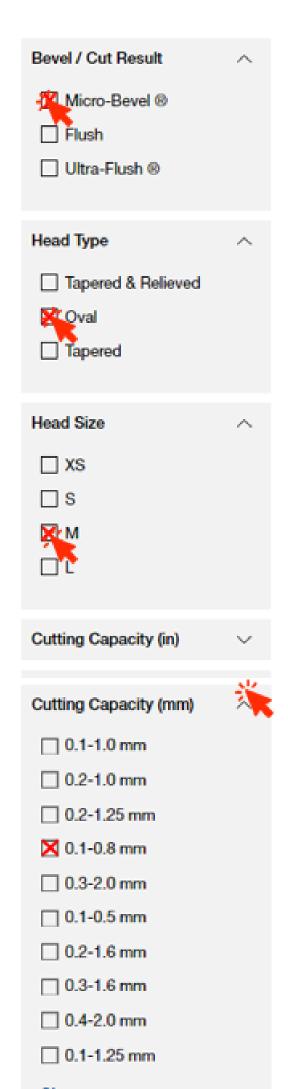
One way of selecting the optimal cutter is to use the TOOL FILTER. It can be found on Lindström's web: www.lindstromtools.com

The tool filter is developed for both diagonal cutters and holding pliers and is easy to use!

Just choose:

- > Cutting edge
- > Head type
- > Head size
- > Cutting capacity

and you have a suggestion of the optimal cutter available!



Diagonal Cutters

3 Items







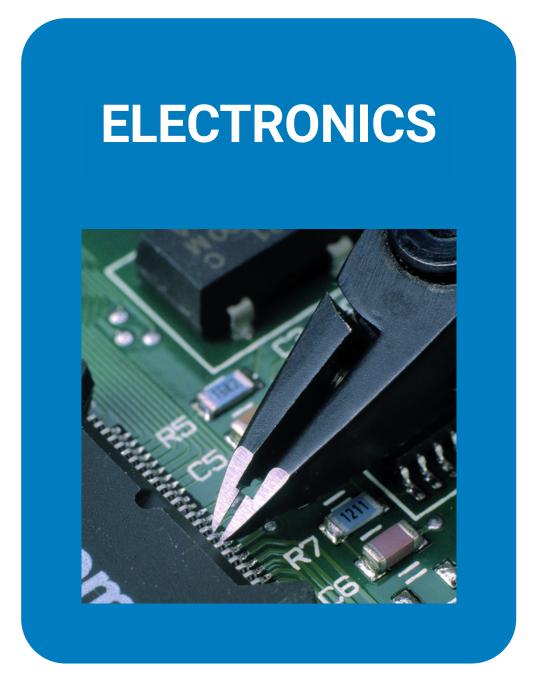
ERGO™ Precision Diagonal Cutters with Oval Head RX 8130-RX 8162

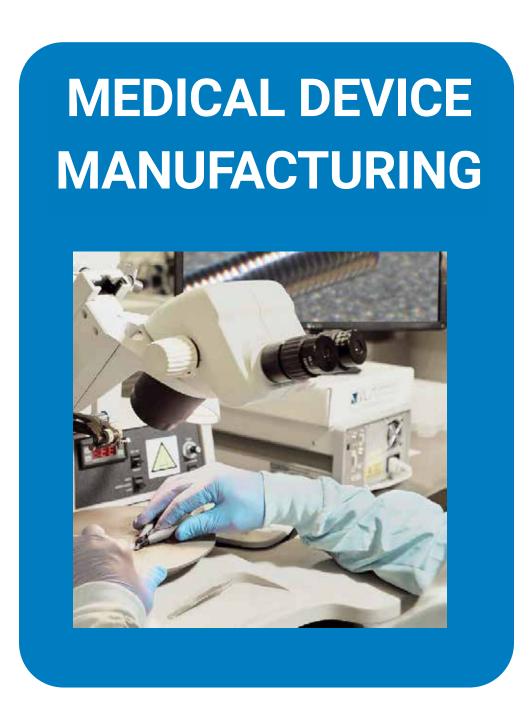
Precision Diagonal Cutters with Oval Head & ESD Safe Handle 8130-8162

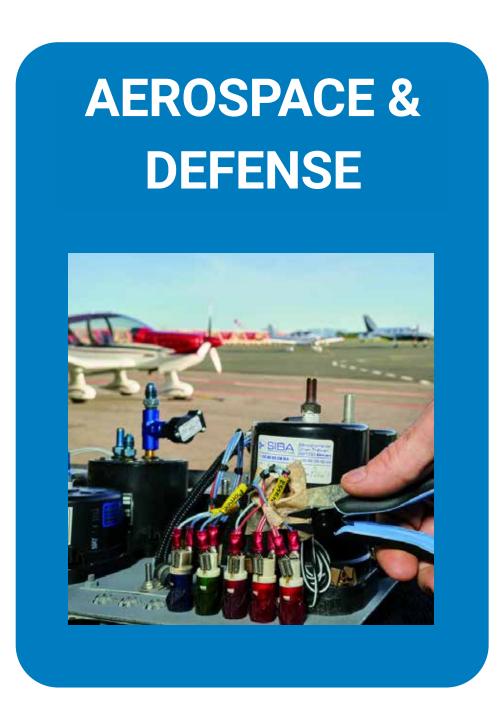
Long Precision Diagonal Cutters with Oval Head & ESD Safe Handle HS 8130-HS 8162

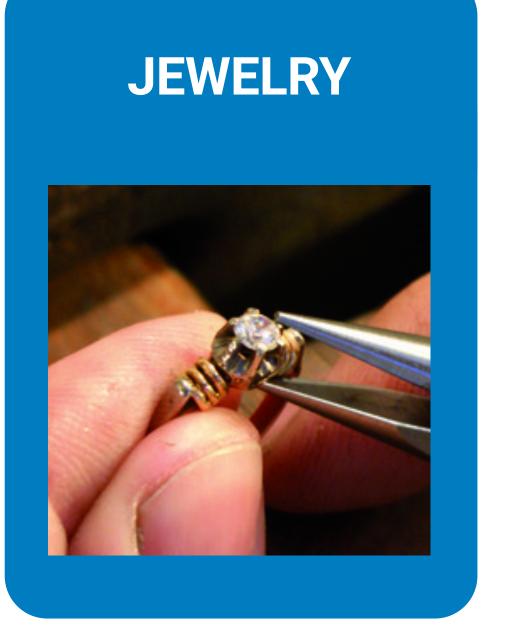
Lindström pliers are used by many different kind of demanding end-users.

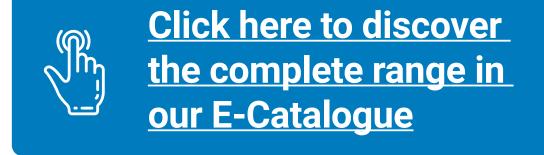
We moved from electronics to other industries driven by innovation, customized projects to the highest end industries in the world:

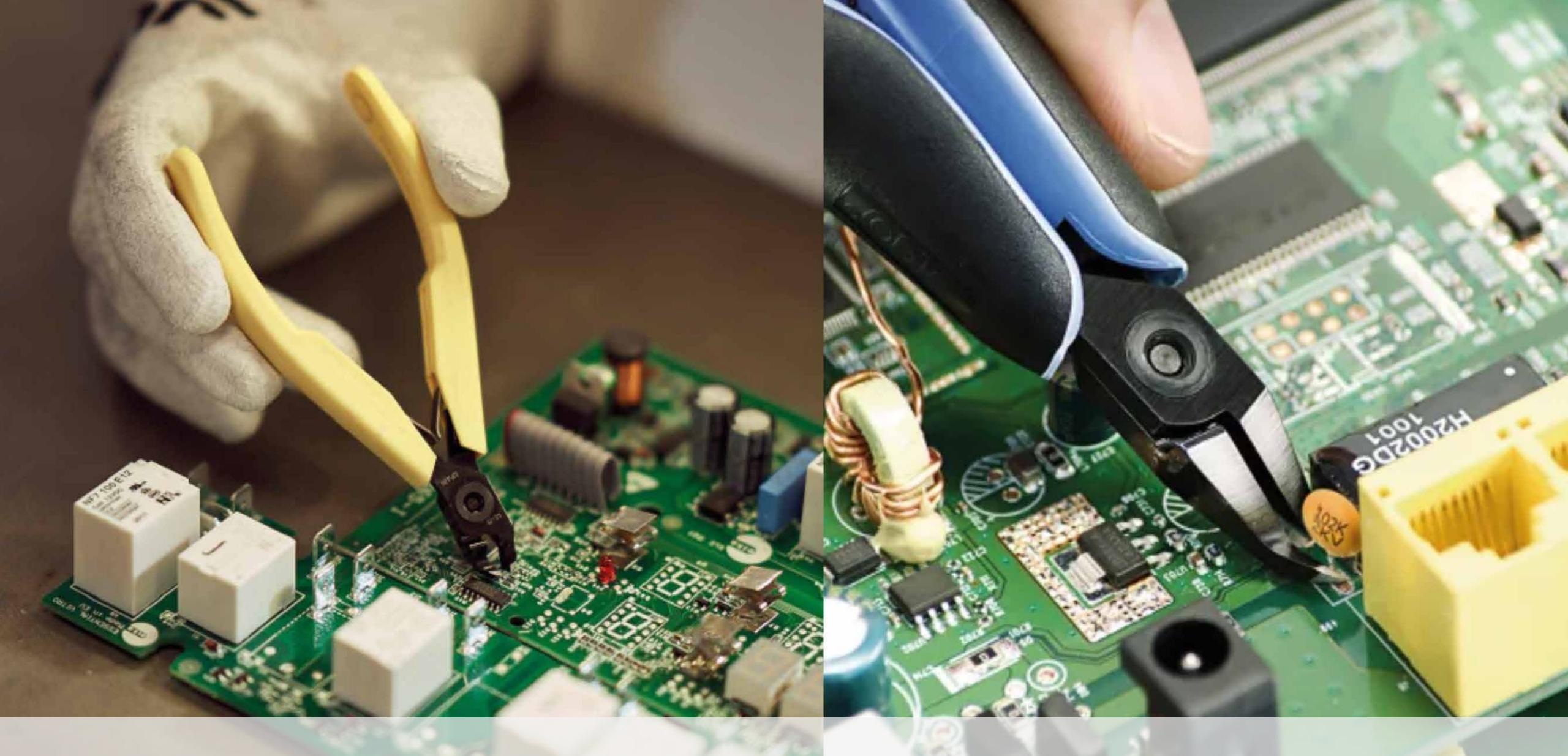












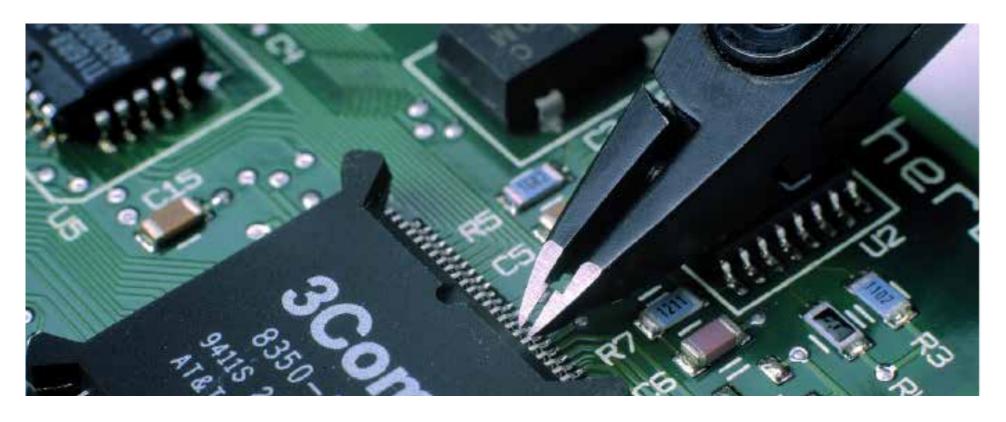
3.1. ELECTRONICS

ELECTRONICS

Lindström tools for electronics manufacturing and assembly.

Since the early days of the electronics industry Lindström has been the brand of choice for manufacturers performing high volume work and critical applications.





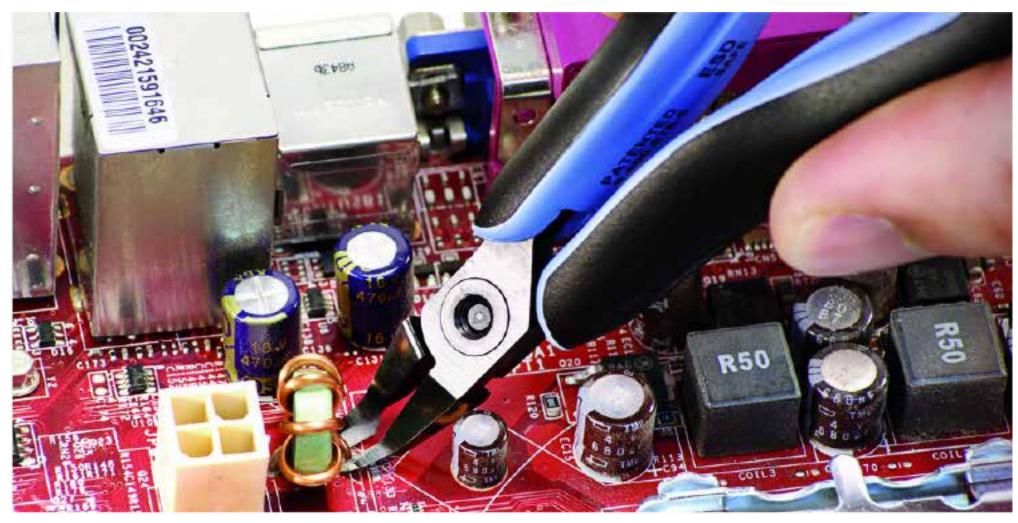


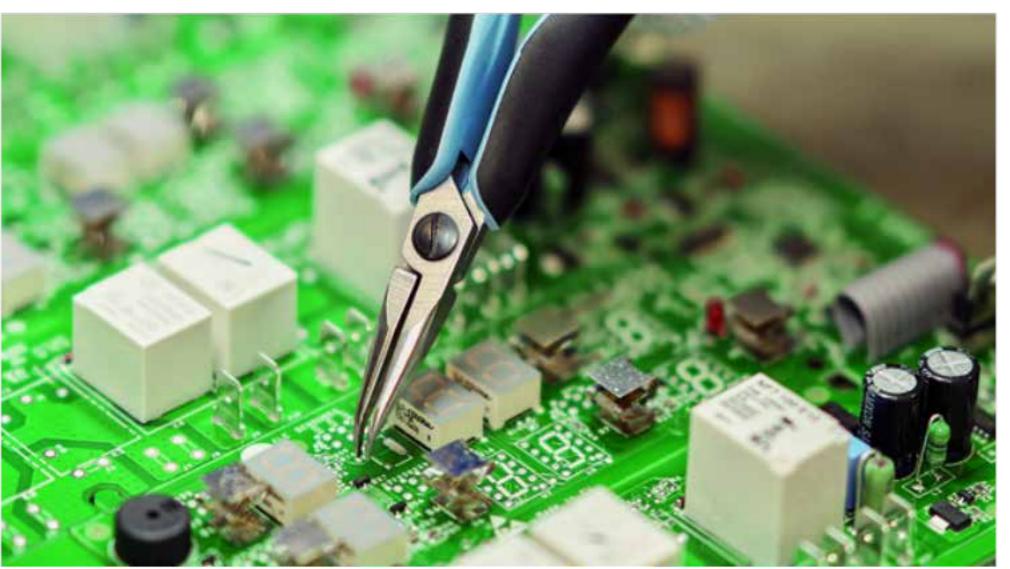
ELECTRONICS

Our RX Series ergonomic pliers were the first tools specifically designed to fit the hands and needs of the user.

The RX Series revolutionized the hand tool industry meeting the specific needs of electronics assembly, military electronics and aerospace production.



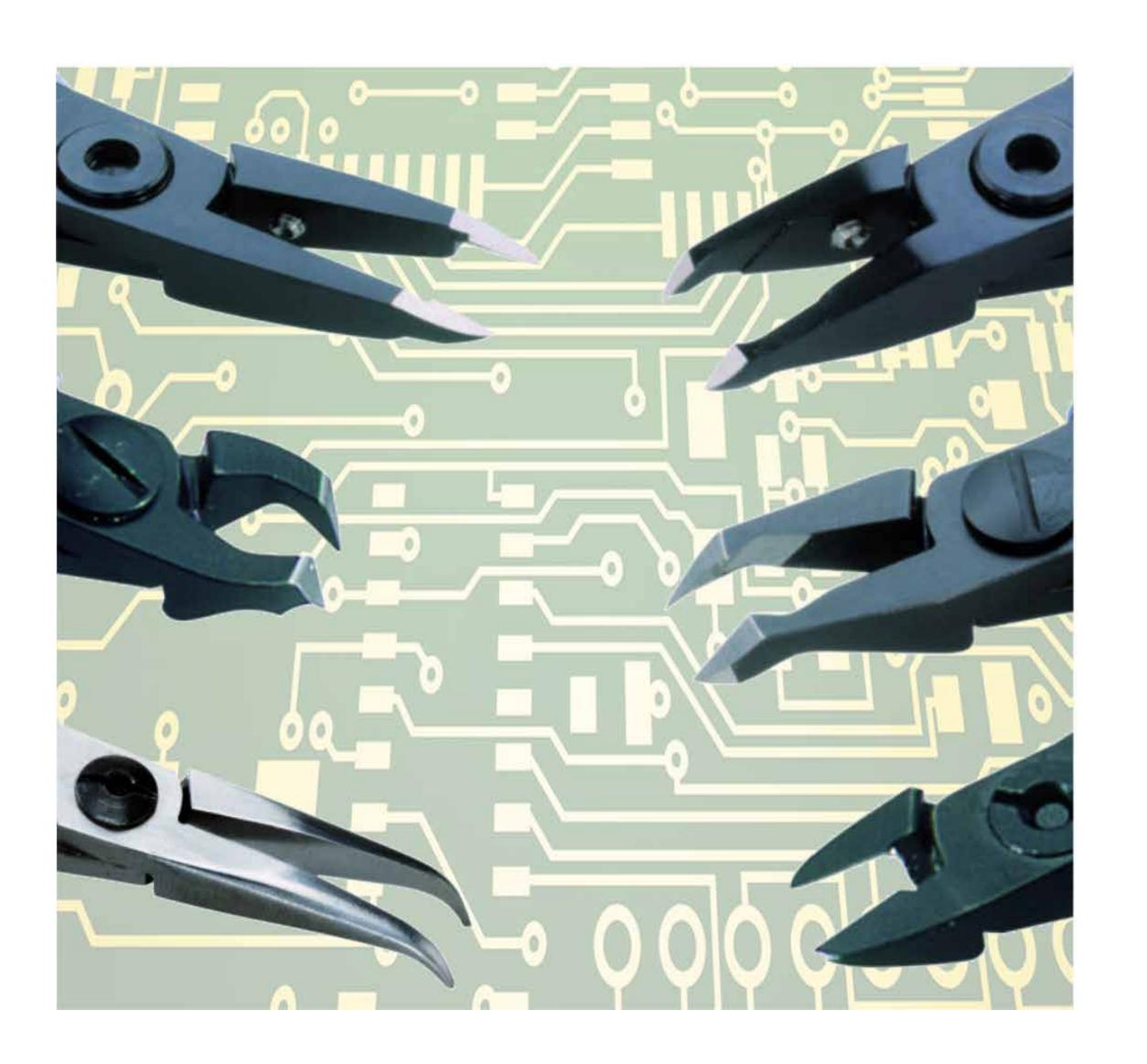




ELECTRONICS

As these industries matured, devices shrank in size and increased in complexity, Lindström developed new profiles on pliers and cutter types to meet their demands:

- Ultra-Flush® cutters for anti-shock military applications.
- > Tapered and relieved cutters to get in between and under tiny components.
- Super-radiused pliers to bend sensitive wire without damage.
- Extra-small tip cutters for microscopic applications.





3.2. MEDICAL DEVICE MANUFACTURING



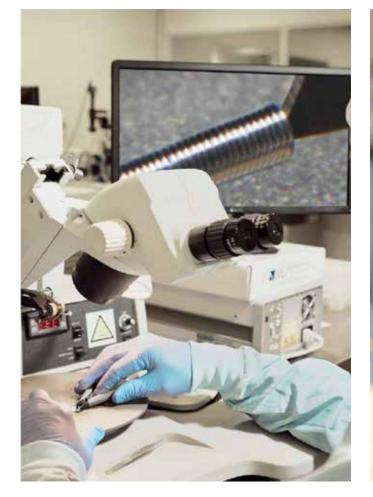
MEDICAL DEVICE MANUFACTURING

3.2. MEDICAL DEVICE MANUFACTURING

For over thirty years, Lindström cutters have been used to manufacture pacemakers, stents, catheters, guide wires and more.

Lindström technological improvements are driven by our customers and their demand for reliable, precise and versatile tools.













Click here to discover our assortment for Medical Device Manufacturing industry

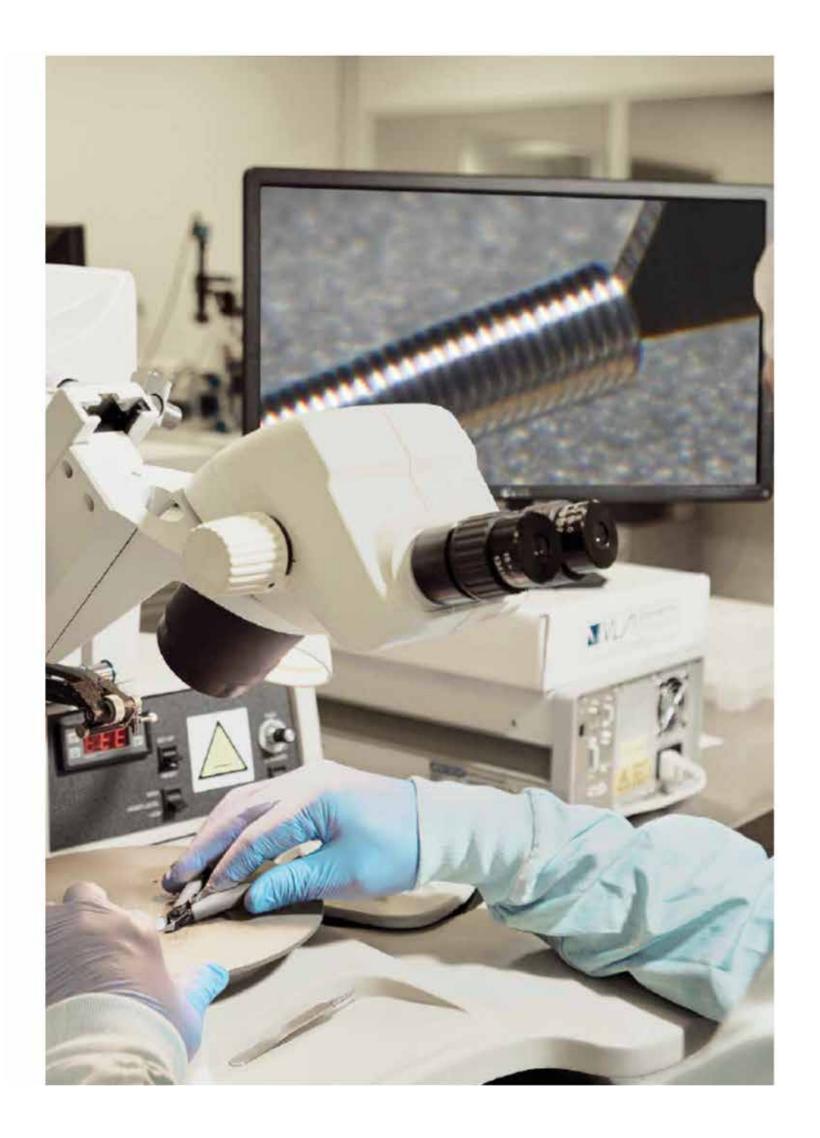
MEDICAL DEVICE MANUFACTURING

We offer cutters for hard materials like Stainless Steel or Nitinol with our new range of carbide cutters. At the same time, when cutting more than two convolutions at a time, we have recently developed a Medical Series that will improve the efficiency thanks to the long-lasting cutting edges.









CUSTOMIZATION

MEDICAL DEVICE MANUFACTURING

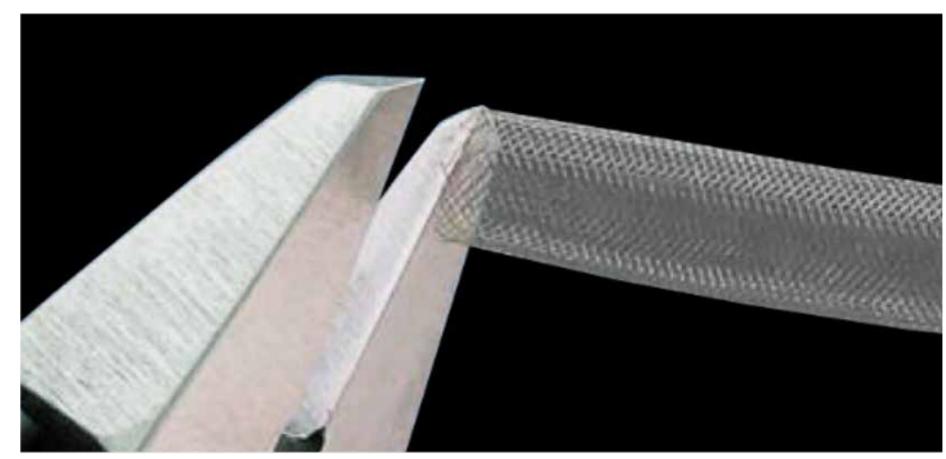
Lindström introduces a specially engineered diagonal cutter for Medical Device applications:

3.2. MEDICAL DEVICE MANUFACTURING

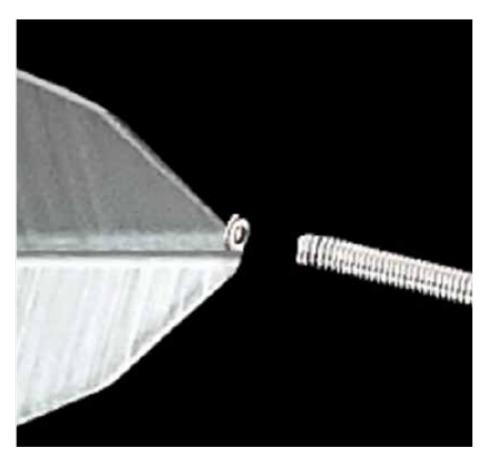
The new **Tungsten Carbide Insert Cutter** is designed to provide consistent, precise flush "Tip Cuts" on guidewires, catheters and fine trimming for stents.

Carbide Insert Cutters are suitable for hard wire materials like:

- **Nitinol**
- **Stainless Steel**
- Titanium









The new Lindström 5154TC Precision Tungsten Carbide Cutter" View the full video View the product page



3.3. AEROSPACE & DEFENSE

<u>assortment for Aerospace</u> <u>& Defense industry</u>



AEROSPACE & DEFENSE

Lindström customers solve problems and we are there to support them with both standard products and custom tools for the aerospace, defense and avionics manufacturing industries.





AEROSPACE & DEFENSE

3.3. AEROSPACE & DEFENSE

Those tools are used in specialized applications for the largest names in the military industry and for small start-up companies developing new technology. Every project receives the same attention to detail and a tool that is right for the job at hand.



To make the process easy Lindström has no minimum order quantity on Special Engineered Tools.







3.4. JEWELRY



For over 150 years Lindström hand tools have been the choice of **professional jewelry makers**.

Today makers of jewelry, hobby creations and a variety of artists choose to use our pliers and cutters to create their unique designs, to precisely bend wire and consistently execute flush cuts.







Exacting users demand a flush cut that is truly flush, a joint that keeps the jaws perfectly aligned, and an edge that stays sharp.

TRUST IS CRUCIAL

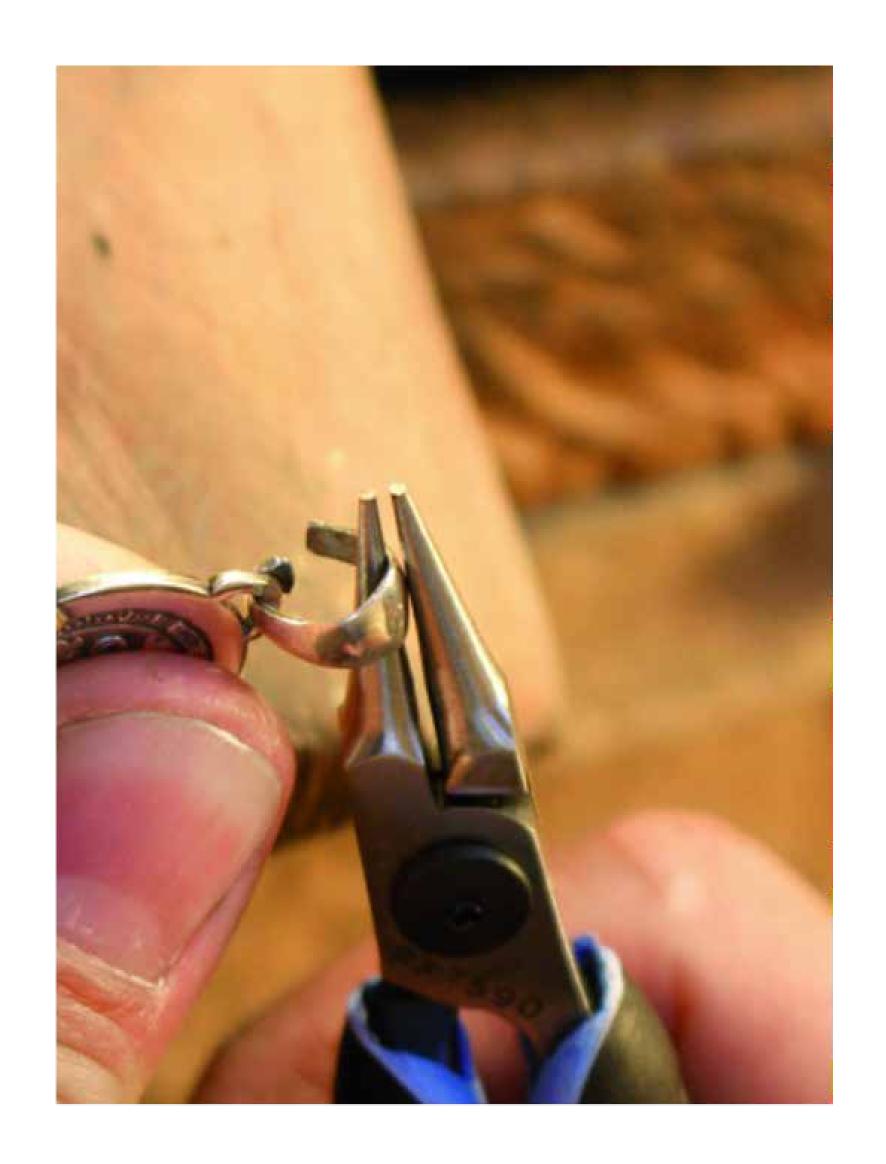
Artistic creations often require expensive materials, and there is little tolerance for waste. When working with gold, waste is bib loss!













SPECIALS / CUSTOMIZE

Can't find the tool you're looking for? Don't worry!

Lindström has developed tools used in specialized applications for the largest names in medical device manufacturing and for small start-up companies developing new technology. Every project receives the same attention to detail and a tool that is right for the job at hand!

We even build tools drawn on the back of a napkin. It's that easy!

