Lindstrom Precision Tools – advanced tools
for assembly, rework and repair.

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LINDSTROM® PRECISION TOOLS

LINDSTROM®
PRECISION TOOLS

CATALOG 3

LINDSTROM PRECISION TOOLS

The expression ”the right tool for the job” could not be more appropriate than in a discussion about handtools. Whether in the hands of a skilled professional or a new operator, the right tool can make the most difficult operation a simple task.
Lindstrom Precision Tools is your source for the right handtool for electronic, electromechanical and medical device assembly, rework and repair.

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Lindstrom Precision Tools invites you to visit our new web site. Our latest up to date information is now available to you either on screen or via download. Enjoy our always available comprehensive web site featuring the best in assembly, rework and repair tools.

Web site includes:

- Lindstrom’s complete range of products.
- Ergonomics.
- Trade show & product exhibition.
- New products.
- Literature availability (Catalogs, Brochures and Flyers).
- Quick link to downloadable high resolution product photographs.
- Where to find Lindstrom Distributors in your area.
- How to contact a local Lindstrom Manufacturing Representative.
- And much more.

Log on today and discover Lindstrom Precision Tools. We stand ready to solve your assembly, rework and repair needs.

NEW

TRx 8180 Heavy-Duty Cutter

Lindstrom introduces a large cutter in the RX series for use on copper wire, wire cables and hard wire applications. The TRx 8180 heavy-duty cutter can handle solid copper wire and hard steel wire from 0.5 mm/0.02 inch up to 2.75 mm/0.11 inch utilizing the new ”progressive cut” bevelled edges. The specially designed thumb-release spring can be disabled so the TRx 8180 will slide into and out of utility belts easily.

See page 59.

ESD Safe Plastic Cutters

ESD safe requirements are no longer just confined to electronics manufacturing. Today electronic equipment requires maintenance across varied areas, the demand for more ESD safe tools has increased. Therefore, Lindstrom now offers two new plastic cutters built to the same existing standards as our already well-known product ranges.

The P6140 and P6160 are suitable to cut cable ties on wire harnessing and plastic components within electronics equipment. These rugged Lindstrom tools offer the user a well balanced feel and a high quality precision cut, ideal for cutting shielded cable, multi-core cable, plastic sprues and flashing within many injection molding applications.
See page 60.

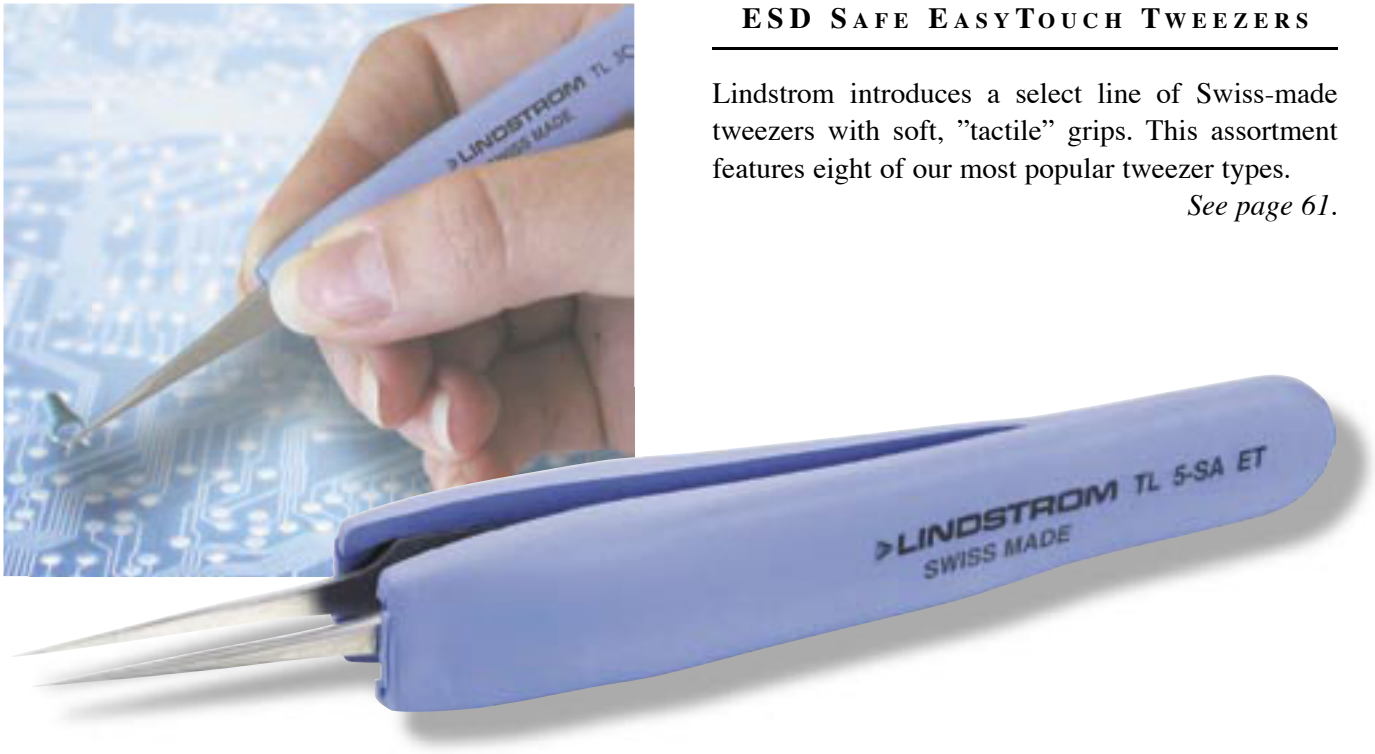
Precision Screwdriver sets

Lindstrom introduces a new range of precision screwdrivers. Four sets are available comprising differing combinations of the Slotted, Phillips, Pozidriv and Torx type tips.

(AVAILABLE IN EUROPE ONLY.)

See page 90.

NEW



ESD Safe EasyTouch Tweezers

Lindstrom introduces a select line of Swiss-made tweezers with soft, ”tactile” grips. This assortment features eight of our most popular tweezer types.

See page 61.

Carbon Fibre Tweezers with Replaceable Tips!

Lindstrom offers a new replaceable tip feature on five of our most popular carbon fibre tweezers. These high quality Swiss tweezers are ideal for use where an optimal balance between stiff tips and smooth surfaces is required. Typical applications include handling and placing of electronic components and devices.

See page 78.

SL Series Tweezers

Lindstrom introduces a line of competitively priced, high quality, Swiss made tweezers. This new assortment features 15 of our most popular tweezer types.

Tweezers start on page 61.
Look out for the symbol

Extra competitive price

Contents

Choosing the right Handtool

In today's complex assembly environment, it is important to understand and consider the different requirements and conditions that affect your choice of handtools.

For example:

- **How frequently are you going to use the tool?**
- **What type of result are you trying to achieve?**
- **What kind of material are you going to cut or bend?**
- **Can you use one tool instead of two?**
- **Do you have concerns about ESD or other specialized standards?**

These questions and many more should be considered in making your choice. We have included additional information to assist you in choosing the right tool for your application.

Cutters

LINDSTROM HISTORY

Started in 1856, Lindstrom has set the standard in precision tool manufacturing. The oldest continuous producer of handtools in existence today, Lindstrom maintains its edge over the competition through its technical understanding, response to market needs, and commitment to advanced technology. Metallurgy, manufacturing techniques, and tremendously skilled crafts people (particularly in the hardening of steel) are the hallmarks of this world renowned Swedish manufacturer.

The Rx8211 combines good application visibility, hand and tool positioning capability and small size with great strength. It is among one of the best angle head tools on the market and a prime example of that which is truly Lindstrom – precision with power. See page 43 for more on Rx8211.

Some companies have been able to implement one facet or another of the Lindstrom manufacturing cycle. Others have attempted to copy the form, appearance and even the actual part numbers of Lindstrom cutters. However, none has been able to successfully blend all the elements that are required to achieve the level of performance recognized worldwide as belonging to a true Lindstrom cutter.

BACKGROUND

Many years ago, cutters were primarily used in heavy-duty work, i.e., cutting heavy electrical wire and wires used in the telecom field. In order to meet the requirements of linemen and other general use workers, tool manufacturers designed a cutter that left a wide, pyramid-shaped lead end after cutting. Its hardness was adequate for the strain put on the cutter blades. Moreover, the cutters had to be designed with an overall ruggedness: capable of withstanding a drop from a ten-story building without being severely damaged.

However, as the electronics and other related industries developed, the requirements on tools, and in particular cutters, became far different. For example, many people believe that an electrician must do a lot of cutting. Yet, an electrician may make

An electronic assembly operator may make more cuts in one month than an electrician makes in a lifetime.

Cutters

fewer cuts in his lifetime than some electronic assembly workers make in one month! Therefore, the need for cutting small wires thousands and thousands of times necessitated a radically new and innovative technology.

The Rx8140 used in traditional over-hand grip. See page 40 for more on Rx8140.

Small cutters were needed that could cut both extremely small and relatively large diameter wires, often of quite different materials. In addition, the lead ends had to be quite different since the solderability of these wires was of paramount importance. These lead ends had to be covered completely and properly with no bare copper (or basis material) exposed.

Compounding the problem was the accessibility issue, as not all cutters could get into the same area. Transmission of the mechanical shock of cutting to sensitive semiconductors added even more cutter design challenges. However, despite some manufacturers' claims to the contrary, there are no secret or "magic" materials or processes that can give you some kind of "super" cutter for all applications. Some inherent "trade-offs" in the design of tools and choices must be made in order to meet certain application requirements. For example:

At what point is the cutter head small enough to gain access and still be able to withstand the impact of cutting wires (of various sizes) innumerable times?

How flush should the cutting edges be in order to meet tough specifications yet still keep tool life extended to the maximum? And what about resistance to edge damage due to occasional misuse?

To what degree of hardness should the tool be made in order to extend tool life and still limit breakage due to being too brittle?

What type of joint should be put into a tool to extend the precision of the cutting edges and still be cost effective for you to use?

Understanding these trade-offs is the key to making an objective and cost-effective choice of tools for your specific application.

MATERIALS

Every cutter begins with basic materials. However, materials can vary greatly with just a minute change in the mixture. A slight adjustment to the ingredients can affect how a particular steel reacts, and Lindstrom has been refining this mixture for almost 150 years.

The 1% Carbon, combined with a pinch of chrome and various other materials, is very similar to the steel grade and mixture used for high quality ball bearings. This is the material used for Lindstrom Rx and 80-Series cutters.

Cutters

RESILIENCY

One of the challenges in tool design and usage alike is the search to increase tool life. Decreased life is caused generally by usage beyond the limits of the material and its corresponding hardness.

The use of ball bearing grade steel together with proper heat treatment offers the possibility of a cutter of tremendous resiliency and toughness with the ability to withstand greater impact, yet with the ability to return to its original form without damage. This is one of the reasons why Lindstrom cutters offer greater life and have less breakage than other brands used in the same applications.

LUBRICITY

Another characteristic that emerges from a Lindstrom cutter is the ease with which the tool makes its cut. It is as if there is a built-in lubricant, which makes the cutting easier. This not only helps to make a better cutter, but also reduces operator fatigue.

HARDNESS

Different steels have different personalities – each allowing a certain level of hardness. If a specific steel is hardened too much for its composition, it will break easily. On the other hand, not enough hardening can sharply reduce tool life. How a steel is cooled (after hardening) and recognizing the different strength capacities of that steel are some of the key factors that make the hardening process a difficult science to master.

Measuring the hardness on a Rockwell Hardness Scale, Lindstrom cutters are elevated to a hardness of 63-65 on the cutting edge, as marked on the ”C” scale of the tester. This hardness ranks among the highest of any cutters made. For most manufacturers, this hardness level would create a high breakage rate.

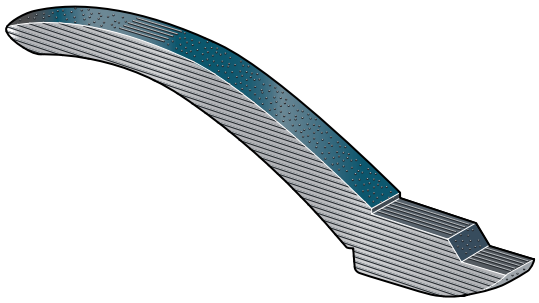
Yet, because of the steel and proper control and consistency of the hardening area, and even when used beyond the rated capacity (as they often are!) Lindstrom cutters have remarkably little breakage.

Cutters

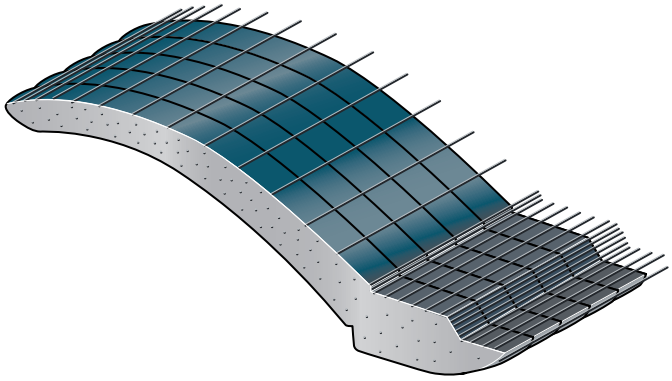
METHODS OF MANUFACTURING

FORGINGS

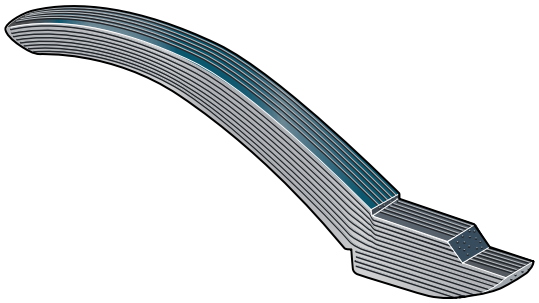
One of the major breakthroughs in Lindstrom technology is the ability to produce exact, precision forgings. Without that capability, the automated production process cannot be utilized effectively. Therefore, as the first step in the manufacturing cycle, forgings are a key element in the total production process. To maintain interchangeability, every forging must be perfectly precise and compatible to one another.



Stamped tools have a straight grain; this construction is useful for certain applications but ultimate tool life and strength can be compromised.

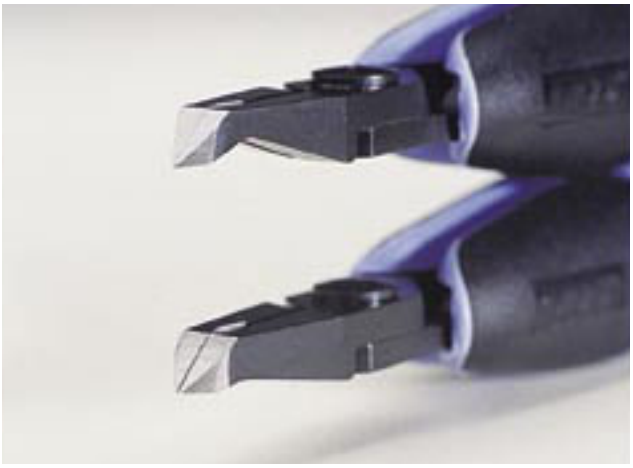


Cutters produced by an extrusion method have a cross grain structure; thus, they are susceptible to greater breakage, particularly along the cutting edges and the joint.



Forged cutters are usually the strongest. Their grain structure follows the profile of the cutter.

Despite automation, any production process can be extremely limiting if not utilized effectively. Lindstrom effectiveness is directly related to the use of forgings of exact dimensions. When forgings are not uniform, it becomes nearly impossible to obtain the repeatability necessary to produce a consistent quality tool. Attempts have been made by others in the industry to automate the manufacturing process without such forgings, but the tools produced are physically erratic. The result is an increased breakage level or rapid deterioration of the cutting edges – expensive tools at any price.



The Rx8247 and even more refined Rx8248 (top), extend the range of applications for angle head cutters. See page 44 and 45 for more on Rx8247 and Rx8248.

Cutters

PROCESSES

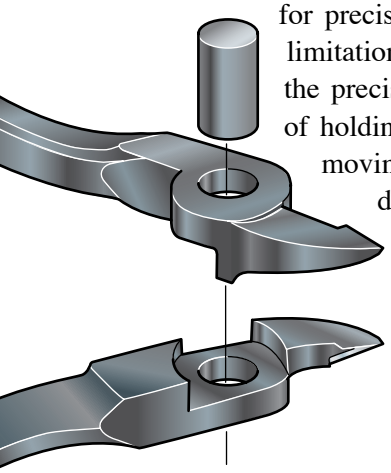
Anyone involved in manufacturing knows that to attain a quality process, there are no shortcuts – learning must be by doing. Subsequent steps in the Lindstrom cutter production process have been painstakingly developed over a 30-year period backed by 150 years of precision tool production and know-how. Lindstrom is constantly seeking the best way to achieve consistent quality results. These results are seen in the perfect symmetry of the cutter components, the exactness of the grinding, and the consistent hardening. The reliability and consistency of these details are the Lindstrom hallmark.

CUTTER JOINTS

Of the three primary types of connections commonly used – lap joint with screw, box joint, and lap joint with rivet – each has a distinct value that you should consider in evaluating your choice of cutter.

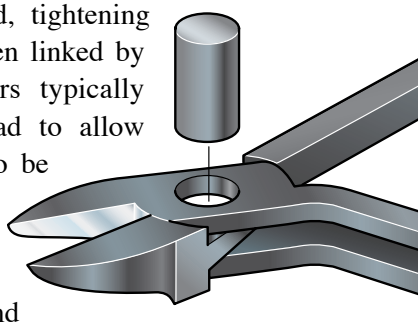
LAP JOINT WITH RIVET

The lap joint with rivet is both economical and effective for those tools used for occasional work or for heavy-duty cutting where the requirements for precision are not as great. This joint's limitation is that it is difficult to achieve the precision of a screw and nut in terms of holding torque and bearing surface for moving parts and thus it can loosen or develop "play" more easily over time. This leads to misaligned cutting edges, a property that is not conducive to exact and continuous cutting.



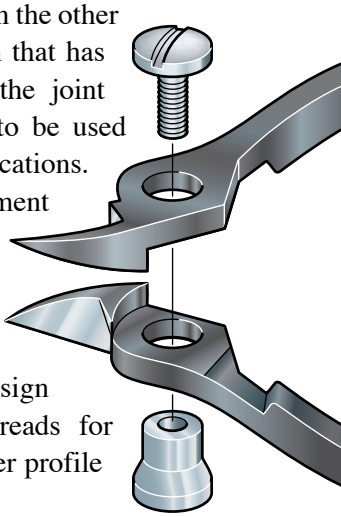
BOX JOINT

The box joint is an older process, developed initially for the jewelry trade where intricate and precise forming of delicate metals is required. The joint is made by sliding one side through the opening of the other side of the joint. Once cooled, the opening closes or is closed, tightening the two sides, which are then linked by a rivet. Most manufacturers typically expand the slot in the head to allow the other half of the tool to be assembled. This offers the possibility of introducing variations on inner contact surfaces in terms of finish and tolerances.



LAP JOINT WITH SCREW

The lap joint with screw is the marriage of a fine pitch threaded screw and miniature nut. It is extremely important that these two parts are geometrically correct. However, there is more to achieving strength and precision in the joint than that. For example, a screw-and-nut combination that is absolutely flush with the edge of the tool may have insufficient threads to maintain consistent alignment. On the other hand, a screw-and-nut combination that has external heads on both sides of the joint may limit the cutter's possibility to be used for a number of tight access applications. Lindstrom eliminated this predicament through the positive integration of both designs. With one flat external head and one flush head, both adverse conditions are eliminated. In the end, this design assures the user of sufficient threads for continuous alignment and a narrower profile for greater accessibility.

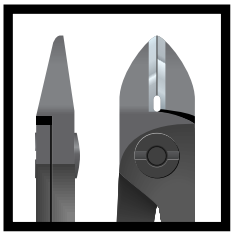


Cutters

CUTTER HEAD SHAPE AND SIZE

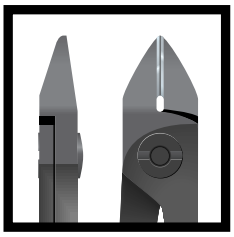
Head shapes vary in size and configuration depending on the application. However, there are four primary types, with variations of each.

OVAL HEAD



Most common of all the head shapes is the oval head. Combining strength and flexibility, the oval head can withstand and distribute the impact of cutting and is utilized in a myriad of applications. The head shape combined with materials, method of manufacturing, type of cut, and the tool's hardness, determine the range of cutting capability.

The Rx8130 with miniature oval head will cut copper wire up to 1.25mm/16 gauge in diameter. Yet, the Rx8130 is far smaller than models from other manufacturers considered to be of similar capacity and is one of the strongest miniature cutters on the market. See page 40 for more on Rx8130.



TAPERED HEAD

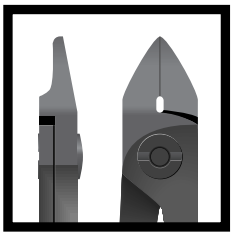
When the sides of a cutter head are shaped along diagonal lines, the operator can effectively broaden the range of tasks this tool can fulfill. The Lindstrom tapered head cutter utilizes this design without reducing the cutting range, and increases the number of areas that the operator can gain access to. However, since the tapered head does not stand up to occasional misuse so well as an oval head design of similar dimensions, a greater degree of care should be observed in its use.

Tapered Rx8143 allows better tip access yet still has a good general range of cutting capacity. See page 41 for more on Rx8143.

Tapered Rx8143 improves cutting access in component removal. See page 41 for more on Rx8143.

Cutters

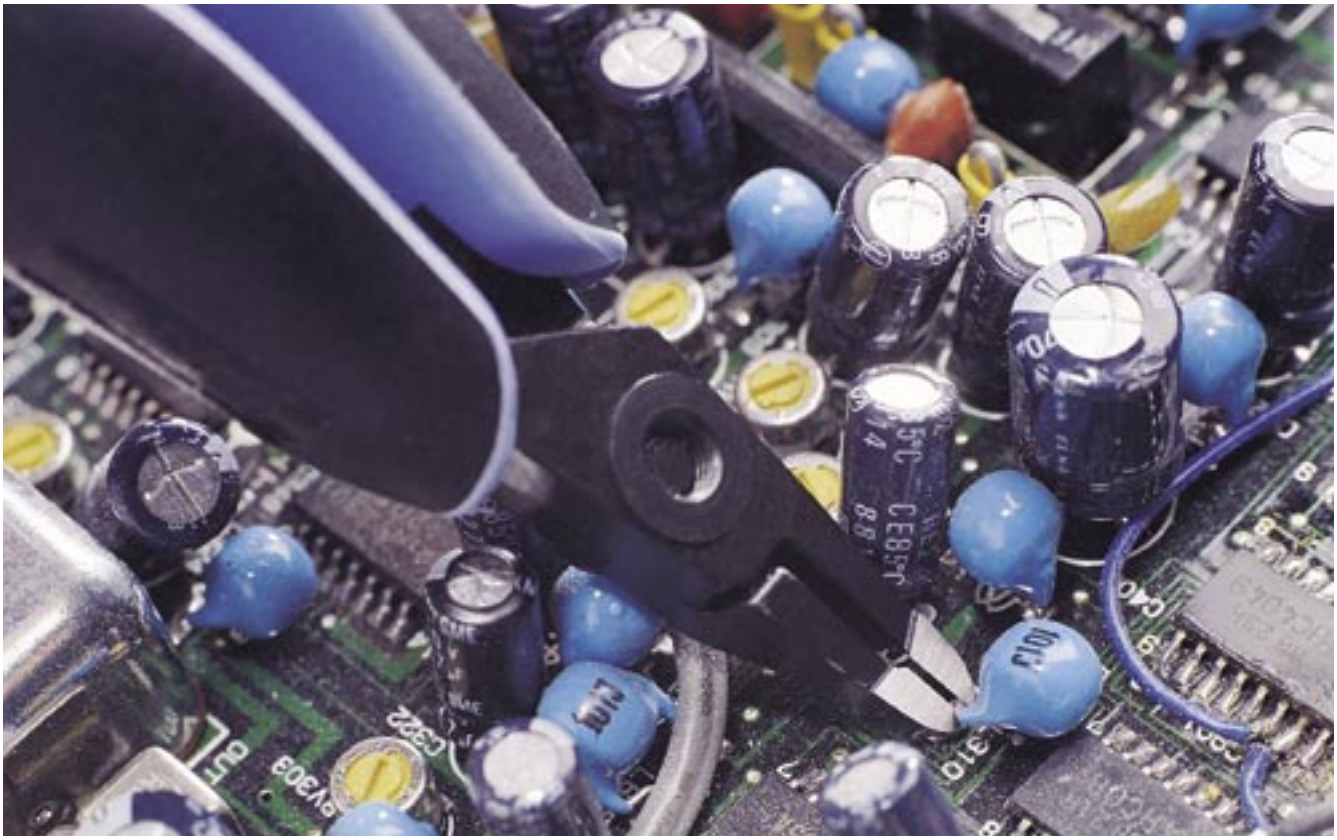
TAPERED AND RELIEVED HEAD



This head style is the smallest of the standard cutting heads available. Not only does it taper on both sides, but also the underside is cut away, allowing the operator to gain access into some difficult areas. Although this provides an obvious advantage, this head style does have a slightly reduced cutting range.

Special care should be taken not to use tapered and relieved cutters outside their specified range of cutting capability.

Tapered and relieved Rx8146 provides improved access and visibility for even the most difficult job. See page 41 for more on Rx8146.

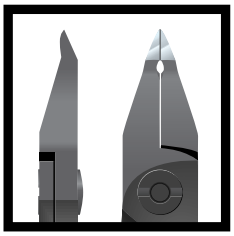


Tip cutter Rx8149 is an even more specialized adaptation of the tapered and relieved style. Its extreme tapering on all sides allows access and reach. See page 42 for more on Rx8149.

Cutters

Angle head Rx8247 provides benefit of reach and operator visibility. See page 44 for more on Rx8247.

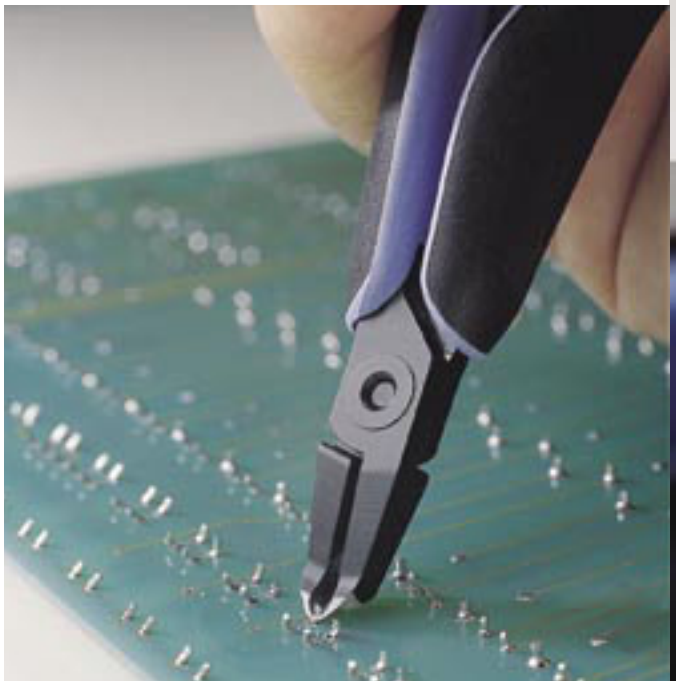
Rx8211 (top) offers outstanding strength and cutting capacity while Rx8247 (bottom) offers better reach. See page 43 for more on Rx8211 and page 44 for more on Rx8247.

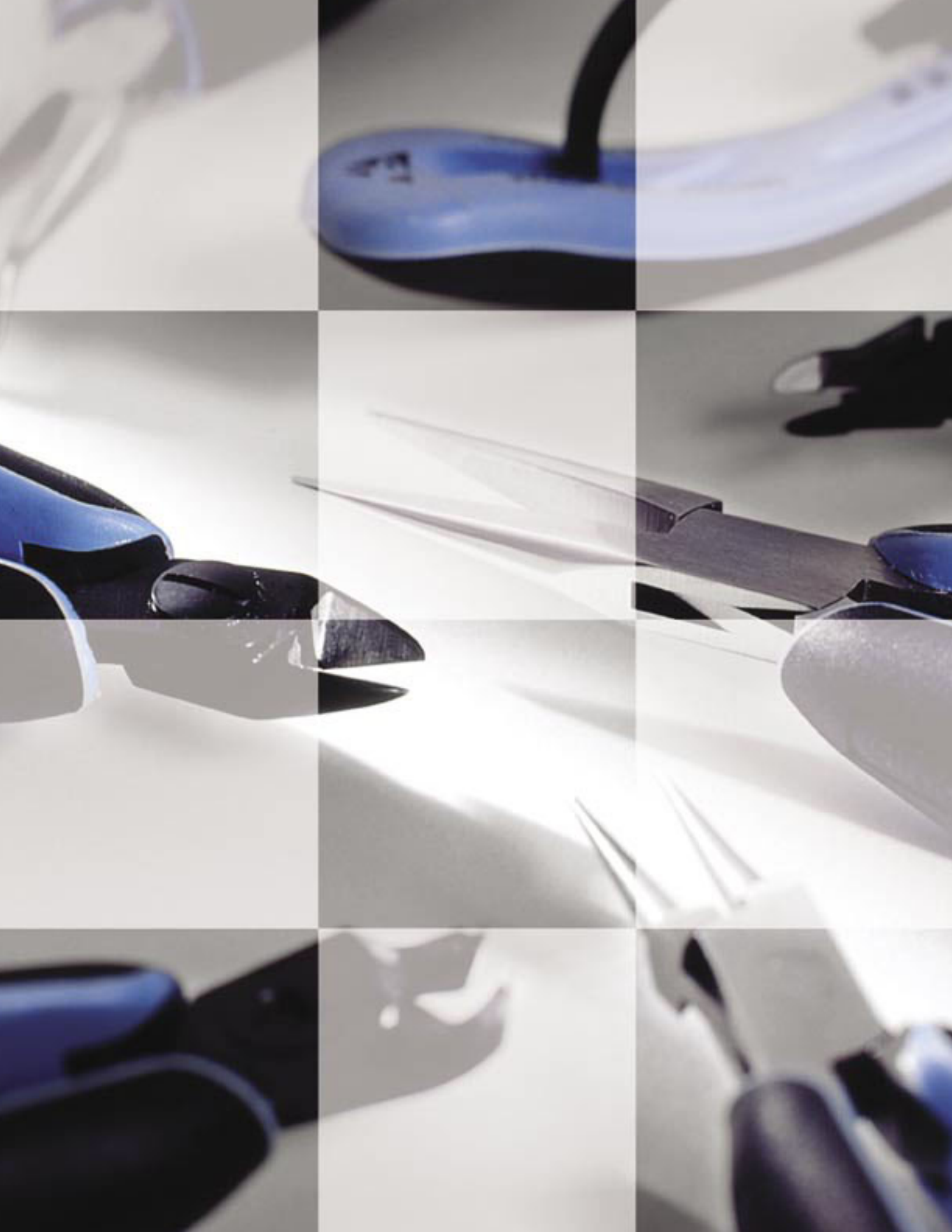


ANGLE HEAD

This head shape is sometimes called an oblique style with its head set at an angle to the main body of the cutter, the purpose of which is to reach between wires or parts or into areas which are difficult to access. Tools of this design can also be used to trim standard leads or parts – with the advantage being that the operator's hand can be in a different position if desired. The cutting range of the angulated head will vary depending upon its style, but some degree of care should be observed in its use.

The Rx8140 (left) used in traditional over-hand grip. Rx8247 (right) allows an inverted grip in a similar application. See page 40 for more on Rx8140 and page 44 for more on Rx8247.



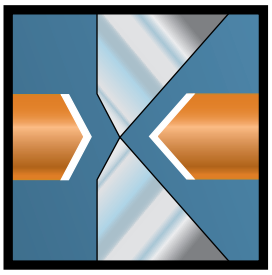


Cutters

CUTTING EDGES

Explaining the type of cut that a particular cutter makes is perhaps the greatest area of confusion and worthy of special study as there is no real standardization of terminology, and each brand offers its own description of its type of cut. Understanding these differences is particularly important in the ordering process.

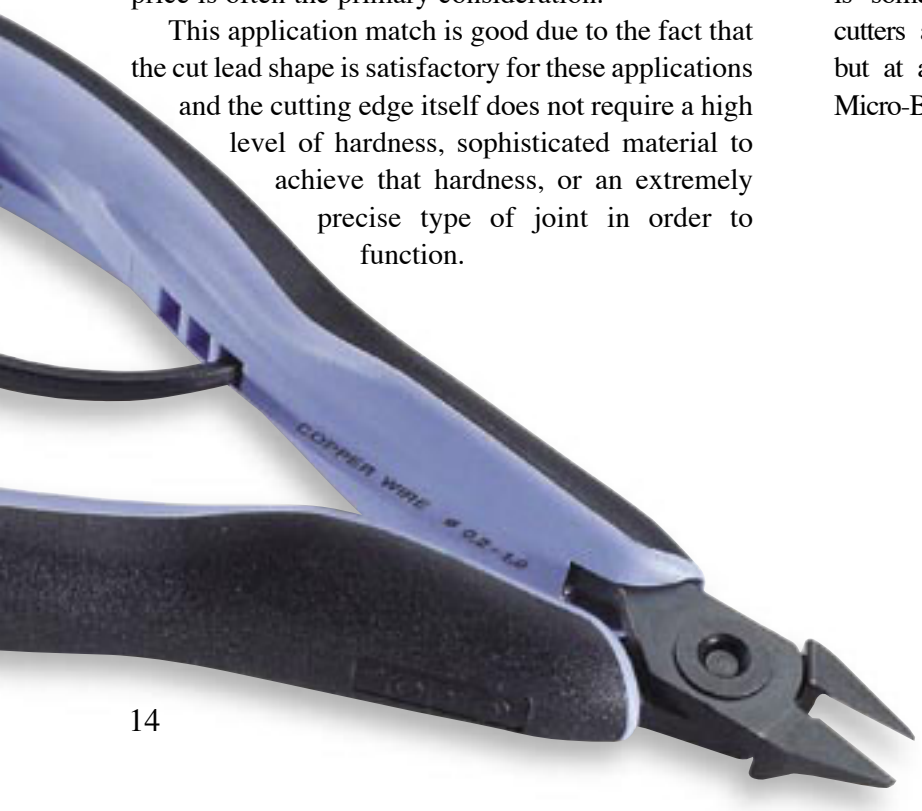
It is imperative that you recognize what type of cut you require and what the cut lead-end should look like after it is cut. This is especially true in the tighter requirements and specifications of military and high-end commercial electronics.



THE SEMI-FLUSH CUT

This type of cut leaves a large lead-end, shaped like a pyramid, and has been manufactured for decades by every tool manufacturer. This type of cutting edge is a good application match for general electrical or hobby cutting where tool price is often the primary consideration.

This application match is good due to the fact that the cut lead shape is satisfactory for these applications and the cutting edge itself does not require a high level of hardness, sophisticated material to achieve that hardness, or an extremely precise type of joint in order to function.

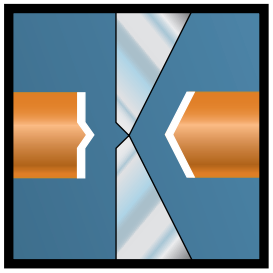


THE MICRO-BEVEL® CUT

To meet the requirements of the electronic assembly industry, Lindstrom designed the Micro-Bevel. Its unique cut is quite different from the semi-flush cutter. Its leads are ”pinched”, unlike the pyramid look of the semi-flush cut, allowing less altitude and smaller overall surface area. Because of its design, it has an extremely wide cutting range, and a variety of uses far beyond any other cutter produced today. For example: Lindstrom produces a cutter (Rx8130) that has a cutting range for copper from 0.2 mm/32 gauge to 1.25 mm/16 gauge yet has a remarkably small overall head size.

THE FLUSH CUT

The cutting result of most ”flush” cutters, their individual terminology notwithstanding, is somewhat similar. Flush cutters also pinch the leads, but at a lower altitude than Micro-Bevel cutters.



Cutters

These cutters have finer cutting edges than semi-flush or Micro-Bevel cutters.

Lindstrom's flush cut also creates a pinched lead. However, it is configured slightly differently than that produced by other cutters. The Lindstrom flush cutter leaves a narrower and shorter taper along the pinch, thereby reducing the total exposed area. The reason for using a Lindstrom flush cutter rather than the Micro-Bevel is to meet a slightly tighter specification for the cut lead-end or to gain a more flush result to a board, component, or part.

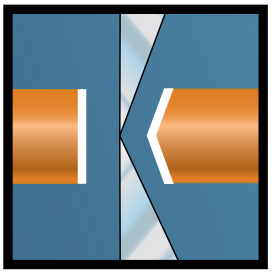
EXCEEDING THE FLUSH CUT

Many manufacturers have a cut which, in reality, is just a smaller pinch, allowing OEMs to meet solderability specifications and alleviate shock. This pinched lead is deemed acceptable for many items produced for high-specification applications, but confusion is caused by the size and height of the pinch as each cut will vary from brand to brand and between manufacturers.

The general consensus is that the greater this pinch becomes, the less the acceptability of the cut. The critical area here is realizing that as the cutter wears down, the size of the pinch increases and could rise above the maximum acceptable height. Moreover, the greater the pinch, the greater the mechanical shock transmitted.

THE ULTRA-FLUSH® CUT

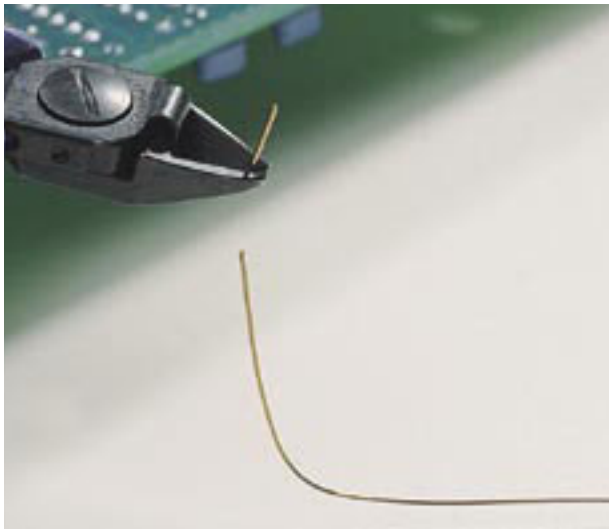
The question to be addressed then is why have a pinch cut at all? Lindstrom engineers have designed the Ultra-Flush cutter which virtually eliminates the pinch other cutters make. The Ultra-Flush configures two flat planes with a barely discernible line separating each of these planar surfaces. Only a precise screw joint and a specially designed radius on the cutting edge could allow this razor-sharp edge to be utilized effectively.



The trade-off in this case is a more limited cutting range and greater possibility for edge damage due to misuse. However, with the exception of Lindstrom's own Micro-Bevel and Flush cutters, the Ultra-Flush will outlast any other "flush" or "shear" type of tool and still match competitive cutting ranges.

The unique design of the Ultra-Flush is perfect for use in close tolerance electronic and medical device assembly where concerns about final lead-end configuration and mechanical shock transmission are a top priority.

Almost all Rx and 80-Series cutters can be equipped with a lead-catcher. See page 96 for more on lead-catchers.

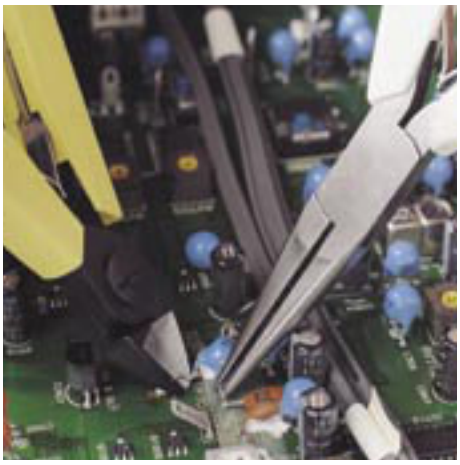


Pliers

PLIERS

EXTENSIONS OF THE HAND

Holding pliers are used on the toughest, most forceful applications – from removing plate steel retaining pins on an oil derrick to the most sensitive and sterile of environments such as surgery. This is because pliers represent the functional expression of replicating and increasing the capabilities of the human hand across many dimensions, particularly of the thumb and adjoining finger, in terms of force and precision.



The 8140 cutter and 7891 holding plier combine capabilities in some electronic "surgery." See page 48 for more on 8140 and page 56 for more on 7891.

That is why holding pliers are available today in an almost limitless number of shapes, styles, configurations, materials and sizes.

PLIER EVALUATION

Evaluating pliers in an objective manner is not a straightforward task. Cutters, for example, can be put on a machine or on the assembly line, and capacity or number of cuts can be tested with some degree of confidence.

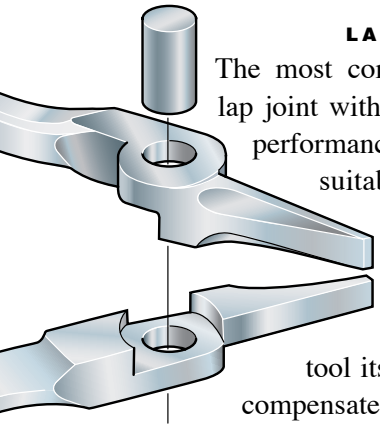
Holding pliers are not so easily tested in an objective way – again, because of the almost limitless way in which they are configured and used and also because of their often very long service life.

The Rx7890 in an inverted grip is used to straighten a connector pin. See page 46 for more on Rx7890.

The forces at work on pliers are also different from cutters. In a cutter, force and wear act on the joint in primarily a single plane, and the overall concern is the precision with which the joint keeps the edges in alignment together with the performance of the cutting edges and jaws when subject to the impact and wear of continuous cutting. By comparison, the joint in a holding plier must be able to withstand the very high and often simultaneous force of multiple plane actions such as holding and twisting in combination with pushing or pulling. In addition, in most applications actual wear on the plier jaws is somewhat secondary to the concern with the ultimate strength and resistance to breakage of the jaws with maximum force applied. Therefore, holding plier performance and capability tend to be strongly influenced by the type and quality of construction of the pivot joint used.

Pliers

The consideration of the positives and negatives of each of these constructions can be somewhat different than for cutters. The key is to take these considerations into account together with your intended application and frequency of use so that you can make an informed, cost-effective decision.



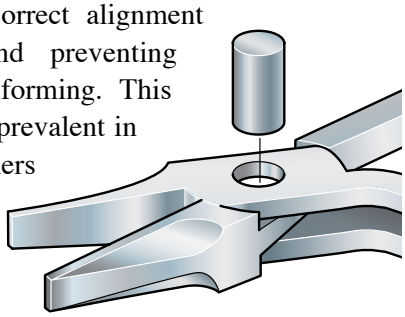
LAP JOINT WITH RIVET

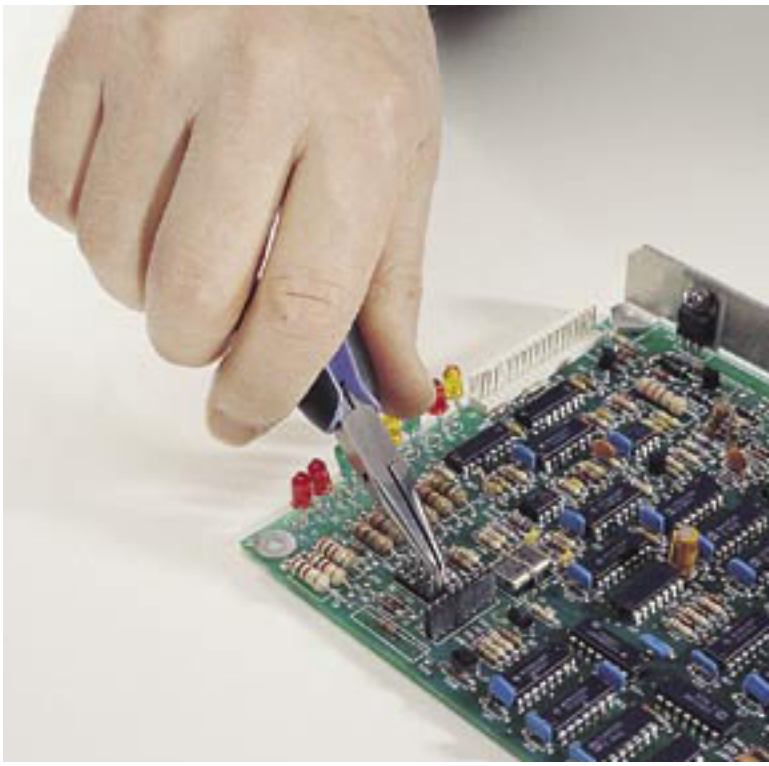
The most common joint used in pliers is the lap joint with rivet. This is due to the cost and performance of such a construction being suitable for many general-purpose tasks. However, lap joint with rivet pliers have a tendency towards a number of problems in assembly tasks where the overall tool itself cannot be made big enough to compensate for the possible weaknesses of this joint. Specifically, the jaws have a tendency to roll over when lead forming, and "play" due to wear can be rapid.

Therefore, although lap joint with rivet pliers often have the lowest price, this joint tends not to have the life or the performance capability often required of small pliers for intricate forming. If the operator is using a larger, medium- to heavy-duty plier, the lap joint with rivet will often suffice as the joint and plier itself are now large enough to offset the joint wear and flex issues present in smaller pliers.

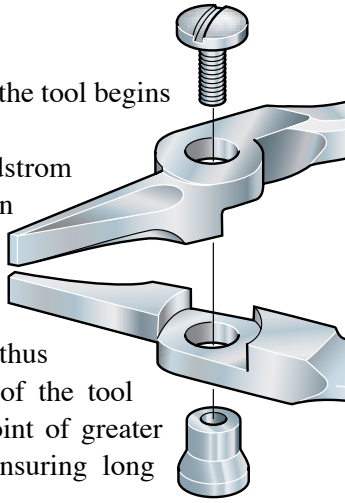
BOX JOINT AND LAP JOINT WITH SCREW

Lindstrom technical analysis has found that the box joint plier or lap joint with screw serves assembly industries best. These allow the plier to retain rigidity, maintaining the correct alignment of the jaws, and preventing "jaw roll" when forming. This condition often is prevalent in other types of pliers and becomes especially obvious as the tool begins to wear and the joint loosens.



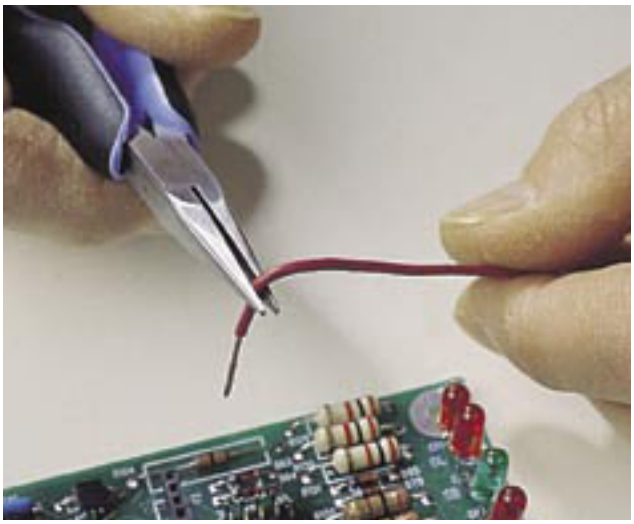


Bent nose Rx7892 allows operator to use an over-hand grip and side access to connector pin and can provide visibility advantages in other applications as well. See page 47 for more on Rx7892.



The construction of the Lindstrom box joint is of special consideration because it features a unique design and construction. This design allows the slot in the joint to remain undisturbed and thus undistorted when the two halves of the tool are assembled. This results in a joint of greater precision and smoothness, thus ensuring long life with minimal wear.

Pliers



The Rx7890 with a gentle side bevel and strong tips can be used for almost any type of bending and forming. See page 46 for more on Rx7890.

The rigidity of the box joint utilized by Lindstrom allows the plier to be configured with a longer jaw and greater taper. This is advantageous for a number of reasons, some of which are obvious – some of which are not. The longer jaw, in combination with the rigid box joint, allows greater accessibility of work without the concern of "jaw roll."

Equally important but not so obvious is the opportunity to reduce the number of pliers needed on the workbench. For example, if you are using a lap joint with rivet pliers, separate small needle nose or chain nose pliers may be required for very fine work. Otherwise, you will have the rolling action common to most lap joint with rivet pliers. However, the greater taper allowed by the rigid Lindstrom box joint plier means that the actual tip of the plier can be much smaller than other types of pliers, relative to the jaw length. This slope greatly increases the range of diameters possible when lead forming. As a consequence, you can utilize fewer tools for more applications. The trade-off once again is the price consideration since the box joint or lap joint with screw pliers are usually priced higher than plain lap joint with rivet types. However, in view of the greater utility of a Lindstrom box joint plier, the ultimate cost is often less.

The Rx7891 (left) with serrations adds additional gripping friction when required. Rx7890 (right) has smooth jaws for reduced possibility to scratch surfaces. See page 46 for more on Rx7890 and Rx7891.

Tweezers

TWEEZERS

Throughout the evolution of tweezers as a range, some tweezer styles such as 1, 2, 3C, 5, AA, etc., have remained as identical in design and as popular in usage as in the past. However, even though many tweezer styles carry generic designations, there are variances within each style, depending on the origin. Once the style is determined, special attention should be given to four important criteria:

1. *How are the tweezer tips finished?*
2. *How symmetrical are the two sides?*
3. *How delicate do they feel?*
4. *How easily do they handle small parts?*

MATERIALS

Once these factors are determined, then the next step is to decide what tweezer material is to be used. A wide variety of materials are available: Carbon, stainless, special stainless materials, nickel plating, nickel-content, and even beryllium and titanium. However, for use in most assembly or repair situations, three primary types will suffice: carbon, stainless, and special stainless steel.

MATERIAL DESIGNATION

Standardized suffix letters designate materials. These designations are listed below with the consideration for each material.

CARBON STEEL

Carbon steel has strong, flame-hardened tips, but has low rust resistance and can develop a high level of magnetism. If the tweezer is made of Carbon steel, there will be no suffix letter. (Example: ”3.”)

STAINLESS STEEL

Stainless steel is rust-resistant with reasonably strong tips, but with less hardness and shorter life than carbon. In time, however, they are susceptible to rust and magnetism (care and use factors notwithstanding.)

If the tweezer is made of stainless steel, the tweezer will be designated with the suffix letter ”S.” (Example: ”3-S.”)

Tweezers

SPECIAL STAINLESS STEEL

This special stainless steel is 304/305 stainless steel which has excellent anti-acid (resistant to hydrofluoric and nitric acids), anti-magnetic, and rust-resistant properties. Its special properties make it the most popular material used today. If the tweezer is made of this steel, it will be labeled with the suffix ”SA.” (Example: ”3-SA.”)

SMD HANDLING TWEEZERS

If SMDs are manipulated by hand, solderable surfaces can be contaminated and lead to faulty joints. Tweezers can alleviate this problem as well as make handling SMDs easier.

In many situations, tweezers are superior to other handling devices such as vacuum pick-ups. For example, in desoldering, tweezers give a firmer grip – especially when dealing with wave soldered components glued to a board. In positioning individual components, tweezers can give the operator better control of location and pressure.

Along with perfect tip alignment and gripping surfaces that fit the shape and size of the component, it is important that the tweezers’ paddles or tips have smooth edges and be highly polished and totally free of burrs or marks. If not, then damage to the components or the board itself could result.

The tips should also be at an oblique angle in order to allow the operator the greatest visibility, which is especially important when working with fine pitch components.

The tweezers should have sufficient opening so that manual opening of the handles is not needed. (Reverse action tweezers excepted.)

DESIGN

ERGONOMICS

Professionals used to be satisfied with very durable steel tools. This emphasis on durability meant that almost all attention was focused on the composition of steel, the life of cutting edges, joints, etc. Thus, for many years, the design of high quality tools for professional use in industry has been technology driven, rather than operator oriented.

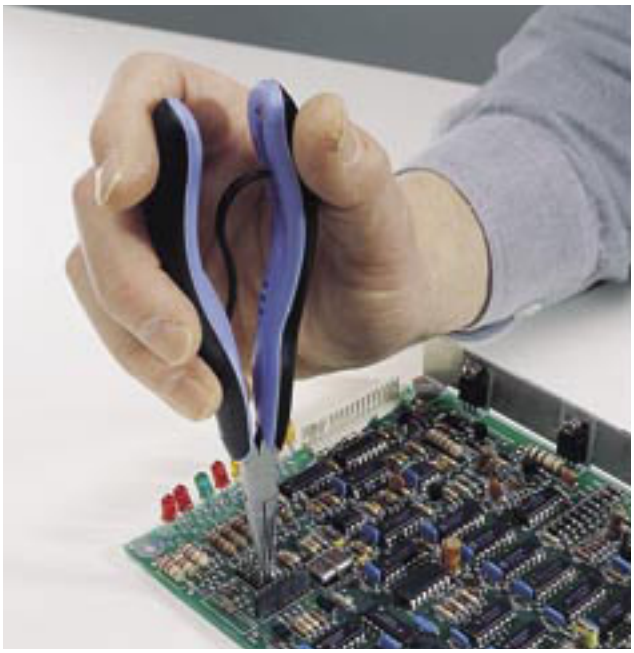
Today, users are more demanding in terms of function and comfort. As a matter of fact, a growing number of professional users now demand tools that meet the highest standards of performance and simultaneously reduce the risk of injury in the short and long term.

Design

This demand is primarily due to two factors: First, the increased concern with safety at the workplace, particularly with regard to the frequent involvement of both repetitive motions and high force in many industrial tasks, often in combination with poor hand/arm posture caused by the inappropriate design of some traditional handtools. The costs for the use of inappropriate handtools, unsuitable work stations, and job routines will, of course, be shared among the individual operators, the company, and society in the form of direct medical expenses, work lost, reduced quality, training of workers, disruption of work, increased insurance and administrative costs.

Second, this demand reflects the recognition of the importance of quality as well as output volume in many industrial tasks, and the need for tools which enhance not only user capabilities but which also offer the ability to give consistent, high performance results – day in and day out.

By introducing ergonomists and industrial designers into the design process, additional focus is being placed upon industry and operator demands. Thus, the dynamics of tool use, operator preference and the size and shape of the handtool are now all design priorities.



Lindstrom Rx7890 plier exemplifies state - of - the - art handtool design, function and performance. For more on Rx7890 see page 46.

Design

DESIGN PRIORITIES

A good handtool should **reduce the risk of direct injury**. It should:

- *not have any sharp edges on the handle.*
- *minimize wear and tear on the skin.*
- *reduce the risk of users' hands getting caught in tight spots.*
- *reduce the risk of users' hands coming into contact with sharp edges.*
- *be slip-resistant.*

A good handtool should **reduce the risk of long-term injury.** It should:

- *have the optimal weight for its purpose.*
- *have a grip that protects the user from hot and cold temperatures.*
- *minimize the build-up of muscular tension during lengthy jobs.*
- *have a large gripping surface that exerts low, even pressure across the hand.*
- *deliver the greatest possible power with the least possible effort.*
- *be perfectly balanced.*

A good handtool should **make the user's job easier.** It should:

- *be the correct size and design for its purpose.*
- *be able to be used in different positions.*
- *be adjustable in many different positions.*
- *be adjustable – even when wearing gloves.*
- *be designed for use with either hand.*
- *be easy to hold, with the right degree of friction against the skin.*
- *be available in different sizes, suitable for different tasks.*
- *tolerate lubricants and solvents.*

GOOD HANDTOOLS ARE NO ACCIDENT

As a consequence of the demands on modern handtools, good handtools are not developed by accident and are not created in isolation. They have to be developed in collaboration with working professionals, together with specialists in ergonomics and industrial design. Our handtools are good because we take the time to ponder and review the results of this collaboration. They are good because we do not rush. We create better tools by taking one step at a time.

The result? Quite simply, better handtools.
We guarantee it. Tools that are:

- **Easier to use.**
- **More comfortable to hold.**
- **Significantly more functional.**
- **Deliver more power.**
- **Give the user a better sense of control.**
- **Enable greater precision.**

Take a look at the Lindstrom Rx cutters and pliers on page 42 and screwdrivers on page 90, for examples of our commitment to meeting your requirements.

Rx Cutters and Pliers

Rx

LINDSTROM Rx
THE ULTIMATE IN PERFORMANCE, PRECISION AND COMFORT

To be the leader in a competitive field takes dedication, hard work, and practice, which is exactly what Lindstrom has been doing since 1856 – perfecting the best handtools money can buy. For nearly 150 years, we have designed and refined the world's leading cutters and pliers. And in that time, we have learned what works, and what doesn't. But to fully comprehend what makes the Rx the very best, one should take a close look at the Rx and then compare all else on the market to it. The Rx will always come out on top.

Micro-Touch™ is the shape that makes it possible to control and rotate the Rx between thumb and index finger for precision work.

Take a Closer Look at the Rx

THE Rx PROFILE

The profile of the Rx grip is slightly rounded and wide, creating excellent surface distribution and contact.

ESD-PROTECTION

The ESD-safe composition of our Rx grips combines resins with conductive additives to produce a material that safely dissipates electrostatic charges, reducing possibility of damage to sensitive components.

WARNING: Rx grips are not insulated and therefore Rx cutters/pliers should never be used on electrified equipment.

Rx Cutters and Pliers

BioSpring®

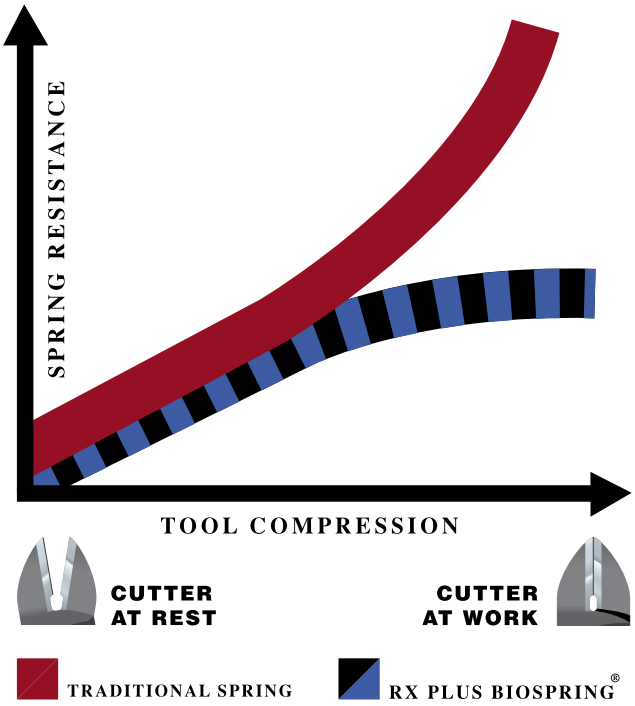
Since it is the traditional nature of a return spring to provide greater resistance the more it is compressed, this has been a challenge for ergonomists whose goal is to make work easier and safer.

The solution lies in Lindstrom´s new, patent applied for, BioSpring®, a solution that is as simple as it is ingenious – where the material and design work together to provide new characteristics.

Rx plus BioSpring®

- *Tension is kept minimal and limited throughout the working cycle of the tool.*
- *Handle width is controlled for ease of tool pick-up and handling.*
- *Tension and opening width can be adjusted to suit your preference via three different ports.*
- *Almost indestructible in normal use.*

Rx plus BioSpring® compared with traditional springs



This graph clearly shows the benefit of reduced spring tension offered by the BioSpring® when compared to hand tools that utilize traditional springs.

To adjust Rx

1. Pull the tool apart.

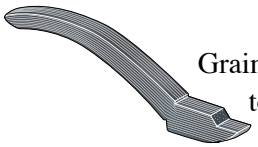
2. Place the spring in the desired port.

3. Close the tool.

Rx Cutters and Pliers

1% CARBON/CHROME BALL BEARING GRADE STEEL

Material usually reserved for high stress applications provides incredible impact resistance and resiliency with smoother, cleaner penetration at the cutting edge.



FORGED COMPONENTS

Grain structure follows profile of the blank to maximize tool strength.

CNC GRINDING OF FORGED BLANKS

Computer controlled grinding guarantees edge angle accuracy and contact which increases tool reliability and consistency.

63-65 HRC ON CUTTING EDGES

Precision induction hardening of 1% Carbon/Chrome Ball Bearing Grade Steel allows high Rockwell hardness without brittleness, resulting in a longer lasting tool.

MICRO-BEVEL®

Micro-Bevel cutters leave a minimal rise on cut leads resulting in a smaller overall surface soldering area.

FLUSH

Lindstrom flush cutters leave an even narrower and shorter rise on cut leads then the Micro-Bevel in order to meet a tighter specification for the cut lead-end or to achieve a more flush result to a board, component or part.

ULTRA-FLUSH®

The unique Ultra-Flush cutters leave a flat surface on cut leads, which is considered to be the ultimate in conformance to tough soldering and mechanical shock specifications.

PRECISION SCREW JOINT

Adjustable screw joint minimizes friction and maximizes alignment of cutting edges.

LEAD-CATCHERS

Lindstrom's patented lead-catcher is an accessory that stops just-cut ends of wire from falling into critical or sensitive areas, which could result in a short circuit or contamination. Almost all Rx cutters can be factory equipped with a leadcatcher. Just add "S" to the tool part number. Ex. Rx 8140-S.

80-Series Cutters

80-SERIES

LINDSTROM 80-SERIES
TRIED AND TRUE PERFORMANCE
FOR THE TRADITIONAL USER

Surpassed only by our own Lindstrom Rx range, the Lindstrom 80-Series remains the top choice for the traditional user. This range of cutters offers unsurpassed cutting capacity covering a wide range of wire dimensions and types. The reasons are:

1% CARBON/CHROME BALL BEARING GRADE STEEL

Material usually reserved for high stress applications provides incredible impact resistance and resiliency with smoother, cleaner penetration at the cutting edge.

FORGED COMPONENTS

Grain structure follows profile of the blank to maximize tool strength.

CNC GRINDING OF FORGED BLANKS

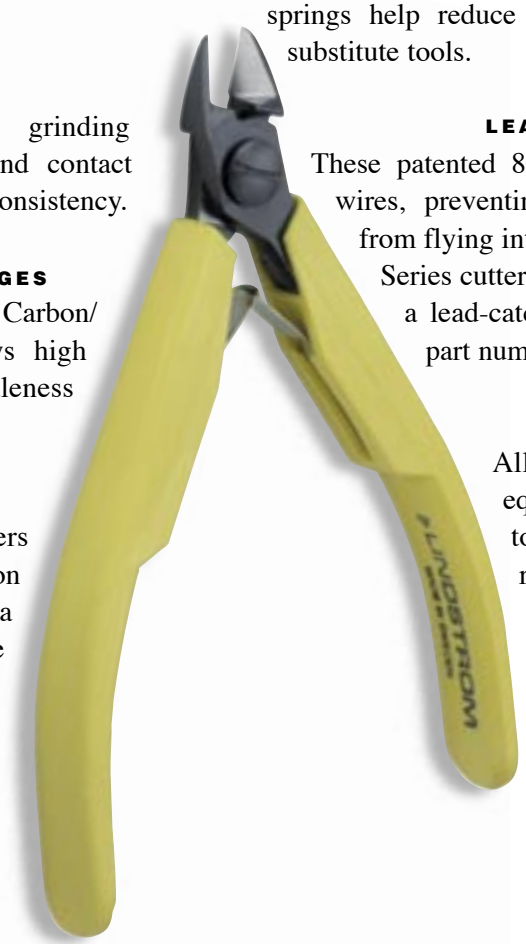
Computer controlled machine grinding guarantees edge angle accuracy and contact which increases tool reliability and consistency.

63-65 HRC ON CUTTING EDGES

Precision induction hardening of 1% Carbon/ Chrome Ball Bearing Steel allows high Rockwell hardness without brittleness resulting in a longer lasting tool.

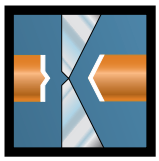
MICRO-BEVEL®

Micro-Bevel cutters leave a minimal rise on cut leads resulting in a smaller overall surface soldering area.



FLUSH

Lindstrom flush cutters leave an even narrower and shorter rise on cut leads then the Micro-Bevel in order to meet a tighter specification for the cut lead-end or to achieve a more flush result to a board, component or part.



ULTRA-FLUSH®

The unique Ultra-Flush cutters leave a flat surface on cut leads, which is considered to be the ultimate in conformance to tough soldering and mechanical shock specifications.

PRECISION SCREW JOINT

Adjustable screw joint minimizes friction and maximizes alignment of cutting edges.

REPLACEABLE SPRINGS

Due to the long life of 80-Series tools, replaceable springs help reduce down time and stocking of substitute tools.

LEAD-CATCHERS

These patented 80-Series accessories hold cut wires, preventing injury and keeping leads from flying into the assembly. Almost all 80-Series cutters can be factory equipped with a lead-catcher. Just add "S" to the tool part number. Ex. 8140-S.

ESD PROTECTION

All 80-Series cutters can be equipped with DS or CO handles to meet specialized ESD requirements.

WARNING: 80-Series grips are not insulated and therefore 80-Series cutters should never be used on electrified equipment.

Supreme Cutters and Pliers

SUPREME

LINDSTROM SUPREME
GOOD PERFORMANCE FOR THE TRADITIONAL USER

Good performing cutters and pliers for general electronics work, repair and fine mechanical work.

Most of the cutters and pliers in the Supreme series have a specially made box joint with extra long contact surfaces, made possible by a special manufacturing technique. Undesirable joint movement is held to a minimum, ensuring extremely precise alignment of the jaws, even at the extreme tip.

Multi-Purpose Shear

LINDSTROM MULTI-PURPOSE SHEAR

UNIQUE PERFORMANCE IN DEMANDING TELECOM AND ELECTRONICS APPLICATIONS

As the number of special telecom applications grows, there is an increasing need for cutters that can handle demanding insulation materials such as the Kevlar elements used in fiber optic and other types of cables.

The HS6000 shear is designed to meet these needs with ease. With a durable, precision screw joint and high carbon 57-59 HRc steel blades serrated on one edge, it cuts easily and precisely without letting the material being cut slide away.

Designed to combine ease of use with durability and precision, the HS6000 fits comfortably in either hand while its cushioned ESD-safe non-slip grips provide a secure grasp. Ideal for cutting insulation, cables, ties and all types of corded materials, the HS6000 is a true multi-purpose shear.

ESD-safe.

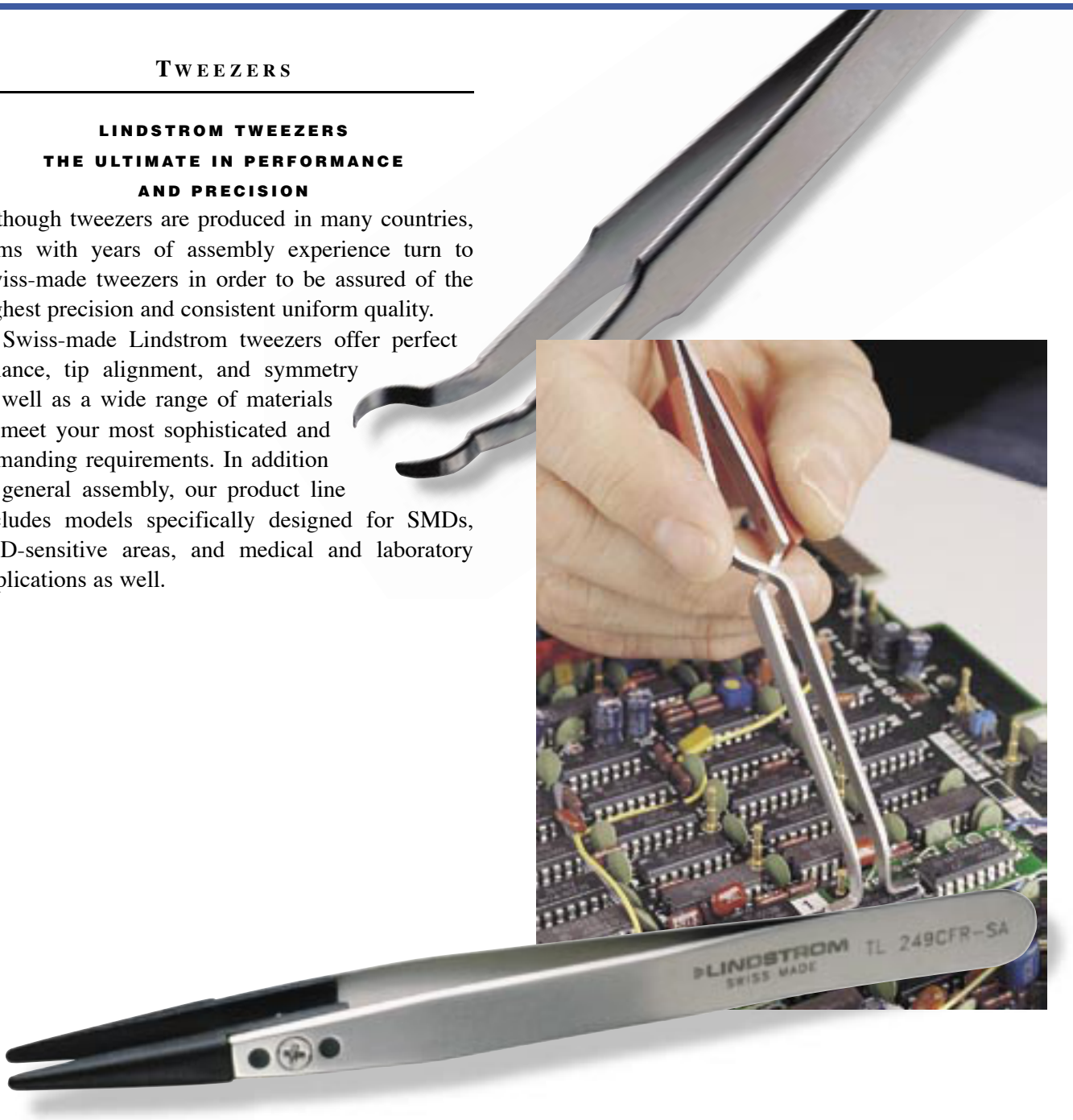
Tweezers

TWEEZERS

LINDSTROM TWEEZERS
THE ULTIMATE IN PERFORMANCE AND PRECISION

Although tweezers are produced in many countries, firms with years of assembly experience turn to Swiss-made tweezers in order to be assured of the highest precision and consistent uniform quality.

Swiss-made Lindstrom tweezers offer perfect balance, tip alignment, and symmetry as well as a wide range of materials to meet your most sophisticated and demanding requirements. In addition to general assembly, our product line includes models specifically designed for SMDs, ESD-sensitive areas, and medical and laboratory applications as well.



Torque Screwdrivers

TORQUE SCREWDRIVERS

HIGH PRECISION TORQUE CONTROL MADE EASY

With a unique, high-precision cam-over torque-limiting design, Lindstrom's new generation of Torque Screwdrivers virtually eliminate over-application of force, thereby reducing the risk for damage and rework costs. Available in Micro-Adjustable or Preset Torque versions, Lindstrom's Adjustable Torque Screwdrivers offer unmatched user comfort, thanks to a user-friendly shape and non-slip grip. Built to last and with a non-magnetic bit holder that accepts any standard drive, the ideal choice for flexible applications as well as volume production. All models are ESD-safe.

MICRO-ADJUSTABLE TORQUE SCREWDRIVERS

The Micro-Adjustable Torque Screwdriver allows instant change to the torque value with an easy-to-read window scale and a precise pull-to-set, push-to-lock mechanism. Adjustment is easy. Just pull the knob, turn it to the desired torque, push in the knob and it is ready to use!

The Micro-Adjustable Screwdriver series includes three models ranging from 10 to 450 Ncm or 20 in.oz. to 40 in.lbs. Accuracy +/- 6%.

PRESET TORQUE SCREWDRIVERS

Sharing the ruggedness, comfort and precision of the Micro-Adjustable version, the Preset Torque Screwdriver is an excellent choice for volume manufacturing applications. The desired torque value is easily set using an internal adjustment screw accessible by removing the end cap of the handle. The Preset Torque Driver is available in four models, covering a torque range of 4 to 450 Ncm or 6 in.oz. to 40 in.lbs. Accuracy +/- 6%.

All models are ESD-safe.
Certified to the following industry specifications:
ASME B107.14 M-1994 and ISO 6789, EN 26789/1994.

Screwdrivers

ESD SCREWDRIVERS

Electrostatic Discharge (ESD) can affect or ruin electronic equipment or components such as semi-conductors, memories and processors.

For secure use in electronics assembly Lindstrom precision screwdrivers with 2-component ESD safe handles should be used. The EDS-safe composition of the grips combines resins with conductive additives to produce a material that safely dissipates electrostatic charges, reducing possibility of damage to sensitive components.

Four sets of ESD Screwdrivers are available comprising differing combinations of the Slotted, Phillips, Pozidriv and Torx type tips. The tops are movable in different colours depending on the tip selection. As the grips are not insulated these screwdrivers should never be used on electrified equipment.

ESD-PROTECTION

The ESD-safe composition of our screwdriver handles combines resins with conductive additives to produce a material that safely dissipates electrostatic charges, reducing possibility of damage to sensitive components.

WARNING: The screwdriver handles are not insulated and therefore the screwdrivers should never be used on electrified equipment.

ERGO® SCREWDRIVERS

THE ULTIMATE IN PERFORMANCE, PRECISION AND COMFORT

Exhaustive studies and tests, both practical and in the laboratory, lie behind the handle design of Ergo® screwdrivers. These studies showed how a screwdriver is really used and how the handle should be designed to obtain a comfortable and effective grip in all conceivable situations.

These tests resulted in a handle that has different diametrics for different functions. The large part of the handle allows high torque to be applied. The small part of the handle can be used with a sensitive touch for speedy tightening or loosening of screws. The fingers can work on the comparatively large diameter of the neck, which means that it is possible to tighten the screw longer with only the fingertips before resistance increases, when the grip is transferred to the upper part of the handle.

The cross-section, material and surface texture of the handle are also the result of extensive research and testing. Besides being comfortable to use in different work situations, the round and efficiently patterned shape permits high torque to be applied. The handle always fits comfortably in the hand – no sharp edges as on a square handle, for example, which may cut painfully into the hand.

The International Standard as determined by ISO stipulates minimum torque requirements for screwdrivers. The strength of Ergo® screwdrivers exceeds the requirements of the ISO standard by a good margin, in some cases by more than 60%.

The blade is made of specially hardened steel and corrosion protected by plating. The tip is of Pro-point design, which means that it is phosphated for maximum dimensional accuracy and no peeling. Larger screwdrivers are equipped with a practical hexagonal drive on the blade, so that a wrench can be used whenever a greater torque is needed.

The shape and strength of the screwdriver tips conform to the requirements of national and international standards in accordance with ISO 2380.

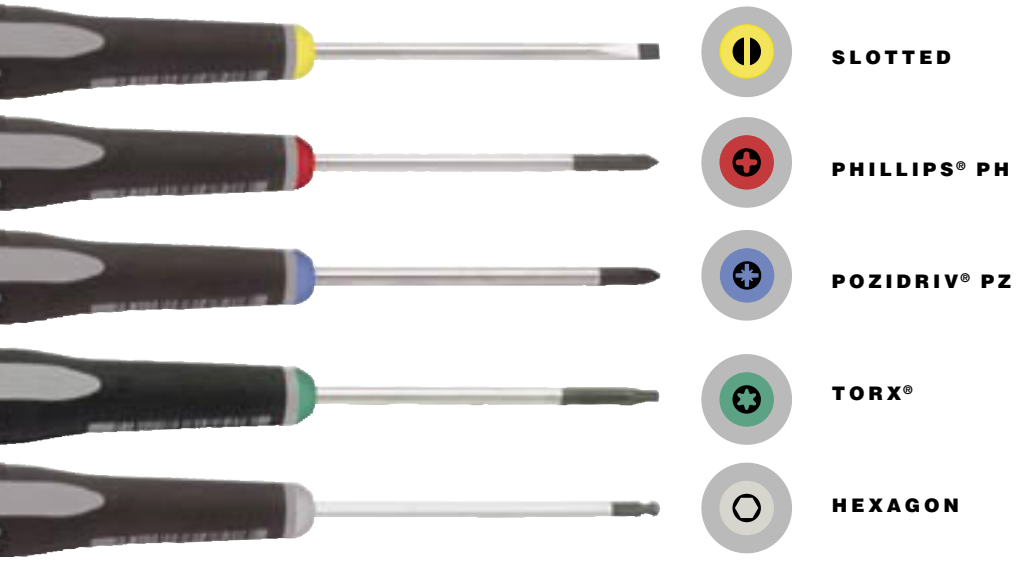
Screwdrivers

TAKE A CLOSER LOOK AT ERGO® SCREWDRIVERS

- *Three-component handle. Combines strong core with good grip.*
- *Easy to choose the right tip with color-coded handle and symbol on the end. Color and symbol don't wear out.*
- *Large, rounded end lets you apply force without hurting the palm of your hand.*
- *Can be hung on a peg or secured by string.*
- *Only rounded contours. No pressure points, no matter how you hold or use the screwdriver.*
- *Soft, high-friction material with ridged surface for comfortable grip and maximum friction even when the hand is oily.*
- *Flat face so the screwdriver won't roll.*
- *Optimal length on the handle neck. Fingers are always correctly positioned for quick turning and precision control.*
- *Cylindrical shaft with small diameter to tighten and loosen screws quickly and easily.*
- *Hexagonal nut on certain models so you can use a wrench if you need to apply extra torque.*

Ergo® screwdrivers:

- *Easier to use.*
- *More comfortable to hold.*
- *Significantly more functional.*



Special Engineered Tools

SPECIAL ENGINEERED TOOLS

There is always a need for tools to fulfill certain special requirements that cannot be met by regular production tools. Our Special Engineered Tools are designed for those applications.

The tools pictured here are only a small sampling of the many different designs we have manufactured as solutions to difficult assembly or rework requirements.

The Lindstrom staff can design special application tools by working from ”before” and ”after” components, engineering drawings, or prototypes. We even build tools drawn on the back of a napkin. It’s that easy!

We can modify tweezers to move tiny wafers without scratching the surface, or build extra-long-nosed pliers for extracting proprietary equipment. We can make one prototype or several hundred.

Our designers have created over 1000 custom tools that were manufactured to perform a wide variety of actions on leads and components. Lindstrom has built specially engineered tools to:

- *Cut and form.*
- *Insert and extract.*
- *Standoff cut.*
- *Straighten.*
- *Cut and swedge.*
- *Hold threaded shafts.*
- *Service custom automated machines.*

(AVAILABLE IN NORTH AMERICA ONLY.)

How To Choose

HOW TO CHOOSE?

Deciding which cutter to use among the very large assortment offered in this catalog can be challenging, to say the least. In addition, there can be several good options to choose from for a given application. We are often asked, ”Why do you offer such a large range of handtools, and specifically, so many cutters?” There are two primary reasons for having such a large assortment.

First, the applications served by these tools are almost infinite. From a pure application point of view, more specialized tools are often required to achieve the most cost effective and technically sound result. In addition, requirements in terms of size and composition of materials to be cut or bent and the end result required can change very rapidly in the fast-moving assembly industry. So maintaining a wide assortment gives you assurance that you can find a good solution for future application requirements that you may not have at present.

Secondly, applications are only a part of the reason for such a wide assortment. The fact is that beyond certain basic safety and health guidelines in proper tool usage, operator preference in terms of positioning, visibility, reach, experience, etc., varies greatly from one operator to another, with very few clear ”right or wrong” aspects. So rather than trying to convince you to choose from a limited range which is easier for us to make, we would rather completely satisfy your requirements and preferences. And that means we have to offer many variations.

However, even with that understanding, choosing can still be a challenge! Here are some basic suggestions that can help you narrow your choice to a few very good options.

8130
XS / Extra Small

8140
S / Small

7893
S / Small

8150
M / Medium

8160
L / Large

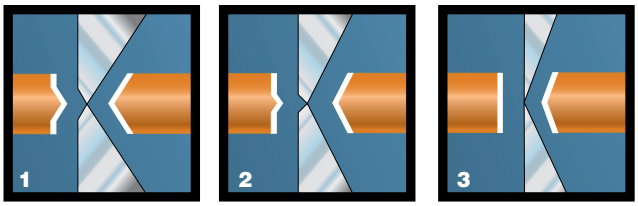
7890
M / Medium

All tools above shown actual size

How To Choose

WHAT KIND OF CUTTING RESULT DO YOU WANT?

1. If the cutting result is not critical, then go with the Micro-Bevel as this cutting edge bevel gives you the best capacity and life in most applications.
2. Use the Flush if Micro-Bevel is not suitable.
3. Use the Ultra-Flush only when required, as it requires the most care in use.



WHAT ARE THE TYPES AND DIAMETERS OF MATERIAL YOU WANT TO CUT?

All of our cutters are rated for copper wire. However, quite often you are not cutting simple copper wire.

But we rate them for copper as that is a standard that almost all can relate to. Some cutters are also rated for tougher material such as spring wire. Again, you are not likely to be cutting spring wire either.

However, almost everything else you are cutting will fall in toughness between copper and spring wire.

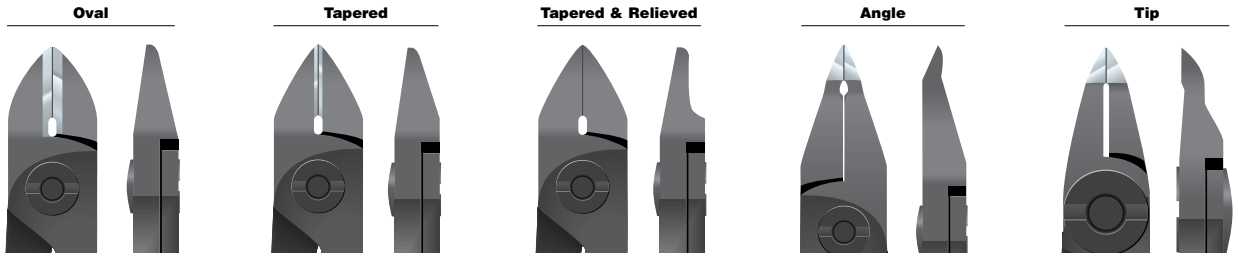
So here you have to use a bit of common sense. For instance: Is the material a little tougher than copper or a lot? This will further narrow the field by eliminating the cutters not likely suitable for the application.

IS ACCESS (SPACE AVAILABILITY) TO THE APPLICATION AN ISSUE?

If access is not a challenge, then lean towards an Oval head - in as large a size as possible - as this is the strongest type of head configuration. One basic fact of the assembly and repair environment is that a cutter on a workbench or in the field will at one time or another be used on something either larger or harder than the original intended application. This is when having chosen a Lindstrom, which is ”over-engineered” and conservatively rated to begin with and the strongest and largest configuration in the Lindstrom range that can be used for the application, makes sense. And saves you a lot of money - the tool will much more easily survive occasional misuse and continue to give good results.

If access is an issue, then try to use a smaller Oval head. If that puts you out of cutting range or is still too large at the tip, then move over to a Tapered head.

If a Tapered head still doesn’t fit the application, then go with the Tapered and Relieved head.



How To Choose

IS REACH OR ANGLE TO THE APPLICATION AN ISSUE?

Then consider an angle or tip cutter. However, keep in mind that the smallest configurations in this type should then be reserved for that application and used with considerable care.

DO YOU REQUIRE ESD PROTECTION ON YOUR HANDTOOLS?

If so, then select from the Rx range or order 80-Series or Supreme ranges with ESD-safe handles installed.

DO YOU REQUIRE LEAD-CATCHERS TO KEEP CUT LEADS FROM GOING INTO SENSITIVE AREAS?

If so, then simply add an ”S” suffix after the cutter part number to have a lead-catcher installed.

CONTACT US

If you still have questions about which tools are best suited for your application, we strongly encourage you to contact one of our factory trained salespeople. Our representatives can make informed recommendations or furnish tools for evaluation where they provide the best opportunity for you to observe their value – on the job. On our Website, www.lindstromtools.com, you will find our world-wide presence and can easily locate a Lindstrom professional ready to help you find the right tool for the job.

Capacity and Options

	PART NO.[1]	SIZE	SHAPE	CUT OR SURFACE	HANDLE OPTIONS Rx	CO	DS	HS	L / C	PAGE	CUTTING CAPACITY COPPER WIRE
											GAUGE 38 24 18 15 12
											INCH .004 .02 .039 .059 .079
											MM 0.1 0.5 1.0 1.5 2.0
CUTTERS	8130	XS	O	MB	■	■	■	■	✓	40, 48	
	8131	XS	O	F	■	■	■	■	✓	40, 48	
	8132	XS	O	UF	■	■	■	■	✓	40, 48	
	8140	S	O	MB	■	■	■	■	✓	40, 48	
	8141	S	O	F	■	■	■	■	✓	40, 48	
	8142	S	O	UF	■	■	■	■	✓	40, 48	
	8143	S	T	MB	■	■	■	■	✓	41, 49	
	8144	S	T	F	■	■	■	■	✓	41, 49	
	8145	S	T	UF	■	■	■	■	✓	41, 49	
	8146	S	T&R	MB	■	■	■	■	✓	41, 49	
	8147	S	T&R	F	■	■	■	■	✓	41, 49	
	8148	S	T&R	UF	■	■	■	■	✓	41, 49	
	8149	S	TP	F	■	■	■	■		42, 50	
	8150	M	O	MB	■	■	■	■	✓	40, 48	3
	8150 J[2]	M	O	MB	■	■	■	■	✓	48	3
	8151	M	O	F	■	■	■	■	✓	40, 48	
	8152	M	O	UF	■	■	■	■	✓	40, 48	
	8153	M	T	MB		■	■	■	✓	41, 49	
	8154	M	T	F		■	■	■	✓	41, 49	
	8155	M	T	UF		■	■	■	✓	41, 49	
	8156	M	T&R	MB		■	■	■	✓	49	
	8157	M	T&R	F		■	■	■	✓	49	
	8158	M	T&R	UF		■	■	■	✓	49	
	8160	L	O	MB	■	■	■	■	✓	40, 48	
	8160 J[2]	L	O	MB		■	■	■		48	
	8161	L	O	F	■	■	■	■	✓	40, 48	
	8162	L	O	UF	■	■	■	■	✓	40, 48	
	8163	L	T	MB		■	■	■	✓	49	
	8164	L	T	F		■	■	■	✓	49	
	8165	L	T	UF		■	■	■	✓	49	
	8211	S	A 20°	F	■	■	■	■		43	
	8233	XS	T 10°	UF	■	■	■	■		42	
	8234	XS	T 10°	UF	■	■	■	■		43	
	8237	XS	A 50°	UF	■	■	■	■		44	
	8247	S	A 45°	F	■	■	■	■	✓	44	
	8248	S	A 45°	F	■	■	■	■		45, 51	
	7190	S	T	MB		■	■	■		52	
	7191	S	T	F		■	■	■		52	
	7280	S	A	F		■	■	■		53	
	7285	S	A	F		■	■	■		53	
	7290	S	A	MB		■	■	■		54	
	7291	S	A	F		■	■	■		54	
	7292	S	ED	F		■	■	■		55	
	7293	S	A	F		■	■	■		54	
PLIERS	7490	S		SM	■	■	■	■		45, 55	
	7590	S		SM	■	■	■	■		46, 56	
	7890	M		SM	■	■	■	■		46, 56	
	7891	M		SE	■	■	■	■		46, 56	
	7892	M		SM	■	■	■	■		47, 57	
	7893	S		SM	■	■	■	■		47, 57	

1
All part numbers as listed come standard with molded plastic handles and springs.

2
Type "J" edges for stripping and cutting insulated copper wire.

Capacity and Options

SIZE	
XS	Extra Small
S	Small
M	Medium
L	Large

SHAPE	
O	Oval
T	Tapered
T&R	Tapered & Relieved
A	Angle
TP	Tip
ED	End

CUT OR SURFACE	
MB	Micro-Bevel
F	Flush
UF	Ultra-Flush
SM	Smooth
SE	Serrated

HANDLE OPTIONS

RX The ultimate in ergonomic and ESD safe handles.

CO Standard handle shape in conductive material.

DS Standard handle in dissipative material.

HS Traditional ergonomic handle shape in dissipative material. (U.S. only)

To order handle options, add two letter prefix to part no. = Rx8130.

LEAD CATCHER

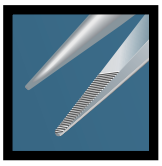
L/C Lead-Catcher available, add "S" suffix to part no. = 8130-S.

MB / Micro-Bevel®

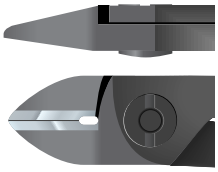
F / Flush

UF / Ultra-Flush®

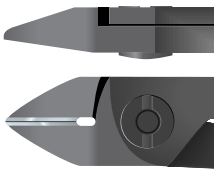
SM / Smoth-Tip



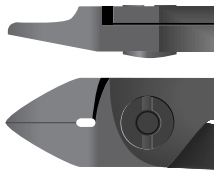
SE / Serrated-Tip



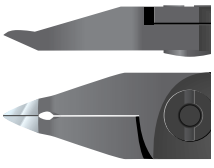
O / Oval



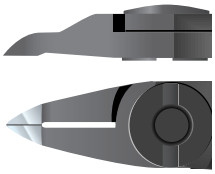
T / Tapered



T&R / Tapered & Relieved



A / Angle



TP / Tip

ACTUAL SIZE

8130
XS / Extra Small

8140
S / Small

8150
M / Medium

8160
L / Large

7893
S / Small

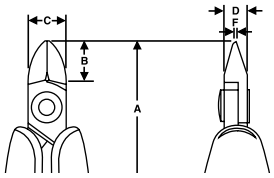
7890
M / Medium

Rx Cutters and Pliers

MICRO-BEVEL FLUSH ULTRA-FLUSH

OVAL

Rx8130-8162



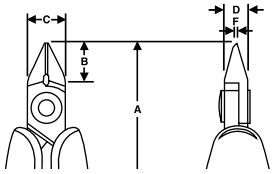
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
Rx8130	0103003	133.5 5.25	8.5 0.33	8.0 0.31	5.0 0.20	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	68	1
Rx8131	0103010	133.5 5.25	8.5 0.33	8.0 0.31	5.0 0.20	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	68	1
Rx8132	0103027	133.5 5.25	8.5 0.33	8.0 0.31	5.0 0.20	0.8 0.03	0.1 - 0.8 0.01 - 0.03	Ultra	68	1
Rx8140	0103034	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	70	1
Rx8141	0103041	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	70	1
Rx8142	0103058	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.0 0.01 - 0.04	Ultra	70	1
Rx8150	0103133	138.0 5.43	13.0 0.51	12.5 0.49	6.0 0.24	1.2 0.05	0.3 - 1.6 0.01 - 0.06	Micro	73	1
Rx8151	0103140	138.0 5.43	13.0 0.51	12.5 0.49	6.0 0.24	1.2 0.05	0.2 - 1.6 0.01 - 0.06	Flush	73	1
Rx8152	0103157	138.0 5.43	13.0 0.51	12.5 0.49	6.0 0.24	1.2 0.05	0.2 - 1.25 0.01 - 0.05	Ultra	73	1
Rx8160	0111534	147.0 5.8	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	97	1
Rx8161	0111541	147.0 5.8	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	97	1
Rx8162	0111568	147.0 5.8	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	97	1

Rx Cutters and Pliers

TAPERED

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
Rx8143	0103065	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	68	1
Rx8144	0103072	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	68	1
Rx8145	0103089	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.0 0.01 - 0.04	Ultra	68	1

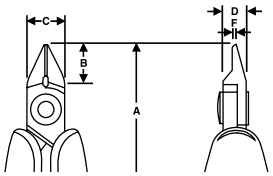
Rx8143-8145



TAPERED AND RELIEVED

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
Rx8146	0103096	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.2 - 1.0 0.01 - 0.04	Micro	68	1
Rx8147	0103102	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.0 0.01 - 0.04	Flush	68	1
Rx8148	0103119	135.5 5.33	10.5 0.41	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 0.8 0.01 - 0.03	Ultra	68	1

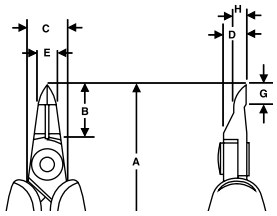
Rx8146-8148



Rx Cutters and Pliers

TIP

Rx8149

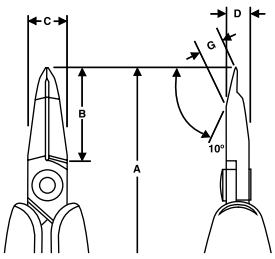


Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	G mm inch	H mm inch	Capacity mm inch	Bevel	g	
Rx8149	0103126	139.0 5.47	14.0 0.55	10.0 0.39	6.0 0.24	5.0 0.20	5.0 0.20	3.2 0.13	0.1 - 0.6 0.01 - 0.02	Flush	70	1

MICRO TIP

LONG HEAD, 10°

Rx8233



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8233	0113521	149.0 5.9	22.3 0.87	10.6 0.41	7.0 0.27	2.3 0.08	7.2 0.28	0.1 - 0.65 0.004 - 0.025	Ultra	69	1

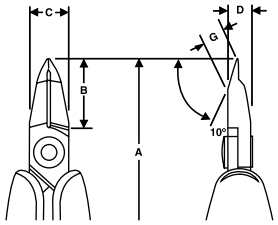
Rx Cutters and Pliers

MICRO TIP

SHORT HEAD, 10°

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8234	0113538	141.0 4.5	14.2 0.56	10.6 0.41	7.0 0.27	1.6 0.06	3.2 0.12	0.05 - 0.4 0.002 - 0.18	Ultra	62	1

Rx8234

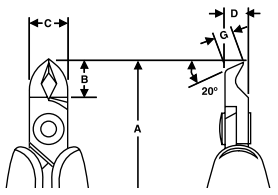


ANGLE

SHORT HEAD, 20°

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8211	0103188	134.5 5.29	9.5 0.37	10.0 0.39	6.0 0.24	4.1 0.16	0.2 - 1.2 0.01 - 0.05	Flush	70	1

Rx8211

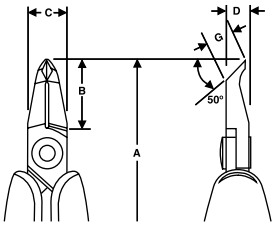


Rx Cutters and Pliers

MICRO TIP, ANGLE

LONG HEAD, RELIEVED 50°

Rx8237

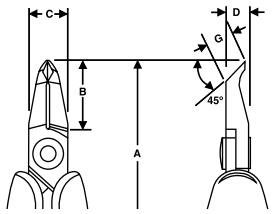


Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8237	0113545	144.0 5.6	17.4 0.69	10.6 0.41	7.0 0.27	1.6 0.06	4.1 0.16	0.1 - 0.65 0.004 - 0.025	Ultra	65	1

ANGLE

LONG HEAD, 45°

Rx8247



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8247	0103164	143.0 5.63	18.0 0.71	10.0 0.39	6.0 0.24	6.7 0.26	0.2 - 1.0 0.01 - 0.04	Flush	72	1

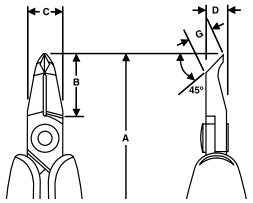
Rx Cutters and Pliers

ANGLE

LONG HEAD, RELIEVED 45°

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
Rx8248	0103171	143.0 5.63	18.0 0.71	10.0 0.39	6.0 0.24	6.7 0.26	0.2 - 0.8 0.01 - 0.03	Flush	72	1

Rx8248

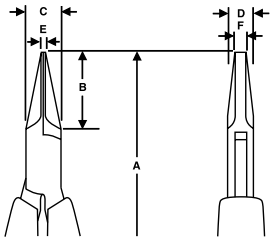


PLIERS

FLAT NOSE

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
Rx7490	0103195	146.5 5.77	20.0 0.79	9.0 0.35	6.7 0.26	1.2 0.05	3.2 0.12	Smooth	70	1

Rx7490

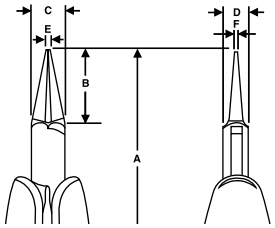


Rx Cutters and Pliers

PLIERS

ROUND NOSE

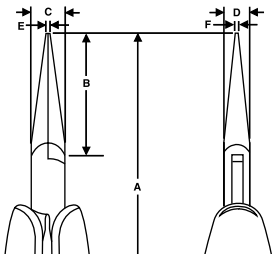
Rx7590



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
Rx7590	0103201	146.5 5.77	20.0 0.79	9.0 0.35	6.7 0.26	1.0 0.04	Ø 0.5 Ø 0.02	Very fine	69	1

SNIPE NOSE

Rx7890-7891



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
Rx7890	0103218	158.5 6.24	32.0 1.26	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Smooth	72	1
Rx7891	0103225	158.5 6.24	32.0 1.26	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Serrated	72	1

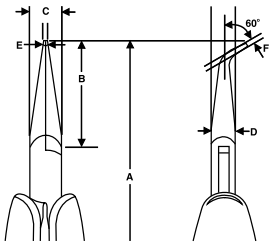
Rx Cutters and Pliers

PLIERS

SNIPE NOSE WITH BENT TIP

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
Rx7892	0103232	155.5 6.12	29.0 1.14	9.0 0.35	6.7 0.26	1.2 0.05	0.8 0.03	Smooth	73	1

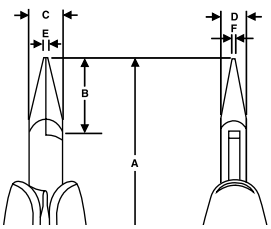
Rx7892



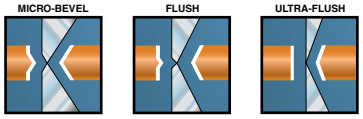
SHORT SNIPE NOSE

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
Rx7893	0103249	146.5 5.77	20.0 0.79	9.0 0.35	6.7 0.26	1.2 0.05	0.8 0.03	Smooth	71	1

Rx7893

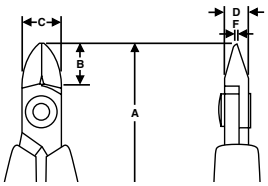


80-Series Cutters



OVAL

8130-8162



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
8130	0050918	108.0 4.25	8.0 0.31	8.0 0.31	5.0 0.20	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	43	1
8131	0050925	108.0 4.25	8.0 0.31	8.0 0.31	5.0 0.20	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	43	1
8132	0050932	108.0 4.25	8.0 0.31	8.0 0.31	5.0 0.20	0.8 0.03	0.1 - 0.8 0.01 - 0.03	Ultra	44	1
8140	0050949	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	46	1
8141	0050987	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	45	1
8142	0051007	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.0 0.01 - 0.04	Ultra	46	1
8150	0051113	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.3 - 1.6 0.01 - 0.06	Micro	50	1
8150J	0051137	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.3 - 1.6 0.01 - 0.06	Micro	49	1
8151	0051199	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.2 - 1.6 0.01 - 0.06	Flush	49	1
8152	0052097	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.2 - 1.25 0.01 - 0.05	Ultra	49	1
8160	0051229	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	88	1
8160J	0051250	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	87	1
8161	0051328	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	1
8162	0051335	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	88	1

Type "J" edges for stripping and cutting insulated copper wire.

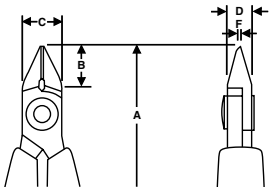
If an 80-series cutter is desired with ESD-safe sleeves, then add the suffix CO or DS to the product code (Example: 8162 CO)

80-Series Cutters

TAPERED

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
8143	0051021	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.2 - 1.25 0.01 - 0.05	Micro	46	1
8144	0051045	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.25 0.01 - 0.05	Flush	46	1
8145	0051052	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.03	0.1 - 1.0 0.01 - 0.04	Ultra	46	1
8153	0051205	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.3 - 1.6 0.01 - 0.06	Micro	49	1
8154	0052103	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.2 - 1.6 0.01 - 0.06	Flush	49	1
8155	0052110	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.2 0.05	0.2 - 1.25 0.01 - 0.05	Ultra	49	1
8163	0051342	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	88	1
8164	0052141	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	1
8165	0052158	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	88	1

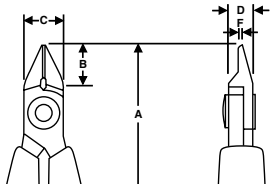
8143-8165



TAPERED AND RELIEVED

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
8146	0051076	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.8	0.2 - 1.0 0.01 - 0.04	Micro	46	1
8147	0051083	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.8	0.1 - 1.0 0.01 - 0.04	Flush	46	1
8148	0051090	110.0 4.33	10.0 0.39	10.0 0.39	6.0 0.24	0.8 0.8	0.1 - 0.8 0.01 - 0.03	Ultra	45	1
8156	0051212	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.0 1.0	0.3 - 1.25 0.01 - 0.05	Micro	49	1
8157	0052127	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.0 1.0	0.2 - 1.25 0.01 - 0.05	Flush	49	1
8158	0052134	112.5 4.43	12.5 0.50	12.5 0.50	6.0 0.24	1.0 1.0	0.2 - 1.0 0.01 - 0.04	Ultra	49	1

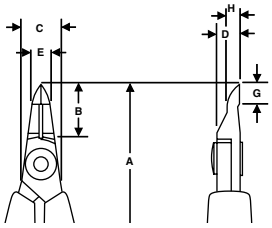
8146-8158



80-Series Cutters

TIP

8149

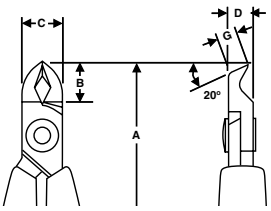


Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	G mm inch	H mm inch	Capacity mm inch	Bevel	g	
8149	0051106	114.0 4.49	14.0 0.55	5.0 0.23	6.0 0.24	5.0 0.23	5.0 0.23	3.2 0.13	0.1 - 0.6 0.01 - 0.02	Flush	48	1

ANGLE

SHORT HEAD, 20°

8211



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
8211	0101030	110.0 4.33	9.5 0.37	10.0 0.39	6.0 0.24	4.1 0.16	0.2 - 1.2 0.01 - 0.05	Flush	43	1

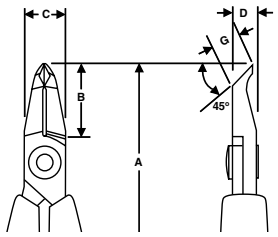
80-Series Cutters

ANGLE

LONG HEAD, 45°

8247

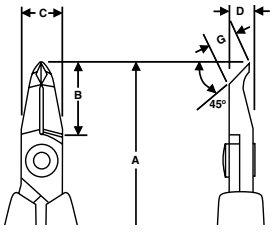
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
8247	0051397	117.5 4.63	18.0 0.71	10.0 0.39	6.0 0.24	6.7 0.26	0.2 - 1.0 0.01 - 0.04	Flush	51	1



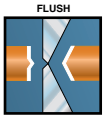
LONG HEAD, RELIEVED, 45°

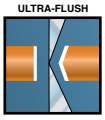
8248

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
8248	0051427	117.5 4.63	18.0 0.71	10.0 0.39	6.0 0.24	6.7 0.26	0.2 - 0.8 0.01 - 0.03	Flush	51	1



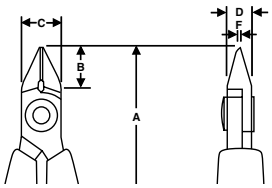
Supreme Cutters and Pliers





TAPERED

7190-7191



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	Capacity mm inch	Bevel	g	
7190	0052479	109.0 4.29	9.0 0.35	9.0 0.35	6.0 0.24	1.0 0.04	0.2 - 1.25 0.01 - 0.05	Micro	50	1
7191	0052509	109.0 4.29	9.0 0.35	9.0 0.35	6.0 0.24	1.0 0.04	0.1 - 1.25 0.01 - 0.05	Flush	50	1

If a Supreme cutter or pliers is desired with ESD-safe sleeves, then add the suffix CO or DS to the product code (Example: 7190 CO)

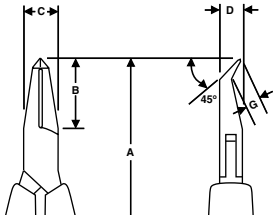
Supreme Cutters and Pliers

ANGLE

REVERSE

7280

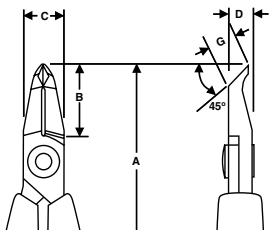
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
7280	0052523	118.0 4.64	18.0 0.71	9.0 0.35	6.0 0.24	3.5 0.14	0.2 - 0.8 0.01 - 0.03	Flush	54	10



MINIATURE

7285

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	G mm inch	Capacity mm inch	Bevel	g	
7285	0052530	120.0 4.72	20.0 0.79	9.0 0.35	6.0 0.24	6.7 0.26	0.2 - 1.0 0.01 - 0.04	Flush	56	1

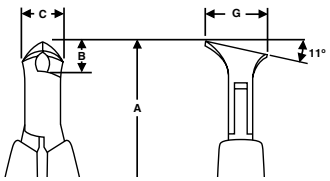


Supreme Cutters and Pliers

ANGLE

END

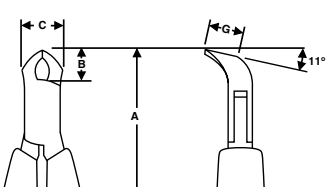
7290-7291



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	G mm inch	Capacity mm inch	Bevel	g	
7290	0052547	108.0 4.25	8.0 0.31	10.5 0.41	15.0 0.59	0.35 - 1.25 0.01 - 0.05	Micro	56	1
7291	0052554	108.0 4.25	8.0 0.31	10.5 0.41	15.0 0.59	0.35 - 1.25 0.01 - 0.05	Flush	56	1

END

7293



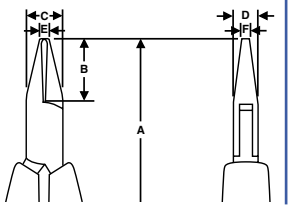
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	G mm inch	Capacity mm inch	Bevel	g	
7293	0052592	108.0 4.25	8.0 0.31	10.5 0.41	8.0 0.31	0.35 - 1.25 0.01 - 0.05	Flush	56	1

Supreme Cutters and Pliers

MINIATURE END

Product code	EAN-code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Capacity mm inch	Bevel	g	
7292	0052578	115.0 4.53	15.0 0.59	9.0 0.35	6.0 0.24	3.2 0.13	4.0 0.16	0.35 - 0.8 0.01 - 0.03	Flush	54	1

7292

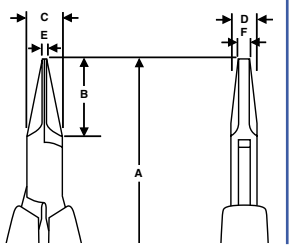


PLIERS

FLAT NOSE

Product code	EAN-code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
7490	0052646	120.0 4.72	20.0 0.79	9.0 0.35	6.0 0.24	1.2 0.05	3.2 0.13	Smooth	53	1

7490

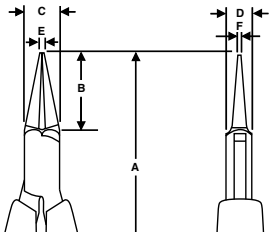


Supreme Cutters and Pliers

PLIERS

ROUND NOSE

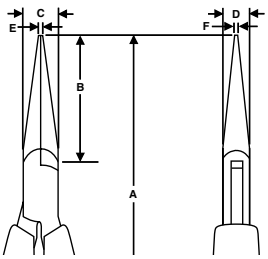
7590



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
7590	0052660	120.0 4.72	20.0 0.79	9.0 0.35	6.0 0.24	1.0 0.04	Ø 0.5 Ø 0.02	Very fine	54	1

SNIPE NOSE

7890-7891



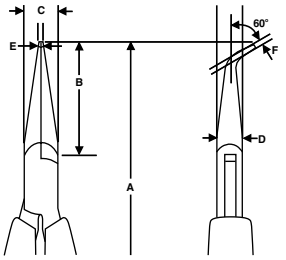
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
7890	0052691	132.0 5.20	32.0 1.26	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Smooth	60	1
7891	0052714	132.0 5.20	32.0 1.26	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Serrated	59	1

Supreme Cutters and Pliers

SNIPE NOSE WITH BENT TIP

7892

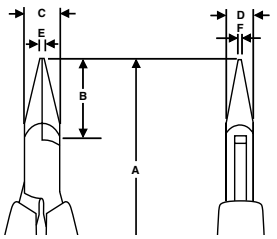
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
7892	0052738	129.0 5.08	29.0 1.14	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Smooth	59	1



SHORT SNIPE NOSE

7893

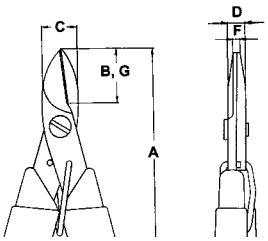
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	E mm inch	F mm inch	Jaw shape	g	
7893	0052769	120.0 4.72	20.0 0.79	9.0 0.35	6.0 0.24	1.2 0.05	0.8 0.03	Smooth	56	1



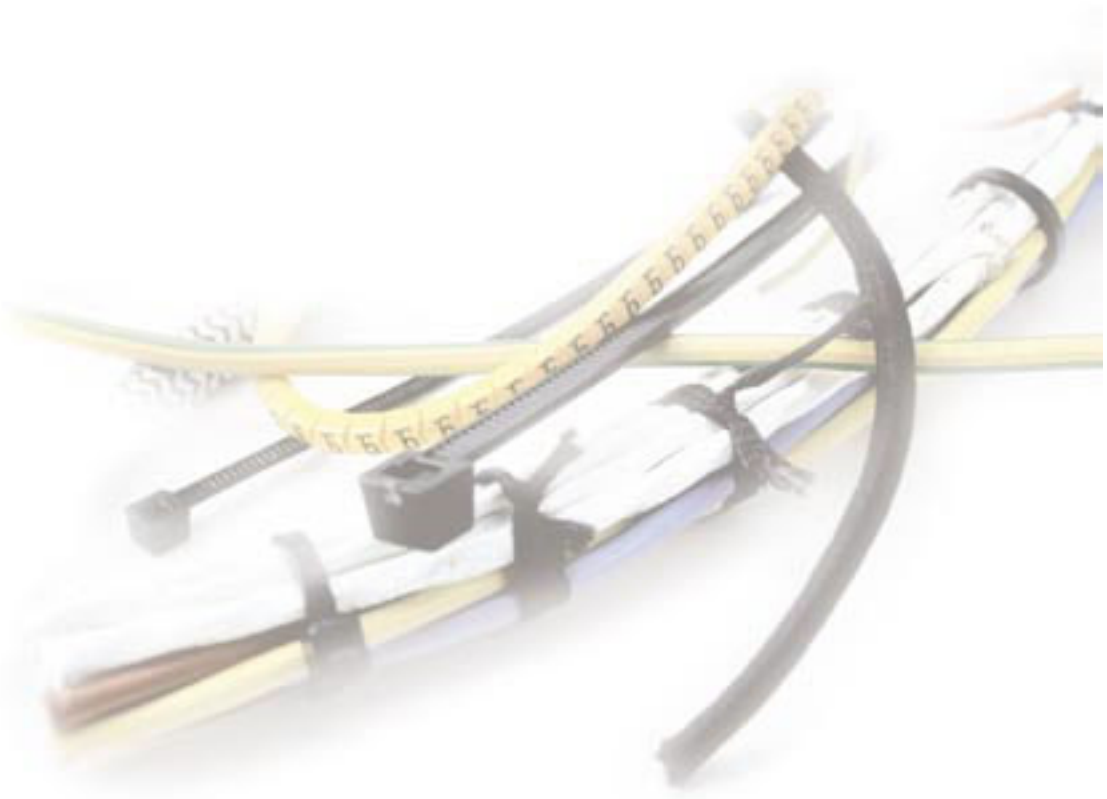
Kevlar Cutter

SHEAR ACTION CUTTERS

HS6000



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	G mm	g	
HS6000	0113521	145.0 5.7	29.0 1.1	12.7 0.5	6.4 0.2	2.2 0.07	29.0 1.1	88	1



Heavy-Duty Cutter

NEW

TRX 8180 HEAVY-DUTY CUTTER

The TRx 8180 heavy-duty cutter can cut solid copper wire and steel wire from 0,5 mm/0,02 inch up to 2,75 mm/0,11 inch utilizing the new ”progressive cut” bevelled edges.

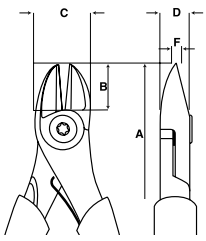
- *Non-slip handle with ”gills” produces a positive grip.*
- *New progressive cutting edges – suited for copper wire at the tip and hard steel wire near the jaws – for versatile operation.*
- *Tough design makes this cutter ideal for production, maintenance, repair and service applications.*
- *Micro-Bevel cutting edges hardened to 63-65 HRC for durable performance.*
- *High leverage joint to reduce cutting force.*
- *Easy on/off spring enables reduced profile for easy storage.*

HEAVY-DUTY CUTTER

NEW

TRx8180

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	g	
TRx 8180	0112272	210 8.26	22 0.87	29 1.14	11 0.43	1.5 0.06	265	1



ESD Safe Plastic Cutters

NEW

ESD SAFE PLASTIC CUTTERS

The P 6140 and P6160 are suitable to cut cable ties on wire harnessing and plastic components within electronics equipment, also ideal for cutting shielded cable, multi-core cable, plastic sprues and flashing within many injection molding applications.

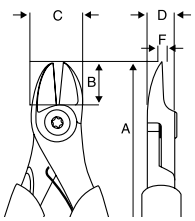
- *Tapered and Relieved cutting head for applications where access is limited.*
- *Extremely strong construction for long lasting performance.*
- *Ultra Flush cutting edges provide a smooth and clean cut.*
- *Ergonomic handles provide an on/off spring for use at operator's option.*
- *ESD safe handles.*

ESD SAFE PLASTIC CUTTERS

NEW

TAPERED AND RELIVED

P6140-P6160



Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	F mm inch	g	
P6140	0115068	140 5.51	16 0.63	19.5 0.77	9 0.35	1.3 0.051	126	1
P6160	0115075	160 6.3	18 0.7	21.5 0.85	10 0.39	1.5 0.059	162	1

Also available in sets

Tweezers

NEW

EASYTOUCH TWEEZERS

- *High quality, precision tweezers*
- *Static dissipative material provides reliable ESD protection*
- *Anti-acid, antimagnetic stainless steel for use in many electronics environments*
- *ESD safe packaging protects tweezers on workbench and in tool cases*

All tweezers are ESD-safe and pictured in original size (100%)

ESD SAFE EASYTOUCH TWEEZERS

Product code	EAN code 731415+	L mm	L inch	g	
TL 00-SA-ET	8279219	120	4.72	28	1

TL 00-SA-ET
Flat edge, strong tips.

TL 2A-SA-ET	8279226	120	4.72	21	1

TL 2A-SA-ET
Flat, round tips.

TL 3-SA-ET	8279356	120	4.72	19	1

TL 3-SA-ET
Very sharp tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

ESD SAFE EASYTOUCH TWEEZERS

All tweezers are ESD-safe and pictured in original size (100%)

Product code	EAN code 731415+	L mm	L inch	g	
TL 3C-SA-ET	8279240	110	4.33	18	1

TL 3C-SA-ET
Very sharp tips.

TL 5-SA-ET	8279257	110	4.33	18	1

TL 5-SA-ET
Extra fine tips.

TL 7-SA-ET	8279264	115	4.53	19	1

TL 7-SA-ET
Fine, curved tips.

TL 15 AGW-ET	8279233	115	4.53	32	1

TL 15 AGW-ET
Tapered cutting tips.

TL AA-SA-ET	8279271	130	5.12	23	1

TL AA-SA-ET
Strong, fine tips.

Also available in sets

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 00B-SA	0109555	120.0	4.72	21	1

TL 00B-SA
Strong tips and serrated grips.

TL 00D-SA	0109562	120.0	4.72	21	1

TL 00D-SA
Serrated tips and grips.

TL 00-SA	0109579	120.0	4.72	22	1

TL 00-SA
Flat edge, strong tips.

TL 00-SA-SL	0115228	120.0	4.72	22	5

Extra competitive price

TL 00-SA-SL
Flat edge, strong tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 0C9-SA	0109586	90.0	3.54	7	1

TL 0C9-SA
Flat egde, fine tips.

TL 0-SA	0109593	120.0	4.72	14	1

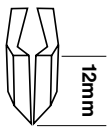
TL 0-SA
Flat egde, fine tips.

TL 10G-SA	0109609	110.0	4.33	13	1

TL 10G-SA
Serrated tips and grips.

TL 15A	0109616	115.0	4.53	27	1

TL 15A
Tapered cutting tips.



MATERIAL DESIGNATIONS

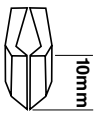
SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

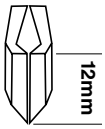
HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 15AGW	0109623	115.0	4.53	26	1



TL 15AGW
Tapered cutting tips.

TL 15AP	0109630	115.0	4.53	27	1



TL 15AP
Parallel cutting tips.

TL 1-SA	0109647	120.0	4.72	13	1

TL 1-SA
Strong, accurate tips.

TL 1-SA-SL	0115235	120.0	4.72	13	5

Extra competitive price

TL 1-SA-SL
Strong, accurate tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

HIGH PRECISION

All tweezers are ESD-safe and pictured in original size (100%)

Product code	EAN code 731415+	L mm	L inch	g	
TL 27-SA	0109654	135.0	5.31	15	1

TL 27-SA
Strong, fine tips.

TL 2AB-SA	0110094	120.0	4.72	15	1

TL 2AB-SA
Flat, curved, round tips.

TL 2A-SA	0110100	120.0	4.72	15	1

TL 2A-SA
Strong, sharp tips.

TL 2A-SA-SL	0115259	120.0	4.72	15	5

Extra competitive price

TL 2A-SA-SL
Flat, curved tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 2-SA	0110117	120.0	4.72	15	1

TL 2-SA
Strong, sharp tips.

TL 2-SA-SL	0115242	120.0	4.72	15	5

Extra competitive price

TL 2-SA-SL
Strong, sharp tips.

TL 3C-SA	0110148	110.0	4.33	12	1

TL 3C-SA
Very sharp tips.

TL 3C-SA-SL	0115273	110.0	4.33	12	5

Extra competitive price

TL 3C-SA-SL
Very sharp tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

HIGH PRECISION

All tweezers are ESD-safe and pictured in original size (100%)

Product code	EAN code 731415+	L mm	L inch	g	
TL 3C-TA	0110155	110.0	4.33	7	1

TL 3C-TA
Very sharp tips.

TL 3-SA	0110162	120.0	4.72	13	1

TL 3-SA
Very sharp tips.

TL 3-SA-SL	0115266	120.0	4.72	13	5

Extra competitive price

TL 3-SA-SL
Very sharp tips.

TL 3-TA	0110179	120.0	4.72	9	1

TL 3-TA
Very sharp tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 4-SA	0110186	110.0	4.33	13	1

TL 4-SA
Extra fine tips.

TL 4-SA-SL	0115280	110.0	4.33	13	5

Extra competitive price

TL 4-SA-SL
Extra fine tips.

TL 4A-SA	0110193	110.0	4.33	13	1

TL 4A-SA
Extra fine tips, strong tips.

TL 51S-SA	0110209	115.0	4.53	13	1

TL 51S-SA
Extra fine,
double bent tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

HIGH PRECISION

All tweezers are ESD-safe and pictured in original size (100%)

Product code	EAN code 731415+	L mm	L inch	g	
TL 5A-SA	0110216	115.0	4.53	13	1

TL 5A-SA
Extra fine tips.

TL 5A-SA-SL	0115303	115.0	4.53	13	5

Extra competitive price

TL 5A-SA-SL
Extra fine tips.

TL 5B-SA	0110223	110.0	4.33	13	1

TL 5B-SA
Fine, bent tips.

TL 5C-SA	0110230	115.0	4.53	13	1

TL 5C-SA
Fine, double bent tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 5-SA	0110247	110.0	4.33	12	1

TL 5-SA
Extra fine tips.

TL 5-SA-SL	0115297	110.0	4.33	12	5

Extra competitive price

TL 5-SA-SL
Extra fine tips.

TL 5-TA	0110254	110.0	4.33	7	1

TL 5-TA
Extra fine tips.

TL 6-SA	0110261	115.0	4.53	15	1

TL 6-SA
Fine, angled tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

HIGH PRECISION

All tweezers are ESD-safe and pictured in original size (100%)

Product code	EAN code 731415+	L mm	L inch	g	
TL 65A-SA	0110278	140.0	5.51	12	1

TL 65A-SA
Long, fine curved tips.

TL 7A-SA	0110285	115.0	4.53	14	1

TL 7A-SA
Strong, curved tips.

TL 7A-SA-SL	0115327	115.0	4.53	14	5

Extra competitive price

TL 7A-SA-SL
Strong, curved tips.

TL 7-SA	0110292	115.0	4.53	13	1

TL 7-SA
Fine, curved tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

HIGH PRECISION

Product code	EAN code 731415+	L mm	L inch	g	
TL 7-SA-SL	0115310	115.0	4.53	13	5

Extra competitive price

TL 7-SA-SL
Fine, curved tips.

TL AC-SA-SL	0115341	110.0	4.33	18	5

Extra competitive price

TL AC-SA-SL
Strong tips and serrated grips.

TL F-SA	0109883	120.0	4.72	15	1

TL F-SA
Flat, square-end tips.

VERY LONG AND FINE

Product code	EAN code 731415+	L mm	L inch	g	
TL SS-EP	0109913	140.0	5.51	13	1

TL SS-EP
Very long and fine.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

All tweezers are ESD-safe and pictured in original size (100%)

VERY LONG AND FINE

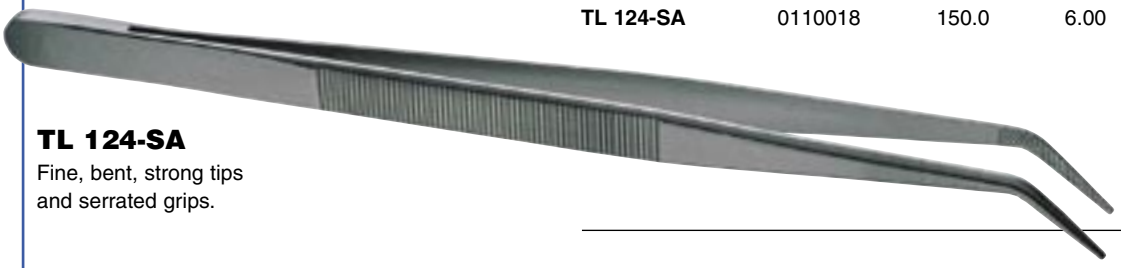
TL SS-SA
Very long and fine.

Product code	EAN code 731415+	L mm	L inch	g	
TL SS-SA	0109937	140.0	5.51	12	1

TL SS-SA-SL
Very long and fine.

Product code	EAN code 731415+	L mm	L inch	g	
TL SS-SA-SL	0115358	140.0	5.51	12	5

GENERAL PURPOSE



TL 124-SA
Fine, bent, strong tips and serrated grips.

Product code	EAN code 731415+	L mm	L inch	g	
TL 124-SA	0110018	150.0	6.00	20	1

TL 2AX-SA
REVERSE ACTION TWEEZER
Reverse action, style 2A.

Product code	EAN code 731415+	L mm	L inch	g	
TL 2AX-SA	0110025	120.0	4.72	15	1

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

Tweezers

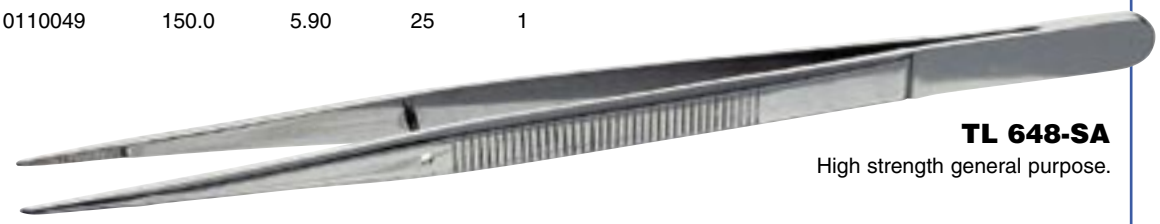
All tweezers are ESD-safe and pictured in original size (100%)

HIGH STRENGHT GENERAL PURPOSE

Product code	EAN code 731415+	L mm	L inch	g	
TL 475-SA	0110032	140.0	5.51	25	1

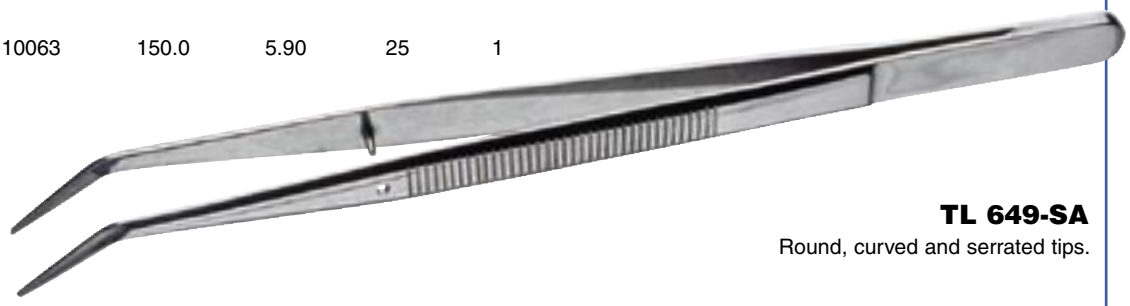
TL 475-SA
Round serrated tips.

TL 648-SA	0110049	150.0	5.90	25	1



TL 648-SA
High strength general purpose.

TL 649-SA	0110063	150.0	5.90	25	1



TL 649-SA
Round, curved and serrated tips.

TL 231-SA	0110087	120.0	4.72	14	1

TL 231-SA
Strong, serrated tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

COMPONENT HANDLING

TL 577-SA
Straight tips, Ø 4 mm,
components 2.0 mm
and serrated grips.

Product code	EAN code 731415+	L mm	L inch	g	
TL 577-SA	0110421	115.0	4.53	13	1

TL 578-SA
Angled tips 90°, Ø 4 mm,
components 2.0 mm
and serrated grips.

TL 578-SA	0110438	115.0	4.53	15	1

TL 579-SA
Angled tips 45°, Ø 4 mm,
components 2.0 mm
and serrated grips.

TL 579-SA	0110445	115.0	4.53	15	1

TL 582-SA
Angled tips 90°, Ø 4 mm,
components 1.0 mm
and serrated grips.

TL 582-SA	0110452	115.0	4.53	15	1

MATERIAL DESIGNATIONS

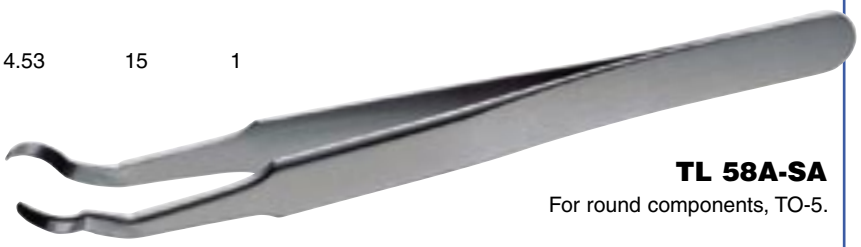
SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

Tweezers

COMPONENT HANDLING

Product code	EAN code 731415+	L mm	L inch	g	
TL 58A-SA	0110469	115.0	4.53	15	1



TL 58A-SA
For round components, TO-5.

BOLEY-STYLE

Product code	EAN code 731415+	L mm	L inch	g	
TL AA-S	0110544	130.0	5.12	16	1

TL AA-S
Strong, fine tips.

TL AA-SA	0110551	130.0	5.12	17	1

TL AA-SA
Strong, fine tips.

TL AA-SA-SL	0115334	130.0	5.12	17	5

Extra competitive price

TL AA-SA-SL
Strong, fine tips.

MATERIAL DESIGNATIONS

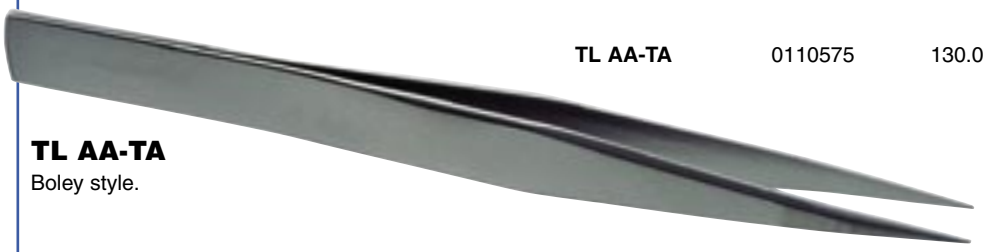
SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

BOLEY STYLE

Product code	EAN code 731415+	L mm	L inch	g	
TL AA-TA	0110575	130.0	5.12	10	1



TL AA-TA
Boley style.

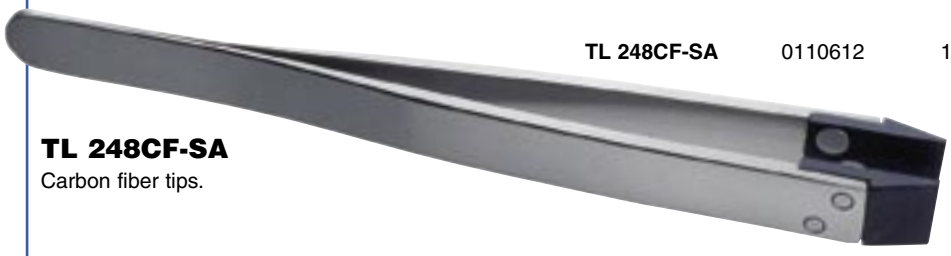
TL MM-SA-SL	0115365	130.0	5.12	15	5

Extra competitive price

TL MM-SA-SL
Boley style.

CARBON FIBER TIP TWEEZERS

Product code	EAN code 731415+	L mm	L inch	g	
TL 248CF-SA	0110612	125.0	4.92	32	1



TL 248CF-SA
Carbon fiber tips.

TL 250CF-SA	0110636	125.0	4.92	32	1

TL 250CF-SA
Carbon fiber tips.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

BOLEY STYLE

Product code	EAN code 731415+	L mm	L inch	g	
TL 269CF-SA	0110735	130.0	5.12	16	1

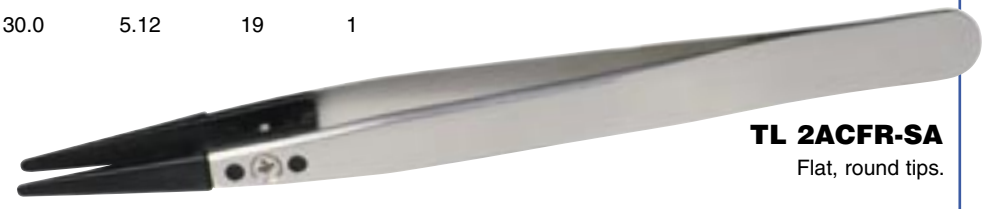
TL 269CF-SA
Carbon fiber tips. Style 2A.

CARBON FIBER TWEEZERS WITH REPLACEABLE TIPS

Product code	EAN code 731415+	L mm	L inch	g	
TL 00CFR-SA	0115402	130.0	5.12	19	1

TL 00CFR-SA
Flat, strong tips.

TL 2ACFR-SA	0115419	130.0	5.12	19	1



TL 2ACFR-SA
Flat, round tips.

TL 5CFR-SA	0115426	130.0	5.12	19	1

TL 5CFR-SA
Very fine tips.

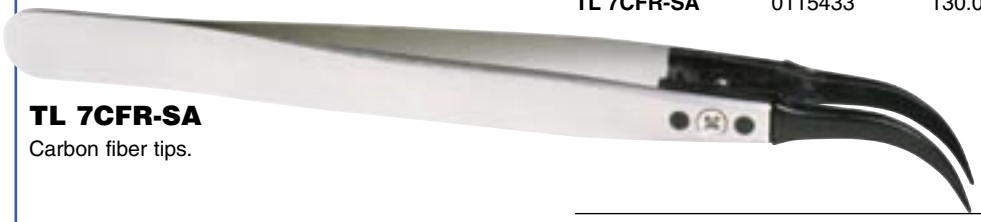
MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant Carbon Fiber replaceabletips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

CARBON FIBER TWEEZERS WITH REPLACEABLE TIPS

Product code	EAN code 731415+	L mm	L inch	g	
TL 7CFR-SA	0115433	130.0	5.12	19	1



TL 7CFR-SA
Carbon fiber tips.

TL 249CFR-SA	0115419	130.0	5.12	17	1

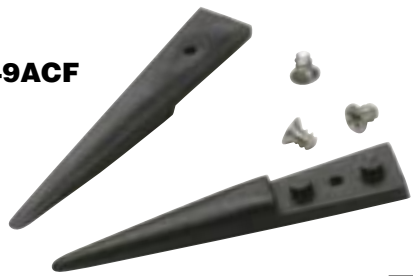
TL 249CFR-SA
Carbon fiber tips.

TI 259CFR-SA	0115150	130.0	5.12	19	1

TL 259CFR-SA
Carbon fiber tips.

REPLACEABLE TIPS WITH SCREWS

Product code	EAN code 731415+	L mm	L inch	g	
TL 249ACF	0115174	40.0	1.57	2	1



TL 249ACF

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

Tweezers

REPLACEABLE TIPS WITH SCREWS

Product code	EAN code 731415+	L mm	L inch	g	
TL 259ACF	0115167	40.0	1.57	2	1
TL 00ACF	0115440	40.0	1.57	2	1
TL 2AACF	0115457	40.0	1.57	2	1
TL 5ACF	0115464	40.0	1.57	2	1

TL 259ACF

TL 00ACF

TL 2AACF

TL 5ACF

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

FIBER TIP

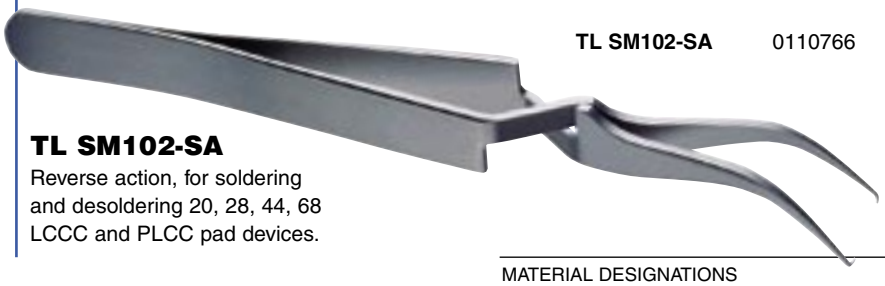
TL 7ACF

Product code	EAN code 731415+	L mm	L inch	g	
TL 7ACF	0115471	40.0	1.57	2	1

SMD

TL SM100-SA
Reverse action,
for handling SMDs.

TL SM101-SA
Reverse action, for soldering
and desoldering 8, 14, 16
lead SMDs.



TL SM102-SA
Reverse action, for soldering
and desoldering 20, 28, 44, 68
LCCC and PLCC pad devices.

Product code	EAN code 731415+	L mm	L inch	g	
TL SM100-SA	0110742	115.0	4.53	13	1
TL SM101-SA	0110759	115.0	4.53	12	1
TL SM102-SA	0110766	115.0	4.53	12	1

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

S M D

Product code	EAN code 731415+	L mm	L inch	g	
TL SM103-SA	0110773	115.0	4.53	15	1

TL SM103-SA
Handling and positioning 2 and 3 lead SOT packages at 45° angle.

TL SM104-SA	0110780	120.0	4.72	15	1

TL SM104-SA
Handling and positioning 3 lead SOT packages.

TL SM105-SA	0110797	120.0	4.72	15	1

TL SM105-SA
For all vertical SOT packages.

TL SM106-SA	0110803	120.0	4.72	15	1

TL SM106-SA
For all horizontal SOT packages.

MATERIAL DESIGNATIONS

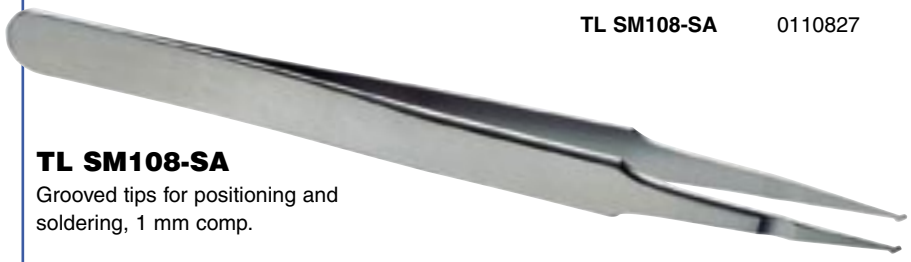
SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

S M D

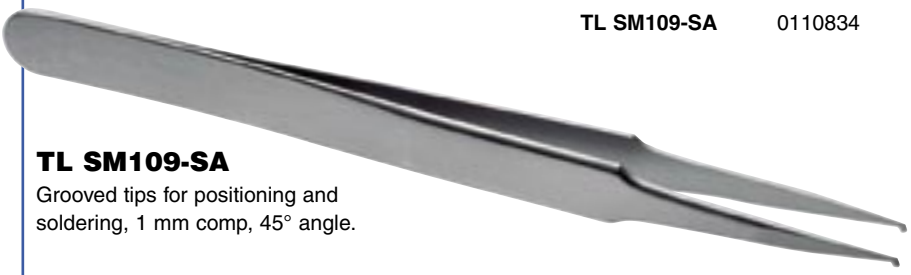
TL SM107-SA
For positioning flat devices at 60° angle.

Product code	EAN code 731415+	L mm	L inch	g	
TL SM107-SA	0110810	120.0	4.72	15	1



TL SM108-SA
Grooved tips for positioning and soldering, 1 mm comp.

TL SM108-SA	0110827	120.0	4.72	15	1



TL SM109-SA
Grooved tips for positioning and soldering, 1 mm comp, 45° angle.

TL SM109-SA	0110834	120.0	4.72	15	1

TL SM110-SA
Grooved tips for positioning monolithic chip capacitors.

TL SM110-SA	0110841	120.0	4.72	15	1

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Also available in sets

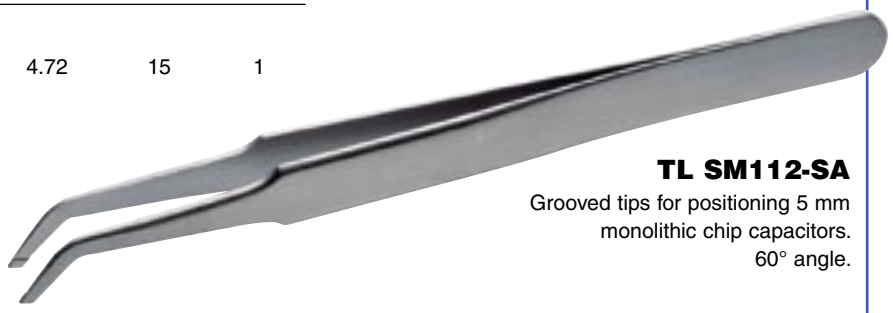
Tweezers

S M D

Product code	EAN code 731415+	L mm	L inch	g	
TL SM111-SA	0110858	120.0	4.72	15	1

TL SM111-SA
Grooved tips for positioning 5 mm monolithic chip capacitors.

TL SM112-SA	0110865	120.0	4.72	15	1



TL SM112-SA
Grooved tips for positioning 5 mm monolithic chip capacitors. 60° angle.

TL SM113-SA	0110872	120.0	4.72	15	1

TL SM113-SA
3 mm long tips, bent at 60° angle.

TL SM114-SA	0110889	120.0	4.72	15	1

TL SM114-SA
3 mm long tips, straight tips vertical.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

Tweezers

Also available in sets

S M D

Product code	EAN code 731415+	L mm	L inch	g	
TL SM115-SA	0110896	120.0	4.72	15	1

TL SM115-SA
Grooved tips,
30° angle.

TL SM116-SA	0110902	120.0	4.72	14	1

TL SM116-SA
Grooved tips, vertical,
positioning of cylindrical
devices Ø 1 mm or more.

TL SM117-SA	0110919	120.0	4.72	15	1

TL SM117-SA
For positioning SOT devices
at 30° angle.

MATERIAL DESIGNATIONS

SA *ESD-safe. Stainless, antimagnetic, anti-acid steel.*
TA *ESD-safe. Lightweight, high-temperature (1600F/870C) Titanium.*
CF *ESD-safe. High-temperature tolerant Carbon Fiber tips.*
CFR *ESD-safe. High-temperature tolerant, 190 C, Carbon fiber tips.*
NC *Plastic Coated.*
S *ESD-safe. Stainless.*
EP *ESD-safe. Epoxy.*

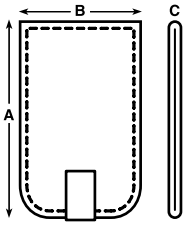
Tweezers Sets

FINE TIP

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9858	0111862	200.0 7.87	65.0 2.57	8.0 0.31	60	1

9858

Content



TL AA-SA-SL
Strong fine tips.

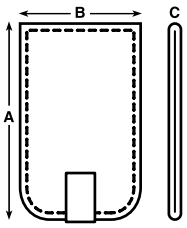
TL SS-SA-SL
Slender, long and fine tips.

STRONG TIP

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9859	0113057	200.0 7.87	65.0 2.57	8.0 0.31	75	1

9859

Content



TL 00B-SA
Strong tips and serrated grips.

TL 2A-SA-SL
Flat profile with round tips.

Tweezers Sets

TITANUM

9856

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9856	0111855	200.0 7.87	110.0 4.33	10.0 0.39	75	1

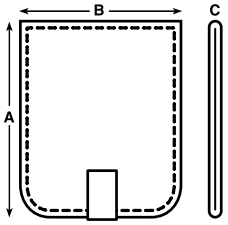
Content

TL 3C-TA
Very sharp tips.

TL 3-TA
Very fine, sharp tips.

TL 5-TA
Extra fine tips.

TL AA-TA
Strong fine tips.



HIGH PRECISION

9857

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9857	0114283	200.0 7.87	110.0 4.33	10.0 0.39	115	1

Content

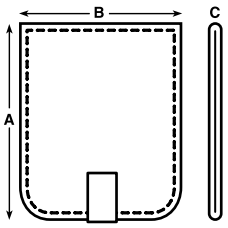
TL 00-SA-SL
Flat edge, strong tips.

TL 1-SA-SL
Strong, sharp tips.

TL 3C-SA-SL
Very sharp tips.

TL5-SA-SL
Extra fine tips.

TL7-SA-SL
Fine, curved tips.



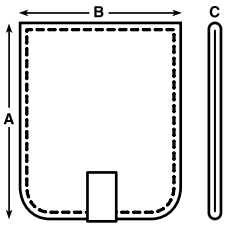
Tweezers Sets

HIGH PRECISION

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9855	0111848	200.0 7.87	110.0 4.33	10.0 0.39	115	1

9855

Content



TL SS-SA-SL
Slender, long and fine tips.

TL AA-SA-SL
Strong fine tips.

TL 2A-SA-SL
Flat round tips.

TL 4-SA-SL
Extra fine tips.

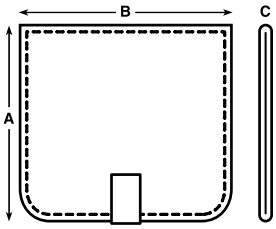
TL 7A-SA-SL
Strong curved tips.

SMD

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	g	
9854	0111831	200.0 7.87	180.0 7.09	20.0 0.78	140	1

9854

Content



TL 5C-SA
Fine, double-bent tips.

TL 5-SA-SL
Extra fine tips.

TL SM 101-SA
Reverse action. Soldering and desoldering 8, 14 or 16 leads SMDs.

TL SM 102-SA
Reverse action. Soldering and desoldering 20, 28, 44 and 68 LCCC and PLCC pad devices.

TL SM 107-SA
For positioning flat devices at 60° angle.

TL SM 108-SA
Grooved tips for positioning and soldering 1 mm wide components.

TL SM 115-SA
Grooved tips, 30° angle.

Screwdrivers

PRECISION SCREWDRIVER SETS

Lindstrom introduces a new range of precision screwdrivers. Four sets are available comprising differing combinations of the Slotted, Phillips, Pozidriv and Torx type tips.

- *Two-component ESD safe handle.*
- *Moveable top in different colours depending on the tip selection.*
- *Main colour black with grey for softer material.*

ESD-PROTECTION

The ESD-safe composition of our screwdriver handles combines resins with conductive additives to produce a material that safely dissipates electrostatic charges, reducing possibility of damage to sensitive components.

WARNING: The screwdriver handles are not insulated and therefore the screwdrivers should never be used on electrified equipment.

Screwdrivers

PRECISION SCREWDRIVER SETS

NEW

9830-9833

Product code	EAN code 731415+	g		DescriptionCode
9830	0115556	383	1	4 pcs. Slotted Tips
				4 pcs. Phillips
9831	0115563	383	1	5 pcs. Slotted Tips
				3 pcs. Phillips
9832	0115570	383	1	5 pcs. Slotted Tips
				3 pcs. PZD
9833	0115587	383	1	3 pcs. Slotted Tips
				3 pcs. Phillips
				2 pcs. Torx

9830
0.8 x 40 mm; 1.2 x 40 mm; 1.5 x 40 mm; 2.0 x 60 mm
000 x 60 mm; 00 x 60 mm; 0 x 60 mm; 1 x 60 mm

9831
1.5 x 40 mm; 2.0 x 60 mm; 2.5 x 60 mm; 3.0 x 60 mm;
3.5 x 60 mm
00 x 60 mm; 0 x 60 mm; 1 x 60 mm

9832
1.5 x 40 mm; 2.0 x 60 mm; 2.5 x 60 mm; 3.0 x 60 mm;
3.5 x 60 mm
00 x 60 mm; 0 x 60 mm; 1 x 60 mm

9833
2.0 x 60 mm; 2.5 x 60 mm; 3.0 x 60 mm
00 x 60 mm; 0 x 60 mm; 1 x 60 mm
T8 x 40 mm; T10 x 60 mm

(AVAILABLE IN EUROPE ONLY.)

Torque Screwdrivers

TORQUE

MA500

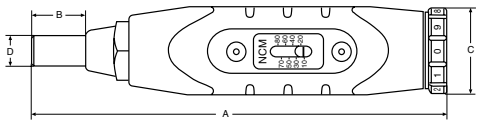
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	inch	Capacity Ncm	g	
MA500-1	112395	138.0 5.43	18.2 0.72	28.0 1.10	9.6 0.38	1/4	10 - 80	195	1
MA500-2	112401	157.0 6.18	18.2 0.72	28.0 1.10	9.6 0.38	1/4	40 - 200	260	1
MA500-3	112418	171.0 6.73	18.2 0.72	32.0 1.26	9.6 0.38	1/4	50 - 450	306	1

Store driver in the protective case at lowest torque setting.
Do not force adjusting knob below lowest setting.

MAL500

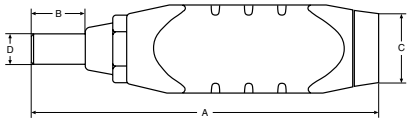
Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	inch	Capacity in. ozs./in. lbs	g	
MAL500-1	112593	138.0 5.43	18.2 0.72	28.0 1.10	9.6 0.38	1/4	20 - 100 in.ozs	195	1
MAL500-2	112609	157.0 6.18	18.2 0.72	28.0 1.10	9.6 0.38	1/4	3 - 15 in.lbs	260	1
MAL500-3	112616	171.0 6.73	18.2 0.72	32.0 1.26	9.6 0.38	1/4	5 - 40 in.lbs	306	1

Store driver in the protective case at lowest torque setting.
Do not force adjusting knob below lowest setting.



PS501

Product code	EAN code 731415+	A mm inch	B mm inch	C mm inch	D mm inch	inch	Capacity Ncm in. ozs./in. lbs	g	
PS501-1	0112425	115.0 4.53	18.2 0.72	28.0 1.10	9.6 0.38	1/4	4 - 22 6 - 32 in.ozs	147	1
PS501-2	0112432	141.0 5.55	18.2 0.72	28.0 1.10	9.6 0.38	1/4	7 - 70 10 - 100 in.ozs	187	1
PS501-3	0112449	141.0 5.55	18.2 0.72	28.0 1.10	9.6 0.38	1/4	15 - 170 1.5 - 15 in.lbs	198	1
PS501-4	0112456	154.0 6.06	18.2 0.72	32.0 1.26	9.6 0.38	1/4	45 - 450 4 - 40 in.lbs	270	1



Torque Screwdrivers

SETS

Product code	EAN code 731415+	Contents	A mm inch	B mm inch	C mm inch	g	
TSK505	0114160	59/S28-1 bit box 6961 1/4" extension 6972H non magnetic bit holder	257 10.3	200 8.0	45 1.8	548	1

Bit Box contents

K6729	*Hexagon male 1/4" to 1/4" square male*	*1*
KM653	*Magnetic bitholder*	
Slotted	*0.6x4.5mm/0.02x0.17*	*1*
	0.8x5.5mm/0.03x0.21	*1*
	1.2x6.5mm/0.05x0.26	*1*
Phillips®	*0*	*2*
	1	*2*
	2	*2*
Pozidriv®	*0*	*1*
	1	*1*
	2	*1*
Torx®	*T6*	*1*
	T7	*1*
	T8	*1*
	T9	*1*
	T10	*1*
	T15	*1*
	T20	*1*
	T25	*1*
	T27	*1*
Hexagon	*55M-1.5*	*1*
	55M-2.0	*1*
	55M-2.5	*1*
	55M-3.0	*1*
	55M-4.0	*1*

TSK505

Ideal for field service work, the TSK505 Bit Box contains a comprehensive selection of bits for use with Lindstrom´s torque screwdrivers.

A compartment is provided with space for one screwdriver. Note: Screwdriver must be ordered separately. See page 92.

Tool Kits

KITS

9841

Product code	EAN code 731415+	Dimensions mm/inch		
9841	0107445	40x240x155/1.6x9.6x6.2	220	1

Contents

7190	*Side cutter 109 mm/4.4*	BE-8610	*Phillips® screwdriver PH 1*
7890	*Snipe nose pliers 132 mm/5.3*	8070	*Adjustable wrench 155 mm/6.0*
TL AA-SA-SL	*Tweezer, strong fine tips 130 mm/5.2*		
BE-8020	*Slotted screwdriver 0.5x3.0 mm/0.02x0.11*		
BE-8040	*Slotted screwdriver 0.8x4.0 mm/0.03x0.15*		

9845

Product code	EAN code 731415+	Dimensions mm/inch		
9845	0107476	40x310x220/1.6x12.4x8.8	1295	1

Contents

2430G-160	*Snipe nose pliers 160 mm/6.4*	BE-8020	*Slotted screwdriver 0.5x3.0 mm/0.02x0.11*
2101G-160	*Side cutter 160 mm/6.4*	BE-8040	*Slotted screwdriver 0.8x4.0 mm/0.03x0.15*
2628G-160	*Combination pliers 160 mm/6.4*	BE-8150	*Slotted screwdriver 1.0x5.5 mm/0.04x0.21*
9070P	*Comb adjustable wrench 155 mm/6.0*	BE-8610	*Phillips® screwdriver PH 1*
		BE-8620	*Phillips® screwdriver PH 2*

9848

Product code	EAN code 731415+	Dimensions mm/inch		
9848	0111015	40x240x150/1.6x9.6x6	380	1

Contents

8160	*Side cutter 125 mm/5.0*	BE-8020	*Slotted screwdriver 0.5x3.0 mm/0.02x0.11*
7890	*Snipe nose pliers 132 mm/5.3*	BE-8040	*Slotted screwdriver 0.8x4.0 mm/0.03x0.15*
TL AA-SA-SL	*Tweezer, strong fine tips 130 mm/5.2*	BE-8610	*Phillips® screwdriver PH 1*
		8070	*Adjustable wrench 155 mm/6.0*

Tool Kits

KITS

Product code	EAN code 731415+	Dimensions mm/inch	Description	g	
9850	0111343	490x390x120/19.6x15.6x4.8	Lindstrom Tool Kit*	13500	1
9851	0111411	490x390x120/19.6x15.6x4.8	Lindstrom Tool Kit**	13500	1

9850
9851

Contents

8070	*Combination Adjustable 155 mm/6.0*	2047PR-1-2	*Double offset PH 1 and 2*
9072P	*Reversible 257 mm/10.0*	2744	*Multi Purpose Shear*
2628-180	*Combination pliers 180 mm/7.2*	479-08	*Claw hammer*
2430G-160	*Snipe nose pliers 160 mm/6.4*	TL648-SA	*Tweezers, general purpose (serrated)*
2128G-160	*Side cutters 160 mm/6.4*	TL 475-SA	*Tweezers, fine pointed*
2223D-150	*Wire strippers 150 mm/6.0*	BE-9770	*Hexagon socket set*
8140	*Electronic side cutters small*	5515L	*Small mirror*
8160	*Electronic side cutters medium*	2509	*Flexible pick-up tool*
7890	*Snipe nose,smooth*	8045LVDE	*Voltage tester*
7291	*Electronic end cutter*	5552	*Trimming knife*
208	*Mini hacksaw*	1-473-08-2-2	*File set*
268	*Junior hacksaw*	2-470-14-2-0	*Needle file set*
BE-8220	*Slotted screvdrivers 3.0 mm/0.11 (long blade)*	1933M/6T	*Small double open-end spanner set*
BE-8040	*Slotted screvdrivers 4.0 mm/0.15*	2233D-160	*Small cable cutters*
BE-8150	*Slotted screvdrivers 5.5 mm/0.21*		*Tap measure 3 m*
BE-8155	*Slotted screvdrivers 6.5 mm/0.26*		*Cutting knife*
BE-8800	*Pozidrive screwdriver PZ 0*		*Soldering iron*
BE-8810	*Pozidrive screwdriver PZ 1*		*De-soldering disp.*
BE-8820	*Pozidrive screwdriver PZ 2*		*Tool box*
7200/S7	*Precision screwdriver set*		

* U.K. plug
** Euro plug

Product code	EAN code 731415+	Dimensions mm/inch	g	
9852	0114092	40x310x220/1.6x12.4x8.8	1985	1

9852

Contents

8070	*Combination Adjustable 155 mm/6.0*	8045 LVDE	*Voltage tester 150-250 V*
2421G-160	*Flat nose pliers 160 mm/6.4*	8160	*Electronic side cutter 125 mm/5,0*
2101G-160	*Side cutter 160 mm/6.4*	7890	*Snipe nose plier 132 mm/5.3*
2628G-180	*Combination pliers 180 mm/7.2*	TL AA-SA-SL	*Tweezer, strong fine tips 130 mm/5.2*
BE-8210	*Slotted screwdriver 0.4x2.5 mm/0.01x0.09*	TL K-AP	*Knife*
BE-8040	*Slotted screwdriver 0.8x4.0 mm/0.03x0.15*	TM3M	*Tape measure*
BE-8150	*Slotted screwdriver 1.0x5.5 mm/0.04x0.21*		
BE-8155	*Slotted screwdriver 1.2x6.5 mm/0.05x0.26*		
BE-8600	*Phillips® screwdriver PH 0*		
BE-8610	*Phillips® screwdriver PH 1*		
BE-8620	*Phillips® screwdriver PH 2*		

Spare Parts

RETURN BIOSPRING FOR RX-SERIES

RX 01

Product code	EAN code 731415+	g	
RX 01	0103263	5	1

5 springs for Rx-Series packed in a plastic bag.

RETURN SPRING FOR 80–SERIES

8130-50
8160

Product code	EAN code 731415+	g	
8130-50 / supr. spring	0111572	2	1
8160 / spring	0111589	2	1

Return springs for 80-Series packed in a plastic bag.

LEAD CATCHERS

813/814

Product code	EAN code 731415+		g	
813	0055852	For cutters 8130-8132, RX 8130-8132	4	5
814	0055845	For cutters 8140-8148, RX 8140-8148	4	5

Screwdrivers

SLOTTED
DIN 5265
ISO 2380-2
Tip DIN 5264-A,
ISO 2380-1.

PHILLIPS® PH
DIN 5262,
ISO 8764-2
Tip DIN 5260,
ISO 8764-1.

POZIDRIV® PZ
DIN 5262,
ISO 8764-2.
Tip DIN 5260,
ISO 8764-1.

TORX®

HEXAGON

ergo®

SLOTTED

BE-8010 - BE-8255

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch	mm inch	g	
BE-8010	0010615	0.4 0.01	2.5 0.09	60.0 2.36	20.0 x 122.0 0.79 x 4.80	182.0 7.17	17	5
BE-8020	0010639	0.5 0.02	3.0 0.11	60.0 2.36	20.0 x 122.0 0.79 x 4.80	182.0 7.17	20	5
BE-8020L	1838591	0.5 0.020	3.0 0.11	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	22	5
BE-8030	0010653	0.6 0.02	3.5 0.13	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	35	5
BE-8040	0010677	0.8 0.03	4.0 0.15	100.0 3.93	20.0 x 122.0 0.79 x 4.80	222.0 8.75	38	5
BE-8150	0010707	1.0 0.039	5.5 0.21	100.0 3.92	27.0 x 122.0 1.06 x 4.80	222.0 8.75	70	5
BE-8155	0010721	1.2 0.05	6.5 0.26	125.0 4.92	36.0 x 122.0 1.42 x 4.80	247.0 9.72	101	5
BE-8210	1838584	0.4 0.01	2.5 0.09	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	18	5
BE-8220	0047741	0.5 0.020	3.0 0.11	125.0 4.92	20.0 x 122.0 0.79 x 4.80	247.0 9.72	22	5
BE-8230	0047758	0.6 0.024	3.5 0.13	125.0 4.92	20.0 x 122.0 0.79 x 4.80	247.0 9.72	38	5
BE-8240	0047765	0.8 0.03	4.0 0.15	175.0 6.89	20.0 x 122.0 0.79 x 4.80	297.0 11.69	47	5
BE-8250	0047772	1.0 0.039	5.5 0.21	150.0 5.90	27.0 x 122.0 1.06 x 4.80	272.0 10.70	75	5
BE-8250L	1838607	1.0 0.039	5.5 0.21	200.0 7.87	27.0 x 122.0 1.06 x 4.80	322.0 12.67	90	5
BE-8255	0047789	1.2 0.05	6.5 0.26	150.0 5.90	36.0 x 122.0 1.42 x 4.80	272.0 10.70	114	5

Screwdrivers

SLOTTED WITH HEXAGON COLLAR

BE-8160 - BE-8890

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch	mm inch	mm inch	g	
BE-8160	0010745	1.2 0.05	8 0.31	125 4.92	36.0 x 122.0 1.42 x 4.80	247.0 9.72	11.0 0.43	142	5
BE-8260	0047796	1.2 0.05	8 0.31	175 6.88	36.0 x 122.0 1.42 x 4.80	297.0 11.69	11.0 0.43	165	5
BE-8865	0010851	1.6 0.06	8 0.31	175 6.88	36.0 x 161.0 1.42 x 6.33	336.0 13.25	13.0 0.51	176	5
BE-8870	0010875	1.6 0.06	10 0.39	175 6.88	36.0 x 161.0 1.42 x 6.33	336.0 13.25	13.0 0.51	200	5
BE-8880	0010899	2 0.08	12 0.47	200 7.86	36.0 x 161.0 1.42 x 6.33	361.0 14.20	13.0 0.51	272	5
BE-8890	0010905	2.5 0.09	14 0.55	200 7.86	36.0 x 161.0 1.42 x 6.33	361.0 14.20	16.0 0.63	276	5

SLOTTED STUBBY TYPE

BE-8330 - BE-8455

Product code	EAN code 731415+	mm	mm	mm	mm	mm	g	
BE-8330	1838614	0.6 0.02	3.5 0.13	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	43	5
BE-8340	1838621	0.8 0.03	4.0 0.15	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	43	5
BE-8350	1838638	1.0 0.04	5.5 0.21	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	43	5
BE-8355	1838652	1.2 0.05	6.5 0.26	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	43	5
BE-8360	1838676	1.2 0.05	8.0 0.31	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	50	5
BE-8450	1838645	1.0 0.04	5.5 0.21	45.0 1.77	36.0 x 58.0 1.42 x 2.28	103.0 4.05	51	5
BE-8455	1838669	1.2 0.05	6.5 0.26	45.0 1.77	36.0 x 58.0 1.42 x 2.28	103.0 4.05	25	5

Screwdrivers

PHILLIPS® PH

Product code	EAN code 731415+	mm inch	mm inch	mm inch		g	
BE-8600	0010769	60.0 2.36	20.0 x 122.0 0.79 x 4.80	182.0 7.17	0 0	19	5
BE-8610	0010776	75.0 2.95	27.0 x 122.0 1.06 x 4.80	197.0 7.75	1 1	40	5
BE-8610L	1838683	200.0 7.87	27.0 x 122.0 1.06 x 4.80	322.0 12.67	1 1	60	5
BE-8620	0010783	100.0 3.94	36.0 x 122.0 1.42 x 4.80	222.0 8.74	2 2	72	5
BE-8620L	1838690	200.0 7.87	36.0 x 122.0 1.42 x 4.80	322.0 12.67	2 2	85	5

BE-8600 - BE-8620L

PHILLIPS® PH WITH HEXAGON COLLAR

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch		g	
BE-8630	0010790	150.0 5.90	36.0 x 122.0 1.42 x 4.80	272.0 10.71	11.0 0.43	3 3	154	5
BE-8640	0010806	200.0 7.87	36.0 x 161.0 1.42 x 6.34	361.0 14.21	16.0 0.63	4 4	222	5

BE-8630 - BE-8640

Screwdrivers

PHILLIPS® PH STUBBY TYPE

BE-8601 - BE-8602

Product code	EAN code 731415+	mm	mm	mm		g	
BE-8601	1838706	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	1 1	45	5
BE-8602	1838713	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26	2 2	53	5

POZIDRIV® PZ

BE-8800 - BE-8820L

Product code	EAN code 731415+	mm inch	mm inch	mm inch		g	
BE-8800	0042012	60.0 2.36	20.0 x 122.0 0.79 x 4.80	182.0 7.17	0 0	19	5
BE-8810	0010813	75.0 2.95	27.0 x 122.0 1.06 x 4.80	197.0 7.76	1 1	40	5
BE-8810L	1838720	200.0 7.86	27.0 x 122.0 1.06 x 4.80	322.0 12.67	1 1	82	5
BE-8820	0010820	100.0 3.94	36.0 x 122.0 1.42 x 4.80	222.0 8.74	2 2	72	5
BE-8820L	1838737	200.0 7.86	36.0 x 122.0 1.42 x 4.80	322.0 12.67	2 2	85	5

Screwdrivers

POZIDRIV® PZ WITH HEXAGON COLLAR

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch		g	
BE-8830	0010837	150.0 5.90	36.0 x 122.0 1.41 x 4.80	272.0 10.71	11.0 0.43	3 3	154	5
BE-8840	0010844	200.0 7.87	36.0 x 161.0 1.41 x 6.34	361.0 14.21	16.0 0.63	4 4	222	5

BE-8830 - BE-8840

POZIDRIV® PZ STUBBY TYPE

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch		g	
BE-8801	1838744	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26		1 1	45	5
BE-8802	1838751	25.0 0.98	36.0 x 58.0 1.42 x 2.28	83.0 3.26		2 2	53	5

BE-8801 - BE-8802

Screwdrivers

TORX®

BE-8906 - BE-8930

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch		g	
BE-8906	0027729	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	1.70 0.07	T6 T6	15	5
BE-8907	0027736	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	1.99 0.08	T7 T7	22	5
BE-8908	0027743	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	2.31 0.09	T8 T8	23	5
BE-8909	0027750	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	2.50 0.10	T9 T9	41	5
BE-8910	0027767	75.0 2.95	20.0 x 122.0 0.79 x 4.80	197.0 7.76	2.74 0.11	T10 T10	34	5
BE-8915	0027774	100.0 3.94	27.0 x 122.0 1.06 x 4.80	222.0 8.74	3.27 0.13	T15 T15	35	5
BE-8920	0027781	100.0 3.94	27.0 x 122.0 1.06 x 4.80	222.0 8.74	3.86 0.15	T20 T20	60	5
BE-8925	0027798	125.0 4.92	27.0 x 122.0 1.06 x 4.80	247.0 9.72	4.43 0.17	T25 T25	55	5
BE-8927	0027804	125.0 4.92	27.0 x 122.0 1.06 x 4.80	247.0 9.72	4.99 0.20	T27 T27	96	5
BE-8930	0027811	150.0 5.91	36.0 x 122.0 1.42 x 4.80	272.0 10.71	5.52 0.22	T30 T30	121	5

BE-8940 - BE-8945

Product code	EAN code 731415+	mm inch	mm inch	mm inch	mm inch		g	
BE-8940	0027828	150.0 5.91	36.0 x 161.0 1.42 x 6.34	311.0 12.24	6.65 0.26	T40 T40	172	5
BE-8945	1838782	150.0 5.91	36.0 x 161.0 1.42 x 6.34	311.0 12.24	7.82 0.31	T45 T45	172	5

Screwdrivers

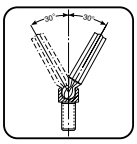
HEXAGON SOCKET

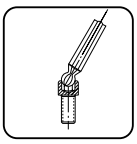
Product code	EAN code 731415+	mm inch	mm inch	mm inch		g	
BE-8702	1838768	100.0 3.94	20.0 x 122.0 0.79 x 4.80	222.0 8.74	2 2	22	5
BE-8725	1838775	100.0 3.94	20.0 x 122.0 0.79 x 4.80	222.0 8.74	2.5 2.5	22	5
BE-8703	0027651	100.0 3.94	20.0 x 122.0 0.79 x 4.80	222.0 8.74	3 3	25	5
BE-8704	0027668	100.0 3.94	27.0 x 122.0 1.06 x 4.80	222.0 8.74	4 4	41	5
BE-8705	0027675	100.0 3.94	36.0 x 122.0 1.42 x 4.80	222.0 8.74	5 5	65	5
BE-8706	0027682	125.0 4.92	36.0 x 122.0 1.42 x 4.80	247.0 9.72	6 6	97	5
BE-8708	0027699	150.0 6.90	36.0 x 122.0 1.42 x 4.80	272.0 10.71	8 8	178	5

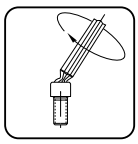
BE-8702 - BE-8708

Product code	EAN code 731415+	mm inch	mm inch	mm inch		g	
BE-8710	0027705	150.0 5.90	36.0 x 161.0 1.42 x 6.34	311.0 12.24	10 10	304	5

BE-8710







Screwdrivers

MULTI-TIP SCREWDRIVER 1/4"

8576A

Product code	EAN code 731415+	mm inch	mm inch			g	
8576A	0028054	118.0 4.65	246.0 9.68	0.8 x 5.5 0.03 x 0.22 PH1, PH2 PZ1, PZ2	1/4”	160	5

With strong magnet to hold bits and screws.
With holder in handle for up to 5 bits. Supplied with 5 bits.

Screwdrivers

SETS

BE-9881

Product code	EAN code 731415+				
BE-9881 *6 pieces.*	0043279	BE-8020 *0.5x3x50* BE-8040 *0.8x4x100* BE-8150 *1x5.5x100* BE-8155 *1.2x6.5x125*	BE-8610 *PH 1x75* BE-8620 *PH 2x100*	450	1

BE-9882

Product code	EAN code 731415+				
BE-9882 *6 pieces.*	1839284	BE-8020 *0.5x3x50* BE-8040 *0.8x4x100* BE-8150 *1x5.5x100* BE-8155 *1.2x6.5x125*	BE-8810 *PZ 1x75* BE-8820 *PZ 2x100*	450	1

BE-9883

Product code	EAN code 731415+				
BE-9883 *6 pieces.*	1839291	BE-8810 *PZ 1x75* BE-8820 *PZ 2x100* BE-8830 *PZ 3x150*	BE-8910 *T10* BE-8915 *T15* BE-8925 *T25*	450	1

Screwdrivers

SETS

BE-9885

Product code	EAN code 731415+					
BE-9885 *5 pieces.*	0048465			BE-8910 *T10* BE-8915 *T15* BE-8920 *T20* BE-8925 *T25* BE-8930 *T30*	355	1

BE-9886

Product code	EAN code 731415+					
BE-9886 *6 pieces.*	0048472	BE-8030 *0.6x3.5x75* BE-8150 *1x5.5x100*	BE-8610 *PH 1x75* BE-8620 *PH 2x100*	BE-8810 *PZ 1x75* BE-8820 *PZ 2x100*	430	1

Warranty

Lindstrom brand tools carry a full guarantee covering defects in materials and workmanship. Tools subjected to abnormal use, abuse, alteration or used after the tool is significantly worn are not covered by this warranty. For tool evaluation and warranty coverage, please contact your Lindstrom Distributor.

Index by Type

Index by Type

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Index by Alphanumeric Sequence

Conversion Tables

DECIMALS TO MILLIMETERS

inches	decimals	mm
1/64	0.015625	0.397
3/64	0.046875	1.191
5/64	0.078125	1.984
7/64	0.109375	2.778
9/64	0.140625	3.572
11/64	0.171875	4.366
13/64	0.203125	5.159
15/64	0.234375	5.953
17/64	0.265625	6.747
19/64	0.296875	7.541
21/64	0.328125	8.334
23/64	0.359375	9.128
25/64	0.390625	9.922
27/64	0.421875	10.716
29/64	0.453125	11.509
31/64	0.484375	12.303
33/64	0.515625	13.097
35/64	0.546875	13.891
37/64	0.578125	14.684
39/64	0.609375	15.478
41/64	0.640625	16.272
43/64	0.671875	17.066
45/64	0.703125	17.859
47/64	0.734375	18.653
49/64	0.765625	19.447
51/64	0.796875	20.241
53/64	0.828125	21.034
55/64	0.859375	21.828
57/64	0.890625	22.622
59/64	0.921875	23.416
61/64	0.953125	24.209
63/64	0.984375	25.003

1 mm = .03937 inch.
.001 inch = .0254 mm.

MILLIMETERS TO DECIMALS

mm	inches	mm	inches	mm	inches
0.1	0.0039	29	1.1417	66	2.5984
0.2	0.0079	30	1.1811	67	2.6378
0.3	0.0118	31	1.2205	68	2.6772
0.4	0.0157	32	1.2598	69	2.7165
0.5	0.0197	33	1.2992	70	2.7559
0.6	0.0236	34	1.3386	71	2.7953
0.7	0.0276	35	1.3780	72	2.8346
0.8	0.0315	36	1.4173	73	2.8740
0.9	0.0354	37	1.4567	74	2.9134
1	0.0394	38	1.4961	75	2.9528
2	0.0787	39	1.5354	76	2.9921
3	0.1181	40	1.5748	77	3.0315
4	0.1575	41	1.6142	78	3.0709
5	0.1969	42	1.6535	79	3.1102
6	0.2362	43	1.6929	80	3.1496
7	0.2756	44	1.7323	81	3.1890
8	0.3150	45	1.7717	82	3.2283
9	0.3543	46	1.8110	83	3.2677
10	0.3937	47	1.8504	84	3.3071
11	0.4331	48	1.8898	85	3.3465
12	0.4724	49	1.9291	86	3.3858
13	0.5118	50	1.9685	87	3.4252
14	0.5512	51	2.0079	88	3.4646
15	0.5906	52	2.0472	89	3.5039
16	0.6299	53	2.0866	90	3.5433
17	0.6693	54	2.1260	91	3.5827
18	0.7087	55	2.1654	92	3.6220
19	0.7480	56	2.2047	93	3.6614
20	0.7874	57	2.2441	94	3.1008
21	0.8268	58	2.2835	95	3.7402
22	0.8661	59	2.3228	96	3.7795
23	0.9055	60	2.3622	97	3.8189
24	0.9449	61	2.4016	98	3.8583
25	0.9843	62	2.4409	99	3.8976
26	1.0236	63	2.4803	100	3.9370
27	1.0630	64	2.5197		
28	1.1024	65	2.5591		

Conversion Tables

COMPARISON OF WIRE GAUGES
DIAMETER OF WIRE IN INCHES

Gauge No.	Brown & Sharpe	Stub's or Birmingham	Imperial or Brit. Std.
0000	0.4600	0.454	0.400
000	0.4096	0.425	0.372
00	0.3648	0.380	0.348
0	0.3249	0.340	0.324
1	0.2893	0.300	0.300
2	0.2576	0.284	0.276
3	0.2294	0.259	0.252
4	0.2043	0.238	0.232
5	0.1819	0.220	0.212
6	0.1620	0.203	0.192
7	0.1443	0.180	0.176
8	0.1285	0.165	0.160
9	0.1144	0.148	0.144
10	0.1019	0.134	0.128
11	0.0907	0.120	0.116
12	0.0808	0.109	0.104
13	0.0720	0.095	0.092
14	0.0941	0.083	0.080
15	0.0571	0.072	0.072
16	0.0508	0.065	0.064
17	0.0453	0.058	0.056
18	0.0403	0.049	0.048
19	0.0359	0.042	0.040
20	0.0320	0.035	0.036
21	0.0285	0.032	0.032
22	0.0254	0.028	0.028
23	0.0226	0.025	0.024
24	0.0201	0.022	0.022
25	0.0179	0.020	0.020
26	0.0159	0.018	0.018
27	0.0142	0.016	0.0164
28	0.0126	0.014	0.0149
29	0.0113	0.013	0.0136
30	0.0100	0.012	0.0124
31	0.0089	0.010	0.0116
32	0.0080	0.009	0.0100
33	0.0071	0.008	0.0100
34	0.0063	0.007	0.0092
35	0.0056	0.005	0.0084
36	0.0050	0.004	0.0076
37	0.0045	-	0.0068
38	0.0040	-	0.0060
39	0.0035	-	0.0052
40	0.0031	-	0.0048

WIRE DIAMETERS

Awg	dia. of solid wire (inches)	dia. of stranded wire (inches)	dia. of solid wire (mm)	dia. of stranded wire (mm)
3	0.128	0.145 - 0.149	3.251	3.68 - 3.78
10	0.102	0.116 - 0.119	2.590	2.45 - 3.02
12	0.81	0.091 - 0.093	2.057	2.31 - 2.36
14	0.64	0.072 - 0.074	1.625	1.82 - 1.88
16	0.051	0.058 - 0.060	1.295	1.47 - 1.52
18	0.040	0.047 - 0.049	1.016	1.19 - 1.24
20	0.032	0.038 - 0.040	0.813	0.965 - 1.02
22	0.025	0.029 - 0.030	0.635	0.736 - 0.762
24	0.020	0.024 - 0.025	0.508	0.609 - 0.635
26	0.016	0.019 - 0.020	0.406	0.482 - 0.508
28	0.013	0.016 - 0.017	0.330	0.406 - 0.432
30	0.010	0.012 - 0.013	0.254	0.305 - 0.330