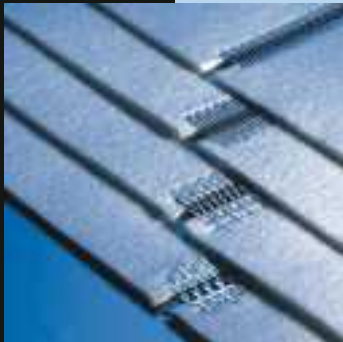


· Belt Fasteners
· Hinge Material
· Belt Lacers

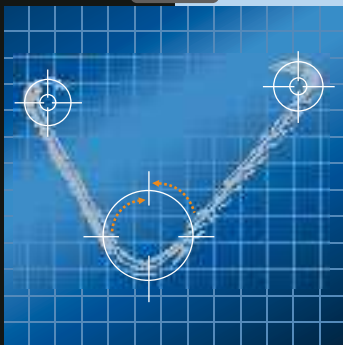
ANKER[®]
Lacing Systems

Perfect shape

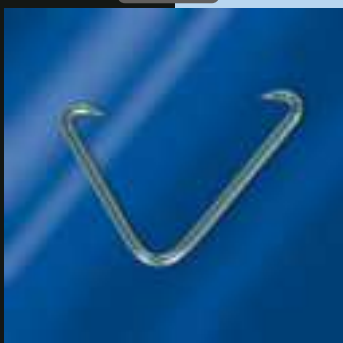
The ANKER Belt Fastening System



Mechanical belt fasteners for light-duty belting



Fastener geometry – perfect teamwork



Fastener shape – designed for specific applications

For use with modern light-duty conveyor belts

Conveyor belts ensure rational material flow and efficient work processes in industry, logistics and agriculture. The environment in which conveyor belts operate are seldom identical. Differing belt constructions, belt materials and covers, along with a multitude of belt widths and thicknesses define the high demands on reliability of mechanical belt splices.

The ANKER belt fastening system provides the response to these challenges. It consists of three major components

- ANKER Belt Fasteners
- ANKER Hinge Material and
- ANKER Belt Lacers.

All components are carefully adapted to suit each other within one system. Decades of intensive development work in co-operation with belt manufacturers, distributors and users have led to products which define today's state-of-the-art technological standards.

We are sure that within the wide range of ANKER belt fasteners you will find a fastener that can be installed quickly and easily and is inexpensive. Belt fasteners simplify conveyor maintenance, reduce downtime and increase productivity.

Sophisticated fastener geometry for highest performance levels

The ANKER belt fastener system offers four fastener series:

- Wire hooks – carded
- Wire hooks – welded
- Belt lacing – from strip steel
- Plastic spirals and spiral lace.

Each series – and within each series every single fastener – is specifically designed to comply with the demands of the user. Optimised fastener geometry encompasses the following key values: fastener shape and material thickness, pitch, leg length of the short and long leg of the fastener, the ratio of the legs to each other, point length, aperture and insertion angle. The point length determines the belt thickness range in which a fastener can be used. The length of the legs determines the size of the smallest pulley in a conveyor system that can handle the fastener without problem.

Horizontally-cut points and double-flattened wire (series 25, 30, 35, 40)

The particularly complex manufacturing process of the horizontally-cut points is especially important for thin belts. While standard cut points are bent sideways this special design ensures that the hook points are bent accurately down towards the belt edge after penetrating the belt. This "ANKERS" these fasteners into the belt.

As early as 1967, we offered the first hooks with double-flattened wire having three main advantages. Increased holding ability and transverse stability of the individual hooks combined with a flatter and more even splice area. The result: belts with ANKER fasteners can be closed easily and rapidly – like a zipper.

Up to four alternating point levels (G series)

The design to have fastener points in four levels was developed by us in 1995 and has been patented internationally since then. This development has increased the burst strength of G series fasteners by over 50% when using these particularly flat and abrasion-resistant fasteners.

Hinge material

ANKER hinge material is manufactured in different material and strength specifications to suit a variety of applications.

For perfect splices: hydraulic belt lacers

To achieve maximum work load transmission in a conveyor belt and a long service life it is essential that the belt lacing process is both – controlled and repeatable. Easy to join and long lasting mechanical fastener splices have U-shaped fastener loops and fastener legs that are parallel to each other.

ANKER offers a variety of state-of-the-art hydraulic belt lacers with the following features:

- Electronically controlled and programmable settings for pre- and main pressure
- Heated jaws to set the fastener
- Jaws that ensure that the main pressure is transmitted into the hook point area (Patent)
- A variety of gauge pins for each comb or adaptor to achieve U-shaped loops.

Wire hooks with horizontally-cut points



Fastener with points in up to four levels



Hinge material to suit all applications



Hydraulic belt lacers to optimise fastener installation



More than 120 years of tradition

Experience



Modern facilities incorporating office, manufacturing and warehouse



Rosenfeld – centrally and idyllically located in South Germany between the Black Forest and the Swabian Alb



Start-up in the historic town centre

From a forge workshop to a modern production facility

Rosenfeld is located between the Swabian Alb and the Black Forest in the southern part of Germany, close to the border of Switzerland. The Wilhelm Sülzle company was founded here in 1880. In 1999, the company name was changed to Walther Sülzle GmbH.

The forge workshop originally produced small iron and steel tools for local farmers and other users in the community, a process generally involving manual labour. The continuing mechanisation of agriculture and industry after the 1920's led to trading in agricultural equipment and machinery. Belt fasteners and belt lacers were also part of the range of products offered during that time. Belt fasteners were originally used to lace leather transmission belts in industry and agriculture.

In 1949, the company began to manufacture ANKER belt fasteners and installation tools primarily for the market in South Germany. Since the early 1950's, ANKER belt fasteners were also successfully exported to all parts of the world. Over the years, the number of building expansions has been one of the indicators of success achieved since then.

In 1960, we moved from the historic town centre of Rosenfeld to the newly established industrial estate "West". The location underwent step-by-step expansion in 1974, 1985 and 1991. The company now has production- and warehouse facilities covering an area of more than 5,000 m². Administration, Sales and Research and Development cover an additional 800m².

Numerous patents and innovative products are documents of more than 50 years of experience in both product and process development. The first ANKER belt fasteners welded on a cross wire were produced as early as 1949. Some of our fasteners have been manufactured since 1969 with horizontally-cut points and double-flattened wire.

The development of our own manufacturing equipment and methods, along with our tool- and die development, ensures that our company can maintain a high level of quality and flexibility to the advantage of our customers.



Reception



Modern and efficient:
our administration



Powerful and flexible:
our production



High performance

The Production Facility



Manufacturing hall for belt fasteners



Independent and flexible:
our tool- and die department



Wire erosion for high-
precision tool- and die
making

From wire or strip steel to belt fasteners

Stainless steel wire and precision strip steel constitute the most important raw materials used in production. On their quality we make the highest demands. Specifications are drawn up for the composition of materials, dimensions, tensile strength and elasticity. Tight limits are set that even the DIN standards are exceeded.

The material quality is adapted to suit the application purpose of the future belt fasteners. The various fastener series are manufactured on special machines, mainly developed and produced by us. Each individual fastener strip is subject to strict quality control of a variety of criteria.

Our high-performance production facility ensures that every order is prepared on time for delivery.

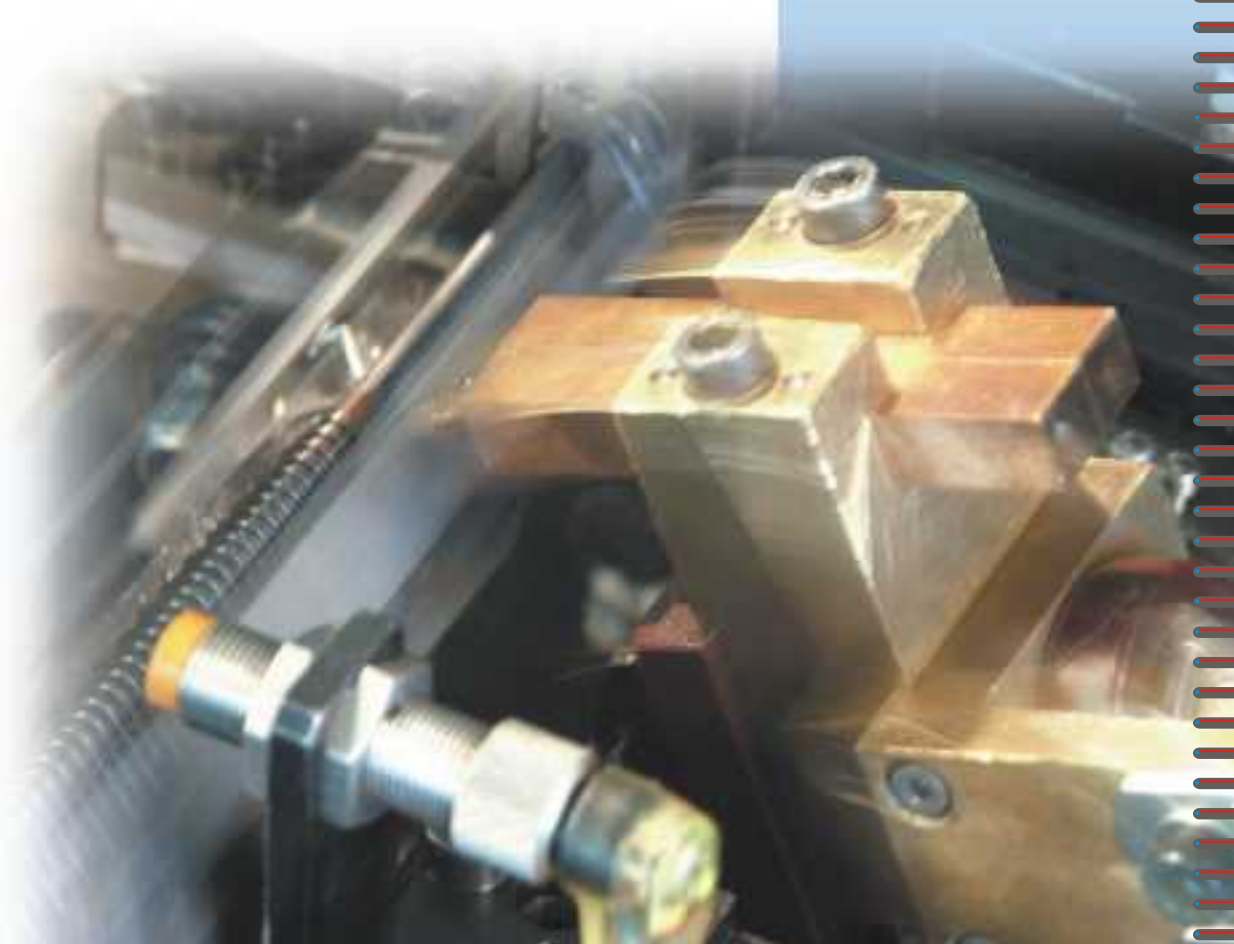
Machine-, tool- and die production – all under one roof

All belt lacers are completely produced in our own facility. Individual components are manufactured on state-of-the-art CNC milling machines; other parts for lacers and dies are produced on wire eroding systems.

The tool and equipment production in house renders us flexible and independent of subcontractors.

ANKER Belt Fasteners are available in the following material qualities:

- ☒ Steel
- ☒ Galvanised steel
- ☐ High-Tensile Steel, galvanised, abrasion-resistant
- ☒ Stainless Steel AISI 430
corrosion- and abrasion-resistant, magnetic
- ☒ Stainless Steel AISI 316
Stainless Steel AISI 316L
corrosion- and abrasion-resistant,
anti-magnetic
- ☐ Hastelloy C4
excellent resistance against acids, alkali and abrasion
- ☐ Inconel 600, excellent resistance in hydrolysis surrounding
- ☐ Monel 400, excellent resistance in salt water



Quality and Service



CAD-Quality starts with design



Examination of the fastener geometry with a profile projector



Examination of fastener strips prior to packaging



Raw material- and fastener examination with a modern pull- and stress reversal tester

A well-designed system – prerequisite for durable splices

All components in the ANKER belt fastener system are designed to be compatible with each other. Material, fastener geometry, installation tools and final shape – each detail is of importance to the overall belt fastener functionality.

Our quality standards are rigorously observed from design to shipping.

Raw material specification – the first step in a transparent production process

Quality begins with the purchase of high-quality raw materials. Carefully selected suppliers and extensive checks of incoming raw material are important elements of our quality control process. Complete documentation of processed materials enables us to trace a finished product to a particular raw material supply, even after years. This keeps the overall production process transparent.

Our experienced staff – motivated and qualified

Our experienced and highly qualified personnel is responsible for quality and productivity in every individual company department. Latest know how in technology is achieved by regular on-site training. Furthermore, each employee is well familiar with the quality policy of the company and makes every effort to keep it high.

Quality control in three steps

Since we know the importance of every detail of our fasteners, our production is subject to rigorous quality inspection. Continuous and repetitive inspection is carried out throughout the production process by means of test splices, profile projectors and visual examination.

Sample checks with the profile projector ensure that the fastener geometry remains consistent. Installation of fasteners into different belt materials enables us to constantly check overall functionality. And finally a 100% visual inspection guarantees that only perfect fasteners will be approved for delivery.

Dynamic testing guarantees long fastener service life

Belt fasteners are inevitably subject to wear and tear. We make every effort to reduce this to a minimum. We check static and dynamic fastener resistance in continuous tests, along with the abrasion resistance of the belt splice. The experience gained is taken into consideration during design, purchase of raw materials and production.

Stand-by for supply

In our extensive warehouse we maintain large stocks of nearly all ANKER fastener series to comply with the demands of our customers. Our central location in the heart of Europe enables us to deliver our products on time.

The best connection to assistance

ANKER provides a comprehensive range of diverse belt fasteners specially adapted to suit light-duty belting. We assist our customers to select the right fastener, either on the telephone or through on-site consulting. The combination of application, belt material and pulley diameter enables us to demonstrate the full spectrum of options.

Trained distributors around the world

ANKER belt fasteners connect conveyor belts in a variety of industries (e.g. airports, food industry, tobacco industry, fish industry, lumber industry, laundry industry, paper, cardboard and printing industry, filter belt industry, in agriculture and wherever belt conveyors are in use).

ANKER belt fasteners are available through a network of qualified belt distributors, manufacturers and OEMs.

Abrasion test of different fastener types and materials



Always on stock – more than 1200 articles



Training- and meeting room



Rosenfeld – Located in the heart of Europe



A diverse product range

ANKER Belt Fasteners



#25 Series



#30 Series

ANKER belt fasteners Wire hooks carded

Designed for the use with a large variety of different belt types and belt thicknesses up to 10 mm. The individual hooks are secured at six points in a strong cardboard which simply can be cut to size. The carding functions as spacing element during transport and installation, subsequently performing a guidance function when the hooks are installed. It is only removed after installation.

#25 series

Specially designed for extremely thin belts (e.g. printing machines, laundry feeder and folding machines and hi-temp conveyors with PTFE-coated belts).

Wire diameter 0.62 mm; pitch 1.70 mm; available pre-cut to belt width with leading and trailing end for belts from 10 to 115 mm width or in boxes with cards 150 or 300 mm long; belt thickness up to 2.8 mm; min. pulley diameter 25 mm; horizontally-cut points, double-flattened wire.

#30 series

Specially designed for thin belts (e.g. filter belts and hi-temp conveyors with PTFE-coated belts).

Wire diameter 0.80 mm; pitch 2.54 mm; cards 150 or 300 mm long; belt thickness up to 2.5 mm; min. pulley diameter 50 mm; horizontally-cut points, double-flattened wire.

#35 series

Specially designed for medium-duty belt filters.

Wire diameter 0.90 mm; pitch 2.54 mm; cards 300 mm long; belt thickness up to 3.0 mm; min. pulley diameter 50 mm; horizontally-cut points, double-flattened wire.

#40 series

Designed for a variety of applications (e.g. heavy-duty filter belts, felts for ironers, general conveyors and corrugator belts).

Wire diameter 1.00 mm; pitch 3.175 mm; available pre-cut to belt width or cards 150 or 300 mm long; belt thickness up to 5.6 mm; min. pulley diameter 50 mm; horizontally-cut points, double-flattened wire.

#2 – #7 series

Designed for a variety of applications in industry, agriculture and logistics.

Wire diameter 1.20 mm (#2 and #3) and 1.38 mm (#4 to #7); pitch 3.67 mm; cards 300 mm long; belt thickness up to 10.0 mm; min. pulley diameter 50 mm.

AP series

Specially designed to achieve flat and non-marking splices in corrugator belts.

Wire diameter 1.20 mm; pitch 3.67 mm; cards 300 mm long; belt thickness up to 10.0 mm; min. pulley diameter 100 mm.

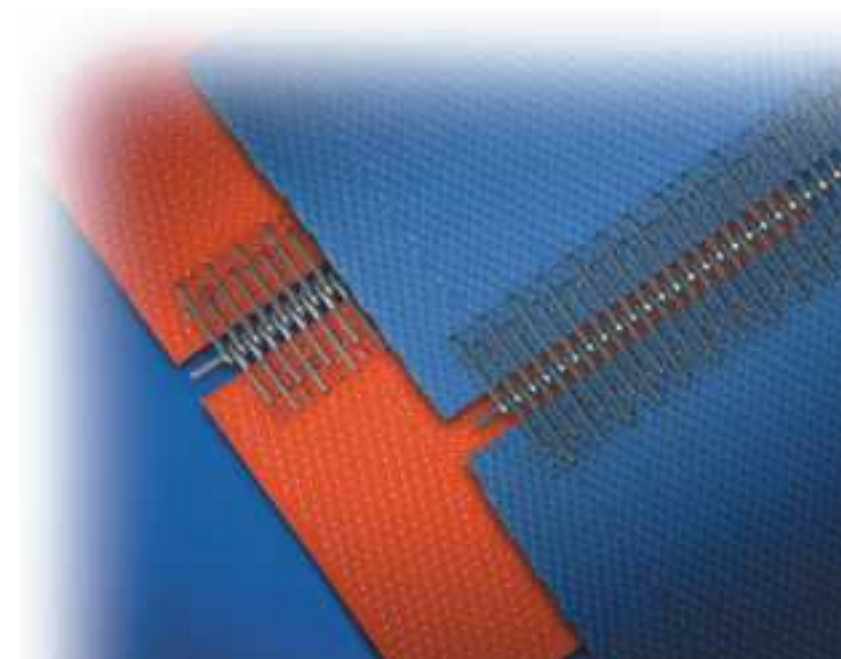
#40 Series



#2 – #7 Series



AP Series



A diverse product range

ANKER Belt Fasteners



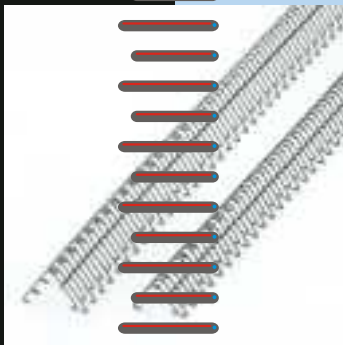
ANKER belt fasteners Wire hooks welded on a cross wire

Successfully used for over 50 years as "Safety Belt Hooks" in transmission and conveyor belts. The cross wire stabilises the splice and prevents individual hooks from breaking loose. Specially designed for belts in agriculture, food industry and logistics.

A30 series

Specially designed for thin belts (e.g. filter belts and hi-temp conveyors with PTFE-coated belts).

Wire diameter 0.80 mm; pitch 2.54 mm; strips 300 and 600 mm long; belt thickness up to 2.5 mm; min. pulley diameter 50 mm.

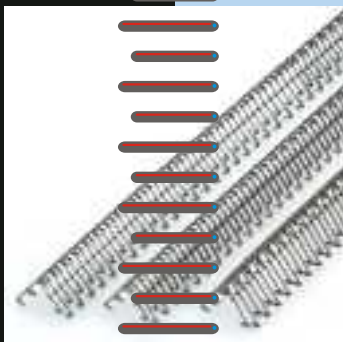


A30 series

A34 series

Specially designed for feeders and folders in the laundry industry.

Wire 0.90 x 0.50 mm; pitch 2.54 mm; available pre-cut to belt width with leading and trailing end for belts 35 to 115 mm wide or in boxes with strips 150 mm long; belt thickness up to 2.0 mm; min. pulley diameter 50 mm.



A34 – A36 series

A35 series

Specially designed for thin belts.

Wire 0.90 x 0.60 mm; pitch 2.54 mm; strips 150, 300 and 600 mm long; belt thickness up to 2.0 mm; min. pulley diameter 50 mm.

A36 series

Specially designed for a wide range of belts (e.g. filter belts; belts in the food-industry and general conveying).

Wire 0.90 x 0.70 mm; pitch 2.54 mm; strips 300 and 600 mm long; belt thickness up to 4.0 mm; min. pulley diameter 25 mm.

A40 series

Designed for a variety of applications (e.g. heavy-duty filter belts, felts for ironers, general conveyors and corrugator belts).

Wire diameter 1.00 mm; pitch 3.175 mm; strips 300 and 600 mm long; special lengths up to 1.50 metres; belt thickness up to 4.0 mm; min. pulley diameter 50 mm.

A2 – A7 series

Designed for a variety of applications in industry, agriculture and logistics.

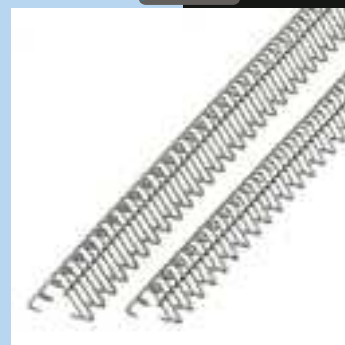
Wire diameter 1.20 mm (A2 and A3) and 1.38 mm (A4 to A7); pitch 3.67 mm; strip lengths 300 and 600 mm; special lengths up to 2.5 metres; belt thickness up to 10.0 mm; min. pulley diameter 50 mm.

ANKER belt lacing

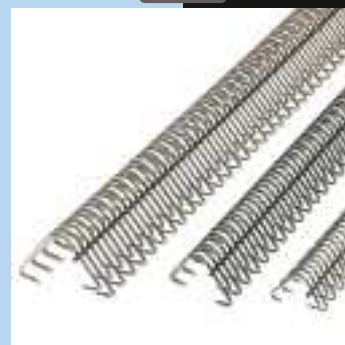
G 00 – G 006

Designed for many applications including slider bed conveyor systems, where particularly flat and abrasion-resistant splices are preferred.

Material thicknesses 0.50 and 0.75 mm, pitch 4.00 mm, strip lengths 300, 600, 900, 1200 and 1500 mm or adapted to suit the belt width; belt thickness up to 3.0 mm; min. pulley diameter 20 mm.



A40 series



A2 – A7 series



G series

A diverse product range

ANKER Belt Fasteners



ANKER G series
G 15 – G 65



ANKER six-point fasteners
SS 200 – SS 207



ANKER spiral lace
PEEK, FDA, Black

ANKER transmission belt lacing

Transmission belt lacing is also available within the **G series** for belts 3,0 mm to 12,5 mm thick. These fasteners are installed with a hammer and are mainly used to join transmission belts in agricultural equipment.

ANKER "six-point" fasteners

Six-point fasteners are used to repair tears and rents in conveyor belts. Seven sizes for belts up to 21 mm thick are available.

ANKER spiral lace and plastic spirals

ANKER spiral lace is successfully used in food applications as well as on airport parcel- and baggage scanners. Hygienic (belt cleaning) and / or technical reasons (metal scanners) on the conveyor system require plastic belt splices made from FDA or high heat-resistant materials. Spiral lace from FDA compounds is used in the food industry while spiral lace from PEEK is mainly used on hi-temp belt conveyors. PEEK spiral lace is not recommended to be used in direct contact with food.

ANKER spiral lace is available in boxes containing 3, 10 and 30 metres. Min. pulley diameter 10 mm.

ANKER hinge material

Hinge materials are an important element of any quality belt splice. They are important to maintain the durability of the splice. We supply hinge pins in a variety of materials, depending on the application purpose and type of fastener.

Nylosteel (NST): Spring steel wire, nylon coated for low abrasion and good lubrication of the splice, relatively rigid for easy insertion.

Nylostainless (NSS): Stainless steel wire (AISI 304); nylon coated for low abrasion and good lubrication of the splice, relatively rigid for easy insertion; suitable also for corrosive environments.

Nylon-covered steel cable (NC): Steel wire rope, nylon coated for low abrasion and good lubrication of the splice; for troughing applications and crowned pulleys.

Nylon-covered stainless steel cable (NCS): Stainless steel wire rope, nylon coated for low abrasion and good lubrication of the splice; for troughing applications and crowned pulleys.

Perlon hinge material (NK): Corrosion-free, good splice lubrication, for low-tension applications.

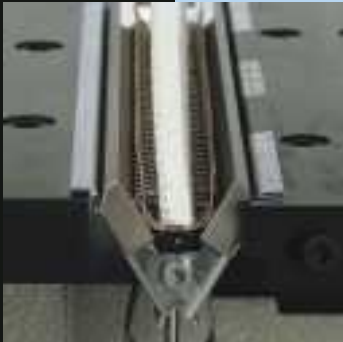
Stainless steel wire (SS) and corrugated stainless steel wire (CSP): Suitable for all applications; CSP particularly with G series conveyor belt fasteners (G 00 – G 006).

ANKER hinge materials



A diverse product range

ANKER Belt Lacers



Precisely guided
machine jaws ...



... ensure uniform
pressure over the
entire width of the
splice ...



... and transmit the
final pressure to the
fastener point area
(patented)

ANKER hydraulic belt lacers

We strongly recommend to install ANKER belt fasteners with our ANKER hydraulic belt lacers. Changeable adaptors and universal combs secure that most ANKER belt fasteners can be installed with any lacer of our broad range.

The patent-protected jaw system ensures that the maximum contact pressure is not transmitted to the edge of the belt, but rather to the hook point area. This ensures that a drop-shaped loop is created, even with hooks laced into belts thinner than the diameter of the gauge pin used.

Some of our hydraulic belt lacers are also available with heated jaws. These machines are particularly recommended to join PVC and PU light-duty conveyor belts as well as filter belts and belts for the corrugator industry.

By heating the jaws and transmitting this heat into the fastener itself, the hook points penetrate the belt much easier without damaging the belt carcass. The heat is further conveyed from the jaws to the belt thus compensating any tension or corrugation that may occur.

Electro-hydraulic belt lacers are equipped with an SPC control system. Functions such as preliminary and main pressure and (if available) jaw temperature and jaw closing period are programmable using a menu and can be saved on function keys. Settings for up to four different types of belt can thus be easily selected using the function keys F1 – F4.

This means that nothing is left to chance. Consistent quality is ensured from splice to splice. Belt splices installed with hydraulic ANKER belt lacers close simply and easily, like a zipper.

ANKER belt lacers ARU and AMU series are designed for universal use with carded belt hooks, welded belt hooks as well as G series belt lacing in strips up to 1500 mm width.

The **AMU 4000** and **AMU 6000** have a particularly rigid steel cast construction. The guide tracks of the moving jaw have been reinforced. The maximum contact pressure is 20 kN. The AMU 6000 is equipped with heated jaws. Available with mounted electro-hydraulic pump HP 1000.

The **ARU 2000** and **ARU 3000** are designed for medium-scale production and field applications. The maximum contact pressure is 10 kN. The ARU 3000 is equipped with heated jaws. Available with two-stage foot pump HP 500, pneumatic-hydraulic pump HP 750 or a choice of mounted or separate electro-hydraulic pumps HP 1000.

ANKER universal combs for the ARU/AMU series are available in widths from 600 to 1500 mm. Each comb has a transfer section to install fasteners in wide belts avoiding steps in the splice.

ANKER belt lacers ARK and AMK series are designed for universal use with all our fasteners, however, preferred when mainly carded hooks in lengths up to 300 mm are used.

The **AMK 400** has a particularly rigid steel cast construction. The guide tracks of the moving jaw have been reinforced. The maximum contact pressure is 20 kN. Available with electro-hydraulic pump HP 1000, mounted or separate with hose and coupling.

The **ARK 150** and **ARK 200** are designed as repair lacers for field and stationary applications. The maximum contact pressure is 6/10 kN. Available with two-stage foot pump HP 500, pneumatic-hydraulic pump HP 750 or electro-hydraulic pump HP 1000.

ANKER adaptors are available for the ARK and AMK series lacers. All adaptors are equipped with a transfer section to install fasteners in wide belts avoiding steps in the splice.



AMU 4000 / AMU 6000



ARU 2000



AMK 400



ARK 150 / ARK 200

A diverse product range

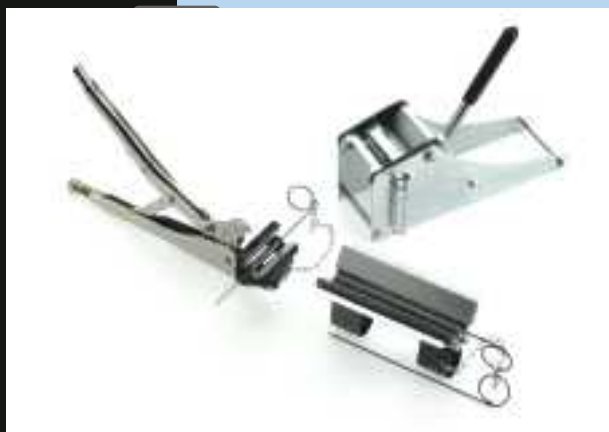
ANKER Belt Lacers ...



ANKER hydraulic pumps HP 500 and HP 1000



ANKER roller lacers



ANKER vise-, lever- and plier lacer

ANKER hydraulic pumps and units

The **ANKER HP 500 hydraulic two-stage pump** is equipped with a valve to adjust contact pressure. Supplied complete with high-pressure hose, quick-change coupling and pressure gauge.

The **ANKER HP 750 pneumatic-hydraulic pump** is supplied complete with high-pressure hose, quick-change coupling, pressure gauge and maintenance unit. The contact pressure is adjusted by the maintenance unit.

The **ANKER HP 1000 hydraulic motor pump** is a robust compact hydraulic pump for clamp devices. The unit is characterised by its operating simplicity, insusceptibility to malfunctions and easy maintenance. The unit can either be mounted directly onto the machine or connected with a high pressure hose and quick-change coupling. Available in a variety of versions to meet local current requirements.

ANKER roller lacers

ANKER roller lacers facilitate quick and easy installation of all ANKER belt fasteners (with the exception of the #25 series). Units are available in widths of 350, 600, 900, 1200 and 1500 mm. Splicing of belts wider than the machine is also possible.

ANKER vise-, lever- and plier lacers

ANKER vise lacers are available for all ANKER belt fastener series and can be used in any stable vise. Vise lacers have no transfer section and are intended for use with belts up to the width of the lacer (120 - 250 mm).

The **ANKER LL25-50 lever lacer** is suitable to splice laundry belts up to 50 mm wide and is designed exclusively for our #25 and #25SP fasteners.

ANKER plier lacers are available for the 25, 30, 40 and G series. They are suitable to splice narrow belts up to 50 mm wide.

... and Accessories

Other ANKER products

ANKER hinge material in red and yellow is specially designed for the use in the paper and cardboard industry. **Nomex** and **Nomex steel** hinge material is used particularly in applications involving high temperature.

Available in 50, 100 and 250 metre coils or as **"Pathfinder"** fitted with leader wire and coupling made to the specific belt width or multiples of the belt width. Pathfinders are also available with PEEK and Polyester pin material.

ANKER spirals are available in polyester (white and red) for applications within the paper industry or in FDA quality for the food industry. Also available are PEEK (brown) spirals and polyamide coated stainless steel spirals for the use in hi-temp applications.

ANKER spiral webbing can be supplied in polyester (blue – type A) and polyester / kevelaer (blue-yellow – type B) for the paper industry and in polyester FDA (white – type G) for the food industry.

The **ANKER adhesive sewing thread** has a special coating which prevents the stitches to unravel, even if individual stitches are damaged. Available as polyester thread (MARA 15/4) and Nomex thread (SALTA 20/3) for high temperature ranges.

ANKER tape binder is used to seal the belt ends in cotton belt in the laundry industry. Available in cans of 0.5 litre (quick-dry-QDTB) or non-flammable-NFTB).

Belt cutters are available in different versions for belts up to 1500 mm wide.

ANKER hinge pins red, yellow and Nomex

ANKER "Pathfinders" with leader, coupling and hinge pin

ANKER plastic spirals



ANKER[®] Lacing Systems

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