



Qualität in neuer Form

Development • Design • Prototype construction • Toolmaking • Serial manufacturing

Your specialist for
BENT, PUNCHED, UPSET, WELDED
combinations and hybrid components made of metal and plastic



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LÖTTCO GMBH & CO.KG

Löttco GmbH & Co. KG has traded for over 65 years and has its main office in the town of Neuenrade.

The company is focussed on the development, design and production of wire, tubing, punched and welded components as well as with hybrid components made of metal and plastic.

Löttco is not only First Tier Supplier and business partner of the international automobile industry and its system suppliers and module suppliers, but also of industry in general.

With approx. 100 employees, the company generated an annual turnover of €20 million. With a capacity to innovate, the latest in manufacturing technology and strategic investments Löttco offers its customers a long term partnership.



Through the innovative development of new products and extreme flexibility towards fulfilling the wishes of customer, Löttco secures a leading position around the world.

The company's own design, its own toolmaking and fixture construction and a special department for building prototypes and preproduction runs form the heart of the company's business.

The various departments guarantee customers decisions concerning the use of the products that have been designed.

Parts which are to be manufactured with multi-stage production processes involving combinations of bending, buckling, punching and welding are produced in Neuenrade. In doing so, it is mainly fully-automatic manufacturing methods and special purpose machines which are used in order to inexpensively produce high volumes.

For products produced in small volumes, the Neuenrade site is only used in the manufacturing of tools and development up to the production stage. Production then takes place in our site in Czech Republic and among cooperating partners in low cost countries. This is done to ensure prices for our customers which are in line with the market.

Today, in over 30 countries, Löttco customers and partners benefit from the innovative strength and the ideas which highly motivated people provide – from the company management team through to each individual member of staff.

Löttco sees itself as well prepared for the latest trends in the sector and is well positioned for planned growth in the key automobile markets.

Quality in a new form

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HEAD RESTRAINTS



PRESSURE AND GUIDE LINES



CRASH STUDS



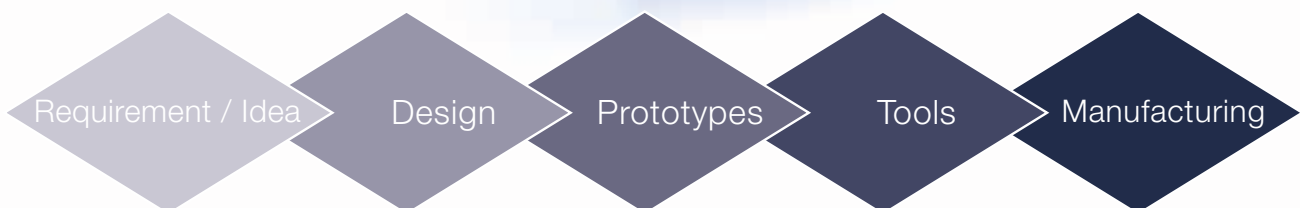
TOWAGE AND LASHING SYSTEMS



OPERATING MECHANISM COMPONENTS

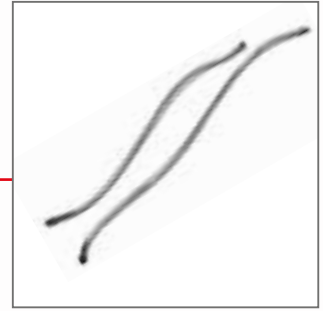


COLUMN TUBES FOR STEERING SYSTEMS





BELT GUIDE CLIP



GUIDE TUBING FOR SUNSHADE SYSTEMS



FASTENING SYSTEMS FOR EXHAUST INSTALLATIONS



SEAT RELATED OPERATING MECHANISM COMPONENTS



DOOR COMPONENTS AND MODULES



PASSIVE SECURITY SYSTEMS

We accompany you
all the way - from the idea
to the finished product!



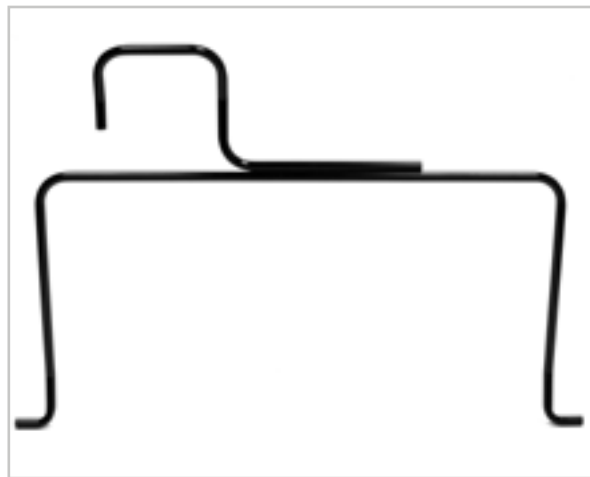
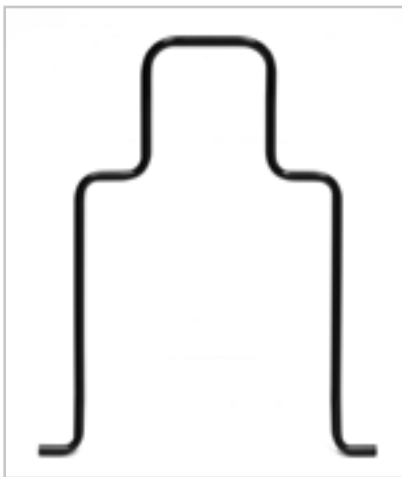
Seat components



Towbar □



SEAT OPERATING MECHANISMS AND STRENGTHENING COMPONENTS



Towbars □



Strengthening tube for seat shell



Strengthening tube for frame construction

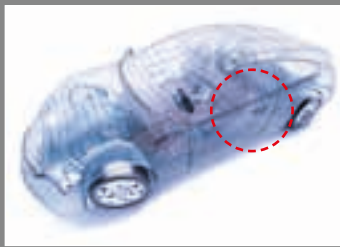


Locking clip



Actuation systems for seating elements made from wire / tubing and wire/ tubing combinations (including handle elements made from plastic) (see p. 26) are developed and produced at Löttco according to customer specifications.

Adjustment and actuation levers can also be provided as hybrid components, either moulded or provided with a plastic handle.

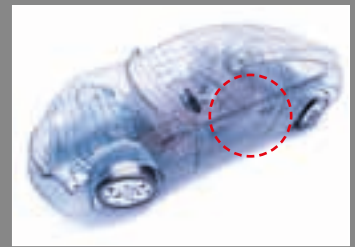


Door components and modules



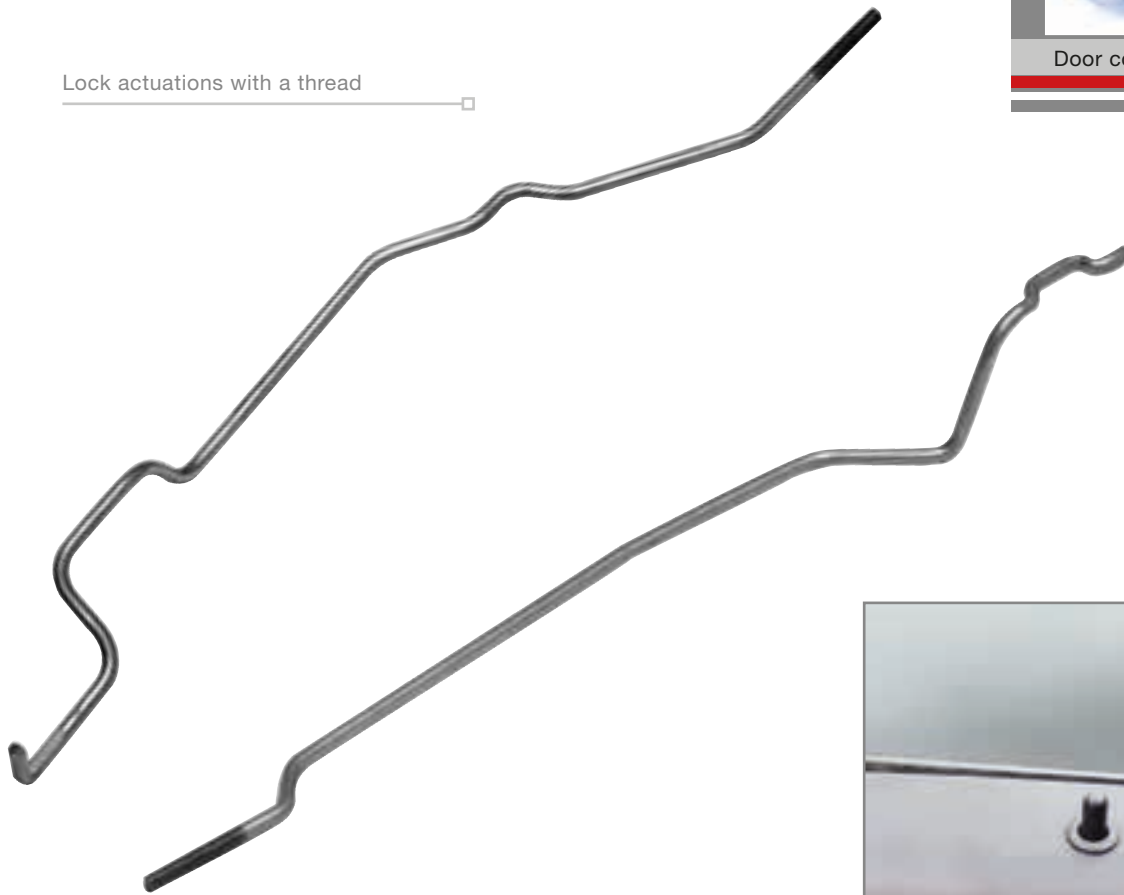
DOOR COMPONENTS AND DOOR MODULES

Löttco manufactures strikers in various embodiments and surfaces according to customer specifications. These include the assembly of screw washers. The fulfilment of the highest safety requirements is ensured by our quality management team.



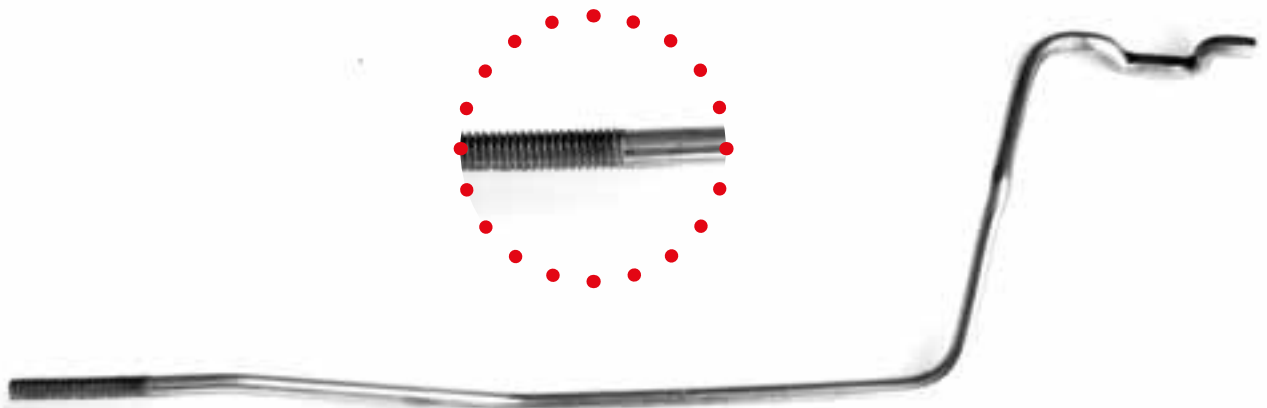
Door components and modules

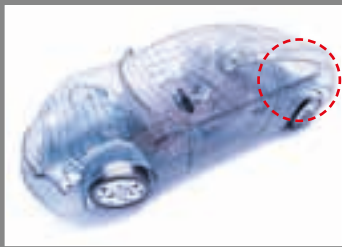
Lock actuations with a thread



DOOR COMPONENTS AND DOOR MODULES

Löttco develops and produces mechanical operating mechanisms made of wire for vehicle door applications – fully automatic, including flattened ends and a milled thread.





Systems for exhaust installations



Exhaust pipe holders
(various embodiments)



Löttco produces attachment and retainer systems for car exhaust installations, both for fitting onto the exhaust system as well as for the holding fixture in the under carriage area. These are manufactured from wire, tubing or a sheet, bent, upset, punched and welded. Upon request, they are mounted with a retention strap.



FASTENING SYSTEMS FOR EXHAUST INSTALLATIONS

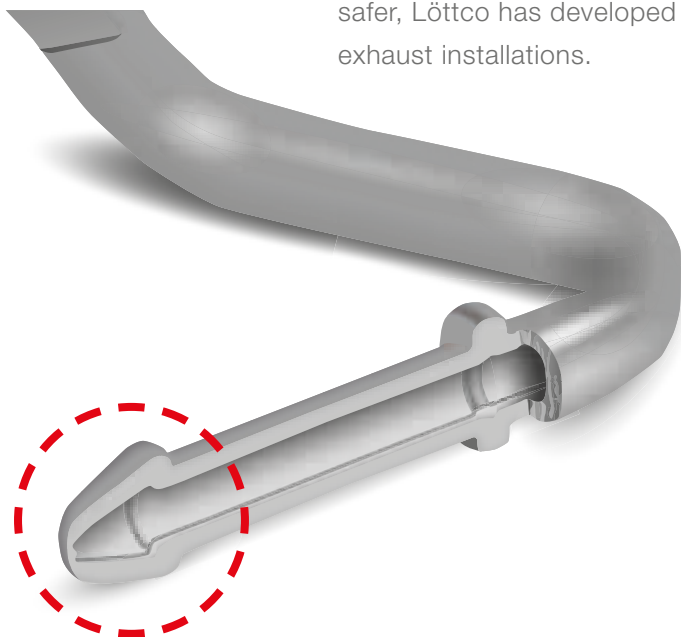


Patented attachment system made from piping with a closed head for exhaust installations

In order to fulfil the requirements of the automobile industry in way which is easier, simpler, cheaper and safer, Löttco has developed a new retainer for exhaust installations.



Patented attachment systems



Advantages

- significant weight saving compared to retainers made from "solid material" approx. 44%.
- no corrosion from "inside", as it is total enclosed.
- conversion from „Nirosta“ stainless steel to normal steel is possible - as a result, there is a significant cost reduction.
- Reduction in noise – no whistling sound through the use of pipes.

Further developments in the field of welded central control unit holders

- In the case of large series resistance welding in the same manufacturing processing upsetting, bending and punching is possible.
- Significant cost saving compared to inert gas welding.

PATENTED ATTACHMENT SYSTEMS MADE OF TUBING





H&D securing systems



Belt guide retainer □



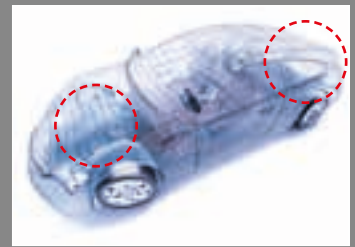
Löttco manufactures holder and diffuser or guide retainers (finished parts) on fully automated plant. These include flattened ends and fastening holes. If spring functions are required, spring steel wire is processed as well. Various surface coatings are possible, e.g. chromium (in the case of high optical requirements).



HOLDERS & DIFFUSERS FOR SECURING SYSTEMS



Bracket for manual brake cable □

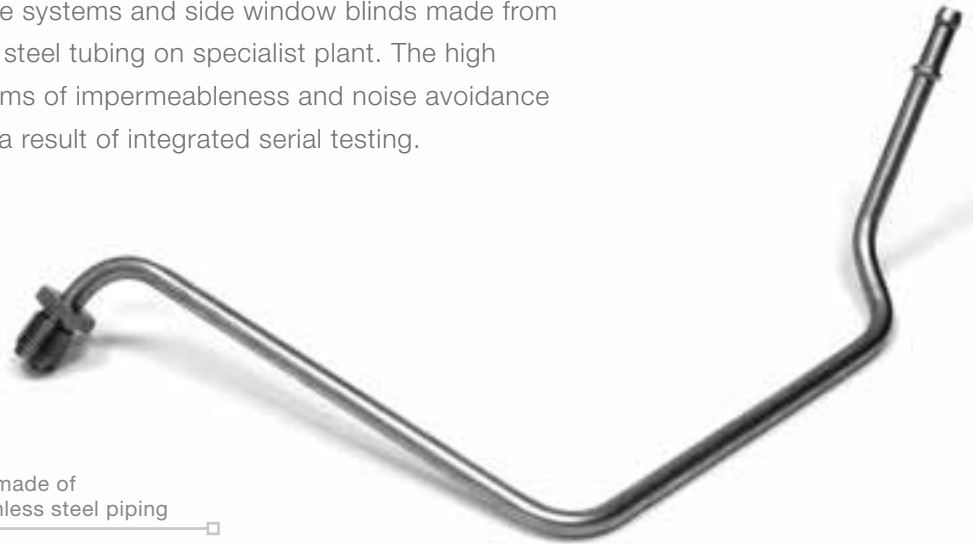


Pressure and guide lines



Guide tubing for sunshade systems

Löttco manufactures pressure lines for carbon particle filters, guide tubing for sunshade systems and side window blinds made from steel and stainless steel tubing on specialist plant. The high requirements in terms of impermeableness and noise avoidance are always met as a result of integrated serial testing.

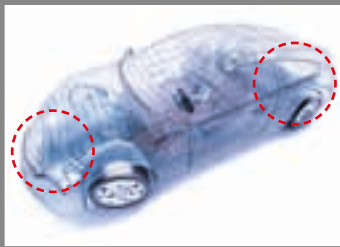


Pressure line made of steel and stainless steel piping

PRESSURE AND GUIDE LINES



Pressure lines made of steel and und stainless steel piping



Towage & lashing systems



TOWAGE AND LASHING SYSTEMS



Retaining bracket

Löttco develops and produces various pieces of towing equipment and lashing eyes for cars. The bending parts with punched parts or cold formed parts are welded on fully automated plant with an integrated welding process. As such, no additional work processes are necessary and this leads to a significant cost reduction.



Column tubes for steering systems



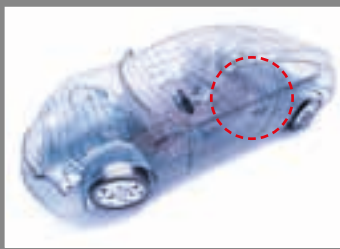
Column tubes

Column tubes are used in the case of electromotor-adjustable steering columns. The tube is worked, arched and punched on special plant. In addition, tothing can be applied. Upon request, the column tube is mounted using bearing rings and blasting bearings.

COLUMN TUBES FOR STEERING SYSTEMS



Tube tothing



Passive safety components

ISOFIX clip



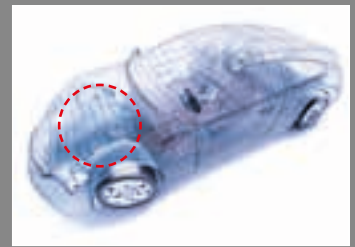
PASSIVE SAFETY COMPONENTS

ISOFIX is a fastening system for children's seats in automobiles which is particularly secure and easy and easy to operate. Löttco developed an automatic coating procedure which enables the ISOFIX clip to be prepared for individual painting.



ISOFIX clip





Crash studs



Crash stud

Crash studs are welded components made from wire / wire or wire / sheeting combinations which additionally serve to protect the driver from injury in the event of a crash. Here as well, Löttco offers different variants with various coatings.



CRASH BARS



Cash stud



Battery clip

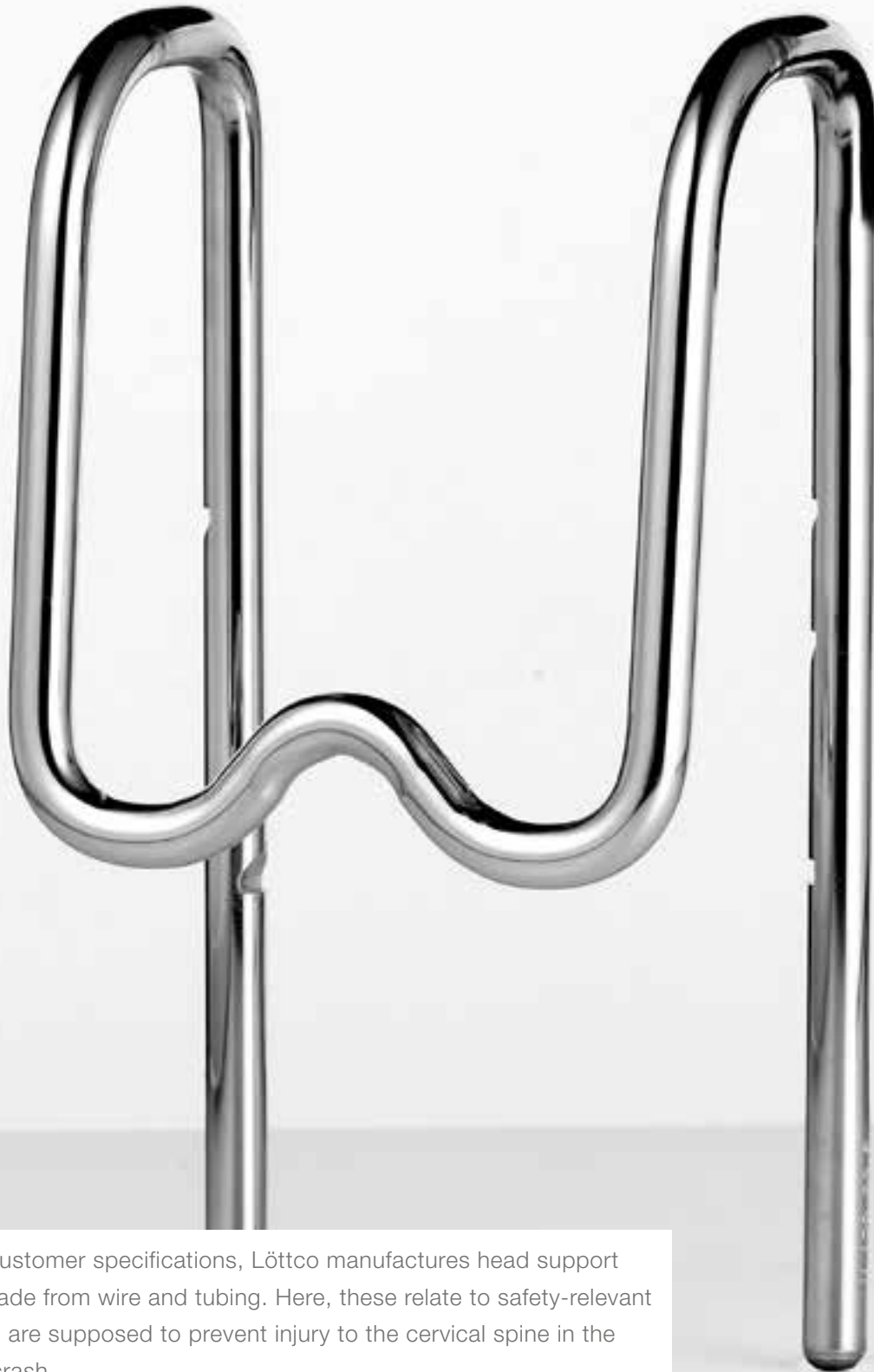


Head support bracket



HEAD SUPPORT BRACKETS





Based on customer specifications, Löttco manufactures head support brackets made from wire and tubing. Here, these relate to safety-relevant parts which are supposed to prevent injury to the cervical spine in the event of a crash.

Löttco is able to produce head support brackets made from tubing with **open and closed notches**. Among other things, head support brackets made from tubing offer the advantage of a weight saving compared to wire and are compatible in terms of function and looks, in spite of the maximum requirements.



Technical upsetting & bending systems

Work takes place on the latest 3D-CNC bending machines and curve controlled universal bending machines:

- **Wires between 2 - 16 mm Ø**
- **Tubes between 3 - 30 mm Ø**

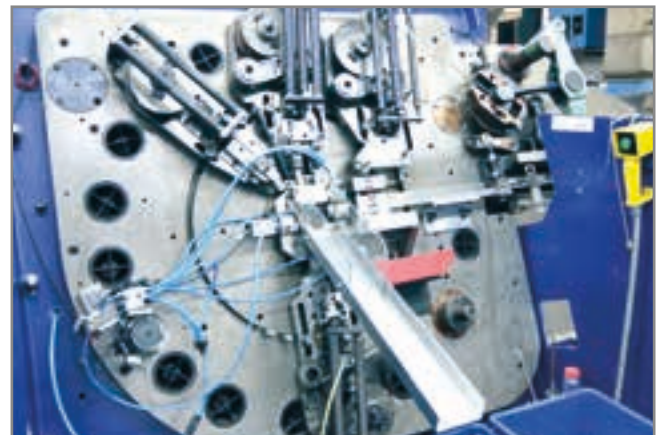
Bent parts made from wire and tubing are manufactured by Löttco in multi-dimensional shapes according to customer needs and drawings. Here, bent wire and tubing parts (which are manufactured with and without a buckled head and flange and made from various types/qualities of wire) are manufactured for various applications, mainly for the automobile industry and its system suppliers/module suppliers.

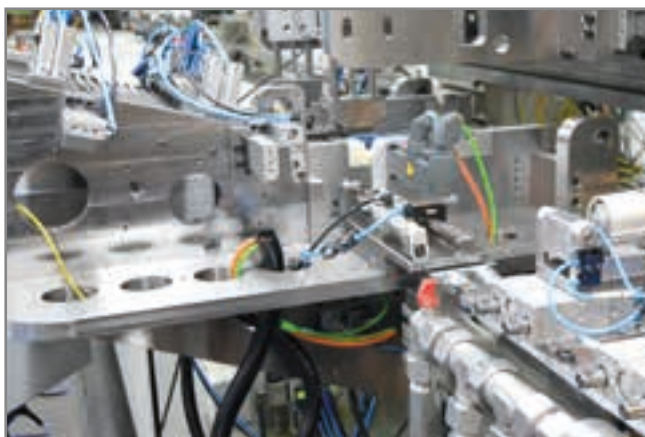
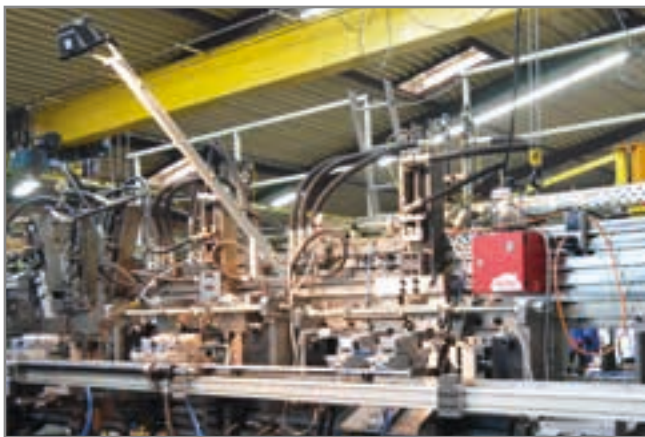
In addition to stabilisation and fastening, different spring functions are also achieved through the use of spring steel wires.

The company's own CNC bending technology is characterised by a high level of flexibility, short set-up times, multi-faceted manufacturing options and maximum precision. Both large, medium and small series are optimally suited to this type of manufacturing technology, as well as prototype manufacturing.

In addition, our curve-controlled universal bending machines are characterised by multi-faceted manufacturing options and a high level of precision. Both large and medium series are ideal for this kind of manufacturing technology.

TECHNICAL UPSETTING AND BENDING SYSTEMS







Welding technology

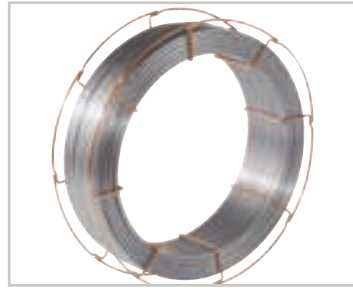


In the field of welding technology, Löttco offers the jointing of wire, strip and pipe material via MIG MAG welding, CMT welding, resistance welding and manual welding. As such, on the basis of customer requests, multi-dimensional structures contain the required functions and characteristics. Stability and rigidity increases as well as material and weight savings can be achieved through the use of raw materials. Robots carry out welding work continuously, efficiently, with precision and with consistent quality. Ideal areas of use are therefore repeat production processes in which the same quality is achieved at inexpensive prices.



WELDING TECHNOLOGY



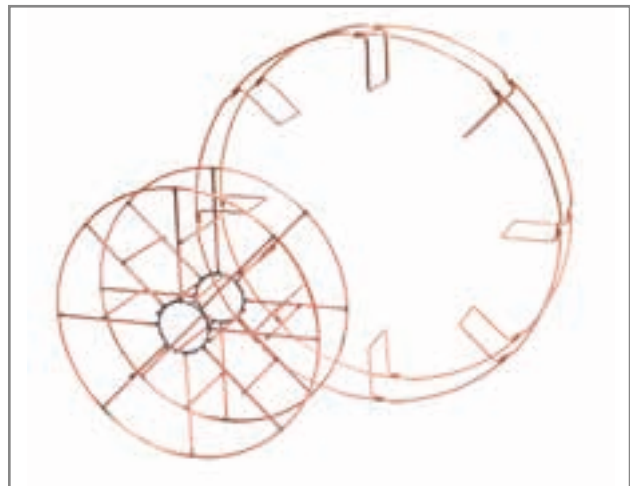
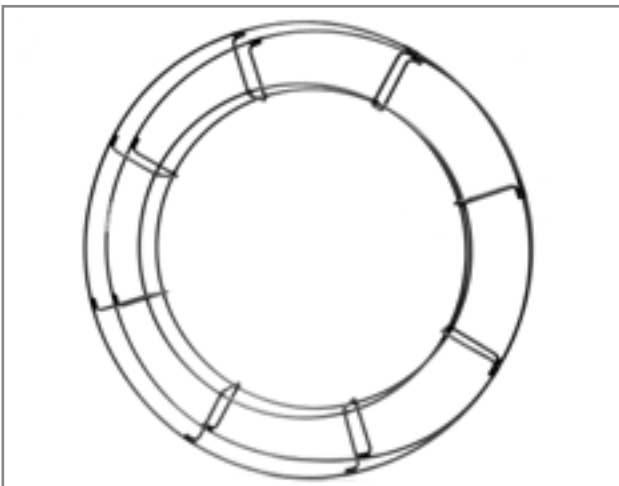


Special-purpose machinery for the manufacturing of welding wire coils



- Robot welding cells with max. 3 robots, with a turntable
(Work surface max. 1900mm x 700mm, possibility for tilting 180°)
- Welding cells with a turntable and 6 devices 2 burners and 1 robot
- Robot welding cells with 1 robot and 2 stationary tables (sliding door) length=900mm depth=500mm
- Electrolytic labelling of parts

WELDING WIRE COIL MANUFACTURE





Technical punching systems



Our manufacturing facilities allow for effective production, both for small as well as for large series. For this, there is a comprehensive fleet of machines which is operated by trained and experienced staff. We currently use:

Eccentric presses up to 250t

Hydraulic presses up to 125t



TECHNICAL PUNCHING SYSTEMS







Plastic technology



Today, hybrid components offer many opportunities to design products.

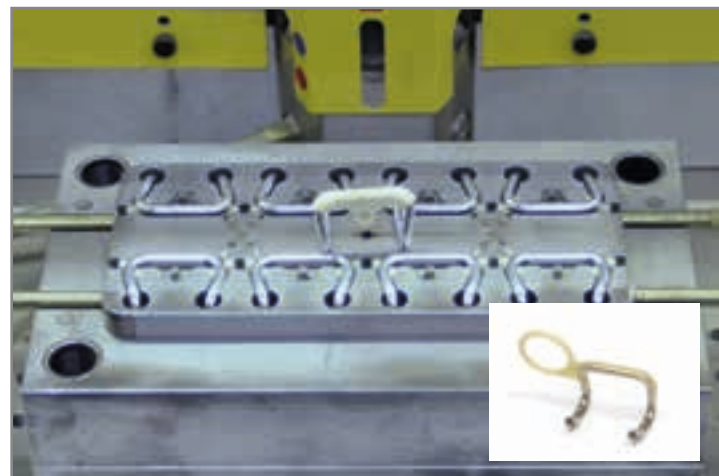
The strength qualities of metal parts, coupled with the free designability of plastics offer functional solutions for reducing weight, noise and improving functional integration, comfort and looks.

With a well-equipped fleet of machinery consisting of injection moulding machines with a mould locking force of 25 – 250 t and a shot weight of up to 500 gr., we are equipped for hybrid components. With a turntable and vertical machines optimised for handling tasks, we are in the position of being able to provide flexible production, even with a small number of pieces.

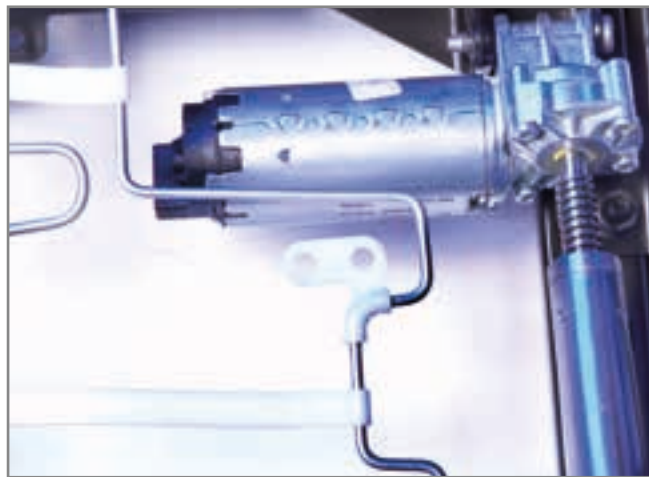
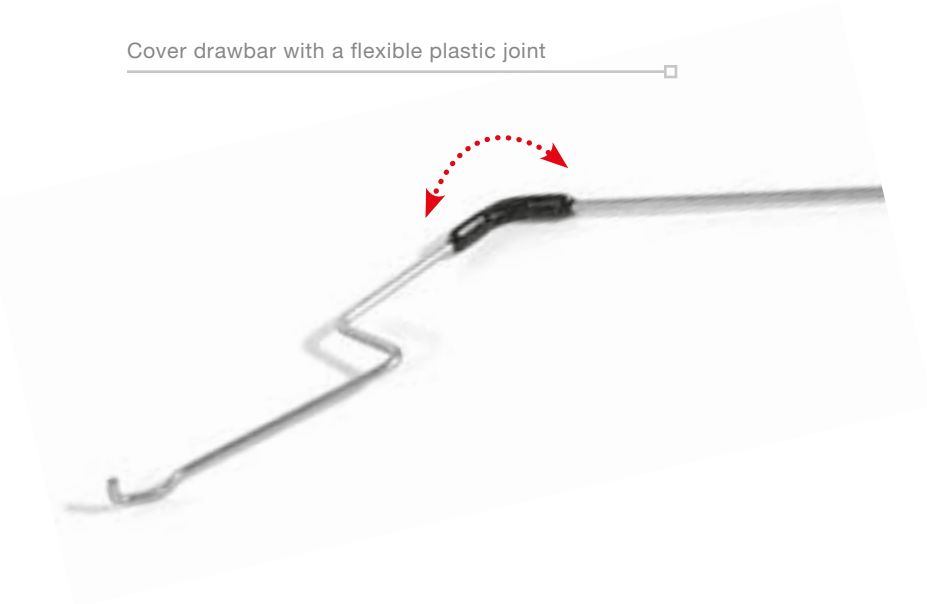
Essentially, the following plastics are used: POM, PC, PA, PP, PS, PEEK

PLASTIC TECHNOLOGY

Manufacturing of hybrid components from a combination of metal and plastics



Cover drawbar with a flexible plastic joint



Car bonnet support with a plastic part



Threaded rod with a plastic overmould



Actuating lever



Toolmaking • Prototype construction



Increased quality requirements affecting our products result in complex toolmaking requirements which have to be implemented. Craftsmanship and modern processing technologies create the conditions for trouble-free, economic serial production.

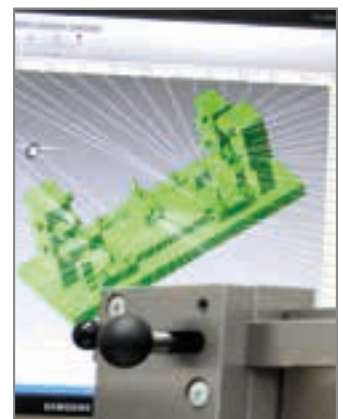
In the field of toolmaking, we create wire bending tools, welding tools, cutting tools, gauges and auxiliary equipment. In order to produce a high number of pieces with the same quality over the years, continuous servicing, maintenance and improvements to the customer's tools are seen as important.



Own construction of gauges and auxiliary equipment

TOOLMAKING • PROTOTYPE CONSTRUCTION

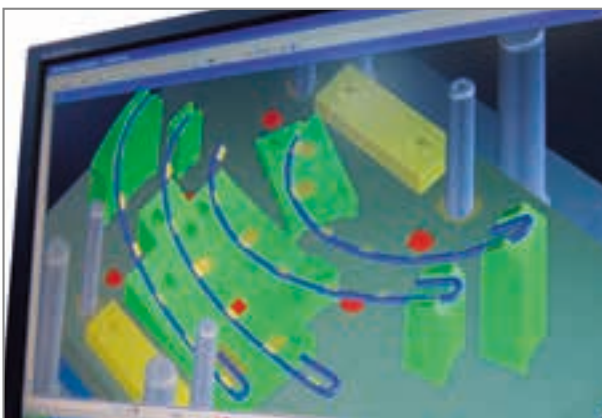




Among other things, the Löttco fleet of machinery consists of:

- Wire etching machines
- CNC milling machines
- Grinders and lathes

Our experience in the field of toolmaking, stretching back over 50 years enables us to react quickly and flexibly to individual customer needs.





Quality comes first

Quality management system ISO/TS 16949:2009



Quality comes first

The production flow is subject to constant monitoring as part of a Quality Management programme. Accordingly, continuous monitoring of the processes is guaranteed at all times. This way, the results of quality assurance directly impact production activities and as such, they serve to optimise our manufacturing.

As a quality policy of Löttco, the continuous improvement of all processes, procedures, methods and processes is laid down in order to achieve the highest level of satisfaction among all interested partners.



QUALITY • QUALITY ASSURANCE





Löttco quality is characterised by:

- **Customer satisfaction:**
the fulfilment of customer requirements and expectations
- **Staff satisfaction:**
the involvement of staff in order to increase motivation and a sense of belonging to the company
- **Environmental compliance:** Compliance with social requirements concerning usability and environmental protection
- **Legal compliance:** Compliance with legal requirements concerning safety and reliability
- **The goal of zero defects:** The continuous application of preventative quality assurance measures in order to achieve the goal of zero defects and avoid the cost of errors
- **Benchmarking:** Comparing own performance with that of the competitor
„Best in Class“ – service: Creating the communication which is required with the customer





Qualität in neuer Form

For a mobile future



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