WELAND

SHEET METAL WORKING

Your complete subcontractor

WELAND IS SHOWING THE WAY

Over the decades, our inventiveness has prepared the way for most of the branches in our business operations. One of these is our department for sheet metal working. Thanks to many winning decisions, we have created the conditions needed to be your long-term partner. The ambition is always to create the conditions for a sustainable, long-term and reliable production thanks to fixity of purpose and modern technology.

OUR JOURNEY

In 1991, our journey towards new goals started when we invested in our first laser cutting machine. We hardly knew what was ahead of us. Along the way, we have passed many milestones and today, we are a complete supplier of sheet metal working where you as our customer can feel confident when you pass on the total responsibility to us. Today, what started nearly 30 years ago as a small side branch is one of our most expansive business areas. All thanks to a swedish entrepreneur with the will to go his own way.

SHEET METAL WORKING

Over the years, Weland has acquired world-class mechanical equipment and large production resources. We possess great knowledge about sheet metal and its properties. These are all factors that make us a complete, strong partner. Together, we can offer unique production opportunities, and you only need one contact who takes the responsibility for, and coordinates, some or all of your production. We also have a very extensive stock of materials, with at least 6000 tonnes of sheet metal, in a wide range of material grades and thicknesses. This means we probably have the right material in store and, for this reason, we can offer delivery times that few can match. With broad competence and strict requirements, we satisfy your requirements.

DESIGN

All our laser machines are programmed in our drawing office, where our staff have many years of programming experience.

The drawing office works using the latest CAD equipment, with SolidWorks being our principal tool. We help you produce drawings or will work based on drawings you have already created. Our team has programming running through their veins, enabling us to program an average of fifty new parts per day, 365 days a year. The drawing office is also where we make adjustments to our own production, prepare material for components, and calculate cutting times.

TENONING

Even while parts are being laser cut, they can be prepared with tenons, mitres, notches and holes in the material. This gives a perfect fit prior to welding without the need for expensive jigs. Tenoning facilitates assembly and joining of parts. You get a perfectly assembled product.

MINIMISATION OF WASTAGE

We work hard to get the most out of each piece of sheet metal, or, to put it another way, to have as little wastage/scrap as possible. Our goal is always to be at the cutting edge of new technology. This also applies to our software. We have an advanced system for monitoring/reporting the consumption of materials. In this system, it is easy for us to follow the exact progress of a cutting plan, to see which parts are being cut. All material reporting is done automatically, which means that all of our material balances are always up-to-date and we can easily monitor how much waste is generated.

All stages of the production chain are subject to careful control and we work in accordance with the ISO 9001 quality management system. We are also environmentally certified in accordance with ISO 14001.

SHEET METAL & TUBE STOCK

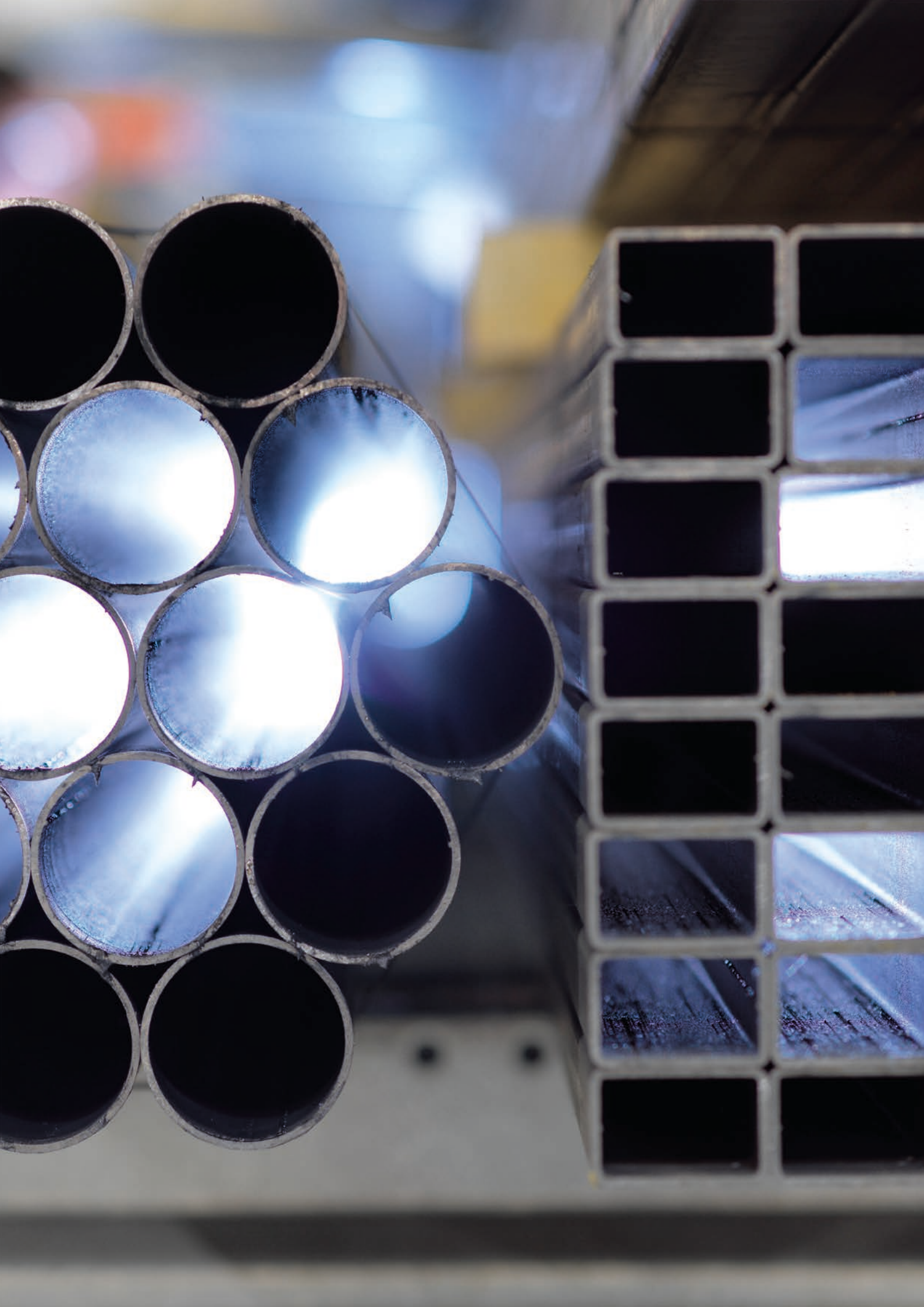
We has an extensive stock of sheet metal and tubes in many different material grades and dimensions.

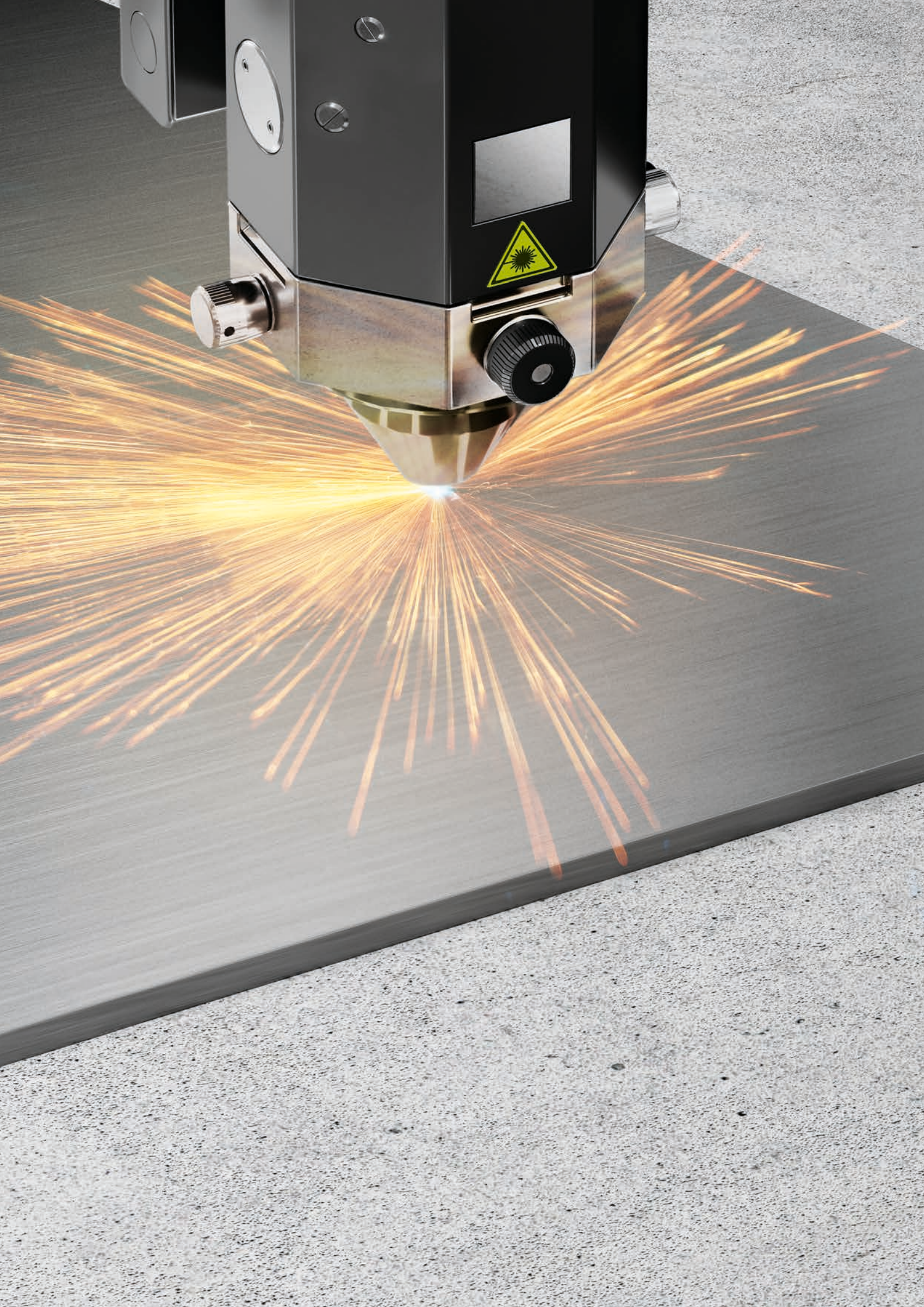
To enable us to meet our customers' demands for quality and prompt delivery, a very extensive stock of sheet metal is required. We always have at least 6000 tonnes of sheet metal in stock, in most grades and thicknesses. These include cold-rolled sheet metal from 0.5 to 3.0 mm, hot-rolled pickled sheet metal S355 MCD - S700 MCD from 3 - 20 mm and stainless steel 1.4301 and acid resistant 1.4404 from 1 to 15 mm. In addition, we also have large stocks of high strength thick plate, type S690QL and S890QL.

Except the above, many other grades of sheet metal and dimensions are also available.

TUBES AND HF HRS BAR

We also have an extensive stock of tube in various dimensions and material grades. If we do not have the right material in stock, we can obtain it quickly thanks to our good contacts with suppliers.





CUTTING

We offer many different types of cutting methods in our production. We can help you with the cutting of both sheet metal and tubing. In our modern fleet of machinery, we have the resources and knowledge to perform the majority of metalworking processes with precision, experience and to the highest quality.

LASER CUTTING

Weland has a comprehensive modern fleet of machinery for sheet metal working. We have around 30 laser cutting machines in shift operation. In total, we have the capacity to cut more than 160 tonnes of sheet metal every working day. We are continuously working to improve the efficiency of our machine fleet and the majority of our machines are equipped with 10 kW fibre laser, which makes the production faster and more sustainable. Come to us, and make your ideas reality. We have good capacity and are at your disposal.

PROTOTYPE PRODUCTION

Laser cutting is a superb method for manufacturing prototypes. Because there is no need to make any special tools, this is a very rational production method. We are at the cutting edge, and we have invested extensive resources in digitalising our manufacturing, Industry 4.0. Our machines are integrated with, and connected to our CAD/CAM and ERP-systems for high productivity and good availability.

TENONING SYSTEM

As parts are being laser cut, they can be prepared with tenons, mitres, notches and holes in the goods. This gives a perfect fit before welding without any need for expensive jigs. The tenoning facilitates the assembly and joining of parts. You get a perfectly assembled product.

CUT SURFACES AND MATERIALS

The cut surfaces are completely perpendicular in laser cutting. The cut surfaces are so even that, as a rule, grinding is not needed. Our fleet of machinery is regularly updated and our latest machines for laser cutting can handle sheet formats up to 6000 x 2500 mm.

CAPACITY

- Max. material length: 6000 mm
- Max. material width: 2500 mm
- Max. thickness: Carbon steel 25 mm, stainless steel 10 mm, aluminium 5 mm.

CAPACITY

- Max. material length for cutting: 18000 mm
- Max. dimension: ø 508 mm or 400 x 400 mm
- Min. dimension: ø 10 mm or 10 x 10 mm
- Max. thickness: 16 mm
- Max. weight: 3600 kg or 200 kg/m
- Tapping: M3 - M12

TUBE CUTTING

We have many years' experience and knowledge of tube laser cutting. We have some 20 machines for tube laser cutting with different characteristics such as threading and joint preparation. The majority of our machines operate with fibre laser, which results in a more sustainable production. In our continuously expanding fleet of machines, we have the ability to cut everything from small tube dimensions up to tubes that are 508 mm in diameter. As components are being laser cut, they can be prepared with tenons and holes in the goods, which gives a perfect fit prior to welding.

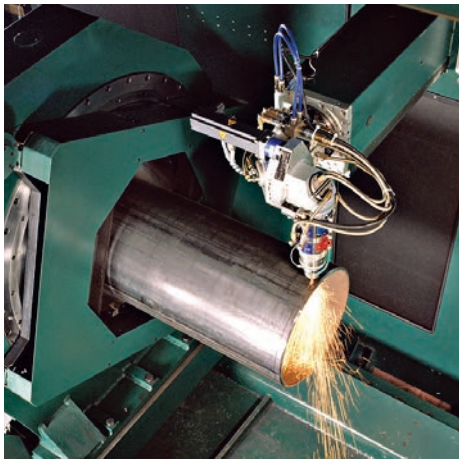
TUBE CUTTING

FIXED CUTTING HEAD

Laser cutting of tubes with fixed cutting head is the traditional method for laser cutting tubes. The cutting head is fixed and always directed towards the centre of the tube. Section surfaces in HF HRS sections are perpendicular to the even surfaces. Cutting of notches and products is done with great precision and speed. This is a superior production method for both small and large series.

MOVABLE CUTTING HEAD

Cutting with a movable cutting head provides the option to produce components not previously possible using laser cutting. Joint preparation for welding can be cut without any finishing. Countersinks can be cut at the same time as the holes are made. We also have tube laser machines for in-machine tapping. Tube “edge-to-edge” joints with curved surfaces are cut with great precision, which means the surfaces fit together perfectly. Angled connections and tube in different dimensions can also be produced. We have a large capacity with automatic production of materials, even for heavy duty dimensions.



JUMBO CUTTING

For heavy duty and larger profiles, we have equipped our fleet of machinery with two Adige Jumbo tube laser cutters. The machines have the capacity to cut tube up to Ø 508 mm. This opens up entirely new production opportunities in the heavy duty segment such as the steel construction industry. Apart from round and square profiles, we can also cut in oval, semi-oval and elliptical profiles as well as rolled steel beams.

CAPACITY

- Max. material length: 6000 mm
- Max. material width: 4000 mm
- Max. thickness: 100 mm

WATERJET CUTTING

Waterjet cutting is one of the alternatives when laser cutting is not possible. We have many machines available and can cut most material and dimensions.

Our machines are equipped with six cutting heads that cut simultaneously, which contributes to a more efficient production. With a large stock of sheet metal, we can deliver with short lead times. The method is gentle to the material, since it is a cold cutting method.

There are no structural changes in the edge zone due to heat effects. This also means that all types of material can be cut, including wood, glass, natural stone, ceramic, rubber, sheet metal and also other non-porous materials.

GAS CUTTING

For cutting very heavy duty plate sizes, gas cutting is a good alternative. The machine can handle thicknesses up to 200 mm.

This is where we cut the really heavy-duty sheet sizes with precision and impressive speed. Four cutting heads and double table for setting up sheet metal provide a very large capacity. The alternative to gas cutting is plasma cutting, and the choice of which method to use is determined by thickness and requisite tolerances.

CAPACITY

- Messer Multiterm 5000 cutter, 4x gas burners
- Model Alfa Torch
- Max. material length: 12000 mm
- Max. material width: 2500 mm
- Max. thickness: 200 mm

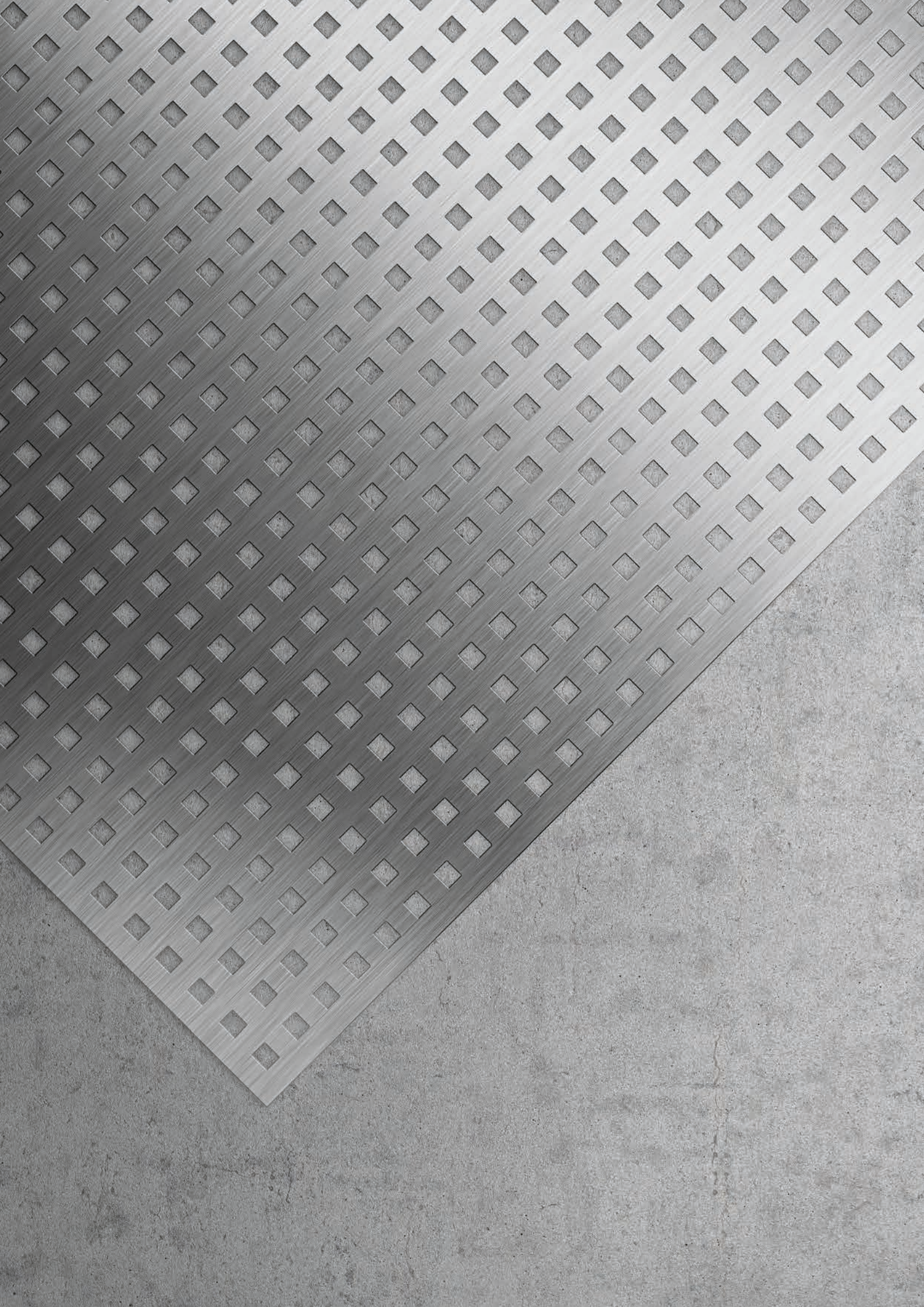
CAPACITY

- 2x cutters, model Hyperterm HPR 260
- Max. material length: 12000 mm
- Max. material width: 2500 mm
- Max. thickness: 50 mm

PLASMA CUTTING

Plasma cutting is a good alternative for cutting medium duty plate dimensions. The machine can handle thicknesses up to 50 mm.

The machine cuts with high precision and impressive speed. A dual cutting head and double table for setting up sheet metal affords a very large capacity. One alternative to plasma cutting is gas cutting. The choice of manufacturing method is determined partly by the thickness of the material, and partly by the requisite tolerances.



PUNCHING

We can punch in both sheet metal and tube. With Sweden's most modern fleet of machinery, we support you from idea to finished product. We can work with most CAD formats and can quickly start up our production from a complete set of supporting documentation.

PUNCHING

In our modern machine lines, we offer punching of sheet metal and tubes, and are set up to handle both small and large volumes. We support you all the way from concept to finished product.

Punching affords a high level of precision and flexibility, and is a very efficient method for thin sheet metal working. We have four machine lines for punching, each with unique characteristics to satisfy the shifting needs of the market.

The production lines are equipped with punch heads, angle shears, and automatic folding machines. All lines are highly automated and can handle materials from coils or output sheet metal to finished component. On the same line, we can punch, cut, shape, fold and stack parts, giving us huge flexibility with short set-up times and high precision. Panel bending affords significant time advantages compared to edge pressing. This makes punching a multi-faceted and cost-efficient method for sheet metal working.

CAPACITY

PUNCHING

- Max. material length: 4300 mm
- Max. material width: 1500 mm
- Thickness: 0.5 - 8.0 mm

BENDING

- Max. length (X): 3990 mm
- Max. width (Y): 1524 mm
- Min. length (X): 285 mm
- Min. width (Y): 190 mm
- Max. diagonal dimension (D): 4000 mm
- Thickness: 0.5 - 4.0 mm

CAPACITY

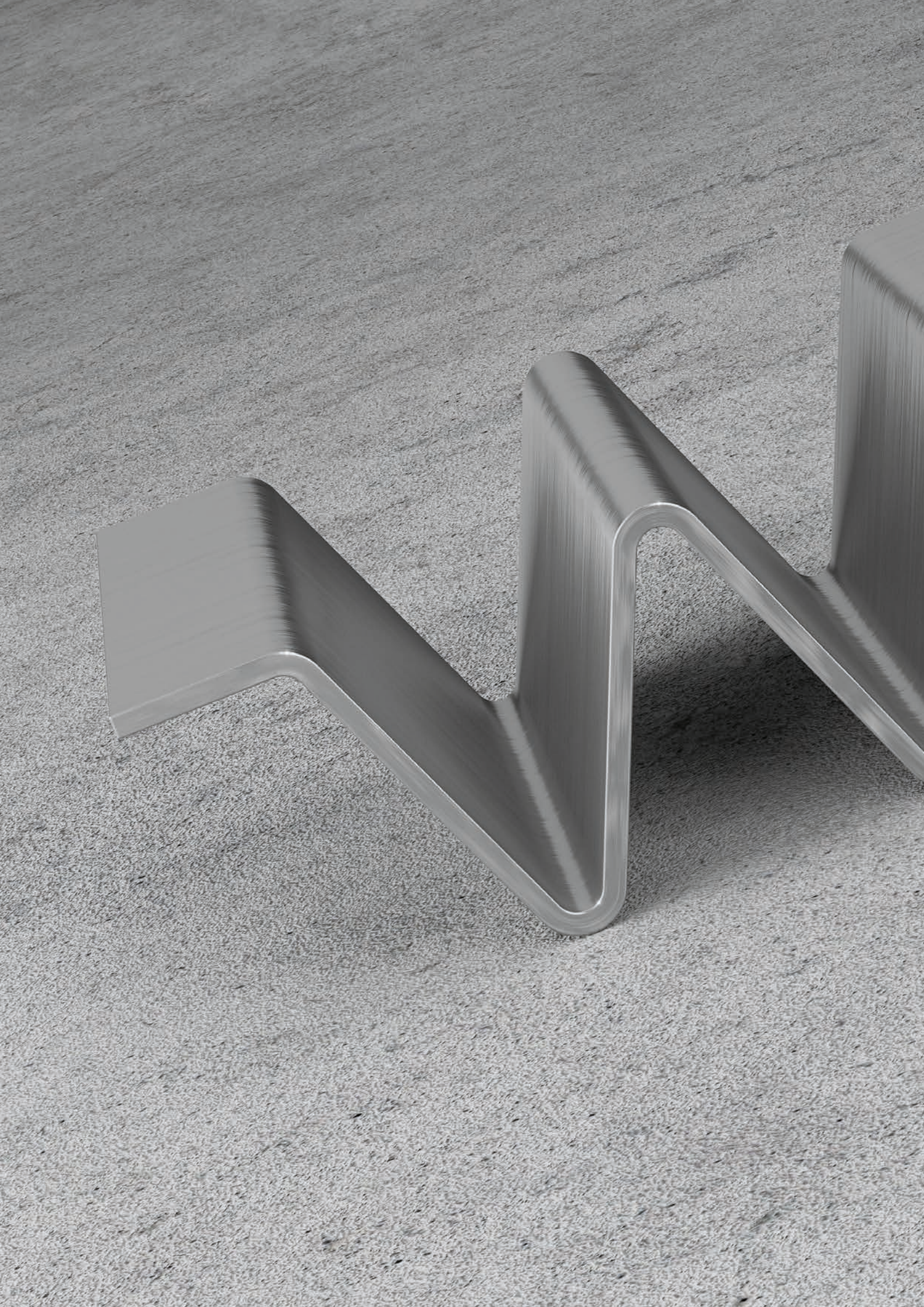
- Max. rectangular tube: 110 x 30 x 3 mm
- Max. square tube: 80 x 80 x 3 mm
- Max. tube length: 3500 mm
- Min. tube length: 800 mm
- Max. tube weight: 30 kg
- Cutting force: 15 tonnes per punch

PERFORATION LINE

We offer perforation of tubes in a whole host of tube dimensions and hole patterns. We can also produce special tools and customised solutions, for things such as store interiors.

Our production features a perforation line where we perforate holes in square tubes. The efficient perforation machine can handle a number of different dimensions and perforates holes in several tubes at a time, which is a quick and rational method that enables us to off short lead times and a high level of quality. Our hi-tech expertise, in-house production facilities, and flexibility makes us a leading supplier of perforated tubes. Perforation of tubes is suitable for many areas of application and solutions. One common area of application is for perforating products that are used, for example, in store interiors.

Weland has a large number of standard tools in a whole host of different tube dimensions and hole sizes/patterns for perforating tubes, but also fabricates new custom tools to satisfy new hole pattern or tube size requirements. This means that we can produce unique customised solutions for the perforation of tubes.



MACHINING

We offer several different types of sheet metal working – post-production processing, cutting machining, bending, and welding. We have both the equipment and expertise to carry out all forms of sheet metal working, no matter whether the project is big or small. With a combination of high level of expertise and modern production technology at our disposal, we offer flexible and cost-efficient machining of sheet metal and tube constructions.

FINISHING

We offer tumbling, deburring, levelling, and blasting of sheet metal components, and, thanks to our experience and expertise, can determine which method is best suited for your particular business.

TUMBLING

Tumbling is especially suitable for deburring small details. The components are tumbled to remove burrs and sharp edges. This method is used most frequently when the components will be surface treated.

DEBURRING

Components can be deburred to remove burrs and sharp edges. This is important in order to obtain good adhesion for later surface treatment, e.g. painting etc. This method simultaneously machines both the upper and lower sides.

LEVELLING

We have two levelling machines, an HRC levelling machine and an ARKU FlatMaster 120 200, which level sheet metal components with thicknesses up to 35 mm and widths up to 2000 mm to a very high degree of precision. The levelling machines consist of a number of rollers that, by CNC control, automatically regulate the roller pressure and feed to achieve the optimum results. Thanks to the CNC control, no adjustments need to be performed to take into account holes and notches in the components.

CAPACITY

LEVELLING

- Component thickness: 0.8 - 35 mm
- Component width max.: 2000 mm
- Level tolerance: +/- 1 mm/m

CAPACITY

- Max. length: 8000 mm
- Max. width: 1300 mm
- Max. height: 2600 mm

CUTTING MACHINING

In our cutting machining equipment, we carry out tasks such as milling, drilling, reaming, and high precision threading.

CUTTING MACHINING

If the precision of the laser cut holes is not sufficient, we carry out reaming or another process in order to attain the correct tolerance. Normally, laser cut holes can be threaded immediately, without any other pre-treatment. Horizontal machining using a rotating table makes it possible to machine from three sides in a single set-up. We have some 20 Mazak brand machines for cutting machining, including an HCN 5000 with PalleTech. All our machines have different characteristics to adapt to the changing needs of the market. Thanks to our horizontal multi-operation machine, we can handle cutting machining for heavy duty and more complex assignments. The machine is equipped with 120 different tools that enable it to carry out many different types of operation in a single process. It has a maximum machining range of 1.7 x 1.4 x 1.5 metres.

ROBOTCELL

Our three flexible machining cells afford the opportunity to make rapid changeovers. Drilling and milling with short cycle times results in a very high number of component changes. In many ways, this is costly and non-ergonomic work that requires somebody to be present at the machine at all times to ensure efficient production. A concept has been developed in the form of a machining cell that combines a high degree of flexibility and the potential for rapid changeovers. The cell consists of a horizontal multi-operation machine. The robotcell contains long conveyor belts that makes buffering for unmanned operation a possibility. In the cell, it is possible to unload finished components at three pallet locations.

BENDING

Bending involves sheet metal being bent into the specified shape using an edge press. Edge pressing is a very important element of the sheet metal working process to ensure that we can deliver a complete sheet metal product.

MODERN MACHINES

As a company, we are at the vanguard of developments in respect of bending. Our modern machines can handle most materials and dimensions. A wide range of standard tools afford us the opportunity to quickly start production of a new project at a low cost.

If you require a particular form or shape, we will produce new tools based on your exact requirements. We are more than happy to assist you with your sheet metal bending needs.

EFFICIENT EDGE PRESSES

We have 10 or so edge press machines of different sizes and bending is CNC-controlled. Edge pressing is performed as a finishing step for one of our cutting processes. Our edge presses have a capacity of 40 to 800 tonnes.

Our 800-tonne capacity edge press allows us to take on work very few companies can do. The press force of a whopping 800 tonnes and maximum working length of 6200 mm inspire respect. Add to this a sophisticated CNC control unit, and we have a unique resource at Weland. Our newest edge press has a press power of 320 tonnes and maximum working length of 4100 mm.

CAPACITY

- Max. press force: 800 tonnes
- Max. bent length: 6200 mm
- Max. tool space: 735 mm
- Max. stroke: 565 mm
- Angle measurement


WELAND

WELDING

We are certified within both robot welding and manual welding, and able to offer cost-effective, high speed, and precise sheet metal working thanks to our modern machine park.

Our extensive experience of mixed constructions makes us skilled in the art of adapting welding to your specific criteria, no matter whether it concerns mechanical or manual welding. We help you with welded components in both smaller series and larger volumes.

MANUAL WELDING

For parts that are manufactured in small series, manual welding is the best alternative. We are certified in accordance with EN ISO 3834-3 and carry out welding on our own premises, with welders certified in accordance with SS-EN 287-1.

ROBOT WELDING

Robot welding is particularly well suited for series production and components that are to be fabricated in large volumes. We have robot welding, robot cells with high-performance robots available as well as some ten robots in various size ranges.

SURFACE TREATMENT

Weland AB performs surface treatment of its products in our in-house surface treatment facilities. We work with surface treatments such as priming, final painting, blasting, and hot dip galvanising.

Because we control the process and have extensive experience of surface treatment methodologies, we can guarantee a high level of quality. It also means that we can offer our customers a finished product that exactly matches their requirements.

Powder coating is done at Weland AB, whilst - subsidiary Weland Welded Components AB carried out wet painting. Zinken Weland AB handles hot dip galvanising of steel. Which is the best option depends on how and where the product is to be used.

PAINTING

In order to satisfy our customers' varying needs and requirements, we offer our products in both primed and fully painted versions. Surface treatment work is carried out in modern and efficient painting facilities. Because we have access to large premises, we can work on bulky objects measuring up to 10 x 10 metres for both blasting and painting. You can choose any shade you want from the entire RAL scale.

Powder coating produces a very good finish and is particularly suited for products that are to be used indoors. Wet painting is, in many ways, a sustainable alternative that is suitable for use with products that require a durable surface treatment but cannot be hot dip galvanised.

For wet painting, Weland Welded Components AB works using Polane paint, which is characterised by the minimal amount of paint required. This makes it an environmentally sustainable alternative, whilst the low amount of paint required means that it dries quickly. Wet painting using Polane is the perfect choice for products that are to be used outdoors but which, for various reasons, cannot be hot dip galvanised.

HOT DIP GALVANISATION

Hot dip galvanisation affords the best level of rust protection and is therefore particularly good for steel products that are to be used outdoors. We can also paint a product that has a hot dip galvanised bottom so that it blends into a specific environment.

Products that are hot dip galvanised are dipped into a zinc bath containing molten zinc. A reaction occurs in the contact surface between the steel and liquid zinc, forming a ferrous/zinc alloy. This means that the zinc layer cannot flake off or rust from the inside. Zinken Weland AB, which is the company responsible for carrying out this work, has a modern hot dip galvanisation facility located in Ulricehamn.

PICKLING

When stainless are welded and ground, the surface layer of the metal is damaged. If these areas are not treated by pickling, there is a significant risk of corrosion developing. To restore the surface and obtain satisfactory corrosion resistance, the product has to be pickled.


WENZEL

CONTROL MEASUREMENT

We always focus on quality. We are certified according to ISO 9001, 14000 and EN 1090. We deliver to many high-performance customers, for example in the automotive industry. Our quality control department has at its disposal measurement equipment of the absolute highest class. In our measurement room, we have, among other equipment, a CMM measuring apparatus of impressive dimensions. The solid measurement table is a full 5 x 2 metres and weighs 19 tonnes. We can measure details in size up to 4 x 1.5 metre with a precision of 3.5 µm + L/300. Apart from the CMM equipment, we also have various types of measurement arms for simpler measurements.

STOCK-KEEPING

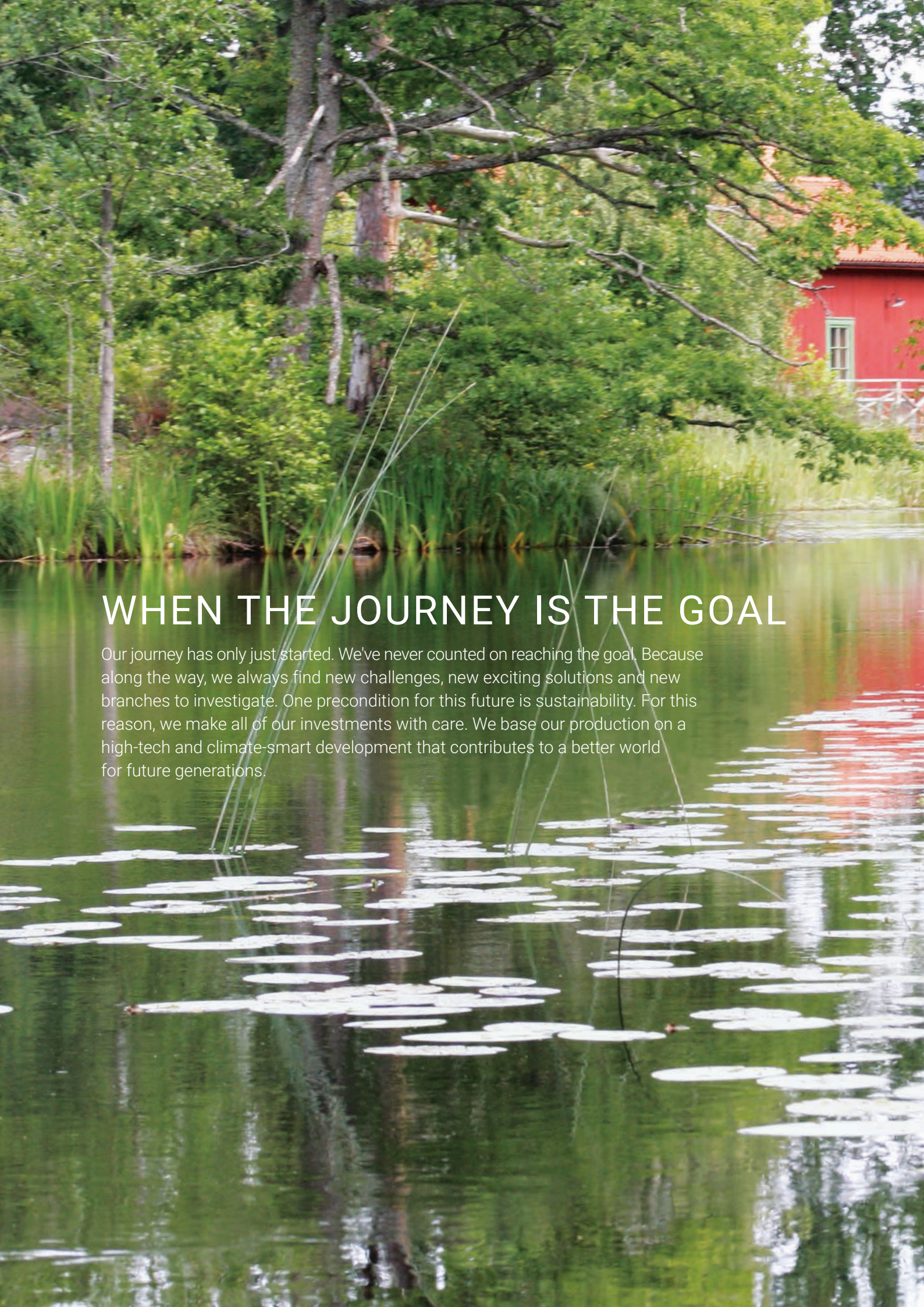
For larger customers, or for products in large series, we can stock products on our customers behalf in a very rational manner in our automatic warehouse. Orders are placed by call-off in close cooperation with the customer.


FARMA
ALSTOR
ALSTOR 300

REFERENCES

OUR EMPLOYEES

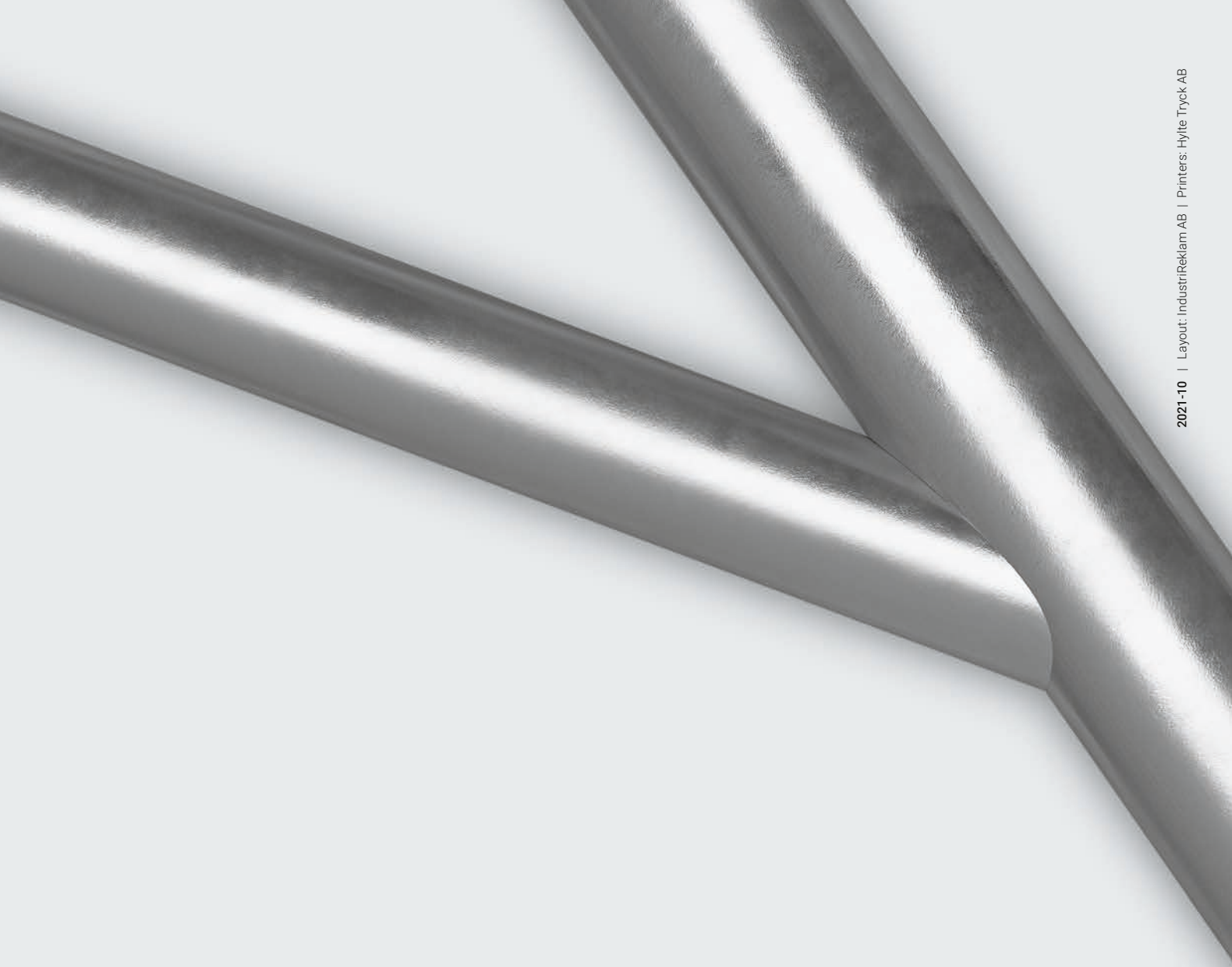
Steel primarily consists of iron and it’s most important alloying element is carbon. Without the carbon's properties, the magic in the steel vanishes. Our core and most important ingredient is our staff. We have created a community, where our employees' knowledge and experience is the key to keeping our journey on course, year after year. It's from this philosophy that we create magic.



WHEN THE JOURNEY IS THE GOAL

Our journey has only just started. We've never counted on reaching the goal. Because along the way, we always find new challenges, new exciting solutions and new branches to investigate. One precondition for this future is sustainability. For this reason, we make all of our investments with care. We base our production on a high-tech and climate-smart development that contributes to a better world for future generations.


WELAND



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