MESSER
Cutting Systems

PRODUCT RANGE
MESSER CUTTING SYSTEMS

CREATING SOLUTIONS BEYOND MACHINES

THE MESSER EXPERIENCE

CUTTING-EDGE HOLISTIC SOLUTIONS FOR TODAY'S MANUFACTURING CHALLENGES

We are a global solution provider for the metal working industry. Our oxyfuel, plasma and laser cutting systems are designed to enable our customers to better achieve their ambitions with high productivity, flexibility and quality products.

Our customers and their needs are at the center of all of Messer Cutting Systems' developments. In everything we do, we aim to offer them added value. We are convinced that we can ensure this by transforming from a mere manufacturing company to a full solution provider.

Therefore, today, we are focusing on customer-driven innovation and 360-degree solutions going beyond the mere machine. We aim to address and support customer challenges by blending our global product portfolio of machinery, software, automation, know-how and service support into the best overall solution that our customers benefit from.

From the first contact with our sales team and products through to after-sales service and from simplest machine to complex solution, we want you to experience the quality, precision, durability, reliability and innovative strength of Messer Cutting Systems. In other words: **We want you to feel the Messer Experience.**

OXYFUEL TECHNOLOGY

PRODUCTS IN ORIGINAL MESSER QUALITY

As market leader in the field of Oxyfuel Equipment we offer a complete product range in Original-Messer-Quality with the most modern solutions for every application. Messer Quality pays off in economy and long productive lives. From the take-up point through safety devices, hoses and handles right up to the hand and machine equipment including the special nozzles: We have the perfect solution for every use case.

Product range:

+ Cylinder Regulators and tapping points
+ Safety devices
+ Handles and machine shafts
+ Welding, soldering and heating applications
+ Hand- and machine cutting torches
+ Nozzles
+ Accessories

GRIFLAM HEATING TECHNOLOGY

COMPLETE SOLUTIONS FOR ALL INDIVIDUAL HEATING TASKS

GRIFLAM heating technology includes a multitude of heating inserts and heating torches. Our individual torches are manufactured for different gases, for the required workpiece geometry and the necessary flame power. The development and manufacturing of authorised and supervised heating and hardening units belongs to the core competences.

Scope of supply:

+ Handles, shafts, injectors
+ Gas supply systems
+ Control systems
+ Heating inserts
+ Fork, row and ring torches
+ Ignition and monitoring equipment
+ Hardening torches
+ Accessories
+ Installation and training

THE WHOLE WORLD OF OXYFUEL TECHNOLOGY

Our programm is oriented on the multi-faceted demands of modern practices so it offers the suitable systems for every welding, cutting and heating process. The products are divided into individual ranges according to their main application, so they deliver the best performance both individually and in combination. To complete these we also offer comprehensive systems for heating and hand equipment for steel mill applications as well as our services.

Our many years of co-operation with gas suppliers have given us a high level of competence in the use of technical gases. Experience in welding and process technology is combined with innovation, quality and reliability since 1898.

STEEL MILL EQUIPMENT

PARTICULARLY ROBUSTLY BUILT

Specially suitable for the demands in the steel mill and steel producing industries, scrap yards and foundries. Comprehensive product range for all hand cutting and scarfing applications. The cutting range of heavy duty cutting torches goes up to 700 mm. A wide range of high quality flame cutting nozzles, heating nozzles and accessories round out the complete product. Suitable for: Acetylene, Propane, Methane, natural gas, MAPP®.

Scope of supply:

+ Heavy duty cutting torches for hand cutting and the splitting of steel scrap
+ Powder feed equipment
+ Hand scarfing torches to deal with cracks, inclusions and local defects
+ Powder hand cutting torches for high alloyed steels and cast iron
+ Powder machine cutting torches
+ Oxygen lances for hole piercing and for cutting of non-ferrous metals and slag
+ Powder distributors

PROCESSES AND SYSTEMS

MULTI-FACED, APPRO-PRIATE, EFFICIENT

PROZESS OPTIONS

Oxyfuel

Despite the increasing significance of other cutting processes such as plasma and laser cutting, oxyfuel flame cutting remains a very economical process. For material thicknesses of up to 600 mm processed on machines, as well as for thicknesses of up to 3200 mm when cutting manually with hand-held devices, flame cutting remains the only practical alternative. For weld preparations it is possible to produce X, V, Y and K cuts.

Advantages:

+ Good cut quality
+ Smooth, vertical cut edges
+ X, V, Y and K cuts for weld preparations

Plate thickness range: 3 mm – 3200 mm

PROZESS OPTIONS

Plasma

Many innovations in plasma technology over the past years make possible precision cutting of Mild Steels, Stainless Steels and Aluminium. The focus of the latest developments is on improving the cutting of holes as well as the extension of consumable lives which give reduced reworking and lower operating costs.

Advantages:

+ Very good cut quality
+ Moderate heat input
+ Low hardening of the cut face
+ High cutting speeds

Plate thickness range:
Mild Steel: 1 mm – 80 mm
Stainless Steel: 3 mm – 160 mm

PROZESS OPTIONS

Laser

Laser cutting is the royal class of cutting processes for the metalworking industry. If you require cuts with the highest quality and the best possible accuracy, then laser cutting with its straight cut edges, narrow cutting kerf width and the lowest heat input is the right technology.

Advantages:

+ Very good cut quality
+ Low heat input
+ Tightest component tolerances
+ Reduced maintenance
+ Increased efficiency through material handling

Plate thickness range:
Mild Steel: 50 mm (O_2)
Stainless Steel: 40 mm (N_2)

DROP & CUT

METALMASTER 2.0

Special cutting system for precision plasma processes. Oxyfuel optional.

Dual side longitudinal drives and precision linear guides guarantee high cutting quality and consistency. The plate support table, which is integrated into the system, is divided into a number of sections for efficient fume extraction even with a smaller fan/filter unit.

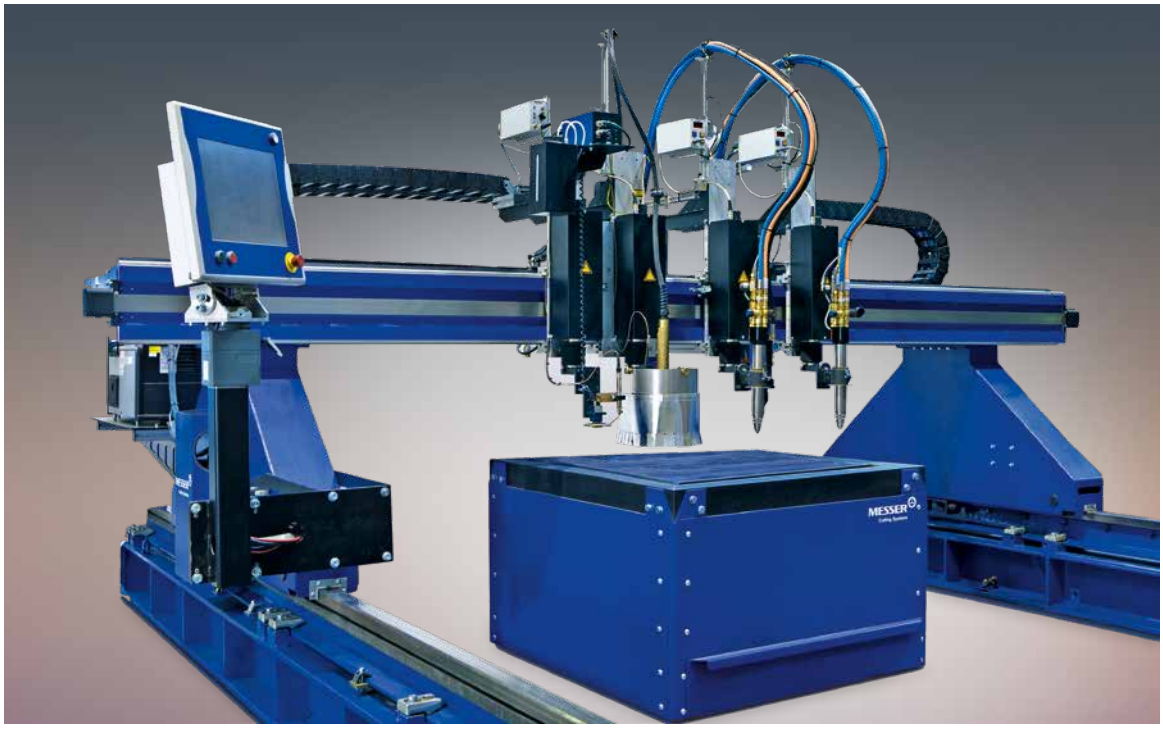
The highly dynamic performance of the machine is achieved through low weight with high design rigidity.

Technical Data

+ Working widths: up to 2.000 mm
+ Travel speeds: up to 35 m/min
+ CNC controlled Z axis with the torch lifter GL180
+ Specialised for the latest precision plasma processes
+ Dimensional tolerances to DIN EN 28206
+ Simple installation drop & cut
+ Cutting processes: Oxyfuel, dry plasma
+ Marking processes: Punch marking, plasma marking

Model	3015	4020
Working width	1500	2000
Overall width	3200	3900
Working length	3000	4000
Overall length	7600	8900
Table height	1000	1000

All values in mm



EASY OPERATIO

MultiTherm® Eco

Fast and efficient.

Compact design, simple operation and high flexibility – that is the MultiTherm® Eco.The machine is conceived for daily work in a standard cutting shop. The high level of automation, simple set-up and operation enable high productivity and the production of high quality parts – quickly and economically.

The symmetrical wheel-housings and the parking space for unused torches over them optimise the working width in the narrowest spaces. The electrical cabinet is positioned over the wheel-housing so it is not exposed to thermal radiation from the cut plate. It is accessible from the side to simplify maintenance and service.

Technical Data

+ Working Widths: up to 3.000 mm*
+ Travel Speeds: up to 20 m/min
+ Cutting processes: Oxyfuel, dry plasma
+ Marking processes: Punch marking, plasma marking

*Depending upon machine equipment

Track gauge	2600	3100	3600	4000
Working width	1500	2000	2500	3000
Overall width	4070	4070	5070	5070
Length	1500	1500	1500	1500

All values in mm

PRODUCTIVITY REDEFINED

ELEMENT

Operate safely. Stay flexible.

We know what today's metal processing industry requires from you – with our flexible ELEMENT platform we are already setting the course for a successful future today.

Apart from the high level of productivity and precision you have come to expect from us, this solution offers customised configuration options and updates, enabling you to respond to future requirements. This gives you a real competitive edge – helping you to stay ahead in the long run.

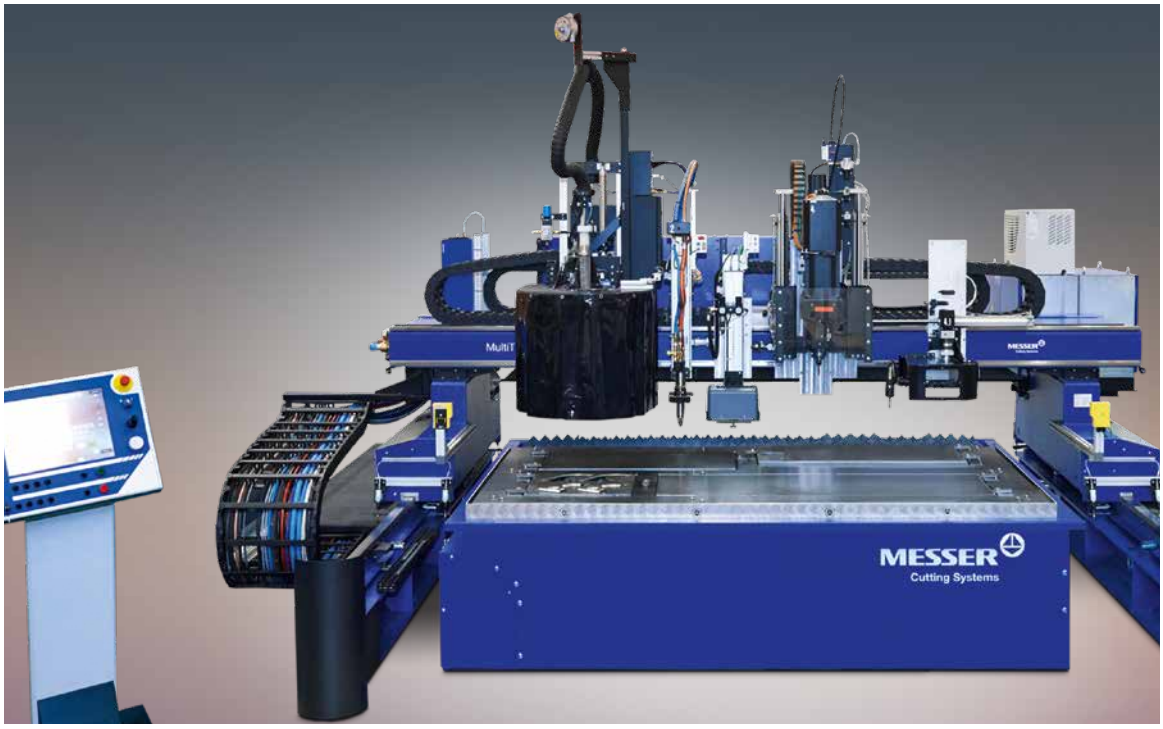
Technical Data

+ Cutting width 1.600 mm to 4.100 mm*
+ Cutting length up to 47.000 mm
+ Cuts material up to 300 mm
+ Mild Steel, Stainless Steel, Aluminium
+ Positioning speeds up to 50 m/min
+ Reinforced steel weldment construction with high rigidity beam
+ Enclosed powertrack in both axes in standard
+ Floo or H-Beam installation
+ Up to sic torch stations

*Depending upon machine equipment

Track gauge	2600	3100	3600	4000	4600	5000	6000
Working width	2100	2600	3100	3600	4100	5100	5600
Overall width	5700	6200	6700	7100	7700	8100	9100
Length	1995	1995	1995	1995	1995	1995	1995

All values in mm



VERSATILE AND EFFICIENT

MultiTherm®

Always the ideal system for your production.

Whether plasma (straight or bevel), multi-torch oxyfuel cutting, laser, marking, drilling or a combination of all is your requirement, the MultiTherm® is the machine for you. High power drives for speeds up to 50 m/min enable high positioning and cutting speeds even on tight contours. The effective working width is used to the maximum thanks to parking space for heads over the wheel-housing. Multiple torch operation for high productivity is, of course, possible with oxyfuel, plasma and laser operation.

Technical Data

+ Working Widths: up to 4.000 mm*
+ Travel Speeds: up to 50 m/min
+ Working Length: 47.000 mm
+ Cutting processes: oxyfuel, dry plasma, fibre laser, UWP
+ Equipment options: Oxyfuel, plasma and laser process, marking, drilling
+ Marking processes: punch marking, plasma marking, needle marker OmniScript, InkJet, laser marker
+ Process optimisation
+ Messer Hole Technology

*Depending upon machine equipment

Track gauge	2600	3100	3600	4000	4600	5000
Working width	1500	2000	2500	3000	3500	4000
Overall width	4070	4070	5070	5070	6070	6070
Length	1940	1940	1940	1940	1940	1940

All values in mm

MACHINE FOR SPECIAL TASKS

OmniMat®

Ideal for large working areas with oxyfuel and plasma.

This machine has been robustly built to guide even the heaviest units accurately. The CNC controlled cutting machine with a high load gantry construction, dual sided longitudinal drives and precision machined guide sections offers you high cutting accuracy and shape consistency even in 24 hour continuous operation. Whether with oxyfuel, underwater or dry plasma, whether vertical cuts, bevels or with drilling unit,the OmniMat® is the ideal solution for the toughest conditions.

Technical Data

+ Working Widths up to 7.800 mm*
+ Maximum number of torches on the machine: 18 (with 24“ screen)
+ Travel speeds: up to 50 m/min
+ Automatic hole piercing up to 130 mm
+ Optional: footplate travelling with the machine and much more
+ Process optimisation
+ Messer Hole Technology
+ Marking processes: punch marking, plasma marking, needle marker OmniScript, InkJet, laser marker

*Depending upon machine equipment

Track Gauge	4000	4600	5000	5600	6000	6500	7000	7500	8000	8300	8800
Working width	3000	3600	4000	4600	5000	5500	6000	6500	7000	7300	7800
Total width	4935	5535	5935	6535	6935	7435	7935	8435	8935	9235	9735
Length	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940

All values in mm

POWERFUL AND PRECISE

FIBERBLADE GU

Combines Performance and Safety.

The FIBERBLADE GU is a powerful and highly accurate 2D laser cutting machine for standard plate formats. Whether simple cuts in thick materials or delicate filigree work in thin sheets - the FIBERBLADE always delivers perfect results that meet your expectations.

The 21.5-inch touch display ensures intuitive operation, making it easy to enter and perform all tasks. High-quality components and a stable construction ensure long-lasting, precise cutting results and increase your productivity. Laser safety also plays a key role and reliably protects both the operator and employees.

Technical Data

+ Working length up to 8.000 mm
+ Working width up to 2.500 mm
+ Laser power up to 30 KW
+ Mild and Stainless Steel, Aluminium
+ Positioning speed up to 160 m/min
+ Multiple cameras for process monitoring on the screen
+ Table type: Parallel shuttle table

Track gauge	3015	4020	6025	8025
Working width	1500	2000	2500	2500
Total width	2335	3705	4210	4210
Length	9120	10910	15210	19640
Height	2650	2650	2650	2650
Laser power	6, 12, 20, 30 KW			

All values in mm / *(combination X-/Y-axes)

PRODUCTIVITY REDEFINED

ELEMENT L

State-of-the-art laser technology.
Maximum productivity.

Whether it is rapidly increasing laser powers, different laser beam profiles or even new cutting gases: Today's laser machines must be able to follow current trends. Innovation is needed as applications must become more effective and transparent. In addition, the increasing shortage of skilled workers is pushing for plants to become more self-sufficient. One machine operator alone has to be able to supervise several machines.

Automation of nozzle change material supply and removal and continuous data exchange or reconciliation across the entire production flow are the prerequisites that were at the forefront of the ELEMENT L's development. It scores with a remarkably high dynamic, latest laser technology and the ability to produce XXL sheets to process economically.

Technical Data

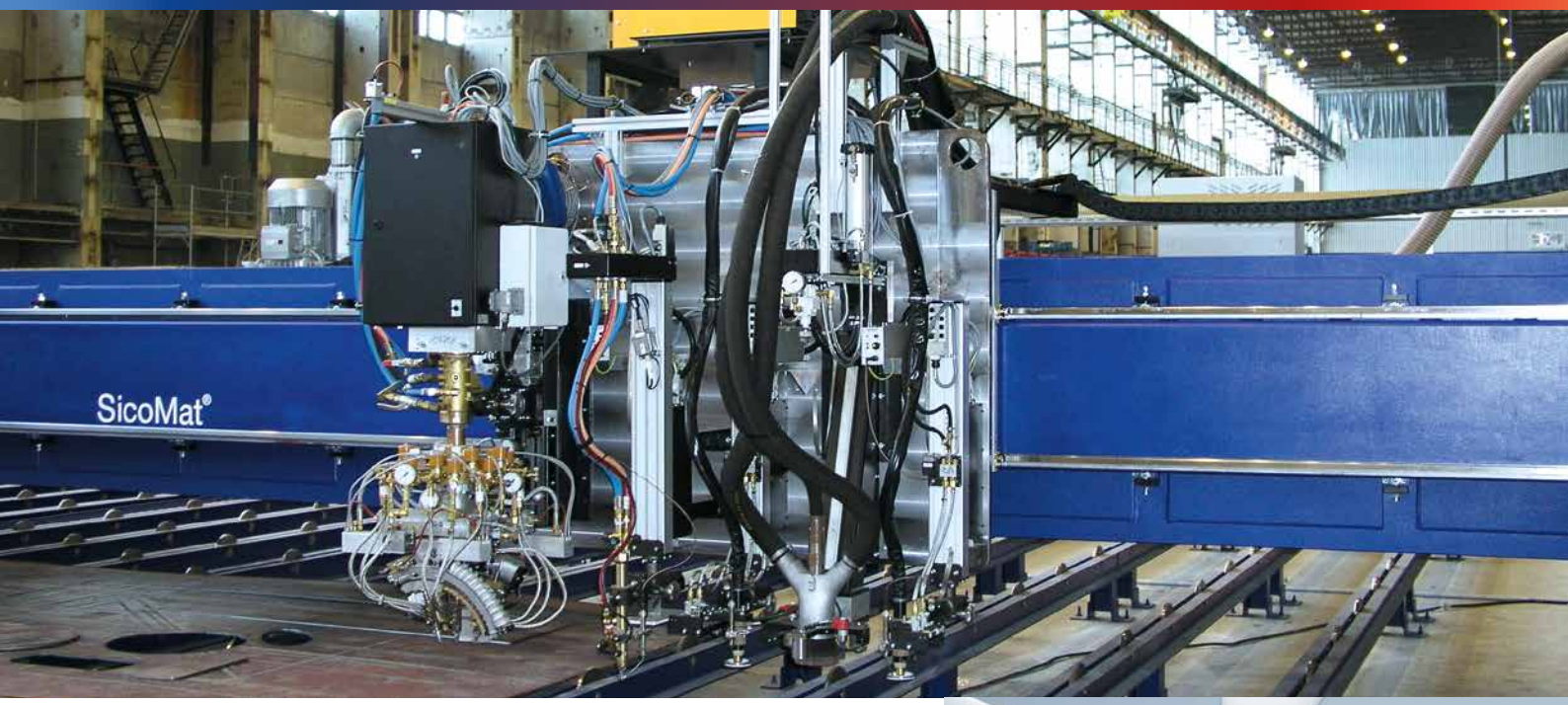
+ Working width 1,600 to 5,100 mm*
+ Working length up to 25,000 mm
+ Mild Steel, Stainless Steel, Aluminium
+ Positioning speeds up to 140 m/min
+ Up to six torch stations (max. 2 laser)
+ Automatic nozzle changer (LNC)
+ Marking systems: Plasma, inkjet and needle marker

*Depending upon machine equipment

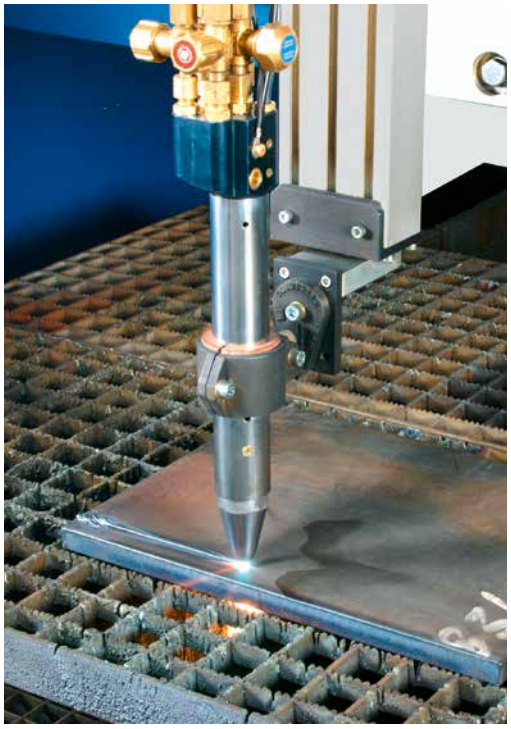
Track gauge	2600	3000	3300	3600	4000	4600	5000	6000
Maximum table width	2100	2600	2600	3100	3600	4100	4600	5600
Machine width	3840	4240	4540	4840	5240	5840	6240	7240
Overall width	4340	4740	5040	5340	5740	6340	6740	7740

All values in mm

SPECIAL PORTAL MACHINES
PRECISION BY THE KILOMETRE



Just as varied as our product range are the tasks we are set by the different branches of industry. We not only supply you with cutting machines with the latest technology and high reliability, but also offer know-how, support in application and design, engineering and training, e.g. in the economical use of CNC techniques.
Special portal machines are used, for example in shipbuilding and the manufacture of wind turbine towers.



EQUIPMENT AND TOOLS

ALFA Oxyfuel Torch

With many well thought through features and possibilities, our ALFA torch raises flame cutting to a completely new level. Thus, for example, you can change the nozzles with no tools which eliminates the risk of misaligning the torch and dramatically reduces set-up times. The cap can be easily unscrewed, releasing the nozzle which can then be readily checked or replaced.

Additionally you can use material more efficiently as the ALFA can cut effectively to the edge of the plate and along it.

What is more, the torch incorporates many features which are external on other torches, e.g. height sensing. Complete integration removes the need for additional cables and sensing rings — not to mention changing the latter for different material thicknesses and for wear.

FEATURES

+ **Fast replacement of nozzles with no tools and no misalignment of the torch**
+ **Better material utilisation through optimum sensing and cutting right up to the plate edge**
+ **Fully integrated height sensing**

EQUIPMENT AND TOOLS

Oxyfuel Bevel Cutting

Bevel cutting demands exact knowledge of the machine and the cutting processes. Corners, lead-ins and run-outs must be cut with special cycles to achieve the quality required. Bevel cutting makes high demands on the programming. Special additional functions are required to set up the devices for bevel cutting perfectly.

At Messer Cutting Systems you will find a large selection of triple torch systems, all perfectly suited for your cutting applications. You can choose between manual or automatic systems. The automatic systems run completely autonomously without any manual intervention.

I/K/V/X and Y bevels are possible. Material thicknesses up to 150 mm can be cut vertically, up to 80 mm with bevels.

FEATURES

+ **Infinite rotation of the head about its own axis**
+ **Interpolation of the angles (Change on the fly) from minimum to maximum angle during cutting**
+ **Positive and negative bevel angles in one part possible**

EQUIPMENT AND TOOLS

Strip Cutting

The strip cutting unit has been specially designed for cutting shops who have many strips to cut. It can be interchangeably installed on a standard cutting machine. It is possible to cut two strips with widths of 90 up to 180 mm or one strip with widths of 180 up to 360 mm with one head. Height sensing is made by the centre torch which

is connected to the SensoMat® ALFA . Multiple strip cutting heads can be combined for simultaneous cutting.

FEATURES

+ **Two strips from 90 – 180 mm wide**
+ **One strip from 180 — 360 mm**
+ **Simultaneous use of multiple strip-cutting heads**

EQUIPMENT AND TOOLS

Hydrogen Cutting

The history of oxyfuel technology goes back more than a century. To this day, it remains an indispensable part of established application areas such as oxyfuel flame cutting, and heating and straightening, as well as brazing and soldering and flame spraying or glass processing. The field of oxyfuel technology is currently dominated by hydrocarbon fuel gases such as acetylene, propane and natural gas.

But in view of increasingly limited natural resources and the need to manage industrial production as sustainably as possible, hydrogen offers an effective fuel gas alternative.

In view of hydrogen's unique properties, special burners and nozzles were developed. They make it possible to adjust the **HyCut** flame for any application – in automated or manual operation.

FEATURES

+ **More environmental protection**
+ **Improved working safety**
+ **Measurable economy**
+ **Highest quality**

EQUIPMENT AND TOOLS

Bevel-S

Accurate and repeatable cut parts are created with this unique design that does not require movement of the entire machine. The plasma torch can therefore tilt very quickly, resulting in maximum plate utilisation.

With only two axes required to tilt the torch in our industry-proven skew axis design, precision cutting of small holes to the most complex bevel contours is possible.

Collision protection, a simple pneumatic torch lead management system and a few recent enhancements ensure that production requirements are easily achieved.

FEATURES

+ +/- 45° bevel angles
+ A, V, Y, X and K weld profiles
+ Interpolation of the bevel angle
+ Plow bolt and countersink holes

EQUIPMENT AND TOOLS

Skew Rotator Infinity

With its infinitely continuous rotation, the Skew Rotator Infinity makes possible precise bevel cuts on almost any contour shape. In bevel mode of the machine the control regulates cutting current and nozzle stand-off with data from the part program.

The system enables the cutting of weld preparations but also of cutting blade bevels, e.g. for earth moving equipment.

FEATURES

+ AC drive for high performance
+ High flexibility and productivity
+ Unlimited C axis rotation
+ No bulky arc segments which could lead to collisions or get in the way

EQUIPMENT AND TOOLS

Messer Hole Technology

Messer Hole Technology stands for the precise cutting of small holes, narrow stitches, and fine internal contours. The cutting technology for unalloyed steels ensures a significantly better hole quality than could previously be achieved with plasma cutting. With it, holes with a diameter/thickness ration of 1:1 can be cut with a high cylindricality and contour faithfulness. The cutting process takes place automatically with no operator intervention.

The Messer machine and software technology supports the technologies Contour Cut (CC) from Kjellberg as well as True Hole from Hypertherm.

FEATURES

+ **Good cut quality**
+ **Reduction of reworking**
+ **Produces bolt holes with high quality**
+ **Reduces costs, increases productivity**

EQUIPMENT AND TOOLS

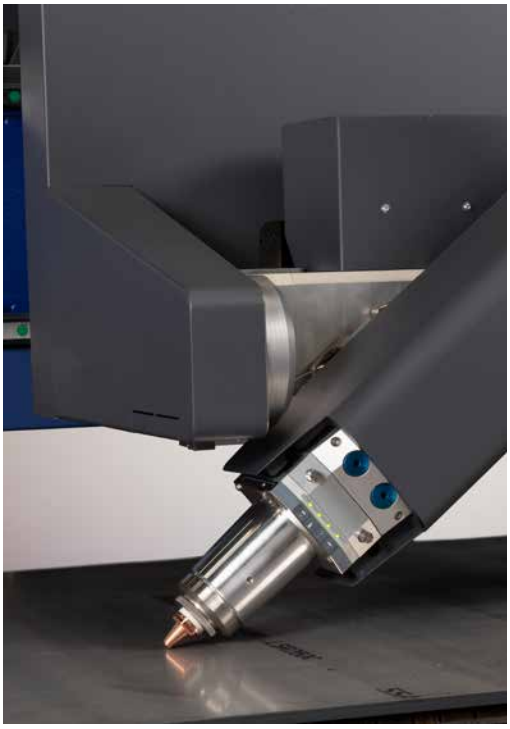
PTC500 Pipe Cutting System

With the PTC500, Messer Cutting Systems offers a pipe cutting system for its OmniMat® and MultiTherm® ranges of machines. The core is the offline software which makes it possible to make bevel cuts on pipes. Using a special postprocessor, it gives the optimum cutting data for pipe processing. Many geometry variations for the cutting geopmetry on the pipe are possible with it. The available cutting process is plasma.

The central axis of the pipe can be variably adjusted with a manual setting of both the pipe support carriages and the driven pipe carriage. An internal extraction through the pipe is an integral part of the system.

FEATURES

+ **For round pipes up to a diameter of 500 mm**
+ **Pipes can be cut with a plasma torch perpendicular to the pipe surface with the pipe axis rotating or**
+ **Using a plasma bevel unit for weld preparations of up to 52°**
+ **Maximum cutting speed on pipe 4000 mm/min**



EQUIPMENT AND TOOLS

Laser bevels with fibre laser

The Bevel-U bevel unit, specially developed for the laser process, enables bevels in the workpiece between -50°and 50°. The bevel angle is continuously adjusted during the laser cutting process. Edge shapes such as I, V, Y, X, and K are possible for a subsequent welding process of the workpieces.

The actual cutting angles depend on the material type, thickness, and bevel type such as AS or DS. With this unique design, precise and repeatable bevel parts can be produced. Consistent quality after nozzle changes is ensured by an automatic test and calibration routine. The design also includes magnetic collision protection for the cutting head and a manual control panel for all drives to perform adjustments directly on the machine.

FEATURES

- **With bevel angle from 50 to +50°**
- **YDS, YAS, K with land height from**
- **1.5 mm for automated robot welding as well as V and X cuts**
- **Variable bevels for developments**

EQUIPMENT AND TOOLS

Laser Nozzle Control (LNC)

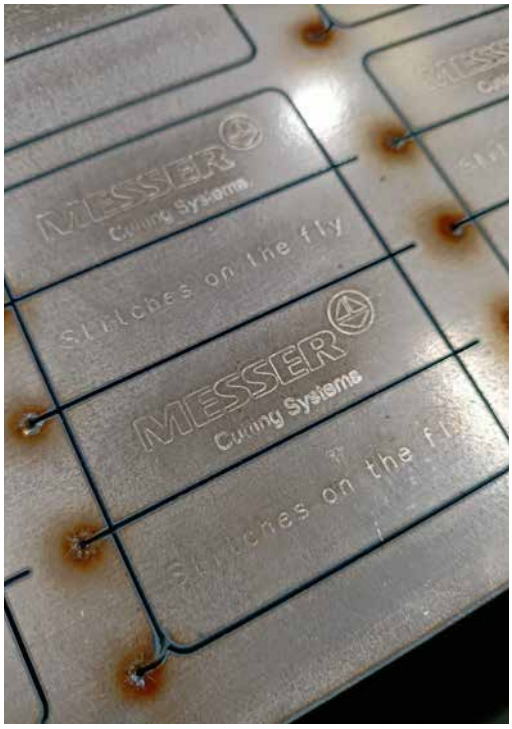
The Laser Nozzle Control (LNC) is the solution for operating a laser cutting system with maximum processing quality and productivity. Regardless of material thickness and process, the LNC enables autonomous machine operation.

Before each job, the LNC checks whether all the necessary nozzles are present in the station. To ensure maximum process reliability, the nozzle quality is checked regularly, the nozzle is cleaned and replaced if necessary.

In addition, the calibration of the nozzle height and centering of the nozzle jet ensure reliable cut quality and shortened setup times.

FEATURES

- **Automation of set-up operations**
- **Prevents machine downtime**
- **Shortened set-up times before and during the cutting process**
- **Planning reliability and optimization**



EQUIPMENT AND TOOLS

Laser Marking

For various applications and subsequent processes lasting markings on different material surfaces are essential. These markings are used in different branches of industry, whether for the labelling, identification, badging, or traceability. Imprinting codes at a fixed position requires high flexibility to ensure legibility.

This is where laser marking comes into play using a pulsed fibre laser with a 100 nanosecond pulse length. By removing the surface marking can even be achieved on difficult metal surfaces.

FEATURES

- + **Lasting marking even on critical surfaces**
- + **Almost maintenance free due to very long component lives**
- + **Simple to use and flexible application**
- + **No consumables**
- + **For applying lines, letters, numbers, logos, bar codes, QR codes**

EQUIPMENT AND TOOLS

Gas Mixer

By using a gas mixer, the speed advantages of nitrogen cutting can be combined with the cut quality of oxygen cutting.

Using mixed gas ensures optimal cutting results in structural steel at maximum cutting speed and is characterized by high process stability. The minimal burr formation on the underside of the workpiece allows for minimal rework, while the cut surface – unlike with oxygen cutting - remains free of a disruptive oxide layer.

This significantly simplifies subsequent surface treatments or welding. At the same time, contamination from dirt or paint on the material has a considerably smaller impact on cut quality, making the overall process more robust and reliable.

COMBINING THE ADVANTAGES OF NITROTEN AND OXYGEN IN LASER CUTTING

- + **High cutting speed with minimal rework**
- + **Increased process stability**
- + **Cut edges free of disruptive oxide layers**
- + **Low heat input**

EQUIPMENT AND TOOLS

Inkjet Marker

Parts often need non-permanent marking for secondary operations such as layout lines or simple part identification as they move through production. The Inkjet Marker produces markings that do not damage the plate and are not visible after painting.

Production does not slow down for marking as the marker creates text at speeds of up to 17 characters per second. Available with 7, 16 or 32 nozzles.

Black ink only systems satisfy most requirements while optional hardware can be used with pigmented ink to create higher contrast results for some applications.

FEATURES

- **Dye-based ink MEK (Methyl Ethyl Ketone)**
- **Dries in 3–5 seconds**
- **Will not wipe off with water**
- **Standard text height at 9, 12, 18, 27 mm**
- **Optional 45 and 67 mm text**

EQUIPMENT AND TOOLS

Pin Marker

For applications which require a more permanent mark, the Pin Marker uses a vibrating engraving needle to create easily legible characters or layout lines.

In just a few seconds, the robust and low-maintenance marker can create text as small as 10 mm.

The results are visible on a variety of materials, including primed, rusted or mill scale plate. In some cases, the mark may still be visible after painting.

FEATURES

- **Permanently visible lines, contours and characters**
- **Clear, physical markings that cannot be easily removed**
- **Variable marking depth**

EQUIPMENT AND TOOLS

HF Punch

The unit produces clear lines and punch marks for drill points, contours and letters on plates surfaces.

For drilling it offers a centre point as start point. The HF punch even marks through rusty surfaces and mill scale.

FEATURES

+ **Clear lines and punch points for drilling, contours and letters**
+ **Even marks through rusty surfaces and mill scale**
+ **Permanent marking**
+ **Marking speed: max. 6 m/min (for lines)**

EQUIPMENT AND TOOLS

Plasma Marking

Plasma marking is suitable for engraving lines, contours and letters onto material surfaces.

The plasma marking unit melts the material surface and allows precise and reliable markings with line widths, depending upon the application, between 0.5 and 1.5 mm.

With variable output power and dual gas for marking and punching you can achieve permanent markings on Stainless Steel, Mild Steel and Aluminium.

FEATURES

+ **Low noise**
+ **Variable marking depth — also suitable for marking through mill scale**
+ **Precise marking with line widths from 0.5 to 1.5 mm**
+ **High marking speeds up to 20 m/min**

FULLY AUTOMATIC DRILLING SYSTEM

Your solution for maximum efficiency and flexibility

Discover the future of manufacturing with our fully automated drilling system, specifically designed to significantly increase productivity in your manufacturing processes. This innovative system transforms your flame cutting machine into a state-of-the-art machining center, offering you a wide range of possibilities.

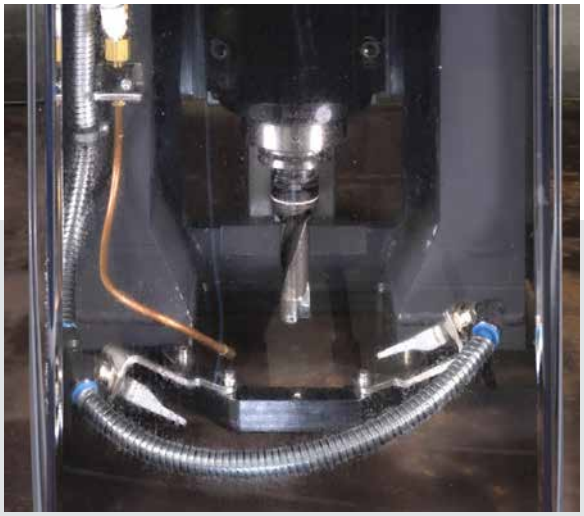
Thanks to the versatility of our system, you can effortlessly perform various machining processes, whether drilling, tapping, or countersinking.

In addition, the 12-compartment tool magazine makes system operation not only efficient but also user-friendly. Personnel requirements are minimized, while setup times for the drilling tools and their integration into the control system are child's play. This guarantees smooth operation and allows you to focus on what matters most – the quality of your products.

The newly designed hold-down clamp ensures stable support of the plate, thus ensuring low-vibration machining of the components. The integrated air nozzles efficiently remove chips and optimally prepare the system for subsequent processes.

The quick and easy machining of cutting parts is supported by intuitive operation and advanced technology. The optimized collaboration between the CAD/CAM software OmniWin and the machine control system significantly simplifies the execution of orders and thus increases planning reliability.

- **+ Increased productivity through automated processes**
- **+ Flexible drilling system for versatile application processes**
- **+ Easy operation and job setup thanks to intuitive controls**
- **+ Low-vibration machining for optimal results**



EQUIPMENT AND TOOLS

Blasting

This process is mainly used in shipbuilding where primed plate must later be prepared for welding.

In one operation the plate is blasted and marked. The automatic filter unit permits a continuous blasting operation. Stiffening plates can be welded on faster. This means a considerable time saving in the production process.

Thanks to the closed circuit blasting medium flow the process is economic and environmentally friendly.

FEATURES

- **Process speeds of 15 m/min and 24 m/min**
- **Primer thickness approx. 20 µm**
- **Strip width of the blasted plate 20 or 40 mm ± 2mm**

* Values depend upon the type and thickness of the primer

EQUIPMENT AND TOOLS

Belt Grinder

Belt grinder device to remove primer. The material removed is sucked up and trapped in a filter. The grinder is used in conjunction with a marking tool so that the material can be cleaned and marked in one process.

The belt grinder is suitable for steel sheets with Zinc Silicate primer and a coating thickness of approx. 15 to 18 µm.

FEATURES

- **Processing up to 24 m/min feed speed**
- **Material thickness 4 - 40 mm**
- **Working directions: Longitudinal, diagonal, and transverse grinding through continuous rotation of the grinding head from 0° to 180°**

CUTTING TABLES AND FILTERS

Filters

The new filter series offers a large selection of filter solutions for flexible use in industrial extraction. The powerful units guarantee a safe and healthy working environment. Because of their low consumption of current and compressed air and the long interval between services they are very economical.

Water Tables

For special materials or especially high requirements for low distortion and low heat affected zones, there are cutting processes in, on or over water.

For all variations, e.g.:

+ Automatic level lowering for loading/unloading
+ Agitation devices to prevent the build up of explosive gasses when cutting aluminum under water
+ Fully automatic slag removal
+ Stops which can be lowered

CUTTING TABLES AND FILTERS

Cutting tables with fume extraction

Fume extraction cutting tables from Messer satisfy the requirements for optimum production conditions with oxyfuel, plasma or laser cutting. Reliable safety for the machine operator, high energy efficiency and the optimum layout of the production process are the criteria using which Messer can prepare the best cutting table for every application from its extensive modular system.

For simple cleaning of the tables we offer not only slag trays but also various automatic systems integrated into the tables and matched to the cutting process. These are also suitable for removing small parts and include: vibration feeders, scraper conveyer tables and belt conveyer tables.

To suit the individual application or logistic requirements of our customers the tables are built nearly individuallyby using modern modular constructions.

MACHINE CONTROLS

CNC Controls

Our exclusive CNC control integrates the experience from several thousand installations world-wide. A comprehensive library of part programs, a database with multiple processes, CAD import, contour nesting. Productivity monitoring and remote diagnostics are just some of the core characteristics available to you.

The user interface with the consistent operating concept is very clearly structured with easily understood symbols, photos, and graphics. Thanks to the easily learnt functions, new employees can be quickly inducted and thus quickly become expert operators.

Do you want to be competitive and well positioned for the future?
The digitalisation of production and of your processes is a critical factor in this. The deep integration of our software suite OmniFab in our Global Connect Control raises processes to a new, digital level. This digitalises the execution of all cutting orders and the control of the cut parts. All cutting orders are available directly on the control and are ready for processing. Important information is also preconfigured by OmniFab and transferred to the control, even whilst another job is being cut.

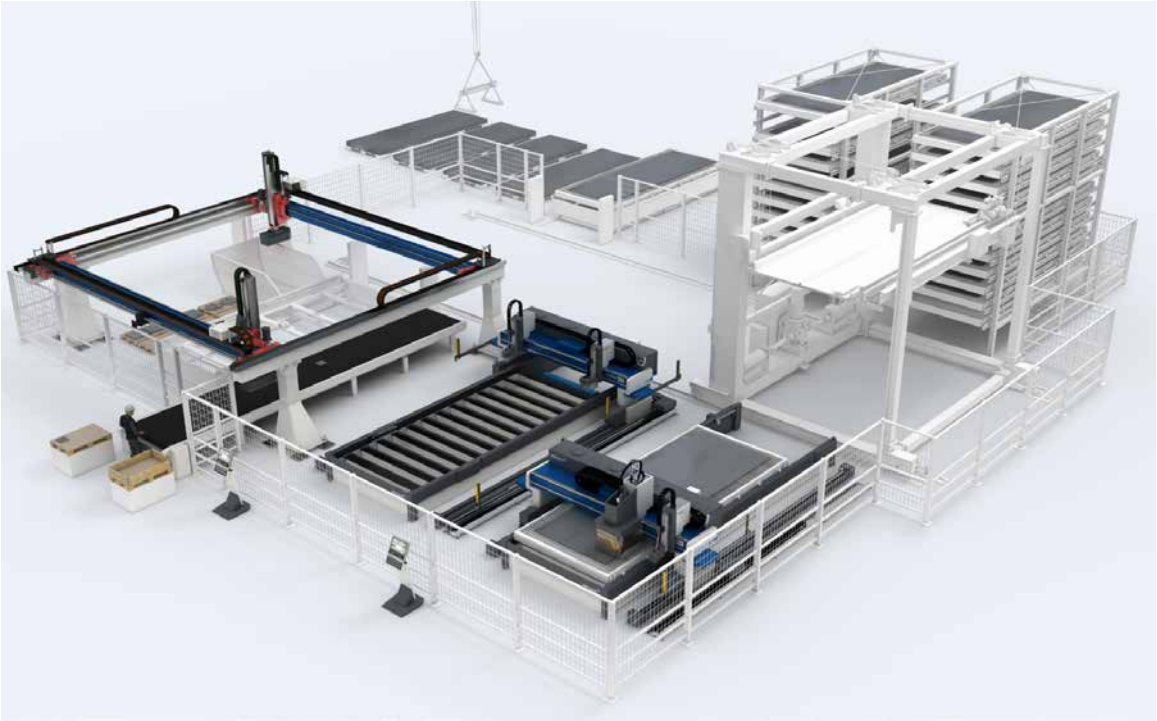
What is more, the system supplies reliable production data reports and complete traceability. Thanks to the networking of the machines and systems you are always in a position to react effectively and to take the right decisions.

FEATURES

+ **Modern operating interface on Microsoft.net technology**
+ **Database with multiple processes make every operator into a professional**
+ **Modern, graphical interface minimises the learning curve**

FEATURES

+ **Joystick and handwheel increase user friendliness**
+ **Video camera as set-up tool or for process monitoring**
+ **Most modern BUS system facilitates modular expansion and simple retrofits**



AUTOMATION

Material Handling

Thermal cutting technology has developed rapidly in recent times. So have the cutting systems. Ever more processes can be automated. This is an important step to counter the increasing lack of skilled staff.

The prerequisite for this is an intelligent networking of machines and systems with the most modern information and communications technology. Building on our programming station software OmniWin, we are now able, for example, to make all data from cutting plans available to automation before and after the machine. Thus Messer cutting machines are open to all conceivable automation combinations, for maximum machine utilisation and increased productivity in the entire value chain.

With respect to the actual machine park for automatic material supply, this is a very wide field and requires an appropriate analysis of customer requirements for the planning. We offer here a large range of our own solutions and can, if required, combine with existing components from third party suppliers

This can already start in the material stores and goes on through the automatic loading of the raw plates onto the cutting machine or the material supply system for multiple machines.

The cutting machine itself takes over the processing of the cutting order independently after the release from the supply system and sends a finished message or release for the automatic removal of the cut plan.

Depending on the structure of the cutting factory, further components are then available for the

+ Unloading of the complete nest for onwards transport or
+ Separation and stacking of the cut parts (by target or by order) as well as
+ If necessary, the transfer to the deburring

Also the remnant grid can be automatically removed in one piece or in parts.

Maximise your machine utilisation and improve your productivity with our modular automation solutions.

DIGITAL WORKFLOW

DIGITIZE YOUR PRODUCTION

The digital solutions perfectly complement the holistic range of products, automation, services and know-how.

- SALES QUOTES
- JOB MANAGEMENT
- ADVANCED PLANNING & SCHEDULING
- MATERIAL FLOW
- PRODUCTION DATA CAPTURE
- ERP CONNECT
- MACHINE INSIGHT

OF

MESSER SOFT

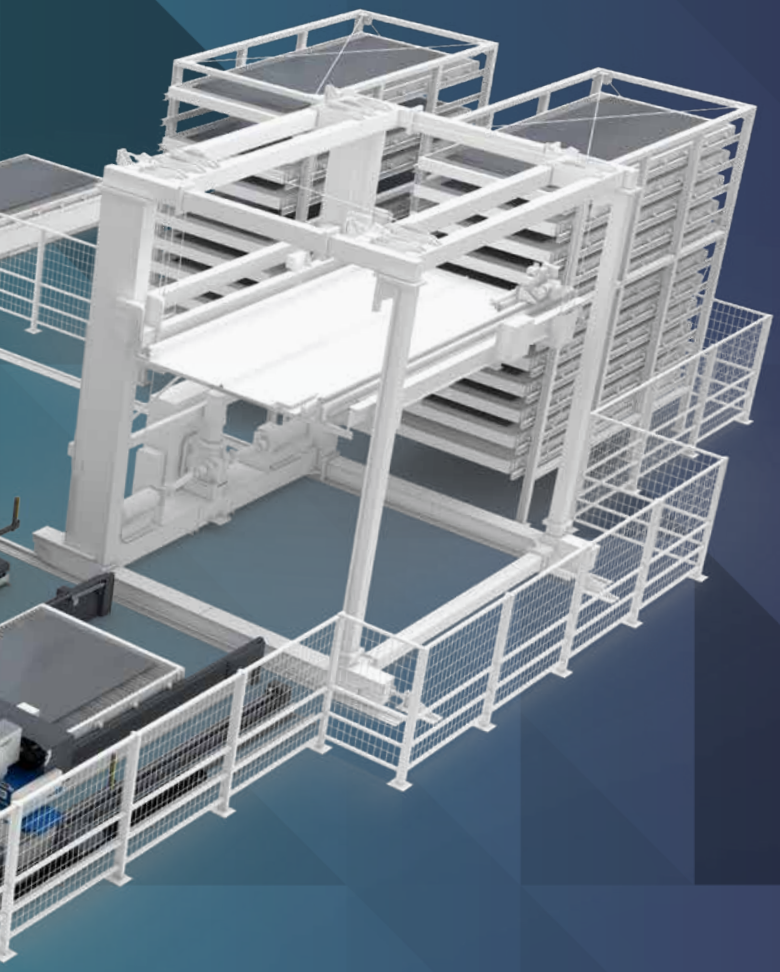
OMNIFAB

Software Suite for digital transformation

The OmniFab software suite integrates Messer Cutting Systems' mechanical engineering technology into business processes in a holistic and process oriented manner.

It provides relevant information for work preparation, production planning and plant management by connecting all systems. OmniFab also integrates material handling systems like loading/unloading stations, towers, material transportation devices and more – even on mobile devices.

YOUR AUTOMATION SOLUTION AT A GLANCE



Machine and software from a single source: Discover our digital information and process technologies combined with intelligent automation solutions.

COMPLETE INTEGRATION

Modular Portfolio

Our modular software portfolio integrates your cutting machines in the best possible way into your business and production processes supporting key functions throughout the entire workflow.

OMNIWIN

Ideal for work preparation

The powerful, easy-to-use design and nesting software that saves time, materials and costs. OmniWin is the ideal tool for work preparation when cutting with oxy-fuel, plasma and laser cutting. It takes on all the cutting tasks that arise, tailored to the order-related production with CNC-controlled cutting machines.

360° SERVICE

The Original - all round more

Combine your original Messer machine with the original Messer service support and ensure the maximum availability of your system and thus an important part of your business success. With the **360° Messer service concept** we offer you Service and Support Packages, which you can match individually and flexibly to your requirements.

Diagnosis/Inspection/Maintenance/Repair Center

Our support uses AI and remote support to provide accurate diagnoses in the shortest possible time in the event of a fault. In addition, our on-site service specialists ensure competent and efficient maintenance and the fastest possible repair of your systems.

Consumable and Spare Parts: Original and quickly obtained

Ensure consistent quality and high precision with original spare and wear parts from the manufacturer.

We maintain a high availability of all common items in our central European warehouse. If servicing is required, the parts are usually available and dispatched within one working day. Our spare and wear part agreements ensure attractive conditions and participation in bonus programs of the original manufacturers.

CAD/CAM Software-Support: Current and fitting

Software and machine development from a single source ensure perfectly coordinated products and guarantee our software customers the best compatibility, a maximum level of customization and maximum efficiency through competent and highly trained service and support staff.

REMOTE SERVICE - PERFORMANCE BOOST THROUGH KI-SUPPORT

- **Extensive knowledge database for all machine types**
- **Accurate tips and advice in the shortest possible response time**
- **Online live assistance through competent service**
- **Support agreements at attractive conditions**

SERVICE LEVEL AGREEMENTS

- **With the 360° Messer service concept, you can put together your requirements in individual service packages.**
- **Personal advice at your premises or via our contact form on the website.**

Increased efficiency through AI-supported support processes

In today's fast-paced world, it is crucial to provide efficient and accurate support services. Our company relies on cutting-edge AI technologies to optimize support for technicians and customers. Every incoming request is analyzed by a pre-trained large language model (LLM), which immediately provides an initial solution proposal for the support agent. The answers or solutions either refer to individual requests or summarize the entire ticket. This not only saves valuable time but also significantly increases customer satisfaction.

AI-supported ticket summaries

Tickets can often contain many entries and become confusing. Our AI generates summaries that process up to 400,000 characters of existing tickets within seconds. This helps our support staff stay on top of things and work more efficiently.

Daily AI reports on production downtimes

To enable rapid prioritization of open tickets, an AI-supported report is generated daily with all production downtimes. This ensures that critical issues can be identified and resolved immediately.

Interactive AI chatbot

Our AI chatbot is available for free-form questions and inputs and provides interactive support in resolving issues. It gives our support staff and service technicians quick access to our knowledge base and offers an additional layer of support that enhances the overall user experience.

By leveraging these advanced AI technologies, we can provide our customers with faster, more accurate, and more efficient support. This not only builds customer trust but also improves the overall performance of our support team.

RETROFIT

Longer service life and higher productivity

With our retrofit programme, we ensure that your cutting machines remain equipped with the latest technology and raise their productivity to a new level. There are numerous options available to you, from upgrading individual components to the comprehensive modernisation of your system. By replacing or adding components, we extend the service life of your machines and increase their efficiency at the same time.

Modernisation brings your systems up to the latest state of the art and enables the use of advanced technologies. Typical components used in the retrofit programme include new generations of plasma systems for the plasma process, high-performance oxyfuel torches and drilling units. Additional marking systems - for plasma, needle or ink, for example - facilitate the subsequent processing of cut parts and optimise production processes in the long term.

Impressive increases in performance can be achieved through the targeted expansion, replacement or conversion of certain elements of your machine. It is often enough to increase the number of torches to noticeably boost productivity. At the same time, safety-relevant equipment can be retrofitted to make the working environment safer.

Our customised solutions minimise downtimes and ensure rapid implementation. You benefit from comprehensive documentation, including circuit diagrams, as well as detailed pre-assembly to ensure smooth installation. Our goal: Maximum efficiency and longevity of your cutting machines - sustainable and future-proof.

EFFICIENCY AND FUTURE SECURITY:

+ **High increase in productivity with minimal investment**
+ **Extended service life and improved availability of spare parts**
+ **Short downtimes thanks to rapid implementation**
+ **Retrofitting of safety and process optimisation**

KNOW-HOW

Messer Cutting Systems Academy

In times of growing competitive pressure and a shortage of skilled labour, investing in the expertise and skills of employees is exactly the right thing to do. After all, not only should the machine work more productively, but also the people who programme, operate and maintain it.

At Messer Cutting Systems in Groß-Umstadt, specialised knowledge is imparted effectively and practically. Our experienced trainers will show you how to get the most out of your systems, units and software using various media and directly on the machine.

Safety is our top priority: our training courses include comprehensive safety guidelines and practices to prevent accidents and ensure a safe working environment.

Our training programme is aimed at both beginners and experts. Choose from a wide range of training modules, which can also be customised to meet the specific needs of your company. In our academy at our headquarters in Groß-Umstadt, we create ideal conditions for participants to impart knowledge while your production can continue uninterrupted.

Take the next step into the future of your company! Contact us today to find out more about our training courses in sheet metal working and how we can help you achieve your goals.

SOFT- AND HARDWARE TRAININGS

- **Courses for operators, programmers, production, quality assurance**
- **Courses for service technicians (on request)**
- **Workshops (on request)**
- **Customised courses according to customer requirements (on request)**
- **Preparation and realisation of certification processes**

TRAINING COURSES OXYFUEL TECHNOLOGY

- **Safety inspection of work equipment**

CREATING SOLUTIONS
BEYOND MACHINES

PRODUCT
AUTOMATION
DIGITAL
SERVICES
KNOW-HOW

WHAT WE STAND FOR

Messer Cutting Systems is a global supplier of cutting-edge technology for the metalworking industry. With almost 1.000 employees worldwide in over 50 countries, we maintain a constant dialogue with our customers to achieve sustainable user-oriented innovation.

Our portfolio embraces the themes PRODUCT, DIGITAL, SERVICES, AUTOMATION and KNOW-HOW. We will live up to our claim "Creating Solutions Beyond Machines" not just with the most modern cutting systems and solutions for oxyfuel technology.

Appropriate services and training, our own software applications as well as the integration of solutions from our technology partners, e. g. in the field of automation, complete the machine to give forward looking total solutions.

Our Know-how combined with our customer-oriented attitude and actions make us the world-wide partner of choice for innovative total solutions on all aspects of cutting systems for over 125 years.

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THE MESSER EXPERIENCE