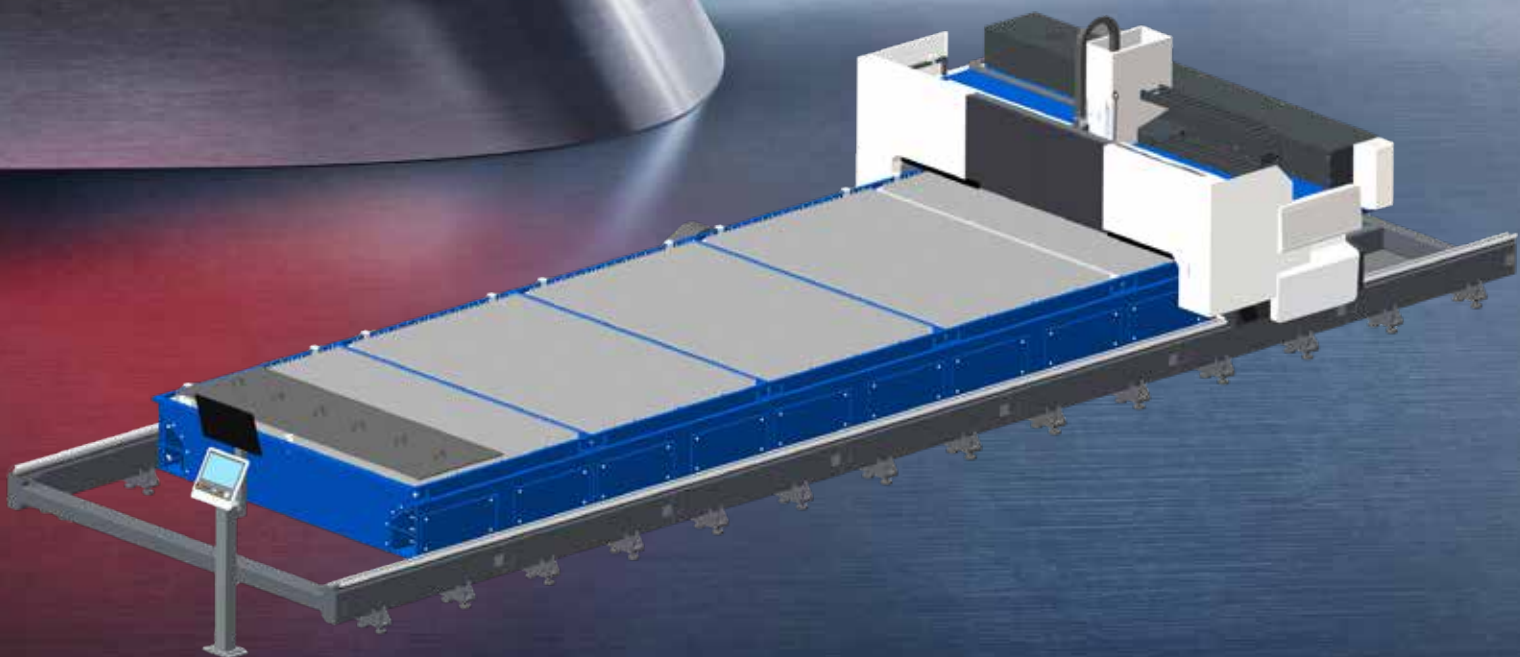


LARGE FORMAT LASER MACHINE

GO BIG TO CUT SMART

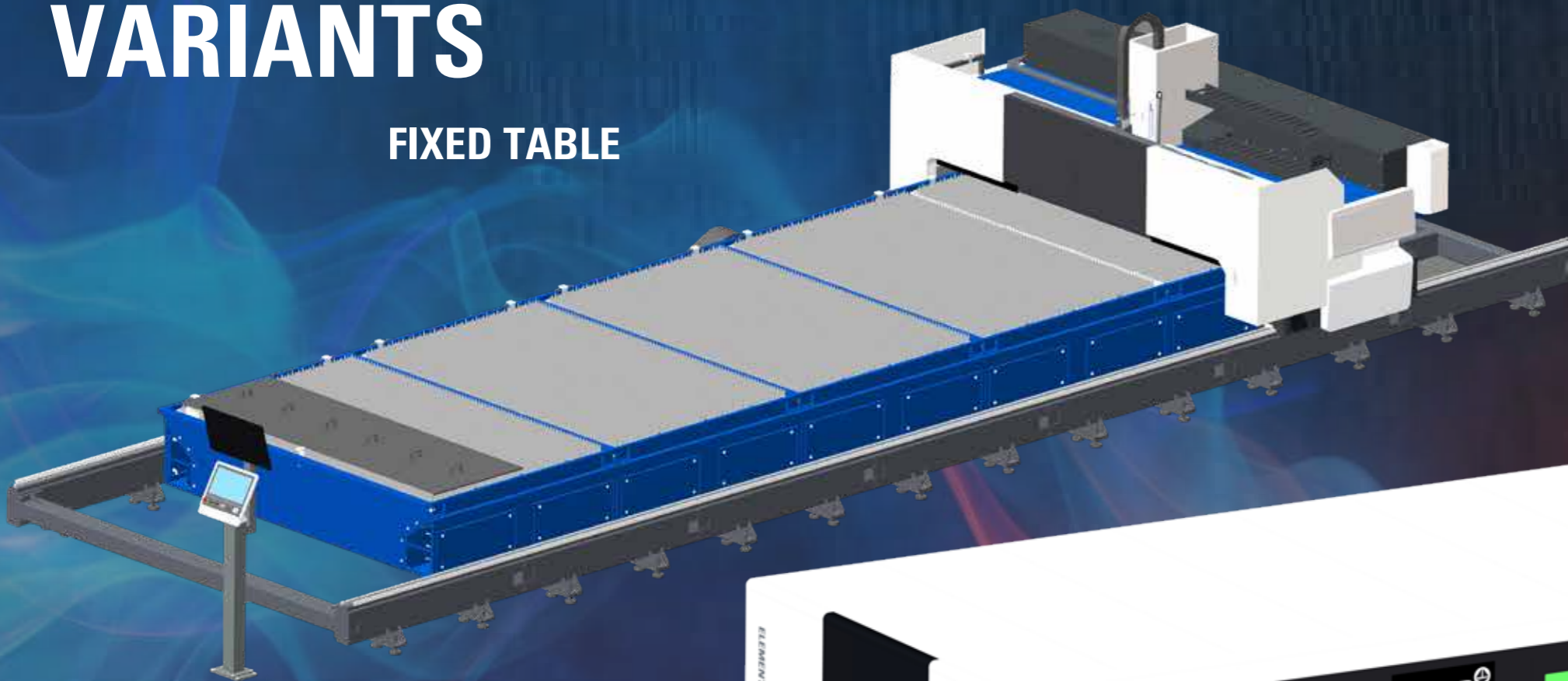
Versatile Laser Solutions for the Evolving Metal Processing Landscape



LARGE FORMAT LASER MACHINE

VARIANTS

FIXED TABLE



For over 120 years, Messer Cutting Systems has been delivering high-quality products and reliable services to the metal processing industry

HYDRAULIC SHUTTLE TABLE



PARALLEL SHUTTLE TABLE



The Large Format Laser Machine seamlessly integrates with multiple material handling systems, delivering unmatched productivity and performance. Designed for flexibility, this cutting-edge processing machine can be tailored to meet the unique demands of the metal processing industry. Packaged with powerful software, the Large Format Laser Machine ensures maximum efficiency, precision, and reliability.



LARGE FORMAT LASER MACHINE
BIG CUTS
BIG POSSIBILITIES



PROCESS OPTIONS

Laser

Leap in performance in laser technology! Whether it is rapidly increasing laser powers, different fiber laser suppliers or even different laser gases. Our machines always follow current trends.

Clean and very high quality cutting, significantly reduces or eliminates any secondary operation required after cutting.

Highly reliable equipment suitable for laser cutting of long plates.

Choice of Lasers : IPG / Max photonics / Raycus

LASER PRECISION CUTTING OF MILD STEEL, STAINLESS STEEL & ALUMINIUM 

- + Increased dynamics
- + Tightest component tolerances
- + Reduced maintenance
- + Predefined database.



LASER BEVEL CUTTING

Bevel-U

The Bevel-U bevel unit, specially developed for the laser process, enables bevels in the work-piece between -50° and 50°.

The actual cutting angles depend on the material type, thickness and bevel type such as AS or DS.

The bevel angle can be continuously adjusted during the laser cutting process.

Consistent quality after nozzle changes is ensured by an automatic test and calibration routine.

Magnetic collision protection for cutting head safeguards cutting head from any unwanted impacts.

Choice of Cutting Head: Precitec / Raytools

LASER BEVEL AND WELD PREPARATION 

- + With bevel angle from -50 to +50°
- + YDS, YAS, K with land height from 1.5 mm for efficient welding post bevel cutting as well as V and X cuts
- + Variable bevels for high quality welds



SPECIAL FEATURES

Motion System

Is the cut edge smooth enough? Are the hole round? Are the corners sharp? Is the part accuracy correct? The answers to these questions speaks volumes about the quality of the machine.

An experienced operator, optimized parameters and new consumables will not produce any usable parts if the machine motion is uneven and the tool does not stay in position.

The Large format laser machine is equipped with a helical rack and pinion drive and precise linear guides, which form the basis for smooth motion.

Powerful AC servo motors ensure fast rapid acceleration of the cutting tool in and around holes and corners and thus for outstanding cutting quality.



SPECIAL FEATURES

Laser Nozzle Control LNC

The nozzle has a great influence on the cutting quality: With the next generation Laser Nozzle Control (LNC), Messer Cutting Systems offers the solution to operate a laser cutting machine with maximum processing quality and productivity for any material, thickness and process as well as to achieve autonomous operation. With the vision of unmanned operation in shopfloor, LNC plays a vital role by changing, replacing, quality checking on nozzles in autonomous operation.

The LNC offers the following functions: Before each job, it checks whether all necessary nozzles are present in the station. To ensure maximum process reliability, the nozzle quality is regularly checked, cleaned and replaced if necessary, e.g. in the event of a defect or if a different nozzle is required for a different sheet thickness.

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



MARKING (OPTIONAL)

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 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.



MARKING (OPTIONAL)

Pin Marker

For applications which require a more permanent mark, the Pin Marker uses a vibrating stylus 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.

HIGHEST PART QUALITY IN
SHORTEST PROCESSING TIME



- + Positioning speed upto 50m/min
- + High acceleration

FASTEST AND RELIABLE
AUTOMATION OF LASER
MACHINES



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

NON-PERMANENT
MARKING OF TEXT AND
LAYOUT LINES



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

TEXT AND LAYOUT
LINES THAT ARE MORE
PERMANENTLY VISIBLE



- + Clear physical markings that cannot be easily removed
- + Variable marking depth



SPECIAL FEATURES

Parallel Cutting Table

A parallel cutting table for large-format laser machines enhances cutting efficiency by allowing multiple workpieces to be processed simultaneously. Its precision alignment systems ensure accurate positioning, resulting in high-quality cuts across various materials, including metal.

The table's design improves workflow with streamlined loading and unloading, while its high load capacity accommodates larger materials.

By boosting productivity and reducing labor and material waste, a parallel cutting table proves to be a valuable asset for industries seeking to optimize their laser cutting operations.



SPECIAL FEATURES

Hydraulic Cutting Table

A hydraulic cutting table for CNC cutting machine is designed to provide precise and efficient cutting of materials where bevel cutting is also a process requirement.

It operates using hydraulic pressure, enabling smooth and controlled cutting motions for accurate results.

The table features adjustable height and robust construction for stability, accommodating heavy workpieces.

This hydraulic system enhances productivity by reducing manual effort and increasing cutting speed, making it an essential tool for workshops that require reliable and high-quality CNC cutting solutions.



SPECIAL FEATURES

Cutting table with fume extraction

The thermal cutting tables ensure the optimal support of the metal sheet and very effective extraction of pollutants produced in thermal cutting.

The extraction system consists of several sections to ensure that the entire extraction process concentrates on the cutting area, requiring only minimal fan power for the complete extraction of cutting dust and smoke.

Single or multiple channel extraction with optimised requirements based on the extracted air volume while maintaining the full effectiveness of the fume extraction table.



SPECIAL FEATURES

Safety

Though functional safety technology prevents damage to machinery and minimises downtime, its core job is to protect people. Light curtains positioned on the front and rear of the machine offer protection when loading and unloading the cutting table.

These devices immediately stop the machine when an obstruction passes through the viewing field. Additional protection is provided by a unique sliding system that also stops the machine in the event of contacting an obstruction.

Most tools on the machine also offer a level of protection for the hardware itself. For example, all torches feature our patented SureStop magnetic collision sensor which quickly stops the machine and turns the process off. Recovery is simple and production resumes.

DOUBLE YOUR OUTPUT:
EXPERIENCE THE POWER
OF PARALLEL CUTTING FOR
LARGE-FORMAT LASER MACHINES!



- + Cuts multiple pieces simultaneously
- + Streamlines loading and unloading processes.
- + Advanced alignment systems ensure accurate and high-quality results.
- + Reduces labor costs and material waste, enhancing profitability.

UNLOCK PRECISION AND
EFFICIENCY WITH A HYDRAULIC
CUTTING TABLE FOR CNC MACHINES!



- + Delivers accurate cuts, ensuring high-quality results for complex designs
- + Streamlines the cutting process, lowering overall labor expenses and increasing efficiency.
- + Sturdy construction support heavy workpieces, maintaining stability during operation

EFFECTIVE SMOKE REMOVAL
AND MINIMAL CUTTING
TABLE MAINTENANCE



- + Can be used laser applications
- + Small parts may also be easily retrieved
- + Table widths from 2.5 to 4 m
- + Table lengths up to 28 m

LEVEL OF PROTECTION FOR
THE MACHINE BUT MORE
IMPORTANTLY THE OPERATOR



- + Light curtains and other overall machine safety features are available
- + Internationally certified TwinSAFE on-board
- + Key switch prevents machine movement during maintenance operations and when performing consumable exchange



SPECIAL FEATURES (OPTIONAL)

Conveyor

A conveyor for large-format laser machines automates slag and part removal, significantly improving efficiency and reducing downtime.

This system is engineered for high-performance environments, integrating seamlessly with cutting tables to provide efficient material handling throughout the entire cutting process.

Its durable construction is built to withstand the demands of industrial applications, providing reliable performance even in rigorous conditions. By minimizing manual intervention the conveyor system plays a crucial role in optimizing laser cutting operations, allowing for high productivity and a safer work environment.

MESSER'S CONVEYOR FOR SEAMLESS LASER CUTTING



- + Effortlessly keeps your cutting area clean and minimizes manual labor
- + Built tough to withstand the demands of high-performance environments
- + Tailored solutions to fit any cutting application, reduce manual handling for a safer workplace, and accelerate material flow for faster turnaround and increased output!



SPECIAL FEATURES (OPTIONAL)

Enclosure

Messer Cutting Systems offers high-quality enclosures designed to protect both cutting equipment and operators.

These enclosures are engineered to enhance safety by minimizing exposure to hazards.

They effectively reduce noise levels, creating a more comfortable working environment, while also containing sparks and debris generated during cutting operations.

With a focus on functionality and safety, Messer's enclosures are an essential addition to any cutting setup, ensuring optimal performance and protection for both personnel and machinery.

SHIELD YOUR OPERATIONS: MESSER'S ENCLOSURES FOR SAFE AND EFFICIENT CUTTING



- + Safeguards operators from sparks, debris, and noise, ensuring a secure working environment
- + Minimizes noise levels, contributing to a quieter and more comfortable work environment
- + Helps maintain a cleaner workspace, enhancing overall productivity and cutting performance

YOUR DIGITAL WORKFLOW

PRODCUTION DIGITISATION



OMNIWIN

Ideal for work preparation

OmniWin is a powerful, easy to use designing and nesting software that saves time, material and costs. It is the ideal tool for work preparation in oxyfuel, plasma and laser cutting with CNC machines, taking over all cutting tasks for order-based production.

The software is both effective and economical – for small productions as well as for just-in-time manufacturing with changing quantities in custom cutting operations.

Our solutions ensure maximum transparency in operations management, production planning and control.



OMNIBEVEL

The tool for bevel cutting

OmniBevel is the software for dimensionally accurate parts and the leading product for bevel cutting. The post-processor module with a graphical, easy to use interface delivers optimal cutting results.

It stands for straight cuts, cylindrical holes, exact bevel angles and enormous flexibility. Almost all possible technology parameters and operation details are adjustable.



OMNIFAB

Software suite for digital transformation

OmniFab is the software suite that integrates Messer Cutting Systems' mechanical engineering technology into commercial processes in a holistic and process-oriented manner.

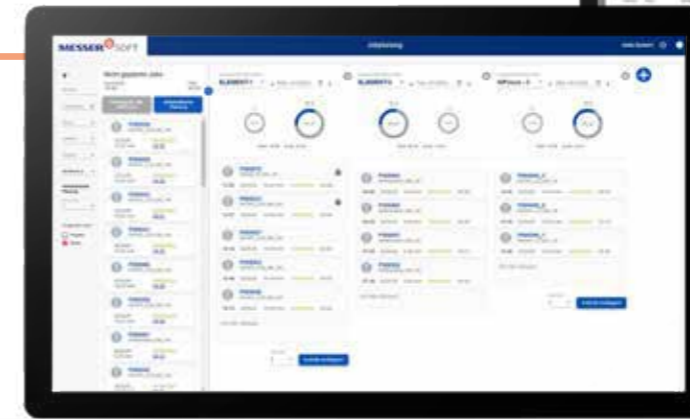
It provides relevant information for work preparation, production planning and plant management by connecting all systems. OmniFab also integrates material handling systems like loading/unloading stations, towers, material transportation devices and more – even on mobile devices.

GLOBAL CONNECT



Everything at a glance

With OmniFab Job Management, you always have an overview of all jobs. The software ensures the jobs are done on the right machines and with the best utilisation, whether you are scheduling manually or automatically. Via OmniFab PDC, feedback from the running operation comes in real-time from the machine operators. You can use this information to react quickly to unforeseen events and make the right decisions.



OmniFab
Job Management



OmniFab
PDC Digital
Working Paper



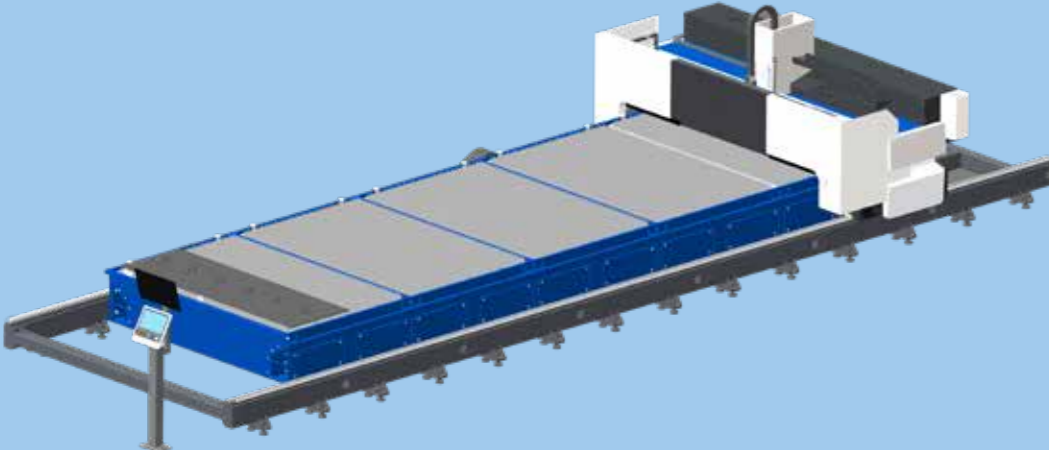
OmniFab
PDC Parts Status

**Novice operators become experts.
Programmers control the process remotely.
Maintenance employees prevent downtime.
Production managers know the job status
and reduce operating costs.**

All of this is possible if you see the CNC control as the connector between production plant, machine and its operator to allow local as well as remote production scheduling. Data transparency to others within the organisation provides key information which is needed to make better business decisions.

- + Flexible job-centric environment for new operators to learn quickly and experienced operators to excel
- + Job scheduling for improved production flow
- + Quick processing of past or repetitive jobs
- + Local nesting and standard shape library for just-in-time workflow





FIXED TABLE

Cutting Width (mm)	2500	3000	3500	4000
Plate Thickness	50mm			
Cutting length	Min 7mtr - Max 28mtr			
Laser Power	6kw-40kw			
Maximum Acceleration	0.25g			
Positioning Speed	50m/min			

PARALLEL SHUTTLE TABLE

Size	8025	13025	7030	8030	13030
Cutting Width (mm)	2500	2500	3000	3000	3000
Cutting length (mm)	8000	13000	7000	8000	13000
Laser Power	6kW - 40kW				
Maximum Acceleration	0.25g				
Positioning Speed	50m/min				

HYDRAULIC SHUTTLE TABLE

Size	7025	8025	13025	7030	8030	13030
Cutting Width (mm)	2500	2500	2500	3000	3000	3000
Cutting length (mm)	7000	8000	13000	7000	8000	13000
Laser Power	6kW - 40kW					
Maximum Acceleration	0.25g					
Positioning Speed	50m/min					

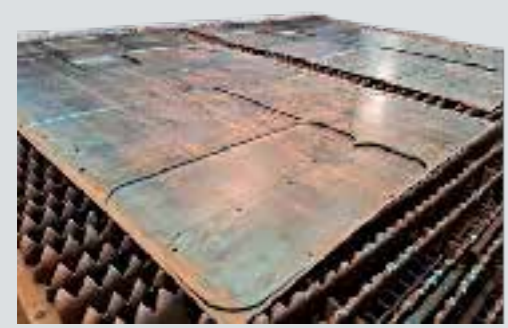


STANDARD FEATURES

- + Cutting widths 2.5 m to 4 m
- + Cutting length up to 28 m
- + Machine motion accuracy: <0.1 mm accuracy; <0.1 mm repeatability
- + Cuts material up to 50 mm
- + Cuts mild steel, stainless steel, aluminum
- + Positioning speed 50m/min for laser & bevel application
- + Reinforced steel weldment construction with high rigidity beam
- + Enclosed powertrack in both axes
- + Global Connect, Windows® based with easy-to-use operator interface
- + Stand alone or right- or left-hand mounted control console with tilt and swivel for operator comfort
- + SureStop collision sensor with easy and accurate reset
- + Meets all safety requirements

OPTIONAL FEATURES

- + Bevel Units: Bevel-U
- + Marker systems: Inkjet and Pin Marker
- + Automatic plate alignment
- + IoT 4.0 (Machine Insight)
- + Enclosure for gantry
- + Light curtain for high safety
- + Zoned exhaust tables
- + Dust collection systems for various applications
- + Material handling systems
- + Visual Service support
- + Virtual Service™ remote consultation and diagnostics





CREATING SOLUTIONS BEYOND MACHINES

What we stand for

PRODUCT

Messer Cutting Systems is a global supplier of cutting edge technology for the metalworking industry.

AUTOMATION

With over 900 employees worldwide in over 50 countries, we maintain a constant dialogue with our customers to achieve sustainable user-oriented innovation.

DIGITAL

SERVICES

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.

KNOW-HOW

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 have made us the worldwide partner of choice for innovative total solutions on all aspects of cutting systems for over 120 years.

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