METAL PROCESSING

Cutting equipment

motofil

CUTTING AND WELDING SOLUTIONS

ABOUT MOTOFIL

Our 38 years in the business makes us a leader in the automation and robotics market. Our growth strategy is based on research and development, and on the continuous improvement of our products and processes, to meet the specific needs of each one of our clients.

We are located in Ílhavo, Portugal, in an industrial park of 260,000 sqm, in which we built facilities to make our production independent and optimised. We have a team with approximately 270 employees, specialized in various areas of expertise.

We invest in internationalisation, by frequently exporting to countries like Spain, United Kingdom, France, Germany, Russia, Slovakia, Czech Republic, Romania, Poland, Turkey, China, USA, Mexico, Peru, Chile, Brazil, and we are currently working to expand to new markets.

FIBER LASER PROCESSING

Solutions of fiber laser cutting technology for metal sheet, tubes and/or beams.

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MFL

2D Fiber Laser Cutting Machine for metal sheet.

10

MFL Tube Smart

Fiber laser cutting machine for tubes and profiles with a maximum capacity of 20 Kg/m.

12

MFL Tube

Fiber laser cutting machine for tubes and profiles with a maximum capacity of 90 Kg/m.

Fiber Laser Processing: MFL

FIBER LASER PROCESSING

MFL

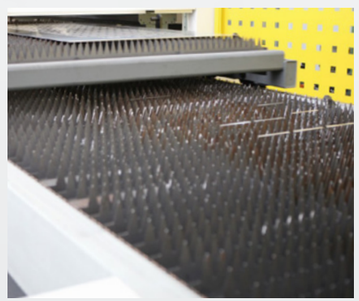
Motofil Fiber Laser system was designed to be the best solution for a simple, fast and effective cut of mild steel, stainless steel, aluminium, brass and copper 2D metal sheets.

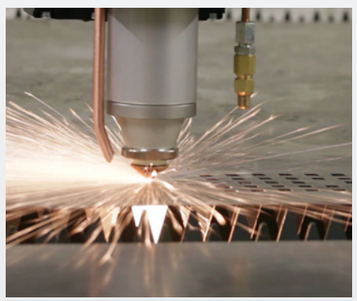
BENEFITS:

- Mechanically welded cradle specially developed to reduce cutting vibrations.
- Fast table changing system, allowing for a sheet to be available, while the other is being moved to the loading/unloading area, thus decreasing the stops and duty cycles.
- The frog-jump technology optimizes the displacement of the cutting head, reaching greater productive efficiency.

MFL					
Models	**315**	**420**	**620**	**625**	**820**
Working area (L x W) **[mm]**	3000x1500	4000x2000	6000x2000	6000x2500	8000x2000

POWER SUPPLY AND MAX. CUTTING THICKNESS *						
Generators [kW]	**2**	**3**	**4**	**6**	**8**	**10**
Mild steel **[mm]**	14	16	10	22	25	30
Stainless steel **[mm]**	8	8	10	12	18	20
Aluminium **[mm]**	6	8	10	10	14	16





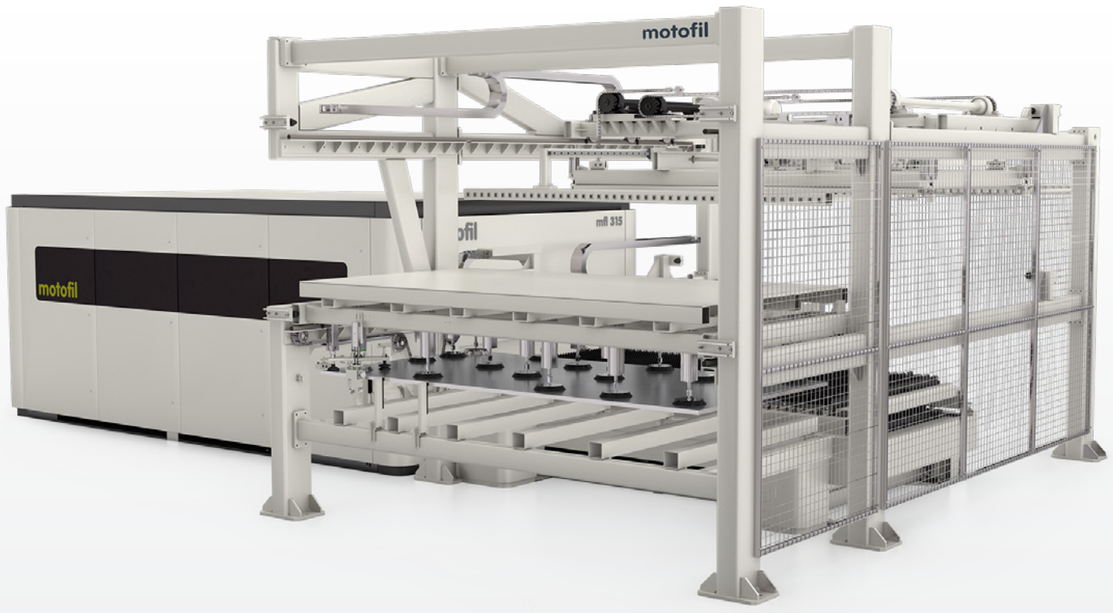
Fiber Laser Processing: MFL

FIBER LASER PROCESSING

MFL - AUTOMATION

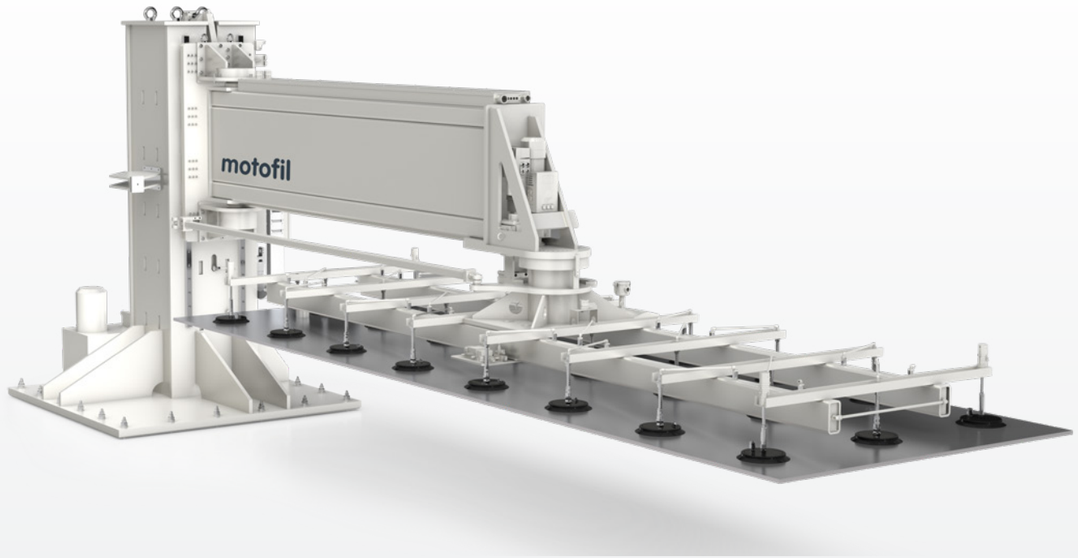
AUTOMATIC LOADING/UNLOADING

Fast and compact loading and unloading unit. While the suction cups are loading the metal sheets to the cutting shuttle, the fork system is unloading the cut parts.



RADIAL LOADER

Sheet loading system that serves as an automatic raw material feeding unit for the fiber laser cutting machine. Using the suction cups, this system loads the metal sheets to the table of the cutting machine.



AUTOMATIC LOADING AND UNLOADING		
Function	**Loading**	**Unloading**
Max. part size **[mm]**	3000x1500	
Min. part size **[mm]**	1000x1000	150x150
Max. sheet thickness **[mm]**	25	
Payload per pallet **[Kg]**	900	
Loading/unloading sheet height **[mm]**	170	

RADIAL LOADER	
Model	**CR 620**
Max. part size **[mm]**	6000x 2000
Min. part size **[mm]**	1000x1000
Max. sheet thickness **[mm]**	25
Payload per pallet **[kg]**	2000

Fiber Laser Processing: MFL TUBE SMART

FIBER LASER PROCESSING

MFL TUBE SMART

Ideal and economical solution for cutting tubes and profiles with a maximum weight of 20 Kg/m.

BENEFITS:

- Intuitive interface, easy to use and designed for high performance levels;
- Optimized to increase the productive flow, decreasing the impact on the organization of production;
- With the use of fiber laser technology, it is possible to process other types of materials, such as copper and brass, which can't be cut with CO_2.

MFL TUBE SMART	
Max. diameter [mm]	140
Min. diameter [mm]	15
Max. weight [Kg/m]	20
Max. length load [mm]	6000
Max. length unload [mm]	1000
Fiber laser max. power supply [kW]	2-3
Materials	Mild, steel, Stainless steel, Copper, Aluminium, Brass

Fiber Laser Processing: MFL TUBE

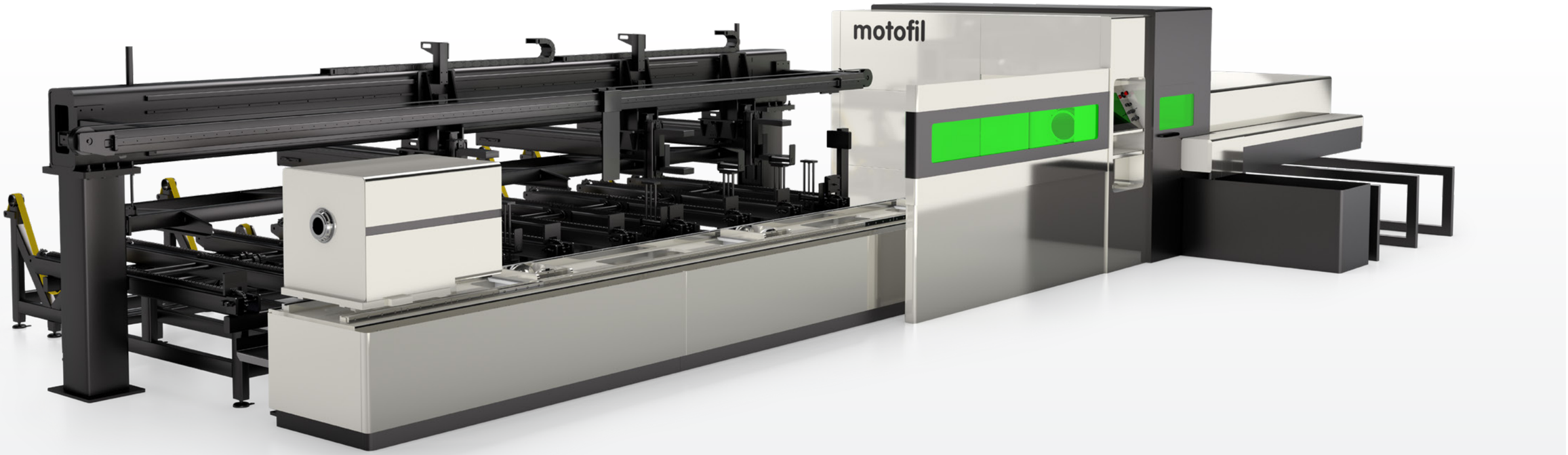
FIBER LASER PROCESSING

MFL TUBE

MFL Tube is an intuitive and compact solution for cutting tubes and profiles with a capacity up to 90 Kg/m.

BENEFITS:

- This solution allows the efficient cutting of heavy tubes composed of various types of materials;
- Electrical efficiency of laser technology, compared to CO_2.
- Integration of automation solutions, such as the automatic loader, allows to increase the productive efficiency.



MFL TUBE	
Max. diameter [mm]	300
Max. weight [kg/m]	90
Max. length load [mm]	7000
Max. length unload [mm]	2000
Fiber laser power supply [kW]	2 - 3
Materials	Mild steel, Stainless steel, Copper, Aluminium, Brass

PLATE PROCESSING

Metal sheet processing solutions with plasma, oxyfuel and mechanical drilling.

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FELINE

Plasma cutting machine for small or medium parts.

18

DRAGOm

Plasma and oxyfuel cutting machine for large parts - heavy-duty solution

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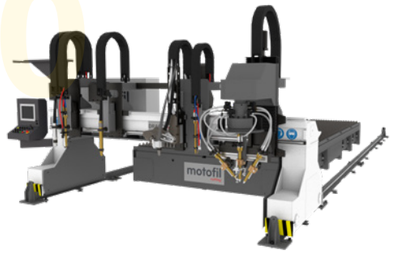

DRAGOm Multiprocess

Multiprocess solution for the cutting and mechanical drilling of large parts.

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TAURUS

Cutting machine of large parts with automatic feeding.

Plate Processing: FELINE

PLATE PROCESSING

FELINE

FELINE is the fastest, compact and user-friendly solution in industrial plasma cutting.

BENEFITS:

- Cutting table and a gantry on rails that are completly integrated into a structure, allowing for a fast installation and set-up;
- Designed to limited factory spaces, featuring a structure with reduced dimensions;
- High performance in comparison to the larger cutting machines. Its compact and integrated manufacturing concept was developed for faster and safer high precision cuts.

FELINE			
Models	**1530**	**2040**	**2060**
Working area (L x W) **[mm]**	3000x1500	4000x2000	6000x2000
Total dimensions **[mm]**	5000x2900	6000x2900	8000x2900
Max. cutting thickness **[mm]**	20*	25**	25**

*Thermal Dynamics A-Series or Ultra-Cut mild steel at 100A
** Thermal Dynamics Ultra-Cut mild steel at 200A

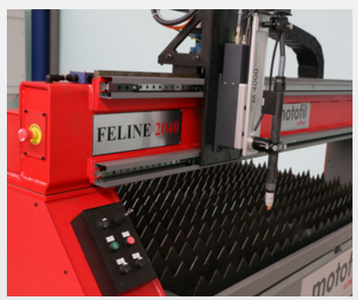
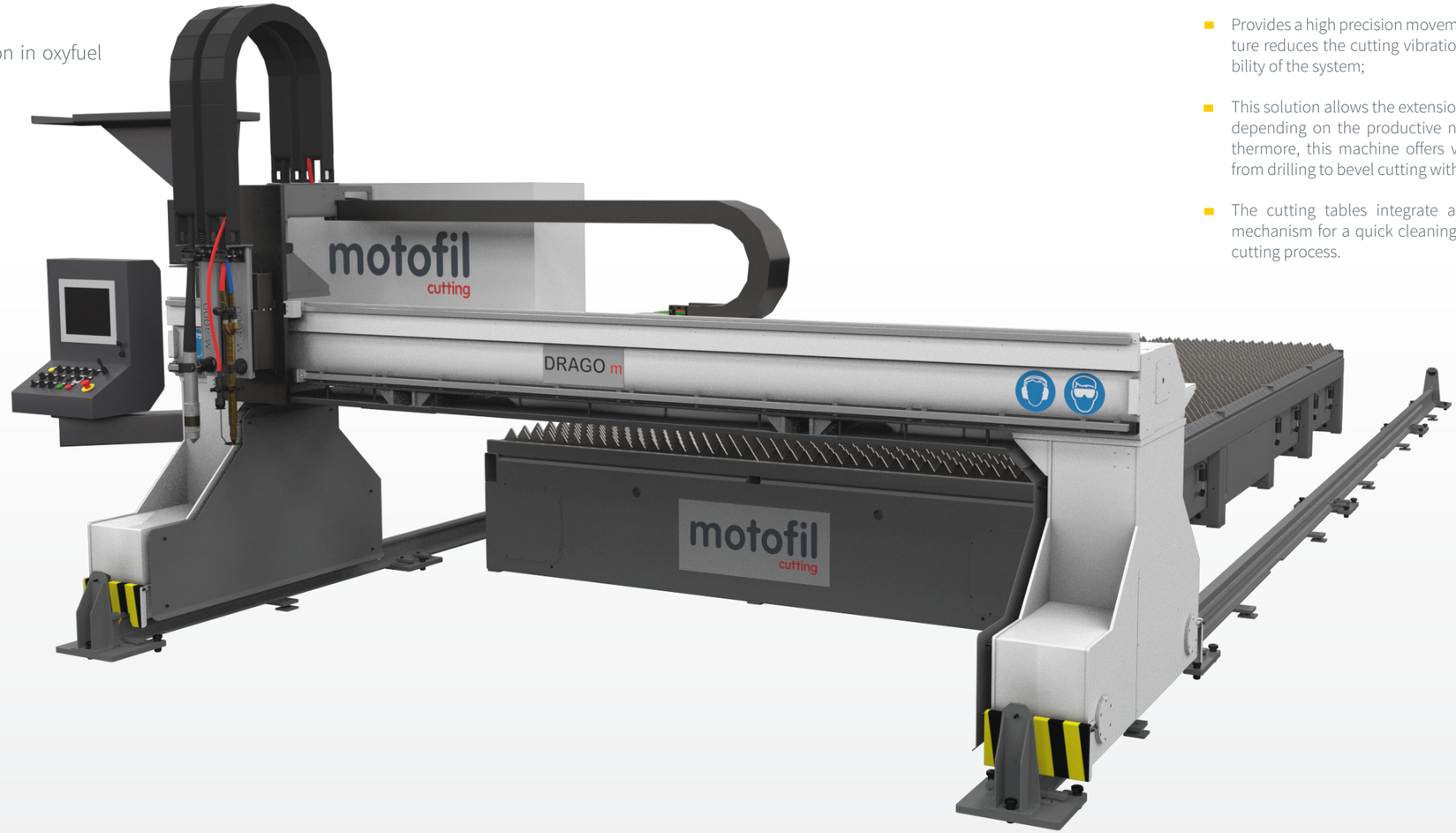


PLATE PROCESSING

DRAGOm

Robust, adjustable and highly productive solution in oxyfuel and plasma cutting.



BENEFITS:

- Provides a high precision movement and its robust structure reduces the cutting vibrations while ensuring durability of the system;
- This solution allows the extension of the cutting area depending on the productive needs of the client. Furthermore, this machine offers various process options from drilling to bevel cutting with oxyfuel and/or plasma;
- The cutting tables integrate an easy slag extraction mechanism for a quick cleaning of the remnants of the cutting process.

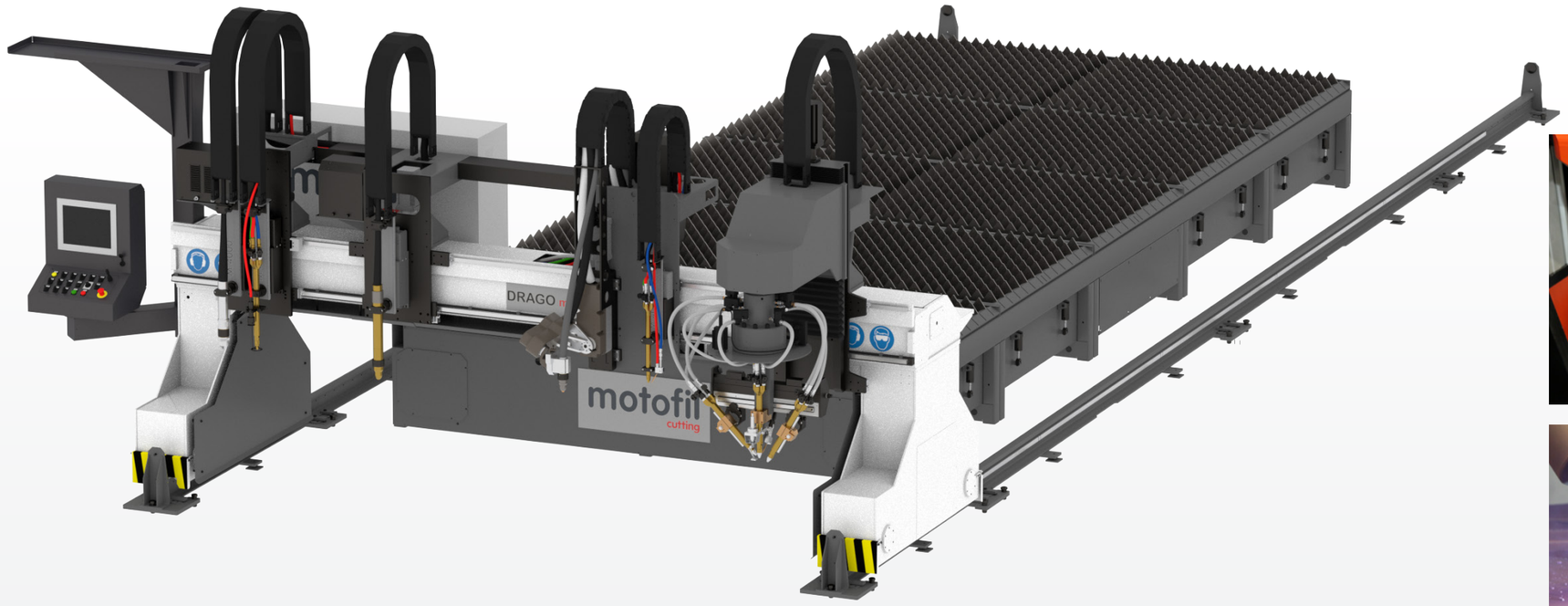
DRAGOm						
Models	**25**	**30**	**35**	**40**	**45**	**Specials**
Cutting Width [mm]	2500	3000	3500	4000	4500	>4500
Cutting Length [mm]	6000 - 30000					
Max. cutting thickness [mm]	3-100 (plasma) / 3-200 (oxyfuel)					
Max. number of plasma torches	2					
Max. number of oxyfuel torches	6					

Plate Processing: DRAGOm Multiprocess

PLATE PROCESSING

DRAGOm MULTIPROCESS

The multiprocess solution offers the opportunity to equip the DRAGOm with various options to increase the number of functionalities of the equipment.



BENEFITS:

- Production flexibility in a single installation;
- Economization of work cycles because there's no need to switch the set-up to use other processes.

OXYFUEL BEVEL SYSTEM

The bevel system can be:
- Automatic: the process can occur continuously, without rolling the wiring, thus the system has infinite rotations;
- Manual: the process can occur with the intervention of the operator and the rotation is up to 180º.

Max. angle [º]	60
Number of torches	2 - 3
Bevel types	I, K, V, X and Y
Rotation [º]	360, automatic; +/- 180, manual

PLASMA BEVEL SYSTEM

The plasma cutting technology allows cuts in chamfer, with 360º borders, continuously, with angles between 0 and ±45º, automatically increasing the intended inclination directly or gradually.

Max. angle [º]	+/- 45
Number of torches	1 - 2
Bevel types	I, V, X and Y
Rotation [º]	360, automatic

MECHANICAL DRILLING (ISO 40)

DRAGOm can perform drilling operations through a servocontrolled unit with a drilling capacity of up to 64 mm of thickness and 32 mm in diameter.

Max. number of stored tools	5
Max. drilling diameter [mm]	32
Min. thickness of the sheet to be drilled [mm]	6
Max. thickness of the sheet to be drilled [mm]	64

Plate Processing: Taurus

PLATE PROCESSING

TAURUS

Dynamic cutting table solution, ideal for large productions of thermal cutting, drilling, threading and marking.

BENEFITS:

- Its robust and large structure facilitates the manipulation of the material to be cut ensuring a greater efficiency of the process;
- The machine is composed of two servomotors that guarantee the precision and speed of the cut, eliminating vibrations that can be harmful to the machine.

TAURUS	
Max. cutting area [mm]	12000x3000
Min. cutting area [mm]	200 x 100
Max. thickness cutting (oxyfuel) [mm]	200
Max. thickness cutting (plasma) [mm]	50
Max. weight of the sheet [kg]	14000
Positioning speed [m/min]	40
Max. acceleration [mm/sec]	2000
Positioning precision [mm]	± 0.1
Diameter of HSS steel drill bit [mm]	5 - 40
Threads	M6 - M36
Max number of stored tools	10
Options	Plasma bevel

BEAM PROCESSING

Thermal and mechanical cutting solutions for metal sheet and beams.

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CUTTING AND DRILLING CENTER

Machine for cutting and drilling metal sheet and beams with marking capacity.

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ROBOTIZED CUTTING CENTER

Robotic solution for plasma and/or oxyfuel cutting of beams.

Beam processing: Cutting and drilling center

BEAM PROCESSING

CUTTING AND DRILLING CENTER

BENEFITS:

- More dynamic production flow, without interruptions, due to the roller table, and consequently the decrease of work cycles;
- Longer useful of the peripherals and maintenance of the cutting speed, because the drilling system directly lubricates the bit;
- Angular cuts in both directions with maximum performance.

DRILLING		
Models	**ST3 1000**	**ST3 1200**
Vertical work capacity [mm]	5 x 455	5x500
Horizontal work capacity [mm]	50 x 1040	50x1200
No. of heads	3	3
Drilling [mm]	5 - 40	10 - 40
Threads	M6 - M30	M12 - M24
Automatic tool change	3 x 5	3x4
Optionals	Marker for parts	Clamp to feed the material

CUTTING		
Models	**PBR 550/1000**	**PBR 700/1300**
Cutting capaticty at 0º [mm]	1000 x 520	1300x650
Cutting capaticty at 45º [mm]	650 x 520	850x650
Cutting capaticty at 60º [mm]	425 x 520	560x650
Dimensions tape [mm]	8400 x 54 x 1.3	10500x54x1.3

Beam processing: Robotized cutting center

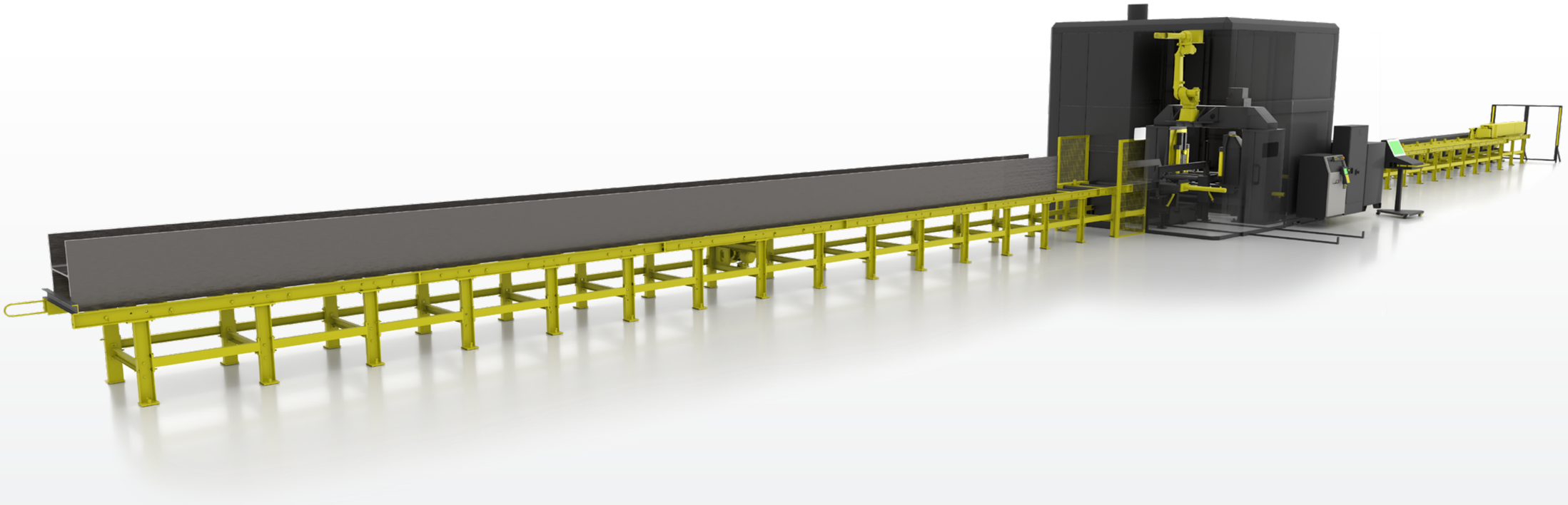
BEAM PROCESSING

ROBOTIZED CUTTING CENTER

The technology and the flexibility of the robot allows the 3D cutting of parts of more complex structure.

BENEFITS:

- Able to cut parts of different forms without resorting to other types of processes;
- Loading and unloading of materials without interrupting the activity of the machine, given the large length of the cutting table composed with rollers, increasing the efficiency of the process;
- Allows plasma marking.



ROBOTIZED CUTTING CENTER	
Cutting area [mm]	500x1250
Max. loading capacity [kg]	1500
Positioning speed (X axis) [m/min]	42
Number of axes	6 + 2 (4 sides)
Plasma cutting	up to 400A
Oxyfuel	Option (up to 200mm)

TECHNICAL ASSISTANCE

MAINTENANCE

We guarantee the availability of substitution components in order to ensure the perfect functioning of our equipment.

AFTER-SALES SERVICE

By getting in touch with Motofil, our specialised technicians are available to answer any question.

INSPECTION

It is possible to schedule inspection visits and preventive maintenance to perform exhaustive diagnosis of the conditions and the operation state of Motofil's machines.

TRAINING SESSIONS

The training program includes a stage destined to the maintenance and basic operation of the equipment, as well as a stage destined to the programming of the software.

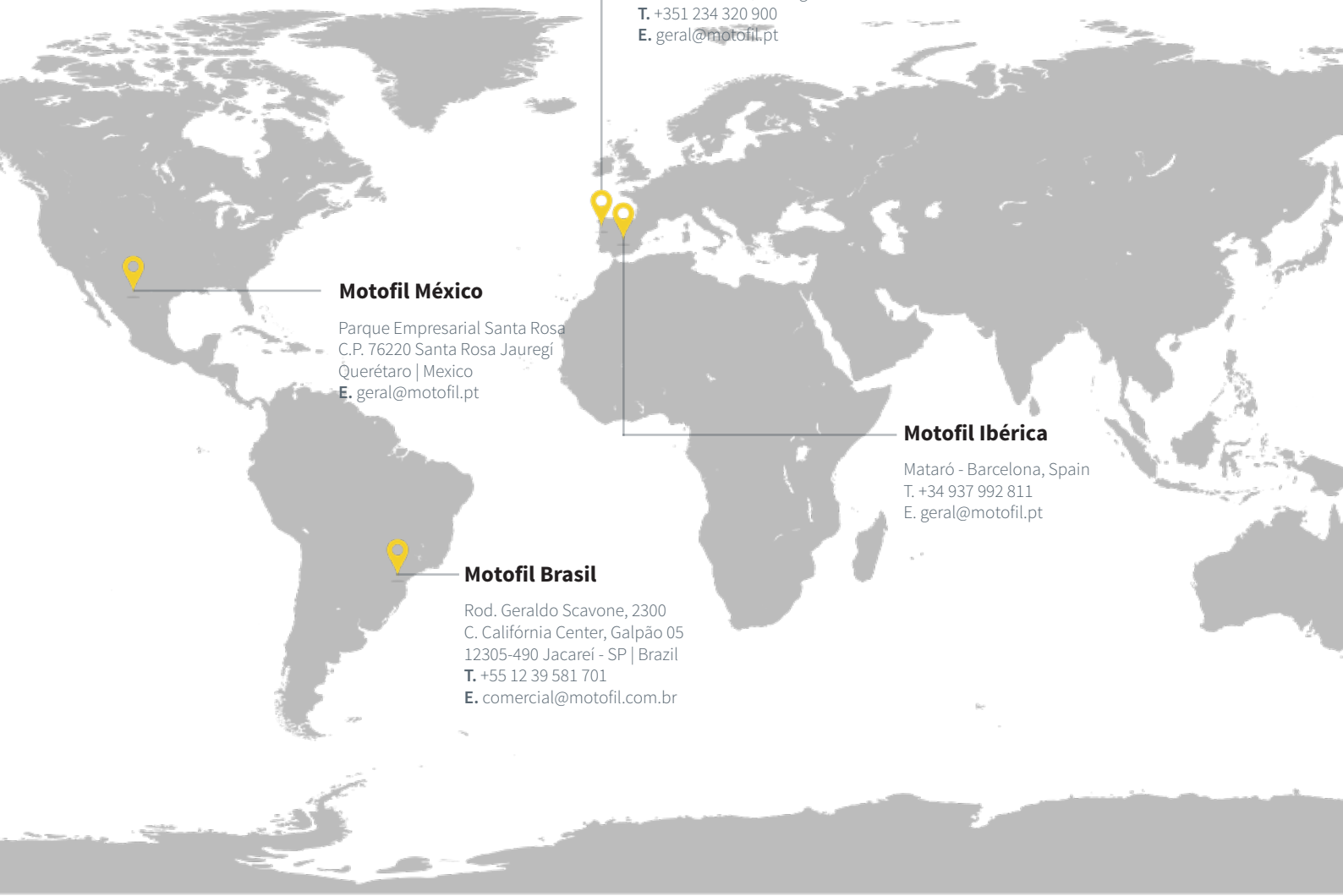
The training is accessible and valid during the operating life of the equipment.

ON THE ROAD TO SUCCESS

Motofil developed approaches and strategies to equip its machine with functionalities like piercing, cornering, edge burning as well as great cutting and travel speeds, with which we can achieve, for instance, piercing times inferior to 1 second in thick sheets. These approaches are based on functions like Pulse Power and Ramping Power.

Motofil invests in the continuous improvement of its products to provide more and better solutions to its clients. To keep track of our developments, visit our website www.grupomotofil.com.

WE'VE INSTALLED MORE THAN 2 000 SOLUTIONS IN OVER 30 COUNTRIES.



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NO MATTER THE PROBLEM

WE HAVE THE SOLUTION

COMPETE 2020
PORTUGAL 2020
UNIÃO EUROPEIA
Fundo Europeu de Desenvolvimento Regional