

## FOR OUR SYSTEMS, WE USE LASER SOURCES WITH THE HIGHEST PERFORMANCE FOR EVERY SPECIFIC APPLICATION

Every one of our machines is made using technologies that better meet expectations and ensure the quality of the provided service. We have established collaborations with the world's major laser manufacturers, and this exchange of experience adds value at the disposal of our clients.

This is the prerequisite that allows us to manufacture a system that better solves the client's issues. Assessing the best CO2 or high brightness laser source is not enough: nowadays it is essential to know how to choose the optimal type of process.



High performance fast axial flow CO2 laser with wear-free gas circulation and radio-frequency excitation.



CO2 SLAB laser. Extremely high quality beam with considerable maintenance reduction.



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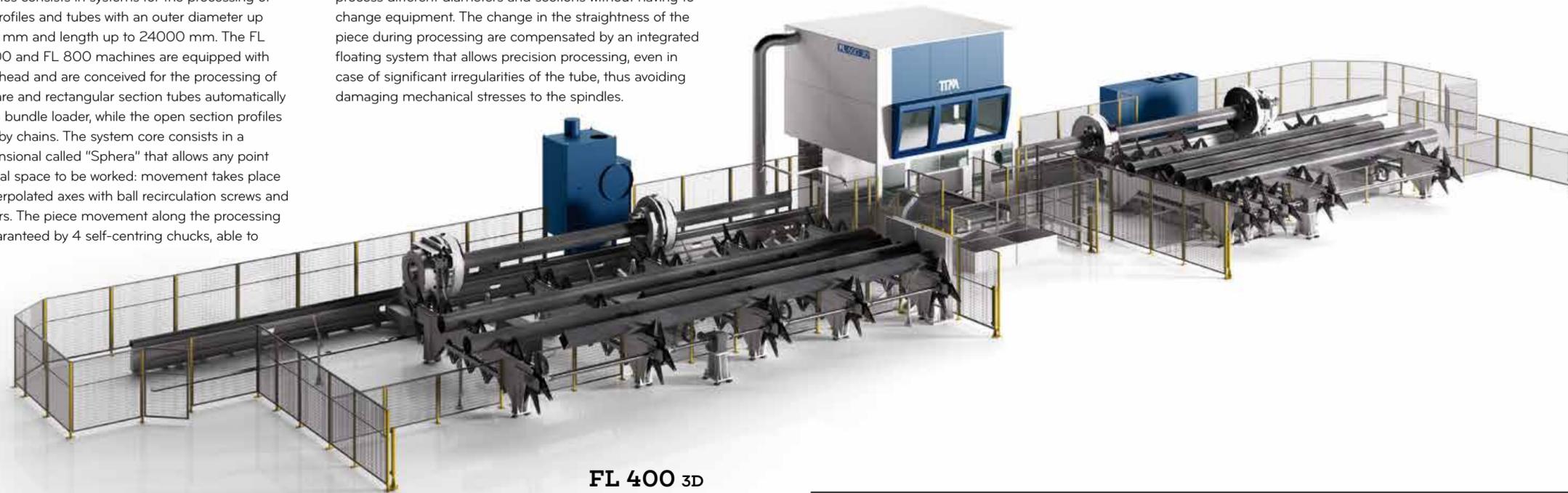
## M4 SERIES FL 400/600/800 TUBE LASER CUTTING MACHINES



# M4 SERIES FL 400 / 600 / 800

The M4 series consists in systems for the processing of structural profiles and tubes with an outer diameter up to max 815 mm and length up to 24000 mm. The FL 400, FL 600 and FL 800 machines are equipped with 3D cutting head and are conceived for the processing of round, square and rectangular section tubes automatically loaded by a bundle loader, while the open section profiles are loaded by chains. The system core consists in a three-dimensional called "Sphera" that allows any point in a spherical space to be worked: movement takes place along 5 interpolated axes with ball recirculation screws and linear motors. The piece movement along the processing axis are guaranteed by 4 self-centring chucks, able to

process different diameters and sections without having to change equipment. The change in the straightness of the piece during processing are compensated by an integrated floating system that allows precision processing, even in case of significant irregularities of the tube, thus avoiding damaging mechanical stresses to the spindles.



**FL 400 3D**

TUBES AND PROFILES CAPACITY RANGE	MAX CARRYING CAPACITY	LOADING LENGTH	UNLOADING LENGTH	SECTIONS	MANDREL N°	CONTROLLED AXES N°	CUTTING PORTAL STROKE	MANDREL MAX LINEAR SPEED
Ø 40 mm MIN Ø 406 mm MAX □ 300 X 300 mm MAX	140 kg/m	UP TO 14 meters	UP TO 14 meters	□ □ □ H L L	4	30 (COMPLETE CONFIGURATION)	2000 mm 6,56'	70 m/min 229 ft/min
Ø 1,5" MIN Ø 16" MAX □ 12" X 12" MAX	94 ppf	UP TO 46'	UP TO 46'					

**FL 600 3D**

TUBES AND PROFILES CAPACITY RANGE	MAX CARRYING CAPACITY	LOADING LENGTH	UNLOADING LENGTH	SECTIONS	MANDREL N°	CONTROLLED AXES N°	CUTTING PORTAL STROKE	MANDREL MAX LINEAR SPEED
Ø 89 mm MIN Ø 610 mm MAX □ 400 X 400 mm MAX	290 kg/m	UP TO 18 meters	UP TO 18 meters	□ □ □ H L L	4	33 (COMPLETE CONFIGURATION)	2000 mm 6,56'	60 m/min 196 ft/min
Ø 3,5" MIN Ø 24" MAX □ 15,7" X 15,7" MAX	194 ppf	UP TO 59'	UP TO 59'					

**FL 800 3D**

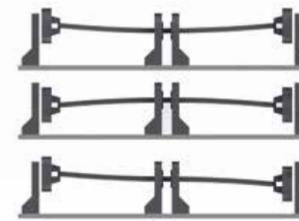
TUBES AND PROFILES CAPACITY RANGE	MAX CARRYING CAPACITY	LOADING LENGTH	UNLOADING LENGTH	SECTIONS	MANDREL N°	CONTROLLED AXES N°	CUTTING PORTAL STROKE	MANDREL MAX LINEAR SPEED
Ø 150 mm MIN Ø 815 mm MAX □ 550 X 550 mm MAX	350 kg/m	UP TO 18 meters	UP TO 18 meters	□ □ □ H L L	4	34 (COMPLETE CONFIGURATION)	6,56'	45 m/min 147 ft/min
Ø 5,9" MIN Ø 32" MAX □ 21,6" X 21,6" MAX	236 ppf	UP TO 59'	UP TO 59'					

SOURCE TYPE  
TruFlow Trumpf - Rofin Slab DC

## RELIABILITY.

### FLOATING-MANDRELS (CHUCKS) SYSTEM (FMS®)

Our machine is equipped with 4 mobile mandrels (chucks). Commercial pipes almost always have a bending, the FMS system allows providing the external chucks (M1 and M4) the ability to rotate with an eccentricity compare to the theoretical centre of rotation, this system allows safeguarding the mechanical part of mandrels ensuring reliability over the time.



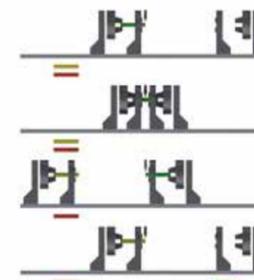
M1

M4

## PRODUCTIVITY.

### CUTTING TIMES AND LOADING AND UNLOADING (4MMS®) TIMES OPTIMISATION

The 4 mobile chucks are indispensable to allow the maximum optimisation of loading and unloading operations ensuring high productivity.



>  
\_ Sphera

The tri-dimensional Sphera system allows any point in a spherical space to be worked. The movement along 5 interpolated axes, with recirculating ball screws, ensures high dynamics.



>  
\_ Chain loading system

The loading and unloading system consists in chains with V-shaped supports which allow the handling also of profiles and open sections.



>  
\_ Loading and unloading gantries

Loading and unloading gantries are the most suitable solution for the handling.