#### AR LINE SECTION BENDING MACHINE

They are more powerful machines, with superior capabilities at a competitive price, for bending all types of profiles.

Special nylon rollers are mounted if aluminum profiles need to be bent, furthermore special hydraulic guides with three-dimensional movement support and accompany the curved profile during processing.

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The three rolls are driven by three independent hydraulic motors and three planetary gears directly connected to each roll to achieve higher torque transmission.

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The **HT versions** are specific for making spirals with short shafts, reinforced motorization to obtain small diameters, reinforced lateral guides for greater thrust and pitch control, calibrator roller which guarantees diameter precision, front support with up/down movement as well as thrust /traction.

In the **ARL version** the lateral bending rollers move on a straight axis, in this way the pinching point of the profile between the lateral and the upper takes place in less space. Linear guides allow you to machine smaller diameters with high precision, accuracy and stability.

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These machines have the possibility of working on both vertical and horizontal axes. And they have the possibility of having CNC automation.

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The goal of our Engineers is to exploit the mechanical/hydraulic accessories exactly as if they were the operator's hands, but obviously with more force.

### AR.4 LINE SECTION BENDING MACHINE

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This range offers a wider distance between the side rollers allowing for larger bending radii. Here too, every secondary element is eliminated and torque transmission is higher.

The 4 rollers are also versatile machines due to the possibility of working on both vertical and horizontal axes.

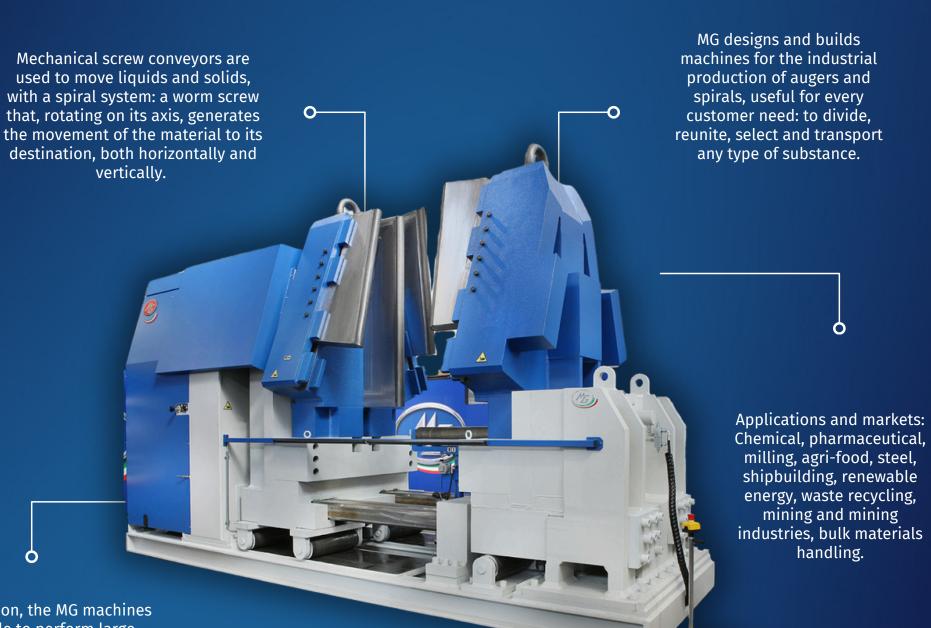
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The **HT versions** are specific for making spirals, with short shafts, reinforced motorization to obtain small diameters, reinforced lateral guides for greater thrust and pitch control, calibrator roller which guarantees diameter precision, front support with up/down movement as well as push/pull. In the **ARL version** the lateral bending rollers move on a straight axis which reduces the space between the rollers themselves. In this way the stapling takes place in less space. Linear guides allow you to machine smaller diameters with high precision, accuracy and stability.

The mechanical configuration of these machines also allows the flat parts at the ends of the profile to be reduced to a minimum.

# **TWO TOOLS**

#### EM LINE MACHINE



In addition, the MG machines are able to perform large spiral machining operations, which are used to produce pumps, mixers, mixers, turbines and industrial augers.

# **TWO ROLLS**

#### F LINE MACHINE

The motorization aspect is also very important during the pre-bending, in fact it allows us to bring the plate to the center of the rolls with maximum precision and control, without risk of slipping of the metal sheet . We will obtain a pre-bending that will not exceed 1.5 or 2 times the thickness of the sheet.

> The MG machine has the upper roll made of steel and the motorized lower roll made of special urethane material: the curvature with this urethane roll allows very fast bending times.

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The precision of processing allows the insertion of our machine in automatic production lines, even very sophisticated.

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F Line Bending Machine is the ideal

solution for bending very small diameters

and for maximum industrial productivity.

With the F Line the correct deformation of the sheet is obtained along the whole useful length: a perfectly circular shell ring without any flat part, in a single pass.

### G LINE MACHINE

It has three driving rollers with hydraulic clamping which guarantee precise and constant material dragging.

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Reliable and productive, the parallelism of the side rolls is controlled by a torsion bar system that connects both ends of the roll, eliminating the disadvantage of delicate and unreliable encoders

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The rolls are driven by hydraulic motors and high-efficiency planetary O gearboxes, coupled directly to the rolls.

The side rolls move up and down on oscillating planetary guides eliminating the disadvantages of linear gears and allows us to have hydraulic pumps with lower capacity motors, improving energy savings.

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Easy to use and precise in the execution of the viroles, it boasts unique versatility thanks to the exclusive MG planetary geometry.

The rolls assembled on sealed bearings and without secondary components, reduce dispersions in the applied force and guarantee greater reliability, increasing the inclination capacity of the lateral rolls, resulting in greater versatility.

In its GE version both the movement and the parallelism of each roll are controlled electronically. Two proportional solenoid valves, two transducers and a dedicated system that guarantees precision, stability and repeatability of the piece over time under all conditions and temperatures.

#### GL LINE MACHINE

In its GL version, however, the lateral rolls move on a straight axis which reduces the space between the rolls themselves.

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The contact point of the lateral rolls with the sheet metal takes place in less space thanks to a shorter wheelbase; this allows you to machine very small diameters and have a much shorter straight part.

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Two proportional solenoid valves, two digital readout transducers and a dedicated electronic control guarantee precision and repeatability of positioning over time for each roller, independently of the temperature and any mechanical wear, always guaranteeing maximum precision.

On this model the parallelism of the rolls is electronic.

#### K LINE MACHINE

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This type of machhine **O**represents a NEW concept in the world of calendering. The machine will be equipped with the Touch Command EVO numerical control which, again, as in all the MG models in which it is present, monitors the calendering work to perfection. With a simple touch of the screen you enter the sheet metal parameters and the control generates the program.

The straight part, already minimal on our machines, 1.8 times the thickness of the sheet metal being machined, will be even shorter, and this can only be a practical and aesthetic advantage on the final product, whatever it may be.

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This bending machine can be used as a normal 4-rolls or as a 3-rolls, with the particularity of having a very reduced width compared to traditional bending machines.

On multiple diameter machining operations, the speeds of the interpolated movements are selected completely automatically and are controlled in all conditions in real time.

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The system monitors the coordinates that are executed with maximum accuracy and corrects any errors. EVO allows wireless communication, interconnection, data collection and analysis, as well as the visualization of the desired shape in 3D graphics.

### M-ME LINE MACHINE

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It is the easiest hydraulic calendering machine to use thanks to the possibility of pinching the sheet metal between the two central motorized rolls, performing the bending at the ends, and calendering along the entire body of the sheet metal in a single direction and in a single pass. The sheet metal is kept square without any slipping thanks to the constant clamping of the upper and lower rolls. This makes it perfectly suitable for being on a NC or CNC numerical control.

In this calender the parallelism of the side rollers is controlled by a torsion bar system that connects both ends of the rolls, eliminating the disadvantage of the extra encoders and the hydraulic circuit. O The rollers assembled on sealed bearings and without secondary components reduce the dispersion in the applied force that is generated by the friction of the various components

The side rolls move on oscillating planetary guides: a perfect geometry that eliminates the disadvantages of linear gears. For this reason we have hydraulic pumps with lower capacity motors, improving energy savings.

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In its ME version both the movement and the parallelism of each roll are controlled electronically.

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#### ML LINE MACHINE

In its ML version, however, the lateral rolls move on a straight axis which reduces the space between the rolls themselves.

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The contact point of the lateral roll with the sheet metal takes place in less space thanks to a shorter wheelbase; this allows you to machine very small diameters and have a much shorter straight part.

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Independently of temperature and any mechanical wear, always guaranteeing maximum precision.

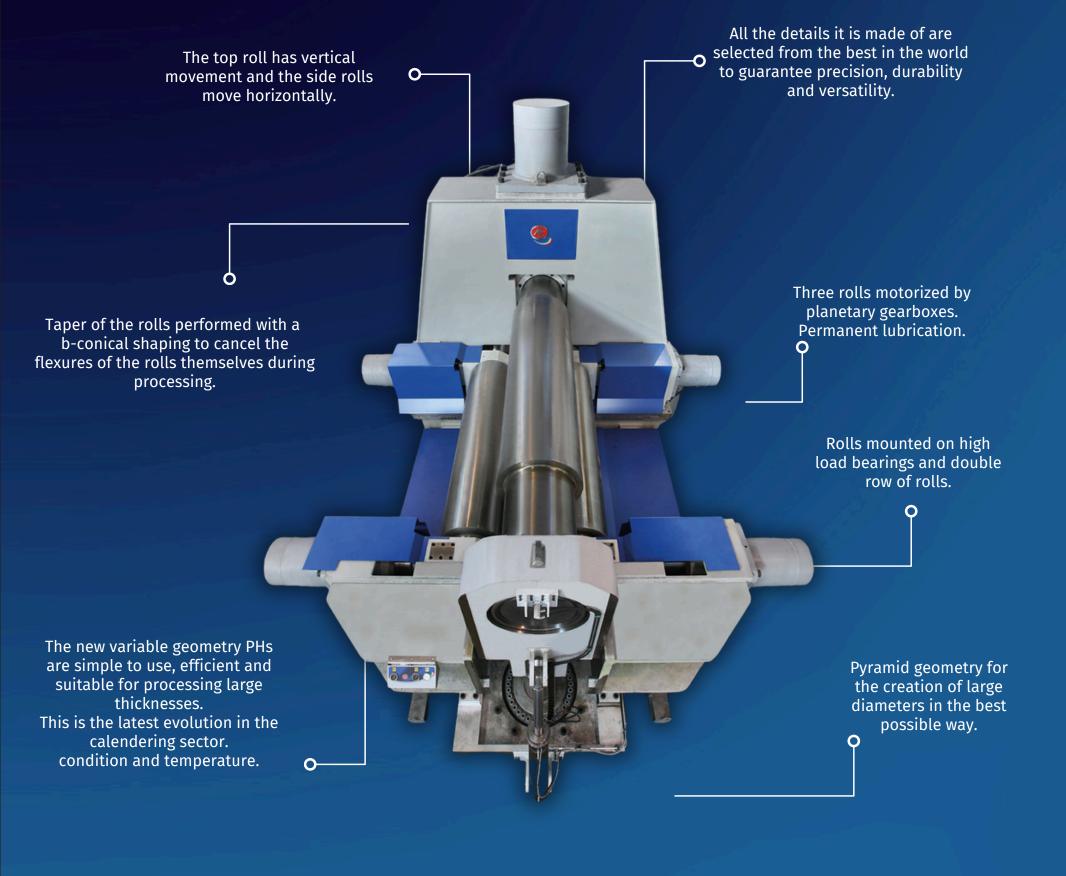
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Two proportional solenoid valves, two digital readout transducers and a dedicated electronic control guarantee precision and repeatability of positioning over time for each roll

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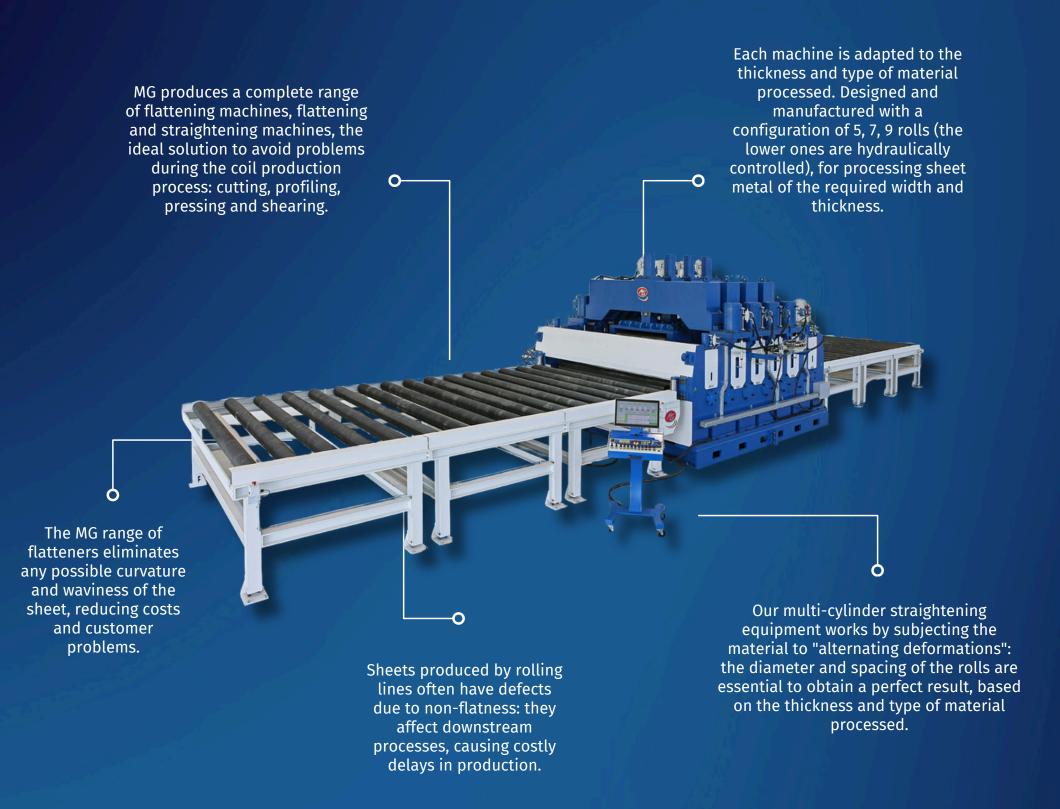
On this model the parallelism of the rolls is electronic.

### PH LINE MACHINE



## NINE ROLLS

#### SP LINE MACHINE



### SIX ROLLS

### SZ LINE SECTION BENDING MACHINE

