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BENDING COMPLETE RANGE

www.blmgroup.com



BLM GROUP

BLM GROUP

Technology that moves you forward

Ours is a history of technology, passion and service. For over 60 years the BLM GROUP has produced equipment for tube fabrication (laser cutting, bending, endforming, sawing and end machining), combining both experience and innovation, to produce efficient and easy to use machines of the highest, Made in Italy, quality.

There are three divisions of the company that design, produce, sell and service machines.

BLM SPA - Cantù

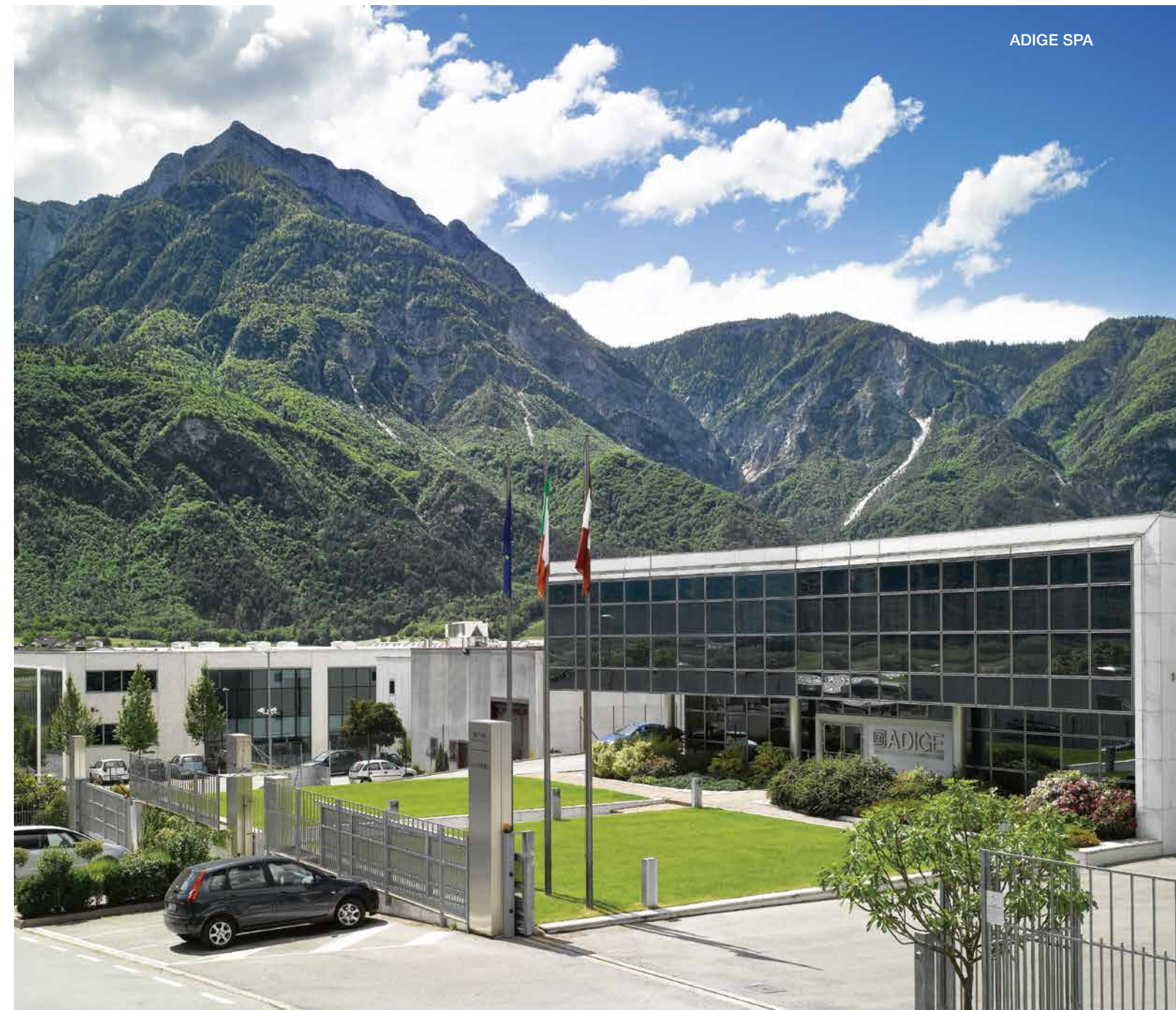
bending and endforming systems and five axis laser systems;

ADIGE SPA - Levico Terme

laser tube cutting systems and cold saws;

ADIGE-SYS SPA - Levico Terme

combination tube and sheet laser cutting systems and end machining systems.





BENDING

Technology

ALL-ELECTRIC

All of our tube benders feature the benefits of easy to use “all-electric” technology.

Minimum set-up time

Repeatability and accuracy is maintained

The precise control and positioning of all the electric axis guarantee the optimum parameters can be produced exactly, right-first-time and every-time. Changeover times are dramatically reduced and operator set up skills are minimized because the machine automatically manages the critical settings for clamps, pressure die, mandrel position and retraction, center line radius, etc.

Drastically reduced maintenance requirements due to the elimination of hydraulic components.

Eco-friendly: noise levels less than 70dB (A), complete absence of hydraulic oils, minimal electrical power consumption.

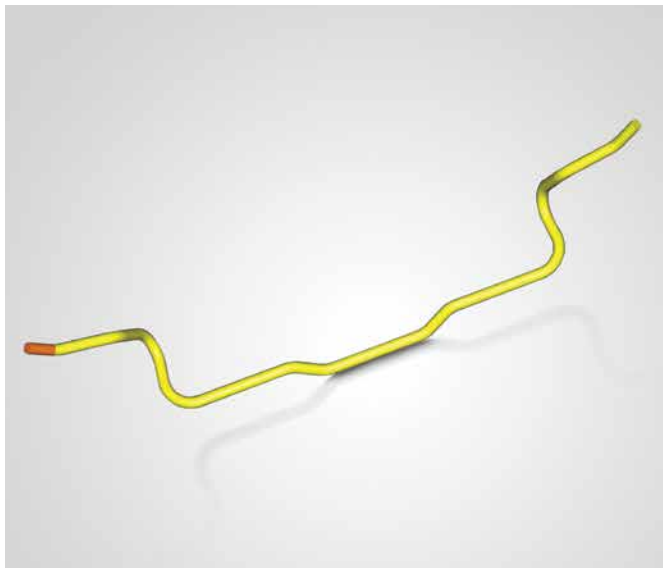
Telediagnostic service support via internet connection.

BENDING

Technology

RIGHT-FIRST-TIME

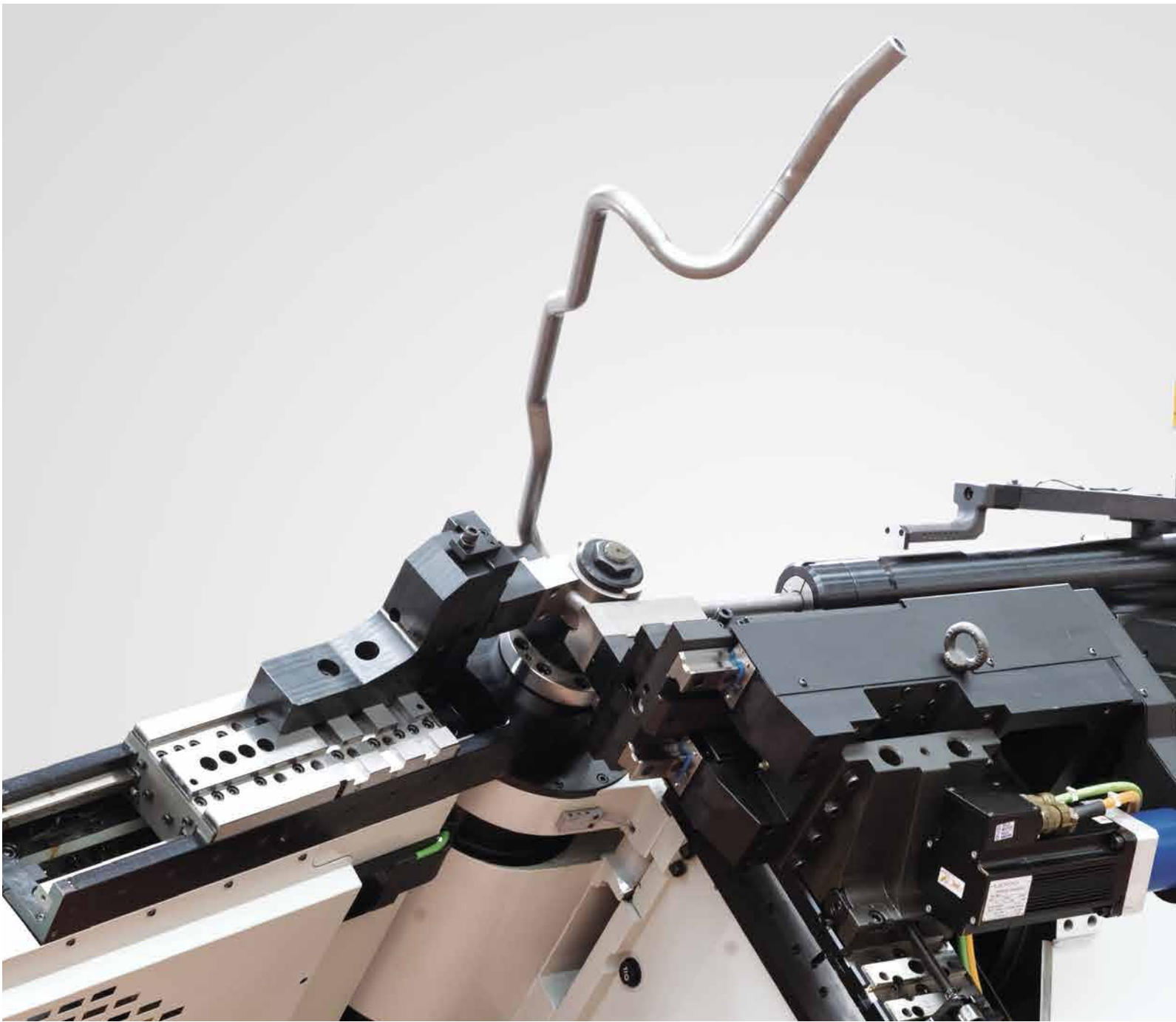
Tubing, as a raw material, comes with a host of imperfections (dimensional tolerances, chemical composition, etc) that causes it to react inconsistently when bending. This often results in creating bends that are out of specification for tolerance, repeatability or quality. BLM has taken our years of expertise and knowledge to provide a CNC control that has the tools to deal with these variables and to provide the features needed for various market sectors.



Our sophisticated software can automatically calculate the precise corrections needed to bend the part perfectly in any material. Previously this could only have been accomplished by a highly skilled operator via wasteful trial and error attempts.

EASY TO USE

Thanks to powerful software developed by BLM, B-TOOLS & B-RIGHT, parts will be right the first-time, every time.



BENDING Technology



COMPLETE PRODUCTION PROCESS

The integration of the tube bender with other equipment can optimize the production process, simplify part handling, eliminate intermediate steps and eliminate additional machines, reducing part production time with an automated operation.

- automatic loading and unloading systems;
- laser cutting or drilling facilities;
- endforming systems that create flanges, countersinks, tapers, combining rolling, deburring and trimming.



Furniture

Freedom of design

Design is the driving force in this sector. Creativity has shaped metal tube without setting any limits. Freedom of complex shapes, freedom of tube sections, freedom of radiuses, and absence of marks for highly aesthetic pieces are the key words in this area. But not only: simplification of the production process, thanks to the creation of new joints that eliminate welding, to laser pre-processed tube bending and laser processing also on pre-bent tubes. Over the decades, the BLM GROUP has developed high-tech manufacturing solutions for the production of chairs, sofas, tables, and other furnishings for restaurants, offices, hospitals, retail, exercise equipment, hospitals, outdoor furniture, etc.

BENDING

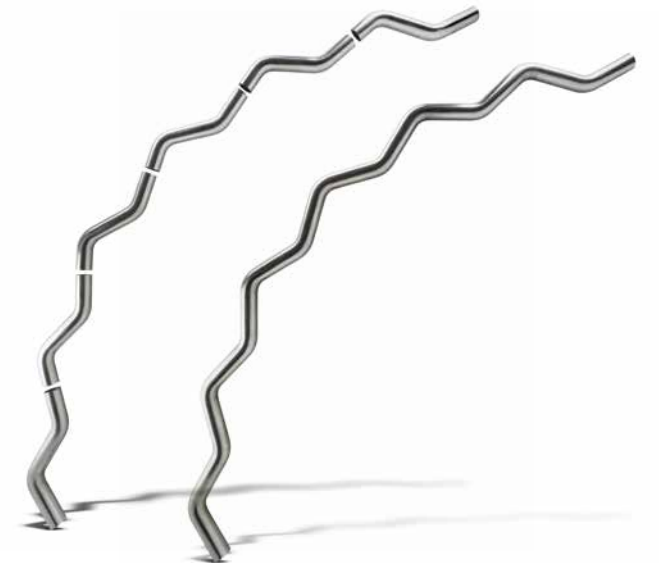
Application sectors



Automotive and Climate control

Efficiency at full power

In this sector the BLM GROUP offers piping solutions suitable for a wide range of requirements: from high-pressure hydraulics to fuel distribution, from air conditioning to airbags and heat exchangers, from manifolds and exhaust systems to seating, power steering and structural components. The cost pressure, the needs of demanding applications (tight radiuses, thin wall, high strength materials, complex shapes to fit confined spaces etc.), the need for reliability, the demand for consistent and certified product quality are the basic principles of our product development. The solutions range from stand-alone benders to integrated production cells.



BENDING

Application sectors



Agricultural machinery

Repeatability

Maximum flexibility, perfect repeatability, even in the case of special shaped tubes with poor dimensional accuracy and repeatability, processing of thick wall and heavy weight materials and small production batches. These are the main requirements in this sector. The more complex the parts to be manufactured, the greater the demands of the of the production processes. Our benders are specifically designed to meet the requirements described above without the need for highly skilled operators, even when batch sizes are as small as one piece.



Aerospace

Zero scrap

The aerospace industry is focused on the production of complex components in very small lots and on the use of thin wall tubing of titanium and other challenging alloys. Our machines allow processing without any manual adjustment, guaranteeing the elimination of scrap with the certainty of manufacturing the first piece correctly and ensuring the maximum repeatability over time.



ELECT

All-Electric Multi-stack CNC Tube Benders

All-Electric CNC tube benders (up to 12 axes) with VGP3D visual graphic programming software for easy programming and with a real-time part simulation. The range of models covers tubes up to 150 mm (6.0") diameter. Each model can be configured to perfectly suit the customer's application. **ELECT** benders are ideal for complex tubular parts, parts with little or no straight between bends, and parts with tight radius bends. ELECTs are extensively used in a wide range of industrial sectors including: automotive, aerospace, agricultural, earth moving equipment, industrial vehicles, ship building, railways, bicycles motor cycles, and general fabrication.



BENDING CAPACITY



ELECT

- all electric (up to 12 axes);
- multi-stack - up to 8 tools can be mounted;
- highest repeatability and precision can be consistently achieved;
- fixed and variable radius bending with booster up to 60,000 N



E-TURN

Right and left-hand, Multi-stack CNC Tube Benders

All-electric, right and left-hand bending with the market leading VGP3D visual graphic programming and real-time part simulation software. **E-TURN** delivers a new design freedom in the manufacture of tubular components. This multi-stack tube bender can perform, in one continuous cycle, right and left hand bends of either fixed or variable radius. It is widely used in sectors including indoor and outdoor furniture, automotive, ATV's, motor-cycles, and general fabrication. Due to its versatility and capability the E-TURN continues to expand the scope of new market applications.



BENDING CAPACITY



E-TURN

- programming and set-up time reduced to a minimum;
- higher productivity;
- production of particularly complex geometric shapes;
- integrated automatic loading / unloading operation



4-RUNNER

Four operations, one machine

The clear advantage of this multipurpose tube processing system is its modularity. It can be variously configured as a dedicated version for a specific job or complete process including: de-coiling, straightening, end-forming, bending, and cutting-off and unloading the finished component. Benefits include:

- maximum flexibility in terms of functionality and manufacturing capability
- maximum efficiency and lower investment costs because of process integration and just-in-time operational capability.



BENDING CAPACITY

			
Aluminum tube	Copper tube	Mild steel	Stainless steel
Ø 22 x 1,2 mm (.86" x .047")	Ø 22 x 1,6 mm (.86" x .062")	Ø 14 x 1 mm (.55" x .040")	Ø 12 x 1 mm (.47" x .040")

4-RUNNER

- tube processing system;
- All electric;
- coil feed;
- de-coiling / straightening, end-forming, bending, cutting;
- compression and draw bending



SMART

Small diameter tube bending

The **SMART** is a high speed, all-electric CNC tube bender ideally suited for complex parts in either short or long batch runs. A variety of automatic loading systems are available for straight tubes or tubes with endforms, nuts and flanges already applied. Typical user sectors include automotive (air conditioning components, brake and fuel lines, radiator connections, HVAC and climate control).



BENDING CAPACITY

			
Aluminum tube	Copper tube	Mild steel	Stainless steel
Ø 28 x 1,5 mm (1.10" x .059")	Ø 28 x 1,5 mm (1.10" x .059")	Ø 22 x 1,5 mm (.86" x .059")	Ø 20 x 1,5 mm (.79" x .059")

SMART

- in cycle right and left-hand bending, with fixed or variable bending radius;
- integrated loading / unloading allows unattended operation for long periods;
- low cost of ownership



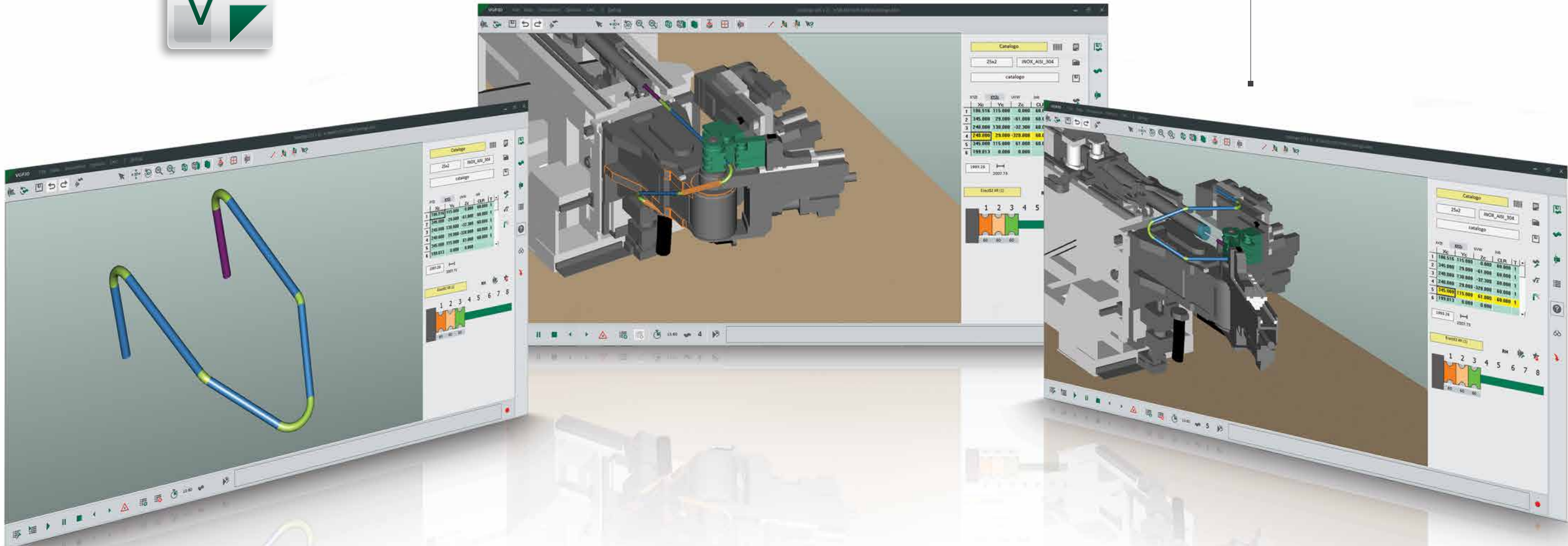
SOFTWARE

VGP3D, the difference



Simulation of the component,
display possible collisions
and their avoidance

Calculation of the part feasibility
with corresponding cycle time



Import from CAD
or programming

**Programming and
3D simulation software**

- Use lower case part geometry data or 3D CAD data to instantly create a part program;
- Quickly check for part feasibility;
- Accurately calculate the cycle time;
- Simulate the machine, tooling and part bending sequence;

- Visualize collisions or allow the software to select the most efficient sequence automatically;
- Reduces the time needed to create cycle time estimates;
- Shorten the response time to the customer;
- Simplified programming via Wizard.



All-In-One Tube Technology

ALL-IN-ONE

BLM GROUP is very familiar with tube manufacturing technology and knows how to automatically integrate compensation (elongation, spring back, radial growth, etc.) to insure that the part will meet its final geometric tolerance.

There is one single source for the management of all the phases of the entire production process:



Laser cutting of straight tube



Bending of laser cut tubes



Laser cutting of bent tube

SERVICES

Help is never far away



Talk to the BLM GROUP sales network

If you have any questions of how to make your tube fabrication more efficient you will always find an expert who can speak your language and answer your questions.



Speak with BLM GROUP service network

You have at your disposal unified service and tech support from BLM GROUP experts, so that with one single call you can resolve most problems.



Worldwide Network

Search for the support point closest to you. You will find a BLM subsidiary or an agent that will provide personalized local service with factory trained staff.



TUBE BENDING

endforming
lasertube cutting system
sawing, deburring and washing
cutting & end machining
combined sheet and tube laser cutting
handling
manufacturing cell
process control software



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