

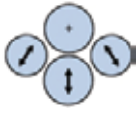
PARMIGIANI

ADVANCED BENDING TECHNOLOGY



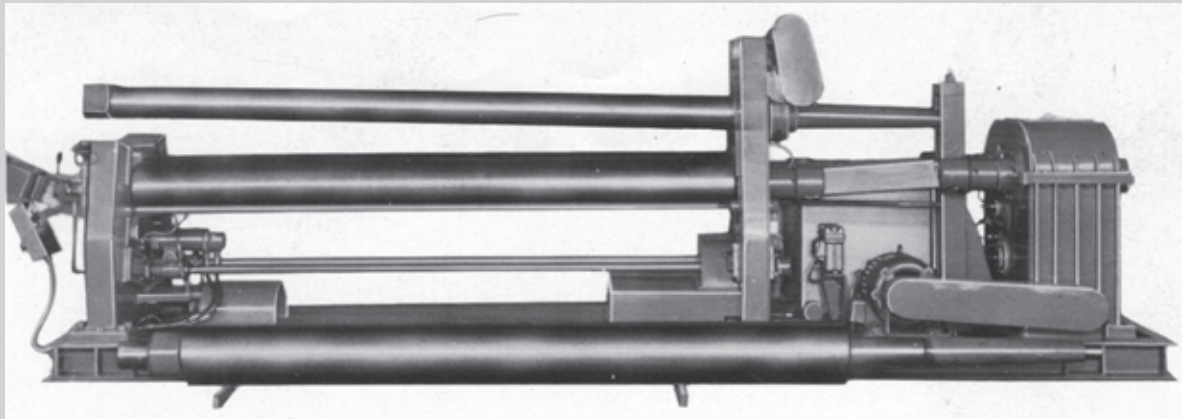
ADVANCED 4-ROLL PLATE BENDING ROLLS

V B H



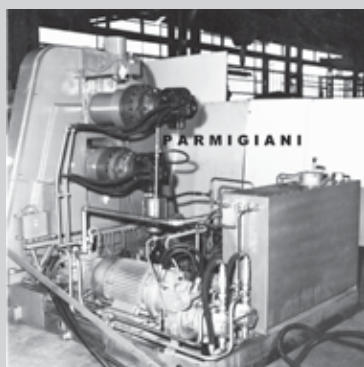
I 4-ROLL PLATE BENDING ROLLS VBH

The Italian Forming Company. Since 1927.



Early plate rolls:

A PARMIGIANI plate roll of the 50's. Many Parmigiani rolls manufactured in those years are still working and we continue offering service and spare parts for them.



70s: PARMIGIANI introduces high efficiency drive on the 3 and 4-roll plate bending rolls via hydraulic motors and planetary reduction units directly coupled to each driven roll.



80s: In the middle 80's the revolutionary electronic parallelism control (syncro) becomes a standard on each PARMIGIANI plate bending rolls. The CNC control is introduced in the market.



Today: The most advanced CNC control in the market, with wifi radius measuring device and a real 3-D cad shape creator. Extended diagnostic also with i-phone and i-pad Apps.

A passion for machines.

More of everything is here:

Parmigiani has been manufacturing bending machines for almost 100 years, and over those years we've come to recognize that nothing is so good it can't be improved.

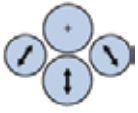
When it came time to design the new VBH rolls, we made sure to listen closely to what you had to say.

Thanks to your feedback and a dedication to quality, we are introducing some of the smartest and most powerful machines we've ever built.

You've picked a great time to look at the new Parmigiani VBH-Series plate rolls.

It's the start of a new rolling era. You just have to turn the page to become part of it.





Presenting the all new VBH Hydrotronic

What can you expect from the new VBH-Series rolls?

Expect a new state-of-the-art machine to give you more precision and more power than anything in the industry.

Expect the best linear guiding system with anti-friction sliding technology and proportional-controlled digital parallelism system.

All are designed to capitalize on the new machines enhanced performance and capacity.

Providing you a solid, stable result with every rolling pass.



Exceeding your expectations

How we exceed your expectations.

It's simple. The all-new VBH Series was created from the belief that every feature, every innovation, must be focused on helping you grow your bottom line.

This led our engineers to design the next generation of plate rolls, concentrating on four key areas of machine performance:

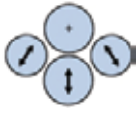
STRENGTH: Linear sliding guides and multiple bearings rolls support system.

POWER: High torque reduction unit for reduced number of rolling passes.

PRECISION: Digital control of the rolls parallelism with proportional valves.

CONTROLS: Infinitely variable rolls adjustment speeds, infinitely variable pinching pressure of the central lower roll, shell calibration working modes, extended i-Diagnostic system... are only some of the features that you can control directly from the operator mobile panel, just moving a finger.





I 4-ROLL PLATE BENDING ROLLS VBH

Built for heavy works

The widest range of machines on the market

There is a VBH for virtually any application.

Almost a century of forming experience and cooperation with our customer are incorporated in our VBH 4-roll plate bending rolls. The VBH is the best machine for both, cylindrical and conical bending.

The main features of our VBH rolls are the greater lower roll pinching force (for short flat ends and optimum pre-bending) and the higher driving torque (for single pass process) to boost productivity.

A winning combination for those looking for performance of the highest level.

The plate is automatically aligned against the side roll and then securely clamped between the two central rolls during the entire rolling process.

Our exclusive HTT rolls driving system allows the best plate feeding and speed compensation.

The possibility to adjust the central lower roll by pressure allows a better versatility and increases the range of plate that can be rolled on the machine.

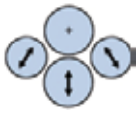


VBH-Series manufacturing range:

Plate thickness from 1 up to 300 mm (0.05" to 12.0")

Length from 300 up to 8.000 mm (1' to 26')





I 4-ROLL PLATE BENDING ROLLS VBH

Discover the VBH rolls



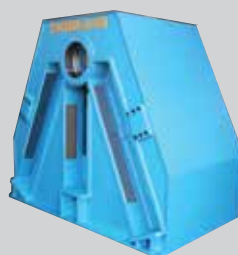
ALG

Antifriction linear
guides



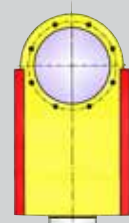
FFD

Full frame
design



AST

Antifriction sliding
technology

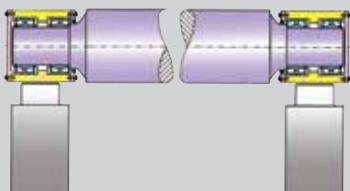


We redefine rolling standards

- 1** Full frame design for maximum rigidity and precision
- 2** Machine frame with linear guides for rolls sliding
- 3** Heavy-duty multibearing system with 4 spherical roller bearings for each roll
- 4** Sliding support with high resistance antifriction material
- 5** Rigid frame construction without force transmitted to foundation
- 6** Digital control of the rolls parallelism with proportional valves. Precision 0,1 mm (0,004")
- 7** Rolls made of high resistance steel forgings, with large diameter and light cambering
- 8** Heavy-duty and rigid frame design for maximum resistance for cone rolling
- 9** Heavy-duty turning bearing support, with four anti deflection points for maximum rigidity
- 10** Centralized control panel, lightweight design for easy handling
- 11** Infinitely variable speeds, controlled from centralized control panel
- 12** Infinitely variable pinching pressure of the central lower roll with digital pressure gauge
- 13** Wired with light-cables against electromagnetic interference
- 14** Fully hydraulic drive of top and lower rolls with automatic speed compensation
- 15** Instantaneous brakes for rolls rotation for maximum safety factor

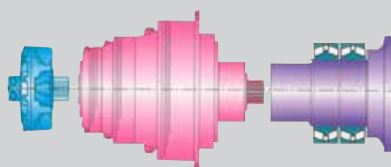
HMB

Heavy-duty multiple bearings



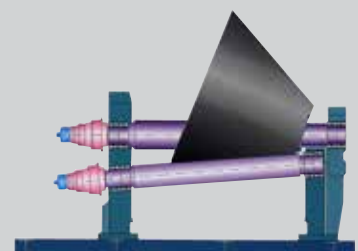
HTT

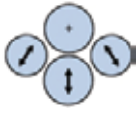
High transmitted torque



CBF

Cone bending facility





Designed to perform

Built for heavy works

Full Frame Extended Design

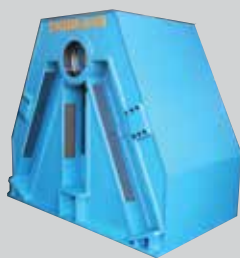
The most heavily sized frame you can find in the market.

Unlike slim frames covered with thin thickness plates that you can find on all machines in the market our frame design looks definitively oversized.

The exclusive full frame design withstands all bending forces and guarantees stiffness and performances through the years.

This unique machine frames, with extended design for added rigidity and strength, are welded fabrication.

After welding all frames are stress relieved and then machined on cnc milling machines.



FFD

Heavy-duty multiple bearing

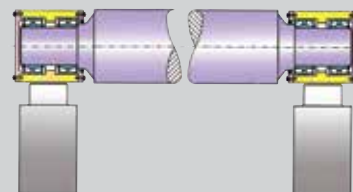
Each bending roll is supported by 4 heavy-duty self-aligning spherical roller bearings (double row type).

Each bearing is oversized in order to withstand the whole bending load.

Thanks to this exclusive design, with four oversized bearings fitted into a swiveling housing, the roll can freely deflect along its full width during the rolling process.

This guarantees an optimal distribution of the load on the supports even during the cone rolling process and increase the machine reliability and life.

Moreover, the multi bearing system with swiveling housings design greatly reduces the maintenance and the need of lubrication (permanent lubrication).



HMB

Get more with linear guiding

Maximum strength and stiffness

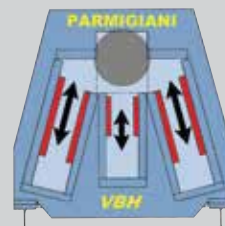


Antifriction linear guides

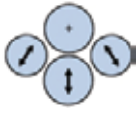
The linear guides design is the only system that can grant the necessary machine stiffness and the perfect geometry for all kind of bending operations.

The linear design allows a compact geometry of the machine ("minimum centerline distance between the two side rolls" impossible to obtain with the swinging design) that it is essential for the bending precision and accuracy.

The linear design allows to work in the best and ideal geometrical conditions when rolling high yield strength materials, reducing the shell spring back reopening effect and also allows to obtain much smaller bending diameters when compared with the swinging design.



ALG



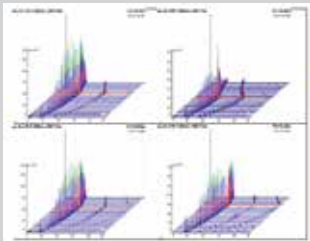
Digital-proportional control of the working pressure



PPP System

Pressure Peaks Prevention

Pressure peaks are among the worst enemies of your machine, because they reduce significantly the life of all its components. The unrivalled Parmigiani PPP System will make you save energy and prolong the life of the entire hydraulic and mechanical system, thus reducing the need for maintenance, spare parts and machine downtime.



IVP System

Intelligent Variable Pressure

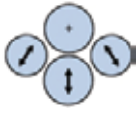
Our exclusive IVP System constantly controls the system working pressure, reducing power losses and oil heating when this is not necessary.

The results? Improved efficiency and lower operating costs.



Absolute precision. Total reliability.
Standard on all our machines.





I 4-ROLL PLATE BENDING ROLLS VBH

P.O.S. We grow with your business

Buy a basic control and upgrade whenever you want.

P.O.S. Parmigiani Open System

Which is your control and what do you need today? DIGIMATIC, SAVE & BEND, FAST or STRADIVARI?

Don't think about tomorrow: you can always upgrade!

We have engineered the only flexible system that allows to migrate from a lower to an higher level control whenever you want, easily and immediately (less than 30 minutes and you are back rolling with your CNC Controlled machine).



Everything is under control

NC and CNC dedicated controls from Parmigiani

NC and CNC control 100% in house developed

Dedicated controls from PARMIGIANI for plate rolling cover an entire range of applications.

All software are in house developed by Parmigiani technicians with great experience in plate rolling.

From the simple, compact DIGIMATIC® control to the STRADIVARI® (unlimited number of axis) there's a PARMIGIANI control for nearly every application.

Controls are an essential requirement for executing precision rolling applications. Select the SAVE&BEND® with its 10.4" display or the FAST® with a 15" display or the STRADIVARI® with a 19" display. They function just like a tablet with touch-screens: navigating through the options is simplified via menus, shortcuts and with context-sensitive help.

SAVE & BEND®

NC Control type PARMIGIANI SAVE & BEND® :

The entry level NC with 9 controlled axis, for fully automatic working mode.

- 10.4" color display, touch – screen
- 9 Controlled Axis (it can be upgraded up to 16 axis)
- Two possible ways of programming: Editing and Play-back mode
- Storage Memory Capacity: up to 1.000 programs of 50 step each

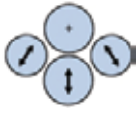


FAST®

CNC control type PARMIGIANI FAST® :

with Automatic program mode for single radius shapes: the control automatically creates the complete bending program, simply entering the shell data (radius, thickness, width, type of material), with all the sequence for obtaining the required shape. If necessary the program theoretically calculated by the control can be optimized by the operator.





STRADIVARI®

THE ULTIMATE CNC COMMAND CENTER

STRADIVARI® software has been in house developed by Parmigiani R&D internal team of experts; technicians with long experience in plate rolling, having in mind two major targets:

Easy to use also without particular CNC experience

Maximum flexibility in order to be largely independent from the operator's skill.

We have overtaken a big limit that is common to the other controls on the market: the standard shape selection!

The STRADIVARI® now incorporates the 3D-ROLLCAD®, a real 3D CAD SOFTWARE, fully integrated in the CNC, that automatically creates the bending sequence starting from a drawing. This means that you are no more limited to pre-set standard shapes (wizard)!

Just draw the shape in the 3D-ROLLCAD®, and you will have the full bending sequence automatically generated by the software.

But we have done more: a powerful macro with conversational data input that allows to draw shapes in 3D-ROLLCAD® without previous cad experience.

Of course the STRADIVARI® can still work in the old way: starting from a menu of standard shapes (cylindrical, oval, polycentric, bucket ect.) and simply entering the shell data -radius, thickness, width, type of material- the control creates automatically the 3D drawing of the work piece and the complete bending program with all the necessary bending steps. If necessary the program theoretically calculated by the control can be optimized by the operator.

CAD-CAM import .dxf files: the 3D-ROLLCAD® is equipped with a powerful post-processor that allows to import .dxf files and generate the complete bending program and the 3D drawing of the part.

Easy to use.

Easy to program.

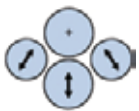
Accuracy. Productivity.

Stay away from limits

Don't let your CNC decide which shape you should roll



Imagine what you can do.



Extended diagnostic in real time

i-Diagnostic® and FACILE® ... the future is today

i-Diagnostic®

**Active extended diagnostic:
a revolution in customer support.**

Have you ever wasted precious working time trying to find out the cause for a sudden machine breakdown? Checking all fuses, all PLC modules, cables, buttons or cards to find the guilty component?

With the innovative PARMIGIANI i-Diagnostic system these problems now belong to the past!

The i-Diagnostic is a revolutionary extended diagnostic system allowing you to monitor all main machine functions in real time with an intuitive and user-friendly interface.

From the control panel you can control the status of almost every component and electrical connection around the machine, including push buttons, potentiometers, micro-switches, checking even if they are engaged/energized or not.

Furthermore, our i-Diagnostic shows you in real time the circuit parts currently activated, which hydraulic valve is responsible for activating a specific part and much more. In short, a huge revolution in the concept of trouble-shooting.

FACILE®

**Do It Yourself. With our Plug & Play
quick connections.**

All Parmigiani machines feature the exclusive FACILE wiring system made of connectors and digital distributors with Plug & Play technology.

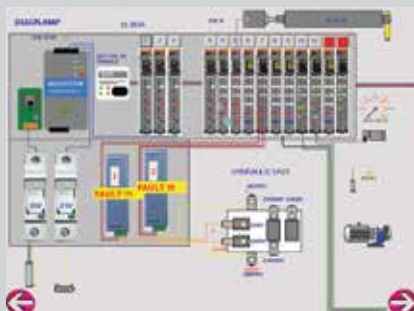
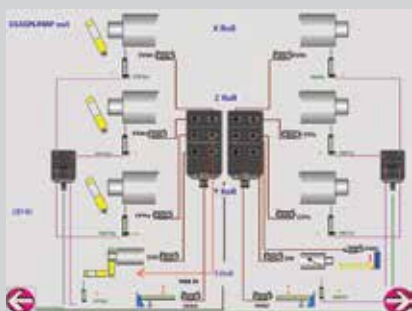
Wirings with connectors are far more reliable over time and also insensitive to environmental contaminations or vibrations.

Thanks to our FACILE Plug & Play system you will be able to replace any cable without needing to unscrew any wire from the terminal board.

Our FACILE technology comes standard even on all PLC modules and cards, guaranteeing easy maintenance without calling for skilled electricians! In this way, all machine servicing will be quicker and cheaper.

With the aim of increasing your independence from any third parties, we have installed the software on static SSD cards rather than on volatile e-proms or hard disks. This means that, should you ever need to replace the PLC, you will never lose the software.

Less troubles and maximum uptime.



Rolling precision is a must!

When you want to move to precision rolling, look to Parmigiani.

PPS SYSTEM

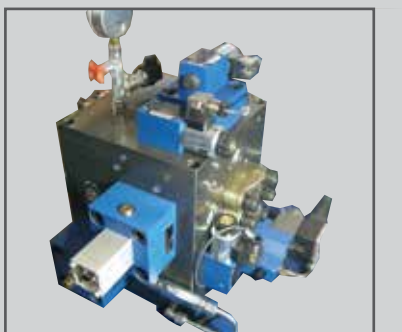
Exclusive digital parallelism system

The PPS is the most advanced parallelism system currently available on the market. The rolls parallelism in a plate bending machine is the key factor for production accuracy.

The capability to maintain its precision across the years also is another critical point. For this reason, we used the best of the technology today available: digital control systems and hydraulic flow control via proportional valves. We have designed a totally wear-proof system that will give you years and years of trouble-free operation, keeping the machine positioning precision like the first day!

The parallelism of top and bottom rolls is fully controlled by a high-speed digital FIELD BUS system. The package also includes a set of proportional hydraulic valves with high-performance digital control cards, matching the high speed of the FIELD BUS system.

This digital technology (the loop control is 20 times faster than PLC-based electronic controls), combined with the hydraulic proportional valves, provides a parallelism precision of about 0,1 mm.



HYDROTRONIC SYSTEM

Advanced hi-tech hydraulic system

The hydraulic system is the operative core of your VBH: it runs everything from the bending rolls drives up to their movement and tilting, as well as all other machine attachments.

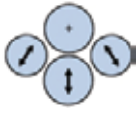
This is why we invested a lot in research and development: to give you a smooth, precise and highly responsive system.

Through the digital control system you can manage the machine pressure and flow, using dedicated proportional hydraulic valves. In this way you can select the most convenient speed for each production step (vs. machines from other manufacturers offering only one or two selectable speeds!) and the maximum pinching force of the central lower roll, adapting it to the characteristics of the plate being worked.

The possibility to select low pressures for thin plates also widely extends the production range of the machine.

As a result, thanks to the infinitely variable adjustment of pressure and speed, the operator will have full control over the process in any bending situation.





Increase your productivity

Cut down production costs

High productivity and Wind Towers Systems

With more than 90 years of experience in the production of bending machines, PARMIGIANI offers a wide range of solutions for the Wind Towers manufacturing industry.

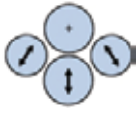
The heavy-duty design, the high drive torque and the accuracy of the digital control system are the guarantee of high precision and repeatability even in conditions of intensive and continuous production.

With our machines it is possible to pre-bend and roll a wind tower section in just one pass.

A wide range of optional ancillary handling equipment (high speed, tilting in-feed roller conveyor, top and side support devices, alignment systems etc..) allows fast and precise production with just one operator.







Great options and Accessories

Improved performances

Options

Even though your Parmigiani VBH in standard configuration comes with an extensive package of features that are usually not available – not even as options – on our competitors' machines (like FACILE®, our i-Diagnostic, the calibration working mode, the Servo-dynamic Active Control and many others) our R&D department has also designed a wide range of accessories for special bending applications.

Some examples? The hydraulic cambering device for the central lower roll (with variable intensity allowing to work with thin and long plates), gantry loaders, unloading devices and many others.

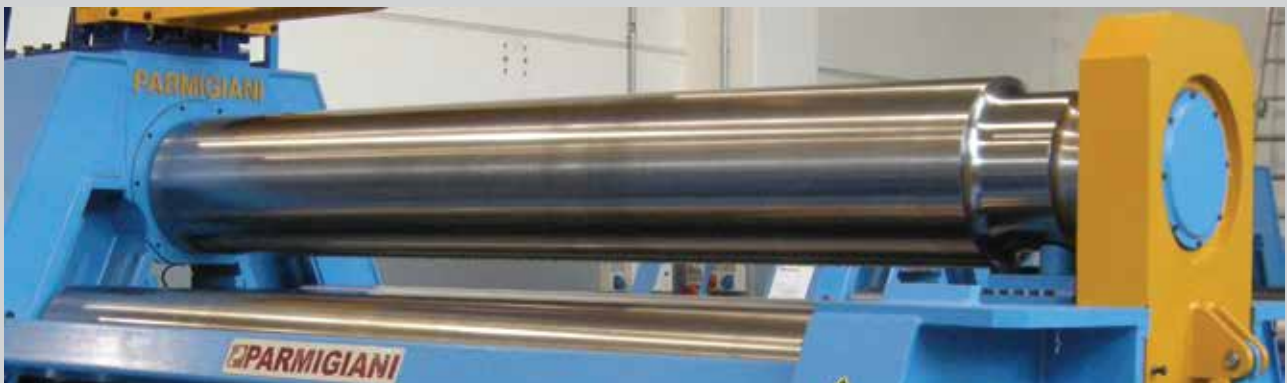
All this, in order to increase your productivity and the quality of the finished products, in particular when dealing with special materials.

Side plate support devices, upper support, rolls conveyor table for plate squaring and feeding and much more: the PARMIGIANI range of options is comprised of various components which significantly enhance the handling dynamics of your Parmigiani VBH.

The upper and the side plate supports devices are supplied linked with our [SERVODYNAMIC ACTIVE CONTROL SYSTEM](#).

[SERVO-DYNAMIC](#) because they have variable positioning speeds: “high” for fast positioning and “low” for creep adjustment and soft contact with the plates.

[ACTIVE](#), because you can control at any time their working pressures through the digital read-out placed on the control panel.



Rolls treatments

Advanced design



Upper Supports



Side supports



Rolls conveyor tables

OTHER MACHINES FROM PARMIGIANI

3-roll Double Pinch Plate Bending Rolls
TBH



3-roll Variable Axis Plate Bending Rolls
PCO



Plate Straightening Machines
SLH



Universal Section Bending Machines
PLANET



Dishing Presses and Automatic Manipulators
DPO-MAP



Tank Heads Flanging Machines
FM-HY



PARMIGIANI

ADVANCED BENDING TECHNOLOGY

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