## BOLDRINI

Since 1905

# PRODUCT PORTFOLIO

Leading worldwide brand of metal forming machines



#### ABOUT BOLDRINI THE BRAND

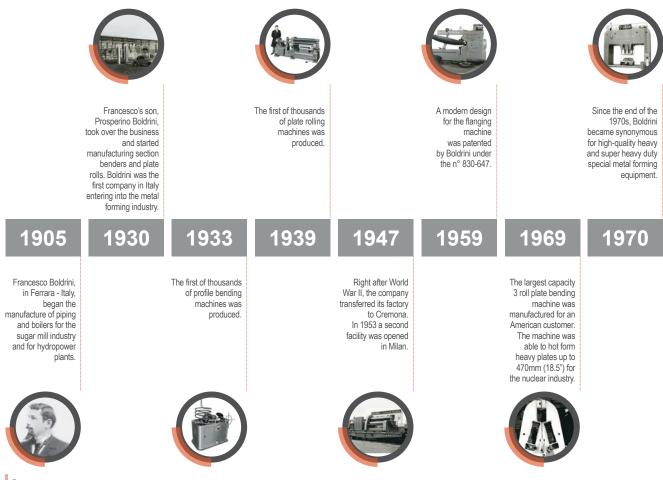
Boldrini is part of Faccin Group a powerful company that combines a number of leading brands – Faccin, Boldrini and Roundo in the metal forming industry. The company uses the synergies provided by each brand, technically and commercially and is able to offer an even wider range of high-quality options and tailored solutions.

Boldrini is recognised as one of the leading brands worldwide of hydraulic dished end presses, flanging machines, plate bending rolls and section bending rolls.



### AT YOUR SERVICE... EXCELLENCE AS STANDARD

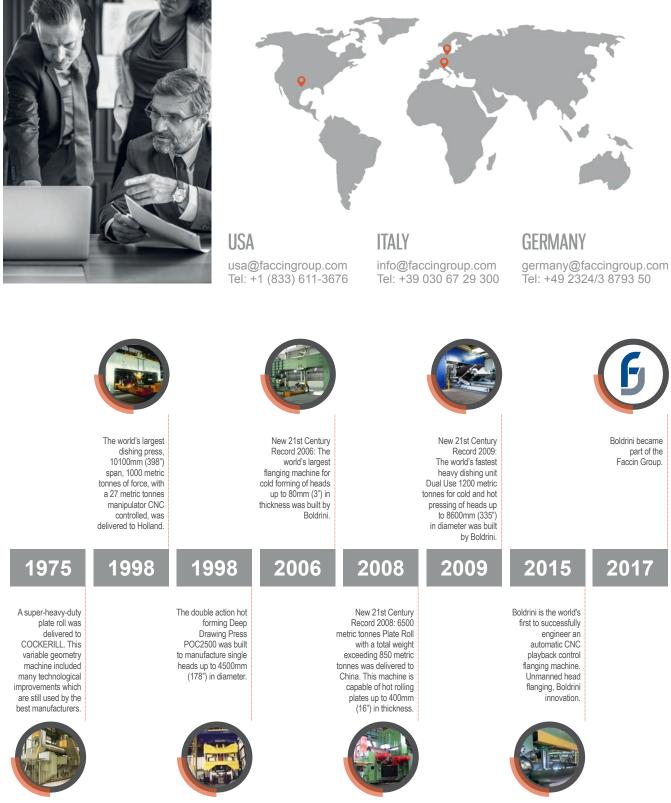
Boldrini has been operating uninterruptedly since 1905 and its products are synonymous with excellence, high performance, reliability, and durability with over 10,000 successfully installed machines around the globe.



### solid international TEAM-SUPPORT STRUCTURE

Boldrini is globally recognized for its indisputable quality products and constant innovation with corporate offices in the USA, Italy and Germany including an extended network of distributors.

In addition, the customer support structure allows Boldrini to ensure the best coverage during and after the sales process.



### HYDRAULIC DISHED END PRESSES PAO SERIES





These Portal Frame Presses are suitable for both cold and hot applications for high pressure and nuclear vessel production.

Boldrini Presses are known worldwide for high speed, including approach, return and particularly, pressure build-up timing, resulting in a substantial increase in head production.

Innovative Laser based internal quality controls ensure compliance with a superior level of mechanical tolerances.

Boldrini's unique and innovative automatic playback system enables precise and continuous repetition of large series head production: multiple presses can be run simultaneously by a single operator.



Automatic manipulator up to 45 metric tonnes assures smooth forming quality guaranteeing no waves on the final dished head surface.



From 150 to 5000 metric tonnes up to 11000mm (435") blank diameter and over 100mm (4") in thickness.



Provided for automatic petal manipulation enabling the production of hemispheres and extremely large heads by segments.





Boldrini presses double the maximum production capacity of any other manufacturer.





## FLANGING MACHINES **RIBO SERIES**





Powerful and accurate forming can be easily obtained with Boldrini flanging machines thanks to the simple operation procedure coupled with the highest quality components used in the machine construction. Boldrini's unique technical design guarantees maximum performance is achieved.

Boldrini gained the leadership on the metal forming market because of the extremely high quality of its products. The vast majority of large dished and flanged ends produced in the world today are manufactured with Boldrini equipment.

Boldrini produces equipment for the pressure vessel, power generation, petrochemical, navy, aerospace, nuclear, food & beverage, pharmaceutical and shipyard industries.



Various types of heads can be produced with Boldrini flanging machines obtaining very tight tolerances and perfectly smooth surfaces.



Cold forming from 2mm (14 gauge) to 80mm (3") and hot forming to 200mm (8"). ASME 2:1 Elliptical heads up to 8000mm (315") diameter.



Special equipment for flanging ends up to 12000mm (475") maximum diameter on the horizontal axis or up to 7000mm (275") length in a tilted position.





The machines exceed twice the maximum production capacity of other fabricators.



### HOT FORMING FOR DEEP DRAWING HEADS





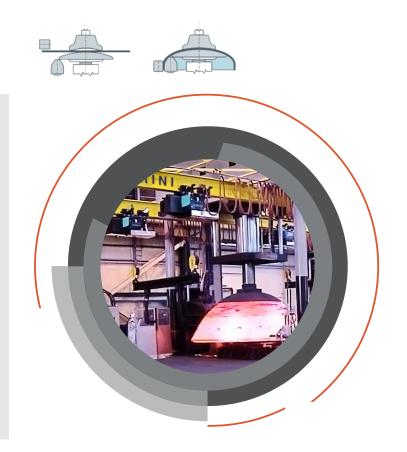
With decades of experience, Boldrini is synonymous with cold and hot forming applications for high pressure and nuclear vessels. The heavy duty 4 column dual use Hydraulic Deep Drawing Press, with a capacity up to 5000 metric tonnes of force, is ideal for series production. Boldrini's POC series enables the client to produce a finished head every few minutes. The popular 4 column press POC 2500 has a 4300 mm (170") capacity and 2500 metric tonnes of force with a 700 metric tonnes blank holder for cold hemisphere forming. Over a certain thickness cold forming processes are no longer cost effective and generally not accepted by any norms, therefore, hot forming is the only process suitable to transfer a flat blank into a finished head. Boldrini's range of Deep Drawing Presses are designed for both applications.

### SPECIAL PRESSES FOR HEAD PRODUCTION

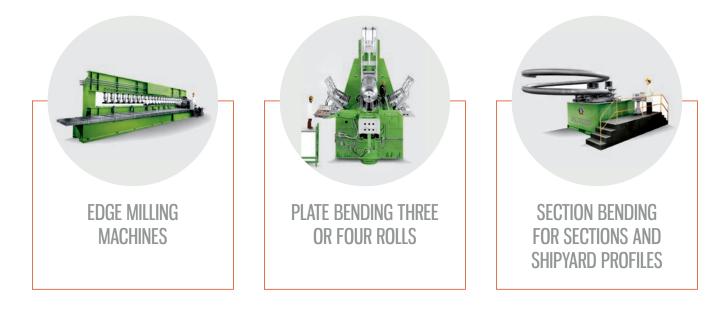
Boldrini's manufacturing line includes specially designed Hydraulic Presses with one or more independent cylinders used for folding, straightening and accurate shaping of components for shipyard and aerospace applications.

Hydroforming and/or Air Forming Presses used for multiple purposes with extremely high productivity are also available. For shipyard manufacturing, the Profile Bender with multiple cylinders is the best option.

Portal Presses, where both upper and lower die holding tables can move along the 'X' Axis and rotate on the 'Y' Axis simultaneously and/or independently are also part of the Boldrini custom range. The exclusive ROTEX<sup>®</sup> design combines a hot forming press with a hot flanging machine capable of forming heads up to 200 mm (8") in thickness.







### **KEY ADVANTAGE QUALITY AND TECHNICAL FEATURES**

- - All standard and customised Boldrini machines comply with CE Norms.
  - Certified plates used for construction are supplied only by major Italian and German manufacturers. All plates undergo strict reticular ultrasonic testing before cutting.
  - Only welding using MIG and/or submerge arc technology is used, which is then tested with non-destructive methods including ultrasonic devices and Magnaflux.
- Visual and dimensional inspections are carried out by the internal quality control department to ensure we comply with our policy to maintain extremely tight tolerances.
- Every press cylinder is manufactured starting from a single piece forged steel, therefore without any welded part. Also, our cylinder rams are made in a solid single forged piece, then machined and chromed with a layer thicker than any other machine manufacturer.
- All components used in our machine construction are from major western European Brands e.g., SKF
- bearings, STAR Linear Guides and Lead Screws and, on hydraulics, BOSCH REXROTH or DUPLOMATIC and MERKEL/SIMRIT seals.

All standard Boldrini machines include PLC SIEMENS S7 hardware enabling controlled reliability and high-speed program execution. Our innovative automatic playback system, based on SIEMENS controls, allows precise repetition of production.

The SIEMENS PROFINET communication system installed also as a standard, reduces wiring, and eases diagnostic procedures and set-up. This combined with a SIEMENS Touch screen Operator Panel (Human Machine Interface), enables the operator to gain all necessary data of the machine and to control all machine functions with a simple graphic interface. PROFISAFE integration allows control of all safety devices within a single platform.



All Boldrini machines are fully tested in our facility before shipment under client supervision.



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