

MICRO-GRINDINGS AND MECHANICAL GRINDINGS SINCE 1964 ON YOUR SIDE LOOKING TO THE FUTURE



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SINCE 1964 SPECIALISTS IN MICRO-GRINDINGS

AND MECHANICAL GRINDINGS

Founded in 1964, Bombardi Rettifiche is the engineering company of Cadelbosco Sopra (Reggio Emilia) specialised in the mechanical grinding sector. It performs, on account of third parties, micro-grindings, flat machining and lapping of components, using the latest technologies to keep up with market developments.

For over 50 years, the company looks to the future by investing in technology, quality and people.

The goal of the last decade has been to re-launch on the market by completely renewing its machinery fleet to offer customers a better and more adhering service to new market requirements.

It currently appears as a modern reality, equipped with cutting-edge equipment and machinery enabling the realisation of multiple processes in the field of micro-grindings and significantly increasing the company's production capacity.

2018 marked a very important investment for the commissioning of the first operational AUTOMATED plant in the Italian market of: Micro-grinding + Brushing + Ultrasonic cleaning.

Since the end of the 1990s, the Bombardi Rettifiche's high precision technologies have been presented at the most important trade fairs in Italy and abroad, including Mecspe in Parma, Medtec Italy in Modena, Bi-mu / Sfortec in Milan, Hannover Messe and Agritecnica in Hanover.



OUR FIRST 50 YEARS OF HISTORY

| 1964 | The first sole proprietorship led by the President Amilcare Bombardi is established | | |
|------|--|--|--|
| 1981 | Production is established in the current headquarters in Cadelbosco Sopra (Reggio Emilia) | | |
| 1989 | The company becomes A. Bombardi & Figlio S.n.c. with the appointment of the General Manager Claudio Bombardi | | |
| 1995 | The plant is expanded up to the current 2,900 square meters of total area | | |
| 2000 | On 17 February A.Bombardi &Figlio snc certifies its Quality system according to the UNI EN ISO 9002: 1994 | | |
| 2003 | The company name becomes Bombardi Rettifiche srl. It fulfils requirements of UNI EN 9001:2000 | | |
| 2005 | The lapping department is strengthened and that of Micro-grindings is inaugurated | | |
| 2010 | It fulfils requirements of the UNI EN ISO 9001:2008 standard From 2010 to 2013 it sponsors Reggiana Calcio in the C1 championship | | |
| 2013 | From 2013 to date it sponsors Pallacanestro Reggiana in the Serie A championship | | |
| 2014 | On 7 April 2014, it celebrated the 50th anniversary of its foundation | | |
| 2015 | Installation of the 4th and 5th Micro-grinding Plants | | |
| 2016 | Installation of the 6th Micro-grinding Plant | | |
| 2017 | It fulfils requirements of the UNI EN ISO 9001: 2015 | | |
| | Installation of First Linear Plant Lap Master Peter Wolters Micro-grinding AC 1000 + | | |

2018 Brushing BD300-L + Automated Washing System Meg. Since 2018, it supports the cycling team of Bike Innovation Focus Rosti of Imola

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EXPERIENCE, RIGOUR AND TECHNOLOGY

WITH HIGH PRECISION

Thanks to more than 50 years of experience, Bombardi Rettifiche has acquired a specific know-how in the Microgrinding sector, flat machining and lapping of hydraulic components, gears, large plates, hydroguide components, earth-moving machines and in the Automotive sector.

The company is equipped with cutting-edge technologies, an advanced robotic system and an automated linear system consisting of Micro-grinding, Brushing and Washing to ensure superior performance: measuring machines and instruments with very high precision to meet every production requirement, even thanks to an array of automatic numerical controls, robotised areas, parallel flat lapping machines and multi-level grinding machines.

As regards Bombardi Rettifiche the environment, safety, social responsibility, energy management, privacy, etc. are related to the specific context in which it operates and refer to the various "stakeholders".

In 2000 it obtained the first issue of the <u>UNI EN ISO 9002:1994 Quality Certificate</u> while DNV-GL considered it fulfilled requirements of the UNI EN ISO 9001: 2015 standard in December 2017.

All machines and equipment comply with the CE regulations while the Production and Stock departments comply with current safety regulations.



OUR PRODUCTION PROCESS

Planning and control of production processes adopted by Bombardi Rettifiche Srl guarantee correct work execution as regards Customer's needs.

Analysis

Definition of the technical - financial bid and timing

Pre-production Work cycle processing

Customer requirements

It's possible to handle extra control documentation given the standard provided by the company.

We are able to carry out:

- ISIR
- Psw
- PPAP
- Flow Chart of the Product Process
- Process FMAE
- XR card

Production

Choosing the most suitable machine in relation to processing Product traceability



In-Process control of the Product and quantity during the production process

Stock

Storage of the finished lot and shipment within the agreed time





MICRO-GRINDINGS: MACHINES, TOOLS

AND WORKABLE DIMENSIONS

The production unit, specialised in micro-grindings, of Bombardi Rettifiche is unique in its kind.

Machines and tools allow you to work simultaneously on two special surfaces made of cast iron, iron, steel, aluminium and bronze with:

- Ø 292 mm
- · flatness and parallelism tolerances less than 0.002 mm
- roughness less than 0.4 RA



| | MACHINE | DESCRIPTION | WORKABLE DIMENSIONS | TOOL |
|--|-----------------------------|--|--------------------------------------|--|
| | Micro-grindings ELC 800 | Melchiorre Piani Paralleli (Parallel Planes) 120 RPM Power 30 Kw | Workable Ψ 227 mm | Millesimal Comparators, Roundness Meter, Roughness Meter, Blocks for Ceramic and Steel Parallel Planes |
| | | | Toll. <0.003 mm Roughness <0.4 RA | |
| | Micro-grindings ELC 800 | Melchiorre Piani Paralleli (Parallel Planes) 120 RPM Power: 22 Kw | Workable Ψ 227 mm | Millesimal Comparators, Roundness Meter, Roughness Meter, Blocks for Ceramic and Steel |
| | | | Toll. <0.003 mm Roughness <0.4 RA | Parallel Planes |
| | Micro-grindings | Melchiorre Piani Paralleli (Parallel Planes) | Workable Ψ 227 mm | Roughness Meter, Blocks for Ceramic and Steel Parallel Planes |
| | ELC 800 | 200 RPM Power 37 kW | Toll. <0.003 mm Roughness <0.4 RA | |
| | Micro-grindings | Melchiorre Piani Paralleli (Parallel Planes) | Workable Ψ 227 mm | Millesimal Comparators, Roundness Meter, Roughness Meter, Blocks for Ceramic and Steel |
| | ELC 800 | 200 RPM Power 37 kW | Toll. <0.003 mm Roughness <0.4 RA | Parallel Planes |
| | Micro-grindings | Peter Wolters Parallel | Workable Ψ 227 mm | Tesa Tronic TT80, with two probes, connected to Pc Panel to check error of Drift, Roundness |
| | AC700 - F | Planes 120 rpm Power: 15 kW | Toll. <0.002 mm Roughness <0.4 RA | Meter, Roughness Meter, Blocks for Ceramic Parallel Planes |
| | Micro-grindings AC700 -F | Peter Wolters Parallel Planes 300 rpm Power 46 kW | Workable Ψ 227 mm | Tesa Tronic TT80, with two probes, connected to Pc Panel to check error of Drift, Roundness |
| | | | Toll. <0.002 mm Roughness <0.4 RA | Meter, Roughness Meter, Blocks for Ceramic Parallel Planes |
| | Micro-grindings | Peter Wolters Parallel Planes 150 rpm Power 48 Kw | Workable Ψ 292 mm | Tesa Tronic TT80, with two probes, connected to Pc Panel to check error of Drift, Roundness |
| | AC1000 -F | | Toll. <0.002 mm Roughness <0.4 RA | Meter, Roughness Meter, Blocks for Ceramic Parallel Planes |



FLAT MACHINING: MACHINES, TOOLS AND WORKABLE SIZES

| MACHINE | DESCRIPTION | WORKABLE DIMENSIONS | TOOL |
|--------------------|-----------------------|------------------------|--|
| Lapidelli C.N | Camut Power 130 Hp | 3100 x 700 x 650 | Centesimal Micrometer, Comparator, Depth Gauge, Roughness Meter |
| | Rosa Silver | 2200 x 850 x 650 | Roundness Meter, Altimeter, Roughness Meter, Millesimal Micrometers, Comparators |
| | Rosa Steel | 1400 x 500 x 500 | Roundness Meter, Altimeter, Roughness Meter, Millesimal Micrometers, Comparators |
| C.N.C. tangentials | Favretto Rotary Table | Ψ 800 | Roundness Meter, Altimeter, Roughness Meter, Millesimal Micrometers, Comparators |
| | Camut Mini 415 | 1500 x 400 x 300 | Roundness Meter, Altimeter, Roughness Meter, Millesimal Micrometers, Comparators |



LAPPINGS: MACHINES, TOOLS AND WORKABLE DIMENSIONS

| MACHINE | DESCRIPTION | WORKABLE DIMENSIONS | TOOL |
|---------|---------------------|------------------------|---|
| Louise | Lui Parallel Planes | ψ 1200 | Roundness meter, Roughness Meter, Blocks for Ceramic and Steel Parallel Planes, Millesimal Micrometer, Vision Swift Digital Profile Projector of 150x100 mm |
| Lapping | Lui Mono - Table | ψ 800 | Roundness meter, Roughness Meter, Blocks for Ceramic and Steel Parallel Planes, Millesimal Micrometer, Vision Swift Digital Profile Projector of 150x100 mm |

ACCESSORIES AVAILABLE FOR MACHINES AND PROCESSES

| | ACCESSORIES | DESCRIPTION |
|--|-----------------------|--|
| | Washing System No. 3 | Meg F-SG Robotic Solvent Washing System |
| | | Ultrasound Washing Station |
| | RRRobotica | Anthropomorphic Robot of Mod. ATOM10 on Microrettifica |
| | | Rosler Tecnomatic ST 14 TRH |
| | Tumble blast machines | Tecnomatic TMD 11k tumble dryer |
| | | Pre-dewatering drum Mod. Rollwash - Mod. Rwosa220 |
| | Brushing CNC | BD 300L Peter Wolters Ψ 270 |

DNV.GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: CERT-05748-2000-AQ-BOL-SINCERT Initial certification date: 17 February 2000 Valid: 16 February 2021 – 15 February 2024

This is to certify that the management system of

BOMBARDI RETTIFICHE S.r.l. - Sede Legale ed Operativa

Via Augera, 13 - 42023 Cadelbosco Sopra (RE) - Italy

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Working on customer's drawing for mechanical, automotive, hydraulics and earth-moving components, on sub-contractor and complete supply, including flat grinding, fine-grinding, lapping, brusching and washing (IAF 17)

Place and date: Vimercate (MB), 18 January 2021



SGQ N° 003 A SGA N° 003 D SGE N° 007 M SCR N° 004 F PRD N° 003 B PRS N° 094 C SSI N° 002 G

Membro di MLA EA per gli schemi di accreditamento 500, SGA, PRD, PRS, ISP, GHG, LAB e LAT, di MLA IAF Ser gli schemi di accreditamento SGQ, SGA, SSI, FSM e PRD e di MRA ILAC per gli schemi di accreditamento LAB, MED, LAT e ISP For the issuing office: DNV GL - Business Assurance Via Energy Park, 14, - 20871 Vimercate (MB) - Italy

Zeno Beltrami Management Representative





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