



Your Partner for innovative industrial solutions



MONNIER + ZAHNER AG



LAMBERT - WAHLI AG

Portrait

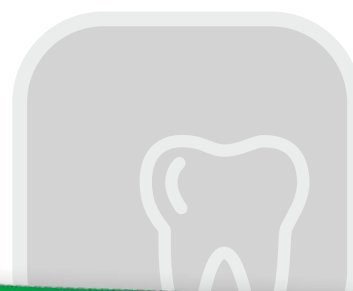
In 1964, Eugen Monnier and Robert Zahner established a company in the industrial area of Safnern-Moss, Switzerland – Monnier + Zahner AG (MZ) – which until 1972 specialised in the construction of machines for the manufacture of watch cases.

The crisis in the watchmaking industry led to a shift to the production of machines for the medical and dental sectors, where MZ worked hard to attain a leading position worldwide with machines for the manufacture of medical implants such as bone screws, bone plates and artificial hip joints.

Other important mainstays followed, including the construction of grinding machines for dental instruments and machines for the production of worms and gears for suppliers to the automotive industry and gearbox manufacturers, and also including special purpose machines built to specific customer requirements.

2006 saw the acquisition of the company Lambert-Wahli AG (LW). Today, the team numbers around 65 employees, including apprentices. We place particular emphasis on the careful training of our apprentices. Ten to twelve apprentices complete their vocational training with us as design engineers, multi-skilled mechanics or automation engineers.

Innovation, flexibility and a management style with a human touch inspires the team to achieve maximum performance. The best quality and service, qualitative rather than quantitative growth and a continuous dialogue with customers and employees remain the key ingredients in our recipe for success.



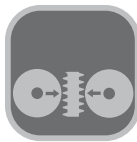
Mechanical engineering

We are a manufacturer of machine tools, producing innovative machine tools for the automotive, watch, medical and dental industries.

We implement machine projects from planning and development to production and assembly. We adapt and optimise standard machines to meet specific customer requirements. For special applications, we're also happy to develop special purpose machines. The construction of special purpose machines is one of our core skills and an important mainstay of our business.

Our aftersales service provides worldwide support. All of this means that we can offer our customers solutions tailored exactly to their individual requirements.

Many forms of processing



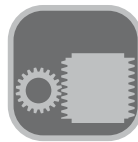
Burnishing
Rolling



Honing
Polishing



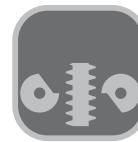
Grinding



Milling



Skiving



Whirling

Other processes

- Slicing of hard materials (e.g. sapphire)
- Laser marking

We offer

- Individual, competent customer support for projects and services
- Fast, flexible and reliable resolution of problems
- Innovative solutions with advantages in terms of both price and quality

Automotive



MZ120
Gear hobbing and worm milling machine

■ Max module 1.0



MZ130
Gear hobbing and worm milling machine

■ Max module 1.5



M644 *Enc*
Duplex worm milling machine

■ Max module 2.5



L248
Duplex worm milling machine

■ Max module 3.5



M651
Worm milling machine

■ Max module 3.5



M663
Thread and worm grinding machine

■ Max module 4.0



W1000micro
Fine pitch gear hobbing machine

■ Max module 1.0



M312
Profile rolling machine

■ Max module 1.75

■ Max rolling pressure 120 kN



2000 *D-drive* Gear hobbing machine

- Max module 4.0
- Synchronized motor spindles, headstock and tailstock max 4'500 min⁻¹, tool spindle max 8'000 min⁻¹
- Flexible deburring unit with two CNC-axes and integrated positioning unit
- Gantry loader design for use in a production line

M667 Worm milling machine

- Max module 1.75
- Robust machine equipped with 3 or 4 CNC axes, swivel axis A optional
- Various loading units such as fast loading unit or CNC universal loader
- Milling head for high-speed milling, cutter speed up to 15'000 min⁻¹
- Version for medical technology



M305 Profile rolling machine

- Profile rolling/burnishing machine in horizontal design
- Tool slide, infeed via torque motor and two direct-drive spindle axes
- Rolling pressure continuously adjustable up to max 50 kN
- Plunge and through-feed procedure



Watch industry



W90 CNC
(Hand loading) fine pitch gear
hobbing machine

- Module 0.05 - 1 mm



W90 CNC
(Packaging loader) fine pitch gear
hobbing machine

- For loading unit W37 / W38



W900micro
Fine pitch gear hobbing
machine

- Manually adjustable swivel
angle



W91
Fine pitch gear hobbing machine

- Module 0.05 - 1.5 mm



W92
Fine pitch gear hobbing machine

- For gear production of small
workpieces



L109
Crown wheel hobbing machine

- Diameter 1 - 6 mm



500 *D-drive*

Fine pitch gear hobbing / crown wheel hobbing machine

- Synchronized motor spindles, headstock and tailstock max 6'000 min⁻¹, tool spindle max 12'000 min⁻¹
- Longitudinal, shift and plunge axes with highly dynamic linear drives
- Wahl W20, W25 and W31 loaders can be integrated

W1000micro

Fine pitch gear hobbing machine

- Hobbing machine with the highest precision and performance, suitable for a wide range of gears for the watch industry, equipment manufacturing and precision engineering
- Three electronically synchronized motor spindles allow speeds of up to 15'000 min⁻¹
- Auxiliary units integrated into the machine



W90 CNC

Fine pitch gear hobbing machine

- Hobbing machine with the highest precision and performance, suitable for straight tooth gears in the watch industry
- Machine version with 3 or 5 axes
- 2-hobs operation for deburring supported
- Clamping force of countertip continuously adjustable. Workpiece clamping by flexible spindle or directly by the hydraulically controlled tailstock spindle
- User-friendly full protection cover with good accessibility (CE compliant)



Medical



M621
Thread whirling machine
■ Workpiece diameter 2.5 - 13mm



M628
Special machine for milling self-cutting flutes on medical screws
■ Machining with milling cutters or end mills



M648
Rotary transfer drill grinding machine
■ Complete machining with up to 18 CNC axes



M669
Head and tip whirling machine for medical screws
■ Machining of pressed blanks made of titanium or medical steel



M658
2-station polishing machine for heads and inserts
■ Station 1: Polishing of head and inserts
Station 2: Polishing of radius, chamfer, face



M660
M650
Internal grinding machine for grinding the cone in ceramic heads and inserts
■ With one or two grinding units



M668

Honing machine for heads and inserts

- Suitable for processing steel, titanium and ceramics
- Customized workpiece and tool holders
- Tool changer and tool magazine for 10 honing / grinding tools
- Workpiece magazine with workpiece loader (optional)
- Transverse CNC axis on tool slide for processing front side, run-in radius and spine products

M654

Polishing machine for heads and inserts

- Temperature monitoring (infrared)
- Polishing tool with integrated suspension infeed
- For polishing products made of ceramics

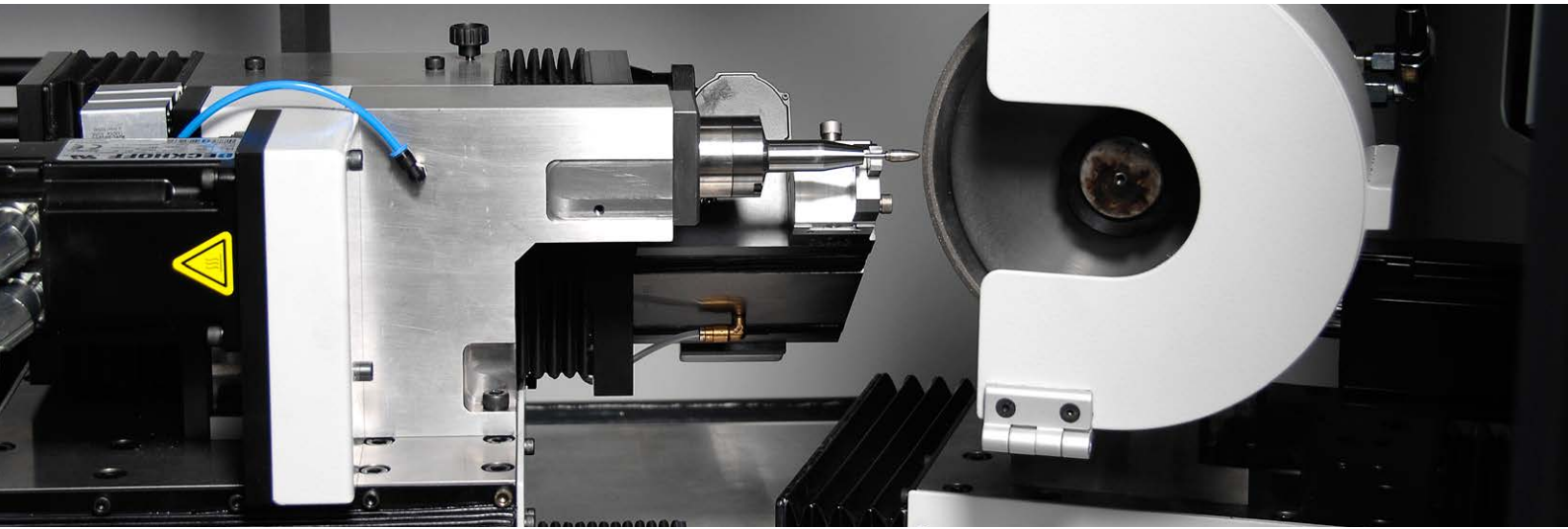


M641

Honing machine for heads and inserts

- Minimum conversion time through simple dialogue programming
- Turret head for 5 honing / grinding tools
- Measuring unit for internal and external measurement
- Polishing unit for steel
- Workpiece magazine with workpiece loader (optional)





Dentsoft calculation software from MTS

With the calculation software by MTS, our grinding machines can also be used for applications outside the dental industry. Among the features offered by the software are modules for milling cutters, rotary cutters, drills, reamers, punches and pre-processing, opening up a wide range of possible applications for the machines. Our own calculation software Dentsoft can still be used for the calculation of rotary burs.





M647

Grinding machine for dental burs

- 6-axes-path control
- Automatic loading and unloading system with funnel magazine for 1'000 workpieces (bar sizes) and/or drum magazine for overend workpieces
- Universal grinding machine for grinding miniature tools
- Grinding wheel attachment for three wheels

M642 evolution

Grinding machine for rotary cutters

- 6-axes-path control
- Automatic loading and unloading system with drum magazine
- Grinding wheel attachment for three wheels
- Software for all shapes (radii and straight lines)

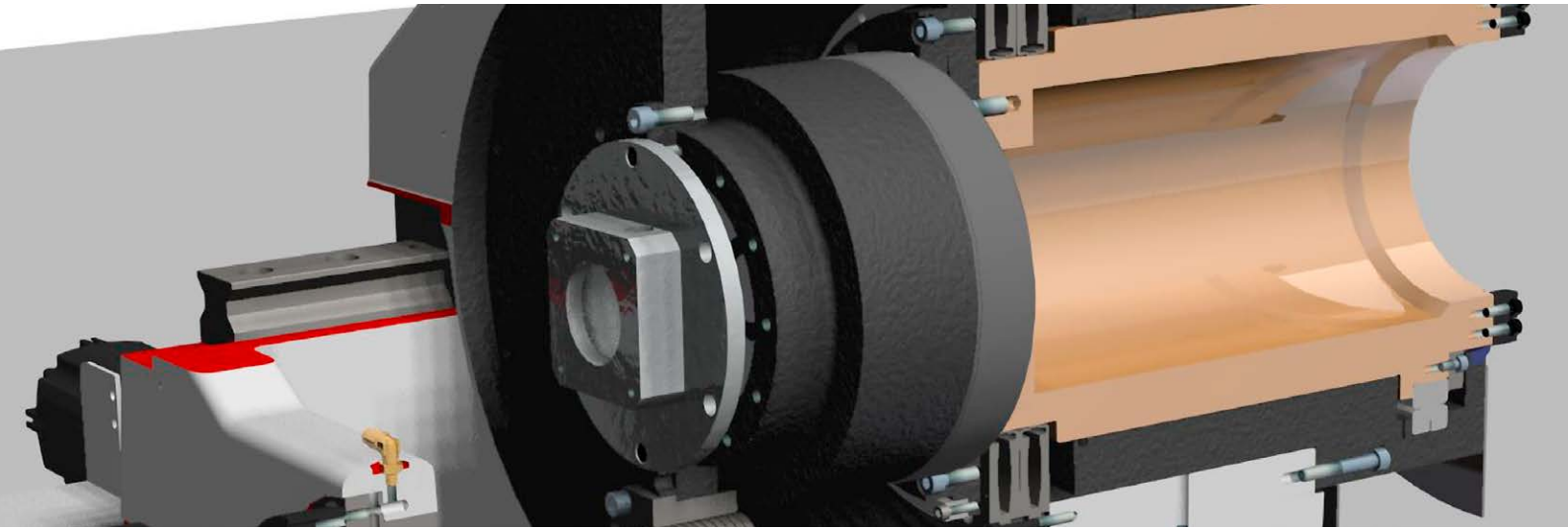


M665

Pregrinding machine

- Automatic loading system with funnel or drum magazine
- The programmable CNC tailstock (part support) compensates for diameter difference through synchronous infeed with the grinding wheel, ensuring the highest level of stability
- High efficiency for simple shapes with up to five programmable plunging operations per workpiece
- Workpiece programming using powerful MTS toolkits. Direct implementation of a wide range of shape and processing variants

Special purpose machines



Designed to the customer...

With our competent and experienced employees, we offer our customers ongoing development and individual support for solutions tailored exactly to their requirements.

- We adapt and optimize standard machines to meet the requirements and specifications of our customers
- For special applications, we're also happy to develop special purpose machines
- Many years of experience and comprehensive know-how support us in the construction of special purpose machines



Trainees



Apprenticeship training is important to us...

To ensure that we can develop and manufacture our products to a high level of quality, we need well-trained and skilled specialists. The training of our apprentices is therefore very important to us. At our company, ten to twelve apprentices complete their vocational training as automation engineers, design engineers or multi-skilled mechanics, in each case earning a Swiss Federal VET Diploma.

«With its multi-faceted training, the profession of multi-skilled mechanic offers a perfect foundation. The apprentices are given the opportunity to get to know the many aspects of our profession in various departments. The challenge of introducing young people into the world of work and being able to see how they develop makes my job exciting. As a vocational trainer, I work hard to get the best from every apprentice.»

Benjamin Fuhrer / Vocational trainer and multi-skilled mechanic

"The good atmosphere we have here and the many funny moments give me the motivation to work every day. The varied jobs (turning, milling, drilling etc.) throw up new challenges for me every day."

Aaron / Apprentice multi-skilled mechanic, 1st year

Why did you decide on an apprenticeship as a design engineer?

"First and foremost because I'm interested in technical stuff, like motors and cars. And I also like being able to develop my own ideas and ultimately put them into practice. By the end of the apprenticeship, you have a good basic education and the doors are open to a wide range of advanced training options."

Marco / Apprentice design engineer, 2nd year

What skills do you acquire as a trainee design engineer apart from the technical expertise?

"During the apprenticeship, independent work and personal responsibility are encouraged. You grow with your responsibilities as the level of difficulty and your own ability to solve problems increases."

Manuel / Apprentice design engineer, 4th year

Quality



Quality comes first...

MZ maintains a management system that meets our own specific requirements, and reviews and improves its efficiency continuously. With our management system, we are certified in quality management (ISO 9001:2008).

We observe the following principles of quality assurance, which must be in line with the requirements of the underlying standards:

- The requirements of customers and other stakeholders must be known if you want to be able to meet - or even better exceed them. Here, legal compliance must be accorded a high priority.
- The management system creates an environment in which it is possible to meet these requirements. Employees are informed about the contents of the management system as appropriate to their specific roles.
- The planned outcome shall be achieved by controlling the required resource and activities in a defined and reproducible process.
- The processes shall be monitored by means of sensible reviews.
- All of MZ's actions shall be based on up-to-date knowledge and high data quality.



For the sake of the environment...

With our management system, we are certified in environmental management (ISO 14001:2004).

The sustainable use of resources is extremely important to us. We manufacture our products in a way that ensures the minimum possible impact on the environment. This means choosing environmentally balanced materials and methods for processes and products.

Operations

- Reduction of energy requirements in operation
- Certified suppliers for waste disposal
- Optimisation of commuter, business trip and transport traffic

Products

- Reduction of energy requirements for our products
- Avoidance or reduction of hazardous substances in our machines
- High standards of service
- Long service life

We also overhaul, refit and modify older machines to bring them up to the standards of the best available technology, allowing us to save additional resources.



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