REISHAUER

Gear Grinding Technology

Reishauer RL x60

MACHINE | **AUTOMATION** | TOOLING | TECHNOLOGY | DIGITAL | SERVICES

Part Loader System

Swiss precision.
Made by Reishauer.

Invented and refined to perfection by Reishauer – our gear grinding process offers valuable advantages:

- Maximum productivity due to high material removal rates and short idle times
- Excellent grinding results
- Extreme process reliability due to continuous shifting and dressing of the grinding worm on the spindle
- Low perishable costs due to long life of the dressing tool and grinding wheel
- CNC machine kinematics allow a wide range of gear flank modifications
- Application of Reishauer Low Noise Shifting technology to produce quiet running gears
- Short contact times between gear and grinding worm flank result in high compressive residual stresses
- Grinding of root to achieve optimum load capacity
- Reishauer TwistControl Grinding technology enables the setting of defined values for flank twist

Customer Benefits

The same engineering that drove Reishauer to become a world leader for gear grinding machines has driven the development of the part loader system. Hence, the part loader is completely matched to the gear grinding machines' performance level and is an integral part of Reishauer's Circle of Competence.

3D gantry with stationary X and Y-axes drives:

The stationary drives reduce the moving mass. The lightweight design for the Z-axes allows high-dynamics and excellent energy efficiency. Full usage of available part loading space.

Modular design:

Loader concept allows adaptation to future customer requirements.

Freely selectable part storage systems (modularity):

Whether conveyor belts, stacking of workpieces on skewers, tray stacking or customer-specific solutions, the part loader can cope with any part feeding system.

Options:

Oil centrifuge for drip-free workpieces, deburring with abrasive brushes running in parallel with oil centrifuging, measuring the gripping diameter, checking of helix angle, checking of part orientation, NOK stations, SPC stations, laser marking, and DMC reader.

Easy accessibility:

Optimal accessibility to the grinding machine's workspindle via the loader door.

Repeatability:

The loader design is capable of delivering trouble-free and accurate loading of hydraulic clamping arbours. Protects the machine's fixturing tools and increases their service life.

All from one source:

Both systems, the grinding machine and the loader, share the same control logic to ensure easy usability.

Energy efficiency:

Economical due to the small mass of the drive system and the recuperation of the kinetic energy. Only minimal pneumatics are required.

Reliability:

A surprisingly simple drive system of two fixed motors ensures trouble-free long-term operation.

A firm grip with one part loader…

Reishauer's RZ x60 high performance gear grinding machines are known for their high production output. These machines often work in multiple shifts, at times up to seven days a week. The new part loader, tailor-made for and fine-tuned to the RZ x60 machine family, allows the user to utilise the full productivity potential of the Reishauer machine tool.

Loader is suitable for disk and shaft type workpieces

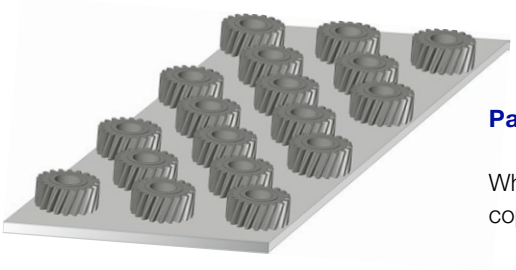
Additionally, the compact loader offers the user a new degree of freedom: it can deal effectively with disk or shaft types of gear parts, from small planet gears to heavy duty final drive gears. The loader's high flexibility ensures that users can quickly respond to future production requirements. Whatever the parts that have to be ground in future on RZ x60 machines, the Reishauer loader is ready for them.

Loader concept allows adaptations to new gear parts

This user-friendly loader can be easily set-up and configured for new gear parts. The modular design offers a large range of customer specific solutions, among them, an oil centrifuge for drip-free workpieces, deburring with abrasive brushes running in parallel with oil centrifuging, checking of the helix angle and the workpiece orientation, NOK station(s), SPC station(s), two-flank rolling test, laser marking, and DMC reader.

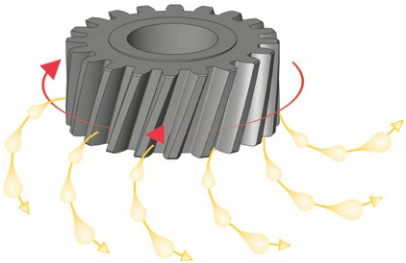
... whether gear shafts, planet, ring or final drive gears

Features



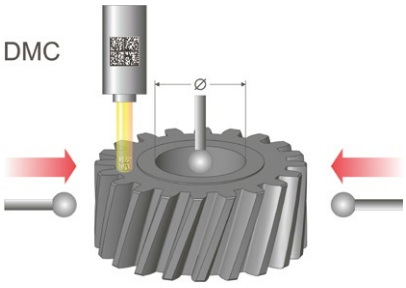
Part storage

Whether conveyor belt, single tray or stack of trays, the Reishauer part loader can cope with any part feeding system.



Statistical process control and oil centrifuge

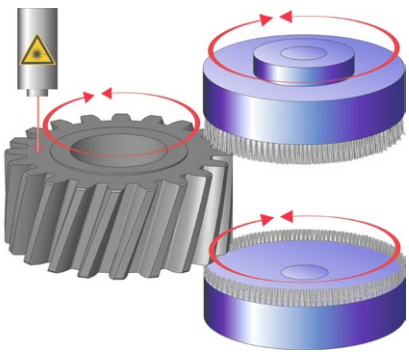
Statistical process control, separation of NOK parts, and an oil centrifuge are standard options.



Pre- and post-measurements options

Depending on customer requirements, the loader can be equipped with a range of measurement and control stations, such as for example:

- Measurement over balls
- Two-flank rolling test
- DMC reader
- Part orientation checking
- Chamfer recognition
- Contour checking
- Helix angle checking



Pre- and post-process options

If so required, further options are available. For example, workpiece deburring station with two simultaneously operating abrasive brushes and a laser workpiece marking system.

The Reishauer Circle of Competence

The Reishauer Circle of Competence describes the entirety of our offering. Reishauer offers products and services around the grinding process completely from one source and thus guarantees a long service life of the machine system at low life cycle costs.

Machine

A broad portfolio, future-oriented controls, and interface concepts, and state-of-the-art grinding technologies – for decades, our machines have guaranteed the highest possible output with maximum precision, consistent quality, and unmatched machine availability.

Automation

Automation "Made by Reishauer". Our automation solutions are perfectly matched to our machines and keep pace with their high output. Modular in design, they can be flexibly tailored to your production needs.

Tooling

Perfectly matched, consistent in quality, and with guaranteed availability: Together with the machine, Reishauer tooling forms the backbone for your successful grinding processes.

Technology

With the development of powerful e-drives, the requirements for quality, surface finishes, and efficient gear geometries have increased significantly. Reishauer grinding technologies enable you to meet your customers´ most demanding requirements and help you remain competitive. Our technology experts are at your side with advice and support.

Digital

System integration, in-depth process analyses, predictive maintenance – the requirements for Industry 4.0 solutions are extremely complex and diverse. Reishauer offers you a constantly growing portfolio of digital services to maximize the potential of your machine.

Services

The reliability of our machines, and thus machine availability, is of central importance for your competitiveness. Shortest reaction time, a worldwide extended network of service engineers, and decentralized spare parts stores guarantee you maximum availability.

Reishauer worldwide

SWITZERLAND
Reishauer AG
Industriestrasse 36
8304 Wallisellen
Switzerland
+41 44 832 22 11
info@reishauer.com

GERMANY
Reishauer GmbH
Humboldtstrasse 32
70771 Leinfelden-Echterdingen
Germany
+49 711 947 56 0
germany@reishauer.com

CHINA
Reishauer AG
Beijing Representative Office
Room 1708, SCITECH TOWER
No. 22 Jian Guo Men Wai Da Jie
Beijing 100004
China
+86 10 651 571 75
china@reishauer.com

USA
Reishauer Corp.
1525 Holmes Road
Elgin, IL 60123
USA
+1 847 888 38 28
usa@reishauer.com

FRANCE
Reishauer AG
21 rue de la Croix Blanche
33000 Bordeaux
France
+33 6 0830 64 20
france@reishauer.com

JAPAN
Reishauer K.K.
2-14-30 Shinyokohama
Kohoku-ku, Yokohama-shi
222-0033 Kanagawa
Japan
+81 45 476 58 33
japan@reishauer.com

Find additional representatives at www.reishauer.com

Head Office:

Reishauer AG
Industriestrasse 36
8304 Wallisellen
Switzerland
+41 44 832 22 11
reishauer.com

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