

REISHAUER

Gear Grinding Technology

RZ 126



MACHINES

PERIPHERAL SYSTEMS

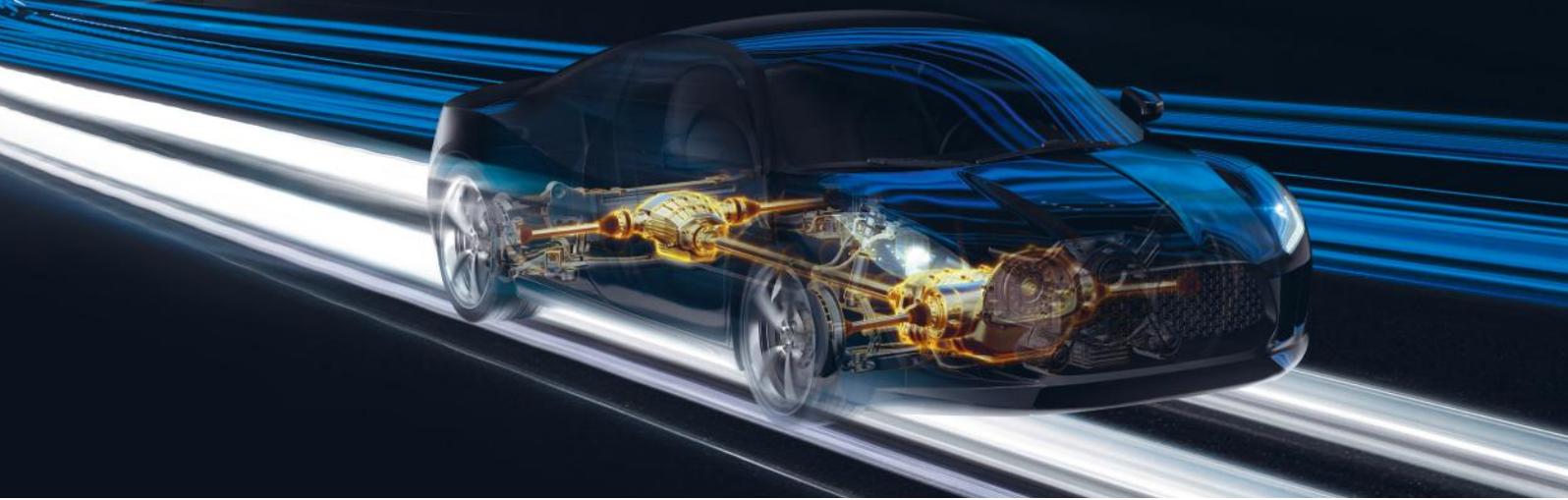
TOOLING

TECHNOLOGY

SERVICES

Gear Grinding Machines

Generating Grinding: Invented and Refined to Perfection 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 value is the focus of our innovation

Swiss precision. Made by Reishauer

For more than 70 years, Reishauer gear grinding machines have enjoyed an outstanding worldwide reputation. These machines guarantee the highest precision and the most efficient gear grinding processes.

The RZ 126 builds and expands on Reishauer's successful twin-spindle machine concept. The machine combines the speed and productivity of the RZ 60 with the flexibility and the latest grinding technologies of the RZ 160 und RZ 260. Regarding productivity, the RZ 126 grinding machine sets industry standards in the high volume production of gears, and in its field, is the fastest machine on the market.

The design principle embodies the uncompromising reduction of non-productive time by the twin-spindle technology, the short reaction time of the spindle drives and the high grinding speeds.

Your benefit:

- Common layout for all gear grinding machines
- Multi-sensors for the grinding of stepped pinions
- Common interfaces with all peripheral systems
- Consistent operation, set-up and maintenance routines
- Common spare parts
- Operators trained for one type of the RZ60 /160/ 260 series are instantly familiar with the full range of these machines, including the RZ 126
- Exchangeable tooling
- Hybrid design of machine bed and spindles for high stiffness and damping
- Acoustic emission analysis for automatic set-up and dressing
- High-precision balancing system for automatic balancing and monitoring of the grinding wheel
- Reishauer PrecisionDrive for adaptive control of the NC axes to execute grinding routines in parallel to eliminate non-productive times
- All overtravel of axes movement reduced to a minimum
- Very stiff machine structure allows aggressive grinding parameters while maintaining high workpiece quality
- Two meshing sensors enable meshing during turning of the turret
- Oil spin-off on the ground part takes place simultaneously when the turret swivels into grinding position for the next workpiece

Uncompromising reduction of non-productive times

Predestined for high volume production

If the demand for gears and lot sizes has increased to the extent that productivity is the top priority, the RZ 126 is a perfect choice. This machine is designed for the production of precise and quiet planetary pinions in automotive transmissions – as well as for mass productions of other gears up to a diameter of 126 mm.

On the RZ 126, all axes overtravel has been reduced to the absolute necessary, and the Reishauer developed PrecisionDrive, the electronic gearbox, works in perfect harmony with all the NC drives such that all procedures are running in parallel, which eliminates secondary times.

100 m/s

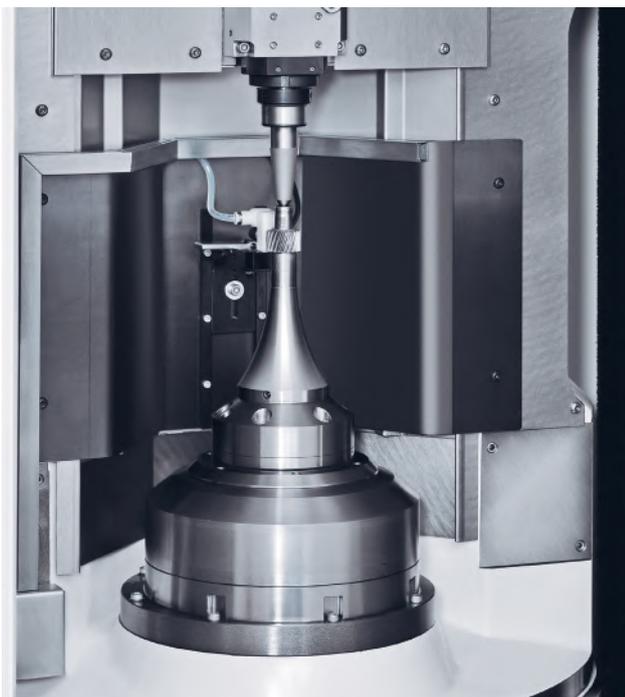
With the RZ 126, Reishauer presents a unique and trend-setting high-speed technology. An increased maximum grinding speed of 100 m/s allows an increase in productivity more reliably than by increasing feed rates or the number of starts – of course without modifying the micro or macro geometry of the gears or causing any grinding burn. The internationally well-respected GS Certificate for the machine, as well as for the grinding wheels made by Reishauer, assure the required safety in industrial practice.



Unbeatably fast

The RZ 126 adapts the basic design set-up of the RZ 60 and RZ 160 and always features a twin workspindle design. Two rapid meshing sensors are responsible for precise synchronization of grinding wheel and gear. Above all, it is the streamlined architecture of the control unit together with the highly sophisticated software routine that ensures the unique performance of this machine.

The Reishauer PrecisionDrive works in perfect harmony with all the NC units such that all procedures are running in parallel which eliminates secondary times. In this way, even at cycle times as short as 10 seconds, there is sufficient time for spinning off the oil while the part is still in the machine. Extra-wide grinding wheels together with multi-rib full profile rolls minimize the dressing time component per gear part.



Perfect accessibility and user-friendliness



Technical Data

Technical Data*

Gear outside diameter	0 – 126 mm
Module	0.5 – 4 mm
Swivel angle (grinding head)	+/- 48°
Grinding stroke (max.)	180 mm
Shaft length (max.)	490 mm
Workpiece spindle RPM (max.)	3000 min ⁻¹
Workpiece weight (including workholding) (max.)	30 kg
Grinding speed (max.)	100 m/s
Grinding wheel outside diameter (max.)	275 mm
Face width of grinding wheel (max.)	125 / 160 mm
Diameter of dressing tools	123 / 140 mm

*Out of range dimensions can be verified upon request

Options (Extract)

Pivoting dressing unit (C4-axis)
CNC tailstock (W1- & W2-axis)
Generating grinding of asymmetric gear profiles
Generating polish grinding
Reishauer TwistControl Grinding Technology (generating defined twist)
Generating grinding of tapered gears (beveloid gears)
Generating grinding of non-involute gears
Two double meshing sensors for stepped pinions
Integrated oil spinning
Reishauer ECO mode

Control

Siemens Sinumerik 840D Solution Line
Reishauer PrecisionDrive
Reishauer operating software

All technical specifications are subject to change.



The RZ 126 is a very compact machine. The operator's panel can be quickly moved from the grinding to the dressing position.

All service components are easily accessible and located in a central location, making the machine very user-friendly and efficient to operate.

Circle of Competence



The Reishauer Circle of Competence

The gear grinding machine, both in qualitative and quantitative performance levels for the large volume production of high-accuracy gears, is at the core of the continuous generating grinding technology invented by Reishauer. To ensure a steady and high production output of our machines at constant quality, and at lower costs per piece, we have

continuously extended our technical competency and support structure in the areas of automation, tooling, application engineering and service. Hence, today we are a single source supplier, and thus we guarantee our customers a long service life of the machine system and lower life cycle costs.

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 KK
 Nisso Dai-17 Bldg. 3F
 2-14-30 Shinyokohama
 Kohoku-ku, Yokohama-shi
 222-0033 Kanagawa-ken
 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



REISHAUER

Gear Grinding Technology