

# REISHAUER

Gear Grinding Technology

## RZ 150



**MACHINES**

PERIPHERAL SYSTEMS

TOOLING

TECHNOLOGY

SERVICES

# Gear Grinding Machines

# Customer Value, the Focus of our Innovations

## Invented and refined to perfection by Reishauer – our Gear Grinding process offers valuable advantages:

- Maximum productivity due to high machining rates and short idle times
- Excellent grinding results regardless of small deviations in the gear blank
- Extreme process reliability due to shifting and dressing of the grinding worm on the spindle
- Low perishable costs due to long life of the dressing tool and grinding wheel
- 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
- Optional tooth root grinding to achieve optimum load capacity
- CNC controlled machine kinematics allowing a wide range of gear flank modifications
- Reishauer Twist Control Grinding technology enables the setting of defined values for flank twist

## Swiss Precision Made by Reishauer

For more than 60 years, Reishauer gear grinding machines have enjoyed an outstanding worldwide reputation as the most reliable and efficient machines in gear finishing. The RZ 150 combines advanced technologies in order to provide excellent results over the entire life cycle of the machine:

- Hybrid design of machine bed and spindles manufactured for maximum stiffness and damping
- Acoustic emission analysis for automatic set-up and dressing
- Precise Reishauer balancing system for automatic balancing of the grinding wheel on the spindle of the machine
- Highly accurate Reishauer generating module for best gear quality
- Multiple sealed guideways for long life and high value retention
- CNC tailstock for programmable axial forces and optimum reproducibility
- Backlash free, swivel axis for the dressing unit (option) with the application of flexible dressing tools



RZ 150



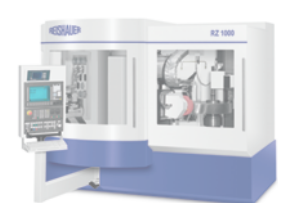
RZ 260



RZ 303C



RZ 550



RZ 1000

# Compact, fast and highly accurate

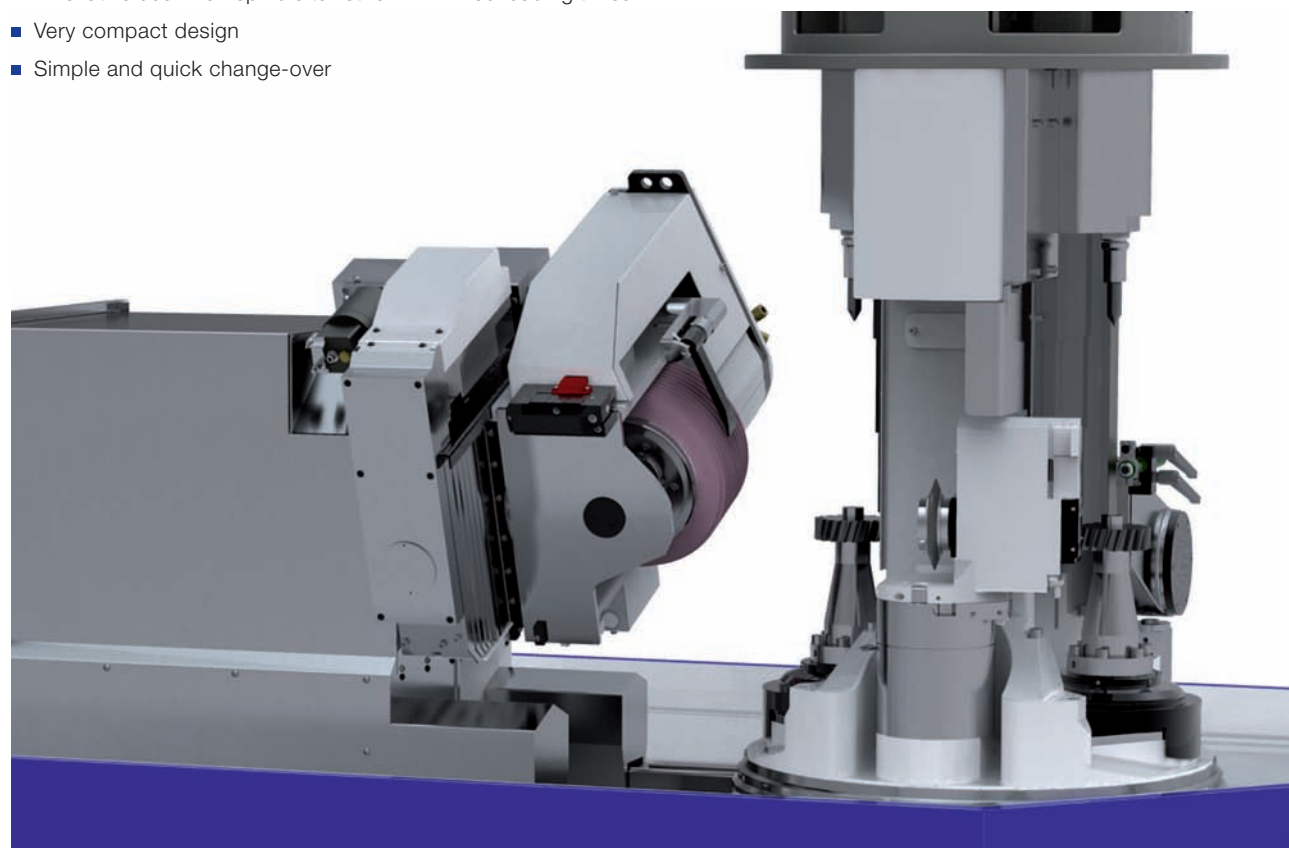
## Developed for mass production

The RZ 150 gear grinding machine was developed to minimize the costs of hard finishing gears by applying maximum efficiency in all details. This is demonstrated by the unprecedented success of the machine. Since its introduction to the market, it represents the state of the art in gear grinding thanks to continuous improvement. This is what our customers demand when implementing their projects.

## Main features of the machine

- Dedicated design of the machine specifically for continuous generating grinding resulting in the highest productivity, quality and reliability
- Innovative dual-workspindle turret for minimized loading times
- Very compact design
- Simple and quick change-over

- High reproducibility of the part quality – even after dressing and change-over
- Man-machine interface (MMI) especially designed for continuous generating grinding for efficient and simple operation
- Capability to grind special gear geometries (i.e. conical gears, non-involute gears, and others)
- Reishauer Low Noise Shifting technology satisfies highest demands in gear noise emission



## Dual workspindle concept

Through the application of two workspindles, the loading times are minimized. The two workspindles are placed on a revolving turret. While one gear is ground on the first workspindle, another gear can be unloaded, loaded and synchronized with the grinding wheel outside of the machining area.

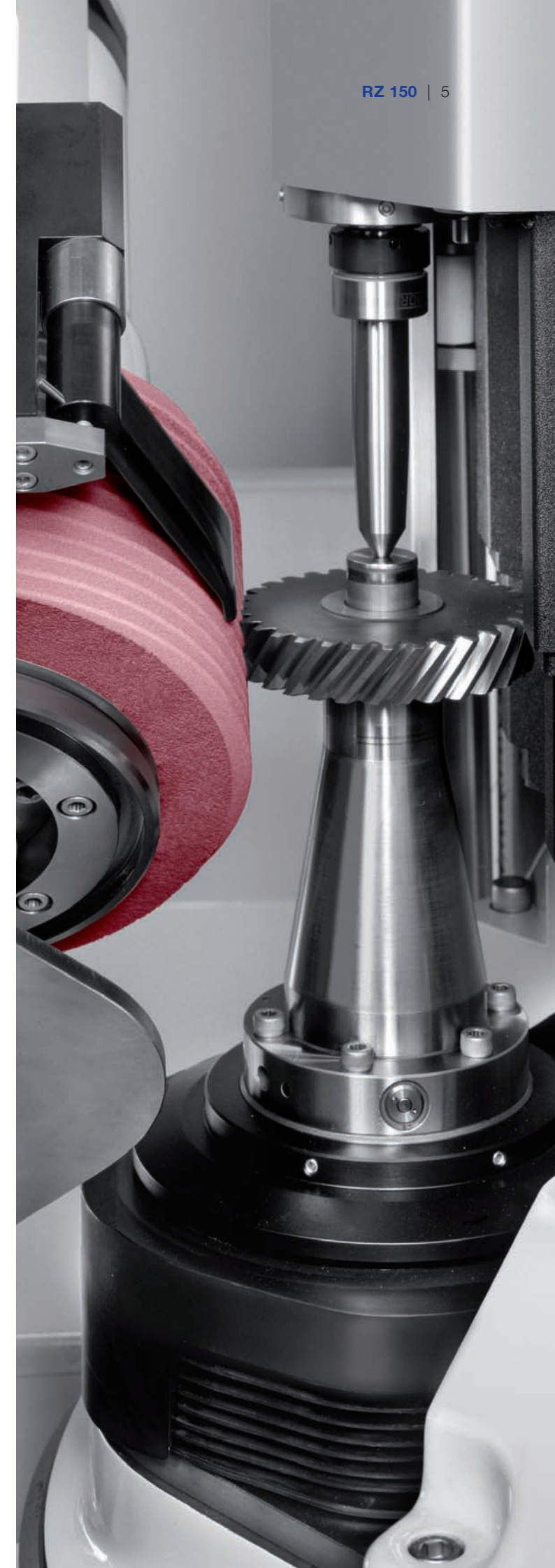
The dressing unit also resides on the turret. For dressing it is rotated and positioned in front of the grinding wheel.



Dressing



Automatic Meshing



# Technical Data

## Gear Dimensions

Outside Diameter	10 to 150 mm
Module	1 to 3 mm
Helix Angle	-40° to +40°
Face Width	≤ 100 mm
Shaft Length	≤ 490 mm

Out of range dimensions can be verified upon request

## Grinding and Dressing

Grinding Speed	≤ 80 m/s
Outside Diameter of Grinding Wheel	275 to 205 mm
Width of Grinding Wheel	125 mm
Diameter of Dressing Tool	123 mm

## Options

Tailstock (W1- & W2-Axis)
Grinding of Non-Involute Gears
Grinding of Defined Flank Twist (Twist Control Grinding)
Grinding of Conical Gears

## Control

Siemens Sinumerik 840D
Reishauer Generating Module
Reishauer User Interface

## Standard Colors

Machine Bed	RAL 5002 (Ultramarine Blue)
Enclosure, Control Cabinet, Panel, Interior	RAL 9010 (Pure White)

## Dimensions

Length	2'440 mm
Width (including Control Cabinet)	2'000 mm
Height	2'470 mm
Weight (including Control Cabinet and Tailstock)	8'000 kg



The RZ 150 is a very compact machine. The operator's panel can be easily moved between grinding and dressing position. All service components are easily accessible and located in a central position, making the machine very user-friendly and efficient to operate.

# Circle of Competence



## Continuous Generating Grinding is our Business

Reishauer not only manufactures excellent gear grinding machines, we are a reliable partner offering our systems expertise allowing you to master the entire gear grinding process. Reishauer is "working solution oriented" and supports customers in their effort to achieve highest productivity and profitability with the best possible quality. The circle of competence encompasses the Reishauer Gear Grinding Technology. It includes our commitment to machines, loading systems, workpiece fixtures, dressing tools, grinding wheels, gear inspection and process technology. Project engineering and consulting, after sales service, technical support, remote diagnostics, maintenance service, supply of spare parts and machine updates complete our scope of responsibility. With Reishauer you commit to quality and profit from our competence in gear grinding technology. This is our guarantee of outstanding performance.

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