

Rack grinding without compromise.

RG 2400

Rack grinding machine

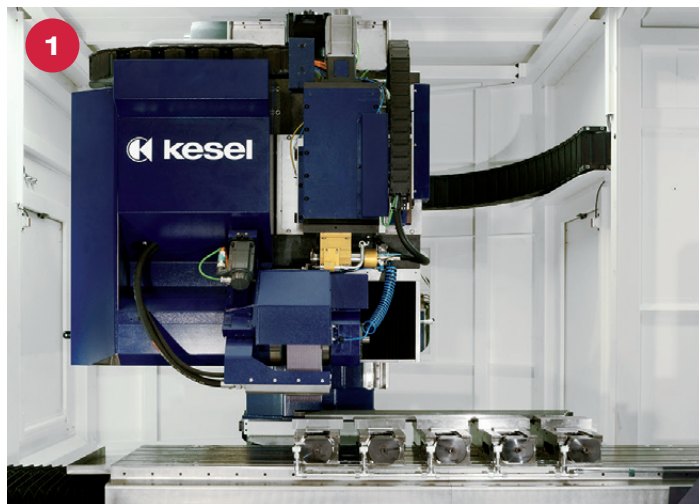


- > Bandsaw blade production
- > Steering rack production
- ▶ Rack production
- > Gear machining
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RG 2400

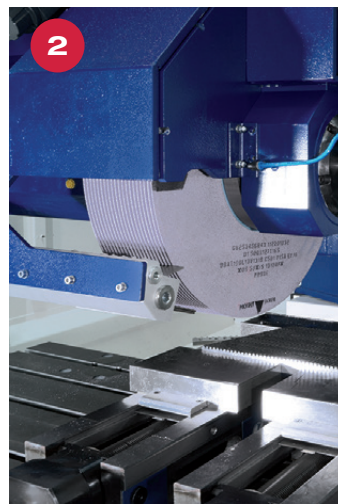
The RG 2400 from Kesel redefines expectations in rack grinding and has created an entirely new dimension of precision within the industry.

In addition to many new technological advances developed by Kesel the RG 2400 operates using the latest Siemens 840D sl control system as well as market-leading dressing spindle technology from Dr. Kaiser. The FEM analysed machine design offers rack manufacturers unrivalled damping, stiffness and thermal stability. The RG 2400 delivers outstanding grinding results as standard.



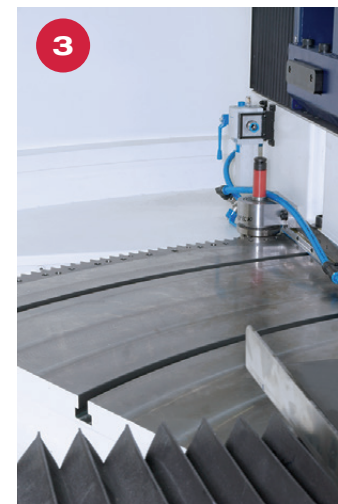
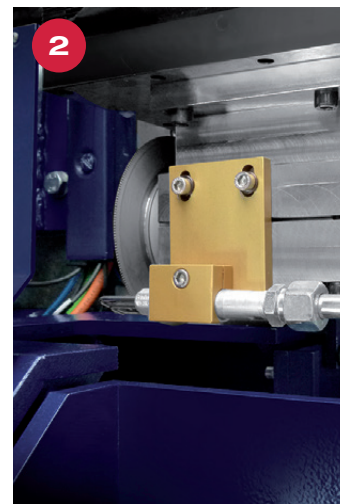
Grinding head

The water-cooled spindle drive of the S500 grinding head ensures temperature stability and absolute precision is achieved at the grinding face. An integrated CNC dressing wheel with automatic balancing system further supports the realisation of outstanding surface finishing of the workpiece. The granite base plate on which the grinding head is mounted, reduces weight directly at the grinding head and provides higher thermal conductivity and excellent damping.



Grinding

The CNC diamond dressing wheel from Dr. Kaiser profiles the grinding wheel quickly and precisely. Specially developed cleaning nozzles, customised to every module size, ensure the best possible cooling effect between the grinding wheel and the workpiece. The automatic tracking and adjustment of the coolant and cleaning nozzles, in conjunction with the intelligent coolant management system, ensures optimum cooling at all times, even with decreasing grinding wheel diameters. Grinding wheels up to 127 mm wide and 500 mm in diameter ensure maximum productivity and short cycle times.



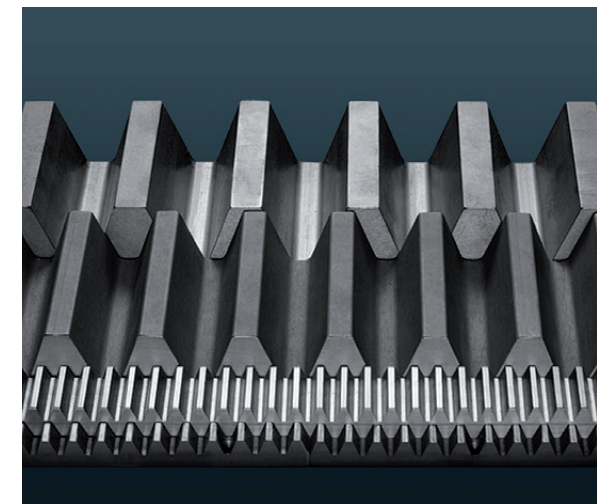
B-Axis

The RG 2400 has an adjustable B-axis with a range of +/- 25° in order to grind the full range of helical racks. The B-axis can be supplied as a manual or fully CNC controlled axis.



Coolant and fine filter management

The intelligent coolant management system is fully automated. Depending on the process requirements (roughing and finishing process), the coolant volume flow and pressures are automatically and optimally set and monitored.

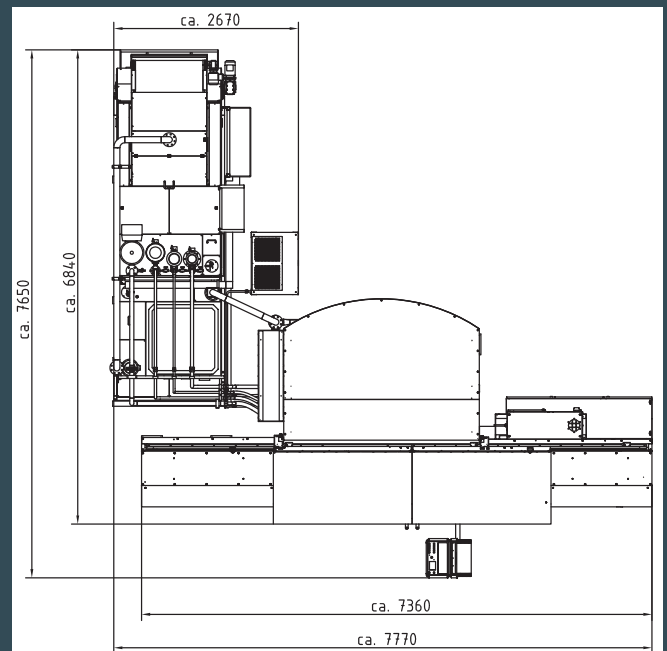


Gear racks

With the RG 2400, high precision grinding, of even the most complex workpieces, is possible. Whether helical or straight tooth forms, or even customer-specific workpieces, we are able to deliver a solution that will increase the effectiveness of your production.

Specification RG 2400

Travel Range	
X-axis (horizontal, table-axis)	2,600 mm
Y-axis (vertical, depth)	380 mm
Z-axis (horizontal, infeed)	548 mm
B-axis (Swivel axis, helical tooth profile)	+/- 25°
Clamping area	565 x 2,400 mm
Travel Range - Dressing unit	
X2-axis	140 mm
Y2-axis	143 mm
Y3-axis	155 mm
Grinding head	
Type	S500
Power	93 kW S1
Grinding wheel adapter	Ø 165 mm
Grinding wheel diameter min.	220 mm
Grinding wheel diameter max.	500 mm
Grinding wheel width max.	127 mm
Control	
Siemens SINUMERIK 840D sl	
Clamping system	
Magnetic or hydraulic clamping system	
Quality	
Achievable tooth quality (To DIN 3962, part 1): Q5	
Coolant and swarf removal	
Cooling lubricant	Emulsion
Filling capacity	6,980 Litre
Fine filtration	Band filter fleece
Integrated coolant monitor and management system	
Electrical connection	
Machine	
Voltage	3 x 400 V
Fuse	250 A
Coolant unit	
Voltage	3 x 400 V
Fuse	160 A
Dimensions and weight	
Installation dimensions:	L: 10,000 x D: 6,500 x H: 3,500 mm
Machine weight:	approx. 34,500 kg
Options	
<ul style="list-style-type: none"> - Automatic sliding doors - Controlled B-axis - Grinding wheel changing unit - Customised clamping setups - Coolant: Oil 	



approx. dimensions

Additional accessories available upon request/Subject to modifications arising from technical advances