

Precision at full length.

RMS

Rack milling machine



- > Bandsaw blade production
- > Steering rack production
- ▶ Rack production
- > Gear processing
- > Clamping tools

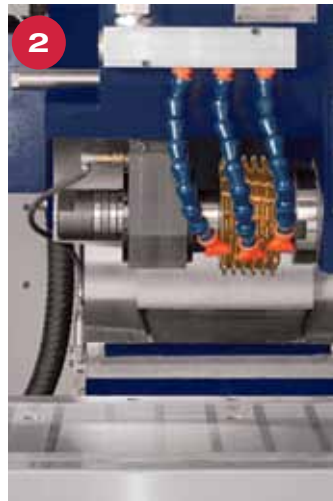
RMS

The concept of the RMS machine is based on decades of expertise in manufacturing special purpose milling machines. The machine is equipped with a state of the art Siemens SINUMERIK 802D sl control as well as Siemens servo drive units. The robust machine is used for the rack production up to module 20 with the highest possible precision. Extensive optional features make this machine a milling centre meeting all customer requirements.



X-axis - Tabletop machine

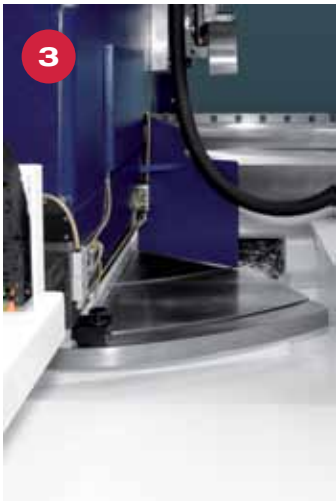
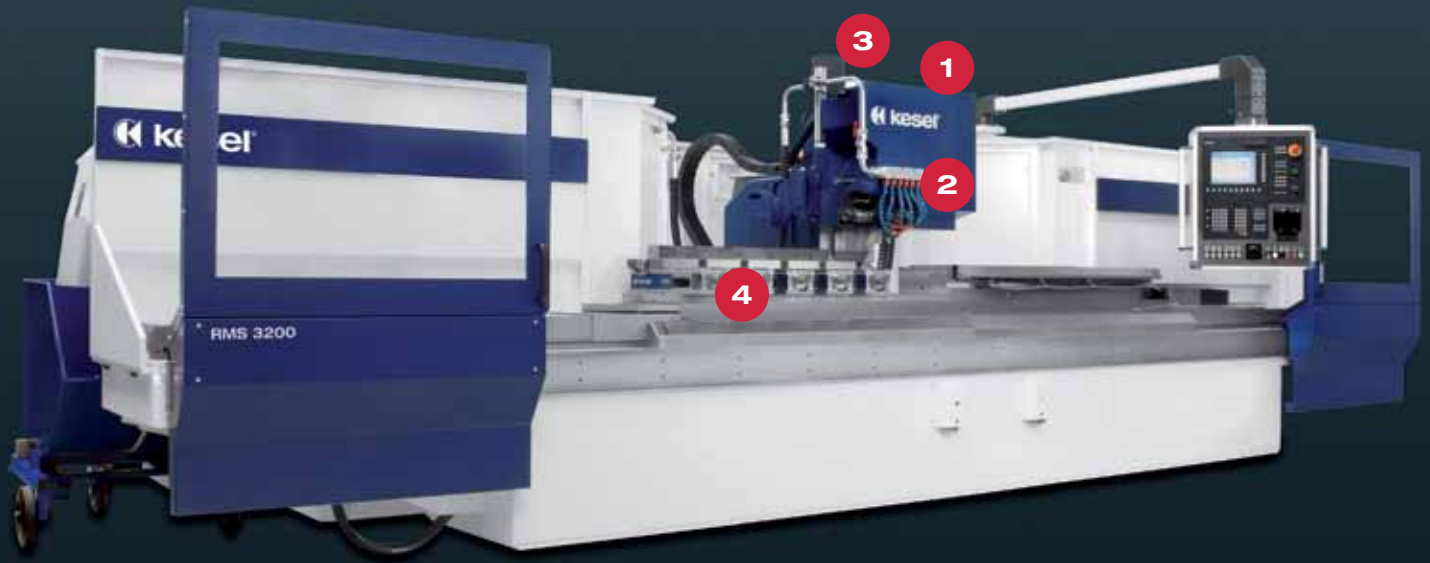
The RMS design of a smaller tabletop machine makes even small batch production of racks with a length of up to four metres profitable. The robust and low-maintenance milling head F 55.4 features a durable transmission with ideal reduction. The machine therefore operates at a very high torque and within a perfectly balanced rpm-range.



Milling

Zero backlash drive units based on ball-bearing spindles and a computer-calculated power transmission yield the highest results in running smoothness and tooth quality. The milling process of the Kesel milling machines can either run with or against the feeding direction. The robust machine can operate with PM or HSS cutting tools.





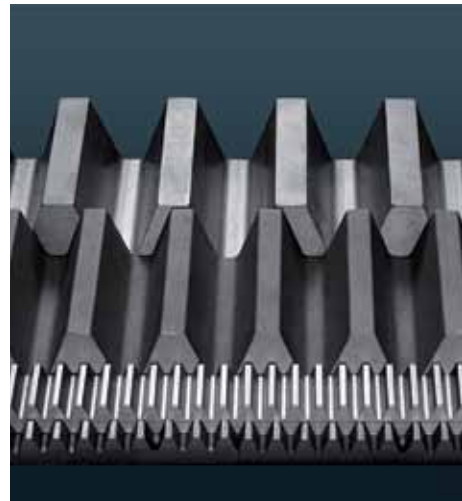
B-axis

The swiveling table (B-axis) allows an adjustment of the milling head for helical tooth profiles of $\pm 30^\circ$.



Clamping systems

Magnetic clamping plate, alternatively hydraulic workpiece clamping device. Special workpieces can also be clamped employing oblique jaws or prismatic jaws.



Racks

The RMS machine enables tooth profile milling up to module 20 on all kinds of workpieces. Helical or linear tooth profiles, racks, profile milling on shafts, or special customer specific workpieces - we can make every application possible.

Specification RMS

Travel range	
X-axis (horizontal, table-axis)	2,100 mm / 3,200 mm / 4,100 mm
Y-axis (vertical, cutting depth)	230 mm
Z-axis (horizontal, infeed)	370 mm
B-axis (swivel axis helical tooth profile)	+/- 30°
Clamping range	2,130 mm / 3,400 mm / 4,100 mm x 345 mm
Milling head	
Type	F 55.4, transmission with high power drive
Power	43 kW S6 40%
RPM	max. 315 rpm, infinitely variable
Milling arbor	SK 50
Min. diameter of milling cutter	128 mm + 2 x cutting depth + 5 mm safety + resharpening (acc. to manufacturer)
Max. diameter of milling cutter	250 mm
Max. tool width	200 mm For cutter design concepts contact Kesel
Control	
Siemens SINUMERIK 802D sl	
Clamping system	
Hydraulic workpiece clamping system, alternatively magnetic clamping plate	
Accuracy	
System accuracy	< 0.005 mm (control and measuring systems)
Positioning accuracy	< 0.002 mm
Coolant and swarf removal	
Cooling lubricant	Oil / Emulsion
Filling capacity	500 litres
Magnetic filter roller for fine filtration	
Electrical connection	
Voltage	3 x 400 V
Amperage	80 A
Dimensions and weight	
Installation dimensions:	
RMS 2100	length 5,300 x depth 2,100 x height 2,500 mm
RMS 3200	length 7,800 x depth 2,100 x height 2,500 mm
RMS 4100	length 9,700 x depth 2,100 x height 2,500 mm
Machine weight:	
RMS 2100	approx. 8,400 kg (incl. control cabinet)
RMS 3200	approx. 10,000 kg (incl. control cabinet)
RMS 4100	approx. 12,500 kg (incl. control cabinet)
Options	
<ul style="list-style-type: none"> - „pendulum milling“ - hydraulic workpiece leveling system - additional spindle unit 	

Additional accessories upon request

