



SKU : 470613

TRIAL MACHINE

Without CE mark, only for export to countries outside the EU

The RSM NC is a high precision cylindrical grinder designed especially for long and heavy workpieces. Instead of the conventional Hydraulic Unit, this model features a modern servo motor drive for both axes, which brings the dynamics, efficiency and precision of this machine to a new level. This machine is ideal for single parts and small batch productions, and the integrated inside grinder adds flexibility. The solid construction with a large machine bed, ground guideways and powerful drives for work spindle and grinding spindle has a proven record. Advanced NC control with touchscreen requires no previous programming knowledge, simplifies operation and increases productivity.

- NC control with touchscreen
- Grinding cycles for internal and external cylindrical grinding
- Servomotors in both axes

TECHNICAL SPECS

WORKING AREA

Center height	180 mm
Center width	1000 mm
Grinding diameter	8 mm - 320 mm
With steady rest	15 mm - 150 mm
Grinding length	1000 mm
Inside grinding diameter with rest	35 mm - 100 mm
Inside grinding diameter without rest	30 mm - 100 mm
Inside grinding depth	125 mm
Workpiece weight between centers (max.)	150 kg
Grinding wheel feed (min.)	0.001 mm
Table swivel range (max.)	-2° / +9°
Wheel speeds	45 m/s
Work spindle speeds	25 1/min - 500 1/min

TRAVELS

Grinding head travel	250 mm
Travel Z-axis	1250 mm

FEED

Table feed, Z axis, infinitely variable	0.03 m/min - 6 m/min
X axis feed, infinitely variable	0.03 m/min - 4 m/min

HEADSTOCK

Working headstock swivel range	90 deg
Working spindle taper	4 MT

GRINDING HEADSTOCK

Grinding spindle speed	2140 1/min
Grinding headstock swivel range (r+l)	10°
Inside grinding spindle speed	10000 1/min

TAILSTOCK

Tailstock taper	4 MT
Tailstock quill stroke	30 mm

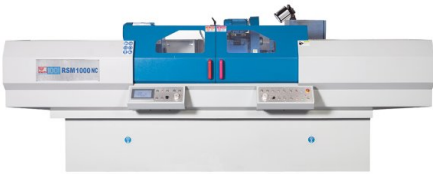
DRIVE CAPACITY

Motor rating - grinding spindle	4 kW
Motor rating X-axis	1.5 kW
Motor rating Z-axis	1.5 kW
Motor rating working spindle	1.5 kW
Motor rating coolant pump	0.125 kW

MEASURES AND WEIGHTS

Grinding wheel dimensions	400 mm x 50 mm x 127 mm
Grindstone dimensions, inside grinding (max.)	32 mm x 25 mm x 10 mm
Overall dimensions (length x width x height)	3.91 m x 2.1 m x 1.46 m
Weight	3200 kg

PRODUCT DETAILS



Machine bed

- The heavy machine bed is designed for high-precision machining of large and heavy workpieces
- The swiveling work table runs on precision-ground, wide and long v-block guides ensuring excellent vibration damping
- With this design the total weight of table and workpiece is distributed evenly over a large area, which ensures high rigidity and minimal tilting torque
- The robust tailstock ensures rigidity and accuracy during clamping of a workpiece between centers



Feed

- The use of servo-conventional feed technology instead of a hydraulic system results in a more consistent and vibration-free advance of the work table
- Premium servo drives allow axis movements with the precision and dynamics of modern CNC machines
- All feed settings can be set with high accuracy and repeatability, and electronic stop gauges provide precise travel limits
- Preloaded ball screws on all axes ensure reduced friction and significantly lower breakaway torques resulting in faster and more precise movements
- The significantly reduced heat build-up leads to more consistent conditions during continuous operation and long-term wear reduction
- Drives, spindles, and measuring systems are totally enclosed or mounted in protective enclosures and virtually maintenance-free



Grinding Headstock

- The headstock runs on premium linear guides that allow maximum positioning accuracy even at the slightest axis movements
- An extensively supported grinding spindle guarantees maximum precision and surface quality for roughing and finishing work
- The inside grinder can be pivoted into the work area as needed and is driven by a separate motor

Work spindle drive

- The work spindle headstock swivels to one side, and the spindle speed is infinitely variable
- A 3-jaw chuck with 200 mm diameter and superior concentricity is included in this series' standard equipment



Equipment

- The work area features large doors for easy access and easy loading and unloading
- All controls are arranged conveniently on two control panels
- LED lights ensure good visibility and safety during machining operations
- An automatic central lubrication system simplifies maintenance and reduces the operator's workload
- Two electronic hand-wheels (one at each control panel) simplify machine setup and reduce down times
- A rest for machining of long workpieces is included in the machine's standard equipment
- A powerful coolant system, dresser, grinding wheel balancer, and operating tools also are included in the standard package
- Technical parameters are displayed on a large touch screen monitor



NC control

- The NC positioning control allows the combination of roughing, finishing and spark-out in one operation
- Individual grinding cycles can be programmed via a touchscreen control, no programming knowledge required
- The HMI provides easy to use control menus for every longitudinal and traverse cylindrical grinding application
- Detailed graphics assist the user during data entry and show the current status during machining operations

Sample product

- Comparable machines in the KNUTH Portfolio 2025 have an enclosed cabinet and a centrally located control panel
- Knuth also offers 2 series of conventional Cylindrical Grinding Machines with hydraulic table movement
- The machine has been tested and is fully functional

Standard Equipment

- NC control with touchscreen
- 2 electronic hand-wheels
- Inside grinding feature
- Work area guard
- Pneumatic tailstock quill
- 3-jaw chuck, Ø 200 mm
- Grinding wheel dresser
- Balancing arbor and balancing stand
- Open and closed rest
- Coolant system
- Automatic central lubrication system
- Grinding accessories
- LED work lights
- Operation manual