

**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

### 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

### 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

## 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

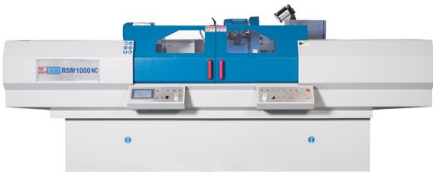
Grinding head travel	250 mm
Travel Z-axis	1250 mm

### 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



## 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



## KNUTH on YouTube Information to the point

On our YouTube channel you can find videos for nearly all machines from our program. We show the machines from current deliveries and you get an impression of the handling, the processing quality and the machining performance.

**Are you interested in a machine for which you cannot find a current video?  
Please feel free to contact us!**