Conventional Grinding Machines

Servogrind® RSM 600 NC

SKU : 124959

The Servogrind® RSM NC is a precision cylindrical grinding machine for long and heavy workpieces. Instead of a conventional hydraulic unit, however, the series has a modern servo motor drive for both axes, which raises the dynamics, efficiency and precision of the machine to a new level. The series is suitable for both single part and small batch production and offers additional flexibility with the internal grinding device. The solid construction with a large machine bed, ground guideways and powerful drives for the work spindle and grinding spindle has proven itself many times over. The modern NC control with touchscreen requires no programming knowledge, simplifies operation and increases productivity.

- NC control with touchscreen
- Grinding cycles for internal and external cylindrical grinding
- Servomotors in both axes
- Swivelling table and swivelling work spindle
- Extensive range of standard accessories

TECHNICAL SPECS

WORKING AREA

Center height	180 mm
Grinding diameter	8 mm - 320 mm
With steady rest	15 mm - 150 mm
Grinding length	600 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.)	100 kg
Table swivel range (max.)	-2° / +9°
Wheel speeds	45 m/s

TRAVELS

Grinding head travel	195 mm

HEADSTOCK

Working headstock swivel range	90 deg
Working spindle taper	4 MT
Chuck diameter	200 mm
Work spindle speeds	25 1/min - 500 1/min

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

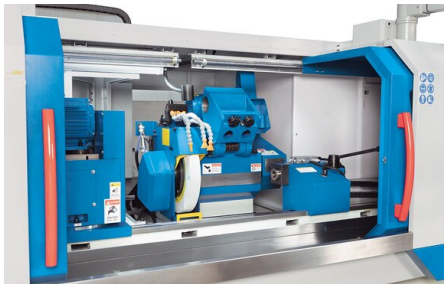
Motor rating - grinding spindle	4 kW
Motor rating inside grinding	1.1 kW
Motor rating - headstock / coolant pump	0,75 / 0,13 kW

MEASURES AND WEIGHTS

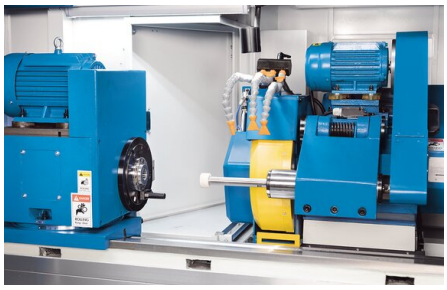
Grinding wheel dimensions	400 mm x 50 mm x 203 mm
Grindstone dimensions, inside grinding (max.)	40 mm x 25 mm x 13 mm
Overall dimensions (length x width x height)	3.03 m x 2.3 m x 2 m
Weight	2800 kg

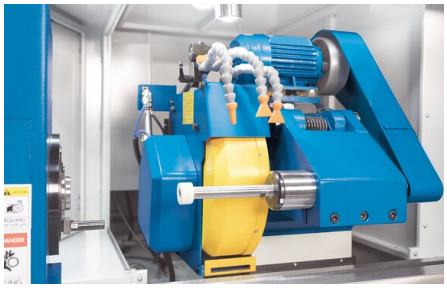
© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 21.01.2026.

The touchscreen allows for easy programming of individual grinding cycles



Wide-opening doors allow for easy access to the fully enclosed working area





The internal grinding device can be swivelled into the working area

An automatic central lubrication system continuously supplies all lubrication points and simplifies maintenance. The lubricant is stored in a central reservoir and distributed via lines to all lubrication points. Lubricant is metered via electronic control

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 totally enclosed work area features large doors for easy access and easy loading and unloading
- All controls are arranged centrally on a control panel, and all technical parameters are displayed on the touch screen monitor
- LED lights ensure good visibility and safety during machining operations
- An automatic central lubrication system simplifies maintenance and reduces the operator's workload
- The mobile electronic hand-wheel significantly simplifies machine setup and reduces 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

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

STANDARD EQUIPMENT

© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 21.01.2026.

NC control with touchscreen
Electronic handwheel Y-, Z-axis
Internal grinding device
Workspace protection
Pneumatic tailstock quill
3-Jaw chuck Ø 200 mm
Grinding wheel dresser
Balancing mandrel and balancing stand
Open and closed rest
Coolant device
Automatic central lubrication
Accessories for grinding
LED work light
Operator instructions

OPTIONAL EQUIPMENT

- Magnetic separator w. paper filter, SKU : 254246
- Grinding wheel flange, SKU : 254247

© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 21.01.2026.