

### SKU : 124935

This series of surface grinders processes large and heavy workpieces with tolerances as required for precision surface grinding or for the preparatory processing step of lapping or polishing. The machine frame is designed in a cross-bed design with a movable column. This construction enables a long table guidance and thus the optimal introduction of weight force over the entire work area. The ability to switch between automatic or manual operation extends the scope for sample production, repair and training.

- Moving column design for maximum stability
- Magnetic clamping plate with built-in demagnetizing function
- Siemens Smart Line PLC control with grinding cycles
- NC-controlled Y/Z axes driven by servo motors
- User-friendly HMI with touchscreen
- Electronic handwheel for Y/Z axes



### TECHNICAL SPECS

#### WORKING AREA

Table dimensions	500 mm x 1600 mm
Spindle center-to-table distance	600 mm
Table load capacity (max.)	900 kg
Magnetic chuck height	110 mm
Dimensions magnetic clamping plate	500 mm x 800 mm
Number of magnetic chucks	2 positions

#### TRAVELS

Travel X-axis	1600 mm
Travel Y-axis	500 mm

#### FEED

Hydr. feed X-axis	5 m/min - 25 m/min
Feed Y-axis	50 mm/min - 500 mm/min
Feed depth, Y-axis	0.005 mm - 0.05 mm
Feed Z-axis	50 mm/min - 1500 mm/min
Automatic Z-axis feed	0 mm/min - 30 mm/min

#### GRINDING WHEEL

Grinding wheels dimensions	350 mm x 40 mm x 127 mm
Speed	1450 1/min

#### DRIVE CAPACITY

Motor rating main drive	7.5 kW
Hydraulic motor rating	3 kW
Y-axis servo motor	2 kW
Z-axis servo motor	0.5 kW

#### MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	6.01 m x 2.5 m x 2.7 m
Weight	6000 kg



## PRODUCT DETAILS

### Surface Grinding Machine

- The massive, heavily ribbed cross-bed machine frame with traversing column and horizontal spindle is extremely rigid even under heaviest workpiece loads
- The large work area allows machining of single workpieces with large surface areas or machining of several workpieces in one setup
- The workspace is protected by an easily accessible enclosure
- A high-performance cooling system is included in the standard equipment of this series

### Control

- Grinding cycles for automatic face and groove grinding are accessible and editable via touchscreen
- Preloaded ball screws and powerful servo-motors on Y and X ensure high precision and repeatability during grinding wheel feeds
- An electronic hand-wheel for Y- and Z-axis simplifies setup and manual positioning of the grinding spindle
- If set to Auto mode, the user-defined roughing and finishing parameters, number of spark-out strokes, and return to zero are automatically processed



### Grinding spindle

- Large grinding spindle, dynamically balanced, completely sealed with permanent lubrication
- Preloaded precision-bearings ensure maximum grinding performance and high reliability over many production hours



### Hydraulics

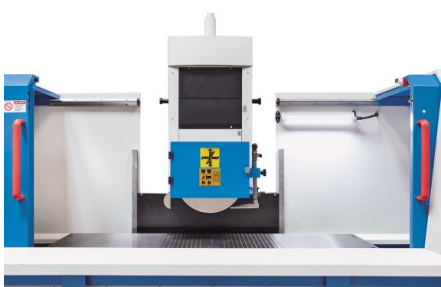
- Extremely quiet operation and minimal heat build-up for optimum work results under continuous operating conditions
- The hydraulic linear table feed is infinitely variable, maintains a constant speed with smooth travel direction reversals
- External hydraulic unit with oil cooler unit ensures perfect temperature stability

### Magnetic clamping plate

- Large magnetic chucks for torsion-free clamping across the entire work surface are included in the standard equipment
- The modern control also ensures reliable operation with firm holding forces and high-grade degaussing



## STANDARD EQUIPMENT



2-axis position indicator X.Pos 3.2  
 Electronic Handwheel for Y Z Axis  
 Grinding wheel flange  
 Workspace enclosure  
 Coolant system  
 Diamond dresser stand (without diamond)  
 Balancing station  
 Balancing shaft  
 LED work lamp  
 Magnetic clamping plate  
 Adjustment screws  
 Operating tools  
 Operator manual  
 Siemens PLC-control with Touchscreen  
 Grinding wheel  
 Automatic central lubrication

## OPTIONAL EQUIPMENT

- Coolant system with magnetic separator and paper filter, SKU : 253467
- Magnetic separator without reservoir, SKU : 253469

- Fine-pole magnetic chuck for HFS 50160 F NC, SKU : 253754
- Upgrade to fine-pole magnetic chuck for HFS 50160 F NC, SKU : 253755
- Servo grinding stone dresser, SKU : 254261



## 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!**