

# Conventional Surface Grinders **HFS 50100 F NC**



## SKU: 124934

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 crossbed 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 builtin 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	20 in x 39 in
Spindle center-to-table distance	24 in
Table load capacity (max.)	1540 lbs
Magnetic chuck height	4 in
Dimensions magnetic clamping plate	20 in x 39 in
Number of magnetic chucks	1 positions

## **TRAVELS**

Travel X-axis	39.4 in
Travel Y-axis	20 in

#### **FEED**

Hydr. feed X-axis	16.35 fpm - 81.75 fpm
Feed Y-axis	2 in/min - 20 in/min
Feed depth, Y-axis	0.000197 in - 0.001969 in
Feed Z-axis	2 in/min - 59 in/min
Automatic Z-axis feed	0 in/min - 1 in/min

## **GRINDING WHEEL**

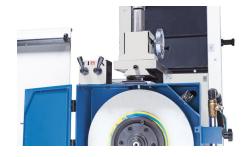
Grinding wheels dimensions	14 in x 2 in x 5 in
Speed	1450 rpm

#### **DRIVE CAPACITY**

Motor rating main drive	10.1 Hp
Hydraulic motor rating	4 Hp
Y-axis servo motor	3 Нр
Z-axis servo motor	1 Hp

#### **MEASURES AND WEIGHTS**

Overall dimensions (length x width x height)	178 in x 105 in x 107 in
Weight	12100 lbs











### **PRODUCT DETAILS**

- 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**

- Superior quiet operation and low heat build-up ensure optimum work results in continuous operations
- The hydraulic linear table feed is infinitely variable, maintains a constant speed with smooth travel direction reversals
- The external hydraulics unit with oil cooler 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 highgrade degaussing

# **STANDARD EQUIPMENT**

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