

Conventional Surface Grinders

HFS 40100 F Advance

SKU : 124930

The HFS F Advanced series is the latest development of our tried and tested surface grinding machines, which have proven themselves in many companies for decades. Although surface grinding is a widespread machining process, the machines in this series with their extensive standard accessories set a high standard as a turnkey solution. The advanced operating functions implemented with Siemens technology are new. These machines are the best choice for customers for whom conventional is too little and CNC is too much.

- Magnetic clamping plate with built-in demagnetizing function
- Vertical axis with ballscrew and servo motor for high precision
- Easy auto-mode programming with Siemens PLC and touchscreen
- Extensive standard equipment package



TECHNICAL SPECS

WORKING AREA

| | |
|--|--------------------|
| Workpiece weight (max.) | 600 kg |
| Spindle nose-to-table surface distance | 580 mm |
| Table dimensions | 1020 mm x 406 mm |
| Dimensions magnetic clamping plate | 1000 mm x 400 mm |
| Scale ring division Y-axis | 0.005 mm |
| Scale ring division Z-axis | 0.02 mm |
| Autom. transverse feed Z-axis | 0.1 mm - 8 mm |
| Speed | 1450 1/min |
| Autom. vertical feed | 0.005 mm - 0.05 mm |

DRIVE CAPACITY

| | |
|-----------------------------|--------|
| Motor rating main drive | 4 kW |
| Motor rating hydraulic pump | 2.2 kW |
| Motor rating Y-axis | 0.5 kW |

MEASURES AND WEIGHTS

| | |
|--|-------------------------|
| Grinding wheel dimensions | 350 mm x 40 mm x 127 mm |
| Overall dimensions (length x width x height) | 4.4 m x 2.4 m x 1.9 m |
| Weight | 3700 kg |

TRAVELS

| | |
|---------------|---------|
| Travel X-axis | 1130 mm |
| Travel Y-axis | 450 mm |

FEED

| | |
|-------------------|--------------------|
| Hydr. feed X-axis | 7 m/min - 23 m/min |
| Rapid feed Y-axis | 480 mm/min |
| Rapid feed Z-axis | 990 mm/min |



If set to Auto mode, the user-defined roughing and finishing parameters, number of spark-out strokes, and return to zero are automatically processed



PRODUCT DETAILS

- The cast-iron machine frame features superior rigidity and torsional strength, precision guideways and excellent machining quality
- All guideways are lubricated reliably via a central lubrication system
- The workspace is protected by an easily accessible enclosure
- A powerful coolant pump is combined with a vacuum exhaust unit to clear grinding dust and aerosol during machining operations

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

Programming

- The high-quality preloaded ball screw and a powerful servo-motor ensure high precision and repeatability of positioning on the Y-axis
- The machine features an electronic hand-wheel for configuration tasks and manual movement 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

Hydraulics

- Extremely quiet operation and minimal heat build-up for optimum work results under continuous operating conditions
- Hydraulically operated linear table movement, infinitely variable, high consistency, and soft reversal of direction
- External hydraulic unit with oil cooler unit ensures perfect temperature stability

Magnetic clamping plate

- Large magnetic chuck allows for torsion-free clamping and is included in standard equipment
- The control unit is integrated into the electric system to simplify operation, allowing quick clamping and degaussing for maximum production efficiency

STANDARD EQUIPMENT

2-axis position indicator X.Pos 3.2
 Electronic hand-wheel
 Grinding wheel flange
 Automatic central lubrication
 Workspace enclosure
 Coolant and suction device
 Grinding wheel dresser
 Balancing station
 Balancing shaft
 LED work lamp
 Magnetic clamping plate
 Adjustment screws
 Operating tools
 Demagnetization unit
 Siemens PLC-control with Touchscreen
 Operator manual
 Grinding wheel

OPTIONAL EQUIPMENT

- Fine-pole magnetic chuck, SKU : 253463
- Coolant system with magnetic separator and paper filter, SKU : 253459
- Parallel grinding wheel dresser, SKU : 253465
- Full housing with 2 doors, SKU : 253775
- Grinding wheel flange, SKU : 253988



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!**