



Plunge-cut grinder

with integrated loader for the complete machining
of shaft parts and part families



GST – GRINDING MADE FOR YOU

Zertifiziert nach

**ISO 9001
VDA 6.4**

Highlights

This plunge-cut grinder was designed for grinding shaft parts and part families. Owing to the compact design of the machine with the integrated loader the equipment takes up very little floor space.

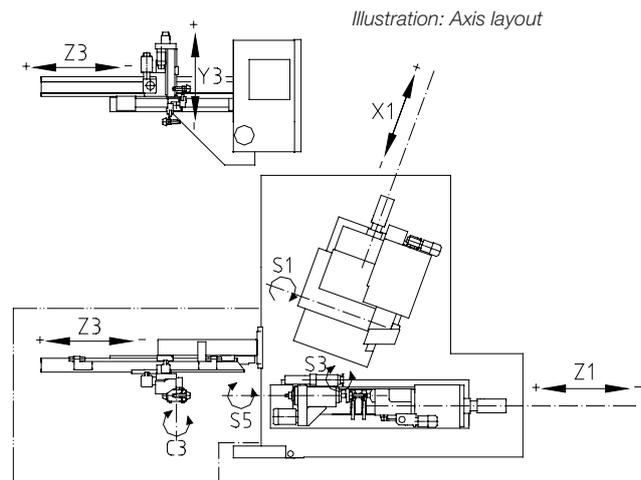
The grinding wheel holding fixture with its short cone together with the contour dressing system make this machine particularly suited for small to medium batch sizes as well as for part families, and allow quick retooling and readjustment.

The important advantage of the integrated loader is that the equipment requires very little floor space and can be used as a stand-alone machine or be integrated in existing industrial production facilities.



Innovative engineering

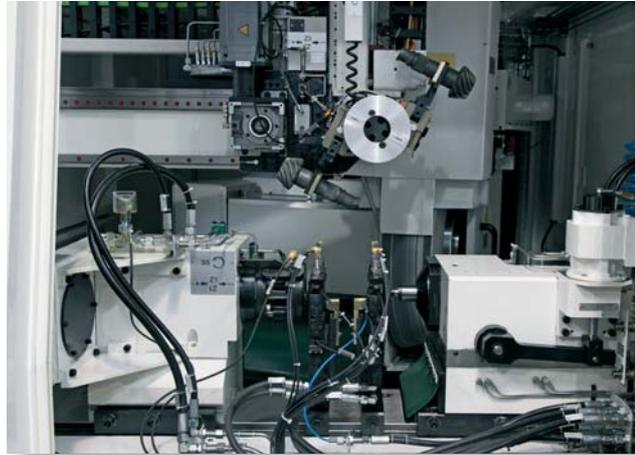
- 2 axes and 3 spindles
- All quality-relevant settings are entered on the operator's panel – no manual adjustments are necessary
- Heavy-duty type wheel-head slide, preloaded recirculating roller guides ensure maximum rigidity
- NC table carrying the headstock, the tailstock and the diamond roll dresser
- Wheel head: largely dimensioned special roller bearings, lubricated for life, sealing air with protective run-out function, wheel holding fixture with short cone
- Electromagnetic balancing system, integrated into the spindle
- Integrated 2-axis loader: solid steel structure, with preloaded recirculating roller guides and double gripper



The use of maintenance-free components increases the overall efficiency of the machine significantly. The machine is set up to be integrated with existing production facilities without any further adaptation.

Mechanical design

Highest quality due to the complete machining of the shaft's undercuts and plane surfaces in just one clamping position. Tailstock adjustment controlled by eccentric shaft for automatic cylindricity compensation. To reduce the loading and unloading times and to keep the machine as compact as possible, an integrated 2-axis loading system has been developed.



The diamond roll dresser is mounted on the grinding table. Dressing is effected via the X- and the Z-axes of the machine. The contour dressing system allows the generation of any required workpiece contour. Form and position tolerances of every diameter can be separately corrected by simply entering the values in the input mask of the control unit.

The wheel flange mounted on a short cone, together with the good accessibility of the working area of the machine and the use of a wheel changing device allow a swift wheel change.

The automatic adjustment of workpiece spindle head, tailstock and steady rest can also be effected by moving the components in the required position. The compact design of the equipment and the integrated loader allows it to be operated as a stand-alone machine or to be integrated in existing industrial production facilities.

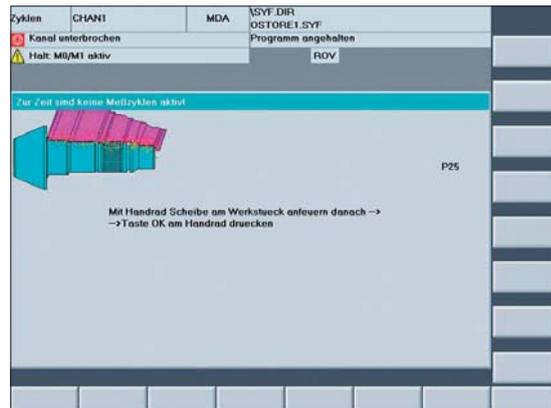


User interface

Clearly structured screen menus and input masks add to the simple and user-friendly operation and enhance the efficiency of the machine considerably. No mechanical intervention is required. The use of the Transline system provides the opportunity for a unified operation and diagnosis.

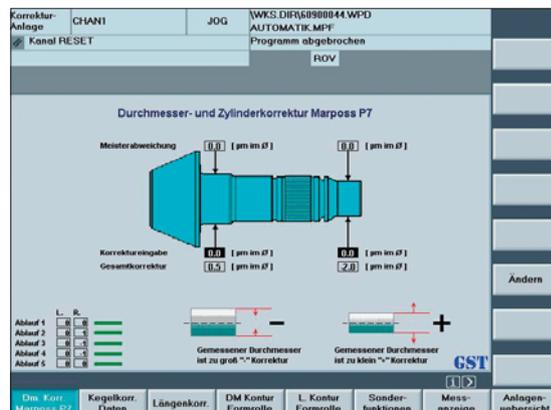
Menu-prompted set-up

The software prompts the operator through the set-up process, thus minimizing the possibility of operator errors.



Correction

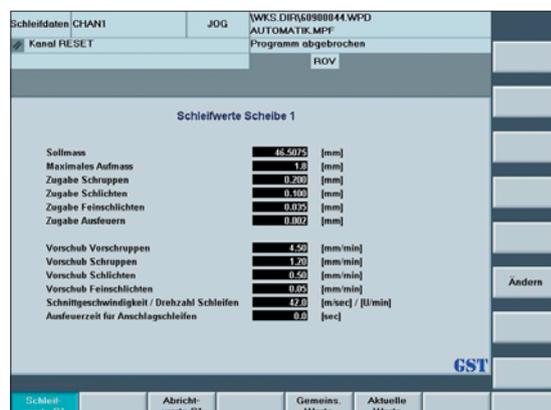
Easy entry of correction values in the input mask, due to the display of your specific workpiece.



Technology data

Grinding and dressing data are entered in plain text.

All input data are workpiece-related, and will be analysed and calculated for the individual axes.

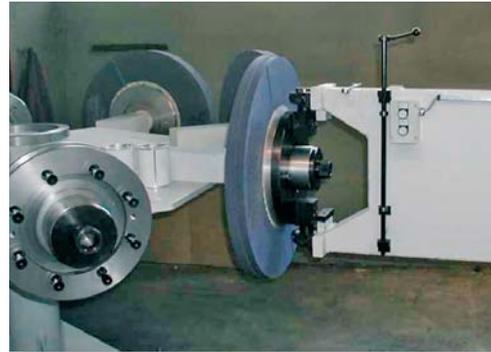


Additional equipment

We also offer a broad range of additional devices which facilitate the handling of the machine and add considerably to process safety. The final design and the project-specific definition of such equipment is done in consultation with the customer.

Grinding wheel magazine

This magazine is of particular advantage if grinding wheels need to be changed frequently or if various wheels sets are used on one machine. In combination with our wheel-changing device, which allows an uncomplicated wheel change with the highest accuracy of position on the spindle, the magazine is a most useful supplement to your grinding machine, reducing change-over times drastically.



Ill.: Grinding wheel magazine and wheel-changing device



Wheel trolley

for moving the wheel sets to the grinder. The trolley is able to carry 2 wheel sets at a time. The wheel height can be adjusted to machine height by means of a hydraulic cylinder and a hand pump. In combination with a wheel-changing device it is a most useful supplement to your grinding machine, reducing change-over times drastically.

Ill.: Wheel trolley

Post-process measuring system

for the acquisition and storage of data from gauging for process analyses. The collected data can be used for statistical process and quality control. The system can generate compensation signals to the machine and can be integrated with existing data networks.



Ill.: Post-process measuring system

Coolant equipment

Especially adapted to the grinding task. Cleaning using filter fleece, continuous filter belt and magnetic separator. A separate return tank with return pump can be supplied.

Technical specification

Grinding wheel diameter	750 mm to 900 mm
Width of grinding wheel	max. 300 mm
Surface speed	50 m/s
Grinding spindle drive	22 kW, controllable
2 NC-axes	X-axis for the wheel head slide Z-axis for the NC table
3 controlled spindles	1 grinding spindle, 1 workpiece spindle and 1 dressing roll
Control unit	Sinumerik 840D
Balancing system	Marposs or Dittel, integrated in the grinding spindle, with non-contact transmission
Workpiece measuring	Marposs, with up to three measuring heads
Loader	integrated in the machine, 2 axes, double gripper
Accessories	Magazine, trolley and changing device coolant equipment, steady rest, post-process measuring system

The design details of the machine will be determined in accordance with the specific requirements of the customer.



Gesellschaft für Schleiftechnik GmbH

Industriepark 6

A-2011 Sierndorf

Phone: +43 (0)2267 / 3250-0

Fax: +43 (0)2267 / 3250-99

Mail: office@gst.at

For more information about our products and services
please visit our web site: www.gst.at

