



Crankshaft grinder

Double Jet with flange bore grinding



GST – GRINDING MADE FOR YOU

Zertifiziert nach

**ISO 9001
VDA 6.4**

Highlights

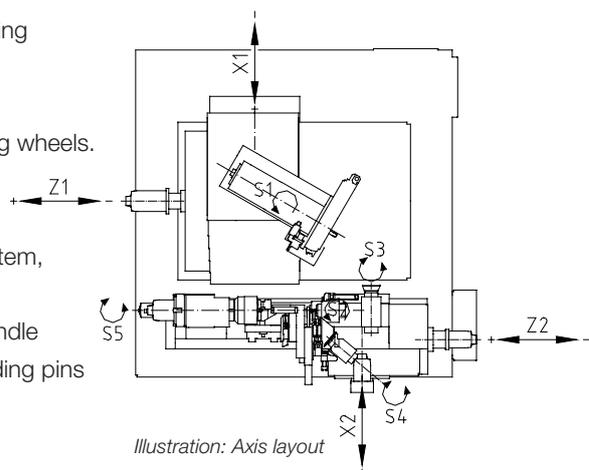
Our crankshaft grinder is particularly suited for the simultaneous grinding of flange, encoder wheel seat and flange bore in just one clamping position, using CBN grinding wheels.

The simultaneous grinding of all elements of the crankshaft's flange end enhances the productivity and brings significant quality improvement. The external and internal grinding spindles are each mounted on a cross slide, allowing swift retooling and readjustment.



Innovative engineering

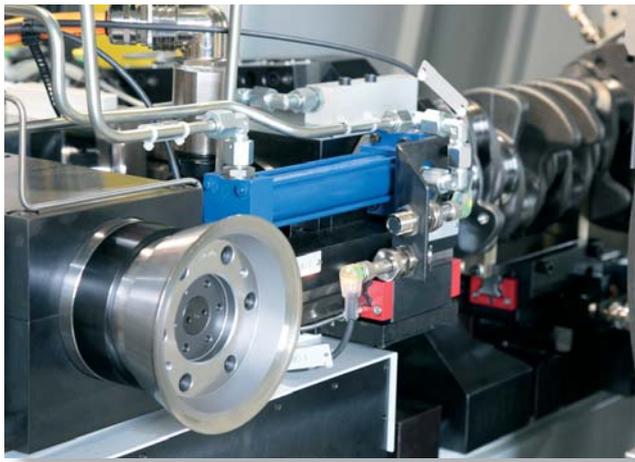
- 4 axes and 5 spindles
- All quality-relevant settings are entered on the operator's panel – no manual adjustments are necessary
- External wheel head cross slide: Z-axis: heavy-duty type wheel head slide, preloaded recirculating roller guides ensure maximum rigidity
X-axis: hydrostatic guides with linear motor
- Internal wheel head cross slide: preloaded recirculating roller guides ensure maximum rigidity
- Table carrying the headstock, the tailstock and the diamond roll dresser for internal and external grinding wheels.
- External grinding spindle > hydrostatic spindle bearings, sealing air with protective run-out function, wheel holding fixture, electromagnetic balancing system, integrated into the spindle
- Internal grinding spindle > high-frequency motor spindle with precision roller bearings, holding fixture for grinding pins



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.

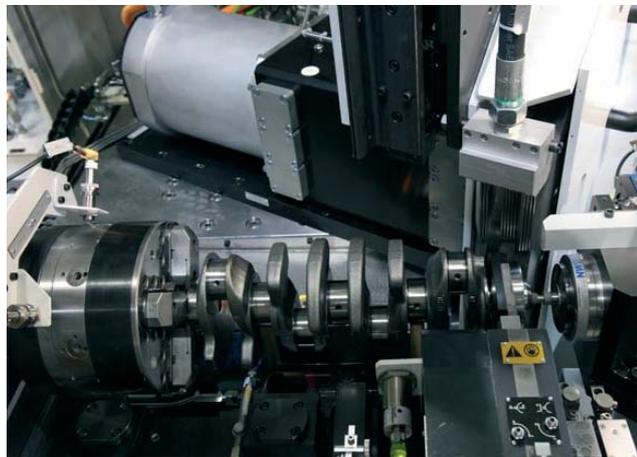
Mechanical design

Highest quality due to the complete machining of the shaft end with flange, encoder wheel seat and flange bore in just one clamping position.



Two diamond roll dressers are mounted on the table. Dressing is effected via the X- and the Z-axes of the external and the internal cross slide. The contour dressing system allows the generation of any required workpiece contour.

Owing to its easy handling, the sophisticated GST programming facilitates even very complex processing tasks.

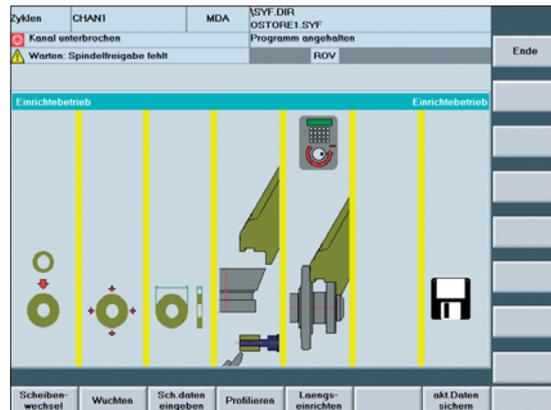


User interface

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.

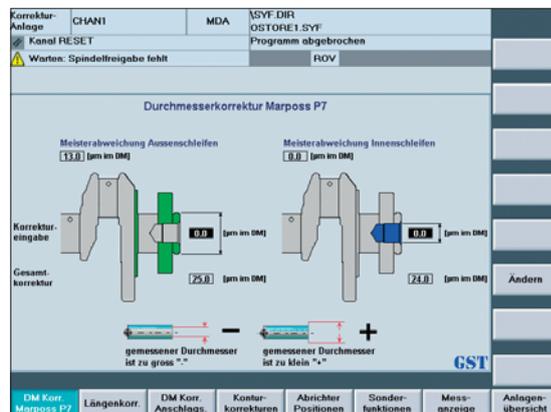
Menu-prompted set-up

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



Correction

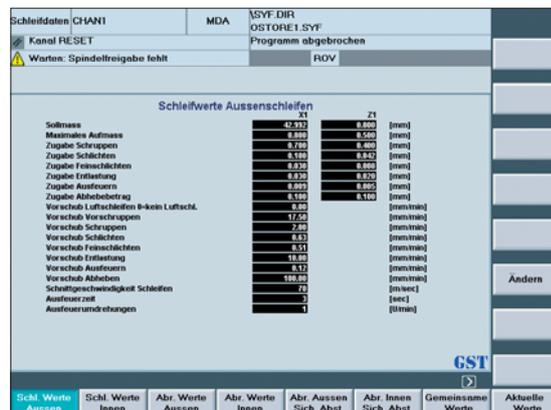
Easy entry of correction values in the input mask, due to the display of your specific workpiece.



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.

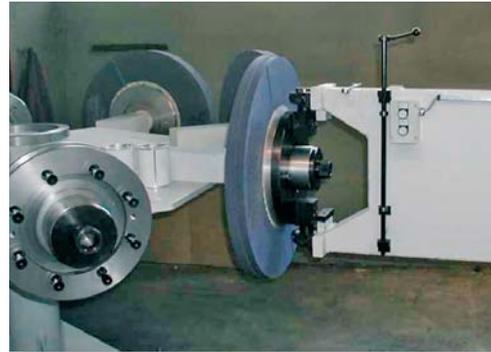


Additional equipment

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	500 mm CBN
Surface speed	120 m/s
Grinding spindle drive	40 kW, controllable
4 NC axes	1 cross slide each for external and internal grinding
5 controlled spindles	2 grinding spindles, 1 workpiece spindle and 2 dresser rolls
Control unit	Sinumerik 840D
Balancing system	Marposs or Dittel
Workpiece measuring	Marposs, with up to two units for external and internal diameter measuring, and for longitudinal positioning
Loading and unloading	prepared for the integration into a production line by a loading flap
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.



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