



Gesellschaft für Schleiftechnik GmbH

Double head grinder S2 – 900/190 DKGM

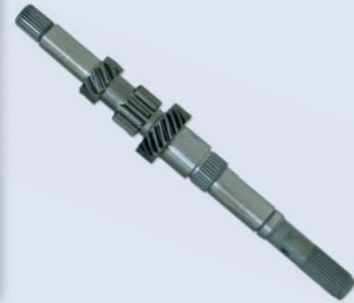


**Special grinder for angular in-feed
grinding of complete shafts**

Certified according to
**ISO 9001
VDA 6.4**

Highlights

Our double head grinder is particularly suited for the grinding of long, continuous part contours while in just one clamping position, with shoulders, grooves and diameters.



This machine replaces the functions of as many as three single machines thereby increasing productivity and bringing considerable quality improvement. Another advantage is the rapid tool-change time. The access doors open fully and permit easy access to the working area of the machine, facilitating a swift change of the grinding wheels with the aid of a wheel-changing device.

Innovative engineering

- 9 axes and 5 spindles
- All quality-relevant settings are entered on the operator's panel – no manual adjustments are necessary
- Heavy-duty type wheel-head slide, preloaded prismatic / flat roller guides, offering maximum rigidity
- Wheel head ⇒ largely dimensioned special roller bearings, lubricated for life, sealing air with protective run-out function
- Electromagnetic balancing arrangement, integrated into the spindle
- Diamond roller dresser with preloaded, low backlash swivelling NC axis, facilitating the correction of the workpiece geometry.

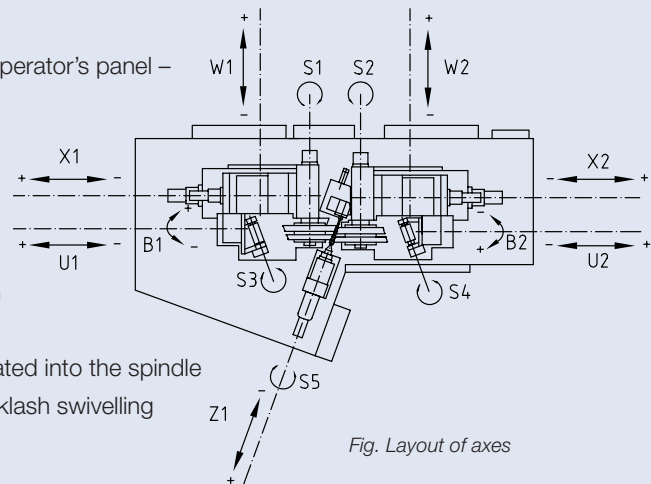
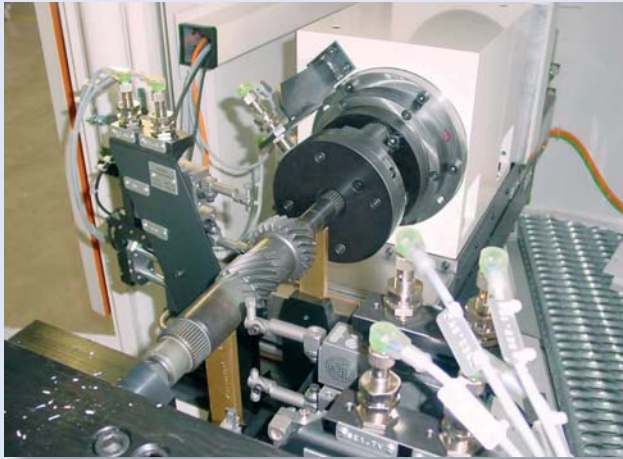


Fig. Layout of axes

The use of maintenance-free components increases the overall efficiency of the machine significantly. From a mechanical point of view as well as in terms of the PLC and CNC systems the machine is set up to be integrated with existing industrial production facilities, if required.

Mechanical design

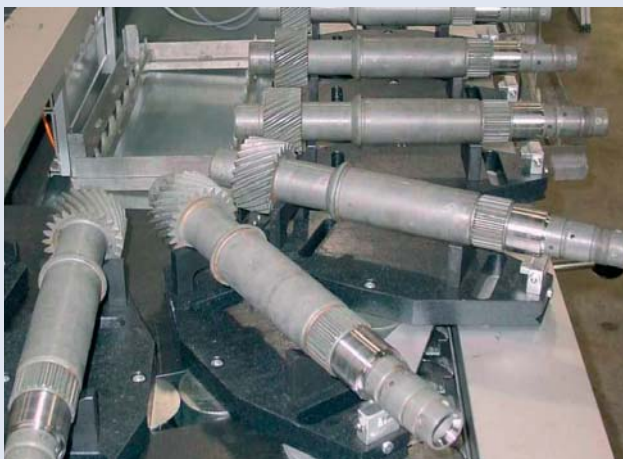
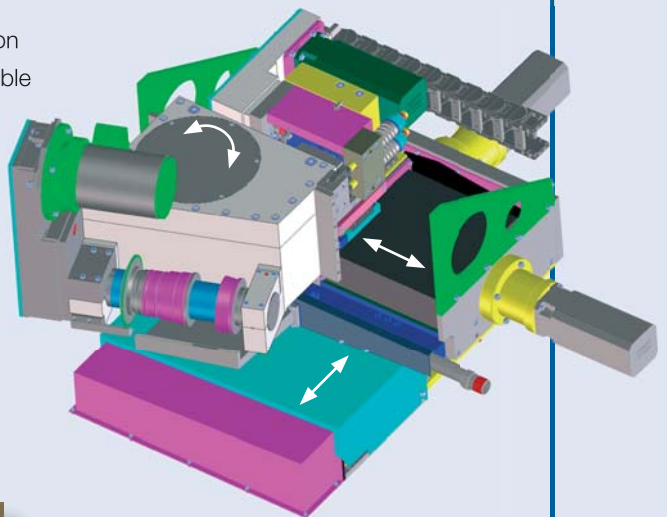


Highest quality due to complete machining while in **just one clamping position**

Dresser system

The axes for the longitudinal, transverse and swivelling motion of the dresser at the rear of the grinding wheel make it possible for the dressing to be performed during loading.

The increased transverse travel allows the use of diamond profile rollers and diamond form rollers as well as blade-type diamond dressers, thus ensuring highly flexible production. The swivelling axis permits workpiece geometry correction during dressing. Tailstock adjustment is therefore not necessary; this guarantees the enhanced stability of the workpiece holder.



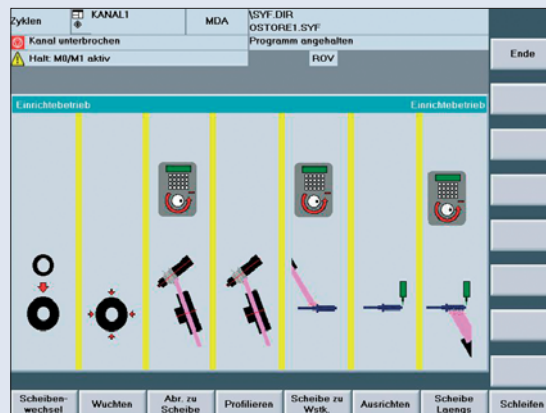
Highest level of automation
– as many as 1500 parts per day

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.

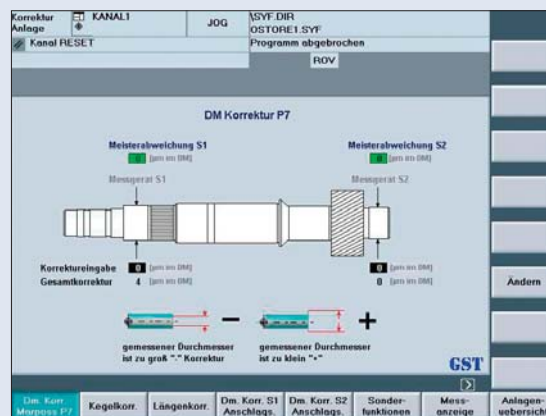
Menu-prompted set-up

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



Correction

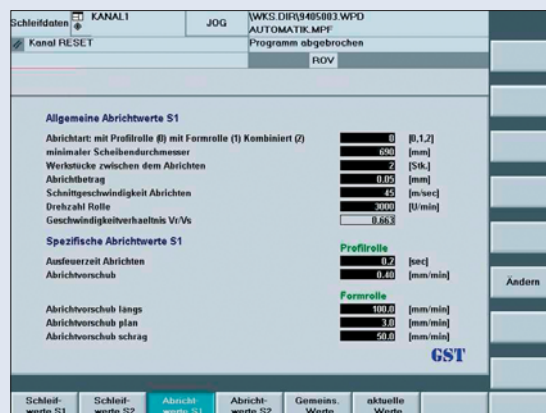
Easy entry of correction values in the input mask, due to the display of your specific workpiece.



Technology data

Grinding and dressing data are entered in plain text.

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



Additional equipment

GST offers 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 and wheel-changing device

This magazine is of particular advantage if grinding wheels need to be changed frequently or if various wheels 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 both spindles, the magazine is a most useful supplement to your grinding machine, to reduce change-over times drastically.

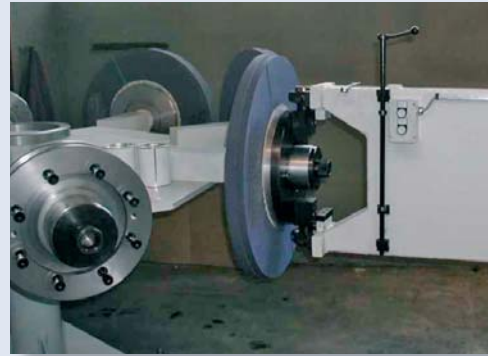


Fig. Wheel changing device



Wheel trolley

For moving the grinding wheels to the grinders. The trolley is able to carry 2 wheels 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, to reduce change-over times drastically.

Fig. 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.



Fig. 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 specifications

Grinding wheel diameter	900 mm
Surface speed	50 m/s
Grinding spindle drives	2 x 22 kW, controllable by frequency converter
12 NC axes	9 for the machine, specifically: Z – axis for the longitudinal positioning of the workpiece X – axis (2 x 30° angle) for the wheel head slide U – axis (2 x) for dresser in-feed W – axis (2 x) for dresser cross-feed B – axis (2 x) for dresser rotating motion 3 for the loading gantry All axes are equipped with an absolute position transducer
5 frequency-controlled spindles	2 grinding spindles, 2 dressing rollers, 1 workpiece spindle
Control unit	Siemens 840 D with Safety Integrated monitoring function 5 channels, of which 4 channels are for the machine and 1 channel is for the loading gantry
Balancing system	Marposs or Schmitt, integrated into the grinding spindle, with non-contact transmission. Can be changed from spindle 1 to spindle 2
Workpiece measuring	Marposs, two units for diameter measurement, one for longitudinal positioning
Loading gantry	with pneumatic double gripper revolving through 180°
Workpiece magazine	Circulating magazine for 20 workpieces
Accessories	Magazine, trolley and changing device for grinding wheels Coolant equipment with filter Self-centering steady, following Post-process measuring system

GST Gesellschaft für Schleiftechnik GmbH

Industriepark 6

A-2011 Sierndorf, Austria

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

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

Mail: office@gst.at

Certified according to
ISO 9001
VDA 6.4

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

