

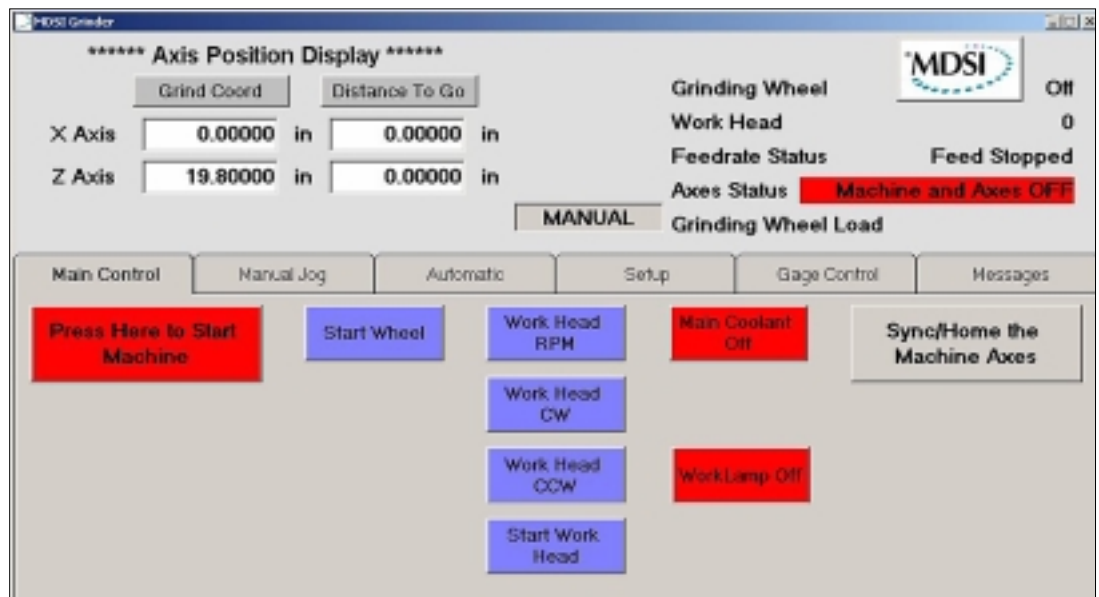
OpenCNC® Grinder

with all the features of an easy to use robust CNC control



OpenCNC Grinder is a robust solution used to control a variety of grinding machines. Based on MDSI's production-proven CNC technology, it provides well-known motion control and performance as well as the features of a full CNC control.

Main Control Window ▶
Friendly and intuitive user interface



A subsidiary of Tecumseh Products Company

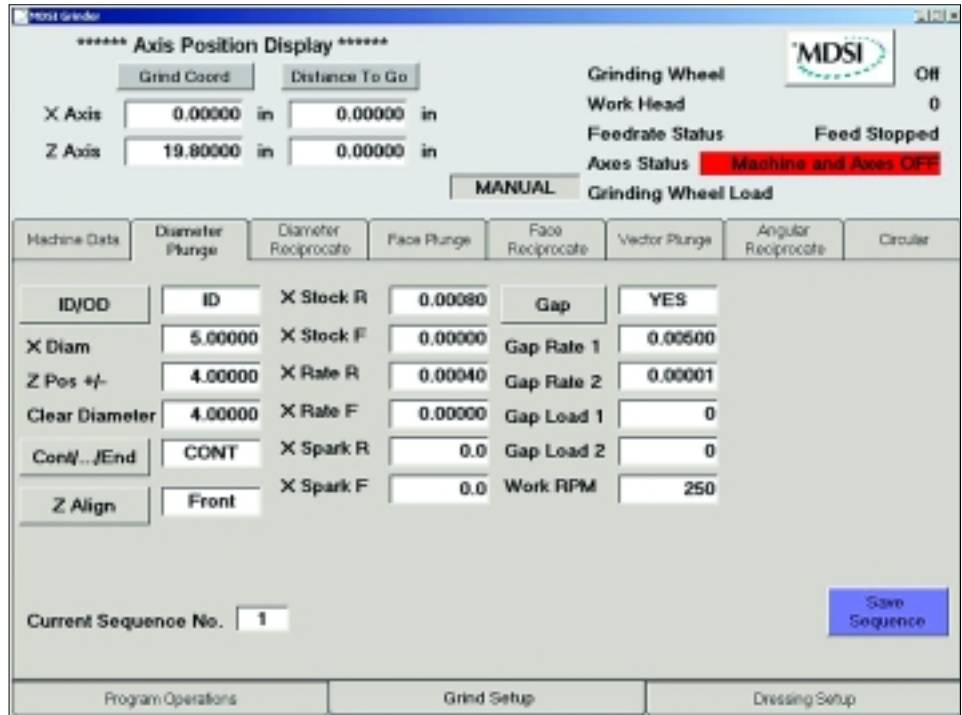
OpenCNC Grinder

OpenCNC Grinder has a friendly and intuitive user interface built on OpenCNC's API. It provides the operator with all the controls necessary for setup and operation of a grinding machine.

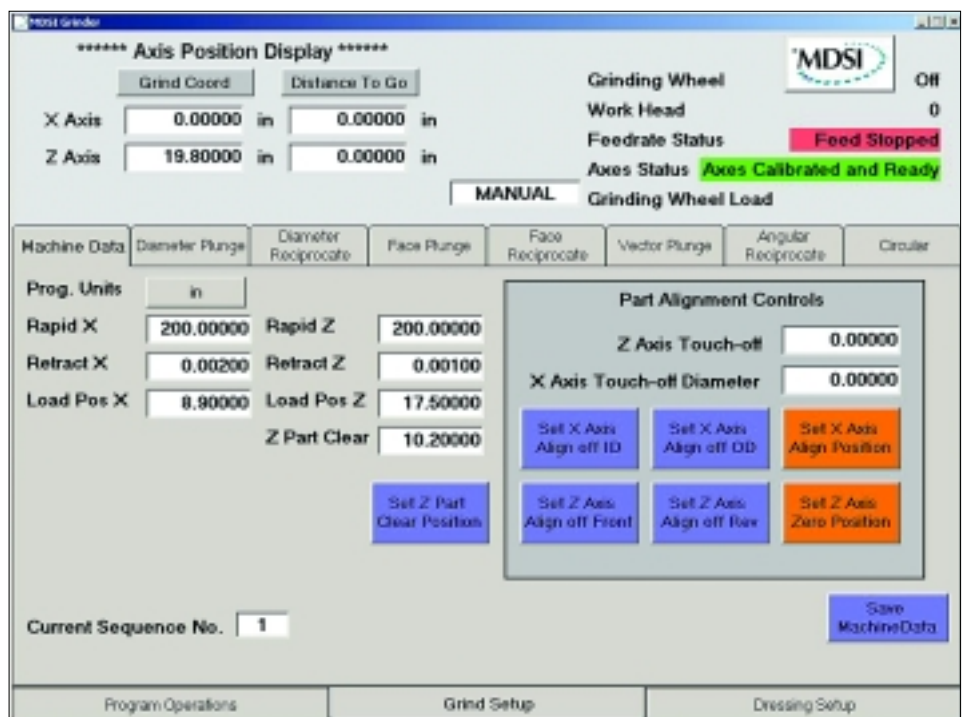
Standard grinding sequences and flexibility

OpenCNC Grinder has many standard grinding sequences built into it: plunge grinding, reciprocate grinding, circular grinding, and vector grinding for the ID, OD, face and reverse face surfaces of the part. Dressing routines are built into OpenCNC Grinder and the new wheel and sequence dress routines can be of different types. The operator can program or set up 20 different sequences. Each has its own dress parameters, providing the ability to do work on up to 20 surfaces. This information can then be saved to the hard drive for re-use in the future. OpenCNC Grinder also provides the flexibility for adding custom grinding sequences and dressing routines for special applications such as CNC dresses or centerless grinding machines.

OpenCNC Grinder can handle variable speed drives as well as non-variable speed for both work spindle and the grinding wheel. The solution has provisions for machines that have multiple types of grinding wheel head attachments that have different speed ranges. OpenCNC Grinder is capable of reading and monitoring the load on the grinding wheel.



▲ Diameter Plunge Window



▲ Machine Data Window
Easy to use part set-up

Reduce machine down time

Setting the grind position and dress positions is handled easily with the OpenCNC Grind Interface. Once set up, the system remembers these locations until the next touch off is performed. This allows the operator to install new wheels easily without having to recalibrate the machine. The system will then perform a new wheel dress when commanded and reset all the grind and dress positions accordingly. This helps to reduce machine down time for setup maintenance.

Real-time machine tool data

The user interface is tightly integrated with the Soft PLC included in OpenCNC Grinder. When errors occur on the machine, the Message Page automatically alerts the operator that there is an item that needs attention. Think of all of the time and money you'll save reducing down time on the machine by collecting machine tool data in real time. These are just a few of the diagnostic tools that aid maintenance personnel in the troubleshooting of machine failures.

Features

OpenCNC Grinder has the following CNC features that increase machine accuracy and flexibility:

- Backlash and bi-directional lead-screw pitch error compensation (up to 100,000 compensation points per axis)
- Axis Auto Tuning Program
- Network ready
- Open Solution that allows for easy upgrades
- Easily integrate Auto Loaders
- Integrate in-process gauging equipment
- MDSI's patented Significant Events™ technology for collection of data in real time from the machine, without special hardware
- High-Speed Probing/Interrupt@500 µsec
- Support/Hardware
 - SERCOS, Yaskawa Mechatrolink™ and analog communication to servo and spindle systems
 - Profibus, DeviceNet™, Ethernet, Yaskawa Mechatrolink™, and Opto-22 style I/O systems

Grinding Sequences

- Diameter Plunge
- Diameter Reciprocate
- Face Plunge
- Face Reciprocate
- Vector Plunge
- Angular Reciprocate
- Circular Grind
- Face grinding can be done from the front or reverse face of the grinding wheel

Wheel Dress Routines

- Diameter Nib only
- Face Nib only
- Diameter and Face Nibs
- Diameter and Reverse Face Nibs
- Diameter, Face, and Reverse Face Nibs
- Face and Reverse Face Nibs
- Vector Roll
- Reverse Face Nib and Vector Roll
- Reverse Vector Roll
- Face Nib and Reverse Vector Roll
- Diameter Roll

Hardware/Software Components

- CNC Control PC with
 - Intel™ Celeron™ 1GHz Processor
 - 256 MB RAM, 40 GB hard drive
 - 10/100 Base T Ethernet Port
 - Windows 2000, or Windows XP,
 - CD-ROM drive
- Drive Package (complete)
- I/O Platform
- Operator Station with Touchscreen Monitor and Keyboard
- MPG (handwheel) Optional
- OpenCNC Plus

OpenCNC Grinder

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