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Balancing and Structure-Borne Noise System ems1100

Modular designed system for integration into the grinding machine controls



Balancing and structure-borne noise system ems1100



The ems1100 is a modular designed balancing and structure-borne noise system. It allows displaying the unbalance and structure-borne noise data on the machine control display. The software may be imbedded into the machine software and the unit would be controlled with the standard keys of the machine. The control and visual display would be programmed by the user (machine builder) and would therefore become an integrated part of the machine and of its overall design. This allows to adjust the ems1100 during the grinding process to the actual conditions. The modular design permits a cost benefitting solution for each application. Several different bus types (Profibus, RS232, RS485) are available for the machine

controller to communicate with the ems1100. A user interface with a graphics display and key pad is available to run the unit if an integration into the machine controller is not desired.

The ems1100 accepts up to six (6) structure-borne sensors and two (2) balancing heads. A built-in small graphic display supports the setup and analysis of the unit. This display also shows the rpm, the unbalance, and the structure-borne noise signal. With turn switches located on the unit the ems1100 allows to set or recall all the parameters directly at the unit.

Further advantages of the ems1100 balancing and structure-borne system

- Eliminates the elaborate static balancing
- Optimizes the grinding result
- Safeguards the spindle bearings
- Increases grinding wheel life
- Reduces down time
- Records the balancing status
- Continuous monitoring of machine vibrations
- Continuous spindle rpm display
- Continuous monitoring of the structure-borne sound
- Reliable and maintenance-free
- Modular design (only the components needed are built-in)

Components for the ems1100 system

- Balancing heads in many sizes (external or Internal)
- Mains power supply adapter
- Wire-bound or no-contact collectors
- Vibration transducer (with magnet or mounting flange)
- Cables to connect components
- Machine specific adapter flanges
- Wire-bound ultra-sound sensors
- No-contact ultra-sound sensors
- Customer specific ultra-sound sensors
- Structure-borne sound module usc5010
- Structure-borne sound module usc5020
- Vibration filter module vfm1000
- Various interface modules

Technical Data

- | | |
|--------------------------------|-------------------------|
| - Power supply | 24VDC |
| - Power consumption | maximum 60W |
| - Protection | IP 65 |
| - Controller weight | maximum 4.5kg |
| - Controller dimensions | 33,5/15,5/6,0mm (WxDxH) |
| - Balancing head | 2 each |
| - Structure-borne sound sensor | 6 each |