



Productivity through Precision™

Schmitt Europe Ltd  
4 The Venture Centre  
Sir William Lyons Road  
Coventry CV4 7EZ  
UK.

Tel +44 2476 697192  
Fax+44 2476 412697  
[enquiries@schmitt.co.uk](mailto:enquiries@schmitt.co.uk)  
[www.schmitteurope.com](http://www.schmitteurope.com)



## Schmitt grinding wheel Balancing System

**SBS** strengthens its reputation as a world leader in automatic dynamic balancing and process monitoring for the grinding industry with the new SB-5500 controller. With its new all digital electronic design, compact size and larger high resolution detachable colour display, the SB-5500 provides unsurpassed accuracy (up to 0.02 micron displacement), speed (300-30,000rpm) and flexibility (four channel capability). The SBS system takes the guess work out of grinding wheel balancing. The easy to install SB-5500 means no more pre-balancing of grinding wheels, fit the system, start the spindle and within seconds the wheel and arbor assembly are balanced to less than 1 micron. This ensures maximum productivity, minimum downtime and an improved and more consistent part quality from the grinding process.

The LCD shows the speed and displacement of the grinding wheel assembly and is multilingual with Chinese, Russian and most European languages pre installed. The SB-5500 has been designed for OEM and end user markets, as it can operate as a 'stand alone controller' or be interfaced with the machine CNC and communicate through Ethernet, Profibus or hardwire.



In spindle Balancer



Contact-less Balancer

HMI Display on Siemens 840D

# Features and Benefits of a Schmitt Grinding wheel Balancing System

## Features

- 4 Balancing or Acoustic Emission systems can be fitted to one controller.
- Fast, Accurate wheel balancing to known values.
- Vibration Spectrum Scan firmware included.
- Communication via Ethernet TCP/IP, USB 2.0, Profibus DP, or Hardwire CNC/PLC.
- Colour TFT display 480 x 272 pixels.
- Rack mounted, Panel mounted or HMI display running on grinder CNC software.
- Displays Displacement or Velocity (microns or mm/s) and RPM of wheel.
- Multi voltage 100-240VAC or 21-28VDC power supply.
- Multi language firmware – English, German, Chinese, Russian, French, Italian, Polish, Swedish and other languages are operator selectable.
- Suitable for Grit, CBN and Diamond wheels 150mm - 1800mm diameter.
- Compatible with all existing SBS balance heads, sensors and SB-4500 cables

## Benefits

- Save time - No need to pre balance grinding wheels.
- Balances wheel assembly 'in service conditions' in seconds.
- Automatically re-balances to preset limits as the wheel wears.
- Fits to Centre less, Surface, Plunge, Creep feed or Universal grinders.
- Improves part quality and geometry.
- Reduces Scrap due to burning, ovality and chatter.
- Minimum downtime of grinder for wheel changes.
- Longer life for grinding wheels, dresser diamonds & spindle bearings.
- Greater accuracy-capable of balancing to 0.02 microns.
- Worldwide SBS service and support.

## System Principles

An Internal or External balance head is fitted to the spindle of the grinding machine. Inside the balance head are 2 motor driven eccentric masses.

Vibration generated by the spinning grinding wheel assembly is picked up by a sensor fitted to the spindle bearing housing. This vibration signal is fed to the SBS controller which filters the signal to +/-3% of the wheel RPM.

The controller drives the weights inside the balance head. When the weights are positioned so the lowest vibration level is reached the balance cycle is complete.

The SB-5500 controller can be fitted with up to 4 electronic cards including:

SB-5512 Internal or external balance head with rotary slip-ring cable connection.

SB-5518 Hydrokompenser balancing

SB-5522 Acoustic Emission Monitoring of grinding and dressing events.

SB-5532 Contact-less Internal or External balance heads.

SB-5543 Manual positioning of balance weights on the wheel flange.

The SB-5500 is certified to ETL and CE.

Temperature range 5°C to +55°C and is NEMA 12, IP54 rated.

- SBS automatic grinding wheel balancers
- Hydrokompenser fluid balancers
- Acoustic Gap-Crash control
- Portable balancers
- Acuity laser distance measuring sensors
- SMS laser reflectance and texture sensors

Registered No: 3202316 (England). Registered Office: 4 The Venture Centre,  
University of Warwick Science Park, Sir William Lyons Road, Coventry CV4 7EZ, UK

## Other Schmitt Products



AE sensor in coolant flow



Hydrokompenser Upgrade



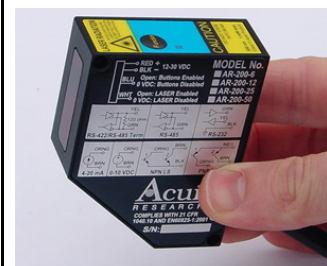
SB-5500 Remote Display



Hydro chamber and nozzle



Lasercheck Ra gauge



Acuity Laser Sensors

Please contact