



COMPACT FORM FACTOR.  
COMPACT PRICE.  
BALANCES TO .02 MICRON.

PUSH QUALITY.  
PUSH THROUGHPUT  
FOR LESS.

## Model SB-1000 Dynamic Balancing System

**Dual functionality at an economical price.**

The **SB-1000** is an easy to use, compact dynamic balancing system that provides full functionality, including both an automatic and a manual balancing mode, at an entry-level price.

This single machine control provides exceptional accuracy, capable of balancing to a tolerance as low as 0.02 microns peak-to-peak displacement over a spindle range of 300 to 30,000 RPM. With its digital design and intuitive icon-driven user interface, the SB-1000 is simple to install on existing equipment and can be easily integrated through the grinding machine CNC/PLC hardwire interface.

The SB-1000's Manual Balance mode not only provides the most economical manual balancing solutions, it also provides real-time display of vibration and RPM levels. Operators can set alert and alarm thresholds through the CNC/PLC interface.

Operators can also utilize the Automatic Balance mode with the addition of a balance head and cable for rapid balance cycles controlled through the CNC/PLC interface, eliminating the need for operator interaction.

### BENEFITS:

- The functionality of two products in one
- Increases throughput by saving setup time
- Improves part quality by automatically balancing to as low as 0.02 microns
- Change balance mode with the push of a button
- All-digital design increases operating life and reliability
- Compact and easy to install and operate
- Economical price
- Longer life for grinding wheels, dressing wheels and spindle bearings
- Works with all SBS installations and accessories
- Easy CNC/PLC interface; USB 2.0 communication capability for firmware upgrades
- Backed by world-class and worldwide customer service

Productivity through Precision.



## SPECIFICATIONS

### Physical

#### Display:

OLED Graphical Display

#### User Interface:

Universal icon-driven (language independent)

#### Dimensions:

W x H x D: 210 mm x 112 mm x 33 mm

#### SB-5500 Compatible:

Operates with existing balancers/cables, sensors, CNC/PCL hardwire interface

### Power Input Requirements

#### Power Supply:

24 VDC with terminal block connection, and M5 ground stud

#### Eingangsspannung:

+ 22VDC to + 26VDC at 3,5A max.

Surge protected

Negative protected (reverse protected from a non-grounded supply)

Fused

#### Communications Interfaces:

USB 2.0 (firmware upgrades only), CNC/PLC hardwire interface (opto-isolated outputs)

### Performance

#### RPM Reporting:

300 to 30,000 RPM

#### Wide Vibration Range:

50 µg to 1,25 g

#### Vibration Display Resolution:

Four digit display with up to 2 decimal points in microns, with display resolution to 0.01 µm

#### Vibration Display Repeatability:

6,000 RPM ±1 % @ 5,0 µm

300–30,000 RPM ±2 % @ 50:1 signal to noise

#### Vibration Display Accuracy:

6,000 RPM ±2 % @ 5,0 µm

300–30,000 RPM ±4 % @ 50:1 signal to noise

#### Auto-Balance Resolution:

0.02 microns displacement at 6,000 RPM

#### Vibration Filter:

Custom digital filter has bandwidth +/- 3 % of measurement RPM

### Safety and Environmental

- CE certified
- RoHS compliant

#### Environmental and Installation Conditions:

- Pollution degree 2
- Intended for indoor use only
- Installation category I
- IP54, NEMA 12
- Environmental temperature range: 5 °C to +55 °C
- Humidity: 0 to 85 % relative humidity (non-condensing) throughout temperature range

More strategies and further information can be found on [www.grindingcontrol.com](http://www.grindingcontrol.com). Or contact your nearest SBS Sales Representative or call Schmitt Industries.



[grindingcontrol.com](http://grindingcontrol.com)

#### Schmitt Industries, Inc.

2765 NW Nicolai St.  
Portland, OR, 97210  
USA  
Tel: +1 (503) 227-7908  
sbs-sales@schmitt-ind.com

#### Schmitt Europe, Ltd.

2 Leofric Court  
Progress Way  
Coventry CV3 2NT  
UK  
Tel: +44 (2476) 651774  
sbs-europe@schmitt-ind.com