Balance Systems

# SB 50 - RB 50

Manual balancing machine for rotors and armatures of eletric motors

## The applications:

The electric motor industry needs to manufacture rotors and armatures with acceptable levels of unbalance.
This is achieved through dynamically balancing the rotating body to design specifications.

**The result:**
- Long bearing life
- Smooth operation

## The solution

Balance Systems has developed the SB50 - RB50 line of general purpose balancing machines capable of accurately quantifying the amount and position of unbalance in two planes

The machine SB50-RB50 is:
- **High precision** - utilizes Hard or soft bearings depending on the application
- **Easy-to-use** - Operator interface to intuitively guide the balance correction process
- **Safe** - Equipped with safety guard
- **Economic** - Provided high volume whit an excellent relationship between quality/price

**Features**

The SB50 - RB50 is a high precision balancing machine for rotating parts whit mass up to 50 kg.
Quick and easy change over to accomodate a broad range of rotors and armatures. Up to 200 specific part models may be stored to support the mechanical changeover.
The machine is composed from:

- Floor model balance base with belt drive system, bearing supports, and safety guard.
- Electric cabinet housing all electrical components and PC electronics.
  There are more economical versions which are not PC based.
  - SB50-RB50/M2 Analog display of unbalance amount and unbalance position by stroboscopic lamp.
  - SB50-RB50/DG6 Analog display of unbalance amount and digital display of the unbalance angular position.

The PC based SB50/RB50 balancing machine offers many options, increased capabilities when compared to typical general purpose balancers.
Complete interface to plant computer network for data reporting is possible. Modem whit telephone (Analog or ISDN ) service for off site troubleshooting is offered along with a complete SPC software package. There are 2 options to identity the location of unbalance. The first is by automatic positioning via servo motor. The second utilizes a visual lazer dot. The software may be customized for specific types of correction like drilling, milling, and single size mass addition. For example the operator could be presented whit the correct number of holes and respective depth for a given drill diameter. Or a specific number of standard size washers to be added to achieve balance correction. We have the balancing machine to care of all your balancing needs.

| Characteristic SB50-RB50 | Value |
|---|---|
| Rotating mass | 1-50kg. |
| Max outside diameter | 450 mm |
| Drive System | Belt |
| Rotor diameter at beltdrive | 20 mm min. - 250 mm max. |
| Distance between bearing supports | 130 mm min. - 800 mm max. |
| Balance sensors | Hard ord soft bearings according to the requirements |
| Shaft diameter at the bearing supports | 8 mm min. - 80 mm max. |
| RPM | Programmable |
| Balance type | Static or 2 plane dynamic |
| Repeatability, ISO | 0,05 gmm/kg |
| Supported correctiong methods | Standard: addition/removal of mass<br>Optional: drilling/milling |
| Machine dimensions | 1200 x 980 x 1100h mm with closed safety guard<br>1900 x 980 x 1100h mm with open safety guard |
| Machine Weight | 200kg |
| Machine Color | Blue 5018 |
| Cabinet Color | Beige 7032 |
| Power supply | 220V single phase 50/60Hz |
| Absorbed power | 1Kw |
| Operating Noice Level | < 70dB |
| Operating interface | The operator interface is Pentium PC based running with Windows NT. Included supporting hardware items are CD and floppy disk driver, keyboard, RAM, Hard drive, Parallel and serial ports, and RJ45 Network interface card. |
| Display | 640 x 480 color |
| Program of diagnostic and maintenance | |
| SPC | Optional - Harvest dates and statistic: Cart X, R, Cpk of initial and final values of unbalance on the planes |
| Modem | Optional |
| Certified Master | Optional |

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