

# B Series - B02

## 7 kg (15 lb) Capacity

### Horizontal Balancing Machine

**HORIZONTAL AXIS,  
TABLE TOP,  
SOFT BEARING,  
BALANCING MACHINE**

#### DESCRIPTION

The Model B02 is a dynamic, horizontal axis, soft bearing Balancing Machine. This is a precision balancing machine that can be used with any IRD Balancing instrument. It is suited for balancing small, lightweight rotors such as those found in small high speed machines.

The machine is of lightweight construction and can be mounted on a rigid tabletop or workbench. Two work supports with rollers are used to support the rotor journals. Both work support pedestals can be moved on the machine bed to accommodate different length rotors.

The drive system consists of a DC variable speed motor with a belt drive. The motor and motor controller are mounted inside the base unit.

Optional V-Block rotor work supports are available. An optional pivoting, dynamic top table assembly with quick lock clamping is available for mounting self powered rotors that cannot be supported on rollers.



#### GENERAL SPECIFICATIONS:

- Weight Capacity: 7 kg (15 lb)
- Max. Rotor Dia: 415 mm (16.3 in)
- Max. Sensitivity: 0.0018 g mm (0.0008 g in)
- Standard Bed Length: 450 mm (17.7 in)
- Journal Dia Range: 6 – 60 mm (0.24 – 2.4 in)
- Journal to Journal Separation: 25 – 400 mm (1 – 47.2 in)
- Drive Type: Underslung Belt Drive
- Drive Motor (std): DC 0.095 kW (0.13 HP)  
Variable speed motor with encoder.
- Balancing Speed Range: 500 to 10000 RPM
- Number of Balance Planes: 1 or 2
- Encoder output port: Used by IRD Balancing instruments for determining rotor angular position.

- Standard Accessories: (3) Flat drive belts, (3) O-Ring drive belts, roller work supports, mounting arm for photocell, end thrust assemblies.
- Tabletop configuration:
  - Dim: 520 x 480 x 400 (l x w x h)
  - Weight: 27 kg (60 lb)
  - Power (std): 120 or 230VAC, 50/60 Hz
  - Temperature: Operating -10 to +50°C

#### OPTIONAL FEATURES:

- V-Block Rotor Work Supports
- Dynamic table top assembly for self powered rotors
- Underbelt tangential drive assembly
- 236 Desktop Balancing Instrument
- 246 Portable Balancing Instrument
- 295 Touch Screen Balancing Instrument

## STANDARD CONFIGURATIONS

B02 Package	Brief Description	Detailed Description
E00480-1	Complete B02 Balancing System with 0.095 kW (0.13 HP) 3000 RPM, DC motor for 120VAC Operation	Complete B02 Balancing Machine that includes a table top machine bed, 2 movable pedestals, 2 roller work supports with height adjustment, drive motor with encoder, motor controller, drive belts and manual. For 120 VAC operation. This machine does not include a balancing instrument or sensors which must be purchased separately.
E00480-2	Complete B02 Balancing System for 230VAC Operation	Same as E00480-1 above, except for 230 VAC operation.
E00481-1	<i>B02/S Balancing System with Integral Balancing Instrument, 120VAC</i>	<i>Similar to E00480-1 except with built in balancing instrument. See B02/S brochure for more details</i>
E00481-2	<i>B02/S Balancing System with Integral Balancing Instrument, 230VAC</i>	<i>Similar to E00480-2 except with built in balancing instrument. See B02/S brochure for more details</i>

Part #	E00480-1 and E00480-2 includes
	Basic B02 balancing machine with drive motor, adjustable roller work supports and motor control
E71201	Flat drive belt, 6mm wide x 480mm long (0.24 X 18.9 in)
E70031	Flat drive belt, 6mm wide x 500mm long (0.24 X 19.7 in)
E71202	Flat drive belt, 6mm wide x 560mm long (0.24 X 22.0 in)
E71043	Round drive belts (O-Ring) set of 3, 1.78 mm diameter x 340 / 400 / 420mm lengths
E19643	AC Power Supply Cable with US plug US, 3 m
E46436	Operation manual for B02 Balancing System-English

Part #	Balancing Instrument Options
E00304	Model 236 Digital Balancing Instrument with all accessories needed for balancing. Includes the 236 Balancing Instrument, two 546DP (direct prod) vibration sensors with brackets and magnetic tips, photoelectric speed sensor, reflective tape and all cables.
E00310	Model 246 Portable Balancing Instrument with all accessories needed for balancing. Includes the 246 Balancing Instrument, two 546DP (direct prod) sensors, two magnetic tips for the 546DP sensors, photocell, photocell reflective tape and all cables.
E00360	Model 295 Touch Screen Balancing Computer with all accessories needed for balancing. Includes the 295 Balancing Instrument, two 546DP (direct prod) vibration sensors with brackets and magnetic tips, photoelectric speed sensor, reflective tape and all cables.

Part #	Other Options, Accessories and Supplies
E71034	Rotor safety hold downs, 2 included
E71144	V-block Rotor Work Supports, 2 included
-	Dynamic table top assembly for self powered rotors
-	Underbelt (tangential) belt drive assembly
E41874	AC Power Supply Cable with UK plug
E41554	AC Power Supply Cable with European plug
E41626	AC Power Supply Cable with Australian plug
E41952	AC Power Supply Cable with S.Africa/India plug
E48666-530	Flat drive belt, 6mm wide x 530mm long (0.24 X 20.8 in)
E48666-540	Flat drive belt, 6mm wide x 540mm long (0.24 X 21.2 in)
E71203	Flat drive belt, 6mm wide x 600mm long (0.24 X 23.6 in)
E02785	546DP Vibration sensor only- no magnetic tip
E10170	Magnetic tip for 546DP vibration sensor
E21000	Photoelectric speed sensor, standard, reflective tape trigger, 25-610 mm (1-24 in) range
E47255	Infrared speed sensor, 12Vdc, light/dark trigger, 100-150 mm range
E21200	Reflective tape for use with speed sensor, 47.5m (150 ft)
E47165	Scale, 120 gram capacity, portable, battery operated.
E11820	Balancing wax, sold by the pound
E32147	Epoxy balancing weight compound kit, 2 lb package
E04753	Balancing weights, set of 16, C--shaped with set screw
E11946	Balancing clips for squirrel cage fans (7 sizes of 100 ea)

# B Series - B02/S

## 7 kg (15 lb) Capacity

## Horizontal Balancing Machine with Built-in Instrument

**HORIZONTAL AXIS, TABLE TOP, SOFT BEARING, BALANCING MACHINE WITH BUILT IN INSTRUMENT**

### DESCRIPTION

The Model B02/S is a dynamic, horizontal axis, soft bearing Balancing Machine. This is a precision balancing machine that comes complete with a built-in instrument. It is suited for balancing small, lightweight rotors such as those found in small high speed machines.

The machine is of lightweight construction and can be mounted on a rigid tabletop or workbench. Two work supports with rollers are used to support the rotor journals. Both work support pedestals can be moved on the machine bed to accommodate different length rotors.

The drive system consists of a DC variable speed motor with a belt drive. The motor and motor controller are mounted inside the base unit.

Optional V-Block rotor work supports are available. An optional pivoting, dynamic top table assembly with quick lock clamping is available for mounting self powered rotors that cannot be supported on rollers.



### GENERAL SPECIFICATIONS

- Weight Capacity: 7 kg (15 lb)
- Max. Rotor Dia: 415 mm (16.3 in)
- Max. Sensitivity: 0.0018 g mm (0.0008 g in)
- Standard Bed Length: 450 mm (17.7 in)
- Journal Dia Range: 6 – 60 mm (0.24 – 2.4 in)
- Journal to Journal Separation: 25 – 400 mm (1 – 47.2 in)
- Drive Type: Underslung Belt Drive
- Drive Motor (std): DC 0.095 kW (0.13 HP)  
Variable speed motor with encoder.
- Balancing Speed Range: 500 to 10000 RPM
- Number of Balance Planes: 1 or 2
- Calibration Method: Trial Weights
- Filter: Dual, narrow band shaft-synchronous digital tracking filters, with averaging
- Display: Dual channel, backlit supertwist alphanumeric LCD with 2 lines x 40 characters per line
- Data Entry: Numeric keypad with 6 Function keys
- Unbalance Readout: grams, ounces, gram-millimeters, ounce-inches
- Vibration Readout: micrometers, mils, millimeters/second, inches/second
- Display of Dynamic (Left/Right) unbalance or Static/Couple Unbalance
- Display of correction angles for adding or removing rotor balance weights
- Direct angle readout for display of correction location on rotor (encoder)
- Unbalance Display in Digital format
- Rotor Memory storage for up to 50 different rotors internally
- Automatic Vector Splitting of unbalance corrections
- Vector Addition of unbalance corrections for combining weights
- Balance Tolerance Level setting, manual
- Colored indicator lights for “In Tolerance” and “Out of Tolerance” Balance Levels
- Electronic Compensation for tooling errors caused by arbor shafts or adapters
- Electronic Key Compensation
- Printer port for external printer
- Customized Headings on Balance Reports (with external computer)
- Serial RS232 interface to send balance data to an external computer
- Standard Accessories: (2) Velocity sensors, speed sensor, cables, drive belts and end thrust assemblies.
- Tabletop configuration:
  - Dim: 520 x 480 x 400 mm (l x w x h)
  - Weight: 30kg (65lb) (with accessories)
  - Power: 120 or 230VAC, 50/60 Hz
  - Temperature: Operating -10 to +50° C
- Switch Selectable Language Options: English, German, French, Italian and Spanish

### OPTIONAL FEATURES

- V-Block Rotor Work Supports
- Dynamic table top assembly for self powered rotors
- Underbelt tangential drive assembly
- 236 Desktop Balancing Instrument
- 246 Portable Balancing Instrument
- 295 Touch Screen Balancing Instrument

## STANDARD CONFIGURATIONS

B02/S Package	Brief Description	Detailed Description
E00481-1	Complete B02/S Balancing System with 0.095 kW (0.13 HP) 3000 RPM, DC motor for <b>120VAC</b> Operation	Complete B02/S Balancing System that includes the balancing machine with a built in instrument, 2 movable pedestals, 2 roller work supports with height adjustment, drive motor with encoder, motor controller, drive belts, photoelectric speed sensor, (2) 546DP velocity sensors, reflective tape for speed sensor, interconnect cables and manual. For 120 VAC operation.
E00481-2	Complete B02/S Balancing System for <b>230VAC</b> Operation	Same as E00481-1 above, except for 230 VAC operation.

## PARTS AND ACCESSORIES

Part #	E00481-1 and E00481-2 includes
	Basic B02/S balancing machine with drive motor, adjustable roller work supports, motor control and instrument
E02785	546DP Vibration sensor, 2 included
E10170	Magnetic tip for 546DP vibration sensor, 2 included
E21000	Photoelectric speed sensor, standard, reflective tape trigger, 25-610 mm range
E71201	Flat drive belt, 6mm wide x 480mm long (0.24 X 18.9 in)
E70031	Flat drive belt, 6mm wide x 500mm long (0.24 X 19.7 in)
E71202	Flat drive belt, 6mm wide x 560mm long (0.24 X 22.0 in)
E71043	Round drive belts (O-Ring) set of 3, 1.78 mm diameter x 340 / 400 / 420mm lengths
-	Cable for use with 546DP vibration sensor, 600mm/24", 2 included
-	Cable for P/N E21000 photoelectric speed sensor, 800mm/32"
E21200	Reflective tape for use with speed sensor, 47.5m/150'
E19643	AC Power Supply Cable with US plug US, 3 m
E46438	Operation manual for B02/S Balancing System-English
E72658	PC communications software diskette (3-1/2")

Part #	Other Options, Accessories and Supplies
E71034	Rotor safety hold downs, 2 included
E71144	V-block Rotor Work Supports, 2 included
-	Dynamic table top assembly for self powered rotors
-	Underbelt (tangential) belt drive assembly
E41874	AC Power Supply Cable with UK plug
E41554	AC Power Supply Cable with European plug
E41626	AC Power Supply Cable with Australian plug
E41952	AC Power Supply Cable with S.Africa/India plug
E48666-530	Flat drive belt, 6mm wide x 530mm long (0.24 X 20.8 in)
E48666-540	Flat drive belt, 6mm wide x 540mm long (0.24 X 21.2 in)
E71203	Flat drive belt, 6mm wide x 600mm long (0.24 X 23.6 in)
E47240	Laser speed sensor, 5Vdc, reflective tape trigger, 100-2000mm
E47246	Cable for laser sensor to 236, 246, 290,295 10m/32.8"
E47255	Infrared speed sensor, 12Vdc, light/dark trigger, 100-150 mm range
E47254	Cable for infrared speed sensor to 236,246,290,295 10m/32.8"
E47164	Printer, 9 Pin Dot Matrix, continuous paper, 120VAC 50/60 Hz
E43497	Printer cable, 1.8m/6'
E47163	Cut sheet paper feeder for printer P/N E47164
E47165	Scale, 120 gram capacity, portable, battery operated.
E11820	Balancing wax, sold by the pound
E32147	Epoxy balancing weight compound kit, 2 lb package
E04753	Balancing weights, set of 16, C--shaped with set screw
E11946	Balancing clips for squirrel cage fans (7 sizes of 100 ea)



**dB Vib Instrumentation**

Montée de Malissol  
38200 VIENNE

Tél. 04 74 16 18 80 – Fax 04 74 16 18 89

Siret 435 015 698 00028