

B Series - B50

2300 kg (5000 lb) Capacity

Horizontal Balancing Machine



**HORIZONTAL AXIS,
GENERAL PURPOSE,
SOFT BEARING,
BALANCING MACHINE**

DESCRIPTION:

The B50 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 to medium weight rotors such as motor armatures, fans, turbines, etc. The machine is constructed from heavy gauge steel weldments and can be mounted to existing shop floors without the need for a special foundation. Two work supports with rollers are used to support the rotor journals. Each work support has a built in height adjustment to accommodate rotors with unequal journal diameters. One work support pedestal 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 controller is mounted inside the control console and is equipped with regenerative braking for quick stops. The B50 is supplied completely wired and ready to connect to existing input power. Optional instrument packages, V-Block rotor work supports, drive power systems and negative load hold downs are available.

GENERAL SPECIFICATIONS:

- Weight Capacity: 2300 kg (5000 lb)
- Max. Rotor Dia.: 2380 mm (94 inches)
- Maximum Sensitivity: 4 g mm (0.16 g in)
- Standard Bed Length: 2170 mm (85.5 inches)



- Journal Diameter Range: 19 - 330 mm (0.75 - 13 inches)
- Journal-to-Journal Separation: 140 - 2030 mm (5.5 - 80 inches)
- Drive Type: Underslung Belt Drive with manual belt tensioning
- Drive Motor (std): DC 3.7 kW (5 HP) Variable speed motor with encoder
- Balancing Speed Range: 250 to 6000 RPM
- Number of Balance Planes: 1 or 2
- Encoder output port: Used by IRD Balancing instruments for determining rotor angular position
- Standard Accessories: (6) Flat drive belts, (2) roller work supports, suspension motion locks, end thrust assemblies, motor control console.
- General configuration (without rotor):
 - Dim: 4826 x 1830 x 1525 mm (l x w x h) (190 x 72 x 60 in) (l x w x h)
 - Weight: 832 kg (1835 lb)
- General configuration (continued)
 - Power (std): 230VAC, 50 or 60 Hz
 - Temperature: Operating 0 to +40° C

OPTIONAL FEATURES:

- Rotor Safety Hold Downs
- V-Block Rotor Work Supports
- Negative Load Hold Downs
- Large Diameter Rollers
- Narrow Width Roller Work Supports
- 236 Digital Balancing Instrument
- 246 Portable Balancing Instrument
- 290 Touch Screen Balancing Computer
- Larger drive motor
- External transformers for other voltages

STANDARD CONFIGURATIONS:

B50 Basic Machine	Brief Description	Detailed Description
E07978	Complete B50 Balancing Machine with 3.7 kw (5 HP) motor for 230VAC, 1 phase , 50 or 60 Hz Operation	Complete B50 Balancing Machine includes a machine bed, height adjustable roller work supports, drive motor with encoder, motor controller with regenerative braking and drive belts. For 230 VAC operation. This does not include a balancing instrument.
E07986	Complete B50 Balancing Machine with 7.5 kw (10 HP) motor for 460VAC, 3 phase , 50 or 60 Hz Operation	Same as E07978 above, except for 7.5 kw DC motor and 460 VAC operation.
E07990	Complete B50 Balancing Machine with 11 kw (15 HP) motor for 460VAC, 3 phase , 50 or 60 Hz Operation	Same as E07978 above, except for 11 kw DC motor and 460 VAC operation.

E07978, E07986 and E07990 include	
-	Basic B50 balancing machine with machine bed, pedestals, drive motor, control console and motor controller
E12217	Flat drive belt, 25mm wide x 3429mm long (1 x 135 in)
E12218	Flat drive belt, 25mm wide x 3810mm long (1 x 150 in)
E12219	Flat drive belt, 25mm wide x 4191mm long (1 x 165 in)
E12220	Flat drive belt, 25mm wide x 4572mm long (1 x 180 in)
E12221	Flat drive belt, 25mm wide x 4953mm long (1 x 195 in)
E12228	Flat drive belt, 25mm wide x 5334mm long (1 x 210 in)
E07379	Roller Work supports, with 80mm diax35mm wide rollers (3x1.38in), built-in 23 mm (.94in) height adjustment, 2 inc.
E07417	End thrust assemblies, 2 included
E05140	Spanner wrench for adjusting work support height
E09776	Operation manual for B50 Balancing System-English
Balancing Instrument Options	
E00303	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) vibration sensors with brackets and magnetic tips, photoelectric speed sensor, reflective tape and all cables.
E00577	Model 290 Touch Screen Balancing Computer with all accessories needed for balancing. Includes the 290 Balancing Instrument, two 546DP (direct prod) vibration sensors with brackets and magnetic tips, photoelectric speed sensor, reflective tape and all cables.

Other Options, Accessories, and Supplies	
E10427	Rotor safety hold down with counter roller, 2 recomnd'd
E07416	V-block Rotor Work Supports, 2 recommended
E48306	V Block height adjust assembly, 23 mm (.94in), with pivoting for use with V-block, E07416
E08054	Negative load hold down assembly for rotors with an outboard center of gravity.
E13165	Replacement roller for standard E07379 roller work support, 80mm diax35mm, 2 req'd per work support.
E11360	Large diameter roller, 125mm diax40mm (4.9x1.56in), fit directly in E07379. 2 req'd per roller work support.
E13400	Narrow width roller work support, pivoting, no height adjustment with (2) 76mm diax13mm wide rollers (3x.5 in). Weight capacity 340 kg (750 lb) each work support
E18608	Height adjust assembly, 23 mm (.94in), non-pivoting, for use with narrow width roller work support P/N E13400
E29537	Fixed height assembly, non-pivoting, for use on opposite side when using height adjust, E18608, and E13400
E10461	Bed extension 1200 mm (48 in) long
E10462	Bed extension 2100 mm (84 in) long
E02785	546DP Vibration sensor- no magnetic tip or mtg. bracket
E10170	Magnetic tip for 546DP vibration sensor
E11194	546DP Vibration sensor, magnetic tip and mtg. bracket kit
E21000	Photoelectric speed sensor, standard, reflective tape trigger, 25-610 mm (1-24 in) range
E21200	Reflective tape for use with speed sensor, 47.5m (150 ft)
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)

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