

# B Series - B100

## 4500 kg (10000 lb) Capacity

### Horizontal Balancing Machine

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

#### DESCRIPTION

The B100 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 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. The left 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 B100 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: 4500 kg (10000 lb)
- Max. Rotor Dia: 2921 mm (115 in)
- Max. Sensitivity: 10 g mm (0.4 g in)
- Standard Bed Length: 2134 mm (84 in)
- Journal Dia Range: 25 – 381 mm (1 – 15 in)
- Journal to Journal Separation: 203 – 1905 mm (8 – 75 in)
- Drive Type: Underslung Belt Drive with manual belt tensioning.
- Drive Motor (std): DC 7.5 kW (10 HP) Variable speed motor with encoder.
- Balancing Speed Range: 250 to 4000 RPM
- Number of Balance Planes: 1 or 2
- Encoder output port: Used by IRD Balancing instruments for determining rotor angular position.

- Standard Accessories: (5) Flat drive belts, (2) roller work supports, suspension motion locks, end thrust assemblies, motor control console.
- General configuration (without rotor):
  - Dim: 4267 x 1676 x 1562 (l x w x h) (168 x 66 x 61.5 in) (l x w x h)
  - Weight: 1497 kg (3300 lb)
  - Power (std): 460VAC, 3ph, 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
- Narrow Width Roller Work Supports
- 236 Digital Balancing Instrument
- 246 Portable Balancing Instrument
- 295 Touch Screen Balancing Instrument
- Large Drive Motor
- External Transformers for Other Voltages

## STANDARD CONFIGURATIONS

B100 Basic Machine	Brief Description	Detailed Description
E00455-2	Complete B100 Balancing Machine with 7.5 kW (10 HP) 2500 RPM, DC motor for 460VAC, 3 phase, 50 or 60 Hz Operation	Complete B100 Balancing Machine includes a machine bed, 2 pedestals (the left pedestal has height adjustment and is movable along the length of the bed), 2 roller work supports, drive motor with encoder, motor controller with regenerative braking and drive belts. For 460 VAC operation. This machine does not include a balancing instrument or sensors which must be purchased separately.
E00455-1	Complete B100 Balancing Machine with 11.2kW (15 HP) 2500 RPM, force ventilated, DC motor for 460VAC, 3 phase, 50 or 60 Hz Operation	Same as E00455-2 above, except for 11.2 kW (15 HP) DC motor.
E00455-4	Complete B100 Balancing Machine with 8.5 kW 2500 RPM, DC motor for 400VAC, 3 phase, 50 or 60 Hz Operation	Same as E00455-2 above, except for 8.5 kW 400V DC motor.

Part #	E00455-1, -2 and -4 include
	Basic B100 balancing machine with machine bed, pedestals, drive motor, control console and motor controls
E12220	Flat drive belt, 25 mm wide x 4572 mm long (1 x180 in)
E12228	Flat drive belt, 25 mm wide x 5334 mm long (1 x210 in)
E33201	Flat drive belt, 25 mm wide x 5969 mm long (1 x235 in)
E11705	Flat drive belt, 25 mm wide x 6502 mm long (1 x256 in)
E33202	Flat drive belt, 25 mm wide x 7112 mm long (1 x280 in)
E11698	Roller Work supports, with two 100 mm dia x 40 mm wide rollers (4 x 1.6 in), 2 included
E07951	Height adjustment module with 76 mm (3 in) vertical adjustment. Fitted on left pedestal
E08102	Fixed height module. Fitted on right pedestal.
E08850	Adjustment bar for height adjust module, E07951
E36240	End thrust assemblies, 2 included
E33148	Operation manual for B100 Balancing System-English

Part #	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.
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
E12060	Rotor safety hold down with counter roller, 2 recomnd'd
E07416	V-block Rotor Work Supports, 2 recommended
E13444	V-Block pivot assembly. Fits under V-Block, E07416,2 rec'd
E11610	Negative load hold down assembly for rotors with an outboard center of gravity. Fits E11698 roller work support and B100 pedestal suspension.
E11785	Replacement roller for standard E11698 roller work support, 100 mm dia x 40 mm wide, 2 req'd per support.
E11784	Large diameter roller, 150 mm dia x 49 mm (5.9 x1.9 in), fits directly in E11698. 2 required per roller work support.
E07379	Narrow width roller work support, pivoting, built-in 23 mm (.94in) height adjustment, with two 80 mm dia x 35 mm wide rollers (3 x 1.38 in). Weight capacity: 1100 kg (2500 lb) each work support.
E10491	Bed extension 1200 mm (48 in) long
E11806	Bed extension 2100 mm (84 in) long
E10492	Bed extension 3400 mm (132 in) long
E47334	10/15 HP air actuated, holding brake kit with drive pulley, brake disk and caliper for E33100 and E34000 machines. (1.375 inch motor shaft diameter, Reliance motor only)
E39490	Safety enclosure (perimeter fence) for machine, non-interlocked
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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