

# B Series - B5F

## 230 kg (500 lb) Capacity

### User Fabricated Balancing Machine



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

#### DESCRIPTION

The B5F is a dynamic, horizontal axis, soft-bearing Balancing Machine that is assembled with precision balancing parts supplied by IRD® and field fabrication by the user.

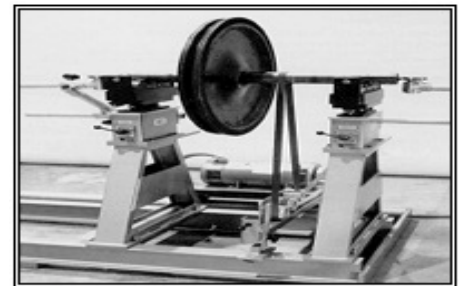
IRD® supplies two modular suspension work supports, two sets of roller work supports, drive motor pulley, idler pulleys, belts, end thrusts and fabrication drawings.

The customer supplies a machine bed, pedestals for mounting the modular suspension work supports, the drive motor, variable speed motor controller and a frame for the belt drive.

Optional instrument packages, V-Block rotor work supports, drive power systems and negative load hold downs are available.



**B5F Kit of Parts, Typical**



**Typical User Fabricated Machine**

#### GENERAL SPECIFICATIONS

- Weight Capacity: 230 kg (500 lb)
- Max. Rotor Dia: 1962 mm (77.25 in)
- Max. Sensitivity: 1.5 g mm (0.06 g in)
- Standard Bed Length: 2170 mm (85.4 in)  
(User Fabricated)
- Journal Dia Range: 13 – 200 mm (0.5 – 8 in)
- Journal to Journal Separation: 50 – 2030 mm (2 – 80 in)  
(Based on User Fabricated Bed)
- Drive Type: Underslung Belt Drive with manual belt tensioning  
(User Fabricated - Idler Pulleys by IRD)
- Drive Motor Recommended: DC 0.75 kW (1 HP)  
Variable speed (User Supplied)
- Balancing Speed Range: 250 to 6000 RPM  
(Depends on Driven Rotor Diameter)
- Number of Balance Planes: 1 or 2
- Standard Parts Included:
  - (4) Flat Drive Belts
  - (2) Roller Work Supports
  - (2) Modular Suspension Work Supports
  - (2) End Thrust Assemblies
  - Drive Motor Pulley (Specify bore dia.)
  - (3) Idler Pulleys
  - Fabrication Drawings
- User Fabricated or Supplied Parts:
  - Fabricate the machine bed and pedestal support frames. Provide the drive system (motor, controls, belt drive frame).
- 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)
  - Kit Weight: 159 kg (350 lb)

#### OPTIONAL FEATURES

- Rotor Safety Hold Downs
- V-Block Rotor Work Supports
- Negative Load Hold Downs
- Large Diameter Rollers
- 236 Desktop Balancing Instrument
- 246 Portable Balancing Instrument
- 295 Touch Screen Balancing Instrument
- Drive Motor/Controller

## STANDARD CONFIGURATIONS

B5F Basic Machine	Brief Description	Detailed Description
E44849	Complete B5F Balancing Machine kit for motor with 22.2 mm / 0.875" diameter shaft.	Complete B5F Balancing Machine kit includes modular suspension work supports, roller work supports, belts, idler pulleys, drive pulley with 0.875" diameter bore, end thrust assemblies and fabrication drawings. This kit does not include a balancing instrument.

## PARTS AND ACCESSORIES

Part #	E44849 includes
E44847	Flat drive belt, 13mm wide x 3429mm long (0.5 x 135 in)
E44848	Flat drive belt, 13mm wide x 3810mm long (0.5 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)
E20610	Modular Suspension Work Supports, 2 included
E13400	Roller Work Supports with 76mm dia x 13mm wide rollers (3x0.5in), no height adjustment, 2 included
E23843	End thrust assemblies, 2 included
E07409	102 mm diameter x 38 mm wide (4 x 1.5 in) idler pulley assembly, 3 included
E23966	152 mm diameter x 38 mm wide (6 x 1.5 in) motor drive pulley, 0.875" bore
	Fabrication Drawings: E33000 (Imperial) or E33300 (Metric)
E33002	Operation/Fabrication manual for B5F Balancing System

Part #	Other Options, Accessories and Supplies
E18806	Rotor safety hold down with counter roller, 2 recommended
E03803	V-block Rotor Work Supports, 2 recommended
E24035	Pivot assembly for use under V-block, E03803
E24916	Negative load hold down assembly for rotors with an outboard center of gravity
E13434	76mm/3" replacement roller assembly for E13400 roller work support, no hub. 76mm dia x 13mm W (3" x 1/2")
E13435	127mm/5" optional roller assembly, mounts in place of standard 76mm roller, no hub. 127mm dia x 13mm W (5" x 1/2")
E13424	Hub for E13434 or E13435 roller assemblies
E18608	Height adjust assembly, 23 mm (.94 in), non-pivoting
E29537	Fixed height assembly, non-pivoting, for use on opposite side when using height adjust, E18608
E46951-1	0.75kW (1 HP) Motor/Console Assembly. Includes a 1750 RPM DC motor with 0.875" dia. shaft, angular location sensor and 12'/3.6m flex conduit connected to a 42"/1067mm high control console with a variable speed regenerative braking drive controller mounted inside, operator control panel and circuit breaker; wired for 230VAC, 1-phase operation. Specify 60 Hz or 50 Hz on order.
E02785	546DP Vibration sensor - no magnetic tip or mounting bracket
E10170	Magnetic tip for 546DP vibration sensor
E11194	546DP Vibration sensor, magnetic tip and mounting bracket
E21000	Photoelectric speed sensor, standard, reflective tape trigger, 25-610 mm (1 - 24 in) range
E21200	Reflective tape for use with speed sensor, 47.5 m (150 ft)
E11820	Balancing was, 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 each)

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.

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