

# EI-500

## Balancing Machine

Datasheet



**EI-500 Balancing Machine** is ideal for all kind of rotating parts weighting up to 500 kg such as rollers, motors, propellers, crankshafts, mills, among others. EI-500 uses light and resistant materials for the **bearing suspension system** in order to reduce inertia.

Features

- Single and 2 planes balancing.
- Variable speed with inverter (included).
- Adjustable pulley’s position.
- 3 liberty axis for each pedestal.
- Manual adjust for power transmission and supports distance.
- Soft bearing suspension system to avoid mechanical looseness.
- Axial supports.
- Stainless steel sensors.
- Cantilever Bearings.
- Easy calibration.

Technical Specs

Max / Min load	500 kg (1102 lb) / 1 kg (2.20 lb)
Dimensions (L x W x H)	2000 x 950 x 900 mm (79 x 37.5 x 35.5 in)
Weight	350 kg (770 lb)
Max rotor diameter	1600 mm (63 in)
Max load per support	250 kg (550 lb)
Max displacement 0 to peak	12 mm (0.5 in)
Max shaft diameter	101 mm (4 in)
Min / Max length	101 mm (4 in) / 1778 mm (70 in)
Power transmission	V-Belt
Lubrication	Type-I (manual)
Accuracy	±0.01 mm/s
Sensitivity	100 mV/g
ISO 2953 Unbalance reduction per sequence	97%
Residual unbalance	1 gmm / 100 kg rotor
Motor electrical features	2.28 kW (3 hp) 220/440 V, 3 phases, 4 poles
Speed Driver	Included, 2.28 kW AC (3 hp)



Cantilever bearings



Telescopic sensor support



90° sensors (Optional)

DigivibeMX M10 is an easy-to-use system that fits perfectly with the EI-500 in order to perform accurate balancings in 1 and 2 planes.



## DigivibeMX M10 Features

- 2-plane balancing without trial weights\*.
- Easy-to-use balancing calculator.
- Plug&Play DAQ interface.
- Balancings from 120 to 150'000 RPM.
- Intuitive graphic interface.
- 2 Polar graphs.
- 1-click balancing reports.
- High compatibility.
- 2 accelerometers and 1 optical sensor included with the EI-500
- **laptop or tablet not included in the kit**

\*Consult DigivibeMX M10 Datasheet

## Technical Specs

### 4-Channel Interface



3 LEMO 5-pin Connectors
Up to 4 mono-axial accelerometers
2- plane simultaneous measuring
IP 67 Protection grade
Frequency Range: 48 kHz
Dimensions: 67 x 74 x 22 mm
Weight: 100 g

### Accelerometer AC-500-2P



Freq. response (+/-3dB): 0.32 - 13kHz
Sensitivity: 100 mV/g +/- 10%
Transverse sensitivity: < 5%
Power supply: 18-30 V - Short-circuit protection
Operation temp.: - 50 to 121 °C
Protection grade: IP 68
Impact Resistance: IEC 60028-27
Standard 2 Pin MIL connector
Weight: 50g
Stainless steel body
Dynamic impact shock: 80 G Peak (Max shock 5000g)

### Laser Tachometer OP-20



Range: 1 - 5000 Hz
Power and current supply: 5V - 10 mA
Short circuit, Reverse Voltage and Over-Voltage (15V for 1min) protection
Voltage drop: <0.4 V
Operation distance: 20cm < 15 m
Operating temp: -10 - 50 °C
Storing temp: -40 - 85 °C
Protection grade: IP 60, III
Impact Resistance: IEC 60028-27
Weight 60 g
Nylamyd body
Analogic output



# Accessories

**EI-500 Balancing Machine** has a wide range of optional accessories and spares to increase performance and reliability.

## Negative Load Supports (Optional)



It's an accessory for EI-500 balancing machine required when rotors are mounted on cantilever and/or to secure rotors with high levels of vibration, like crankshafts. Each support includes bearings and has adjustable height. Its dimensions may vary depending on the bearing suspensions. **Sold separately.**

## Axial Supports (Included)



Designed to limit the axial rotor's displacement on the EI-500 balancing machine. It has 2 axes to adjust to shaft's length from the supports. They include the mounting base to the balancing pedestal, an axial and radial arm and a rolling element at the tip. EI-500 includes 2 axial supports.

## Transmission Belt (Included)



**A-type V-belt** reinforced.  
  
Length: 3m (10 ft).  
Width: 10mm (3/8 in).

## Kit of 4 Pulleys (Included)



Set of 3 tensor pulleys and 1 driver pulley for EI-500 A-type V-belt.

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