

# EI-2000

## Balancing Machine

Datasheet



**EI-2000** is ideal for all kind of rotating parts whose mass is up to 2000 kg such as rollers, motors, propellers, mills, crankshafts, among others. **EI-2000** uses soft bearing suspensions built with light and resistant materials to decrease inertia.

## Features

- Single and two planes balancing
- Variable speed (inverter included)
- Adjustable pulley's position
- 2 roller positions for wide shaft diameters
- 3 liberty axis for each SBS
- Elevation screw
- Soft bearing suspension system to avoid mechanical looseness
- Axial supports
- Sensors integrated to avoid corrosion
- Easy calibration



## Technical Specs

|                               |  |
|-------------------------------|--|
| Minimum suitable rotor weight | 5 kg (11 lb)                                   |
| Max load per support          | 1000 kg (2200 lb)                              |
| Balancing speed range         | 60 - 6000 RPM                                  |
| Max rotor diameter            | 2000 mm (79 in)                                |
| Max SBS displacement          | 12 mm (0.5 in) 0-to-peak                       |
| Max shaft diameter            | 228 mm (9 in)                                  |
| Min / Max SBS distance        | 152 mm (6 in) / 1778 mm (70 in)                |
| Max elevation height          | 12 mm (0.5 in)                                 |
| Residual unbalance            | 0.02 g.mm.kg rotor                             |
| Power transmission            | Flat Belt                                      |
| Lubrication                   | Type-I (manual)                                |
| Dimensions (L x W x H)        | 2000 x 1320 x 1295 mm<br>(79 x 52 x 51 in)     |
| Weight                        | 200 kg (440 lb)                                |
| Motor electrical features     | 3.73 kW (5 hp)<br>220/440 V, 3 phases, 4 poles |
| Speed Driver                  | Included, 3.73 kW AC (5 hp)                    |



Extern Sensor



90° Sensor (Opc)

**DigivibeMX M10** is an easy-to-use device that fits perfectly with the **EI-2000** 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-2000<sup>T</sup>.
- **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-2000 Balancing Machine** has a wide range of optional accessories and spares to increase performance and reliability.

## Protection Supports (Not included)



It's an accessory for **EI-2000 balancing machine** required to secure rotors with high levels of vibration, like crankshafts. Each support includes bearings and has adjustable height. **Sold separately.**

## Axial Supports (Included)



Designed to limit the axial rotor's displacement on the **EI-2000 balancing machine**. It has 3 axes to adjust shaft's length from the supports. They include the mounting base to the pedestal, an axial and radial arm and a rolling element at the tip. **EI-2000 includes 2 axial supports.**

## Transmission Belt & Pulleys



A flat belt of high strength and durability reinforced with 3 layers: **fabric-nylon-fabric**.

Length: 4.2 m (13.8 ft)  
Width: 50 mm (2 in)



Set of 3 bearing pulleys and 1 driver pulley for EI-2000 flat belt.

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