

EL-1000

Balancing Machine

Datasheet



EI-1000 Balancing Machine is ideal for all kind of rotating parts whose mass is up to 1000 kg such as rollers, motors, propellers, mills, fans among others. **EI-1000** uses a **soft bearing suspension system** built using light and resistant materials in order to decrease inertia.

Features

- Single and two planes balancing without trial masses
- Variable speed (inverter included)
- Adjustable pulley’s position
- 3 liberty degrees for each pedestal
- Manual adjust for power transmission and supports distance
- Soft bearing suspension system to avoid mechanical looseness
- Axial support system
- Sensors integrated to avoid corrosion
- Easy calibration

Technical Specs

Max / Min load	1000 kg (2200 lb) / 3 kg (6.6 lb)
Dimensions (L x W x H)	2000 x 950 x 1100 mm (79 x 37.5 x 43.25 in)
Weight	200 kg (440 lb)
Max rotor diameter	1800 mm (71 in)
Max load per support	500 kg (1100 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	Flat Belt
Lubrication	Type-I (manual)
Accuracy	±0.01 mm/s
Sensitivity	100 mV/g
ISO 2953 Unbalance reduction per sequence	97%
Residual unbalance	2 gmm / 100 kg rotor
Motor electrical features	3.73 kW (5 hp) 220/440 V, 3 phases, 4 poles
Speed Driver	Included, 3.73 kW AC (5 hp)



DigivibeMX M10 is an easy-to-use device that fits perfectly with the EI-1000 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-1000.
- **laptop or tablet not included in the kit.**

*Consult DigivibeMX M10 Datasheet

Technical Specs

4-Channel Interface



Accelerometer AC-500-2P



Laser Tachometer OP-20



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

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)

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-1000 Balancing Machine has a wide range of optional accessories and spares to increase performance and reliability.

Negative Load Supports (Not included)



It's an accessory for **EI-1000 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-1000 balancing machine. It has 2 axes to adjust up to 1 meter 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-1000 includes 2 axial supports.**

Transmission Belt & Pulleys



A flat belt of high strength and durability reinforced with 3 layers: **fabric-nylon-fabric**.
Length: 4.5 m (14.76 ft)
Width: 25-30mm (1 in).



Set of 3 bearing pulleys and 1 driver pulley for EI-1000 flat belt.

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