

EI SERIES

EI-10T Balancing Machine - Datasheet



EI-10T is a high-capacity balancing machine

equipped with soft-bearing suspensions manufactured with resistant materials to insure the best reliability.

Overview

Made 100% from carbon steel, the EI-10T includes fixing points. Its heavy-load bearings integrate a soft material bearing sleeve to prevent excessive wear on the rolling surface of the rotor.

The EI-10T can support up to 10 Tons (5 Tons each support) and its slices allow shaft diameters up to 508 mm (20 in). It also has an elevation system to adjust the height in case the shaft journals have a difference in diameter up to 50 mm (2 in).

For a better contact between the shaft and the rolling elements, it has a swing

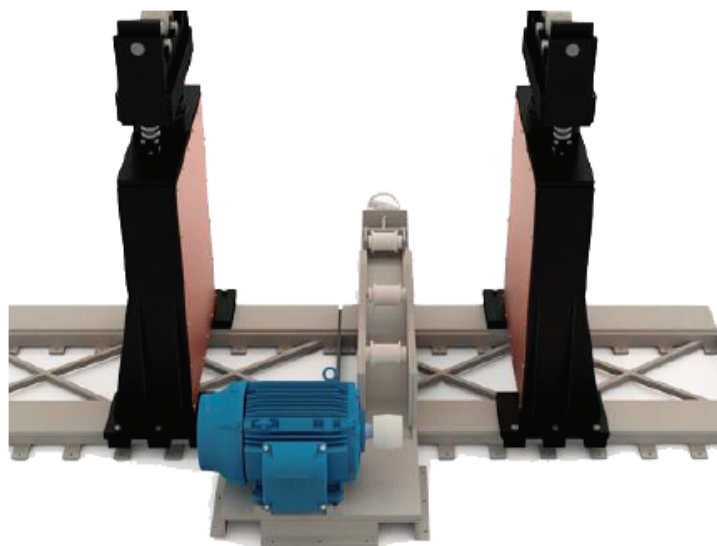
system with a pitch up to 10°, this way the EI-10T gets aligned automatically with the shaft to prevent distortion on the shaft's surface.

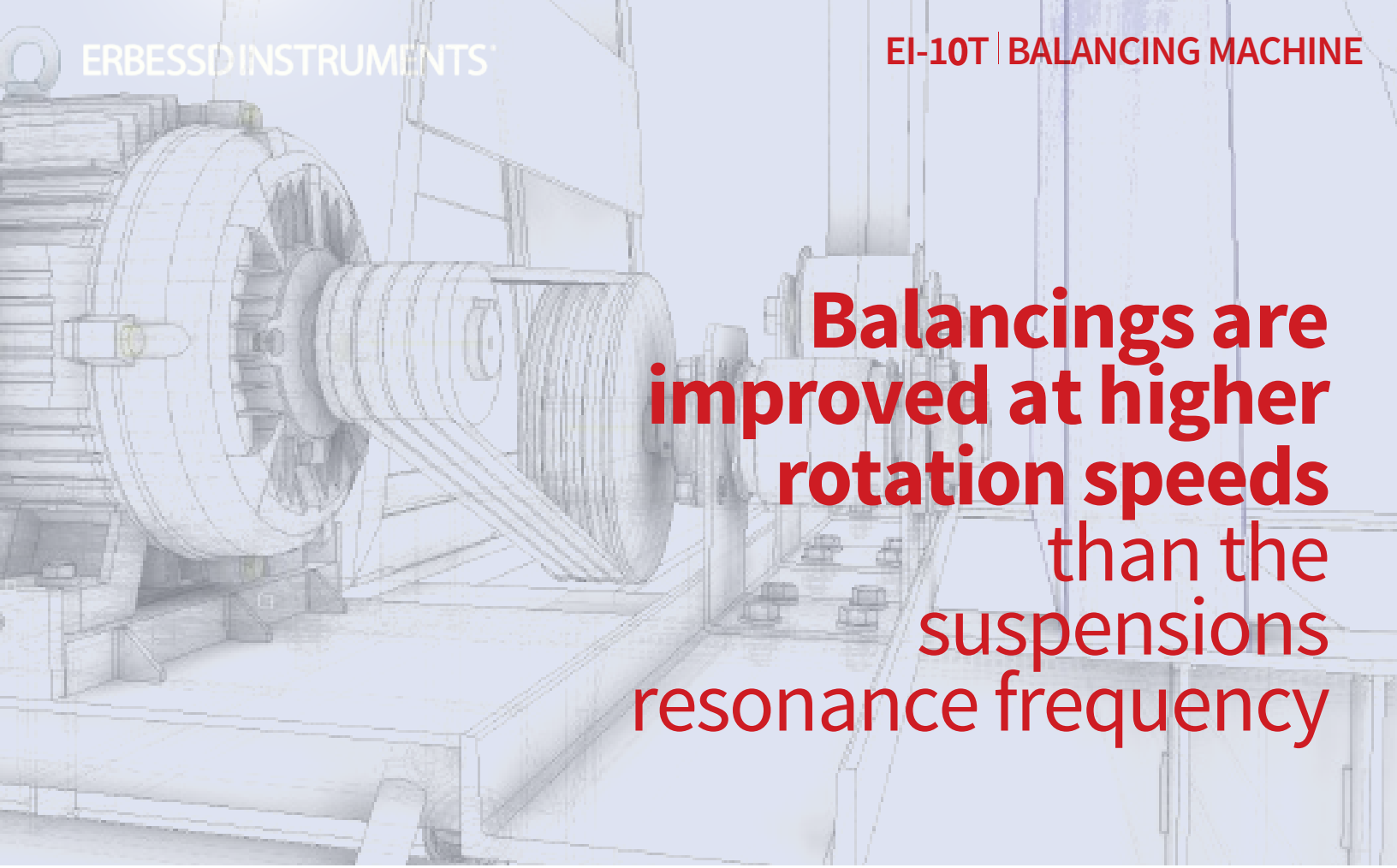


The rotation of the workpiece is carried out using a high capacity AC motor and a transmission system tensioned manually with a flat belt pulley set. The EI-10T includes 2 accelerometers, 1 laser tachometer and balancing software with no-trial-mass balancing function, so the balancing machine gives the optimal performance and accurate balancings.

Features

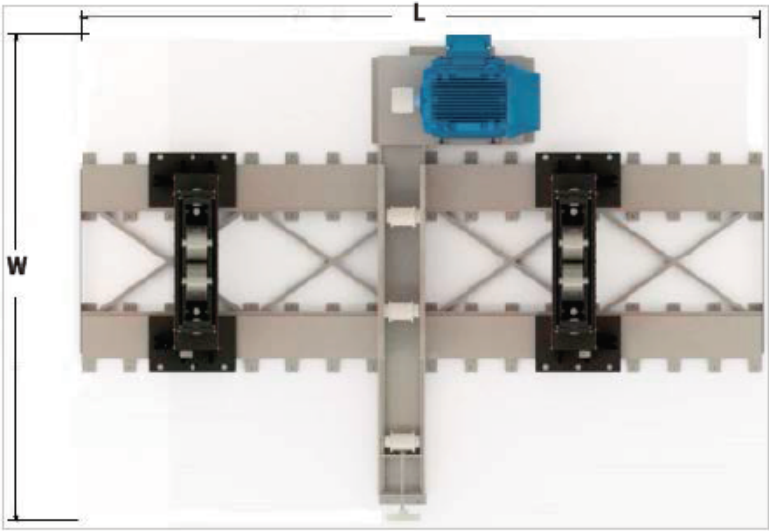
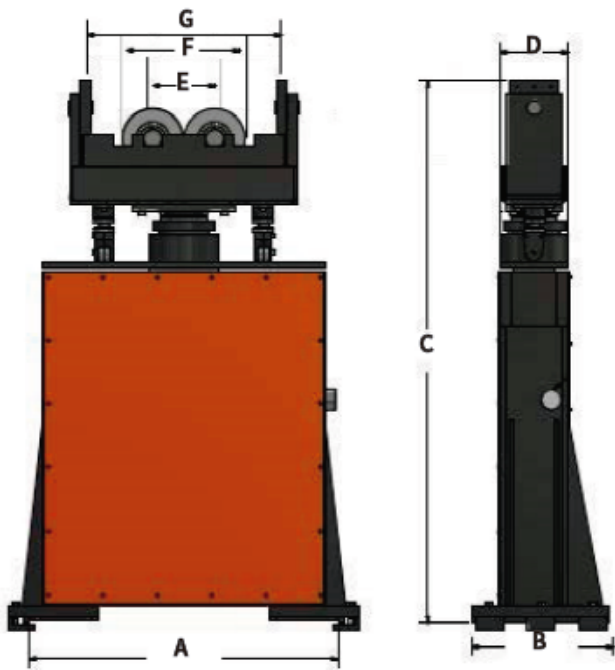
- Symmetric load 10Tons.
- 2 plane balancing.
- Variable speed with inverter.
- Adjustable pulley position.
- 3 liberty axis for each pedestal.
- Manual adjust for transmission.
- Supports distance are easy to adjust.
- Soft bearing suspensions to avoid vibration transmission to the floor.
- Axial supports.
- Easy calibration.





Balancings are improved at higher rotation speeds than the suspensions resonance frequency

Technical Specs



Max load	10, 000 kg (22046 lb) Pair / 5000 kg (11 034 lb) Each
Dimensions (L x W x H)	4000 x 2500 x 1700 mm (157.4 x 98.4 x 66 in)
Weight	1100 kg (2425 lb) aprox.
Max rotor diameter (adaptable)	2200 mm (86.6 in)
Max radial displacement	76.2 mm (3 in)
Min / Max shaft diameter	127mm/ 533 mm (5/21 in)
Min / Max shafts lenght	787 mm (31 in) / 6 680 mm (263 in)
Max axial load	1.4 kN (315 lbf)
Sensitivity / Accuracy	100 mV/g / ±0.01 mm/s
Lock system / Elevation screw	Yes / Yes (25 mm)
Power transmission	Flat Belt
Lubrication	Type-I (manual)
ISO 2953 Unbalance reduction per sequence	97%
Residual unbalance	2 gmm / 100 kg rotor
Motor electrical features	14.90 kW (20 hp)
Speed Driver	440 V, 3 phases, 6 poles Included, 14.9 kW AC (20 hp)
Control Module	option

Dimensions Table

A	1270 mm / 50"	G	552mm / 21.75"
B	455 mm / 18"	W	2500 mm / 98.4"
C	1670 mm / 65.75"	L	4000 mm / 157"
D	203 mm / 8"	(2 bench frames 2m long)	
E	203 mm / 8"		
F	330 mm / 13"		

DigivibeMX M10 is an easy-to-use system that fits perfectly with the EI-10T allowing to perform balancings in 2 planes without trial mass.



Software 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.

*Consult DigivibeMX M10 Datasheet

Hardware Specs

2 accelerometers and 1 optical sensor included with the EI-10T (laptop or tablet not included).

Control Module¹

This easy-to-move module integrates all control elements of the balancing machine: computer equipment with touch screen display, start-up switch and speed driver. It also has lockers to store tools and counter weights required during the balancing job.

(1) Ask for prices and configurations



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

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