ERBESSD RELIABILITY™

DigivibeMX®

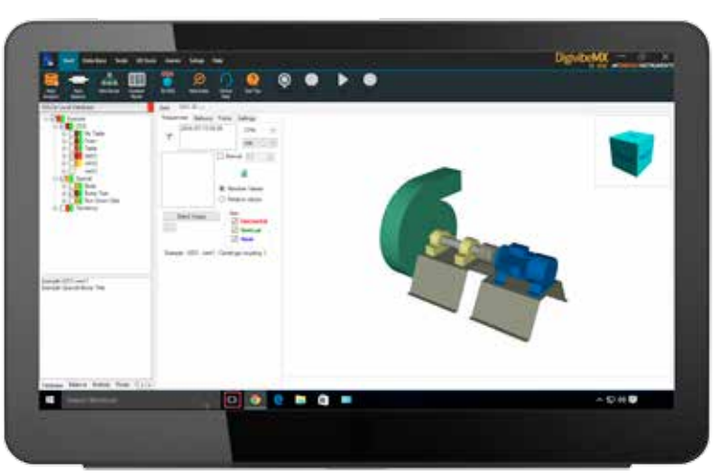
Vibration Analyzer, Data Collector &
Dynamic Balancer

The most complete, reliable and productive **Dynamic Balancing** and **Vibration Analysis Device**

Only for illustrative purposes. Computer is not included.

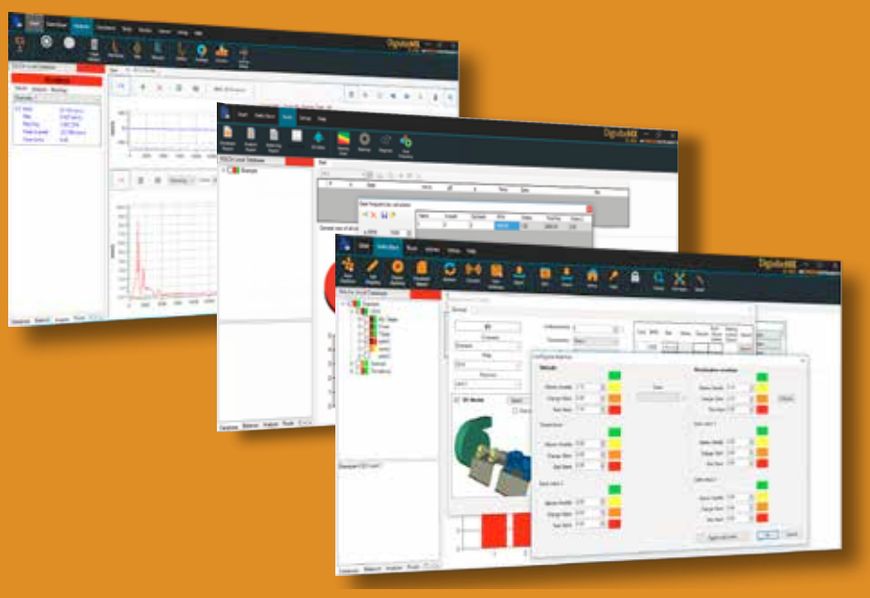
Overview

The DigivibeMX platform is the most complete, realiable and productive device for dynamic balancing, vibration analysis and portable data collection. Digivibe allows you to do simple and complex analysis in both on and off route modes. The Balancing functions can be used in the field and on balancing machines. The intuitive interface is perfect for novice and expert users alike.



Functions

- 3D ODS Analysis
- FFT Spectra 3D Waterfall
- Dual Channel Functions
- FFT Spectra with 2 millon lines of resolution
- Lines and columns tendency (octaves)
- Statistical machinery condition
- Code Bar generator
- Easy-to-use and understand color coding
- Intelligent Analysis
- Large Bearing Database
- Synchronize with other users easily
- Export to ASCII, WAV, UFF-58
- Gear calculator
- 4 Channel, Trial Capable Option
- Analysis and Balancing Reports (CSS, Word, Excel)
- Balancing in the field in 1 or 2 planes
- Automatic Balancing Reports
- 12 functions in the balancing calculator
- Balancing without trial weights



Advanced, but simple

With a single click you can easily analyze machine defects and correct machine imbalance.

DigivibeMX M30 Vibrations Analyzer, Data Collector and Dynamic Balancer	**DigivibeMX M20** Vibrations Analyzer and Data Collector	**DigivibeMX M10** Balancer for 1 or 2 planes
●	●	
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Take a shot. Get the data.

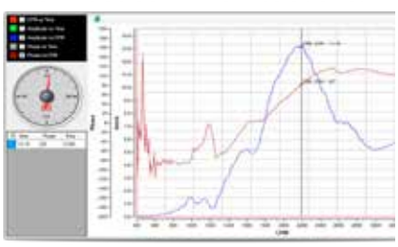
DigivibeMX can easily identify your machines using our embedded barcode generator and reader.

[1]Available at M20 & M30

Advanced Analysis M30 M20

Advanced features allow you to diagnose complex problems in machinery and structures avoiding high costs of downtime, collateral damage, and unplanned repairs.

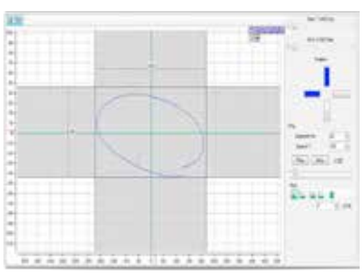
The most common tool are:



- Signal in time FFT
- FFT Pointers
- CPM, Hz, Orders
- FRF & Bump Test
- Waveform Analysis-
- Transient Capture

Dual Channels M30 M20

The Dual Channel functions offers advantages, because it save time for the data collectiom and obtains information that can't be achieved with one channel analysis.



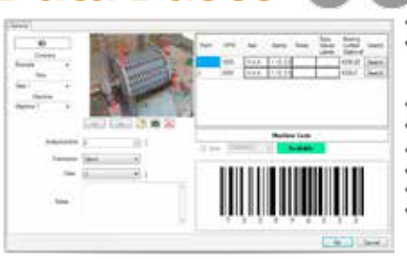
- **Orbits**
- **Cross Power Spectrum**
- **Transference function**
- **Coherence** function
- **Bode**
- **Nyquist**
- **Phase Analysis**

Bearings and Gears M30 M20

DigivibeMX has a expandable data base with failures frequencies of more than 20,000 bearings. Also includes functions for frequencies calculation and analysis of gears.

Designation	Type	Internal diameter	External diameter	Width	Dynamic load rating kN	Static load rating kN	Fatigue load limit kN	Reference speed
623	1 HB	3	10	4	0.54	0.18	0.007	130000
623-2RS1	1 HB	3	10	4	0.54	0.18	0.007	-
623-2Z	1 HB	3	10	4	0.54	0.18	0.007	130000
623-RS1	1 HB	3	10	4	0.54	0.18	0.007	-
623-Z	1 HB	3	10	4	0.54	0.18	0.007	130000
618/4	1 HB	4	9	2.5	0.54	0.18	0.007	140000
628/4-2Z	1 HB	4	9	3.5	0.54	0.18	0.007	140000
638/4-2Z	1 HB	4	9	4	0.54	0.18	0.007	140000
619/4	1 HB	4	11	4	0.715	0.232	0.0098	130000
619/4-2Z	1 HB	4	11	4	0.715	0.232	0.0098	130000
604	1 HB	4	12	4	0.806	0.28	0.012	120000
604-2Z	1 HB	4	12	4	0.806	0.28	0.012	120000
604-Z	1 HB	4	12	4	0.806	0.28	0.012	120000

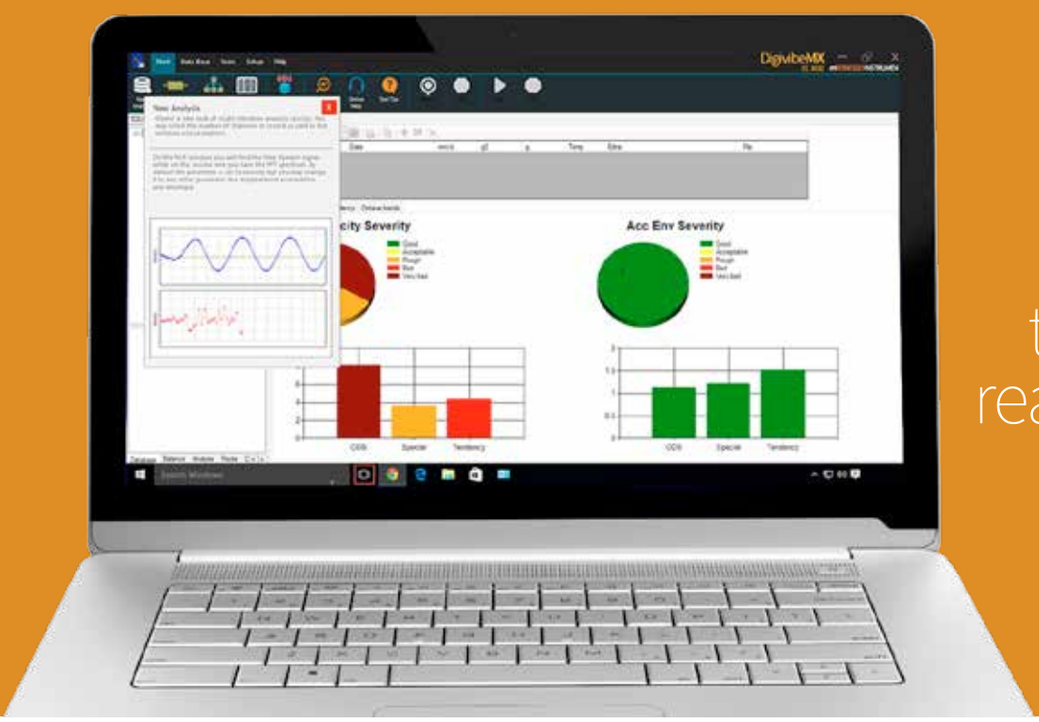
Machinery Data Bases M30 M20



- Name, area & company.
- Measure points
- Kind of coupling
- Iso Class

Compatibility M30 M20

- ASCII* Format
- UFF58 Files
- ANL BAL
- WAV (stethoscope)



Functions and Tools

that allows you to diagnose the real status of your machines.

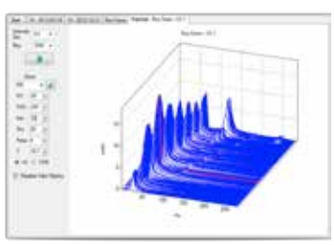
Predictive Analysis Tools M30 M20

ESPECTRO EN CASCADA

DigivibeMX allows the users to complete analysis of all kinds of machinery in the data base with tools like:

- Machinery database and routes
- Database with more than 20,000 bearings & a gear calculator
- Speeds Interpretation tools and diagnostics
- Cascade Spectra
- 3D ODS

FFT Spectra M30 M20 M10

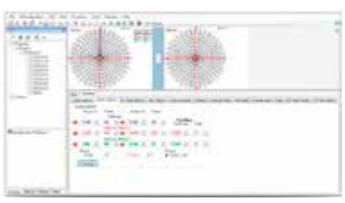


The spectral analysis tools in DigivibeMX are based on the FFT algorythm, able to measure very low frequencies (0.4 Hz) and up to 30kHz. The precision of the spectra adjust based upon the point definition and can rearch several million lines of resolution

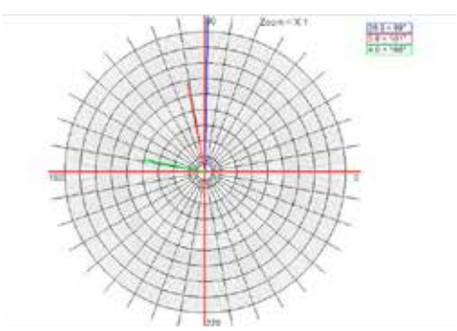
- Spectra with millions of resolution lines
- Spectrogram
- 3D Spectra
- Pointers
- Zoom In - Zoom Out
- Markers
- FFT Averaging

Dynamic balancing in 1 and 2 planes M30 M10

- **Balancing without trial weights**
- **2 Polar graph**
- **Calculator with 12 functions:**

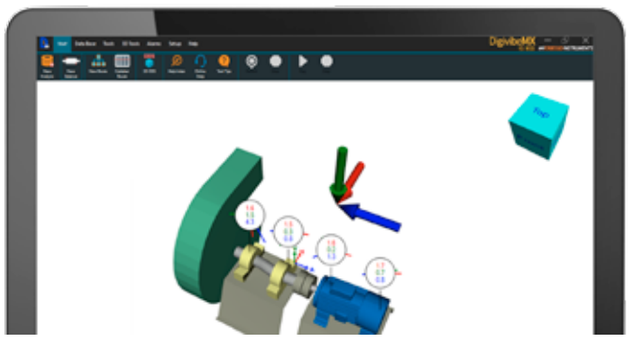


- Add or remove weight
- Separate or combine weights
- Trial weights
- Balancing in series (without trial weights)
- Drills calculation
- Residual Imbalance
- Degree of quality
- Intellegent Machine Wizard
- Balancing Report



ODS Functions

M30 M20



ODS analysis is now a easy task. Create your 3D model in 3D design software (3DS Max, Blender, Solid Works, Windows 3D Builder that comes free with Windows 10 etc.) import the model to the DigivibeMX to generate a customized ODS analysis. The phase analysis also calculates the coherence between signals, the cross power and the transference to ensure that all of the recorded signals are consistent. Also all the 3D simulations can be exported to AVI video or to an animated graphic GIF.

3D Cascade

M30 M20

One FFT graphic in cascade (waterfall) is a spectral representation variable in time (creating a 3D drawing) that shows how the density of a signal vary as time passes. DigivibeMX includes a tool that generates this graph easily with the ability to rotate and zoom in with the mouse or your finger like in other 3D software.

System requirements

Requirements of the laptop/tablet where Digivibe its going to be installed:

- Processor 1.6 GHz or superior
- 1 GB RAM or superior
- Windows 7 or superior (supports Windows 8.1 Windows 10*)
- SVGA Monitor or superior
- “Touch” mode for touch screen
- 300 MB free disk space
- 1 USB 2.0 port

*Does not work with Windows RT.

DigivibeMX includes:

2-Channel interface

- 4-pin connectors (1-A, 1-B, 2) for 24V accelerometers
- 5-pin connector (Op) for Optical Sensor
- Selector button (Ch 1 / Ch 2)
- Cable with USB connector (15cm)
- Weight 230g
- Dimensions (mm): 60(d) x 90(w) x 30(h)

Accelerometer

- Dinamyc Impact Shock: 50g peak (max shock 5000g)
- Freq. response (+/- 3dB): 0.32 - 13000 Hz
- Freq. response (+/- 5%): 2 - 10000 Hz
- Sensitivity: 100 mV/g +/- 10%
- Transverse sensitivity: < 5%
- Power supply: 18-30 V / 3-8 mA
- Short-circuit protection
- Operation temp.: −10 - 50 °C
- Protection grade: IP 67, III
- Impact resistance: IEC 60028-27
- Standard 2-Pin MIL connector

Magnetic Base
Weight 50g
Stainless steel body

Laser Optical Sensor

- Analogic output / Range: 1 - 5000 Hz
- Power and current supply: 5V , 20 - 30 mA.
- Voltage drop: <0.4 V
- Short circuit, Reverse Voltage and Over-Voltage (15V for 1min) protection
- Operation distance: up to 15 m
- Operating temp: −10 - 50 °C
- Storing temp: −40 - 85 °C
- Protection grade: IP 67, III
- Impact Resistance: IEC 60028-27
- Weight 60 g
- Nylamid body

Cables

Calibrator

Soft Case & Magnetic Base

*Solo M10 y M30

Installation CD & User Manual

Software highlights

- **Displacement: 0.5 um to 30 mm (0.02 to 1200 mils)**
- **Velocity: 0.002 to 3000 mm/s (0.0001 to 120 in/s)**
- **Acceleration: 0.0001 to 100 G's PP**
- **Lines of resolution: > 1,000,000**
- **FFT windows: Rectangular, Hanning, Hamming, Flaptop, Blackman, CosSum, Bartlett, Kaiser**
- **Measures: Peak, Peak to Peak, RMS**

Accessories

Triaxial Acelerometer

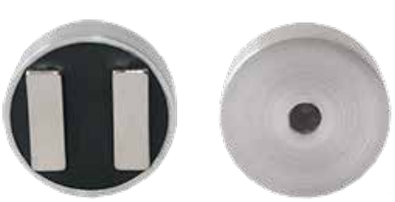
Is the ideal sensor to measure simultaneously*the X, Y , Z axis for 3D analysis, dual functions and data collector in routes.

*Requires a 4 channel interface

Digital Scale

200 g, 500 g y 1000 g

Magnetic base- for acelerometer



4 Channel interface

4 Channel Interface measures with a max sample of 44100 Hz. Supports 4 acelerometers monoaxials or 1 triaxial acelerometer and 1 opticalsensor
Weight: 220 g. Dimensions:129 x 84 x 19 mm.

EI SERIES
Balancing Machines

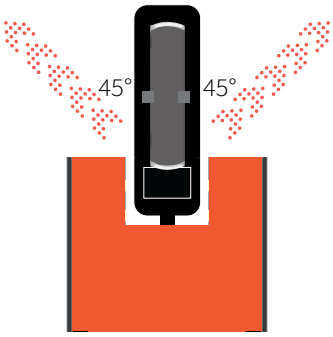
The most complete option for your balacing needs.

Designed to measure and eliminate the imbalance mass of any rotor.

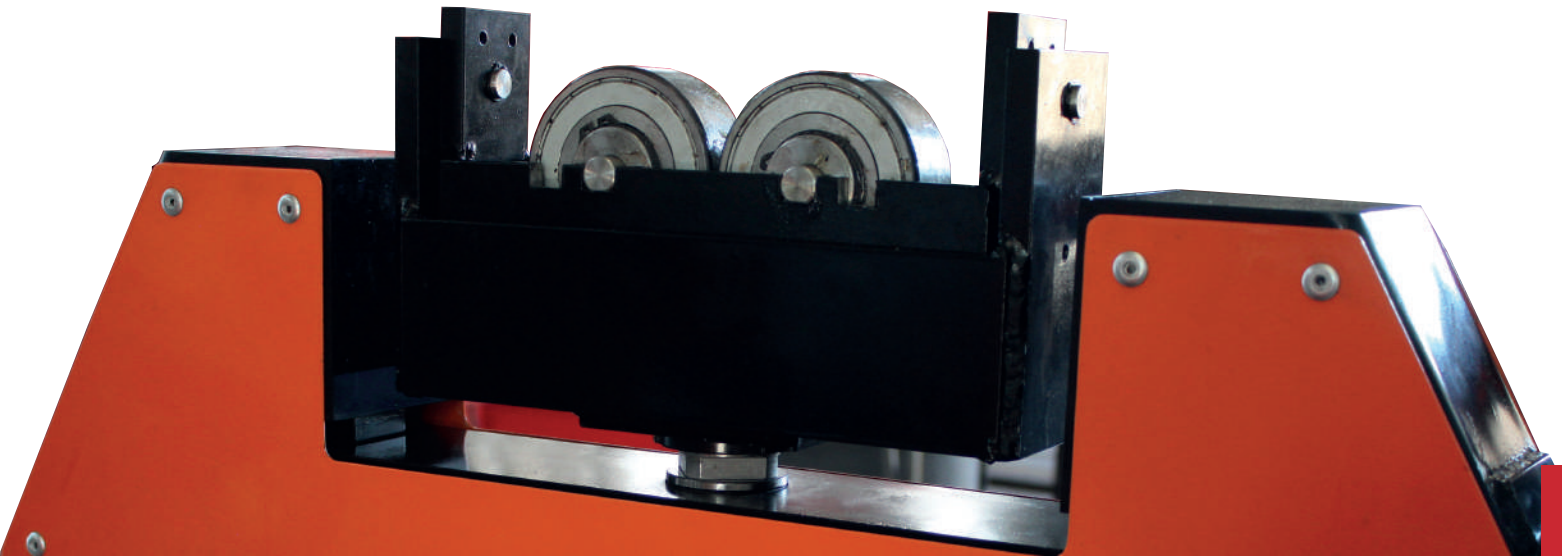
Our balancing machines detect the center of mass through vibration sensors to give you the most precise results.

Every balancing machine in the **EI Series** has a **Soft Bearing Suspension (SBS)** built in.

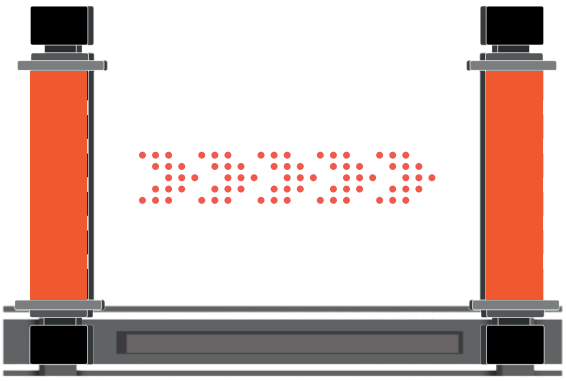
The **SBS** technology guarantees the most reliable balancing with the easiest to use software.



The **SBS** base has the capability to rotate itself within it's axis and has an **horizontal 45° tilt**. These features protect the poles and provide maximum **durability.**

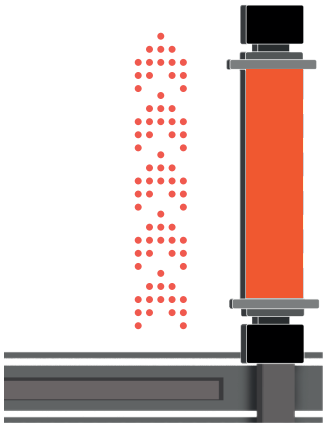


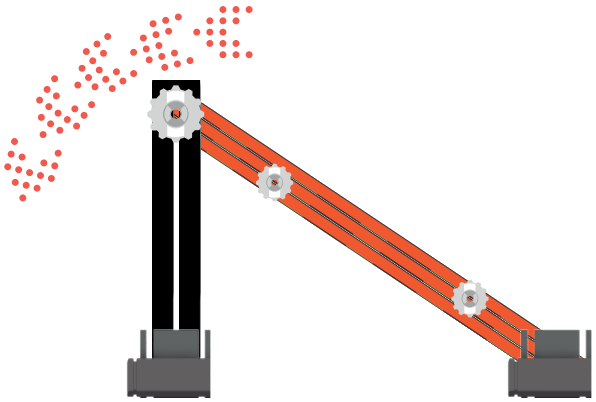
ADAPTABILITY LIKE NO OTHER



The EI Series **pedestals can be adjusted** to adapt to a wide variety of shafts.

The **height** of the base **can** also **be changed** to fit rotors with different diameters.





And the **transmission adjuster** will help you achive the perfect height and tension between the bench and your rotor.

EI-30 is a high precision horizontal balancer ideal for high speed turbochargers, as well as for other low weight rotors.

The low inertia reduces vibration resistance and increases the sensitivity and accuracy of the balancing process.

TECHNICAL SPECIFICATIONS

Dimensions:
725 x 456 x 595 mm

Sequencial unbalance reduction:
95%

Weight:
25 kg (55 lb)

Max rotor diameter:
508 mm (20 in)

Max weight per base:
15 kg (33 lb)

Power transmission:
Flat belt

Max journal diameter:
88 mm (3.4 in)

Max SBS displacement:
11 mm (0.43 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
0.1 kg(0.6 lb)
15 kg (33 lb)

Min/Max distance between supports:
15 mm (0.59 in)
465 mm (18.3 in)

Motor features:
0.12 W (1/6 HP)
90 VDC

Speed driver (VFD):
Included

The EI-150 is ideal for all types of rotating parts up to 150kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-150 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
1010 x 868 x 501 mm

Sequencial unbalance reduction:
95%

Weight:
79 kg (174 lb)

Max rotor diameter:
660 mm (26 in)

Max weight per base:
75 kg (165 lb)

Power transmission:
V Band, Type A

Max journal diameter:
180 mm (7 in)

Max SBS displacement:
20 mm (0.78 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
0.5 kg (1.1 lb)
75 kg (165 lb)

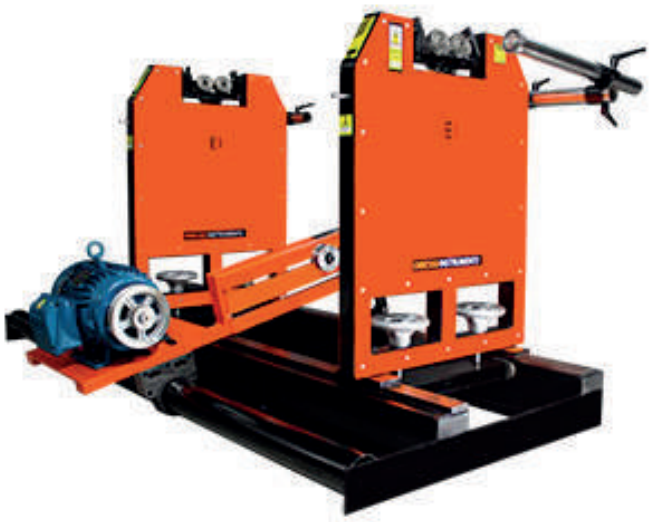
Min/Max distance between supports:
60 mm (132 in)
831 mm (1832 in)

Motor features:
1.5 kW (2 hp)
220 / 440 V, 3 phases, 4 poles

Speed driver (VFD):
Included

The EI-300 is ideal for all types of rotating parts up to 300kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-300 are manufactured **tough** and **light** to reduce mechanical inertia.



TECHNICAL SPECIFICATIONS

Dimensions: 2020 x 1007x 1275 mm	**Sequencial unbalance reduction:** 95%	**Weight:** 302 kg (666 lb)
Max rotor diameter: 670 mm (26 in)	**Max weight per base:** 150 kg (330 lb)	**Power transmission:** V Band, Type A
Max journal diameter: 160 mm (6.2 in)	**Max SBS displacement:** 35 mm (1.3 in)	**Lubrication:** Manual
Precision: ±0.01 mm/s	**Accelerometer Sensitivity:** 100 mV/g	**Residual unbalance:** 2 gr·mm/ 100kg rotor
Min/Max symmetric load: 1 kg (2.2 lb) 150 kg (330 lb)	**Min/Max distance between supports:** 190 mm (7.4 in) 1790 mm (70.4 in)	**Motor features:** 2.24 kW (3 hp) 220 / 440 V, 3 phases, 4 poles
	Speed driver (VFD): Included	

The EI-500 is ideal for all types of rotating parts up to 500kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-500 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
2020 x 1007x 1275 mm

Sequencial unbalance reduction:
95%

Weight:
302 kg (666 lb)

Max rotor diameter:
670 mm (26 in)

Max weight per base:
250 kg (550 lb)

Power transmission:
V Band, Type A

Max journal diameter:
160 mm (6.2 in)

Max SBS displacement:
35 mm (1.3 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
1 kg (2.2 lb)
250 kg (550 lb)

Min/Max distance between supports:
190 mm (7.4 in)
1790 mm (70.4 in)

Motor features:
2.24 kW (3 hp)
220 / 440 V, 3 phases, 4 poles

Speed driver (VFD):
Included

The EI-1000 is ideal for all types of rotating parts up to 1000kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-1000 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
2020 x 1382 x 1363 mm

Sequencial unbalance reduction:
95%

Weight:
445 kg (982 lb)

Max rotor diameter:
1650 mm (65 in)

Max weight per base:
500 kg (1100 in)

Power transmission:
Flat belt

Max journal diameter:
225 mm (8.8 in)

Max SBS displacement:
22 mm (0.9 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
3 kg (6.6 lb)
500 kg (2200 lb)

Min/Max distance between supports:
250 mm (9.9 in)
1524 mm (60 in)

Motor features:
3.73 kW (5 hp)
220 / 440 V, 3 phases,
4 poles

Speed driver (VFD):
Included

The EI-2000 is ideal for all types of rotating parts up to 2000kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-2000 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
2020 x 1382 x 1363 mm

Sequencial unbalance reduction:
95%

Weight:
445 kg (982 lb)

Max rotor diameter:
1650 mm (65 in)

Max weight per base:
1000 kg (2200 in)

Power transmission:
Flat belt

Max journal diameter:
225 mm (8.8 in)

Max SBS displacement:
22 mm (0.9 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
5 kg (11 lb)
1000 kg (2200 lb)

Min/Max distance between supports:
250 mm (9.9 in)
1524 mm (60 in)

Motor features:
5.59 kW (7.5 hp)
220 / 440 V, 3 phases,
4 poles

Speed driver (VFD):
Included

The EI-3000 is ideal for all types of rotating parts up to 3000kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-3000 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions: 2020 x 1382 x 1363 mm	**Sequencial unbalance reduction:** 95%	**Weight:** 480 kg (1058 lb)
Max rotor diameter: 1650 mm (65 in)	**Max weight per base:** 1500 kg (3307 lb)	**Power transmission:** Flat belt
Max journal diameter: 225 mm (8.8 in)	**Max SBS displacement:** 22 mm (0.9 in)	**Lubrication:** Manual
Precision: ±0.01 mm/s	**Accelerometer Sensitivity:** 100 mV/g	**Residual unbalance:** 2 gr·mm/ 100kg rotor
Min/Max symmetric load: 5 kg (11 lb) 1500 kg (3307 lb)	**Min/Max distance between supports:** 250 mm (9.9 in) 1524 mm (60 in)	**Motor features:** 5.59 kW (7.5 hp) 220 / 440 V, 3 phases, 4 poles
	Speed driver (VFD): Included	

The EI-4500 is ideal for all types of rotating parts up to 4500kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-4500 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
3000 x 1750 x 1325 mm

Sequencial unbalance reduction:
95%

Weight:
520 kg (1146lb)

Max rotor diameter:
1800 mm (71 in)

Max weight per base:
2250 kg (4960 lb)

Power transmission:
Flat belt

Max journal diameter:
280 mm (11 in)

Max SBS displacement:
40 mm (1.5 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
100 kg (220.4lb)
2250 kg (4961 lb)

Min/Max distance between supports:
200 mm (7.8 in)
-- mm (-- in)

Motor features:
7.4 kW (10 hp)
220 / 440 V, 3 phases, 4 poles

Speed driver (VFD):
Included

The EI-6000 is ideal for all types of rotating parts up to 4500kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-6000 are manufactured **tough** and **light** to reduce mechanical inertia.

TECHNICAL SPECIFICATIONS

Dimensions:
3000 x 1750 x 1325 mm

Sequencial unbalance reduction:
95%

Weight:
520 kg (1146lb)

Max rotor diameter:
1800 mm (71 in)

Max weight per base:
3000 kg (6613 lb)

Power transmission:
Flat belt

Max journal diameter:
343 mm (11 in)

Max SBS displacement:
38 mm (3.1 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
150 kg (330 lb)
3000 kg (6613 lb)

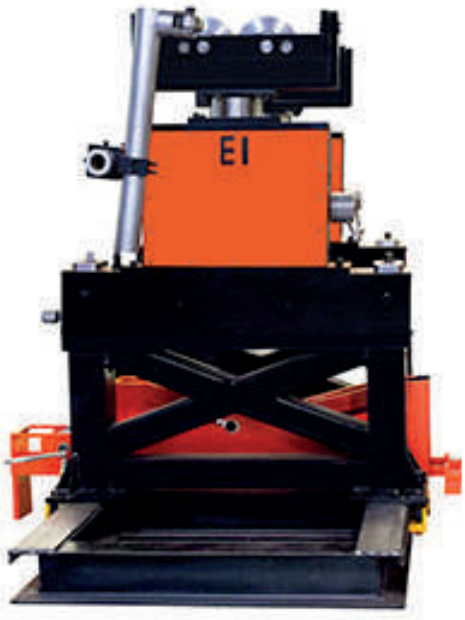
Min/Max distance between supports:
500 mm (7.8 in)
-- mm (-- in)

Motor features:
7.4 kW (11 HP)
220 / 440 V, 3 phases, 4 poles

Speed driver (VFD):
Included

The EI-10T is ideal for all types of rotating parts up to 10000kg as rollers, motor rotors, crankshafts, mills and many others.

The floating bases of the EI-10T are manufactured **tough** and **light** to reduce mechanical inertia.



TECHNICAL SPECIFICATIONS

Dimensions:
4095 x 1566 x 2258 mm

Sequencial unbalance reduction:
95%

Weight:
1811 kg (3992 lb)

Max rotor diameter:
~1750 mm (68.9 in)

Max weight per base:
5000 kg (11023 lb)

Power transmission:
Flat belt

Max journal diameter:
520 mm (20.5 in)

Max SBS displacement:
140 mm (5.5 in)

Lubrication:
Manual

Precision:
±0.01 mm/s

Accelerometer Sensitivity:
100 mV/g

Residual unbalance:
2 gr·mm/ 100kg rotor

Min/Max symmetric load:
500 kg (1102 b)
5000 kg (11023 lb)

Min/Max distance between supports:
700 mm (27.56 in)
--- mm (--- in)

Motor features:
11.1 kW (15 hp)
220 / 440 V, 3 phases, 4 poles

Speed driver (VFD):
Included