

iRotorBalancer App (iPad)

Vibration Analysis and Rotor Balancing



iRotorBalancer is a technical tool for field balancing of rotating machinery in single-plane and two-planes. The iPad application connects to the Motionics 2-CH DAQ box mounted on iPad case, collects the vibration amplitude and phase with an accelerometer and a laser tachometer, and calculates the correction balancing weights and their angular positions for the testing machines.

After each balancing work, the user can quickly generate a PDF test report in iRotorBalancer App to include test information, balancing data, machine vibration before and after balancing, map location, pictures from library or camera, signature and notes. Test report can be saved locally in the plant-machine structured test report manager for future evaluation or exported via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive, OneDrive, etc.).



Single-Plane and Two-Plane Balancing

iRotorBalancer uses different methods to cover both single-plane and two-planes balancing for different machine configurations.

- Single-Plane balancing using the Vector-Method (Amplitude & Phase Measurements)
- Single-Plane balancing using the Four-Runs-Method (Amplitude Measurement)
- Two-Plane inbound balancing using the Influence Coefficients Method (Amplitude & Phase Measurements)
- Two-Plane overhung balancing (Amplitude & Phase Measurements)

Various Balancing Tools

iRotorBalancer provides various handy tools to make balancing work easy even for users without any experience.

- Real-time signal waveform and FFT spectrum display
- Automatic select 1x peak amplitude and phase
- Polar plot to show graphic location of trial and correction weights
- Convenient calculator to estimate trial weight
- Angular mass distribution calculator to help distribute mass if correction weight location is not available
- Weight removal calculator to help determine drill bit size and depth for material removal
- Interactive permissible residual imbalance determination to quickly evaluate balancing quality

Balancing Report

Users can easily create PDF report after each balancing work in the App and save reports in local report manager for future reference.

- PDF report with test information, balancing data, machine vibration before and after balancing, map location, pictures from library or camera, signature and notes
- Local report manager to save test reports
- PDF report export via AirDrop, Email, wireless printing and cloud storage (Dropbox, Google Drive, OneDrive, etc)

