



# HIGH SPEED BALANCING

## BALANCED PERFORMANCE IS BETTER PERFORMANCE

Excessive vibration from unbalanced rotors can result in a variety of productivity-limiting problems, including expensive downtime. At our onsite high-speed balance bunker, we correct unbalance and minimize vibration under field-like operating conditions; producing field-ready performance, reducing problems at start-up and helping you avoid costly field balancing.

### Why High Speed Balance

Low speed balancing is necessary before any rotor runs in service after manufacturing, repair, or long-term service to ensure it behaves in agreement with the rotor dynamic analysis. Performing a high-speed balance provides further confirmation. High-speed balancing evaluates rotor performance in a simulated service environment for behavior study. By spinning the rotor at operating speed, the effects of the remaining unbalance left after low speed balance is studied and corrected further ensures correct rotor behavior. Using both low and high-speed balance minimizes potential failure modes caused by rotor vibration.

### MCO-I's high-speed balance pit features

- Rigid, non-deflecting pedestals that won't alter rotor balance behavior, ensuring that the test conditions are as close as possible to the field.
- High stiffness and high sensitivity so we can perform both low and high speed precision balancing while minimizing handling.

- Ability to balance using tilt pad bearings
- Computer systems that provide real time evaluation data for fast, yet careful, analysis and decision-making. Easy networking enables cost-efficient remote witness.

### Remote Monitoring

Our state-of-the art control room features balancing software and data analytics with PI server access, allowing you the ability to monitor balance results live, remotely. A customer lounge allows you private space when witnessing a rotor balance onsite.

### ROTOR DIMENSIONS

Rotor Weight	27,500 lb
Rotor Max Diameter	5.5 ft.
Rotor Length	19.5 ft.
Journal Bearing Diameter	20 in.
Max Bearing Distance	17.1 ft.
Minimum Bearing Distance	3.3 ft.

### PERFORMANCE DATA

Rotor Speed	20,000 rpm
Driving Power	1,070 HP
Minimum Achievable Residual Unbalance	.2 oz-in/lb
Bearing Oil Flow	132 gal/min
Containment Evacuation Time	11 minutes



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