LORD RealTime™ Fan Balancing Systems

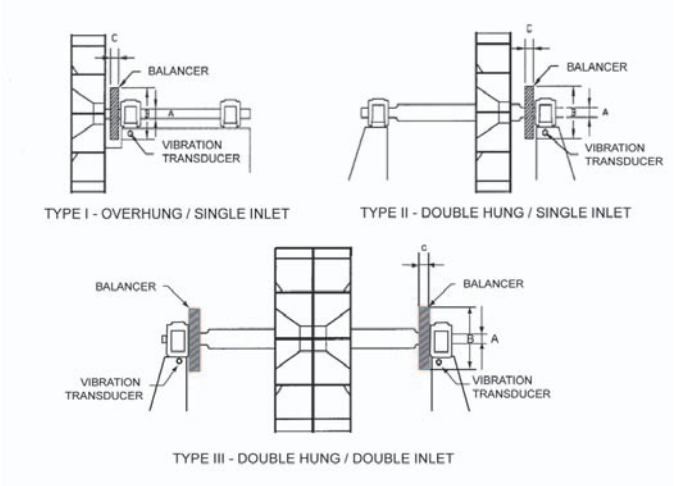
For Centrifugal Induced Draft/Forced Draft and Axial-Vane Fans

LORD RealTime™ Fan Balancing Systems

LORD Fan Balancing Systems are comprised of sensors, a controller, and one or more balancers that make trim balance corrections to reduce fan vibration while the fan is running, at any operating speed or load. The system is able to compensate for variable balance conditions due to material build-up, temperature variations and changing process conditions. Balance corrections are made automatically or manually, minimizing vibration caused by unbalance in seconds.

How RealTime™ Fan Balancing Systems Work

- One or more balancers is permanently fixed on the rotating shaft, and each balancer is surrounded by a stationary coil used to transmit power into the balancer(s)
- Balance corrections are made based on "Sense, then Adjust":
- Sensors monitor vibration levels and transmit information to the controller
    - When vibration exceeds a preset high limit or alarm, the controller signals the coil(s) to pulse power to the balancer(s) to make a balance correction
    - The correction is made by the repositioning of two counterweighted rotors relative to each other, located inside the rotating balancer(s)
    - Vibration levels are reduced as the rotors are moved until the controller senses that vibration levels have dropped below a preset low limit
    - The rotors are repositioned in seconds to complete the trim balance correction while the fan continues operating without a forced shutdown
    - The system monitors and controls 1X (shaft synchronous) vibration levels



Key Systems Benefits

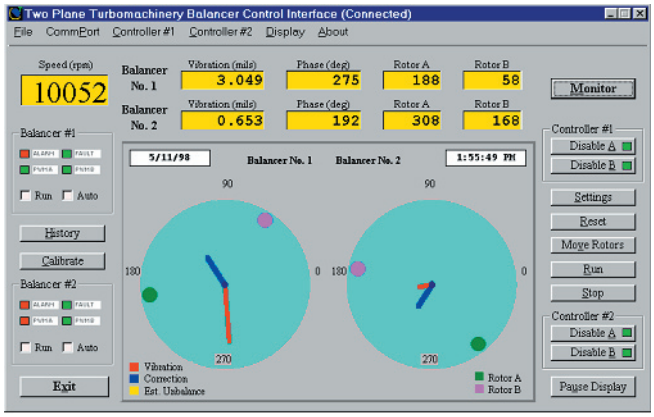
- Increases production uptime
- Optimizes equipment life (bearings, motors, seals, etc.)
- System fits with existing condition monitoring systems
- Maximizes asset availability
- Rapid payback on balancing system and installation cost
- "I don't get calls anymore at 2 AM"

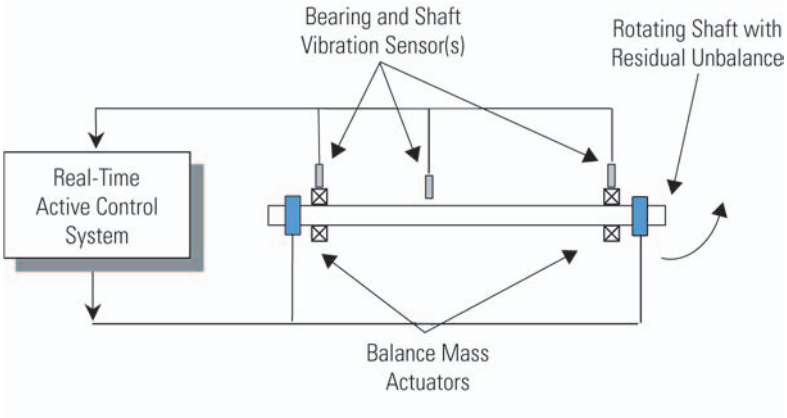
Features of LORD RealTime™ Balancing Systems

- Trim balances equipment while operating, without a forced shutdown
- Operates in either Automatic or Manual modes
- Eliminates multiple starts/stops necessary for manual balance corrections
- Includes continuous monitoring and diagnostics, on-site or remote
- Fail-safe system - even if power is lost the balancer maintains last correction

System Health And Condition Monitoring Features

- Constantly monitors and indicates equipment vibration levels
- Stores unbalance history and past balance correction data
- Measures and indicates amount and location of correction capacity used
- Windows based software interface provides graphical interactive displays

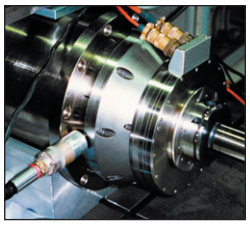




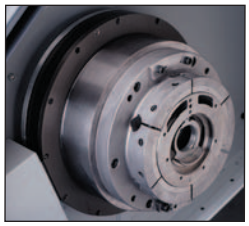
Proven Solutions

LORD Corporation has developed RealTime™ Balancing solutions for the toughest vibration-related problems in a variety of industrial applications

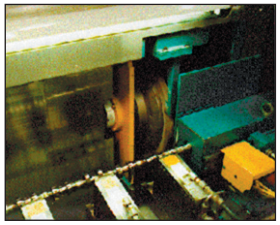
High Speed Machining



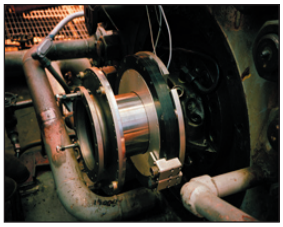
Turning Centers



ID/OD Grinding



Turbomachinery



ID/FD Fans

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