

## SpectraQuest introduces the Machinery Fault Simulator (MFS)

- ***The best tool for learning machinery diagnosis and predictive maintenance***
- ***Simple methods for introducing controlled and calibrated faults.***
- ***Study the vibration signatures of common machine faults***
- ***Smart design makes the simulator robust and easy to use***
- ***Bench top machine for hands-on training and skill sharpening***
- ***Over forty application specific optional kits are available for detailed in-depth investigation of specific vibration phenomena and machinery faults***
- ***Available in various packages to fit customer requirements***



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SpectraQuest introduces Machinery Fault Simulator (MFS), an innovative tool to study the signatures of common machinery faults without compromising production schedule or profits. Condition-based predictive maintenance (PdM) is a reliable, cost-effective technique for monitoring and diagnosing machinery faults before they irreversibly damage your machinery and cause breakdowns that threaten to undermine product quality, delivery and overall customer service. The success of any PdM program ultimately depends on how accurately and easily the vibration spectra, waveforms and phase relationships can be analyzed and understood. The MFS is a perfect tool to enhance your understanding of predictive maintenance and of machinery fault signatures. This bench-top system has a spacious modular design featuring versatility, operational simplicity, and robustness. Each component is machined to high tolerances so it can be operated without conflicting vibration. Various faults can be introduced either individually or jointly in a totally controlled environment, making the MFS the best tool available for learning machinery diagnosis.

With the MFS, controlled experiments and offline training can be performed to understand the real world vibration spectra and interaction between dynamic stiffness, resonance and speed of a machine. This allows the technicians and maintenance professionals to develop expertise to diagnose industrial machinery problems, without adversely affecting plant production and profits. The most comprehensive device of its kind on the market, the MFS meets the needs of a broad range of vibration analysts, from novice to experienced. It is also an effective tool for introducing the concepts and methodologies of predictive maintenance and design considerations to engineering students. The MFS is designed to be both versatile and easy to operate. The simulator is constructed with a larger base, split bracket bearing housing, a sliding shaft, rotors with split collar ends, couplings, pulleys, a multiple belt tensioning and gearbox mounting mechanism, and reciprocating system; all of which are designed to be easily removed and replaced between various experiments. Over forty application specific option kits are available for in-depth studies of machinery faults. It comes with a training book and complete operations manual & videos to assist with exercises and learning. From basic to



comprehensive, various packages are designed to provide you with all the tools needed to study variety of machinery fault topics. Please download the brochure at <http://www.spectraquest.com/resources/downloads/> for more details.

### ***About SpectraQuest***

SpectraQuest is a leading developer and manufacturer of turn-key systems and products for enhancing reliability of rotating and reciprocating machinery. These products are ideal platform for research and education in machine fault diagnosis/prognosis, teaching dynamics and vibration courses, and wind turbine drivetrain studies. The distinguishing feature of SpectraQuest is a wide variety of Machinery Fault Simulators and Custom Designed Test Rigs which are sold in over forty five countries around the world. Further information is available at <http://www.spectraquest.com/>.

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