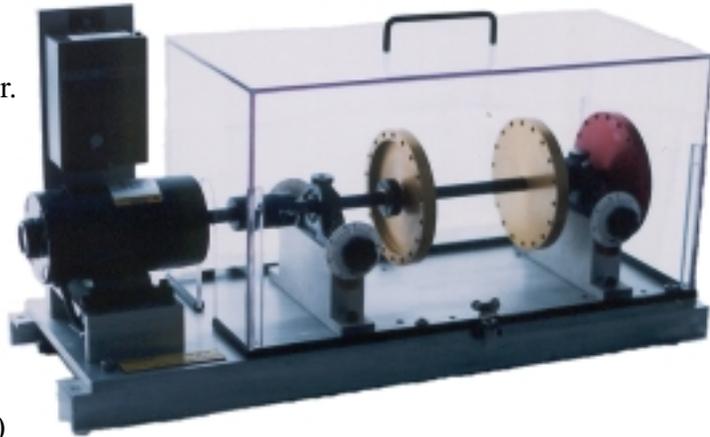


# SpectraQuest

“An Ideal Tool For  
Optimizing Production  
Machinery Performance”

## The Alignment/Balance Vibration Trainer

- ◆ Portable, robust, cost-effective alignment/balance vibration trainer.
- ◆ Calibrated unbalance, parallel and angular misalignment easily introduced.
- ◆ Ideal for teaching alignment and balancing (multi-plane, center/overhung rotors).
- ◆ Learn vibration spectra and phase due to static and dynamic (couple) unbalance.
- ◆ Learn vibration signatures of misalignment under different machine dynamics.
- ◆ Learn to recognize and correct soft and sprung foot conditions.
- ◆ Learn resonance/critical speed phenomenon and develop methods to control it.



**Use the ABVT to learn how to recognize the vibration spectra of different faults and validate the rules provided in books and training courses.**

**M**isalignment and unbalance are the most common causes of machinery malfunction. A properly aligned and balanced machine will save a factory between 40% to 50% on machine down time, replacement parts, inventory, and energy consumption. The payback from aligning and balancing machinery to extend the operating life and optimize process conditions is very large.

SpectraQuest's Alignment/Balance Vibration Trainer (ABVT) is designed for studying the vibration signatures that occur when two shafts are misaligned and/or rotors are unbalanced, eccentric, or cocked, or operating at a resonance condition. It is a hands-on trainer for maintenance professionals. It provides a unique mechanism for studying soft and sprung foot.

# SpectraQuest's

## Alignment/Balance Vibration Trainer Provides Many Benefits and Features

The ABVT system is robust, portable, and simple to use. It weighs 45 lbs. and fits on a bench-top. It is easy to transport from one place to another. The device has ample space to mount dial indicators and laser heads for alignment training.

The ABVT provides a wide range of benefits for developing an understanding of predictive maintenance and learning to recognize the signatures of various machine faults.

- ◆ Misalignment in horizontal and vertical planes both angular and parallel (four horizontally mounted jack bolts with calibrated and reference dials and slotted shims for elevation.).
- ◆ Effect of coupling stiffness and rotor dynamic stiffness on misalignment spectra.
- ◆ Unbalance in single plane, multiple planes, center-hung and overhung conditions.
- ◆ Phase relationship due to coupled unbalance force.
- ◆ Eccentric and Cocked rotors.
- ◆ Learn resonance/critical speed phenomena and develop control methods.
- ◆ Practice and learn different methods of shaft alignment using dial indicators or lasers.
- ◆ Introduce various types of soft and sprung foot and practice corrective action.
- ◆ Techniques for sensor mountings and optimum measurement locations.
- ◆ Uses of proximity probes, velocity transducers and accelerometers.
- ◆ Operating deflection shapes (ODS) and modal characteristics.

AT SPECTRAQUEST, WE OFFER A WIDE RANGE OF PRODUCTS AND SERVICES FOR MACHINERY VIBRATION SOLUTIONS. WE ALSO CONTINUE TO DEVELOP NEW APPLICATIONS FOR AND IMPROVEMENTS IN THE ABVT SO THAT THE INVESTMENT YOU MAKE IN THIS IMPORTANT MAINTENANCE TOOL WILL CONTINUE TO PROVIDE VALUE FOR MANY YEARS TO COME. WE OFFER CUSTOM DESIGN.

TO LEARN MORE ABOUT THE ABVT AND HOW WE CAN HELP KEEP YOUR PLANT OPERATING PROFITABLY, PLEASE CALL US OR CONTACT US BY WAY OF E-MAIL. WE ARE MORE THAN EAGER TO EXPLAIN HOW WE CAN HELP YOU MEET THE SPECIAL CHALLENGES YOU FACE AS YOU CONCENTRATE ON MAINTAINING YOUR COMPANY'S COMPETITIVE POSITION IN THE MARKET.

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