

## ROI Calculators Quantify the Benefit of Advanced Jet Engine Balancing Systems

*Online ROI calculators compare total annual costs of performing traditional “3-Shot Plot” engine balancing procedure vs. using MTI Instruments’ PBS 4100+ and PBS Express Vibration Analyzers*

Albany, NY—August 31, 2022—MTI Instruments, a US-based manufacturer of advanced test and measurement



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equipment, announces the availability of two online, interactive ROI calculators designed to illustrate the dramatic cost reductions possible when jet engine balancing is performed utilizing its [PBS 4100+](#) and [PBS eXpress](#) advanced vibration analysis technology. These calculators contrast the total costs of both labor and fuel when utilizing the MTI PBS 4100+ system (for commercial jets) and MTI PBS eXpress (for regional and business jets) versus using the traditional “3-shot plot” engine balancing procedure.

The conventional 3-shot plot process cannot guarantee the best balance solution. Labor and time intensive, it involves installing known weights onto the fan disk at different locations and measuring the change in vibration magnitudes. From these vibration levels, the user must calculate an approximate balance solution by hand. All in, a 3-shot plot procedure will normally consist of over 25 steps and involve running the engine at least four or five times. In contrast, the advanced analytical tools included with the PBS-4100+ and PBS eXpress Vibration Analyzers make identifying the cause of a vibration complaint significantly faster. Furthermore, if a fan balance is determined to be a cause of unsatisfactory vibrations, the Vibration Analyzer’s Balancing Wizard will quickly determine the best possible balance solution after only a single additional run.

“We have developed an easy-to-use online RIO Calculator that lets technicians calculate the savings for each balance procedure when using our Jet Engine Vibration Analyzers and see how those savings can quickly stack up throughout the year,” said Moshe Benjamin, MTI Instruments’ President. “Compared to using the traditional 3-shot plot process, the PBS-4100+ and PBS eXpress can be operated reliably and with minimal training. The systems offer numerous quantifiable advantages when troubleshooting and basically keep turbine engines running smoothly and without sacrificing safety. Simply put, the online ROI calculator clearly demonstrates how to minimize downtime while keeping operational costs low.”

**Pricing & Availability:** [Contact MTI Instruments for more information on pricing and lead times.](#)

**RIO Calculator (Links)** <https://mtiinstruments.com/sales-support/roi-calculator/>  
<https://mtiinstruments.com/sales-support/pbs-express-roi-calculator/>

### About MTI Instruments



[MTI Instruments](#), a [VitreK](#) brand, is a US-based manufacturer of precision tools, systems and solutions for clients requiring the precise measurement and control of products and processes and for the development and implementation of automated manufacturing, assembly and complex machinery operation. Our product solutions are used in engine vibration analysis systems for military and commercial aircraft applications, industrial manufacturing/production markets and research, design and process development markets.

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