



H337PA Series JETCAL 2000^{®1} Turbine Engine Performance Analyzer

Test Cell Accuracy for Installed Engine Performance Single or Dual Engine Capabilities

The JETCAL 2000[®] Turbine Engine Performance Analyzer is an advanced data collection and analysis system. It provides test cell equivalent analysis of engine performance while keeping the engine on-wing and the aircraft in service.

As an aid to engine maintenance, the JETCAL 2000[®] Analyzer has the following capabilities and benefits:

- Verifies engine performance after installation or maintenance is performed
- Isolates abnormal performance to an engine module
- Specifies and verifies correct maintenance actions by providing before and after diagnostic comparisons
- Allows operators to verify the accuracy of cockpit instrumentation
- Provides engine torque (Q) based on thermodynamic engine model for measured engine parameters to validate torque indicating system
- Provides a printed performance history and maintenance audit trail
- Establishes a performance database for individual engines and engine types
- Provides vibration analysis
- Offers the ability to upgrade system software
- Reduces the number of engines prematurely removed for repair
- Improved analysis and fault isolation
- Facilitates condition-based maintenance
- Reduces human error associated with data measurement, recording and interpretation



¹JETCAL 2000[®] is a registered trademark of Howell Instruments, Inc.

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BEFOR

PORTABLE ENGINE TEST SETS & TRIMMERS

H337PA Series

System Components:

The JETCAL 2000® Turbine Engine Performance Analyzer consists of four components:

- Data Acquisition Unit (DAU) for acquiring and converting raw signals to useable data. It is housed in a MIL-Standard box and provides a mounting surface for the power switch, cable and power connectors, as well as the display terminal during data collection.
- Display Terminal (DT) for user interface, collecting data, analyzing data and upgrading software. The DT is a portable PC used to provide all standard computer interfaces and a ruggedized terminal.
- Software Packages for data collection and performance analysis.

- Accessory Kits contain cables, hoses, transducers, mounting brackets and fasteners required to interface the analyzer to the aircraft/engine.

Referred Engine Diagnostic Data (REDD)^{®2} Analysis Program

Howell's patented REDD[®] software program is available with all JETCAL 2000[®] products. This powerful analysis tool provides comprehensive thermodynamic analysis that can identify abnormal operation by comparing actual engine operation with expected performance. Easy-to-read, color-coded graphs illustrate engine performance at a glance. Performance reports are divided into compressor, overall and turbine sections, and quantify the health of an engine.

Specifications	
Input Signals:	
Type K Thermocouple Channels	±1 °C
Platinum RTD, 100 ohms	±0.3 °C
DC Voltages, (-10 to + 10 VDC)	±0.1 VDC Full-Scale
Measured Speeds in Frequency	±0.1 %RPM
Pressure Altitude	±75 feet
Synchro Position	±0.2 degrees
Vibration	±3.5 %Full-Scale
Power	Accepts 28 VDC or 85 to 265 VAC, 50 to 400 Hz
Sample Rate	Software configurable recording routines and sample data rates
Peripheral	Interfaces with industry standard PCs and peripherals



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