LISTEN.
THINK.
SOLVE.®

Dynamix 2500
1441-DYN25



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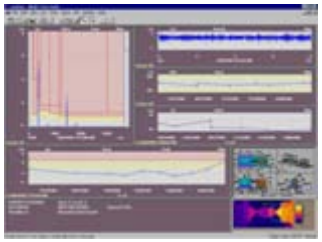
Allen-Bradley • Rockwell Software

Rockwell Automation

The Dynamix Family Offering











Online

- Stand Alone or easily Integrated
- Cost effective solutions for protection and balance of plant monitoring
- Complete solution for Turbine Supervisory Instrumentation (TSI) System and API 670 compliant

Walk-Around

- Emonitor Connectivity
- Light weight and easy to use
- Fast navigation and data acquisition
- Rugged to withstand harshest environments
- Expandable to dual channel, balancing, time waveform recording, and more.

Software

- Emonitor industry leading Condition Monitoring software
- Multiple data collection platforms
- Comprehensive plotting
- Advanced alarming
- Intelligent diagnostics & advisories
- Real-time analysis of condition data from online sources

Sensors

- Accelerometers
- Non-contact probes
- Full range of options
  - Frequency response
  - Environmental
  - Mounting/exit

Services

- Reliability Services
  - •Results Assurance
  - •Reliability Audits
  - •Program Management
  - •Reliability Online
- Training
- Phone Support
- Engineered and Custom Products
- Project and System Commissioning

Dynamix 2500, 1441-DYN25

- Key features:
- Existing functionality of Enpac 2500 v3.1 firmware.
- Multi four-channel support options.
- Route/off-route support for 80 KHz single-channel.
- Route/off-route support for 40 kHz four-channel support.
- Headphone support for multi-channel o/p.
- Faster on screen route navigation.
- Fastest Analyser/DataCollector ever by Rockwell Automation.
- Improved missed point/taken point indication.
- Increased language support option.
- Significantly improved screen resolution
- Firmware upgrade route via SD-Card.



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Dynamix 2500, 1441-DYN25

- Multi channel support out of the box!
- Standard kit two-channel.
  - Off-route two-channel
  - Route mode two-channel.
  - Triax measurements done in single transducer mode.
- Optional upgrades.
- Four Channel Module.
  - Triax measurements done simultaneous
  - Off-route four-channel.
- Time Recorder module (Four-channels).
- Frequency Response Module (Single Channel)
- Run Up Coast Down Module (Single Channel)
- 2 Plane Balancing Module
- Bump Test Module

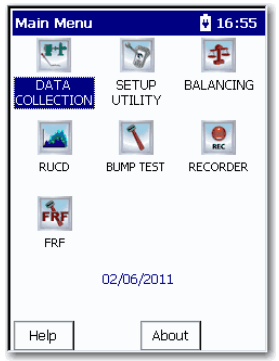










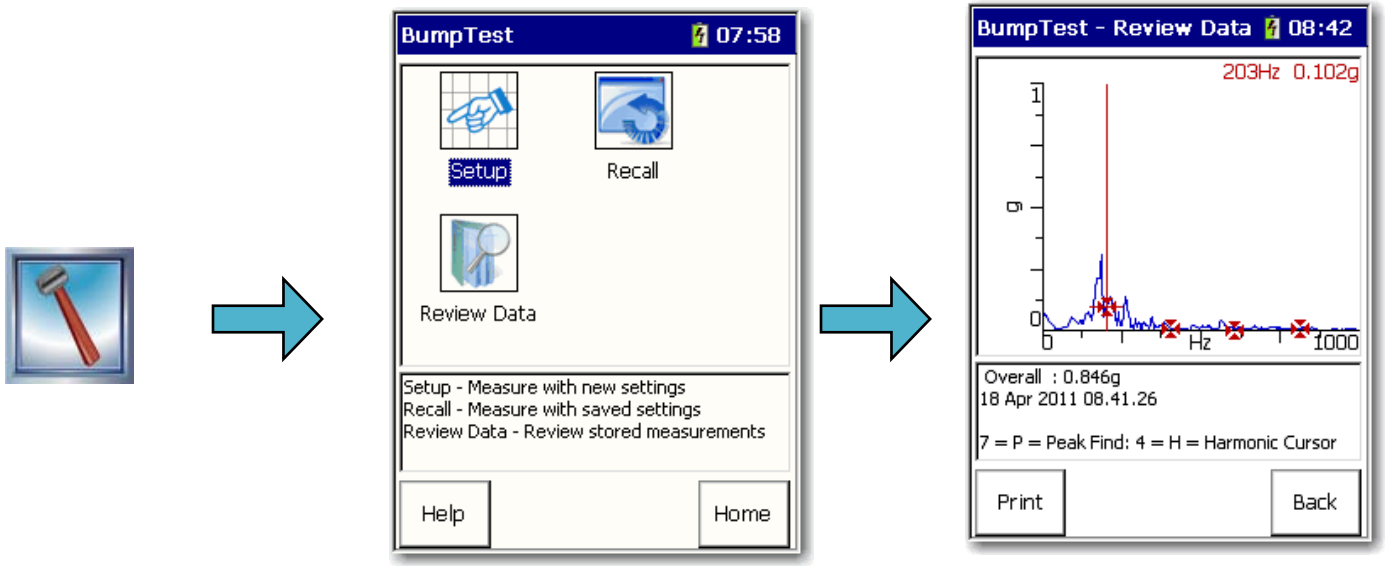


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Bump Test extension module

When using the Dynamix 2500 data collector and the Bump Test extension module, you can do the following:

- Determine natural (or resonant) frequencies of a machine or structure.
- Identify a structure's resonant modes.
- Change the resonance frequency to reduce or eliminate damaging vibration levels.



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Bump Test extension module

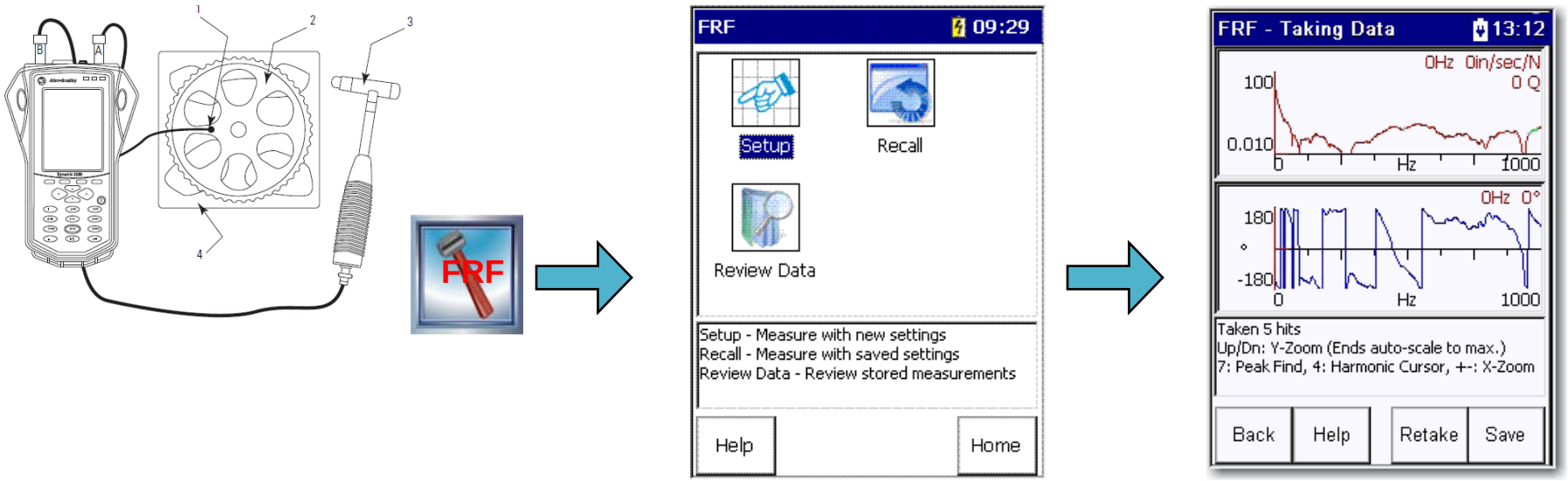
- The Bump Test extension module for the Dynamix 2500 data collector provides an effective way of determining natural (or resonant) frequencies of a machine or structure.
- A bump test (or hammer test) determines the natural frequencies of a machine or a structure. The idea behind the test is that when an object is impacted or bumped, the object's natural or resonant frequencies are excited. If a measurement is taken while the object is vibrating due to the impact, peaks will result and pinpoint the object's natural frequencies. The Dynamix 2500 data collector can be used to capture this frequency response and illustrates the resonant frequencies.
- Vibration forces transmitted by rotating machines often excite natural resonance in structures attached to the machine. When these structural resonances appear, vibration levels are amplified and can result in fatigue failures. Structural resonances can also mask the cause of a machine's vibration making it difficult to implement corrective machine maintenance. The Bump Test identifies a structure's resonant modes and provides you with the opportunity to change the resonance frequency to reduce or eliminate damaging vibration levels.

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Frequency extension module

When using the Dynamix 2500 data collector and the FRF Frequency extension module, you can do the following:

- Determine natural frequencies.
- Model the way a structure reacts to forces.
- Capture information about how a machine moves when it's running.
- Illustrate high or low coherence.



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Frequency extension module

- The Dynamix 2500 data collector FRF extension module lets you determine the natural frequencies of a machine or structure in a more sophisticated manner than the Bump Test module. Rather than simply detecting the frequencies where resonances occur, it captures information about the frequency response of the structure being tested.
- • You can use the FRF data in conjunction with a modal analysis software package to model the way the structure reacts to forces applied to it.
- • You can use the FRF module to capture information about how a machine moves when it is running. You can use this information with the Operation Deflection Shape (ODS) analysis software.

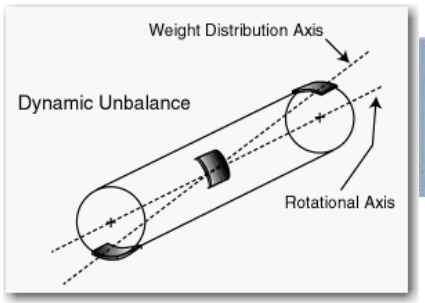
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Balancing extension module

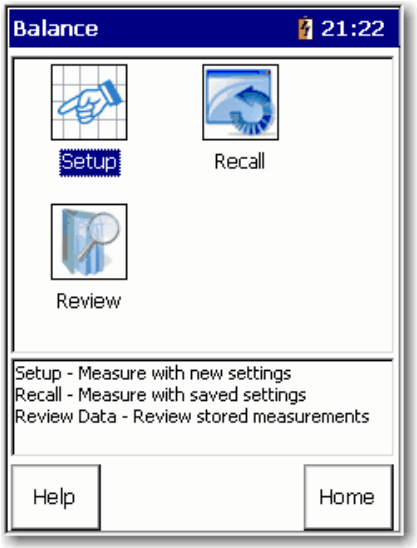
The balancing test determines the amount and location of the heavy spot on a rotating shaft so that you can balance it with an equal amount of weight in the opposite direction.

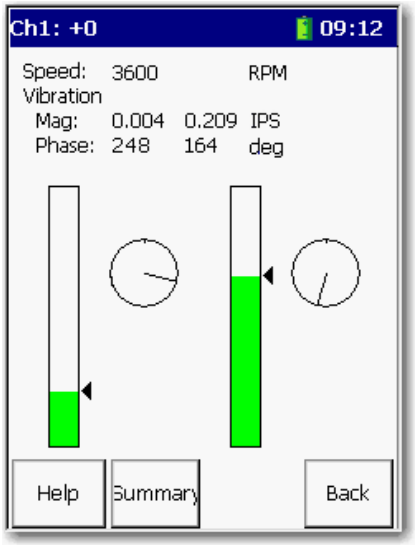
There are three types of measurements in the balancing process:

- Initial Vibration
- Trial Weight
- Residual Measurements









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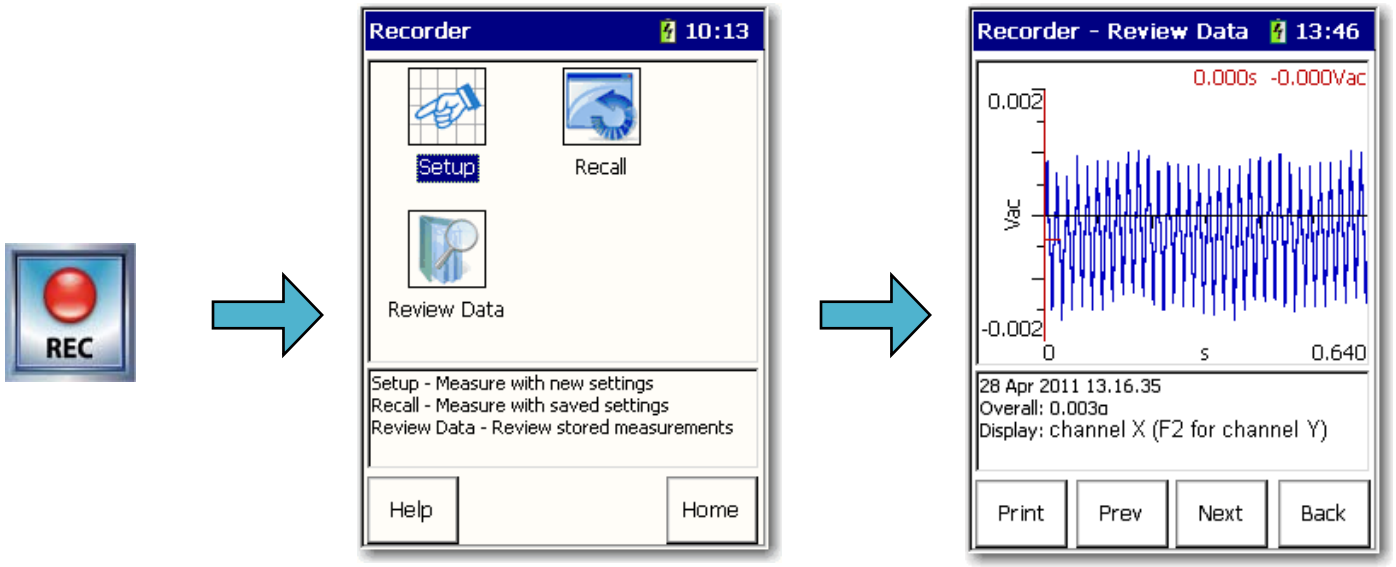
Balancing extension module

- Balancing application resolves single-plane, two-plane, and static-couple balances with high precision. You can use the Dynamix 2500 data collector coupled with a speed-measuring device such as a strobe light or laser tachometer.
- The Dynamix 2500 data collector Balancing extension module provides a simple, direct method to balance your rotating machinery in one or two planes. You can use the internal laser tachometer in the data collector or an external laser tachometer, optical tachometer, or strobescope for measuring phase during the balance run.

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Time Recorder module

When using the Dynamix 2500 data collector and the Time Recorder module, you can use as a data collector for real-time data acquisition and analysis.



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Time Recorder module

Examples of how you can use the Time Recorder module:

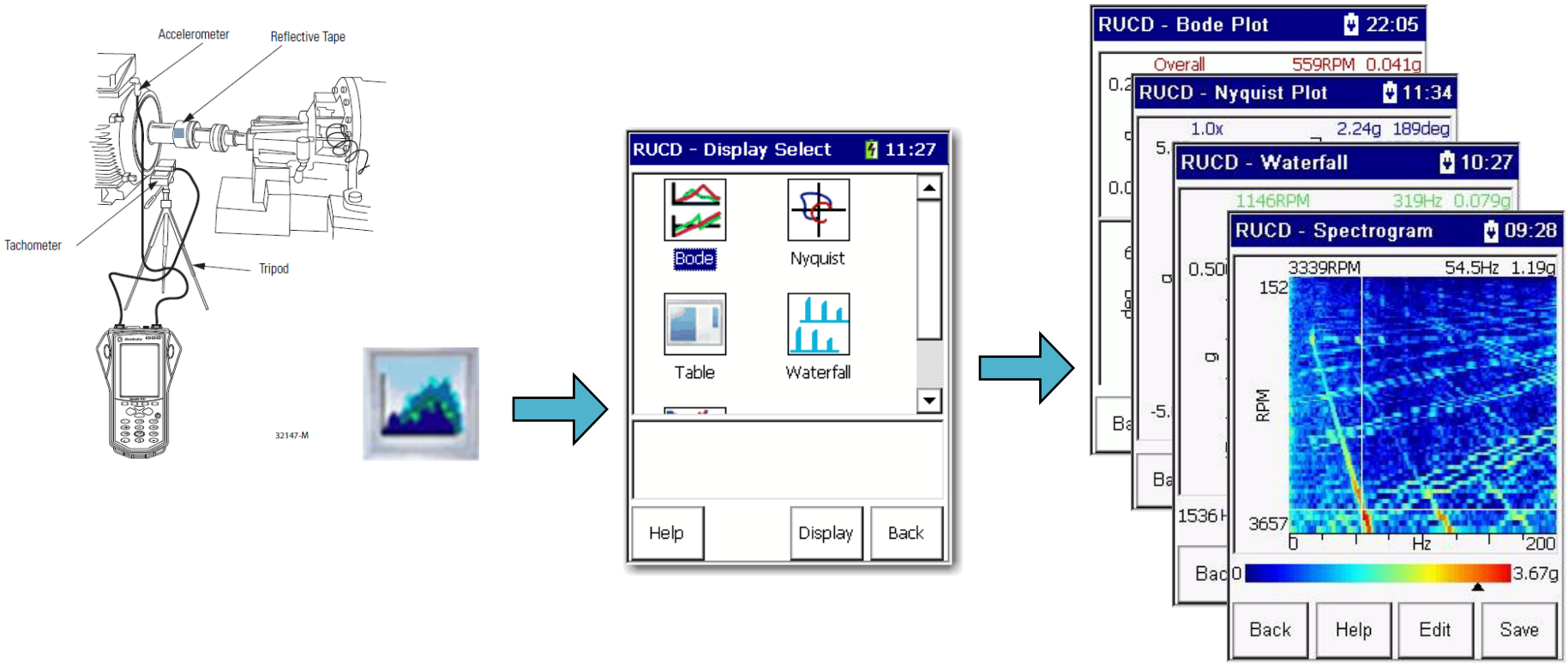
- • Analyze very low speed machines.
- • Capture run up or coast-down data, intermittent events, and transient vibration signals from non-steady machines.
- • Prevent further damage to a problem machine by recording the vibration signal for a short time. Then shut down the machine and play the recorded .wav file to analyze the measurement without the machine running.
- • On a ship propulsion system, which uses large amounts of fuel, you can start the time recorder, run the ship up to full speed, run five minutes at full speed, and then coast-down. The measurement analysis is performed on the recorded vibration signal without spending hours of gas turbine drive time collecting data and resulting fuel consumption.

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Run Up Coast Down Extension Module

When using the Dynamix 2500 Data Collector Run Up Coast Down Extension Module, you can do the following:

- Record and analyze data from intermittent events and transient vibration signals from non-steady state machines.
- Analyze a machine's critical speeds and resonant frequencies.



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Run Up Coast Down Extension Module

- The Run Up/Coast Down extension module lets the data collector record and analyze data from intermittent events and transient vibration signals from non-steady state machines.
- The Run Up/Coast Down extension module is used to record and analyze data from machines where noise or vibration levels are changing with speed or time such as:
  - during a run up (increase in speed)
  - coast down (decrease in speed)
  - other applications causing transient phenomena.
- You use the data to analyze a machine's critical speeds and resonant frequencies.

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Dynamix 2500, 1441-DYN25, Cable assembly

- Backward compatible with Enpac cables:
- Transducer cables
- USB Power
- Trigger cables
- Extension cables, 5m, 10m
- Headphone support:
- CH1/Ch2 to 3.5mm headphone jack.
- 3.5mm extension cable
- Multi-channel support:
- 2-channel splitter cable
- Triax- transducer cable
- Triax transducer

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Dynamix 2500, New Catalogs

RA Catalog #	RA PN #	
1441-DYN25-2C	PN-107246	Dynamix 2500 Data Collector Kit
1441-DYN25-Z-2C	PN-107248	Dynamix 2500 ATEX Z2 Data Collector kit
1441-DYN25-CAP	PN-107250	Dynamix 2500 Dust Caps
1441-DYN25-CBLHS	PN-107251	Dynamix 2500 Headset Adapter Cable
1441-DYN25-CBL2CH	PN-107252	Dynamix 2500 2 Channel Adapter Cable
1441-DYN25-PS	PN-107253	Dynamix 2500 Global Power Supply
1441-DYN25-CD	PN-107254	Dynamix 2500 Operating System & Info CD
1441-DYN25-M4CH	PN-107255	Dynamix 2500 4 Channel Module
1441-DYN25-MBMP	PN-107256	Dynamix 2500 Bump Test Module
1441-DYN25-MBAL	PN-107257	Dynamix 2500 2 Plane Balancing Module
1441-DYN25-MRUC	PN-107258	Dynamix 2500 Run Up Coast Down Module
1441-DYN25-MFRF	PN-107259	Dynamix 2500 Frequency Response Module
1441-DYN25-MREC	PN-107260	Dynamix 2500 Time Recorder Module

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Dynamix 2500 Portable Data Collector kit details

Dynamix 2500 Portable Data Collector kit details (1441-DYN25-2C)		
1441-DYN25		Dynamix 2500 Data Collector
1441-PEN25-HS		Hand Strap
1441-PEN25-BAT		ENPAC 2500 Spare Battery
1441-PEN25-RBS		ENPAC 2500 Rubber Bump Sleeve
1441-DYN25-PS		Dynamix 2500 Global Power Supply
1441-PEN25-CASE-T		ENPAC 2500 Transit Case
1441-PEN25-COMS-US		ENPAC 2500 Communication Cable USB Power Splitter
1441-DYN25-CD		Dynamix 2500 Operating System & Info CD

Dynamix 2500, ATEX Zone 2, Portable Data Collector kit details (1441-DYN25-Z-2C)		
1441-DYN25-Z		Dynamix 2500, ATEX Zone 2, Portable Data Collector
1441-PEN25-HS		Hand Strap
1441-PEN25-BAT		ENPAC 2500 Spare Battery
1441-PEN25-RBS		ENPAC 2500 Rubber Bump Sleeve
1441-DYN25-PS		Dynamix 2500 Global Power Supply
1441-PEN25-CASE-T		ENPAC 2500 Transit Case
1441-PEN25-COMS-US		ENPAC 2500 Communication Cable USB Power Splitter
1441-DYN25-CD		Dynamix 2500 Operating System & Info CD

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Portable data collector enhancements

	Enpac 2500	Dynamix 2500
Max Frequency:	40kHz	80KHz
# of Channel:	Maximum 2-channel input	Maximum 4-channel input
ADC resolution:	20 bit (Sigma Delta)	24bit (Sigma Delta)
Signal input range:	min 0 to +/- 10mVac max 0 to +/- 40Vac	min 0 to +/- 40mVac max 0 to +/- 25Vac (Improved signal noise ratio for low amplitudes)
Tri-axial support:	Measurements done by multiplexing.	Measurements done simultaneous.
Headphone support:	No	Yes, Integrated
Laser tacho support:	Yes, Integrated	Yes, Integrated
Communication support:	RS-232, USB	USB only
Route & offroute:	Yes, standard	Yes, standard
Internal Route memory:	64MB	128 MB flash memory for internal storage
External Route memory:	PCMCIA, SD card to 2GB	SDHC to 16GB
Modular upgrades:	Yes, 2-channel support, Bump, FRF, Balancing, Recorder, RuCd	Yes, Multi-channel support, Bump, FRF, Balancing, Recorder, RuCd
Modular licence support:	Done by PCCARD (PCMCIA)	Done by SDHC
LCD screen protection:	Curved screen protector	Screen protector with raised bezel.
Operating System:	Windows CE.net 4.2	Windows CE 6.0

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Portable Data Collectors Migration Drivers

Increasing Costs

- As a product stays in service long time necessity for product repair and spare parts increases.



1441-DYN25 cables compatibility

- Backward compatible with Enpac cables



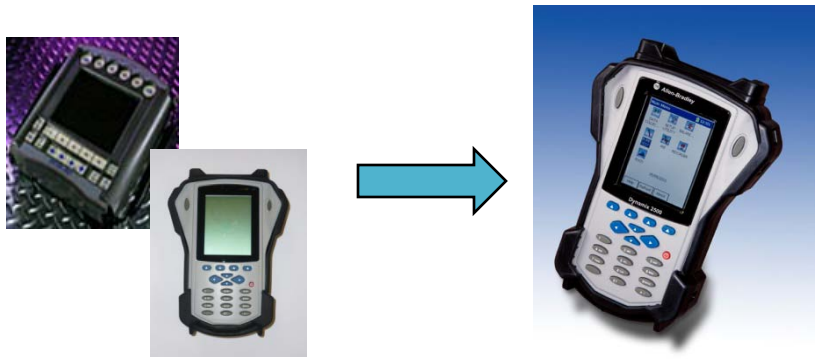
1441-PEN25 Product Availability

- Obsolete by the end of April 2011
- Only 16 Units available!



Incentives To Migrate

- *StepForward*™ credits for migrating from Datapac and Enpac to Dynamix



1441-PEN25 Firmware Upgrades

- Last Firmware Update later this year



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AST-ENTEK

Helping you make sense of the options



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