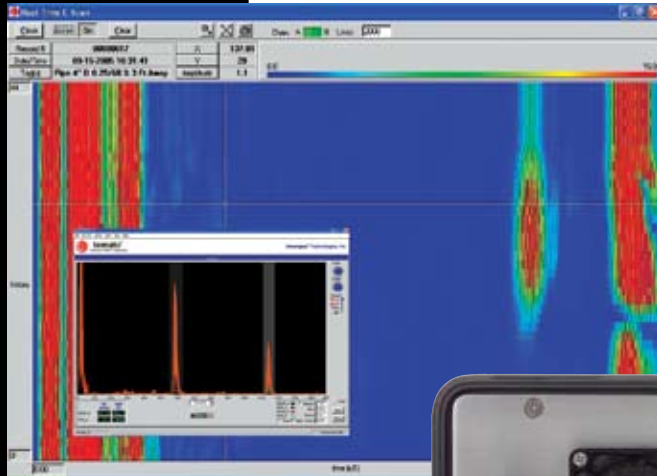




temate®

PowerBox™ 2 High-Power Ultrasonic Instrument

The PowerBox™ 2 is a flexible, dual channel instrument designed for high-speed and high-power non-destructive testing applications such as EMAT and air-coupled ultrasound.



The portable and rugged PowerBox™ 2 incorporates an intelligent processor with integrated digitizers and broadband pulsers/receivers to perform a variety of flaw inspection, thickness, and material properties measurements in factory or field environments. Spike and tone-burst pulses at frequencies from 50kHz to 7MHz can be generated to excite a full range of ultrasonic wave modes, including guided waves, in pulse-echo and pitch-catch arrangements.

The PowerBox™ 2 can operate stand-alone, and features internal real-time

signal processing, waveform analysis, and alarming. It can also operate in combination with any PC over a PCMCIA connection.

A built-in encoder interface, and 12 programmable Inputs/Outputs facilitate integration with a scanner and other external equipment. temate® POWER UT software is supplied for PC data logging, imaging and analysis.

Probes and accessories are also available from Innerspec® Technologies to provide a complete solution for your non-destructive testing needs.

Innerspec®
Technologies

**World Leader in Ultrasonic
 EMAT Technology**

4004 Murray Place
 Lynchburg, VA 24501
 434.948.1301

www.innerspec.com

Specifications - PowerBox™ 2

ULTRASONIC CHANNELS	2
BANDWIDTH	50 kHz to 7 MHz
PULSE REPETITION FREQUENCY	Up to 10 kHz
PULSERS	Spike, Toneburst Waveforms 8 kW Power Output 1200Vpp @ 25App into 50 Ohms 1% Maximum Duty per Channel
RECEIVERS	50 Ω Input Impedance -20 dB to 60 dB Gain 0.3 dB Gain Resolution 8 Low Pass RF Filters; (Off, .1, .2, .5, 1, 2, 5, 10 MHz) 8 High Pass RF Filters; (Off, .1, .2, .5, 1, 2, 5, 10 MHz)
P/R MODES	Pulse-Echo, Pitch-Catch
A/D CONVERTERS	14-bit, 100+ MSPS
FILTERING	IIR/FIR Digital Filters
RECTIFICATION	Full-wave, +/- half-wave, and RF mode
EVALUATION GATES	4 Gates per Channel Amplitude and Time Measurements
ENCODER INTERFACE	A/B Quadrature or Clock/Direction
ALARMS & AUXILIARY I/O	12 User Programmable TTL I/O
PC COMMUNICATION	PCMCIA Interface Records to any MS Windows Device
PC SOFTWARE	temate® POWER UT (standard) UTEX InspectionWare (optional)
DIMENSIONS & WEIGHT	12 ¾" x 13 ¼" x 9 ¼" (324mm x 336mm x 235mm) 22 lbs (10 kg)
OPERATING TEMPERATURE	32°F (0°C) to 105°F (40°C)
ELECTRICAL POWER	100-240VAC, 47-63Hz



Accessories

- Magnet Pulser Attachment (PowerBox™ MP) to drive DC electromagnets. Electromagnetic probes are used to generate a magnetic field without attracting to the part
- Motorized and explosion-proof scanners and actuators



Available EMAT Probes

- Shear Horizontal normal beam for ambient and high temperature applications (up to 1200°F/650°C)
- Shear Horizontal and Shear Vertical angled beam
- Shear Horizontal at 90° and Lamb Type (guided waves)
- Material properties measurement (anisotropy, nodularity, strain)
- Other wave modes and custom designs available upon request