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Eddy Current Products

# ETbox8i<sup>®</sup>

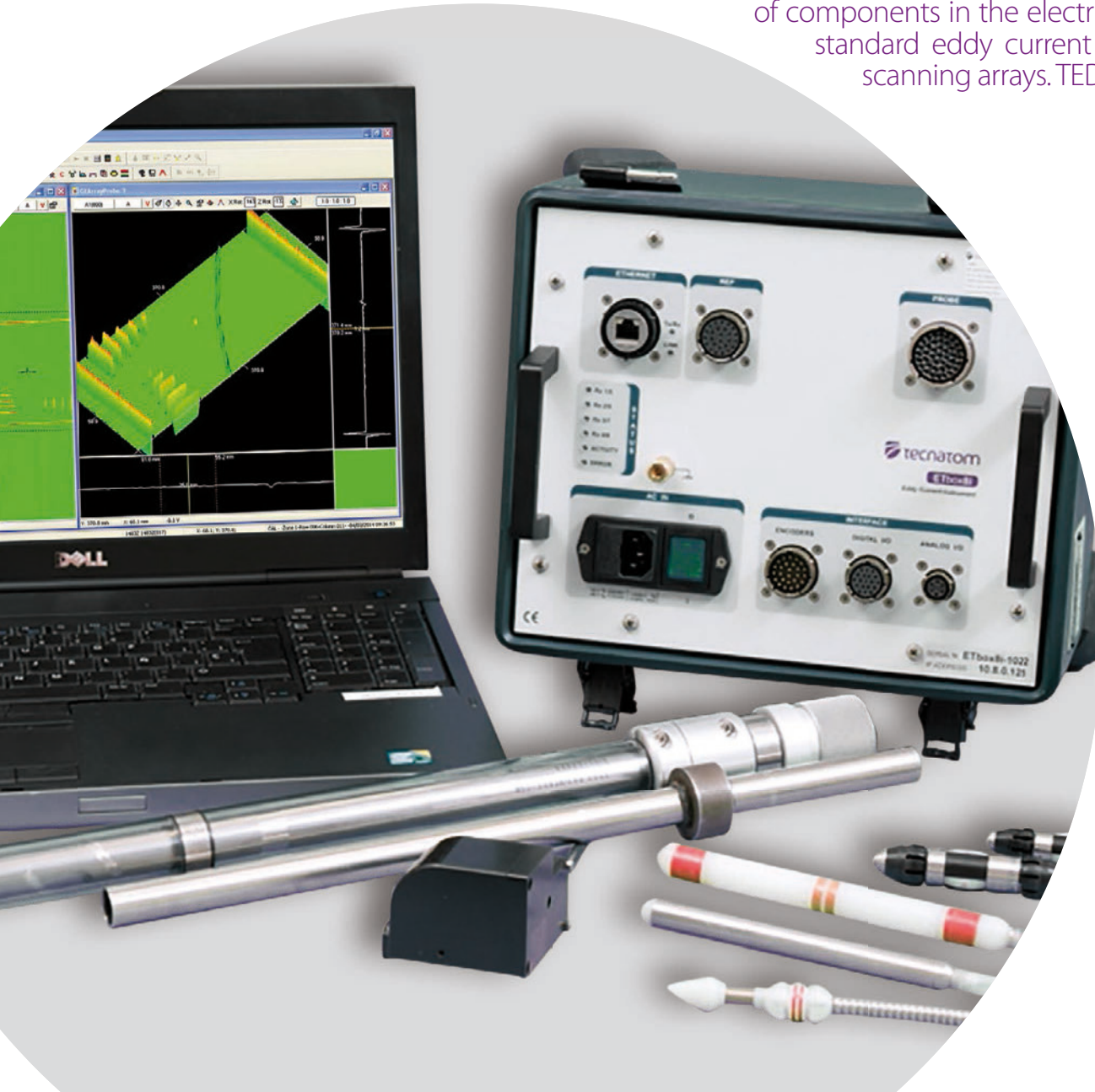
Advanced Eddy  
Current Instrument

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ETbox8i is a digital multi-channel and multi-frequency eddy current instrument for inspection of components in the electricity generation, nuclear and industrial sectors. It supports standard eddy current (ET) and remote field (RFT) tubing probes and surface scanning arrays. TEDDY software available for acquisition and analysis.



## MAIN FEATURES

- Multi-channel and multi-frequency capabilities. Up to 512 channels.
- Configurable with different probes: Bobbin, MRPC, Multi-coil & Array for tubing inspection and surfaces inspection based on Multi-coil or Array probes. Multiplexer options.
- Multiplexed and simultaneous injection modes.
- Wide frequency range of 10 Hz to 5 MHz. Independent channel gain control. Hardware null and reference probe simulation.
- 100% digital signal processing on board. FIR filters and signal detection threshold.
- No ventilation fans needed, low power consumption.
- High immunity against EMC noises. Single board. No wires.
- On board 100/1000 Ethernet FPGA controller. No need of embedded PCs.
- Easy to transport. Reduced Weight.
- Full compatible with TEDDY software running under Windows. Advanced acquisition and analysis software for tubing inspection and surfaces.
- Data display in real time: Strip-chart, Lissajous, C-Scan, and 3D views.
- User definable screens.
- Configuration and calibration of instrument. Digital filters.
- Integration with mechanical systems.

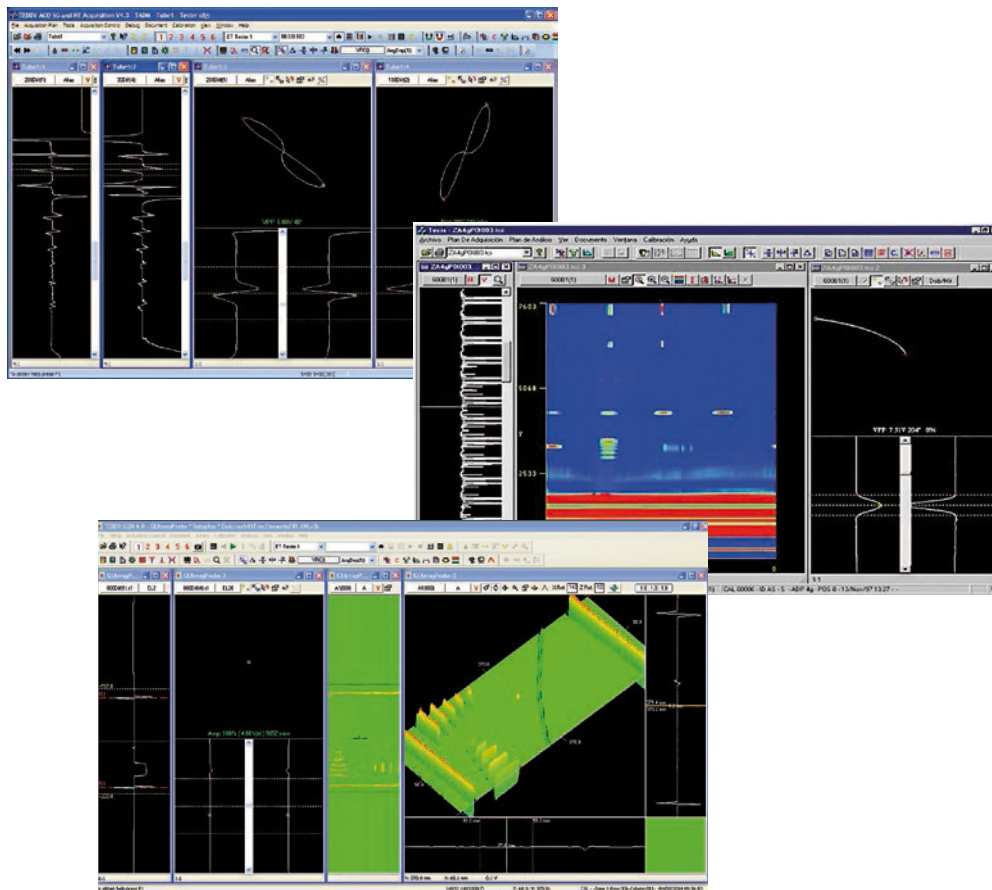
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## TEDDY SOFTWARE

Teddy software includes a full suite of applications for advanced acquisition and analysis for both tubing inspection and other components of the industry.

TEDDY software is Windows XP/7 compatible. Alternatively drivers software and support documentation are available for customizable user applications with ETbox instruments.



### TECHNICAL SPECIFICATION

Power	100-240 VAC 50-60 Hz
Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 70°C
Instrument Weight	5Kg
Instrument Size	30 x 25 x 27 cm WxDxH
System	Up to 50,000 Acq/sec Ethernet 100/1000BaseT Connetion Internal, External, Encoder Trigger Modes
Emitters	4 Generators Multiplexed and Simultaneous Injection modes 0-24Vpp Range Volts (1V Resolution) 16 Time-slots up to 64 frequencies 10Hz to 5MHz Range
EC Receivers	8 Coils 16 Time-slots up to 64 frequencies 10Hz – 5MHz Range Independent channel gain Hardware null Reference bobbin simulation 0dB – 40dB Range Gain (1dB Resolution)
Probe Types	Bobbin, MRPC, Multi-coil and Array Probes, RFT Probes
Channels Capabilities	Multiplexed mode: 128 Simultaneous mode: 32 Mix mode: 512
Encoders:	Up to 6 encoders TTL Level / Differential / Isolated Incremental or Pulse Type
Digital Inputs	4 Inputs TTL Level / Differential / Isolated Input, Enable ACQ, Trigger Modes
Digital Outputs	4 Outputs TTL Level / Differential / Isolated Output, Alarm, Trigger Modes
Analogue Inputs	2 Inputs ±10v Range – Isolated 20KHz bandwidth
Analogue Outputs	2 Outputs ±10v Range – Isolated 20KHz Bandwidth
Firmware process	FIR filters, threshold detection, tube-air detection

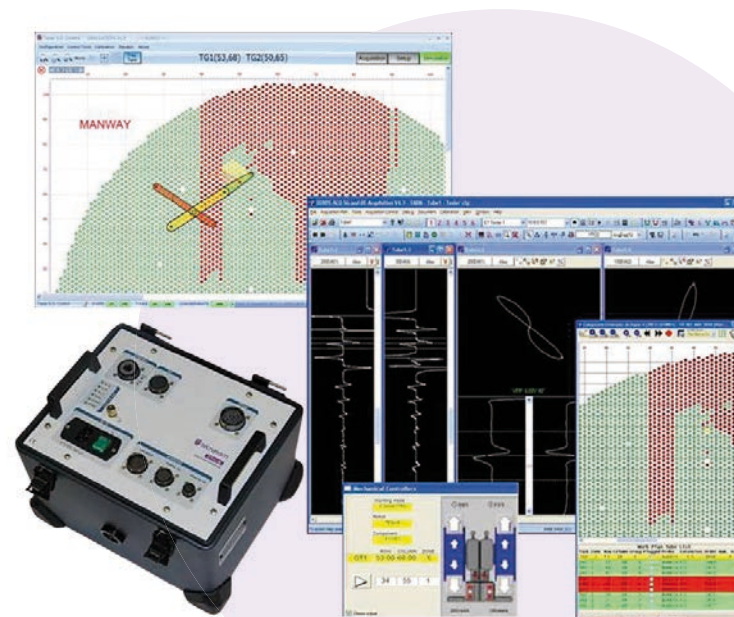
## APPLICATION FIELDS

### Power Generation

Tubing inspection for steam generators, heat exchangers and condensers. Fuel rods inspection. Head penetrations. Welds and components surfaces inspection.

### Industry and Others

Quality control of component manufacturing. Material testing in laboratories, R&D activities...



### ORDERING INFORMATION

Reference	Description
ETbox8i	ETbox instrument 8 inputs
ET8BB41BDA	1 Bobbin differential-absolute connection probe adapter
ET8BB42BDA	2 Bobbin differential-absolute connection probe adapter
ET8BB44BDA	4 Bobbin differential-absolute connection probe adapter
ET8MRP1RPC	1 RPC probe adapter
ET8MRP2RPC	2 RPC probe adapter
ET8RFA1RFT	RFT Adapter
E8ITP31TPD	Tprobe array probe adapter



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