



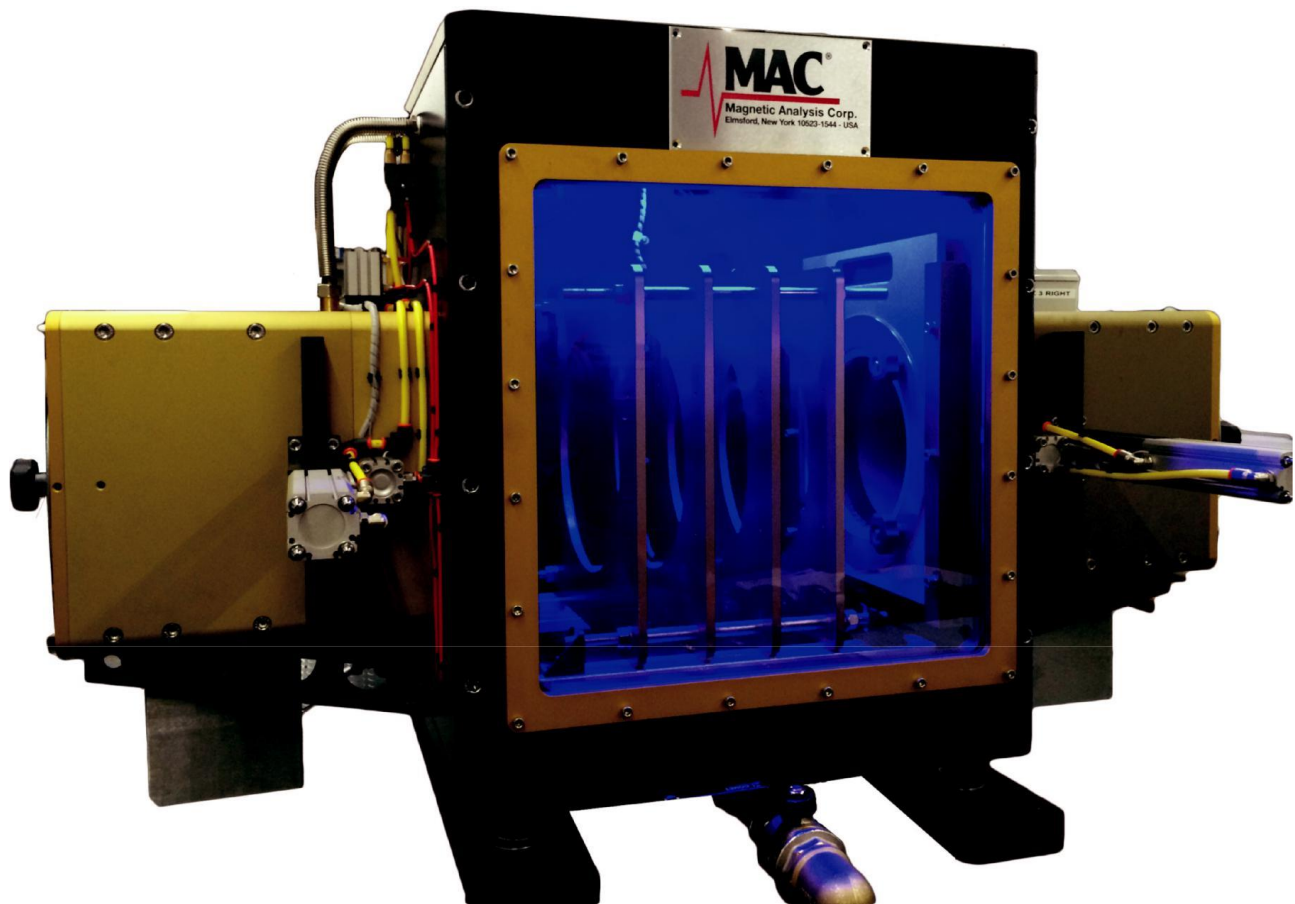
**ALAT UJI**

Products, Solution, Services

# Echomac® 180 PA

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Ultrasonic Phased Array System  
For Testing Broad Ranges of Bar Sizes





**Complementing MAC's broad range of Rotary Ultrasonic testers, the Echomac® PA system is designed for those applications that can benefit from its unique capabilities, including high-speed parallel processing to handle a large amount of data.**

**The system is capable of generating normal incidence as well as clockwise and counterclockwise shear waves electronically from transducer arrays, providing defect detection in both core and surface sub-surface. You can test a range of sizes, or fine tune incidence angles, without having to make physical adjustments to the transducer positions.**

### **System Shown Above:**

- Testing hot rolled bars, 90 - 180mm diameter
- At throughput speeds of 10 - 20 m/m
- Finding FBH (flat bottom hole) core defects, of 1.2mm - 1.6 mm at 25%, 50% and 75%.
- Finding 1.6mm diameter FBH subsurface defects at 3mm & 5mm depth.
- Locating surface notches 0.2mm x 10mm length on hot rolled bars

### **System Design Features:**

- Multi-element transducer probes are positioned at multiple locations around the bar, and can be used for working at different angles of incidence and different depths.
- Convenient transducer holders accommodate different size ranges and allow for fast changeover times.
- Unique water box design minimizes water loss and bubbles, while ensuring bars are properly centered relative to the transducers.
- Software based on the MAC Echomac® platform which is recognized in the industry for power and flexibility.
- Sizes up to 200mm, and other configurations are available, including designs for square or round bars.



*Echomac 180 PA live screen display of a calibration standard with defects.*