

# High Temperature Shear Wave EMAT - 200°C HWS2225-HT

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## Product Features

- ▶ No couplants required, works on rough surfaces
- ▶ High temperature operation, works at temperatures up to 200°C without active cooling
- ▶ Generates and detects at 3-5 MHz centre frequency
- ▶ Operates on conductive and magnetic samples

High temperature version of the HWS2225HT; it is a high-performance, broadband, radially polarised shear bulk wave Electromagnetic Acoustic Transducer (EMAT), ideal for pulse-echo inspections at temperatures up to 200°C. Works seamlessly with Sonemat's GS2020 EMAT adaptor box and the PR5000 or PR5020 pulser-receiver systems, delivering reliable and precise measurements across many applications.

Made with high temperature adhesives and a high temperature magnet allow it to be used for inspections at temperatures up to 200°C without cooling, while providing good signals. It is fitted with a K-type thermocouple to monitor the temperature behind the front face.



## Applications



The HWS2225-HT is suitable for a range of industrial applications, in non-destructive testing (NDT) in sectors such as energy generation, petrochemical and oil & gas. Its broadband frequency response and adaptability make it perfect for material characterization, flaw detection, and thickness measurement.

- Thickness gauging ( $\pm 0.1\text{mm}$ )
- Corrosion monitoring
- Acoustic birefringence
- Crystallographic texture
- Boiler tube inspection
- Defect detection

Feature	Description
Probe Configuration	Pulse-Echo, can be used in pitch-catch with two probes
EMAT Working Principle	Lorentz force mechanism Magnetostrictive effect (if sample is magnetostrictive)
Weight	0.2kg
Dimensions	40mm (55mm with BNC) length x 31mm diameter
Operating Temp.	0 - 200 °C (with K-type thermocouple; temp behind front face)
Working Voltage	300 - 1000V pulse
Excitation Frequency	Broadband (spike) optimised for peak energy around 3-5 MHz
Wear Face	Alumina ceramic
Connections	BNC socket (50Ω)
Magnet Type	Field normal to sample
Recommended Electronics (Driver and Amplifier)	Sonemat's GS2020, PR5000 or PR5020 Contact us for more information
Options	Thermocouple type can be changed according to customer specifications

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