



# Western Instruments

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Established 1965

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## W-FI Field Indicators (Magnetometers)

Western Instruments manufactures 3 models of Disposable Field Indicators, which provide readings in *Gauss*;

1. W-FI-10 Intended to be used for Demagnetization and are calibrated during manufacture in a Homogeneous Field (**Helmholtz Coil +/- 10 Gauss**).
2. W-FI-20 Intended to check residual fields on small parts, and are calibrated during manufacture for a Homogeneous Field (**Helmholtz Coil +/- 20 Gauss**).
3. W-FI-50 Intended to check residual fields on heavy parts, and calibrated during manufacture for a Homogeneous Field (**Helmholtz Coil +/- 50 Gauss**).

The Certification Decal, illustrated below, is affixed to the back of every W-FI, and the date of shipment is etched onto the decal. The Certification Decal reads as follows;

"This Magnetic Field Indicator (Magnetometer), as outlined in the *ASNT Handbook (2<sup>nd</sup> Edition, Volume 6)* and Defined in ASTM E 1316, is designed to measure the Relative Intensity of a Magnetic Field (measured in *Gauss*) before or after Magnetic Particle Inspection. At the time of shipping \_\_\_/\_\_\_/\_\_\_, the accuracy of this W-FI was confirmed to be within +/-1 Gauss or 5% of the scale value, whichever is greater."



A magnetic field of under 10 Gauss is typically not strong enough for Magnetic Particle Inspection (MPI), thus the W-FI-10 is used to ensure a workpiece is demagnetized. A magnetic field, for MPI, should be approximately 18 to 24 Gauss, thus an inspector uses the W-FI-20 to ensure his field is strong enough. A workpiece can be magnetically saturated prior to or after inspection, and these strong fields are evaluated with a W-FI-50.