



## Reference Magnets Axial, Transverse, Zero-Field Chamber

### Description

Reference Magnets provide a stable and convenient method to verify the accuracy and calibration of Hall Effect Gaussmeters, Teslameters, and Probes. Magnetic Instrumentation Inc.'s Reference Magnets are self-shielded to minimize the effects of external magnetic fields. For maximum accuracy the Gauss value of the Reference Magnet and the field to be measured should be on the same meter range and approximately the same value.

### Features

- Precision Reference Devices for Hall Effect Probes and Meters
- Self-Shielding Configuration
- Many Standard Values Available
- High Degree of Stability
- Accuracy Retained Between 0°C and 40°C (32°F and 104°F)
- Special Gauss and Tesla Values Quoted on Request
- Both Axial and Transverse Reference Magnets are Available

### All Reference Magnet Certifications are traceable to the National Institute of Science and Technology

#### Stability

Temperature cycling and controlled demagnetizing from magnetic saturation during manufacture produces Reference Magnets with exceptional long term stability.

#### Accuracy

Reference Magnets will retain their initial accuracy over the temperature range of 0°C to 40°C (32°F to 104°F). The reference value given for each magnet is at an ambient temperature expressed in degrees C. The magnetic field value will change 0.02%/C, but will return to its reference value provided the ambient temperature does not go beyond the specified range.

#### Special Reference Magnets

Reference Magnets with different values can be provided for special applications.

#### Influence of External Magnetic Fields

Reference Magnets with values below 1000 Gauss (.10 Tesla) will be unaffected by ambient fields less than 100 Gauss (.01 Tesla). Magnets with values above 1000 Gauss (.10 Tesla) will tolerate ambient fields up to 200 Gauss (.02 Tesla).

#### Zero-Field Chamber

A Zero-Field Chamber (Model 16580) is available which allows probes to be placed in a low field environment for easy meter zeroing. The chamber has a single end opening with a diameter of 0.500 inches (12.7 mm).

#### Probe Spacer Blocks

Probe spacer blocks are available for use with axial and flat probes. These blocks are used to position the probe accurately, insuring repeatable readings. Specify the Hall Probe Model and Reference Magnet Model when ordering probe spacer blocks (16795).

**FLAT PROBE REFERENCE MAGNETS**

<b><u>Model</u></b>	<b><u>Value</u></b>		<b><u>Width</u></b>		<b><u>Gap</u></b>	
	<b><u>(Gauss)</u></b>	<b><u>(Tesla)</u></b>	<b><u>in</u></b>	<b><u>mm</u></b>	<b><u>in</u></b>	<b><u>mm</u></b>
F062-200	200 ± 1.0%	.020 ± 1.0%	.50	12.7	0.062	1.58
F062-500	500 ± 1.0%	.050 ± 1.0%	.50	12.7	0.062	1.58
F062-1K	1K ± 0.5%	.100 ± 0.5%	.50	12.7	0.062	1.58
F062-2K	2K ± 0.5%	.200 ± 0.5%	.50	12.7	0.062	1.58
F062-5K	5K ± 0.5%	.500 ± 0.5%	.50	12.7	0.062	1.58
F062-0K	10K ± 0.5%	1.000 ± 0.5%	.50	12.7	0.062	1.58
F343-50	50 ± 1.0%	.005 ± 1.0%	.49	11.4	0.343	8.70
F343-100	100 ± 1.0%	.010 ± 1.0%	.49	11.4	0.343	8.70
F343-200	200 ± 1.0%	.020 ± 1.0%	.49	11.4	0.343	8.70
F343-500	500 ± 1.0%	.050 ± 1.0%	.49	11.4	0.343	8.70
F343-1K	1K ± 1.0%	.100 ± 1.0%	.49	11.4	0.343	8.70
F343-2K	2K ± 1.0%	.200 ± 1.0%	.49	11.4	0.343	8.70

**Zero-Gauss Chamber Model 16580, Single ended .500" access opening (06505009)**

**AXIAL PROBE REFERENCE MAGNETS**

<b><u>Model</u></b>	<b><u>Value</u></b>		<b><u>ID</u></b>	
	<b><u>(Gauss)</u></b>	<b><u>(Tesla)</u></b>	<b><u>in</u></b>	<b><u>mm</u></b>
A312-100	100 ± 1.0%	.010 ± 1.0%	0.312	7.92
A312-200	200 ± 1.0%	.020 ± 1.0%	0.312	7.92
F312-500	500 ± 1.0%	.050 ± 1.0%	0.312	7.92
F312-1K	1K ± 1.0%	.100 ± 1.0%	0.312	7.92
F312-2K	2K ± 1.0%	.200 ± 1.0%	0.312	7.92
F468-100	100 ± 1.0%	.010 ± 1.0%	0.468	11.88

Low Level Magnetic Reference Model 48500 (06505017)  
 Probe Spacer Block Model 16795 (Specify Probe and Reference Magnet)  
 Special Reference Magnets Quoted on Request

Specifications subject to change without notice.

Contact our factory for additional information.  
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