

Magnets

NVE offers several popular permanent magnets for use with magnetic sensors. In addition to individual magnets, NVE offers evaluation kits containing assortments of magnets, magnetic sensors, and printed circuit boards for sensor system development.

The following magnets are available:

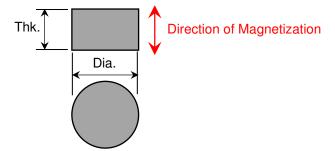


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|----------|--|------------------------------------|----------------------|--|--|--|
| Part No. | Description | Dimensions | Field at Face | Evalution Kits | | |
| 12030 | Ferrite Bar Magnet | 0.5" L x 0.125" W x 0.25" T | 150 mT | AG001-01, AG040, | | |
| | | | | AG940, and others | | |
| 12031 | Ferrite Disk Magnet | 0.312" dia. x 0.125" thick | 90 mT | AG001-01 | | |
| 12032 | Ferrite Bar Magnet | 1" L x 0.25" W x 0.39" T | 180 mT | AG910-07; AG911-07 | | |
| 12216 | Ferrite Disk Magnet | 6 mm dia. x 4 mm thick | 110 mT | AG920-07 | | |
| 12217 | Ferrite Disk Magnet | 3.5 mm dia. x 4 mm thick | 170 mT | AG920-07 | | |
| 12249 | | 12 mm dia. x 4 mm thick | 100 mT | None | | |
| 12526 | Diametrically- | 4 mm dia. x 4 mm thick | 80 mT | (compatible with | | |
| 12527 | Magnetized | 8 mm dia. x 4 mm thick | 90 mT | AAT/ADT/ADT/ASR- | | |
| 12528 | Disk Magnets | 8 mm dia. x 8 mm thick | 100 mT | Series sensors) | | |
| 12426 | Alnico-5 Split-Pole Round Horseshoe | 0.44" dia. x 0.44" H (see fig.) | 110 mT | AAT/ADT/ADT/ASR- Series angle sensors | | |

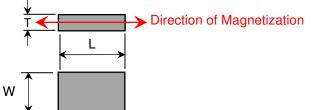
Use our <u>Web application calculators</u> (www.nve.com/spec/calculators.php) to estimate the magnet fields at various distances.



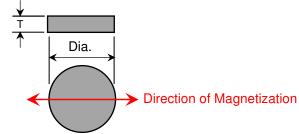
Disc Magnets (C5, Y25, or similar)



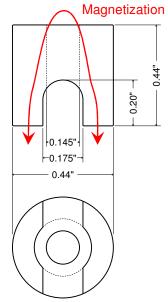
Bar Magnets (C1, Y10T, C5, Y25, or similar)



12249, 12526, 12527, and 12528 Diametrically-Magnetized Magnets (C5, Y25, or similar)



12426 Split-Pole Round Horseshoe Magnet (Alnico 5)





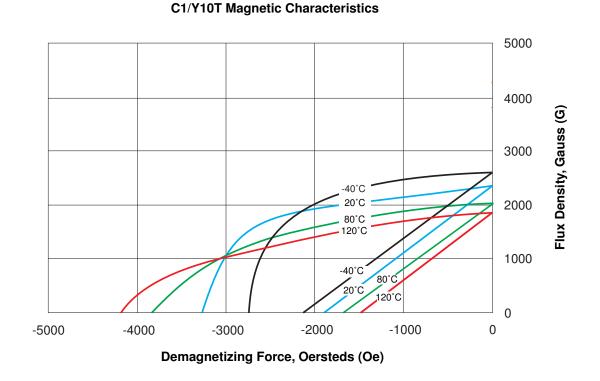
Magnet Material Specifications

| | C1/Y10T | C5/Y25 | Alnico-5 |
|---|------------|------------|-------------|
| Maximum Operating Temperature | 300°C | 300°C | 525°C |
| Curie Temperature | 450°C | 450°C | 860°C |
| Temperature Coefficient of Flux Density | -0.20%/°C | -0.20%/°C | -0.02%/°C |
| Maximum Energy Product | 1 MGOe | 3.4 MGOe | 5.5 MGOe |
| Residual Induction | 2175 Gauss | 3800 Gauss | 12800 Gauss |
| Coercive Force | 1800 Oe | 2400 Oe | 640 Oe |

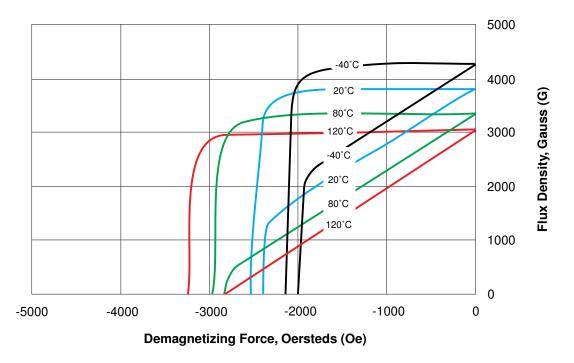




Material Characteristics



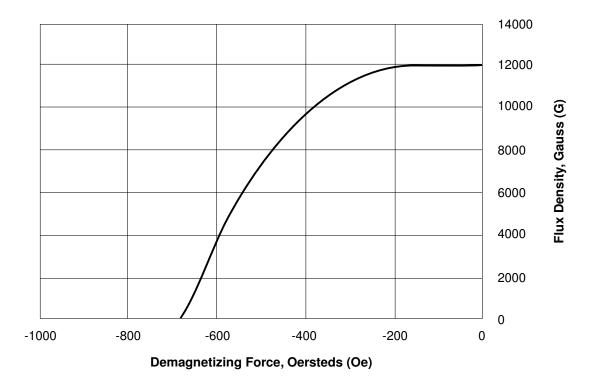
C5/Y25 Magnetic Characteristics





Datasheet

Alnico-5 Magnetic Characteristics





Datasheet

March 2025

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