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Bigger and Better

100 After making the prestigious *Star Tribune* 100 for the first time last year, NVE moved up an impressive nine notches in this year's recently-published rankings.

[<More Info>](#)

Background Music



"It's a Magnet" by Dorothy Collins

is NVE's current telephone background music.

As the story at right explains, [the right magnet](#) can make a big difference in sensor system performance.

NVE's award-winning [magnetic sensors](#) can say if "It's a Magnet" with unmatched precision and speed.

Memorial Day

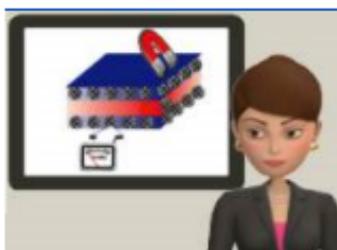


NVE will be closed May 30 for Memorial Day.

Technical Videos



More than 20 highly-acclaimed new [technical videos](#) cover technology, NVE products, and practical application tips. Virtual actors [Danno](#), [Jayne](#), [Sandy](#), and [N. V. e-Geek](#) provide valuable information in a fun format.



So crank up the big screen, grab some popcorn, and invite some friends.

[<NVE Videos>](#)

Upcoming Exhibitions

Powerful, intelligent NVE products will be on display at Power Conversion and Intelligent Motion ("PCIM") in Nürnberg, Germany. See us May 17 - 19 in the HY-LINE Power booth, Hall 12 Stand 434.

[<Free Registration Courtesy HY-LINE Power >](#)



NVE sensors will be on display at **Sensor+Test 2011** in June. Look for details in next month's *Sensor and Isolator News*.

Application Corner

Remembering Magnets

Humble magnets are sometimes forgotten in sensor systems. But the right magnet can make all the difference in sensor system performance, often at low cost. NVE stocks several [popular magnet types](#). Watch our [new video](#) for an overview:

Magnet Shapes

- > Bar
- > Disk
- > Split-Pole
- > Ring

NEW!

Magnet Configurations

Magnets can be often used to activate a magnetic sensor, as with a simple proximity sensor, or to bias a sensor where the field is deflected by ferromagnetic material. For example, [GMR Switch Sensors](#) are often activated with a magnet and [GT Gear-Tooth Sensors](#) are usually operated with a bias magnet.

Material Grades

Ceramic and Alnico magnetic materials are graded between one and eight. Grade 1 materials are non-oriented or isotropic. In general, higher grades are more fully oriented (anisotropic) and have higher field strengths. Magnet cost also tends to increase with material grade.

Materials

Ceramic (ferrite) magnets are made of strontium carbonate and iron oxide. Grade 1 have the weakest magnetic field strengths, grade 5 are inexpensive and popular with our customers, and grade 8 have good field characteristics for sensor systems and are still relatively inexpensive.

Alnico refers to aluminium-nickel-cobalt alloys. Alnico magnets have working temperatures above 1,000°F (538°C). Alnico grade 8 magnets provide a very stable field over wide temperature ranges, making them the preferred choice for high temperature application.

Rare-earth magnets (samarium-cobalt or neodymium-iron-boron) are relatively expensive and have very high field strengths. The high field strengths are generally not necessary in NVE sensor systems and may saturate sensors, resulting in no output.

Sizes and Shapes

There are a myriad of magnet sizes and shapes. Some of the more common among our customers are bar magnets around 1/2 inch long and disk magnets 1/8 to 1/4 inch in diameter.

Specialty Magnets

Split-pole disk magnets are typically used for angle sensors such as [AAT001 Angle Sensors](#), although a bar magnet can also be used. Split-pole magnets have poles on opposite sides of the diameter rather than top and bottom as with a conventional disk magnet (see figure at right).



Split-pole magnet

Ring magnets have multiple poles around the diameter and can be used for rotational or course-angle sensing. Ring magnets are common in ABS systems, for example, and can be used with GT Sensors.

[<Magnet Data Sheet \(.pdf\)>](#)

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\$9.95 shipping