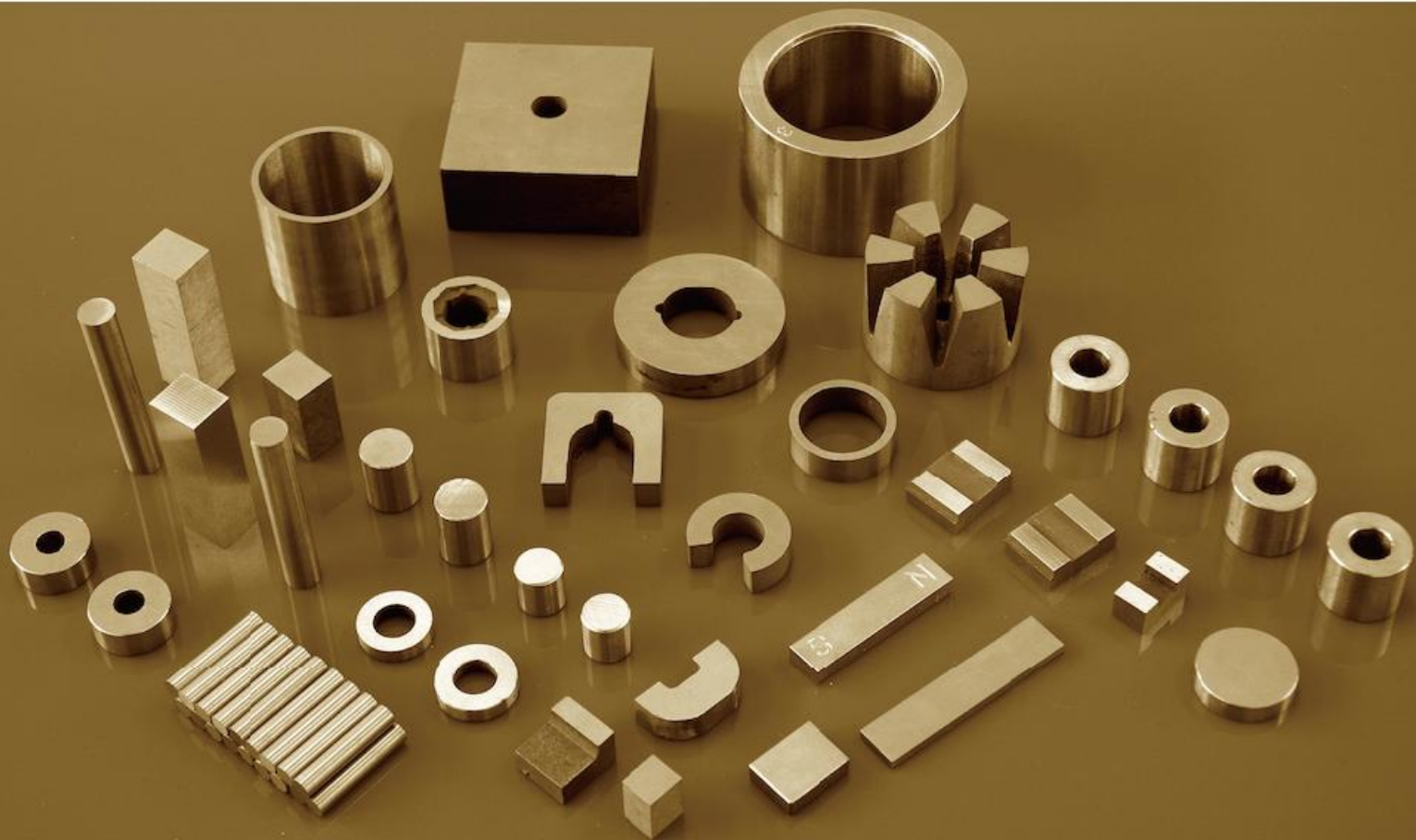


AlNiCo

Aluminum Nickel Cobalt

First used in the 1930's, Alnico is the oldest family of permanent magnets. Its energy products range from 2.0 to 9.0 MGOe and it is produced in both cast and sintered forms. The most common grades are cast Alnico 5 and 8 with Alnico 5-7 and 9 being premium grades. Sintered Alnico materials are used for applications where the geometries are smaller and more complex.

Alnico magnets are easy to magnetize and have high resistance to corrosion. They are used where high temperatures exist and/or where very stable properties are required.



Magnetic Properties of AlNiCo Magnets

| Grade | Remanence Flux Density | | Coercive | | | | Max. Energy Density | | Temp. Coefficient | | Operating Temp. | MMPA |
|-----------------------------|------------------------|------|-----------------|------|-----------------|------|---------------------|-------------------|-------------------|--------------------------|--------------------|------------|
| | B _r | | H _{CB} | | H _{CJ} | | (BH) _{max} | | TK(Br) %/K | TK(H _{CJ}) %/K | T _w max | |
| | kGs | mT | kOe | kA/m | kOe | kA/m | MGOe | kJ/m ³ | | | + C | |
| ISOTROPIC CAST ALNICO | | | | | | | | | | | | |
| LN10 | 6.5 | 650 | 0.48 | 38 | 0.5 | 40 | 1.25 | 10 | -0.035 | -0.025 | 450 | ALNICO 3 |
| LNG12 | 7.5 | 750 | 0.56 | 45 | 0.58 | 46 | 1.5 | 12 | -0.03 | -0.02 | 450 | ALNICO 2 |
| LNGT18 | 5.5 | 550 | 1.13 | 90 | 1.21 | 97 | 2.25 | 18 | -0.025 | 0.01 | 550 | ALNICO 8 |
| ANISOTROPIC CAST ALNICO | | | | | | | | | | | | |
| LNG34 | 11 | 1100 | 0.63 | 50 | 0.65 | 52 | 4.25 | 34 | -0.02 | 0.01 | 525 | ALNICO 5 |
| LNG37 | 11.8 | 1180 | 0.61 | 49 | 0.64 | 51 | 4.63 | 37 | -0.02 | 0.01 | 525 | |
| LNG40 | 12 | 1200 | 0.63 | 50 | 0.65 | 52 | 5 | 40 | -0.02 | 0.01 | 525 | |
| LNG44 | 12.5 | 1250 | 0.65 | 52 | 0.68 | 54 | 5.5 | 44 | -0.02 | 0.01 | 525 | |
| LNGT28 | 11.5 | 1150 | 0.73 | 58 | 0.75 | 60 | 3.5 | 28 | -0.02 | 0.03 | 525 | ALNICO 6 |
| LNG52 | 13 | 1300 | 0.7 | 56 | 0.73 | 58 | 6.5 | 52 | -0.02 | 0.03 | 525 | ALNICO 5DG |
| LNG60 | 13.5 | 1350 | 0.73 | 58 | 0.75 | 60 | 7.5 | 60 | -0.02 | 0.03 | 525 | ALNICO 5-7 |
| LNGT38 | 8 | 800 | 1.38 | 110 | 1.4 | 112 | 4.75 | 38 | -0.025 | 0.01 | 550 | ALNICO 8 |
| LNGT40 | 8.5 | 850 | 1.44 | 115 | 1.46 | 117 | 5 | 40 | -0.025 | 0.01 | 550 | |
| LNGT44 | 9 | 900 | 1.44 | 115 | 1.46 | 117 | 5.5 | 44 | -0.025 | 0.01 | 550 | |
| LNGT36J | 7.2 | 720 | 1.88 | 150 | 1.9 | 152 | 4.5 | 36 | -0.025 | 0.01 | 550 | ALNICO 8HC |
| LNGT60 | 10 | 1000 | 1.38 | 110 | 1.4 | 112 | 7.5 | 60 | -0.025 | 0.01 | 550 | ALNICO 9 |
| LNGT72 | 10.5 | 1050 | 1.44 | 115 | 1.46 | 117 | 9 | 72 | -0.025 | 0.01 | 550 | |
| LNGT80 | 10.8 | 1080 | 1.5 | 120 | 1.53 | 122 | 10 | 80 | -0.025 | 0.01 | 550 | |
| ISOTROPIC SINTERED ALNICO | | | | | | | | | | | | |
| FLNG10 | 6.5 | 650 | 0.5 | 40 | 0.53 | 42 | 1.25 | 10 | -0.03 | -0.02 | 450 | ALNICO 2 |
| FLNG12 | 7.5 | 750 | 0.56 | 45 | 0.58 | 46 | 1.5 | 12 | -0.035 | -0.025 | 450 | ALNICO 3 |
| FLNGT18 | 6 | 600 | 1.19 | 95 | 1.23 | 98 | 2.25 | 18 | -0.025 | 0.01 | 550 | ALNICO 8 |
| FLNGT20 | 6.2 | 620 | 1.25 | 100 | 1.31 | 105 | 2.5 | 20 | -0.025 | 0.01 | 550 | |
| ANISOTROPIC SINTERED ALNICO | | | | | | | | | | | | |
| FLNG34 | 11.5 | 1150 | 0.6 | 48 | 0.63 | 50 | 4.25 | 34 | -0.02 | 0.01 | 525 | ALNICO 5 |
| FLNGT28 | 11 | 1100 | 0.73 | 58 | 0.75 | 60 | 3.5 | 28 | -0.02 | 0.03 | 525 | ALNICO 6 |
| FLNGT36J | 7.2 | 720 | 1.88 | 150 | 1.9 | 152 | 4.5 | 36 | -0.025 | 0.01 | 550 | ALNICO 8HC |
| FLNGT38 | 8 | 800 | 1.38 | 110 | 1.4 | 112 | 4.75 | 38 | -0.025 | 0.01 | 550 | ALNICO 8 |
| FLNGT44 | 8.5 | 850 | 1.5 | 120 | 1.53 | 122 | 5.5 | 44 | -0.025 | 0.01 | 550 | |
| FLNGT48 | 9.2 | 920 | 1.56 | 125 | 1.59 | 127 | 6 | 48 | -0.025 | 0.01 | 550 | |

1. The above-mentioned data of magnetic parameters and physical properties are given at room temperature.
2. The above values also have relationship to products shapes and dimensions. It is recommended that the final test data to be fixed on actual products.
3. For other special magnetic parameters, please contact us, and we can make them to your specifications.