



KYLE MAGNETICS CO.,LTD
Devote ourselves in clean energy

Technical Data Specification:

Alnico Magnets

Alnico magnets is regarded as the best choice in extremely high temperature applications. Alnico magnets can be produced by Casting or Sintering. Alnico is also rarely made by Bonding within a binder.

Cast Alnico is the most common form of Alnico magnet. Casting is often used to get "near net shape" Alnico magnets. Casting Alnico is cost effective for both low and high volume, for small and very large magnets.

Sintered Alnico is cost effective for medium to high volume runs due to tooling cost. The parts are generally small to medium. Sintered Alnico magnets are not so commonly used due to lower magnetic performance and limitation to simpler shapes.

Anisotropic magnets have the direction of magnetisation (DoM) permanently within the structure and give the maximum performance. Isotropic magnets can be magnetised in many ways as they have no preferred direction of magnetisation but give reduced performance.

Where the shape is new, tooling charges may apply. It is common for the magnet pole faces to be machined to finish. Alnico produced to specific Br, Hc, Hci and BHmax may be possible but at extra cost. Keeping within normal grades is advised.

Alnico Assemblies are also possible.

| SINTERED ALNICO | | | | | | | | |
|---|------|------------|----------|------------|---------|---------|-----------|---------|
| Specification is for the sole use of the intended recipient(s) and may contain confidential and privileged information, only for reference. | | | | | | | | |
| Grade | MMPA | Br | Hcb | (BH)max | Tc | Tw | T.C.α(Br) | Density |
| | | mT/Gs | Ka/m/Oe | Kj/m3/MGOe | °C | °C | %°C | g/cm3 |
| | | Typical | Typical | Typical | Typical | Typical | Typical | |
| KM300 | | 500/5000 | 40/500 | 8/1.00 | 760 | 450 | -0.022 | 6.9 |
| KM200 | | 700/7000 | 48/600 | 12/1.50 | 810 | 450 | -0.014 | 7.1 |
| KM700 | | 600/6000 | 90/1130 | 18/2.20 | 860 | 450 | -0.02 | 7.3 |
| KM500 | | 1200/12000 | 48/600 | 34/4.25 | 890 | 450 | -0.016 | 7.3 |
| KM600 | | 1050/10500 | 56/700 | 28/3.50 | 850 | 450 | -0.02 | 7.3 |
| KM380 | | 800/8000 | 120/1500 | 38/4.75 | 850 | 450 | -0.02 | 7.3 |
| KM420 | | 880/8800 | 120/1500 | 42/5.25 | 820 | 450 | -0.02 | 7.3 |
| KM33J | | 700/7000 | 140/1750 | 33/4.13 | 850 | 450 | -0.025 | 7.3 |
| KM36J | | 700/7000 | 140/1750 | 36/4.50 | 850 | 450 | -0.025 | 7.3 |



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| CAST ALNICO | | | | | | | | | |
|-------------|-----------|------------|----------|------------|---------|---------|-----------|-------------|---------|
| Grade | MMPA | Br | Hcb | (BH)max | Tc | Tw | T.C.α(Br) | T.c.α(Hcj) | Density |
| | | mT/Gs | Ka/m/Oe | Kj/m3/MGOe | °C | °C | %/°C | %/°C | g/cm3 |
| | | Typical | Typical | Typical | Typical | Typical | Typical | Typical | |
| LN10 | ALNICO3 | 600/6000 | 40/500 | 10/1.25 | 750 | 550 | -0.02 | -0.03~-0.07 | 6.9 |
| LNG10 | | 600/6000 | 44/550 | 10/1.25 | 750 | 550 | -0.02 | -0.03~-0.07 | 6.9 |
| LNG12 | ALNICO2 | 700/7000 | 44/550 | 12/1.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.1 |
| LNG13 | | 680/6800 | 48/600 | 13/1.63 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.1 |
| LNG16 | ALNICO4 | 800/8000 | 48/600 | 16/2.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG18 | | 900/9000 | 48/600 | 18/2.25 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG37 | ALNICO5 | 1200/12000 | 48/600 | 37/4.63 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG40 | | 1230/12300 | 48/600 | 40/5.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG44 | ALNICO5DG | 1250/12500 | 52/650 | 44/5.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG48 | | 1280/12800 | 56/700 | 48/6.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG52 | ALNICO5-7 | 1300/13000 | 56/700 | 52/6.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG56 | | 1300/13000 | 58/720 | 56/7.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNG60 | ALNICO6 | 1330/13300 | 60/750 | 60/7.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT28 | | 1000/10000 | 56/700 | 28/3.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT30 | ALNICO8 | 1100/11000 | 56/700 | 30/3.75 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT18 | | 580/5800 | 80/1000 | 18/2.25 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT32 | ALNICO8 | 800/8000 | 100/1250 | 32/4.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT38 | | 800/8000 | 110/1380 | 38/4.75 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT44 | ALNICO8HE | 850/8500 | 115/1450 | 44/5.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT48 | | 900/9000 | 120/1500 | 48/6.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT60 | ALNICO9 | 900/9000 | 110/1380 | 60/7.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT72 | | 1050/10500 | 112/1400 | 72/9.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT80 | ALNICO9 | 1080/10800 | 120/1500 | 80/10.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT88 | | 1100/11000 | 115/1450 | 88/11.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT96 | ALNICO8HC | 1150/11500 | 118/1480 | 96/12.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT36J | | 700/7000 | 140/1750 | 36/4.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT48J | ALNICO8HC | 800/8000 | 145/1820 | 48/6.00 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |
| LNGT52J | | 850/8500 | 140/1750 | 52/6.50 | 800~850 | 550 | -0.02 | -0.03~-0.07 | 7.3 |