

ALNICO

Alnico magnets are metal magnets mainly composed of aluminium, nickel, cobalt and iron.

They are obtained by casting.

Density 7.3.

HOLDING FORCE

- ▶ It is optimal when the magnet is in contact with a soft, flat, clean and sufficiently thick steel frame. It decreases for alloyed steels and cast iron (-30% for cast iron)
- ▶ It decreases when there is an air gap (space between the part to be attracted and the pole face of the magnet).
- ▶ It decreases by 0.04% per degree C. This loss is reversible.

SURFACE INDUCTION

- ▶ In order to have a maximum surface value, the magnet must be bare and have a length, between the two polar faces, of about 5 times its diameter.
- ▶ The value of the induction created by the Alnico decreases by 0.02% per degree C, as the temperature increases. This loss is reversible.

MECHANICAL STRENGTH

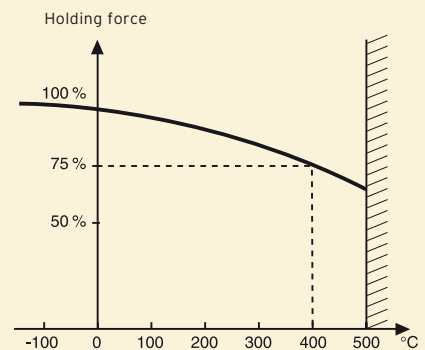
- ▶ Of all the rigid magnetic materials, Alnico offers the best impact resistance.

RESISTANCE TO OXIDATION

- ▶ Oxidation resistance is good in a normal atmosphere.

PRECAUTIONS FOR USE

- ▶ Do not put magnets in repulsion.
- ▶ Never slide them against each other, or leave a magnet against a part to be attracted: they can lose up to 30% of their attraction power.



- ▶ Magnetically, Alnico is characterised by a high remanent induction but a low coercive field and a low maximum BH.
- ▶ EUROMAG manufactures 20 different grades. The Alnico grades presented in this catalogue are :

Grades	Alnico 600	Alnico 700	Alnico 1500
Br Typical (T)	1,26	1,20	0,90
Hcb Typical (kA/m)	50	56	125
BH max Typical (kJ/m ³)	42	41	45

