

Magneti in Coaniax fusi (Alnico)



Coaniax

Sotto il nome "Coaniax" si intende reggruppare quei materiali magnetici ottenuti per fusione. Il tipo RK 1 è in assoluto la gradazione più richiesta ed è composta da Cobalto (24%), Nichel (14%), Alluminio (8%), Rame (3%), e Ferro (51%).

Per applicazioni speciali sono disponibili altre gradazioni che meglio potrebbero adattarsi alle specifiche esigenze. Le barrette cilindriche (Art. 371), possono essere tagliate e rettificare con tolleranze millesimali. In tempi brevi la Calamit può produrre qualunque diametro fino a 25 mm. con lunghezze massime variabili da 180 a 250 mm. Il Coaniax è la composizione magnetica che meglio resiste alle alte temperature (vedi pag.24). Su disegno si esegue qualunque formato.



Coaniax

Con el nombre "Coaniax" se designa el grupo de materiales magnéticos obtenidos por fusión. El tipo RK 1 es con diferencia la gradación más solicitada y está compuesta por Cobalto (24%), Níquel (14%), Aluminio (8%), Cobre (3%), Hierro (51%).

Para aplicaciones específicas hay otras gradaciones disponibles que podrían adaptarse mejor a las necesidades de cada caso. Las barras cilíndricas (Art. 371), se pueden cortar y rectificar con tolerancias milésimas. En poco tiempo Calamit puede producir cualquier diámetro de hasta 25 mm. con longitudes máximas variables de 180 a 250 mm. El Coaniax es la composición magnética que resiste mejor a las altas temperaturas (véase pág. 24). Se realiza cualquier formato del diseño elegido.



Coaniax

Par le nom "Coaniax" on indique les matériaux magnétiques obtenus par fusion. Le type RK 1 est en absolu la gradation la plus requise et se compose de Cobalt (24%), Nickel (14%), Aluminium (8%), Cuivre (3%) et Fer (51%).

Pour des applications spéciales sont disponibles d'autres gradations qui pourraient mieux s'adapter aux besoins spécifiques. Les barres cylindriques (Art. 371) peuvent être coupées et rectifiées avec des tolérances au millième. Calamit est à même de produire très rapidement tout diamètre jusqu'à 25 mm, avec des longueurs maximales comprises entre 180 et 250 mm. Le Coaniax est la composition magnétique la plus résistante aux hautes températures (voir page 24). Sur demande l'on réalise tout format.



Coaniax

The name "Coaniax" is used to identify all those magnetic materials obtained by fusion. The type RK1 is definitely the most required grade and consists of Cobalt (24%), Nickel (14%), Aluminium (8%), Copper (3%) and Iron (51%).

For special applications other grades are available so as to better meet your specific needs. The cylindrical bars (Art. 371) can be cut and rectified with millesimal tolerances. Calamit can rapidly produce any diameter up to 25 mm with maximum lengths ranging between 180 and 250 mm. Coaniax is the most resistant magnetic composition to high temperatures (see page 24). Any size can be made upon specific request.

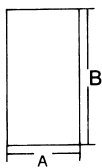


Coaniax

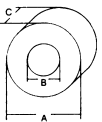
Unter dem Namen "Coaniax" versteht man die Gruppe der magnetischen Materialien, die durch Schmelzung erhalten wurden. Der Typ RK 1 ist die weitaus am meisten gefragte Gradation und besteht aus Kobalt (24%), Nickel (14%), Aluminium (8%), Kupfer (3%) und Eisen (51%).

Für Spezialanwendungen sind weitere Gradationen erhältlich, die sich besser an die speziellen Bedürfnisse anpassen könnten. Die Zylinderstangen (Art. 371) können geschnitten und mit Millimetertoleranzen auf Mass geschliffen werden. In kurzer Zeit kann Calamit jeden Durchmesser bis zu 25 mm mit Maximallängen von 180 bis 250 mm herstellen. Coaniax ist die magnetische Zusammensetzung, die am besten hohen Temperaturen widersteht (siehe S. 24). Nach Zeichnung wird jedes Format ausgeführt.

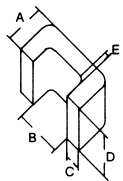
| Art. 371 | A mm | B mm | C mm | D mm | E mm | Type |
|------------------------------------------------------|-------------------|---------------------|------|------|------|------|
| Barrette Varillas Barrettes Bars Stangen | 3 - 4 - 4,5 | } min. 5 max 220 | | | | RK 1 |
| | 5 - 6 - 7 | | | | | RK 1 |
| | 8 - 9 - 10 | | | | | RK 1 |
| | 12 - 15 - 20 - 25 | | | | | RK 1 |
| | 12,42 | 8,6 | | | | RK 2 |
| | 16 | 13 | | | | RK 1 |
| | 28,3 | 19,44 | | | | RK 1 |
| | 55,3 | 50 | | | | RK 1 |



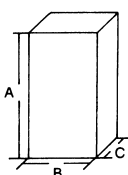
| Art. 373 | A mm | B mm | C mm | Type |
|----------|------|------|------|------|
| Anelli | 17,8 | 4,2 | 9 | RK 1 |
| Anillos | 29 | 18 | 12 | RK 1 |
| Anneaux | 55,3 | 9,5 | 50 | RK 1 |
| Rings | 50,8 | 38 | 25,4 | RK 1 |

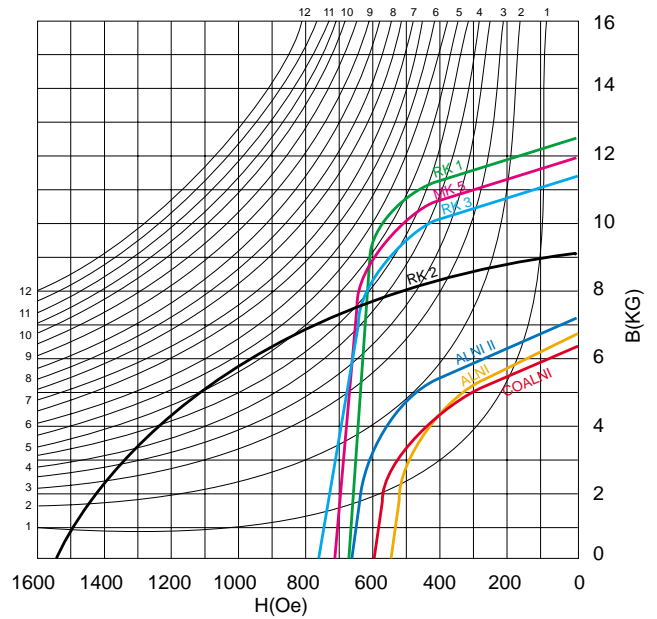


| Art. 374 | A mm | B mm | C mm | D mm | E mm | Type |
|----------------------------------------------------------------------|------|------|------|------|----------|---------------|
| Forma ad "U" Forma a "U" Forme en "U" "U" Shape "U" Form | 20 | 15 | 7,5 | 20 | 4 | RK 1 - d 2130 |
| | 25,4 | 19,1 | 9,5 | 25,4 | 5 | RK 1 - d 2098 |
| | 29,5 | 22,2 | 11,1 | 28,6 | 5,8 | RK 1 - d 2051 |
| | 35 | 36 | 11 | 44 | 2 x 8 | RK 1 - d 2126 |
| | 41 | 41 | 14,5 | 57 | 2 x 8 | RK 1 - d 2127 |
| | 54 | 48 | 20 | 82 | 2 x 10,5 | RK 1 - d 2128 |
| | 7 | 10 | 6 | 11,5 | 3,5 | RK 1 - aut |
| | 20,5 | 17 | 12 | 19 | | RK 1 - sep mm |
| | 31 | 22 | 11,5 | 29,5 | 5,5 | RK 1 - vet |
| | 40 | 62,5 | 12,5 | 45 | 8 | RK 1 - sep |
| | 54 | 47,6 | 16 | 82,5 | 9,5 | RK 1 - sep sp |



| Art. 375 | A mm | B mm | C mm | Type |
|--------------------------------------------------|------|------|------|---------------------------------|
| Blocchi Bloqueos Blocs Blocks Blöcke | 35 | 20 | 18 | RK 1 |
| | 7,9 | 5,9 | 2,85 | RK 1 |
| | 51 | 25 | 6 | RK 3 |
| | 63,5 | 34 | 6 | RK 3 |
| | 50 | 45 | 40 | RK 1 |
| | 80 | 70 | 30 | RK 1 |
| | 105 | 33 | 15 | RK 1 |
| | | | | con due asole with two slots |





Caratteristiche minime garantite (+ Max 10%)
 Características mínimas garantizadas (+ Máx 10%)
 Caractéristiques minimales garanties (+ Max 10%)
 Minimum guaranteed characteristics (+ Max 10%)
 Garantierte magnetische Mindestwerte (+ max 10%)

Cast AlNiCo

Cast AlNiCo

Moulage AlNiCo

Cast AlNiCo

Cast AlNiCo

| Gradazioni Grade | Br | | HcB | | (BH) max | | D | Equivalente Equivalent MMPA Class | % Change Per C | | Tc | Tw |
|------------------|---------|---------|-----------|---------|------------|-----------|-------|-----------------------------------|----------------|-------|-----|-----|
| | mT Min. | Gs Min. | KA/m Min. | Oe Min. | KJ/m³ Min. | MGOe Min. | g/cm³ | | Br | HcJ | °C | °C |
| RK 1 | 1250 | 12500 | 48 | 600 | 40.0 | 5.00 | 7.3 | Alnico 5 | -0.02 | +0.02 | 860 | 525 |
| RK 2 | 800 | 8000 | 110 | 1380 | 40.0 | 5.0 | 7.3 | Alnico 8 | -0.025 | +0.02 | 860 | 550 |
| RK 3 | 1000 | 10000 | 58 | 720 | 28.0 | 3.50 | 7.3 | Alnico 6 | -0.02 | +0.03 | 860 | 525 |
| RK 6 | 1250 | 12500 | 50 | 550 | 42 | 4.7 | 7.3 | Alnico 600 | -0.02 | +0.03 | 860 | 525 |
| MKS 52 | 1300 | 13000 | 56 | 700 | 52.0 | 6.50 | 7.3 | Alnico 5 DG | -0.02 | +0.02 | 860 | 525 |
| LNG37 | 1200 | 12000 | 48 | 600 | 37.0 | 4.65 | 7.3 | Alnico 5 L | -0.02 | +0.02 | 860 | 525 |
| LNG44 | 1250 | 12500 | 52 | 650 | 44.0 | 5.50 | 7.3 | Alnico 5 H | -0.02 | +0.02 | 860 | 525 |
| LNG60 | 1350 | 13500 | 59 | 740 | 60.0 | 7.5 | 7.3 | Alnico 5-7 | -0.02 | +0.02 | 860 | 525 |
| LNGT36J | 700 | 7000 | 140 | 1750 | 36.0 | 4.50 | 7.3 | Alnico 8HC | -0.025 | +0.02 | 860 | 550 |
| LNGT18 | 580 | 5800 | 100 | 1250 | 18.0 | 2.2 | 7.3 | Alnico 8 | -0.025 | +0.02 | 860 | 550 |
| LNGT32 | 800 | 8000 | 100 | 1250 | 32.0 | 4.0 | 7.3 | Alnico 8 | -0.025 | +0.02 | 860 | 550 |
| LNGT60 | 900 | 9000 | 110 | 1380 | 60.0 | 7.50 | 7.3 | Alnico 9 | -0.025 | +0.02 | 860 | 550 |
| LNGT72 | 1050 | 12000 | 48 | 600 | 37.0 | 4.65 | 7.3 | Alnico 5 L | -0.02 | +0.02 | 860 | 525 |
| *ALNi 9 | 680 | 6800 | 30 | 380 | 9.0 | 1.13 | 6.9 | Alnico 3 | -0.03 | -0.02 | 810 | 450 |
| *ALNi 10 | 600 | 6000 | 40 | 500 | 10.0 | 1.20 | 6.9 | Alnico 3 | -0.03 | -0.02 | 810 | 450 |
| *COALNi 12 | 720 | 7200 | 45 | 500 | 12.4 | 1.55 | 7.0 | Alnico 2 | -0.03 | -0.02 | 810 | 450 |
| *ALNi II 13 | 700 | 7000 | 48 | 600 | 12.8 | 1.60 | 7.0 | Alnico 2 | -0.03 | -0.02 | 810 | 450 |

* = Materiali isotropici - Materiales isotrópicos - Matériaux isotropiques - Isotropic materials - Isotrope Materialien

| | Min Spess./Thick. | Max Spess./Thick. | Min Ø int | Max Ø int | Min Ø ext | Max Ø ext |
|-----------------------|----------------------------------------------------|-------------------|-----------------|-----------------|------------------|------------------|
| ALNICO RING AXIAL | 1 | 700 | 6 | 600 | 1 | 700 |
| ALNICO RING DIAMETRAL | 1 | 700 | 6 | 600 | 1 | 700 |
| ALNICO RING RADIAL | Impossibile - Impossible - Impossible - Impossible | | | | | |
| ALNICO DISC AXIAL | 1 | 700 | X | X | 1 | 700 |
| ALNICO DISC DIAMETRAL | 1 | 700 | X | X | 1 | 700 |
| | Min Spess./Thick. | Max Spess./Thick. | Min Lung/Lenght | Max Lung/Lenght | Min Largh./Widht | Max Largh./Widht |
| ALNICO BLOCK AXIAL | 1 | 700 | 1 | 700 | 1 | 700 |

Magneti Coaniax Sinterizzati (Alnico)



Tipici magneti in Coaniax
 Tipicos imanes en Coaniax
 Aimants typiques en Coaniax
 Typical magnets made of Coaniax
 Typische Magnete aus Coaniax

Alnico Sinterizzato Alnico Sinterizado Alnico Fritté Sintered Alnico Gesintertes AlNiCo

| Grade | Br | | Hcj | | HcB | | (BH)max | | D | % Change Per C | Tc | REMARK |
|---------|------|-------|------|------|------|------|-------------------|-----------|-------------------|----------------|-----|-------------|
| | mT | Gs | KA/m | Oe | KA/m | Oe | KJ/m ³ | MGOe | g/cm ³ | %K | °C | |
| FLN8 | 520 | 5200 | 43 | 540 | 40 | 500 | 8-10 | 1.0-1.25 | 6.8 | -0.022 | 760 | Isotropic |
| FLNG12 | 700 | 7000 | 43 | 540 | 40 | 500 | 12-14 | 1.5-1.75 | 7.0 | -0.014 | 810 | Isotropic |
| FLNGT14 | 570 | 5700 | 78 | 980 | 76 | 950 | 14-16 | 1.75-2.0 | 7.1 | -0.020 | 850 | Isotropic |
| FLNGT18 | 560 | 5600 | 90 | 1130 | 88 | 1100 | 18-22 | 2.25-2.75 | 7.2 | -0.020 | 850 | Isotropic |
| FLNG28 | 1050 | 10500 | 47 | 590 | 46 | 580 | 28-33 | 3.5-4.15 | 7.2 | -0.016 | 850 | Anisotropic |
| FLNG34 | 1100 | 11000 | 51 | 640 | 50 | 630 | 34-38 | 4.3-4.8 | 7.2 | -0.016 | 890 | Anisotropic |
| FLNGT28 | 1000 | 10000 | 57 | 710 | 56 | 700 | 28-30 | 3.5-3.8 | 7.2 | -0.020 | 850 | Anisotropic |
| FLNGT31 | 780 | 7800 | 106 | 1130 | 104 | 1300 | 33-36 | 3.9-4.5 | 7.2 | -0.020 | 850 | Anisotropic |
| FLNG33J | 650 | 6500 | 150 | 1880 | 136 | 1700 | 31-36 | 4.15-4.5 | 7.2 | -0.020 | 850 | Anisotropic |
| FLNGT38 | 800 | 8000 | 126 | 1580 | 123 | 1550 | 38-42 | 4.75-5.3 | 7.2 | -0.020 | 850 | Anisotropic |
| FLNGT42 | 880 | 8800 | 122 | 1530 | 120 | 1500 | 42-48 | 5.3-6.0 | 7.25 | -0.020 | 850 | Anisotropic |

Tabelle di conversione

Tablas de conversión

Tableaux de conversion

Conversion tables

Umrechnungstabellen

| | | | | |
|------|-------------------|-----------------|-------------------|-------------------|
| KA/m | 20 | 100 | 200 | 300 |
| A/m | 2x10 ² | 10 ³ | 2x10 ³ | 3x10 ³ |
| A/cm | 200 | 1000 | 2000 | 3000 |
| Oe | 250 | 1250 | 2500 | 3770 |

100 KA/mx (4π) = 1256,6 Oe

| | | | | | | | | | | | | |
|-----------------------|---|----|----|----|----|----|----|----|----|----|----|----|
| KJ/m ³ | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| mWS/cm ³ | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 10 ⁶ Gx Oe | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

10 KJ/m³ (4xπ/100) = 1,256x10⁶ Gx Oe 1x10⁶ G x Oe = 7,96 KJ/m

| | | | | |
|------------------------------------|------|------|-------|-------|
| T | 0,1 | 0,5 | 1,0 | 1,5 |
| mT | 100 | 500 | 1000 | 1500 |
| G | 1000 | 5000 | 10000 | 15000 |
| 10 ⁶ VS/cm ² | 1000 | 5000 | 10000 | 15000 |

1G = 10⁶ VS/cm² 1T = 10000 G 1mT = 10G

1 N = 101,97 gr.

Lunghezza • Length • Longueur Länge • Largo

- 1 pollice (inch) = 25,4 mm
- 1 piede (foot) = 30,48 cm
- 1 yard = 0,9144 m
- 1 miglio (mile) = 1,609 Km
- 1 cm = 0,0328 piedi
- 1 m = 1,093 yards
- 1 Km = 0,62137 miglia

Superficie • Area • Aire • Fläche

1 pollice quadrato (sq. inch) = 6,4516 cm²

Volume • Volumen

- 1 pollice cubo = 16,387 cm³
- 1 pinta = 0,568 litri
- 1 cm³ = 0,061 pollici cubi
- 1 litro = 1,76 pinte

Peso • Weight • Poids Gewicht

- 1 oncia = 28,349 grammi
- 1 pound = 0,4536 Kg
- 1 stone = 6,350 Kg
- 1 cwt = 50,80 Kg
- 1 ton = 1,016 tonnellate
- 1 grammo = 0,03527 once
- 1 Kg = 2,205 pounds
- 1 tonnellata = 0,9842 tons

Temperatura • Temperature Température Temperatur

Centigrade = (F-32) $\frac{5}{9}$
 Fahrenheit = $\frac{9}{5}$ C+32