

# ALCAST | ALSINT

Cast / Sintered AlNiCo

## MATERIAL TYPE

Metallic Alloy

## SURFACE PROTECTION

Not necessary

## ORIENTATION & MAGNETIZATION

Axial / Diametral

## TEMPERATURE BEHAVIOR

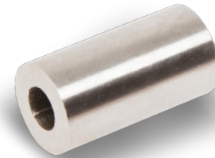
Br TEMPERATURE COEFFICIENT	% / °C	-0,03
HcJ TEMPERATURE COEFFICIENT	% / °C	+0,03

\*The temperature coefficients are nominal reference values only. They can vary for different temperatures and don't need to be linear.

\*\*The maximum operating temperature is depending on the magnet shape, size and on the specific application.

## PHYSICAL AND MECHANICAL TYPICAL PROPERTIES

CURIE TEMPERATURE	°C	850
RECOIL PERMEABILITY	( $\mu$ r)	2,0 - 6,5
SATURATION FIELD	kOe	> 5.000
ELECTRICAL RESISTIVITY	$\Omega$ m	0,6
COMPRESSIVE STRENGTH	N/mm <sup>2</sup>	~ 700
DENSITY	g/cm <sup>3</sup>	7,3
FLEXURAL STRENGTH	N/mm <sup>2</sup>	55
TENSILE STRENGTH	N/mm <sup>2</sup>	45 - 60
VICKERS HARDNESS	HV	50
YOUNG'S MODULUS	N/mm <sup>2</sup>	~ 150
SPECIFIC HEAT	kcal/kg/°C	0,12
THERMAL CONDUCTIVITY	kcal/m/hr/°C	60
THERMAL EXPANSION COEFFICIENT	10 <sup>-6</sup> /°C	11 - 13



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## Cast AlNiCo (Anisotropic)

GRADES	Br		Coercive Force		BH max		Max. Working Temp.**
	G	T	Oe	kA/m	MG0e	kJ/m <sup>3</sup>	
ALCAST 37	12.000	1,200	600	48	4,63	37	≤550
ALCAST 40	12.500	1,250	600	48	5,00	40	≤550
ALCAST 44	12.500	1,250	650	52	5,50	44	≤550
ALCAST 52	13.000	1,300	700	56	6,50	52	≤550
ALCAST 44T	8.500	0,850	1.500	120	5,50	44	≤550
ALCAST 48T	9.000	0,900	1.500	120	6,00	48	≤550

## Sintered AlNiCo (Isotropic)

GRADES	Br		Coercive Force		BH max		Max. Working Temp.**
	G	T	Oe	kA/m	MG0e	kJ/m <sup>3</sup>	
ALSINT 10	6.150	0,615	625	50	1,13	9	≤450
ALSINT 12	7.250	0,725	650	52	1,50	12	≤450
ALSINT 20	6.200	0,620	1.270	102	2,53	20	≤550

## Sintered AlNiCo (Anisotropic)

GRADES	Br		Coercive Force		BH max		Max. Working Temp.**
	G	T	Oe	kA/m	MG0e	kJ/m <sup>3</sup>	
ALSINT 28	10.600	1,600	750	60	3,75	30	≤550
ALSINT 34	11.900	1,190	650	52	4,25	34	≤550
ALSINT 36	7.250	0,725	1.925	154	5,05	41	≤550
ALSINT 45	9.000	0,900	1.575	126	5,85	47	≤550