

# Cast / Sintered AlNiCo

ALCAST / ALSINT

## MATERIAL TYPE

Metallic Alloy

## SURFACE PROTECTION

Not necessary

## ORIENTATION & MAGNETIZATION

Axial / Diametral

## TEMPERATURE BEHAVIOR

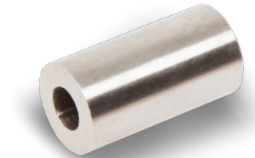
Br TEMPERATURE COEFFICIENT*	% / °C	-0,03
HcJ TEMPERATURE COEFFICIENT*	% / °C	+0,03

\*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 depends on the magnet shape, size and on the specific application. Maximum working temperature data shown on the catalogue are based on the international standard  $B/H = P_c > 0,7$ .

## 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	$N/mm^2$	~ 700
DENSITY	$g/cm^3$	7,3
FLEXURAL STRENGTH	$N/mm^2$	55
TENSILE STRENGTH	$N/mm^2$	45-60
VICKERS HARDNESS	HV	50
YOUNG'S MODULUS	$N/mm^2$	~ 150
SPECIFIC HEAT	kcal/kg/°C	0,12
THERMAL CONDUCTIVITY	kcal/m/hr/°C	60
THERMAL EXPANSION COEF $\perp c$	$10^{-6}/°C$	11-13
THERMAL EXPANSION COEF $// c$	$10^{-6}/°C$	11-13



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GRADE	Br		HcB		HcJ		BH max		Max. Working Temp.** °C
	G	T	Oe	kA/m	Oe	kA/m	MGOe	kJ/m <sup>3</sup>	
<b>Cast AlNiCo</b>									
<b>Anisotropic Material</b>									
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		
<b>Sintered AlNiCo</b>									
<b>Isotropic Material</b>									
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		
<b>Anisotropic Material</b>									
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		