ARNOLD MAGNETIC TECHNOLOGIES

N50H

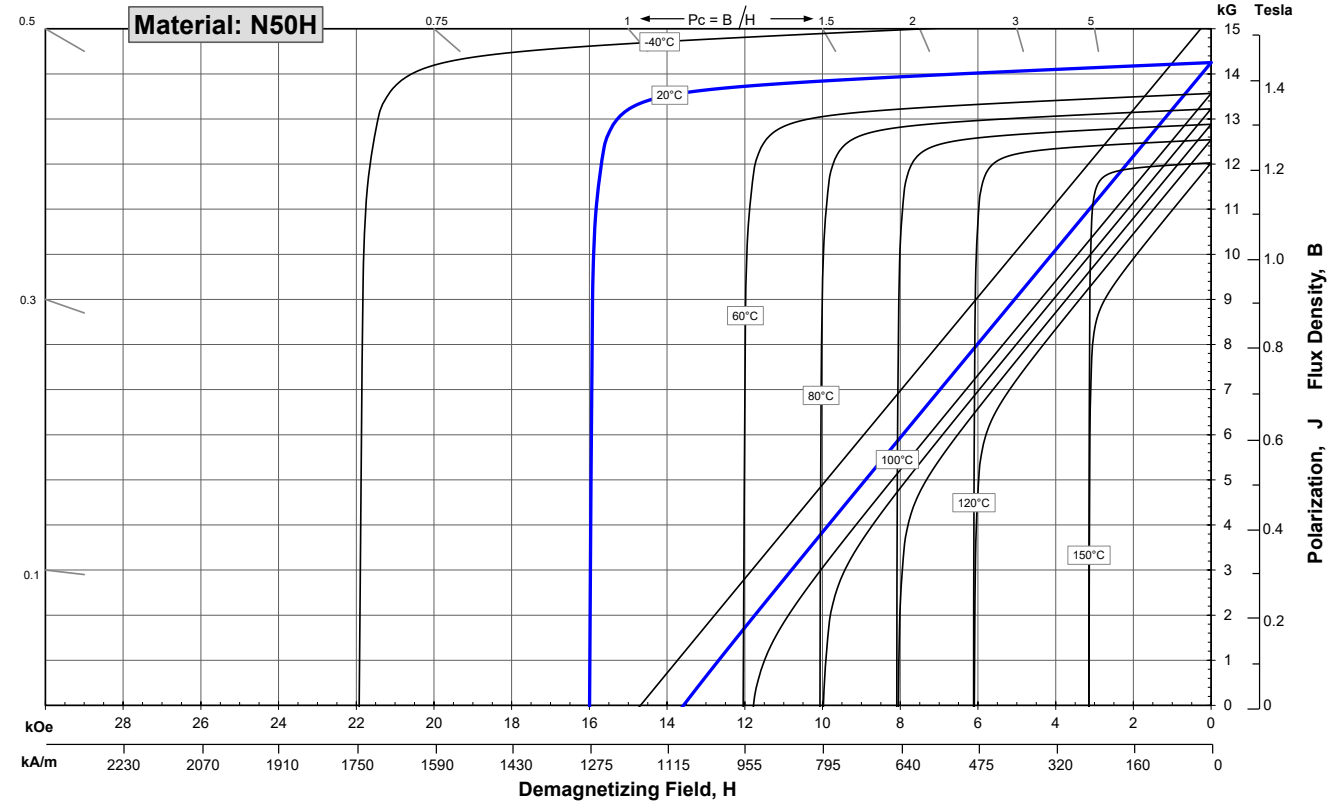
Sintered Neodymium-Iron-Boron Magnets

These are also referred to as "Neo" or NdFeB magnets. They offer a combination of high magnetic output at moderate cost. Please contact Arnold for additional grade information and recommendations for protective coating. Assemblies using these magnets can also be provided.

	Characteristic	Units	min.	nominal	max.
Magnetic Properties	**Br**, Residual Induction	Gauss	13,900	14,250	14,600
		mT	1390	1425	1460
	H_{cB}, Coercivity	Oersteds	10,500	12,250	14,000
		kA/m	836	975	1114
	H_{cJ}, Intrinsic Coercivity	Oersteds	16,000		
		kA/m	1,273		
	BHmax, Maximum Energy Product	MGOe	47	49	51
		kJ/m^3	374	390	406

	Characteristic	Units	C //	C ⊥
Thermal Properties	Reversible Temperature Coefficients (1)			
	of Induction, α(Br)	%/ºC	-0.12	
	of Coercivity, α(Hcj)	%/ºC	-0.62	
	Coefficient of Thermal Expansion (2)	ΔL/L per ºCx10^{-6}	7	-1
	Thermal Conductivity	kcal/mhrºC	5.3	5.8
	Specific Heat (3)	cal/gºC	0.11	
	Curie Temperature, Tc	ºC	310	
Other Properties	Flexural Strength	psi	41,300	
		MPa	285	
	Density	g/cm^3	7.6	
	Hardness, Vickers	Hv	620	
	Electrical Resistivity, ρ	μΩ • cm	150 // 130 ⊥	

Notes: (1) Coefficients measured between 20 and 100 ºC
(2) Between 20 and 200 ºC. Values are typical and can vary.
(3) Between 20 and 140 ºC



1 kA/m = 12.566 Oe 1 kOe = 79.577 kA/m

Notes The material data and demagnetization curves shown above represent typical properties that may vary due to product shape and size.
Demagnetization curves show nominal Br and minimum Hci.
Magnets can be supplied thermally stabilized or magnetically calibrated to customer specifications.
Additional grades are available. Please contact the factory for information.

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