	ALNICO						CERAMIC			NEODYMIUM							SAMARIUM COBALT		
	SINTERED		CAST																
GRADE	2	8H	2	5	8B	8HE	1	5	8	30	35SH	35	38	40	45	50	18	22	26
MAGNETIC CHARACTERISTICS																			
Max. Energy Product (Bd Hd) Max. (Mgo)	1.5	5.25	5.4	5.5	5.5	6	1	3.4	3.5	30	35	35	38	40	45	50	18	22	26
Residual Induction Br. gauss	7100	7250	7500	12700	8300	9000	2200	3800	3850	11400	11900	12150	12500	12900	13800	14300	8900	9500	10400
Coercive Force Hc-oErstEds	550	1975	580	640	1650	1600	1825	2400	2950	10400	11000	11050	11800	12300	10500	11500	8600	9200	9500
Intrinsic Coercive Force Hci-oersteds	575	2125	600	645	1860	1620	3250	2420	3250	13500	>17000	13500	>12000	>14000	>11000	>11000	>20000	>20000	20000
Saturation Magnetizing Force Hs-oersteds	2000	6000	2000	3000	6000	6000	10000	10000	10000	30000	30000	30000	30000	30000	30000	30000	40000	40000	55000
Recoil Permeability	6.4	3.2	2.6	2.1	2.0	3	1.15	1.05	1.07	1.05	1.05	1.05	1.08	1.08	1.05	1.05	1.05	1.05	1.05
Magnetic Orientation (anisotropic)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
MATERIAL CHARACTERISTICS																			
Density - lB./in.3	.243	.254	.263	.265	.262	.265	.175	.177	.177	.268	.275	.268	.268	.269	.268	.268	.304	.304	.297
Curie Temp.-F°	1544	1562	1472	1544	1580	1580	842	842	842	625	648	625	635	635	600	600	1380	1380	1515
Max. Practical Operating Temperature-F°	1000	1000	932	1000	1000	1000	480	480	480	180	300	180	180	180	180	180	575	575	575
Reversible temp. coef of Br %/F°	.011	.006	.020	.011	.006	.006	.105	.105	.105	.066	.052	.066	.066	.061	.061	.061	.022	.022	.019
Hardness-rockwell UNSPECIFIED TOLERANCES	rc43	rc44	rc50	rc50	rc56	rc58	---	---	---	rc55	rc58	rc55	rc55	rc58	rc58	rc58	ro53	ro53	ro56
Unfinished Surfaces (+/-) 0 - .125	.005	.005	.015	.015	.031	.031	*	*	*	+	+	+	+	+	+	+	+	+	+
.125 - .625	.010	.010	.015	.015	.031	.031	*	*	*	+	+	+	+	+	+	+	+	+	+
.625 - 1.00	.015	.015	.015	.015	.031	.031	*	*	*	+	+	+	+	+	+	+	+	+	+
1.00 - 3.00	---	---	---	.015	.031	.031	*	*	*	+	+	+	+	+	+	+	+	+	+
3.00 - 5.00	---	---	---	.015	.047	.047	---	*	*	---	---	---	---	---	---	---	---	---	---
5.00 - 7.00	---	---	---	.015	.062	.062	---	*	*	---	---	---	---	---	---	---	---	---	---
7.00 - 9.00	---	---	---	.015	.078	.078	---	*	*	---	---	---	---	---	---	---	---	---	---
9.00 - 12.00	---	---	---	---	.094	.094	---	*	*	---	---	---	---	---	---	---	---	---	---
Ground Surfaces (+)	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005
Concentricity (tir.)																			
0 - .500	.005	.005	.048	.048	.048	.048	.020	.020	.020	.010	---	.010	---	---	.010	.010	---	---	---
.500 - 1.00	.010	.010	.048	.048	.048	.048	.030	.030	.030	.020	---	.020	---	---	.020	.020	---	---	---
1.00 - 1.50	.015	.015	.093	.093	.093	.093	3%	3%	3%	---	---	---	---	---	.030	.030	---	---	---
1.50 - 3.00	---	---	.093	.093	.093	.093	3%	3%	3%	---	---	---	---	---	---	---	---	---	---
Cut Surfaces (+/-)																			
0 - 3.00	.015	.015	---	.015	.015	.015	.015	.015	.015	.005	.005	.005	.005	.005	.005	.005	.015	.015	.015
3.00 - 6.00	---	---	---	.015	.015	.015	---	.015	.015	---	---	---	---	---	---	---	---	---	---
6.00 - 12.00	---	---	---	.015	---	---	---	.015	.015	---	---	---	---	---	---	---	---	---	---