

Sintered Ferrite Magnets

Hard ferrite magnets are manufactured by a die pressing followed by sintering process which allows economic production of components in a varied array of sizes and shapes. Ferrite magnets have excellent corrosion resistance and have normal operating capabilities between -40 °C and +250 °C.

When considering a new design using hard ferrite magnets, in order to minimize the potential for manufacturing difficulties and to be more assured of a satisfactory, and perhaps less costly product, one should bear in mind a few rules: 1.) The maximum thickness in the direction of pressing should be approximately one inch, and this dimension (also called the magnetic length) should be less than any other dimension. If greater thickness is needed for a particular application, two or more magnets may be stacked and cemented together. 2.) Whenever possible, magnetic circuits should be designed to accommodate unground dimensional tolerances (except for the thickness, which is normally ground to +/- .005 inch. Additional grinding is usually a significant portion of the total cost. 3.) Slots, steps, or any abrupt change in cross section should be avoided. The arc ends of motor segments should preferably be flat at the outside corner.

Manufactured from oxide materials using powder metallurgical process. Ceramic magnet is most widely used because of its low cost, high-energy, good electric insulation and excellent resistance to demagnetization. The most common type of ceramic magnets are anisotropic strontium, anisotropic barium and isotropic barium magnet. Our huge range of ceramic magnet can ensure us to supply assortment of goods to choose from, which includes arc segments, ring types discs, blocks, bars and more, in a variety of sizes and shapes. This selection includes all grades, oriented and non-oriented, bi-pole and multi-pole magnets.

Mostly Used national standard - SJ285-77 permanent ferrite magnet standard

Grade	Value(min/typical in our factory)							
	Br		Hcb(BHC)		Hcj(IHC)		(BH)max	
	MT	KG	KA/m	Koe	KA/m	KOe	Kj/m ³	MGOe
Y10T(=C1)	200/218	2.00/2.18	125/145	1.57/1.82	210/250	2.64/3.14	6.5/8.0	0.8/1.0
Y25	360/370	3.60/3.70	135/150	1.70/1.88	140/170	1.76/2.14	22.5/25.3	2.8/3.2
Y30(=C5)	380/385	3.80/3.85	191/210	2.40/2.64	199/220	2.50/2.51	26.0/28	3.4/3.7
Y30BH	380/390	3.80/3.90	223/235	2.80/2.95	231/245	2.90/3.08	27.0/30.0	3.4/3.7
Y33	410/420	4.10/4.20	220/235	2.77/2.95	225/240	2.83/3.01	31.5/33.0	4.0/4.2
Y35	400/410	4.00/4.10	175/195	2.20/2.45	180/200	2.26/2.51	30.0/32.0	3.8/4.0
C8(=C8A)	385/390	3.85/3.90	235/255	2.95/3.20	242/265	3.05/3.33	27.8/30.0	3.5/3.7
C10	400/410	4.00/4.10	288/300	3.62/3.77	280/287	3.51/3.60	30.4/31.9	3.8/4.0

Chinese standard -sj/T10410 2000 permanent ferrite magnet standard

Material	Br		HcB		HcJ		(BH)max	
	mT	KG	KA/m	Oe	KA/m	Oe	Kj/m ³	MGOe
Y8T	200~235	≥2000	125~160	≥1570	210~280	≥2610	6.5~9.5	≥0.8
Y22H	310~360	≥3100	220~250	≥2770	280~320	≥3520	20.0~24.0	≥2.5
Y25	360~400	≥3600	135~170	≥1700	140~200	≥1760	22.5~28.0	≥2.8
Y26H-1	360~390	≥3600	220~250	≥2512	225~255	≥2830	23.0~28.0	≥2.9
Y26H-2	360-380	≥3600	263-288	≥3300	318-350	≥4000	24.0-28.0	≥3.0
Y27H	370~400	≥3500	225-240	≥2830	235-260	≥2950	25.0~29.0	≥3.1
Y28	370-400	≥3700	175-210	≥2200	180-220	≥2260	26.0-30.0	≥3.3
Y28H-1	380-400	≥3800	240-260	≥3020	250-280	≥3140	27.0-30.0	≥3.1
Y28H-2	360-380	≥3600	271-295	≥3400	382-405	≥1800	26.0-30.0	≥3.3

Y30	370~400	3.7~4.0	175~210	2.20~2.64	180~220	2.26~2.77	26.0~30.0	3.3~3.8
Y30H-1	380~400	≧3800	230-275	≧2890	235-290	≧2950	27.0~32.5	≧3.4
Y30H-2	395-415	≧3950	275-300	≧3460	310-335	≧3900	27.0~32.0	≧3.4
Y32	400~420	≧4000	160~190	≧2010	165~195	≧2070	30.0~33.5	≧3.8
Y32H-1	400-420	≧4000	190-230	≧2390	230-250	≧2890	34.5-35.0	≧4.0
Y32H-2	400-440	≧4000	224-240	≧2810	230-250	≧2890	31.0-34.0	≧3.9
Y33	410~430	≧4100	220~250	≧2760	225~255	≧2830	31.5~35.0	≧4.0
Y33H	410-430	≧4100	250-270	≧3140	250-275	≧3140	31.5-35.0	≧4.0
Y34	420-440	≧4200	200-230	≧2510	205-235	≧2580	32.5-36.0	≧4.1
Y35	430-450	≧4300	215-239	≧2700	217-242	≧2730	33.1-33.2	≧4.2
Y36	440-450	≧4400	247-271	≧3100	250-374	≧4400	35.1-38.3	≧4.4
Y38	440-460	≧4400	285-305	≧3580	294-310	≧3690	36.6-40.6	≧4.6
Y40	450-460	≧4500	330-354	≧4150	340-360	≧4270	37.6-41.8	≧4.7



Demagnetization Curves of Permanent Ferrite Magnet

USA standard - permanent ferrite magnet industry standard of USA

Material	Br		HcB		HcJ		(BH)max	
	mT	KG	KA/m	KOe	KA/e	KOe	kJ/m ³	MGOe
C1	230	2.3	148	1.86	258	3.5	8.36	1.05
C5	380	3.8	191	2.4	199	2.5	27	3.4
C7	340	3.4	258	3.23	318	4.00	21.9	2.75
C8(=C8A)	385	3.85	235	2.95	242	3.05	27.8	3.5
C8B	420	4.2	232	2.913	236	2.96	32.8	4.12
C9	380	3.8	280	3.516	320	4.01	26.4	3.32
C10	400	4.0	288	3.617	280	3.51	30.4	3.82
C11	430	4.3	200	2.512	204	2.56	34.4	4.32

Japan TDK standard

Grade	Composition _i	Br		Hcb		Hcj		BH max	
		mT	kG	kA/m	kOe	kA/m	kOe	KJ/m ³	MGOe
FB40	SrO6Fe2O3	410+/-10	4.1+/-10	234.8+/-11.9	2.95+/-0.15	238.7+/-15.9	3.0+/-0.2	31.4+/-1.6	3.95+/-0.2
FB3N	SrO6Fe2O3	395+/-15	3.95+/-15	234.8+/-11.9	2.95+/-0.15	238.7+/-15.9	3.0+/-0.2	28.7+/-2.4	3.6+/-0.3
FB3G	SrO6Fe2O3	375+/-15	3.75+/-15	254.6+/-15.9	3.2+/-0.2	270.6+/-19.9	3.4+/-0.25	25.9+/-2.4	3.25+/-0.3
FB3X	SrO6Fe2O3	375+/-15	3.75+/-15	234.8+/-11.9	2.95+/-0.15	238.7+/-15.9	3.0+/-0.2	25.9+/-2.4	3.25+/-0.3
FB1A	SrO6Fe2O3	220+/-15	2.20+/-15	159.2+/-15.9	2.0+/-0.2	258.6+/-19.9	3.25+/-0.25	8.9+/-1.6	1.1+/-0.2
FB5H	SrO6Fe2O3	405+/-15	4.05+/-15	298.4+/-11.9	3.75+/-0.15	322.3+/-11.9	4.05+/-0.15	31.1+/-1.6	3.9+/-0.2
FB4X	SrO6Fe2O3	420+/-10	4.20+/-10	234.8+/-11.9	2.95+/-0.15	238.7+/-15.9	3.0+/-0.2	33.4+/-1.6	4.2+/-0.2

FB4B	SrO6Fe2O3	400+/- 10	4.00+/- 10	254.6+/- 11.9	3.2+/-0.2	262.6+/- 19.9	3.3+/- 0.25	30.3+/- 1.6	3.8+/-0.2
FB4A	SrO/BaO6Fe2O3	410+/- 10	4.10+/- 10	175.1+/- 15.9	2.2+/-0.2	176.7+/- 15.9	2.22+/- 0.2	31.8+/- 1.6	4.0+/-0.2
FBGN	SrO6Fe2O3	440+/- 10	4.40+/- 10	258.6+/- 11.9	3.25+/- 0.15	262.6+/- 11.9	3.3+/- 0.15	36.7+/- 1.6	4.6+/-0.2
FB6B	SrO6Fe2O3	420+/- 10	4.20+/- 10	302.4+/- 11.9	3.8+/- 0.15	318.3+/- 11.9	4.0+/- 0.15	33.4+/- 1.6	4.2+/-0.2
FB6H	SrO6Fe2O3	400+/- 10	4.00+/- 10	302.4+/- 11.9	3.8+/- 0.15	358.1+/- 11.9	4.5+/- 0.15	30.3+/- 1.6	3.8+/-0.2
FB6E	SrO6Fe2O3	380+/- 10	3.80+/- 10	290.5+/- 11.9	3.65+/- 0.15	393.9+/- 11.9	4.95+/- 0.15	27.5+/- 1.6	3.45+/- 0.2
FB5N	SrO6Fe2O3	440+/- 10	4.40+/- 10	256.8+/- 11.9	2.85+/- 0.15	2259.2+/- 11.9	2.88+/- 0.15	36.7+/- 1.6	4.6+/-0.2
FB5B	SrO6Fe2O3	420+/- 10	4.20+/- 10	262.6+/- 11.9	3.3+/- 0.15	266.6+/- 11.9	3.35+/- 0.15	33.4+/- 1.6	4.2+/-0.2

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