ChenYang Permanent Magnets
for Magnetic Sensors and Model Building

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ChenYang-ISM supplies all kinds of permanent magnets specified for applications to magnetic sensors/ transducers, such as magnetostrictive position sensors, magnetoresistive (Hall, AMR and GMR) sensors and model building. These magnets are made by NdFeB, SmCo, Alnico, ceramic/ferrite, bonded magnetic materials and are customer specific magnets with different shapes, sizes, magnetic properties and magnetisation (multi poles).



Magnetic Material	**NdFeB**	**Hard Ferrite**	**SmCo**	**Alnico**
Max. Energy Product B×H $_{max}$ (MGOe)	28 ~ 51	0.8 ~ 5.1	14 ~ 32	1.13 ~ 9.0
Remanence (kGs)	10.2 ~ 14.5	2.0 ~ 4.6	7.5 ~ 12	5.2 ~ 13.5
Intrinsic Coercivity iHc (kOe)	11 ~ 30	1.6 ~ 5.0	5.2 ~ 25	0.38 ~ 1.88
Curie Temperature (°C)	310 ~ 370	460	700 ~ 800	810-860
Maximum Operating Temperature (°C)	80 ~ 200	250	250	450 ~ 550
Temperature Coefficient of Br (%/°C)	-0.12 ~ -0.10	-0.18 ~ -0.2	-0.05 ~ -0.03	-0.025 ~ -0.02
Temperature Coefficient of iHc (%/°C)	-0.6	0.2 ~ 0.5	-0.25 ~ -0.19	0.01 ~ 0.03

Sintered SmCo Magnets (Samarium Cobalt)

Material	Grade	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
		Br(T)	Br(kGs)	bHc (kA/m)	bHc (kOe)	iHc (kA/m)	iHc (kOe)	(BH)max (KJ/m^3	(BH)max (MGOe)
$SmCo_5$	S16	0.75-0.8	7.5-8.0	557-637	7.0-8.0	1989	25	111-143	14-18
	S18	0.8-0.93	8.0-9.3	597-677	7.5-8.5	1432	18	127-159	16-20
	S20	0.85-0.98	8.5-9.8	597-677	7.5-8.5	1273	16	143-175	18-22
	S24	1.0	10.0	680	8.5	1195	15	175-190	22-24
Sm_2Co_{17}	S180	0.90-1.03	9.0-10.3	597-677	7.5-8.5	1194	15	127-159	16-20
	S22A	0.90-1.03	9.0-10.3	613-693	7.7-8.7	1989	25	159-191	20-24
	S22B	0.90-1.03	9.0-10.3	613-693	7.7-8.7	1432	18	159-191	20-24
	S240	0.98-1.08	9.8-10.8	636-716	8.0-9.0	1432	18	175-207	22-26
	S26A	1.0-1.13	10.0-11.3	676-756	8.5-9.5	1194	15	191-223	24-28
	S26B	1.0-1.13	10.0-11.3	676-756	8.5-9.5	796	10	191-223	24-28
	S280	1.03-1.13	10.3-11.3	716-796	9.0-10	1432	18	207-239	26-30
	S270	1.0-1.10	10.0-11.0	357-516	4.5-6.5	413	5.2	183-223	24-28
	S300	1.10-1.20	11.0-12.0	438-517	5.5-6.5	454	5.7	223-255	28-32

Sintered NdFeB Magnets

Grade	Max. working Temp.	Remanence				Coercivity				Intr. Coercivity		Max. Energy Product			
		Br(T)		Br(kGs)		bHc(kA/m)		bHc(kOe)		iHc (kA/m)	iHc (kOe)	(BH)max (KJ/m^3)		(BH)max (MGOe)	
		Nom	Min	Nom	Min	Nom	Min	Nom	Min			Nom	Min	Nom	Min
N30	80	1.12	1.08	11.2	10.8	836	780	10.5	9.8	955	12	239	223	30	28
N33		1.17	1.14	11.7	11.4	876	820	11.0	10.3	955	12	263	247	33	31
N35		1.21	1.17	12.1	11.7	915	860	11.5	10.8	955	12	279	263	35	33
N38		1.26	1.22	12.6	12.2	915	860	11.5	10.8	955	12	303	287	38	36
N40		1.29	1.26	12.9	12.6	876	836	11.0	10.5	955	12	318	303	40	38
N42		1.30	1.27	13.0	12.7	876	836	11.0	10.5	955	12	334	318	42	40
N45		1.38	1.32	13.8	13.2	924	876	11.6	11.0	955	12	366	342	46	43
N48		1.42	1.38	14.2	13.8	890	835	11.19	10.5	876	11	390	366	49	46
N50		1.47	1.41	14.7	14.1	1035	829	13.0	10.5	876	11	414	382	52	48
N30M	100	1.12	1.08	11.2	10.8	836	780	10.5	9.8	1114	14	239	223	30	28
N33M		1.17	1.14	11.7	11.4	876	820	11.0	10.3	1114	14	263	247	33	31
N35M		1.21	1.17	12.1	11.7	915	860	11.5	10.8	1114	14	279	263	35	33
N38M		1.26	1.22	12.6	12.2	915	860	11.5	10.8	1114	14	303	287	38	36
N40M		1.29	1.26	12.9	12.6	915	860	11.5	10.8	1114	14	318	303	40	38
N42M		1.32	1.28	13.2	12.8	1010	955	12.7	12.0	1114	14	342	318	43	40
N48M		1.43	1.37	14.3	13.7	1090	1035	13.7	13.0	1120	14	392	360	49	45
N50M		1.47	1.41	14.7	14.1	1138	1043	14.3	13.1	1114	14	414	382	52	48
N27H	120	1.06	1.02	10.6	10.2	796	740	10.0	9.3	1353	17	215	199	27	25
N30H		1.12	1.08	11.2	10.8	836	780	10.5	9.8	1353	17	239	223	30	28
N33H		1.17	1.14	11.7	11.4	876	820	11.0	10.3	1353	17	263	247	33	31
N35H		1.21	1.17	12.1	11.7	915	860	11.5	10.8	1353	17	279	263	35	33
N38H		1.26	1.22	12.6	12.2	955	915	12.0	11.5	1353	17	303	287	38	36
N40H		1.28	1.24	12.8	12.4	955	915	12.0	11.5	1353	17	334	311	42	39
N42H		1.32	1.28	13.2	12.8	1010	955	12.7	12.0	1353	17	342	318	43	40
N45H		1.36	1.32	13.6	13.2	1050	1000	13.2	12.5	1360	17	376	344	47	43
N27SH	150	1.06	1.02	10.6	10.2	796	740	10.0	9.3	1595	20	215	199	27	25
N30SH		1.12	1.08	11.2	10.8	836	780	10.5	9.8	1595	20	239	223	30	28
N33SH		1.17	1.14	11.7	11.4	876	820	11.0	10.3	1595	20	263	247	33	31
N35SH		1.21	1.17	12.1	11.7	915	860	11.5	10.8	1595	20	279	263	35	33
N38SH		1.26	1.22	12.6	12.2	924	870	11.6	10.9	1595	20	311	286	39	36
N40SH		1.28	1.24	12.8	12.4	989	939	12.4	11.8	1592	20	326	302	41	38
N42SH		1.35	1.30	13.5	13.0	1013	963	12.7	12.0	1600	20	344	312	43	39
N25UH	180	1.02	0.98	10.2	9.8	764	732	9.6	9.2	1990	25	199	183	25	23
N28UH		1.08	1.04	10.8	10.4	812	780	10.2	9.8	1990	25	223	207	28	26
N30UH		1.10	1.08	11.0	10.8	812	780	10.2	9.8	1990	25	247	223	31	28
N33UH		1.17	1.13	11.7	11.3	836	804	10.5	10.1	1990	25	270	247	34	31
N35UH		1.22	1.17	12.2	11.7	891	836	11.2	10.5	1990	25	279	263	35	33
N27EH	200	1.08	1.02	10.8	10.2	784	752	9.8	9.4	2388	30	223	191	28	25
N28EH		1.09	1.04	10.9	10.4	825	780	10.4	9.8	2388	30	231	207	29	26
N30EH		1.13	1.08	11.3	10.8	804	772	10.1	9.7	2388	30	247	223	31	28
N33EH		1.18	1.14	11.8	11.4	885	835	11.1	10.5	2400	30	272	248	34	31
N30AH	>200	1.15	1.08	11.5	10.8	899	804	11.3	10.1	2786	35	254	223	32	28
N35AH		1.24	1.16	12.4	11.6	947	851	11.9	10.7	2786	35	286	254	36	32

Casted Alnico

Material Grade (USA)	Material grade	Remanence		Intrinsic Coercivity		Max. Energy Product	
		Br (mT)	Br (kGs)	iHc (kA/m)	iHc (kOe)	(BH)max (KJ/m^3)	(BH)max (MGOe)
Alnico 3	*LN9	680	6.8	30	0.38	9.0	1.13
	*LN10	600	6.0	39.8	0.50	10.0	1.20
Alnico 2	*LNG12	720	7.2	39.8	0.5	12.4	1.55
	*LNG13	700	7.0	48.0	0.60	12.8	1.60
Alnico 5	LNG37	1200	12.0	48.0	0.60	37.0	4.65
	LNG40	1250	12.5	48.0	0.60	40.0	5.0
	LNG44	1250	12.5	52.0	0.65	44.0	5.5
Alnico 5DG	LNG52	1300	13.0	56.0	0.70	52.0	6.5
Alnico 5-7	LNG60	1350	13.5	59.0	0.74	60.0	7.5
Alnico 6	LNGT28	1000	10.0	58.0	0.72	28.0	3.5
Alnico 8HC	LNGT36J	700	7.0	140.0	1.75	36.0	4.5
Alnico 8	*LNGT18	580	5.8	100.0	1.25	18.0	2.2
Alnico 8	LNGT32	800	8.0	100.0	1.25	32.0	4.0
	LNGT40	800	8.0	110.0	1.38	40.0	5.0
Alnico 9	LNGT60	900	9.0	110.0	1.38	60.0	7.5
	LNGT75	1050	10.5	112.0	1.4	72.0	9.0

Note: * means isotropy

Sintered Alnico

Material Grade	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
	Br (mT)	Br (kGs)	bHc (kA/m)	bHc (kOe)	iHc (kA/m)	iHc (kOe)	(BH)max (KJ/m^3)	(BH)max (MGOe)
*FLN8	520	5.2	40	0.5	43	0.54	8-10	1.0-1.25
*FLNG12	700	7.0	40	0.5	43	0.54	12-14	1.5-1.75
*FLNGT14	570	5.7	76	0.95	78	0.98	14-16	1.75-2.00
*FLNGT18	560	5.6	88	1.1	90	1.13	18-22	2.25-2.75
FLNG28	1050	10.5	46	0.58	47	0.59	28-33	3.5-4.15
FLNG34	1100	11.0	50	0.63	51	0.64	34-38	4.3-4.8
FLNGT28	1000	10.0	56	0.7	57	0.71	28-30	3.5-3.8
FLNGT31	780	7.8	104	1.3	90	1.13	31-36	3.9-4.5
FLNG33J	650	6.5	135	1.7	150	1.88	33-36	4.15-4.5
FLNGT38	800	8.0	123	1.55	126	1.58	38-42	4.75-5.3
FLNGT42	880	8.8	120	1.5	122	1.53	42-48	5.3-6.0

Note: * means isotropy

Hard Ferrite (Ceramic) Magnets

Material	Remanence		Coercivity		Intrinsic Coercivity		Max. Energy Product	
	Br (mT)	Br (kGs)	bHc (kA/m)	bHc (kOe)	iHc (kA/m)	iHc (kOe)	(BH)max (KJ/m^3)	(BH)max (MGOe)
Y10	200-235	2.00-2.35	125-160	1.57-2.01	210-280	2.64-3.52	6.5-9.5	0.8-1.2
Y10T	>200	>2.00	128-160	1.60-2.00	128-160	1.60-2.00	6.4-9.6	0.8-1.2
Y20	320-380	3.20-3.80	135-190	1.70-2.38	140-195	1.76-2.45	18.0-22.0	2.3-2.8
Y22H	310-360	3.10-3.60	220-250	2.77-3.14	280-320	3.52-4.02	20.0-24.0	2.5-3.0
Y23	320-370	3.20-3.70	170-190	2.14-2.38	190-230	2.39-2.89	20.0-25.5	2.5-3.2
Y25	360-400	3.60-4.00	135-170	1.70-2.14	140-200	1.76-2.51	22.5-28.0	2.8-3.5
Y25BH	360-390	3.60-3.90	176-216	2.20-2.70	215-231	2.70-2.90	23.9-27.1	3.0-3.4
Y26H	360-390	3.60-3.90	220-250	2.77-3.14	225-255	2.83-3.21	23.0-28.0	2.9-3.5
Y27H	370-400	3.70-4.00	205-250	2.58-3.14	210-255	2.64-3.21	25.0-29.0	3.1-3.7
Y28	370-400	3.70-4.00	175-210	2.20-2.64	180-220	2.26-2.77	26.0-30.0	3.3-3.8
Y30	385-405	3.85-4.05	176-224	2.20-2.80	184-226	2.30-2.84	27.5-30.5	3.45-3.95
Y30BH	380-400	3.80-4.00	230-275	2.89-3.46	235-290	2.95-3.65	27.0-32.5	3.4-4.1
Y32	400-420	4.00-4.20	160-190	2.01-2.38	165-195	2.07-2.45	30.0-33.5	3.8-4.2
Y33	410-430	4.10-4.30	220-250	2.77-3.14	225-255	2.83-3.21	31.5-35.0	4.0-4.4
Y35	400-420	4.00-4.20	160-190	2.01-2.38	165-195	2.07-2.45	30.0-33.5	3.8-4.2
Y35H1	395-415	3.95-4.15	251-259	3.15-3.25	255-271	3.20-3.40	29.6-32.8	3.7-4.1
Y35H2	390-410	3.90-4.10	236-295	3.30-3.70	275-299	3.45-3.75	28.8-32.0	3.6-4.04
Y35H3	405-425	4.05-4.25	223-247	2.80-3.10	231-255	2.90-3.20	30.2-35.4	3.8-4.4
Y35H4	370-390	3.70-3.90	270-302	3.40-3.80	326-358	4.10-4.50	25.6-28.8	3.2-3.6
Y40	390-410	3.90-4.10	279-309	3.50-3.86	311-325	3.90-4.10	28.8-32.0	3.6-4.0
Y40B	410-430	4.10-4.30	247-263	3.10-3.30	255-271	3.20-3.40	32.6-34.4	4.0-4.4
Y40H	370-390	3.70-3.90	275-297	3.45-3.75	374-390	4.70-4.90	25.6-29.4	3.2-3.6