

Samarium Cobalt(SmCo) Magnet Grade

Grade	Br		Hcb		Hcj		(BH)max		Tw	α(Br)		Material
	T	KGS	KA/m	kOe	KA/m	kOe	kJ/m³	MGOe	℃	%/° C	%/° C	
SmCo ₅ (RECo ₅)												
YX16	0.81-0.85	8.1-8.5	610-660	7.8-8.3	1194-1830	15-23	111-127	14-16	250	-0.050	-0.30	RECo ₅ 119/127
YX18	0.85-0.90	8.5-9.0	650-700	8.3-8.8	1194-1830	15-23	127-143	16-18	250	-0.050	-0.30	RECo ₅ 135/127
YX20	0.90-0.94	9.0-9.4	680-725	8.5-9.1	1194-1830	15-23	143-159	18-20	250	-0.050	-0.30	RECo ₅ 151/127
YX22	0.94-0.96	9.4-9.6	710-750	8.9-9.4	1194-1830	15-23	159-175	20-22	250	-0.050	-0.30	RECo ₅ 159/127
YX24	0.96-1.00	9.6-10.0	720-770	9.2-9.7	1194-1830	15-23	175-190	22-24	250	-0.050	-0.30	RECo ₅ 175/127
YX16S	0.79-0.84	7.9-8.4	612-660	7.7-8.3	≥ 1830	≥ 23	118-135	15-17	250	-0.035	-0.28	RECo ₅
YX18S	0.84-0.90	8.4-9.0	644-692	8.1-8.7	≥ 1830	≥ 23	135-151	17-19	250	-0.040	-0.28	RECo ₅
YX20S	0.90-0.94	9.0-9.4	684-732	8.6-9.2	≥ 1830	≥ 23	151-167	19-21	250	-0.045	-0.28	RECo ₅
YX22S	0.92-0.96	9.2-9.6	710-756	8.9-9.5	≥ 1830	≥ 23	167-183	21-23	250	-0.045	-0.28	RECo ₅
YX24S	0.96-1.00	9.6-10.0	740-788	9.3-9.9	≥ 1830	≥ 23	183-199	23-25	250	-0.045	-0.28	RECo ₅
Sm ₂ Co ₁₇ (RE ₂ Co ₁₇)												
YXG22H	0.93-0.97	9.3-9.7	676-740	8.5-9.3	≥ 1990	≥ 25	160-175	20-22	300	-0.020	-0.20	RE ₂ Co ₁₇ 160/199
YXG24H	0.95-1.02	9.5-10.2	700-750	8.7-9.4	≥ 1990	≥ 25	175-191	22-24	350	-0.025	-0.20	RE ₂ Co ₁₇ 175/199
YXG26H	1.02-1.05	10.2-10.5	750-780	9.4-9.8	≥ 1990	≥ 25	191-207	24-26	350	-0.030	-0.20	RE ₂ Co ₁₇ 191/199
YXG28H	1.05-1.08	10.5-10.8	756-796	9.5-10	≥ 1990	≥ 25	207-220	26-28	350	-0.035	-0.20	RE ₂ Co ₁₇ 207/199
YXG30H	1.08-1.10	10.8-11.0	788-835	9.9-10.5	≥ 1990	≥ 25	220-240	28-30	350	-0.035	-0.20	RE ₂ Co ₁₇ 222/199
YXG32H	1.10-1.13	11.0-11.3	812-860	10.2-10.8	≥ 1990	≥ 25	230-255	29-32	350	-0.035	-0.20	RE ₂ Co ₁₇ 239/199
YXG22	0.93-0.97	9.3-9.7	676-740	8.5-9.3	≥ 1443	≥ 18	160-175	20-22	300	-0.020	-0.20	RE ₂ Co ₁₇ 160/143
YXG24	0.95-1.02	9.5-10.2	692-764	8.7-9.6	≥ 1443	≥ 18	175-191	22-24	300	-0.025	-0.20	RE ₂ Co ₁₇ 175/143
YXG26	1.02-1.05	10.2-10.5	748-796	9.4-10.0	≥ 1443	≥ 18	191-207	24-26	300	-0.030	-0.20	RE ₂ Co ₁₇ 191/143
YXG28	1.05-1.08	10.5-10.8	756-812	9.5-10.2	≥ 1443	≥ 18	207-220	26-28	300	-0.035	-0.20	RE ₂ Co ₁₇ 207/143
YXG30	1.08-1.10	10.8-11.0	788-835	9.9-10.5	≥ 1443	≥ 18	220-240	28-30	300	-0.035	-0.20	RE ₂ Co ₁₇ 222/143
YXG32	1.10-1.13	11.0-11.3	812-860	10.2-10.8	≥ 1443	≥ 18	230-255	29-32	300	-0.035	-0.20	RE ₂ Co ₁₇ 239/143
YXG26M	1.02-1.05	10.2-10.5	676-780	8.5-9.8	955-1433	12-18	191-207	24-26	300	-0.035	-0.20	RE ₂ Co ₁₇
YXG28M	1.05-1.08	10.5-10.8	676-796	8.5-10.0	955-1433	12-18	207-220	26-28	300	-0.035	-0.20	RE ₂ Co ₁₇
YXG30M	1.08-1.10	10.8-11.0	676-835	8.5-10.5	955-1433	12-18	220-240	28-30	300	-0.035	-0.20	RE ₂ Co ₁₇
YXG28L	1.05-1.08	10.5-10.8	541-764	6.8-9.6	636-955	8-12	207-220	26-28	250	-0.035	-0.20	RE ₂ Co ₁₇
YXG30L	1.08-1.15	10.8-11.5	541-796	6.8-10.0	636-955	8-12	220-240	28-30	250	-0.035	-0.20	RE ₂ Co ₁₇

Hangzhou Zhijiang Magnetic Co., Ltd
 Zhudong Village Industrial Zone,
 Linpu Town, Xiaoshan District, Hangzhou 311251, P.R.China
 Tel: (+86) 571 82837863 Fax: (+86) 571 82871538

Samarium Cobalt(SmCo) Physical Properties

Grade	SmCo ₅ (RECo ₅)	Sm ₂ Co ₁₇ (RE ₂ Co ₁₇)
Temperature Coefficient of Remanence(Br)	-0.05%/°C	-0.03%/°C
Curie Temperature	750°C	800°C
Density	8.2-8.4g/cm ³	8.3-8.5g/cm ³
Vickers Hardness	450-500Hv	500-600Hv
Max.Operating Temperature	250°C	300-350°C

Comparison of Physical Properties- SmCo/NdFeB

Material	SmCo	
Remanence	0.82-1.16T	
Coercivity	0.493-1.99MA/m	
Relative Permeability	1.05	
Temperature Coefficient of Remanence(Br)	-0.03%/°C	
Temperature Coefficient of Coercivity(Hcj)	-0.15~-0.30%/°C	
Curie Temperature	750-800°C	
Density	8.2-8.4g/cm ³	
CTE,Magnetizing Direction	5.2x10 ⁻⁶ %/K	
Flexural Strength	150N/mm ²	
Compressive Strength	800N/mm ²	
Tensile Strength	35N/mm ²	
Vickers Hardness	500-550Hv	
Electrical Resistivity	86x10 ⁻⁶ Ω.cm	