

Magnetic Properties of Sintered Samarium Cobalt Magnets

Material	Grade	Br		Hcb		Hcj		(BH)max		TC	TW	Temperature Coefficient	Temperature Coefficient
		Remanence Br		Coercivity Force		Intrinsic Coercivity		Maximun Energy		Curie Temperature	Max Operating Temperature	of Br	of iHc
		T	KGs	KA/m	KOe	KA/m	KOe	KJ/m <sup>3</sup>	MGOe	°C	°C	% °C	% °C
SmCo <sub>5</sub> (SmPr)Co <sub>5</sub>	YX-16	0.81-0.85	8.1-8.5	620-660	7.8-8.3	1194-1830	15-23	110-127	14-16	750	250	-0,050	-0,30
	YX-18	0.85-0.90	8.5-9.0	660-700	8.3-8.8	1194-1830	15-23	127-143	16-18	750	250	-0,050	-0,30
	YX-20	0.90-0.94	9.0-9.4	676-725	8.5-9.1	1194-1830	15-23	150-167	19-21	750	250	-0,050	-0,30
	YX-22	0.92-0.96	9.2-9.6	710-748	8.9-9.4	1194-1830	15-23	160-175	20-22	750	250	-0,050	-0,30
	YX-24	0.96-1.00	9.6-10.0	730-770	9.2-9.7	1194-1830	15-23	175-190	22-24	750	250	-0,050	-0,30
SmCo <sub>5</sub>	YX-16s	0.79-0.84	7.9-8.4	620-660	7.8-8.3	≥1830	≥23	118-135	15-17	750	250	-0,035	-0,28
	YX-18s	0.84-0.89	8.4-8.9	660-700	8.3-8.8	≥1830	≥23	135-151	17-19	750	250	-0,040	-0,28
	YX-20s	0.89-0.93	8.9-9.3	684-732	8.6-9.2	≥1830	≥23	150-167	19-21	750	250	-0,045	-0,28
	YX-22s	0.92-0.96	9.2-9.6	710-756	8.9-9.5	≥1830	≥23	167-183	21-23	750	250	-0,045	-0,28
	YX-24s	0.96-1.00	9.6-10.0	740-788	9.3-9.9	≥1830	≥23	183-199	23-25	750	250	-0,045	-0,28
Low temperature coefficient SmCo <sub>5</sub> (SmGd)Co <sub>5</sub>	LTc(YX-10)	0.62-0.66	6.2-6.6	485-517	6.1-6.5	≥1830	≥23	75-88	9.5-11	750	300	Temp. Range	Temp.Coefficient of Br
												20-100°C	+0.0156% °C
												100-200°C	+0.0087% °C
												200-300°C	+0.0007% °C
Ce (CoFeCu) <sub>5</sub>	YX-12	0.70-0.74	7.0-7.4	358-390	4.5-4.9	358-478	4.5-6	80-103	10-13	450	200		
Sm <sub>2</sub> Co <sub>17</sub> Sm <sub>2</sub> (CoFecuzr) <sub>17</sub>	YXG-24H	0.95-1.02	9.5-10.2	692-764	8.7-9.6	≥1990	≥25	175-191	22-24	800	350	-0,025	-0,20
	YXG-26H	1.02-1.05	10.2-10.5	748-796	9.4-10.0	≥1990	≥25	191-207	24-26	800	350	-0,030	-0,20
	YXG-28H	1.03-1.08	10.3-10.8	756-812	9.5-10.2	≥1990	≥25	207-220	26-28	800	350	-0,035	-0,20
	YXG-30H	1.08-1.10	10.8-11.0	788-835	9.9-10.5	≥1990	≥25	220-240	28-30	800	350	-0,035	-0,20
	YXG-32H	1.10-1.13	11.0-11.3	812-860	10.2-10.8	≥1990	≥25	230-255	29-32	800	350	-0,035	-0,20
	YXG-22	0.93-0.97	9.3-9.7	676-740	8.5-9.3	≥1433	≥18	160-183	20-23	800	300	-0,020	-0,20
	YXG-24	0.95-1.02	9.5-10.2	692-764	8.7-9.6	≥1433	≥18	175-191	22-24	800	300	-0,025	-0,20
	YXG-26	1.02-1.05	10.2-10.5	748-796	9.4-10.0	≥1433	≥18	191-207	24-26	800	300	-0,030	-0,20
	YXG-28	1.03-1.08	10.3-10.8	756-812	9.5-10.2	≥1433	≥18	207-220	26-28	800	300	-0,035	-0,20
	YXG-30	1.08-1.10	10.8-11.0	788-835	9.9-10.5	≥1433	≥18	220-240	28-30	800	300	-0,035	-0,20
	YXG-32	1.10-1.13	11.0-11.3	812-860	10.2-10.8	≥1433	≥18	230-255	29-32	800	300	-0,035	-0,20
	YXG-26M	1.02-1.05	10.2-10.5	676-780	8.5-9.8	955-1433	12-18	191-207	24-26	800	300	-0,035	-0,20
	YXG-28M	1.03-1.08	10.3-10.8	676-796	8.5-10.0	955-1433	12-18	207-220	26-28	800	300	-0,035	-0,20
	YXG-30M	1.08-1.10	10.8-11.0	676-835	8.5-10.5	955-1433	12-18	220-240	28-30	800	300	-0,035	-0,20
	YXG-32M	1.10-1.13	11.0-11.3	676-852	8.5-10.7	955-1433	12-18	230-255	29-32	800	300	-0,035	-0,20
	YXG-24L	0.95-1.02	9.5-10.2	541-716	6.8-9.0	636-955	8.12	175-191	22-24	800	250	-0,025	-0,20
	YXG-26L	1.02-1.05	10.2-10.5	541-748	6.8-9.4	636-955	8.12	191-207	24-26	800	250	-0,035	-0,20
	YXG-28L	1.03-1.08	10.3-10.8	541-764	6.8-9.6	636-955	8.12	207-220	26-28	800	250	-0,035	-0,20
	YXG-30L	1.08-1.15	10.8-11.5	541-796	6.8-10.0	636-955	8.12	220-240	28-30	800	250	-0,035	-0,20
	YXG-32L	1.10-1.15	11.0-11.5	541-812	6.8-10.2	636-955	8.12	230-255	29-32	800	250	-0,035	-0,20
Low temperature coefficient Sm <sub>2</sub> Co <sub>17</sub> (SmEr) <sub>2</sub> (CoTM) <sub>17</sub>	LTC(YXG-22)	0.94-0.98	9.4-9.8	668-716	8.4-9.0	≥1433	≥18	167-183	21-23	840	300	Temp. Range	Temp.Coefficient of Br
												-50-25°C	+ 0.005% °C
												20-100°C	-0.008% °C
												100-200°C	-0.008% °C
												200-300°C	-0.011% °C