SmCo Magnetic Properties

Reference series 2026-10 • SmCo5 and Sm2Co17

Tabulated basis A is reproduced below. Maximum working temperatures are typical values for L/D=0.7. Geometry, dimensions, magnetic circuit and operating conditions affect the usable limit. Magnetic-property measurement temperature is not specified in this reference.

This series remains distinct from the archived 2026.09 catalogue. Identical or similar grade names do not establish equivalence. Confirm the selected specification and resolve the differences listed at the end before adopting a supply limit.

Grade	Br T	Hcb kA/m	Hcj kA/m	(BH)max kJ/m³	Br kGs	Hcb kOe	Hcj kOe	(BH)max MGOe	Tmax °C
YX-16	0.81-0.85	620-660	1194-1830	110-127	8.1-8.5	7.8-8.3	15-23	14-16	250
YX-18	0.85-0.90	660-700	1194-1830	127-143	8.5-9.0	8.3-8.8	15-23	16-18	250
YX-20	0.90-0.94	676-725	1194-1830	150-167	9.0-9.4	8.5-9.1	15-23	19-21	250
YX-22	0.92-0.96	710-748	1194-1830	160-175	9.2-9.6	8.9-9.4	15-23	20-22	250
YX-24	0.96-1.00	730-770	1194-1830	175-190	9.6-10.0	9.2-9.7	15-23	22-24	250
YX-16s	0.79-0.84	620-660	≥1830	118-135	7.9-8.4	7.8-8.3	≥23	15-17	250
YX-18s	0.84-0.89	660-700	≥1830	135-151	8.4-8.9	8.3-8.8	≥23	17-19	250
YX-20s	0.89-0.93	684-732	≥1830	150-167	8.9-9.3	8.6-9.2	≥23	19-21	250
YX-22s	0.92-0.96	710-756	≥1830	167-183	9.2-9.6	8.9-9.5	≥23	21-23	250
YX-24s	0.96-1.00	740-788	≥1830	183-199	9.6-10.0	9.3-9.9	≥23	23-25	250
YXG-24H	0.95-1.02	692-764	≥1990	175-191	9.5-10.2	8.7-9.6	≥25	22-24	350
YXG-26H	1.02-1.05	748-796	≥1990	191-207	10.2-10.5	9.4-10.0	≥25	24-26	350
YXG-28H	1.03-1.08	756-812	≥1990	207-223	10.3-10.8	9.5-10.2	≥25	26-28	350
YXG-30H	1.08-1.10	788-835	≥1990	223-239	10.8-11.0	9.9-10.5	≥25	28-30	350
YXG-32H	1.10-1.13	812-860	≥1990	231-255	11.0-11.3	10.2-10.8	≥25	29-32	350
YXG-33H	1.12-1.16	845-890	≥1990	239-263	11.2-11.6	10.6-11.2	≥25	30-33	350
YXG-35H	1.16-1.20	860-908	≥1830	255-278	11.6-12.0	10.8-11.4	≥23	32-35	350
YXG-22	0.93-0.97	676-740	≥1433	160-183	9.3-9.7	8.5-9.3	≥18	20-23	300
YXG-24	0.95-1.02	692-764	≥1433	175-191	9.5-10.2	8.7-9.6	≥18	22-24	300
YXG-26	1.02-1.05	748-796	≥1433	191-207	10.2-10.5	9.4-10.0	≥18	24-26	300
YXG-28	1.03-1.08	756-812	≥1433	207-223	10.3-10.8	9.5-10.2	≥18	26-28	300
YXG-30	1.08-1.10	788-835	≥1433	223-239	10.8-11.0	9.9-10.5	≥18	28-30	300

Grade	Br T	Hcb kA/m	Hcj kA/m	(BH)max kJ/m³	Br kGs	Hcb kOe	Hcj kOe	(BH)max MGOe	Tmax °C
YXG-32	1.10-1.13	812-860	≥1433	231-255	11.0-11.3	10.2-10.8	≥18	29-32	300
YXG-33	1.12-1.16	845-890	≥1433	239-263	11.2-11.6	10.6-11.2	≥18	30-33	300
YXG-35	1.16-1.20	860-908	≥1433	255-278	11.6-12.0	10.8-11.4	≥18	32-35	250
YXG-26M	1.02-1.05	676-780	955-1433	199-215	10.2-10.5	8.5-9.8	12-18	25-27	300
YXG-28M	1.03-1.08	676-796	955-1433	207-223	10.3-10.8	8.5-10.0	12-18	26-28	300
YXG-30M	1.08-1.10	676-835	955-1433	223-240	10.8-11.0	8.5-10.5	12-18	28-30	300
YXG-32M	1.10-1.13	676-852	955-1433	231-255	11.0-11.3	8.5-10.7	12-18	29-32	300
YXG-24L	0.95-1.02	541-716	636-955	183-199	9.5-10.2	6.8-9.0	8-12	23-25	250
YXG-26L	1.02-1.05	541-748	636-955	199-215	10.2-10.5	6.8-9.4	8-12	25-27	250
YXG-28L	1.03-1.08	541-764	636-955	207-223	10.3-10.8	6.8-9.6	8-12	26-28	250
YXG-30L	1.08-1.15	541-796	636-955	223-239	10.8-11.5	6.8-10.0	8-12	28-30	250
YXG-32L	1.10-1.15	541-812	636-955	231-255	11.0-11.5	6.8-10.2	8-12	29-32	250

Conditions and version differences

Version definitions

Basis A: tabulated technical data reproduced in this 2026-10 reference. Basis B: parallel reference-table snapshot reviewed on 20 October 2026. The distinctions below remain unresolved; they are not silently averaged or merged into a single guarantee.

Temperature and measurement conditions

L/D=0.7 Typ applies to the tabulated maximum working temperature. The actual limit depends on magnet geometry, dimensions, magnetic circuit, duty and operating conditions. Br, Hcb, Hcj and (BH)max are not assigned an unstated measurement temperature. Do not infer a temperature limit solely from a grade suffix.

Material families and series

YX grades are SmCo5; YXG grades are Sm2Co17. H, M and L are retained as printed grade identifiers. The typical working-temperature limits confirmed on 24 October 2026 are 250°C for YXG-35 and 350°C for YXG-35H, with the L/D=0.7 and operating conditions above retained. YXG-35H is listed only in basis A. Do not assign 350°C to every H-suffix grade.

Unresolved differences between basis A and B

Grade	Property	Basis A	Basis B
YX-22	(BH)max (kJ/m³)	160-175	167-175
YXG-35H	Row listing	present	Not listed
YXG-35	Hcb (kA/m)	860-908	868-908
YXG-35	Hcb (kOe)	10.8-11.4	10.9-11.4
YXG-28M	(BH)max (kJ/m³)	207-223	207-220
YXG-30M	(BH)max (kJ/m³)	223-240	220-240
YXG-32M	(BH)max (kJ/m³)	231-255	230-255
YXG-28L	(BH)max (kJ/m³)	207-223	207-220
YXG-30L	(BH)max (kJ/m³)	223-239	220-240
YXG-32L	(BH)max (kJ/m³)	231-255	230-255

Confirm the selected grade, process, composition, geometry, coating, magnetization and agreed acceptance conditions before purchase. Technical reference only; not a certificate, batch report or unconditional supply guarantee.