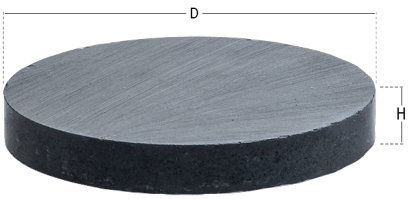
SAMARIUM COBALT



The Samarium-Cobalt magnets, developed in the 1960s, are Rare Earth-based magnets with high technical performance, ideal for advanced applications.
They are divided in two main categories based on the compositions of the alloy: **SmCo5** and **Sm2Co17**.

Produced by **sintering**, they have strong magnetic attraction and high coercivity, with an operating temperature up to **350 °C** and magnetic stability down to -150 °C. In addition, their chemical composition makes them completely (or almost, in the case of Sm2Co17) **immune from oxidation by external agents**, so much that they do not require any kind of surface coating.
We can also supply the magnets with nickel coating on request.

Their technical characteristics make them the best choice for many applications in specific technical fields, such as **laboratory measuring instruments, industrial turbochargers, cryogenic systems, acoustic equipment**, etc.

Contact us to get quick feedback on prices, availability and customized products.
You can view and download the technical drawings of each product by clicking on the respective code, highlighted in blue.

All measures are in millimeters (mm).

CODE	D	H
SAMC.26XY00.23	2	3
SAMC.260000.42	4	2
SAMC.173000.44	4	4
SAMC.260000.510	5	10
SAMC.000000.66	6	6
SAMC.300000.6.58T	6,5	8
SAMC.000000.85	8	5
SAMC.300000.88	8	8
SAMC.170000.93	9	3
SAMC.170000.9.55	9,5	5
SAMC.250000.1010	10	10
SAMC.280000.1110	11	10
SAMC.XGS280.11.55	11,5	5
SAMC.180000.125	12	5
SAMC.000000.154	15	4
SAMC.250000.205	20	5
SAMC.200000.254	25	4
SAMC.300000.304	30	4
SAMC.280000.307	30	7

Technical features

MATERIAL	MAGNETIZZAZIONE GRADE	BH Max		Br (min-max)		Residual Induction Hcb (min-max)		Coercitive Force Hcj (min-max)		Density D	Rev. Temp. Coeff (Br)	Curie Temp. TC	Temperature Max Tw
		KJ/m^3	MGsOe	T	KGs	KA/m	KOe	Ka/m	KOe	g/cm^3	% / °C	°C	°C
SmCo5	XG16	120-143	15.00-18.00	0.77-0.86	7.7-8.6	613-716	7.7-9.0	?1194	?15.0	8.3	-0.04	?740	250
	XG16H	120-143	15.00-18.00	0.77-0.86	7.7-8.6	613-716	7.7-9.0	?1592	?20.0				
	XG18	135-159	17.00-20.00	0.81-0.92	8.1-9.2	637-756	8.0-9.5	?1194	?15.0				
	XG18H	135-159	17.00-20.00	0.81-0.92	8.1-9.2	637-756	8.0-9.5	?1592	?20.0				
	XG20	151-175	19.00-22.00	0.85-0.95	8.5-9.5	637-756	8.0-9.5	?1194	?15.0				
	XG20H	151-175	19.00-22.00	0.85-0.95	8.5-9.5	637-756	8.0-9.5	?1592	?20.0				
	XG22	167-191	21.00-24.00	0.89-1.00	8.9-10.0	661-772	8.3-9.7	?1194	?15.0				
	XG22H	167-191	21.00-24.00	0.89-1.00	8.9-10.0	661-772	8.3-9.7	?1592	?20.0				
Sm2Co17	XGS24M	175-199	22.00-25.00	0.92-1.04	9.2-10.4	318-788	4.0-9.9	398-1194	5.0-15.0	8.4	-0.03	?850	350
	XGS24	175-199	22.00-25.00	0.92-1.04	9.2-10.4	661-796	8.3-10.0	1194-1990	15.0-25.0				
	XGS24H	175-199	22.00-25.00	0.92-1.04	9.2-10.4	661-804	8.3-10.1	>1990	>25.0				
	XGS26M	191-215	24.00-27.00	1.00-1.06	10.0-10.6	318-796	4.0-10.0	398-1990	5.0-15.0				
	XGS26	191-215	24.00-27.00	1.00-1.06	10.0-10.6	677-820	8.5-10.3	1194-1990	15.0-25.0				
	XGS26H	191-215	24.00-27.00	1.00-1.06	10.0-10.6	677-820	8.5-10.3	>1990	>25.0				
	XGS28M	207-231	26.00-29.00	1.04-1.10	10.4-11.0	318-804	4.0-10.1	398-1194	5.0-15.0				

	XGS28	207-231	26.00-29.00	1.04-1.10	10.4-11.0	677-820	8.5-10.3	1194-1990	15.0-25.0				
	XGS28H	207-231	26.00-29.00	1.04-1.10	10.4-11.0	677-820	8.5-10.3	>1990	>25.0				
	XGS30M	223-247	28.00-31.00	1.07-1.12	10.7-11.2	318-804	4.0-10.1	398-1194	5.0-15.0				
	XGS30	223-247	28.00-31.00	1.07-1.12	10.7-11.2	700-828	8.8-10.4	1194-1990	15.0-25.0				
	XGS30H	223-247	28.00-31.00	1.07-1.12	10.7-11.2	700-828	8.8-10.4	>1990	>25.0				
	XGS32M	231-255	29.00-32.00	1.09-1.15	10.9-11.5	318-804	4.0-10.1	398-955	5.0-12.0				
	XGS32	231-255	29.00-32.00	1.09-1.15	10.9-11.5	716-836	9.0-10.5	>995	>12.0				
Coeff. bassa Temp. SmCo17	XGS22LT	159-183	20.00-23.00	0.90-0.99	9.0-9.9	677-756	8.5-9.5	?1194	?15.0	8.4	-0.015	?850	350
	XGS24LT	175-199	22.00-25.00	0.92-1.02	9.2-10.2	677-756	8.5-9.5	?1194	?15.0				

The force values given in the tables are the result of dynamometric tests performed with a 10 mm thick iron plate.
Any variations from this standard in the use may change the actual performance of the magnet.

It is always recommended to perform specific tests according to your application.