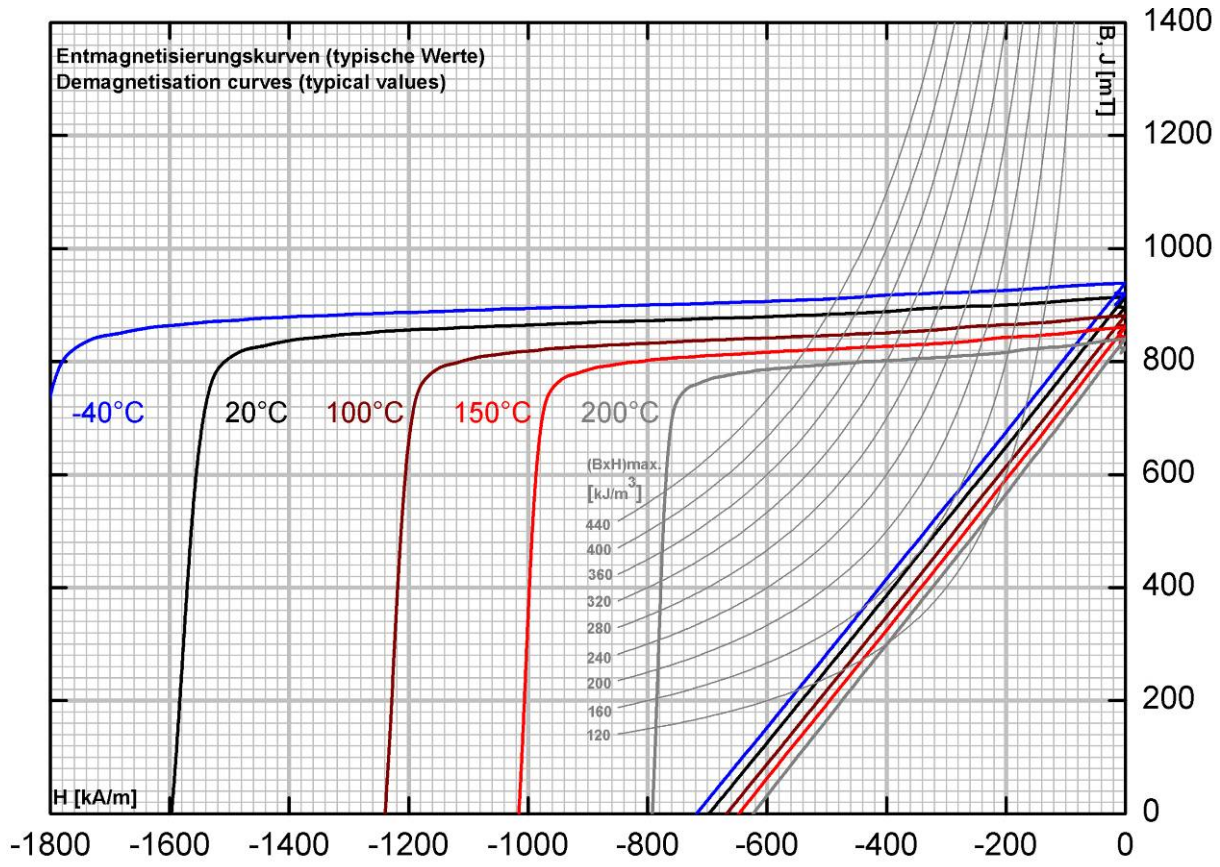
RARE EARTH MAGNETS

SmCo5 143/143

anisotropic



MATERIAL DATA

Magnetic values according to DIN IEC 60404-8-1

Energy product $(B{\cdot}H)_{max.}$	typ.	kJ/m^3	151
	min.	kJ/m^3	143
Remanence B_r	typ.	mT	920
	min.	mT	900
Revers. temp.-coeff. of B_r	approx.	%/K	-0.045 [1]
Coercivity H_C	H_{cB} typ.	kA/m	700
	H_{cB} min.	kA/m	680
	H_{cJ} typ.	kA/m	1600
	H_{cJ} min.	kA/m	1433
Revers. temp.-coeff. of H_{CJ}	approx.	%/K	-0.28 [1]
Relative permanent permeability $\mu_{rec.}$	approx.		1.05
Curie temperature	approx.	°C	720
Max. operating temperature	approx.	°C	250 [2]
Magnetising field strength	min.	kA/m	>3500

Mechanical values

Density	approx.	g/cm^3	8.3
Vickers hardness	approx.	HV	500-700
Elasticity modulus	approx.	$10^3 N/mm^2$	100-200
Compressive strength	approx.	N/mm^2	1000
Flexural strength	approx.	N/mm^2	100-180
Expansion coefficient	p.p.d. [3]	approx. $10^{-6}/K$	12
	i.p.d. [4]		6
Spec. elec. resistance	approx.	$10^{-6}\Omega m$	0.5
Spec. heat capacity	approx.	J/(kg·K)	370
Thermal conductivity	approx.	W/mK	12

[1] In the temperature range from 20 °C to 100 °C.
[2] The max. operating temperature depends on the magnet dimension and the specific application. Please contact our application engineering for more information.
[3] p.p.d. = perpendicular to preferred direction
[4] i.p.d. = in preferred direction

All values indicated were determined on standard samples according to IEC 60404-5.
Matrix pressed magnets of various shapes and sizes may differ in their magnetic ratings.

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