

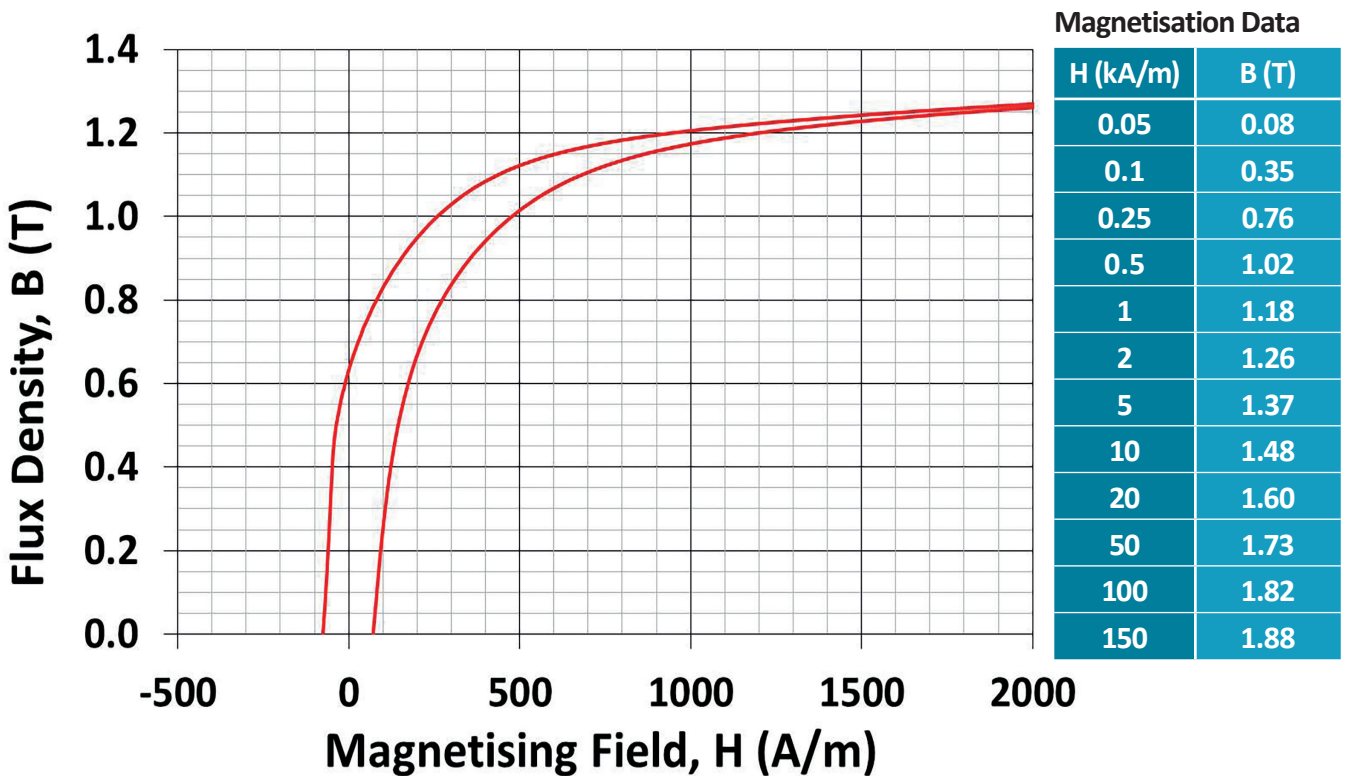
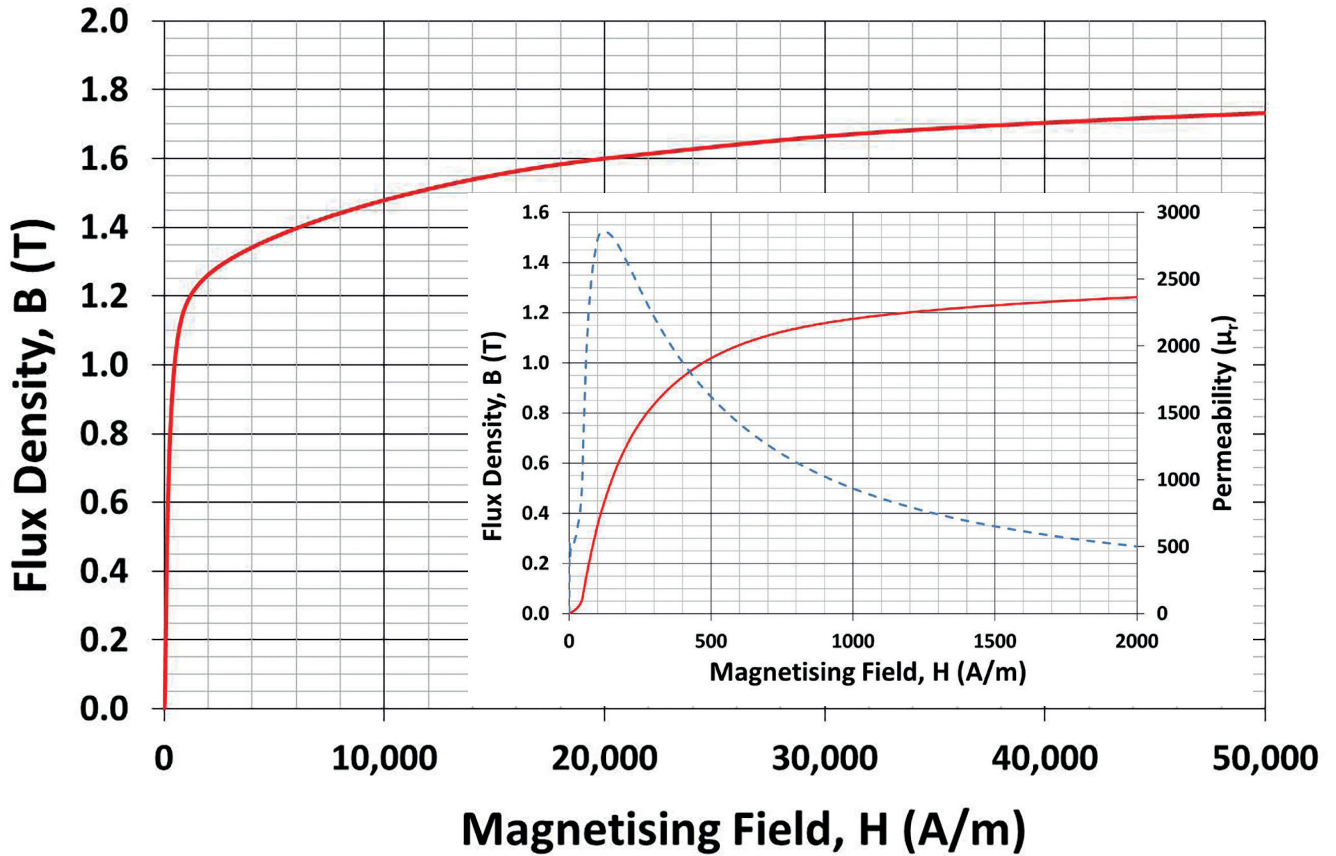
Iron Chromium FeCr12

Product data sheet



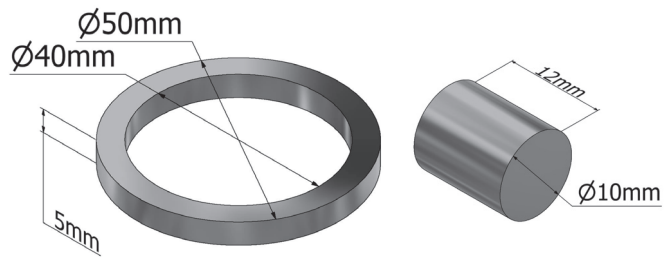
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➤ Magnetic Properties



➤ Magnetic Properties*

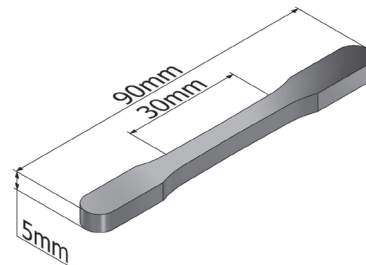
Jsat	1.70 T
Max Permeability (μ max)	2,900
Remanence (Br)	0.63 T
Coercivity (Hc)	80 A/m
Resistivity	55 $\mu\Omega$.cm



Ring used to obtain magnetic data and test bar used to obtain high field data

➤ Mechanical Properties†

Yield Strength, $R_{p0.2}$	230 MPa
Tensile Strength, R_m	390 MPa
Elongation at Fracture, A	20%
Hardness	62 HRB



Dog Bone used for Tensile Testing

➤ General Properties

Density (ρ)	7.48 g/cm ³
Thermal Expansion	10x10 ⁻⁶ /K
Thermal Conductivity	25 W/m.k
Corrosion Resistance	Excellent

➤ Further Information

Iron Chromium, FeCr, is designed for high performance applications in Gasoline Direct Injection [GDI] solenoids.

SG Technologies produces components using proprietary Ultra High Density [UHD] moulding and heat treatment. These processes may be followed by grinding, machining and deburring. The parts we produce in this way may need annealing depending on geometry or the extent of secondary operations.

Individual components can be tested using our magnetic component verification techniques. This assures quality control for transient electromagnetic performance.

*Determined following IEC404-4.

†Determined following MPIF standard 10 tensile test bar

For all further information and data regarding the production of finished parts please contact us at SG Technologies:

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