



Powder Injection Molding

PIM (Powder Injection Molding) combines injection molding flexibility with powder metallurgy material properties to produce complex magnets and precision metal/ceramic parts impossible with conventional methods.

Suited for miniaturized, high-precision, high-volume production in consumer electronics, medical implants, automotive sensors, and more.



X-MAG's capabilities cover magnetic engineering & simulation, automated sustainable manufacturing, comprehensive quality assurance, and advanced magnet R&D.

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Type	Material	Specific Alloys	Specific Feature	Application
MIM (Metal Injection Molding)	Stainless Steel	17-4PH, 316L, 304,420, 430, 440B, 440NB	Strength, heat treatable, corrosion resistance, ductility, nonmagnetic, hardness, wear resistance	Medical, electronics, hardware, sporting goods, aerospace, consumer electronics, automotive parts, micro gear
	Soft Magnetic Alloy	FeSi3, FeN50, FeCo35, FeCo50	Low core losses and high electrical resistivity,high permeability and low coercive field,highest magnetic saturation	Electronic solenoids, armatures, relay
	Low-alloy Steel	FN04, FN08, G1010, 8620, 8740, 4340, 100Cr6, 42CrMo4, SCM415	Case hardenable,general purpose,high wear resistance	Hardware, bearings, races,consumer electronics, machine parts, automotive parts, micro gear
	Tool Steel	M2, SKD11, M42, S15	High hardness,range from 55 HRC to 70 HRC	Cutting tools for wood or metal
	Special Alloy	Ti,W,F15, HX,N90, GHS-4, W heavy alloy	Light weight, high strength,good density and toughness	Medical, aerospace, consumer electronics, military, electronic, sporting goods
CIM (Ceramic Injection Molding)	Ceramic	Al2O3,ZrO2	Low core losses and high electrical resistivity	5G, consumer electronics, medical