

Arnold Magnetics (Shenzhen) Limited
阿诺德磁材(深圳)有限公司

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阿诺德——全球领先的磁性材料和组件制造商，生产工厂分布于欧洲，北美及亚洲，服务的客户遍布全球。凭借30多年的领先研发经验，我们的深圳团队力求根据您的需要为您提供以下种类齐全的产品和优质的技术服务：

Arnold Magnetics (Shenzhen) Limited

Arnold is a global leader in magnetic materials with manufacturing presence in Europe, North America, and Asia. We serve customers globally. At the culmination of over 30 years of research and development, our Arnold Shenzhen Group commits to provide you best combination of design and properties with highest quality assurance. We are a full service manufacturer and offer a full range of technology support .

- 全系列注塑成型永磁
- 磁性组装件及与磁性相关组装件
- 压制成型磁体及烧结磁体
- 模具设计与制造能力
- 磁性材料设计，测试与检定
- Full range of injection molded magnets
- Magnetic assemblies and other assemblies
- Compression bonded magnets and sintered magnets
- Tooling design and manufacture
- Magnetic materials design, testing, verification and validation





公司环境

- 轻松融洽的办公氛围
- 干净整洁的车间环境
- 技术娴熟的车间操作人员

COMPANY ENVIRONMENT

- Relaxed and harmonious office working environment
- Cleanly and orderly workshop
- Skilled operators



阿诺德技术能力

- CAD, Solidworks, ProE, Magneto(2D)和Amperes(3D)设计软件，自行设计与制造注塑磁模具，夹具，磁性组装件

• 磁材设计：

- a. 提供关于最佳磁性材料选择、粘结剂、镀层、聚合物、防腐等方面的优质服务
- b. 提供环境和老化测试：包括高压蒸汽、盐雾和热震性
- c. 磁场扫描：线性、旋转和三维扫描

• 产品检测：

种类齐全的测试分析设备：三次元、影象分析仪、磁滞回线仪、流变仪、差示扫描量热仪、镀层测厚仪、及阿诺德自主设计的磁性扫描仪

AML TECHNICAL CAPABILITY

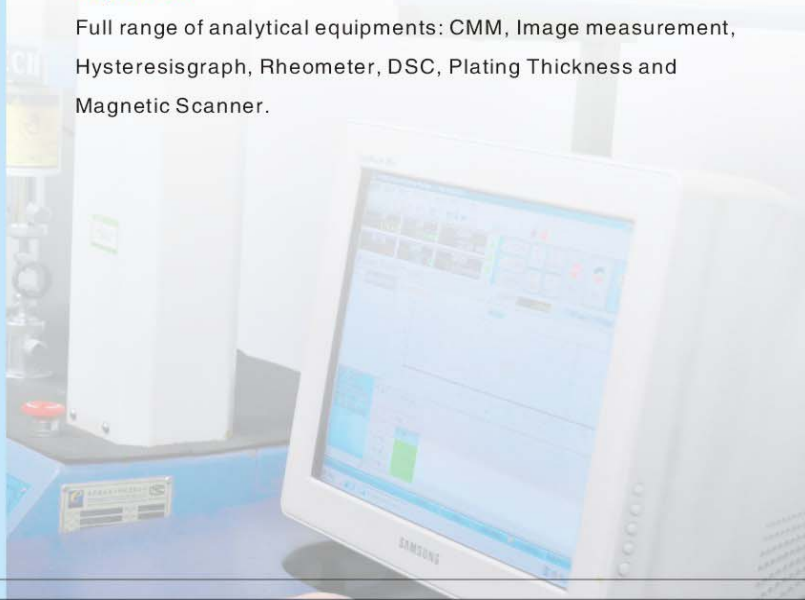
- CAD, Solidworks, ProE, Magneto(2D) and Amperes(3D) softwares to design and make tooling, fixtures and magnetic assemblies.

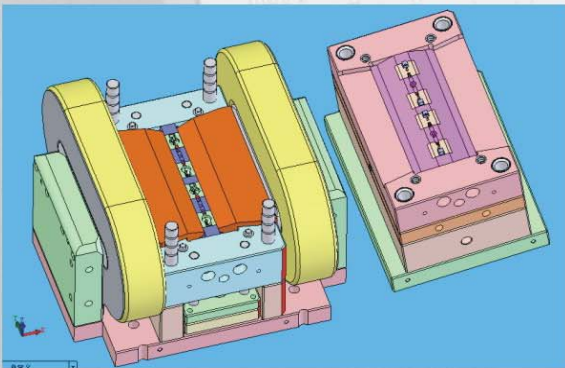
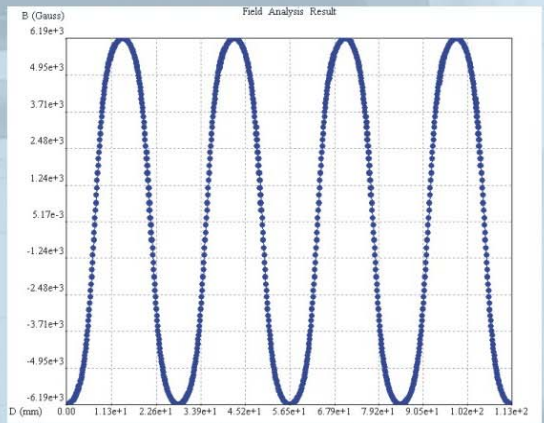
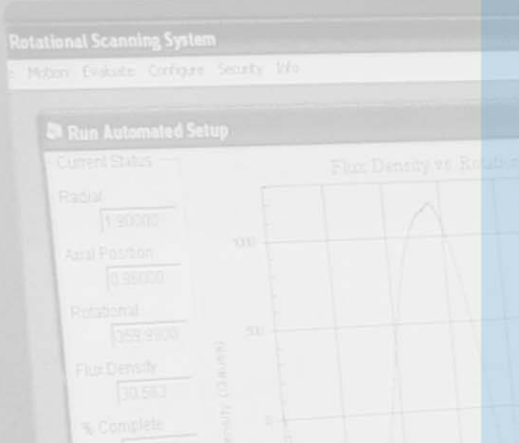
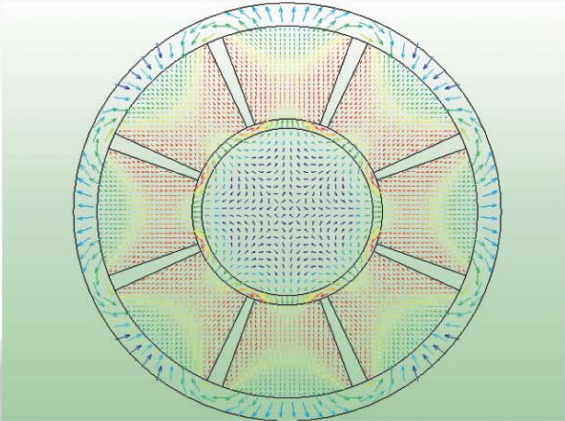
• Magnetic Design:

- a. Value-added service to select the most appropriate magnetic materials, adhesive, plating, polymer, corrosion protection, etc.
- b. Environmental and aging testing: Autoclave, Salt Spray and Thermal Shock
- c. Field scans : linear, rotational and 3D scan

• Inspection:


Full range of analytical equipments: CMM, Image measurement, Hysteresisgraph, Rheometer, DSC, Plating Thickness and Magnetic Scanner.







品质体系(Quality Systems):ISO 14001, ISO 9001, ISO/TS 16949



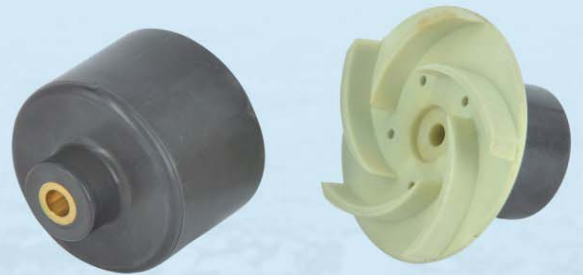
Arnold's success is always intelligence and hard work put together with our faith and your belief.

Material	Magnetic Powder	Polymer	Density in g/cc	Residual Induction Br In Gauss		Coercivity Hc In Oersteds		Int. Coercivity Hci In Oersteds		Energy Product (BH)max In MGOe	Rev. Temp Coeff of Br %°C	Max Appl. Temperature °C
				Reference	Min.	Max.	Min.	Max.	Min.			
2039	SrFerrite	Nylon 6	3.80	2,770	3,070	2,190	2,570	2,610	3,070	1.85	2.35	160
2040	SrFerrite	Nylon 12	3.75	2,760	3,060	2,160	2,540	2,670	3,190	1.84	2.34	150
2046	SrFerrite	Nylon 6	3.58	2,610	2,890	2,170	2,550	2,690	3,150	1.65	2.11	160
2048	SrFerrite	Nylon 6	3.55	2,620	2,880	2,130	2,510	2,730	3,210	1.57	1.99	160
2049	SrFerrite	Nylon 12	3.21	2,220	2,460	2,000	2,340	3,000	3,600	1.20	1.52	150
2051	SrFerrite	Nylon 6	3.76	2,830	3,130	2,210	2,590	2,620	3,140	1.89	2.41	160
2052	SrFerrite	PPS	3.65	2,560	2,880	2,150	2,530	2,780	3,320	1.58	2.05	180
2070	SrFerrite	Nylon 12	3.63	2,660	2,940	2,140	2,520	2,670	3,190	1.71	2.17	150
2071	SrFerrite	Nylon 12	3.53	2,550	2,810	2,260	2,660	3,360	4,020	1.61	2.05	150
2101	SmCo	Nylon 12	5.60	6,220	6,880	5,200	6,000	9,660	11,600	9.02	11.28	150
2103	SmCo	Nylon 6	5.50	5,800	6,380	5,000	6,000	16,000	28,000	7.48	9.72	160
2202	NdFeB	Polyamide	4.85	5,200	5,800	3,600	4,320	7,500	10,000	5.00	7.15	125
2204	NdFeB	Nylon 12	5.20	4,900	5,390	4,100	4,920	11,000	13,200	4.57	5.94	150
2206	NdFeB	PPS	4.40	3,900	4,400	3,400	4,000	8,500	10,500	3.34	4.26	150
2212	NdFeB	Nylon 12	4.90	5,200	5,720	3,600	4,320	7,500	9,000	5.10	6.63	150
2213	NdFeB	Nylon 12	5.20	5,500	5,890	4,000	5,000	8,000	10,000	5.72	7.44	150
2214	NdFeB	Nylon 12/Polyamide	4.65	4,300	4,800	3,500	4,200	8,200	9,840	4.28	5.56	125
2216	NdFeB	Nylon 12	5.16	5,500	6,110	4,000	4,800	7,000	9,000	5.10	6.63	125
2217	NdFeB	PPS	4.90	4,500	4,820	4,000	4,800	15,000	18,000	3.98	5.17	180
2218	NdFeB	Nylon 12	5.20	5,500	5,890	4,000	4,800	8,000	9,600	5.72	7.44	150
2225	NdFeB	Special plastic	5.70	6,300	6,800	4,800	5,800	8,800	10,200	8.50	9.40	150
2409	SrFerrite/NdFeB	Nylon 12/Polyamide	4.15	4,200	4,620	2,400	2,880	3,600	4,320	2.64	3.43	125
2413	SrFerrite/NdFeB	Nylon 12/Polyamide	4.72	4,700	5,200	2,160	2,640	3,600	4,400	3.67	4.77	125
2414	SrFerrite/NdFeB	Nylon 12	4.85	4,950	5,300	3,400	4,100	7,400	9,100	4.58	5.95	150
2415	SrFerrite/NdFeB	Nylon 12	4.00	3,600	3,870	2,360	2,830	3,520	4,220	2.33	3.03	150
2416	SrFerrite/NdFeB	Nylon 12	4.97	5,100	5,400	3,570	4,310	7,900	9,400	4.85	6.31	150
2417	SrFerrite/NdFeB	Nylon 6	3.85	2,000	2,200	1,450	1,740	2,200	2,640	0.78	1.01	150
2521	SrFerrite	Nylon 12	3.65	2,550	2,810	2,280	2,680	3,360	4,020	1.61	2.05	150
2534	SrFerrite	Nylon 6	3.53	2,480	2,730	1,900	2,250	2,700	3,300	1.45	1.89	150
2535	SrFerrite	Nylon 12/Polyamide	3.65	2,570	2,840	2,250	2,650	3,400	4,000	1.54	1.96	125
2560	SrFerrite	Polyamide	3.65	2,570	2,840	2,250	2,650	3,400	4,000	1.54	1.96	125

All values shown in this brochure are typical and will vary depending upon part geometry.

注塑磁特性

- 高强度的磁性和优良的力学性能
- 与烧结磁相比，注塑磁具有更好的抗裂性，使其便于组装
- 产品形状多样
- 磁体可完全充磁也可局部充磁或退磁
- 采用的粘结剂和磁体可以满足-40℃至180℃的应用温度
- 内嵌模压工艺可直接将磁粉料注塑到产品上形成组装件而得以减少后续工艺并降低系统成本
- 成型件具有独特的尺寸、形状、磁性和力学性能



INJECTION MAGNETS FEATURES

- High magnetic output coupled with excellent physical strength
- Molded magnets are more chip resistant than sintered magnets making handing easier on production assembly lines.
- Production magnets can be either simple in shape or of complex geometry.
- Molded magnets can be wholly magnetized, partially magnetized or demagnetized.
- The binders and magnetic alloys utilized are capable of a wide range of application temperature from -40 °C to 180 °C.
- Insert molding is the injection of magnet compound over, inside or against an existing component resulting in an assembly. This can eliminate secondary operating and reduce total system cost.
- Each finished good is unique in size, shape, magnetic and mechanical properties.

注塑成型磁材

- 按客户规格生产，以更好满足应用的磁性，力学及环境要求
- 粘结材料可用种类：尼龙6，尼龙12和PPS（聚苯硫醚）
- 磁性材料可用种类：铁氧体、钕铁硼、钕钴及它们的复合物
- 应用于电磁屏蔽的软磁材料
- 多种磁化状态：径向、轴向、辐射、多极或局部充磁

INJECTION MOLDED MAGNETS

- Customer-made compounds that best meet the application's magnetic, mechanical and environmental requirements.
- Binders available: Nylon6, Nylon12 and PPS
- Magnetic materials available: Ferrite, NdFeB, SmCo, and the hybrid magnets
- Soft magnetic materials for electromagnetic shielding application.
- Diverse magnetizing direction: diametrically, axially, radially, multi-poles or locally magnetized





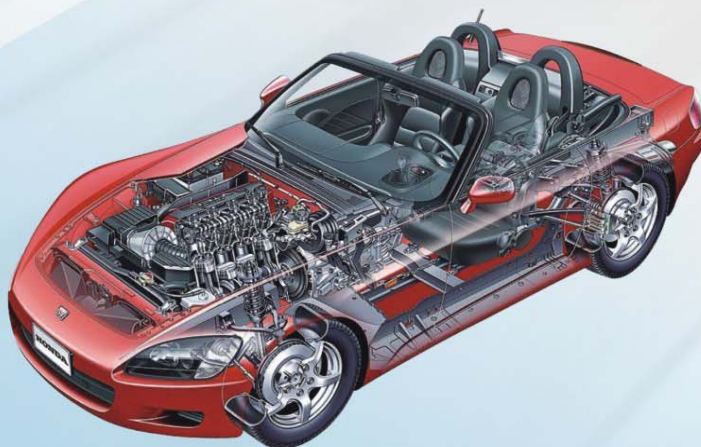
注塑磁产品应用领域

- 电机定子和转子
- 传感器磁体和组装件
- 磁性联结组合件
- 精密量具(仪表)
- 其他需要应用到家电、办公自动化设备、通讯、国防、航空、航海等领域



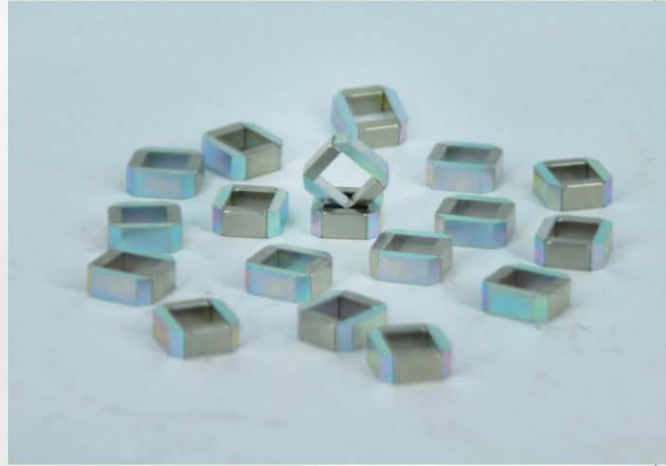
Markets Served

- Motor Stators and Rotors
- Sensor Magnets and Assemblies
- Coupling Assemblies
- Precision Gauges
- Other markets such as modern household appliances, office automation devices, communications devices, defense, aerospace, marine applications.



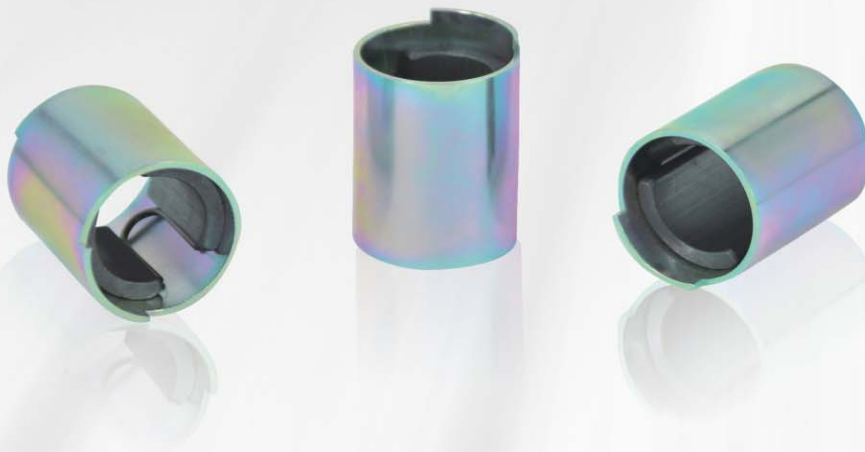
磁性组装件

- 铁氧体、钕铁硼、钐钴、铝镍钴组装件(烧结、压制、浇铸成型)
- 粘胶、弹弓夹持、树脂固位、包胶成型
- 线圈缠绕
- 拥有高质量、低成本机械零件供应商



Magnetic Assemblies

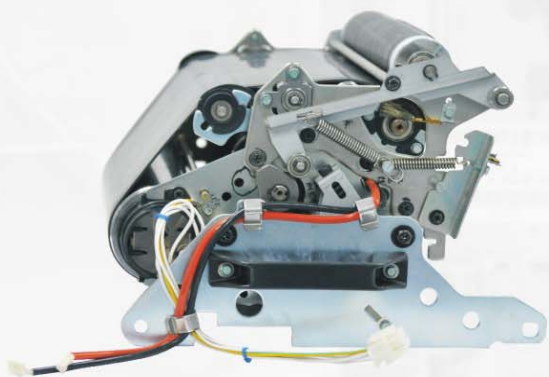
- Ferrite , NdFeB, SmCo, Alnico (Sintered , Compression Bonded , Cast , Molded)
- Glued , Clipped , Potted and Insert Molded
- Coil Winding
- Selection and qualification of mechanical components from low cost regions



磁性材料相关的组装

主要产品

- 打印复印机磁辊设计和制造
- 打印复印机定影和固化组件
- 马达驱动耦合器设计和制造
- 高精度磁辊套管





WORKCENTRE 5655

XEROX

1

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打印复印机磁辊

我们目前为多个客户提供各种不同设计和功能的磁辊，种类多达20多种，产品远销美国，欧洲多个国家，新加坡和台湾。磁辊上使用的磁性材料有：

- 烧结钕铁硼磁铁
- 挤压钕铁硼磁铁
- 挤压铁氧体磁铁

我们也使用了高精密的磁辊套管，材料有薄壁无缝不锈钢和铝合金，直径从 $\phi 22-65\text{mm}$ ，长度可达1米多长。套管的全跳动可达 0.03mm 。

由于我们所设计和制造的磁辊具有高磁性能和高精密性，在新打印机和复印机的开发阶段，我们往往成为客户的首先供应商，参与了解产品功能，并提供设计建议。这样对于我们后续品质的控制提供了良好的平台，从而赢得了客户的信任。基于此，我们也赢得了与磁辊组装相关的业务，包括印复印机定影组件和固化器组件的组装和测试。

另外，我们也为客户提供马达耦合器及转子定子的设计和制造。

Magnet Rollers

We provide our customers various magnet rollers with different design and function. There are more than 20 types of magnets sold to America, Europe, Singapore and Taiwan. Magnetic materials used on the rollers are as following.

- Sintered Nd-Fe-B Magnets
- Extruded Nd-Fe-B Magnet Strips
- Extruded Ferrite Magnet Strips

Meanwhile, high precision sleeves are used on the rollers, with seamless stainless steel and aluminum, diameter from $\phi 22-65\text{mm}$. Length can achieve more than 1 meter, and total runout gets up to 0.03mm .

By providing high magnetic properties and high precision with Arnold-made magnet rollers, we are always selected as priority supplier by our customers during development of new projects. Actively participating in the function design helps us to better understand the products and thus provide excellent quality. Base on this, customers trust us and offered us more business-related to magnet rollers, like developers and fusers.

Furthermore, we also provide design and building service for motor coupling, rotators and stators.



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地址: 中国广东深圳光明新区公明街道玉律社区大洋一路15号

Add: 15# Dayang 1st Road, Yulu, Gongming Street,

Guangming District, Shenzhen, China, 518132

电话/Tel: +86-755-81729700

传真/Fax: +86-755-29905550

Http: //www.arnoldmagnetics.com

E-mail: Info-AML@arnoldmagnetics.com

