



PHONE IN GROUP

2024

www.phoneingroup.com

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01

Group Overview

- Group Introduction
- Development History
- Service Locations

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Group Introduction

Phone In Group, originally established as LI RAY Company in 1983, has been dedicated to the magnetic materials industry. In 1990, the company began collaborating with manufacturers in mainland China for magnetic materials, and in 1999, Phone In Mag-Electronics Co., Ltd. was established. The Phone In Group has invested in and established factories in Dongguan, Suzhou, Xinyang, and Ningbo, China. In 2023, Phone In Mag-Electronics Co., Ltd. (BVI) established a branch in Taiwan and a factory in Vietnam, with the goal of becoming a publicly listed company.

Thanks to the efforts of all employees and the exceptional leadership of the company, Phone In Group has established production and sales bases in China, Taiwan, Vietnam, and San Francisco, expanding its global magnetic materials business comprehensively.

Phone In Group has developed into a supplier for world-class brands in smartphones, 3C products, wearable devices, new energy electric vehicles, and motor manufacturers. Its quality has reached world-class advanced standards, with a reputation for excellent quality, competitive pricing, fast delivery times, advanced magnetic performance, and processing research and development technology, as well as automated magnetic component assembly capabilities.

Group Overview

Establishment Date

December 1999

Global Employees

- 600 (China)
- 20 (Taiwan)
- 50 (Vietnam)
- 5 (USA)

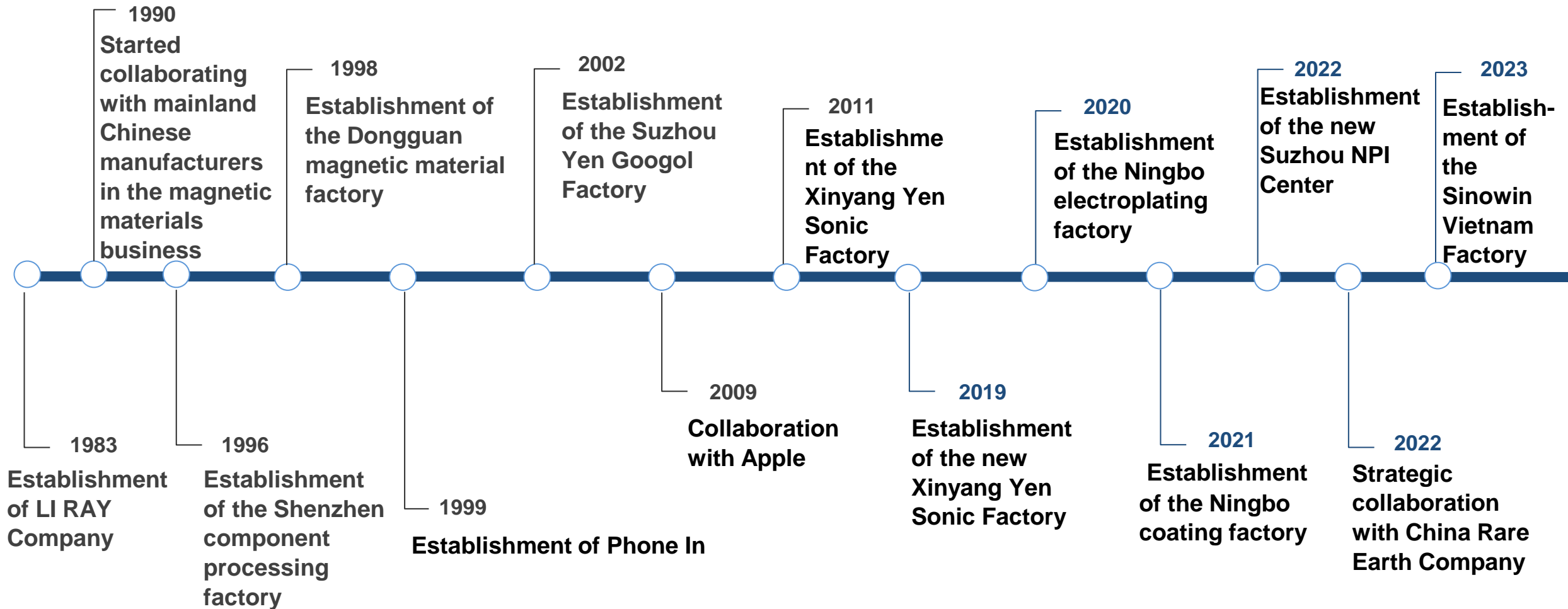
Factory Locations

- 4 Factories (Xinyang, Dongguan, Ningbo, Vietnam)
- 1 NPI Center (Suzhou)

Capital

\$30 Million USD

Development History



Locations



**Ningbo
Factory**



**Taipei
Head office**



**San Francisco
Office**



**Vietnam
Factory**



▲ Dongguan Branch



Xinyang Factory



**Suzhou
NPI
Center**



✦ **Vietnam**

Sinowin Industrial
(Vietnam) Co., Ltd.

✦ **USA**

San Francisco
Office

✦ **Taiwan**

Phone In Mag-Electronics Co., Ltd. Taiwan Branch

✦ **China**

Xinyang Yen Sonic Technology Co., Ltd.
(Xinyang Factory)

Xinyang Yen Sonic – Dongguan Branch
Suzhou Yen Googol Electronics Co., Ltd.
(NPI Center)

Phone In Mag-Electronics Co., Ltd.
(Ningbo Factory)

Xinyang Factory

Certified by Apple and third-party SR Social Responsibility.
Certified with ISO 9001/14001, IATF 16949, UL ECVP 2809-2.



- **Address:** No. 6, G4 Connection Line, High-tech Industrial Development Zone, Xinyang City, Henan Province
- **Total Land Area:** 76,000 square meters
- **Total Building Area:** 57,000 square meters

Suzhou (NPI Center)

Magnetic Materials Research, Laboratory,
Big Data Center
Certified with ISO 9001/14001/45001



- **Address:** No. 1010, Xiugu Road, Xiangcheng District, Suzhou City, Jiangsu Province
- **Total Land Area:** 12,000 square meters
- **Total Building Area:** 45,000 square meters (7 floors)

Vietnam Factory

Sintering, Machining, Electroplating, Assembly
Certified with ISO 9001/14001/45001



- **Address:** B3 + B4 + B5 Area, Industrial Zone, Dinh Tram Town, Viet Yen District, Bac Giang Province, Vietnam
- **Total Land Area:** 8,000 square meters
- **Total Building Area:** 6,000 square meters

02

Product Development

- Rare Earth Nd-Fe-B Magnets
- New Electroplating Plant
- New Coating Plant
- Green Energy and Environmental Protection

Rare Earth Nd-Fe-B Magnets

Sintering Process:
N52/N54/N56/N54M/N52H/N45SH/
N48SH/N50SH/N52SH

GBD Process:
N40UH/N48UH/N50UH/N52UH/N48EH/
N50EH/N42AH/N45AH/N35TH/N38TH

Monthly Production Capacity:

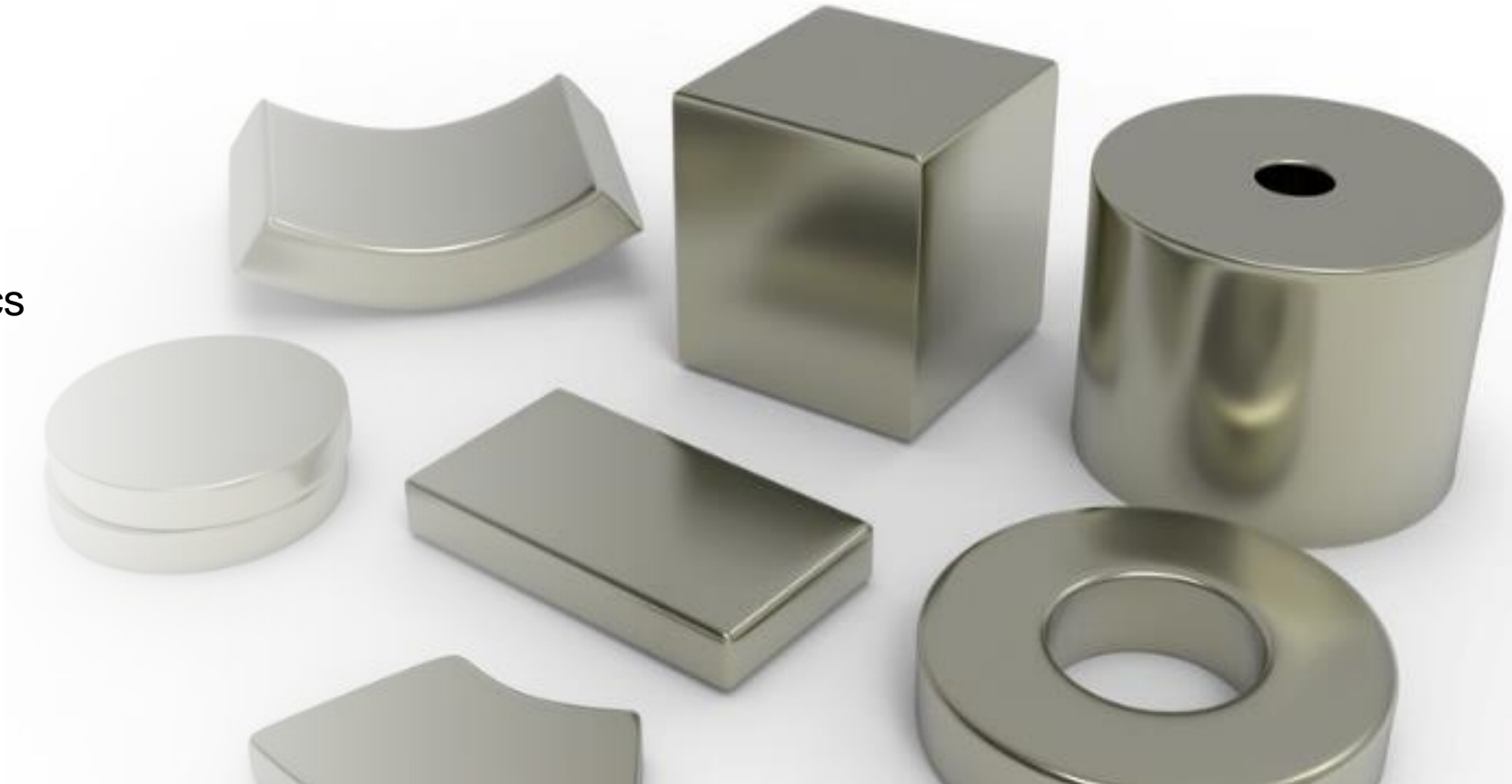
100,000,000

pcs

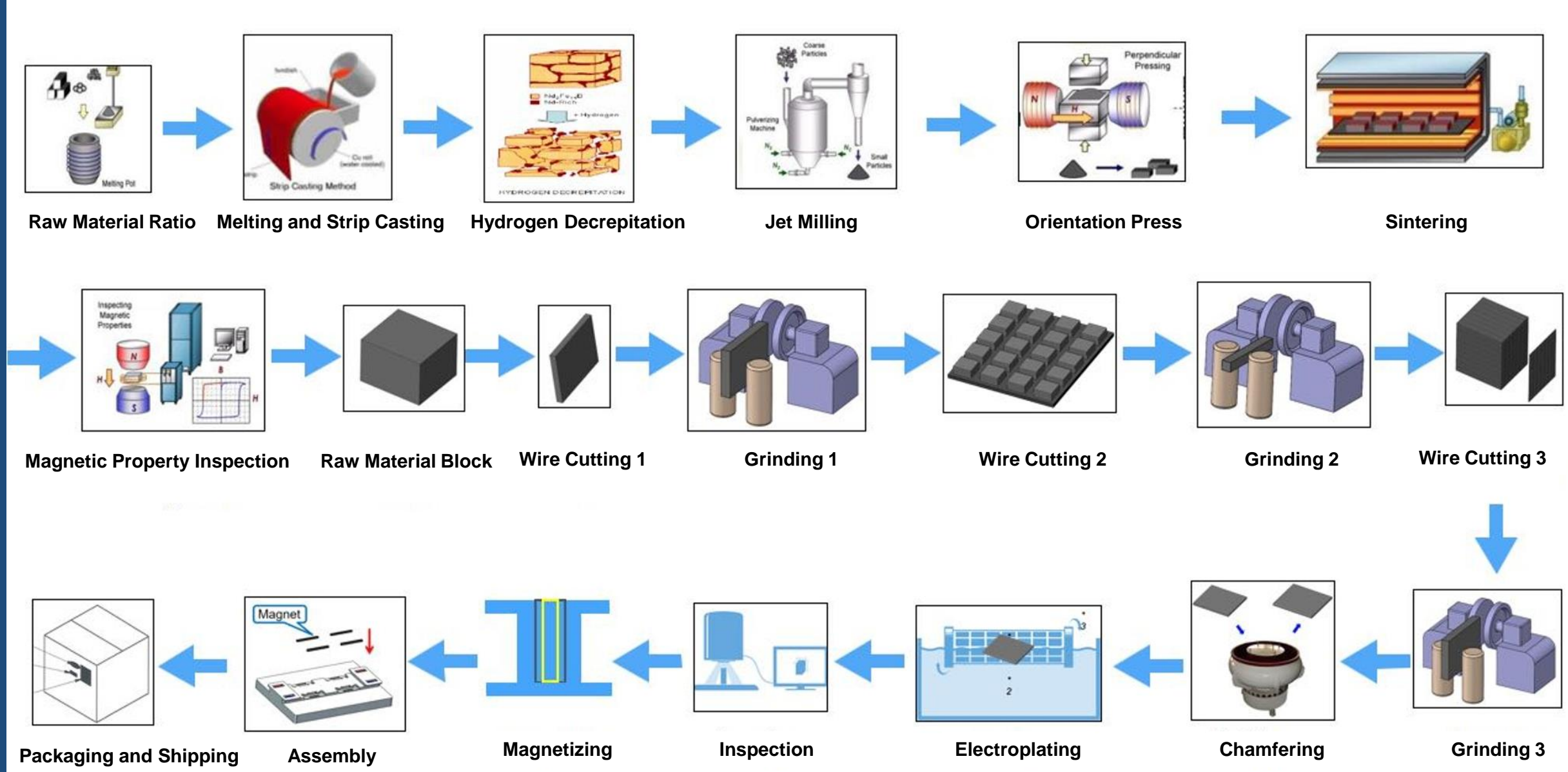
Annual Production Quantity:

1,600

tons



Rare Earth Nd-Fe-B Magnets Sintering → Machining → Electroplating → Magnetizing → Assembly Process



Application Areas of Rare Earth Nd-Fe-B Magnets



**Smartphones
and Tablets**



Medical Equipment



Motors



**New Energy
Electric Vehicles**



**Smart
Watches**



Drones



**Tools and
Precision
Machinery**



**3C Products
and Home
Appliances**

New Electroplating Factory

(Ningbo Zhenhai
Innovation Electroplating
Zone)



Electroplating Factory Production Line



Production Line



Plasma Emission Spectrometer

New Coating Factory (Ningbo Fenghua District)

Epoxy resin enhances the corrosion resistance and insulation of magnets.

Phone In Group has independently developed an automated epoxy resin coating process, achieving automated loading and unloading, and a digitally controlled production process. This ensures quality, reduces manpower, lowers costs, and successfully establishes core technology standards that meet Japanese industry benchmarks.



Coating Machine

System Certifications

ISO 9001

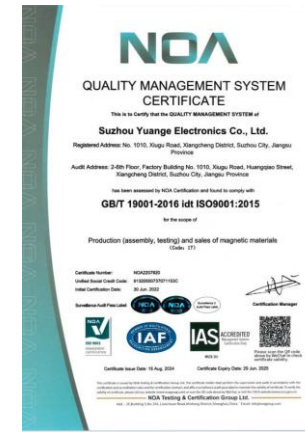
ISO 14001

ISO 45001

IATF 16949

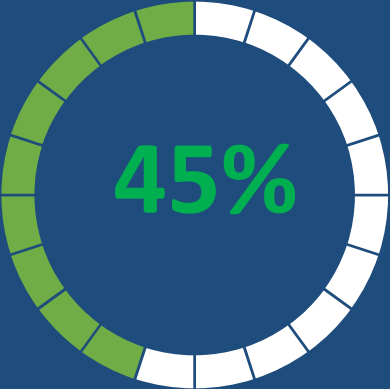
RoHS 2.0 / REACH ready

UL ECVP 2809-2

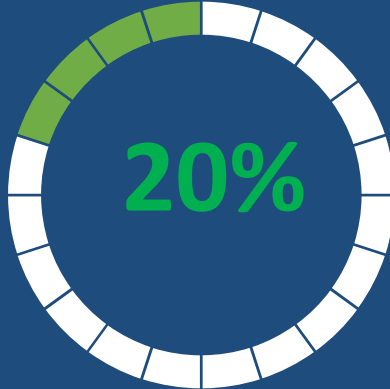


Green Manufacturing

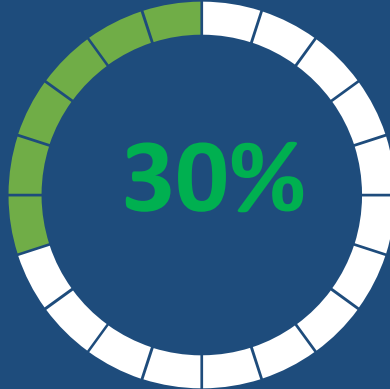
Beyond 100% REE, Phone In Group does more in Green Manufacturing



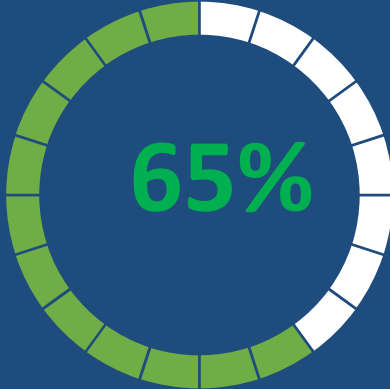
925,750 kWh



-93,600 Nm³



-3,420T



-240T

100% of available area covered with solar panels. Solar power generation increased to 45% of total capacity in 2023.

Reduced natural gas usage by 20%. Insulation layer installed for heat collection and reuse.

30% recovery of electroplating wastewater. Collaborating with local government.

Reduced pollution emissions by 65%. In 2023, using recycled rare earths reduced the mining of rare earth ores by approximately 240 tons.

03

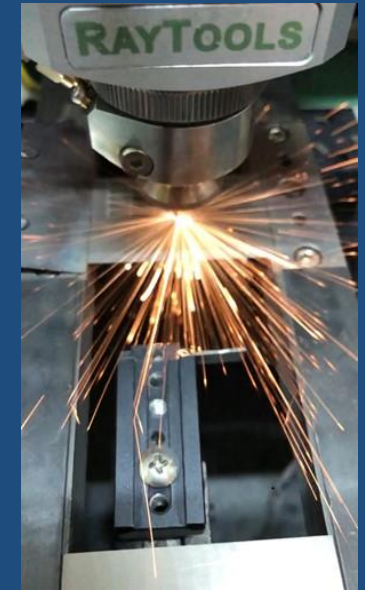
Manufacturing

- Laser Cutting Process
- Magnetic Material Testing Equipment
- Automated Production Equipment
- Automated Inspection Equipment

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Laser-Cut Machining

Phone In has applied over 30 years of experience in magnet manufacturing to develop and introduce laser cutting technology with simplifies the machining process. This method optimizes recycled material utilization as well as reduces overall carbon emissions. Laser cutting is applicable to various magnet specifications

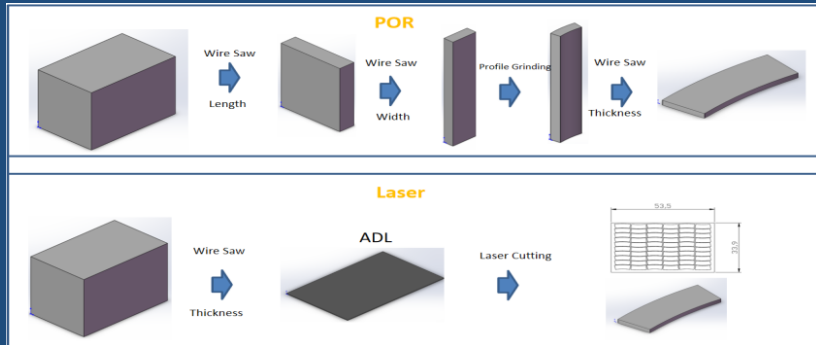


Creating a new chapter of environment protection, high efficiency, clean workshop and stable manufacture.

John 110

Comprehensive Capacity Comparison

	POR	Laser
Block Size (mm)	53.5*33.9*42.1	
Output/ block (pcs)	4,050	4,800
M'tl Utilization	44.7%	59.0%
Ramp Process L/T	3 weeks	2 weeks



Note :

1. Shortening cycle time of product manufacturing.
2. Reduction of operators at the same Q'ty.
3. Improved material utilization.
4. High environmental cleanliness.
5. Simple waste recycling.

	POR			Laser cutting		
	Product Q'ty(pcs)	C/T (pcs/sec)	OP/Day	Product Q'ty(pcs)	C/T (pcs/sec)	OP/Day
Wire-saw- Length	1	12	2	-	-	-
Polish- Length	1	2	2	-	-	-
Wire-saw- Width	1	0.92	2	-	-	-
Polish- Width	1	0.31	2	-	-	-
Profile Grinding	1	0.9	3	-	-	-
Wire-saw- Thickness	1	0.08	2	1	4.24	2
ADL- Thickness	1	0.06	1	1	1.25	1
Laser	-	-	-	1	0.9	1
Total		16.27	14		6.39	4

Magnetic Material Testing Equipment



One dimensional
flux meter



Magnetic declination
measuring tester



JQS gauss test
machine



Automated Production Equipment

Modular Automated Assembly Line



Fully Automated Intelligent Assembly Line

Automated Production Equipment



**Automatic glue
removal machine**



AGV smart truck



Any Feeder Machine



**Automatic glue
removal machine**



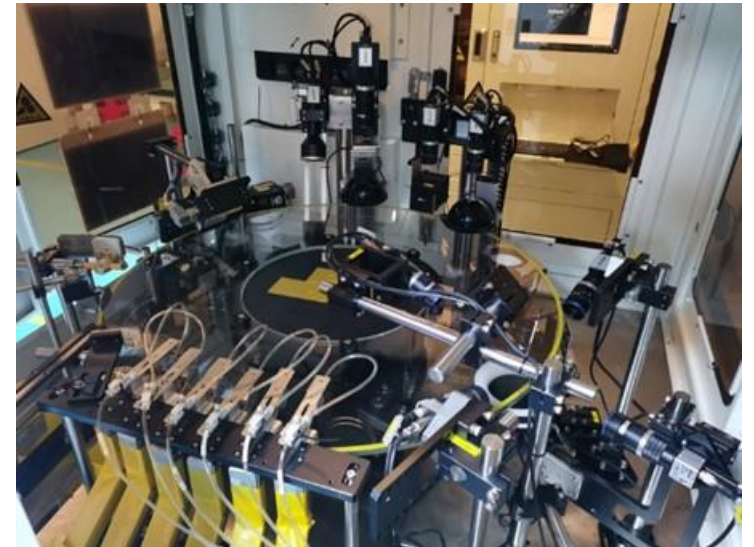
Automated Inspection Equipment



▲
AOI magnet inspection machine



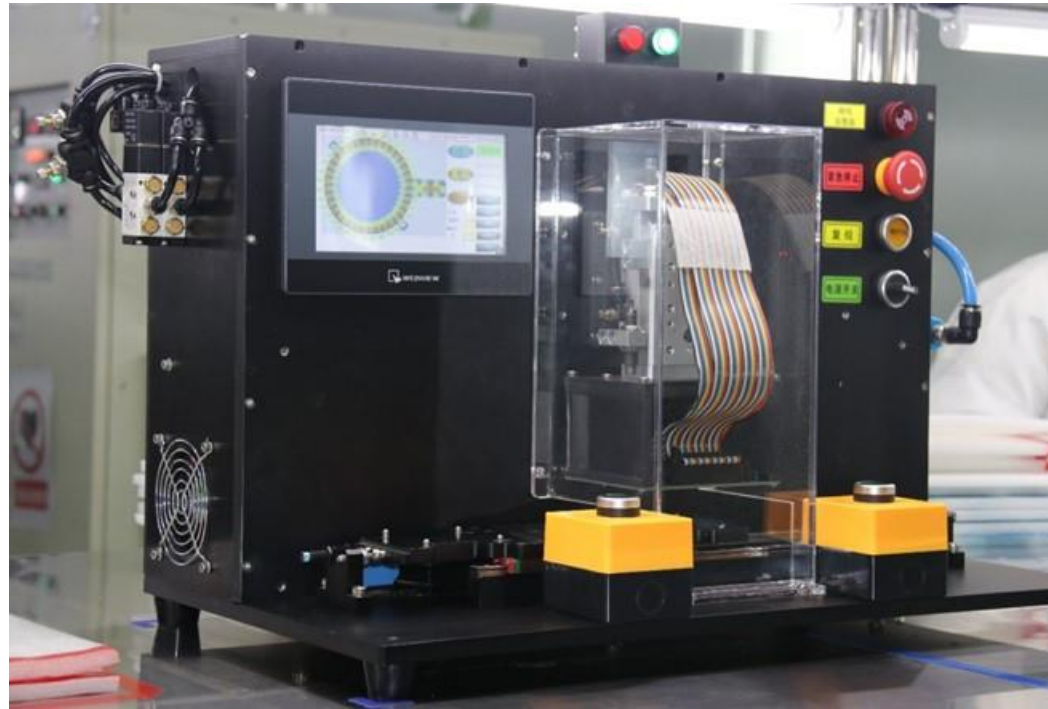
▲
Automated
sorting equipment



▲
AOI with 3D Profile
Scanning Datum Machine

Automated Inspection Equipment

Top of the line production equipment



◀ Polarity detection equipment



◀ Visual laser engraving machine



◀ Flashing test machine

04

Customer Service

- Design and Manufacturing Services
- Core Values
- Excellent Customers

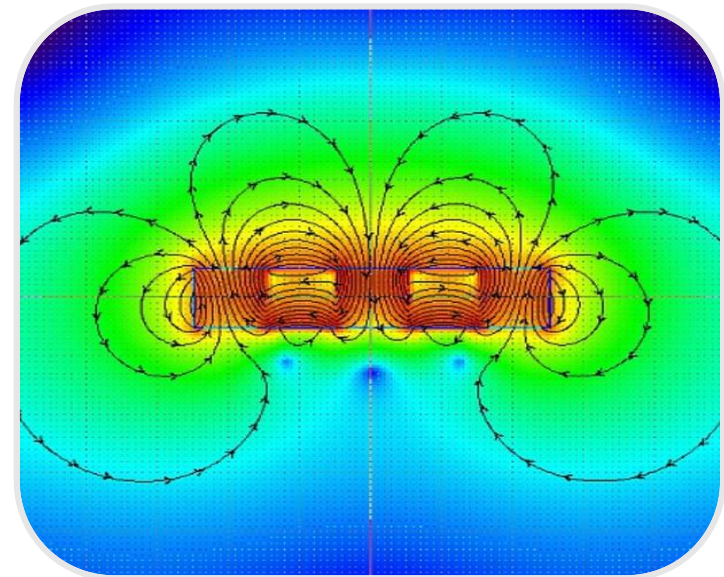
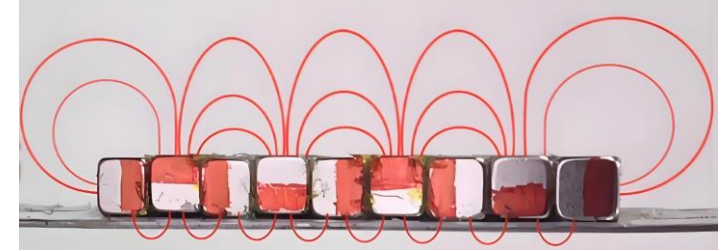
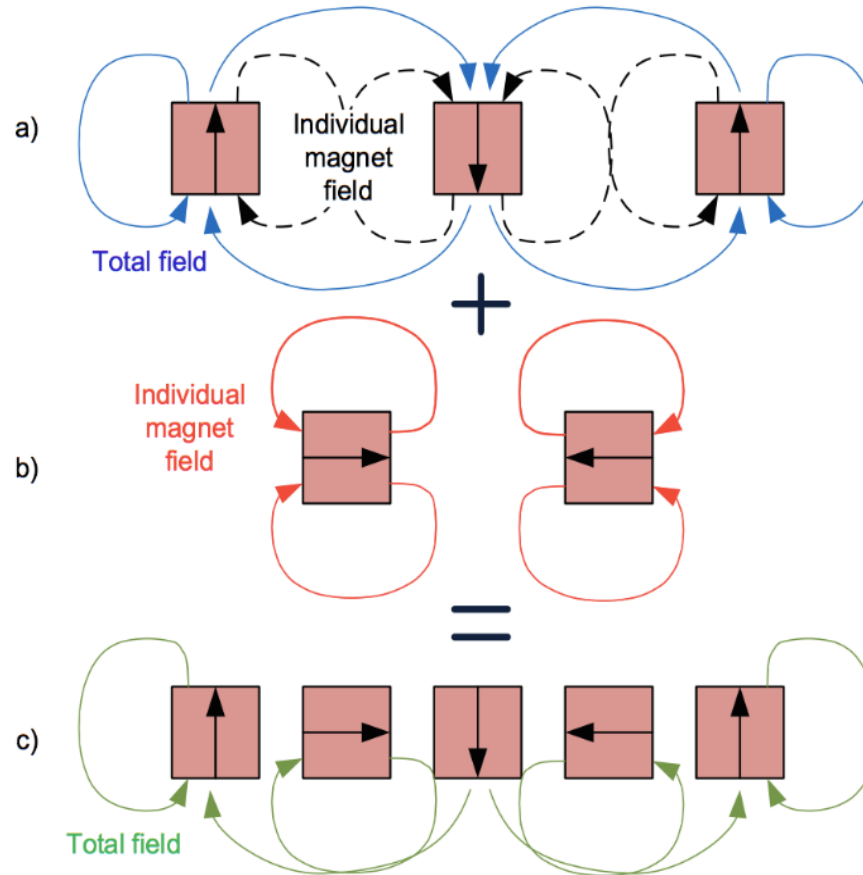
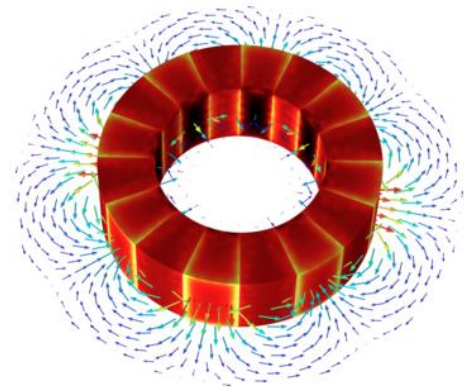
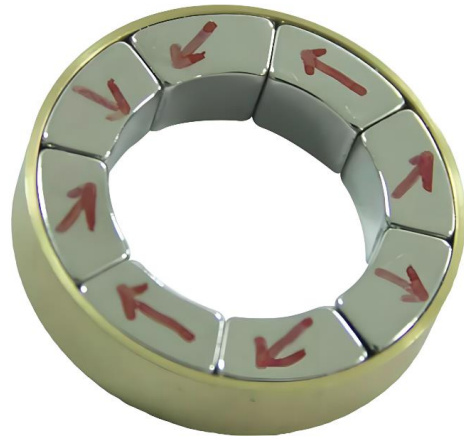
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Design and Manufacturing Services



- High-precision and performance magnets, precision control of non-magnetic areas
- Flux value, Gauss value, tension value simulations and systems analysis
- Magnetic assembly hardware post processing
- Customized multi-pole magnetization solutions
- Halbach Array magnetization and assembly

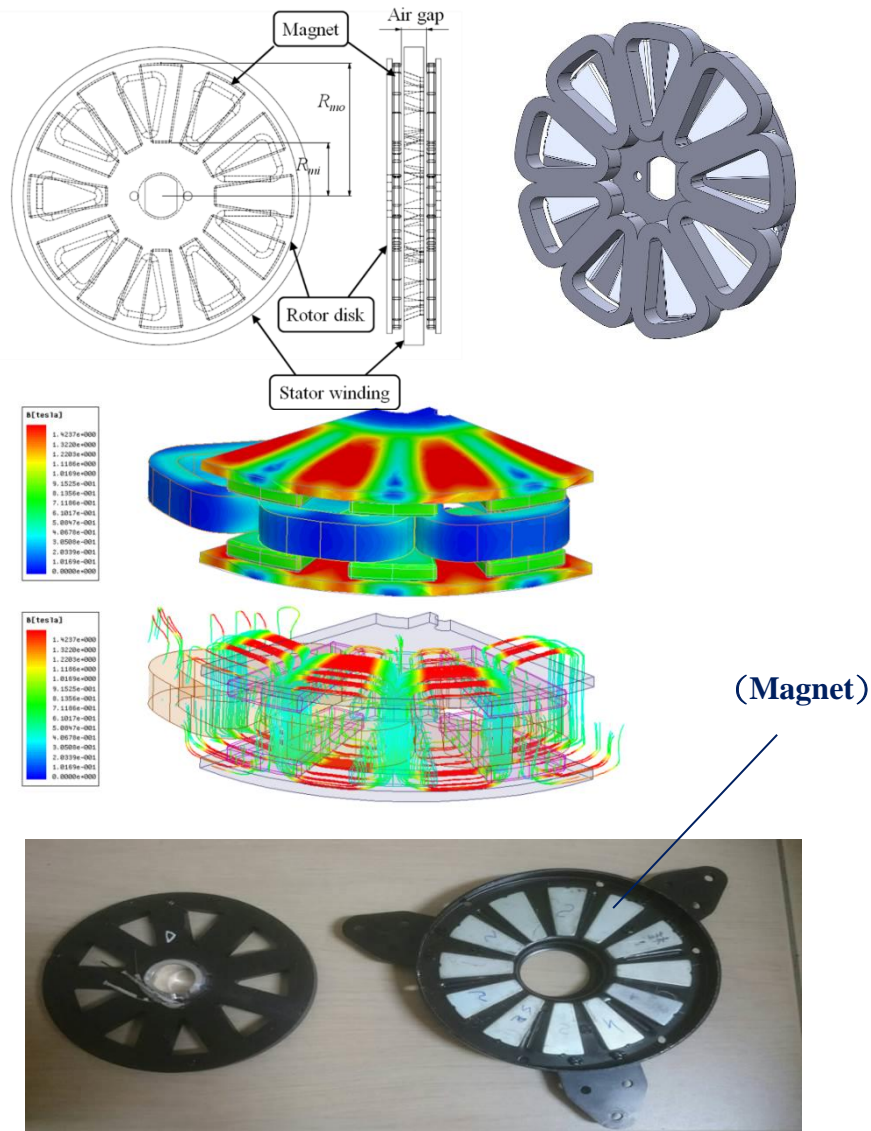
Halbach Array Magnet Assembly and Production Services



The Halbach Array is a type of magnetic structure that is an engineering approximation of an ideal configuration. Its goals are to maximize the output field, minimize weight, and reduce leakage. It is particularly applied in new energy vehicle motors and other devices. In 3C products, it is especially used in high-end wireless charging magnetic absorption module assemblies.

The high-performance, ultra-thin Halbach Array magnetic components are integrated into these applications.

Motor/Generator Design and Simulation Analysis Services



Customized Magnet Design and Manufacturing

Design magnet size, shape, and model to meet design requirements and reduce costs. Provide high-performance magnetic designs tailored for specific applications to ensure optimal efficiency and performance in motors/generators.

Magnet Testing and Verification Services

- Provide magnetic performance testing services to ensure compliance with design requirements and standards.
- Conduct magnet life testing and durability analysis to assist in improving product quality.

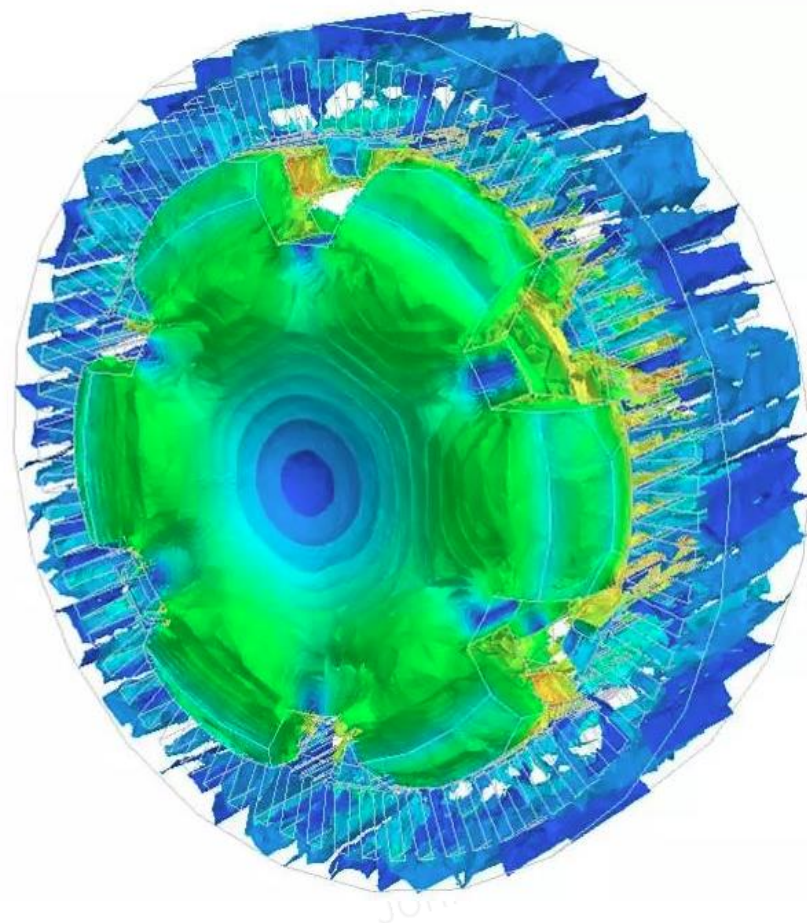
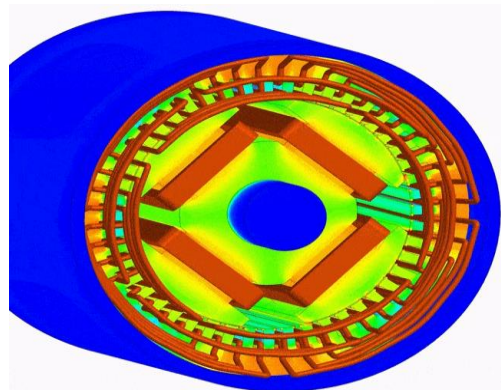
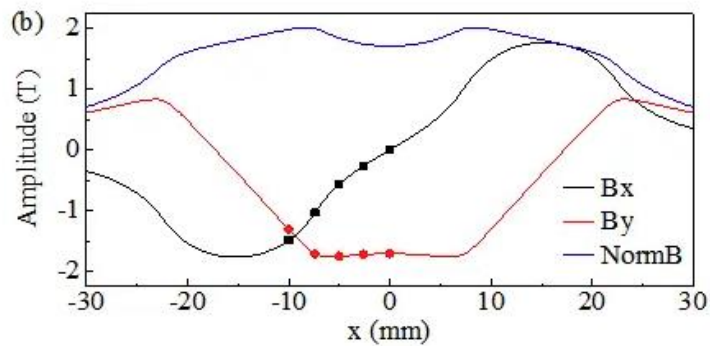
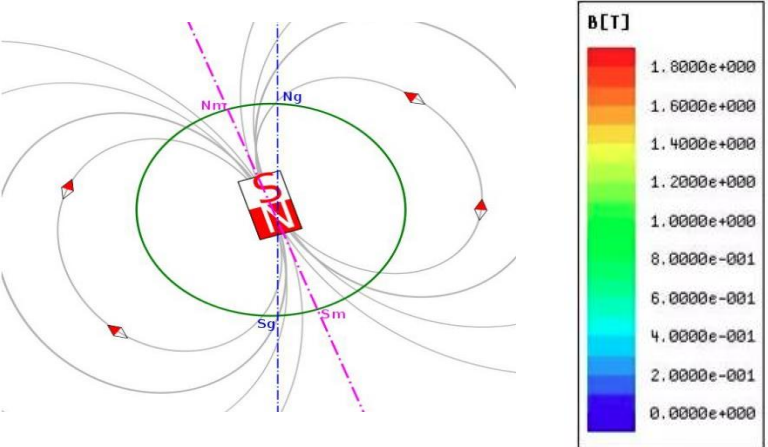
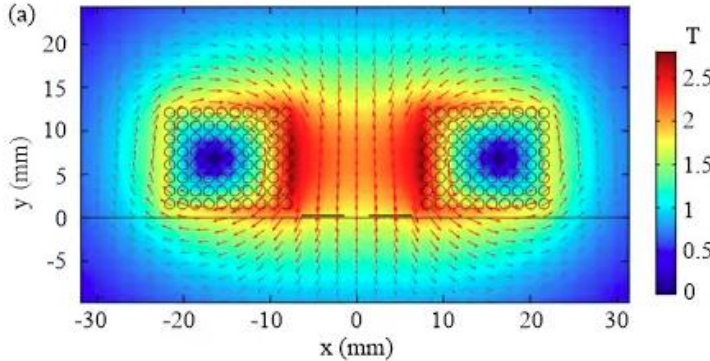
Motor Design Simulation and Optimization

- Numerical simulation services for motor/generator design to ensure optimal magnetic circuit design and magnetic field distribution for key performance indicators.
- Electromagnetic, thermal, and mechanical performance analysis to ensure design stability and efficiency.
- Optimize existing motor designs to enhance performance, reduce losses, and extend motor lifespan.

Technical Consultation and Solution Development

- Professional consulting for magnetic material applications to help solve technical design challenges.
- Co-develop new motor technologies focusing on high-performance and high-density magnet applications.

Motor/Magnetic Circuit Design and Magnetic Field Simulation Services



Phone In Group Corporate Culture



◆ Management Philosophy:

- ★ Humanization
- ★ Refinement
- ★ Service-oriented

◆ Corporate Vision:

To provide customers with more immersive magnetic application solutions and products for smart terminal devices.

◆ Corporate Mission:

To develop advanced magnetic material technologies and solutions that create value for customers.

◆ Core Values:

- ★ Focus on Needs
- ★ Create Value
- ★ Bear Responsibility
- ★ Innovate and Share

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Excellent Customers



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Thank you!



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