Hangzhou Vector Magnets Co., Ltd.

a FORESEE Company

Founded in 2009
About Vector Magnets

**Integrated Manufacturing**
Facility and manufacturing Located in Hangzhou, assorted magnets, assemblies, modules, devices and equipment.

**Global Vision**
Professional team collaboration based on efficient communication.

**Project Experience**
Engineers well versed in data analyzing technics providing customer with value-added service.

**Data Authenticity**
Manufacturing automation and advanced test and inspection equipment to ensure reliable verification.

**Fine Traceability**
Automotive customer servicing experience to allow continuous improvement and product traceability.

**Share**
Open to customers and partners to share knowledge, opinion and information.
Products
&
Applications
**What We Make - Materials**

**Sintered NdFeB Magnets**
- High Br: 1.5T; High Hcj: 2700 kA/m; (BH)max: 55MGOe
- Max working temperature: 220°C
- Poor corrosion resistance, needs surface finishing

**Sintered SmCo Magnets**
- High Br: 1.12T; Hcj: 1990 kA/m; (BH)max: 32MGOe
- Max working temperature: 350°C - 450°C
- Higher resistance to corrosion

**AlNiCo Magnets (Cast & Sintered)**
- High Br: 1.35T; Hc: 160kA/m; (BH)max: 12MGOe
- Max working temperature: 550 °C
- High resistance to corrosion

**Bonded NdFeB Magnets (Compression & Injection)**
- High Br: 0.8T; Hcj: 1250 kA/m; (BH)max: 12MGOe
- Max working temperature: 160 °C
- Available for various shapes, multi-poles and high precision

**Hard Ferrite Magnets**
- High Br: 0.46T; Hcj: 360 kA/m; (BH)max: 5.0MGOe
- Max working temperature: 250 °C
- High dielectric property and high electric resistance

**Bonded Ferrite Magnets**
- High Br: 320mT; Hcj: 230 kA/m; (BH)max: 2.5MGOe
- Available for various shapes, multi-poles and high precision
- Excellent corrosion and impact resistance

**FeCrCo Magnets**
- High Br: 1.35T; Hcj: 630 kA/m; (BH)max: 6.5MGOe
- Max working temperature: 500 °C
- Good machinability, available for various shapes

**Ferrite & NdFeB Flexible Rubber Magnets**
- High Br: 270mT; Hcj: 230 kA/m; (BH)max: 1.8MGOe
- Magnetic Sheeting, printer, magnetic whiteboard, magnetic decoration, extrusion strips, etc
### What We Make & Supplying

#### Soft Magnets
SMC, Silicon Iron, Chromium Iron, Phosphorus Iron, Permalloy, Nickel-Cobalt alloy,
widely applied in micromotors, esp. in military & aerospace.

#### Plastic Injection
Hot plastic material melted in certain die into various shapes, consisting of rubber injection, plastic injection, molding injection.

#### Stamping
Metal’s plastic deformation under the co-impact of presser and mold, plates, stripes, tubes, pot, cap, etc.

#### Electromagnets
A portative electromagnet is designed to hold materials in place, i.e. lifting magnets, used in motor & generators, transformers, relays, electric bells and buzzers, actuators, etc.

#### Sintered Radial Ring NdFeB Magnets
Widely used in PMSM, new multipole radial orientation. High Stability and evenly distributed magnetic flux.

#### MIM
Matel Injection molding
Widely used in 3C, Medical, Automobile, Power tool, locks, Musical Instrument, Spectacles, Watches, etc.

#### SmFeN
Higher Curie Temp than NdFeB
Anisotropy field as great as NdFeB
Need 0% cobalt, anti-corrosion & anti-oxidation

#### Programmable Magnetizing
Tailored Design available for various magnetization
Enhanced with way more magnetic field density
Applications

Motor & Generator
Requirement: High Temp Demag, High Magnetic flux, density consistency, low weight loss; anti-corrosion, dynamic balance; Widely used in BLDC, PMDC, PMSM, Compressor, Blower, Linear Motor, Haibach Arrays, etc.

Devices & Equipment
Mechanical panels i.e. speedometer, flow meter, etc. Musical Instrument, pickups in guitar; microscope, Magnetic Resonance Imaging, Couplings, Magnetrons, etc.

Green Energy
Wind Turbine Generator requires great amount of high quality, anti-corrosion, high coercivity Neo magnets, making it one of the iconic application of this type of magnets.

House & Stationery Magnets
Greatly improve work efficiency and environment friendly in hundreds of working scenes.

Sensors
For various purposes of proximity, rotation, relay, switch, detector, isolator, etc. High Surface Flux Consistency Micro-size with key Features, Magnetic Angle Deviation control, Good Machinability mostly allows injection molding.

Industrial Magnets
Glass Filming, Welding Magnets, Magnetic Chuck, Fishing Magnets Available in various shapes and occasions; Comes in different materials; Excellent corrosion and impact resistance, Multi-pole magnetization.

Communication & Security
Radio Frequency, Acoustic Drivers, Haptic Drivers, Camera, Fire Alerter, Fingerprint Lock and assorted applications in automotive, wireless communication, aerospace, etc.

Pot Magnets
Assorted combination of steel and magnets applicable in various occasions, living room, kitchen, supermarket, garage, office, working lines.
We Serve
Procedures
• Project Confirmation
• Technical Requirement Conversion
• Process Development
• Ramping
• Mass Production

Features
• Long Period
• Procedural Approach
• Continuous Improvement
• Process Control
• High Stability

Automobile

- Powertrain
- Engine
- Safety
- Transmission
- Fuel Tank
- Motors
Consumer Electronics

VCM

- **High Precision**
  - Linear Tolerance: 0.005mm − 0.01mm
  - Geometric Tolerance incl. concentricity, parallelism etc., top level in magnet industry

- **Dimension**
  - 0.15-0.3mm ID
  - 0.4-1.0mm OD
  - 0.25mm-0.8mm thickness
  - 200 x 200 x 50T mm block
  - OD250 x 50T mm disk

- **Modularization**
  - A combination of magnetic technology and other subjects;
  - Super easy for replacement;
  - Less cost in repairing

- **High Grade**
  - N55, N52M, N50H, N50SH, N44UH, SmCo32, SmCo32H, AlNiCo9, AlNiCo8Hc, YN18, FeCrCo52/5, FB9B, BN12

- **Auto Inspection**
  - Automate quality control, parts to be assembled by machine in automatic process, higher efficiency, accuracy and reliability

Vibration Motor

Loudspeaker

Camera Focus
Why Us

High Precision

Quality Control
Automation in manufacturing and inspection to control magnet appearance, dimensions, flux, flux density, pull force, shear force, dynamic balancing, etc. Certified by ISO9001, ISO/TS16949, ISO14001, OHSAS18001, AS9100, ISO/IEC27001, GJB9001B.

A wide range of magnetic solutions
Production and technical experiences in various manufacturing processes of casting, sintering, compression/injection molding, coil winding, rolling, welding, powder metallurgy, etc to assist customer with miscellaneous requirements.

In-house finishing
Environment is strictly controlled within all production sites, Available plating are Ni, NiCuNi, Zn, Epoxy, Au, Copper, Sn, SnCu, Parylene, Teflon, Aluminum, etc.
Application-oriented
All test devices and equipment are application-oriented, which are widely and high recognized by both magnet manufacturers and application market/users.

Applicable to most of magnets
Multiple omnibus test devices and equipment available for almost all sorts of magnetic materials, extending to other metal parts and plastic parts.

Reliability
Major test devices and equipment are calibrated with 3rd party authorities, institutes and labs, specializing customers.
Service & Support

24 Hr Service
Quick response within 24hrs to customer queries

Engineering Support
Application-oriented technical feasibility analysis
Tailored assembly Design for specific application

PDCA
PDCA model to tackle quality control and issues

Warehousing
FIFO, Safety Stock, environment control, real time tracking