

## Plastoneodymium magnet

BONMAG is the new Bonded line consisting of rare earth and plastic materials compressed.

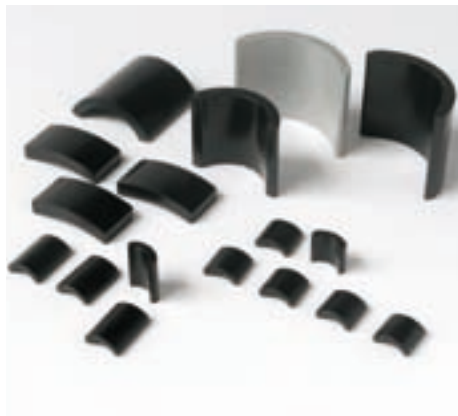
The compression of plastic materials and rare powder as neodymium, iron and boron, create magnets at very low tolerances up to  $\pm 0,015$  that means higher performances components which doesn't need any further working process.

Qualities of this products permit to use it in multiple applications with higher advantages.

BONMAG is the new Bonded Neodymium magnet with high performances to improve motor qualities!

### Features:

- magnet powder of neodymium, iron and boron
- optional coating electro deposition: black or grey epoxy
- high efficiency and max. energy up to 12 MGO in mini-type and light-weight in advanced application
- high resistance ( $\sim 10\text{-}\Omega\text{.cm}$ ) of magnet ensures no electric-current loss and be suitable for multi-poles magnetization
- high precise dimensions: precise tolerance  $\pm 0.015\text{ mm}$
- suitable for mass production
- high mechanical strength
- increased density
- higher output with reduced volume
- 4 up to 6 times stronger than ferrite magnets.



Segments  
Segmenti



Rings  
Anelli



Rotors and sensors  
Rotori e sensori

### Applications:

#### Automotive

- Motors
- Sensors
- Engine Cooling Fan
- Electric Fuel Pumps
- Electric Power Steering
- Permanent Magnet Starter
- Instrumentation Gauges
- Brushless DC Motors
- Actuators

#### Home Appliances

- Refrigerator Motors
- HVAC Blower Motors
- Cordless Power Tool Motors
- Cordless Household Appliances
- Household Appliance Motors

#### Factory Automation Industrial

- Robot Arms
- Robot Motors
- Magnetic Coupling
- Bearings
- Generators
- Servo Motors

#### Computer & Office Automation

- Disk Drive Spindle
- Printer & Fax Stepper Motors
- Printer Hammer
- CD-ROM Drive Spindle
- Voice Coil Motors
- Pick-up Motors

#### Consumer Electronics

- VCRs
- Camcorders
- Cameras
- Speakers & Headsets
- Video Games
- Microphones
- DVD Players

## Magneti in Plasto Neodimio

BONMAG è la nuova linea Bonded caratterizzato da terre rare e materiali plastici o compressi.

La compressione di materiali plastici e polveri rare quale il neodimio, ferro e boro, crea magneti a bassissime tolleranze fino a  $\pm 0,015$  che significa alte performances dei componenti che non necessitano di ulteriori lavorazioni.

La qualità di questo prodotto permette di utilizzarlo in molteplici applicazioni con alti vantaggi.

BONMAG è il nuovo magnete in Bonded Neodimio con alte performances per migliorare la potenza dei motori!

### Caratteristiche:

- magnete in polveri di neodimio, ferro e boro e materiali plastici
- rivestimento: elettrodeposito di resina, colorazioni nero o grigio
- alta efficienza e massima energia fino a 12 MGO e applicazioni avanzate
- l'alta resistenza ( $\sim 10\text{-}\Omega\text{.cm}$ ) dei magneti assicura nessuna elettrica ed è adatta alla magnetizzazione multipolo
- dimensioni altamente precise: tolleranza  $\pm 0.015\text{ mm}$
- adatto alla produzione di massa
- alta forza meccanica
- elevata densità
- più alto output con volume ridotto
- da 4 a 6 volte più forte del magnete in ferrite.

### Applicazioni:

#### Automotive

- Motori DC
- Motori brushless
- Motori pancake
- Sensori
- Elettroventole raffreddamento motore
- Pompe elettriche per carburante
- Sterzi elettrici
- Attuatori
- Motorini di avviamento

#### Elettrodomestici

- Motori per frigoriferi
- Motori per raffreddamento (HVAC)
- Elettrodomestici a batteria
- Elettrodomestici a batteria
- Motori per piccoli elettrodomestici

#### Automazione Industriale

- Bracci robot
- Motori robot
- Accoppiamento magnetico
- Cuscinetti
- Generatori
- Servo Motori

#### Automazione Computer & Ufficio

- Albero azionatore del disco
- Motori passo a passo Fax & Stampanti
- Martello stampante
- CD-ROM albero di azionamento
- Motori bobina voce
- Motori Pick-up

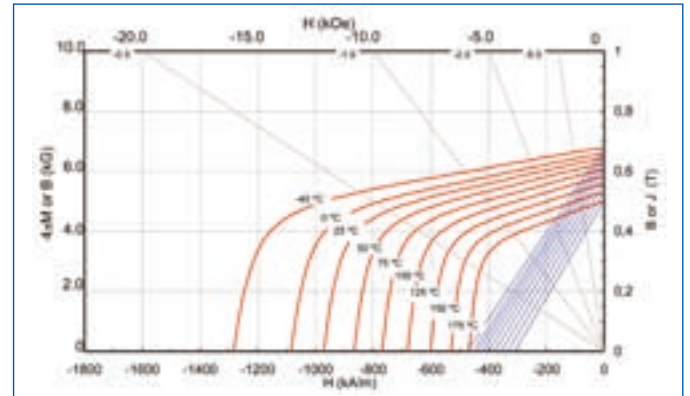
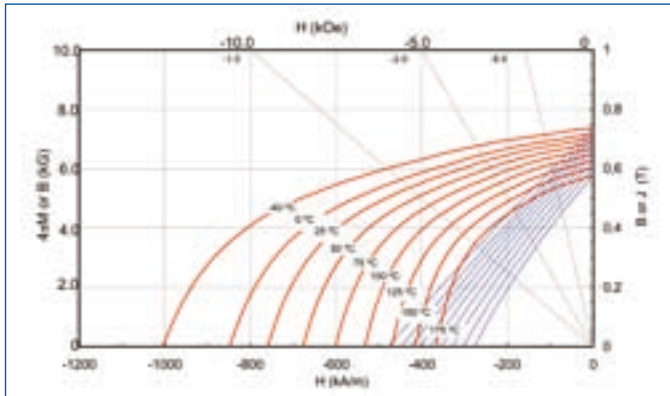
#### Consumi Elettronici

- VCR
- Videocamere
- Telecamere
- Speakers & Headsets
- Video giochi
- Microfoni
- Lettori DVD



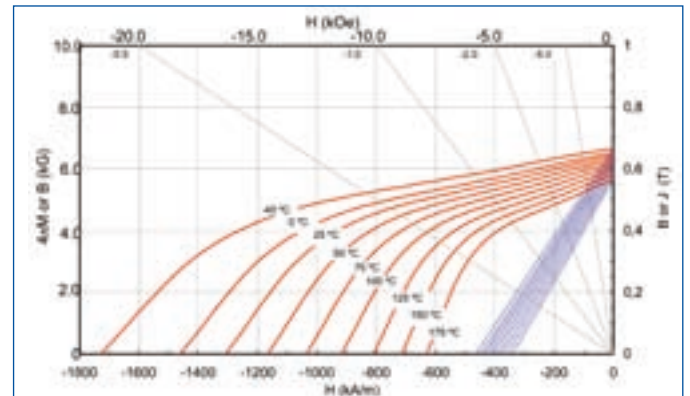
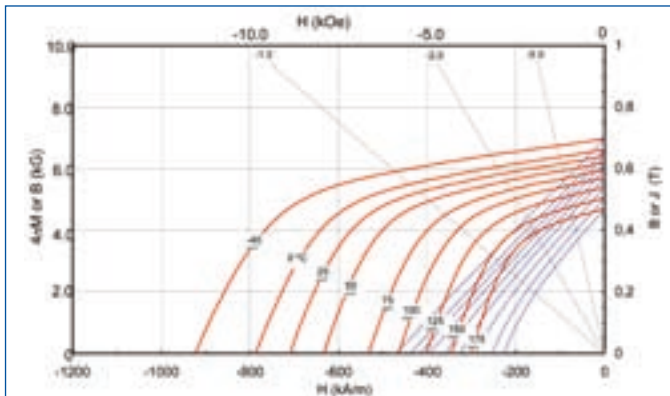
Magnetic curves "Bonded Compression Nd-Fe-B"

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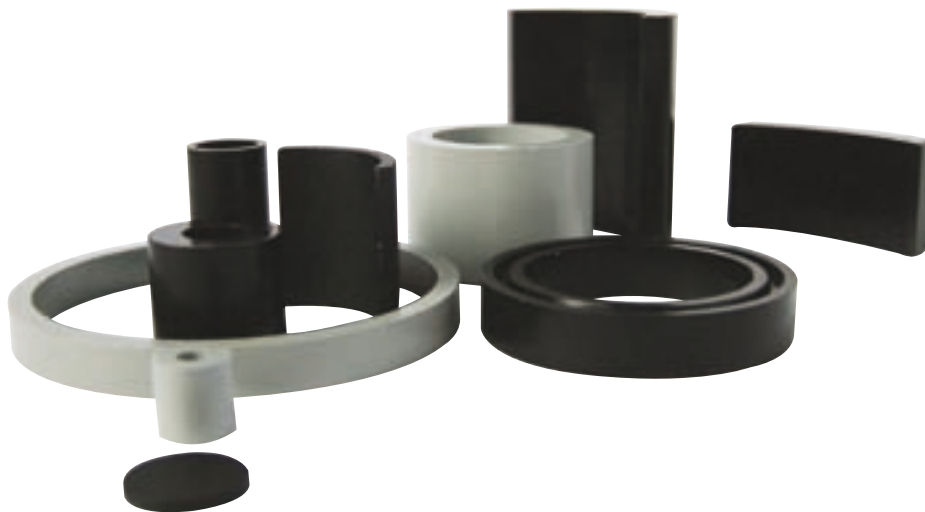
BM-08L

BM-08SR



BM-08

BM-08H





	Residual induction (Br)	Coercive force (Hcb)	Intrinsic coercive force (Hcj)	Maximum energy product (BH)max	Temp. coefficient of Br to 100° C	Temp. coefficient of Hcj to 100° C	Density (without coating)	Max work temperatur.	Curie temperatur.	Saturation magnetizing force
Code	T (KGs)	KA/m (KOe)	KA/m (KOe)	KJ/m <sup>3</sup> (MGOe)	% / °C	% / °C	g/cm <sup>3</sup>	°C	°C	KA/m (KOe)
<b>BM-02</b>	300 - 400 (3.0 - 4.0)	160 - 240 (2.0 - 3.0)	480 - 640 (6.0 - 8.0)	16 - 24 (2.0 - 3.0)	- 0.11	- 0.40	4.5 - 5.0	160	350	≥1600 (≥20)
<b>BM-04</b>	400 - 500 (4.0 - 5.0)	240 - 320 (3.0 - 4.0)	560 - 720 (7.0 - 9.0)	32 - 44 (4.0 - 5.5)	- 0.11	- 0.40	5.2 - 5.7	160	350	≥1600 (≥20)
<b>BM-06</b>	500 - 600 (5.0 - 6.0)	320 - 400 (4.0 - 6.0)	560 - 720 (7.0 - 9.0)	48 - 60 (6.0 - 7.5)	- 0.11	- 0.40	5.5 - 6.0	160	350	≥1600 (≥20)
<b>BM-08</b>	600 - 680 (6.0 - 6.8)	360 - 440 (4.5 - 5.5)	640 - 800 (8.0 - 10.0)	60 - 72 (7.5 - 9.0)	- 0.11	- 0.40	5.8 - 6.1	160	350	≥1600 (≥20)
<b>BM-08H</b>	600 - 650 (6.0 - 6.5)	400 - 480 (5.0 - 6.0)	1040 - 1360 (13.0 - 17.0)	60 - 68 (7.5 - 8.5)	- 0.12	- 0.40	5.8 - 6.1	160	300	≥2400 (≥30)
<b>BM-08L</b>	600 - 680 (6.0 - 6.8)	400 - 480 (5.0 - 6.0)	640 - 800 (8.0 - 10.0)	64 - 72 (8.0 - 9.0)	- 0.12	- 0.40	5.8 - 6.1	160	300	≥1600 (≥20)
<b>BM-08SR</b>	600 - 650 (6.0 - 6.5)	400 - 480 (5.0 - 6.0)	800 - 1120 (10.0 - 14.0)	60 - 68 (7.5 - 8.5)	- 0.13	- 0.40	5.8 - 6.1	180	300	≥2000 (≥25)
<b>BM-10</b>	680 - 730 (6.8 - 7.3)	400 - 480 (5.0 - 6.0)	640 - 800 (8.0 - 10.0)	76 - 84 (9.5 - 10.5)	- 0.10	- 0.40	5.2 - 5.7	160	350	≥1600 (≥20)
<b>BM-10H</b>	700 - 750 (7.0 - 7.5)	400 - 480 (5.0 - 6.0)	640 - 800 (8.0 - 10.0)	80 - 88 (10.0 - 11.0)	- 0.10	- 0.40	6.0 - 6.3	160	350	≥1600 (≥20)
<b>BM-12</b>	720 - 770 (7.2 - 7.7)	440 - 520 (5.5 - 6.5)	720 - 880 (9.0 - 11.0)	88 - 96 (11.0 - 12.0)	- 0.10	- 0.40	6.0 - 6.3	160	350	≥1600 (≥20)
<b>BM-12D</b>	720 - 770 (7.2 - 7.7)	440 - 520 (5.5 - 6.5)	720 - 880 (9.0 - 11.0)	88 - 96 (11.0 - 12.0)	- 0.10	- 0.40	6.0 - 6.3	170	400	≥2000 (≥25)
<b>BM-12L</b>	760 - 810 (7.6 - 8.1)	400 - 480 (5.0 - 6.0)	480 - 640 (6.0 - 8.0)	88 - 96 (11.0 - 12.0)	- 0.11	- 0.40	6.0 - 6.3	150	320	≥1600 (≥20)
<b>BM-13L</b>	780 - 830 (7.8 - 8.3)	400 - 480 (5.0 - 6.0)	480 - 640 (6.0 - 8.0)	88 - 104 (11.0 - 13.0)	- 0.11	- 0.40	6.0 - 6.4	150	320	≥1600 (≥20)

**Kind of magnetization**  
**Tipologie di magnetizzazione**

The diagrams illustrate eight different magnetization configurations for cylindrical and disc magnets:

- Two-pole magnetized OD:** A cylindrical magnet with North (N) and South (S) poles on the outer diameter.
- Two-pole magnetized ID:** A cylindrical magnet with North (N) and South (S) poles on the inner diameter.
- Multi-pole Magnetized OD:** A cylindrical magnet with multiple alternating North (N) and South (S) poles along the outer diameter.
- Radial Magnetized:** A magnet with magnetic flux lines radiating from the inner diameter to the outer diameter.
- Multi-pole Magnetized ID:** A cylindrical magnet with multiple alternating North (N) and South (S) poles along the inner diameter.
- radial magnetized:** A disc magnet with magnetic flux lines radiating from the top surface to the bottom surface.
- Disc Multi-pole Magnetized:** A disc magnet with multiple alternating North (N) and South (S) poles on its top surface.
- Diametral Magnetized:** A magnet with magnetic flux lines passing through the diameter from the top surface to the bottom surface.