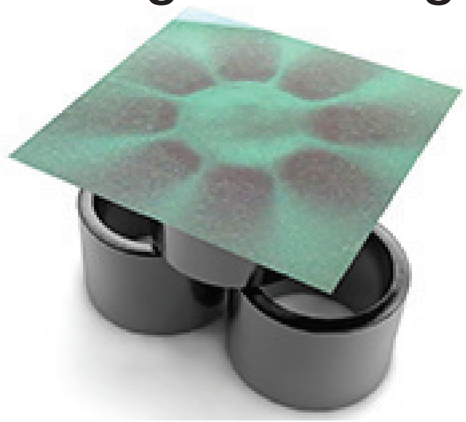
High Efficiency Multipole Radial Magnetic Rings

Allstar Magnetics now offers high efficiency multipole magnetic rings. These Neodymium (NdFeB) rings are revolutionizing the permanent magnet space for synchronous motors, stepping motors and DC brushless motors widely used in automotive, computers, electronics, communications, office, school equipment and common household products. Until recently, full magnetic rings (FMR) were made of separate magnets joined together to create the desired ring shape. Now new technology enables the creation of super strong, one piece, multi-pole radial magnetic rings.



The advantages are significant:

- Motor assembly is made much easier; installation of one or more rings versus gluing arcs into place.
- Radial sintering assures no “weak spots”.
- Magnets are multi-poled – thus the ring does not compromise the magnetic properties
- The radial orientation results in a super strong magnet by virtue of superior metallurgy developed specifically to BE radially oriented.

Technology:

Hot pressing is a new method of producing sintered NdFeB magnets. This process consists of combining base powders, hot pressing the resulting material, and then baking or sintering the resulting ring to achieve a radially magnetized product. This new technology improves the magnetic flux which in turn provides better efficiency and performance.

Available Dimensions:

O.D	I.D	Thickness(T)	Height(H)
<70mm	>15mm	2<T<5mm	25-50mm

*Special sizes may be produced depending on the grade, height-to-diameter ratio, and wall thickness.

Allstar Magnetics, LLC • 6205 NE 63RD Street, Vancouver WA 98661 • sales@allstarmagnetics.com
www.allstarmagnetics.com
1-800-949-8950

Allstar Magnetics

Grade	Remanence *Br(kGs)*	Coercivity *Hc(kOe)*	Intrinsic Coercivity *Hcj(kOe)*	Max Energy Product *(BH)max*	Operating Temp. °C
N35R	11.7-12.2	≥10.9	≥12	33-36 (MGOe)	80
N38R	12.2-12.5	≥11.3	≥12	36-39 (MGOe)	80
N48R	13.8-14.2	≥11.6	≥12	46-49 (MGOe)	80
N35MR	11.7-12.2	≥10.9	≥14	33-36 (MGOe)	100
N38MR	12.2-12.5	≥11.3	≥14	36-39 (MGOe)	100
N45MR	13.2-13.8	≥12.5	≥14	43-46 (MGOe)	100
N35SHR	11.7-12.2	≥11.0	≥20	33-36 (MGOe)	150
N38SHR	12.2-12.5	≥11.4	≥20	36-39 (MGOe)	150
N42SHR	12.8-13.2	≥12.4	≥20	40-43 (MGOe)	150
N45SHR	13.2-13.8	≥12.6	≥20	43-46 (MGOe)	150
N33UHR	11.3-11.7	≥10.7	≥25	31-34 (MGOe)	180
N35UHR	11.8-12.2	≥10.8	≥25	33-36 (MGOe)	180

Applications:
- Actuators
- Magnetic bearings
- Magnetic clutch
- Peripheral motors
- Spindle motors
- Steering control motors
- Stepper motors
- Other new products

Other Advantages:
- Geometric precision
- Variety of magnetic configurations
- Homogeneous distribution of magnetic field
- Design and assembly simplification
- Precision of motor performances
- Cost efficiency
- Huge marketing potential

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