

Datasheet - Neodymium NdFeB 42SH Bi-Pole Deep Pots



At A Glance

- ✓ Max. recommended operation temperature 150°C
- ✓ Bi-pole design for magnetic fixturing and clamping
- ✓ Strongest magnetic performance
- ✓ Up to 70kg pull force
- ✓ H6 diameter brass pot with mild steel pole pieces



These high temperature Neodymium Bi-Pole Deep Pot Magnets are high-strength permanent magnetic assemblies engineered for strong magnetic holding and attachment in industrial, workshop, fabrication, and engineered applications. These magnets combine a powerful neodymium-iron-boron (NdFeB 42SH) magnet core with a robust steel pot housing with H6 tolerance for the diameter, focusing the magnetic field at the contact face to deliver powerful, consistent holding force in demanding industrial and engineered environments.

The deep pot design delivers exceptional pull force relative to size, making these magnets ideal where strong magnetic contact and secure gripping performance are needed. The steel pot also protects the magnet core from mechanical damage and improves magnetic efficiency by directing flux towards the working faces, giving reliable performance in demanding environments.

Neodymium Bi-Pole Deep Pot Magnets combine high magnetic strength and durable steel housing in a compact assembly. The neodymium core delivers powerful magnetic force providing enhanced flexibility and grip in engineered applications. The deep pot construction protects the magnet and optimises magnetic performance, making these magnets a dependable choice for complex holding, fixturing, and mechanical mounting scenarios. By incorporating N42SH-grade neodymium iron boron magnets, these Neodymium Bi-Pole Deep Pots are capable of operating at elevated temperatures of up to 150°C. The H6 diameter tolerance allows for press-fit applications.

Benefits

- Maximum recommended operating temperature - 150°C
- Bi-pole high magnetic strength – powerful holding and clamping force
- H6 tolerance for the diameter
- Magnet protected by the zinc plated mild steel body ('cup')
- Up to **70kg** holding force

Performance

Magnetic Performance	Up to 70kg pull force - see next page
Magnet Type	NdFeB 42SH pot magnet assembly
Temperature Range	Up to 150°C - Max. recommended

Suitability

Suitable Products	Mild Steel plates, Ferrous Surfaces, etc
Suitable Location	Multiple Assemblies, Lighting, Home, Workshop, etc

Materials

Magnetic Material	Neodymium Iron Boron (NdFeB 42SH)
Other Parts	Mild Steel (Zinc Plated)

Maintenance

- There is no specific requirement to regularly inspect this item
- 150°C - Maximum recommended operating temperature
- Put Keeper Plate back onto the pot magnet for safe storage and during transit
- Easy cleaning of surfaces can be achieved using a cloth

Alternatives

- Neodymium NdFeB 42SH Shallow Pots
- Neodymium NdFeB 42SH Shallow Pots with Threaded Hole
- Alnico Deep Pots • Alnico Shallow Pots

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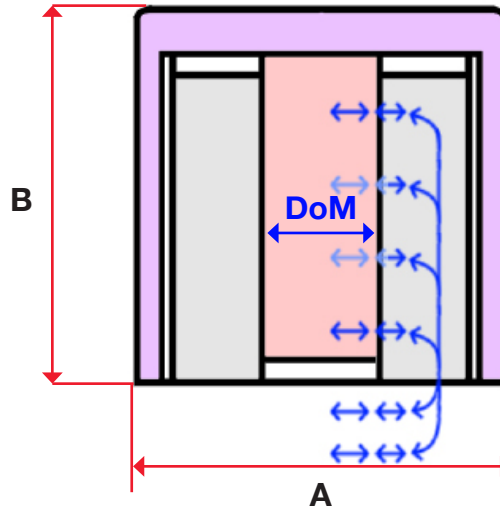
A Generic Example cross-section is shown for guidance

For simplicity, the cross-section shown does not show part-specific details such as glue lines/filler, etc.

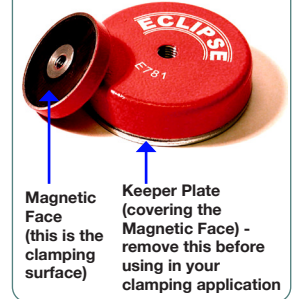
The example shown is not to scale.

DoM = Direction of Magnetisation (inside the Permanent Magnet)

The blue arrows give a guidance to the magnetic pathways (shown on one half only) after the Keeper Plate has been removed. Where the magnetic pathways are out into the air gap - this is where you can place a ferrous part for the Pot Magnet to clamp against it.



Pot Magnet Keeper Plate:-



Product Number	A** mm	B mm	Weight g	Pull Force* kg	Units / Pack
E750NEOSH	6	20	4	1	20
E751NEOSH	8	20	7	2.5	20
E752NEOSH	10	20	11	4.5	20
E753NEOSH	13	20	19	7	20
E754NEOSH	16	20	29	15	10
E755NEOSH	20	25	57	28	5
E756NEOSH	25	35	128	45	2
E757NEOSH	32	40	228	70	2

* The Pull Force is a Maximum Possible Pull Force Rating based on direct contact pull against a very thick and smooth finish high magnetic permeability mild steel plate. The actual performance is application specific - thinner material, less magnetic material, air gaps, and elevated temperatures, etc can all reduce the magnetic performance.

H6 tolerance for the diameter

** Magnetic axis

For further assistance, please contact sales@eclipsemagnetics.com

Although we have made every attempt to provide accurate information, we do reserve the right to change any of the information in this document without notice.

We cannot accept any responsibility or liability for any errors or problems caused by using any of the information provided.

Conversions Guide:-

1kg ≈ 2.204lb ≈ 9.806N

1lb ≈ 0.453kg ≈ 4.448N

1N ≈ 0.101kg ≈ 0.224lb

10mm ≈ 0.393in (≈ 25/64in)

1in ≈ 25.4mm

(the above conversion values are rounded down)



FM 31278

EMS 616377

DATA-E750NEOSH-Iss1