Datasheet - Neodymium NdFeB 42SH Shallow Pots

UTILITY

At A Glance

- Max. recommended operation temperature 150˚C
- Blind ended design for press fit applications
- Strongest magnetic performance
- Up to 35kg pull force
- Zinc Plated Mild Steel Body

The blind ended Neodymium NdFeB 42SH Shallow Pot Magnet is engineered for applications requiring strong magnetic holding, stability at elevated temperatures, and long-term reliability in a compact design. Built around a high-performance 150˚C rated N42SH grade neodymium disc magnet, each unit is encased in a zinc-plated mild steel cup that enhances magnetic performance, improves corrosion resistance, and provides mechanical protection.

Designed without fixing holes or threads, these blind-ended pot magnets are intended for press-fit installation, or bonding in milled holes, delivering a smooth, seamless finish ideal for flush-mounted, embedded, or aesthetic critical assemblies. Their shallow, low-profile design makes them especially effective in height restricted or precision engineered applications where appearance, alignment, and reliability are essential.

Because the pot is closed at one end, the magnetic field is directed towards the open face, maximising pull force and improving holding capability. While primarily used for press-fit integration, these shallow pot magnets can also be used in certain applications that involve clamping to a ferromagnetic surface, particularly where the magnet is not intended to be easily accessed or removed.

Durable, compact, and designed for long-term industrial use, our Blind-Ended Neodymium Shallow Pot Magnets provide strong, consistent holding performance for fixtures, jigs, mechanical assemblies, positioning systems, and concealed mounting points across engineering and manufacturing environments.

Neodymium NdFeB 42SH Shallow Pot Magnets combine powerful magnetic performance, thermal resilience upto 150˚C, and durable construction in a low-profile assembly. The high-energy core provides strong holding force, while the shallow pot housing enhances flux direction and protects the magnet. These magnets are an excellent choice for engineers, designers, and professionals who require reliable magnetic holding and mounting in challenging operating conditions.

Benefits

- Maximum recommended operating temperature - 150˚C
- High direct clamping forces
- Magnet protected by the zinc plated mild steel body ('cup')
- Up to **35kg** holding force
- For press-fitting or bonding in milled holes

Materials

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

Performance

Magnetic Performance	Up to 35kg pull force - see next page
Magnet Type	NdFeB 42SH pot magnet assembly
Temperature Range	Up to 150°C - Max. recommended

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

Suitability

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

Alternatives

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

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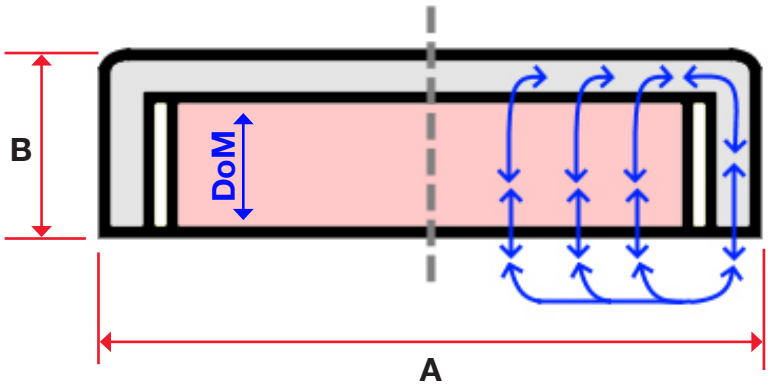
A Generic Example cross-section is shown for guidance

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:-

Magnetic Face (this is the clamping surface)

Keeper Plate (covering the Magnetic Face) - remove this before using in your clamping application

Product Number	A mm	B** mm	Weight g	Maximum Recommended Operating Temperature °C	Pull Force* kg	Units / Pack
E760NEOSH	6	4.5	1	150	0.5	20
E761NEOSH	8	4.5	1.8	150	1.3	20
E762NEOSH	10	4.5	2.5	150	2.5	20
E763NEOSH	13	4.5	4.5	150	6	20
E764NEOSH	16	4.5	5.5	150	9.5	20
E765NEOSH	20	6	15	150	14	10
E766NEOSH	25	7	31	150	20	10
E767NEOSH	32	7	40	150	35	10

* 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.
**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)

bsi. ISO 9001 Quality Management FM 31278 ISO 14001 Environmental Management EMS 616377

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