

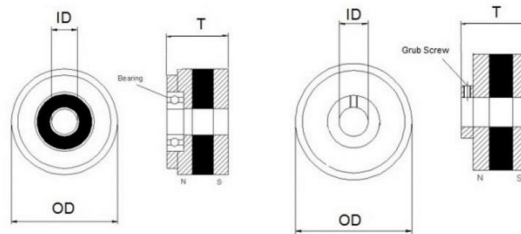


Magnetic Wheels

MSS have developed a series of Magnetic Wheels that enable inspection devices and crawlers to adhere to the metal surface, providing a strong magnetic holding force.

The Magnetic Wheels usually consist of a magnet array within an acetal (POM-C) or aluminium housing with 416 stainless steel pole pieces to concentrate the flux. The scalable design can be used in a variety of sizes and uses powerful Neodymium-Iron-Boron or Samarium Cobalt magnets, depending on the work being carried out, surface or Sub-Sea.

Although these systems are commonly used for ship hull inspection, they can also be used for the majority of non-destructive testing such as on oil & gas pipelines, large metal storage tanks and a variety of other metal structures



Magnetic Wheel Guide.

Below is a guide of common sizes.

Normally for short-term exposure to corroding influences - NdFeB is the choice of material.

For harsh environments, sub-sea or elevated temperature - SmCo should be used.

Wheels can be supplied with either a bearing or grub screw fitting for the non-ferrous shaft.

| Magnetic Wheel Guide | | | | | |
|----------------------|----|----------------|---------------------------|--------------------------|--------------|
| OD | T | ID Shaft (max) | Holding Force NdFeB (kgs) | Holding Force SmCo (kgs) | Weight (gms) |
| 30 | 16 | 10 | 6 | 4 | 57 |
| 30 | 21 | 10 | 10 | 7 | 73 |
| 40 | 20 | 10 | 8 | 5 | 130 |
| 40 | 25 | 10 | 10 | 9 | 162 |
| 50 | 29 | 12.7 | 20 | 17 | 281 |
| 75 | 40 | 12.7 | 50 | 40 | 930 |
| 100 | 50 | 12.7 | 60 | 55 | 1685 |

Please note

Holding Forces are based upon direct contact with a thick, clean mild steel surface. Holding Forces will be reduced with heavily painted or corroded surfaces.

For vertical use – Normally the holding force of one wheel should be equal or more than the total weight of the crawler (Assuming it's a 4 wheel crawler)

The outer Diameter of the poles can be machined with a diamond knurled finish to improve adhesion. Always use a non-ferrous shaft with these wheels.

For High Temp work, SmCo magnets housed in Aluminium instead of Acetal.

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