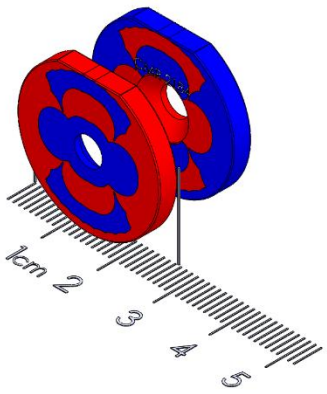
www.polymagnet.com

1002298
Twist/Release Polymagnet Pair – 90 degree



Twist/Release Polymagnets are engineered to provide a strong attachment/alignment force in portrait/landscape positions and a repulsion force once rotated +/- 90°. To achieve this behavior, these magnets are used in pairs and must be axially aligned. These Polymagnets also exhibit a tightly controlled magnetic field which minimizes interference with sensitive devices.

Twist/Release Polymagnets can also have an alignment feature every 180° meaning the repulsion force would occur when the magnet is rotated +/- 90°. However, this Polymagnet has a stronger magnetic field and may not be suitable for sensitive devices.

Features and Benefits

- Mobile phone case and stand design
- Rotational alignment
- M4 countersink
- 1002184 – D shape 1” OD 0.125” thick
- 1002185 – D shape 1” OD 0.125” thick

Technical Specifications:

Shape Type:	D-Shape	
Diameter:	1.0”	
Weight:	0.06 oz	(3.7 g)
Material:	NdFeB	
Magnet Grade:	N50	
Coating:	Ni-Cu-Ni	
Temperature Rating:	140° F	(60 C)
Holding Force:	32.1 lbs	(143 N)

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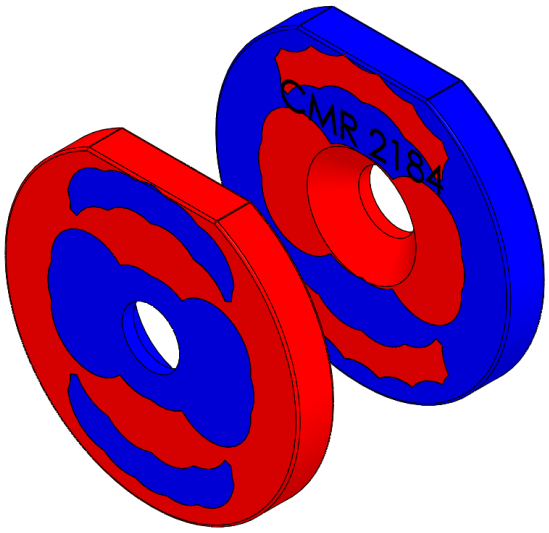
These Polymagnets exhibit a high holding force when they are rotationally aligned at 0° and 180 ° and a repel force at +/- 90°. The holding force is at a maximum of 143N when the magnets are aligned at zero gap. While keeping one magnet constrained, the clamp force decreases, reaching a minimum force of 40N at zero gap, when the other magnet is rotated 90°. This Polymagnet pair differs from portrait/landscape in behavior as the attraction force becomes a repulsion force at +/- 90˚ positions.

*In the images below, north poles are indicated by the red regions and south poles are indicated by the blue regions.

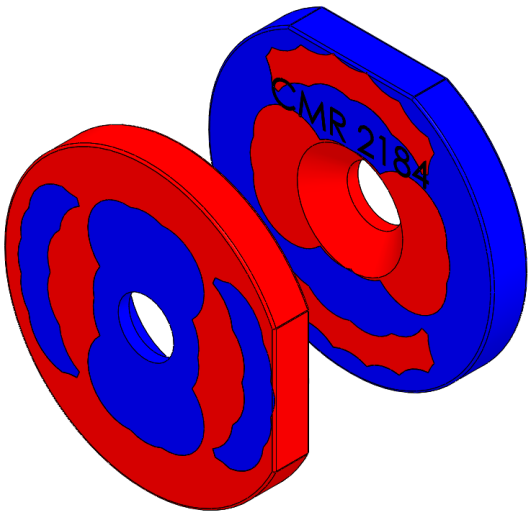
Holding Force:	5.93lbs

Holding Force:	-2.87 lbs

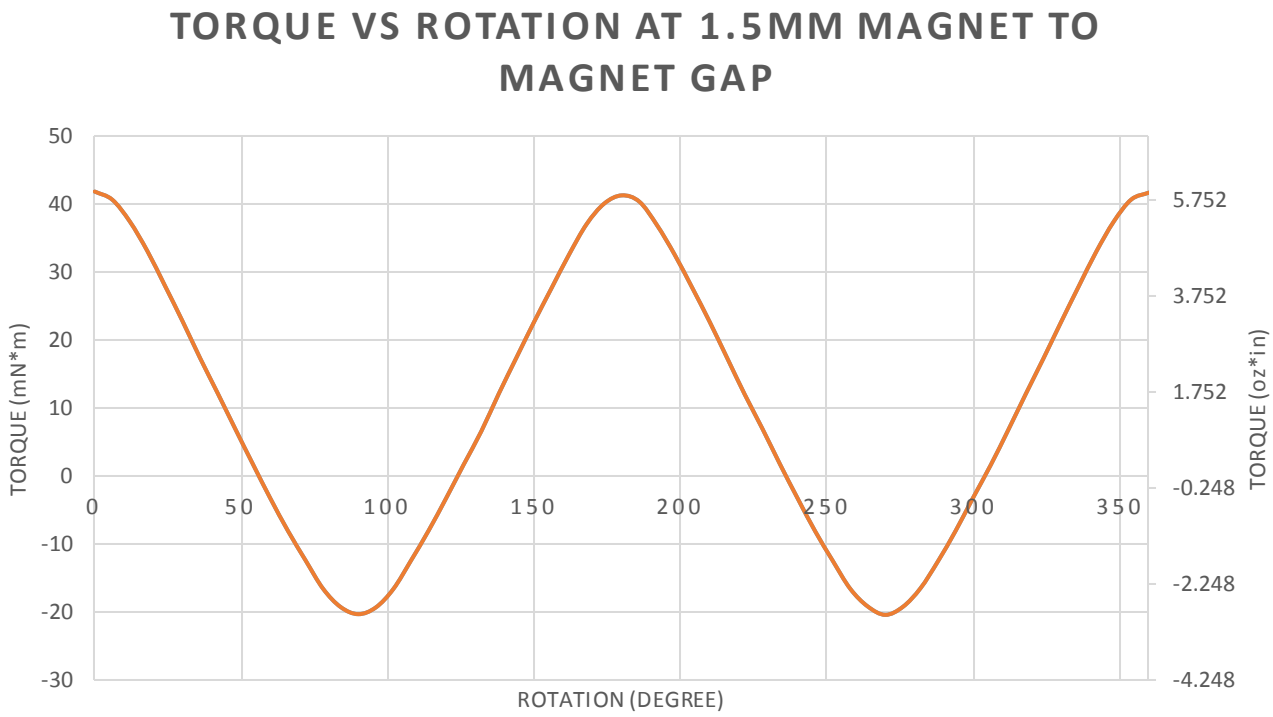
ALIGNED



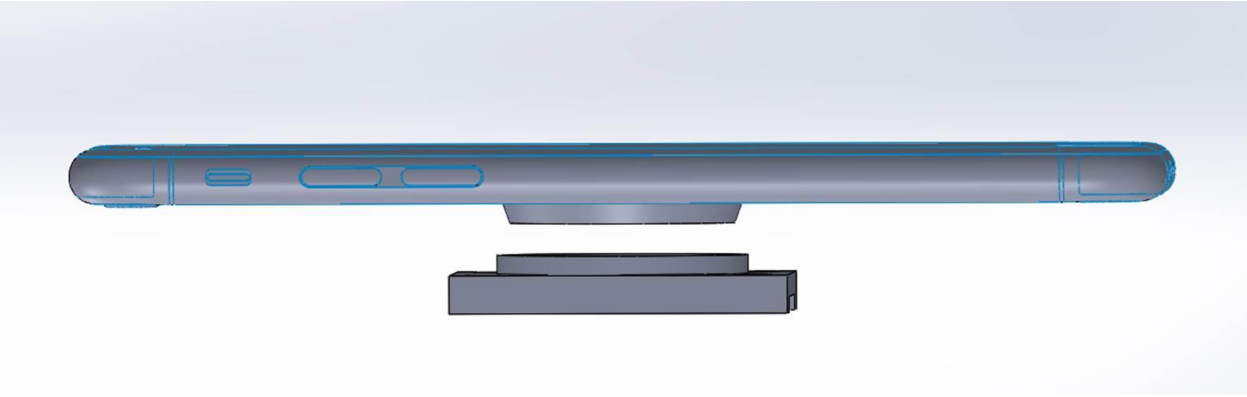
90° ROTATION



Polymagnet
CORRELATED MAGNETICS



These Polymagnets are D-shaped which provides an indexing feature. This aids in the assembly process as well as provides a flat surface to resist the torque created as the magnets are rotated. In order for this system to work correctly, there must be a mechanical feature which constrains the system as seen in the picture below.



Notes on Performance Data

The performance information provided in this data sheet is derived from test or simulation results of directly comparable magnets of the same size and grade under consistent conditions. The magnets are tested under controlled environmental conditions. Unconstrained application testing may give lower forces due to the magnet tilting or shifting away from target during engagement and disengagement.

Patent Information

Pat. www.cmrpatents.com

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