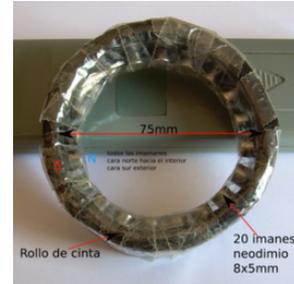


## Application No. 228: Swirling sphere

Author: Jaime Iglesias Garre, Barcelona, Spain, [peonzamagnetica@gmail.com](mailto:peonzamagnetica@gmail.com)

### For this rotor and stator no special equipment is necessary

For my experiment I needed a roll of adhesive tape with a diameter of 75 mm. On the inside of the roll I attached 20 disc magnets S-08-05-N ([www.supermagnete.fr/eng/S-08-05-N](http://www.supermagnete.fr/eng/S-08-05-N)) in regular intervals with an isolating tape. As you can see, I needed tons of tape, so the magnets would not attach to each other. All magnets are arranged in the same way, with the north pole towards the inside.

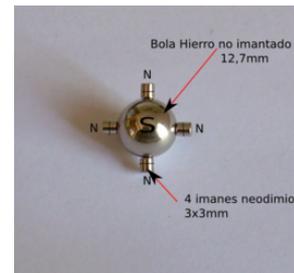


Here you can see in detail how I proceeded with the tape. In this version you cannot see the magnets. Maybe you like this version better - spectators might be even more impressed if they don't get the principle right away.



Video

The rotor consists of a non-magnetic steel sphere ([www.supermagnete.fr/eng/ST-K-13-N](http://www.supermagnete.fr/eng/ST-K-13-N)) and 4 disc magnets S-03-03-N ([www.supermagnete.fr/eng/S-03-03-N](http://www.supermagnete.fr/eng/S-03-03-N)). The individual disc magnets are staggered on the sphere by 90 degrees.



On the picture you see 8 magnets, but you only need 4.

As soon as the roll is placed over the rotor, it starts rotating (see video below).

YouTube Video: [www.youtube.com/watch?v=S45-6iV\\_QjE](http://www.youtube.com/watch?v=S45-6iV_QjE)

Note from the supermagnete team: Another customer implemented this experiment in 2015 with different magnets and achieved nice results:

YouTube Video: [www.youtube.com/watch?v=ZZEFTEEHOPI](http://www.youtube.com/watch?v=ZZEFTEEHOPI)

### Articles used

1 x ST-K-13-N: Steel balls 13 mm ([www.supermagnete.fr/eng/ST-K-13-N](http://www.supermagnete.fr/eng/ST-K-13-N))

4 x S-03-03-N: Disc magnet Ø 3 mm, height 3 mm ([www.supermagnete.fr/eng/S-03-03-N](http://www.supermagnete.fr/eng/S-03-03-N))

20 x S-08-05-N: Disc magnet Ø 8 mm, height 5 mm ([www.supermagnete.fr/eng/S-08-05-N](http://www.supermagnete.fr/eng/S-08-05-N))

1 x ST-K-08-N: Steel balls 8 mm ([www.supermagnete.fr/eng/ST-K-08-N](http://www.supermagnete.fr/eng/ST-K-08-N))

1 x ST-K-10-N: Steel balls 10 mm ([www.supermagnete.fr/eng/ST-K-10-N](http://www.supermagnete.fr/eng/ST-K-10-N))

1 x ST-K-20-N: Steel balls 20 mm ([www.supermagnete.fr/eng/ST-K-20-N](http://www.supermagnete.fr/eng/ST-K-20-N))

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