

Concerning the all-permanent magnetic motor, we would like to call your attention to its well-accepted predecessor, the electro-magnetic motor.

It is not electricity that makes electro-magnetic motors run. It is the creation of magnetic forces by electricity that operates them. In fact, it is common to find hybrid permanent magnetic/electro-magnetic motors. These are motors that use permanent magnets either in the stator or rotor and electro-magnets for the other. It is found that such motors run a bit cooler and are about 50% more efficient than those that use electricity exclusively to create the magnetic fields. We are not trying to get perpetual motion (which can't be done). The same kind of energy that is in electro-magnets is also in permanent magnets. The only difference is that permanent magnets can't be turned off and on. That is the only thing that is standing in our way of using them in an all-permanent magnet motor.

The reason permanent magnet motors haven't replaced electro-magnet motors is due to the inability to switch permanent magnetic forces on and off. If permanent magnets could be turned on and off like electro-magnets they would be used exclusively. Magnets have their own domain and the rules that operate them must be faithfully observed. Timing is very critical even in electro-magnet motors. Get the timing out and electro-magnet motors won't run either. Timing is in fact what makes all motors work. With the proper "timing" we believe permanent magnet motors can also be made to work. Magnetic fields are unaware of what is creating them. They are also unaware of what they are accomplishing. God knows what we need to do to accomplish our goal. We believe that He will give us the wisdom (if He has not already done so) to accomplish it, if we use it for His honor and His glory.

In our research at Mission: Magnetics, we have observed three challenges that must be overcome to use permanent magnets in both rotor and stator.

1. **Prevent "sweet" spots:** these are areas where magnets want to "park"—because like forces repel each other, and unlike forces attract each other. We must be able to get powerful magnets to turn past each other at 1/32" or closer spacing for maximum efficiency. These are magnets that a strong man cannot physically push together closer than 1 1/2" and are impossible to pull directly apart when opposite poles come together.
2. **Unidirectional rotation:** to arrange the magnets to encourage rotation in one direction only. This DIRECTING of magnetic fields focuses the energy so the magnets want to go in a specific direction.
3. **Shielding/Shading:** to mask the powerful magnetic fields so they won't repel each other, until the correct position is attained. Electro-magnets affect this by switching currents on and off. In other words, "correct timing".

The first two challenges were overcome in our first prototype. This was effected by shaping and positioning the powerful neodymium magnets. A person could turn the rotor by hand, even though it contained magnetic forces of 48 million gauss! Yet it was very difficult to rotate the rotor backwards. And that was accomplished without shielding.

The new prototype will have special shielding that effectively neutralizes one side of the stator magnet to allow the pole on the rotor magnet to get past it. At that point the full force of the stator magnet is in effect and pushes the rotor field away from it (in a particular direction).

This shielding effect has been demonstrated by special magnetic sensitive film. Without shielding, the specially shaped magnets show the fields around them in the expected pattern. With the shielding in position, one side of the magnet is effectively drawn into the shielding, while the other side is pretty much unaffected. This is exactly what is needed for the approaching rotor magnet to get past the equally powerful stator magnet. Once past it, the repelling forces are incredible.

We have been asked if we can make a cheaper prototype just to prove the concept, like a turntable with magnets glued to it. If this is all that someone wants to see, they can search the Internet for magnetic motors. They will find lots of permanent magnet motors demonstrating this concept.

There is no way to prove the effectiveness of our design outside of having special plastic housing tooled for the job. Also, if we do not use the exact magnets that will be used in the "real" motor we will not prove that our design will work. Also, the time it would take to machine a small model would be very similar to a full-size one. In fact it could take longer. We are not talking about a big difference in size. Labor is where the cost is.

A 200 hp electro-magnet motor uses less than 1000 gauss in the electro-magnetic fields created. We're dealing with 48 million gauss fields, so you can imagine the torque and forces we are dealing with! There are no adhesives that can contain such forces! But, if we were to throw something together and it didn't work, it would result in comments like, "See, we figured it wouldn't work", when the real reason was it wasn't done right the first time. We will not go forward until we can do it right.

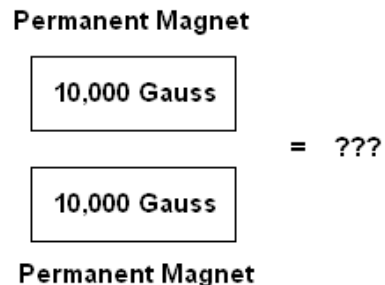
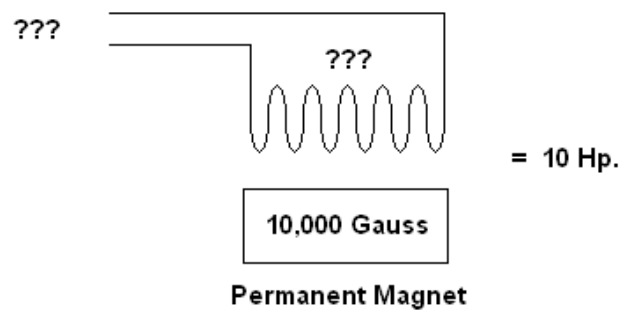
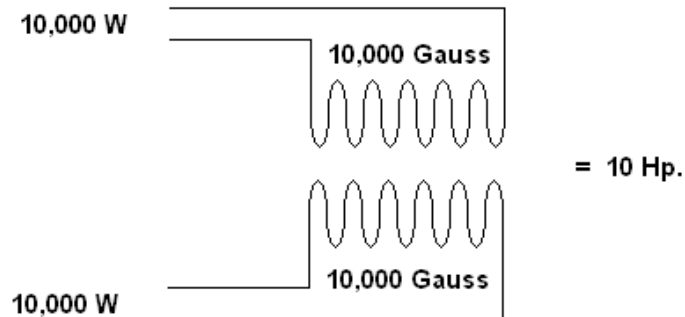
When we have sufficient funds together our machinist will tool the plastic rotor, stator and housing for the magnets. Then we shall see what the shielding has added to the previous design and determine what kind of horsepower is generated.

We are certain adjustments will improve the design, but proving the new design is what we are after, presently. We are aware of no less expensive way to go about it. There's a statement, "If you don't have the time/money to do it right the first time, where will you get the time/money to do it the second time?"

Thank you for your consideration.

Mission: Magnetics

For the sake of argument, we will say that 10,000 watts = 10,000 Gauss of magnetic field in coils, and that the two fields, the top one being the stator, the bottom one being the rotor, produce 10 hp of mechanical energy.



The only difficulty we run into making the bottom illustration work, is that we can't switch one of the fields on and off to obtain rotation. If one were able to turn one of the fields on and off we wouldn't need electricity to run the motor. Electricity is not what makes motors run it is magnetic fields. We simply use electricity to create magnetic fields. We believe there is a way to "fool" the permanent magnets that they are turning on and off, but timing is very critical.