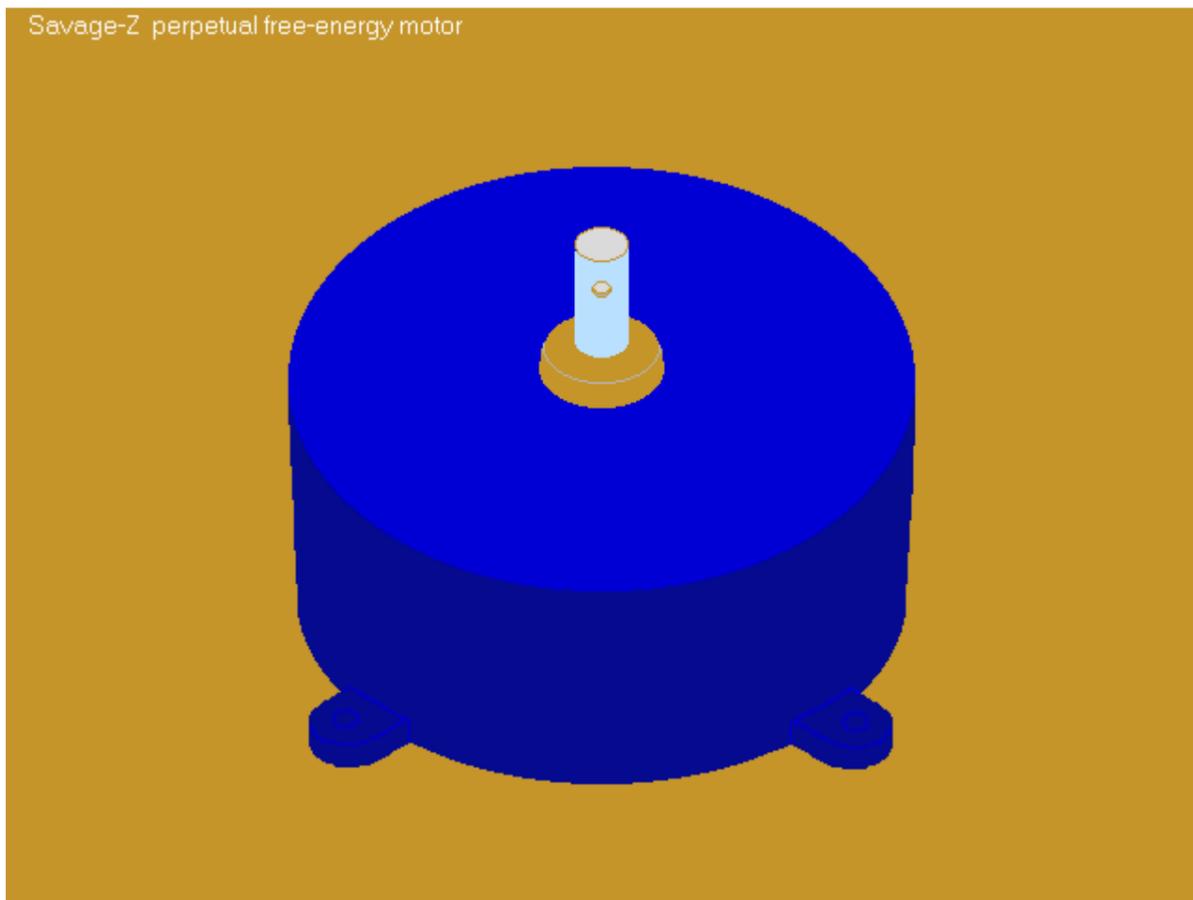


# Savage-Z perpetual free-energy motor



Savage-Z perpetual free-energy motor

Savage-Z perpetual free-energy motor. How to build one without risk to fail

The goal of this text is to lead even a low scientific level hobbyist to be able to build a perpetual motion free energy motor, the Savage-Z version only, with no risk to fail and to understand how it works, as it is obvious the major part of those hobbyists seem to need it this way. Habitually I speak french and I'm sorry for the mistakes in the translation. This file have been released following a plan. The hobbyists or experimenters from around the world, interested to build a better world for tomorrow will read this text and see the images and then build the device and make it known and prove to the world the free-energy concept can be the answer to our energy needs. Then other peoples will duplicate the device and work to improve the material. Then everyboby knows and there can not be a return back to the petrol slavery, and the life of the inventor is not anymore in danger, and then the more impressive Y version will be released at its turn. In this group I hope some intelligent peoples will follow the plan, everything relies on them. Some are just curious to see the beast and will be disapointed to not be able to buy one at walmart yet, or just wait to see other experimenters suceed to built the device and prove the feasibility before they begins to build their own one. All the scientific facts are there in this .htm file and can't be denied. Some members doubt of scientific facts and call them just theories! I don't want to hear about them. Some are negative peoples that have not even read the text and only look at the beautiful images as they knows they are not intelligent enough to understand anyway. Some don't take the time to read the messages and my answers and ask the same questions again, they have obviously not even read the file neither. If you are that idiot do not make us loosing our time. When few members will have built the device, others will understand what they are missing and rush to get their own one of course, but those who are not experimenters, don't disturb the plan please.

The Savage-Z version is based on a primitive and pueril unbalance method to get the perpetual motion, but it is possible to get a usable torque. The letter Z is for the first version that is really perfect with no defect, as lesser quality ones are only named prototype that don't even deserve a letter before all defects are removed. For example the perendev one is full of defects as we will see in this text. Then as new discoveries allows to improve, you get the letter Y then X up to A if possible. The present Savage-Z version only use the lateral push on the circumference method wich is the same used in the perendev version, but with no defect. To respect the name Savage-Z is all that is asked to you for the present version when you refer to it. While the Savage-Y version also already exist and deliver a lot more torque, but the informations about it can't be released before all the patents needed to protect the copyright are delivered. The Savage-Y version also use the total force vector towards the inner volume of the rotor to produce a greater torque, like some peoples thought through their illusion the perendev one should do but is not able to, but this method is not described here. Through this text we will first study the defective perendev device and then the Savage-Z and its variations up to its ideal one.

I always knew that a perpetual motion device was feasible although the official science says it is not. In part because Egar cayce said it was possible and this master can't be denied, but he had only talked shortly about a device that use mercury and probably gravity and no more detail. I'm an expert on how the forces energies and masses interacts in the three dimensions and time and in mechanical motion. If perpetual motion is a new branch of science then we must edict the new law.

A perpetual motion device by definition is a machine that need no energy from outside, this still thru but no machine can work without energy. Logical since it will loose its energy because of the resistance, except at temperature near zero degree kelvin, wich is out of our habitual environnement. Such a device use energy but it's not cheating since the device get its energy from a force, and it's from gravity or magnetism most of the time, then from inside itself as gravity is a force inside all matter that attract all matter, or the magnetic force comes from the magnets inside the machine.

Then when you want to build a perpetual motion device you must first think of how to build the mechanical device that will transform the force into energy.

In the equation the  $\Rightarrow$  is an arrow that mean transformation

Then we want to make  $F \Rightarrow E$  We can't write  $F = E$  because a force is not an energy, and each one got its own different equation. But the equation is not there for nothing you must understand its meaning and not many peoples mind of it when they try to make a device.

Since  $E = mc^2$  then the signification of  $F \Rightarrow E$  is  $F \Rightarrow mc^2$  This mean that you can not build the device witout an ACCELERATING MASS included in your design. Never forget that. Or/and you must produce an UNBALANCED STATE. One big mistake of the hobbyists is to try to get the most balanced device as possible to get an equilibrium, the point zero, to be pass over easily, this is kid stuff. If you can get energy you don't have to mind of such accuracy as you want also to get serious moreover energy at the exit, not just a curious fragile toy that can be stop and fall apart when you blow on it. You rather want the generator of your dreams, that will give you all the perpetual free energy autonomy for all your needs. If the mass must be the vehicule of the force then forget the use of styrofoam.

Although we know from a long time that a force can be transformed into energy, for example the wind force wich is a pressure can be transformed into electricity by a wind generator, and electricity can produce an electromagnetic force. The pale of a fan is such a simple mechanical device then why is it so difficult to design the right one for each forces? Is the wind or the water pressure could be called already half way dregraded form of a force that can be transformed more easily? But there is a scientific dilemma. You can make a permanent magnet with only few energy but you are not supposed to get back from this magnetic force more energy than you have used to create the force according to the fundamental physic law wich says this: energy can not be created nor destroyed but can only be transformed... we can add... into other kind of energy such as kinetik/electricity/heath etc... or into one of many kind of forces... But the transformation could not unbalance the equation. If you can get an eternal torque from a perpetual motion permanent magnet motor, then is energy is created? We don't say energy have been created when we move the magnet by hand no matter how much we get from it then why can we say that we create energy when a little part of this energy is used to move the magnet? Maybe what is missing in the

equation is a constant for eternity, a term to developed as some kind of a mechanical device with a fixed point that rely on the time laws, on wich I'm not an expert.

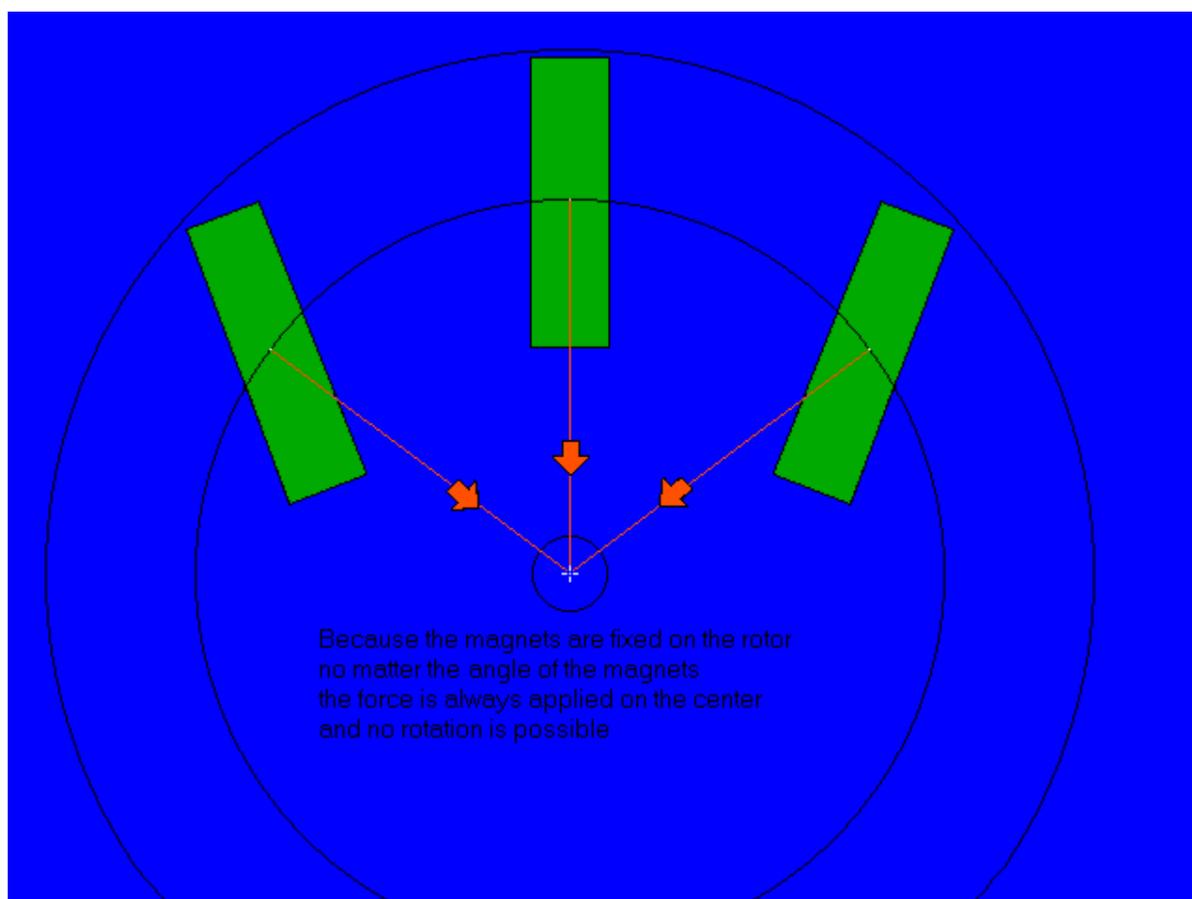
I heard of the perendev motor and about all the failed samples that have been made. At that time I considered that device to be just an other balanced system that can not work, as I doubt on the magnetic screen quality until then, mostly because they were used in wrong manner, and I counted too much on the hobbyists although they have only a poor intelligence level they must have tryed about everything yet through the centuries. If only we could invent a magnetic shield that works out of the supraconductor temperatures domain, it should be easy to build a lot of magnetic machine. But shields repulses magnets, maybe magnetic absorbers should be more convenient sometimes. But when I saw two samples of the perendev motor that really works on YOU TUBE clips then I knew there was something there to study and develop. I only have to study it for a short time to uncover all its secrets, and nobody seem to have study it seriously and correctly before. I wanted to make an efficient motor with it, that could give a great torque. This mean remove all its defects, and add better qualities.

I got a quiz question to ask you and I will give the answer later. There are twins, they are on the same athlete level and of the same weight. They are cyclists and are climbing a mountain together, one beside the other at an ordinary cruising speed. One use its 10 th speed and the other its first speed. The same energy is needed to reach the summit for both of them, but one will spend more energy than the other, wich one and why?

#### The Perendev defective perpetual free-energy motor study

In the perendev device I have found a lot of mistakes the hobbyists have replicated as they seem to have no scientific background and think they can just replicate the device by thinking with their habitual illusion sens of living creatures. The first mistake is the magnets are fixed with an angle, and sometimes in a spiral shape! How stupid it is! Here is why it is absolutly of no use. You got two fixed points in the machine, one is the stator and the other one is the center point of the rotor and this point can only rotate, and the mechanical work is between these two points. If the magnet is fixed with no possible movement on the rotor then the magnet is also fixed to the central point of rotation like any other atoms of the rotor, then any force applied on the magnets are applied directly on the central point and can not make the rotor rotate, no matter the angle you try. It's a mechanical law. Consider in your mind that there is even no existing push towards the rotor center because its magnet can not move, nor the central point wich can only rotate. There are one force vector on both sides of the magnets in a 90 degrees angle from the rotor and they can only give a push on the circumference nowhere else, because the circumference's points can only move in that direction and are on front of the vector in the perfect angle. Every force vector is independant from an other one in its action on the mass. Vectors can be added to get a resultant but here the vector towards the center point do not really exist because it can not make any action on the mass that can not move in that direction. There is only two vectors present, one on both sides of the magnet. If no magnetic screen is used or if they are equally present on both sides of the magnet then the two vectors are of equal opposite force and their resultant force is zero and again they can not make the rotor rotate.

[image angle.gif]



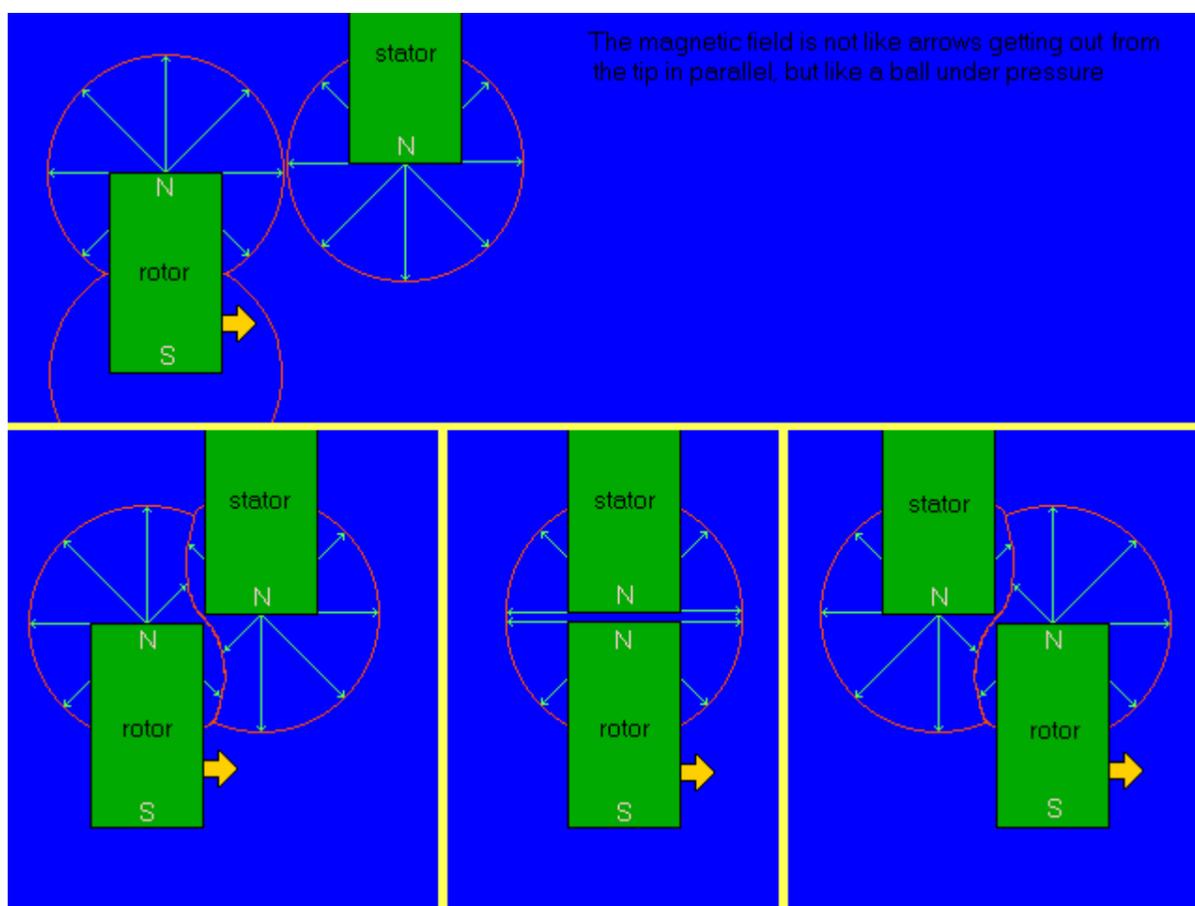
In the example of a pencil lying on a table, if you push on it from a down direction vector, the pencil will not rotate, nor if you push on one end in direction of the other, nor if you push on its side when the pencil is holded in a hole and free to rotate. The conclusion of this is, the force should be applied on any other point of the rotor than its central rotation point. The rotor could have arms like an asterisk shape with material radius, wich are levers on wich the force can be directly applied. Or when the rotor is a disk and got no visible anchor point, the force must be applied on a rotor's virtual radius anchor point, this can be any point of the disk including the circumference wich is then the tip of a virtual lever, but always on an other point than the central point. Both the Savage-Z version and the perendev device only use the circumference.

An other mistake the hobbyists are making is to consider the rotor as the accelerated mass of the equation. The rotor must not be considered as the accelerated mass except if the unbalance principle is used like in the perendev device. The magnetic force can be transfered with much more efficiency if you use an other principle than the unbalance one. Even if it got a round shape wich is just an optical illusion, the rotor is a mechanical device, it is a LEVER and nothing else. There are two fixed points in the system, the stator and the central point of the rotor. Between them a mechanical apparatus must transform the force into energy. The exit could be the only point of the machine where you could name the term of the equation you get as the energy, while inside the machine could be only the force transfered through the mechanic masses, or else, this depend on the device you build as it also exist many kind of forces and mechanical ways although they all rely on lever and pulley action.

An other mistake the hobbyists are making is to think that if the repulsive action is replaced by an attractive action it would make a difference. Not at all in reality. You have no difficulty to understand that now that you know that the stator magnet can not act on anything else than on the circumference and no matter the polarity of the rotor magnet it will produces both a deceleration and an acceleration action on the circumference of the rotor, and nothing else. In fact we will see that all mind snakes that were annoying the hobbyist is a free gift from the nature that could be used to improve the motor.

An other mistake is to think of the magnetic field as a bundle of parallel pushing arrows getting out of the tip of the magnet like the water from a hose. You must rather think of the magnetic field as to be a ball under high pressure that is penetrated up to its center by the tip of the magnet. The origin point from wich all the vector arrows comes from is the same one and is positioned in the center of the ball. So no matter the angle you put the magnet there is no easier angle to approach the magnet and the force is equal everywhere.

[image field.gif]

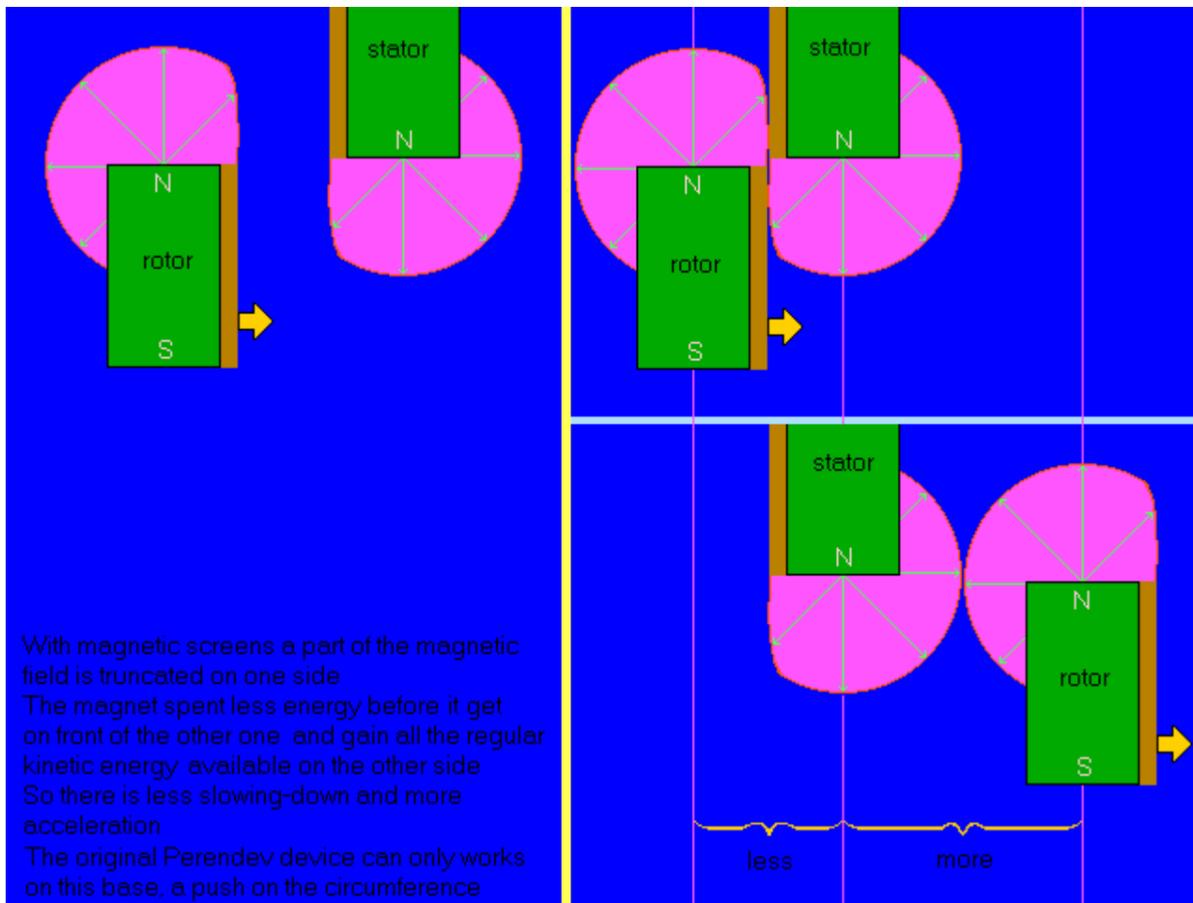


A magnetic screen can produce a difference in a magnetic field magnitude. So the total force of the field is lower but it's of no importance here, if we figure that only the effect count because it can be localized and create an unbalance in the system, and bingo, then the perpetual motion device can work.

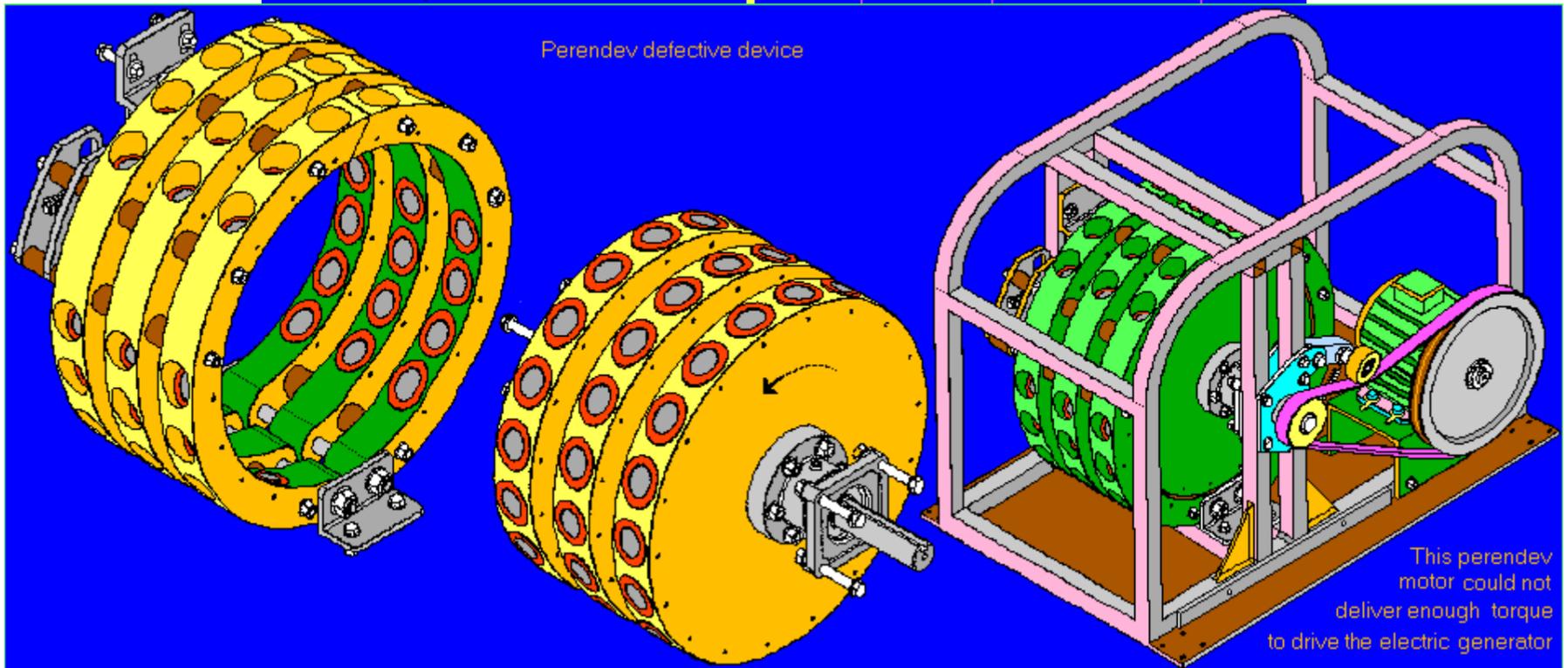
An other very stupid mistake the hobbyists are making is to put magnetic screens on both sides of the magnets, and then they becomes in tears and cry outloud because the device can not work. If few machines that were build following such a design were working it's just because in fact the magnetic screens were not really of the same importance on both sides, and because they were very lucky. The magnetic screen must be putted on the approach side of both the rotor and stator magnets if you use the north-north design. On contrary, If you use the north-south design then you put the magnetic screen on the magnet side that are going away from the other magnet, on both the rotor and the stator magnets.

Let suppose a magnetic screen in the worse case, when well positioned on only one side of the magnet, is able to hide only 1% of a magnetic field. And let suppose the total force value of the magnetic field remaining to give a push on the other side is 100 unities. Then the deceleration = - 99 unities and the acceleration = +100 unities.  $(-99) + (+100) = 1$  unity of acceleration. If the resistance in the bearings plus the air resistance around the device together are less than 1 unity then you got an acceleration and the rotor can rotate for a complete cycle and continue in the next cycle with an other acceleration. So the rotor speed is rising. This processus continue until the air resistance reaches 1 unity and then the speed is stabilized. If you drain energy from the axle then the speed is slowing down to reach a new stability. If you drain too much energy then the speed is too much slowered and the rotor will stop. The more efficient your magnetic screens are the more you will get torque in this kind of perpetual motion device based on the unbalance principle.

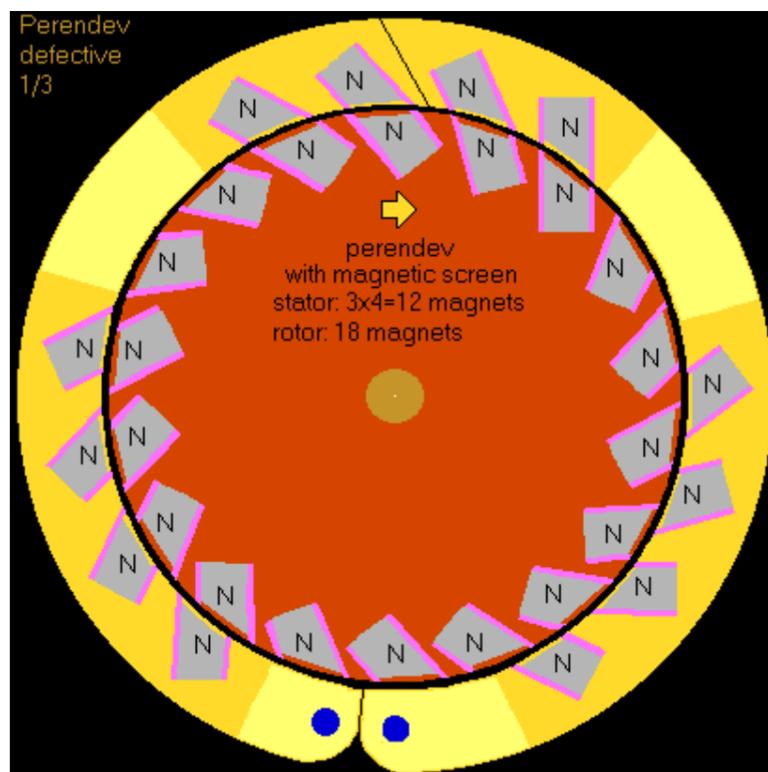
[images screen.gif & perende7.gif]



With magnetic screens a part of the magnetic field is truncated on one side  
 The magnet spent less energy before it get on front of the other one and gain all the regular kinetic energy available on the other side  
 So there is less slowing-down and more acceleration  
 The original Perendev device can only works on this base, a push on the circumference



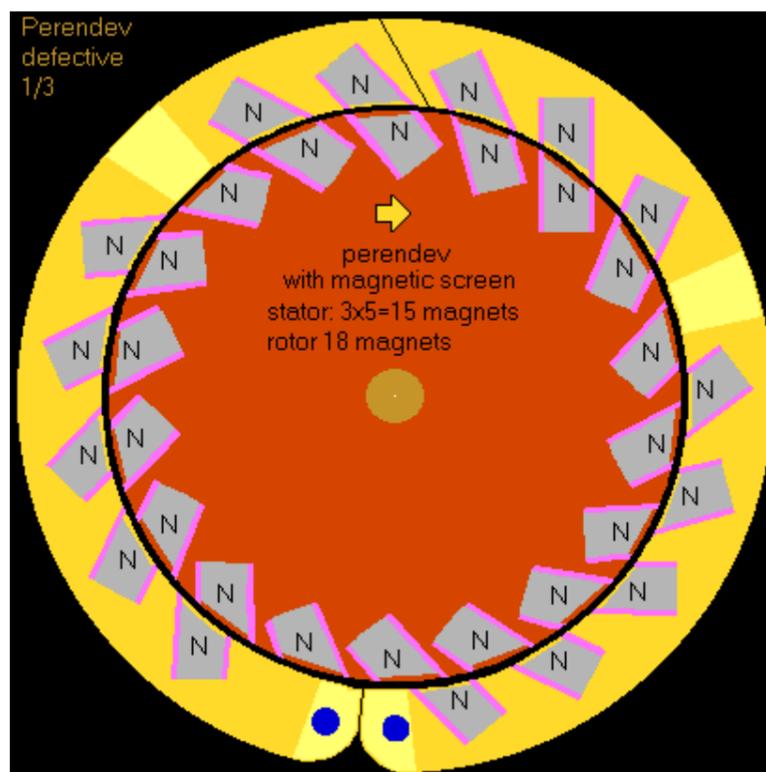
I will get rid of other illusions about the perendev device. As you know in mathematics we can transfer a term on both side of an equation, but we can do the same materialy in a device, particularly easily with that device, and that's what I gona do. We will continue to study the perendev device defects using the device original design we can find on internet, the famous model composed of three slices on the same axle. Each slice is a stator-rotor assembly like in the next image, with a little difference as the three rotors got a 6,6...degrees of rotation between them. You will notice that the magnetic screens are in bad position in these next two images and many hobbyists have made the same error.  
 [image perende1.gif]



The device got magnets fixed with an angle because the inventor thought this arrangement could give a push on a side to make the rotor rotate, but we know now that it was impossible, so we won't come back on this detail but only mention to remember that any angle can not make any difference. Each device's slice is a complete stator-rotor assembly and is also an autonome motor by itself, as it is perfectly balanced by the magnet term, plus the unbalance created by the magnetic screen term. One slice is called a three phased device because there is 18 magnets on the rotor and only 12 on the stator as the stator is constituted of three groups of 4 magnets. The groups are

separated by a gap (in yellow) because their magnetic moment are different, so this space prevent one group to be magnetically disturbed by the two other ones beside. That's why this gap got no magnet and so there is two magnets missing in each gap. Each group is putted in a retard or advance according to an other, wich is an angle of one third of a magnet cycle. So this way, when a rotor magnet group is exactly on front of the stator magnets then the total repulsive force at this position is exactly equal of the addition of both the two other magnet group forces together. It's more simple to say that when a rotor magnet is on front of a stator magnet then there is always a rotor magnet that is half way between two stator magnets, so the repulsive force is always equal everywhere all the time with this arrangement. If there would be just one magnet per group, it would not change anything on the work but would only give less torque (although it's sure it won't have enough torque this way to rotate by itself). In fact the gap is too wider than necessary and the next image shows that if the gap got only one missing magnet in an 15-18 magnets arrangement it's also correct because if there is a little disturbance between groups then it's also spread and compensated everywhere in the device. And logically it must even be better, since more magnets equal more torque, and the amount we are adding this way meant +25% of torque.

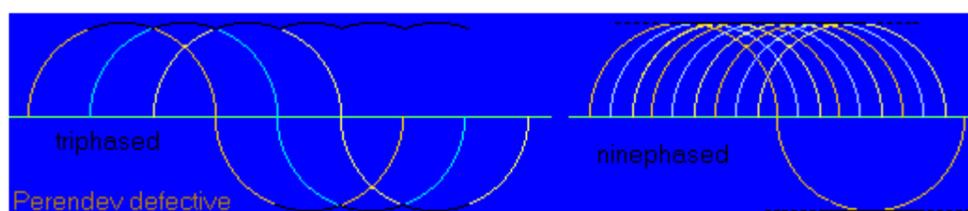
[image perende2.gif]



The three motor slices are exactly alike but with a little difference, there is a rotation angle between each rotors. This time they got one ninth of a magnet cycle retard-advance angle between them. This spread inside the whole machine nine magnet cycles in one magnet angle rotation. This is why this machine is called a nine phased machine. Again all the force levels are equally spread everywhere with no more efficiency. The idea behind this arrangement comes from one inventor observation through its illusion sens, and he tryed to compensate a virtual effect with an other one. That fighting back attitude always leads to add more resistance as every hobbyist had noticed when he works in the perpetual motion domain near the point zero. And I direct your attention on the 25% missing on three slices that can not give a better efficiency, this arrangement produce only 2/3 of all the torque it could produce if it had gotten 18 magnets on its three stators. So this is considered as an other defect of the original perende design, and sure it's not a good idea, just a stupid one. The illusion comes from the fact that a human do not sens the deceleration and the acceleration effect to be at the same level when it rotate the rotor by hand, but they are exactly equal when you are doing tests without the magnetic screen presence. And since everything is then perfectly balanced you are not supposed to feel anything as each effect is compensated by its reversed complement at the opposite radius, but if you sens something it's mostly because materialy speaking the perfect positioning of each magnet is not possible and the magnets can not be all of exactly the same force, but no matter all those differences, even if the balancing is not just perfect, all the small differences are spread randomly in the whole device an almost compensate each other equally. The most important thing to understand is these deceleration/acceleration effects got absolutely no importance because with this device we can only deal with the resultant force vectors wich produces the rotation we want, so it's the sum of the gain that each magnetic screen is giving by a push. What you can feel by the hand, is mostly caused by the magnetic screens on good position as mentioned, is only a positive effect for the device, and is necessary. The maximum efficiency of this device can be evaluated to 50% because only half the magnets are really active at a time, so we can compare the different versions together using this simple ratio. Later I will talk about the way you can illiminate the deceleration/acceleration effect completly because it is better when it's not there effectively, I confess, but there is a simple way to do it, and simpler is also better. In conclusion this design is an other big defect.

The next image shows the three magnet cycles of one slice, and the sum of the three slices together. The amplitude resultant is a serie of little bumps easy to pass over, this is following the illusion of a car on a road, with a good suspension and shock absorbers you should not even feel anything. In fact you can't feel anything since the positive and negative amplitude is the same and the resultant is zero. The inventor had tryed to smoother the level of the whole involved force by spreading the deceleration on a longer interval in many smaller bumps, wich is of no use since it's already compensated by the complementary acceleration, wich is even positively higher because of the magnetic screens but should be as much attenuated following the same stupid idea that do not work. Just few bigger bumps at a time are already absorbed by their complements. It's strange that so many hobbyists did not take the time to study the device and just follows all the same errors. I think that Perende guy at the origine of all this trouble must not be very intelligent. All this trouble complicate the device construction, and you could build an equivalent one with only two more-efficient slices instead of three more-resistive. Instead to complicate everything, if you rather simplifly all the terms then you can find the solution and only then, like you do in mathematic.

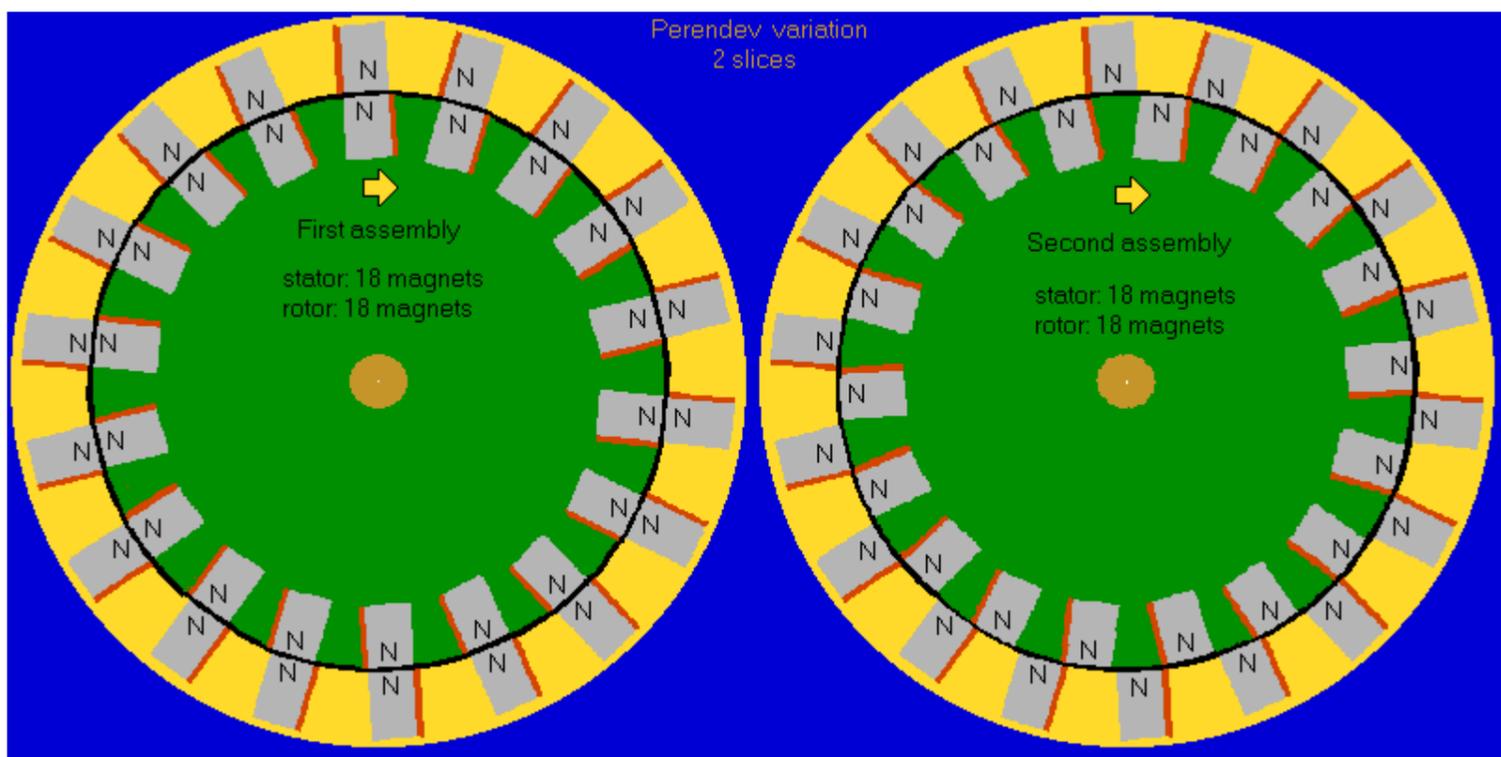
[image phase.gif]



The next image shows the same equivalent device by comparison with the original perende device. I have only changed the term positions in the equation. It obviously look more simpler and is in fact simpler to build as it only need two assemblies to have the same torque. Actually this version got more torque because it got only 2/3 of the air resistance of the original perende version, wich is an important factor because you feel like beside a fan when this device rotate. Each rotor compensate the other as when one is decelerated the other is accelerated, so the sling deceleration / acceleration effect is not supposed to even be detectable nor exist but just acceleration boosts are given. The magnetic screens are still necessary as they cause the unbalance and the torque. If you rather use stator-north / rotor-south magnets then you must reverse the magnetic screens positioning. Give a good push to the motor and it will accelerate until it reaches its maximum speed, that is when its torque reach the air resistance. It should work better in a vacuum chamber of course, but then could reach such a speed that it could dismantle itself because of the centrifugal force. To get a better resistance against this problem such a device always got its rotor magnets fixed with some pin passing through the magnets and rotor body, because just using a glue could not be sufficient. Same for the stator magnets if the attraction principle is used. Still the torque is not impressive and won't give you the energy autonomy you want, More torque can be obtained by simply adding many assemblies in couple one behind the other on the same axle. For example with four slices you can keep the same rotation angle between the two rotor pairs or adjust them to 10 degrees, but you may adjust to 6,6...degrees between the pairs if you put 3 pairs, as this triple the magnetic moment frequency. Anyway it's a real perpetual motion device, and there still no mystery why it works, it's because its two force vectors are unbalanced by the magnetic screens as each pair of magnets produces more acceleration than deceleration. And the efficiency is still 50% as half the 36 pair of magnets are active at the same time.

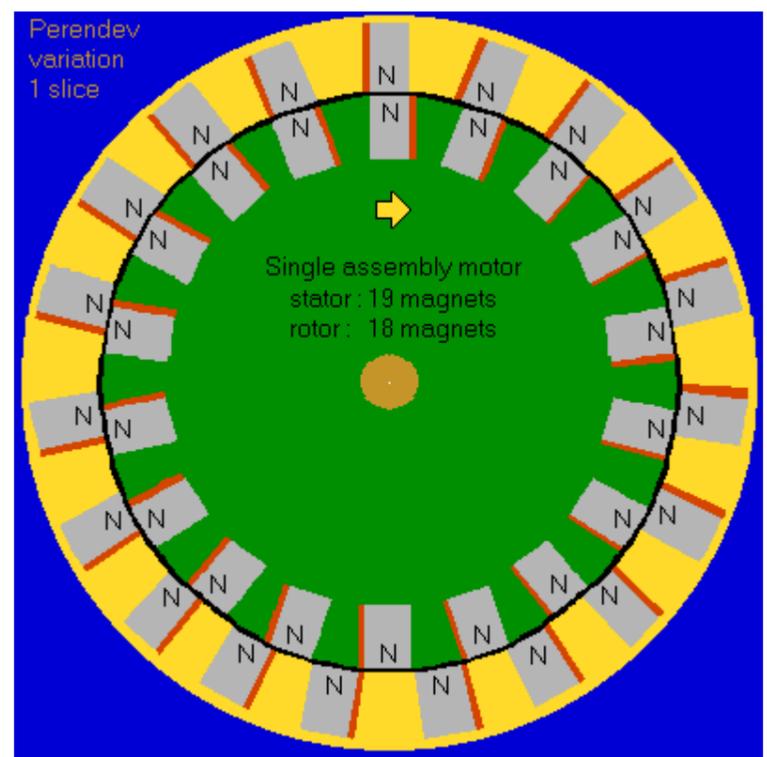
An other error in the original perendev device is to use cylindrical shaped magnets instead of square shaped ones. The surface of a round magnet is only 0,785 of the square shaped one, and so for its power. The idea was probably again because of the illusion that their approach look more easier or smoother... But not at all since a complement magnet always compensate with the same amplitude. So we will pretend all our next versions are build with more efficient square shaped magnets, and accuracy. So this two slices version below could be over 50% more efficient than the original three slices perendev version, as it got less bearings and air resistance, square shaped magnets, and magnetic screens on only one magnetic side of the magnets. I say magnetic side, instead of just side, because on a square shaped magnet the magnetic screen must be also folded twice and fixed around (we should say asquare) the magnet, so partialy on both parallel rotor's side, that is up to the half width of the magnet. Although all the drawings mainly and always shows the screen side positioning, only some shows the complete screen shape because it's supposed to be obvious, and is more drawing work. Sometimes in the drawings the screen is on the total lenght of the magnet and sometimes only half, the reason of this is because sometimes it mean only the side positioning of the screen wich is the most important detail, sometimes that it could be holded by the same screw than the magnet so this way the screen is total lenght and affect also the inactive magnet pole but then add no effect in the device. Sometimes its minimum dimension is showed because it's all it need in fact as it only need to hide one pole not both, except if both magnet poles are active like in the srs.gif rotor. In the Savz2.gif variation the minimum normal screen shape is like in the test.gif image.

[image modif1.gif]



We still continue to change the term position in the equation. The next image shows that you can build a device with only one slice, or stator-rotor assembly, always fully compensated, by simply adding one more magnet on the stator. As you can see in this 19 magnets-stator / 18 magnets-rotor arrangement, each time a magnet is exactly on front of an other one then there is also a magnet that is between two magnets on the opposite side of the rotor. And you still got a 50% efficiency as half of the magnet are active, but the torque is half the precedent two slices version because you got only 9 active rotor magnets instead of 18 at a time. Still you can add assemblies on the same axle to get more torque. Then putting two slices together with a 10 degrees rotation angle between the rotors could be better as the magnet cycle frequency is double and regularize the rotation when connected to a sensible unit that use the energy, without disturbing the torque. Such an angle should not be necessary as the compensation is supposed to be perfect but it always depend also if you put the magnets correctly with accuracy, so as soon a magnet had passed an opposant one then it must already reach the next one. Sometimes the hobbyists made the error to let to much space between the magnets, this change the magnetic moment that we are dealing with, although it's more important for the acuracy of the perendev than for the Savage-z where everything is in line. The frequency per rotor cycle can also be rised by using more magnets per slice and this also improve the torque, keeping the vision in mind that the dimension of the magnet is still the same then the circumference of the device become bigger of course. But there must be one magnet more on the stator than on the rotor in this version.

[image modif2.gif]



Here is the answer to the quiz question: The cyclist who use the first speed, although it's easier to climb this way, will spend more energy. first speed is 52/28 ratio and the wheel got 7 feet of circumference, then one pedaling cycle make advancing of 13 feet while it's 26 feet with the 10 th speed ratio of 52/14. Then both will spend the same energy to bring its weight to the summit but the one who use the first speed will spend twice as much energy than the other to fight against its legs inerty in a piston movement.

Here is seven simple ways to improve the torque. First, simply build bigger units. Second, add units on the same axle. Third, use better magnetic screens. Fourth, use more magnets. Fifth, Be sure the magnets are passing as close as possible from each other. Sixth, use ticker magnets, as bigger is also stronger. Ticker in the dimension through the diagram plan. When the device is a complete one slice version like the one in an image below, then all the slices you can add are all alike and do not need to have a different rotation angle between them, then the slices may be put close to each other as if they were one single unit, this will diminush the air resistance an

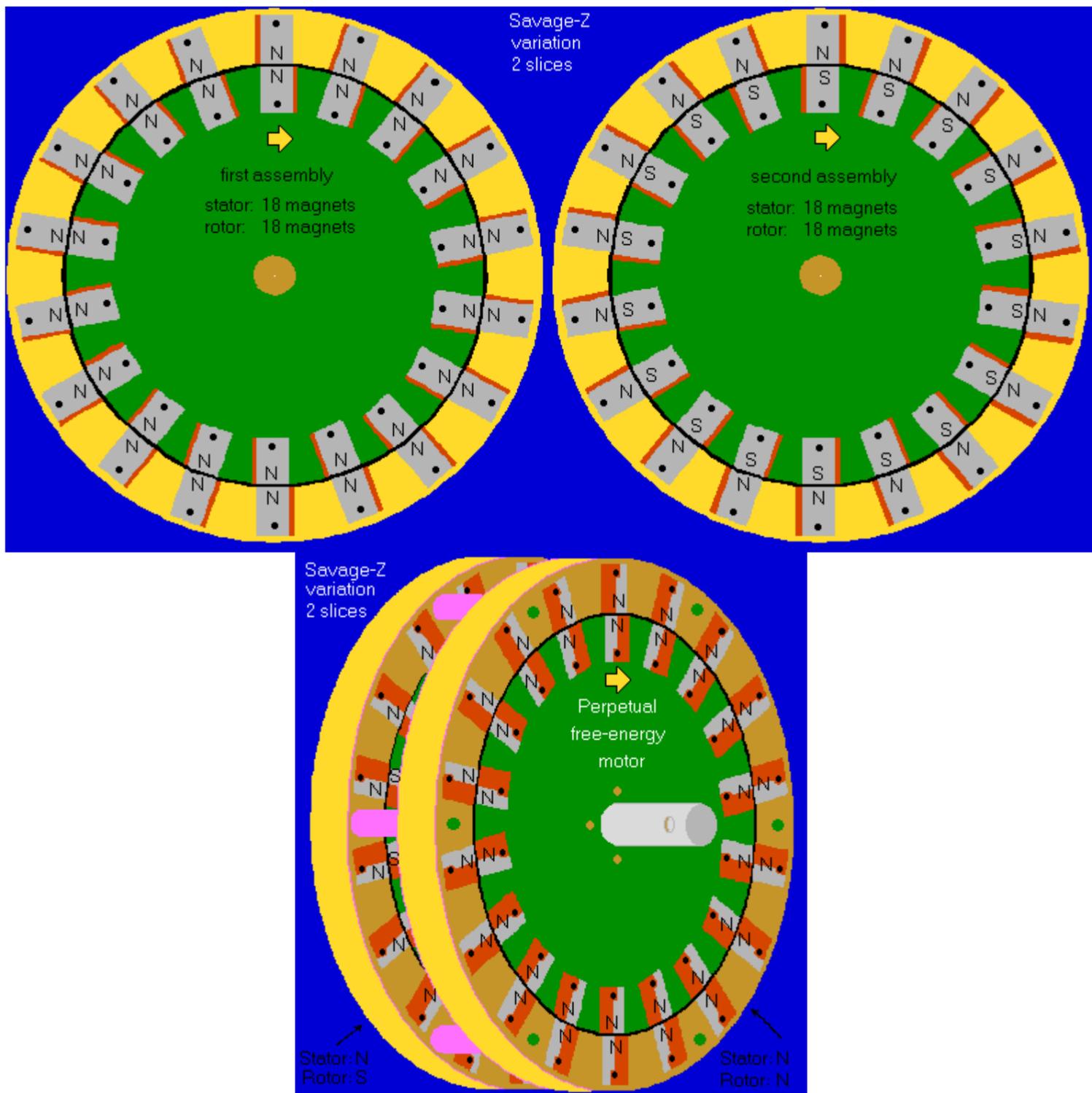
improve the efficiency. Seventh, use a speed reduction, for example with chain and sprockets. Always avoid the use of pulley and strap because it's less efficient, such arrangement could easily loose 15% of the energy into heat during the transfert just by the friction resistance. Eight, invent a better system.

END of the perendev device study (do not build one of these variations above!)

The Savage-Z perpetual free-energy motor (wich is not a perendev variation)

In the two slices version showed in the next image, we use the two complementary polarity magnetic fields to compensate themselves both together, so they are kicked out of the equation and we do not mind with them anymore, and only keep the remaining of the other force interactions, wich are the boost vectors that are pushing all together on the same side on the rotor's circumference. Each slice compensate the other one on the magnets point of view as when a magnet is repulsed on one slice there is a magnet attracted on the other slice, so there is no deceleration / acceleration effect on this point of view, but still the magnetic screens create the unbalance that produces only pushes on the rotor's circumference. This because on one slice a north-north arrangement is used while a north-south one is used on the other slice. This way all the rotor magnets pass on front of the stator magnets at the same time in the whole device. The result is no deceleration / acceleration effect, and remains only the push force vectors from both north and south magnets added together

The ratio of efficiency, always based on the active magnets, is 100%. Actually the torque is four times higher than the precedent one slice version, because half of the magnets are not just there to compensate but all magnets are also accelerating the rotor, so you got 36 active magnet pairs. The torque of this device is basically equivalent of twice the original perendev device, but maybe around three times better in reality considering the improvements we now use, with square shaped magnets, magnetic screens on one side only, and less air resistance because of the less number of slices and then also less bearing resistance, as yet mentioned.  
 [images Savage-z.gif & savz2.gif]



The Savage-Z motor is not a perendev motor variation.

1) The main difference between both devices is that in the Savage-Z motor the annoying deceleration-acceleration effect is completely absent using a very simple method instead of complicating the device to render it almost impossible to work.

The method is: When there are two north magnets that are approaching each other, at the same time there are two magnets of a north-south couple that are approaching each other. This means a north-north couple is repulsed (deceleration), at the same time there is a north-south couple attracted (acceleration), then the resultant effect is none, zero. This situation is then reversed at the precise instant when all the rotor's magnets are exactly facing their stator's magnet opponents. Then when there are two north magnets going away from each other, at the same time there are a north and a south magnets that are going away from each other. This means a north-north couple is repulsed (acceleration), at the same time there is a north-south couple attracted (deceleration), then the resultant effect is again none, zero. All this mean that when the magnets are approaching or going away from their opponents, there is absolutly no acceleration-deceleration effect and no magnetic friction. The perfect magnet adjustment is described in the second test paragraph of the tests section, we will see later.

2) In the Savage-z motor it is clear that the boosts that allows the device to rotate do not comes from direct pushes from magnets in angle as this is impossible, but from an unbalance as there is a bigger field amplitude on one side of each magnet than on the other side. The presence of magnetic shielding on one side of each magnet bring us back to reconsider the paragraph above, because the magnetic field of each magnet is stronger on one side than on the other one, and because we position the shielding

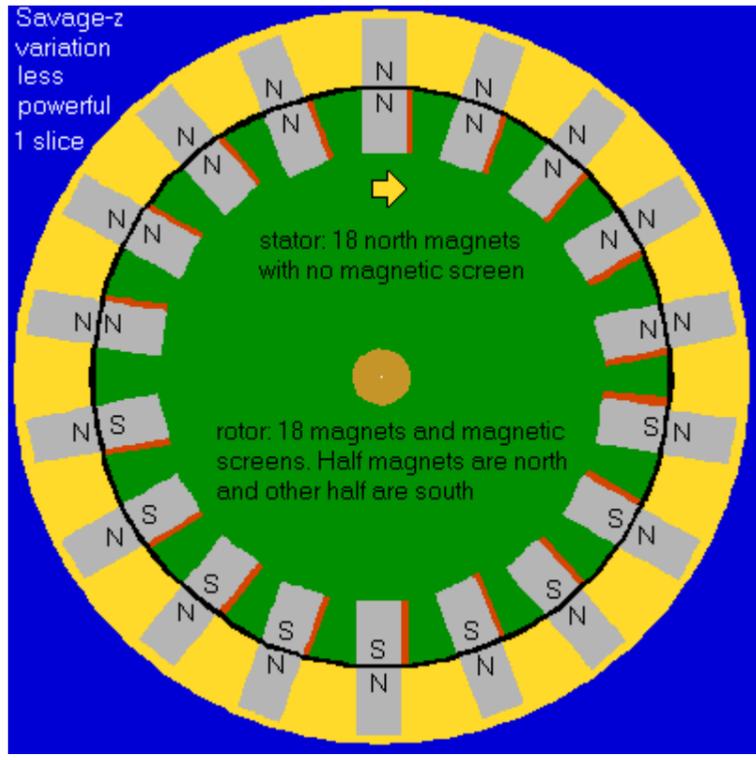
on the reversed side on one slice in comparison from the other slice. Then when two north-north magnets are approaching each other they are less repulsed (deceleration-) than when they are going away from each other (acceleration=) so the resultant is more acceleration than deceleration. At the same time there is also the complementary interaction between the north-south magnets, as when they are approaching each other they are more attracted (acceleration=) than when they are going away from each other (deceleration-), and again the resultant is more acceleration than deceleration. This way we got two acceleration vectors added together that pushes in the same direction (as deceleration-- is equal to acceleration++). The material can't give positive values because the shield can only diminish a field and can't amplify it, but a negative deceleration is an acceleration obviously).

What I would like all the members of our discussion group to understand, because as time goes by some don't seem to understand and although it is written in this text and I'm still repeating the same thing. In the Savage-Z motor there is no such thing as attraction or repulsion matter that we have to deal with, no matter we use very powerful magnet since they are all of same force and with the same gap between every rotor and stator magnets, then the resultant is none, since attraction + repulsion = nothing. The presence of the shielding well positioned create an unbalance that give two boosts per every complementary four magnets group at the same time and only on the same direction to make the rotor rotate, let say in that direction => Now only think about the resultant since this is all that count. As you know in physics we represent the force vectors with arrows, if we got ----> plus <-- then we get --> or if we got --> plus --> then we get ----> etc... And this no matter if in the system you got the illusion of vectors in serial or parallel because they are forces and they are added the same way when they are on the same angle line. Then it is very easy to understand what is next: In the two slices example of the image Savage-Z.gif where in the north/north slice you got low repulsion <--- when the magnet approach the opponent and then total repulsion ----> when the magnet pass the opponent, the resultant is a low acceleration -> At the same time when all this happens there is also the north/south slice where we got total attraction ----> then lower attraction <--- The resultant is a low acceleration -> again. The resultant of both vectors from the two slices is then -> plus -> equal --> wich is double than just one slice. This is the boost each complementary group of four magnets gives to the rotors assembly. Then if the air resistance is equivalent of <----- then you need three complementary groups to fight against it as <----- plus -----> equal zero. If you got more groups than needed to fight against the resistance then you got a working motor. The power of one single boost given by an interaction between two magnets, whether it's a north/north or a north/south couple is of no importance, is the total force on one side of the magnet minus the force remaining on the other side wich is left by the shield. The amplitude of this remaining force depend on the power of the magnet and the shield quality. The difference between the total amplitude of one side minus the remaining on the other side is a percentage of the total magnet force. If it's 10% then each complementary group gives 20% and if you got 20 complementary groups then you got 400%, wich means the same thing than the force of four powerful magnets each one pushing on the tip of a lever of the same lenght than the rotor radius at the same time. This give an idea of the torque we can get because it depend on the power level of the magnet type you have choosed to use in the motor design, and the torque can be improved by adding many motor assemblies on the same axle, and still you can rotate the rotor by hand and feel no magnetic friction when you give its initial boost, on contrary you will rather feel the dog pulling on its leash.

If the motor get acceleration boosts when it rotate on the good side then obviously this mean that if you try to make it rotate on the bad side it will decelerate and stop, because it is not a balanced device on the point of view of the force vectors acting inside the device. All the vectors are pushing on the same rotation side.

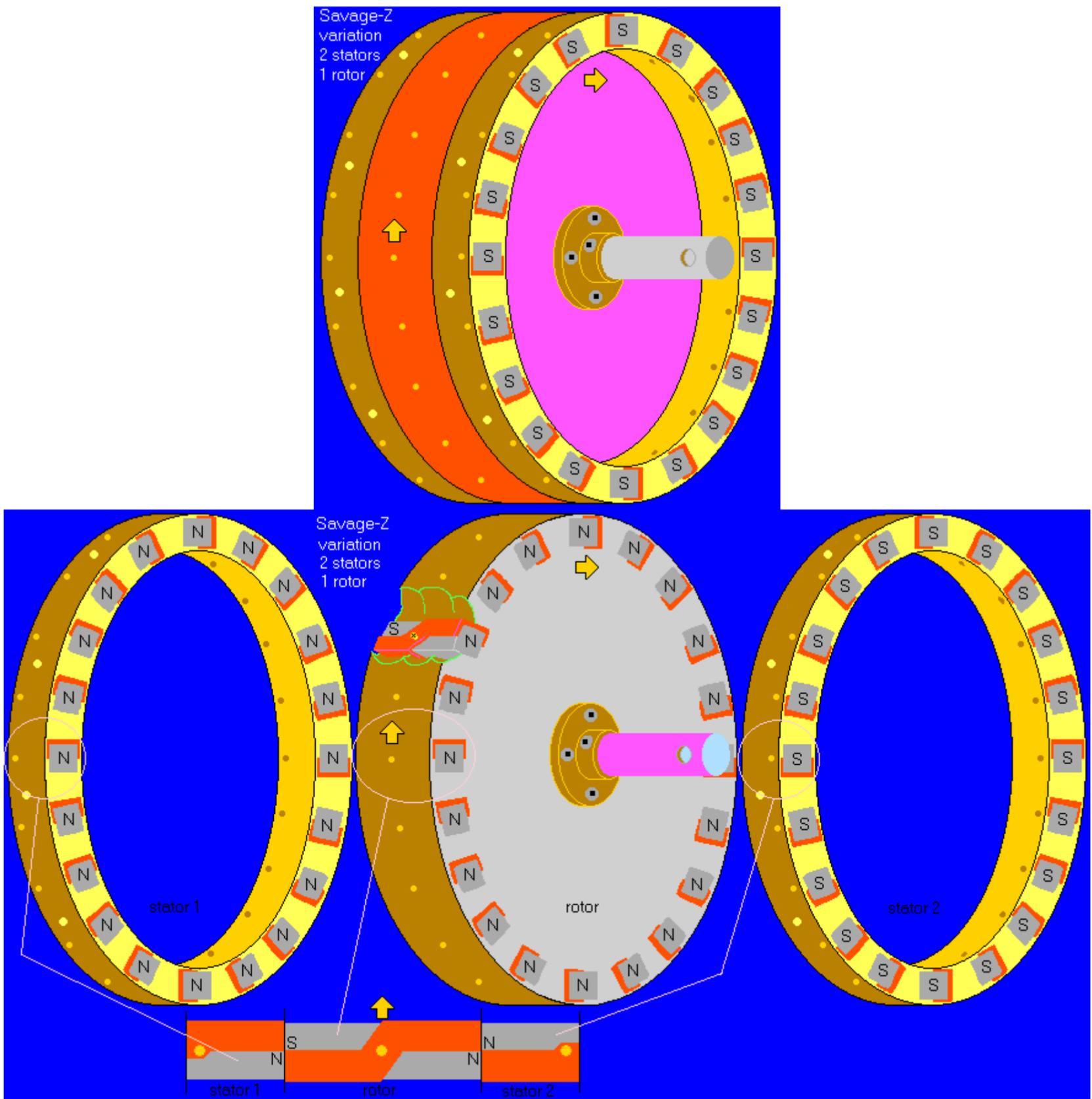
Always based on the Savage-Z.gif, the next image shows a one slice version wich is just a variation of the same device from the image above, but its torque is not impressive. The torque is already cutted in half because there is no magnetic screen on the stator as its magnets got both north and south opponents on the rotor. But the rotor's magnets need magnetic screens of course, they had to be somewhere at least. And its torque is again cutted in half because it got half less magnets. It do not deserve to be built except to be exposed as a perpetual motion curiosity and its simplicity, and you need good shielding to get a torque satisfactory enough. The stator got only north pole magnets and the rotor got alternatively north magnets on one circumference half, and south magnets on the other half. On the rotor, since they are in a pair number, each magnet polarity is used to equally compensate the opposite polarity of an other magnet. The efficiency is 100% but the torque is less than 1/4 of the precedent version.

[image modif4.gif]



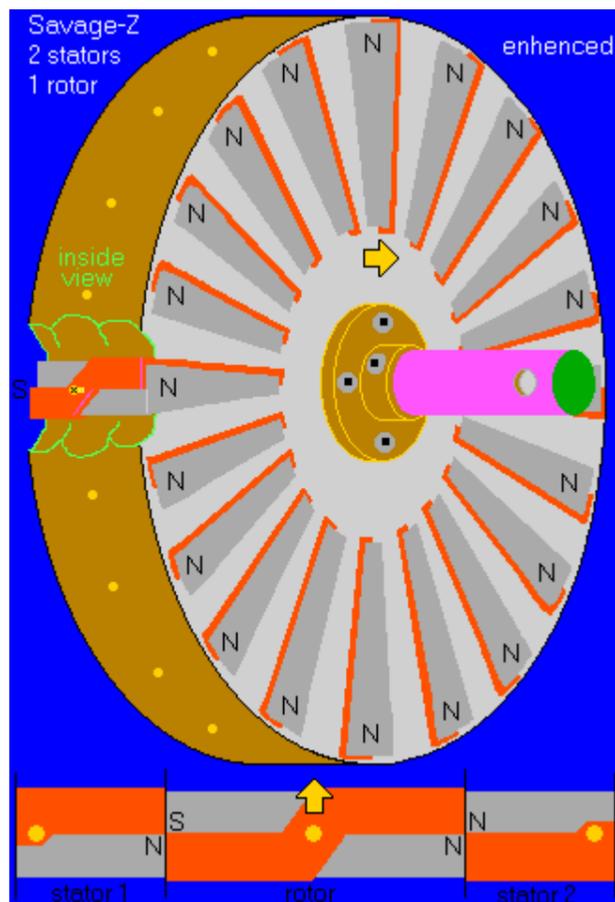
The next image shows a 2 stators & 1 rotor variation of the 2 slices Savage-Z device we have seen before. It got basically the same torque, with a 100% efficiency, but it's a little bit better because the magnet positions are on a higher rotor diameter, and it got half air resistance of course. It's better and I rather prefer this variation and suggest you to build this one (mostly to definitively forget the look of the defective perendev one. It also got 20 magnets instead of 18 in this image, only to broke with the tradition). It still work like the one in the images Savage-Z.gif and savz2.gif because the material is just positionned in a different manner. It's interesting to notice that there is only two magnet ends unused instead of four in a complementary magnet group. Since we still got two stators, this mean that the two rotors have been integrated into a single one. This variation also allows a better understanding of how it works. It could also be easier to build as it need 25% less magnets, and the centrifugal force could not cause problem anymore. The vectors pushes on the side instead of the circumference, this make no difference since the pushes are still at 90 degrees. I tried to move the equation terms to get the best design but through all this variations it still the same Z version.

[images savz2s1r.gif & srs.gif]



How to get about twice more torque with this one? Put a second circle of magnets inside (and this way you got about 5 times the original perendev torque, no image of it), or build it with a rotor with stronger and bigger magnets like in the next image, if you can find or cut ones with this shape, and the magnets of both stators must also be adapted to this rotor, that could give you around ten times the original torque of the perendev one, maybe more. The magnet shape was the last thing to improve, this give more torque, then it's the last of this serie.

[image enhanced.gif]



A member of the group have recently sent me an interesting link:

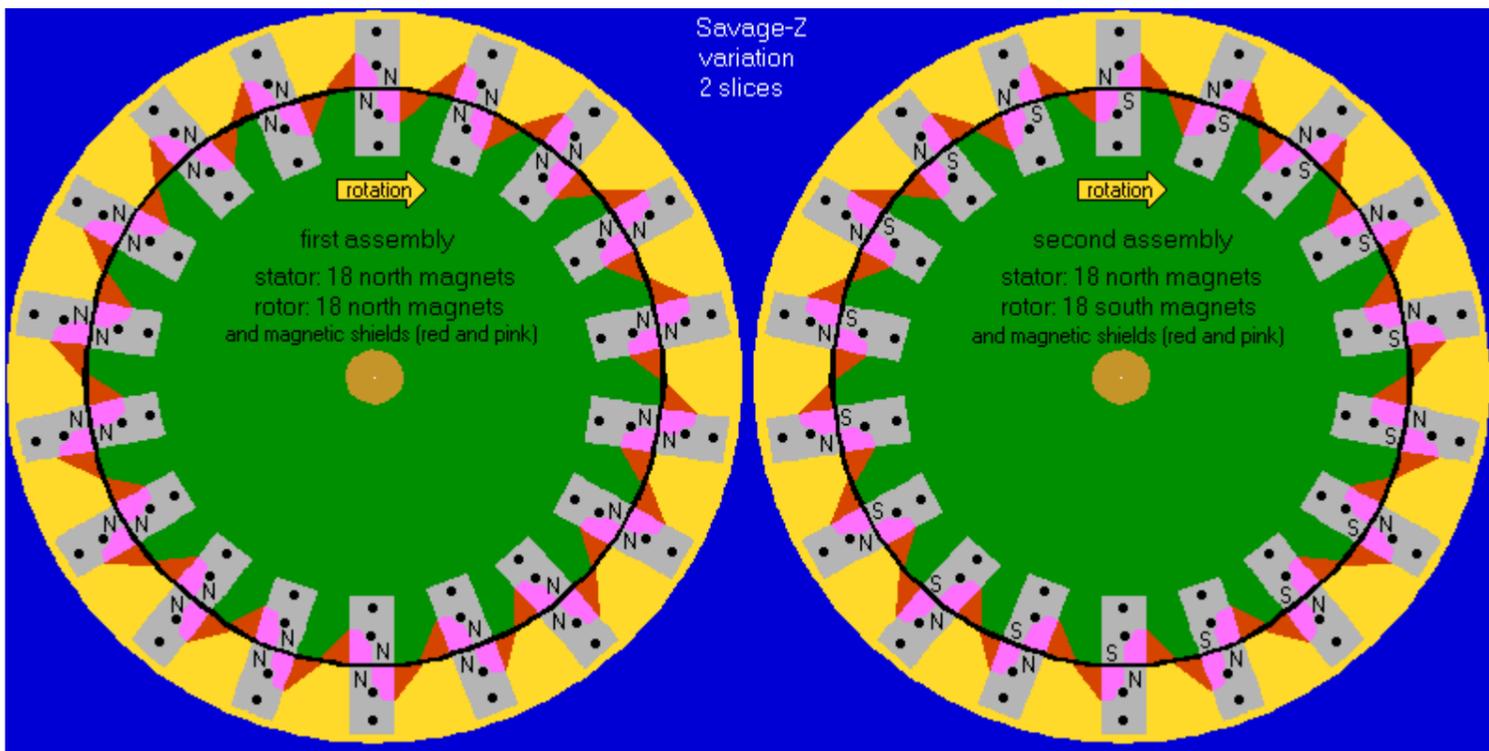
<http://www.rexresearch.com/wardle/wardle.htm>

It's about magnetic shield made of powders. 30 october 2007 I have wrote a letter to the company. I will try to know if it can be solified or put inside some plastic or rubber like material. I had the idea to do this using an epoxy resin, but one people had already tryed and says it is not good. At least it's existing. This shield seem to be promising and a lot better than the magnetic screen I have used during my experimentation with the Z version. With such a shield this motor will be comparable to an electric motor as a magnetic field could be present only on one side of the magnets. Then our group will progress faster. Although it's a powder then maybe the grain need to be free to move with the field amplitude variation to disrupt the magnetic flux, and this way don't let a network available for whether you name it Foucault current or eddy current, we will see.

The answer I gotten for my letter about the new magnetic shield was disapointing, but some members are working on that powder and we will get further developments. I will work on that too by next april at least or maybe sooner.

Few changes are needed to adjust the motor if using such a powder as magnetic shield, because this suppose the presence of cavities to contain the powder, then we must use two screws instead of only one to fix every magnet stable in the rotor or stator body. The next image shows the same variation we have seen before in the image Savz2.gif but it now shows how it could look with cavities around the magnets. However the variation in the image srs.gif could be easier to build with cavities because with that one it's easier to deal with the centrifugal force.

[image shield.gif]



## FAQ Frequently asked questions

Here is the part for the frequently asked questions and answers and other details, as I'm still doing my duty of updating this file as time goes by. This will limits the repetition found in the message's section of the forum. I try to answer all messages in the forum in spite I got only a short limited time when I come on internet.

\* Why the rotor is that tick in the Savz2s1r.gif image?

Because is like two rotors sticked together since two rotors have been integrated in only one, then the same magnet masses must be respected to keep the same power ratio between rotor and stator magnets. To get this double lenght for the rotor magnets you can add two magnets one behind the other, and it's the same than using a double lenght one.

\* Of what substances the magnetic screen is made of?

I know among other substances there is nickel and copper in it. Copper although is widely used for its electric conductivity, is a bit resistant to magnetic conductivity. I use the ordinary material used in modern motorized device such as laser and diskette drive and speaker shielding, and I have tryed different substances too, with no great success. I had resistance to get informations from companies as they seem to be ignorant more than else or satisfied enough of what already exist, and I feel as much disapointed as any other experimenter on that subject because it's the weaker link of the technology and everything relies on it, but the future is promising as I have mentioned. For the moment, my laboratory can not support me more in this quest neither until I will get back to work there in april. I wish I could had kept a model of the Z version to display it instead of reusing the material, and a modified piece can not always be reused, I don't want to say more on this but both versions are not compatible. The boss told me I have even said to much and I have to erase few things in this text and in my messages in the forum. But the major problem with the screens is that they are attracted by the magnet, so you must adjust the distance they pass from the opponent magnet. Although the motor could rotate with only the half of its pushes vectors because their sum is higher than the resistance, maybe you thought of first using the screen on the north-north magnets only just for the time needed to adjust them and then when they are correct put the remaining ones for the north-south magnets. But this should not work, as the balance of compensated attraction-repulsion effect between the stator and rotor systems could be too much disturbed as the screens are then lowering only the repulsion polarity on one side, so the attraction side act like a break. My present work on auto-excited copper selves could get the rid of this as they could be putted on the north-south sides only and compensate the bad effect of screen attraction on the other side because they oppose a field when producing a current. Anyway sure the future shield we will use will get the rid of this problem as they are not attracted. Do recycle your old devices instead of trowing them away. When there is a sheet of metal against or near a magnet it's a magnetic screen most of the time, keep this treasure for your lab.

\* Are the rotors free to move from each others and same for the stators?

Of course not. All rotors are free from the stators; All the rotors are fixed on the same unique axle; All stators are fixed into the same motor embodiment like the one you can see in the motor.gif image. The stators and the axle's bearings can be fixed into clamps when you do your first experimentations in open air.

\* A model with one basic complementary group of four magnets and magnetic screens have been made and we observe that there is effectively a positive effect on one side more than on the other but do not give enough push to make the rotor doing a complete turn, why?

The force of this acceleration push vector is still under the total resistance and more vectors are needed, wich comes from a complementary group of four magnets, each group give 2 vectors. How many groups are needed depends on the resistance and the power of the magnets and quality of the screening (or shielding), so one motor sample may need more complementary groups than an other sample to rotate by itself. It could be interesting to verify what is the minimum quantity needed for a sample motor to run free. But with only one group it could not be enough, and using a non magnetic weight on the opposite side of the rotor although it adds more resistance could even help to get also more boost as it become an inertial flywheel, the contrary of using styrofoam to liter the wheel (wich is a bad idea), still it won't pass the magnets for an other turn neither. According to this observation, if your second complementary group is putted at this position instead of the weight then a test should

shows a better result than if it was putted immediatly beside the first group, still probably two will not be enough again. The game is not to see if the precedent group give enough push to pass the next beside. Since our rotor is the accelerated mass, one chareteristic of this motor is that it need a minimum speed to run free by itself. When you do the experiment you give the minimum initial push by hand, the more there is complementary groups the lesser push force is needed from the hand. The motor will accelerate. If it is decelerating then there is obviously a problem with the field truncating function of the screen or shield material. Because it depends on every sample, all the idea I can give to you about the amount of force needed to make the device working is this: The sum of all the force vectors added together must be higher than the air and bearings resistance. In a worse case: if you got the full rotor's 20 complementary groups of four magnets and the motor is running well and this group quantity is the lower to make it run, and if you hold slightly the axle and the motor decelerate under its minimum vital speed, then the motor got no usable torque, then all this give you an idea of the quality of the shielding, it's at the minimum to work. If the minimum quantity of groups is 4, then it's the fifth of the whole rotor and all this torque is enough to fight the resistance at the minimum speed, and then the 16 other magnets give a usable torque. How much? The sum of the 16 vectors (they are 32 in reality since they are 2 per group), so the more powerfull are the magnets the more torque we get. We are talking in term of percentage as a vector is the difference between the complete force of the magnet on one side minus the force remaining on the other side that is left by the shielding. If the percentage is in the worse case of 1% this mean you need 50 groups to get the torque equivalent of one full magnet force. It's why I knew the perendev version running full trotle could be stop by hand even if they avoid to show us that in the video clip on internet, it's far from the electric motor efficiency. Don't worry the yield can be better than this 2% mentioned per group. This shows the importance of good shielding. I'm optimistic and like to say shield instead of screen now that I'm waiting for news about the new shielding material. With the new promising shield only one group should be enough for the motor to work, it will be tremendous with the whole rotor, and such Z version should become equivalent or better than my Y version, but I will also improve that one too with the same material... Anyway we will soon know more about that.

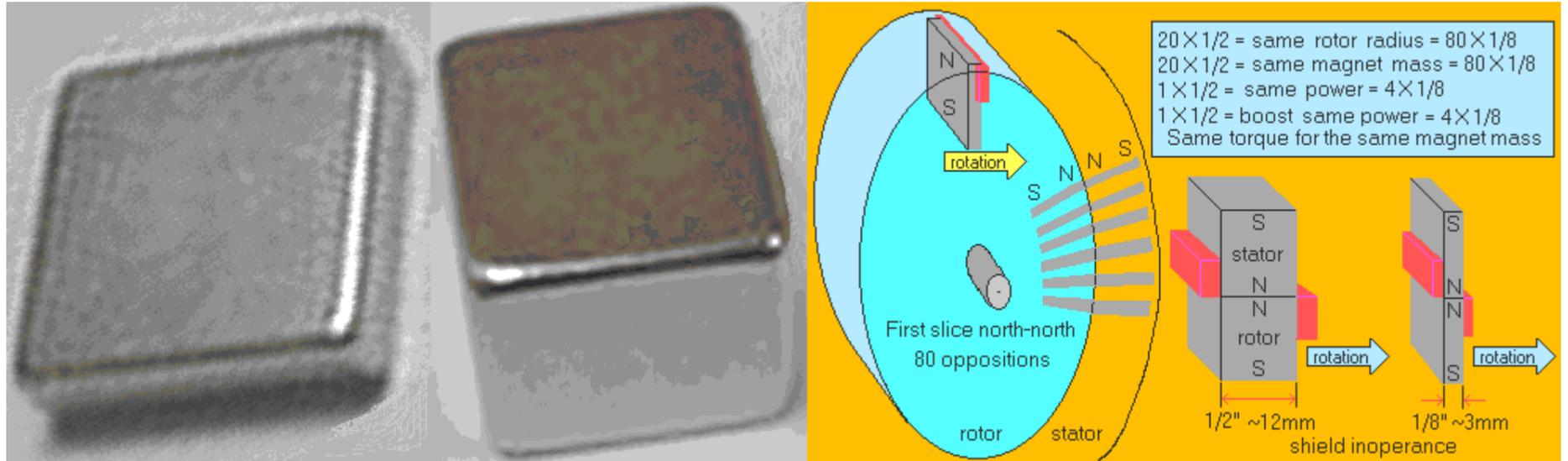
\* How wide is the air gap between the rotor and stator magnets?

The lesser is the gap the greater will be the torque, but 1 mm is correct and will be sufficient to hinder a possible contact that could destroy the machine at high speed if the rotor magnets are well fastened. With the power of the magnets we use and their possible difference of strenght between magnet samples, and the accuracy at the 1 mm scale, it's not easy to get all the complementary groups at a same strenght and this can represent a big value in comparison to the screen effect when we know that the force vary at square the distance. The best way to fix all the magnets at the same distance is to fix the stator magnet number one and then adjust the rotor magnet number one using a 1mm spacer, then rotate the rotor and adjust all the other rotor magnets to the same gap between them and the stator magnet number one the same way, then adjust all the other stator magnets from the number two to the last one, to be at the correct distance from the rotor magnet number one. This way the same gap is supposed to be spread everywhere.

\* How to choose the magnets?

If we use less wide magnets in more quantity than wider ones, for example, if we use 80 x 1/8" instead of 20 x 1/2", each boost is 1/4 weaker but 4 times more numerous, then the torque is still the same as the magnetic mass is still the same. Although this statement is not perfectly true because in reality in the case of neodym magnets, they are plated to protect them against oxydation, and the thickness of this coating is part of the magnet width, so a 1/2" magnet got to sides and four 1/8" magnets got 8 sides of coating then is a lost of magnetic mass in comparizon, and you can verify this by the quantity of lbs they can hold in the CMS commercial link. Then it's always better to use less number of wider magnets than less wide ones in the case of coated magnets. The way to get more torque is to rise the slice tickness (so for the magnet dimension) or the radius and the magnet quantity. The formula to calculate the radius of the rotor is: quantity of magnets x magnet width / 3,1415926 In fact the interval between magnets could be a bit higher as the magnetic moment is always complementary everytime and everywhere during the rotation, as the Savage-z motor design is not complicated, we simply assume that we put the larger amount of magnets on the space available to get the greatest torque, and that the lesser amount should be at least eight magnets especialy with square magnets.

[image magpower.gif]



\* Wich tests can we make to prove the feasibility of the motor before spending money to buy expansive magnets?

The next image shows how to build a simple apparatus that can make three tests. As mentioned before, if the motor gets acceleration boosts when it rotate on the good side then obviously this mean that if you try to make it rotate on the bad side it will decelerate and stop, because all the vectors are pushing on the same rotation side. The apparatus will mesure the gain produced by a complementary group of four magnets with a scale meter, or the lost. The meter can shows three different levels of force as its needle will point to whether the signs - = +

How does the meter works? The spring on the meter side will absorb the remaining force from the push of the other spring, and at the same time the level of this remaining force will be displayed by the scale. The two springs are of the same strenght, and do not have to be very strong first because as weak the boost vector could be, its strenght must be an interesting percentage of the spring strength to be visually detected on the meter scale, and because the one on the trigger side only got to fight against the rotor inertia, the air resistance and the bearings resistance. And there is no magnetic resistance between the stator and rotor. Although this last statement is really true only if the magnetic screens are absent. When they are present then we got two possible things, first, a resistance, a deceleration on the bad rotation side, and second, a boost wich is an acceleration on the good rotation side. And we can mesure both with the meter, as much as we can also find a neutral or balanced level on both side when the magnetic screens are absent or when the stator is removed. The perfect no attraction and no repulsion equilibrium adjustment is described in the second test paragraph below.

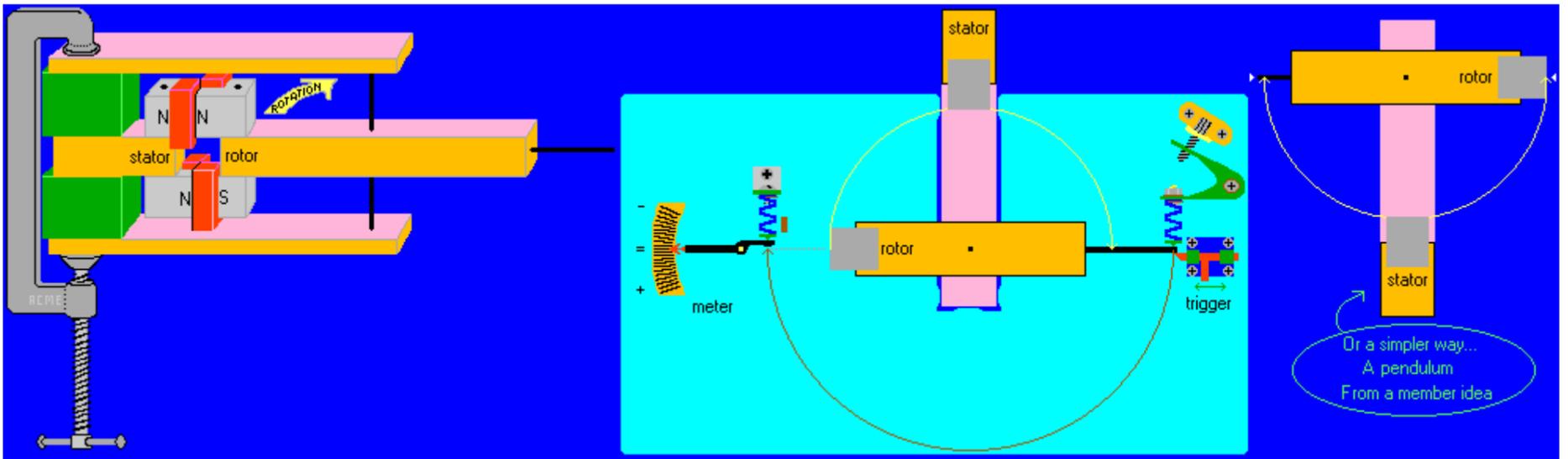
The test lab is made of two main parts: The first main part is the motor to test, wich is mainly the stator and the rotor, or rather represent them as the motor is not yet completed, but could look a bit more complicated in your shack than just these short words, and we will have to deal with, but the image shows that it could be build portable to be reversed up side down easily as needed for the tests. Otherwise the motor adjustment could be disturbed when you reverse it if your design is not strong enough. We figure that the rotor is in the horizontal plan. And the second main part is the mesure instrument, wich is the trigger and the meter. We figure that they are fixed on some plank together like in the image. When the tests are made, these two main parts must be fixed together, but the motor must be reversed up side down to switch between the tests two and three.

How to make the first test. The first test will set the meter to the neutral point, on the =. You must remove the stator to make this setting. Then you pull the trigger and read the meter. You now adjust the spring's screw on the trigger plate for the needle to point onto the = when the apparatus is triggered. The sign = is the neutral point, so when the needle will point toward the + side this will indicate a kinetic energy gain, an acceleration boost. When the needle will point toward the - side, this will indicate a deceleration and a lost of kinetic energy. Try the trigger few time to verify that the needle get on the = each time. There could be a little difference between times but it will be in this average. The setting is definitive. Obviously before you pull the trigger the needle always shows the - side when the adjustment is correct because the spring is elongated and idling. The reading is only made when you pull the trigger.

Second test to verify that we can really get a kinetic energy gain with the motor. Do not change the trigger screw adjustment otherwise the test will be false. The two main parts settings in the image is for this second test. Install the stator with its two magnets and magnetic screens back in place in the apparatus. Now verify if you feel an attraction or repulsion when the rotor's magnets pass on front of the stator's magnets. You are not supposed to detect any such thing. If you feel a repulsion then the magnets of the north-north couple are too near from each other compared to the gap of the other couple. If you feel an attraction then the magnets of the north-south couple are too near from each other compared to the gap of the other couple. Make the adjustment needed. Most of the time when an adjustment is needed it's on the attractive couple because the magnetic creens are made from attracted material, although this affect both slices you just have to simply pull back a bit the stator's north magnets in the attractive north-south slice only to rise the gap, it will just result in a bit less powerful vector in that slice but won't disturb the device work. Now when you pull the trigger, the needle should deviate toward the + if there is a kinetic energy gain, wich is the normality and this result prove that the motor can work. Then logically, a rotation in reverse should produce a lost of kinetic energy.

The third test will verify if you get a normal deceleration and lost of kinetic energy when the rotor rotate on the wrong sens. Here it depends on your design because you got to reverse the rotor-stator assembly up side down without disturbing its adjustment, so we figure that you have build a portable version that look like in the image. Do not change the trigger screw adjustment otherwise the test will be false. The things look like in the second test but when you pull the trigger then the rotor will now obviously rotate on its wrong side, even if it still rotate in the same sens before your eyes in this test. Then the needle must go toward the - zone, and this prove that we get a normal deceleration, because there is a lost of kinetic energy. The results in test 2 and 3 shows the normality that we were waiting for. Those scientific tests should convince you of the motor feasibility.

[image test.gif]

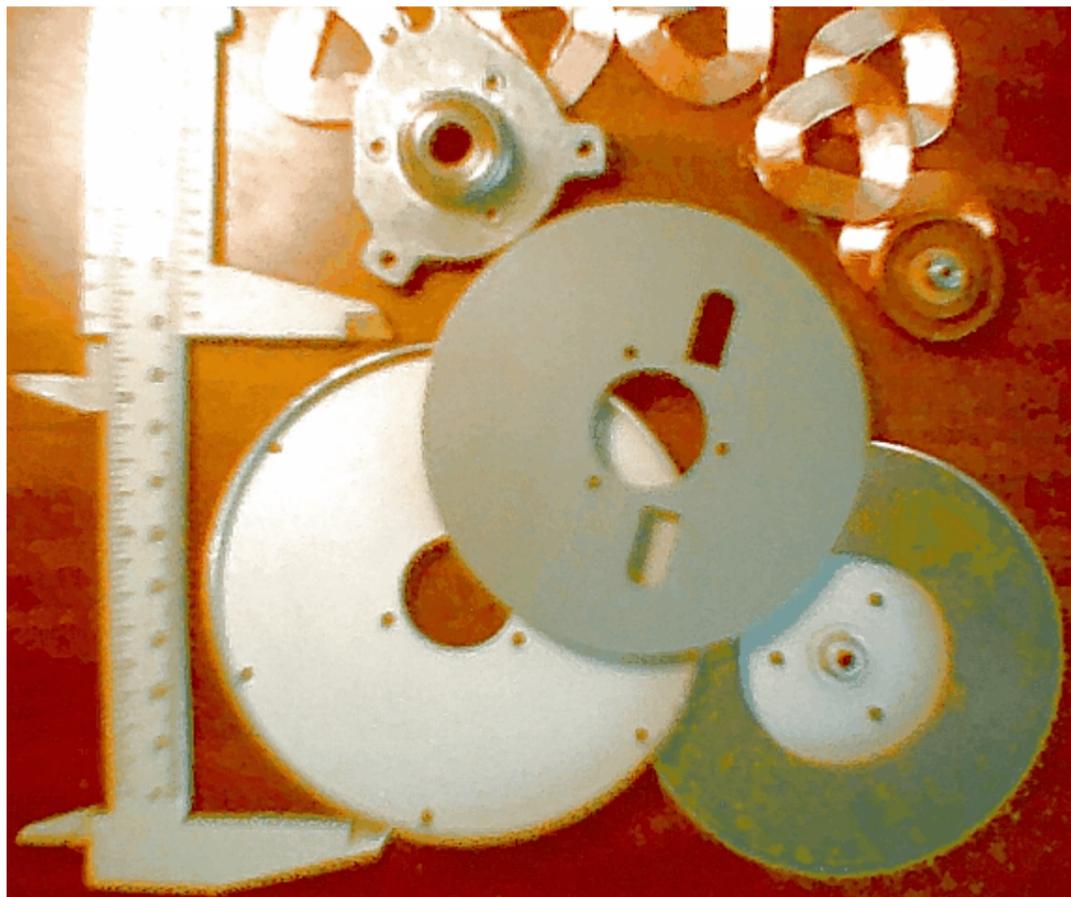


A member came with a good idea about an other brilliant and simpler design for a test apparatus (right part of the image). There we don't need the second main part wich is the one with meter and trigger. The first main part is put like a pendulum and the gravity force replace the springs. The stator is at the bottom. When you make the rotor swing on one side or the other the course should be greater on one side than the other.

\* Where can we find this magnetic screen material?

Habitually when there is a piece of metal against or near a magnet, it's a magnetic screen most of the time. You can get magnetic screens from recycling old computer 5 1/4" diskette drives, if you still can find some for few ¢ents, their price was 400\$ twenty years ago... Or a scraped newer 3 1/2" diskette drive, as its life is also limited. The next image shows pieces from a 5 1/2" one I have just dismantle an hour ago to take a picture, it was the last one I kept from a hundred I have dismantled. There is a 8 poles ring magnet glued inside one half of a 3 1/8" (0.9 mm x 80 mm, it became 87.5 when unfolded with a hammer) shell plate made of the screen material, and the other half shell is a 3 5/8" (0.75 mm x 92 mm, 98.5 unfolded) plate of the same material, and also a 3 1/4" (0.3 mm x 82 mm) tiny and dark sheet but it's obviously a magnetic screen too. Normaly you should be able to build a working motor with this kind of material efficient enough to produce the unbalance needed in the magnetic fields. In the image there is also copper selves, a bronze hub, and an aluminum hub that contains two sets of bearings.

[image p003.gif]



On the 8 of november, I thought I have made a great discovery after making a test with a magnet and my habitual neutral rectangular iron piece from a door catch we have talked about in our last messages, on a computer 3 1/2" diskette drive cage that can hold two units, and tests on other pieces of metal from computer skeleton and devices covers. I put the metal to test between a magnet and the rectangle. I found magnetic screen material and gave you the news. The next day, after more tests on this metal, I think it's not efficient enough to be use as magnetic screen. A huge surface is efficient to protect the devices against possible magnetism present in the vicinity only, because when cutted into smaller pieces, it is not satisfactory enough. Although some pieces gave better results and multilayering could also help, and I don't know

yet what you have conclude from your own tests, but I don't think this material is good enough. Sorry false alert.

[image magscrn.gif]

.....  
To be continued and I could also add here a list of your best tricks, links and addresses to get the material, prices etc... and pictures of your work in the photo section, to satisfy some members...

-----  
All the images above should be sufficient for any average intelligent hobbyist to understand and be able to replicate the motor. There is open views to show the magnets and screens arrangement. Of course the stator and rotor bodies are thicker to hold everything as you can guess for the screws to hold the magnets they need a thicker body, just like in the perende7.gif image but is not showed in the Savz2.gif. The hobbyist have to do its part of the job and make the finition according to his own skill and tools and material availability. A first model do not need to be very big before planing to go under mass production, and lower cost little magnets can be used. I did not kept a model of this Z version because it was just a step among other during the experimentations and the material have been reused for the Y version, so I did not took a picture of it as this discussion forum was not premedited neither at that time. Pictures should not reveal better detail to render the device more easy to build as the organs must be enclosed inside a body and can not even shows the movement of the axle. So what a movie of it could show more? And the images above keep and enhance the details needed without distracting the dreamers on something else. It's very strange so many forum members stumble on this detail of no interest. The text explains how the device is working, it's just ordinary physics, and nothing can be denied on it. Any intelligent adult should understand it and agree on its obvious feasibility. I was counting on intelligent experimenters when I began all this and have been enough disapointed by the low intelligence of the humanity all my life, so I won't come back on the subject about the document quality of the present file anymore in the next messages and answers I will left in the forum, although I'm still answering questions in the forum to help, and will also continue to update this text with more details that were asked in the discussions, if really of interest. The lesser effort is asked from the experimenters to participate to a great worldwide plan from wich we will all win a better world, it depends on you before I release my Y version, and other steps are planed after, although the X version is not ready yet and will may be just an improved Y version, I'm still continue to progress on it as everything became scientifically clearer about these devices. Maybe somewhere in january I will make a model of the Z version, beginning from zero, to get a better idea on wich points the experimenters could have more difficulties, and to show it in the group. So you are free to put the pictures of your own work in the forum and if something is not correct all the members could give its own help to improve the work of its colleagues. And maybe the dreamers will get a better idea of what the device is supposed to physicaly look like on a table.

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The Savage-Y version of a perpetual motion free-energy motor, ( although it do not need it to work, also take profit of the same unbalance principle, and may count on the new promising shield to even do better ) use an other greater force vector towards the inner rotor's volume through a simple mechanical apparatus that trap all the force and release it only through the only escape possible, the rotor's axle. The Y version got a very great torque and can be used to fulfill all the humain energy needs such as replacing the petrol car motor, and hydroelectric turbines, and wind turbines, and the use of charcoal, propane and nuclear energy, etc... and get the rid of the pollution problem, but also will cause a lot of employment losses and fortune losses. But more informations about the Y version won't be released before this invention will be fully copy right protected.

My work continue on auto-excited copper selves to create a field to imitate the magnetic screens effect, as they were the weaker link of the technology I wanted to find something better. Even if the annoying deceleration-acceleration effect caused by the magnetic fields are illiminated these fields are still present and can be exploited to produce an electric current and so an electromagnetic field to dimunish the amplitude of the magnet field as the screen do. This way the Z version could be compared to an electric motor in wich the electromagnetic field is switched on and off at the right moment. Also based on the Y version I use the same idea and I wish to include an electric generator in itself, instead for example to be just the motor to act on a dynamo. Although my first target is a car motor with a great torque that can be controled by modifying the distance between the stator and rotor magnets or moving the screens/shields material or selves field amplitude. So there is still work to do for an X version.

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On 12+1 of december 2007 our group will be open since 8 weeks...

I want to congratulate our experimenters, they are doing very fine now, and I can't wait to know wich one will be the first to succeed to build the device. I have updated this file few times, ok it was maybe not that good at the beginning and I had to be clearer, but I think you are bright. You don't even need me anymore, maybe I should rather let you go alone on your boost now.