**Astmeteta mootori eelised.**

Astmeteta, nn. impulssmootori puhul muudetakse kiirust voolu impulsside laiuse muutmisega ja kiiruse vähenedes nullini voolutarve muutub peaaegu nullini välja. Käikudega e. astmetega mootoril on mähiste peal vool kogu aeg, väiksematel käikudel lihtsalt juhitakse voolu mootori mähistelt takistite peale.



**Motorguide, Minn Kota jne, põhimõte on sama.**

Pikem seletus kõikide eeliste kohta oli saadav Minn Kota lehel:

**What are the benefits of Minn Kota’s Maximizer?**

The Maximizer offers two primary benefits: infinitely variable speed control and more run time on a battery charge versus a five speed control motor. The infinitely variable speed control feature allows the angler to adjust his motor to just the right power setting for the conditions he’s fishing. The Maximizer is electronic circuitry that uses “Pulse Width Modulation” technology to apply the correct amount of current to the motor unit. Basically, no current is wasted — giving the angler up to five times more fishing time between battery charges.

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**How does Maximizer compare to a speed coil?**

**How Speed Coil Motors Work**

* Electrical loads are hooked up in series with the motor such that power from the battery is split between supplying the motor and supplying the additional loads (speed coils).
* Power from the battery is fairly constant regardless of the speed setting. Therefore, on speed 1 for example, more power is diverted to the speed coil than is supplied to the motor. This makes the overall motor assembly less efficient (vs. variable speed/maximizer).
* Extra power consumed by the speed coil produces heat, much like an electrical heating element. The heat is then transferred through the motor housing to the water.
* That is why speed coils are located in the lower motor unit.

**Speed Coil Analogy**

* + You are driving a car at full speed. To slow down, you brake with one foot while continuing to keep your foot down on the acceleration pedal. By doing this, you continue to burn petrol (power) while causing the brakes to heat up.
	+ Same theory applies with a speed coil motor. The power supply is still constant, but is diverted to the speed coils for the lower speeds which reduces efficiency and run time.

**How Maximizer Works**

* + Since speed coils reduce the power going to the motor, the Maximizer was designed to, eliminate this inefficient speed control method by using rapid on/off switching. The Maximizer is simply a switch that turns the connection to the battery on and off 20,000 times per second.
	+ If “on” time is longer compared to “off”, the motor runs receive more power. If “off” time is longer, the motor gets less power. Since there is minimal power lost to accomplish this, the overall motor is very efficient.



**Maximizer Analogy**

* You are driving a car fully accelerated. To slow down, you lift your foot off the pedal to decelerate allowing only the proper amount of petrol (power) to be used. This burns less petrol than the first analogy and does not heat up the brake system.
* Same theory applies to the Maximizer. Only the necessary power to go the desired speed is delivered to the motor providing extreme efficiency and longer running time.

**Maximizer Benefits**

* + **Extended trolling time (up to 5x longer on a single charge).**
	+ **Siin tuleb silmas pidada, et nii suur vahe on minimaalsetel kiirustel, mida kiiremini sõidate, seda väiksemaks vahe jääb!**
	+ The Maximizer speed control saves valuable power over a conventional speed coil motor**.**
	+ The Maximizer allows more fishing time on your battery charge, up to five times longer run time per battery charge, compared to the 5-speed switch.
	+ With infinitely variable speed control, the Maximizer allows for proper speeds to be set and maintained while trolling lures for proper presentation.
	+ Virtual speed adjustments for changing conditions**.**
	+ The Maxmizer allows for fine tune speed adjustments.
	+ The Maximizer allows the user to control boat speed more effectively in changing environments.

**Soft Start**

* + A feature of the Maximizer, it limits how fast the motor can go from “off” to “on.”
	+ Soft start helps increase the motor’s life.

**More Powerful Motors**

* Maximizer electronics allow for more control of higher thrust motors.
* A standard 5-speed switch does not hold up as well under the same conditions.