# Electric motor history timeline

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German-Russian, engineer and physicist; built a 15 watt motor in 1834 submitted to the Academy of Sciences in Paris with details published in 1835; demonstrated first use of electric motor to propel a boat; first real useful rotary electrical motor.

William Sturgeon, an English physicist, is credited with inventing the first DC electric motor in 1832. His design was the first electric motor capable of moving machinery, however, it was still heavily limited by its low power output.

1821 - Faraday begins electrical work by repeating Oersted"s experiments. First electric motor (Faraday). 1821 - Humphrey Davy shows that direct current is carried throughout the volume of a conductor and establishes that for long wires. He also discovers that resistance is increased as the temperature rises.

Since the birth of technology, the pace of innovation has continued to accelerate. New inventions and technologies make our lives easier, but what"s fascinating is that technology often leads to the next innovative ideas and discoveries, making it easier to design and build even newer technology. This ever-accelerating cycle of innovation continues to reshape and redesign the world we live in, and it"s the reason why you can sip on an old-fashioned and watch Seinfeld while you"re packed in a metal tube hurtling through the sky 30,000 feet above the Atlantic.

The story of electric motor technology has been no exemption, following this trend of innovation for the past 200 years. Looking back at the invention of the first electric motor in 1832, it"s hard to imagine the impact electric motors have already made on our lives and other technologies, and even harder to imagine the next 200 years of innovation. Through retelling the history of the electric motor, we will witness the accelerating cycle of innovation in live action and better understand what"s in store for the future.

Hans Christian ?rsted was experimenting with electricity in 1820, when he observed that a compass deflected when he held an electrified rod next to it. He had just discovered electromagnetism and although undoubtedly he had no grasp of his discovery"s impact but he just set the ball in motion for the innovation of electric motor technology.

It wasn"t long before scientists around the world were searching for power-generating applications of electromagnetism. William Sturgeon, an English physicist, is credited with inventing the first DC electric motor in 1832. His design was the first electric motor capable of moving machinery, however, it was still heavily limited by its low power output.

A few years later in the United States, Thomas Davenport and his wife Emily Davenport were granted the first DC electric motor patent in 1837. Their design was a partial adaptation from Sturgeon"s first motor.

Unfortunately, despite years of experimentation, Davenport"s motor design was still plagued by the same power and efficiency issues faced by Sturgeon"s original design.

Still, the most impressive early motor design was built by a Russian named Moritz Von Jacobi whose electric motor set a world record for mechanical power output in 1834, including Davenport"s motor. Jacobi didn"t waste any time when making his improvements either, and only a year later, in 1835, he demonstrated his new design"s increased power by ferrying 14 people across a river using a boat powered by his motor.

Following the early demonstrations of electric motor capability, interest in electric motor technology exploded, inspiring hundreds of new inventions and discoveries. Still, the first generation of electric motors were glorified paperweights. They were terribly impractical, having voltage loss across windings, an unstable supply current, and common sparking. Over the course of the next 50 years, engineers and physicists worked to solve these problems by optimizing and redesigning the fundamental components of the electric motor.

A number of improvements were made to the rotor and armature design between 1835-1886 in an effort to develop the first "practical" motor, with notable contributions being made by Italian physicist, Antonio Pacinotti and Belgian electrical engineer, Z?nobe Gramme. However, only American inventor Frank Julian Sprague is credited with inventing the first "practical" motor, in 1886.

Sprague"s electric motor eliminated sparking, voltage loss across windings, and could deliver power at a constant speed– making it the first "practical" DC electric motor, enabling the broader application of electric motors. Sprague"s motor designs were practically reliable and fairly powerful, but the efficiencies of these designs left much to be desired. Sprague would use his motors for the development of the first electric trolley system the following year in Richmond, Virginia in 1887.