

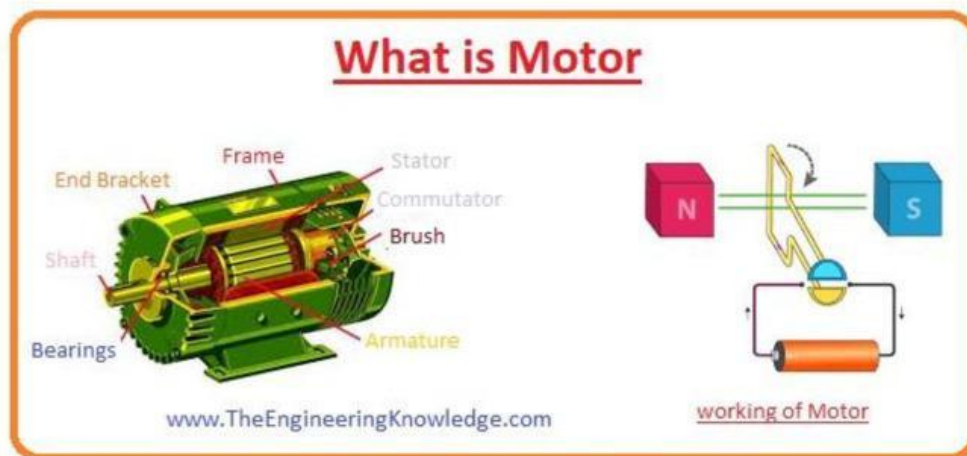
Electromotor

1) Fill in the missing words:

A) *appliances, efficiently, fans, flows, mechanical, move, movement, principles, spins, toothbrush*

An electric motor is a machine that turns electricity into _____. It's something you use every day, even if you don't realize it. Electric motors are in many common devices like _____, washing machines, and even cars. They help things work smoothly and make our lives easier.

Inside an electric motor, there are different parts. The main parts are the rotor and the stator. The rotor is the part that _____, and the stator is the part that doesn't. Electricity _____ into the motor and creates a magnetic field. This field makes the rotor turn. Electric motors are very important because they use electrical energy and change it into _____ energy to do work. This process is efficient and helps reduce the use of fossil fuels. That makes electric motors better for the environment.



There are different kinds of electric motors, but the most common are AC motors and DC motors. AC stands for "alternating current," and DC stands for "direct current." AC motors are mostly used in home _____, while DC motors are used in things like electric cars and toys.

Electric motors come in many sizes. Some are very small, like the one in your electric _____, while others are very large, like those used in big factories. No matter the size, they all work on the same basic _____. Understanding electric motors is important because they are a big part of our modern world. As technology continues to grow, electric motors will become even more important. They help us do things faster and more _____, making them a key part of everyday life.

Electromotor

B) connected, connected, consisting, constructed, delivers, equipped, generated, powered, replaced, used

A direct current (DC) machine typically has a stator magnetic circuit with pole extensions, which are made from solid material. The magnetic flux of the circuit is _____ either by permanent magnets or by an excitation winding. Additionally, the stator is _____ with brush holders and bearing end shields.

The excitation winding can be to the rotor in series, in parallel (shunt), in a compound (mixed) configuration, or via an external excitation source. In some cases, the excitation winding is _____ by a permanent magnet.

The rotor's magnetic circuit, which contains slots for the winding, is _____ from laminated transformer sheets. The winding ends are _____ to the segments of the commutator.

The three-phase asynchronous machine (ASM) is the most common and widely _____ type of electric motor. The stator carries a three-phase winding, _____ of three identical coils that are electrically offset by 120° . A special case is the single-phase asynchronous machine, which has two different coils offset by 90° electrically (main and auxiliary winding).

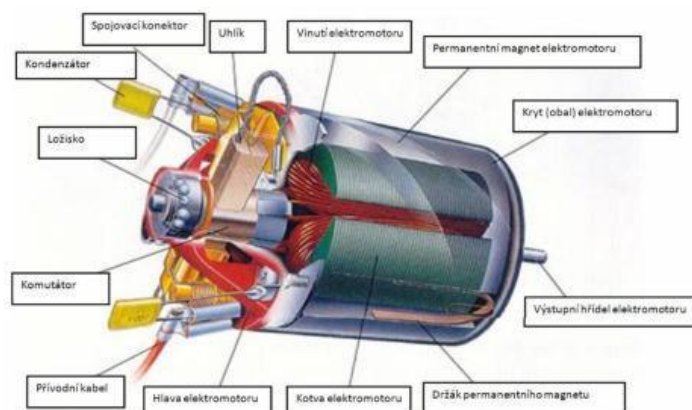
A three-phase ASM can also be _____ from a single-phase supply. However, this requires a suitable modification of the stator wiring and the addition of a capacitor. In this configuration, the motor _____ a lower mechanical output power at the shaft.

2) Write Czech terms next to the English ones

Main parts:

- Rotor
 - output shaft
 - armatures with windings
 - commutator
 - bearings
- Stator
 - coils with windings
 - electromagnets/permanent magnets (synchronous motors)
 - brushes with holders
 - case terminals

Konstrukce komutátorového elektromotoru (s buzením pomocí permanentního magnetu)



Obr. 1.7-Grafický řez komponent elektromotoru s permanentním magnetem. [14]