

# Electric motors AUSE

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# AUSE

## ARETXABALETA

### Lanbide Eskola

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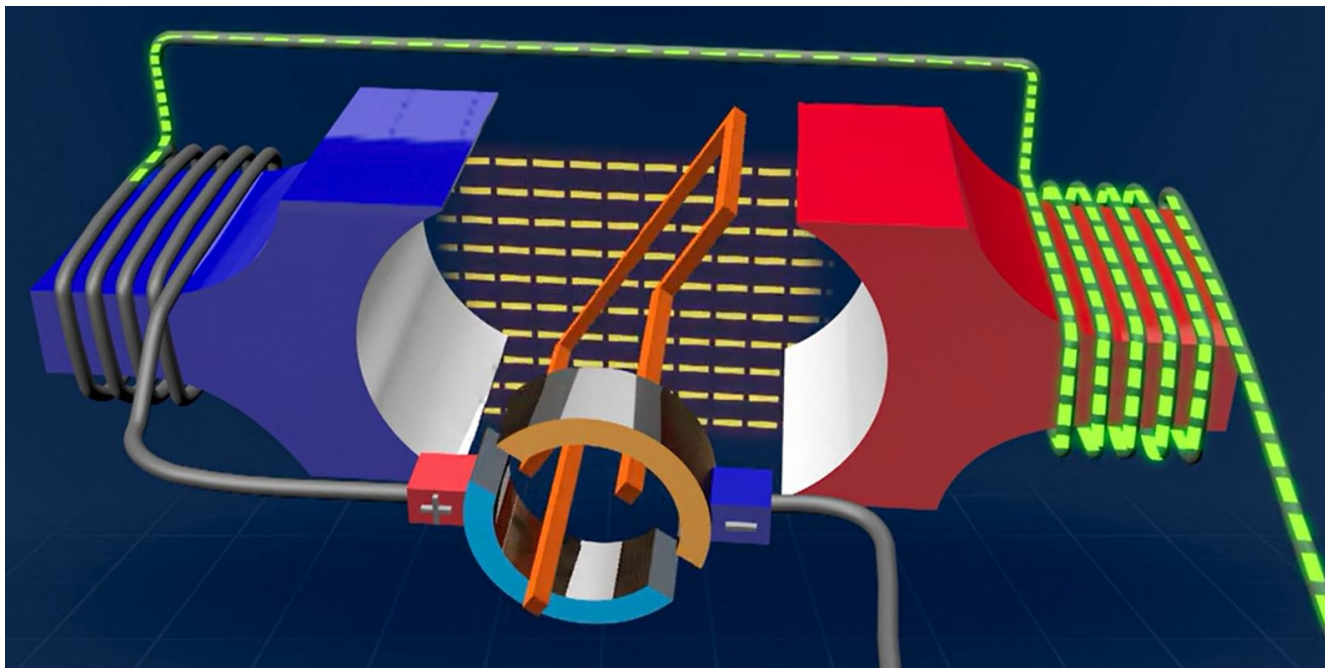
Lanbide Heziketako  
Ikastetxe Integratua



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## Motors based on magnetism

Electromagnets are used to move the axis



## Direct current motor



Pass the electricity through the brush. This also causes the system to not crash

North and South poles attraction between strength will appear. The axis of that force it will spin.

Spindle magnet is an electromagnet. This is by electricity created magnet

# Direct current motor

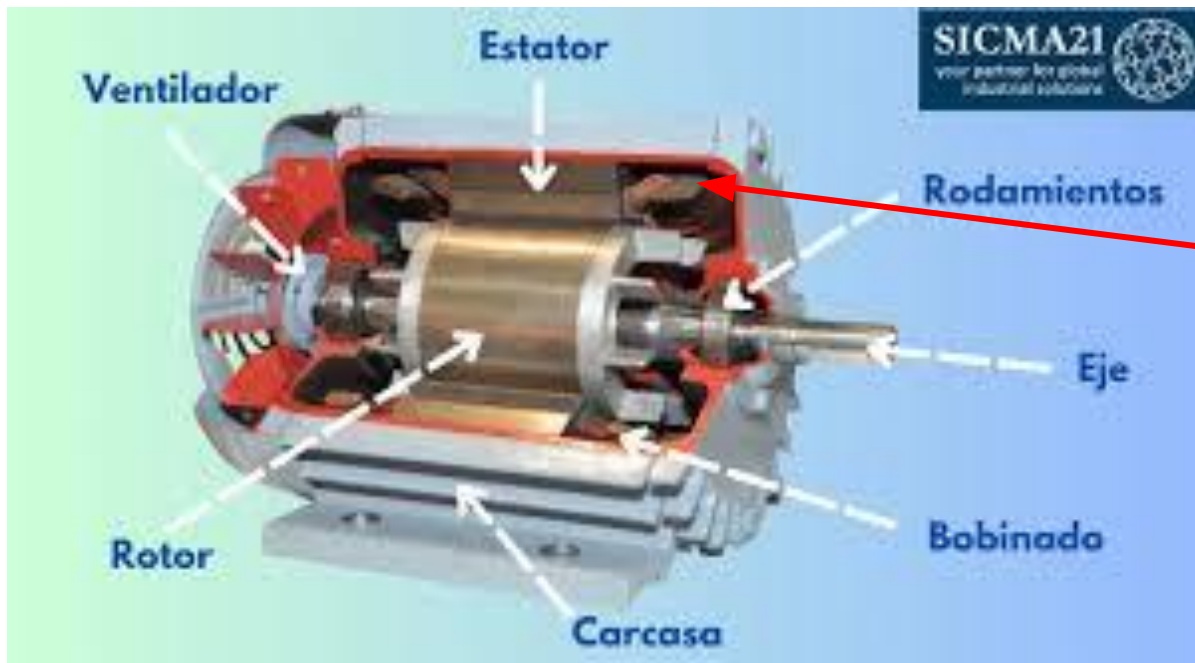
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## Problems:

- If they work with 12v it takes 60A to get 1 ZP. Very high intensity
- If no voltage drop greater than 0.5V can be present in the system → Very sensitive to resistance. in the wiring **with 0.008 ohms** we can have problems. It would consume 30w of power.
- Brushes are necessary to transfer power to the shaft. These are said to wear out

# Alternating current motor

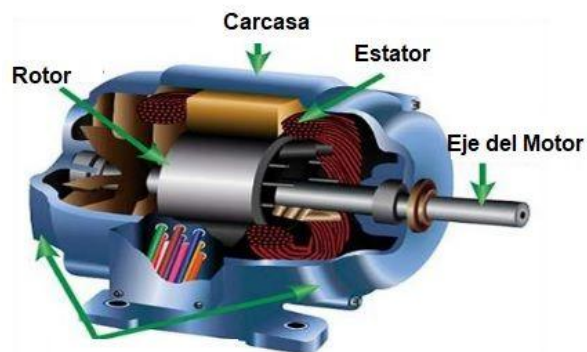
These are also based on magnetism. magnets in the rotor and winding in the stator



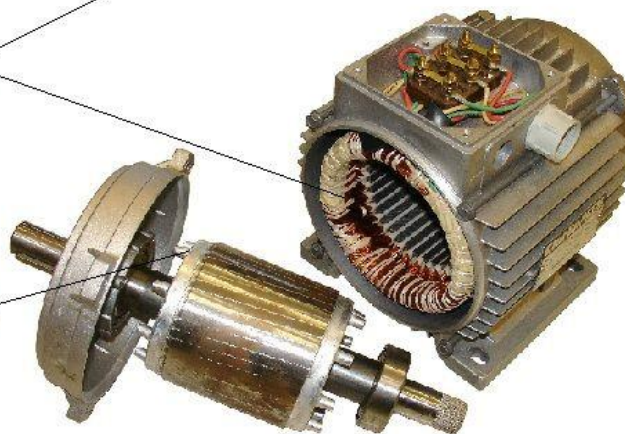
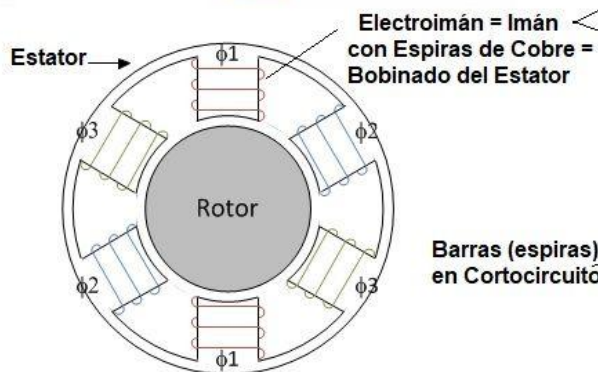
Current in the coil when entering the alternate of electro magnets polarity it changes

# Alternating current motor

## MOTOR TRIFÁSICO

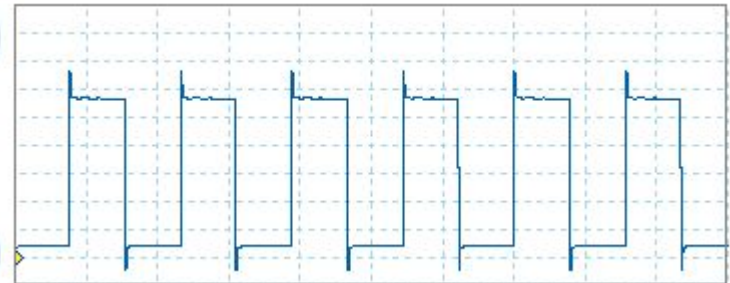
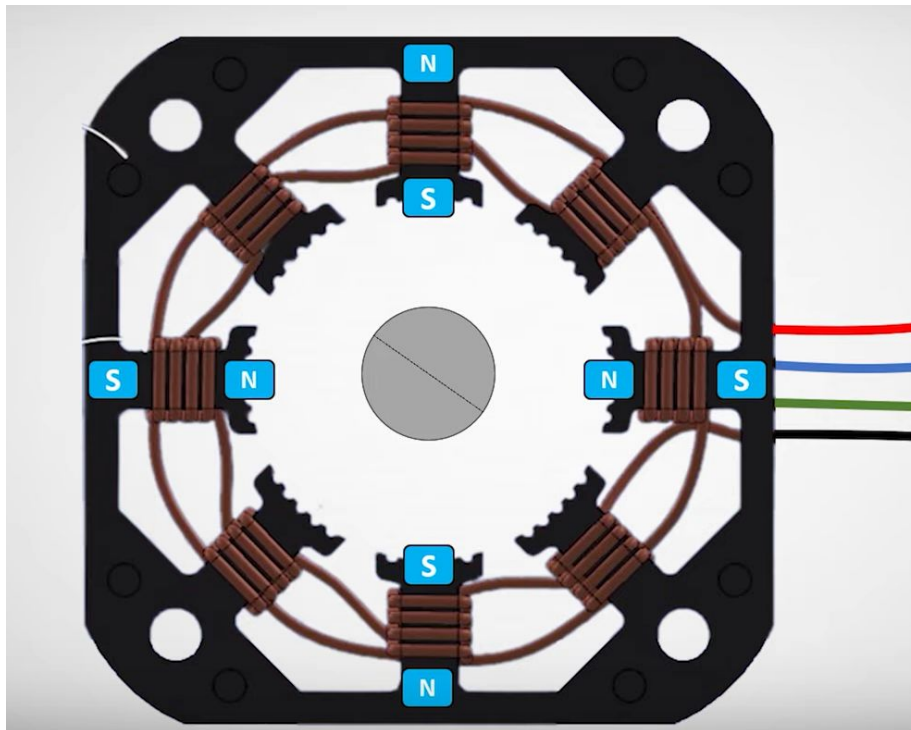


Each phase and to each his own  
electrical circuit will create  
torque. Often to synchronize the  
controller is needed



Rotor en Jaula de Ardilla

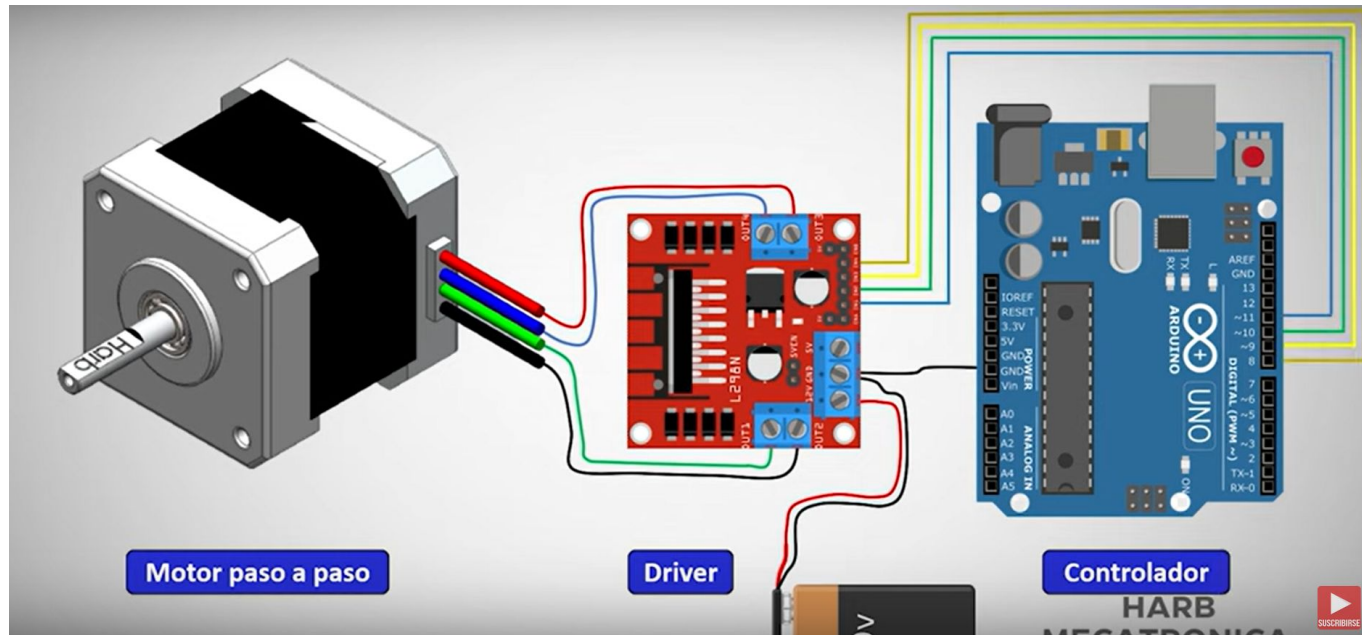
# Stepper motors



Static or depending on the signal that is fed can be moved

Absolute on the move  
seek control

# Stepper motors



The need for control electronics