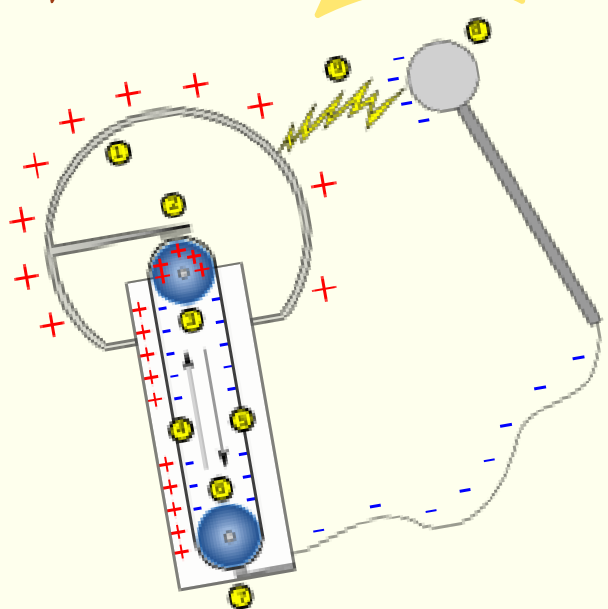


# VAN DE GRAAFF GENERATOR



The American physicist Robert Jemison Van de Graaff invented the Van de Graaff generator in 1931 which is a device designed to create lots of static electricity and make it available for experimentation.

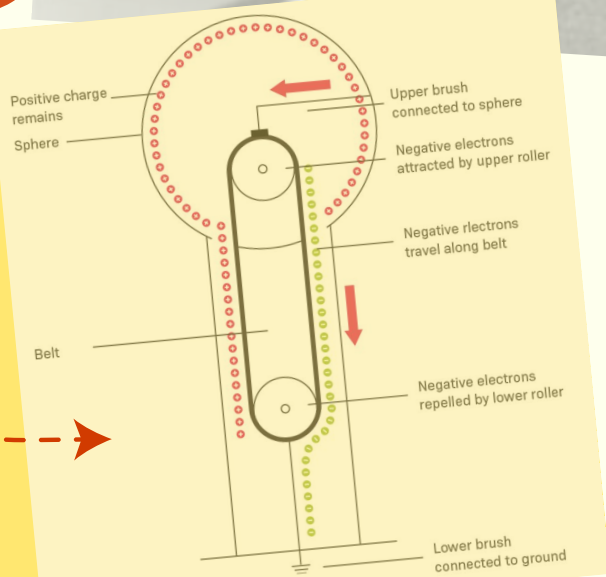
## There are two types of Van de Graaff generators:

one that uses a high-voltage power supply for charging and one that uses belts and rollers for charging but most used is the second one that now we're going to describe.



This kind of Van de Graaff generator is made up of:

- A motor
- Two rollers
- A belt
- Two brush assemblies
- An output terminal (usually a metal or aluminum sphere)



## now we're going to explain how it works with an experiment:

For this experiment we need:

- the van de graaff generator
- a person



## how does the experiment work?

The generator makes static electricity because of a giant rubber band inside of it that rubs across a piece of felt, stealing its electrons. The rubber band then spins around and the electrons travel up to the big metal ball on top. If you have a hand on the metal ball, the electrons will go into you.

So when the volunteer puts her hand on the metal ball her hair stands on end.

**in this video we can see the demonstration of the experiment:**

## why the hairs stands up like that?

It can actually be dangerous, but you can be protected from the ground by standing on a piece of rubber or plastic, which are powerful insulators. You are now filled up with electrons, but these electrons don't like each other so try to get as far away from each other as possible. The result will be your hair standing up because it is full of electrons that are repelling each other.



## BIBLIOGRAFIA

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