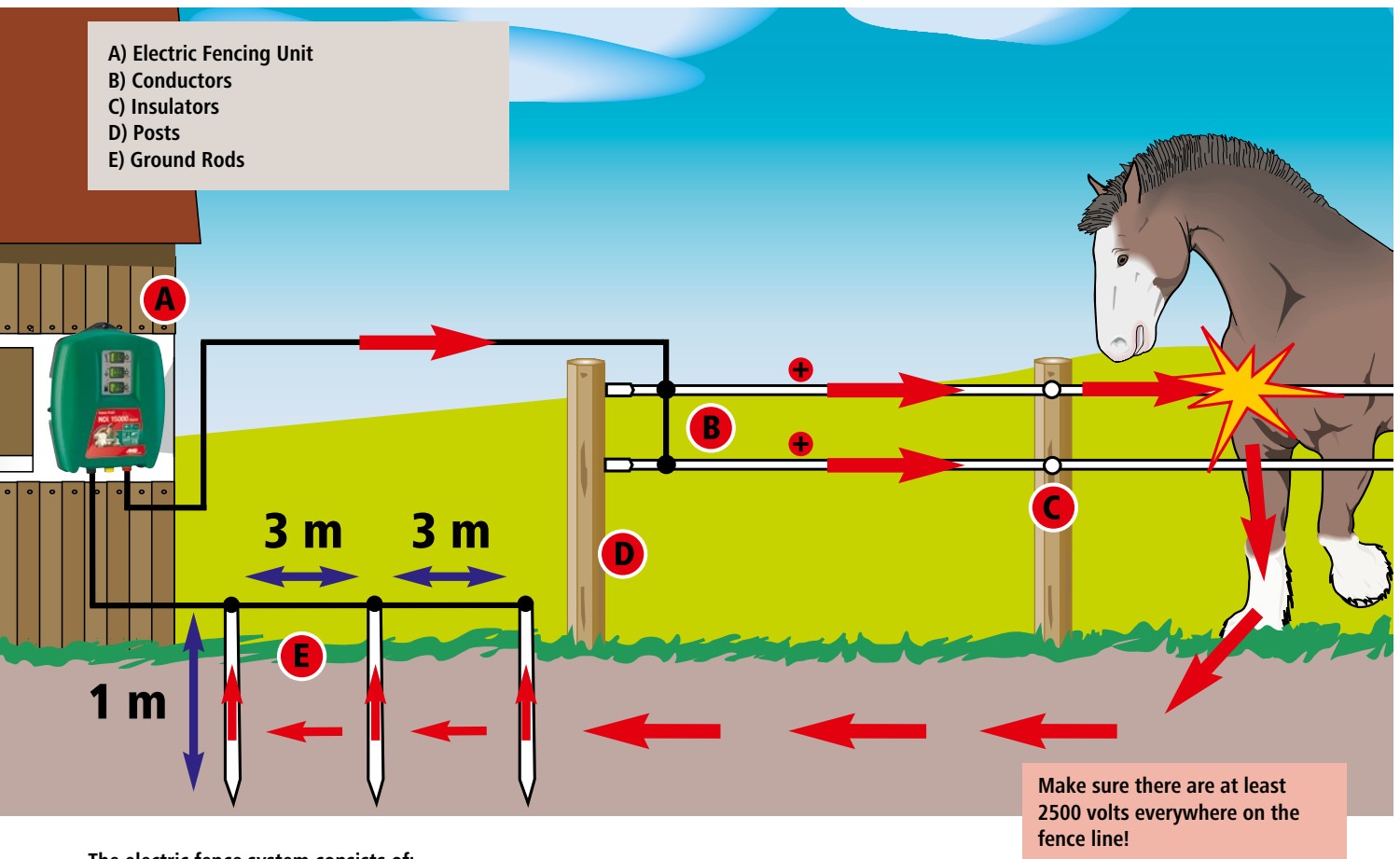


This is how an electric fence system works!



The electric fence system consists of:

- A) An electric fencer generating regular energy impulses.
- B) One or more wires that transport electricity (although these do not necessarily have to form a closed loop).
- C) Insulation is performed by insulators preventing the power from diverting into the ground.
- D) Permanent or mobile posts that can be used as required.
- E) The earthing of the electric fencer which should be driven as deep as possible into moist soil.

If the animal touches the wire, a current circuit is closed, i.e. the electric current flows through the animal and the earth back to the unit. The animal consequently receives an unpleasant, although harmless, electric shock and retreats. An electric fence system of this kind is used successfully to pen animals in and also to keep other animals out.



Earthing

Earthing is an important part of the electric circuit. To make sure the current flows back without hindrance through the soil to the fencer, there has to be the best contact possible between ground rod and soil (soil with hardly no moisture conducts inadequately). When driving in the ground rod look for moist spots, i.e. the ground rod must be of sufficient length to reach deepsub-soil moisture.



Fence Voltage and Impulse Energy

The peak of an electric impulse generated by the fencer is called fence-voltage. High voltage is necessary to create a proper channel between fence wire and body of the animal. There has to be a minimum voltage of about 2500 volts. (For thick-coated animals we recommend a minimum voltage of 4000 volts). Now the current (impulse energy) can flow through this channel. This means that the efficiency of shock depends on the amount of impulse energy (voltage alone does not hurt!). The more stubborn an animal is the more power should be used to enclose or keep off. Furthermore, the need of more impulse energy rises according to the length of the fence line and its possible loss (e.g. vegetation). The more power is delivered by a fencing unit, the higher its power consumption. With regard to the impulse energy we recommend to make a careful choice especially when battery or rechargeable battery operated energizers are concerned.



Fence Resistance

Apart from sufficient impulse energy you also need highly efficient conductors to achieve the maximum shock possible and to make sure that the energy is delivered with minimum loss to the animal without fading away before. Line resistance is a measure to rate conductivity. It is stated in Ohm/Meter. The smaller the value, the more conductive the material. The longer the fence line, the more conductive the material has to be. Excellent materials have a resistance of 0.3 Ω/m, poor ones over 4 Ω/m. Researches have shown that there has to be a compromise between high conduction mostly achieved by copper wires and long service life (stainless steel wires of low conductivity). Combined materials (conductors made of copper and stainless steel wires) offer here the Optimum (Premium Line).