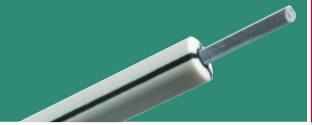


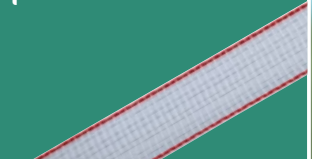
# The permanent fence guide for paddocks

... Tips and tricks for DIY!

Premium Horse Wire



Tape



Rope



3-4

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Content horses | Commitment | Partners | Friends | Happy horse owners and riders

## Why we are the right partner for you.

- ... AKO has over 70 years of development expertise in the field of fence devices and fence construction!
- Production of all fence devices that are "made in Germany" ... at the German site in Wangen im Allgäu!
- 3-year warranty on all our devices
- in-house research, 3D design & electronics development ... our own development team focuses exclusively on the further and new development of device technology in accordance with the latest safety standards!
- 100% quality control ... every fence device is checked to ensure its function and performance!
- ... our excellent service and superb quality make us a partner you can rely on!



AKO fence devices production location: Wangen im Allgäu



AKO-Agrartechnik GmbH & Co. KG: Wangen im Allgäu



Albert Kerbl GmbH: Lager Ampfing

## A fence must be safe. But when is a fence considered safe? How high should a fence be?

These are questions that even experts can't answer clearly sometimes. "The legal basis for paddock fences is article 2 of the Animal Welfare Act and various bodies have made recommendations based on this," says Volker Raulf, an agricultural engineer, in *Pferdebetrieb* 3/2012. "Only the Higher Regional Court of Celle has once made a ruling (26 January 2000, 9 U 130/99) on the height of a fence to prevent a horse jumping over it. According to this ruling, as a rule of thumb, the height of a fence should be at least four fifths of the withers of the largest horse in the pasture," continues Raulf.

**(AKO: we recommend installing the top line of the conductor material only 10 % under the height of the withers of the largest horse.)** You should also consider which horses or ponies are in the pasture. The withers rule of thumb, for example, doesn't help much in the

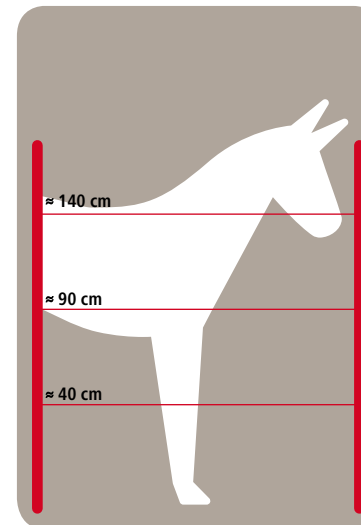
case of show jumpers or sports ponies, as they jump much higher as part of their sport. If you operate mixed grazing on your paddock, you must have a fence that suits all the animals in it. Fences also have to be adapted for stallions and foals. Yet correctly determining the precise fence height is not so easy. Not only do the horses in the pasture play a role, but also the nature of the pasture itself. "Hardly any horse owners take the topography of the pasture into account when building a fence. The height of the fence is usually measured directly on the fence post. However, the horse would probably usually jump from about a meter away from the fence. Even small irregularities in the ground would give the horse extra height," explains expert Georg W. Fink.

### AKO tip:

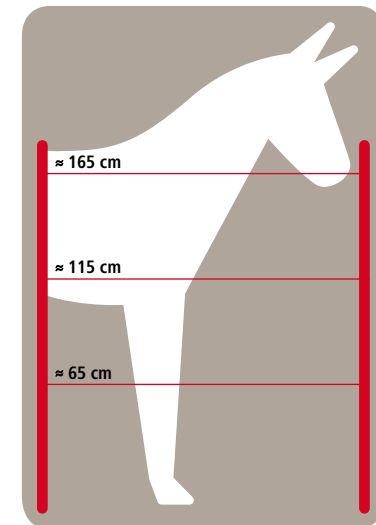
Note irregularities in the ground when determining fence height.



### Small horses



### Large horses





### 01 | Fence Tape

When it comes to semi-permanent fences, the most-used option is 40 mm tapes due to their high visual barrier. 40 mm tapes are often combined with 20 mm tapes or the fence rope.



### 02 | Fence Rope

Fence ropes are also considered to be semi-permanent fencing. In most cases, rope is used in combination with a 40 mm fence tape.



### 03 | Premium Horse Wire

The permanent fence with AKO Premium Horse Wire is the ultimate permanent horse fence! The 2.5 mm thick steel wire coated with black and white plastic not only provides an extremely strong mechanical barrier for horses, it is also extremely long-lived.

### General

Anyone who has horses knows how important a pasture fence is. The fencing for a pasture must be as stable and secure as possible. It has to be **sufficiently high and visible** with a deterrent effect. Durability and, not least, the costs of installation and maintenance also play a role in selecting a fence. Horses must not be injured by fences. Fences that combine **good visibility, mechanical stability** and a **psychological deterrent (electric fence)** are particularly escape-proof and cause very few injuries. We want to give you an overview of different types of fences and practical tips on building fences in this brochure.

A permanent fence is a permanent electric fence system that is installed once in terms of the posts and is not intended to be moved temporarily. Mobile plastic or metal posts can be used if required for internal enclosures.

### When horses escape

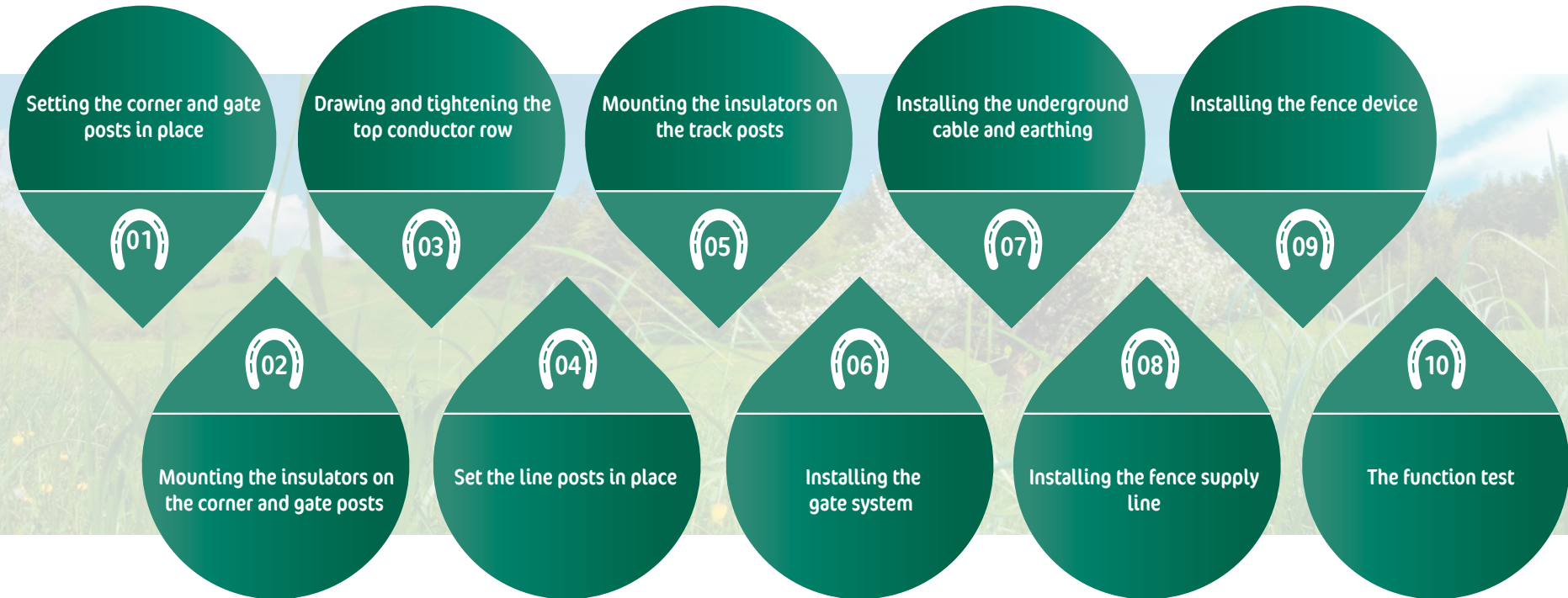
A study by the Weihenstephan University of Applied Sciences demonstrates that things outside the pasture were responsible for most pasture escapes. Even simple things like low-flying aircraft or unusual agricultural machines can panic the horses. Horses escape more often the further the pasture is located from the stables.

A survey conducted by the University of Vienna of 161 horse farms concluded that 76 per cent of these operations have had to recapture escaped horses. Breaking out of the pasture was the most-cited reason for this. Most cases of horses escaping were easily resolved for everyone involved. In 16 per cent of the cases investigated by the Viennese scientists, however, the horse, at least, was injured. Cases of personal injury may be rare, but all the more devastating when they do occur as they mainly involve horses colliding with cars on the road.





## 10 steps to your permanent fence!



## AKO OctoWood wooden post

With its 8 sides, the wooden post with ingenious octagonal profile of pine wood (*Pinus Sylvestris*) enables flexibility when fitting insulators. The most commonly used fence post is available in different lengths as well as different diameters, allowing it to be used in any fence system. Pine wood is not a hardwood and is therefore easy to work with.

Item no.	Item	Length	Ø
441828	Corner/Gate Post	250 m	140 mm
441823	Track Post	200 m	80 mm
441824	Track Post	225 m	80 mm
441825	Track Post	200 m	100 mm
441826	Track Post	225 m	100 mm

\*other post lengths available

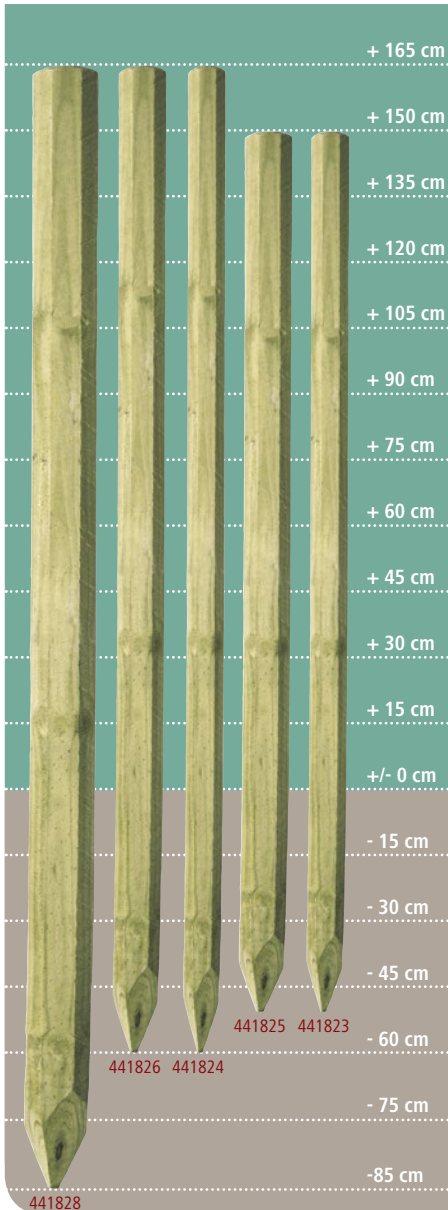


### Heartwood

- does not have to be waterproofed
- contains the natural fungus inhibitor "pinosylvin"
- with resin channels throughout
- "dead" wood
- gives the post rigidity

### Sapwood

- only the sapwood part is waterproofed
- the membrane of the wood fibre cell is coated in a copper sulphate layer
- waterproofed with Wolmanit CX in a pressure tank process



## The T-Post metal post

The green and white painted T-Post metal posts have a distinct advantage in difficult terrain (e.g. stony ground) in particular.

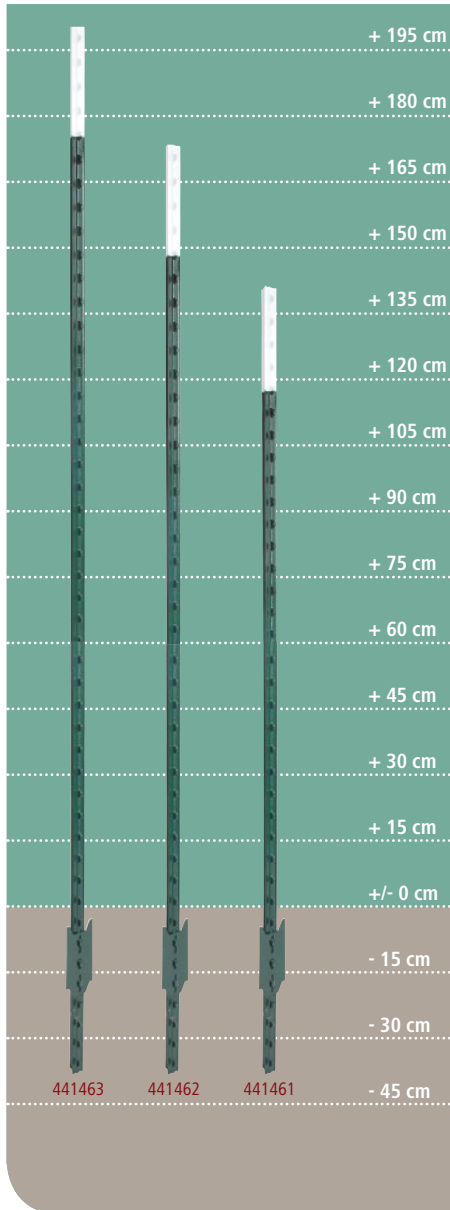
Their small cross-section means the posts are quick and easy to drive into the ground using a ram. They boast long life and stability and, through the special click-on insulators required, high flexibility when it comes to attaching the conductor material.

There are insulators for the T-Post range that, for example, are suitable to ropes and tapes and can be easily clipped on without using tools.

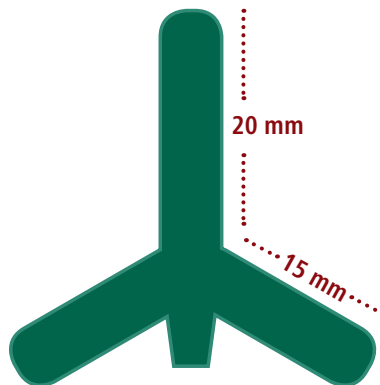
The posts are available in various lengths and have solid nubs every 5.5 cm along their entire length for attaching the insulators.

**AKO tip:**

We recommend using a 30 cm longer T-Post for each corner post. The corner and gate posts must be able to withstand the high tensile forces of the conductor material in a fence system. By choosing longer posts at these posts, you prevent the posts becoming lopsided.



T-Post profile



Item no.	Item	Length <sup>1</sup>
441461	T-Post Metal Post	182 cm
441462	T-Post Metal Post	213 cm
441463	T-Post Metal Post	240 cm

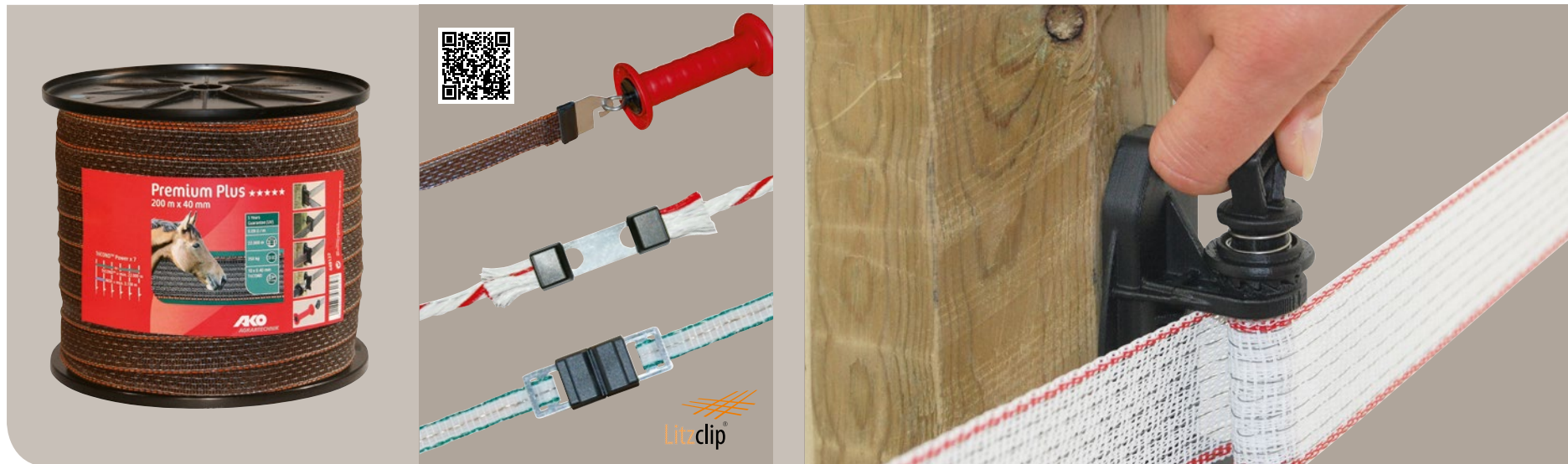
\*other post lengths available

## General

Electric fences do not deter horses through their mechanical barrier (solid fencing), but instead through their psychological effect – the electrical pulse.

As horses are flight animals, they have to be able to see the fence well, as they can otherwise run into the fence or even break through it. The deterrent effect relies on the fact that the animals “know” there is electricity in the fence.

Always use clearly visible conductor tapes (40 mm tapes are ideal) with high conductivity (= low resistance) as a component. In no circumstances should only thin wire or one wire be used. It is also important that horses do not injure themselves on contact with the fence.



### AKO tip 1:

When selecting the conductor material, always note the resistance in ohm/m. Figures in the range of 0... are ideal – e.g. 0.3... ohm/m

### AKO tip 2:

Never knot your conductor material! Use stainless steel AKO Litzclip(R) conductor connector – for the gate handle and gate insulator, too. **IMPORTANT:** Always use stainless steel connectors when installing copper conductors.

### AKO tip 3:

Always keep your fence conductor material properly tensioned. Slack ropes and tapes increase the risk of injury and have a reduce life span due to the effects of wind or snow.

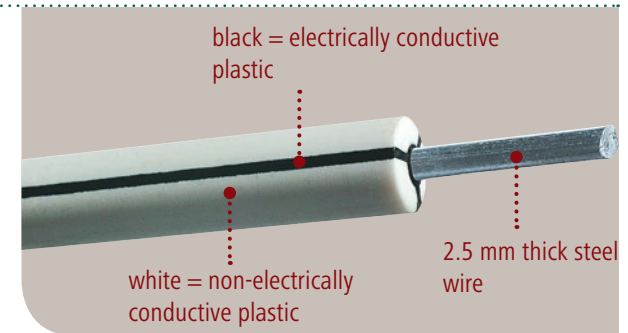
## The pasture must be visible!

### AKO Premium Horse Wire

This conductor wire offers a very high mechanical barrier combines with high electrical conductivity. An internal 2.5 mm steel wire is coated with conductive plastic. Its round, smooth surface (8 mm outer diameter) prevents cuts to the horse.

AKO offers a 10-year product warranty on Premium Horse Wire.

This conductor wire is suitable for long-term planned fence systems and requires special care when setting up the posts due to the high tensile forces.

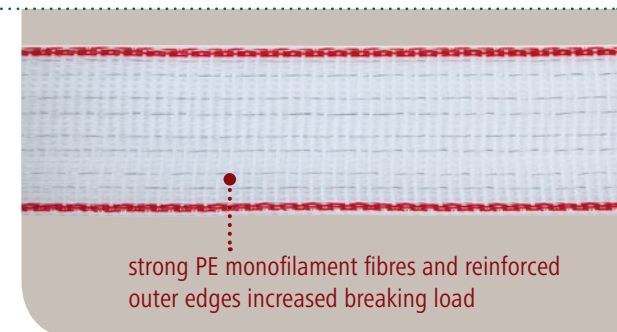


### AKO Fence Tapes

...provide ideal security for horses – especially the 40 mm wide tapes.

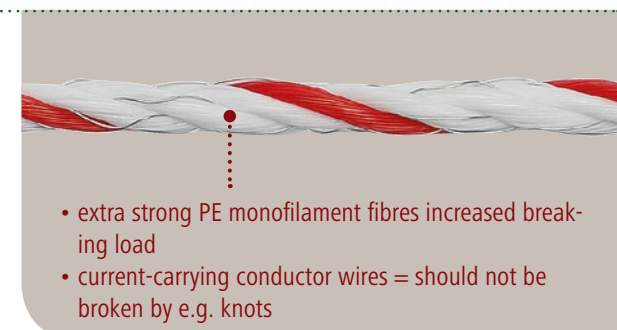
It is important to ensure the tapes are always fully tensioned and do not sag.

The lower the specified resistance in ohm/m on the tape roll, the more electricity flows through the fence to the animal.



### AKO Fence Ropes

...are used where adverse weather conditions such as wind are commonplace. Ropes have also been shown to be less sensitive in winter snow. Ropes are somewhat easier to install yet offer lower visibility than tapes. The lower the specified resistance in ohm/m on the rope roll, the more electricity flows through the fence to the animal.



## Fence Tape and Fence Rope ... the most widely installed conductor materials

\* other conductor material products are available



### AKO PremiumLine series

- fence length of up to 10,000 m
- 5 year warranty on UV stability
- excellent conductivity with an extremely robust tape construction
- used for: very long fence systems

Item no.	Item	Length	Width	Colour	Resistance
441535	Tape	200 m	38 mm	white/green	0.13 ohm/m
441564	Rope	200 m	6.5 mm	white/green	0.11 ohm/m



### AKO TOPLine series

- up to 3,000 m long fences
- 4-year warranty on UV stability
- optimised price/performance ratio The lower-cost version with excellent conductivity.
- used for: long fences

Item no.	Item	Length	Width	Colour	Resistance
449554	Tape	200 m	40 mm	white/red	0.187 ohm/m
449532	Rope	200 m	6 mm	white/red	0.311 ohm/m
449583	Tape	200 m	30 mm	neon yellow/blue	0.467 ohm/m



### AKO EconomyLine series

- up to 500 m long fences
- 3-year warranty on UV stability
- the lowest-cost solution
- used for: ideal for smaller paddocks and temporary sections

Item no.	Item	Length	Width	Colour	Resistance
44557	Tape	200 m	40 mm	white	5.50 ohm/m
44531	Rope	200 m	6 mm	white	3.87 ohm/m

## AKO Premium Horse Wire ... one of the most durable electrifiable horse fence systems currently on the market!

Premium Horse Wire provides a very high mechanical barrier for your horse thanks to its 2.5 mm thick steel wire inside the plastic coating. The electrically conductive black plastic and the non-conductive white plastic protect the interior steel wire from the weather and resists a breaking load of up to 800 kg.

### Product details:

- length: 250 m
- breaking load: 800 kg
- steel wire diameter: 2.5 mm
- Premium Horse Wire outer diameter: 8 mm
- colour of the non-conductive plastic: white
- colour of the outer conductive plastic: black
- very high conductivity: 0.035 ohm/m
- high mechanical barrier through 2.5 mm thick steel wire
- extremely weather-resistant (cold, heat, humidity)
- very good visibility due to high proportion of white and 8 mm diameter
- UV-stabilised PE covering

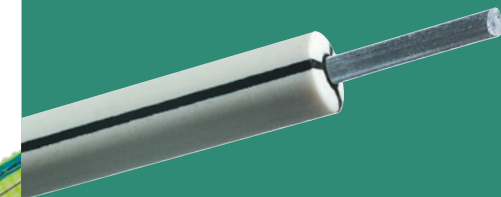
### AKO tip:

Round and smooth surface does not cause cutting injuries to horses.

We recommend integrating a row of 40 mm fence tape to improve visibility.



### Premium Horse Wire



- up to 60 km long fences
- 10-year product warranty
- used for: permanent fence systems for long-term use, low-maintenance compared to tape and rope designs

Item no.	Length	Width	Colour	Resistance
44873	250 m	8 mm	white/black	0.035 ohm/m



AKO Premium Horse Wire – the horse fence for true connoisseurs



## Wooden posts and Premium Horse Wire

durable | high-quality | strong | secure



## Straight sections

### Insulator

The plastic stretch insulators are fixed in place using 2 wood screws and are only used to guide the Premium Horse Wire on the track. These insulators should not be under much tension.

### Track post\*

- item no. 441826: 100 mm x 225 cm
- post height above ground: 165 cm
- drive-in depth: 60 cm



Item no. 441396

\* please align the top conductor material row to the withers height of the largest horse in the pasture

## Corner

### Insulator

These corner insulators come in a 3-pack and can be quickly and easily attached to the corner post using the integrated stainless steel wire rope loop. They are fixed to the outside of the post using staples so that they stay in position.

### Corner and support post\*

- corner post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm
- support post crossbeam: 100 mm x 200 cm (item no. 441825)



Item no. 446507

## Fence start / T-junction start

### Insulator

Installing the fence start is done in just the same way as the start of a T-junction in the middle of a fence system. This "horizontal" de-tensioning set comprises 4 functions in one: post attachment using the integrated stainless steel wire cable loop, post insulation using the white insulation, the temperature equalisation spring to equalise temperature spikes and the gear-wire tensioner for tensioning the conductor material. The Easy-Loop including insulating hose can also be used for stopping at the end.

### Tension and support post\*

- tension post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm
- support post crossbeam: 100 mm x 200 cm (item no. 441825)



Item no. 446509

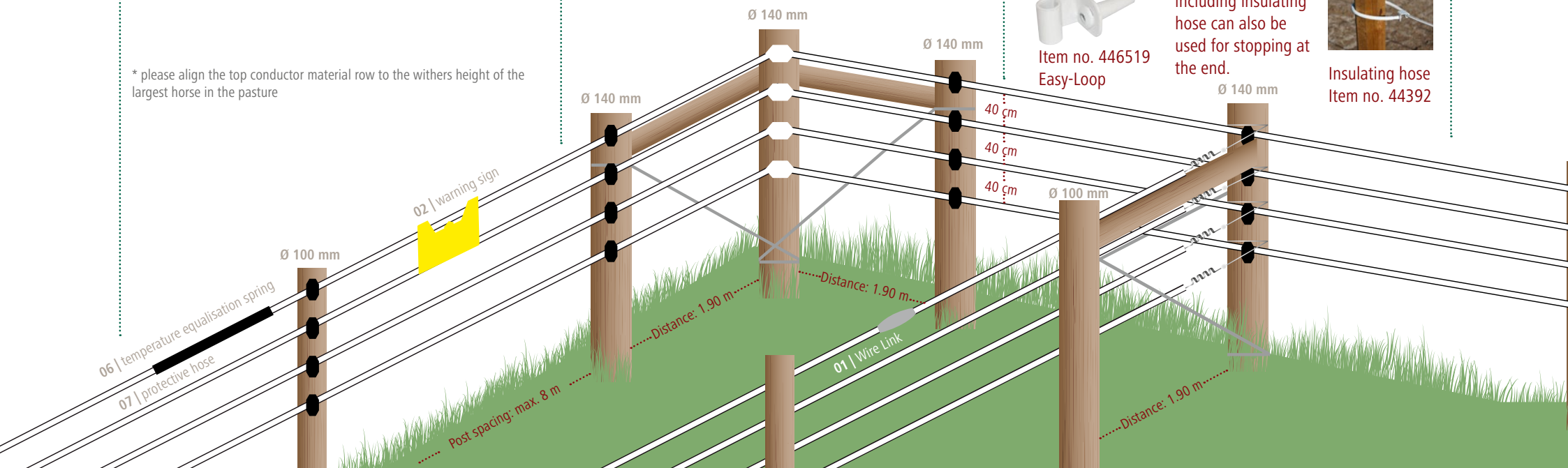


Item no. 446519  
Easy-Loop

The Easy-Loop including insulating hose can also be used for stopping at the end.



Insulating hose  
Item no. 44392



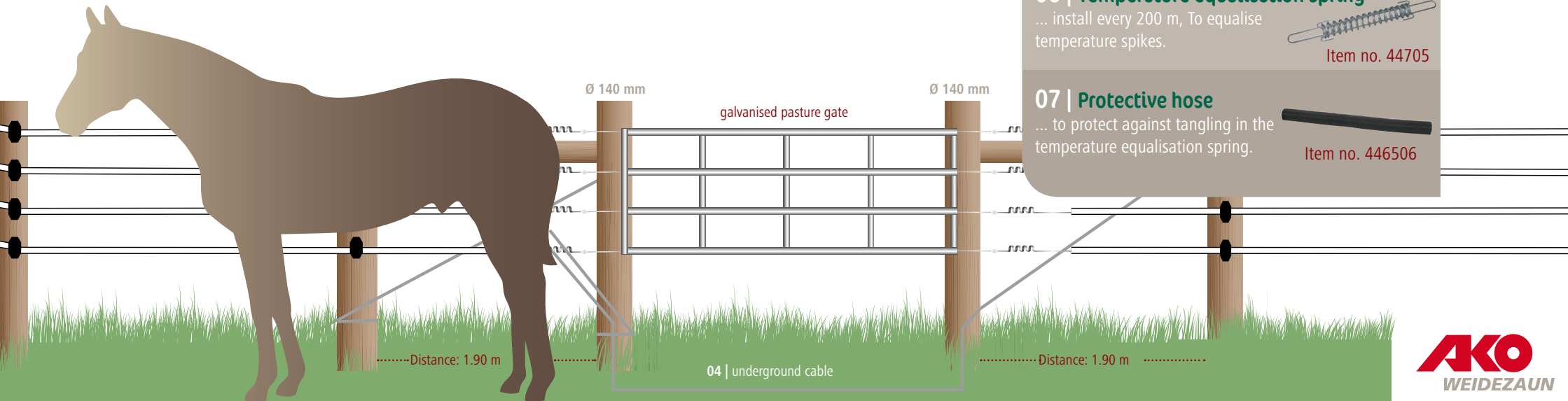
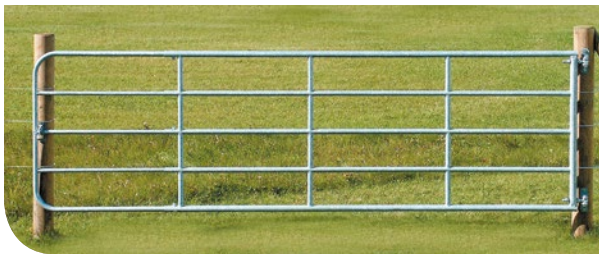
## Gate

### Insulator

When installing a galvanised pasture gate, the gate posts are seen as fence starter posts. The fence starter set, item no. 446509, is used here to hold and tension the Premium Horse Wire on both sides. Wire terminal item no. 441225 is used to attach the underground cable to the post and/or the Premium Horse Wire.

### Gate and support post\*

- gate post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm
- support post crossbeam: 100 mm x 200 cm (item no. 441825)



### 01 | Wire Link

... for connecting 2 Premium Horse Wire ends.



Item no. 442367

### 02 | Warning sign

... for attachment at regular, clearly visible intervals.



Item no. 446513

### 03 | Wire terminal

... for connecting the individual conductor materials every 200-400 m.



Item no. 441225

### 04 | High voltage underground cable

... for underground transmission of the current.



Item no. 44819

### 05 | Clamping lever for gear wheel wire tensioner

... for regular tensioning of the Premium Horse Wire.



Item no. 441328

### 06 | Temperature equalisation spring

... install every 200 m, To equalise temperature spikes.



Item no. 44705

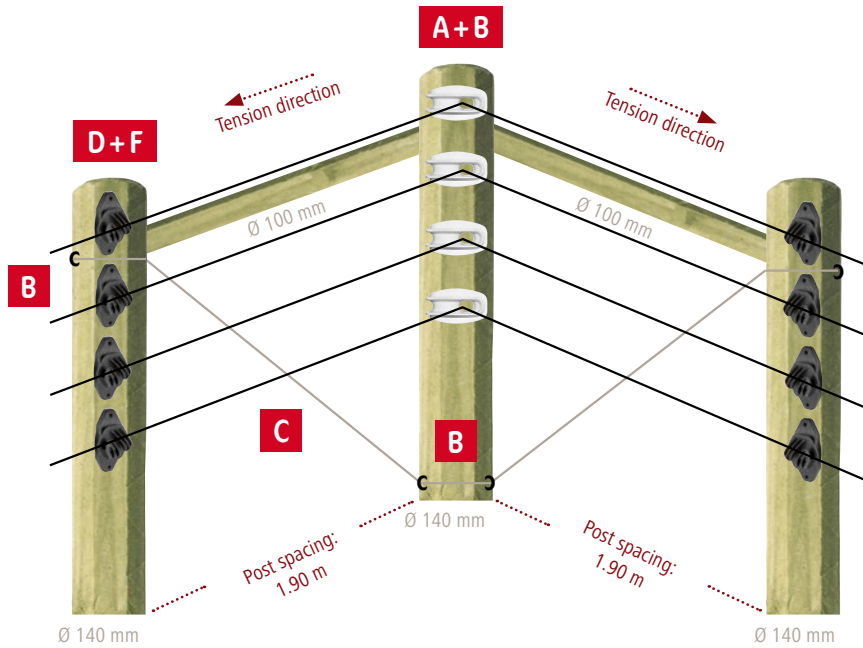
### 07 | Protective hose

... to protect against tangling in the temperature equalisation spring.

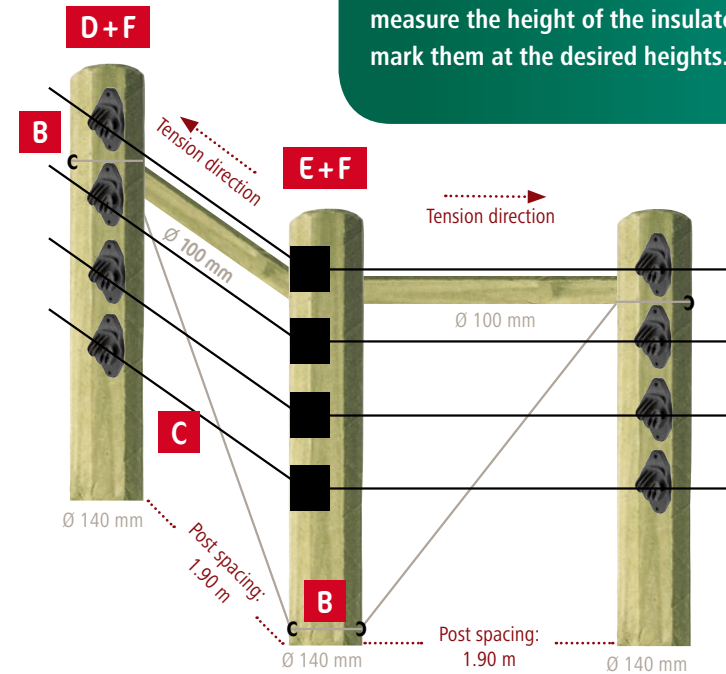


Item no. 446506

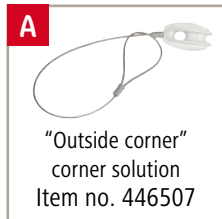
### Corner | option 1 | "outside corner"



### Corner | option 2 | "inside corner"



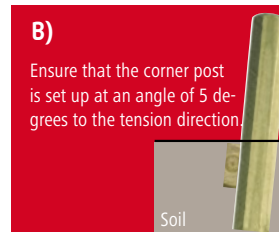
**INFO:**  
measure the height of the insulators and mark them at the desired heights.



## Corner structures with crossbeams ... a little more detailed, a lot more durable!

### 1. Setting the corner and gate posts in place (item no. 441828 – OctoWood wooden post 140 mm x 250 cm)

You will need 3 of the posts mentioned above to install both corner variants. For large horses, we generally recommend a fence height of 160 cm above the ground, this means the post should protrude 165 cm from the ground and thus be driven 85 cm into the ground.



#### Options for setting the corner structure in place

A) H-structure, see option 1/fig. A (AKO recommendation)

When setting both the support posts in place using a pile driver or similar, ensure that they are not driven in more than 1.90 m away from the corner post.

B) driving in using a pile driver or similar without pre-drilling + burying a support hardwood plank or support beam approx. 50 cm in the tension direction directly at the post

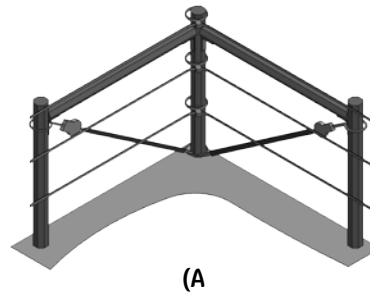
C) digging a hole using a post hole digger (Ø 30 cm), setting the post in place, filling the hole at least halfway with concrete and the rest with soil and compressing

### 2. Fixing the crossbeam in place (item no. 441825 – OctoWood wooden post 100 mm x 200 cm)

Use 2 of the narrower posts with a diameter of 10 cm to support the corner post. The tip of the post should be sawn off after 190 cm for this.

**IMPORTANT:** Match the length of the crossbeam to the actual distance between the corner and support posts.

Now clamp the posts horizontally, centrally between the corner posts and support posts and fix them in place using the 90° bracket and the screws from the diagonal de-tensioning set (item no. 446508).



### 3. De-tensioning the corner and support posts (item no 446508 – “diagonal” de-tensioning set)

Once the corner post structure is in place, the two diagonal de-tensioning sets should be

installed.

1. The first step is to mount the stainless steel wire rope using the integrated loop just below the metal bracket on the support post and fix the position using a staple.



2. The second step is then to mount the gear wheel wire tensioner using the integrated loop at the very bottom of the corner post and fix the position using a staple.

3. Next, pull the white protective hose over the wire rope and fasten it with the wire tensioner. Using this tensioning, the corner post can withstand the high tensile forces of the Premium Horse Wire. This means the posts will not become crooked.

### 4. Installing the insulators on the corner post – option 1 (item no. 446507 – corner solution for Premium Horse Wire | 3 Pack)

The corner insulators are similarly easy to mount on the corner post using the wire rope loop. Simply take it once around the post and then pull the white strain insulator through the loop. Done! Here, too, the respective positions are fixed in place using the staples.



### 5. Installing the insulators on the corner post – option 2 (item no. 441284 – corner sleeve insulator)

The sleeves are fixed to the post using two wood screws or two nails. The integrated pinlock system means the Premium Horse Wire is simply laid in and held in place with the pins.

### 6. Installing the insulators on the support posts (item no. 441396 – Euro Cord rope insulator)

The support posts are considered to be just like normal track posts here. The Premium Horse Wire “only” has to be guided by the insulator here.

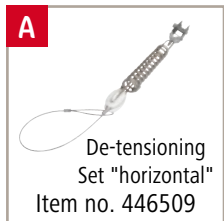
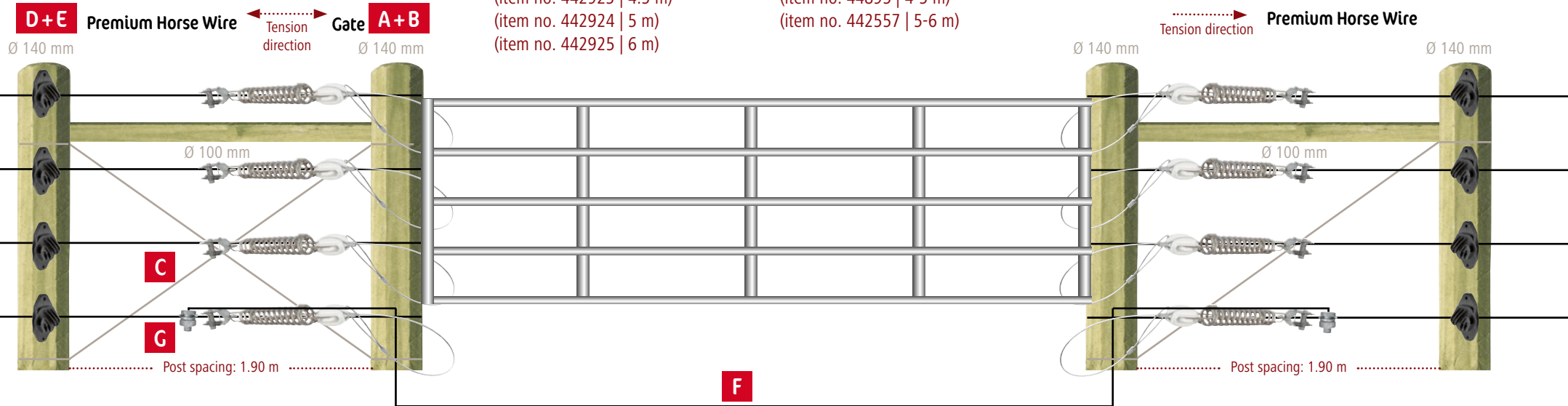
## Gate | fence starter

rigid pasture gates incl. mounting set  
 Height: 100 cm  
 (item no. 442920 | 3 m)  
 (item no. 442921 | 3.5 m)  
 (item no. 442922 | 4 m)  
 (item no. 442923 | 4.5 m)  
 (item no. 442924 | 5 m)  
 (item no. 442925 | 6 m)

adjustable pasture gates incl. mounting set  
 Height: 110 cm  
 (item no. 44893 | 1-1.7 m)  
 (item no. 44892 | 2-3 m)  
 (item no. 44891 | 3-4 m)  
 (item no. 44895 | 4-5 m)  
 (item no. 442557 | 5-6 m)

**AKO tip:**

Pull the underground cable through a plastic protection hose to protect it from external damage.



## Gate design with crossbeam...preventing unstable gates and crooked posts!

### 1. Setting the gate and support posts in place (item no. 441828 – OctoWood wooden post 140 mm x 250 cm)

You will need 4 of the posts mentioned above to install a galvanised pasture gate. For large horses, we generally recommend a fence height of 160 cm above the ground, this means the post should protrude 165 cm from the ground and thus be driven 85 cm into the ground.

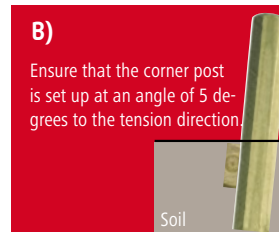
#### Options for setting the corner structure in place

A) H-structure, see option 1/fig. A (AKO recommendation)

When setting both the support posts in place, ensure that they are not driven in more than 1.90 m away from the corner post.

B) driving in using a pile driver without pre-drilling + burying a hardwood plank to support the post in the tension direction directly at the post

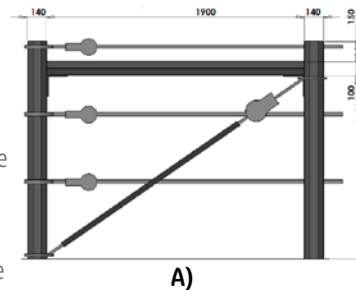
C) digging a hole using a post hole digger (Ø 30 cm), setting the post in place, filling the hole at least halfway with concrete and the rest with soil and compressing



### 2. Fixing the crossbeam in place (item no. 441825 – OctoWood wooden post 100 mm x 200 cm)

Use the narrower posts with a diameter of 10 cm to support the two gate posts. The tip of the post should be sawn off after 190 cm for this.

IMPORTANT: Match the length of the crossbeam to the actual distance between the gate and support posts. Now clamp the posts horizontally, centrally between the gate posts and support posts and fix them in place using the 90° bracket and the screws from the diagonal de-tensioning set (item no. 446508).



### 3. De-tensioning the corner and support posts (item no. 446508 – “diagonal” de-tensioning set)

Once the two H-structures are in place, it is time to install the 3 diagonal de-tensioning sets.

1. The first step is to use the integrated stainless steel wire rope loop to mount the gear wheel wire tensioner just below the metal bracket on the support post and fix the position using a staple.

2. The second step is then to mount the stainless steel wire rope using the integrated loop at the bottom of the corner post and fix the position using a staple.

3. Next, pull the white protective hose over the wire rope and fasten it with the wire tensioner.

4. Next, tension the diagonal bracing using the clamping level, item no. 441328, or a size 15 fork spanner.



### 4. De-tensioning/mounting on the fence start/end (item no. 446509 – “horizontal de-tensioning set)

Installing the fence start is done in just the same way as the start of a T-junction in the middle of a fence system. This “horizontal” de-tensioning set comprises 4 functions in one: post attachment using the integrated stainless steel wire cable loop, post insulation using the white insulation, the temperature equalisation spring to equalise temperature spikes and the gear-wire tensioner for tensioning the conductor material. Fix the wire rope loop in place using a staple.

### 5. Installing the galvanised pasture fence gate (item no. 44891 – adjustable pasture gate, 3-4 m, height: 110 cm)

Mount the pasture gate in such a way that the upper edge of the gate forms a line with the top line of the Premium Horse Wire. Mounting on the fence inner: the gate should not be able to be “pressed open” to the outside by a horse leaning against it. Mounting on the fence outer: the gate is not in the way when retrieving a horse.

### 6. Installing the underground cable (item no. 44819 – underground cable 50 m | 2.5 mm)

Cut the underground cable in such a way that it can easily go from gate post to gate post under the soil + another 3 m. Fix the cable to the posts using the staples and connect it with the plain wire of the Premium Horse Wire using the wire terminal.



Fence tape – clearly visible | flexible | available in different colours



## Wooden posts and fence tape visual barrier | high-quality | flexible



## Straight sections

### Insulator

The plastic track insulators are fixed using 2 wood screws and have different functions.

Insulator item no. 441290 is used for rough terrain.

Its clamping function means it tensions and holds the tape, preventing it from bending.

Insulator item no. 44340 is used on straight stretches. It only guides the tape and keeps it on track.



### Track post\*

- item no. 441826:  
100 mm x 225 cm
- post height above ground: 165 cm
- drive-in depth: 60 cm

Item no. 441290

Item no. 44340

### AKO tip:

We recommend shortening the post spacing in windy areas. This means the tape is held firm or guided by the insulators more often, reducing exposure to the wind.

Ø 100 mm

## Corner

### Insulator

The Profi corner and strain insulator (item no. 44350) is installed both in corners and at fence starts and ends in order to tension and hold the tape. It is also fixed directly on the wooden post using 2 wood screws.

Unlike the Profi insulator, the Cavallo corner insulator (item no. 441376) is screwed directly into the post without wood screws. This insulator flexibly guides the tape through the corner.



Item no.  
443501

### Corner and support post\*

- corner post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm

Item no.  
441376  
Ø 140 mm



## T-junction

### Insulator

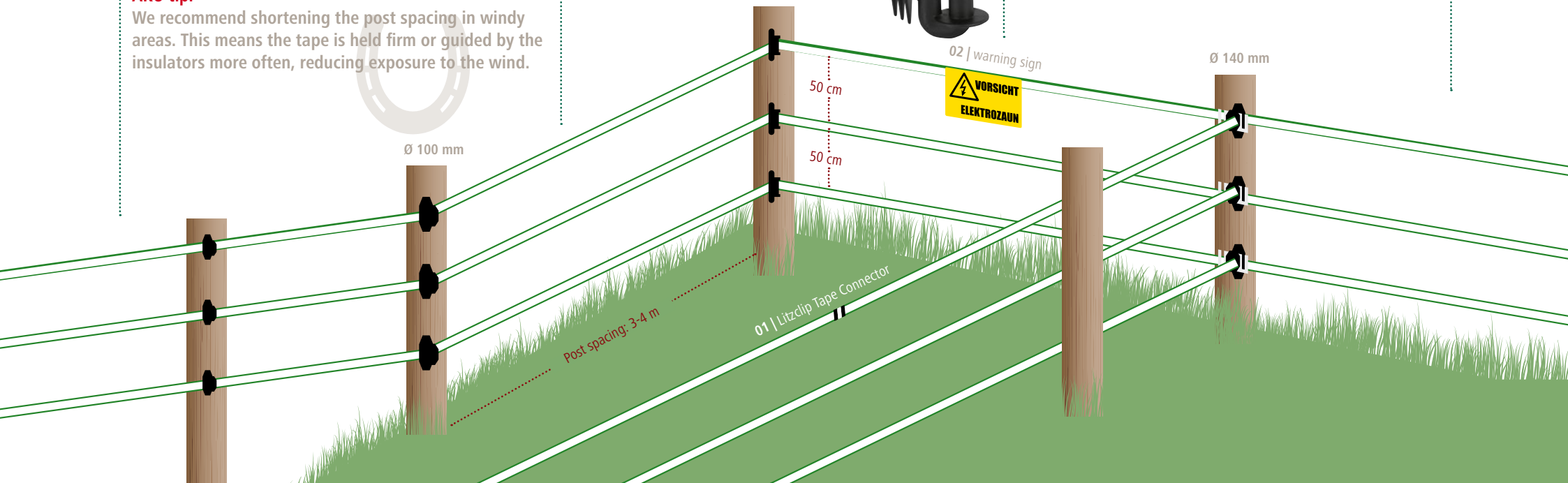
This insulator is the same as item no. 44350, just with a metal plate. Using this plate, you can either hang gate handles or construct pasture junctions.

### Tension post\*

- tension post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm



item no. 44355/041



## Gate

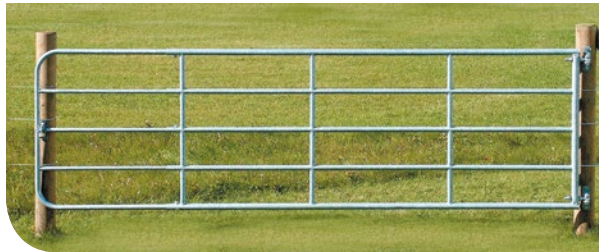
### Insulator

The insulator selection depends on which gate system is installed.

The individual gate structures are shown in more detail on the following pages.

### Gate post\*

- gate post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm

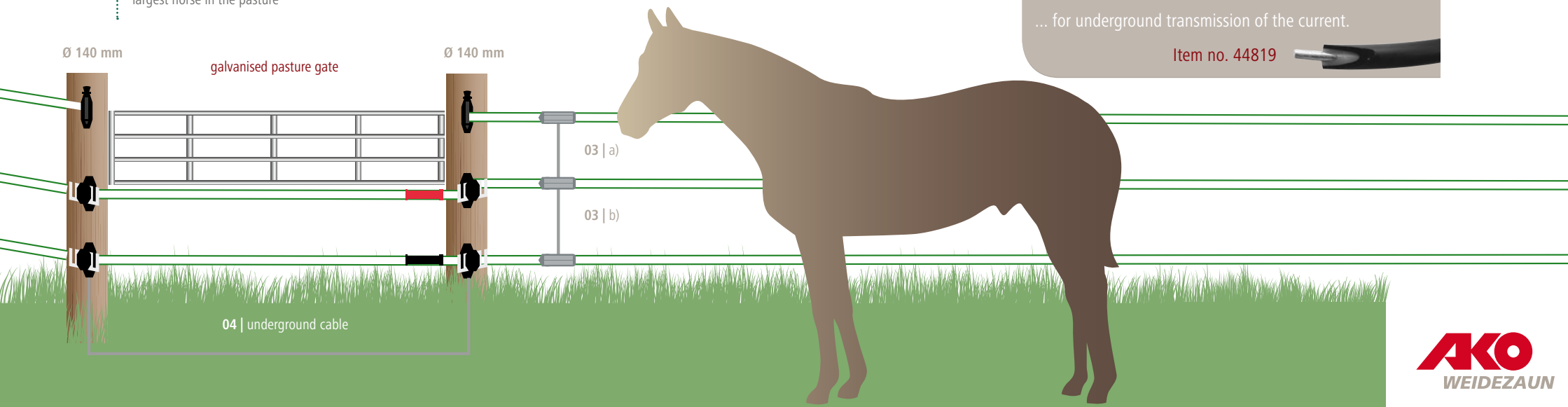


### AKO tip:

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical.

Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.

\* please align the top conductor material row to the withers height of the largest horse in the pasture



AKO tip: ALWAYS affix the conductor material on the fence inner.

### 01 | Litzclip® tape connector 40 mm ...

...for connecting 2 tape ends.

Item no. 442002/051



### 02 | Warning sign

... for attachment at regular, clearly visible intervals.

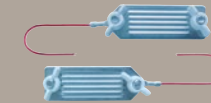


Item no. 446513

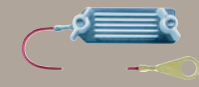
### 03 | Fence connector cable

... for cross-connecting the tape rows every 200-400 m.

- 3 a) connector cable... from row 1 to 2
- 3 b) connector cable ... on every additional row



Item no. 44616/011



Item no. 44617/011

### 04 | High voltage underground cable

... for underground transmission of the current.

Item no. 44819



## The gate handle with tape connector ... simple but perfect!

You will need 2x gate handle insulator item no. 44355 per tape row for the gate system with gate handle.

The tape is held and tensioned by the insulator on the right side of the image and on the left side, the gate handle is hung in the metal plate.

### AKO tip:

Hang the gate handle in the metal plate on the other side when opening the gate. This prevents knotting and reduces soiling to the tapes.

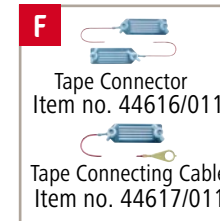
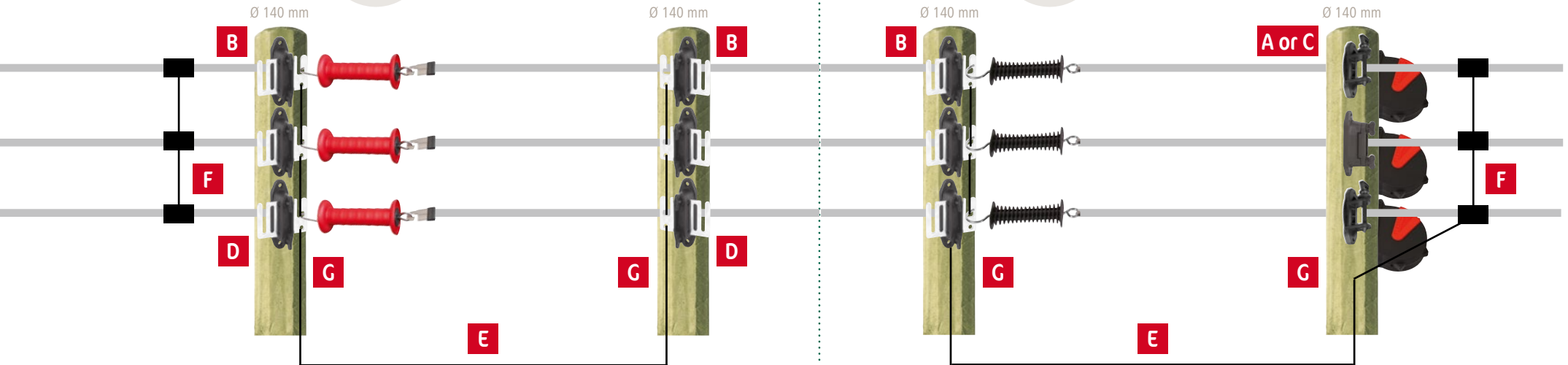


## AKO FlexiGate tape ... the clean solution!

The FlexiGate is fixed directly to the wooden post using the 2 supplied wood screws. Always attach the FlexiGate to the fence outer. This prevents horses from being able to destroy the housing. Electrify the rolled tape using a connector cable between FlexiGate and tape.

### AKO tip:

Guide the gate handle back to the housing – do not simply let it go.



## The galvanised pasture gate ... stable and durable!

rigid pasture gates incl. mounting set

Height: 100 cm

(item no. 442920 | 3 m)

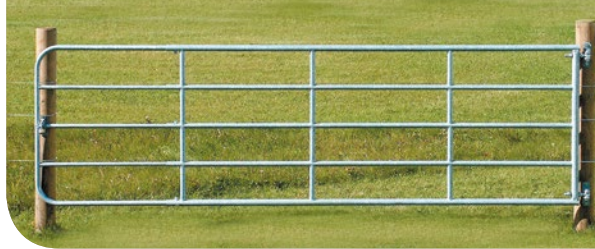
(item no. 442921 | 3.5 m)

(item no. 442922 | 4 m)

(item no. 442923 | 4.5 m)

(item no. 442924 | 5 m)

(item no. 442925 | 6 m)



adjustable pasture gates incl. mounting set

Height: 110 cm

(item no. 44893 | 1-1.7 m)

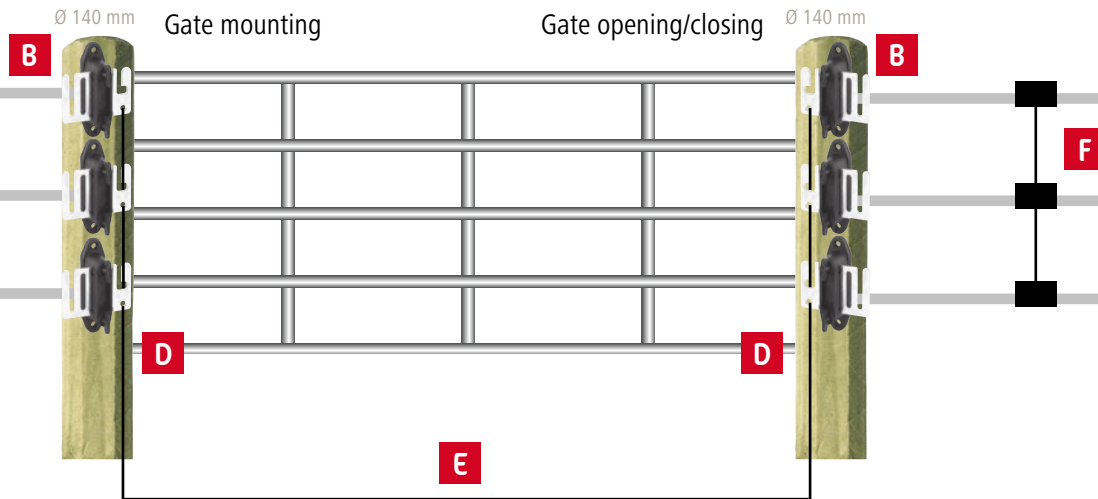
(item no. 44892 | 2-3 m)

(item no. 44891 | 3-4 m)

(item no. 44895 | 4-5 m)

(item no. 442557 | 5-6 m)

Tape tension direction ← ..... → Gate  
Tension direction



### AKO tip:

Mount the pasture gate in such a way that the upper edge of the gate forms a line with the top line of the fence tape.

### AKO tip:

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical. Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.

### Optional accessories

#### 01 | Swing-through lock

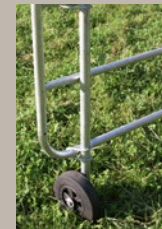
allows the gate to be opened in both directions.



Item no. 441025

#### 02 | Stabiliser

for easy opening and closing of the gate.



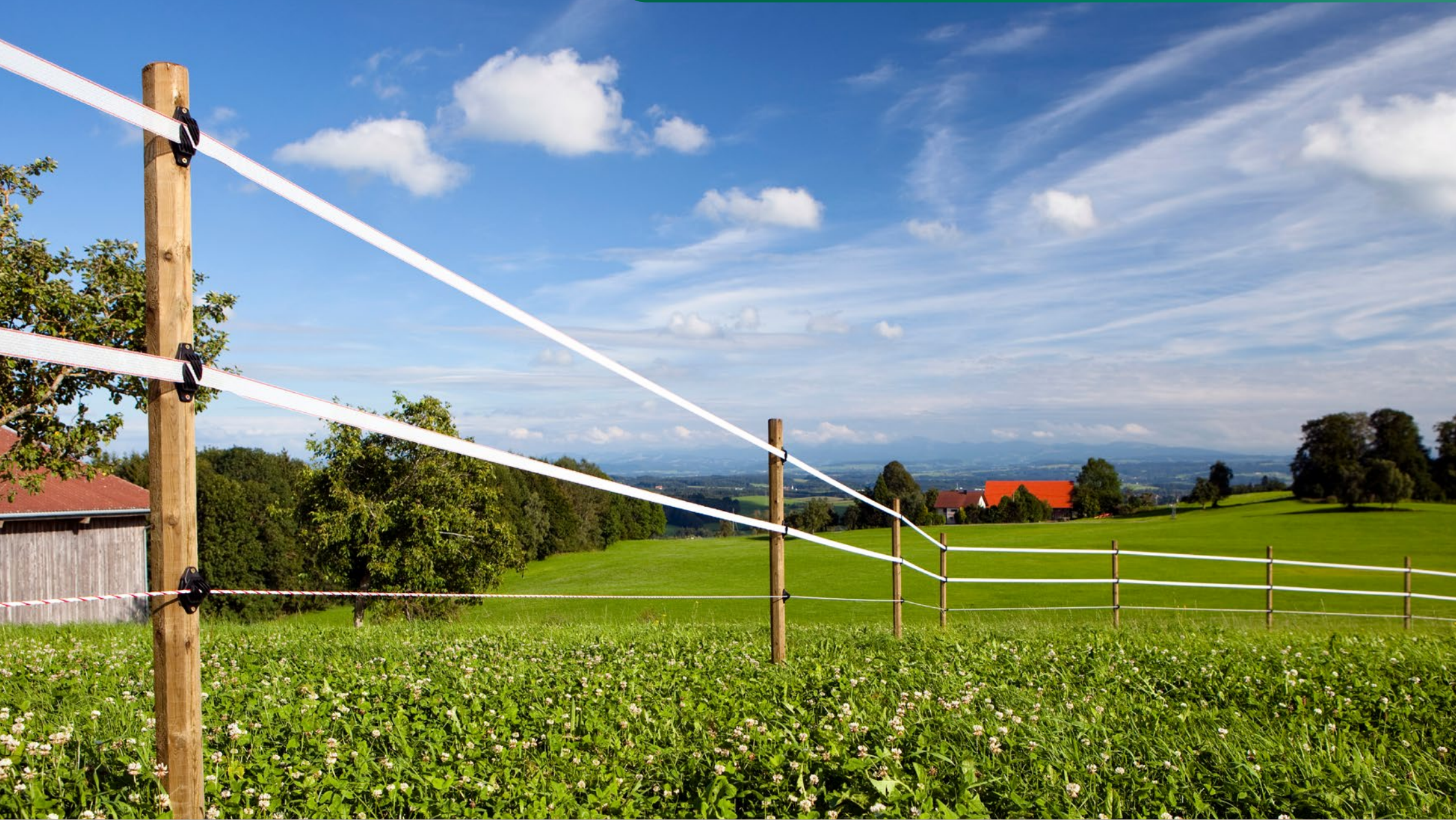
Item no. 442559

#### 03 | Electro set

for electrifying the pasture gate.



Item no. 441224



Fence rope – recommended in combination with fence tape

## Wooden posts and fence rope robust | simple | wind-resistant



## Straight sections

### Insulator

The plastic track insulators are fixed using 2 wood screws.

The only serve to guide the rope on the straight sections.

### Track post\*

- item no. 441826: 100 mm x 225 cm
- post height above ground: 165 cm
- drive-in depth: 60 cm

### AKO tip:

A fence rope can be tensioned more and is not as exposed to the wind as a fence tape.

This is why you can extend the spacing between posts

when installing a fence system with fence rope.



Item no. 441396

## Corner

### Insulator

The Super corner insulator is used in corners. The rope is simply guided around the insulator head done!

This guides the rope around the corner, keeping it flexible.

### Corner post\*

- corner post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm



Item no. 441330

## T-junction

### Insulator

The Vario Profi gate handle insulator not only enables a gate handle to be mounted, it also allows for smaller paddocks to be sectioned off. The conductor material is provided with optimum electrification throughout using the quick rope connector.

### Tension post\*

- tension post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm

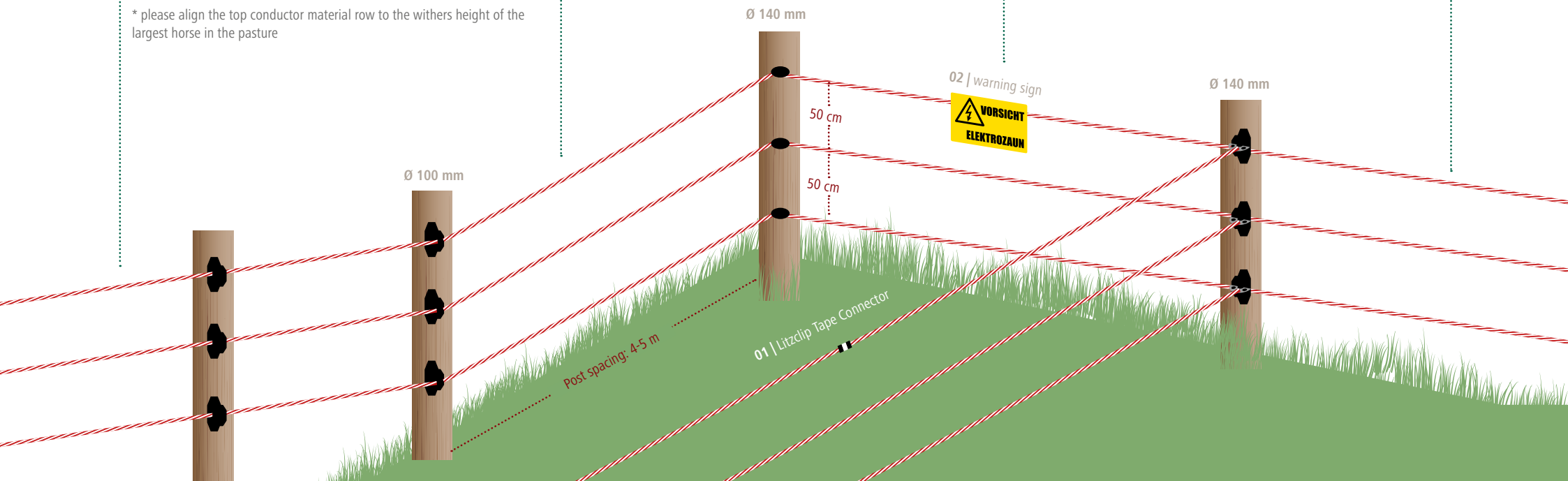


item no. 441209/041



item no. 446505/041

\* please align the top conductor material row to the withers height of the largest horse in the pasture





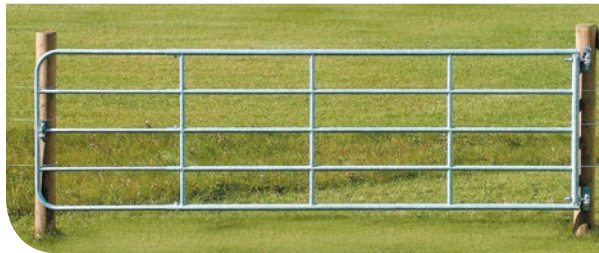
## Gate

### Insulator

The insulator selection depends on which gate system is installed.  
The individual gate structures are shown in more detail on the following pages.

### Gate post\*

- gate post: item no. 441828 – 140 mm x 250 cm
- post height above ground: 165 cm
- drive-in depth: 85 cm



### AKO tip:

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical.  
Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.



Item no. 44948



item no. 441299/011



E-Line 3-6m (item no. 44255/011)

E-Line 4.5-9m (item no. 442551/011)

**AKO tip:** ALWAYS affix the conductor material on the fence inner.

### 01 | Litzclip® rope connector 6 mm ...

... for connecting 2 rope ends.

Item no. 442004/051



### 02 | Warning sign

... for attachment at regular, clearly visible intervals.



Item no. 446513

### 03 | Fence connector cable

... for cross-connecting the tape rows every 200-400 m.

- 3 a) connector cable from row 1 to 2
- 3 b) connector cable on every additional row



Item no. 44629/011



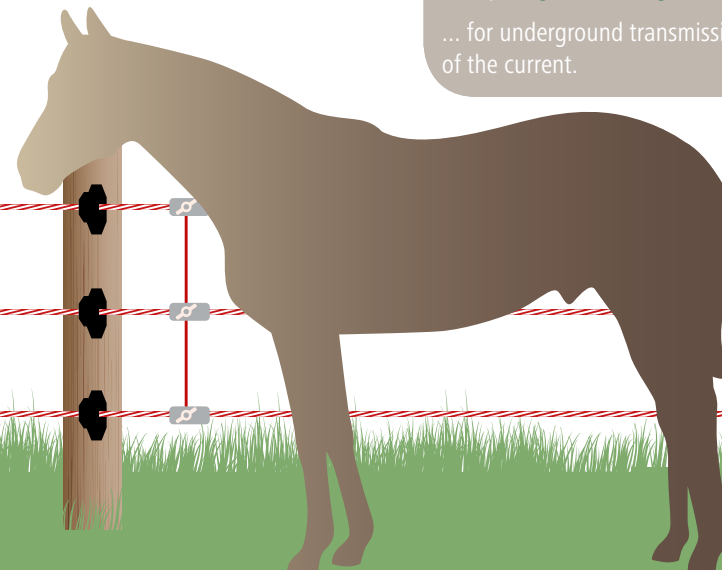
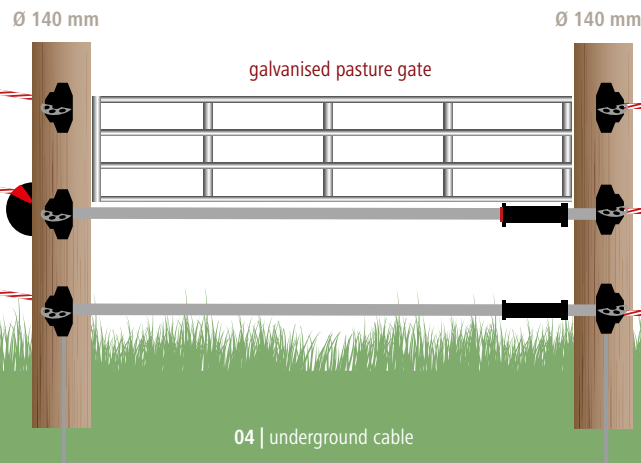
Item no. 44627/011

### 04 | High voltage underground cable

... for underground transmission of the current.



Item no. 44819



## The gate handle with rope connector ... simple but perfect!

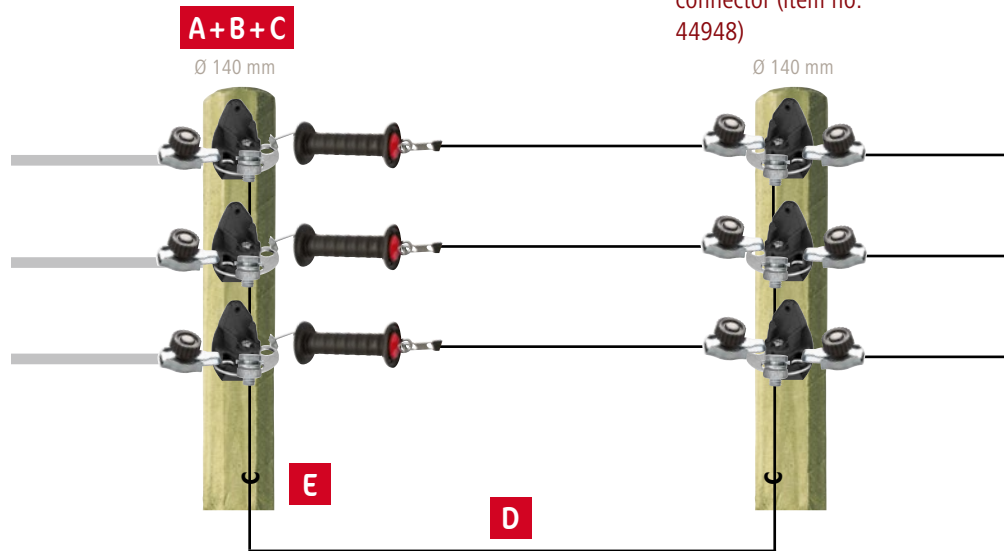
You will need 2x gate handle insulator item no. 446505/041 per rope row for the gate system with gate handle. The rope is fixed on the metal plate using a quick rope connector on the right side of the image. The gate on the opposite post is opened or closed using the gate handle.

### AKO tip:

Hang the gate handle in the metal plate on the other side when opening the gate. This prevents knotting and reduces soiling to the ropes.



Gate handle with rope connector (item no. 44948)



## AKO FlexiGate rope ... All in one!

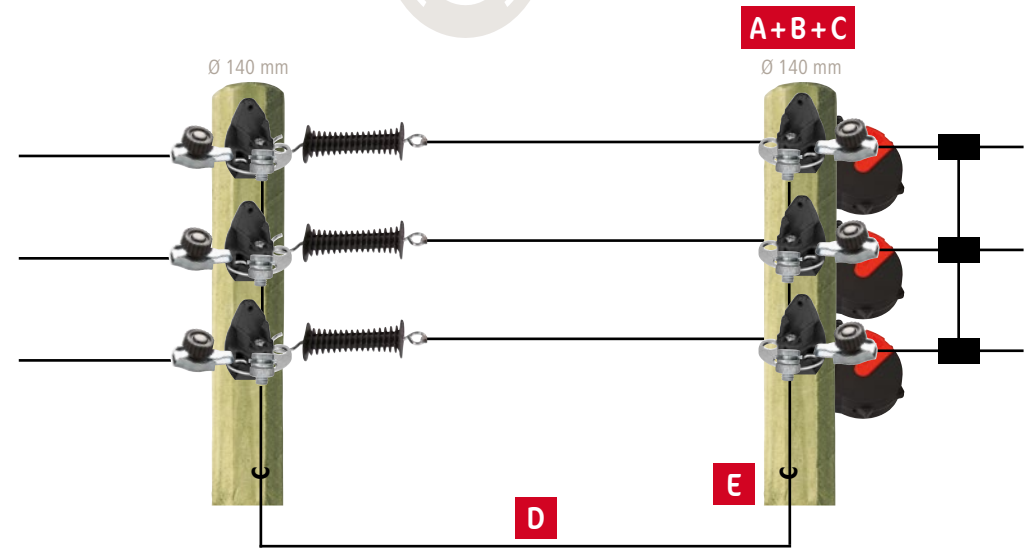
The FlexiGate is fixed directly to the wooden post using the 2 supplied wood screws. Always attach the FlexiGate to the fence outer. This prevents horses from being able to damage the housing. You electrify the tape in the FlexiGate using a connector cable between the FlexiGate housing and the fence conductor material.



FlexiGate with 6 mm rope - max. 7.5 m (item no. 441299/011)

### AKO tip:

Always guide the gate handle with the rope straight back when opening. This prevents uneven rolling.



## The galvanised pasture gate ... stable and durable!

rigid pasture gates incl. mounting set

Height: 100 cm

(item no. 442920 | 3 m)

(item no. 442921 | 3.5 m)

(item no. 442922 | 4 m)

(item no. 442923 | 4.5 m)

(item no. 442924 | 5 m)

(item no. 442925 | 6 m)



adjustable pasture gates incl. mounting set

Height: 110 cm

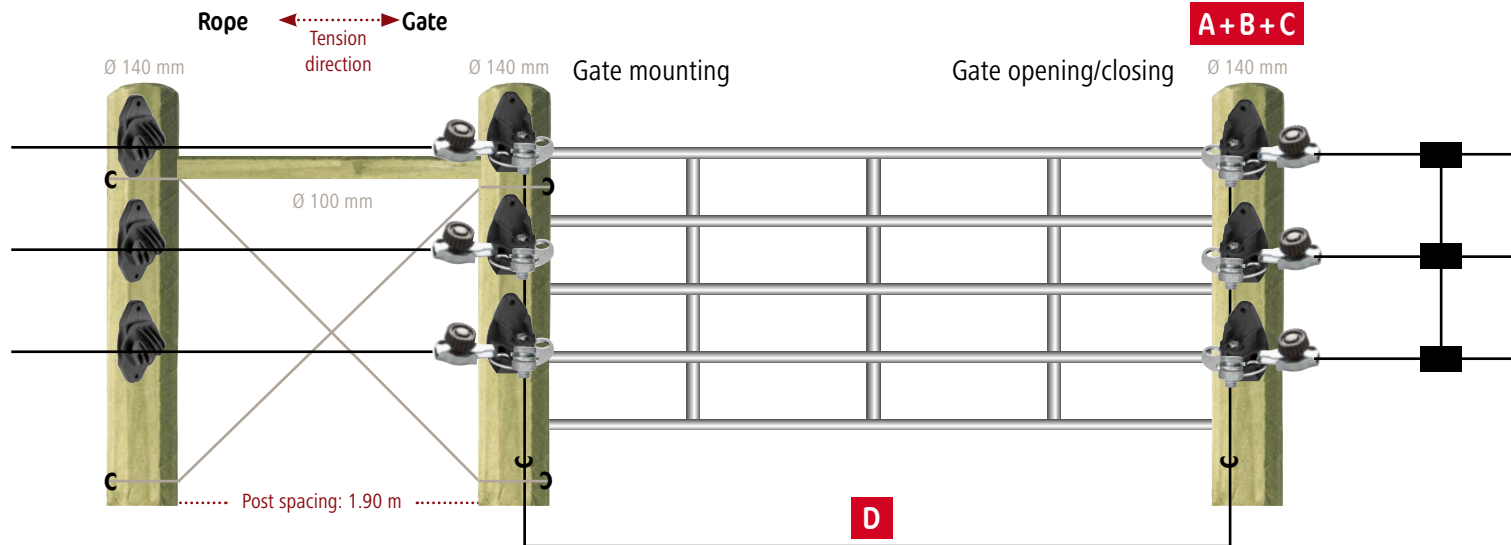
(item no. 44893 | 1-1.7 m)

(item no. 44892 | 2-3 m)

(item no. 44891 | 3-4 m)

(item no. 44895 | 4-5 m)

(item no. 442557 | 5-6 m)



**AKO tip:**

Mount the pasture gate in such a way that the upper edge of the gate forms a line with the top line of the fence rope.

### Optional accessories

#### 01 | Swing-through lock

allows the gate to be opened in both directions.



Item no. 441025

#### 02 | Stabiliser

for easy opening and closing of the gate.



Item no. 442559

#### 03 | Electro set

for electrifying the pasture gate.



Item no. 441224

**AKO tip:**

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical. Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.

## Installations in detail ... let's take a closer look!



## AKO E-Line ... Elastic and flexible to use!

The flexible E-Line gate system is installed over 3 gate posts. If the E-Line gate is opened, the gate handle stops at the centre post. If the gate is closed, the gate handle is hung on the supplied gate insulator.



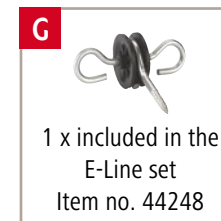
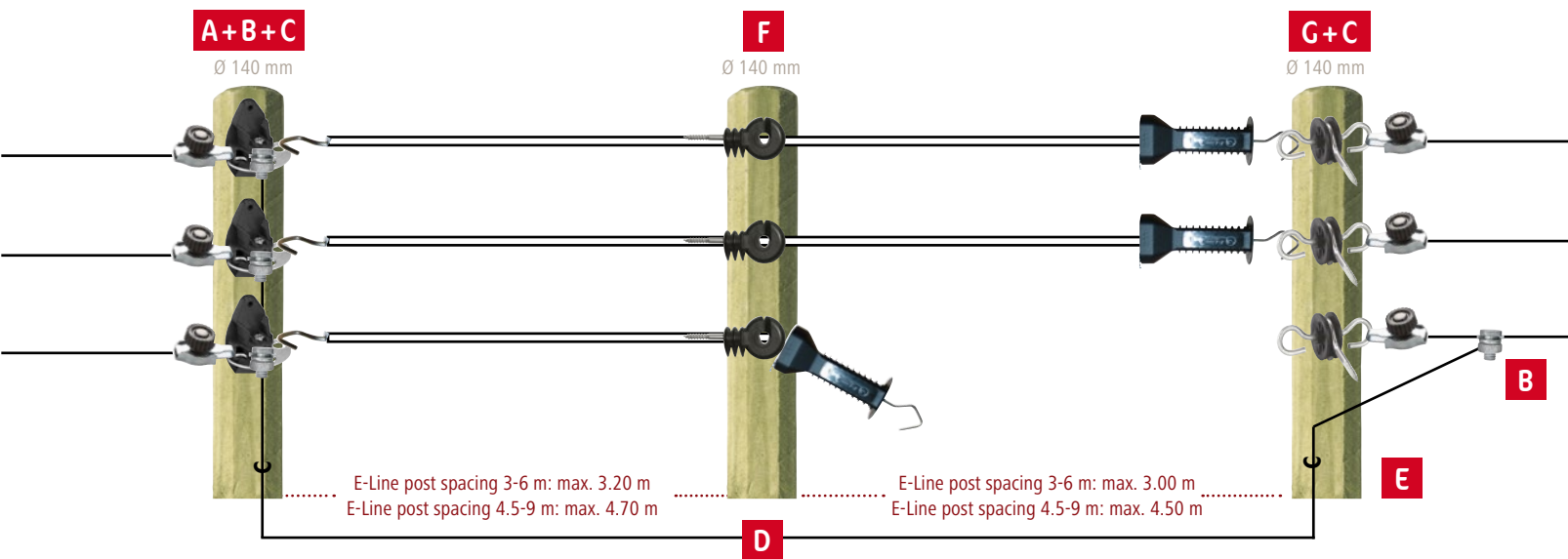
E-Line 3-6m (item no. 44255/011)  
E-Line 4.5-9m (item no. 442551/011)

AKO tip:

for separating larger pathways, e.g. closing off yards when bringing horses in and out. Ideal for use together with quick rope connector item no. 441209/041



Available in lengths:  
item no. 441890 - 25 m  
item no. 441891 - 50 m





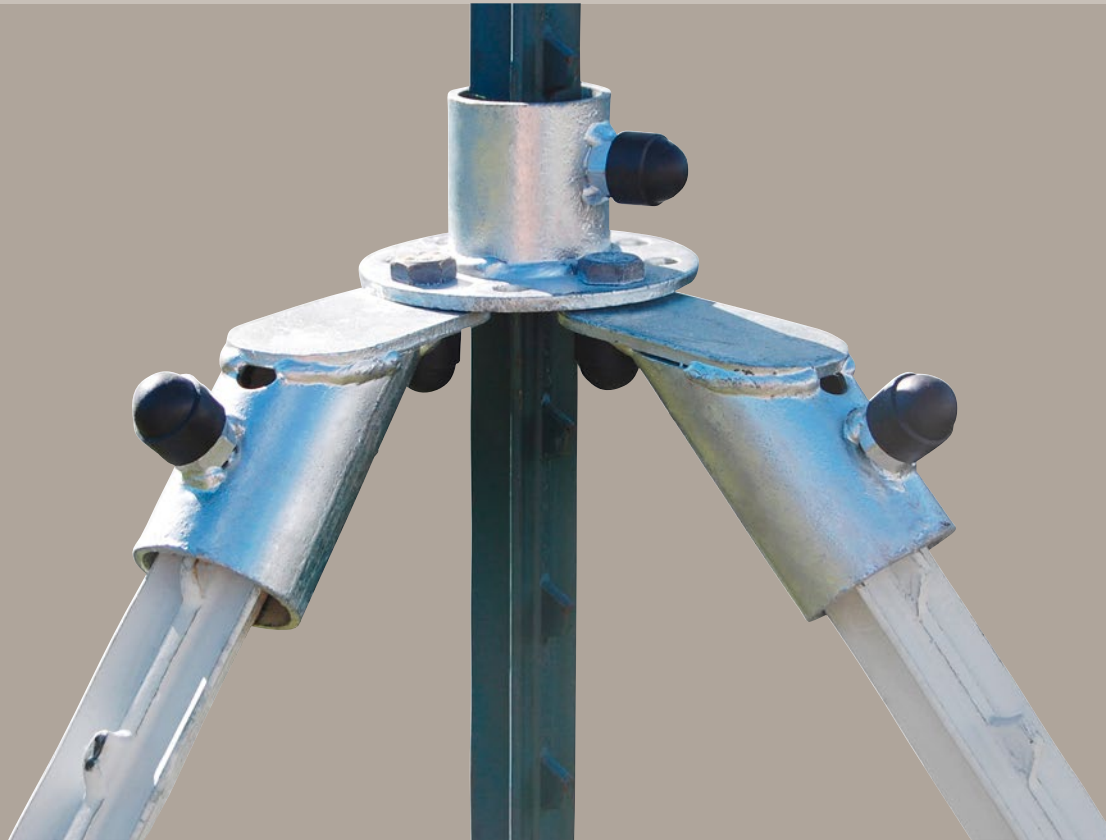
Fence tape – visible | flexible use | available in different colours

# T-Post and fence tape

robust | simple | wind-resistant | easy to install



## The fence starter set and corner solution set



Item no. 441177



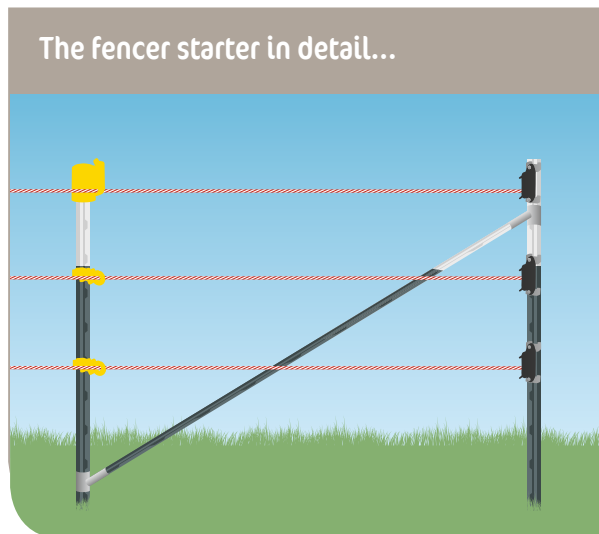
Item no. 441178



## The correct installation of corner and starter posts.

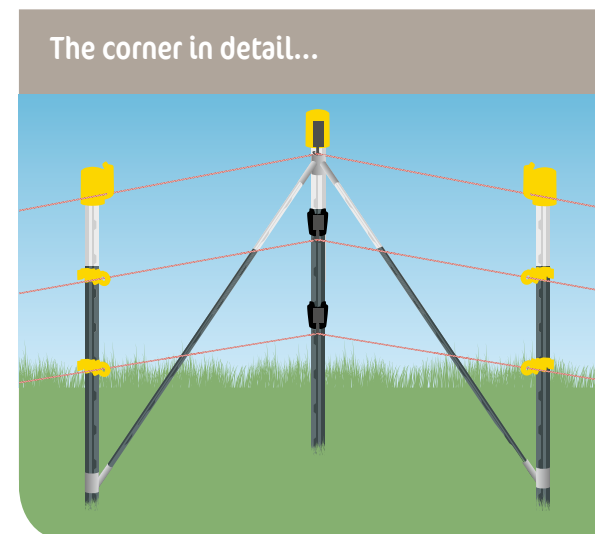
### Installation of a fence starter with T-posts (item no. 441178)

- drive the gate or junction post approx. 40-50 cm into the ground...
- drive in the next track post using a spacing of 1.50 m...
- remove the base plates from the diagonal support post...
- install the fence starter set on the gate or junction post and on the track post...
- attach the diagonal support post to the sleeve and align it



### Installation of a corner with T-posts (item no. 441177)

- drive the corner post approx. 40-50 cm into the ground...
- drive in both additional corner and stretch posts using a spacing of 1.50 m each...
- remove the base plates from both diagonal support posts...
- install the corner solution set on the corner posts...
- attach the diagonal support posts to the sleeve and align them



**AKO tip:**

We recommend using our T-Post corner insulators to avoid the conductor material touching diagonal support posts.

## Straight sections

### Insulator

2 different insulators are required per post for the track in the T-Post fence system. The head insulator covers the edged head of the post, preventing injuries and guiding the tape or rope with the integrated tape and rope insulator. Insulator item no. 441184/441183 is used for every additional row underneath.

### Track post\*

- item no. 441462: 213 cm
- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm

### AKO tip:

We recommend shortening the post spacing in windy areas. This means the tape is guided by the insulators more often, reducing exposure to the wind.



## Corner

### Insulator

Unlike on the straight track, no head insulator is required for the corner. Here, the spacer corner insulator is installed at the desired heights. The metal holder is easily affixed to the post using the integrated pinlock system. This guides the tape around the corner, keeping it flexible.

### Corner/tension/support and track post\*

- item no. 441462: 213 cm (5 pcs./corner)
- Information on installing the diagonal structure on p. 40/41
- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm



## T-junction

### Insulator

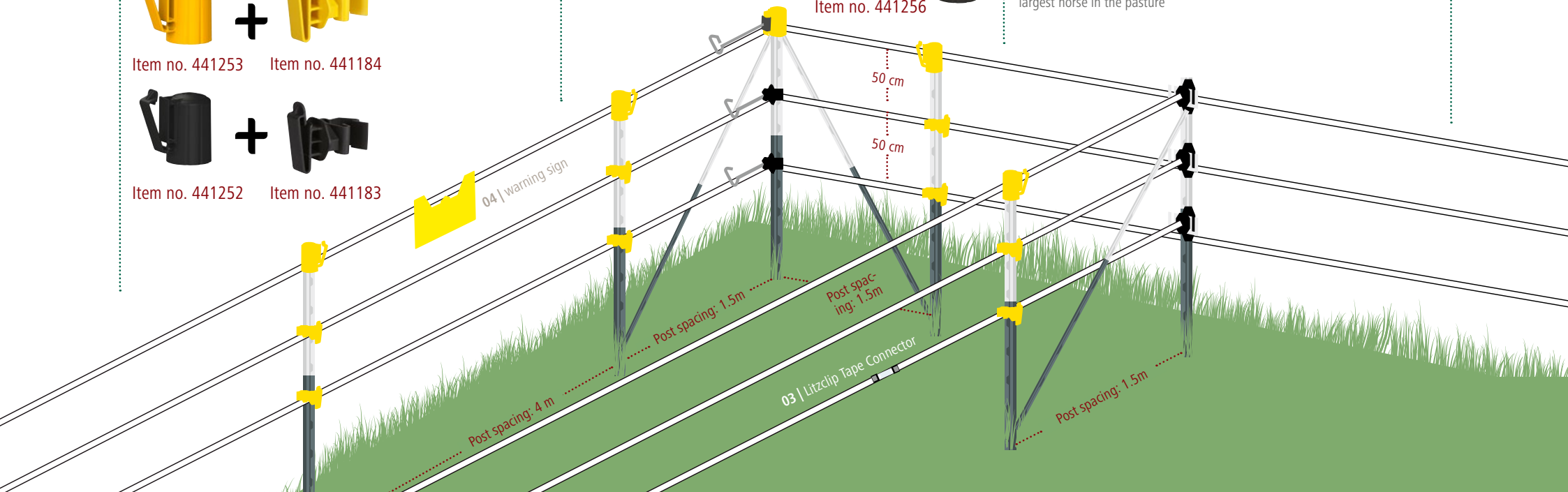
No head insulator is required when installing a junction, either. The same insulator is used here as with the wooden fence, the difference is that it is fixed to the T-Post with the 2 universal clamps supplied.

### Tension/support and track post\*

- item no. 441462: 213 cm (3 pcs./divider)
- Information on installing the diagonal structure on p. 40/41
- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm



\* please align the top conductor material row to the withers height of the largest horse in the pasture



## Gate

### Insulator

The insulator selection depends on which gate system is installed.  
The two gate structures are shown in more detail on the following pages.

### Gate post\*

- item no. 441462: 213 cm (6 pcs./gate)

Information on installing the diagonal structure on p. 40/41

- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm

### Important

To install a 90° corner, a T-junction or a gate, you need the variable corner set or starter set for T-Posts.

- support post crossbeam: 100 mm x 200 cm (item no. 441825)



item no. 4494440 - 40 mm tape  
item no. 4494420 - 20 mm tape

**AKO tip:** ALWAYS affix the conductor material on the fence inner.

### 01 | Ram for T-Posts

... for driving in all fence posts.

Item no. 441324



### 02 | T-Post puller

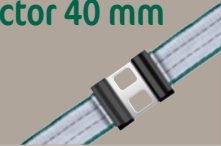
...for pulling out the posts.

Item no. 441300

### 03 | Litzclip® tape connector 40 mm

...for connecting 2 tape ends.

442002/051

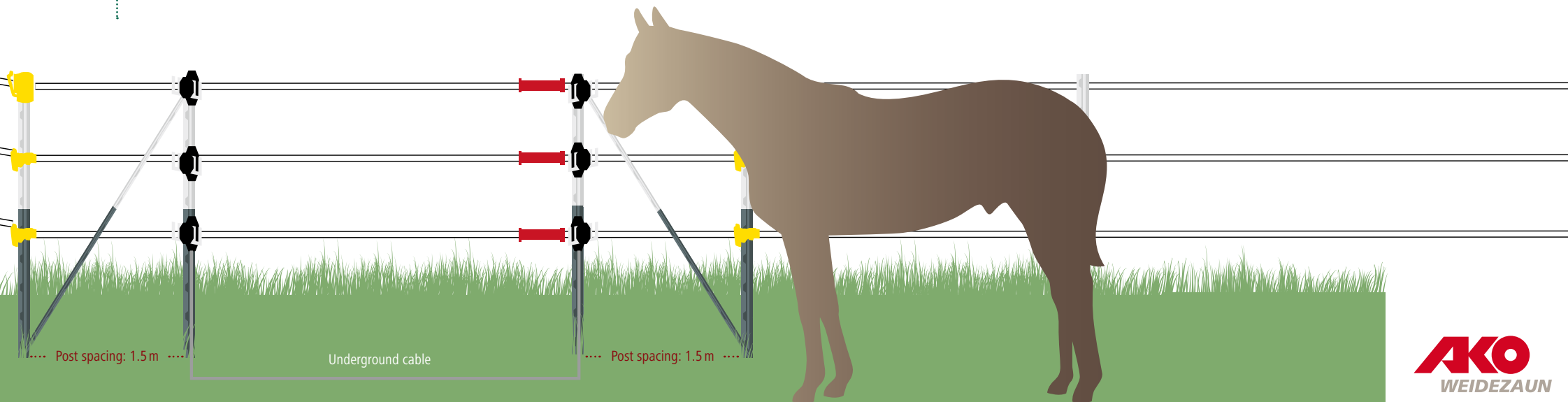


### 04 | Warning sign

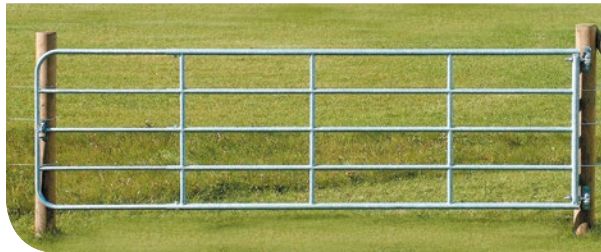
...for attaching at regular, clearly visible intervals.



Item no. 446513



## 2. The galvanised pasture gate ... Stable and durable!

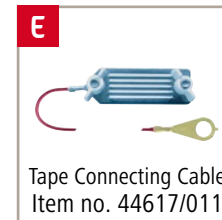
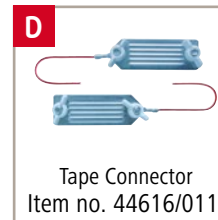
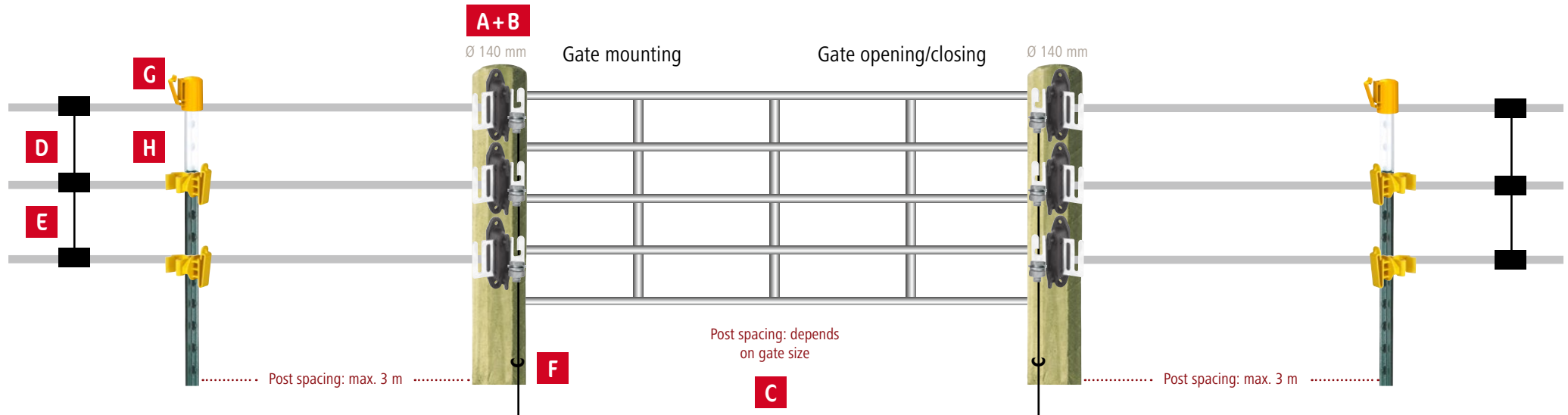


rigid pasture gates incl.  
mounting set  
Height: 100 cm  
(item no. 442920 | 3 m)  
(item no. 442921 | 3.5 m)  
(item no. 442922 | 4 m)  
(item no. 442923 | 4.5 m)  
(item no. 442924 | 5 m)  
(item no. 442925 | 6 m)

adjustable pasture gates incl.  
mounting set  
Height: 110 cm  
(item no. 44893 | 1-1.7 m)  
(item no. 44892 | 2-3 m)  
(item no. 44891 | 3-4 m)  
(item no. 44895 | 4-5 m)  
(item no. 442557 | 5-6 m)

**AKO tip:**

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical.  
Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.



## 1. The gate handle with tape connector ... Simple but perfect!

You will need 2x gate handle insulator including metal plate item no. 441494 per tape row for the gate system with gate handle.

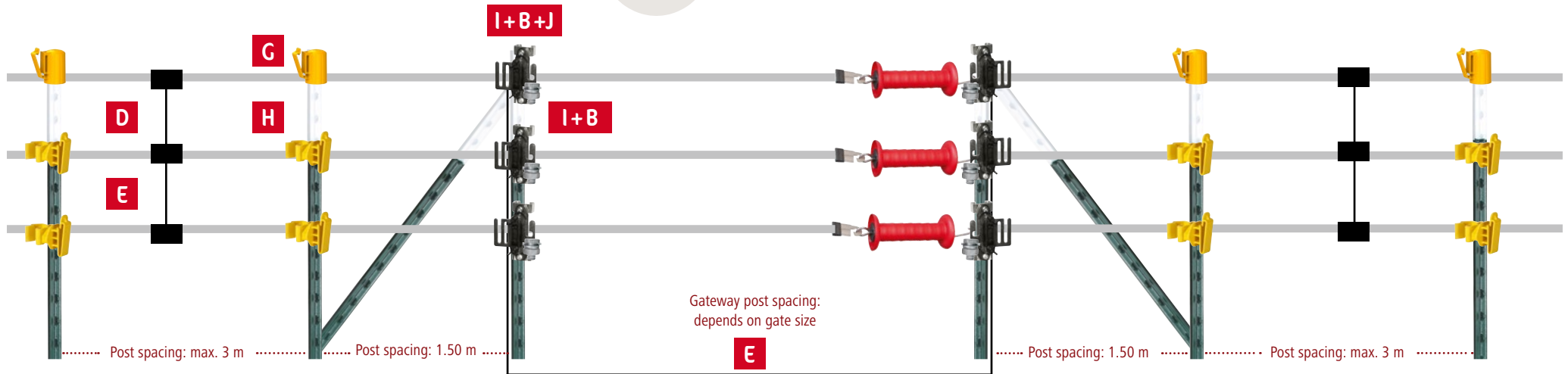
The tape is held and tensioned by the insulator on the left side of the image and on the right side, the gate handle is hung in the metal plate.

### AKO tip:

Hang the gate handle in the metal plate on the other side when opening the gate. This prevents knotting and reduces soiling to the tapes. The diagonal posts support the two gate posts, preventing the posts becoming crooked.



Gate handle with Litzclip® Tape connector 40 mm (item no. 4494440)    Gate handle with Litzclip® Tape connector 20 mm (item no. 4494420)



### Important

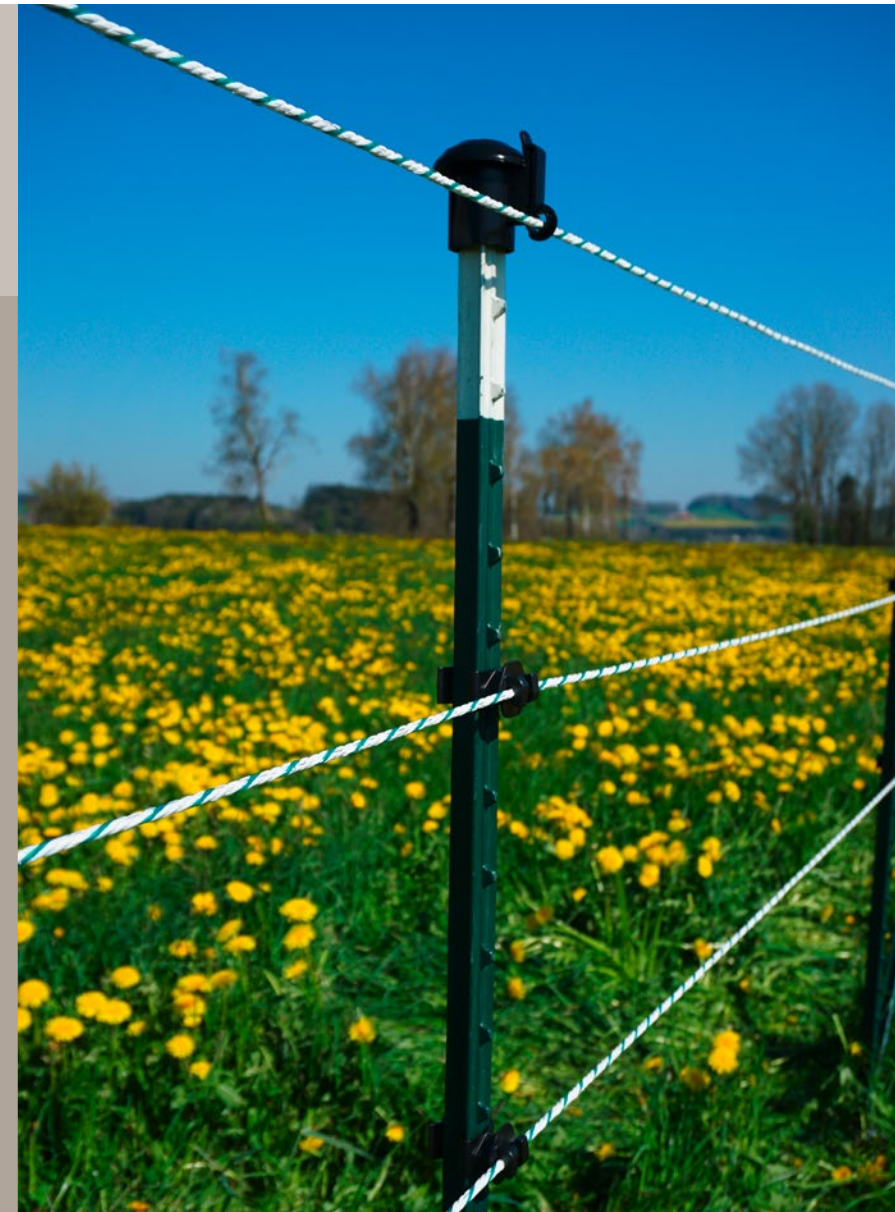
You MUST ALWAYS remove the ground anchor plates when attaching the T-Post diagonal posts. This prevents the horses from being injured.

AKO tip:  
Combine the rope with a row of 40  
mm tape in order to increase the  
"visibility" for your horse.



Fence rope – recommended in combination with fence tape

T-Post and fence rope  
robust | simple | wind-resistant | easy to install



## Straight sections

### Insulator

2 different insulators are required per post for the track in the T-Post fence system. The head insulator covers the edged head of the post, preventing injuries and guiding the tape or rope with the integrated tape and rope insulator. Insulator item no. 441183/441184 is used for every additional row underneath.

### Track Post

- item no. 441462: 213 cm
- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm

### AKO tip:

A fence rope can be tensioned more and is not as exposed to the wind as a fence tape. This is why you can extend the spacing between posts when installing fence rope, as compared to fence tape.



Item no. 441253    Item no. 441190



Item no. 441252    Item no. 441189

## Corner

### Insulator

Unlike on the straight track, no head insulator is required for the corner. Here, the spacer corner insulator is installed at the desired heights. The metal holder is easily affixed to the insulator using the integrated pinlock system.

This guides the rope flexibly through the corner, creating distance to the diagonal support post.

### Corner/tension/support and track post

- Item no. 441462: 213 cm (5 pcs./corner) Information on installing the diagonal structure on p. 40/41
- post height above ground: approx. 165 cm
  - drive-in depth: approx. 40-50 cm



Item no. 441255

Item no. 446515

Item no. 441257

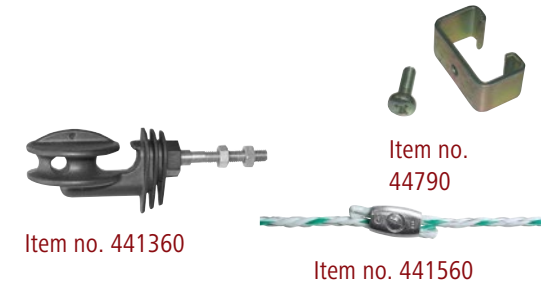
## T-junction

### Insulator

You need the "Super" insulator with metric thread to install a junction. The insulator is attached to the post using a bracket. The rope is looped around the insulator body or threaded through the hole provided and fixed using a rope connector. No head insulator is required here.

### Tension/support and track post

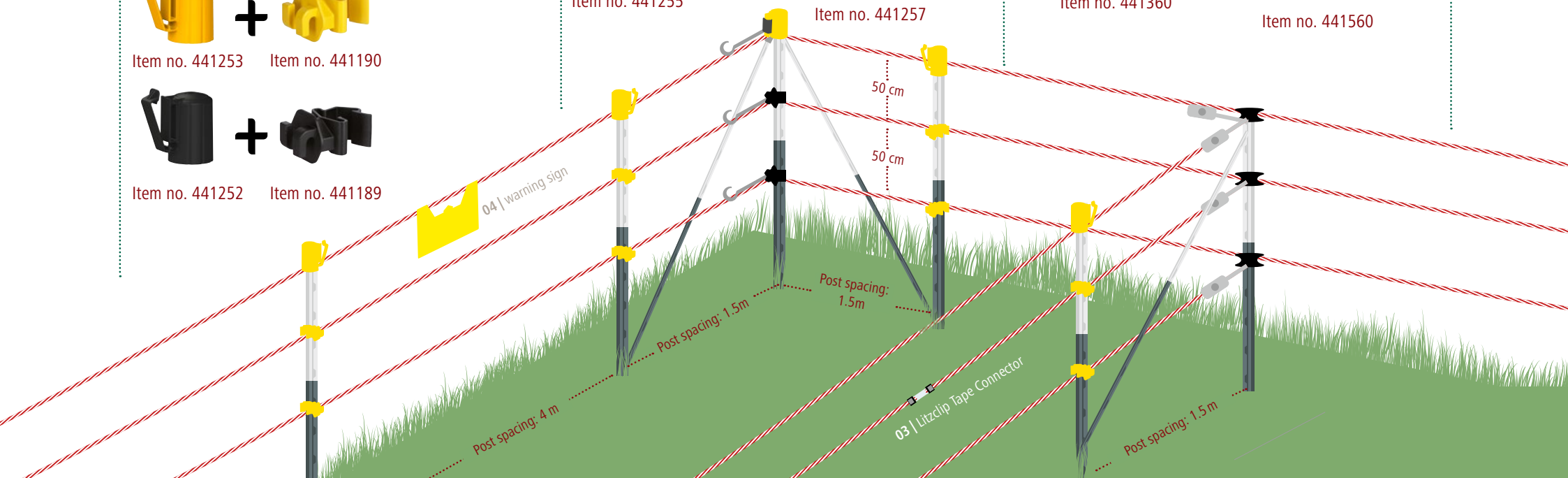
- item no. 441462: 213 cm (3 pcs./divider)
- Information on installing the diagonal structure on p. 40/41
- post height above ground: approx. 165 cm
- drive-in depth: approx. 40-50 cm



Item no. 441360

Item no. 44790

Item no. 441560





## Gate

### Insulator

The insulator selection depends on which gate system is installed.

The various gate structures are shown in more detail on the following pages.

### Gate Post

- item no. 441462: 213 cm (6 pcs./gate)
- post height above ground: approx. 165 cm

Information on installing the diagonal structure on p. 40/41

- drive-in depth: approx. 40-50 cm

### Important

To install a 90 ° corner, a T-junction or a gate, you need the WEDGE-Loc system to mount the diagonal posts.

- support post crossbeam: 100 mm x 200 cm (item no. 441825)



**AKO tip:** ALWAYS affix the conductor material on the fence inner.

### 01 | Ram for T-Posts

... for driving in all fence posts.



### 02 | T-Post puller

...for pulling out the posts.

Item no. 441300

### 03 | Litzclip® rope connector 6 mm

... for connecting 2 rope ends.

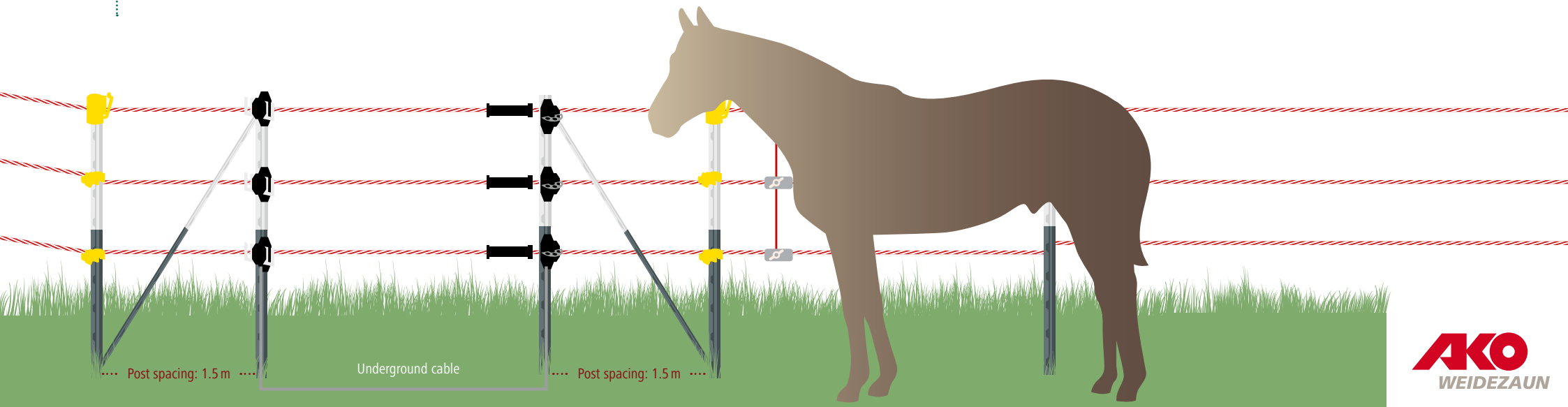


### 04 | Warning sign

...for attaching at regular, clearly visible intervals.



Item no. 446513



## The galvanised pasture gate ... stable and durable!

rigid pasture gates incl. mounting set

Height: 100 cm

(item no. 442920 | 3 m)

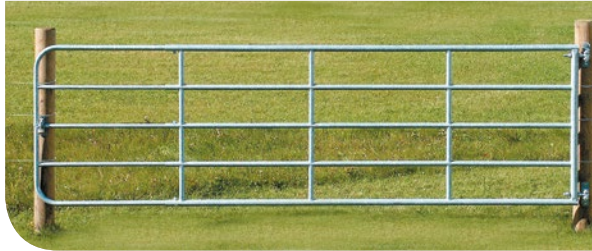
(item no. 442921 | 3.5 m)

(item no. 442922 | 4 m)

(item no. 442923 | 4.5 m)

(item no. 442924 | 5 m)

(item no. 442925 | 6 m)



adjustable pasture gates incl. mounting set

Height: 110 cm

(item no. 44893 | 1-1.7 m)

(item no. 44892 | 2-3 m)

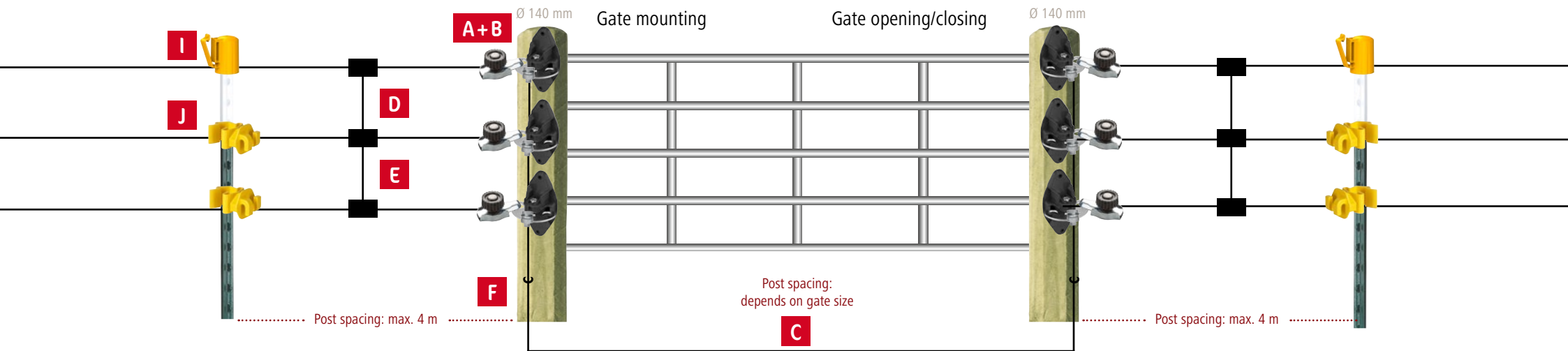
(item no. 44891 | 3-4 m)

(item no. 44895 | 4-5 m)

(item no. 442557 | 5-6 m)

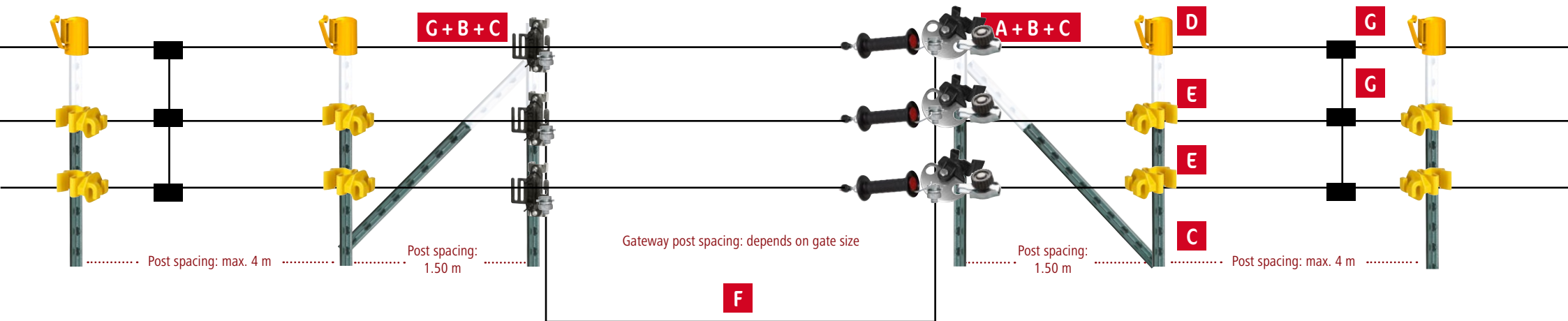
**AKO tip:**

Set the gate tethering post well in concrete or support the post with a cross plank (see p. 21 and 23) in order to keep the post permanently vertical. Run the underground cable under the soil in a protective hose. This will prevent the cable from being damaged.



## The gate handle with rope connector ... simple but perfect!

Gate handle with Litzclip®  
 Rope connector  
 (item no. 44948)



**Important:**

You **MUST ALWAYS** remove the ground anchor plates when attaching the T-Post diagonal posts. This prevents the horses from being injured.



## AKO E-Line ... Elastic and flexible to use!

The flexible E-Line gate system is installed over 3 gate posts. The 2 tethering gate posts are driven in at 3 m or 4.5 m depending on the base length of the E-Line. If the E-Line gate is opened, the gate handle stops at the rope insulator. If the gate is closed, the gate handle is hung on the gate insulator.

### Important

Please ensure that you follow the maximum extension lengths of the E-Line. I.e. the 3rd gate post can be driven in either 3 m or 4.5 m away.

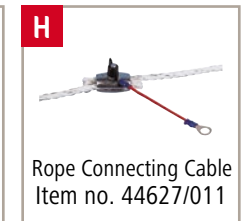
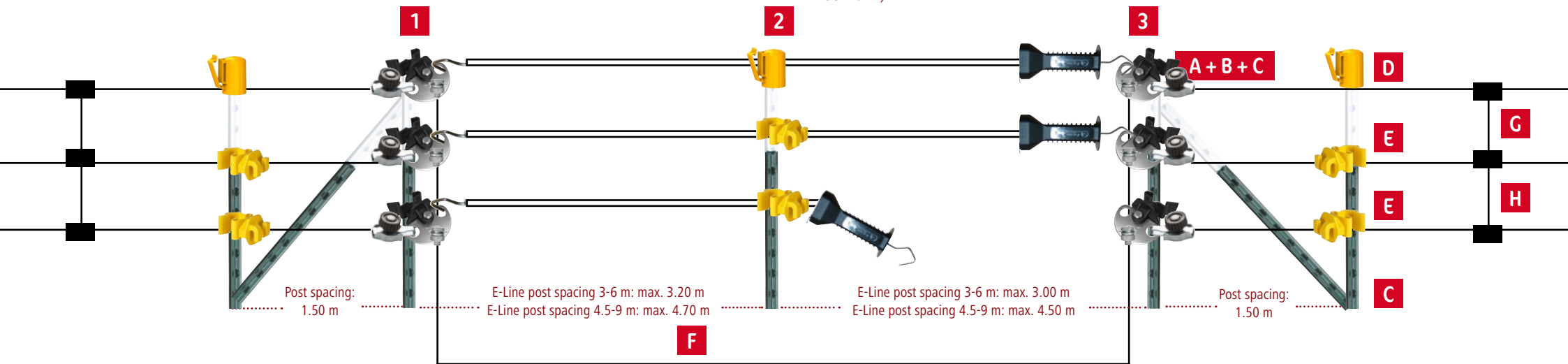
AKO tip: for separating larger pathways, e.g. closing off yards when bringing horses in and out. Ideal for use together with quick rope connector item no. 441209/041



E-Line 3-6m (item no. 44255/011)  
E-Line 4.5-9m (item no. 442551/011)



Available in lengths:  
item no. 441890 - 25 m  
item no. 441891 - 50 m



## Products for improving safety



...for testing whether the minimum shock voltage of 2,500 volts is available in the fence every day.

### Fence tester

Item no. 44669

01



...for visual voltage checks on the fence. The warning light stops flashing below a voltage of 3,000 V.

### Signal light

Item no. 441223/011

02



...for monitoring and controlling the fence system. The alarm message arrives via push message on your mobile phone.

### Fence control

Item no. 441122

03



04

Item no. 446513

### Warning signs

...for informing third parties that there is electricity here. Please attach the signs in regular, clearly visible intervals on the fence.



05

Item no. 44607

### Fence switch

a practical on/off and changeover switch for your fence system. Can control 2 separate fence systems.



06

Item no. 449602/011

### Lightning protection

...protects your electric fence unit from over-voltage caused by lightning strikes to the fence.



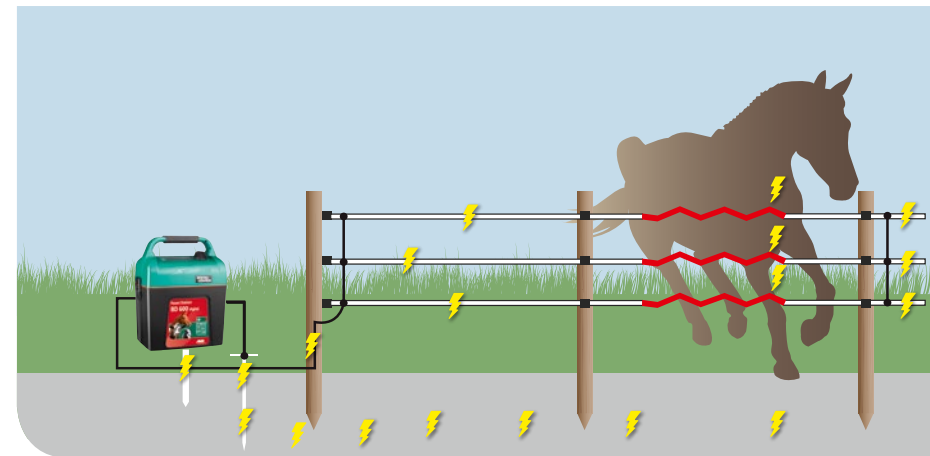
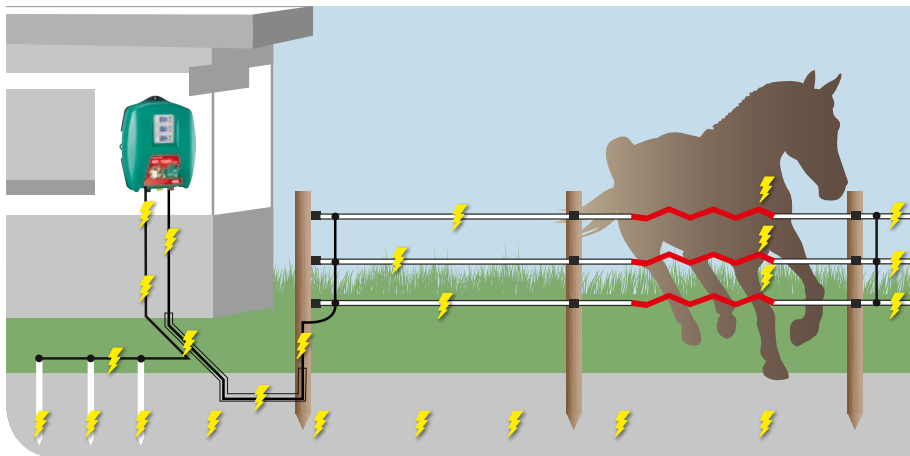
### This is how an electric fence system works. ...with a closed electrical circuit

An electric fence system consists of:

- A) An electric fence unit that generates regular electric pulses.
- B) One or more conductor material rows that transport the electricity.
  - The conductor materials do not absolutely have to form a closed fence loop.
- C) Insulators that isolate the electricity from earth.
- D) Permanent or mobile posts that can be used as required.
- E) The earth of the electric fence unit, which should be buried as deep as possible in damp soil.

If the animal touches the wire, an electric circuit is closed, i.e. the electric current flows through the animal and the earth back to the fence device. The animal consequently receives an unpleasant, though 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.

See the AKO tips for earthing on page 62.



## The technical terms you need to know. ... Voltage? Input/output joules? Resistance?



### • What does voltage mean?

A high voltage is needed to provide long fences with power and to create a conductive “channel” between the fence wire and the animal's body. The minimum voltage required for this is around 2,500 Volt (at each point of the fence system). For animals with a thick coat, we recommend 4000 V minimum.

### • What do the technical terms input and output joules mean?

The shock effect depends on the level of pulse (output) energy in joules (voltage itself does not hurt!). The more insensitive the animal is, the greater the energy needed to secure or scare it. The demand for pulse energy also increases with the length of the fence and its load (e.g. vegetation). The charging (input) energy is the energy that the device consumes.

The pulse (output) energy is the most important parameter for assessing the power of a fence device.

### • What does conductor resistance mean?

The conductor resistance is a measure of the conductivity of the fence material. It is specified in ohms/meter. The lower this value, the better the material's conductivity. The best materials have a resistance of around 0.5 ohm/m and below, while poorer materials have over 4 – up to as much as 15 ohm/m. The longer the fence, the better the conductivity of the material used must be.

### • What kilometre figures should you base your decision on?

Kilometre figures are often highly theoretical values that are based on the best possible conditions (wire conductivity, connections, insulation status, ground conditions, earthing) in the fence system. These conditions change constantly, however, due to the influences of weather. It is therefore important to achieve the minimum protective voltage of 2,500 Volt at each point of the fence system in all conditions.




**230 V**

- power source: mains socket – permanent power supply
- available from 0.5 - 14.5 output joules
- the first choice if a mains socket is available




**12|230 volt**

- power source: mains socket or 12 volt wet battery
- available from 1 - 3 output joules
- multifunctional use

Standard compliant | 3-year WARRANTY





**12 V**

- power source: 12 volt wet battery
- available from 0.50 - 4.80 output joules
- mobile | effective | rechargeable




**12 volt solar**

- power source: integrated 12 V gel battery
- available from 0.25 - 0.55 output joules
- mobile | for small fences without vegetation | autonomous




**9 V**

- power source: 9 volt dry battery
- available from 0.10 - 0.55 output joules
- mobile | fences with no vegetation | easy battery handling | also with foal protection switch



## Which device is suitable for my fence? ...consider the vegetation.



### 230 V power energisers – the FIRST CHOICE if a mains socket is available.

These units provide security for an unlimited period. They are available in all the necessary power classes and are the best means of delivering the energy required (output 0.5 to 14.5 joules) on long fences or fences with vegetation, or for very robust animals. Animals are of course not harmed by this higher energy. All AKO units comply with applicable safety standards.

If mobile use is intended, e.g. at tournaments, on trail or long-distance rides or simply on frequently changing pastures where there is no 230 V power supply available, you must resort to a battery-powered unit. For fences with heavier vegetation, 9 V compact solar units are inadequate and 12 V units must be used.



### 12 volt battery-powered units – strong performance even on fences with heavier vegetative growth.

12 V battery units are ideal for very robust animals, long fences and/or fences with vegetation if no 230 V connection is available. The discharge energy is comparable to that of power energisers (output approx. 0.5 to 5 joules). Rechargeable 12 V wet batteries are used as the power source, which must be recharged every 2 - 4 weeks or so depending on the type of device, power requirements and battery type. Solar modules, which convert solar energy into electricity and therefore constantly top up the 12 V battery, are a good add-on.



### 12/230 Volt DUO units – maximum flexibility combined with powerful output energies.

Units of this type combine the unlimited security time of the 230 V units with the mobility of powerful 12 V units. A 12 V cable and 230 V adapter are included.






### 9 V dry battery units – the ideal units for smaller fences and paddocks.






9 V battery units are suitable for shorter fence lengths without vegetation. They are highly mobile and significantly lighter than 12 V units. The 9 V battery runs for a few months and can even cover an entire pasture season depending on the operating time, battery type and size (expressed in Ah – the more Ah (ampere hours), the longer it runs for). Once discharged, it cannot be recharged. 9 V units (even if these can also be operated with 12 V batteries) are weaker than 12 V units. 9 V units in this instance typically deliver approx. 0.15 to 0.35 joules. High-impact 9 V units (e.g. AKO PowerStation BD600 or EcoPower B500) can deliver up to 0.55 joules.












### Compact solar units similar to 9 V units for smaller fences without vegetation.


AKO offers two types: S180 with a pulse of 0.25 joules and S550 with a pulse of 0.55 joules. The 12 V gel battery is integrated and is constantly charged via the solar module built into the housing. If the battery has to be topped up, it can be recharged using the 230 V mains adapter.

	Type	Art. No.	 joules	Display: LED / LCD	 medium vegetation	recommended accessories	Use
	<b>NDi 6500</b>	372806	8.20 J	Fence/earth LED/LCD	12 km up to 100 ha	44669 Fence Tester 44615 Ground rod 1 m: 3 x 446513 Warning Sign 44601 Lightning Protection Throttle 44818 High voltage / underground cable	Main unit, extra strong for long fences/heavy vegetation/Shetlands
	<b>N 4800</b>	372885	6.70 J	Fence/earth LED	8 km up to 45 ha		
	<b>N 3500</b>	372883	5.50 J	Fence/earth LED	6 km up to 25 ha		
	<b>N 1200</b>	372881	1.70 J	Funct. LED	2 km up to 3 ha		Main unit, larger/multiple paddocks

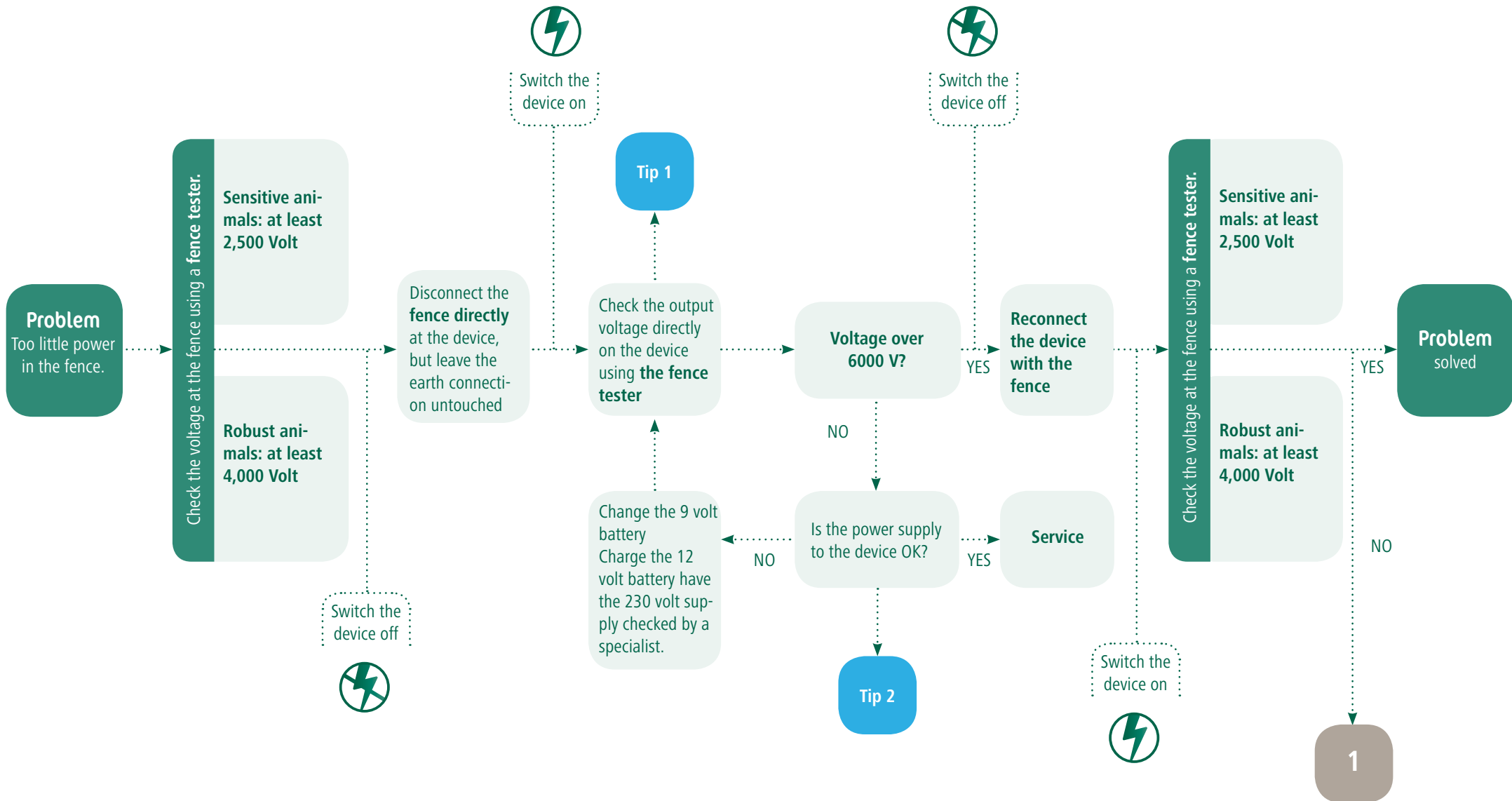
	Type	Art. No.	 joules	Display: LED / LCD	 medium vegetation	recommended accessories	Use
	<b>3000</b>	372754	4.10 J	Fence/battery LED	6 km up to 25 ha	44233 12 volt, 85 Ah battery 442161 Battery acid: 4 x 371017/011 Battery Charger 44619 Ground rod 75 cm: 2 x 44604/011 Ground connection cable: 2 x 446513 Warning Sign	mobile fences, also with vegetation, larger paddocks/long fences
	<b>2000</b>	372752	3.20 J	Fence/battery LED	4 km up to 11 ha		
	<b>AD 2000</b>	372201	3.00 J	Fence/battery LED/LCD	8 km up to 44 ha		
	<b>A 1200</b>	372121	2.10 J	Fence/battery LED	5 km up to 17 ha		

	Type	Art. No.	 joules	Display: LED / LCD	 medium vegetation	recommended accessories	Use
	<b>X 2500</b>	372872	3.20 J	Fence/battery LED	4 km up to 11 ha	44233 12 volt, 85 Ah battery 442161 Battery acid: 4 x 371017/011 Battery Charger 44656 Metal Battery Boxes 44619 Ground rod 75 cm: 2 x 44604/011 Ground connection cable: 1 x 446513 Warning Sign	for both stationary and mobile paddocks
	<b>X 1000</b>	372871	1.60 J	Function/battery LED	1.5 km up to 2 ha		

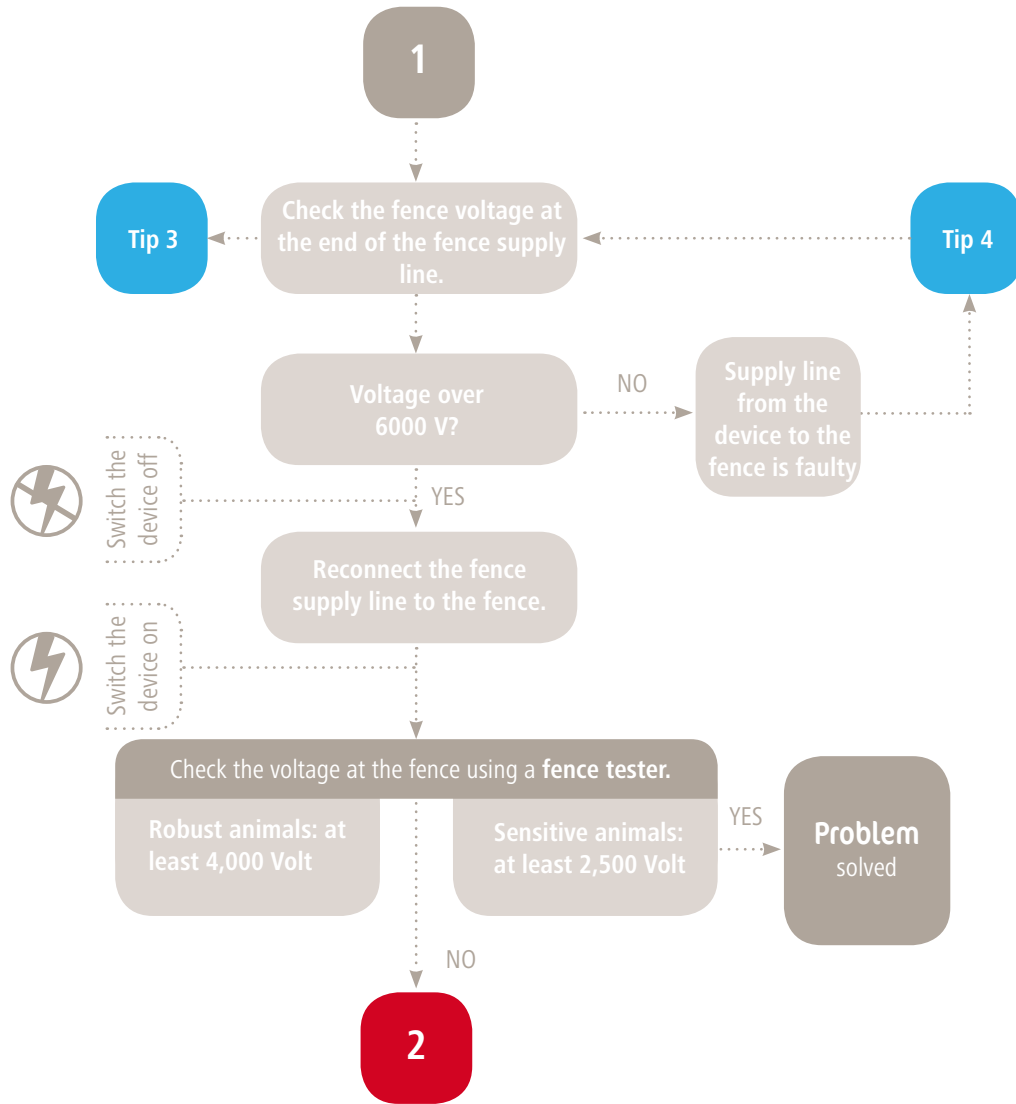
	Type	Art. No.	 joules	Display: LED / LCD	 medium vegetation	recommended accessories	Use
	<b>S 550</b>	372023	0.70 J	Fence/battery LED	2 km up to 3 ha	44669 Fence Tester 44619 Ground rod 75 cm: 1 x 446513 Warning Sign 44604/011 Ground connection cable	smaller fences/paddocks without vegetation
	<b>S 250</b>	372920	0.40 J	Function/battery LED	0.7 km to 1 ha		

	Type	Art. No.	 joules	Display: LED / LCD	 medium vegetation	recommended accessories	Use
<b>Power Station BD digital</b>  	<b>BD 400</b>	372034	0.51 J	Fence/battery LCD/LED	5.5 km up to 21 ha	350531 9 volt, 175 Ah battery 446513 Warning Sign 44619 Ground rod 75 cm 44669 Fence Tester 44604/011 Ground connection cable	
	<b>BD 300</b>	372033	0.38 J	LCD	4 km up to 11 ha		
<b>Eco Power Plus</b>  	<b>B 500 plus</b>	372030	0.64 J	Fence/battery LED	6 km up to 25 ha		
	<b>B 250 plus</b>	372037	0.45 J	Fence/battery LED	0.7 km up to 0.5 ha		
<b>Compact Power</b>  	<b>B 240 multi</b>	372028	0.38 J	Fence/battery LED	0.6 km up to 0.5 ha	350681 9 volt, 75 Ah battery 446513 Warning Sign 44619 Ground rod 75 cm 44669 Fence Tester 44604/011 Ground connection cable	mobile.smaller pastures/paddocks without vegetation, tournament use
<b>Compact Power B 140</b>  	<b>B 140</b>	350330	0.21 J	Function/battery LED	0.5 km up to 0.5 ha		

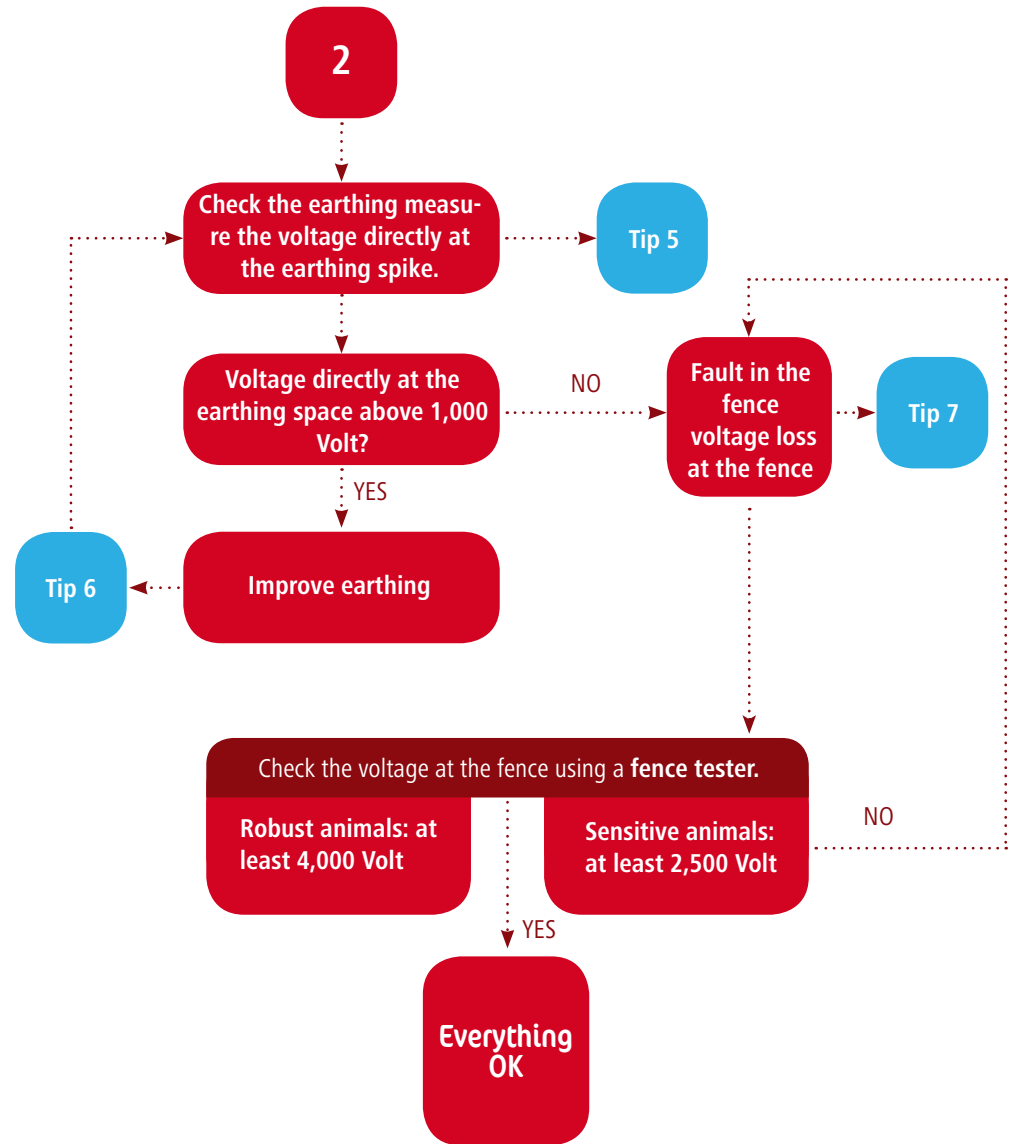
## Testing the fence device



### Checking the fence supply line



### Checking the fence system & earthing



## Useful tips from our experts ... please note!

### Tip 1

1. Remove the knurled nuts from the earthing and fence output.
2. Contact the earth output on the device using the fence tester's earthing rod.
3. Contact the fence output on the device using the fence tester.

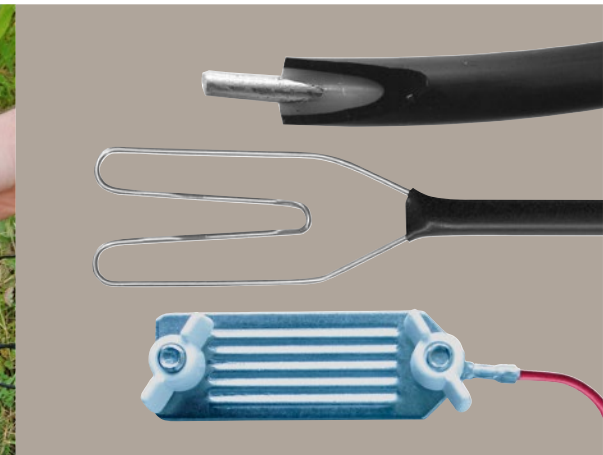


### Tip 2

1. 9 volt battery: flashing red - battery is flat
2. 12 volt battery: flashing red -battery is flat
3. 230 volt mains power: LED not flashing - no power supply

### Tip 3

1. Switch the device off.
2. Disconnect the fence supply cable at the fence.
3. Switch the device back on.
4. Using a fence tester, measure the voltage at the end of the fence supply line cable.



## Nuttige tips van onze experts ... volg deze tips op!

### Tip 4

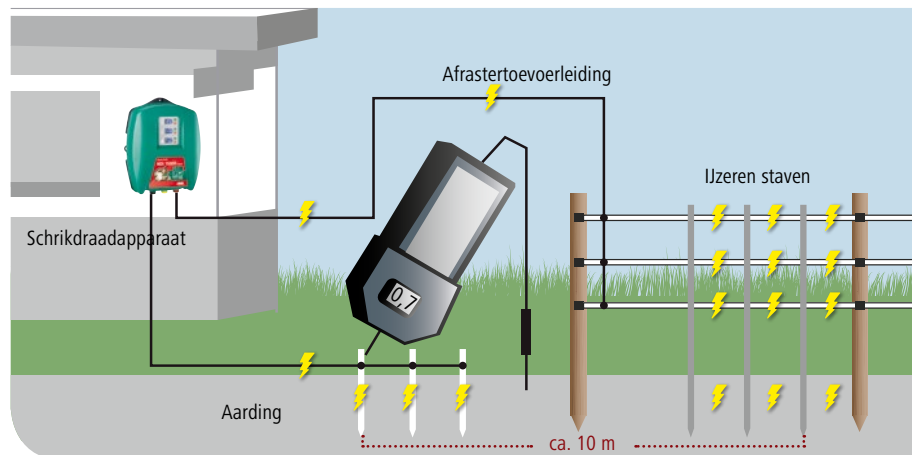
1. Ondergrondse afrastertoevoerleiding  
De grondkabel is defect  
Gebruik een hoogspanningsgrondkabel.

2. Bovengrondse afrastertoevoerleiding  
Controleer de afrastertoevoerleiding op afleidingen/onderbrekingen  
(bijv. maakt de toevoerleiding contact met het gebouw? Bijv. klimop, dakgoot, struiken enz.)

### Tip 5

Hoe meet ik de spanning direct bij de aardpen?

1. Afrasteringsdraad op een afstand van ca. 10 m van de aarding via ijzeren staven kortsluiten.
2. Spanning direct bij de aardpen van het apparaat via de digitale voltmeter controleren



### Tip 6

1. Aardpennen op enige afstand van het gebouw minimaal 1 m diep in altijd vochtige grond slaan
2. Meerdere aardpennen in een afstand van minimaal 3 m inslaan en met elkaar verbinden
3. Aardpennen moeten gemaakt zijn van niet-roestend materiaal, bijv. roestvrij staal of moeten verzinkt zijn.

### Tip 7

1. Begroeiing bij de afrastering verwijderen!
2. Geleidermateriaal ligt op de grond spannen/verbinden
3. Slecht geleidermateriaal door goed geleidend geleidermateriaal vervangen ( $< 1 \text{ ohm/m}$ )
4. Geleidermateriaal zit in de knoop gebruik een roestvrijstalen verbinder
5. Isolator slaat door door nieuwe isolator vervangen
6. Gebroken metalen geleiderdraden geleidermateriaal vervangen
7. Geleidingsvermogen verbeteren geleidermateriaalrijen ca. om de 200 m verticaal met elkaar verbinden

## Equipment

Item no.	Description	Sales unit	€
350330	Compact Power B140   9 Volt Battery Energiser	1 pcs	€ 94.99
372023	Sun Power S 550   12 Volt Solar Unit	1 pcs	€ 349.00
372028	Compact Power B 240 multi   9 Volt Battery Energiser	1 pcs	€ 129.00
372029	Eco Power B 250 plus   9 Volt Battery Energiser	1 pcs	€ 179.00
372030	Eco Power B 500 plus   9 Volt Battery Energiser	1 pcs	€ 239.00
372033	Power Station BD 300 digital   9 volt battery energiser	1 pcs	€ 259.00
372034	Power Station BD 400 digital   9 volt battery energiser	1 pcs	€ 319.00
372121	Mobil Power A 1200   12 Volt Battery Unit	1 pcs	€ 279.00
372201	Mobil Power AD 2000 digital   12 Volt Battery Unit	1 pcs	€ 349.00
372752	Savanne 2000   12 Volt Battery Unit	1 pcs	€ 179.00
372754	Savanne 3000   12 Volt Battery Unit	1 pcs	€ 219.00
372806	Power Profi NDi 6500 digital   230 Volt Power Supply	1 pcs	€ 399.00
372871	Duo Power X 1000   12/230 Volt Duo Fence Device	1 pcs	€ 99.99
372872	Duo Power X 2500   12/230 Volt Fence Device	1 pcs	€ 159.00
372881	Power N 1200   230 Volt Power Supply	1 pcs	€ 89.99
372883	Power N 3500   230 Volt Power Supply	1 pcs	€ 139.00
372885	Power N 4800   230 Volt Power Supply	1 pcs	€ 189.00
372920	Sun Power S 250 Solar Fence Device	1 pcs	€ 179.00

## Post

Item no.	Description	Sales unit	€
441461	T-Post Metal Post 182 cm	1 pcs	€ 7.99
441462	T-Post Metal Post 213 cm	1 pcs	€ 8.79
441463	T-Post Metal Post 240 cm	1 pcs	€ 10.49
441823	OctoWood Stretch Post 200 m x 80 mm	1 pcs	€ 9.29
441824	OctoWood Stretch Post 225 m x 80 mm	1 pcs	€ 9.59
441825	OctoWood Stretch Post 200 m x 100 mm	1 pcs	€ 12.29
441826	OctoWood Stretch Post 225 m x 100 mm	1 pcs	€ 13.29
441828	OctoWood Corner/Gate Post 250 m x 140 mm	1 pcs	€ 36.99

## Insulator

Item no.	Description	Sales unit	€
44340	Wide Tape Insulator, Stretch	10 pcs	€ 3.99
44355/041	Profi Tape Gate Handle Insulator with Stainless Steel Plate	4 pcs	€ 11.99
44392	Hose Insulator 60 cm	10 pcs	€ 11.99
44578	Premium Multi-strain Insulator	10 pcs	€ 24.99
44790	T-Post Bracket for Insulators	2 pcs	€ 1.59
443501	Profi Tape Corner/Stretch Insulator	10 pcs	€ 15.99
441183	T-Post Tape Insulator, black	25 pcs	€ 9.99
441184	T-Post Tape Insulator, yellow	25 pcs	€ 9.99
441189	T-Post Rope Insulator, black	25 pcs	€ 7.99
441190	T-Post Rope Insulator, yellow	25 pcs	€ 7.99
441252	T-Post Head Insulator, black	10 pcs	€ 9.49
441253	T-Post Head Insulator, yellow	10 pcs	€ 9.49
441254	T-Post Corner Solution Tape, yellow	1 pcs	€ 15.99
441255	T-Post Corner Solution Cable, yellow	1 pcs	€ 15.99
441256	T-Post Corner Solution Tape, black	1 pcs	€ 15.99
441257	T-Post Corner Solution Rope, black	1 pcs	€ 15.99
441284	Corner Sleeve Insulator	10 pcs	€ 17.99
441290	Clip Insulator Premium	10 pcs	€ 10.49
441330	Super Corner Insulator for Rope, Poly Wire and Wire	10 pcs	€ 9.59
441360	Super Corner Insulator with Metric Thread	10 pcs	€ 9.99
441376	Tape Corner Insulator Cavallo	10 pcs	€ 9.99
441396	Rope Insulator Euro Cord	10 pcs	€ 3.29
441494	T-Post Profi Tape Gate Handle Insulator	2 pcs	€ 8.29
446505/041	Insulator Vario Premium Set	4 pcs	€ 9.99
446507	Corner Solution for PHW and Tension Wire	3 pcs	€ 15.99
446509	"Horizontal" De-tensioning Set incl. Insulation	1 pcs	€ 19.99
446514	T-Post Tape Corner Solution incl. T-Post Pinlock	4 pcs	€ 12.99
446515	T-Post Rope Corner Solution	4 pcs	€ 12.99
446516	T-Post Gate Handle Insulator Vario	3 pcs	€ 5.59
446519	Easy Loop Plug Connector	10 pcs	€ 33.99

## Conductors

Item no.	Description	Sales unit	€
44531	EconomyLine Rope 6 mm x 200 m	1 pcs	€ 17.99
44557	EconomyLine Tape 40 mm x 200 m	1 pcs	€ 18.99
44873	Premium Horse Wire 8 mm x 250 m	1 pcs	€ 219.00
441535	PremiumLine Tape 38 mm x 200 m	1 pcs	€ 56.99
441564	PremiumLine Rope 6.5 mm x 200 m	1 pcs	€ 51.99
449532	TopLine Rope 6 mm x 200 m	1 pcs	€ 39.99
449554	TopLine Tape 40 mm x 200 m	1 pcs	€ 39.99
449583	TopLine Plus Tape 30 mm x 200 m	1 pcs	€ 29.99



## Gate

Item no.	Description	Sales unit	€
44255/011	E-Line Electric Fence Door 3 - 6 m	1 pcs	€14.99
44891	adjustable galvanised pasture gate incl. mounting kit 3 - 4 m	1 pcs	€ 189.00
44892	adjustable galvanised pasture gate incl. mounting kit 2 - 3 m	1 pcs	€169.00
44893	adjustable galvanised pasture gate incl. mounting kit 1 - 1.7 m	1 pcs	€129.00
44895	adjustable galvanised pasture gate incl. mounting kit 4 - 5 m	1 pcs	€239.00
44948	Gate Handle with Hook Rope Connector	1 pcs	€3.49
441025	Swing-Through Lock for Fence Gates	1 pcs	€15.99
441224	Electro Set for electrifying the pasture gate.	1 pcs	€26.99
441298/011	FlexiGate Tape 7.5 m	1 pcs	€29.99
441299/011	FlexiGate Rope 7.5 m	1 pcs	€29.99
441890	Rubber Electric Rope 25 m	1 pcs	€27.99
441891	Rubber Electric Rope 50 m	1 pcs	€49.99
442551/011	E-Line Electric Fence Door 4.5 - 9 m	1 pcs	€17.99
442557	adjustable galvanised pasture gate incl. mounting kit 5 - 6 m	1 pcs	€269.00
442559	Stabiliser for Galvanised Pasture Gates	1 pcs	€31.99
442920	rigid galvanised pasture gate incl. mounting kit 3 m	1 pcs	€165.00
442921	rigid galvanised pasture gate incl. mounting kit 3.5 m	1 pcs	€175.00
442922	rigid galvanised pasture gate incl. mounting kit 4 m	1 pcs	€185.00
442923	rigid galvanised pasture gate incl. mounting kit 4.5 m	1 pcs	€215.00
442924	rigid galvanised pasture gate incl. mounting kit 5 m	1 pcs	€235.00
442925	rigid galvanised pasture gate incl. mounting kit 6 m	1 pcs	€269.00
4494420	Gate Handle with Litzclip Tape Connector 20 mm	1 pcs	€4.99
4494440	Gate Handle with Litzclip Tape Connector 40 mm	1 pcs	€4.99

## Accessories

Item no.	Description	Sales unit	€
44394	Staples	50 pcs	€ 3.29
44616/011	Tape Coupling up to 40 mm	1 pcs	€ 5.99
44617/011	Fence Connector Cable for Tapes	1 pcs	€ 4.99
44627/011	Rope Connector Cable, Complete	1 pcs	€ 4.99
44629/011	Rope Coupling incl. 2 Rope Connectors	1 pcs	€ 5.99
44705	Stainless Steel Temperature Equalisation Spring	1 pcs	€ 9.99
44819	High Voltage Underground Cable 2.5 mm x 50 m	1 pcs	€ 56.99
441209/041	Screw-in Rope/Wire Connector	4 pcs	€ 5.99
441177	Variable Corner Solution Set T-Post	1 pcs	24.99
441178	Fence Starter Set T-Post	1 pcs	€ 14.99
441225	Wire Connecting Clamp	10 pcs	€ 9.49
441300	T-Post Puller	1 pcs	€ 69.99
441324	T-Post Pile Driver	1 pcs	€ 39.99
441328	Clamping Lever for Gear Wheel Wire Tensioner	1 pcs	€ 4.99
441560	Egg Shape Galvanised Rope Connector	10 pcs	€ 12.99
442002/051	Litzclip Stainless Steel Tape Connector 40 mm	5 pcs	€ 9.99
442004/051	Litzclip Stainless Steel Rope Connector	5 pcs	€ 9.49
442367	Wire-Link Wire Connector	2 pcs	€ 4.99
442610/1001	Wood Screws	100 pcs	€ 6.49
446506	Protective Hose for Temperature Equalisation Spring	3 pcs	€ 14.99
446508	"Diagonal" De-tensioning Set	1 pcs	€ 19.99

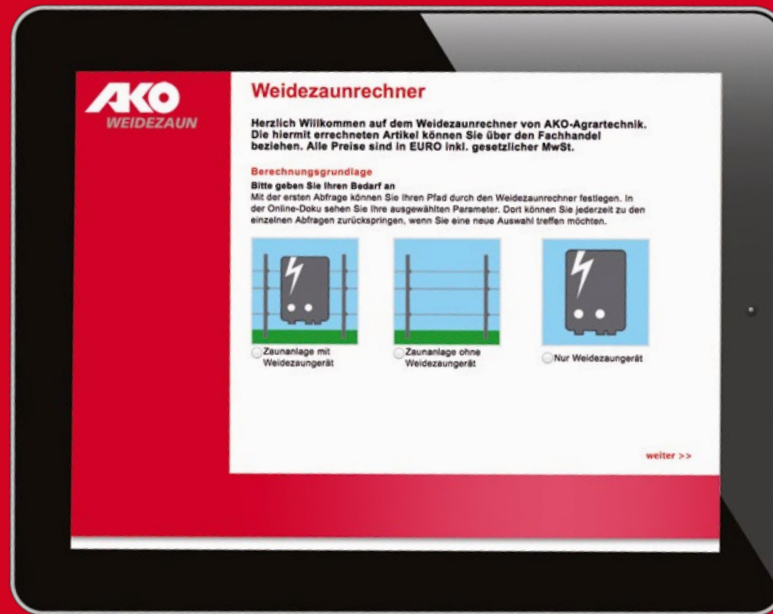
## Safety products

Item no.	Description	Sales unit	€
44607	Cut-Out Switch	1 pcs	€7.99
44669	Fence Tester, without spike, with LED display	1 pcs	€19.99
441122	Fence Control (Basic)	1 pcs	€ 279.00
441123	On/off Switching Adapter for 230 volt units for Fence Control	1 pcs	€ 79.99
441223/011	Signal Light	1 pcs	€19.99
446513	Warning Sign	1 pcs	€2.59
449602/011	Lightning Protection	1 pcs	€16.99
371018	GSM Alarm Mains Adapter (accessories)	1 pcs	€ 19.99
371019	12 Volt Cable for Fence Control (accessories)	1 pcs	€ 14.99
371020	9 Volt Cable for Fence Control (accessories)	1 pcs	€ 14.99

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### Fence advice from Kerbl

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### Sales/Logistics

#### Albert Kerbl GmbH

Felizenzell 9  
84428 Buchbach  
Germany  
Tel. +49 8086 933-577  
Fax +49 8086 933-152  
Email [weidezaun@kerbl.de](mailto:weidezaun@kerbl.de)  
[www.kerbl.de](http://www.kerbl.de)

### Technical advice

#### AKO-Agrartechnik GmbH & Co.KG

Karl-Maybach-Str. 4  
88239 Wangen-Geiselharz  
Germany  
Tel. +49 7520 9660-0  
Fax +49 7520 9660-88  
Email [info@ako-agrar.de](mailto:info@ako-agrar.de)  
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