

Electric fencing catalogue

Keep your livestock secure



Fencing for all your animals



What do you need to keep your animals safe?

If you've ever chased a cow that's escaped from a field, you'll understand the importance of a properly functioning electric fence.

Electric fencing is, of course, nothing new. But it's not easy to build and maintain a fence that animals will respect. That's because a number of variables can challenge its effectiveness, for example: fencing length, the terrain or the amount of vegetation touching the fence.

At DeLaval, we have been helping farmers plan electric fencing for more than 30 years. So we know how to put together an effective fence.

This also means that we have a full range of fencing products – whether it's a powerful energizer, a volt-meter or just a rubber maul – all bearing the DeLaval stamp of quality.

Take time to look through this new catalogue. Get a sense of what you need. And then get in contact. Together, we can plan a fence for that particular field you have in mind. A fence that you can trust to keep your animals safe.

Best regards,

Silke Biermann

Silke Biermann
Product Manager Farm Supply
Portfolio Farm Supplies
DeLaval International

DeLaval is a company of the Tetra Laval Group.

DeLaval is part of the FfDO initiative

The Food for Development Office initiates and supports feeding programmes such as school milk programmes and integrated dairy development projects in developing countries.

The aim of these projects is to achieve sustainable social and economic dairy development by promoting local milk production and value chain improvements.



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Not all DeLaval products are available in all countries. For information about the availability of a specific product, please contact your DeLaval dealer.

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It's always greener on the other side. Animals, of course, know what they want, yet they are not stupid. It doesn't take them long to learn to respect an electric fence. But only if it's working properly.

If it's not, animals will always go wherever the grass seems greener.

To ensure your fencing will always deliver the desired deterrent effect, you need two things. One, a wide range of fencing products and accessories so that you can tailor the fence to the exact needs of your location. Two, a knowledgeable partner, who can help plan and maintain a fence that will safeguard your animals.



How it works

Electric fences might be the cheapest way to keep your animals safe. However, keeping the right amount of electricity flowing around a fence can be tricky.



The principles

Like any electrical circuit, an electric fence only does its job when the circuit is closed. And fencing is only closed when something touches it.

This is how fencing works. An energizer pumps out an electric current through the fencing (the plus pole). When an animal touches the fencing, the current flows, for a split-second, through the animal via the ground to the earthing rods, which are connected back to the energizer (the negative pole). In other words, it is the animal that closes the circuit.

Ensuring the deterrent effect

But how do you ensure that the charge (i.e. the number of joules) the animal receives is at a level so that they respect the boundary?

Good conductivity

First, you need wire with good conductivity and low resistance. In this way, the fence will offer the same high charge along its entire length – even far away from the energizer.

Effective earthing

Second, no matter how expensive the energizer or wires you use, the earthing must be effective. If earthing is not done properly, less electricity will flow back to the energizer, the electrical charge will be lower, and animals may lose respect for the fence. If in doubt, use one earthing rod too many.

Minimize vegetation

Third, don't forget to factor in vegetation that might come into contact with the fence. Grasses, bushes and overhanging branches can all steal electricity from the system. If they drain off too much, the charge delivered to animals may be too low to act as a deterrent.

Lead-free energizers

New generation DeLaval energizers are in the forefront of the market for lead-free production, complying with EU regulations. They provide reliable performance in a range of solutions to suit different conditions.

Lightning protection

Lightning strikes are one of the greatest threats to an electric fence. By installing at least one lightning protector on the fence, you reduce the risk of lightning damaging the energizer.

It is essential to keep the resistance (measured in ohms, Ω) of the wire and earth as low as possible. The energizer will then be able to detect changes in the load when a body touches the fence, change its power point and maintain high voltage.

As can be seen in Figure 1, it is the wire, vegetation and earth that offer resistance (R). The energizer registers the total resistance and adapts power accordingly.



What parts do you need for an effective fence?

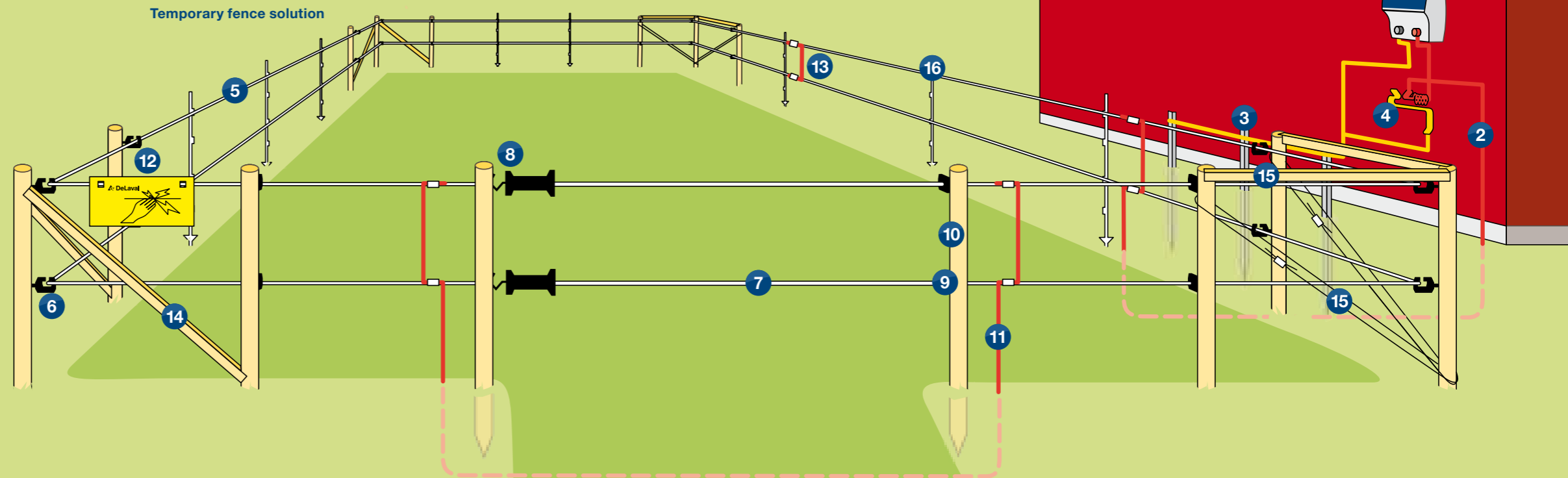
An electric fence is like a chain: introduce one weak link, and no matter how expensive the energizer, the fence will not keep your animals safe.

So select rope, tape or wires carefully. Use connectors rather than tying rope or tapes together. And install one earthing rod too many, rather than one too few.

- 1 Energizer**
An energizer is the heart of an electric fence.
- 2 Lead-out cable**
Connects main-operated energizers to fences.
- 3 Earthing rods**
Ensure electricity passes from the animal back to the energizer.
- 4 Lightning protector**
Reduces the risk of lightning damaging the energizer.
- 5 Fence line**
Rope, tape or wire, the higher the conductivity the better.
- 6 Insulators**
Make your fence effective, safe and durable with the right insulator.
- 7 Gate system**
Keep the fence live even when a gate is open.
- 8 Gate handle**
For trouble-free opening.
- 9 Gate accessories**
The right accessories reduce workload and make fencing function optimally.
- 10 Gate post**
Dimensions for gate posts should be 100 x 2,000 mm.
- 11 Underground cable**
Keeps fence but not gate electrified when gate is open.
- 12 Warning sign**
Electric fences must have warning signs at regular intervals.
- 13 Connectors**
Essential to keep entire fence working as intended.
- 14 15 Corner solutions**
Gives corners strength and stability.
- 16 Posts**
The kind of post depends on the type of fence, however, use wooden posts for corners, even for temporary fencing.

Wooden posts for sturdy fences

To ensure sturdy, dependable fences, we recommend using wooden posts for the corners, even for temporary fencing. Choose a long-lasting kind of wood, such as pine – and do not forget to impregnate the posts. For permanent fences, wooden posts should also be used for longer stretches of fencing and for gates. Post dimensions for corners and gates should be 100 x 2,000 mm. Use a tractor-driven post driver if possible. The post should be fixed to a depth of 70-75 cm. If you use a handheld driver, fill aggregate/sand around the post. See page 12 for more detailed installation tips.

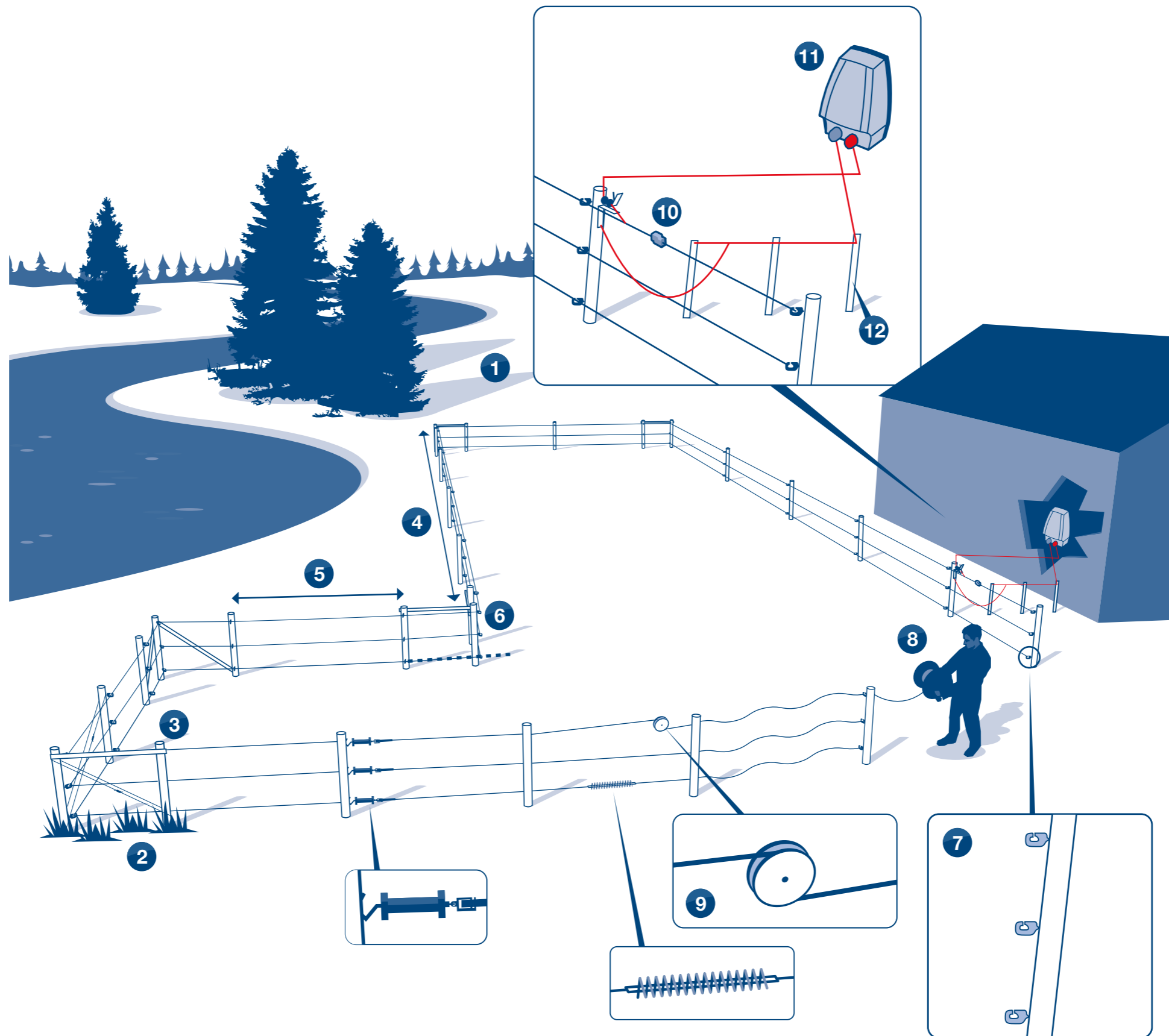


How to build a permanent fence

- 1 Decide which is the most suitable position for the fence. In woodland and pasture, take the terrain into consideration and exploit it to obtain the most effective fencing possible. Try to keep lines as straight as possible. If slightly curved lines are needed, use 60 mm intermediate posts. When building permanent fencing around arable land, make sure that the fence is not too close to the area concerned. There must be enough room to turn a tractor comfortably.
- 2 Clear vegetation and brush wood away from the fence line. Remove small undulations.
- 3 Plan the positions of corners, gates and end posts.

NOTE: Corners are the most critical point in a fence. The posts should be set 70–75 cm into the ground and surrounded by gravel or sand. A corner should be braced if the ground is shallow and rocky.

- 4 For completely straight lines, stretch a wire between the corner posts to indicate where the other fence posts should go. If the line is slightly curved, the post placement must be determined by eye. It is much easier to take sightings if you have two people working together.
- 5 Place the fence posts at approximately 6 m intervals. If the ground is very uneven, shorten the distance between posts. If it is completely flat and level, the distance can be increased to 7 to 8 m.
- 6 Mark the required wire height on the corner and fence posts. The height and number of strands of wire depend on the type of animal being enclosed. See page 8.
- 7 Fit the insulators.



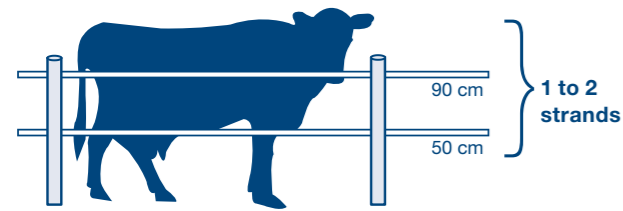
- 8 Reel out the wire and thread it in the insulators. Use insulated tubes or corner insulators on ends and corners.
- 9 Tension the wires using wire tensioners.
- 10 All wires in each section must be connected together in at least one place. Use wire connections. Build the fence in sections. A section is the length of the wire before you cut and tension it. A section must always begin and end with an end or corner post. It is seldom appropriate for sections to be longer than around 400 m. On totally flat and level areas, sections can be long. Where there are many corners, the sections must be shorter.
- 11 The energizer should be mounted indoors where someone will pass it every day. Good quality earthing and lead-out cable must be used for both the earth and the fence terminals.
- 12 Earthing should be done in a damp place near the fence, not along drained building walls. Begin with at least three earthing rods. In most cases, three to four earthing rods are needed for a permanent electric fence, but at least five for more powerful energizers.

NOTE: With very long fences, it may be necessary to fit an earth wire to the fence. Staple a steel wire 15 cm above the ground and connect it to an earthing rod every 400 to 500 m.

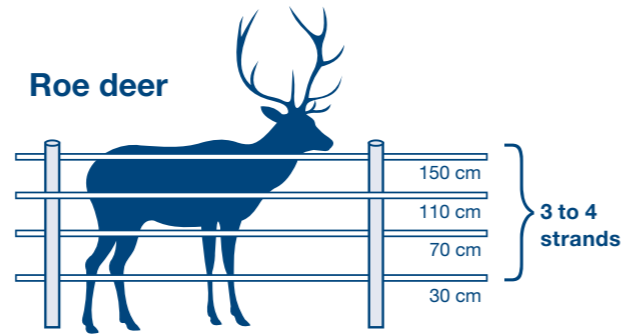
Different fences for different animals

How high should a fence be for pigs? And for cows? How many strands of wire will deter wolves?

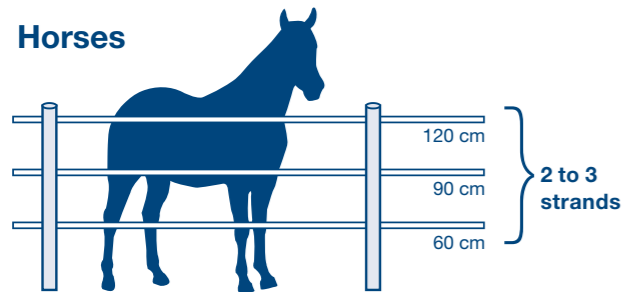
Cattle



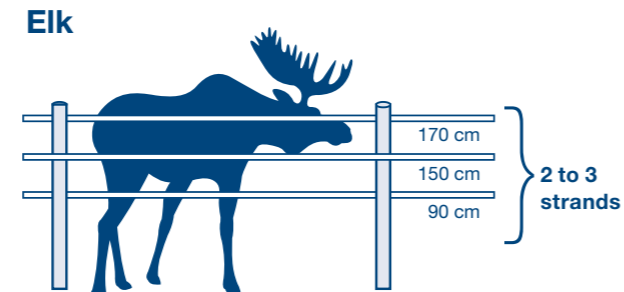
Roe deer



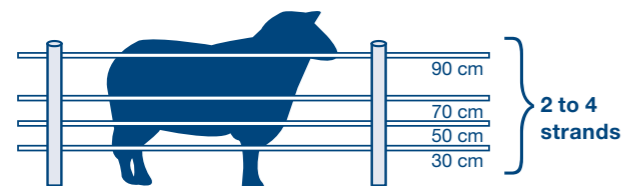
Horses



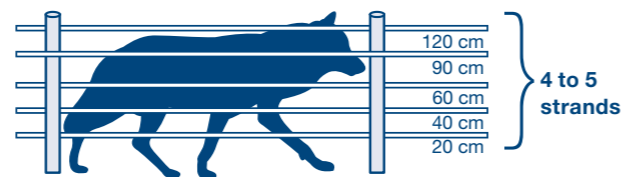
Elk



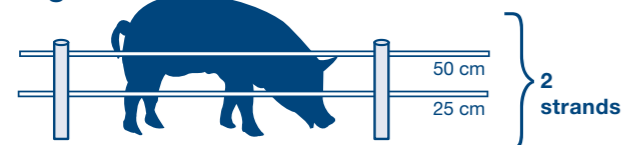
Sheep



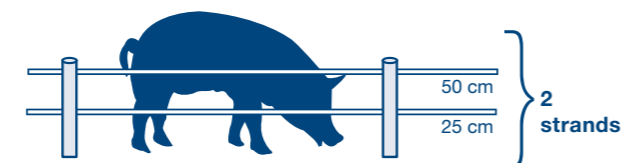
Wolves



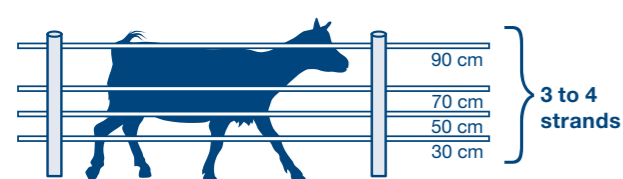
Pigs



Wild boars



Goats



NOTE: the height and number of wires should only be considered as guidelines. The size of your animals should of course determine the actual dimensions of your fences.

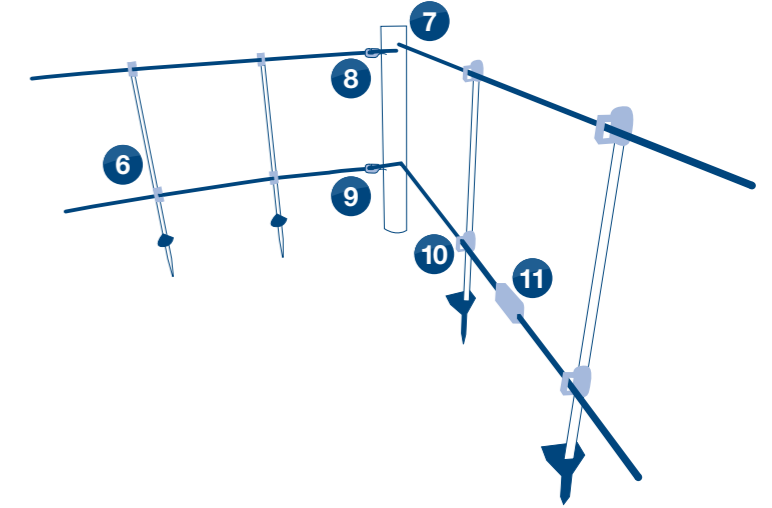
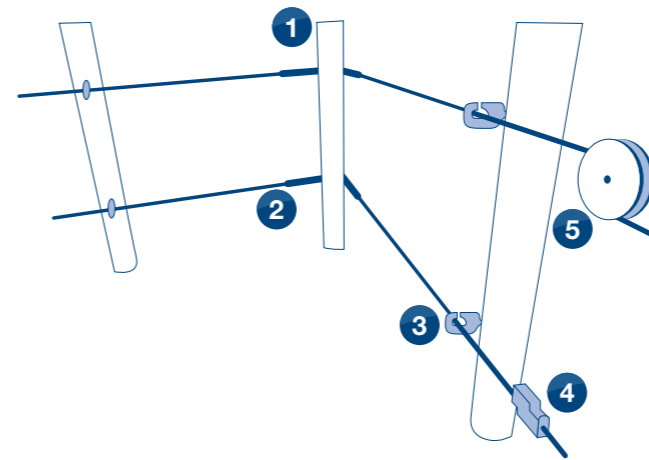
Installation tips, gates and earthing

Permanent fencing

A permanent fence is to be preferred when enclosing pasture. Strong and robust, it will withstand the wear and tear of everyday usage.

Temporary fencing

Temporary fences are recommended when you want to divide an area into smaller pastures. This lets you optimise grazing by moving the complete system as the grass grows.



- 1 For permanent fences, impregnated wooden posts are recommended. For good stability, corner posts should be larger than the other posts.
- 2 At corners, use DeLaval tube insulator around the wire and post or end and connect the wire to a corner insulator.
- 3 Use a ring insulator on wooden posts. The insulator insert tool facilitates installation.

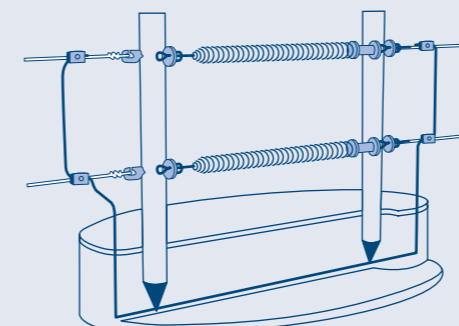
EXTRA TIP: Use a reel to make it easier to install galvanized wire, ropes and tapes

- 4 A wire connector makes joints strong and reliable.
- 5 Use a wire strainer and handle to stretch the wire.

- 6 In most cases we recommend fibreglass posts. They are lightweight, easy to carry and durable.
- 7 Use wooden corner posts to make the system stable.
- 8 We recommend ending a wire/rope at a corner. Use a wire connector to create a strong joint to the next wire/rope.
- 9 It is recommended to use a ring insulator on wooden corner posts.

- 10 Wires and ropes should be made of durable polymer with conductors woven into the material. These are easy to use and their bright colours are clearly visible to animals.
- 11 When tying two ropes together there is a large risk of a poor electrical connection. Use wire connectors to ensure intended joule effect along entire length of fence.

EXTRA TIP: For completely straight lines, stretch a wire between the corner posts to indicate where the other posts should go.



Gates

To keep your fence live when a gate is open, the fence must be connected through a cable run underground on both sides of the gate. With this construction the gate will not be electrified when it is open.

Earthing

Good earthing is essential if you want the fencing to deliver the intended number of joules. Earthing rods should be inserted in damp ground and at some distance away from buildings, so that the rod is not in sandy infill by buildings walls. A minimum of three to four earthing rods must be used for most electric fences. For the most powerful mains operated energizers, use at least five. For small battery-powered energizers,

on very short fences, one should be enough. Place the rods with at least 3 metre intervals, approximately 100 cm down. Try to find a place with damp ground. When there are poor earthing conditions, use an earth cable and do the earthing somewhere along the fence.

How to check earthing

- a. Short-circuit the fence by leaning an iron pole/rod against the fencing wire approx. 100 m from the energizer.
- b. Measure the voltage between earthing and ground with a volt meter.
- c. If the measured voltage is higher than 300 V (0.3 kV) the earthing is insufficient and needs to be improved with one or more additional earthing rods.

 DeLaval

Energizer E60M



6.0J **4.5J** **230V**
Stored energy Energy output Mains operated
9 W



1000 V 3000 V 6000 V



Energizers

An energizer is the heart of an electric fence. Choose carefully to find one that best suits your needs. Our new range offers improved design and performance – whether mains operated, battery or portable. Two factors to bear in mind are the height of the lowest wire above the ground, and the length of the fence.

What energizer do I need?

Permanent fences need powerful energizers: they are often long and have contact with much undergrowth. Fences for sheep also need powerful units because the lowest wire must be less than 30 cm above the ground, and so loses power to vegetation. Whereas fences for horses require a relatively low-power energizer since the lowest wire, at 60 cm, is often higher than the undergrowth.

DeLaval mains operated energizers



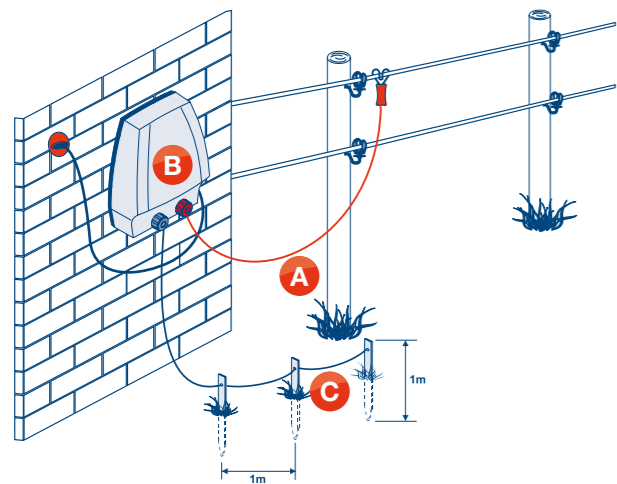
All DeLaval energizers have a 3 year warranty



UV-protected to guarantee longer life expectancy



- Stored energy - in joules
- Max. energy output
- Mains voltage
- LED display 1,000-6,000 volt
- Theoretical fence length
- Animal suitability
- Earth connection
- Fence terminal



- A.** To create optimal connection use DeLaval connection cables
- B.** Mount energizers indoors where someone passes by them every day
- C.** In most cases, three to four earthing rods are needed for a permanent electric fence

→ J	Stored energy	Joules	Energy absorbed by the energizers
J →	Max. output energy	Joules	Maximum energy that the energizer sends out to the fence
Energy use	Power consumption	W/mA	Power consumption of mains energizers is given in W and for battery energizers in mA
Max ⚡	Max. Voltage	Volts	Maximum voltage can only be reached at a low fence load
500 Ω ⚡	Voltage at 500 Ohms	Volts	Voltage at 500 Ohms fence load
Max ⚡	Max. Voltage on second terminal	Volts	Maximum voltage on second terminal can only be reached at a low fence load
CEE ⚡	Theoretical fence length (CEE)	Km	This is theoretical value that can never be reached in real fence situation
Max ⚡	Max. Fence length at different fence load	Km	This is maximum fence length that can be reached under different fence load with conductors of high conductivity (<0,05 Ω/m)
Max ⚡	Max. Fence length at different fence load	Km	This is maximum fence length that can be reached under different fence load with conductors of high conductivity (<0,05 Ω/m)
Max ⚡	Max. Fence length at different fence load	Km	This is maximum fence length that can be reached under different fence load with conductors of high conductivity (<0,05 Ω/m)
⚡	Grounding	Piece	Recommended number of grounding rods depends on the output energy of the energizer and soil conditions



DeLaval energizer 10M
Mains operated, it is suitable for short and medium sized fences. DeLaval 10M is simple to use and has a clear indicator for easy supervision.



DeLaval energizer 20M
This basic mains operated energizer is suitable for short and medium sized fences. It is simple to use and has a clear indicator for easy supervision.



DeLaval energizer 30M
Mains operated for use on short and medium sized fences in normal conditions.



DeLaval energizer E60M
Powerful mains operated unit for long fences with heavy undergrowth. The double connection terminals enable running two fences with one energizer, or temporary fencing for strip-grazing. Manufactured according to EN 60335-2-76 norm. E60M is also the perfect choice for exclusion of wild predators or sheep keeping due to its narrow impulse and high voltage at animal contact.



DeLaval energizer E120M
More powerful mains operated energizer for long fences with heavy undergrowth. Manufactured according to EN 60335-2-76 norm.



DeLaval energizer E250M
The most powerful energizer allowed according to the new EN 60335-2-76 norm. Suitable for really long fences with heavy undergrowth.



Safer fences with time-delayed energizers

DeLaval energizers comply with the EU safety standard for electric fences that came into effect in October 2010. According to the norm, standard devices in the 5-15 joule range must be equipped with a power adjustment delay for altered loads, and must feature an alarm function.

This time delay ensures that there is enough time to move safely away from the fence. However, if there is contact with the fence over a longer period of time, the pulse frequency is slowed and audio-visual alarms are triggered.

Product name	Art. no.	→ J	J →	Energy use	Max ⚡	500 Ω ⚡	Max ⚡	CEE ⚡	Max ⚡	Max ⚡	Max ⚡	Max ⚡
10M	92198080	1.5 J	1.0 J	2.2 W	7.850 V	3.750 V	n/a	30.0 km	10.0 km	2.5 km	0.8 km	3 x 1 m
20M	94290080	2.5 J	1.9 J	4.4 W	8.750 V	4.125 V	n/a	40.0 km	13.0 km	3.0 km	1.5 km	3 x 1 m
30M	94300010	3.0 J	2.0 J	6.0 W	9.000 V	4.700 V	n/a	60.0 km	20.0 km	5.0 km	2.0 km	3 x 1 m
E60M	85488720	6.0 J	4.5 J	9.0 W	9.500 V	6.400 V	8.000 V	80.0 km	30.0 km	16.0 km	9.0 km	3 x 1 m
E120M	85488740	12.0 J	8.4 J	14.0 W	9.500 V	5.500 V	8.500 V	120.0 km	35.0 km	15.0 km	10.0 km	4 x 1 m
E250M	86167601	25.0 J	14.0 J	35.0 W	10.600 V	5.000 V	n/a	320.0 km	85.0 km	40.0 km	25.0 km	5 x 1 m

DeLaval battery operated and combined energizers



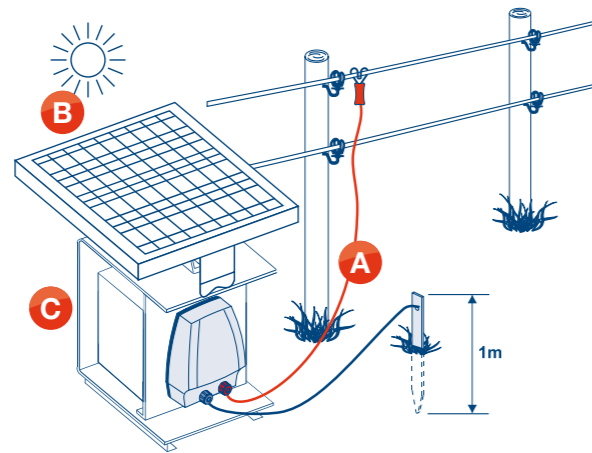
All DeLaval energizers have a 3 year warranty



UV-protected to guarantee longer life expectancy



- Stored energy - in joules
- Max. energy output
- Battery voltage
- Theoretical fence length
- Animal suitability
- LED display 1,000-6,000 volt
- Earth connection
- Strong fence terminal
- On/off switch
- Second connection terminal for paddocks and smaller pastures



- A.** To create optimal connection use DeLaval connection cables
- B.** Solar power can maintain and also extend battery life
- C.** Protect your energizer with a DeLaval box for energizer and battery

Tip: Safeguard your energizer and its battery in a protective box.



DeLaval energizer ESE16BM

A combined battery and mains energizer for short fences. It usually operates on batteries, but can be mains operated by using an adapter. Power saving technology allows power consumption to vary from 30-90 mA depending on fencing conditions. Battery operated it can also be easily connected to a solar cell.

Mains adapter incl. in delivery



DeLaval energizer 20B

Medium power 12 V energizer prepared for solar cell connection. DeLaval 20B works with a potentiometer for easy adjustment to suit different animal applications.



DeLaval energizer E8BM

Easy to use, combined battery and mains energizers for short fences and strip-grazing. Equipped with mains and battery connection cables. Can be battery or mains operated.



DeLaval energizer E2B

Easy to use, portable 9 V or 12 V battery energizers for short fences and strip-grazing.



DeLaval energizer ESE4B

Power saving technology allows power consumption to vary from 12 to 32 mA depending on fencing conditions.



DeLaval energizer ESE25BM

A combined battery and mains energizer. It usually operates on batteries, but can be mains operated by using an adapter. If both battery and mains are connected it will run on mains current, but if this cuts out it will automatically switch to battery power.

Mains adapter incl. in delivery

Power saving technology allows power consumption to vary from 35-190 mA depending on fencing conditions.



DeLaval energizer ESE50B

Powerful battery energizer with double connection terminals for medium to long fences. Power saving technology allows power consumption to vary from 100-500 mA depending on fencing conditions. Manufactured according to EN 60335-2-76 norm.



DeLaval energizer ESE120BM

As our largest battery/mains unit, this energizer is designed to provide continuous power even when the electricity is down. With energy saving technology, it only uses the power it needs, 500-1200 mA, for longer battery life. The unit can also be used purely as a battery-powered energizer.



DeLaval energizer ESE7BM

Very strong 9 V or 12 V battery energizer. Power saving technology allows power consumption to vary from 18 to 60 mA depending on fencing conditions. Supplied with mains adapter for optional connection to mains power. Portable combined energizer to suit different animal application for fences up to 7 km with no vegetation growth and 1.2 km with heavy vegetation growth.



Product name	Art. no.	→ J	J →	Energy use	Max ⚡	500 Ω ⚡	Max ⚡	CEE	Max	Max	Max	Max
E2B	87881401	0.18 J	0.12 J	22 mA	8.600 V	1.500 V	n/a	4.0 km	3.0 km	1.0 km	0.3 km	1
ESE4B	88859301	0.35 J	0.25 J	12-32 mA	9.500 V	3.000 V	n/a	8.0 km	6.0 km	4.0 km	1.0 km	1
ESE7BM	88342901	0.77 J	0.50 J	18-60 mA	10.000 V	4.000 V	n/a	18.0 km	7.0 km	5.0 km	1.2 km	1
E8BM	87881601	0.80 J	0.45 J	50 mA	7.900 V	3.300 V	n/a	8.0 km	4.0 km	2.0 km	0.8 km	1 x 1 m
ESE16BM	87881301	1.30 J	1.00 J	30-90 mA	11.500 V	4.200 V	n/a	30.0 km	8.0 km	3.5 km	1.2 km	1 x 1 m
20B	94300064	2.00 J	1.50 J	50-250 mA	11.000 V	3.800 V	n/a	40.0 km	15.0 km	5.0 km	2.0 km	1 x 1 m
ESE25BM	87881201	2.50 J	2.00 J	35-190 mA	12.500 V	4.500 V	n/a	50.0 km	15.0 km	4.5 km	1.7 km	1 x 1 m
ESE50B	86157201	4.80 J	3.00 J	100-500 mA	10.000 V	5.500 V	9.500 V	60.0 km	20.0 km	5.0 km	2.0 km	3 x 1 m
ESE120BM	86673601	12.00 J	8.00 J	500-1200 mA	9.700 V	4.300 V	n/a	180.0 km	45.0 km	21.0 km	14.0 km	3 x 1 m

DeLaval solar energizers, solar panels and accessories

DeLaval offers a wide range of solar operation for energizers. From energizer ESE7BS with built in battery and integrated solar panel to solar kits for 9 Volt energizers and several solar panels for use with 12 Volt battery energizers.



All DeLaval energizers have a 3 year warranty



UV-protected to guarantee longer life expectancy



DeLaval energizer ESE7BS
A solar operated energizer with fixed solar panel and integrated 12 V 7Ah battery. With automatic solar charging controller and battery control display. Supplied with fence and earth connection cables and 230 V mains plug for battery charging. Suitable for fences up to 16 km with no vegetation growth and 1.6 km with heavy vegetation growth.



DeLaval solar cell kit for energizer E2B, E4B, ESE4B and ESE7BM
Consisting of a 2 W solar cell panel, a support for the panel and a cable set, this ready-to-use kit helps prolong battery lifetime of your energizer.
Art. no. 94247000



DeLaval solar cell mounting plate, energizer box
To connect the solar cell support to a energizer box the mounting plate is needed
Art. no. 94247024



DeLaval solar cell support
To mount the solar cell in an easy and convenient way the support is recommended.
Art. no. 86675001



Solar cell support
For 10 to 50 Watt panels.
Art. no. 94247018



DeLaval portable energizer box
Holds any DeLaval portable energizer with its battery. Easy to move thanks to sturdy handle.
Art. no. 94247023

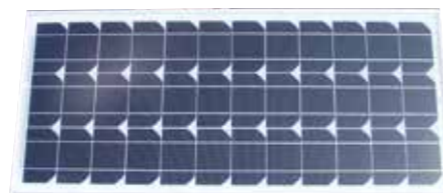
Product name	Art. no.	→ J	J →	Energy use	Max ⚡	500 Ω ⚡	Max ⚡	CEE	Max	Max	Max	Max
ESE7BS	88859401	0.65 J	0.50 J	20-50 mA	11.000 V	3.600 V	n/a	18.0 km	16.0 km	4.2 km	1.6 km	1 x 1 m



DeLaval solar cell panel 10 W
Art. no. 86674901



DeLaval solar cell panel 20 W
Art. no. 86674902



DeLaval solar cell panel 50 W
Art. no. 86674903

Technical information

Product name	Length, mm	Width, mm	Depth, mm	Weight, kg	Art. no.
Solar Cell Kit 2 W	315	190	23	1.095	94247000
Solar Cell Panel 10 W	396	296	25	1.7	86674901
Solar Cell Panel 20 W	672	296	25	2.5	86674902
Solar Cell Panel 50 W	810	540	35	6.0	86674903

Batteries for 9 V energizers



DeLaval dry alkaline batteries
9V Battery alkaline, 75 Ah. Art. no. 90598880
9V Battery alkaline, 175 Ah. Art. no. 88029101

Rechargeable 12 V battery



DeLaval rechargeable battery
For 12 V energizers and solar installations.
12 V battery sealed, 12 Ah.
Art. no. 90632090

9V alkaline batteries

Ampere hours	Length, mm	Width, mm	Depth, mm	Weight, kg	Art. no.
75	110	115	165	1.7	90598880
175	125	160	190	3.4	88029101

12V rechargeable dry batteries

Ampere hours	Length, mm	Width, mm	Depth, mm	Weight, kg	Art. no.
12	150	98	95	4.1	90632090

Energizer accessories

Selection made easy



Energizer E2B –
Art no. 87881401

2 W Solar Cell Panel –
Art no. 94247000

12 V / 12 Ah –
Art no. 90632090 or
9 V / 175 Ah –
Art no. 88029101



Energizer E4B –
Art no. 87881501

2 W Solar Cell Panel –
Art no. 94247000

12 V / 12 Ah –
Art no. 90632090 or
9 V / 175 Ah –
Art no. 88029101



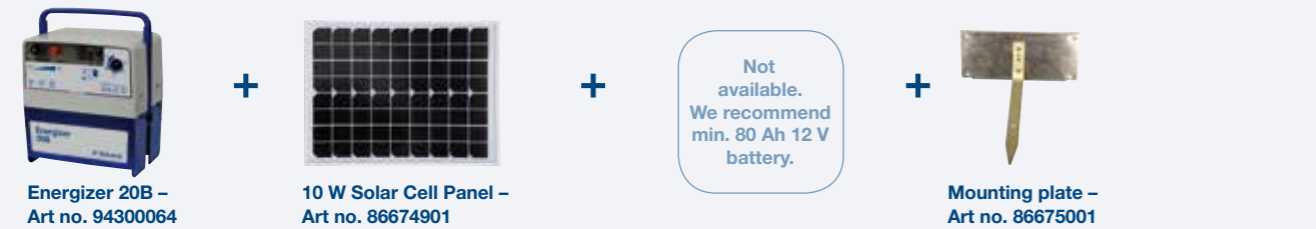
Energizer ESE16BM –
Art no. 87881301

10 W Solar Cell Panel –
Art no. 86674901

12 V / 12 Ah –
Art no. 90632090

Mounting plate –
Art no. 86675001
Art no. 94247024

Energizer box –
Art no. 94247023



Energizer 20B –
Art no. 94300064

10 W Solar Cell Panel –
Art no. 86674901

Not available.
We recommend
min. 80 Ah 12 V
battery.

Mounting plate –
Art no. 86675001



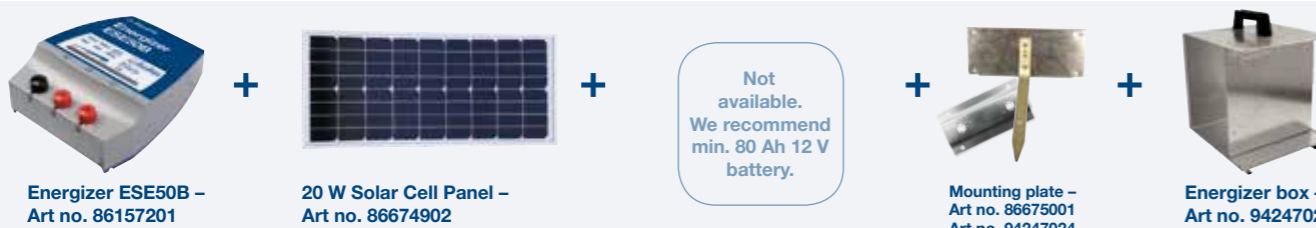
Energizer ESE25BM –
Art no. 87881201

20 W Solar Cell Panel –
Art no. 86674902

Not available.
We recommend
min. 80 Ah 12 V
battery.

Mounting plate –
Art no. 86675001
Art no. 94247024

Energizer box –
Art no. 94247023



Energizer ESE50B –
Art no. 86157201

20 W Solar Cell Panel –
Art no. 86674902

Not available.
We recommend
min. 80 Ah 12 V
battery.

Mounting plate –
Art no. 86675001
Art no. 94247024

Energizer box –
Art no. 94247023



Energizer ESE120BM –
Art no. 86673601

50 W Solar Cell Panel –
Art no. 86674903

Not available.
We recommend
min. 200 Ah 12 V
battery.

Solar cell support –
Art no. 94247018

Not available.
We recommend
mounting at
wooden
posts.

DeLaval connection cables

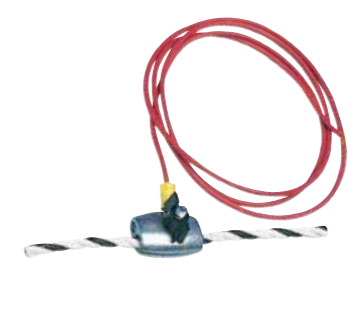
DeLaval connection cables ensures a good connection between the energizer and fence line as well as between separated fence lines. A good connection is critical in order to get the energy of the energizer into the fence lines.



Tape to tape, max 40mm.
Art. no. 90632016



Energizer to tape, up to 1500mm.
Art. no. 90632015

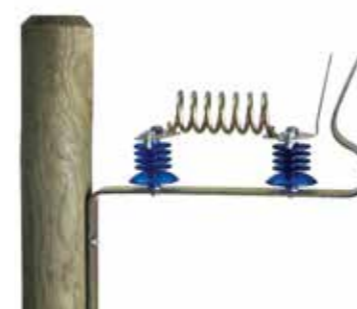


Tape to rope, up to 1500mm.
Art. no. 90632014



Fence connection cable universal
For rope and tape up to 40mm.
Art. no. 94247025

Fence accessories



DeLaval lightning protection
Will reduce the risk of lightning
damaging the energizer.
Art. no. 98872010



DeLaval earthing rod
An angled profile gives maximum surface
contact with the ground, which improves
earthing and reliability. 115 cm.
Art. no. 98882440



DeLaval ground cable
Connect earthing rods and gateways above or
below ground. The cable is double insulated and
features a galvanized steel wire conductor. Voltage
strength approx. 20 000 V. The cable is available in
three different lengths: 10, 25 and 100 m.
Ø 1.6 mm, 10m. Art. no. 86675501
Ø 1.6 mm, 25m. Art. no. 98767235
Ø 2.5 mm, 100 m. Art. no. 88859601



Wires, ropes and tapes DeLaval offers a wide range of wires, ropes and tapes for electric fencing.

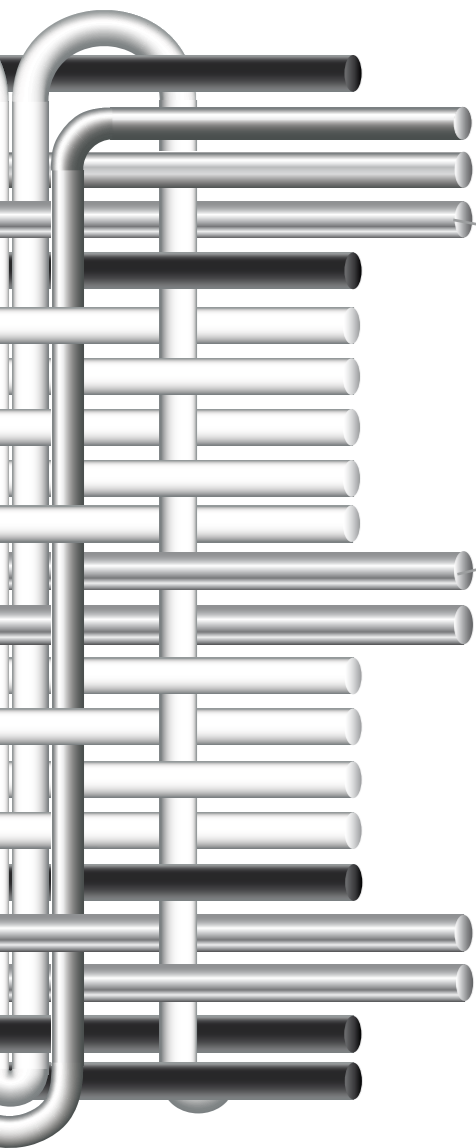
The choice of wire depends on many things. Is the fence permanent or temporary? How often will it be moved? What animals do you want the fence to keep in, or out? And how long should it be?

The DeLaval assortment is divided into three ranges – basic, standard and premium.

Products in the basic assortment contain conductors made of stainless steel. Stainless steel offers excellent breaking strength and long durability, but comparatively low conductivity. The disadvantages with low conductivity are fence length limitations, and a lower level of deterrence.

In the standard assortment, the conductors are made of both stainless steel and copper. The copper conductors are plated with corrosion-resistant material and provide extremely good conductivity, but they do not have the same breaking strength as stainless steel.

The premium range features our new high volt conductors, which provide the strength and weathering-resistance of stainless steel, plus the high conductivity of copper. In other words, our premium wire, ropes and tapes enable longer, high-deterrence fencing that is also reliable and long-lasting.

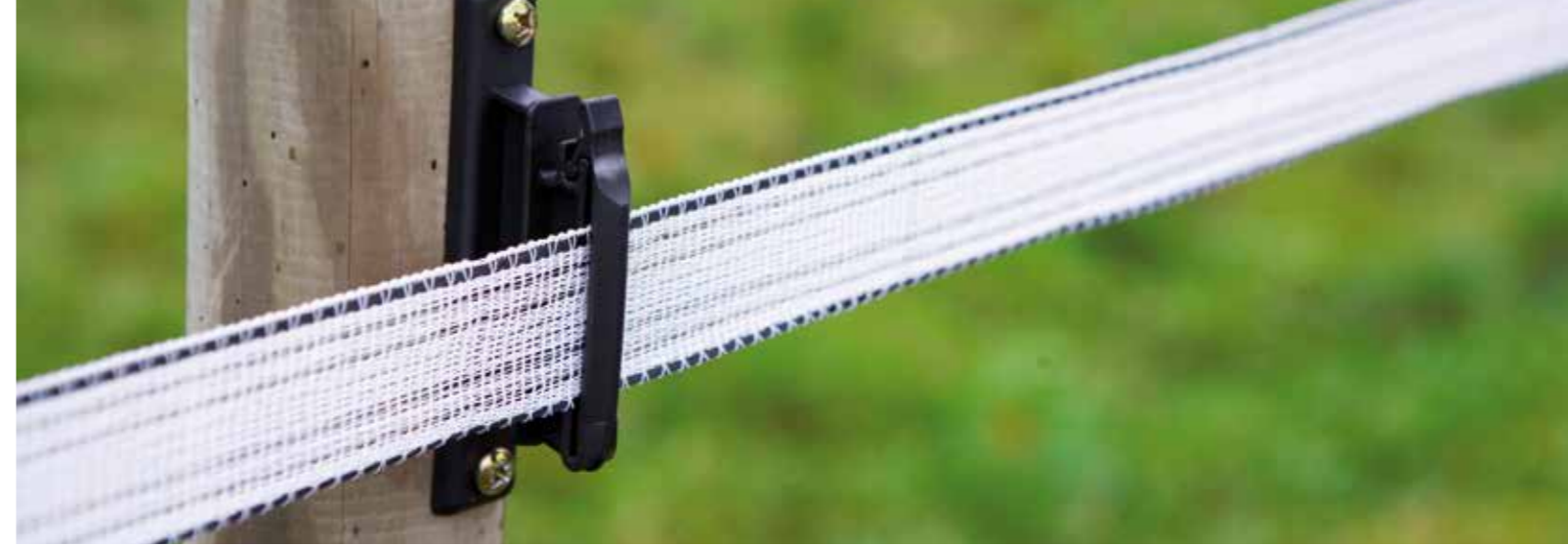


The new high volt conductors keep voltage levels higher which enables longer fences.

Premium tapes 12 mm or wider have bridge conductors to ensure power even if a conductor should fail.



DeLaval polytape BW40
Offers excellent conductivity for extra deterrence and longer fences. With its bridge conductor, the tape will always be powered even if a conductor fails. Black and white for high visibility.



DeLaval polytape BWR9
Offers excellent conductivity for extra deterrence and longer fences. Combining both high conductivity with excellent strength/weathering-resistance, this tape can be used as a long-distance contrast fence-line together with high tensile wire. Black and white for high visibility.



DeLaval polytape BW12
Provides excellent conductivity for extra deterrence and longer fences. With its bridge conductor, the tape will always be powered even if a conductor fails. Black and white for high visibility.



DeLaval polytape BW20
Has excellent conductivity for extra deterrence and longer fences. With its bridge conductor, the tape will always be powered even if a conductor fails. Black and white for high visibility.



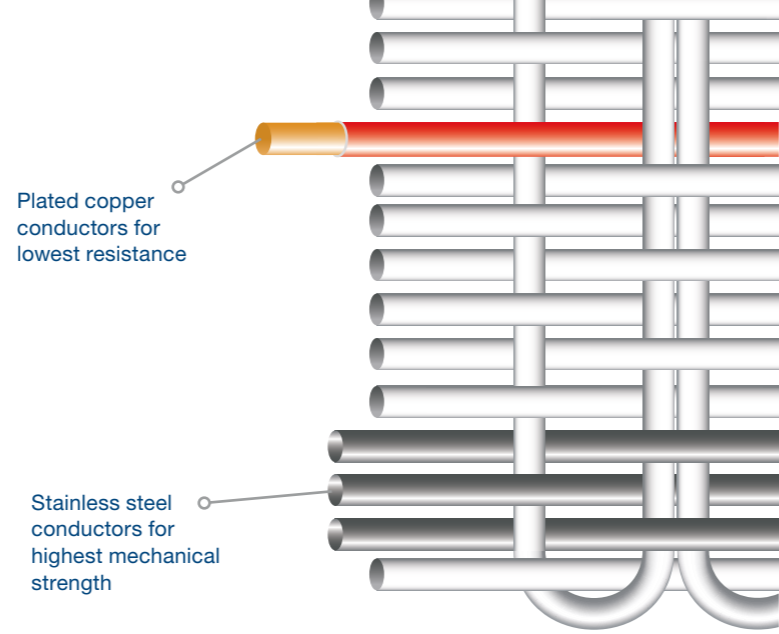
Premium tapes

The new high volt conductors used in our premium tapes provide the excellent conductivity of copper with the mechanical strength and weathering-resistance of steel. DeLaval polytape keeps the voltage running high along the entire length of your fence. This has two advantages: one, it ensures an effective level of deterrence; two, it lets you build longer fences. The black and white exterior of DeLaval polytapes gives good contrast for high visibility.

Spool	Length	Diameter	Conductors	Resistance	Max length	Art. no.
BWR9	200 m	9 mm	9 HighVolt	0.07 Ω/m	24 km	88134901
	400 m	9 mm	9 HighVolt	0.07 Ω/m	24 km	88134902
BW12	200 m	12 mm	5 HighVolt	0.16 Ω/m	17 km	88153501
BW20	200 m	20 mm	5 HighVolt	0.10 Ω/m	20 km	88153601
BW40	200 m	40 mm	9 HighVolt	0.08 Ω/m	23 km	88153701

Standard tapes

Our standard assortment of tapes are available in white or orange for good visibility. They represent a cost effective choice offering a copper conductor with good conductivity and long lifetime.



Plated copper conductors for lowest resistance

Stainless steel conductors for highest mechanical strength



DeLaval polytape O10
Combines copper and stainless steel for good breaking strength and conductivity. Often used for temporary fencing. Orange.



DeLaval polytape W10
Combines copper and stainless steel for good breaking strength and conductivity. Often used for temporary fencing. White.



DeLaval polytape W20
A durable tape for long fences. White.



DeLaval polytape W40
A durable tape for permanent fencing of horses. White.

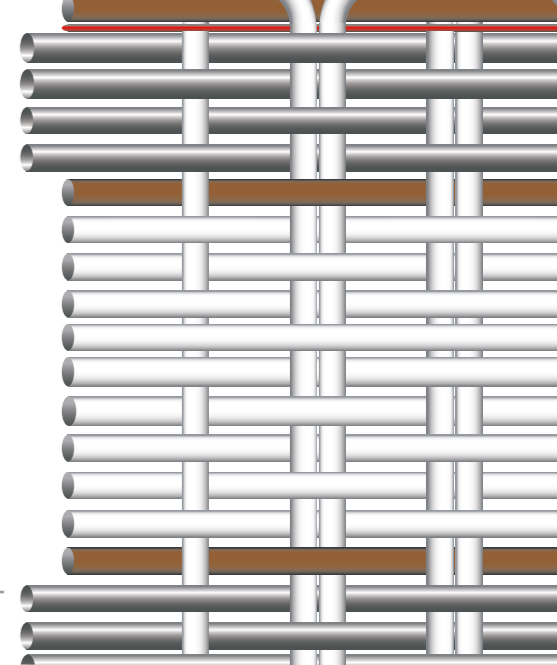


DeLaval polytape B40
Can be used as double circuit polytape. Brown.



Basic tapes

Our basic range comes in white/brown. By using only stainless steel conductors, the assortment provides a budget-priced, durable alternative for short fences and strip grazing.



Stainless steel conductors for highest mechanical strength



DeLaval polytape WB10
White/brown.



DeLaval polytape WB20
White/brown.



DeLaval polytape WB40
Can be used as double circuit polytape.



Product name	Length	Width	Conductors	Resistance	Max length	Art. no.
O10	200 m	10 mm	1 copper 4 stainless steel	0.35 Ω/m	13 km	88153901
W10	200 m	10 mm	1 copper 4 stainless steel	0.35 Ω/m	13 km	88154001
W20	200 m	20 mm	1 copper 5 stainless steel	0.34 Ω/m	13 km	88154101
W40	200 m	40 mm	1 copper 6 stainless steel	0.33 Ω/m	13 km	88154201
B40	200 m	40 mm	2x3 stainless steel	2.06 Ω/m	7 km	88154301

Product name	Length	Width	Conductors	Resistance	Max length	Art. no.
WB10	300 m	10 mm	3 stainless steel	14.4 Ω/m	1,8 km	88134701
WB20	300 m	20 mm	4 stainless steel	10.8 Ω/m	2,5 km	88134801
WB40	300 m	40 mm	2x4 stainless steel	5.4 Ω/m	3,3 km	88153101

Premium ropes

Made with durable polymers, our premium ropes are suitable for fences that are often moved. Containing our new high volt conductors, these premium ropes provide the low-resistance of copper conductors with the strength/weathering-resistance of steel — enabling longer fences with excellent durability.

The premium range offers the best of both worlds: the strength/weathering-resistance of steel, plus the high conductivity of copper. The extra low-resistance conductor delivers more voltage for better deterrence and longer fences.

DeLaval braided polywire BWP is not an ordinary wire. The monofilaments and conductors are plaited around a fibrillated plastic core. The core allows the braided twine to keep its diameter, even when highly tensioned; it also provides high breaking strength as well as low-resistance.



DeLaval braided polywire BWP4
This premium wire offers excellent conductivity and durability thanks to the unique braided design. The black and white combination provides high visibility.



New high volt conductors keep energy levels high enabling longer fences

Plated copper conductors for low resistance

Polyethylene monofilaments for long lifetime



DeLaval polywire BW4

This premium wire offers excellent conductivity and durability thanks to the new high volt conductors. Black and white for high visibility.



DeLaval polyrope BW6

This premium rope offers excellent conductivity and durability thanks to the new high volt conductors. Black and white for high visibility.

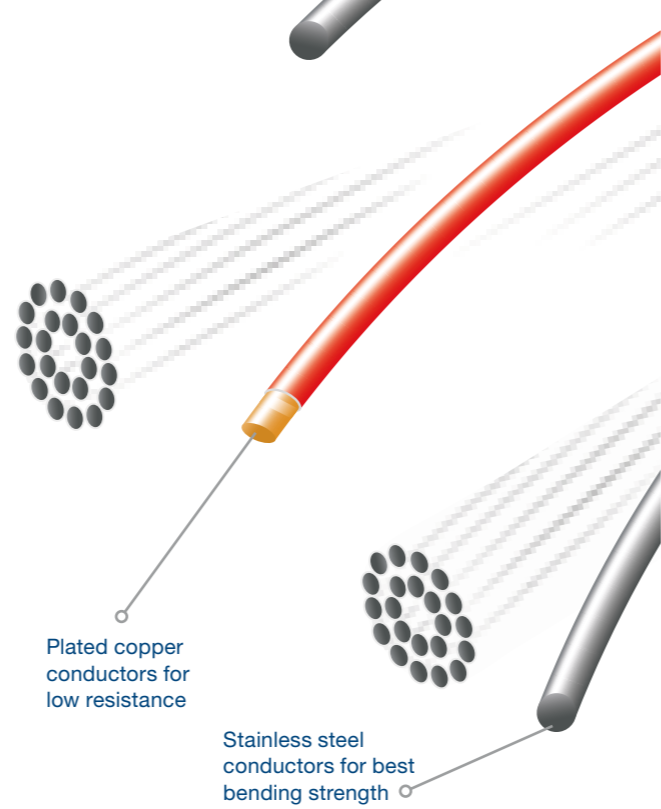


Spool	Length	Diameter	Conductors	Resistance	Max length	Art. no.
BW4	250 m / 1000 m	3.5 mm	5 HighVolt	0.13 Ω/m	18 km	88153201 88153301
BW6	300 m / 500 m	6.0 mm	6 HighVolt	0.10 Ω/m	20 km	88153401 88153402
BWP4	200 m / 500 m	3.5 mm	3 copper 1 stainless steel	0.15 Ω/m	17 km	90599610 90599609

Standard ropes and wires

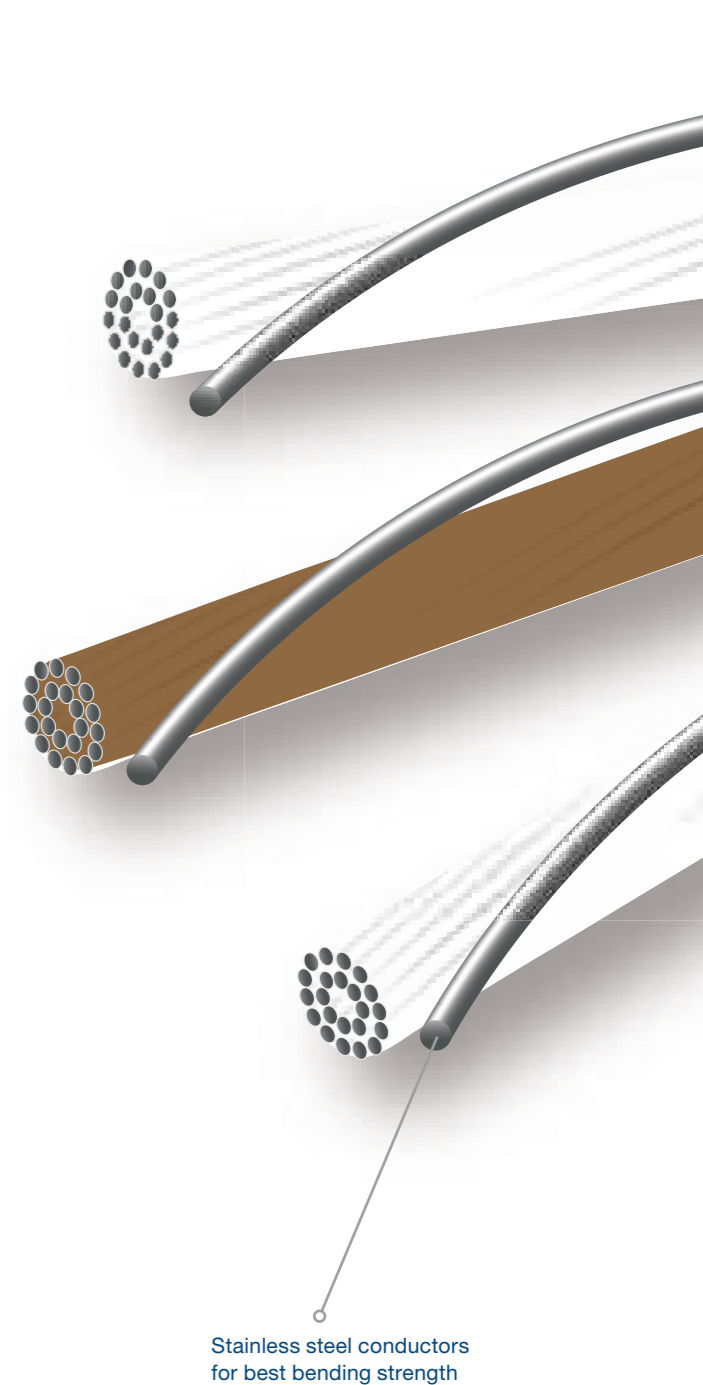
The standard assortment offers a cost effective solution with a copper conductor and good conductivity. The assortment provides long lifetime and good visibility in white or orange.

Our standard rope W4 comes with extra thick stainless steel conductors which are criss crossed around strong Polyethylene monofilaments which ensures best efficiency of the conductors.



Basic ropes and wires

Much like the tape assortment, ropes and wires are made in white and brown colour. Stainless steel conductors make it a price worthy durable solution for short fences or strip grazing.



DeLaval polywire O2
Orange.



DeLaval polywire W2
White.



DeLaval polywire W5
White.



DeLaval polyrope W4
White.



DeLaval polywire WB2
White/brown.



DeLaval polyrope WB4
White/brown.



Spool	Length	Diameter	Conductors	Resistance	Max length	Art. no.
O2	250 m	1.5 mm	1 copper 2 stainless steel	0.3 Ω/m	13 km	88154401
W2	250 m	1.5 mm	1 copper 2 stainless steel	0.3 Ω/m	13 km	88153801
W5	300 m	5 mm	1 copper 2 stainless steel	0.3 Ω/m	13 km	88154501
W4	500 m	4 mm	2 stainless steel	3.6 Ω/m	4.5 km	88859501

Spool	Length	Diameter	Conductors	Resistance	Max length	Art. no.
WB2	250 m	1.3 mm	3 stainless steel	14.4 Ω/m	1.8 km	88152901
WB4	300 m	4 mm	3 stainless steel	14.4 Ω/m	1.8 km	88153001



Accessories for wires, tapes, ropes

DeLaval tape and rope connectors

To create a good connection when one roll ends and a new begins, or to repair a broken tape.



For tapes up to 20 mm.
10pcs. Art. no. 88338601



For tapes up to 40 mm.
5 pcs. Art. no. 88339001



DeLaval rope connector
For ropes up to Ø 4mm.
5 pcs. Art. no. 87050701
For ropes up to Ø 6mm.
5 pcs. Art. no. 87050702



For ropes up to Ø 6mm.
5 pcs. Art. no. 90601982



DeLaval twine and rope strainer
Suitable for twines and ropes up to 6 mm diameter and tapes up to 12 mm diameter. Easy to apply to fence, straining is possible at any time, fence material does not have to be cut off. 2 pcs.
Art. no. 88339201



DeLaval combi reel
A light weight reel that simplifies putting up and taking down polywires and tapes. Capacity: tape 750 m and wire 2 000 m
Art. no. 94247005 - reel bobbin
Art. no. 94247006 - reel support



DeLaval combi reel big
Extra large reel particularly suitable for winding and unwinding polywires and tapes. Capacity according to type – tape up to 1500 m, wire up to 4000m. The reel is equipped with a lead through for the wire and a robust brake.
Art. no. 85030005 – reel bobbin big.
Art. no. 85030006 – reel support big

Tip:
Never knot your fence material! Always use connectors to guarantee energy flow!

Metal wires



DeLaval high tensile wire (triple-galvanized)

High tensile wire is stiff and has an extremely high breaking strength. It is pre stretched and can because of that easily be tensioned between the posts without sagging of its own weight. High tensile wire is triple galvanized with up to 400 g Zn/m². It has a life time of more than 20 years under normal conditions.

L: 1025m, Ø: 2mm, R: 0.05Ω/m

Art. no. 98800902

L: 650m, Ø: 2.5mm, R: 0.03Ω/m

Art. no. 98800903



DeLaval twisted metal wire

Is a good alternative if you would like steel wire but need something that is easier to handle than a regular metal wire. The twisted metal wire has six strong galvanized conductors.

L: 300m, Ø: 1.5mm, R: 0.1Ω/m

Art. no. 98800802



DeLaval normal galvanized wire

Normal galvanized wire is a basic steel wire for permanent fencing. It is softer than the high tensile wire and not pre stretched.

L: 410m, Ø: 1.4mm, R: 0.08Ω/m

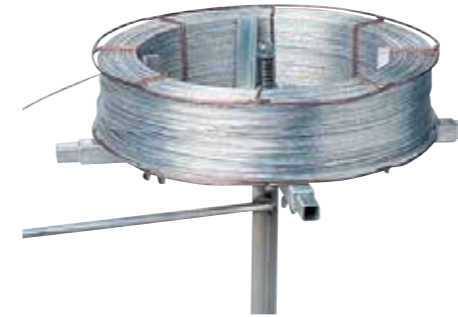
Art. no. 98800912

L: 250 m, ø: 1.8 mm, R: 0.07 Ω/m

Art. no. 85488710



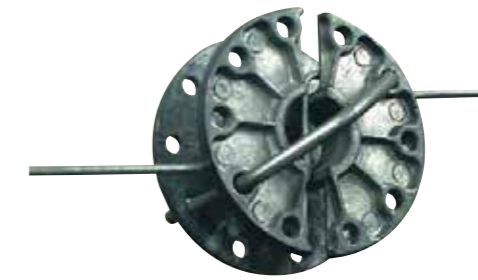
Accessories for metal wires



DeLaval reel for galvanized wire

Makes straightening heavy galvanized wire easy.

Art. no. 98964680



DeLaval wire strainer

High quality strainer which simplifies stretching of galvanized wire. 2 pcs.

Art. no. 94247022



DeLaval handle for wire strainer

To use the wire strainers a handle is needed

Art. no. 98882441



DeLaval spring for tension regulation

Used to keep galvanized wire correctly tensioned.

Art. no. 90601980



DeLaval wire connector

To connect bridge lines between the fence lines or to gates.

5 pcs. Art. no. 97271719



Gripper wire joiner

Connect wires with a connection that is both a joiner and tensioner in one. Gripper is an easy to use connector that lasts.

Small gripper for wire

20 pcs. 1.00–2.00 mm.

Art. no. 86674701

Large gripper for wire

10 pcs. 2.00–3.25 mm.

Art. no. 86674702



Gripper tensioning tool

Load wire with up to 400 kg of tension with minimal effort thanks to gear mechanism. Built-in torque gauge makes it easy to re-tension wire to the right level time after time.

Art. no. 86674801



DeLaval wire strainer



DeLaval wire connector



Posts

DeLaval offers a wide range of posts for fence construction. No matter whether you are looking for light and durable posts for temporary fencing, or strong and easy-to-use posts for permanent fencing, we have a solution that meets your needs.

What kind of posts do you need?

Generally speaking, the type of fence you need determines the choice of post. Permanent fences are built with wooden posts, or with our new permanent plastic posts. For temporary fencing, lighter materials are recommended with posts made out of fibreglass, plastic or spring steel.

Posts

Generally the type of fence determines the choice of post. Permanent fences are built with wooden posts and temporary ones with fibreglass, plastic or steel posts.

Temporary posts

DeLaval fibreglass posts

Our fibreglass posts are light weight yet durable and stable. They are also easy to drive into the ground.

1. Fibreglass post B112 without foot for cattle, 112 cm.
Art. no. 97270465

2. Fibreglass post BWP110 for cattle, 110 cm.
Art. no. 97270462.
Pallet of 1000 pcs.
Art. no. 97270464

3. Fibreglass post BWP150 for horses, 150 cm.
Art. no. 97270463

4. Insulator for fibreglass post Q:25
Extra insulators makes it possible to add extra fence lines to the fibreglass posts
Art. no. 97270480

DeLaval spring steel posts

Steel posts are used for temporary fences, preferably when the ground is hard.

5. Grey oval spring steel post, with a multi-purpose insulator. For cattle. 105 cm. Art. no. 94247060

The steel post can easily be equipped with additional insulators as desired, besides the standard top insulator. These extra insulators just clip on to the post.

6. DeLaval steel post insulator
25 pcs. Art. no. 94247061

7. DeLaval pigtail spring steel post, 105 cm.
Round steel post with white finish. Large pigtail in UV stabilised plastic (7 mm thick). Low weight and easily penetrates ground.
Art. no. 85030020

DeLaval plastic posts

Our posts are made of durable material and have several fixed insulators. The foot has a spike that can be efficiently driven into the ground. The specially designed foot on our premium plastic posts is reinforced and durable.

Plastic post for cattle:

8. Basic 102 cm.
Art. no. 87284001
9. Standard 105 cm.
Art. no. 88600301
10. Premium 108 cm.
Art. no. 94247031

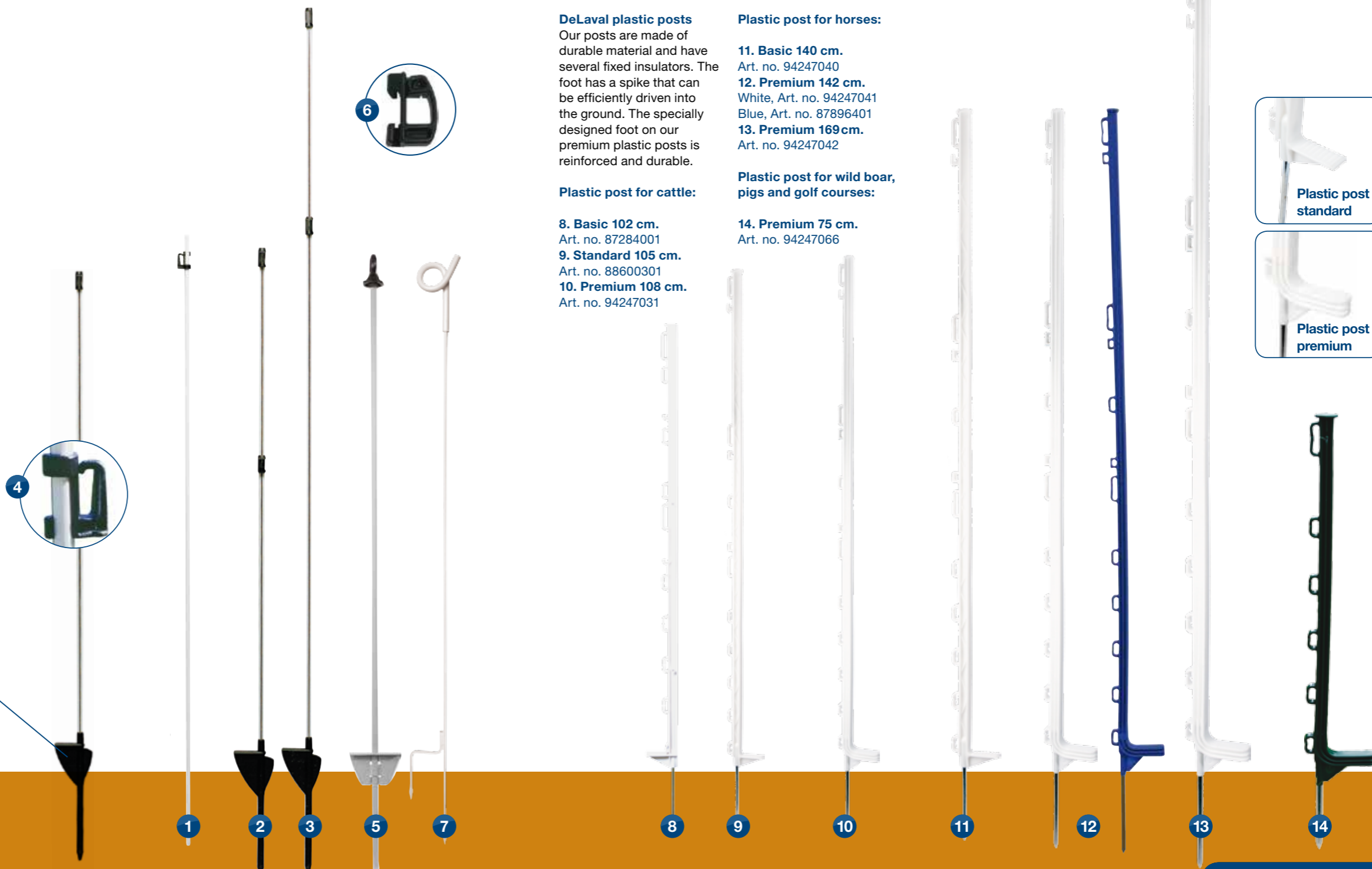
Plastic post for horses:

11. Basic 140 cm.
Art. no. 94247040
12. Premium 142 cm.
White, Art. no. 94247041
Blue, Art. no. 87896401
13. Premium 169 cm.
Art. no. 94247042

Plastic post for wild boar, pigs and golf courses:

14. Premium 75 cm.
Art. no. 94247066

Robust foot that is easy to drive into the ground



Plastic post standard



Plastic post premium



Sheep netting

Fast and easy to set up
Good conductivity
High deterrence

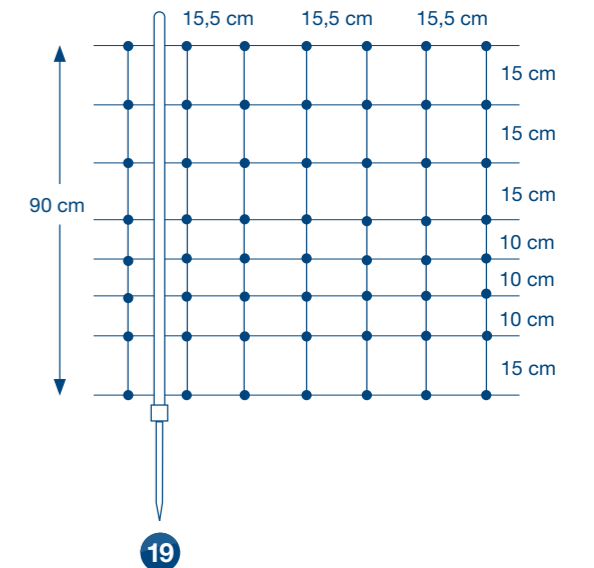
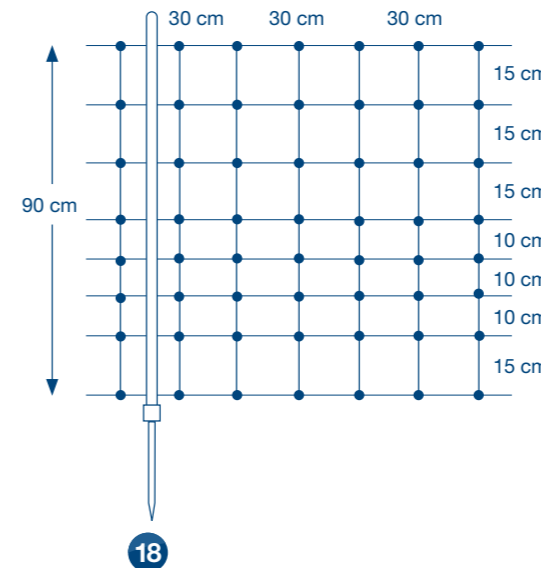
There is little as effective in temporary fencing as well-functioning electric netting. With its high conductivity and black/white colouring, DeLaval netting keeps sheep and goats safely on the inside, and predators safely on the outside.

18. DeLaval sheep net
 Black/white
 H: 90 cm L: 50 m
 Art. no. 90601680

19. DeLaval sheep net, standard
 Green/white
 H: 90 cm L: 50 m
 Art. no. 87896801

20. DeLaval spare part kit for sheep net
 Art. no. 87896501

NOTE:
 Never connect more than one energizer to the net.



Insulators

Make fencing safe and durable with the right insulator – regardless of whether you have permanent or temporary fences, or are using wire, rope or tape.

The insulator's most important task is to keep the conductor in place without having any losses of effect on the full fence length. It is important to choose strong insulators which insulate properly and give minimum power drops on the fence. The more powerful the energizer is, the more important it is to have an insulator with good insulation properties. Besides material, these properties are: a long distance between post and conductor, elimination of flash-overs, and a shape that decreases creeping currents, especially in wet conditions.

Advantages

- Highly UV-resistant
- Good insulating properties
- Durable plastic material

DeLaval universal insulator mounting tool

For installation of ring insulators, gate insulator and insulator combi. To be fixed on a drilling machine.
Art. no. 87896601



1 DeLaval ring insulator
Strong ring insulators for all types of wire, ropes up to 6 mm and tape up to 20 mm wide.
25 pcs. Art. no. 88248801
100 pcs. Art. no. 88248802

2 DeLaval ring insulator standard
For tapes up to 10 mm.
For ropes up to 6 mm.
Black, 120 pcs. Art. no. 94247050
Black, 25 pcs. Art. no. 91960704
Blue, 25 pcs. Art. no. 87896201

3 DeLaval reinforced ring insulator
Super strong ring insulator made of polycarbonate. With longer supporting nail.
For tapes up to 10 mm.
For ropes up to 6 mm.
25 pcs. Art. no. 94247051

4 DeLaval insulator combi
For tapes up to 40 mm.
For wires and ropes up to 8 mm.
25 pcs. Art. no. 94247076

5 DeLaval distance ring insulator
For tapes up to 12 mm.
For ropes up to 5 mm.
10 pcs. Art. no. 87896001



A. DeLaval tape end/corner insulator
New insulator with no risk of losing the screw as it is fixed with a nut.
5 pcs. Art. no. 90632031
Max tape 40 mm
Max rope 8 mm

6 DeLaval claw insulator premium
DeLaval claw insulator premium. Super strong claw insulator for permanent fencing.
For tapes up to 20 mm.
For wires and ropes up to 6 mm.
20 pcs. Art. no. 94247052.

7 DeLaval tape and rope insulator
For tapes up to 40 mm. For ropes up to 6 mm. 20 pcs.
Art. no. 88343501

8 DeLaval tape insulator
DeLaval tape insulator. For tapes up to 40 mm.
45 pcs. Art. no. 87896701

9 DeLaval tape insulator
For tapes up to 40 mm. For ropes up to 8 mm.
20 pcs. Art. no. 94247070

10 DeLaval nail insulator
For wire or rope up to 4 mm.
100 pcs. Art. no. 97270517

11 DeLaval multi insulator incl. nail
For wire or rope up to 6 mm.
100 pcs. Art. no. 97271010

12 DeLaval button insulator
For wire or rope up to 4 mm.
50 pcs. Art. no. 98882433

DeLaval ring insulator PND

Full plastic insulator for best isolation. Usage: Pre-drill a hole with 8mm HSS drill and nail the insulator in afterwards.
150 pcs. + 8 mm HSS drill,
Art. no. 87965901



B. DeLaval connector plate
To use together with tape end/corner insulator to start or end a fence line, connect an energizer or gate. Ideal to use as a three-way junction.
5 pcs. Art. no. 90632032



DeLaval corner insulator

Strong and durable corner insulator for permanent fencing. To be connected to the post with high tensile wire. Black.
10 pcs. Art. no. 98882430

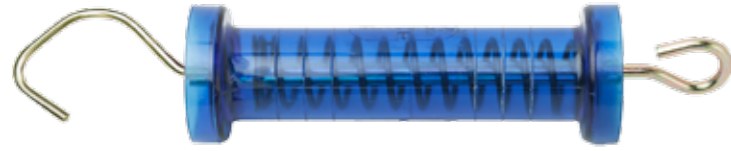


DeLaval tube insulator

25 m. Art. no. 91960708

General accessories

Handles



DeLaval gate handle tension limiter (blue)
Super strong gate handle made of polycarbonate. Transparent for easy supervision. Durable long-lasting compression spring. Art. no. 94247069



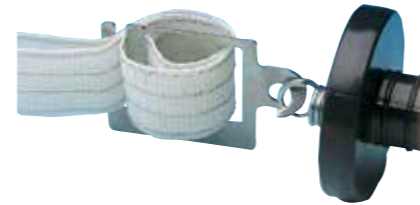
DeLaval gate handle for tape
Open and close electrified gates more easily with this gate handle. With the accompanying tape holder you can attach tape up to 40 mm to the handle. Art. no. 88343201



DeLaval standard gate handle
Standard gate handle with conductive pull-spring. Easy to wind up wire or rope thanks to built-in slot.
Black – Art. no. 90632055 Blue - Art. no. 87896301
Yellow – Art. no. 86674602 Pink – Art. no. 86674601



DeLaval gate insulator
4 pcs. Art. no. 90632051



DeLaval tape/gate handle connector
Connects up to 40 mm of tape for a safe gate. 5 pcs. Art. no. 90632013



DeLaval elastic gate
An easy to use, safe and animal friendly gate. The elastic rope is 4.5 m long and can be stretched to a maximum of 9.4 m. Art. no. 97271433



DeLaval spring gate
Permits a gate 4.5 m wide. Art. no. 97271430



Monitoring and safety



DeLaval fence tester multi

Controls voltage and amperage level of the fence and direction of the current flow. It will also show the direction of any short circuit in the fence. The fence tester multi works without an earth cable which ensures easy handling. 9V battery included.
Art. no. 85030001



DeLaval digital volt meter

A measuring instrument that helps to check your fence and keep it working correctly. Voltage in kV. Battery included.
Art. no. 90632072



DeLaval fence tester FT6

Shows fence voltage level in 6 levels, up to 10 000 volts. Easy to use, no earth connection necessary. 1.5 Volt monocell battery included.
Art. no. 88343601



DeLaval fence tester

Shows that there is voltage running through the fence. Up to 10000V.
Art. no. 94247068



DeLaval key-ring fence tester

For quick check of your fence. Battery included.
Art. no. 91960701



DeLaval warning sign

Electric fences must have warning signs at regular intervals. DeLaval warning sign is made of strong plastic material with warning text on both sides, including cable ties for easy placement on the fence.
4 pcs. Art. no. 85488701

Tools



DeLaval rubber maul

Makes it simple to drive posts into the ground.

3kg Art. no. 97270441
5kg Art. no. 97270442



DeLaval fence pliers

Robust pliers which help you when fencing.

Art. no. 98767209



Recommended products for fencing cattle in



Recommended products for fencing horses in



Fence energizer

- Short electric fences: DeLaval 10M, 30M, E2B, E8BM
- Medium and long electric fences: DeLaval 20M, E60M, ESE4B, ESE7BS, ESE7BM, ESE16BM, 20B, ESE50B, ESE25BM
- Very long electric fences: DeLaval E120M, E250M, ESE120BM

Permanent fencing



Wire and tape

- High-tensile wire (triple-galvanised) 2.0 mm/2.5 mm 98800902/-03
- Normal galvanized wire 1.4 mm/1.8 mm 98800912/85488710
- Twisted metal wire 1.5 mm 98800802
- Braided polywire BWP4 90599609/-10
- Polyrope BW6 88153401/to follow



Posts (6 m between posts)

- Pressure-treated timber post



Insulators

- Ring insulator (for timber posts) 88248801/-02 91960704, 94247050, 94247076,
- Distance ring insulator 87896001
- Claw insulator 94247052
- Reinforced ring insulator 94247051

Temporary fencing



Wire and tape

- Braided polywire BWP4 90599609/-10
- Polywire BW4 88153201/ 88153301
- Polytape BW12/20/40 88153501/-3601/-3701
- Polywire O2 88154401
- Polywire W2 88153801
- Polyrope W5 88154501
- Polytape BWR9 88134901/-02
- Polytape W10/20/40 88154001/-101/-201
- Polytape O10 88153901



Posts (up to 10m between posts)

- Fibreglass post BW110 incl. foot 97270462
- Fibreglass post B112 excl. foot 97270465
- Plastic post 102 cm 87284001
- Plastic post 108 cm 94247031
- Spring steel post 105 cm 94247060
- Spring steel post 105 cm (pigtail insulator) 85030020
- Pressure-treated timber post (for corner)

Note: For recommended wire heights (for both permanent and temporary fencing), see page 8.



Fence energizer

Fencing for horses does not normally require a high-power energizer

- Short electric fences: DeLaval 10M, 30M, E2B, E8BM
- Medium and long electric fences: DeLaval 20M, E60M, ESE4B, ESE7BS, ESE7BM, ESE16BM, 20B, ESE50B, ESE25BM
- Very long electric fences: DeLaval E120M, E250M, ESE120BM

Permanent fencing



Wire and tape

- Polyrope BW6 88153401/to follow
- Polytape BWR9 88134901/-02



Posts (2 to 3 m apart using 40 mm tape, otherwise 4 to 6 m)

- Pressure-treated timber posts



Insulators (2 to 3 pcs. per post)

- Ring insulator (for timber posts) 88248801/-02 91960704, 94247050, 94247070
- Tape insulator 90632031
- Tape end/corner insulator 94247052
- Reinforced ring insulator 94247051



For connecting and gates

- Join/connector plate 90632032
- Gate plate 90632013
- Tape connectors 88338601/87050702

Temporary fencing



Wire and tape

- Polywire BW4 88153201/-301
- Braided polywire BWP4 90599609/-10
- Polytape BW12/20/40 88153501/-601/-701
- Polytape BWR9 88134901/-02
- Polytape W10/20/40 88154001/-101/-201
- Polytape O10 88153901



Posts

- Fibreglass post BWP150 97270463
- Plastic post 140 cm 94247040
- Plastic post 142 cm 94247041
- Plastic post 169 cm 94247042
- Pressure-treated timber post (for corner)



Recommended products for fencing sheep in



Fence energizer

Always use a high-power energizer for fences for sheep.

- Short electric fences: DeLaval 10M, 30M, E2B, E8BM
- Medium and long electric fences: DeLaval 20M, E60M, ESE4B, ESE7BM, ESE16BM, 20B, ESE50B, ESE25BM
- Very long electric fences: DeLaval E120M, E250M, ESE120BM

Permanent fencing



Wire and tape

- High-tensile wire (triple-galv.) 2.0mm/2.5mm 98800902/-03
- Normal galvanized wire 1.8mm 85488710
- Braided polywire BWP4 90599609/-10
- Polyrope BW6 88153401/to follow
- Polytape BWR9 88134901/-02



Posts (4 to 6 m between posts)

- Pressure-treated timber posts



Insulators (2 to 4 pcs. per post)

- Ring insulator (for timber posts) 88248801/-02
91960704, 94247050, 94247076
- Claw insulator 94247052
- Reinforced ring insulator 94247051



For connecting and gates

- Join/connector plate 90632032
- Gate plate 90632013

Temporary fencing

Sheep netting

- 90 cm, length 50 m 90601680
- **Sheep netting, standard**
- 90 cm, length 50 m 87896801



Wire

- Braided polywire BWP4 90599609/-10
- Polywire BW4 88153201/-301
- Polytape BW12/20/40 88153501/-601/-701
- Polywire O2 88154401
- Polywire W2 88153801
- Polytape W10/20/40 88154001/-101/-201
- Polytape O10 88153901



Posts (up to 8 m between posts)

- Fibreglass post BWP110 + 1 to 2 extra insulators 97270462/-80
- Plastic post 75 cm green (premium) 94247066
- Plastic post 102 cm 87284001
- Plastic post 108 cm 94247031
- Spring steel post 105 cm + 1 to 2 extra insulators 94247060/-61/-62
- Spring steel post 105 cm (pigtail insulator) 85030020
- Pressure-treated timber post (for corner)



Recommended products for keeping predators out



Fence energizer for predators (wolves, bears, lynx)

Always use a high-power energizer with fencing to keep out predators, because of the length of the fence and exposure to vegetation.

- Medium and long electric fences: DeLaval E60M, ESE50B
- Very long electric fences: DeLaval E120M, E250M, ESE120BM

Permanent fencing



Wire

- High-tensile wire (triple-galv.) 2.0mm/2.5mm 98800902/-03



Posts (6m between posts)

- Pressure-treated timber posts



Insulators (4 to 5 per post)

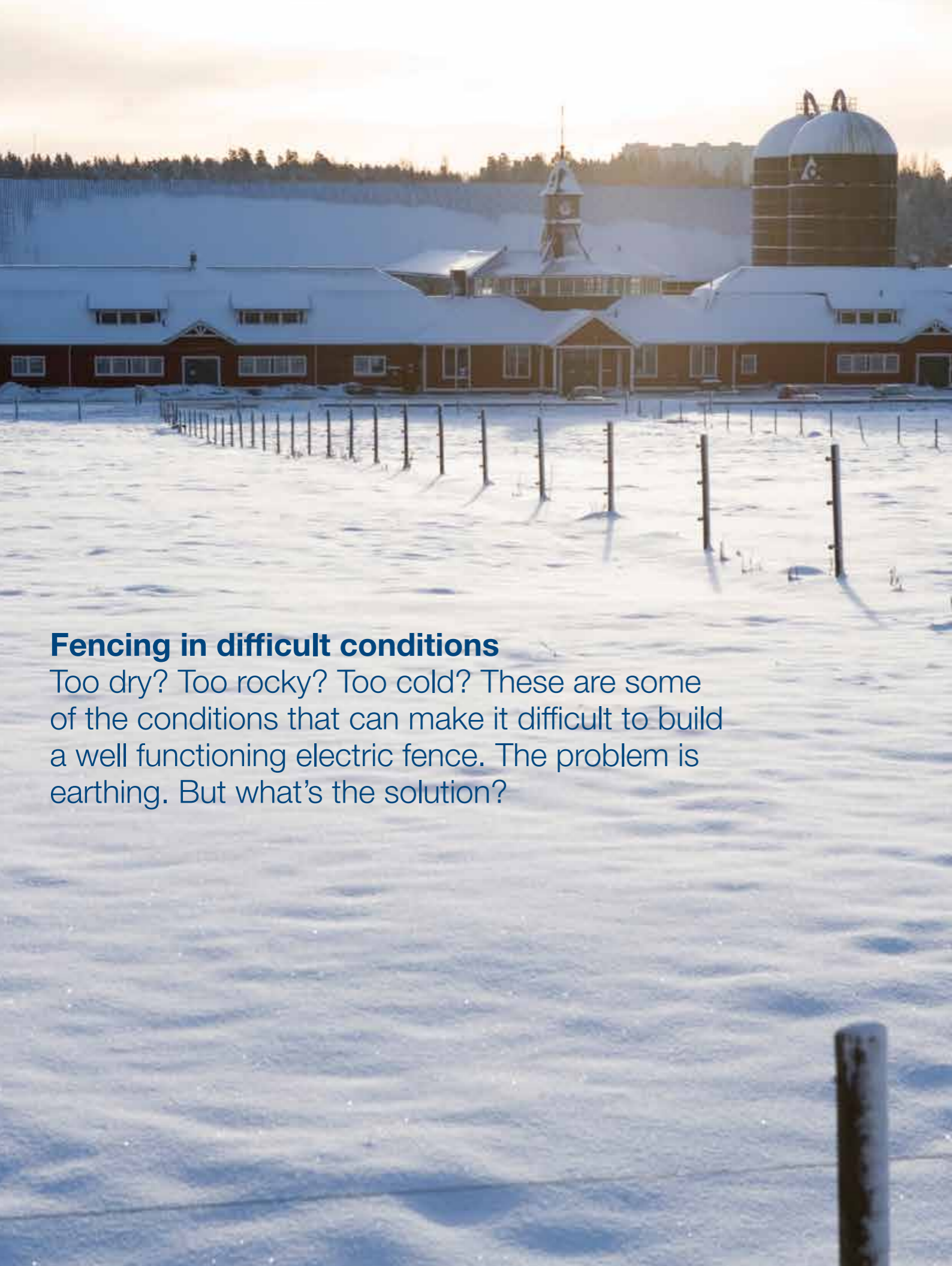
- Ring insulator (for timber posts) 88248801/-02
- Claw insulator 94247052
- Reinforced ring insulator 94247051



For connecting and gates

- Join/connector plate 90632032
- Gate plate 90632013

Note: For recommended wire heights (for both permanent and temporary fencing), see page 8.



Fencing in difficult conditions

Too dry? Too rocky? Too cold? These are some of the conditions that can make it difficult to build a well functioning electric fence. The problem is earthing. But what's the solution?

Fencing when earthing is difficult

If you want animals to respect an electric fence, effective earthing is essential – otherwise the circuit will not close when an animal touches the fence and so will not receive a deterring shock. And for a circuit to close, the animal must be in contact with ground that contains moisture. But what do you do if conditions are very dry? Or with long fences in rocky or mountainous terrain? Or when frost or snow insulate animals from contact with the ground?

Reliable solutions

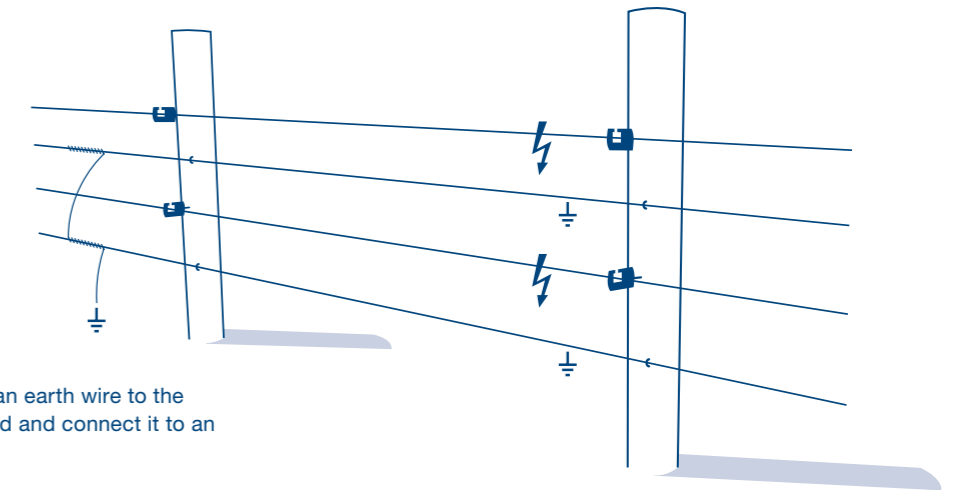
DeLaval has two solutions. Both set up an earthing circuit that can work independently of the ground and earthing rods.

1. DeLaval double circuit polytape

DeLaval double circuit polytape has two separate conductors built into the tape. One is the standard wire that powers the fence. The other connects to the energizer's earthing terminal. When an animal comes into contact with your fence, it touches both conductors at the same time. This closes the circuit and the animal receives a nonhazardous electrical shock.

2. Separate earthing circuit

Another solution is to mount a separate earthing circuit around the length of your fence. By setting up a dedicated earthing wire, you provide the current with an unhindered route back to the energizer's earthing terminal. In this way, an animal will receive a shock when it touches the standard fence wire and the earthing wire at the same time. To further enhance effectiveness, earthing rods can be connected to the earthing circuit every 200 metres.



For very long fences, it may be necessary to fit an earth wire to the fence. Staple a steel wire 15cm above the ground and connect it to an earthing rod approx. every 200 metres.



- 1 Polytape B40, 200m.
Art. no. 88154301
Polytape WB40, 200m.
Art. no. 88153101
Polytape W40, 200m
Art. no. 88153201



- 2 Tape insulator, 8 pcs/pack.
Art. no. 94247053



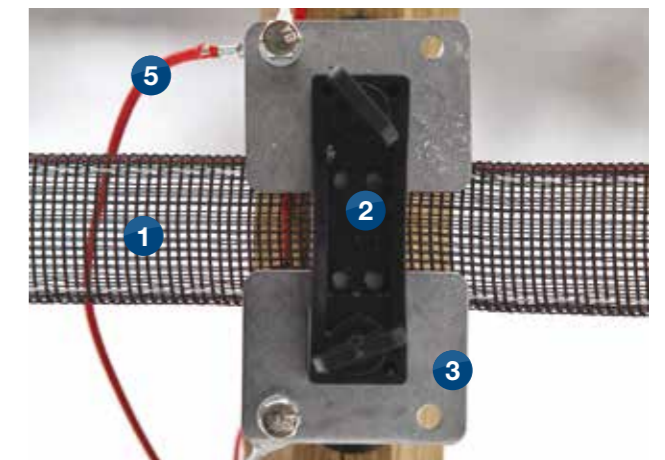
- 3 Connector plates, metal,
2 pcs/pack.
Art. no. 94247056

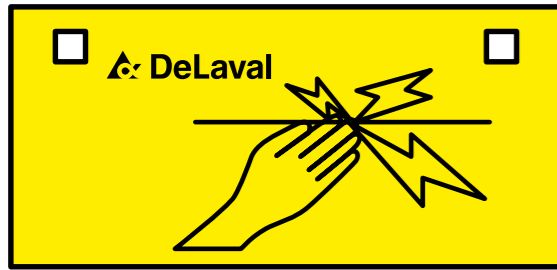


- 4 Earth & fence connection
cables.
Art. no. 94247054



- 5 Tape connection cables.
Art. no. 94247055





Safety instructions for the installation and operation of electric fencing

1. Electric fencing must be installed and used in such a way that it does not cause any danger to people, animals or its surroundings. As far as is reasonably possible, it must be out of the reach of children and not subjected to mechanical damage or unauthorised tampering. Insofar as the following requirements are additional to, but not in conflict with, regulations issued by the national authority responsible, they are valid for the installation and operation of electric fencing and its devices.

2. Electric fencing must not be fed by more than one device. Electric fencing with one wire must be fed by only one fence circuit on the electric fencing device. Electric fencing with several wires can be fed from different fencing circuits from the same electric fencing device, provided that only one fencing circuit is used to feed an individual wire.

3. For two separate electric fences, the distance between the fencing wires and the distance between the connecting wires must be at least 2 m. If the space between is to be fenced, this must be done using electrically non-conductive material.

Advice:
The horizontal separation between an electric fence and other obstacles to movement running parallel to the fence should not be less than 2 m.

4. Barbed wire must not be electrified in electric fencing. Non-electrified barbed wire must not be used in combination with single or multiple wire electric fencing.

5. An electric fence, or parts thereof, installed along a public road or footpath, must be identified using warning signs fixed securely on posts or fixed securely to the fence wire at frequent intervals. The size of the warning signs must be at least 200x100 mm. The background colour on

both sides of the warning sign must be yellow. The lettering on the sign must be black and in the form of the symbol in accordance with local regulations.

6. If it is necessary to cross a public highway with a fence wire or lead-out feed, the authority concerned must be informed. In all cases the vertical separation between the wire and any part of the roadway must be at least five metres.

7. Where electric fencing crosses a bridleway or other public footpath, a non-electrified gate must be included in the fence at this point, or there must be a crossing using stiles. At a crossing like this, the adjoining fencing wires must be equipped with such warning signs as are specified in number 5.

8. If it is necessary to open an electric fence at places that are not accessible to the general public, parts that can be touched must be made of insulating material or be appropriately insulated from the fence.

9. Fencing wire and lead-out feeds must not be attached to posts used for low or high-tension overhead transmission lines, or to telephone or telegraph wires. Electric fence apparatus connected to the mains may be attached to posts for low-tension lines provided permission has been obtained from the appropriate electricity utility, company or supervising authority.

10. If an electric fence must be installed close to an overhead power line, the vertical separation between any fence wire or lead-out feed and the ground surface must not exceed 2 m. This distance applies to all points situated within the projection at right-angles to the outermost of the power lines onto the ground surface and a distance of two metres outside thereof for power lines with a nominal working voltage not exceeding 1kV, and a distance of 15m outside that for power lines with a working voltage exceeding

1kV. Avoid crossing overhead power lines. If such a crossing cannot be avoided, it must be made below the power line and at as close to a right-angle to it as possible. The separation stated above must be applied. The appropriate electricity utility, company or authority must be notified.

11. Where fencing wires or lead-out feeds are installed close to overhead communication lines, There must be at least two metres separation between any of the fence wires or lead-out feeds and these lines.

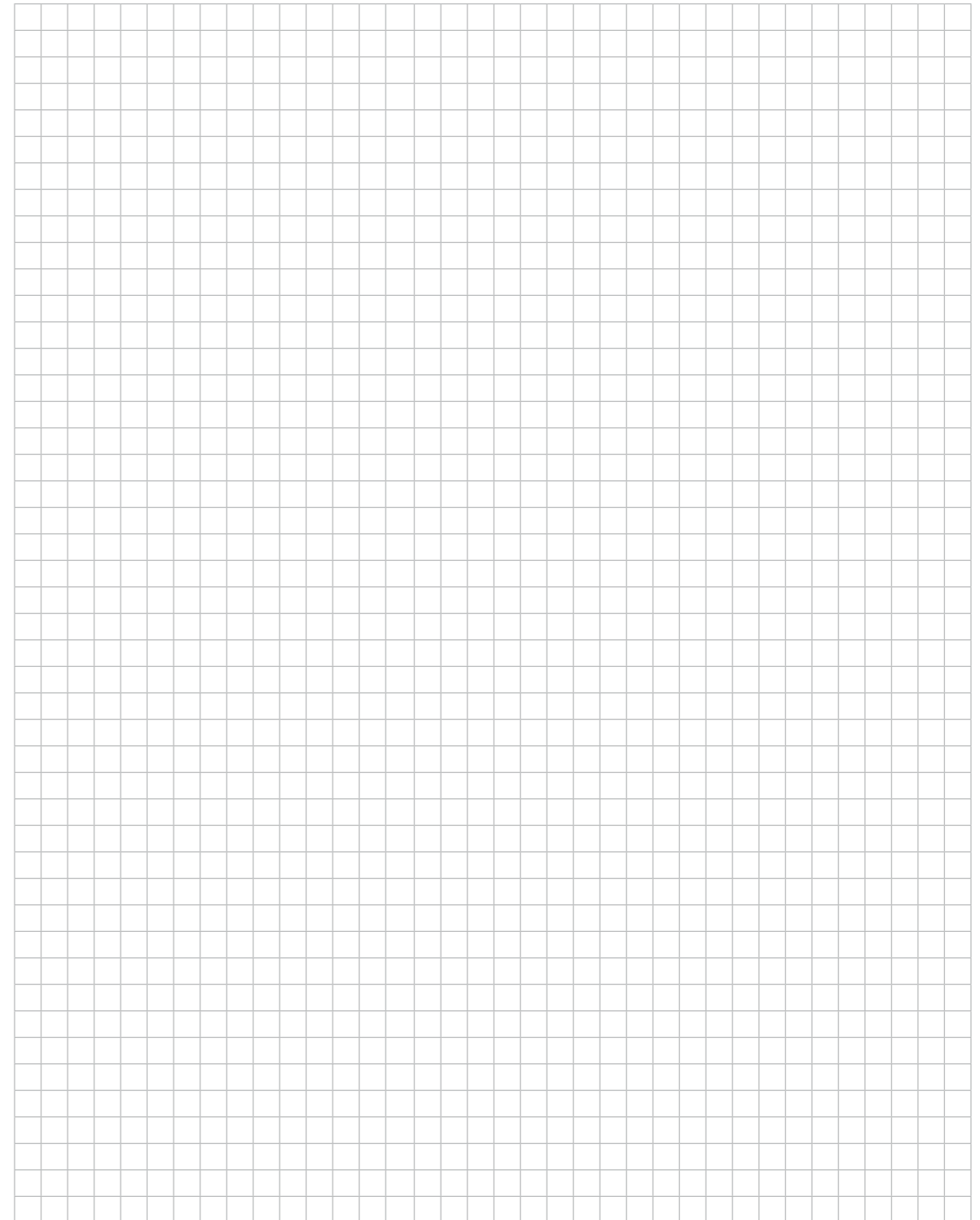
12. Inside buildings, special insulation between the feeds and parts of the building connected to earth is required for lead-out feeds that work at a voltage exceeding 1kV. Make sure there is sufficient separation or use high-tension cables.

13. If the earth lead of an electric fence is installed close to a building, the separation between this earth lead and the mains electricity earth protection and neutral connection must be at least 10m. The electrode for the electric fence earth lead should preferably be installed in a location with damp earth to ensure a good contact. The electrode, unless being used with low-power battery-powered fences, must penetrate at least 0.5m into the ground.

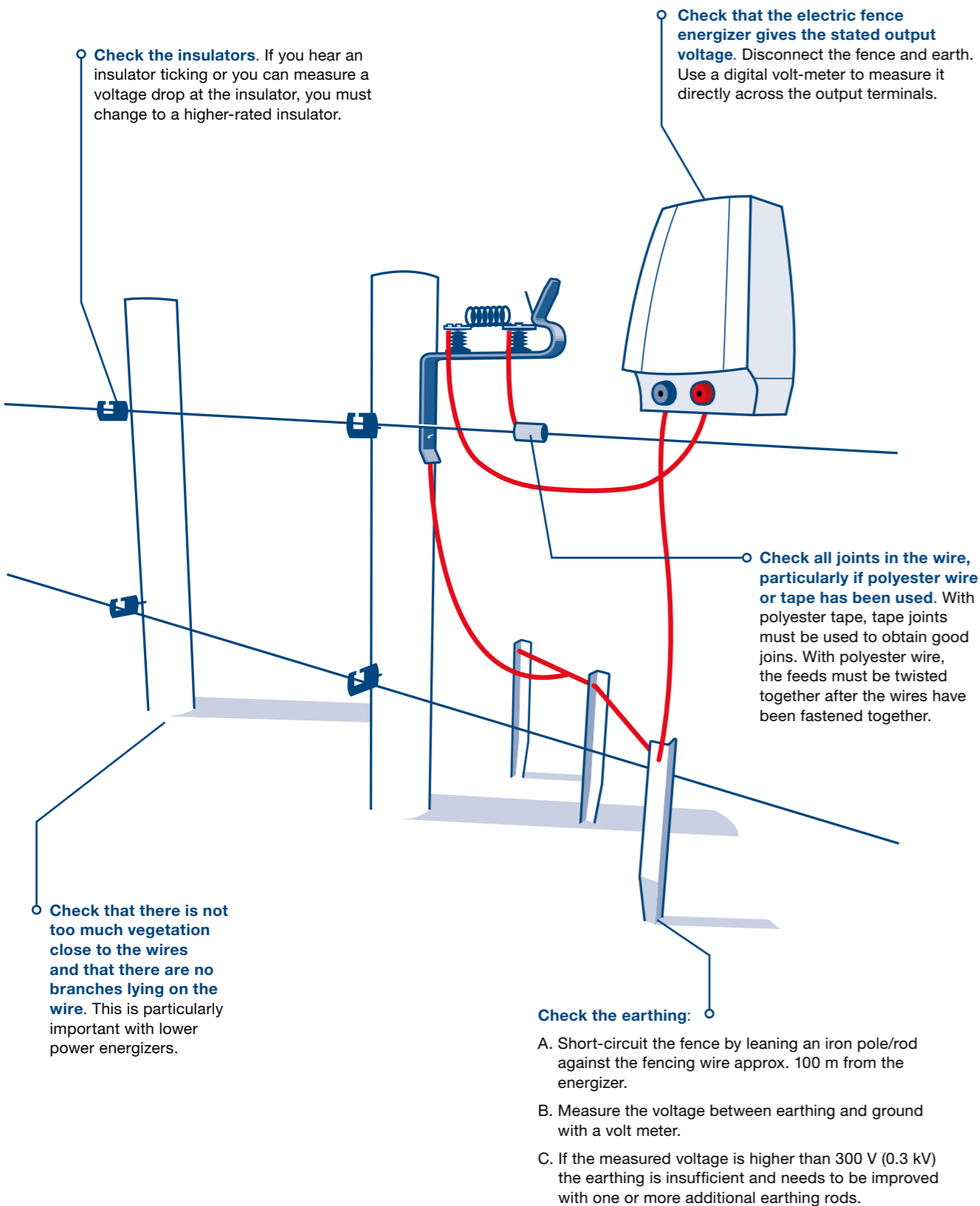
14. Where electric fencing crosses a bridleway or other public footpath, a non-electrified gate must be included in the fence at this point, or there must be a crossing using stiles. At a crossing like this, the adjoining fencing wires must be equipped with such warning signs as are specified in number 5.

These 14 points come from annex BB1 in the European norm EN 60335-2-76. The advice is a Swedish "rule" made by the Swedish Electrical Safety Administration and the Swedish Board of Agriculture.

Planning



Problems with an ineffective fence



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