

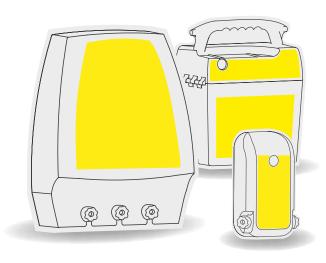
# HORIZONT FENCE SELECTION

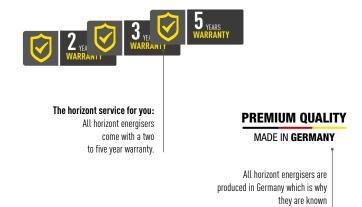
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### HORIZONT FENCE | Energisers | Guide

### FAO

# **ENERGISERS**





### WHAT DOES THE ENERGISER DO?

- The energiser emits short current pulses that flow along the fence and remain unused if there is no animal contact or discharge.
- $\bullet$  The pulse duration is only 0.1 to 0.3 thousandths of a second and the pulse spacing is between 1,15 and 2,0 seconds.

### WHY A CLOSED CIRCUIT?

The circuit must be prepared so that it is closed when it comes into contact with the animal. It is also important to ensure that the current remains in the fence and really only activates when it is touched by an animal.

### WHAT IS EARTHING?

- Earthing is the "counterpart to the freely installed conductor material" in the fence.
- The energy emitted by the energiser is fed back into the energiser through the ground and the earth stakes. When the fence is touched, the circuit is closed via the earthing.

### WHAT HAPPENS WHEN THE ANIMAL TOUCHES THE FENCE?

### **TIP: EARTHING WITH DRY GROUND**

Earthing: The number of earth stakes refers to damp soil. If the soil is dry in summer, the number may have to be increased.

- The animal closes the circuit. The pulse emitted by the electric fence energiser flows through the conductor material, the animal's body, the ground and the earth stakes back into the electric fence energiser. Similar to a light switch, the animal or vegetation closes the circuit and the energy flows.
- The animal learns to accept the fence as a barrier.

### WHAT HAVE JOULES & VOLTS GOT TO DO WITH IT?

• Energy applied to the fence is expressed in joules. The higher the value, the stronger the electric shock. Joules hurt!

for their premium quality.

• The voltage of the fence is measured in volts. The voltage is needed to strike through the insulating hide of the animal. This is the only way the energy can jump over. Voltage is the carrier for what

### WHY USE HIGH QUALITY CONDUCTOR MATERIAL?

- The conductive material is the actual fence, i.e. tapes, ropes, polywires or wires.
- The conductor material transports the electricity and forms the barrier for the animals. The better the material, the higher the current that flows through the fence.
- Saving on conductor material is to be penny-wise and pound-foolish. Poor conductor material may cause significant energy loss and prevent electricity from reaching the end of the fence. Never knot your conductor material! Too much energy is lost in the process. Always use suitable connectors to guarantee the current flow.

### IS LONG GRASS AT THE FENCE A BAD THING?

- Yes, because grass or other vegetation diverts energy from the fence and the fence therefore loses energy.
- For vegetation, reduce the fence lengths as follows:

FOR AVERAGE VEGETATION:

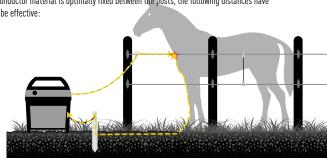
To approx. 50 % of the specified fence length\*

FOR DENSE VEGETATION:

To approx. 20 % of the specified fence length\*

### **HOW FAR APART SHOULD THE POSTS BE?**

To ensure the conductor material is optimally fixed between the posts, the following distances have been proven to be effective:



### Guide | Energisers | HORIZONT FENCE

#### - POLYWIRES AND WIRES:

6 m to 8 m (depending on net weight)

#### - TAPES:

3 m (for wide tape 40 mm), 5 m (for wide tape 20 mm), 6 m to 8 m (for wide tape 10 mm)

#### - ELECTRIC ROPE:

4 m (for diameter 6 - 8 mm), 6 m (for diameter 5 - 6 mm)

#### - TERRAIN:

Observe the local conditions! If the terrain is very uneven, several posts are required to guide the conductor material parallel to the ground.

### WHAT ELSE NEEDS TO BE CONSIDERED?

- Important: Never operate fence systems and netting without an energiser!
- Conductivity: Be sure to use conductor material with high conductivity and good earthing, especially for high pulse energies.
- Connectors: Never knot your conductor material always use suitable connectors to guarantee the current flow
- Warning signs: For safety reasons, you are legally obliged to attach these to your electric fence, clearly visible and printed on both sides.
- Circuit: The fence does not have to be set up as a closed circuit the circuit is closed by the animal contact.
- Daily check with fence testers

### **HOW DOES AN ENERGISER WORK?**

The energiser is supplied with power from the mains, a battery or a rechargeable battery (sometimes with solar support). When the energisers is earthed and connected to a fence, your circuit is not closed. If an animal now touches the fence, the electric circuit is closed by the animal: The current flows from the fence through the animal to the earth. To eliminate the risk of dangerous electric shock, the energiser sends the charge to the fence in pulses. A high voltage must be generated so that the current can flow over the animal on contact. The energy must also be "portioned" so that no dangerous current flows at the high voltage.

### WHICH ADDITIONAL FUNCTIONS DO HORIZONT ENERGISERS OFFER?\*

horizont energisers are equipped with various, sometimes automatic, functions. These guarantee simple and flexible adaptation to the respective type of use, fence quality and vegetation.

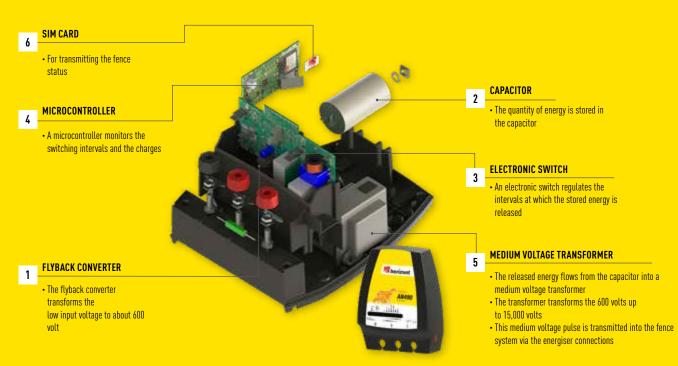
Moreover, you can get by with fewer batteries throughout the entire electric fence season, as many energisers are equipped with a power economiser (ECO Power / power saving function).

The premium products are made of particularly stable and weather-resistant plastic. They are splash-proof protected, electrically well insulated and suitable for high operating temperatures in the sun. Some energisers have an LED display that provides information about the state of the fence despite being far away. The time spent on controlling is reduced to a minimum as the output voltage can be read directly on the energiser (Energy Control Power Control, Impulse Control, System Control).

There are also some features which ensure herding security in difficult situations in case of damage (2-stage CPN technology, turbomax technology).

### TIP

But one thing must not be forgotten: The energiser is useless if it is connected to a defective fence!



<sup>\*</sup> The range of functions differs between the different types of housing and energy supply

### HORIZONT FENCE | Energisers | Electric fencing FAQ

### THE CHOICE OF THE RIGHT ENERGISER

### WHICH ENERGY SUPPLY IS PREFERRED?

horizont distinguishes between battery energisers 9 V, rechargeable battery energisers 12 V, mains energisers 230 V and solar energisers. Many energisers also combine different types of power supply in order to offer more security and flexibility in the application. In addition, horizont offers different housing shapes, which are reflected in the operating mode. The main difference is in stationary housing forms for wall mounting and mobile housing forms for handy transport.



Batterv energiser



Batterv energiser 12 V



Mains energiser 230 V



Solar energiser

### **HOW LARGE IS THE AREA TO BE FENCED?**

The fence length is important for the choice of the right energiser, but so is the conductor material. The power of the energiser and the conductivity of the conductor material must be compatible! To simplify the choice of suitable products for you, horizont has grouped together matching products in series.

Please note that the length specifications always assume optimal conditions, any disruptions and growth are excluded. With vegetation, for example, a partial amount of energy is diverted from the fence into the ground and is then missing from the herding performance.



### WHICH ANIMALS ARE TO BE HERDED?

Each animal has special characteristics and reacts differently to the current pulse. The sensitivity and coat of the animals is important for the correct construction of the electric fence. Horizont has developed special pulse shapes for different situations to ensure herding security for every animal species and every fence situation. The animal symbols make it easy to identify the energiser recommended for a particular animal species.



### WHICH ADDITIONAL FUNCTIONS DO HORIZONT ENERGISERS OFFER?

Each energiser has individual features and additional functions that are advantageous depending on the application. Some are found in the housing shape, others are technically incorporated.





### SAFE HANDLING OF ENERGISERS: PROTECTION AGAINST FIRE, BLAZE, AND LIGHTNING

The energiser must not be installed inside buildings in operating areas with a fire hazard, such as barns, and should also be protected from mechanical damage and kept out of the reach of children. To prevent lightning damage, a specialist must install an earthed lightning protection energiser in the fence supply cable to the building or prior to entry

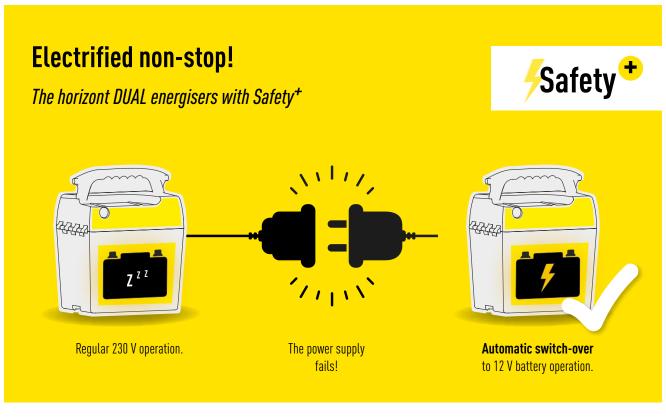
You will find detailed information in our safety instructions: www.animalcare.horizont.com/Secura







### **ENERGY SUPPLY CLEVERLY COMBINED**













### Can only be done by horizont energisers:

# Automatic switch-over to battery operation in the event of an interruption in the power line.

Dual energisers are primarily operated via 12 volts or 9 volts. The energisers can also be connected to 230 V via a plug-in mains energiser. The 12 volt battery then serves as a backup battery and is charged via the plug-in power supply. If the 230 volt mains fails, the energisers continue to operate without interruption via the 9 or 12 V battery. The energisers can also be operated with a solar panel in conjunction with a 12 or a 9 volt battery.



Combi energisers from the 12 V battery range can be operated on the 230 V mains or on the 12 V battery. Combi energisers from the battery range can be operated on the 12 volt battery or on a 9 volt battery. A solar panel can additionally be connected directly to the 12 V battery or to the 9 V battery via the energiser.

### FROM HOBBY TO PROFESSIONAL

# PRODUCT SERIES

#### The innovative series concept

The right product series for every application:

The horizont electric fence series covers all areas of application: From hobby to professional. The components of a series guarantee optimal interaction. Beginning with the entry-level series trapper® to the premium series turbomax® horizont offers the optimal solution for every area of application, whether cattle, horse, sheep/goat husbandry or small animal keeping. Nearly all energisers are produced in Germany and undergo a multi-stage quality assurance

process during production, which is DIN EN ISO 9001 certified. This provides the greatest possible safety both in the use of individual components and for the finished product.

You will find the energiser features with explanations on the respective product in the catalogue.





### IDEAL FOR CALM GRAZING ANIMALS AND NORMAL OPERATING CONDITIONS

The farmer<sup>®</sup> range of energisers includes our all-rounders for electric fence management. They are ideal for calm grazing animals that are kept under normal operating conditions. This series also includes many energisers that have a dual function.

- $\boldsymbol{\cdot}$  Special pulse shape deploys gently in the fence system
- High output voltages offer great herding security

### THE MOST IMPORTANT FEATURES\*:

- Polycarbonate
- ON /OFF switch
- Energy Control (display of battery/ rechargeable battery capacity)
- ECO Power (power economiser)
- · Very sturdy housing
- Power Control (pulse control)



### IDEAL FOR SMALL, SIMPLE FENCE SYSTEMS

Our trapper® series is very suitable for newcomers and hobby livestock owners. The trapper energisers are the ideal choice for small and simple fence systems

- · Simple to use, easy to install
- Compact housing, versatile in use
- Output energy designed for the most common applications, e.g. horse keeping

### THE MOST IMPORTANT FEATURES\*:

- ON /OFF switch
- Energy Control (display of battery/ rechargeable battery capacity)
- · Very sturdy housing
- · Power Control (pulse control)





\* The range of functions differs between the different types of housing and energy supply.

### Product series | Energisers | HORIZONT FENCE



### **IDEAL FOR ROBUST ANIMALS AND** FOR WILDLIFE DETERRENT

This series is perfectly suited for deterring robust animals or the keeping of long-haired and feathered animals. hotshock  $^{\tiny{\textcircled{\$}}}$  energisers can therefore be used for sheep and goat farming in combination with netting. They regulate every difficult situation, making them useful as special solutions in wildlife deterrent

- Strong energisers with maximum output energy
- · Special pulse shape enables special herding security under the most difficult conditions

### THE MOST IMPORTANT FEATURES\*:

- Polycarbonate
- ON /OFF switch
- Energy Control (display of battery/ rechargeable battery capacity)
- ECO Power (power economiser)
- · Impulse Control (cycle sequence monitoring)
- · Very sturdy housing
- 2 fence terminals
- · Power Control (pulse control)





### FOR EXACTING DEMANDS AND DRY **SOIL CONDITIONS**

Our professional series for exacting demands and dry location conditions. The ranger® energisers are ideal for grazing animals such as cattle or horses. This series also includes many energisers that have a dual function.

- Energiser function can be adapted to fence conditions depending on the situation
- Special pulse shape deploys gently in the fence system
- · Large herding performance even during dry summer

### THE MOST IMPORTANT FEATURES\*:

- Polycarbonate
- ON /OFF switch
- · System Control (argutector fence control)
- · Energy Control (display of battery/ rechargeable battery capacity)
- · ECO Power (power economiser)
- 6-stage voltage display
- Impulse Control (cycle sequence monitoring)
- · Very sturdy housing
- Voltage regulator (rotary potentiometer)
- 2 fence terminals
- 6 modes function





### **POWERFUL PERFORMANCE FOR HIGHEST DEMANDS**

Our premium series for extreme and particularly high demands. The turbomax® energisers are extremely powerful energisers and are suitable for extremely long fences. turbomax energisers can be used for herding almost all types of animals.

- Important safety features and functions that are very useful for the user
- Special safety circuit, which increases the performance when required

#### THE MOST IMPORTANT FEATURES\*:

- Polycarbonate
- ON /OFF switch
- System Control (argutector fence control)
- Energy Control (display of battery/ rechargeable battery capacity)
- ECO Power (power economiser)
- 6-stage voltage display
- LED display
- Alarm function
- 2-stage CPN technology
- Impulse Control (cycle sequence monitoring)
- Very sturdy housing
- turbomax technology





### **PRODUCT GUIDE**

# **ENERGISERS**

# BATTERY ENERGISERS 9 V

DUAL /	Number of As per Without Average High possible As per vegetation vegetation vegetation		High vegetation			Anima	l husbaı	ndry				dlife rrent	Product			
COMBI	nets per 50 m	CEE* CEE (1500V)	max.	max.		M			in the second	<b>**</b>	K	ð		at	Designation	Art. No.
Combi	_	3 km	1.5 km	_	0.5	•				•					trapper® AB12	125H14497
Combi	_	4 km	3 km	1 km	0.3 km	•	•		•	•					trapper® B12	125H10616
Combi	_	8 km	5 km	3.5 km	0.8 km	•	•		•	•					trapper® B22	125H10620
Dual	2	9.5 km	5.5 km	3.8 km	0.9 km	•	•			•			•		farmer® ABN30	125H10891
Dual	3	10 km	6 km	4 km	1.1 km	•	•	•			•		•		hotshock® ABN37	125H10892
Dual	2	12 km	6.5 km	4.5 km	1.3 km	•	•			•			•		ranger® ABN60	125H10983

### BATTERY ENERGISERS 12 V

Combi	3	8 km	4 km	2 km	0.8 km	•	•	•	•	•	•	•			trapper® AN45	125H10867
Combi	4	12 km	8 km	3.5 km	1.2 km	•	•	•	•	•	•	•			trapper® AN80	125H10866
Combi	6	18 km	12 km	4.5 km	1.5 km	•	•	•	•		•	•			trapper® AN120	125H10865
Dual	6	30 km	10 km	3.5 km	1.2 km	•	•	•	•	•			•		farmer® AN100	125H10896
Dual	12	80 km	18 km	4.8 km	1.9 km	•	•	•	•				•		farmer® AN300	125H10882
Dual	6	40 km	10 km	3.5 km	1.2 km	•	•	•	•				•		farmer® AN1000	125H10855
Dual	6	40 km	10 km	3.5 km	1.2 km	•	•	•	•				•		farmer® AN1000Solar	125H10856
_	14	80 km	30 km	15 km	8 km	•	•	•			•		•	•	hotshock® A300	125H10613
Combi	14	130 km	45 km	20 km	10 km	•	•	•			•		•	•	hotshock® AN490	125H10813
Dual	12	90 km	43 km	17 km	9 km	•	•	•	•		•		•	•	ranger® AN360	125H10997
Dual	14	130 km	60 km	20 km	10 km	•	•	•	•		•		•	•	ranger® AN490	125H10857
Dual	10	50 km	20 km	4.5 km	1.7 km	•	•	•			•		•		ranger® AN2000	125H10854
Dual	12	100 km	33 km	5 km	2 km	•	•	•	•				•	•	ranger® AN3000	125H10992
Dual	14	130 km	60 km	20 km	10 km	•	•	•	•				•	•	ranger® AN4800	125H10993
Dual	17	180 km	55 km	21 km	14 km	•	•	•			•		•	•	turbomax® AN800	125H10749





# **MAINS ENERGISERS 230 V**

DUAL /	Number of Without Average High possible As per vegetation vegetation vegetation					Animal husbandry							Wildlife deterrent Product			
COMBI		CEE* CEE (1500V)	vegetation max.	vegetation max.	vegetation max.	M			<b></b>	Ħ	Ķ	æ	n.	at	Designation	Art. No.
-	3	15 km	4 km	2 km	0.8 km	•	•		•	•	•	•			trapper® N45	125H10864
_	10	50 km	15 km	4 km	1.4 km	•	•		•	•			•		farmer® N200	125H10996
_	16	120 km	45 km	20 km	10 km	•	•	•			•		•	•	hotshock® N500	125H10614
_	12	60 km	20 km	5 km	2 km	•	•		•	•			•		ranger® N270	125H10608
_	16	100 km	40 km	10 km	4 km	•	•		•	•			•		ranger® N420	125H10742
-	30	320 km	85 km	40 km	25 km	•	•	•		•			•		turbomax® N1430	125H10748

### **SOLAR ENERGISERS**

_		_	8.5 km	5 km	3 km	0.9 km	•	•		•				trapper® AS25	125H14982
-		_	18.5 km	5 km	3 km	0.9 km	•	•		•				farmer® AS50	125H14485
-		8	48 km	14 km	5 km	1.5 km	•	•			•	•		farmer® AS140	125H14478
Dua	al	6	43 km	12 km	4 km	1.4 km	•	•				•		ranger® AS120	125H10986
Dua	al	8	48 km	14 km	4.3 km	1.6 km	•	•				•	•	ranger® AS180	125H10987

### HORIZONT FENCE | Energisers | Batteries





UKAL'S TIP — What does C20 or C100 mean when the capacity is

Depending on the acid level, a battery has a certain capacity. This is specified as a C value. C20 indicates the capacity of a battery discharged for 20 h (with current) at the discharge voltage C100 indicates the

capacity with a discharge over 100 h at discharge voltage

Since a discharge battery

discharge of more than 20 h

results in a much higher current

than a discharge of more than 100 h, the specification of capacity at C100 (standard capacity) is lower than that

indicated?

current.

of C20.

### **UKAL'S TIP**

Our small and large batteries are designed to work with our battery-powered energisers. Alkaline batteries provide optimum voltage and are generally used with high performance batteries.





125H14124



125H14894

### **ALCALINE 9 V BATTERIES**

- The best power to optimise your energiser's operation. Energiser.
- 0 % mercury / 0 % cadmium.
- Resistant to extreme conditions: from -20° C to +45° C.
- Turbomax®: guaranteed efficiency.
- Storage life: approx. 2 years.
- Suitable for new-generation energisers.

Sku. 125H15848	AB55 - 55 Ah (I)11 x (H)11,5 x (L)16,5 cm	4 014803 158482	4
Sku. 125H15844	AB120 - 120 Ah (I)11 x (H)11,5 x (L)16,5 cm	4 014803 158444	4
Sku. 125H14500	AB130 - 130 Ah (l)12,5 x (H)16 x (L)19 cm	4 014803 145000	4
Sku. 125H14500P	AB130 - 130 Ah (l)12,5 x (H)16 x (L)19 cm	4 014803 449702	45
Sku. 125H12012	AB170 - 170 Ah (l)12,5 x (H)16 x (L)19 cm	4 014803 120120	4
Sku. 125H12012P	AB170 - 170 Ah (l)12,5 x (H)16 x (L)19 cm	4 014803 436955	45
Sku. 125H14896	AB200 - 200 Ah (l)12,5 x (H)16 x (L)19 cm	4 014803 148964	4
Sku. 125H14896P	AB200 (l)12,5 x (H)16 x (L)19 cm	4 014803 464552	45

### **SALINE 9 V BATTERY**

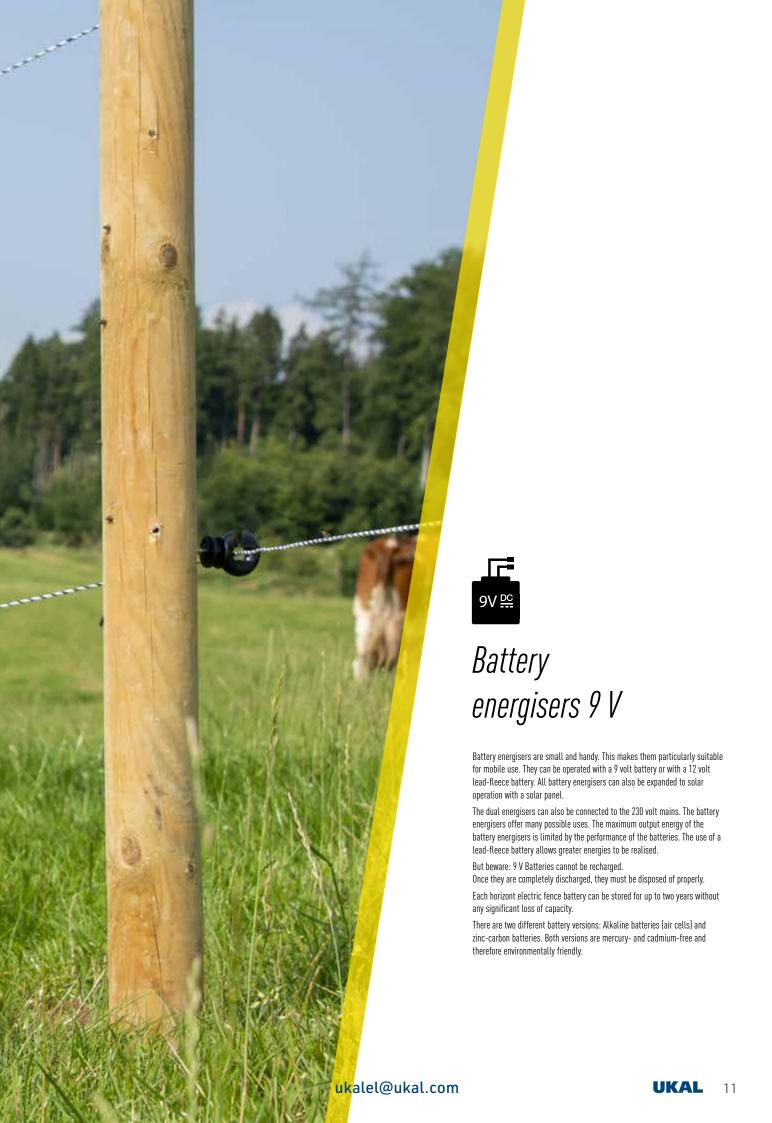
- Very good storage life (2 years on average).
- Insensitive to humidity.
- Very good price / Ah ratio.
- High efficiency under 300 Ohm: 112 Ah.

Sku. 125H12010	SB130 - 130 Ah	4 014803 120106	4
	(l) 12,5 x (H) 16 x (L) 19 cm	4 " 014803 " 120106 "	4

### **12 V BATTERIES**

- With carrying handle.
- Excellent storage life (2 years on average).
- Insensitive to humidity.
- Very good price/Ah ratio.
- High output at 300 Ohm: 112 Ah.

Sku. 125H14124	C20 - 63 Ah (l)24,6 x (H)17,5 x (L)19 cm	4 014803 141248
Sku. 125H14894	C100 - 85 Ah (l)26,5 x (H)17,5 x (L)22,5 cm	4 014803 148940



# trapper® B Battery energiser 9 V





### **Energy supply**



### **Features**

- Very sturdy housing
- Power Control (pulse control)
- Automatic switch-over to solar operation

Possibilities of energy supply for these energisers:

- Solar charging control installed in the energiser is weather protected – easy charging of different types of batteries
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Secure closing mechanism - pull energiser apart and remove cover



Housing serves as portable box and protects rechargeable battery / battery from effects of weather

### energiser to solar panel

Extremely robust housing

• Particularly impact-resistant housing through use of high-quality plastics

Material is UV resistant, splash-proof and oil-resistant

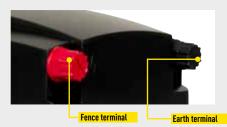
### Front view



- Shows the activity of the energiser
- Flashes in time with the pulse output

### Rear view

• Intelligent cable routing from inside the



## trapper® B Battery energiser 9 V

COMBI

### trapper® B12

### trapper® B22





As per CEE:	4 km
Without vegetation:	3 km
Average vegetation:	1 km
High vegetation:	0.3 km



MATERIA

Input: Max. output: **Energy consumption:** 

Type of animal hus-

bandry:

Max. voltage: Voltage 500  $\Omega$ : Dimensions (L x W x H): Scope of delivery:

• 0.18 J

• 0.12 J

• 9 V: 15 mA - 12 V: 22 mA

- 8,500 V

- 1,500 V

- 19.5 x 23.3 x 25.0 cm

• Energiser, earth stake (approx. 30 cm), fence and earth connecting cable

Art. No.	Unit	EAN
125H10616	<b>⊕</b> 1	4 014803 106162



As per CEE:	8 km
Without vegetation:	5 km
Average vegetation:	3.5 km
High vegetation:	0.8 km
myn vegetation.	U.U KIII



• 0.3 J

- 0.22 J

• 9 V: 35 mA

- 12 V: 25 mA

- 9,000 V

- 2,200 V

- 19.5 x 23.3 x 25.0 cm

• Energiser, earth stake (approx. 30 cm), fence and earth connecting cable

Art. No.	Unit	EAN
125H10620	⊕1	4 0 14803 006851

Recommended accessories:

- 12 V lead-fleece battery with 12 Ah (125H15842)  $\geq$ service life: 41 days\* or 9 V alkaline battery with 120 Ah (125H15844E)  $\geq$  service life: 333 days\*
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 2 W (125H60140)
- 12 V lead-fleece battery with 12 Ah (125H15842) ≥ service life: 20 days\* or 9 V alkaline battery with 120 Ah (125H15844E) ≥ service life: 143 days\*
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 2 W (125H60140)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V lead-fleece battery with 12 Ah (125H15842)



9 V alkaline battery with 120 Ah (125H15844E)



Solar panel 2 W (125H60140)

 $<sup>^{\</sup>star}$  The figures refer to a calculated use of 100 % of the stated capacity.

## 







### Ergonomic carrying handle

- · Carrying comfort thanks to soft grip padding
- · Easy to move with one hand

#### Holding device for solar panel

- · Easy attachment of the solar panel to the holding device
- $\cdot$  4 different setting angles and a transport position of the solar panel possible



#### **Extremely robust housing**

- Particularly impact-resistant housing through use of high-quality plastics (PC)
- Material is UV resistant, splash-proof and oil-resistant
- $\cdot$  Housing holds rechargeable batteries with a capacity up to 34 Ah and batteries up to 200 Ah

#### ON/OFF switch & Energy Control

- $\cdot$  3-stage LED control display for capacity and function of 9 or 12 V batteries
- · Shows the activity of the energiser
- · Flashes in time with the pulse output



### Dual energiser with Safety\*

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

#### **Features**

- Plug-in profile for earthing rod in housing
- Top and bottom part are connected by hinge
- Housing can be secured by padlock
- Retaining plate inside provides firm stability for 9 and 12 V batteries
- Multi-optional storage compartment for power supply unit when not in use
- Intelligent cable routing prevents pinched cables and runs from inside the energiser to the solar panel
- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- Automatic switch-over to solar operation
- Solar charging control installed in the energiser is weather protected easy charging of different types of rechargeable batteries
- · Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN



DUAL

### farmer® ABN30





#### Animal husbandry:

Input:

MARTA - N 4 I

• 0.3 J

Max. output: **Energy consumption:** 

- 12 V: 24 - 28 mA Max. voltage: - 10.000 V - 3,200 V

Voltage 500  $\Omega$ : Dimensions (L x W x H):

- 17.5 x 24.8 x 31.9 cm

• 9 V: 28 - 36 mA

Scope of delivery: • Energiser, earth stake (double spike approx. 17 cm), fence and earth connecting cable

> Art. No. Unit **125H10891** 😭 1

#### Recommended accessories:

- 12 V lead-fleece battery with 34 Ah (125H14501) ≥ service life: 50-59 days\* or 9 V alkaline battery with 150 Ah (125H14057E) ≥ service life: 173-223 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 5 W (125H14499)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V lead-fleece with 34 Ah (125H14501) and solar panel 5 W (125H14499)

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

Advantage:

### Battery energisers 9 V I Energisers | HORIZONT FENCE

### hotshock® ABN Battery energiser 9 V







### Ergonomic carrying handle

- · Carrying comfort thanks to soft grip padding
- · Easy to move with one hand

#### Holding device for solar panel

- · Easy attachment of the solar panel to the holding device
- · 4 different setting angles and a transport position of the solar panel possible



#### Extremely robust housing

- $\cdot \ \, \text{Particularly impact-resistant housing through use of high-quality plastics (PC)}$ Material is UV resistant, splash-proof and pil-resistant
- · Housing holds rechargeable batteries with a capacity up to 34 Ah and batteries up to 200 Ah

#### ON/OFF switch & Energy Control

- 3-stage LED control display for capacity and function of 9 or 12 V batteries
- · Shows the activity of the energise
- · Flashes in time with the pulse output



### Dual energiser with Safety\*

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

#### **Features**

- Plug-in profile for earthing rod in housing
- Top and bottom part are connected by hinge
- Housing can be secured by padlock
- Retaining plate inside provides firm stability for 9 and 12 V batteries
- Multi-optional storage compartment for power supply unit when not in use
- Intelligent cable routing prevents pinched cables and runs from inside the energiser to the solar panel
- Automatic switch-over to solar operation
- Solar charging control installed in the energiser is weather protected easy charging of different types of rechargeable batteries
- Micronrocessor control
- Tested and built according to the applicable EU directives and the safety standard EN 60335-2-76 and **DIN EN ISO 9001**

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

\* The figures refer to a calculated use of 100 % of the stated capacity

### DUAL

### hotshock® ABN37





As per CEE: 10 km Without vegetation: 6 km Average vegetation: 4 km High vegetation: 1.1 km

#### Animal husbandry:



Max. output:

Input:

• 0.5 J • 0.37 J

**Energy consumption:** 

• 9 V: 47 mA - 12 V: 35 mA - 13,000 V

Max. voltage: Voltage 500 Ω: Dimensions (LxWxH)

- 3,800 V

- 17.5 x 24.8 x 31.9 cm Scope of delivery:

• Energiser, earth stake (double tip approx. 17 cm), fence connection cable

Art. No.	Unit	EAN
125H10892	₩1	4 014803 108920

#### Recommended accessories:

- 12 V lead-fleece battery with 34 Ah (125H4501) ≥ service life: 40 days\* or 9 V alkaline battery with 170 Ah (125H12012E) ≥ service life: 150 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 10 W (125H14511)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V lead-fleece with 34 Ah (125H14501) and solar panel 10 W (125H14511)



Advantage:

# ranger® ABN 🚪





### Ergonomic carrying handle

- · Carrying comfort thanks to soft grip padding
- · Easy to move with one hand

#### Holding device for solar panel

- · Easy attachment of the solar panel to the holding device
- 4 different setting angles and a transport position of the solar panel possible



### Extremely robust housing

(a) to

- Particularly impact-resistant housing through use of high-quality plastics (PC)
- Material is UV resistant, splash-proof and oil-resistant

horizont

ABN60

• Housing holds rechargeable batteries with a capacity up to 34 Ah and batteries up to 200 Ah

#### ON/OFF switch & Energy Control

- 3-stage LED control display for capacity and function of 9 or 12 V batteries
- Shows the activity of the energiser
- Flashes in time with the pulse output



### Dual energiser with Safety\*

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

- Plug-in profile for earthing rod in housing
- Top and bottom part are connected by hinge
- Exhaustive discharge cut-off at 12 V
- Housing can be secured by padlock
- Retaining plate inside provides firm stability for 9 and 12 V batteries
- Multi-optional storage compartment for power supply unit when not in use
- Intelligent cable routing prevents pinched cables and runs from inside the energiser to the solar panel
- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- Automatic switch-over to solar operation
- Solar charging control installed in the energiser is weather protected easy charging of different types of rechargeable batteries
- · Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

### DUAL

### ranger® ABN60





As per CEE: 12 km Without vegetation: 6.5 km Average vegetation: 4.5 km High vegetation: 1.3 km

#### Animal husbandry:



Input:

- 0.65 J

• 0.6 J

Max. output: **Energy consumption:** 

• 9 V: 19 - 57 mA - 12 V: 22 - 70 mA - 11 NNN V

Max. voltage: Voltage 500  $\Omega$ : Dimensions (LxWxH):

Scope of delivery:

- 3,600 V

- 17.5 x 24.8 x 31.9 cm • Energiser, earth stake (double spike approx. 17 cm), fence and earth connecting cable

Art. No. Unit 125H10983 😭 1

#### Recommended accessories:

- 12 V lead-fleece battery with 34 Ah (125H14501) ≥ service life: 20-64 days\* or 9 V alkaline battery with 170 Ah (125H12O12E) ≥ service life: 173-223
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 10 W (125H14511)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V lead-fleece battery with 34 Ah (125H14501,19, 9 V alkaline battery with 170 Ah (125H12012E) and solar panel 10 W (125H14511)





Advantage:





# Battery energisers 12 V

Large fence systems can be operated using battery energisers.

High-capacity batteries can be used to extract so much energy that the turbomax® AN800, for example, can deliver a powerful 8 joules of output energy to the fence.

All batteries can be connected to a solar panel to avoid recharging from the mains if there is sufficient sunlight.

Energisers that can accommodate a battery in the housing also have a solar regulator installed in the energiser. The advantage of this housing shape is that the energiser, battery and solar panel form a compact unit.





### Battery energisers 12 V I Energisers | HORIZONT FENCE

### Battery energisers 12 V

COMBI

trapper® AN45



trapper® AN120







Max.	Max. fence length:		
Е	1		
	_		

3 x 50 m As per CEE: 8 km Without vegetation: 4 km Average vegetation: 2 km 0.8 km High vegetation:

4 x 50 m As per CEE: 12 km Without vegetation: 8 km Average vegetation: 3.5 km 1.2 km High vegetation:





**Energy consumption:** 

Dimensions (L x W x H):

Scope of delivery:

Max. voltage:

Voltage 500  $\Omega$ :

Input: Max. output:

- 0.8 J

• 0.45 J

- 50 mA

-7,900 V

- 3,300 V

• 5.8 x 12.4 x 17.2 cm

battery connecting cable



• 0.8 J

- 90 mA

-8,400 V

- 3,600 V

- 5.8 x 12.4 x 17.2 cm

• Energiser, fence, earth and battery connecting



- 2.4 J

• 1.2 J - 145 mA

- 8,600 V

- 4,000 V

• 5.8 x 12.4 x 17.2 cm

• Energiser, power supply unit, fence, earth and battery connecting cable

125H10867	⊕1	4 014803 108678
Art No	Unit	FAN

• Energiser, power supply unit, fence, earth and

125H10866 😭 1

#### Recommended accessories:

- 12 V AGM battery with 60 Ah (125H14548) ≥ service life: 52 days\*
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 10 W (125H14545)
- 12 V AGM battery with 60 Ah (125H14548) ≥ service life: 40 days\*
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 10 W (125H14545) or 1 x 20 W (125H14536)
- 12 V battery special with 100 Ah (125H14126) ≥ service life: 29 days\*
- Earth stake 2 x 1 m (125H140411)
- Solar panel 1 x 20 W (125H14536) or 1 x 20 W (125H14536)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.

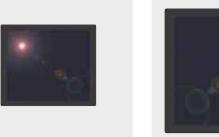


\* The figures refer to a calculated use of 100 % of the stated capacity.

12 V AGM battery with 60 Ah (125H14548)



Solar panel 10 W (125H14545)



Solar panel 20 W (125H14536)



# **farmer**® Battery energisers 12 V







### Dual energiser with Safety\*

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

### **Features**

- ECO Power / power saving circuit: The power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- Automatic switch-over to solar operation
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Hanging device for wall mounting



Ventilation slots to allow discharge of condensation water





Connection socket for the power supply unit at the back

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

### Battery energisers 12 V I Energisers | HORIZONT FENCE

### DUAL

### farmer® AN100

### farmer® AN300





Animal husbandry:

Netting:	6 x 50 m
As per CEE:	30 km
Without vegetation:	10 km
Average vegetation:	3.5 km
High vegetation:	1 2 km

# Netting: 12 x 50 m As per CEE: 80 km Without vegetation: 18 km Average vegetation: 4.8 km High vegetation: 1.9 km



Input:

Max. output: Energy consumption: Max. voltage: Voltage 500 Ω: Dimensions (L x W x H): Scope of delivery: • 1.3 J

- •1 J
- 30 90 mA
- 11,500 V
- 4,200 V
- 9.0 x 19.0 x 23.3 cm
- Energiser, power supply unit, fence and earth connecting cable

Art. No.	Unit	EAN
125H10896	⊕1	4 014803 108968



- 4.2 J
- •3 J
- 30 265 mA
- 11,800 V
- 6,200 V
- 9.0 x 19.0 x 23.3 cm
- Energiser, power supply unit, fence and earth connecting cable

Art. No.	Unit	EAN
125H10882	⊕1	4 0 14803 464163

### Recommended accessories:

- 12 V AGM battery 88 Ah (125H14549)
- ≥ service life: 40-122 days\*
- 230 V power supply unit (125H47PSU0010EU)
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 20 W (125H14536)
- 12 V battery special with 100 Ah (125H14126) ≥ service life: 16-138 days\*
- 230 V power supply unit (125H47PSU0010EU)
- Earth stake 3 x 1 m (125H140411)
- Solar panel 1 x 30 W (125H14537)

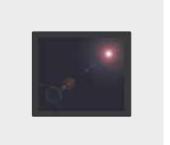
### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V battery special with 100 Ah (125H14126)

 $\ensuremath{^{*}}$  The figures refer to a calculated use of 100 % of the stated capacity.



Solar panel 20 W (125H14536)



Solar panel 30 W (125H14537)

### farmer® Battery energisers 12 V Ergonomic portable handle · Carrying comfort thanks to soft grip padding ON/OFF switch & Energy Control • Easy to move with one hand • 3-stage LED control display for capacity and function of 9 or 12 V batteries • Shows the activity of the energiser • Flashes in time with the pulse output **Extremely robust housing** horizont • Particularly impact-resistant housing through use of high-quality plastics (PC and PP) AN1000 • Material is UV resistant, splash-proof and oil-resistant • Housing holds 9 and 12 V batteries up to a size of 265 x 192 x 225 mm **Energy supply** Fence terminal Dual energiser with Safety\* Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Earth terminal Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to 12 V battery operation. • ECO Power / power saving function: the power economiser automatically adjusts power Advantage: consumption to the status of the fence = less energy consumption, less environmental impact and lower costs • Rechargeable battery or battery is integrated into the handy transport box where it is protected from the weather • Contact with the battery or the acid is avoided during transport

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

• Solar charging control installed in the energiser is weather protected – easy charging of

• Tested and built according to the applicable EU directives and the safety standard





padlock

Device for attachment of appropriate solar panel to the back of the energiser cover



Solar panel can be folded away to the side for transport

• Automatic switch-over to solar operation

different types of rechargeable batteries

EN60335-2-76 and DIN EN ISO 900

· Microprocessor control

### Battery energisers 12 V I Energisers | HORIZONT FENCE

### DUAL

### farmer® AN1000



### farmer® AN1000Solar



Max. fence length:		
		H
-	$\rightarrow$	>

#### Animal husbandry:

Input: Max. output: Energy consumption:

Max. voltage: Voltage 500  $\Omega$ : Dimensions (L x W x H): Scope of delivery:

Netting:	6 x 50 m
As per CEE:	40 km
Without vegetation:	10 km
Average vegetation:	3.5 km
High vegetation:	1.2 km



- 1.4 J
- •1J
- 9 V: 40 70 mA
- 12 V: 30 90 mA
- 11,000 V
- 4,800 V
- 24.0 x 31.5 x 38.0 cm
- Energiser, fence, earth and battery connecting cable

Art. No.	Unit	EAN
125H10855	⊕1	4 0 14803 108555



6 x 50 m

40 km

10 km

3.5 km

1.2 km

• 1.4 J

As per CEE:

Without vegetation:

Average vegetation:

High vegetation:

- •1J
- 9 V: 40 70 mA
- 12 V: 30 90 mA
- 11,000 V
- 4,800 V
- 24.0 x 31.5 x 38.0 cm
- Energiser, fence, earth connecting cable, 10 W solar panel

Art. No.	Unit	EAN
125H10856	⊕1	4 0 14803 108562

### Recommended accessories:

- 12 V battery special with 60 Ah (125H14548) ≥ service life: 39-118 days\* or 12 V lead-fleece battery with 75 Ah (125H14479, 26) ≥ service life: 34-104 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 1 x 1 m (125H140411)
- Solar panel 1 x 10 W (125H14546)
- 12 V battery special with 60 Ah (125H14548) ≥ service life: 39-118 days\* or 12 V lead-fleece battery with 75 Ah (125H14479) ≥ service life: 34-104 days\*
- 230 V power supply unit (47PSU0010FEU)
- Earth stake 1 x 1 m (125H140411)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V battery special with 60 Ah (125H14548)

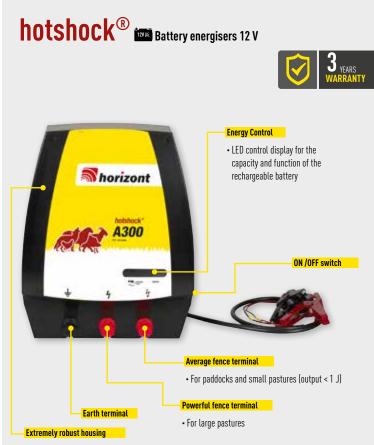
\* The figures refer to a calculated use of 100 % of the stated capacity.



12 V lead-fleece battery with 75 Ah (125H14479)



Solar panel 10 W with bracket (125H14546)



- Particularly impact-resistant housing through use of high-quality plastics (PC)
- Material is UV resistant, splash-proof and oil-resistant

### **Energy supply**



#### **Features**

- Two fence terminals for operating one large and one small pasture or paddock
- Automatic switch-over to solar operation
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 0001



Hanging device for wall mounting



Ventilation slots to allow discharge of condensation water

**Safety advice:** In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

### hotshock® A300





#### Animal husbandry:



 Input:
 - 4 J

 Max. output:
 - 3 J

 Energy consumption:
 - 340 mA

 Max. voltage:
 - 11,000 V

 Voltage 500 Ω:
 - 5,800 V

Dimensions (L x W x H): • 9.9 x 22.8 x 28.4 cm Scope of delivery: • Energiser, fence, ear

Energiser, fence, earth and battery connecting
cable

cable

Art. No. Unit EAN

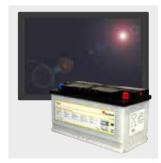
125H10613 ⊗ 1

### Recommended accessories:

- 12 V battery special with 100 Ah (125H14126) ≥ service life: 12 days\*
- Earth stake 3 x 1 m (125H140411)
- Solar panel 1 x 20 W (125H14536) or 1 x 30 W (125H14537)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V battery special with 100 Ah (125H14126) and solar panel 30 W (125H14537)

### Battery energisers 12 V I Energisers | HORIZONT FENCE

## hotshock® Battery energisers 12 V

### Extremely robust housing

- Particularly impact-resistant housing through use of high-quality plastics (PC)
- · Material is UV resistant, splash-proof



Powerful fence terminal

Earth terminal

• For large pastures

Average fence terminal

• For paddocks and small pastures (output < 1 J)

#### Control bar

- Energy Control: 3-stage LED control display for capacity and function of 9 or 12 V batteries
- Impulse Control (cycle sequence monitoring): Lights up when the device is in disrupted operation
- System Control (argutector display): Display at higher power consumption to maintain power
- Voltage display: 6-step LED display to check the fence voltage



#### **Energy supply**



- · Two fence terminals for operating one large and one small pasture or paddock
- · Connection socket for the power supply unit at the back
- Straightforward and visual information display easy remote monitoring possible
- Exhaustive discharge cut-off at 12 V
- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- · Automatic switch-over to solar operation
- · Microprocessor control
- Tested and built according to the applicable EU Directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Hanging device for wall mounting



Ventilation slots to allow discharge of condensation water

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

### COMBI

### hotshock® AN490



Max. fence length:	Netting: As per CEE:	14 x 50 m 130 km
	Without vegetation: Average vegetation:	45 km 20 km
<del></del>	High vegetation:	10 km

### Animal husbandry:



Input: Max. output: -49I

**Energy consumption:** - 110 - 435 mA Max. voltage: Voltage 500  $\Omega$ :

- 14,000 V - 6,000 V

Dimensions (L x W x H): Scope of delivery:

- 9.9 x 22.8 x 28.4 cm

• Energiser, power supply unit, fence, earth and battery connecting cable

Art. No.	Unit	EAN
125H10813	⊕1	4 014803 460998

### Recommended accessories:

- 12 V battery special with 100 Ah (125H14126) ≥ service life: 9-44 days\*
- Earth stake 3 x 1.5 m (125H15017-1)
- Solar panel 1 x 50 W (125H14873)

### ranger® Battery energisers 12 V Extremely robust housing · Particularly impact-resistant housing through use of high-quality plastics 6 modes functions · Material is UV resistant, splash-proof and oil-resistant 1. NORMAL: Normal pulse sequence 2. SMART: Normal pulse sequence APN\* 3. DAY MODE: Normal pulse sequence APN\* by day, slow pulse sequence at 4. NIGHT MODE: Normal pulse sequence APN\* at night, slow pulse sequence ON /OFF switch by day horizont 5. SLOW MODE: Slow pulse sequence & Menu pushbutton APN\* by day and at night 6. ONLY NIGHT MODE: Normal pulse sequence APN\* at night, no pulse sequence by day = additional energy savings, more AN490 efficiency, lower operating costs LED control display • Energy Control: 3-stage LED control display for capacity and function of 9 or 12 V batteries · Impulse Control (cycle sequence moni-Average fence terminal toring): Lights up when the energiser is in • For paddocks and small pastures (output < 1 J) disrupted operation



• System Control (argutector display): Display at higher power consumption to maintain power

- Voltage display: 6-step LED display to check

### Dual energiser with Safety\*

the fence voltage

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

#### Features

- Two fence terminals for operating one large and one small pasture or paddock
- Connection socket for the power supply unit at the back
- Straightforward and visual information display easy remote monitoring possible
- Exhaustive discharge cut-off
- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- Automatic switch-over to solar operation
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Earth terminal

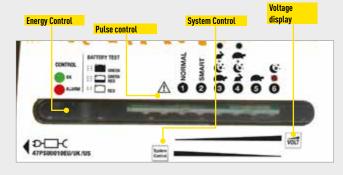
Hanging device for wall mounting

Powerful fence terminal

• For large pastures



Ventilation slots to allow discharge of condensation water



**Safety advice:** In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

\*APN = Output energy level is set to 60 % of the maximum energy and automatically adjusted in case of load changes, e.g. due to vegetation along the fence

### Battery energisers 12 V I Energisers | HORIZONT FENCE

### DUAL

### ranger® AN360

### ranger® AN490





# Max. fence length:

### Animal husbandry:

Netting:	12 x 50 m
As per CEE:	90 km
Without vegetation:	43 km
Average vegetation:	17 km
High vegetation:	9 km

# Netting: 14 x 50 m As per CEE: 130 km Without vegetation: 60 km Average vegetation: 20 km High vegetation: 10 km



### Input:

Max. output: Energy consumption: Max. voltage: Voltage 500 Ω: Dimensions (L x W x H): Scope of delivery:

- 4.3 J
- 3.6 J
- 70 320 mA
- 12,000 V
- -5,200 V
- 9.9 x 22.8 x 28.4 cm
- Energiser, power supply unit, fence, earth and battery connecting cable

125H10997	⊕1	4 014803 109972
Art. No.	Unit	EAN



- ∙ 5.7 J
- 4.9 J
- 70 450 mA
- 12,000 V
- 5,200 V
- 9.9 x 22.8 x 28.4 cm
- Energiser, power supply unit, fence, earth and battery connecting cable

Art. No.	Unit	EAN
125H10857	⊕1	4 014803 108579

### Recommended accessories:

- 12 V special battery with 100 Ah (125H14126) ≥ service life: 13-46 days\*
- Earth stake 2 x 1.5 m (125H15017-1)
- Solar panel 1 x 30 W (125H14537)
- 12 V battery special with 100 Ah (125H14126) ≥ service life: 9-44 days\*
- Earth stake 3 x 1.5 m (125H15017-1)
- Solar panel 1 x 50 W (125H14873)

### Selected accessories

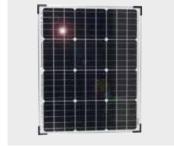
Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V battery special with 100 Ah (125H14126)



Solar panel 30 W (125H14537)



Solar panel 50 W (125H14873)

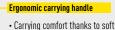
 $<sup>^{\</sup>star}$  The figures refer to a calculated use of 100 % of the stated capacity.

# ranger® Battery energisers 12 V



### LED control display

- Impulse Control (cycle sequence monitoring): Lights up when the energiser is in disrupted operation
- System Control (argutector display): Display at higher power consumption to maintain power
- Voltage display: 6-step LED display to check the fence voltage



grip padding
- Easy to move with one hand

#### Rotary potentiometer

• The output energy level (APN\*) can be preselected on the rotary potentiometer [100 % - 50 %]

### ON/OFF switch, menu pushbutton & Energy Control

- LED control display for the capacity and function of the 9 or 12 V batteries
- Shows the activity of the energiser
- Flashes in time with the pulse output



1. NORMAL: Normal pulse sequence
2. SMART: Normal pulse sequence APN\*

3. DAY MODE: Normal pulse sequence APN\* by day, slow pulse sequence at night

**5. SLOW MODE:** Slow pulse sequence APN\* by day and at night

additional energy savings, more efficiency, lower operating costs

4. NIGHT MODE: Normal pulse sequence APN\* at night, slow pulse sequence by day

6. ONLY NIGHT MODE: Normal pulse sequence APN\* at night, no pulse sequence by day =

### Extremely robust housing

- Particularly impact-resistant housing through use of high-quality plastics (PC and PP)
- Material is UV resistant, splash-proof and oil-resistant
- Housing holds 9 and 12 V batteries with a size up to 265 x 142 x 225 mm

### **Energy supply**



### Dual energiser with Safety

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

#### Features

- 9 or 12 V batteries ar integrated into the handy portable box where it is protected from the weather
- Contact with the rechargeable battery or the acid is avoided during transport
- Exhaustive discharge cut-off
- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- Automatic switch-over to solar operation
- Solar charging control installed in the energiser is weather protected easy charging of different types of rechargeable batteries
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001







**Safety advice:** In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.





Device for attaching the appropriate solar panel to the back of the energiser cover

\*APN = Output energy level is set to 50 % of the maximum energy and automatically adjusted in case of load changes, e.g. due to vegetation along the fence

### Battery energisers 12 V I Energisers | HORIZONT FENCE

### DUAL

### ranger® AN2000

### ranger® AN3000

### ranger® AN4800







Max. fend	e length:	
	<u> </u>	F
		F
	<b>-</b>	<b>-</b>

 Netting:
 10 x 50 m

 As per CEE:
 50 km

 Without vegetation:
 20 km

 Average vegetation:
 4.5 km

 High vegetation:
 1.7 km

 Netting:
 12 x 50 m

 As per CEE:
 100 km

 Without vegetation:
 33 km

 Average vegetation:
 5 km

 High vegetation:
 2 km

 Netting:
 14 x 50 m

 As per CEE:
 130 km

 Without vegetation:
 60 km

 Average vegetation:
 20 km

 High vegetation:
 10 km









Input:

Max. output: Energy consumption: Max. voltage: Voltage 500 Ω: Dimensions (LxWxH):

Scope of delivery:

- 2.7 J
- 2 J
- 65 215 mA
- 12,000 V
- 4,700 V
- 24.0 x 31.5 x 38.0 cm
- Energiser, fence connection cable
- 3.5 J
- 3 J
- 75 275 mA
- 12,000 V
- 5,200 V
- 24.0 x 31.5 x 38.0 cm
- Energiser, fence connection cable
- ∙ 5.7 J
- 4.8 J
- 85 450 mA
- 12,000 V
- 5,200 V
- 24.0 x 31.5 x 38.0 cm
- Energiser, fence connection cable

Art. No.	Unit	EAN
125H10854	⊕1	4 014803 108548

125H10992 😭 1	Art. No.	Unit	EAN
4"014803"109927	125H10992	⊕1	4 014803 109927

Art. No.	Unit	EAN
125H10993	⊕1	4 014803 109934

### Recommended accessories:

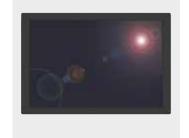
- 12 V AGM battery with 95 Ah (125H14600)  $\geq$  service life: 17-78 days\* or 12 V lead-fleece battery with 75 Ah (125H14479)  $\geq$  service life: 15-69 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 2 x 1 m (125H140411)
- Solar panel 1 x 20 W (125H14538) or 1 x 30 W (125H14539)
- 12 V AGM battery with 95 Ah (125H14600) ≥ service life: 13-78 days\* or 12 V lead-fleece battery with 75 Ah (125H14479) ≥ service life: 11-69 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 3 x 1 m (125H140411)
- Solar panel 1 x 20 W (125H14538) or 1 x 30 W (125H14539)
- 12 V AGM battery with 95 Ah (125H14600) ≥ service life: 8-37 days\* or 12 V lead-fleece battery with 75 Ah (125H14479) ≥ service life: 7-33 days\*
- 230 V power supply unit (125H47PSU0010FEU)
- Earth stake 5 x 1 m (125H140411)
- Solar panel 1 x 30 W (125H14539) or 1 x 50 W (125H14873)

### Selected accessories

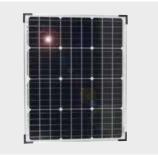
Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



12 V AGM battery with 95 Ah (125H14600)



Solar panel 30 W (125H14539)

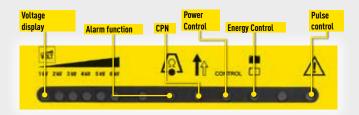


Solar panel 50 W (125H14873)

**UKAL** 

# turbomax® Battery energisers 12 V 5 YEARS At-5 A horizont Earth terminal Fence terminal AN800 Advantage: LED control display

- Voltage display: 6-step LED display to check the earthing and fence voltage
- Alarm function: Optical and acoustic alarm when the voltage drops below 400 ohms, the fence should be checked for faults or damage
- 2-stage CPN technology: In the event of faults, higher energies are automatically fed into the fence (LED lights up red) after a safety margin of 55 seconds to ensure the safety of the herd
- Power Control: Shows the activity of the energiser and flashes in time with the pulse output
- Energy Control: LED control display for capacity and function of 9 or 12 V batteries
- Impulse Control (cycle sequence monitoring): Lights up when the energiser is in disrupted operation



#### **Energy supply**



### Dual energiser with Safety+

Dual energisers can be connected in parallel to 230 V mains power and a 12 V battery. Uninterrupted operation is guaranteed in the event of a power failure! The energiser switches over automatically to battery operation.

### Safety advice

In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

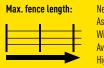
- · Hanging device for wall mounting
- ON/OFF switch integrated on the side
- Connection socket for the power supply unit on the underside
- Straightforward and visual information display remote monitoring possible
- · Exhaustive discharge cut-off
- turbomax technology: for fence loads
- > 500 ohms the energiser works with an enormously high energy potential to reliably supply the fence
- Automatic switch-over to solar operation
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN FN ISO 9001

\* The figures refer to a calculated use of 100 % of the stated capacity

### DUAL

### turbomax® AN800





Netting: As per CEE: Without vegetation: Average vegetation: High vegetation:

180 km 55 km 21 km 14 km

### Animal husbandry:



Input: Max. output:

-12 J -8J

**Energy consumption:** Max. voltage:

- 500 - 1,200 mA - 12,000 V -4,400 V

Voltage 500  $\Omega$ : Dimensions (L x W x H): Scope of delivery:

- 10.6 x 23.4 x 29.8 cm

• Energiser, mains plug, battery connecting cable

Art. No. 125H10749 😭 1

#### Recommended accessories:

- 12 V battery special with 230 Ah (125H25012B) ≥ service life: 8-19 days\*
- Earth stake 5 x 1.5 m (125H15017-1)
- Solar panel 1 x 50 W (125H14873)
- Large-capacity battery box (125H21264)
- Warning sign international (125H14127)
- Earth cable

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number



12 V battery special with 230 Ah (125H25012B) and solar panel 50 W (125H14873)

30

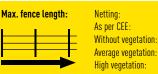


### HORIZONT FENCE | Energisers | Mains energisers 230 V



### trapper® N45





3 x 50 m 15 km

4 km 2 km 0.8 km

#### Animal husbandry:



Input: Max. output: Energy consumption:

• 1.5 W • 8,000 V • 3,900 V

- 0.8 J

- 0.45 J

Max. voltage: Voltage 500 Ω: Dimensions (L x W x H): Scope of delivery:

• 5.8 x 12.4 x 17.2 cm • Energiser, mains plug, dowels, screws

Recommended accessories:

- Earth stake 1 x 1 m (125H140411)
- Fence connection kit (125H15522)
- Fence tester farmer (125H14527)

### Energy supply



### Features

- · Very sturdy housing
- Power Control (pulse control)
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Hanging device for wall mounting

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake (125H140411), fence connection kit (125H15522C), fence tester farmer (125H14527C)

### Mains energisers 230 V I Energisers | HORIZONT FENCE

# farmer<sup>®</sup> ₩ Mains energiser 230 V

### Extremely robust housing

- Particularly impact-resistant housing through use of high-quality plastics [PC]
- Material is UV resistant, splash-proof and oil-resistant



### Power Control

- Shows the activity of the energiser
- Flashes in time with the pulse output

### **Energy supply**



### 230 V №

#### Features

- Very sturdy housing
   Dever Control (pulse on
- Power Control (pulse control)
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001







Ventilation slots to allow discharge of condensation water

**Safety advice:** In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

### farmer® N200



#### Animal husbandry:



Input: -2.8 J
Max. output: -2 J\*
Energy consumption: -5 W

Max. voltage: Voltage 500 Ω: Dimensions (L x W x H):

Scope of delivery:

• 14,000 V • 5,200 V • 9.9 x 22.8 x 28.4 cm

• Energiser, mains plug, dowels and screws

Art. No.	Unit	EAN
125H10996	⊕1	4 014803 109965

### Recommended accessories:

- Earth stake 2 x 1 m (125H140411)
- Fence connection kit (125H15522)
- Fence tester farmer (125H14527)
- Warning sign international (125H14127)
- Lightning protection choke (125H15482)
- Earth cable

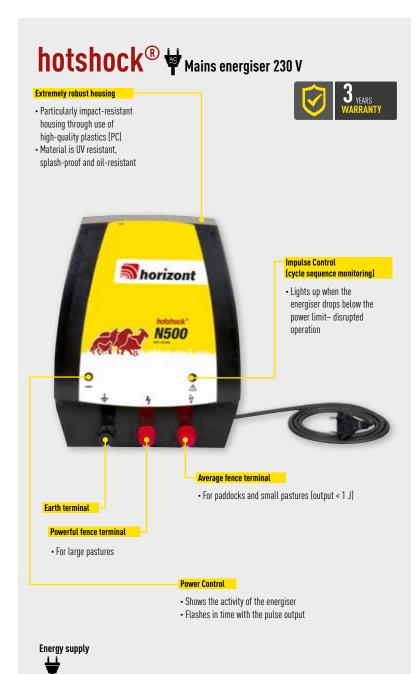
### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake 1 m (125H140411), fence connection kit (125H15522), fence tester farmer (125H14527)

### HORIZONT FENCE | Energisers | Mains energisers 230 V



### hotshock® N500





#### Animal husbandry:



Input: Max. output: •5J\* **Energy consumption:** -8W

Max. voltage: - 9,500 V Voltage 500  $\Omega$ : - 6,000 V

Dimensions (L x W x H): - 9.9 x 22.8 x 28.4 cm

Scope of delivery: • Energiser, mains plug, dowels and screws

> Art No Unit 125H10614 😙 1

### Recommended

- Earth stake 3 x 1.5 m (125H15017-1)
- Fence connection kit (125H15522)
- Lightning protection choke (125H15482)

### accessories:

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake 1.5 m (125H15017-1), fence connection kit (125H15522), lightning protection choke (125H15482)



• Two fence terminals for operating one large and one small

• Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and

230 V №

pasture or paddock

**DIN EN ISO 9001** 



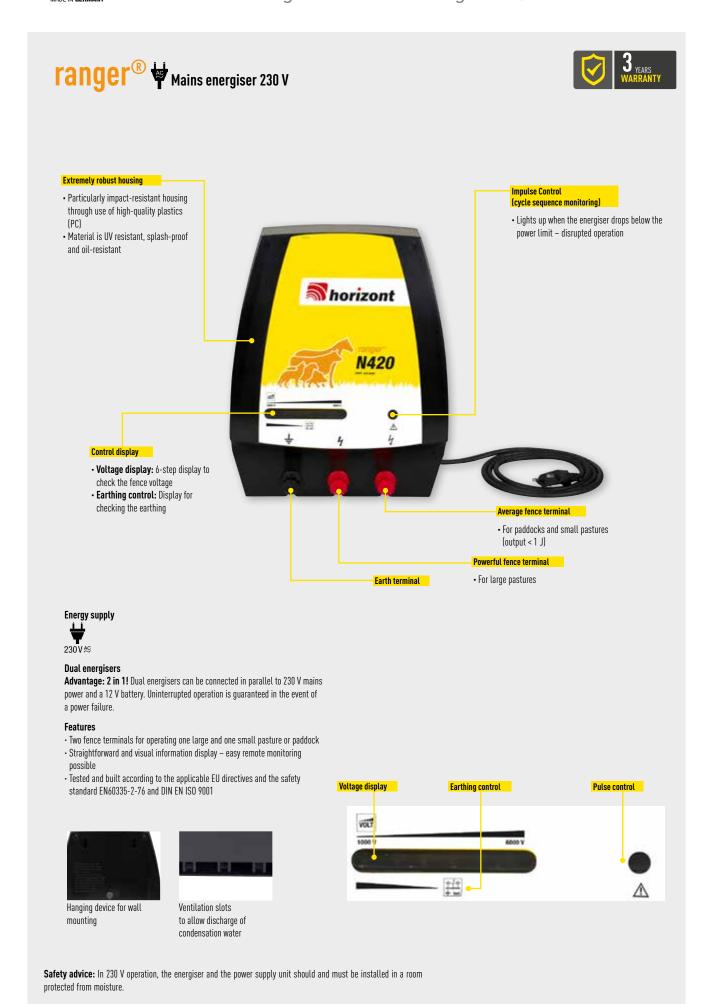


Ventilation slots to allow discharge of condensation water

Safety advice: In 230 V operation, the energiser and the power supply unit should and must be installed in a room protected from moisture.

\* at 110 % test voltage 253 V

### Mains energisers 230 V I Energisers | HORIZONT FENCE



### HORIZONT FENCE | Energisers | Mains energisers 230 V

### Mains energisers 230 V

### ranger® N270

### ranger® N420





	Max. fenc	e length:	
- [			Н
			F
'		_	<b>&gt;</b>

Animal husbandry:

Input:

Max. output:

Max. voltage:

Voltage 500  $\Omega$ :

Energy consumption:

Dimensions (L x W x H):

Scope of delivery:

Netting: 12 x 50 m As per CEE: 60 km 20 km Without vegetation: Average vegetation: 5 km High vegetation: 2 km

Netting: 16 x 50 m As per CEE: 100 km Without vegetation: 40 km Average vegetation: 10 km High vegetation: 4 km

tridati



tran



- 6 J
- 4.2 J
- 7 W
- 9,300 V
- 5,600 V
- 9.9 x 22.8 x 28.4 cm
- 9.9 x 22.8 x 28.4 cm • Energiser, mains plug, dowels and screws

Energiser.	mains	plua.	dowels and screws	



Art. No.	Unit	EAN
125H10742	⊕1	4 014803 107428

### Recommended accessories:

- Earth stake 2 x 1.5 m (125H15017-1)
- Lightning protection choke (125H15482)
- Fence connection kit (125H15522)
- Warning sign international (125H14127)
- Earth cable

- 3.4 J

• 2.7 J

- 5 W

- 13,500 V

- 5,400 V

- Earth stake 3 x 1.5 m (125H15017-1)
- Lightning protection choke (125H15482)
- Fence connection kit (125H15522)
- Warning sign international (125H14127)
- Earth cable

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake 1,5 m (125H15017-1)



Lightning protection choke (125H15482)

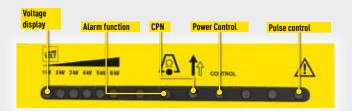


Fence connection kit (125H15522)

# Mains energisers 230 V I Energisers | HORIZONT FENCE



- **Voltage display:** 6-step LED display to check the earthing and fence voltage
- **Alarm function:** Optical and acoustic alarm when the voltage drops below 400 ohms, the fence should be checked for faults or damage
- 2-stage CPN technology: In the event of faults, higher energies are automatically fed into the fence (LED lights up red) after a safety margin of 55 seconds to ensure herding security
- Power Control: Shows the activity of the energiser and flashes in time with the pulse output
- Impulse Control (cycle sequence monitoring): Lights up when the energiser is in disrupted operation



# Energy supply

### 230 V №

### Features

- Straightforward and visual information display remote monitoring possible
- turbomax technology: for fence loads
- > 500 ohms the energiser works with an enormously high energy potential to reliably supply the fence
- Microprocessor control
- Tested and built according to the applicable EU directives and the safety standard EN60335-2-76 and DIN EN ISO 9001



Hanging device for wall mounting

### turbomax® N1430





### Animal husbandry:



Voltage 500 Ω: - 4,600 V
Dimensions (Lx W x H): - 10.6 x 2

Dimensions (L x W x H): • 10.6 x 23.4 x 29.8 cm Scope of delivery: • Energiser, mains plug

Art. No.	Unit	EAN
125H10748	⊕1	4 014803 107480

# Recommended accessories:

- Earth stake 9 x 1.5 m (125H15017-1)
- Large-capacity battery box (125H21264)
- Fence tester turbomax (125H14151)
- Lightning protection choke (125H15482)
- Warning sign international (125H14127)
- Earth cable

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Fence tester turbomax (125H14151), lightning protection choke (125H15482)





# Solar energisers

The following horizont solar energisers have an integrated solar panel. This supports the 12 V battery in that it does not need to be recharged so often, as it is discharged more economically.

The solar support is a worthwhile investment in the long term, especially during the sunny times of the year.

The advantage of the solar energisers is that they are delivered fully assembled. The energiser is therefore immediately operational after the rechargeable battery has been fully charged. The components are matched to each other so that the energisers on the fence provide super performance.

# Solar energiser | Energisers | HORIZONT FENCE



### trapper® AS25





As per CEE: Without vegetation: Average vegetation: High vegetation:

5 km 3 km 0.9 km

### Animal husbandry:



Input:

Max. output: Energy consumption:

Scope of delivery:

- 0.25 J - 26 mA - 9,000 V

- 0.33 J

Max. voltage: Voltage 500  $\Omega$ :

- 3,000 V

Dimensions (L x W x H): - 23.1 x 37.4 x 32.0 cm

• Energiser, power supply unit, earth stake (approx. 30 cm), 12 V battery, 5 W solar panel, fence and earth connecting cable

Art. No.	Unit	EAN
125H14982	⊛1	4 014803 149824

### Recommended accessories:

- Earth stake 1 x 1 m (125H140411)
- Fence tester farmer (125H14527)
- Warning sign international (125H14127)

# Rear view

Earth terminal



### Features

- · Very sturdy housing
- Power Control (pulse control)
- Automatic switch-over to solar operation
- · Solar charging control installed weather-protected in housing
- · Microprocessor control



Plug-in profile for earthing rod in housing



230 V charging socket to keep the integrated 12 V battery charged

Fence terminal



Twist lock on the back to open the housing



Inclined front for easy alignment of solar panel to the sun

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake (125H14O411), warning sign, international (125H14127)

# HORIZONT FENCE | Energisers | Solar energiser



Rear view

farmer® AS50





As per CEE: Without vegetation: Average vegetation: High vegetation:

5 km 3 km

0.9 km

### Animal husbandry:

• 0.5 J

Input: Max. output: Energy consumption: Max. voltage:

Scope of delivery:

- 20 - 50 mA - 11,000 V

Voltage 500  $\Omega$ : - 3,600 V Dimensions (L x W x H): - 23.1 x 37.4 x 32.0 cm

• Energiser, power supply unit, 12 V rechargeable battery,

10 W solar panel, fence and earth connecting cable

Art. No.

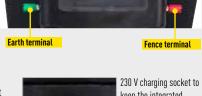
### **Energy supply**



- ECO Power / power saving function: The power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- · Automatic switch-over to solar operation

• Shows the activity of the energiser • Flashes in time with the pulse output

- Solar charging control installed in the energiser is weather protected - easy charging of different types of rechargeable batteries
- · Microprocessor control





keep the integrated 12 V battery charged



Twist lock on the back to open the housing



Plug-in profile for earthing rod in housing



Inclined front for easy alignment of solar panel to the sun

### Recommended accessories:

- Earth stake 1 x 1 m (125H140411)
- Fence tester farmer (125H14527)
- Warning sign international (125H14127)

### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake (125H14O411), warning sign international (125H14127)

40

# Solar energiser | Energisers | HORIZONT FENCE



### **NEW** farmer® AS140





As per CEE: Without vegetation: Average vegetation: High vegetation:

14 km 5 km 1.5 km

### Animal husbandry:



Input:

Max. output: Energy consumption: Max. voltage:

Scope of delivery:

- 30 - 200 mA - 10,000 V

- 2 N I

-1,4 J

Voltage 500  $\Omega$ : - 4,600 V

> • Energiser, power supply unit, earth stake (approx. 30 cm), 12 V battery, 24 W solar panel, fence and earth connecting cable

Art. No. Unit 1014803 144783 125H14478 😙 1

Recommended accessories:

- Earth stake 2 x 1 m (125H140411)
- Fence tester farmer (125H14527)
- Warning sign international (125H14127)

# Rear view

• Shows the activity of the energiser • Flashes in time with the pulse output



**Earth terminal** 

### **Energy supply**



### **Features**

- ECO Power / power saving function: the power economiser automatically adjusts power consumption to the status of the fence = less energy consumption, less environmental impact and lower costs
- · Automatic switch-over to solar operation
- · Solar charging control installed in the energiser is weather protected – easy charging of different types of rechargeable batteries

Plug-in profile for

earthing rod in housing

· Microprocessor control



Twist lock on the back to open the housing

230 V charging socket to

keep the integrated

12 V battery charged



Inclined front for easy alignment of solar panel to the sun





### Selected accessories

Find matching accessories for your horizont energiser in the comprehensive horizont range here in the catalogue or on the horizont website under the corresponding article number.



Earth stake (125H140411), fence tester farmer (125H14527), warning sign international (125H14127)

UKAL



# HORIZONT FENCE | Earthing & control | Guide

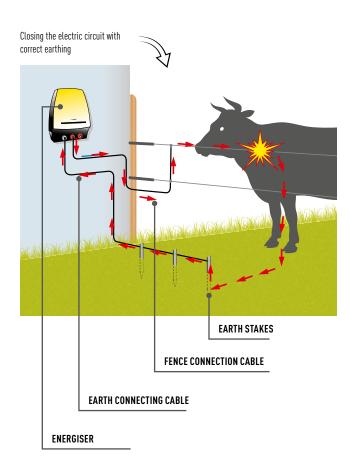
### THINGS TO KNOW ABOUT

# EARTHING & CONTROL

### 1. WHY IS EARTHING AT THE FENCE SO IMPORTANT?

The most important prerequisite to ensure optimum herding security as well as full energiser performance at the fence is proper earthing. The fence system is a circuit in which electricity flows.

**CAUTION:** It is not necessary to set up the fence in a circle to close the circuit because it is closed when touched by the animal. The current thus flows from the energiser through the conductors, the animal body (or vegetation) over the ground, through the earth stakes back to the energiser. Insufficient earthing means that less current flows and the deterrent effect on the animal is reduced. The danger: The animal escapes or enters the fenced area.





### **TIP: FAULT DETECTION**

Connect long supply lines from the energiser to the fence in a branching box every 50-100 m. This can be easily opened and the cables checked for function by measuring the voltage. Troubleshooting is significantly simplified, especially for cables laid in the ground.

# 2. WHAT IS IMPORTANT TO PAY ATTENTION TO IN TERMS OF SOIL CONDITIONS?

Soil can have a very high resistance and significantly affect the herding security of the electric fence system. The goal is to minimise soil resistance, and this is achieved by good soil conductivity. Damp soil with good turf favours conductivity, while dry soil with little grass cover makes good earthing difficult. Difficult weather conditions, such as a layer of snow and frost, can also severely affect the earthing. If the ground is sandy, we recommend using an open or uninsulated earth conductor and earthing it at regular intervals. The more poorly the soil conducts, the more earth stakes should be used.

### 3. HOW DOES ONE EARTH AN ELECTRIC FENCE PROPERLY?

One or several earth stakes are inserted at least 1 m deep into the soil until they reach damp earth. When using several earth stakes, space them 3 m apart. The earth stakes are then connected to the energiser using high voltage cables and connecting cables. The number and depth of the earth stakes is crucial: The more and the deeper, the better.

**CAUTION:** Only use galvanised, rust-free materials for earthing, as a layer of rust will greatly impair the effect.

# Guide Earthing & control | HORIZONT FENCE

### **EARTHING CHECKLIST**

- ✓ Energiser
- ✓ Earth stake
- ✓ Earth connecting cable & connection cable
- ✓ Fence tester

### 4. WHEN AND HOW IS EARTHING CHECKED?

Earthing reliability should be checked when the pasture is put to use in the spring and during the dry period in the summer. Also in the event of faults in the fence as well as after installation of a new energiser.

Certain measuring instruments or fence testers are used for this purpose.

The test procedure is as follows: You produce a short circuit by placing iron posts against the electrical conductor about 100 m away from the energiser. Ensure good contact with the conductor and drive the post at least 30 cm into the soil. The fence voltage should now drop to 2000 V (1000 V for dry soil).

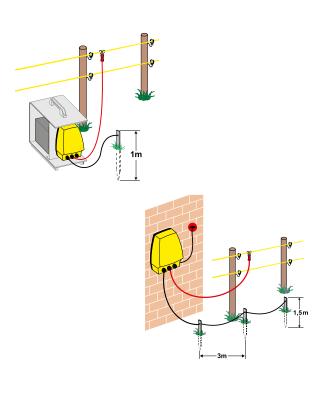
The earthing rod of the voltmeter is inserted into the soil about 1 m from the last earth rod of the energiser, and the measuring contact is held to the last earthing rod of the energiser. The value should be under 1000 V. Note: The smaller the value, the better. You should always check your fence system daily and look after your animals. Written documentation helps to prove that you checked

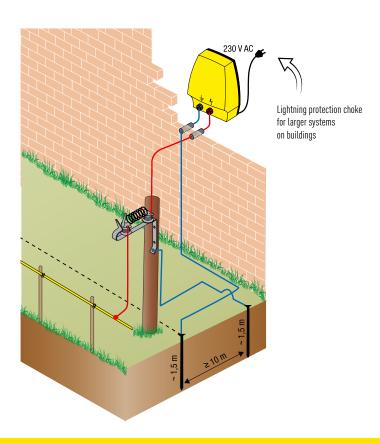
### 5. WHICH SAFETY REGULATIONS MUST BE OBSERVED?

When earthing the energiser, a minimum distance of 10 m to other earthing systems (e.g. building earthing) must be maintained to prevent the voltage from flashing over (e.g. in the event of a lightning strike). This safety distance is important to avoid endangering the house earthing including water and power lines. The distance between the earthing of the energiser and the lightning protection should also be at least 10 m.

Excessive voltage (like a lightning strike) can destroy the energiser, the fence is no longer functional and the animal can escape. To prevent this, a lightning protection system should be installed between the energiser and the fence system. This is a requirement inside the building. It is considered a recommendation for installation outside buildings. It is particularly useful when using a mains energiser, as the current can flash over to the mains.

A so-called lightning protection choke effectively protects the energiser against damage caused by lightning and excessive voltages.





## **Important icons for this chapter:**

### **Product describing icons:**

These icons describe earthing & control features.





Width





Stainless
Steel
Stainless



steel

Galvanized

ukalel@ukal.com

# HORIZONT FENCE | Earthing & control | Earth stakes







# T-earth stake

**Suitable for:** • 12 V Battery and mains energisers

Length: • 100

Material: • Angle section, galvanized

Material thickness: - 3 mm

Scope of delivery: • Complete with connection bolt

Art. No.	Unit	EAN
125H140411	1	4 014803 434265

# Earth cable and warning



To protect the earth cable, it is advisable to lay it in a protective hose or pipe.

### Earth / Connecting / Supply cable

Application: • Overhead and buried fence supply cables, connection of earthing rods and for power

supply at gates

Advantage: - Double insulated

• Conductor of galvanized steel wire • Electric strength is at < 20,000 V

Art. No.	Reel	Diameter	max. supply cable length	Resistance	Unit	EAN
125H14040	25 m	1.6 mm	500 m	0.07 <b>Ω</b> /m	1	4 014803 140401
125H15525	50 m	1.6 mm	500 m	0.07 Ω/m	1	4 014803 155252
125H15956	100 m	1.6 mm	500 m	0.07 Ω/m	1	4 014803 159564
125H15516	100 m	2.5 mm	1,000 m	0.035 <b>Ω/</b> m	1	4 014803 155160





### Warning sign international

**Dimensions:** - 20 x 10 cm

Scope of delivery: • Warning sign printed on both sides

Art. No.	Unit	EAN
125H14127	□4	4 014803 141279

# Fence tester | Earthing & control | HORIZONT FENCE

### Fence connection kit

Suitable for: • Heart clamp for connection to tape

up to 12 mm, rope, polywire and wire

Advantage: • High voltage cable of the heart clamp with reinforced plastic sheath to

avoid voltage flashovers

Material: • Galvanized

Scope of delivery: • Connecting cable 120 cm, earth cable 50 cm

Art. No. Unit EAN
9HOR15522 1 4014803/405788







### **Energiser and earth connection kit**

Suitable for: • Heart clamp for connection to tape up to 12 mm,

rope, polywire and wire

Earth connecting cable for fastening to earthing rodHigh voltage cable with reinforced plastic sheath

Material: • Galvanize

Advantage:

**Scope of delivery:** • Earthing rod, fence connection cable 2 m, earth connecting cable 3 m,

Warning sign

Art. No. Unit EAN

125H15858C ©1 4 014803 158581





### Fence tester

\_

### **NEW** Fence tester trapper®

Advantage: • 6 recessed glow lamps for easy reading of voltage

• Non-slip insulation of the earth stake - additional safety in operation

 When not in use, the cable can be wrapped around the fence tester and the earthing rod can be fixed in place - easy handling and additional protection against damage

**Operation:** • Operation without battery!

Scope of delivery: • Fence tester

Art. No. Unit EAN







# HORIZONT FENCE | Earthing & control | Fence tester





### Fence tester ranger ®

Advantage: • Digital display for accurate reading of the voltage

- Device switches on automatically when fence voltage is applied
- Non-slip insulation of the earth stake enables safe operation
- Cable can be wrapped around the fence tester when not in use easy

handling and additional protection against damage

Operation:
Scope of delivery:
- Battery operation
- Fence tester, battery

Art. No. Unit EA



### Fence tester turbomax® Fence scout

Advantage: • Measuring device for fence voltage, amperage and as fault finder

Measuring range up to 10,000 VDisplay of current flow direction

Direction display of the faultDisplay lighting

Acoustic signalsWith battery control indicator

Battery operation

Operation:

Scope of delivery: • Fence tester, 9 V block battery, belt pouch

Art. No.	Unit	EAN
125H14151	1 Limited stock	3 700393 916540

# Lightning protection and fence switch



# 2x <sup>4</sup>7

### **DOUBLE LIGHTENING PROTECTION**

Energisers with two fence terminals also require two lightning protection systems.

### Lightning protection choke

Suitable for:

• Electric fence installation on building installations

Advantage:

• Effectively protects energiser from damage caused by lightning and

excessive voltage

**Safety advice:** To prevent lightning damage, an earthed lightning spark gap must be installed in the fence supply cable to the building, or prior to entry into a building. The lightning protection device must be installed by a specialist if the energiser is installed inside the building. The wiring must be carried out by a specialist according to the installation instructions. Do not combine lightning protection earth and operational earth of the electric fence system.

# Guide | Netting | HORIZONT FENCE





# **NETTING**

THINGS TO KNOW ABOUT

### 1. THE FUNCTION OF NETTING

Netting consists of horizontal and vertical polywires. These polywires are made of monofilament plastic threads and the current-carrying polywires are additionally made of wires. A quality feature here is the number and thickness of the wires. With regard to plastic monofilaments, resistance to sunlight and mechanical strength also play a special role. horizont plastic monofilaments are therefore made of high-quality polyethylene (PE for short) with an additive for UV stabilization. Special reinforcements of the vertical polywires, the plastic struts, can further increase the stability of the netting (for specific applications under increased weather conditions, such as wind and snow loads, as well as in uneven terrain).

Various posts with different heights and thickness are also available to ensure optimal vertical fixing of the netting. There are various types of netting, depending on the application, which differ in the spacing between the polywires and the number and arrangement of the current-carrying polywires.

### 2. THE APPLICATION

As a livestock owner you can keep your animals in or out with a electric fence or an electric net. Animals that have a dense coat or plumage, such as poultry, sheep and goats, are ideally guarded with an electric net. Due to their size, small animals such as cats, dogs or rabbits can also be managed with netting. The same rule can also be applied when warding off wildlife or wolves. In this case, the horizont range offers optimal netting and polywire fencing solutions.

The different types of netting are classified according to the different animal species into sheep/ goat, poultry and small animal nets (rabbits, cats).

### THE CONDUCTIVITY

The required herding pulse energy can be achieved through high electrical conductivity (of the polywires or wires). Each horizont netting type contains information on conductivity, e.g. the symbol A++, which stands for the highest conductivity.





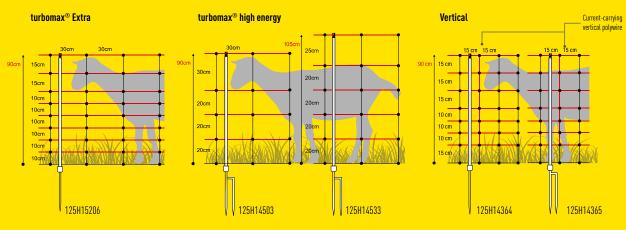
When using netting on particularly dry soil, it is advisable to use netting with earth conductors. If the netting is touched by the animal in this case, the dry soil prevents the necessary transport of electrical pulse energy back to the earth connection of the energiser. The earth conductor of the corresponding netting can act as a substitute and feed the pulse back to the energiser. Netting with earthing conductors can be used in all soil conditions. Particular strengths of the netting are in dry soils and earthing problems.

### THE VEGETATION SITUATION

Vegetation at the site of use also plays a large role when choosing the appropriate netting. For example, an increased ground clearance of the lower current-carrying polywire (see turbomax® high energy 14503, 14533 below) or a certain number and arrangement of the current-carrying vertical polywires (see vertical netting 14364, 14365 below) can considerably reduce energy leakage into the ground that is unused for the herding performance. The pulse-type energy of the energiser is available in the optimum intensity required for herding security when the animal comes into contact with the netting. If one of the bottom polywires is covered with vegetation (see turbomax® Extra 15206 below), the leakage can have a negative effect on the herding performance.

TIP

There should be no vegetation under the netting; vegetation should be removed before installation. Depending on the netting, the bottom current-carrying conductor is 5, 10 or 20 cm from the ground. This important conductor is therefore so close to the ground or vegetation as no other electric fence.



# **HORIZONT FENCE** | Netting | Guide



### 3. CHOOSING THE CORRECT POSTS

The posts can be selected according to soil conditions and preferences (single or double prong).

SINGLE PRONG

• Use on stony ground or in the mountains

### **DOUBLE PRONG**

- Use on loose or firm stone-free ground
- The post can be anchored in the ground without tools thanks to the tread
- A double prong achieves a greater stability

The horizont posts are particularly stable. The post material is specifically optimised for multiple tensile loads that occur when pulling out net posts. The high strength and adapted elasticity, as well as the special connection technology of the post with the earth spikes, ensure a particularly long durability compared to conventional posts in mobile use.

The polywire insulator at ground level, which is located on the post-earth spike, ensures close contact with the spike. It therefore supports the conductivity of a net with an electrical earth wire. Using additional posts to press down the bottom wire

strand in uneven soil conditions helps avoid an electrical connection of the live polywires. This also eliminates possible gaps which wild animals can use to slip through, for example.

### 4. CONNECTION TO AN ENERGISER

horizont offers special energisers for the herding of animals with an insulating coat of wool, hair or feathers. Since the netting is often set up well inside the vegetation, horizont energisers are designed for exactly such conditions.

### 5. THE ASSEMBLY AND DISMANTLING OF NETTING

### **CUTTING THE PASTURE AREA FREE**

Why is it so important for the netting to have the pasture area cut free?

The trimmed corridor under the set up netting prevents the first current-carrying polywire from being overgrown through vegetation. The vegetation cannot conduct energy away from the netting into the ground. If the first current-carrying polywires are free from vegetation, no energy will be lost from the fence.

### **POSTS**

How do I choose the optimal post?

The broader surface of posts with double prong makes it easier to drive them into the ground. Yet the double prong is difficult to drive into stony ground. It is better to use a single prong here.

### CORNER WITH POST

How does a corner solution work for the sheep net fence with additional posts? The additional post for the sheep net is necessary if there is no built-in post available in the corner. A "standard" plastic post can be used there, for example.

### **CONNECTING SHEEP NETTING**

How is a net overlap created in sheep netting?

This is attached at points where the nets meet. This means the netting is properly stretched in parallel at this point in the resulting length. It is important that the designated cable ends of the netting is connected conductively.

### CONNECTING SHEEP NETTING CONDUCTIVELY TOGETHER

How is the netting conductively connected at the two starting points?

Both of the cable ends of the netting are properly staked around the posts to eliminate unnecessary protrusion. Both clips of the ends are then connected without tools to establish a clean electrical contact on the fence.

### SECURING SHEEP

How to deal with gaps between the netting and the ground due to ground depressions?

Lambs or even sheep could slip under the fence here. It is therefore important to check the sheep net fence! The netting can be stretched on the ground with the supplied stakes. This guarantees better herding security.

### CONNECTING THE ENERGISER

The energiser should be connected to the connecting clips of the netting. This enables the best contact performance.

### **ROLLING UP SHEEP NETTING**

The netting is picked up at the posts. The actual netting (wire strand) is then rolled up to the posts. The netting is tied together with the strings.

# Sheep and goat netting | HORIZONT FENCE

### **Horinetz**

Accessories:

### Sheep and goat netting

Suitable for: • Sheep and goats

• Wolf deterrent and repelling of wild boars

Bottom mesh size: • 15.0 cm high and 15.5 cm wide Advantages:

• Good conductivity and extremely durable

• High load rating possible

• 1 x herding net horinetz complete Scope of delivery:

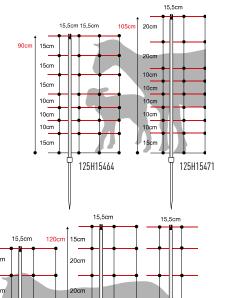
14 plastic posts with single or double prong
1 x repair kit, 1 x warning sign and 2 x ground stakes

- Replacement post with double prong Ø 13 mm, 90 cm high (125H15022-2), 105 cm high (125H15026-2) or 120 cm high

(125H14384-2)







10cm

10cm

10cm

125H14147

125H14543

125H15472

Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H15464	90 cm	50 m	Single prong	14 / plastic	white		8	7	1.15 <b>Ω</b> / m	1	4 014803 154644
125H15465	90 cm	50 m	Double prong	14 / plastic	white		8	7	1.15 <b>Ω</b> / m	1	4 014803 154651
125H15471	105 cm	50 m	Single prong	14 / plastic	white	•	9	8	1.01 Ω / m	1	4 014803 154712
125H15472	105 cm	50 m	Double prong	14 / plastic	white		9	8	1.01 Ω / m	1	4 014803 154729
125H14147	120 cm	50 m	Double prong	14 / plastic	white	•	10	9	0.84 Ω / m	1	4 014803 141477

15,5cm

90cm 15cm 15cm

10cm

10cm

15cm

125H15465

105cn

10cm

10cm

10cm



# **HORIZONT FENCE** | Netting I Sheep and goat netting

### Turbomax® Extra Sheep and goat netting

Suitable for:

• Sheep and goats

• Wolf deterrent and wild boar repellent • 10 cm high and 30 cm wide

Bottom mesh size: Advantages:

- High stability through special vertical
- connections
- Tight mesh spacing prevents lambs from
- breaking out
- Professional netting with high conductivity for more safety
- White with black outside edges for more contrast to the surroundings
- and for better visibility · horizont quality with high-quality copper conductor
- 1 x herding net complete, 50 m long Scope of delivery:
  - - 14 x plastic posts with single or double prong

1 x repair kit, 1 x warning sign and 2 x ground stakes
Replacement post with double prong Ø 13 mm, 90 cm high Accessories:

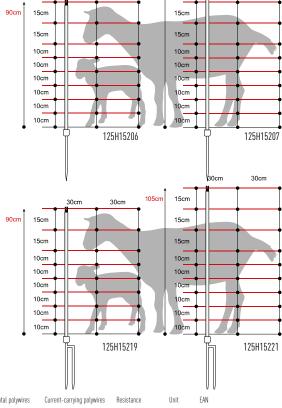
(125H15022-2) or 105 cm high (125H15026-2)







Foot tread with double prong



Conductivity:

A+

15cm

Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H15206	90 cm	50 m	Single prong	14 / plastic	white		9	8	0.29 <b>Ω</b> / m	1	4 0 14803 152060
125H15207	105 cm	50 m	Single prong	14 / plastic	white		10	9	0.28 Ω / m	1	4 0 14 803 15 20 77
125H15221	105 cm	50 m	Double prong	14 / plastic	white		10	9	0.28 <b>Ω</b> / m	1	4 0 14 8 0 3 15 2 2 1 3



# Sheep and goat netting | HORIZONT FENCE

### Turbomax® Plus Sheep and goat netting

Suitable for:

• Sheep and goats

• Wolf deterrent and wild boar repellent

Bottom mesh size:

• 10 cm high and 30 cm wide

Advantages:

• Both bottom polywires are not current-carrying - no discharge and so

cutting free is not necessary

• High stability through rigid verticals

• Long operating life due to robust conductor material

• White polywire with black outside edges for more contrast to the

surroundings and for better visibility

Scope of delivery:

• horizont quality with high-quality copper conductor • 1 x herding net turbomax high energy complete, 90 cm high, 50 m

• 14 x plastic posts with single prongs

• 1 x repair kit, 1 x warning sign and 2 x ground stakes

• Connecting accessories

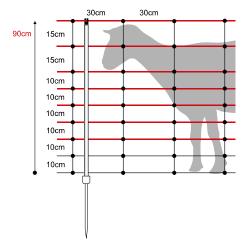
Accessories: - Replacement post with single prong Ø 13 mm, 90 cm high

(125H14664)









Art. No.	Netting height	Netting length	Prong	Number of posts and material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H14955	90 cm	50 m	Single prong	14 plastic posts	white		9	7	$0.33\;\Omega$ / m	1	4 014803 149558



### RECOMMENDED BY SHEEP BREEDING ASSOCIATIONS

# **WOLF DETERRENT**



### THE CURRENT SITUATION AND OUR SOLUTIONS FOR YOU

Wolves have been detected in nearly all parts of Germany. The wolf has returned to wide parts of Germany. The delight over what we consider to be an extinct animal is clouded by the fact that it considers farm animals to be part of its diet. This is backed up by the sufferings endured by sheep and goat farmers across the country. This is where the electric fence comes into play, the development of which has been part of horizont's profession for decades. In several research projects in cooperation with the Saxon Sheep and Goat Breeding Association and the Baden-Württemberg State Sheep Breeding Association, horizont has developed reliable and particularly effective wolf deterrent systems to protect your farm animals. The netting has been extensively tested in practice and is recommended by the associations - for more safety on your pastures!

### **TURBOMAX HIGH ENERGY**

The turbomax high energy netting is suitable for uneven terrain and mountains. Since the lower mesh spacings are particularly large, small wild animals can also slip through the netting and remain unharmed. Rigid verticals in the netting ensure solid stability. High energy in the netting is ensured due to a reduced number of horizontal polywires. The reduced number of horizontal polywires guarantees a particularly high conductivity with low energy consumption of the energiser.

### HORINETZ SUPER PLUS

With the horinetz super with a height of 90 cm, a 20 mm wide tape can also be inserted at a height of 120 cm. The special construction can prevent the wolf from jumping over the net, as the movement of the tape in the wind irritates the wolf's field of vision and it cannot calculate its jump over the netting. UV-stable plastic posts in combination with double prongs ensure a secure stability, even in loose soil or in windy conditions.

### HORINETZ SUPER

The horinetz super is an extra high special net as wolf deterrent with 145 cm height. In combination with further wolf deterrent measures, this high netting offers very good protection against the wolf and prevents attacks on your animals. The stable posts with a 19 mm post diameter ensure the secure stability of the netting. This ensures that your animals are safely and reliably fenced in



Art. No. 125H14503/ 125H14533 with additional earth conductor: Art. No. 125H14534/ 125H14652



Art. No. 125H14992/ 125H14925



Art. No. 125H14967

# Wolf deterrent | Netting | HORIZONT FENCE

### Horinetz super Wolf deterrent netting

Suitable for:

• Sheep and goats
• Wolf deterrent and wild boar repellent

Bottom mesh size: Advantages:

Scope of delivery:

• 15 cm high and 15 cm wide

 Extra high special net for wolf defence with 145 cm height
 High stability due to reinforced top and bottom polywires • 1 x herding net wolf deterrent netting horinetz super complete, 145 cm high, 50 m long

• 15 x plastic posts with double prongs

• 1 x repair kit, 1 x warning sign and 2 x ground stakes

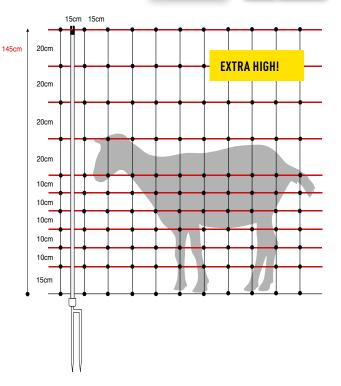
Accessories:

• Replacement post with double prong Ø 19 mm, 145 cm high (125H14993)









Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H14967	145 cm	50 m	Double prong	15 / plastic	black		11	10	0.81 $\Omega$ / m	1	4 014803 149671



# HORIZONT FENCE | Netting | Wolf deterrent netting

# Horinetz super plus Wolf deterrent netting

Suitable for:

• Sheep and goats

• Wolf deterrent and wild boar repellent

Bottom mesh size:

• 15 cm high and 15.5 cm wide

Advantages:

Recommended by the Saxon Sheep and Goat Breeding Association
 Increased jump height through additional 20 mm tape at

120 cm height

• Quick and easy assembly

• High energy due to accompanying earth conductor

Scope of delivery:

• 1 x herding net wolf deterrent netting horinetz super plus complete,

50 m lon

• 15 x plastic posts with single or double prong

• 1 x additional post 1.20 m for adaptation

to ground contour

• 1 x repair kit, 1 x warning sign and 2 x ground stakes

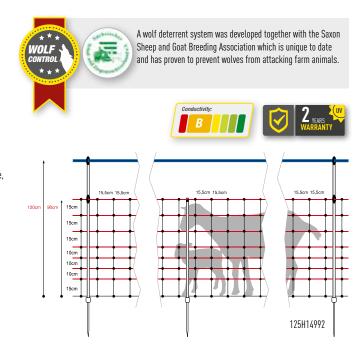
Accessories:

• Replacement post with double prong Ø 13 mm, 90 cm high (125H15022-2, 15)

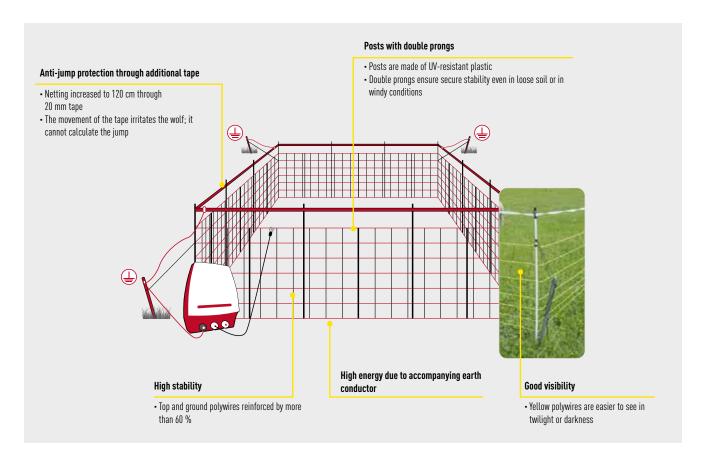
• 20 mm tape (125H17111)

• Earth stake for guying and earthing (125H15017-1)

• Tape connecting cable (125H10447)



Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H14925	90 / 120 cm	50 m	Double prong	15 / plastic	white		8	7	1.15 Ω / m	1	4 0 14803 149251



# Poultry netting | HORIZONT FENCE

# Turbomax® high energy Wolf deterrent netting

Suitable for: - Sh

Sheep and goats

• Wolf deterrent and wild boar repellent

Bottom mesh size: Advantages:

Accessories:

• 20 cm high and 30 cm wide

• Due to large mesh spacing at the bottom, small wild animals can slip through and are thus protected

• Rigid verticals ensure solid stability

• Low weight – 10% lighter than conventional netting

• Reduced number of horizontal polywires provides high energy due to

less contact with vegetation

• White with black outside edges for more contrast to the surroundings

and for better visibility

• horizont quality with high-quality copper conductor

Scope of delivery: • 1 x herding net turbomax high energy complete, 50

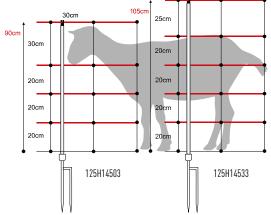
• 1 x herding net turbomax high energy complete, 50 m long • 14 x plastic posts with double prongs

1 x repair kit, 1 x warning sign and 2 x ground stakes

- Replacement post with double prong Ø 13 mm, 90 cm high

(125H15022-2) or 105 cm high (125H15026-2)











Connecting clip Head insulator

tor Ground stake

Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H14503	90 cm	50 m	Double prong	14 / plastic	white		5	4	$0.33\Omega$ / m	1	4 014803 145031



# **HORIZONT FENCE** | Netting | Poultry netting

### Ranger®

### Poultry netting 105 cm

Suitable for: Bottom mesh size:

• Chickens, turkeys, geese and ducks • 5 cm high and 7.5 cm wide

• High conductivity for optimal herding security Advantages:

• High quality posts for high stability

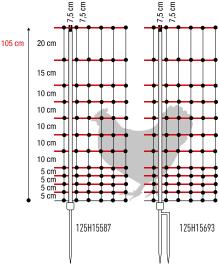
 Materials are rust-free and therefore extremely resistant • 1 x poultry netting complete, 105 cm high, 50 m long Scope of delivery:

• 15 x posts with single or double prongs

• 1 x repair kit, 1 x warning sign and 2 x ground stakes

Accessories: - Replacement post with double prong Ø 13 mm, 105 cm high (125H15026-2)





Art. No.	Netting height	length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	polywires	Resistance	Unit	EAN
125H15587	105 cm	50 m	Single prong	15 / plastic	white		12	11	$0.74~\Omega$ / m	1	4 014803 155870

### Ranger® security Poultry netting (not electrifiable)

Suitable for: Bottom mesh size: Advantages:

• Chickens, turkeys, geese and ducks • 5 cm high and 7.5 cm wide

• Tool-free connection of several nets

• High quality posts for high stability

• Without current-carrying conductors, no electrification possible

Scope of delivery: • 1 x poultry netting complete, 105 cm high, 50 m long

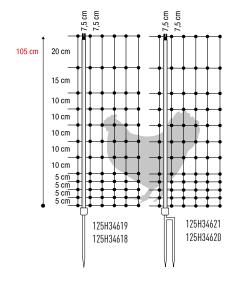
• Posts with single or double prongs

• Repair kit, 2 x ground stakes

Accessories:

• Replacement post with double prong Ø 13 mm, 110 cm high (125H14662)





Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires Resist	stance	Unit	EAN
125H34619	105 cm	25 m	Single prong	9 / plastic	green	•	12	not electrifiable		1	4 014803 346193
125H34618	105 cm	50 m	Single prong	15 / plastic	green		12	not electrifiable	!	1	4 014803 346186



### **EVEN MORE FOR FEATHERED FRIENDS**



Our animal husbandry catalogue offers the right range of products for poultry farming. Let our service team assist you.



# Gate for electric fence netting | Netting | HORIZONT FENCE

### Farmer® extra | small animal netting

Suitable for: Bottom mesh size: • Chicks, small hares and rabbits

Advantages:

Scope of delivery:

5 cm high and 7.5 cm wideHigh quality posts for high stability

horizont quality with high-quality stainless steel conductors

• 1 x herding net complete, 50 cm high, 50 m long

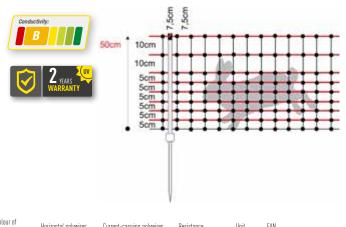
• 15 x posts with single prongs

• Connecting accessories

Accessories:

- Replacement post with single prong with Ø 13 mm, 50 cm high

(125H15028)



Art.	No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
12	5H15576	50 cm	50 m	Single prong	15 / plastic	white		9	8	1.01 Ω / m	1	4 014803 155764

### Farmer® plus | small animal netting

Suitable for: Bottom mesh size: • Chicks, small hares and rabbits • 6 cm high and 6 cm wide

Advantages:

High quality posts for high stability

Scope of delivery: •1x1

• horizont quality with high-quality stainless steel conductors

• 1 x herding net complete, 65 cm high, 50 m long

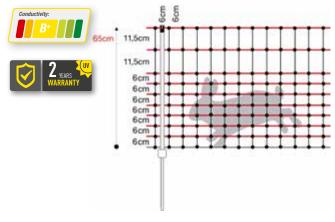
• 15 x posts with single prongs

• Connecting accessories

Accessories:

- Replacement post with single prong with Ø 13 mm, 50 cm high

(125H15223)



Art. No.	Netting height	Netting length	Prong	Number of posts/ material	Colour of posts	Colour of netting	Horizontal polywires	Current-carrying polywires	Resistance	Unit	EAN
125H14	<b>895</b> 65 cm	50 m	Single prong	15 / plastic	green		10	9	0.90 $\Omega$ / m $$	1	4 014803 148957

### THINGS TO KNOW ABOUT

# CONDUCTOR MATERIAL

# **& ACCESSORIES**

Conductor materials must be highly conductive, tear-resistant and weatherproof. Good visibility can increase the effect and is essential for fleeing animals like horses. Due to the risk of injury, barbed wire should not be used as a fence conductor. Apart from the energiser, conductor material is one of the most important components of the fence system for mobile or permanent fencing. By choosing the right conductor, you can significantly influence herding security.

### 1. THE RIGHT CHOICE OF CONDUCTOR MATERIAL

Conductor materials can be plastic-metal mixtures or pure metallic materials - e.g. various electrifiable wires, these have the highest conductivity. Particular attention should be paid to the following values when selecting the conductor material:



The **RESISTANCE** is given in ohms / m. The lower this value, the higher the quality of the conductor material. High resistance values cannot be compensated even with powerful energisers!

The BREAKING LOAD is given in kilograms and indicates the maximum load (in kg) or tensile force the conductor material can withstand.



The **NUMBER AND THICKNESS** of the current-carrying conductors provides information about its conductivity. The more conductors and the thicker the conductors are in the conductor material, the more current is carried.



IN GENERAL: The better the electricity is transported in the fence, the longer fences can be built or the higher the herding voltage in the fence.

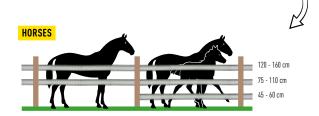
### **SEVERAL LEVELS IN THE FENCE:**

When using several levels in the fence, the following should be noted:

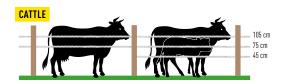
- The total resistance of the fence system decreases with each additional level (conductor material) – but it is always smaller than the lowest resistance value of a level
- With fencing, the same conductor material should always be used on the different levels, as this guarantees optimum herding security - different conductor materials can also be mixed in the fence system under special conditions
- (e.g. in cattle farming)
- If the lowest level of the conductor material is covered with vegetation, the energy loss from the fence increases due to current leakage
- Ideally, the levels in the fence are free of vegetation, which has a positive effect on the maximum fence length
- For outdoor fencing, the use of conductor material with low resistance values is recommended - however, subdivisions in the fence or strip grazing can also be equipped with conductor material with higher  $\Omega/m$  values due to their small size

### **RECOMMENDATIONS FOR DIFFERENT TYPES OF ANIMALS:**

For different types of animals, horizont recommends different conductor materials and a certain number of levels when building fences:

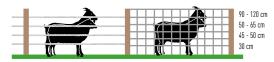


horizont recommends fencing horses with 40 mm wide electric fence tape; horses are fleeing animals, and the wider the electric fence tape, the better it is perceived by the animals. This considerably reduces the risk of injury and escape of your animals!

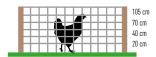


horizont recommends fencing cattle with electric fence rope or polywire.

### SHEEP AND GOATS

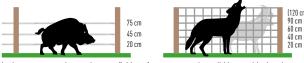


Sheep and goats can be fenced in locally with electric fence polywire. Alternatively, electric nets are also ideal for herding such animals.



horizont recommends fencing in poultry with electric nets.

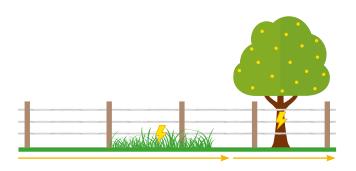
### WILDLIFE OR WOLF DETERRENT



horizont recommends securing corn fields or forest areas against wild boars with electric fence tape or rope. For wolf deterrent and for the protection of sheep or goats, horizont recommends the use of special wolf deterrent netting.

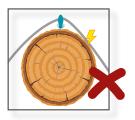
58

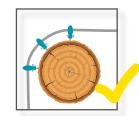
### Guide | Conductor material | HORIZONT FENCE



### 2. MALFUNCTIONS AT THE FENCE

The above diagram illustrates the malfunctions that can be caused by vegetation at the fence, for example. Consequently, the fence should always be kept in proper condition, the fence voltage should be checked regularly, the fence should be kept free of vegetation and connectors should be used if a conductor breaks. This will increase the durability of your fence and the safety of your animals will not be reduced by avoidable defects in the fence. The fence gains stability.







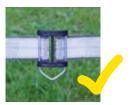
Conductor material attached to wood posts, often resulting from incorrectly attached insulators, can also influence the current flow. The conductor material should always be run in appropriate insulators.

### 3. TIPS FOR HANDLING CONDUCTOR MATERIAL

If the conductor material is torn, use suitable accessories such as connectors to restore the herding security. If the conductor material is sagging and needs to be re-tensioned, use the appropriate tensioners to keep it properly at height again. Do not wrap the conductor material in the dry room of the insulators; this can cause spark-overs on the support of the insulator. In winter, water accumulation can cause the conductor material to be significantly heavier and sag. If you do not use your pasture in winter, dismantle your fence. A recommended method for easy and practical storage of the conductor material is to wind it onto reels. This allows for direct storage and the use of reels also makes it easier to reassemble the fence in the spring.

Do not knot the conductor material, as a constant current flow in the fence is no longer guaranteed in this case. Instead, use suitable connectors from horizont.





In areas particularly exposed to the wind, electric fence tapes should be twisted when tensioned, as this reduces the surface area exposed to gusts of wind and increases the stability of your fence.

### 4. DIFFERENT LEVELS OF QUALITY

Various technologies were developed for the horizont conductor material to make it even more conductive. The different resistance values are decisive here:



turbomax $^{\circ}$  0,08 - 0,17  $\Omega$  / m

ranger $^{\odot}$  0,20 - 0,53  $\Omega$  / m

hotshock<sup>®</sup>  $0.24 - 0.53 \Omega / m$ 

### THE CONDUCTIVITY:

The required herding pulse energy can be achieved through high electrical conductivity. Each horizont conductor material type contains information on conductivity, e.g. the symbol A++, which stands for the highest conductivity.





## **Important icons for this chapter:**

### **Product describing icons:**

These icons describe insulator features.



Polypropylene



Zinc

Coated

Galvanized



Aluminium

Aluminium

FE / ZN
Wire

length

Length



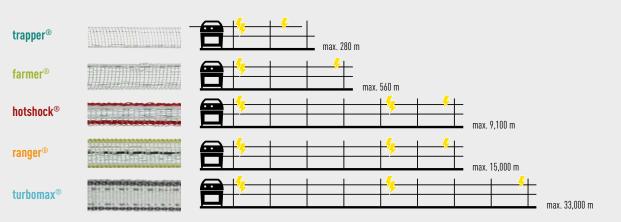
Cross selling icons:

These icons refer to products that are additionally required and are compatible with the selected product.

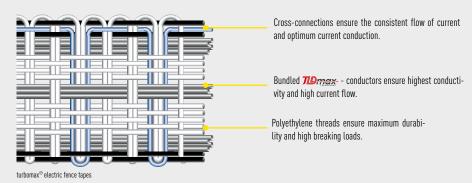
# **HORIZONT FENCE** | Conductor material | Electric fence tape



horizont electric fence tapes are available in different series, which are characterized by the maximum fence length. horizont offers the appropriate electric fence tape for every individual application. When choosing the conductor material, pay attention to width and colour for optimum herding security.



**Maximum fence lengths:** The length specifications show the maximum possible fence length of a level without vegetation with an appropriately strong energiser.



<sup>\*</sup>Fence length: Specification for simple fences with one conductor and without vegetation. Depending on the amount of vegetation, this will reduce the specified fence lengths. If using several fence conductors on several levels, longer fences are possible.

# Electric fence tape I Conductor material | HORIZONT FENCE

### **Electric fence tape trapper®**

Suitable for: Short fences and strip grazing Advantage: • Monofilaments with high UV stability

- Stainless steel conductor for good conductivity and highest bending

Colour: · White: for more contrast to the surroundings and increased visibility

in twilight and darkness



Art. No.	Designation	Width	Reel	Max. fence length*	Breaking load	Number of conductors	Ø Stainless steel conductor	Resistance	Colour	Unit	EAN
125H17280	trapper® T10 - W	10 mm	250 m	210 m	~ 20 kg	3	0,15 mm	14,40 Ω/m	$\circ$	1	4 014803 459718

### **Electric fence tape farmer®**

Suitable for: · Short fences and strip grazing

Advantage: • High breaking loads

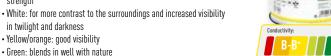
· Monofilaments with high UV stability

• Stainless steel conductor for good conductivity and highest bending

strength

Colour:

in twilight and darkness • Yellow/orange: good visibility





Art. No.	Designation	Width	Reel	Max. fence length*	Breaking load	Number of conductors	Ø Stainless steel conductor	Resistance	Colour	Unit	EAN
125H17451	farmer® T10 - W	10 mm	200 m	210 m	~ 40 kg	3	0,15 mm	14,40 Ω/m	$\bigcirc$	1	4 014803 174512
125H17287	farmer® T10 - O	10 mm	200 m	210 m	~ 40 kg	3	0,15 mm	14,40 Ω/m		1	4 014803 172877
125H17475	farmer® T20 - W	20 mm	200 m	280 m	~ 90 kg	4	0,15 mm	10,80 Ω/m	0	1	4 014803 174758
125H17272	farmer® T20 - W	20 mm	2 x 200 m	280 m	~ 90 kg	4	0,15 mm	10,80 Ω/m	$\circ$	1	4 014803 172723
125H17528	farmer® T20 - O	20 mm	200 m	280 m	~ 90 kg	4	0,15 mm	10,80 Ω/m		1	4 014803 175281
125H17458	farmer® T40 - W	40 mm	200 m	560 m	~ 120 kg	8	0,15 mm	5,40 Ω/m	0	1	4 014803 174581
125H17458008	farmer® T40 - G	40 mm	200 m	560 m	~ 120 kg	8	0,15 mm	5,40 <b>Ω/</b> m		1	4 014803 428813

### **Electric fence tape turbomax®**

Suitable for: • Long to very long fences

Advantage:

High conductivity ensures high herding security
Conductors of property are extremely weather-resistant

• Cross-connections guarantee a continuous current flow and ensure optimum current conduction even in the event of conductor breakage

• Polyethylene threads ensure maximum durability and high breaking

loads

Colour: • White: with black outer edges: for more contrast to the surroundings

and increased visibility in twilight and darkness



Art. No.	Designation	Width	Reel	Max. fence length*	Breaking load	Number of conductors	TDmgx-	Ø Stainless steel conductor	Resistance	Colour	Unit	EAN
125H17110	turbomax® T12	12 mm	200 m	21,400 m	~ 60 kg	6	5 x 0,30 mm	1 x 0,20 mm	0,14 <b>Ω/</b> m		1	4 014803 171108
125H17111	turbomax® T20	20 mm	200 m	20,000 m	~ 140 kg	8	7 x 0,25 mm	1 x 0,20 mm	0,15 <b>Ω/</b> m	<b>(1)</b>	1	4 014803 171115
125H17112	turbomax® T40	40 mm	200 m	33,300 m	~ 240 kg	12	11 x 0,25 mm	1 x 0,20 mm	0,09 Ω/m		1	4 014803 171122

# HORIZONT FENCE | Conductor material | Electric fence tape



### Electric fence tape hotshock®

Suitable for: • Medium fence lengths

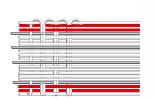
Advantage: • Greater durability due to additional corrosion protection

• Reinforced conductor material with higher breaking load

Specifically for strong energisers (wildlife deterrent)

Colour: • White/blue: good visibility for animal and human

Art. No.	Designation	Width	Reel	Max. fence length*	Breaking load	Number of conductors	<del>JBmax</del>	Resistance	Colour	Unit	EAN
125H17211	hotshock® T12	12 mm	200 m	8,600 m	~ 100 kg	6	0,30 mm	0.36 <b>Ω/</b> m		1	4 0 14803 467423







### Electric fence tape hotshock®

For all HOTSHOCK T12 tapes, the TBmax conductors ensure high conductivity. These HOTSHOCK energizers are specially designed to withstand high power, ideal for keeping sheep and fighting game and wild animals.

The wires are made of polyethylene, which gives them increased protection against UV rays, allowing them to last longer and have a high breaking strength.

Art. No.	Designation	Width	Number of conductors	<b>JB</b>	Resistance	max.	Max. fence length*	EAN	
125H17202	hotshock® T12	250 m	4	0,30 mm	0,533 Ω/m	~ 100 kg	5 600 m	4 014803 172020	18





### **Electric fence tape ranger®**

Suitable for:

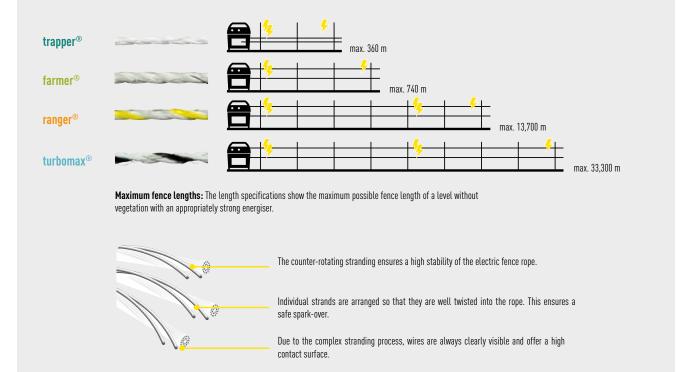
- Medium to long fences
- · High conductivity
- Polyethylene monofilaments for high tensile strength
- Bundled There conductors for highest current flow
- High tensile loads can be absorbed due to particularly high and reinforced outside edges (only for 125H17121, 125H17122, 125H17124, 125H17125)
- White with yellow outside edges: For more contrast to the surroundings and increased visibility in twilight and darkness
- Yellow/blue/green: fluorescent effect, especially good visibility against darker backgrounds like forests
- Green: blends in well with nature
- Brown: blends in well with stable wooden fence situations

Art. No.	Designation	Width	Reel	Max. fence length*	Breaking load	Number of conductors	<b>To</b> max-	Resistance	Colour	Unit	EAN
125H17116	ranger® FLUO T12	12 mm	200 m	9,100 m	~ 60 kg	4	0.22 mm	0.33 <b>Ω/</b> m		1	4 014803 171160
125H17113	ranger® T12 - W	12 mm	200 m	9,100 m	~ 60 kg	4	0.22 mm	0.33 <b>Ω/</b> m	$\bigcirc$	1	4 014803 171139
125H17114	ranger® T20 - W	20 mm	200 m	11,100 m	~ 120 kg	5	0.22 mm	0.27 <b>Ω/</b> m	0	1	4 014803 171146
125H17115	ranger® T40 - W	40 mm	200 m	15,000 m	~ 180 kg	8	0.20 mm	0.20 <b>Ω/</b> m	$\bigcirc$	1	4 014803 171153
125H17125	ranger® T40 - B-E	40 mm	200 m	15,000 m	~ 260 kg	8	0.20 mm	0.20 <b>Ω/</b> m	•	1	4 014803 171252

# Electric fence rope I Conductor material | HORIZONT FENCE



horizont electric fence ropes are available in different series, which are characterized by the maximum fence length. horizont offers the appropriate electric fence rope for every individual application. When choosing the conductor material, observe the diameter and colour for optimum herding security.



### **Electric fence rope farmer®**

Suitable for:

· Short fences and strip grazing with little vegetation

Advantage:

• 125H462560: The elasticity of the horizont fence rope makes it ideal for use on pasture gates in combination with gate handles

Colour:

• White: for more contrast to the surroundings and increased visibility in twilight and darkness



Art. No.	Designation	Diameter	Reel	Max. fence length*	Breaking load	Number of conductors	Ø Stainless steel conductor	Resistance	Colour	Unit	EAN
125H153372	farmer® R6	6 mm	200 m	740 m	~ 250 kg	6	0,20 mm	4,05 Ω/m	$\circ$	1	4 014803 438034
125H153372400	farmer® R6	6 mm	400 m	740 m	~ 250 kg	6	0,20 mm	4,05 Ω/m	0	1	4 014803 438041
125H462560	farmer® stretch W3	8 mm	50 m	370 m	~ 100 kg	3	0,20 mm	8,10 Ω/m		1	3 485630 025604

\*Fence length: Specification for simple fences with one conductor and without vegetation. Depending on the amount of vegetation, this will reduce the specified fence lengths.

If using several fence conductors on several levels, longer fences are possible

# HORIZONT FENCE | Conductor material | Electric fence rope



### **Electric fence rope ranger**®

Suitable for: Advantage:

• High number of wires ensures high current flow

• Polyethylene threads with high tensile strength

• White: for more contrast to the surroundings and increased visibility

in twilight and darkness

• Medium to long fences

• Green: blends in well with nature

Art. No.	Designation	Diameter	Reel	Max. fence length*	Breaking load	Number of conductors	<b>TD</b> max-	Resistance	Colour	Unit	EAN
125H17182	ranger® R6	6 mm	200 m	13,700 m	~ 250 kg	6	0,22 mm	0.22 <b>Ω/</b> m	$\bigcirc$	1	4 014803 171825
125H17182400	ranger® R6	6 mm	400 m	13,700 m	~ 250 kg	6	0,22 mm	0.22 <b>Ω/</b> m	0	1	4 014803 438010



### **Electric fence rope turbomax®**

Suitable for:

Advantage:

• Long to very long fences with dense vegetation
• The The conductors ensure highest conductivity and secure

a high current flow

High tensile strength for long outdoor use PE monofilaments for long durability

Colour:

• White/black: for more contrast to the surroundings and increased

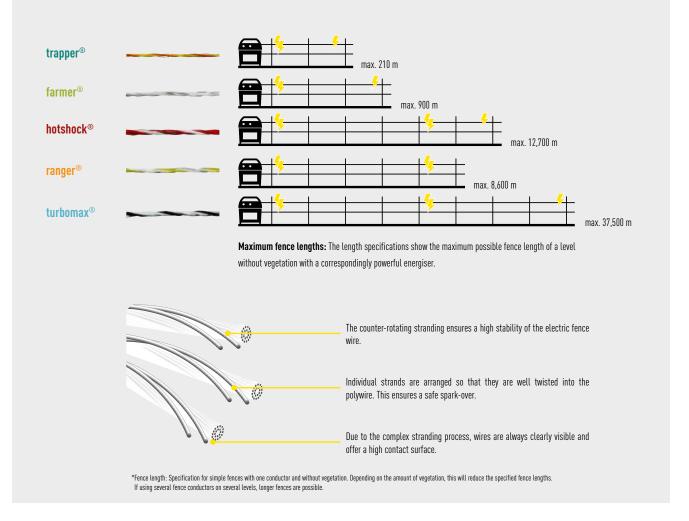
visibility in twilight and darkness

Art. No.	Designation	Diameter	Reel	Max. fence length*	Breaking load	Number of conductors	TDmex-	Resistance	Colour	Unit	EAN
125H17180	turbomax® R6-PE	6 mm	200 m	17,700 m	~ 500 kg	6	0,25 mm	0.17 <b>Ω/</b> m		1	4 0 14803 17 1801
125H17180400	turbomax® R6-PE	6 mm	400 m	17,700 m	~ 500 kg	6	0,25 mm	0.17 Ω/m		1	4 0 14803 43 1998
125H17180800	turbomax® R6-PE	6 mm	800 m	17,000 m	~ 500 kg	6	0,25 mm	0.17 Ω/m		1	4 0 14803 438003

# Polywire I Conductor material | HORIZONT FENCE



horizont electric fence polywires are available in different series, which are characterized by the maximum fence length. horizont offers the appropriate electric fence polywire for every individual application. All horizont electric fence wires are clearly visible at twilight, which is important due to the small diameter.



# HORIZONT FENCE | Conductor material | Electric fence polywire



### **Electric fence polywire trapper®**

Suitable for: Advantage: Colour:

- Short fences and strip grazing
- Simple quality optimal for the hobby sector
- Yellow/ orange: good visibility for animal and human

VIII.	32.55
	Conductivity:

Art. No.	Designation	Reel	Max. fence length*	Breaking load	conductors	conductor	Resistance	Colour	Unit	EAN
125H15567	trapper® W3	250 m	210 m	~ 30 kg	3	0,15 mm	14.4 Ω/m		1	4 014803 155672
125H15849	trapper® W3	500 m	210 m	~ 30 kg	3	0,15 mm	14.4 Ω/m		1	4 014803 158499



### **Electric fence polywire farmer®**

Suitable for: Advantage:

- Short to medium fences
- Average breaking loads

• Double the amount of monofilaments compared to a

standard quality

Colour:

- White: for more contrast to the surroundings and increased visibility
- in twilight and darkness
- Yellow/orange: good visibility for animal and human

Art. No.	Designation	Reel	Max. fence length*	Breaking load	Number of conductors	Ø Stainless steel conductor	Resistance	Colour	Unit	EAN
125H15347	farmer® W9 - W	250 m	900 m	~ 70 kg	9	0,18 mm	3.33 <b>Ω/</b> m	$\circ$	1	4 014803 153470
125H15277	farmer® W9 - W	400 m	900 m	~ 70 kg	9	0,18 mm	3.33 <b>Ω/</b> m	0	1	4 014803 152770
125H15282	farmer® W6 - W	250 m	600 m	~ 60 kg	6	0,18 mm	4.98 Ω/m	0	1	4 014803 152824
125H15283	farmer® W6 - W	400 m	600 m	~ 60 kg	6	0,18 mm	4.98 Ω/m	0	1	4 014803 152831
125H15345	farmer® W3 - O	250 m	300 m	~ 50 kg	3	0,18 mm	9.99 <b>Ω/</b> m		1	4 014803 153456







### **Electric fence polywire hotshock®**

The HOTSHOCK W6 400 m HORIZONT wire is very resistant. It ensures a better conductivity thanks to the use of TBmax conductors.

The wires are made of polyethylene, which gives them a reinforced protection against UV rays, allowing them a longer life and a high resistance to breakage.

They are specially designed to withstand the high power of the HOTSHOCK energizers, to keep sheep and fight against game and various wild animals.

3-year warranty on UV resistance.

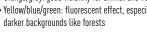
Art. No.	Designation	Reel	Number of conductors	Conductor	Ø Stainless steel conductor	Line resistance	Breaking load: approx.	Colour	Unit	EAN
125H17208	hotshock® W6	400 m	6	Ø 0.30 m	0.18 mm	3,356 <b>Ω/</b> m	100 kg	$\bigcirc$	8	4 014803 172082
125H17209	hotshock® W9	400 m	9	Ø 0.30 m	0.18 mm	3,33 Ω/m	120 kg	$\bigcirc$	8	4 014803 172099

# Electric fence polywire I Conductor material | HORIZONT FENCE

### Electric fence polywire | ranger®

Suitable for:

- Medium to long fences
- Advantage:
- High conductivity, high tensile strengths and safe and high current flow
- Colour:
- White/yellow: for more contrast to the surroundings and increased visibility in twilight and darkness
- Orange/grey: good visibility for animal and human
- Yellow/blue/green: fluorescent effect, especially good visibility against





Art. No.	Designation	Reel	Max. fence length*	Breaking load	Number of conductors	<b>TDmax</b>	Resistance	Colour	Unit	EAN
125H17143	ranger® W3 - 0	200 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω/</b> m		1	4 014803 171436
125H17143400	ranger® W3 - 0	400 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω</b> /m		1	4 014803 437952
125H171431000	ranger® W3 - 0	1000 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω</b> /m	•••	1	4 014803 437969
125H17144	ranger® W3 - W	200 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω</b> /m	0	1	4 014803 171443
125H17144400	ranger® W3 - W	400 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω/</b> m	0	1	4 014803 437976
125H171441000	ranger® W3 - W	1000 m	8,6 km	~ 160 kg	3	0,25 mm	0,35 <b>Ω/</b> m	<u> </u>	1	4 014803 437983

### **Electric fence polywire | turbomax®**

Suitable for:

• Long to very long fences with dense vegetation

Advantage:

• High conductivity and safe and high current flow

Colour:

• White/yellow: for more contrast to the surroundings and increased

visibility in twilight and darkness



Art. No.	Designation	Reel	Max. fence length*	Breaking load	Number of conductors	TDmax-	Resistance	Colour	Unit	EAN
125H17140	turbomax® W6	200 m	25 km	~ 180 kg	6	0,30 mm	0,12 <b>Ω</b> /m		1	4 014803 171405
125H17140400	turbomax® W6	400 m	25 km	~ 180 kg	6	0,30 mm	0,12 <b>Ω</b> /m		1	4 014803 437891
125H171401000	turbomax® W6	1000 m	25 km	~ 180 kg	6	0,30 mm	0,12 Ω/m		1	4 014803 437907
125H17141	turbomax® W9	200 m	27,3 km	~ 200 kg	9	0,25 mm	0,11 Ω/m		1	4 014803 171412
125H17141400	turbomax® W9	400 m	27,3 km	~ 200 kg	9	0,25 mm	0,11 Ω/m		1	4 014803 437914
125H171411000	turbomax® W9	1000 m	27,3 km	~ 200 kg	9	0,25 mm	0,11 Ω/m		1	4 014803 437921
125H17142	turbomax® W12	200 m	37,5 km	~ 220 kg	12	0,25 mm	0,08 Ω/m		1	4 014803 171429
125H17142400	turbomax® W12	400 m	37,5 km	~ 220 kg	12	0,25 mm	0,08 Ω/m		1	4 014803 437938
125H171421000	turbomax® W12	1000 m	37,5 km	~ 220 kg	12	0,25 mm	0,08 Ω/m	<b></b>	1	4 014803 437945

<sup>\*</sup>Fence length: Specification for simple fences with one conductor and without vegetation. Depending on the amount of vegetation, this will reduce the specified fence lengths. If using several fence conductors on several levels, longer fences are possible.



# HORIZONT FENCE | Conductor material | Electric fence polywire

### Electric fence polywire turbomax® braided wire

Suitable for:

Colour:

• Long to very long fences with dense vegetation

Advantage:

- Mobile fences that are frequently assembled and dismantled
   Strong conductivity due to high number of mixed conductors (copper and stainless steel)
- High number of conductors ensures high current flow
  - $\bullet \ Braided \ structure \ of \ the \ plastic \ monofilaments \ ensures \ a \ high \ tensile \ strength \ and \ well \ protected$
  - conductor wires, thus achieving long-term resistance
  - PE monofilaments for long durability

• White/black: for more contrast to the surroundings and increased visibility in twilight and

darkness

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	18 Page	THE REAL PROPERTY.
S YEAR	RS ANTY	Conductivity:  A++

A	Art. No.	Designation	Ø	Reel	Max. fence length*	Breaking load	Number of conductors	Ø Stainless steel conductor	Ø Copper conductor	Resistance	Colour	Unit	EAN
	125H145121	turbomax® braided wire D3	3 mm	200 m	23,1 km	~ 200 kg	9	6 x 0,15 mm	3 x 0,25 mm	0,13 <b>Ω</b> /m		1	4 0 14803 467430
	125H145121400	turbomax® braided wire D3	3 mm	400 m	23,1 km	~ 200 kg	9	6 x 0,15 mm	3 x 0,25 mm	0,13 <b>Ω</b> /m		1	4 0 14803 467447



# Wire I Conductor material | HORIZONT FENCE



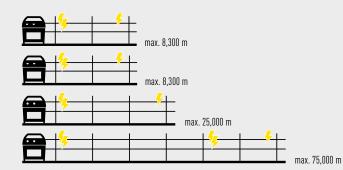
horizont electric fence wires are available in different series, which are characterized by the maximum fence length. horizont offers the appropriate electric fence wire for every individual application. For optimum herding security, observe the diameter and processing (solid or coiled wire) when choosing the conductor material.

Original control wire

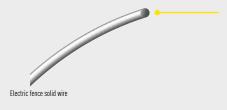
Steel wire

Stranded wire

Permanent fencing GALVADUR

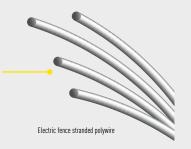


**Maximum fence lengths:** The length specifications show the maximum possible fence length of a level without vegetation with a correspondingly powerful energiser.



horizont offers electric fence solid wires with different diameters and highest conductivity. They are very easy to shape, are corrosion resistant, easy to process, enormously resilient and suitable for long fences.

The electric fence polywire consists of many different individual, e.g. galvanized wire strands. It is easy to process, is suitable for long fences and is particularly tear-resistant.



\*Fence length: Specification for simple fences with one conductor and without vegetation. Depending on the amount of vegetation, this will reduce the specified fence lengths. If using several fence conductors on several levels, longer fences are possible.

# HORIZONT FENCE | Conductor material | Electric fence wire



### **Electric fence wire | Stranded wire**

Suitable for:

- Medium fence lengths
- Advantage:
- 7 wires wound into one conductor
- Wire is particularly flexible

Art. No.	Designation	Diameter	Reel	Max. fence length*	Breaking load	conductors	Resistance	Material	Unit	EAN
125H14134400	Stranded wire	1.5 mm	400 m	25,0 km	~ 200 kg	7	0,12 Ω/m	galvanized	1	4 014803 438102



### **Electric fence wire | Permanent fencing GALVADUR**

Suitable for:

- Long fences
- Advantage:
- $\hbox{\bf The utilised steel wire is thickly galvanised with a special zinc/aluminium long-term}\\$
- protection (95 % zinc and 5 % aluminium)
- This achieves a high level of corrosion protection and considerably extends the durability

Art. No.	Designation	Diameter	Reel	Max. fence length*	Breaking load	Number of conductors	Resistance	Material	Unit	EAN
125H15904	GALVADUR	1,6 mm	315 m	50,0 km	~ 200 kg	1	0,06 <b>Ω/</b> m	galvanized	1	4 0 14803 159045
125H15945	GALVADUR	2,5 mm	625 m	75,0 km	~ 500 kg	1	0,04 <b>Ω/</b> m	galvanized	1	4 0 14803 159458



125H13011400

### ACO wire

- Galvanized steel single cord.
- Conductors: galvanised braided wires with a diameter of 1.2 mm
- Length: 200 m reel
- Linear resistance: 0.9 Ohm/m
- Breaking load: approx. 150 k

Art. No.	Lenght	Unit	EAN
125H13010	200 m reel Limited stock	□ 6	3 700393 916052
125H13011400	400 m reel		4 014803 438355

### Electric fence connectors I Conductor material | HORIZONT FENCE

### **Electric fence connectors**

Application:

• Easy and safe to use in the electric fence tape

• Simple re-tensioning possible

Electric fence tapes up to 40 mm galvanized, plastic

Advantage:

Art. No. **125H14988** 

125H14987

 Stable electric fence tape connector through one-piece galvanized metal brackets supported by break-proof plastic

Suitable for	Width	Material	Unit	EAN
Electric fence tapes	up to 20 mm	galvanized, plastic	□ 10	3 700393 916632











### Electric fence rope/polywire connector

Application:

• For connection of electric fence polywires or ropes

Advantage: - Large contact surface

Art. No.	Suitable for	Diameter	Material	Unit	EAN
125H15063	Electric fence polywires	1-4 mm	galvanized steel	□ 10	4 014803 405388
125H15483	Electric fence ropes	4-6 mm	galvanized steel	□ 5	4 014803 405746









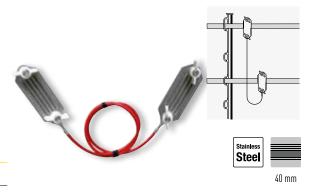


### Electric fence tape connecting cable

Application:

- Screw-on
- Connects overlapping tapes
- Cable length 50 cm

Art. No.	Suitable for	Width	Material	Unit	EAN
125H10446	Electric fence tapes	up to 40 mm	Stainless steel	□ 1	3 700393 916496



### Electric fence polywire connecting cable

Application:

- For the connection of electric fence polywires stretched over each other
- Cable length 50 cm

Advantage: • All high voltage cables with double insulation















Art. No.	Suitable for	Material	Unit	EAN
125H10440	Electric fence ropes and wires	galvanized steel, plastic	□ 2	3 700393 916472

# HORIZONT FENCE | Conductor material | Electric fence connectors







### **Electric fence wire connector and tensioner Gripple**

Application: • Can also be used as wire tensioner

- 4 times faster than knotting or such
- Holds tension for a long time and is easy to re-tension
- Easy to mount with Gripple tensioning tool with tension meter

(125H15962)

Art. No.	Suitable for	Diameter	Material	Unit	EAN
125H15967	Electric fence solid wires	1,4-2,2 mm	galvanized	□ 20	3 700393 916953
125H47GRIP0001	Electric fence solid wires	2,0-3,25 mm	galvanized	□ 20	3 700393 916960

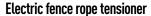












Advantage:

Application: • Tensioner can be mounted directly into the fence material at any

point of the fence

· Complete with locking bracket

Art. No.	Suitable for	Diameter	Material	Unit	EAN
125H15937	Electric fence ropes and wires	1-8 mm	Aluminium	□2	3 700393 916922
125H15937025	Electric fence ropes and wires	1-8 mm	Aluminium	₾ 25	4014803 413192





### Electric fence polywire/rope tensioner

Application:

• Easy re-tensioning possible any time

· High tensioning effect













### **Electric fence wire tensioner | Accessories**

Application: • Keeps the wire taut during temperature fluctuations

Art. No.	Surtable for	Material	Unit	EAN
125H14150	Electric fence wires	hot-dip galvanized steel	□ 2	4 014803 141507
125H15906	Electric fence wires	hot-dip galvanized steel	□ 2	3 700393 919534







### **Electric fence tensioning tool | Gripple**

Application: • For tensioning the wire with the Gripple wire connector (125H15967,

125H47GRIP0001)

• Up to 400 kg tension can be applied to wires

• Regulation of the tension force through integrated tension measurement

Art. No.	Suitable for	Unit	EAN
125H15962	Electric fence tensioning tool	□ 1	5 038006 012548





### **Electric fence tightening tool**

Application: • For tightening the rope or wire in conjunction with the electric fence

wire tensioner (Art. No. 125H15937)

Art. No.	Suitable for	Material	Unit	EAN
125H15936	Electric fence tightening tool	galvanized steel	1	4 014803 159366

# Reels | Conductor material | HORIZONT FENCE

#### Reel for wire

Application: • For winding and unwinding

• Electric fence wire GALVADUR Ø 2,5 mm (125H15945): up to max. 625 m Capacity:

Brake: • Via a screw Advantage: • Incl. supporting foot Material: • Galvanized steel







### Reel | MAXI ROLLER 2000 & 4000

Application: • For winding and unwinding

Capacity: • Electric fence polywire: up to max. 2000 m (125H15013) / 4000 m

(125H15839)

• Electric fence tape: up to max. 750 m (125H15013) / 1500 m

(125H15839)

Guide: Yes Brake: Yes

Material: · Plastic, with conical shaft

	Art. No.	Designation	Unit	EAN
<b>125H14068</b> Re		Reel 4000 m	1	4 014803 140685
	125H15013	Replacement roll for MAXI ROLLER 2000	1	4 014803 150134
	125H15839	Replacement roll for MAXI ROLLER 4000	1	4 014803 158390







## Reel | SUPER ROLLER 1000

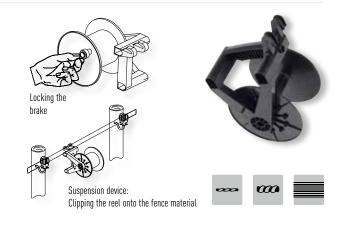
Application: • For winding and unwinding

Capacity: Electric fence polywire: up to max. 600 m Electric fence tape: up to max. 200 m

Guide: Brake: • Yes

Material: • Plastic, with hooking in device

Art. No. 125H14168



#### Reel | TURBO ROLLER 3: 1

Application: • For winding and unwinding

Capacity: • Electric fence polywire: up to max. 800 m • Electric fence tape: up to max. 300 m

Guide: Yes

Brake: • Yes (trailing and parking brake)

Material: • Impact-resistant plastic, robust steel crank and

steel frame with suspension eyes

Advantages: • Roll-back lock, suspension eyes

Art. No.	Designation	Unit	EAN
125H13041	Plastic reel	1	4 014803 130419



Using the brake

# THINGS TO KNOW ABOUT

# **POSTS**

# 1. WHAT ARE THE DIFFERENT PURPOSES OF POSTS?

#### **CORNER AND GATE POSTS**

Corner and gate posts are usually made of wood or recycled material. They are used when the fence direction changes significantly, for example, if you need to integrate a change of direction / corner (more than 30 degrees) into your fence system. Plastic posts cannot sustain the high tensile forces of the fence system as corner posts and are therefore unsuitable for this area of application. Sturdy wood posts are useful; when assembling a corner, make sure you also use the right accessories; use insulators for wood and recycled posts from horizont. Wood posts are also suitable as intermediate posts for long, straight fence sections; in this case, we recommend using them to make the fence system sufficiently stable and secure. If you integrate a gate into your fence, you should also position stable posts at the end of the fence/gate since the last post must bear the tensile force of the fence at the gate.

Regardless of whether you integrate a corner or gate into your fence system, the posts must be anchored deep in the ground to provide sufficient stability in the fence system. The more forces a post must withstand, the deeper it must be anchored in the ground and the larger the post diameter must be.

TIP: Corner, gate and intermediate posts are best anchored in the ground using an earth auger and a post rammer and should be twice as long as the fence is high.

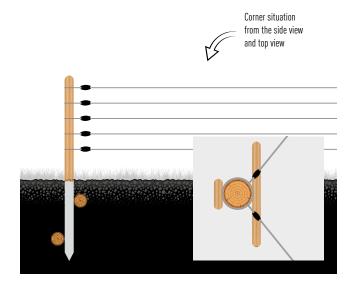
#### POSTS FOR CHANGING DIRECTION

If the direction of your fence changes (at an angle of 20 to 30 degrees), the post used to change

#### **TIP: TILTING POSTS?**

Do your posts often tip over? This would pose a high risk for you as a livestock owner and your animals. Line posts have only limited grip

in the ground. The correct use of corner posts is therefore important, as they keep the tension secure and stable from corner post to corner post. For plastic posts, a wide and long earth spike is suitable for a better grip in the ground.

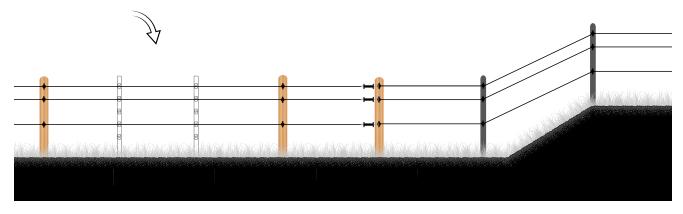


direction need not be as strong as a corner or gate post. The forces acting on the post under this low inclination are not very strong. These poles should also be used in depressions or hills. The most suitable posts for this purpose are those that can be anchored in the ground, such as wooden posts. Recycled plastic posts from horizont are an inexpensive alternative.

#### LINE POSTS

The function of the line posts is to keep the conductor material at a constant height. The wider the conductor material is (especially when using tapes), the closer together the posts must be positioned. In wind-prone areas, more posts should be placed along one section of the fence to ensure that the fence is stable enough. The utilised conductor material becomes heavier in heavy rain or even in winter, as it absorbs more moisture. This increased weight is not without risk for the herding security in the fence and should be taken into account. To avoid failures or voltage drops, provide a sufficient number of posts in your fence system as a preventive measure. The choice of the appropriate line post differs depending on whether you own a stationary fence or want to build a mobile fencing. For permanent fencing we recommend wood or recycled plastic posts. When utilising mobile fencing, you should use plastic, fibreglass or angle steel posts.

Example fence with corner/gate posts e.g. made of wood (brown), line posts e.g. made of plastic (white) and posts for changing direction e.g. made of recycled material (grey)



# Guide | Posts | HORIZONT FENCE

#### 2. HOW HIGH AND HOW FAR APART MUST POSTS BE?

The height of your electric fence depends on the type of animal to be herded. Above all, the size of your animals and their jumping characteristics should be taken into account. If you also keep young animals in the pasture, your fence must be extended downwards.

As a general rule, the wider or heavier the conductor material, the closer together the posts must be in wind-prone regions. The distances also differ from the conductor material used.

#### TIP

When using plastic posts as line posts, you can easily transfer the heights for the insulators to the corner posts or posts for changes of direction by placing the plastic post in the ground next to the wood or recycling plastic post and transferring the height of the eyes to it.



# 3. HOW DOES THE INTERACTION OF POSTS AND FENCE LENGTHS WORK?

The following table helps to calculate fence lengths and the number of posts required. It is important to note that stable posts should be used for each corner and gate and where there are major changes in direction or depressions and hills.

Area	Examples of side lengths	Fence length
2,500 m² / 0,25 ha	50 m x 50 m	200 m
5,000 m² / 0,5 ha	71 x 71 m	284 m
7,500 m² / 0,75 ha	87 x 87 m	348 m
10,000 m² / 1,0 ha	100 x 100 m	400 m
15,000 m² / 1,5 ha	122 x 122 m	488 m
20,000 m² / 2,0 ha	141 x 141 m	564 m
30,000 m² / 3,0 ha	173 x 173 m	692 m
50,000 m² / 5,0 ha	224 x 224 m	896 m

# EXAMPLE SITUATION: HORSE PASTURE AT THE EDGE OF THE FOREST WITHOUT TERRAIN



This pasture measures 306 m and includes a gate and must also bypass a large boulder. Therefore 6 stable corner posts are needed. For some of the long distances between the posts, line posts should be placed at intervals of 3 m, which keep 3 levels of wide tape at the same height. For a fence length of 300 m you will need 100 line posts, but this does not include the length of the gate (6 m below the boulder here).

# Important icons for this chapter:

#### **Cross Selling Icons:**

These icons refer to products that are additionally required and are compatible with the selected product.













.....

# **HORIZONT FENCE** | Posts | Plastic posts



# Stirrup post

Eyes suitable for:

- 4 x wide tapes up to 40 mm, 4 x wide tapes up to 20 mm, 8 x rope up to 8 mm, 8 x polywires up to 3,5 mm and 8 x wires up

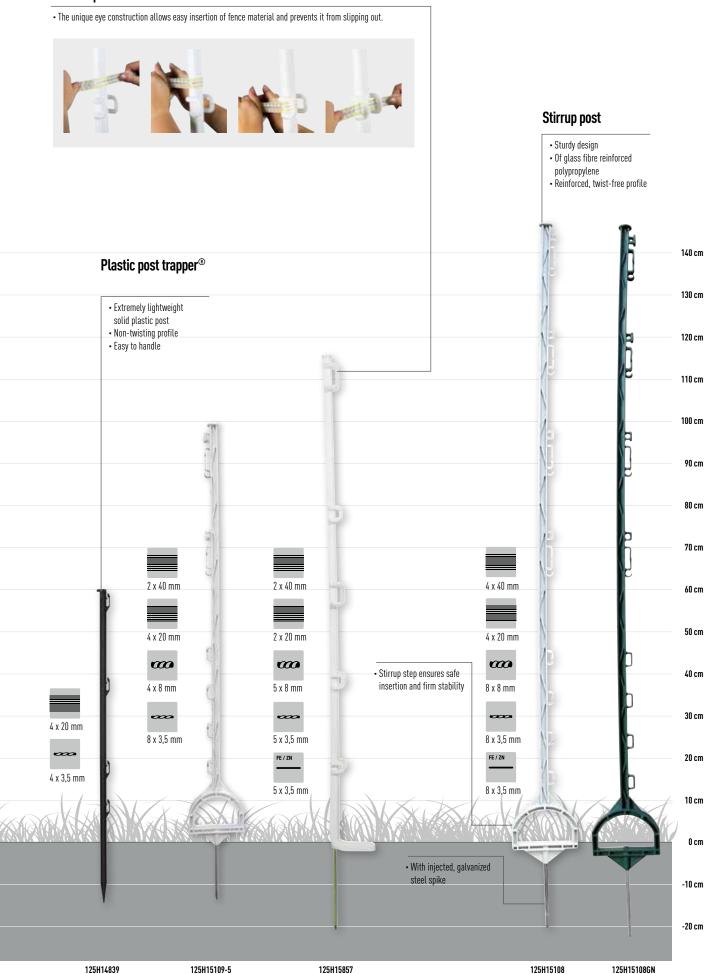
to 3,5 mm

Total height: • 157 cm Height above ground: Earth spike: • 142 cm • 15 cm, Ø 8 mm Tread: • Stirrup step

Art. No.	Colour	Unit	EAN
125H15108	white	<b>1</b> 20	4 014803 151087
125H15108GN	white	<b>1</b> 20	4 014803 432384

# Plastic posts | **HORIZONT FENCE**

### **Plastic post**



# **HORIZONT FENCE** | Posts | Plastic posts



### Plastic post ranger®

Eyes suitable for: - 2x wide tape up to 40 mm, 3x wide tape up to

20 mm, 5x polywire up to 3.5 mm

 Total height:
 - 71 cm

 Height above ground:
 - 58 cm

 Earth spike:
 - 13 cm, ∅ 7 mm

Art. No.	Colour	Tread	Unit	EAN
125H14471	white	Single tread	<b>1</b> 0	4 014803 465719

Eyes suitable for:
- 3x wide tape up to 40 mm, 5x wide tape up to 20 mm, 2x rope up to 8 mm, 10x polywire up to 3.5 mm

Total height: - 108 cm
Height above ground: - 95 cm
Earth spike: - 13 cm, Ø 8 mm

Art. No.	Colour	Tread	Unit	EAN
125H14472	white	Single tread	10	4 0 14803 465740
125H14472GN	green	Single tread	10	4 014803 465764

Eyes suitable for:

- 4x wide tape up to 40 mm, 5x wide tape up to 20 mm, 3x rope up to 8 mm, 12x polywire up to 3,5 mm

Total height: - 138 cm Height above ground: - 125 cm Earth spike: - 13 cm, Ø 7 mm

Art. No.	Colour	Tread	Unit	EAN
125H14473	white	Single tread	10	4 0 14803 465788
125H14381-5	white	Double tread	5	4 0 14803 465894
125H14473GN	green	Simple tread	5	4 014803 465801

### Plastic post long life

Suitable for: • Insulators for clamping and all types of conductor material

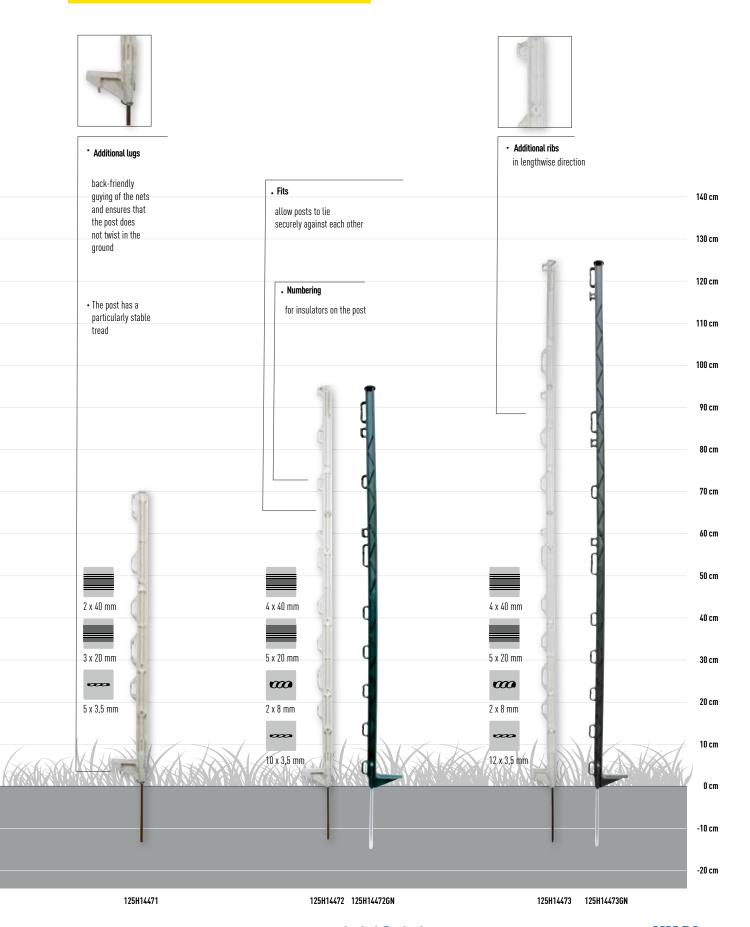
Total height: - 146 cm
Height above ground: - 125 cm
Earth spike: - 21 cm, Ø 9 mm
Tread: - Single tread
Diameter: - 0 19 mm

 Art. No.
 Colour
 Unit
 EAN

 125H15376
 white
 10
 4 014803 153760

# Plastic posts | **HORIZONT FENCE**

### **EXCLUSIVE ADVANTAGES OF THE NEW PLASTIC POSTS:**



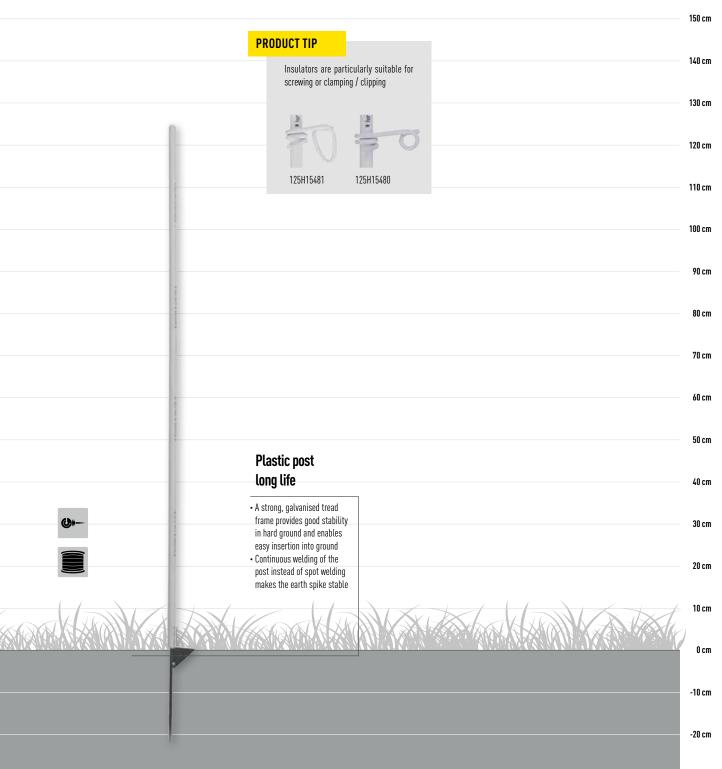
# **HORIZONT FENCE** | Posts | Plastic posts

### PLASTIC POST LONG LIFE - A GOOD CHOICE!



- Very high durability made of a high-quality special plastic, therefore frost-proof
- No seams, as the post is cast in one piece
- Insulators can be individually adjusted in number and height

 $\boldsymbol{\cdot}$  Post is sealed at top – water cannot enter



**UKAL** 

# Plastic posts | **HORIZONT FENCE**

# Plastic post turbomax® smart post

Eyes suitable for: - 2 x wide tapes up to 40 mm, 4 x wide tapes up to 20 mm and 6 x

polywires up to 3,5 mm

• 78 cm Total height: Height above ground: • 55 cm Earth spike: - 23 cm, Ø 9 mm Tread: • Single tread

Art. No.	Colour	Unit	EAN
125H1449010	white	10	4 014803 450180
125H144905GN	green	5	4 014803 450210
125H1449010GN	green	10	4 014803 450241

- 3 x wide tapes up to 40 mm, 5 x wide tapes up to 20 mm, 2 x rope up to 8 mm, 10 x polywires up to 3,5 mm Eyes suitable for:

Total height: • 115 cm Height above ground: • 92 cm Earth spike: - 23 cm, Ø 9 mm Tread: • Single tread

Art. No.	Colour	Unit	EAN
125H1449110	white	10	4 014803 144911
125H1449110GN	green	10	4 014803 450258

Eyes suitable for: • 4 x wide tapes up to 40 mm, 6 x wide tapes up to 20 mm, 3 x rope up

to 8 mm, 12 x polywires up to 3,5 mm

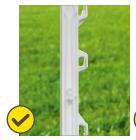
Total height: • 145 cm Height above ground: • 122 cm Earth spike: • 23 cm, Ø 9 mm Tread: · Single tread

Art. No.	Colour	Unit	EAN
125H1449210	white	<b>1</b> 0	4 014803 144928
125H144925GN	green	5	4 014803 450234
125H1449210GN	green	10	4 014803 450265

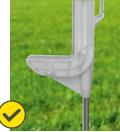


# **HORIZONT FENCE | Posts | Plastic posts**

#### PLASTIC POST TURBOMAX® SMART POST - WITH STRONG ADVANTAGES:



**Cross-ribbing** in post provides stability, so it can be subjected to higher tensile forces and is difficult to bend



An additionally reinforced and rounded tread frame with fluting ensures a firm tread and prevents accidental slipping off



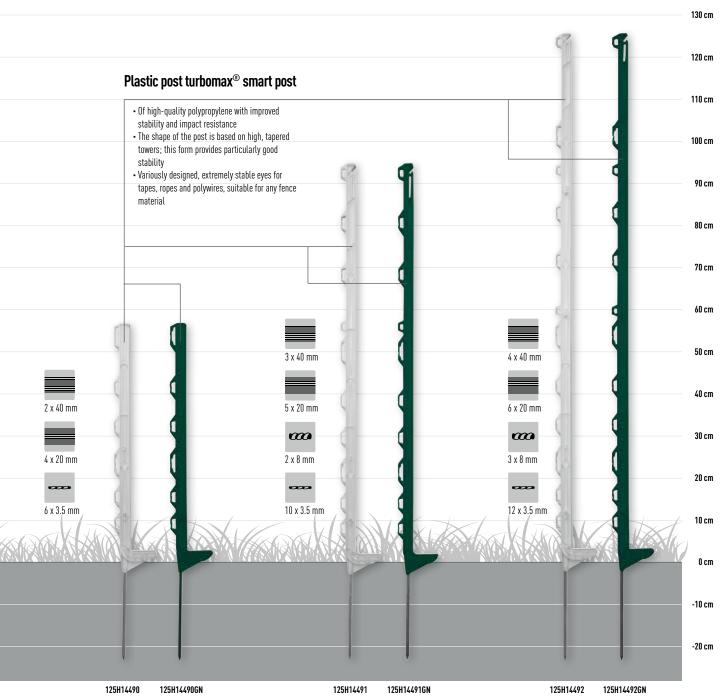
**Two insulators** at the post tip ensure optimum utilisation of the post length when using polywire, rope or tape up to 40 mm



The **numbering** of the eyes simplifies fence assembly, especially for large pastures



A stable, extra thick galvanized earth **spike** (9 mm diameter, 23 cm length) injected into the post guarantees high durability and ensures secure stability



# Fibreglass and steel posts | HORIZONT FENCE

#### Fibreglass post

Suitable for:

- Insulators for wide tapes up to 20 mm, rope up to 8 mm and

polywires up to 3,5 mm

Total height: - 124 cm Height above ground: • 99 cm Tread:

· Single tread • Ø 12 mm Diameter:

Colour

125H14886 yellow

1014803 148865



### Recycled plastic post\*

Suitable for:

Art. No.

• Insulators for screwing in, screwing on and nailing on

Fibreglass post

• Extremely stable and lightweight

• Particularly easy to handle in terrain

Total height: • 175 cm Height above ground: - 120 cm Diameter: • Ø 6 cm Please note: Sold only by the pallet!

Art No Colour 125H15593 **125** grey

125H14886

#### **YOUR ADVANTAGE:**

- Processing with common tools (post does not splinter)
- Manufactured of recycled plastics- can be recycled again
- Unlimited durability guaranteed
- Individual adjustment of holes
- Impregnation not necessary water cannot enter the post

\* Delivery ex works. Please request a non-binding offer for the freight costs.





#### PRODUCT TIP

Insulators are particularly suitable for clamping / clipping







• Insulators can be individually adjusted in number 125H17801F and height 100 cm 90 cm 80 cm 70 cm 60 cm 50 cm 40 cm 30 cm 20 cm 10 cm · With pressed-on foot step 0 cm -10 cm -20 cm

# **HORIZONT FENCE** | Posts | Steel posts



### Angular steel post

Suitable for: • Insulators with split pin or metric thread for polywires up

Total height: • 115 cm Height above ground: • 95 cm Tread: • Double tread Wall thickness: - 2 mm

Art. No.	Colour	Design	Unit	EAN
125H155361	red	4 bore holes	10	4 014803 155368

Suitable for:

• Insulators with split pin or metric thread for polywires up to 3.5

Total height: • 120 cm Height above ground: - 100 cm • Double tread Tread: Wall thickness: - 3 mm

Art. No.	Colour	Design	Unit	EAN
125H15877	red	4 bore holes	10	4 014803 011794

Suitable for: • Insulators with split pin or metric thread for polywires up to 3.5

Total height: • 165 cm Height above ground: • 145 cm Tread: • Double tread Wall thickness: - 3 mm

Art. No. Colour Design

4 014802 152511 125H152541 6 bore holes

# Oval steel post with metal eye

Eyes suitable for: • 1 x polywires up to 3,5 mm and insulators for screwing on and

clamping/clipping for polywires up to 3.5 mm

Total height: • 107 cm Height above ground: • 82 cm Tread: - Double tread

Art. No.	Colour	Design	Unit	EAN
125H150561	red	with metal eye	<b>1</b> 25	4 014803 432810

### Oval steel post with ring insulator

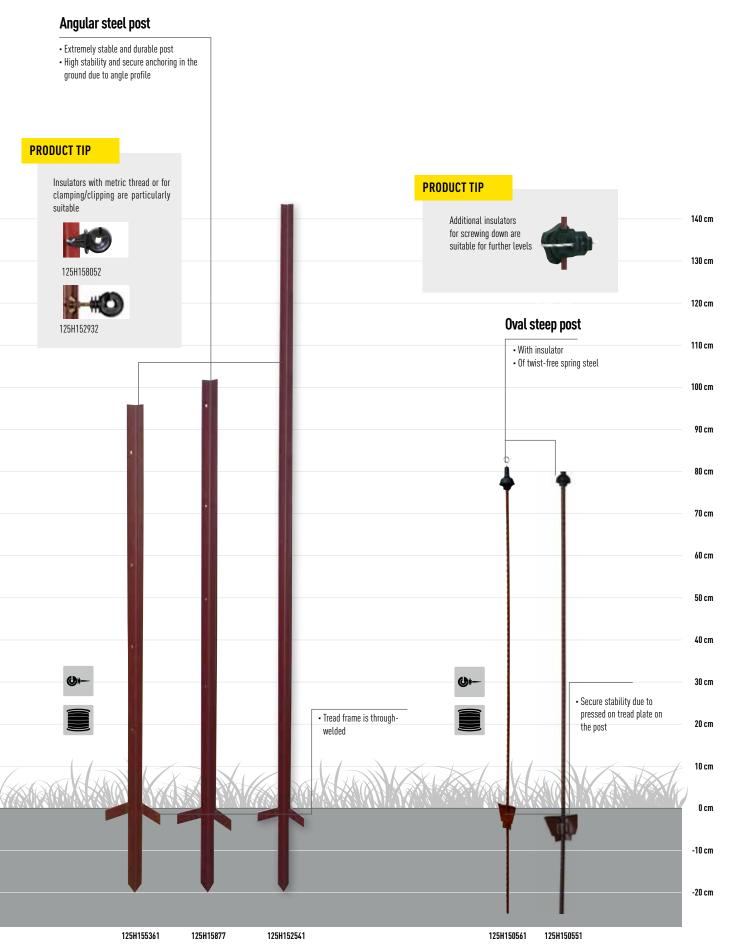
Eyes suitable for: • 1 x polywires up to 3,5 mm and insulators for screwing on and

clamping/clipping for polywires up to 3,5 mm

Total height: • 106 cm Height above ground: - 80 cm Tread: • Double tread

Art. No.	Colour	Design	Unit	EAN
125H150551	red	with ring insulator	₾ 25	4 014803 432803

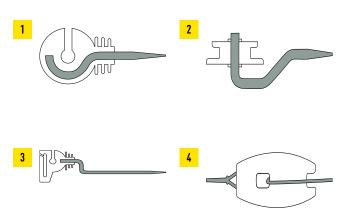
# Steel posts | **HORIZONT FENCE**



# THINGS TO KNOW ABOUT

# **INSULATORS**

There are countless fence variants and a suitable insulator is available for nearly every variant. To make it easier to choose the optimal accessory, some criteria should be considered when choosing an insulator.



# 1. IS THERE A SPECIAL FENCING SITUATION YOU NEED TO MASTER WITH YOUR INSULATOR?

#### 1 SECTION/ GUIDE INSULATOR

Section or guide insulators always keep the conductor material at a constant height. The conductor material is guided close to the fence post which makes the fence particularly stable. In addition, their small surface area prevents animals from leaning against or touching the insulators and possibly bending them.

### 2 CORNER INSULATOR

If you want to build a corner in your fence, we recommend using so-called corner insulators. These can be screwed to the inside of the post. Corner insulators are particularly stable and usually have a metal support inside the insulator which absorbs the tensile forces from the conductor material. As a result, the fence is stable and will not collapse in strong gusts of wind, for example.

#### 3 SPACER INSULATOR

Spacer insulators are less tightly fitted than section /guide insulators, as the guide of the conductor material is further away from the screw-in point of the insulator. They still guarantee good herding security. The use of these insulators prevents direct contact between the animal and the fence. This prevents the animals from leaning against fence posts, for example, and enables the fence to last longer. Spacer insulators are also used to protect solid wood fences, as the animals do not nibble at the wood.

#### 4 STRAIN INSULATOR

Strain insulators are used at the start and end of a fence section or in corners. They are particularly suitable for use with ropes (with a diameter of up to 8 mm) or wire.

#### 2. WHICH CONDUCTOR MATERIAL MUST THE INSULATOR CARRY?

Depending on the type of animal to be fenced in you have selected the appropriate conductor



#### NOTE

If you want to fence in animals, attach the spacer insulators on the inside of the pasture. If you want to fend off animals, fasten the insulators on the outside of the pasture.

material for your fence. The horizont range carries insulators for tapes, ropes, polywires and wires. There are even insulators that can carry more than one conductor material. Combined insulators are also available for special application situations; these enable you to install tape, rope or polywire in just one insulator.

Always use the appropriate insulator for your conductor material. Never attempt to install a rope in a ring insulator. Ring insulators are suitable for polywires. Otherwise you are in danger of damaging the conductor material and risk weakening the herding security of the fence system.

# Guide | Insulators | HORIZONT FENCE

# 3. SHOULD THE CONDUCTOR MATERIAL IN THE INSULATOR RUN FREELY OR BE FIXED?

Conductor material is usually fixed in places where strong wind can occur. The conductor material can be fastened by closing the insulator or by using a screw. These variants enable the tight fit of the conductor material. Insulators with free-running conductor material are used for stable corner posts or as section/ guide insulators. The advantage is that the conductor material can be stretched over long distances because it can move freely in the insulator. If fixed insulators were to be used, the conductor material would have to be readjusted on each individual insulator.





Tape runs free!

Tape is fixed!

#### 4. HOW IS AN INSULATOR MOUNTED?

Important: Always select the appropriate insulator in relation to your post. The Product Guide will help you here:



#### **SCREW IN**

If insulators are to be fastened in wood, plastic or on stone walls, use insulators that can be screwed in, bolted, nailed or fastened with a special staple.

The horizont range includes special insulators with a unique screw thread for screwing into e.g. wood posts. This special thread prevents annoying splintering of the wood post. For you, the time-consuming process of pre-drilling or countersinking is no longer necessary. Because of the low splintering of the wood – after the insulator has been attached – an extremely secure fit can be guaranteed and herding security be established in your pasture.



#### **SCREWING / NAILING**

If you prefer insulators without support, it is best to use insulators that can be nailed or fastened with special staples or screws. These are best attached to wood posts. Insulators with separate metric thread can - in addition to materials such as wood, plastic or stone - also be easily attached to drillable materials such as metal. Just as with the insulators for screwing in, a securely tight fit on the post is possible here.



CLAMPS

Depending on the type of post you use, we also carry insulators for clamping, clipping or inserting. No additional tools are necessary for installation. The insulators can be mounted directly on the post very quickly and easily.

# **Important icons for this chapter:**

#### Product describing icons:

These icons describe insulator features.



material runs free



Conductor material is fixed



Section/ guide insulator



insulator



Length o



Continuous support



Short support



Diameter support



UV resistant



Polycarbonates

#### **Cross Selling Icons:**

These icons refer to products that are additionally required and are compatible with the selected product.



w

Rope



Polywire

FE / ZN

Wire

# **HORIZONT FENCE** | Insulators | Insulators for wood and recycled plastic posts













### Tape insulator | corner 40 plus

Suitable as: Conductor material:

• Starting/corner insulator • Tape up to 40 mm

Fastening: Advantage:

• Nailing or screwing to wood or recycled posts with at least two 5 mm screws • Conductor material cannot "fall" out of the insulator even when it is not under tension

• Easy re-tensioning possible

 Fixed Application:

Scope of delivery: • Screws, bracket

Art. No.	Material	Unit	EAN
125H15299	galvanized	□ 5	3 700393 919619



### Tape insulator | combi 40

Suitable as:

• Section insulator, spacer insulator

Conductor material:

• Tape up to 40 mm, polywire up to 4 mm, rope up to 8 mm

Fastening: Advantage: • Screwing in to wood or recycled plastic posts • Large dry room = High insulation

Application:

• Free running

Support:

- Short, Ø 6 mm

Art. No.























 $\boldsymbol{w}$ 4 mm 8 mm











40 mm







 $\boldsymbol{\omega}$ 

8 mm

### Tape insulator combi 40

Suitable as: Conductor material: • Section insulator, starting/corner insulator • Tape up to 40 mm, polywire up to 4 mm,

rope up to 8 mm

Fastening: • Screwing in to wood or recycled plastic posts Advantage: • Large dry room = High insulation

Application: • Free running - Short, Ø 6 mm Support:

Art. No.	Colour	Unit	EAN
125H15390	black	30	3 700393 916748
125H15390080	black	⊜80	4 014803 413147



#### Tape insulator ranger® 40 fix

Suitable as:

- Section insulator

Conductor material:

Fastening:

• Tape up to 40 mm, rope up to 8 mm

Advantage:

• Nailing or screwing to wood or recycled plastic posts • Strongly interlocked closure support on tape, which provides a secure hold

Application: Fixed

Art. No.	Unit	EAN
125H14990	□ 15	3 700393 916649
125H14990080	□ 80	4 014803 446534

**UKAL** 

# Insulators for wood and recycled plastic posts I Insulators | HORIZONT FENCE

### Tape insulator ranger® 40

Suitable as: • Section insulator Conductor material: • Tape up to 40 mm Fastening:

• Nailing or screwing to wood or recycled plastic

posts with two 5 mm screws

Application: Fixed Scope of delivery: • Plastic screws

Art. No.	Design	Unit	EAN
125H14161030	without rubber insert	<b>9</b> 30	4 014803 428929













### Tape insulator turbomax® plus

Suitable as: Conductor material: • Section insulator, starting/corner insulator • Tape up to 40 mm, polywires up to 4 mm,

rope up to 8 mm

Fastening:

- Nailing or screwing to wood or recycled plastic

posts with two 5 mm screws

Application: Fixed

Art. No.	Design	Unit	EAN
125H15843	with connecting plate can be used as gate handle insulator Limited stock	<b>1</b>	4 014803 405470



#### YOUR ADVANTAGE:

- This design is unique on the  ${\bf market}$  The insulator can be opened and and offers many advantages.
  - closed very easily.
- ${\boldsymbol{\cdot}}$  The screw is  ${\boldsymbol{\mathsf{fixed}}}\ {\boldsymbol{\mathsf{firmly}}}$  to the insulator so that it can be swivelled, making installation child's play.
- The non-rusting metal connecting plate can even be fitted with a gate handle.
- And fence branches can also be easily created.

# HORIZONT FENCE | Insulators | Insulators for wood and recycled plastic posts























#### Rope insulator turbomax®

Suitable as:

· Section insulator, starting/corner insulator

Conductor material:

• Polywire up to 4 mm, rope up to 8 mm, wire up to

Fastening: Advantage: Application:

125H15835

• Screwing in to wood or recycled plastic posts • Ergonomic shape for optimal handling

• Free running

Support:

- Short, Ø 6 mm

Art. No. Unit

700202 016895 15





















### Rope insulator turbomax® metric

Suitable as: Conductor material: • Section insulator, spacer insulator • Polywire up to 4 mm, rope up to 8 mm

Fastening: Advantage: • Screwing to through holes of e.g. metal posts • Large dry room = High insulation

Application: • Free running

38

• With metric thread M6, Ø 6 mm Support:

125H15073

1 014803 456076



















Distance:

Suitable as:

• Section insulator, spacer insulator, strain

insulator

Conductor material: • Tape up to 40 mm, polywire up to 4 mm,

rope up to 8 mm

• Distance to post is 40 cm

Rope insulator flexibar 400 - one side

Material: • Extruded plastic, therefore extremely durable

Art. No. 125H15318

**10** 











# Insulators for wood and recycled plastic posts I Insulators | HORIZONT FENCE

### Ring insulator trapper® IS-S

Suitable as: • Section insulator, corner insulator • Tape up to 12 mm, polywire up to 4 mm Conductor material: • Screwing in to wood or recycled plastic posts Fastening:

Application: • Free running • Continuous, Ø 5,3 mm Support:

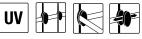




















4 mm

# Ring insulator farmer® plus ISL

Suitable as: • Section insulator, starting/corner insulator Conductor material: • Tape up to 13 mm, polywire up to 4 mm Fastening: - Screwing in to wood or recycled plastic posts

Application: • Free running Support: - Continuous, Ø 5,3 mm























### Ring insulator farmer®

Suitable as: • Section insulator

 $\bullet$  Tape up to 13 mm, polywire up to 4 mm Conductor material: Fastening: • Screwing in to wood or recycled plastic posts

Application: • Free running Support: - Short, Ø 5,3 mm

Art. No.	Colour	Unit	EAN
125H15275	black	□ 35	4 014803 456571
125H15275025	black	□ 25	4 014803 420923
125H15275K50	black	□ 50	5 901764 261742
125H15275120	black	♥120	4 014803 419859
125H15275010	yellow	□ 25	4 014803 417602

















# **HORIZONT FENCE** | Insulators I Insulators for wood and recycled plastic posts

















4 mm

### Ring insulator farmer®

Suitable as: • Spacer insulator, strain insulator, section

Conductor material: • Tape up to 13 mm, polywire up to 4 mm Fastening: • Screwing in to wood or recycled plastic posts

• Free running **Application:** Support: - Short, Ø 6 mm

Art. No.

2 700202 016619 125H14937 □ 8























### Ring insulator ranger® plus

Suitable as: Conductor material: Fastening:

Advantage:

• Section insulator, starting/corner insulator • Tape up to 13 mm, polywire up to 4 mm • Screwing in to wood or recycled plastic posts

• Large dry room = High insulation · Very high electric strength

Application: • Free running Support: - Continuous, Ø 6 mm

125H15370120 9 120 hlack























#### Ring insulator ranger®

Suitable as:

• Section insulator, spacer insulator, strain

insulator

Conductor material:

• Tape up to 13 mm, polywire up to 4 mm

Fastening:

Art No

125H15595

• Screwing in to wood or recycled plastic posts

Advantage:

• Large dry room = High insulation • Because of the lateral ground position, the tape

cannot "fall" out of the insulator unintentionally, even if guided over hill and dale

**Application:** Support:

• Free running - Short, Ø 6 mm

EAN Unit □ 10

700303

# Insulators for wood and recycled plastic posts I Insulators | HORIZONT FENCE

### Wire insulator ranger®

Suitable as:

Section insulator, starting/corner insulator
 Polywire up to 4 mm, rope up to 7 mm,

Conductor material:

wire up to 2.5 mm

Fastening:

Nailing or screwing to wood or recycled plastic postsFree running

Application:

Art. No. Unit EA

125H15929045 🖯 45 40 14803 002938

















2,5 mm

4 m

mm 7 mm

# Screw-in aidsh

\_

#### **Insulating tube**

Conductor material:

• Wire

Application:

• Insulation of wire on wooden posts for electrified fence

Length: - 25 m

Material: - Plastic

125H15935	interior Ø 5 mm. exterior Ø 10 mm	1	4 0148 03 150350
Art. No.	Diameter	Unit	EAN





#### Screw-in aid

Suitable for:

- Ring insulators with a wall thickness up to 16  $\mbox{mm}$ 

Application:

• Easy screwing in of the insulators using a cordless screwdriver

Art. No. Unit EAN

125H15357 🗇 1



#### Screw-in aid

Suitable for:

• Ring insulators, rope insulator, gate handle insulators

Application:

• Easy screwing in of the insulators using

a cordless screwdriver







# **HORIZONT FENCE** | Insulators | Insulators for plastic and fibreglass posts



















### Replacement/additional insulator combi ip-15

Suitable as: • Section insulator Suitable for: • Posts up to Ø 15 mm

Conductor material: • Tape up to 13 mm, polywire up to 4 mm,

rope up to 6 mm

Application: • Free running Note:

• Insulator is open at the post attachment

Art. No.	Unit	EAN
125H15290	□ 25	3 700393 916670
125H15290050	950	4 014803 417930











# Replacement/additional insulator farmer® 40

Suitable as: Section insulator Suitable for: - Round posts up to  $\emptyset$  12 mm Conductor material: • Tape up to 40 mm, polywire up to 4 mm

Application: Fixed

Note: • Insulator is closed at post output

Art. No.	Unit	EAN
125H14969025	□ 25	4 014803 444592
125H14969090	□ 90	3 700393 919763

# Rope and polywire insulatorsh

















8 mm

# Replacement/additional insulator farmer® ip-15

Suitable as: - Section insulator Suitable for: • Posts up to Ø 15 mm

Conductor material: • Polywire up to 4 mm, rope up to 6 mm

Application: Free running

Note: • Insulator is closed at post output

Art. No.	Unit	EAN
125H15129	□ 20	3 700393 916656
125H1512960	□ 60	4 014803 420541

















### Replacement/additional insulator farmer® fiber

Suitable as:

• Section insulator

Suitable for: Conductor material:

• Posts with Ø 12 mm (125H14886) - Tape up to 13 mm, polywire up to 4 mm

Application:

• Free running

Art. No.	Unit	EAN
125H14046	□ 25	3 700393 916519

# Insulators for plastic and fibreglass posts I Insulators | HORIZONT FENCE

### Insulators plastic eyelet

The eyelet insulator keeps the wires, ropes and tapes tight and ensures a perfect tension of the fence. It is suitable for the following posts: 125H14886 and 125H14921.

For round posts with a diameter of 12 mm.

- Secure fixing
- For 12 mm diameter tapes
- For 6 mm diameter wires and ropes





### Insulators plastic eyelet

The eyelet insulator keeps the wires, ropes and tapes tight and ensures a perfect tension of the fence. It is suitable for the following posts: 125H14885, 125H14887 and 125H14888.

For round posts with a diameter of 10 mm.

- · Secure fixing
- For 12 mm diameter tapes
- For 6 mm diameter wires and ropes

Unit 125H17804F □ 20 By 50



### Ring insulator metric thread ranger®

Suitable as: Section insulator

Suitable for: Angular steel posts with Ø 2-3 mm (125H155361, 125H15877,

125H152541)

Conductor material: • Polywire up to 4 mm • Free running Application:

Support: • With metric thread M6, thread length of 80 mm















#### Horizont strain insulator

Suitable as:

• Stretching insulator

Conductor material: **Application:** 

• Polywire, ropes and wire • Guying of the fence section

Material: Plastic









# **HORIZONT FENCE** | Gates | Gate handles







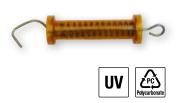












#### Gate handle with hook farmer®

Spring travel limit: • 3 cm Material:

Fastening: • Eye for conductor material on handle

Art. No.	Colour	Unit	EAN
125H15817002	black	1	4 014803 417848
125H15817019	orange	1	4 014803 417879
125H15817010	yellow	1	4 014803 158178

#### Gate handle with hook ranger®

Spring travel limit:

• 5 cm

Advantage:

• Reinforced insulation, therefore suitable for use with powerful

equipment

• Stainless steel rotating pressure spring

Material: Polycarbonate

• Eye for conductor material on handle Fastening:

Colour: Transparent dark grey

Art. No. 125H14350

### Gate handle with hook and tape connector ranger®

Spring travel limit:

Advantage:

• With the mounted tape connector, a tape up to 40 mm wide can be attached directly to the gate, thus ensuring optimum gate opening

• The tape can be easily re-tensioned

• Safe handling due to wide flange

Material: Plastic

Colour: • Black

Art. No.	Unit	EAN
125H156031	1	4 0 14803 446541

### Gate handle with hook and tape connector turbomax® equistop

Spring travel limit:

Advantage:

- With the mounted tape connector, a tape up to 40 mm wide can be attached directly to the gate, thus ensuring optimum gate opening

• The tape can be easily re-tensioned

Material: Colour:

Plastic

• Black

Art Nn

125H151391

### Gate handle with hook turbomax®

Unit

Unit

Spring travel limit:

- 8 cm

Advantage: Material:

• Extremely durable and compressible pressure spring

Fastening:

Polycarbonate

EAN

• Eye for conductor material on handle

Colour: Art. No.

• Transparent yellow

125H15445010

# Gate handles and gate handle insulators | Gates | HORIZONT FENCE

#### **CLEVER COMBINATION: GATE HANDLE & UNDERGROUND CABLE**



The current should never be transmitted through the gate handle and the conductor material in the gate. Especially when things need to move quickly, the gate handle often remains on the ground and is not immediately reattached. In this case, the current is diverted via the ground and the herding voltage in the fence drops. So, there is a risk that your animal will escape. Bridge the gate with a parallel installed underground cable.

#### Gate handle insulator with wooden thread

Suitable for: • All gate handles with hooks or eyes

Conductor material:

• Rope, polywire, wire
• Plastic, galvanized iron

**Application:** • For screwing in to wood and recycled plastic posts

Colour: - Black

**Support:** • Insulator support with thread for wood

Art. No.	Unit	EAN
125H15126	<b>3</b>	4 014803 456410









#### Gate handle insulator with metal plate

Suitable for:
Conductor material:

• All gate handles with hooks
• Wire up to 2,5 mm

**Application:** • For screwing or nailing on to wood and

recycled plastic posts

Advantage: • Wire connection screws can be placed on the metal plate. This establishes a connection

to other fence wires • Black

Colour:
Scope of delivery:
- Black
- Metal plate

Plastic part with screws

Art. No. Unit EA

125H15307 🗇 2









2,5 mm

#### Gate handle set with spring

**Application:** • Especially suitable for easy opening

and closing of gates through electrically conductive tension spring

Scope of delivery: • 1x gate handle turbomax with hook

- 1x gate handle insulator
- 1x ring insulator
- Tension spring, galvanized, thick

Art. No.	Design	Unit	EAN
125H15416	Kit	□2	3 700393 916687
125H15487	Tension spring single, galvanized, thick	1	3 700393 916786







### Gate handle set with rope

**Application:** • Especially suitable for easy opening and closing of gates without ground

contact through electrically conductive rope

**Scope of delivery:** - 1x gate handle with hook

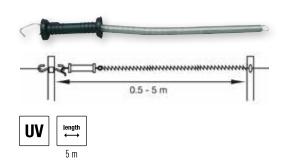
• 1x rope: 4.50 m long (slack), 9,4 long (taut)

1x gate handle insulator1x ring insulator

125H15316	<b>1</b>	
Art. No.	Unit	EAN



# HORIZONT FENCE | Gates | Gate handle sets & Pasture gates



### Gate handle set with thin spring

Application:

 ${\mbox{\footnote{injobs} - Especially suitable for easy opening and closing of gates through}$ 

electrically conductive tension spring

Scope of delivery: - 1x gate handle farmer

• 1x tension spring, galvanized, thin

Art. No.	Unit	EAN
125H15291	<b>1</b> 2	4 014803 420442



# **NEW** Roller Gate ranger®

#### Gate handle set 20 mm, swivelling

Application:

- Gate for electric fences
- Easy to open without the conductor material touching the ground, the tape is rolled up automatically
- Can be swivelled when installed to the 2 sturdy metal holders and can therefore be used for 2 gates
- Large pasture gates or double-row gates up to 7 m width are possible
- Large pasture gates or double-row gates up to 7 m width are possible with the 15 m long tape

Scope of delivery:

• 1 x belt retractor, 1 x gate handle with tape connector, 2 x metal supports, 15 m tape 20 mm

Nn linit FAN

Art. No. Unit EAN

125H14651 1 4 014803 146519



# THE LEGACY OF A PASSION

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