



Art.Nr	Type	Price	Tension	Energy	Capacity	Weigth	Shape	Consumption in mA								
								EC1000	EC2100	HB15/EB15	EC20	EC25	ST	Other brands		
								15	18	20	30	35	15	40	50	
								PERSISTENCE IN DAYS								
		Incl. VAT	Volt	Wh	Ah											
163-45505	Alkaline		9,0	380	55	1,35	Small	117	97	87	58	50	x	32	26	
163-45522	Alkaline		9,0	570	75	1,82	Small	176	147	132	88	75	x	66	53	
163-45515	Alkaline		9,0	540	65	1,75	Small	166	138	125	83	71	x	54	43	
163-45524	Alkaline		9,0	900	120	2,27	Small	278	231	208	139	119	x	104	83	
163-45513	Alkaline		9,0	740	100	2,40	Small	228	190	171	114	97	x	82	66	
163-45534	Alkaline		9,0	1250	160	2,67	Small	385	321	289	192	165	x	145	116	
163-45532	Alkaline		9,0	1500	200	4,26	Large	463	386	x	231	198	x	174	139	
163-45525	Alkaline		12,0	690	60	2,32	Small	x	133	119	80	68	x	60	48	
163-45533	Alkaline		12,0	1380	120	4,45	Large	x	266	x	160	137	x	120	96	
163-45501	Alkaline		6,0	510	100	1,70	Round	x	x	x	x	x	236	x	x	
Suitable for 12 Volt car battery								No	Yes	Yes	Yes	Yes	No	?	?	
In case of using a car battery, the following accessories are available:																
152-80017 Simple battery connection kit								x	Yes	Yes	Yes	Yes	No	Yes	Yes	
162-60000 Battery connection kit with charge indication								x	Yes	Yes	Yes	Yes	No	Yes	Yes	

For the energy supply of fences we use mains, car batteries, solar units or dry cell batteries. If there is no mains available, energy supply by a dry cell battery is common use. Low cost and easy to transport. There are two types of dry cell batteries, saline and alkaline batteries. Both are air-oxygen batteries, they need oxygen out of the air to maintain a chemical reaction to produce the energy.

- The cathode and anode in an alkaline battery are much more efficient. This results in less material for the same capacity compared to saline batteries. Alkaline batteries weight therefore ca half less then saline batteries and are smaller. Due to this, less garbage is produced, also the transport costs are lower and the future disposal costs will be lower.

- The electrolyte of alkaline batteries contains less water than saline batteries, due to that alkaline batteries function better at lower temperatures.

- With a decreasing battery tension a fence will use more energy to maintain the energy output. At a lower battery tension the internal resistance increases, due to that the energy uptake will increase accordingly. Alkaline batteries have due to an equal tension a lower energy use against saline batteries.

DIFFERENCES BETWEEN ALKALINE AND SALINE

Both types are free of mercury and cadmium and therefore environmental friendly, if it is disposed after usage at a official disposal point. It is not allowed to dispose the batteries with consumer- or company garbage.

ADVANTAGE OF ALKALINE BATTERIES

- The most important advantage is the output tension. Alkaline batteries give a stable tension during the usage period. The tension of saline batteries drops from 8,4 Volt to 5,5 Volt (picture below). With a decreasing battery tension -which is the case for all saline batteries-, the fence will take up more electrical current to maintain the declared output energy and this will result in accelerated battery discharge.

Advantages of alkaline against saline:

1. Voltage stays the same
2. Less raw material, less weight
3. Performs better at lower temperatures
4. Consumption is lower

DIMENSIONS

Shape	Height in mm	Width in mm	Length in mm
Round	180	Ø 180	na
Small	102	102	165
Large	158	127	189

KOLTEC TIP

Choose a battery which fits to the desired life time. The higher the energy content / capacity, the lower the daily usage costs.

CAUTION!! :

Weeds / grass growth against the fence and conductors on the ground have a negative influence on the life time of the battery!

BATTERY LIFE TIME

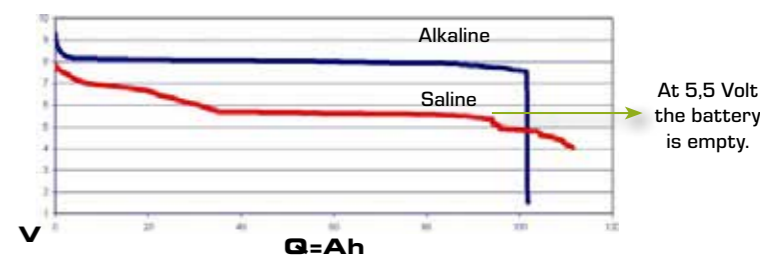
To give a better indication how long a battery works, Koltec changes the capacity indication from Ah into Wh. This stands for Watt hour. This is the energy of the battery, the higher the Wh, the higher the energy content, the longer a fence works on this battery.

EXAMPLE CALCULATION:

Consumption of the fence: 30 mA.
Average battery tension (alkaline): 8,5 Volt.
Energy consumption of the device: $30/1000 * 8,5 = 0,255$ Wh

75 Ah Alkaline battery contains 570 Wh.
Usage time of the device with this battery: $570 / 0,255 = 2235$ hour = 93 days.

TENSION CURVE OF ALKALINE AGAINST SALINE:



Batteries with the same capacity (100 Ah):

Battery	Weight	Energy (Wh)	Energy eff. Wh/Kg
Alkaline	2,3 kg	800	347
Saline	4,4 kg	600	136

