



OJSC "RPE "KVANT"

MBIT - Metal-Air Power Sources

First of all it is standalone, environmentally friendly, noiseless power source based on essentially new method to receive electric energy that in case is the result of interaction of water, oxygen of air and metal.

Structurally MBIT consists of several (on buyer's request from 2 to 6) consecutively connected cells. Weight of the source is from 3 to 8 kg. That provides its mobility. Each cell is a plastic tank inside of which cathode section and 2 spare magnesium anodes are located.

For operation only water is needed (any water from reservoir, rain, sea, water pipe) and table salt. To use this power source is very simple: just open cover of each cell, strew 200 grams of salt in each cell, pour 1,5 litres of water in each cell stir it and seal the cover hermetically: that is all MBIT is ready for operation! The electric-chemical reactions are started to proceed inside the cells, in the result of which the water and anodes are consumed and the electric energy is generated.

To increase MBIT voltage up to the level of 12V, 14,5V or 7,3V sources is completed with transformer-stabiliser in which for the convenience of the user there are not only plugs, but also output the type "igniter". Now all the consumers of the electric power from a lamp to refrigerator we swith from MBIT, as well as charge at charge at a spot from MBIT different types of the storage batteries with voltage 12V or 6V with the help of wires available n the complete set.

Besides MBIT may be used in the so-called "buffer" mode. The essence of it is, that the power source is parallel connected to the storage battery to which some power consumer has been already connected (for example, electrical motor or underwater camera). MBIT will constantly charge the storage battery and thus it may operate not 3-4 hours but several days; the same refers to underwater camera and echo sounder. After full dissolution of anodes to continue operation it is necessary 5 minutes to install the next set of anodes and pour a new water with salt. Irrespective of a condition of anodes the power from MBIT may be interrupted in any moment and store MBIT with the anodes for operation till the next use during 10 years.

In a complete with MBIT it is offered the energy saving bulb (12V, 12W), equal on a light exposure to a incandescent bulb with power 60W.

One complete of anodes is enough for as follows:

- to power such bulb from MBIT during a month averagely 3 hours in a day,
- to power TV set (12V) from MBIT during 20 days averagely 3 hours in a day,
- for a high-grade cycle of charge of "55" storage battery.

Application:

- illumination of tent, camp, country small house, hunters small house, bases, as well as other places at emergency swithing off or absence of energy,
- power supply and charge of mobile phones, radio stations, photo cameras, video cameras, players, note-books, echo-sounders, GPS-navigators, audio devices.
- Charge of automobile storage batteries as well as uninterrupted power supply to boat electric motors in "buffer" mode
- Power supply to refrigerators and TV sets (12V).



Technical characteristics of MBIT with PS (12 V)

№	Parameters	МВИТ 2-500ПС	МВИТ 3-750ПС	МВИТ 4-1000ПС	МВИТ 5-1250ПС	МВИТ 6-1500ПС
1	Voltage of open circuit, V	12	12	12	12	12
2	Nominal Voltage, V	12	12	12	12	12
3	Nominal Current, ?	1,5	2,5	3	4	5
4	Maximum power, W	21	36	42	57	72
	Maximum current of discharge, A	1,75	3	3,5	4,75	6
5	Nominal capacity for 1 add of anodes and Solution, W*hour	500	750	1000	1250	1500
6	Loss of capacity during storage in filled condition, W*hour	5	7	10	12,5	15
7	Ambient operation temperature, °?	-20...+40				
8	Weight dry, kg	3	4,2	5,4	6,6	7,8
9	Weight filled not more then, kg	6	8,7	11,4	14,1	16,8
10	Weight of spare set of anodes, kg	0,24	0,72	0,96	1,2	1,44
11	Dimensions(L*B*H),mm	250*230*220	250*325*220	250*420*220	250*520*220	250*610*220
12	Concentration of salt in water, g/l	100-150				
13	Storage period in a dry condition, years,	10				
14	Warranty total operation resource, hours	not less then 5000				
15	Time for charge of storage battery (12V) Capacity 55 A.hours, hours	30-35 change		23-25	15-20	10-15
16	Time for charge of storage battery (12V), Capacity 7,2 A.hours, hours	5-7	4-6	3-5	-	-



**Manufacture and supplier:
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