

# WKE P04 LITHIUM-IRON-PHOSPHATE



## RECHARGEABLE BATTERIES MADE OF LITHIUM IONS

WKE World Key Energy will soon introduce the new WKE P04 batteries.

About them: batteries made of lithium-iron- and phosphate (WKEP04) are a kind of rechargeable batteries made of lithium ions, which uses lithium-iron-phosphate as a cathodic material.

These batteries are characterized by a good thermic stability which makes their application safe, makes them more resistant to aging, gives them a higher current, while iron- instead of the more classical lithium batteries- makes them more ecological.

Their weight is about 3 times lower, although the batteries are extremely performing and they can provide the accumulated energy even with fast discharge in a continuous regime of 2 C (twice the capacity in C) until 5 C in impulsive regime; moreover their life expectancy is about 6 times higher than a traditional lead battery.

### Characteristics

#### Low current of self-discharge

4 times less than normal batteries

#### 4 times higher lifespan

Exceeding abundantly 2000 complete cycles of life expectancy

#### Good stability under tension

Even if exposed to massive charges

#### High thermic stability

-30 / +60 °C



All the prototypes are case integrated Bms (battery management system); for specific applications WKE World Key Energy solution can create customized batteries.

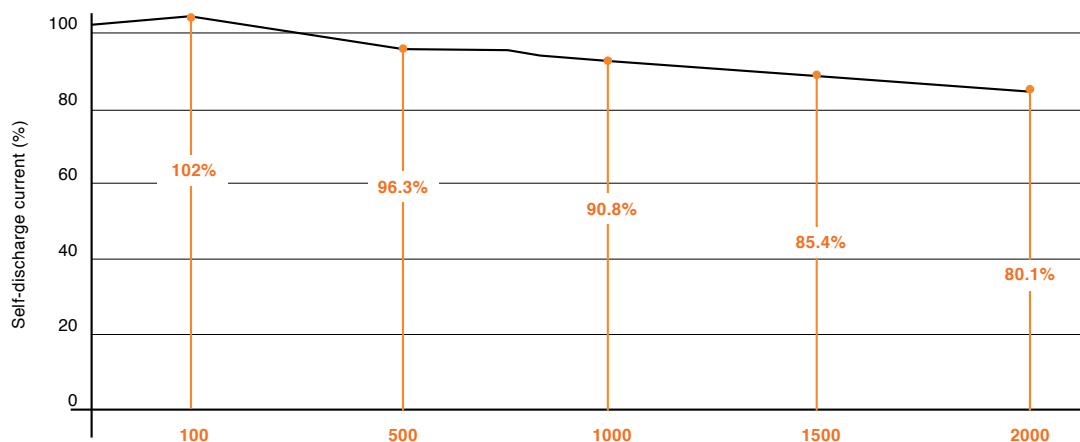
24V prototypes are also available in 12V version with double capacity. (ex.: 24v 10AH prototype corresponds to 12V 20AH prototype).



### COMPARATIVE TABLE

	ACID LEAD	WKE P04
SAFETY	Good	Excellent
GREEN PRODUCT	No	Yes
HIGH TEMPERATURE CHARGE	Good	Good
MEMORY EFFECT	No	No
NOMINAL TENSION CELL	2V	3.3V
POWER DENSITY(MA/G)	ND	160
ENERGY DENSITY (WH/KG)	30	115
START UP POWER (W/KG)	300	>2500
LIFE CYCLES (CHARGE 1C)	500	>2000
LIFE IN SERVICE (DAILY USE)	1-2 years	5-6 years
CHARGE EFFICIENCY	60,00%	95,00%
RECHARGE TIME (HOURS)	8	0,25-1
SELF-DISCHARGE (MONTHLY)	20,00%	4,00%

#### LIFE CYCLES PERFORMANCE, 100% DOD



MODEL	DIMENSIONS	WEIGHT
12V 20AH	182.5*78.5*167mm	2.8 Kg
12V 30AH	125*175*175mm	4 Kg
12V 40AH	197*165*169mm	5.5 Kg
12V 50AH	197*165*169mm	7 Kg
12V 60AH	350*168*179mm	8 Kg
12V 80AH	350*168*179mm	11 Kg
12V 100AH	323*171*215mm	16 Kg
12V 150AH	520*265*220mm	24 Kg
12V 200AH	520*265*220mm	35 Kg
12V 300AH	520*265*220mm	45 Kg

MODEL	DIMENSIONS	WEIGHT
24V 10AH	182.5*78.5*167mm	3.5 Kg
24V 20AH	198*166*175mm	6 Kg
24V 30AH	350*168*179mm	8.68 Kg
24V 40AH	350*168*179mm	10.5 Kg
24V 50AH	323*171*215mm	15 Kg
24V 100AH	520*265*220mm	35 Kg
24V 150AH	520*265*220mm	51 Kg