ADVANTAGES OF THE BYD IRON-PHOSPHATE BATTERY

Iron-Phosphate Battery vs. Lead-Acid Battery

LEAD ACID BATTERY		BYD IRON PHOSPHATE BATTERY	
CYCLE LIFE	Expected lifespan is 1,200 - 1,500 cycles.	EXTENDED CYCLE LIFE	After 4,000 cycles, battery retains 80% of its original capacity. 4,000 cycles mean over 10 years' operation, considering once a day charging.
MAINTENANCE	Lead acid batteries must be periodically refilled with distilled water and electrolytes.	MAINTENANCE FREE	The battery is completely sealed. No need for battery maintenance.
POLLUTION	Lead and sulfuric acid are harmful to the human body and environment during use.	NO POLLUTION	No pollution when produced and used.
EMISSION	Flammable gas (hydrogen) emission during charging	ZERO EMISSION	No acid-gas or flammable gas emission during charging.
CHARGING	Charging time: 8 - 10 hours	FAST CHARGING	Charging time: 2.5 hours with 30A 1.3 hours with 60A
DISCHARGING	Can not discharge at high rate.	HIGH DISCHARGING TOLERANCE	Up to 2C charging rate Up to 5C discharging rate
OPERATING TEMPERATURE	At -25°C, the discharging rate of the battery is about 40%, and at -40°C , it is almost 0.	EXCELLENT PERFOR-MANCE AT VARIABLE TEMPERATURE	At -25°C, the discharging rate of the battery remains above 75%. At -40°C, the discharging rate of the battery remains above 60%.
SAFETY LEVEL	Toxic or flammable gas emissions during charging pose a risk of fire or even explosion.	HIGH SAFETY	Tested and approved at the highest level of European safety standards, exceeding those of the FEM (Federation European Manufacturers). Battery tested under conditions of fire, piercing and impact.
EFFICIENCY	Charging efficiency is 60% - 70%. Only 70% depth of discharge.	HIGH EFFICIENCY	Up to 99% of battery capacity can be used every cycle.

V.S. Traditional IC Forklift

Items	Unit	BYD 2.5T Forklift	2.5T IC Forklift
Energy Consumption/h	-	3.5 kWh	2.8 L
Energy Price	USD	0.12/kWh	0.85/L
Price/h	USD	0.42	2.38

BYD 2.5T Forklift saves 1.96 USD every hour and over **47,000 USD** in 10 years if it works 8 hours per day and 300 days per year.

V.S. Traditional Lead Acid Electric Forklift

Items	Unit	BYD 2.5T Forklift	2.5T Lead Acid Forklift
Energy Consumption/h	-	3.5 kWh	4.97 kWh
Energy Price	USD	0.12/kWh	0.12/kWh
Price/h	USD	0.42	0.6
Battery Maintenance Labor Cost	USD	0	1.1/d
Battery Cycle Life	-	Over 10 Years if charged once a day	3 Years
Battery Replacement Cost over 10 Years	USD	0	9,000 USD (3,000 USD/Battery)
Charging Area	-	No need	Special enclosed charging area

BYD 2.5T Forklift saves over **16,620 USD in 10 years** if it works 8 hours per day and 300 days a year compared to traditional Lead Acid electric forklift.

Build Your Dreams

BYD is an established green-tech giant engaged in the Electronics, Automobile, New Energy, and Rail Transit industries. The company is listed on the Hong Kong and Shenzhen stock exchanges with 33 industrial parks worldwide.

Business Card

BYD AUTO INDUSTRY COMPANY LIMITED

ADD.: No. 3009, BYD Road, Pingshan, Shenzhen, P.R. China Tel: +86-755-89888888-62375

www.byd.com facebook.com/bydcompany twitter.com/bydcompany youtube.com/bydcompany

BYD ELECTRIC FORKLIFT

IRON-PHOSPHATE BATTERY TECHNOLOGY

- ECB16/18
- ECB20/25
- ECB30/35

HIGHLIGHTS OF BYD FORKLIFTS

Economic
- Fully charged in 1 hour for 6 - 8 hours of use
- 80% lower operation cost compared with traditional IC forklift
- No battery replacement or maintenance cost compared to lead acid electric forklift

Eco-friendly
- The battery is composed of recyclable green materials.
- No toxic fumes or gas emissions during operation

Safe
- The Battery has been used on BYD pure electric taxis and buses for over 6 years.
- Tested and approved at the highest European standards
  Exceeds FEM (Federation of European Manufacturers) standards.

1. AUTOMATIC SPEED REDUCTION WHEN TURNING

Truck speed reduces automatically upon turning of the vehicle to enhance lateral stability and reduce the risk of tipping over.

2. BRAKING ASSIST SYSTEM

The braking assist system allows for a stable stop, preventing the forklift from rolling forward or backwards after releasing the brake on a slope.

3. FORWARD TILT ANGLE CONTROL

The forward tilt angle control will automatically adjust the mast's forward tilt angle according to load weight and mast height, decreasing the chance of load spilling.

4. OVERLOAD PROTECTION

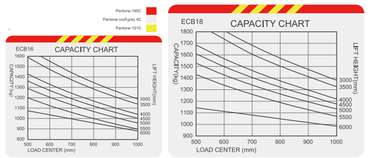
When load exceeds 10% of the load capacity, the lifting motor stops working.

5. MULTI FUNCTION TFT SCREEN

Displays travel speed, remaining battery capacity, clock, working hours; three speed mode setting.

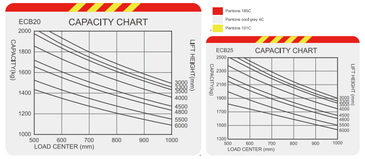
ECB16/18

1.6 - 1.8 TON COUNTERBALANCE



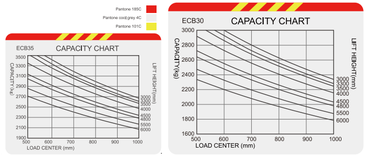
ECB20/25

2.0 - 2.5 TON COUNTERBALANCE



ECB30/35

3.0 - 3.5 TON COUNTERBALANCE



BYD COUNTERBALANCE FORKLIFT SPECS

CHARGER

FOR BYD FORKLIFT

CHARGER		
ELECTRICS	Model	80V100A（200A/60A）
	Operating voltage	Three-phase AC 380V±15%
	Input power	11.8 kw
	Output voltage	DC80 V
	Output current	DC100A (200A/60A)
	Output power	10 kw
PHYSICAL PROPERTY	Overall length	483 mm
	Overall width	483 mm
	Overall height	780 mm
	Net weight	94 kg
	Charging connector quantity	1 PCS
	Length of charging cable	2 m
SAFETY	Enclosure protection	IP21
	Noise	< 65dB
	Operating temperature	-10℃ - 40℃
	Surrounding humidity	30% - 90%

TYPES OF ELECTRIC FORKLIFT			ECB16	ECB18	ECB20	ECB25	ECB30	ECB35
DIMENSIONS	Overall length	mm	2,935	3,005	3,375		3,630	
	Length of face of forks	mm	1,935	2,005	2,305		2,215	
	Overall width	mm	1,050		1,195		1,360	
	Lift height	mm	3,000		3,000		3,000	
	Max. height	mm	4,035		4,040		4,120	
	Min. height	mm	2,020		2,035		2,115	
	Overhead guard height	mm	2,020		2,195		2,215	
	Fork dimensions (l/w/h)	mm	35/100/1,000		40/120/1,070		50/125/1,070	
	Width over forks	mm	1,040		1,085		1,145	
	Tilt range (front/rear)	°	5/7		5/8		5/8	
	Free lift	mm	150		150		150	
	Min. aisle width	mm	3,460		4,300		4,490	
	Min. turning radius	mm	1,570	1,640	2,020		2,210	
	Load capacity	kg	1,600	1,800	2,000	2,500	3,000	3,500
	Load center	mm	500		500		500	
	Load distance, center of support arm wheel to face of forks	mm	365		375	425	375	460
	Wheelbase	mm	1,360		1,505		1,725	
WEIGHT	Service weight including battery	kg	3,100		4,200		5,440	
	Axle load, with load (front/rear)	kg	4,083/617	4,495/605	4,091/699	5,811/889	6,693/1147	7,722/1,218
	Axle load, without load (front/rear)	kg	1,466/1,634	1,511/1,749	1,672/1,928	1,775/2,425	2,023/2871	2,274/3,166
TIRES	Wheel size (front)	mm	18 x 7-8		21 x 8-9		23 x 10-12	
	Wheel size (rear)	mm	15 x 4.5-8		18 x 7-8		200/50-10	
	Wheel number, front/rear (x=driven wheels)		2x /2		2x /2		2x /2	
	Track width (front)	mm	890		1,000		1,100	
	Track width (rear)	mm	190		955		955	
PERFORMANCE	Travel speed (with/without load)	km/h	16/16		20/20		20/20	
	Lift speed (with/without load)	mm/s	500/550		420/500		380/450	
	Lowering speed (with/without load)	mm/s	530/500		500/450		500/450	
	Gradeability (with/without load)	%	20/20	18/20	20/20		20/20	
	Service brake		Mechanical/Hydraulic					
ELECTRIC MOTOR	Drive motor rating at (S2=60 min)	kW	5 x 2		8 x 1		10 x 1	
	Lift motor rating at (S3=15%ED)	kW	16		20		24	
BATTERY	Battery type		Iron-Phosphate Battery					
	Battery capacity	kWh	21.6		21.6/43.2		43.2	
	Charging time	h	1		1.35/2.7		2.7/5.4	

※ All information herein is based upon the latest data available at the time of posting. BYD reserves the right to make changes at any time without prior notice. Valid until December 31,2017.