

# LXE50

5,000 LB. CAPACITY

INTEGRATED LITHIUM-ION CUSHION TIRE FORKLIFT



**SPECIFICATIONS**



## **INTEGRATED LITHIUM-ION PROVIDES SIMPLICITY AND REDUCES COST.**

Many businesses know that it takes Lithium-ion to get the most efficiency, uptime and cost effectiveness out of an electric forklift. And now customers are learning that it takes an integrated power source for simplicity of operation and optimal ergonomics. The Big Joe LXE50 delivers all of the above—an optimal package that supports the operator while driving down cost of operations. Big Joe is one of the few suppliers to develop and produce both forklift and battery, so customers have one expert supplier to help from end to end.

# FEATURES



## **Integrated Lithium: Simple and Effective**

The UL-recognized Lithium-ion battery is designed and manufactured by Big Joe, in our state-of-the-art, automated facility to deliver the highest levels of quality, durability and reliability. The battery pairs seamlessly with the truck, requiring no additional displays, connection ports, power buttons or other complications. Simply buckle up, turn the key, release the parking brake and go.

## **A Battery without Headaches**

The Lithium-ion battery is completely maintenance-free. That means no watering, toxic fumes or corrosive and explosive gases. And you only need one battery per truck—no cranes, hoists or roller systems for swapping batteries are required. This simplicity not only saves space in your warehouse—it also reduces overhead since staffing doesn't need to be dedicated to battery services. And since the battery can fully recharge in two hours and doesn't need to cool down after charging, your truck can spend more time working.<sup>1</sup>

## **A Drivetrain for High Productivity and Low Operating Cost**

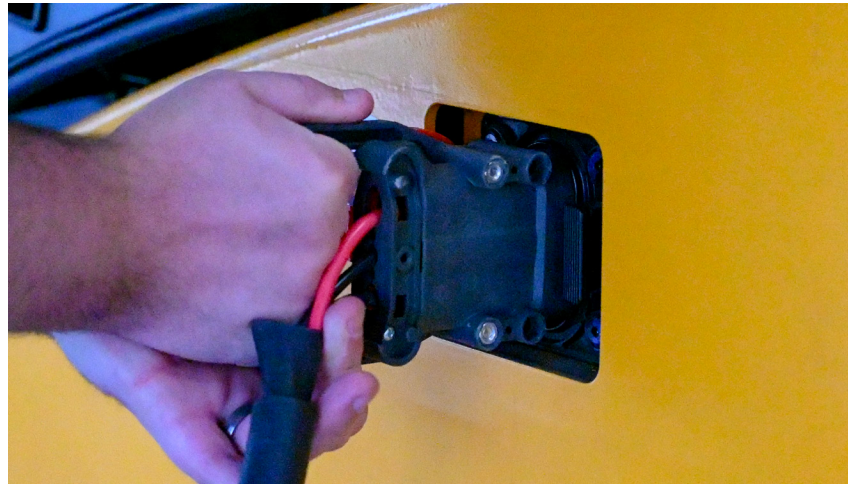
Dual AC drive motors deliver fine inching control when precision matters, while also delivering high torque and smooth acceleration when it's time to get moving. When it's time to stop, regenerative motor braking recharges the battery, while standard wet disc brakes provide additional brake performance when needed. Operators can appreciate the performance and lack of engine noise. Business owners can appreciate the lack of fuel costs and not needing to worry about unexpected - and expensive - engine breakdowns.

1. 2-hour charge time is based on the use of a 200A offboard charger operating under ideal conditions with proper power supplied to the charger. Actual charge times can increase in adverse environmental conditions or if sufficient power is not provided to the charger.

# FEATURES

## Charging Options for your Application

Unlike some other suppliers, Big Joe provides—and supports—the forklift, battery and charger. LXE50 is available with a range of chargers, from a single-phase 120V/240V option that plugs into a typical wall outlet, to a 16kW industrial charger that reduces charge times. Each charger easily plugs into the integrated charge port on the side of the truck for fast, intuitive operation.



## Operator Compartment: Your Employee's Office

The operator reaps the benefits of a wide-open operator compartment, large step and natural operating position, all thanks to the integrated design of the battery. Cowl-mounted hydraulic levers are designed to make it easy to get on and off the truck from either side. The long step and open space will be welcome features for operators accustomed to typical electric forklifts designed around bulky lead acid batteries.



## Advanced Electrical System

Big Joe AC controller technology delivers high performance efficiently while significantly reducing maintenance costs and extending the vehicle's service life. The battery management system continuously monitors performance during operation and charging to optimize the battery's service life.



## Remote Work Isn't Just for the Office

LXE50 comes standard with a digital LCD display that enables wireless programming and diagnostics via Bluetooth or the standard telematics system that includes cloud-based maintenance monitoring, GPS tracking and related data services. When maintenance is required, features like removable covers and a design philosophy centered on simplicity help make the technician's job easier.



# RUN TIMES

## Power to Get the Job Done

Run times in the tables below are provided as a guide and do not account for all factors that may affect run time. It is highly recommended to perform a power study to more accurately determine your battery size and charging needs. Big Joe forklifts with Lithium-ion batteries come standard with telematics that enable monitoring of truck run time, charge time, energy usages and many other data points. This information can help you to make the most of your equipment and drive down operating costs.

## Tailored to Your Specific Needs

Based on experience helping customers electrify their fleets and take advantage of the benefits of integrated Lithium-ion, Big Joe has categorized applications into three main types to help estimate run time:

Light Duty	Light duty applications, in terms of energy usage, account for a large portion of customer use cases. These are applications with level surfaces - where the truck typically handles 50% or less of its rated capacity.
Medium Duty	Medium duty applications are very common and involve handling loads that typically exceed 50% of the truck's rated capacity. There may be occasional: <ul style="list-style-type: none"><li>• Operation up and down ramps</li><li>• Lifting to upper rack heights</li><li>• Use of attachments such as fork positioners and multi-pallet handlers (i.e. single-doubles)</li></ul>
Heavy Duty	Heavy duty applications are not as common and include frequent: <ul style="list-style-type: none"><li>• Operation up and down ramps</li><li>• Handling loads at or near the truck's capacity</li><li>• Lifting to upper rack heights</li><li>• Use of heavy duty attachments (clamps, rotators, push-pulls and turrets)</li></ul>

## Stay Up and Running

The forklift's digital display includes a clear and easy-to-read battery indicator that shows the current state of charge. This helps operators to know exactly how much charge remains and remember to recharge as planned. Now, thanks to Big Joe's progressive warning system, the operator will be alerted should the battery state of charge fall too low. A lift interrupt and multiple levels of traction speed reduction help give the operator plenty of time to get to a charger without fear of over-discharging the battery.

LXE50 Run Time <sup>1</sup>			
Battery Capacity (kWh)	Application Intensity		
	Light Duty	Medium Duty	Heavy Duty
18.4	6h 45m	4h	3h
36.8	13h 30m	8h	5h 45m

1. Run times are provided for purposes of estimating battery and charger requirements and are not a guarantee. Run times are from fully-charged battery to lift interrupt. Actual run times vary widely based on truck duty cycle, ambient conditions and other factors. A product demo and/or power study are highly recommended.

# CHARGE TIMES



## Flexible Charging That Works for You

Thanks to the in-house design and expertise of Big Joe, the charger, battery and forklift work seamlessly together. Big Joe’s UL-certified chargers automatically adjust power based on the state of the battery in order to minimize charge time while optimizing the battery’s overall service life.

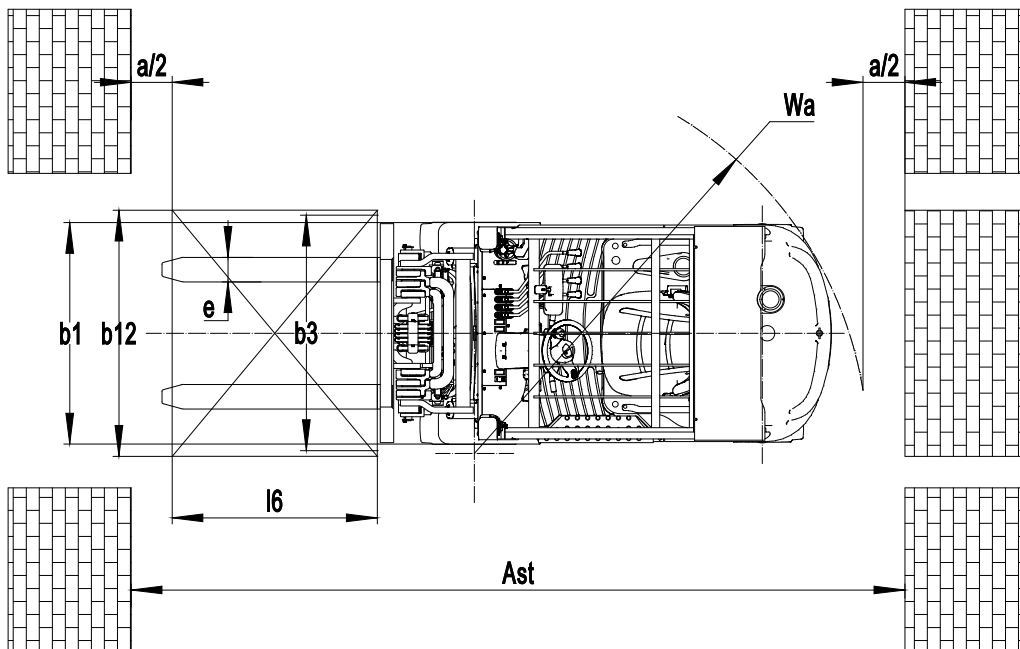
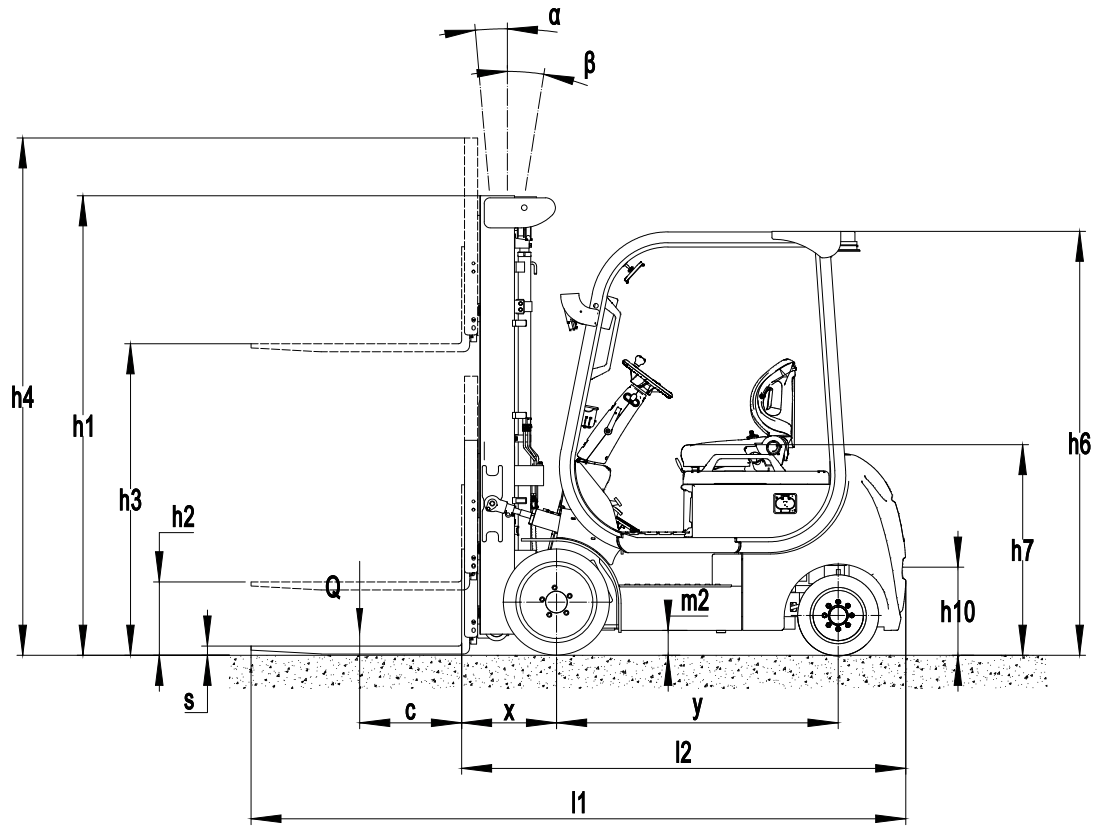
For flexible charging, various offboard chargers, also called “wall chargers,” are available. A power study is recommended in order to select the optimal battery and charger combination for your application’s unique needs. For convenience, all LXE50 models include a charge port for offboard power, accessible without opening the hood or removing panels.

Regardless of which charger you pick, the design is plug and play. That means minimal operator training and input is needed to keep your operation running smoothly.

Charger Specifications						
Charger Output Power	kW	Onboard Charger		Offboard Three-Phase Chargers		
		1.2	2.8	8	8	16
Input Voltage	VAC	120	240	208/220/240	480	
Input Current	A	15	15	35	15	36
Output Current @ 80VDC	A	15	35	100	100	200
LXE50 Charge Time <sup>1</sup>						
Battery Capacity (kWh)	18.4	13h	5h 45m	2h	2h	1h 45m
	36.8	26h	11h 15m	4h	4h	2h

<sup>1</sup> Charge times shown are estimates only and represent charging under ideal conditions and proper power supply to the charger. Charge times are based on recharging from lift interrupt to fully-charged.

# DIAGRAMS



# SPECIFICATIONS

Distinguishing mark	1.1	Manufacturer			Big Joe
	1.2	Model designation			LXE50
	1.3	Drive			Electric
	1.4	Operator type			Seated
	1.5	Load capacity	Q	lb.	5000
	1.6	Load center distance	c	in.	24
	1.8	Load distance, center of drive axle to fork	x	in.	18.3
	1.9	Wheelbase	y	in.	55.3
	Service weight	2.1	Service weight		lb.
2.2		Axle loading, laden (front / rear)		lb.	13878 / 1660
2.3		Axle loading, unladen (front / rear)		lb.	5059 / 5479
Tires/chassis	3.1	Tire type			Cushion
	3.2	Tire size, front			21x7-15
	3.3	Tire size, rear			16x6-10.5
	3.5	Wheels, number (front/rear) x=drive wheels			2x / 2
	3.6	Tread width, front	b10	in.	35.6
	3.7	Tread width, rear	b11	in.	35.4
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha / \beta$	°
4.2		Retracted mast height	h1	in.	83
4.3		Free lift	h2	in.	57.8
4.4		Lift height	h3	in.	189
4.5		Height, mast extended w/std LBR	h4	in.	237
4.7		Height of overheard guard (cabin)	h6	in.	83
4.8		Seat height / standing height	h7	in.	40
4.12		Tow coupling height	h10	in.	16.3
4.20		Length to face of forks	l2	in.	87.0
4.21		Overall width	b1/b2	in.	42.5
4.22		Fork dimensions	s x e x l	in.	1.6 x 4.8 x 42
4.23		A, B fork carriage class / type A, B			2A
4.24		Fork carriage width	b3	in.	41
4.31		Ground clearance, laden, below mast	m1	in.	3.9
4.32		Ground clearance, center of wheelbase	m2	in.	4.7
4.34.1		Right angle stack aisle width <sup>1</sup>		in.	93.9
4.35		Turning radius	Wa	in.	75.6
Performance Data	5.1	Travel speed, laden/unladen		mph	9.0 / 9.3
	5.2	Lifting speed, laden/unladen		fpm	74.8 / 98.4
	5.3	Lowering speed, laden/unladen		fpm	88.5 / 98.4
	5.8	Max gradeability, laden/unladen		%	15 / 16
	5.10	Service brake			Hydraulic
	5.11	Parking brake			Mechanical
Electric	6.1	Drive motor rating S2 60min		kW	2x 5.0
	6.2	Lift motor rating at S3 15%		kW	18
	6.4.1	Battery capacity <sup>2</sup>		kWh	36.8
	6.4	Battery voltage / nominal capacity <sup>2</sup>		V/Ah	80/460
Additional	10.1	Operating pressure for attachments		PSI	2750
	10.2	Oil flow for attachments		gpm	5 - 8
	10.5	Steering design			Hydraulic

<sup>1</sup> Basic right angle stack (add load length and clearance)

<sup>2</sup> Alternate battery sizes available - see standard and optional equipment list



# MAST SPECIFICATIONS

LXE50												
Mast Type	Overall Dimensions (in.) <sup>1</sup>										Rated Capacity (lb.) at 24" Load Center <sup>2</sup>	
	Lift Height (Top of Forks)	Lowered Height	Extended Height				Free Lift Height				Carry Height	Max Fork Ht
			no LBR	42" LBR	48" LBR	60" LBR	no LBR	42" LBR	48" LBR	60" LBR		
2-Stage Limited Free Lift	81.5	61.6	101.6	123.5	129.5	141.3	4.5				5000	5000
3-Stage Full Free Lift	189	84.3	214.8	231.0	237.0	248.8	57.8	42.2	36.2	24.4	5000	4200 <sup>2</sup>
	197	91.1	223.0	239.0	245.0	256.8	64.7	49.1	43.1	31.3	5000	4200 <sup>2</sup>
4-Stage Full Free Lift	258	88.7	282.0	300.1	306.1	318.0	72.0	46.7	40.7	28.9	4400	2200



1. LBR = Load Backrest Extension, measured from top face of fork to top of LBR

2. Rated capacities shown with integral sideshifting carriage. Rated capacities reduced by 400 lb. when equipped with hang-on sideshifter, 500 lb. when equipped with fork positioner

Additional lift heights available by request

# STANDARD/OPTIONAL EQUIPMENT

- Standard
- Optional

Electrical System	80V electrical system	●
	Brushless AC motor drive system w/regenerative braking	●
	Brushless AC hydraulic pump motor	●
	Transistor motor controllers with infinite speed control	●
	Corner speed control	●
Battery and Charging	UL-Recognized 36.8kWh (80V / 460 Ah) integrated lithium-ion battery	●
	UL-Recognized 18.4kWh (80V / 230 Ah) integrated lithium-ion battery	○
	320A DIN connector for offboard charging	●
	UL-Certified offboard 1.2kW / 2.8kW battery charger for use with 120V / 240V AC single-phase power (15A / 35A)	○
	UL-Certified offboard 8kW battery charger for use with 208V / 220V / 240V AC three-phase power (100A)	○
	UL-Certified offboard 8kW battery charger for use with 480V AC three-phase power (100A)	○
	UL-Certified offboard 16kW battery charger for use with 208V / 220V / 240V AC three-phase power (200A)	○
	UL-Certified offboard 16kW battery charger for use with 480V AC three-phase power (200A)	○
	Telemetry with over-the-air updating	●
Drive System	Wet disc service brake	●
	Foot-applied / foot-released parking brake lever	●
	Power-assisted steering	●
Wheels & Tires	Smooth cushion tires	●
	Non-marking smooth cushion tires	○
Front End Equipment	3-stage full free-lift mast	●
	Mast tilt: 6° forward 5° backward	●
	Hook type carriage	○
	Hook type integral sideshifting carriage	○
	Hook type carriage with hang-on sideshifter	●
	Hook type carriage with hang-on sideshifter and fork positioner	○
	42" hook type standard taper forks	●
	40.9" high load backrest	●
	48" high load backrest	○
60" high load backrest	○	

Hydraulics	3-way hydraulic control valve	○
	4-way hydraulic control valve	●
	1 auxiliary hose group	○
	2 auxiliary hose group	●
	2 auxiliary hose extension kit for use with attachments (assembly required)	○
	Quick-disconnect (Qty 2) kit for use with auxiliary hose extension kit	○
Operator Compartment	2-way adjustable full-suspension vinyl seat	●
	Entry assist grab handle	●
	Rear grab handle with integrated horn button	●
	Cup holder	●
	Digital LED display with Bluetooth service connectivity	●
	Steering wheel with integrated spinner knob	●
	12V accessory charging port	●
Lights and Alarms	LED light package (headlights, brake lights, turn signals)	●
	LED strobe light	●
	Rear-facing blue spot light	●
	Front-facing blue spot light	○
	Back-up alarm	●
	Self-adjusting back-up alarm	○
	Horn	●
	White noise sound generator (always on)	○
	Left and right red side curtain lights	○
Warranty	84 months / 12,000 hours - Integrated lithium-ion battery warranty	●
	36 months / 6,000 hours - Frame & powertrain warranty	●
	24 months / 4,000 hours - Full truck warranty	●



Established in 1951, Big Joe is a customer-driven North American material handling equipment company. We distribute innovative products for in-between-handling applications, purpose-built counterbalanced lithium forklifts, and market-leading autonomous solutions. Based in Madison, Wisconsin, we provide engineering expertise, customer service, aftermarket parts, and warranty support to our extensive dealer network and customers.



Certification: Big Joe lift trucks are built in compliance with ANSI B56.1 and OSHA section 1910.178(A)(2). Lift trucks specifications are subject to change without notice. Any specifications critical to the intended application of the forklift should be reviewed with your Big Joe dealer. Images may show optional equipment not available in all regions.



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