BIG JOE

CLASS 1 LITHIUM-ION FORKLIFTS

CLASS 1 FORKLIFTS

LVE35

LVE40

LCE50-65S

LPX40

LPE50-70S

LPE80-100S

LI-ION

Eliminate productivity shortcomings that are unavoidable with acid lead technology and reap the benefits of a smoother operation.

Why change from IC to integrated lithium-ion?

Depending on your operation, corporate initiatives and even the state you operate in, there are many reasons that now might be the best time to electrify.

3 Areas of Lower Operational Costs

1. **Maintenance**
   Electric forklifts have considerably fewer moving parts than their internal combustion rival. Less parts=less maintenance.

2. **Fuel**
   Potential for an 80% savings in fuel costs over time when you switch to electric.

3. **Life**
   Electrics have been proven to have a longer usable life than IC forklifts and over time will have a significant impact on improving fleet efficiency and reducing overall costs.

Legislation Pressure

In June 2024, the California Air Resources Board (ARB) approved the adoption of the Zero-Emission Forklift Regulation. This could soon impact other states and most certainly will impact Oregon and Washington. It is smarter to make the switch now, than to have costly repercussions down the road.

Improved working Environment

- Lithium-Ion batteries maintain their high levels of performance between charges, unlike lead acid solutions, which become sluggish as the battery discharges.
- Lithium-Ion batteries are solid-state technology that does not use electrolyte, therefore eliminates risks associated with washing, servicing or maintaining lead acid batteries.
- Lithium-Ion batteries do not fume during charges, thereby eliminating the need for costly and space consuming ventilation systems.
- Lithium-Ion batteries are designed to be a single battery per truck solution which means no more battery swapping, no more battery charging rooms and no more complex and costly battery change-out systems.
- Advancing to a lithium-Ion forklift fleet empowers operations to avoid losing valuable real estate which would have been otherwise used for lead acid battery storage, maintenance and management

Why now?

Legislative Pressures Won't Stop

There are many other states keeping a close watch on the recently passed California's Zero Emission Forklift Regulation with approximately nine of those states looking to adopt similar measures by 2030.

With Lithium-Ion, it Simply Makes Sense to Make the Switch

With numerous attributes designed to overcome all the pains associated with lead acid battery technology, the recent entrance of lithium-Ion has shattered all the myths surrounding the once-believed conclusion that electric forklifts cannot replace their IC counterparts. With lithium-Ion representing a solid bridge toward electrification, a high percentage of operations using IC lift trucks will now be empowered to experience all the benefits of going electric.

Why Big Joe?

We have a broad and growing line of lithium-Ion sit-down counterbalance forklifts purpose-built around a proven industrial lithium-Ion battery. Our forklifts are designed and manufactured by us. With Big Joe, there's no more having to choose a lithium-Ion battery from a wide array of suppliers. Our vertically oriented supply chain and manufacturing processes give us control over costs and we pass the savings to you. With our integrated battery design, our engineers have freedom to deliver an overall forklift design fit to your operational `needs.

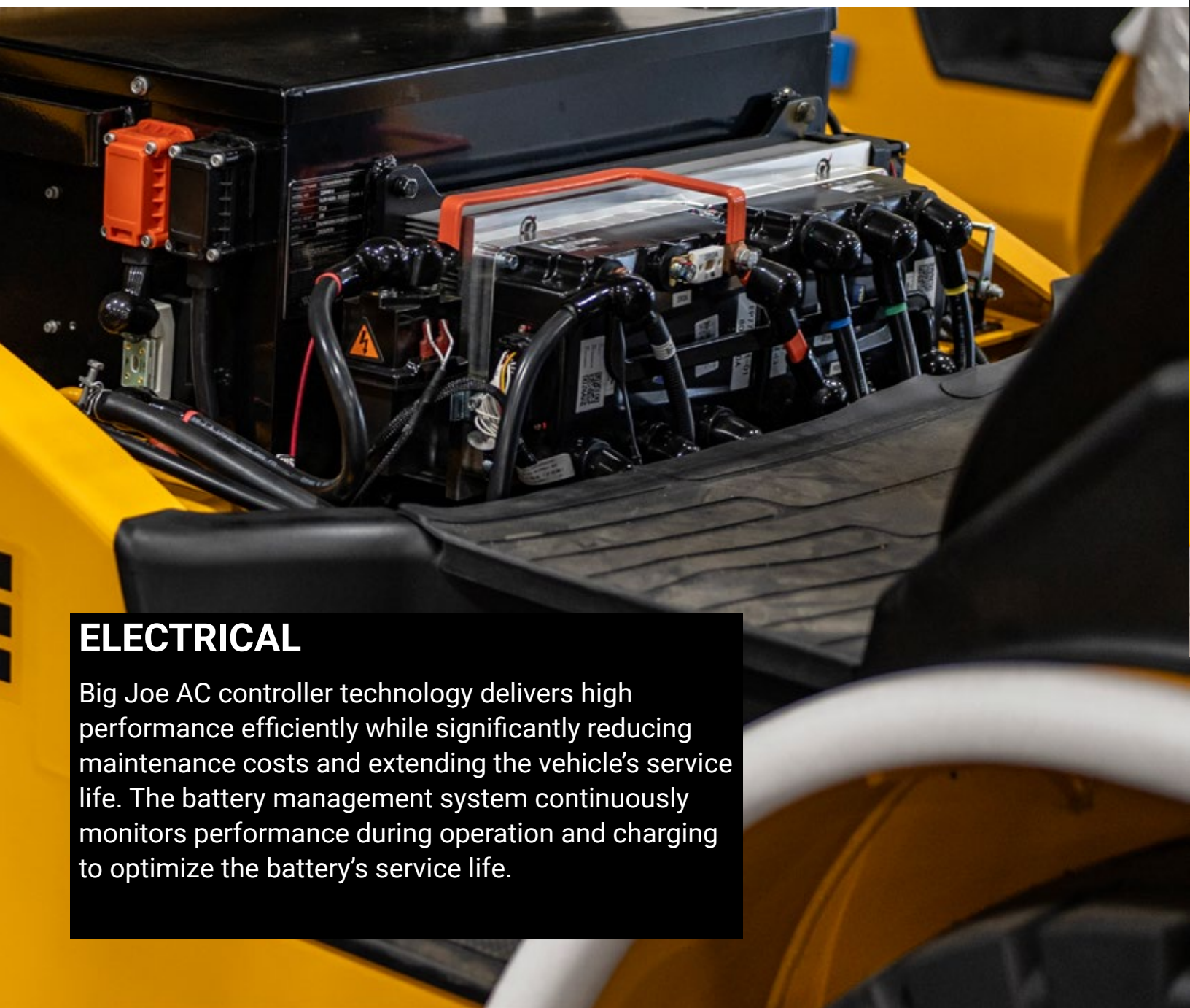
Big Joe goes above and beyond by certifying our designed and manufactured lithium-ion batteries to the Underwriters Laboratory (UL) 2580 safety standard, which was established to evaluate the safety of lithium-ion batteries for use in electric vehicles. This level of battery safety certification gives Big Joe's customers the highest level of confidence with our wide range of integrated lithium-ion warehouse solutions. Our Class 1 sit-down counterbalance models are purpose-built to replace Class 4 and 5 internal combustion fleets. As a market leader in lithium-Ion forklifts with over 70,000 units in use across the globe, let Big Joe improve today's operations with tomorrow's technology.

The time is now! Make the switch!

FEATURES

INTEGRATED LITHIUM

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.



ELECTRICAL

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.

DRIVETRAIN

The AC drive motor delivers fine inching control when precision matters, while also delivering high torque and smooth acceleration when it's time to get moving. Regenerative motor braking helps to reclaim energy, increasing run time and improving efficiency. Operators can appreciate the performance and lack of engine noise, while owners can appreciate the lack of fuel cost and not worrying about unexpected breakdowns.

FEATURES

OPERATOR COMPARTMENT

The operator reaps the benefits of a wide-open operator compartment, large step, chamfered hood and natural operating position, all thanks to the integrated design of the battery. For operators accustomed to internal combustion forklifts, Big Joe's Class 1 trucks feel natural. Power steering, an adjustable steering column and seat ensure reduced fatigue for operators.

ERGONOMIC CONTROLS

Ergonomic controls for lift, lower, tilt and side shift are within easy reach of the operator and allow for smooth, precise load control. Energy efficiency is optimized since the hydraulic pump only activated when flow is needed and utilizes proportional control.

SERVICEABILITY

Our touchscreen, digital LCD display, which comes standard with all Class 1 trucks, enables wireless programming and diagnostics via Bluetooth. When maintenance is required, features like a gas-spring assisted hood, removable floor plates and covers and a design philosophy centered on simplicity help make the technician's job easier.

FLEXIBLE CHARGING

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.

To help make charging easy, all Big Joe forklifts come standard with an onboard charger that can accept both 120VAC and 240VAC single-phase input. Cables are included for both supply voltages. The onboard charger automatically identifies input voltage and charges the battery accordingly.

BIG JOE PULSE

Big Joe Pulse: Data to Enhance Your Business

Big Joe Pulse is more than a telemetry system, it is the heartbeat monitor for your electric forklift fleet. With standard 5-year coverage, Pulse delivers unmatched visibility, diagnostics and performance insights to keep your organization running smoothly and efficiently. Whether you're managing a single truck or an entire fleet, Pulse gives you the tools to stay ahead of maintenance, optimize energy usage and keep your materials moving.

Fleet Electrification Insights

Thinking electric? Pulse provides the data you need to electrify with confidence. From battery health and regenerative braking to missed charging opportunities, Pulse helps you plan, deploy and scale your electric fleet with precision - understanding usage patterns and charging behaviors to maximize battery life and reduce energy costs.

PULSE

Energy Usage Insights: Right-Size Your Power

Big Joe Pulse tracks detailed energy consumption across your fleet, helping you understand how much power each truck uses during different tasks and shifts. This data enables you to right-size batteries for your application, eliminating the worry of overspending on oversized packs or under-powering critical equipment. With Pulse, you can match battery capacity to operational demand with precision, improving uptime and reducing capital costs.

Charging Behavior Analytics: Shape Operator Habits

Pulse identifies missed charging opportunities by analyzing idle time versus actual charging activity. These insights reveal gaps in operator behavior and workflow that can be corrected through training or process adjustments. By encouraging consistent charging habits, Pulse helps extend battery life, reduce emergency replacements and ensure trucks are always ready to perform. It's not just about data; it's about driving better habits.

LVE35

3,500 LB. CAPACITY THREE-WHEEL PNEUMATIC LITHIUM-ION FORKLIFT

Model designation		LVE35
Drive		Electric
Operator type		Seated
Load capacity	lb.	3500
Load center distance	in.	24
Load distance, center of drive axle to fork	in.	16.6
Wheelbase	in.	52.4
Service weight	lb.	7645
Tire type		Pneumatic-shaped solid
Tire size, front[1]		18x7-8
Tire size, rear		15x4.5-8
Tilt of mast/fork carriage forward/backward	°	3 / 5
Retracted mast height	in.	88.2
Free lift w/o LBR	in.	60.2
Lift height	in.	189
Height, mast extended w/40.9 in. LBR	in.	230
Height of overheard guard	in.	81.8
Length to face of forks	in.	75.3
Overall width[1]	in.	43.3
Fork dimensions	in.	1.6 x 3.9 x 42
Right angle stack aisle width[2]	in.	128.6
Turning radius	in.	61
Travel speed, laden/unladen	mph	8.0 / 8.7
Lifting speed, laden/unladen	fpm	65.0 / 88.6
Lowering speed, laden/unladen	fpm	78.7 / 86.6
Max gradeability, laden/unladen	%	10 / 15
Service brake		Hydraulic
Parking brake		Mechanical
Drive motor rating S2 60min	kW	2x 5.0
Lift motor rating at S3 15%	kW	11
Battery capacity	kWh	18.4
Battery voltage / nominal capacity	V/Ah	80/230

[1] Front tire size is 200/50-10 when equipped with mast of 197 in. lift height or greater. Overall width increases to 46 in. and tread width to 38.6 in.
[2] Right angle stack is provided without clearance and assumes a load 40in. wide x 48 in. long.

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Back up alarm
- Adjustable seat and tilt steering column
- Integral side shift with 3-function hydraulics
- Reverse travel grab handle with horn
- 42” x 4” x 1.6” forks
- Pulse telemetry system

Optional Equipment

- 4th hydraulic valve, control & hosing
- Hang-on side shift in lieu of integral
- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC charger
- Non-marking, white tires
- 48” forks
- 48” or 60” load backrest
- Blue light

LVE40

4,000 LB. CAPACITY THREE-WHEEL PNEUMATIC LITHIUM-ION FORKLIFT

Model designation		LVE40
Drive		Electric
Operator type		Seated
Load capacity	lb.	4000
Load center distance	in.	24
Load distance, center of drive axle to fork	in.	16.6
Wheelbase	in.	53.5
Service weight	lb.	8415
Tire type		Pneumatic-shaped solid
Tire size, front		200/50-10
Tire size, rear		15x4.5-8
Tilt of mast/fork carriage forward/backward	°	5 / 6
Retracted mast height	in.	88.2
Free lift w/o LBR	in.	60.2
Lift height	in.	189
Height, mast extended w/42 in. LBR	in.	231.1
Height of overheard guard	in.	84.3
Length to face of forks	in.	80.0
Overall width	in.	45.3
Fork dimensions	in.	1.6 x 4.8 x 42.1
Right angle stack aisle width[1]	in.	130.8
Turning radius	in.	63.2
Travel speed, laden/unladen	mph	9.3 / 9.9
Lifting speed, laden/unladen	fpm	68.9 / 84.6
Lowering speed, laden/unladen	fpm	86.6 / 72.8
Max gradeability, laden/unladen	%	15 / 17
Service brake		Regenerative
Parking brake		Electromagnetic
Drive motor rating S2 60min	kW	2x 5.4
Lift motor rating at S3 15%	kW	11
Battery capacity[2]	kWh	17.3
Battery voltage / nominal capacity[2]	V/Ah	48/360

[1] Right angle stack is provided without clearance and assumes a load 40 in. wide x 48 in. long. LVE40 features dual drive motors capable of counter-rotating when turning.

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Rear blue light
- Back up alarm
- Adjustable seat and tilt steering column
- Hang-on side shifting carriage
- Reverse travel grab handle with horn
- Pulse telemetry system

Optional Equipment

- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC external charger
- Non-marking, white tires
- 48” forks
- 48” or 60” load backrest
- Blue light

LPX40

4,000 LB. CAPACITY FOUR-WHEEL PNEUMATIC LITHIUM-ION FORKLIFT

Model designation		LPX40
Drive		Electric
Operator type		Seated
Load capacity	lb.	4000
Load center distance	in.	24
Load distance, center of drive axle to fork	in.	19.5
Wheelbase	in.	60.6
Service weight	lb.	7800
Tire type		Pneumatic-solid shaped
Tire size, front		7.00-12
Tire size, rear		18x7-8
Tilt of mast/fork carriage forward/backward	°	6 / 6
Retracted mast height	in.	89.2
Free lift	in.	42.8
Lift height	in.	189
Height, mast extended w/std LBR	in.	237
Height of overheard guard (cabin)	in.	85.2
Length to face of forks	in.	92.8
Overall width	in.	45.4
Fork dimensions	in.	1.6 x 4.8 x 42
Right angle stack aisle width[1]	in.	102.6
Turning radius	in.	83.1
Travel speed, laden/unladen	mph	11.8 / 12.4
Lifting speed, laden/unladen	fpm	94.5 / 106.3
Lowering speed, laden/unladen	fpm	84.6 / 86.6
Max gradeability, laden/unladen	%	22 / 28
Service brake		Hydraulic
Parking brake		Mechanical
Drive motor rating S2 60min	kW	15
Lift motor rating at S3 15%	kW	16
Battery capacity	kWh	36.8
Battery voltage / nominal capacity	V/Ah	80 / 460

[1] Basic right angle stack (add load length and clearance)

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Back up alarm
- Adjustable seat and tilt steering column
- Hang-on side shifting carriage
- Reverse travel grab handle with horn
- 42” x 4.8” x 1.6” forks
- IPX4 rating
- Pulse telemetry system

Optional Equipment

- Fingertip hydraulic controls
- Automatic tilt leveling
- Hang-on side shift in lieu of integral
- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC charger
- Non-marking, white tires
- Fully enclosed cab

LCE50-65S

5,000 - 6,500 LB. CAPACITY FOUR-WHEEL CUSHION LITHIUM-ION FORKLIFT

Model designation		LCE50S	LCE65S
Drive		Electric	
Operator type		Seated	
Load capacity	lb.	5000	6500
Load center distance	in.	24	
Load distance, center of drive axle to fork	in.	17.9	18.2
Wheelbase	in.	58.5	
Service weight	lb.	9240	10850
Tire type		Cushion	
Tire size, front		21x7-15	21x8-15
Tire size, rear		16x6-10.5	
Tilt of mast/fork carriage forward/backward[4]	°	6 / 5	
Retracted mast height	in.	83.1	
Free lift	in.	58.7	57.8
Lift height	in.	189	
Height, mast extended w/std LBR	in.	231.1	237.1
Height of overheard guard (cabin)	in.	83.1	
Length to face of forks[1]	in.	91.7	95.6
Overall width[5]	in.	43.0	44.2
Fork dimensions	in.	1.57 x 4.8 x 42	1.8 x 4.8 x 42
Right angle stack aisle width[1,2]	in.	96.3	99.3
Turning radius	in.	78.4	81.1
Travel speed, laden/unladen	mph	10.6 / 10.6	10.5 / 11.2
Lifting speed, laden/unladen	fpm	120 / 126	98 / 124
Lowering speed, laden/unladen	fpm	98 / 98	98 / 98
Max gradeability, laden/unladen	%	17 / 30	15 / 25
Service brake		Hydraulic	
Parking brake		Mechanical	
Drive motor rating S2 60min	kW	15	17
Lift motor rating at S3 15%	kW	26	30
Battery capacity[3]	kWh	36.8	
Battery voltage / nominal capacity[3]	V/Ah	80 / 460	

[1] Add 2.2 in. when equipped with 4-stage mast
[2] Basic right angle stack (add load length and clearance)
[3] Alternate battery sizes available - see standard and optional equipment list
[4] Mast tilt reduced to 3° / 5° when equipped with 4-stage mast

Model shown - LCE50S

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Back up alarm
- Adjustable seat and tilt steering column
- Hang-on side shifting carriage
- Reverse travel grab handle with horn
- 42” x 4” x 1.6” forks
- IPX4 rating
- Pulse telemetry system

Optional Equipment

- Medium-duty 230 Ah Lithium battery
- Automatic tilt leveling
- Bottler’s tilt, 10° forward
- Integral side shifter
- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC charger
- Non-marking, white tires

LPE50-70S

5,000 - 7,000 LB. CAPACITY FOUR-WHEEL PNEUMATIC LITHIUM-ION FORKLIFT

Model designation		LPE50S	LPE60S	LPE70S
Drive			Electric	
Operator type			Seated	
Load capacity	lb.	5000	6000	7000
Load center distance	in.		24	
Load distance, center of drive axle to fork	in.	19.5	18.9	19.1
Wheelbase	in.		68.5	
Service weight	lb.	9520	10290	10996
Tire type			Solid pneumatic	
Tire size, front		7.00-12-5.00	28x9-15	28x9-15
Tire size, rear		18x7-8	200/50-10	200/50-10
Tilt of mast/fork carriage forward/backward	°		6 / 6	
Retracted mast height	in.		89.2	
Free lift	in.	47	43.1	43.1
Lift height	in.	189	189	189
Height, mast extended w/std LBR	in.	229.3	232.1	232.1
Height of overheard guard (cabin)	in.	85.2	85.8	85.8
Length to face of forks	in.	99.6	100	103.1
Overall width	in.	45.4	47.6	47.6
Fork dimensions	in.	1.6 x 4.8 x 42	1.6 x 4.8 x 42	2 x 4.8 x 42
Right angle stack aisle width[1]	in.	110.3	111.3	113.8
Turning radius	in.	90.8	92.4	94.7
Travel speed, laden/unladen	mph		9.9 / 10.5	
Lifting speed, laden/unladen	fpm		78.7 / 98.4	
Lowering speed, laden/unladen	fpm		84.7 / 86.6	
Max gradeability, laden/unladen	%	20 / 25	20 / 25	18 / 25
Service brake			Hydraulic	
Parking brake			Mechanical	
Drive motor rating S2 60min	kW		17	
Lift motor rating at S3 15%	kW		26	
Battery capacity[2]	kWh		36.8	
Battery voltage / nominal capacity[2]	V/Ah		80/460	

[1] Basic right angle stack (add load length and clearance)
[2] Alternate battery sizes available - see standard and optional equipment list

Model shown - LPE50S

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Back up alarm
- Adjustable seat and tilt steering column
- Hang-on side shifting carriage
- Reverse travel grab handle with horn
- 42” x 4” x 1.8” forks
- IPX4 rating
- Pulse telemetry system

Optional Equipment

- Medium-duty 230 Ah Lithium battery
- 4th hydraulic valve, control & hosing
- Integral side shifter
- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC charger
- Non-marking, white tires
- Fully enclosed cab

LPE80-100S

8,000 - 10,000 LB. CAPACITY FOUR-WHE
PNEUMATIC LITHIUM-ION FORKLIFT

Model designation		LPE80S	LPE100S
Drive		Electric	
Operator type		Seated	
Load capacity	lb.	8000	10000
Load center distance	in.	24	
Load distance, center of drive axle to fork	in.	21.8	
Wheelbase	in.	78.7	
Service weight	lb.	14960	15400
Tire type		Pneumatic - shaped solid	
Tire size, front		28x12.5-15	
Tire size, rear		23x10-12	
Tilt of mast/fork carriage forward/backward	°	6 / 5	
Retracted mast height	in.	91.0	
Free lift w/40.9 in. LBR	in.	44.5	
Lift height	in.	185	
Height, mast extended w/40.9 in. LBR	in.	232	
Height of overheard guard (cabin)	in.	88.6	
Length to face of forks	in.	114.2	
Overall width	in.	61.0	
Fork dimensions	in.	2.2 x 6 x 48	
Right angle stack aisle width[1]	in.	127.1	
Turning radius	in.	105.3	
Travel speed, laden/unladen	mph	9.9 / 11.2	
Lifting speed, laden/unladen	fpm	59 / 88.6	
Lowering speed, laden/unladen	fpm	88.6 / 100.4	
Max gradeability, laden/unladen	%	15 / 20	
Service brake		Dry drum	
Parking brake		Mechanical	
Drive motor rating S2 60min	kW	18.0	
Lift motor rating at S3 15%	kW	25.4	
Battery capacity[2]	kWh	36.8	
Battery voltage / nominal capacity[2]	V/Ah	80/460	

[1] Basic right angle stack (add load length and clearance)
[2] Alternate battery sizes available - see standard and optional equipment list

EEL

Model shown - LPE100S

Standard Equipment

- Onboard 120V/240V battery charger
- Headlights, brake, turn signal & warning lights
- Back up alarm
- Adjustable seat and tilt steering column
- Hang-on side shifting fork positioner
- Reverse travel grab handle with horn
- 48” x 6” x 2.2” forks
- IPX4 rating
- Pulse telemetry system

Optional Equipment

- 560 Ah Non-UL Lithium battery
- 4th hydraulic valve, control & hosing
- Side shifting fork positioner
- 480VAC, 240VAC or 120VAC charger
- Non-marking, white tires
- Fully enclosed cab

Big Joe Forklifts, established in 1951, is a North American leader in material handling solutions with a mission to empower the people who move things and a vision to be the trusted partner delivering disruptive solutions that accelerate the industry's transformation from internal combustion to electric to fully autonomous. Our tagline, Powering Progress, reflects our commitment to innovation and partnership as we deliver lithium-ion forklifts, advanced material-handling equipment, and autonomous solutions through our nationwide dealer network.

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.

BIG JOE

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