

LVE35

3,500 LB. CAPACITY

INTEGRATED LITHIUM-ION THREE-WHEEL 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 LVE35 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.

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.

A Drivetrain for High Productivity and Low Operating Cost

Dual AC drive motors enable LVE35 to pivot on its own center, which supports operation in tight spaces. Transistor motor controllers deliver smooth control for handling large or delicate loads. In addition to regenerative braking, LVE35 features maintenance-free wet disc brakes for confident stopping power.

FEATURES

Charging Made Easy

Every LVE35 forklift comes standard with an onboard charger that plugs into a typical single-phase 120V or 240V wall outlet, allowing you to recharge almost anywhere. For operations that require faster charge rates, offboard chargers that conveniently connect to the truck's integrated charge port are available. Since the battery doesn't need to cool down after charging, your truck can spend more time working. Unlike some other suppliers, Big Joe provides—and supports—the forklift, battery and charger.



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.



Smooth and Efficient Hydraulic Controls

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



Wireless Telematics for Operational Insights

LVE35 comes standard with onboard telematics that track key utilization metrics like key-on time, energy consumption, error codes and recharging patterns. This data can help spot missed opportunities for recharging, identify peak usage times and monitor the health of your equipment.



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: • Operation up and down ramps • Lifting to upper rack heights • Use of attachments such as fork positioners and multi-pallet handlers (i.e. single-doubles)
Heavy Duty	Heavy duty applications are not as common and include frequent: • Operation up and down ramps • Handling loads at or near the truck's capacity • Lifting to upper rack heights • Use of heavy duty attachments (clamps, rotators, push-pulls and turrets)

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.

LVE35 Run Time ¹			
	Application Intensity		
Battery Capacity (kWh)	Light Duty	Medium Duty	Heavy Duty
18.4	8h 45m	5h 15m	3h 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.

To help make charging easy, all Big Joe LVE35 models 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.

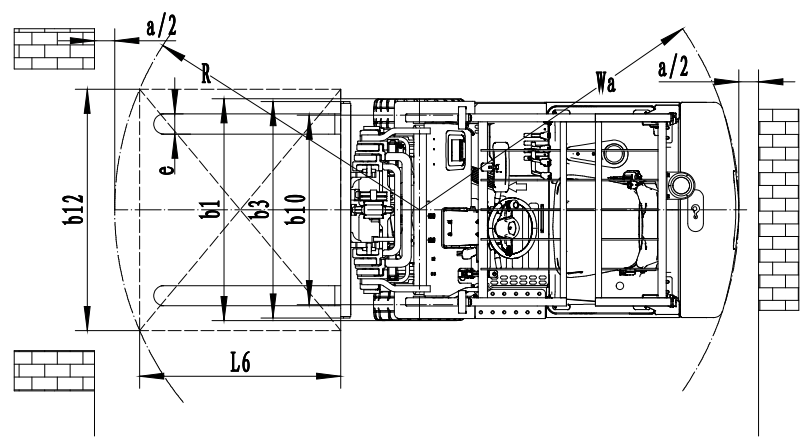
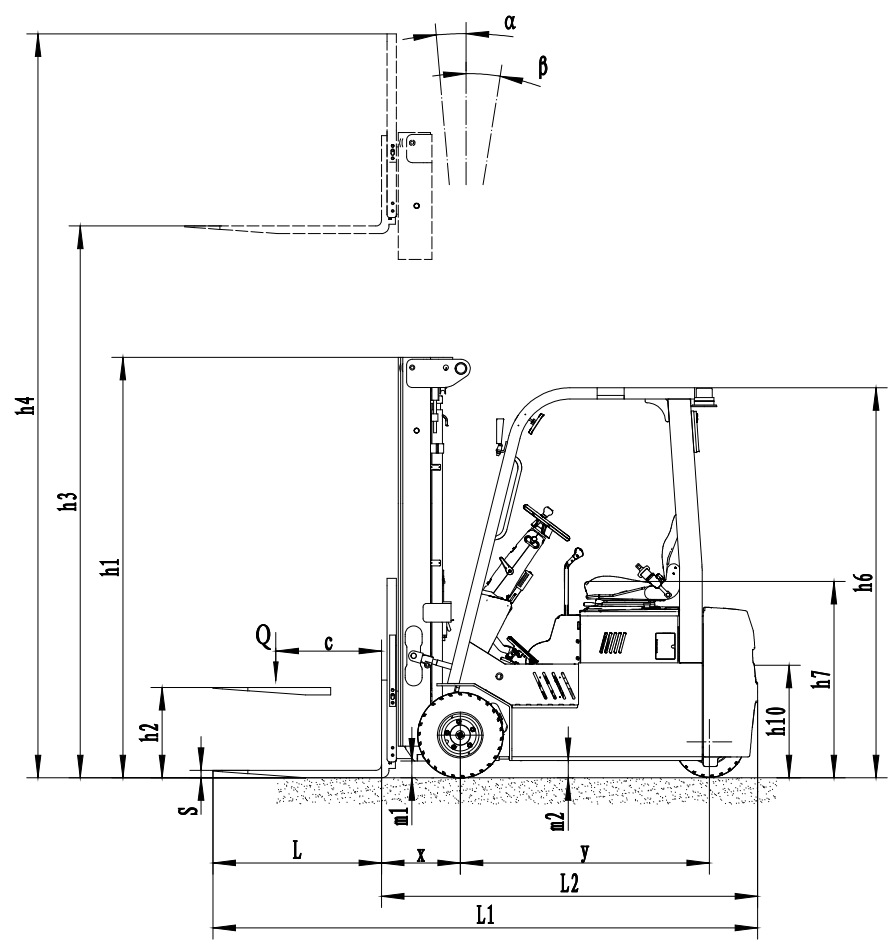
For faster charging, optional offboard chargers, also called “wall chargers,” are available. Offboard chargers are typically hard-wired and are capable of faster charge rates. A power study is recommended in order to select the optimal battery and charger combination for your application’s unique needs. For convenience, all LVE35 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	7.2	7.2
Input Voltage	VAC	120	/ 240	208/220/240	480
Input Current	A	15	/ 15	35	15
Output Current @ 80VDC	A	15	/ 35	100	100
LVE35 Charge Time ¹					
Battery Capacity (kWh)	18.4	13h	/ 5h 45m	2h 15m	2h 15m

1. 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

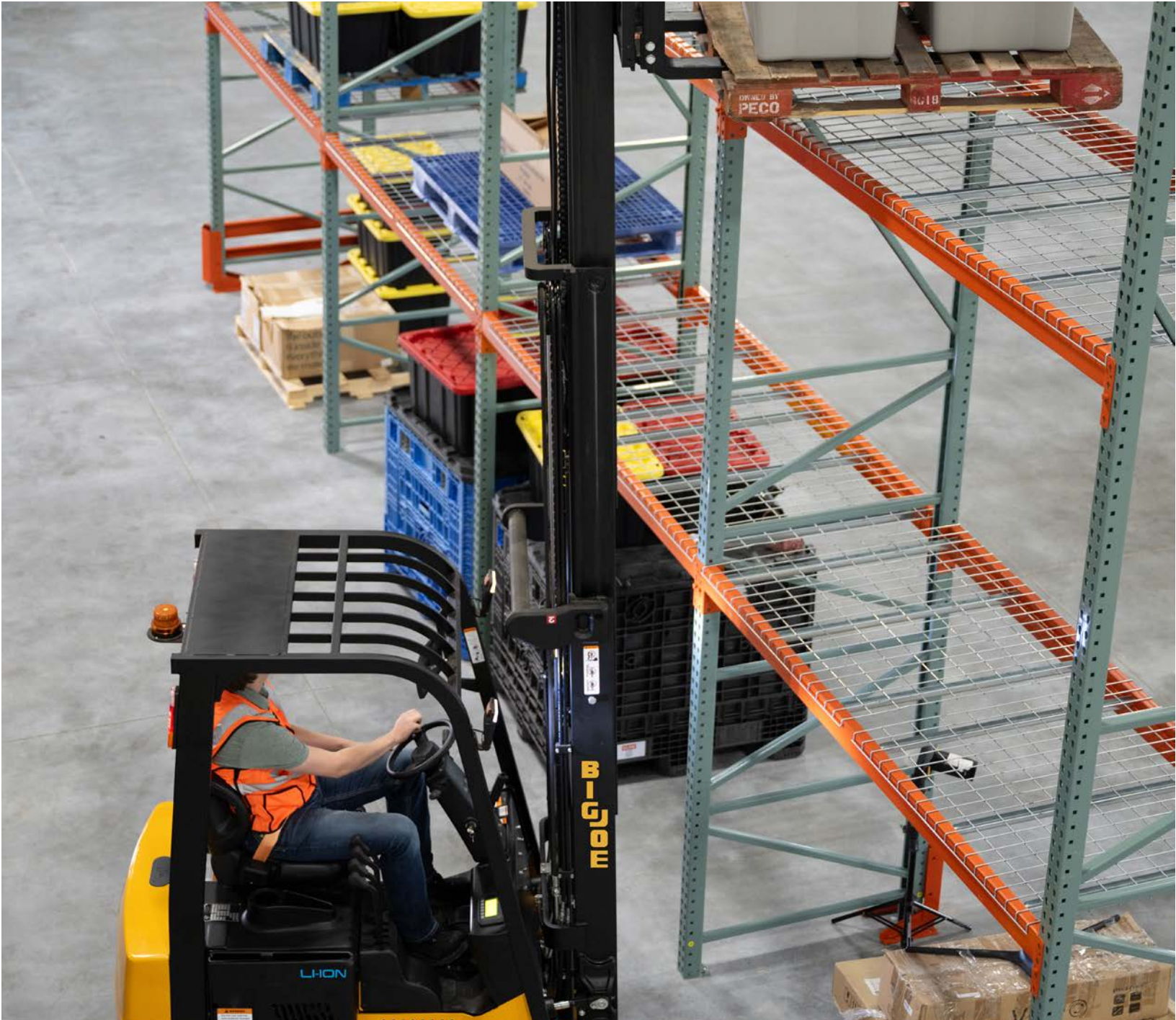
Distinguishing mark	1.1	Manufacturer			Big Joe
	1.2	Model designation			LVE35
	1.3	Drive			Electric
	1.4	Operator type			Seated
	1.5	Load capacity	Q	lb.	3500
	1.6	Load center distance	c	in.	24
	1.8	Load distance, center of drive axle to fork	x	in.	16.6
	1.9	Wheelbase	y	in.	52.4
Service weight	2.1	Service weight		lb.	7645
	2.2	Axle loading, laden (front / rear)		lb.	9713 / 1438
	2.3	Axle loading, unladen (front / rear)		lb.	3707 / 3938
Tires/chassis	3.1	Tire type			Pneumatic-shaped solid
	3.2	Tire size, front ¹			18x7-8
	3.3	Tire size, rear			15x4.5-8
	3.5	Wheels, number (front/rear) x=drive wheels			2x / 2
	3.6	Tread width, front ¹	b10	in.	37.1
	3.7	Tread width, rear	b11	in.	6.9
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α / β	°	5 / 5
	4.2	Retracted mast height	h1	in.	88.2
	4.3	Free lift w/o LBR	h2	in.	60.2
	4.4	Lift height	h3	in.	189
	4.5	Height, mast extended w/40.9 in. LBR	h4	in.	230
	4.7	Height of overheard guard	h6	in.	81.8
	4.8	Seat height / standing height	h7	in.	41.7
	4.12	Tow coupling height	h10	in.	23.6
	4.20	Length to face of forks	l2	in.	75.3
	4.21	Overall width ¹	b1/b2	in.	43.3
	4.22	Fork dimensions	s x e x l	in.	1.6 x 3.9 x 42
	4.23	A, B fork carriage class / type A, B			2A
	4.24	Fork carriage width	b3	in.	40.9
	4.31	Ground clearance, laden, below mast	m1	in.	3.5
	4.32	Ground clearance, center of wheelbase	m2	in.	3.6
	4.34.1	Right angle stack aisle width ²		in.	128.6
	4.35	Turning radius	Wa	in.	61
Performance Data	5.1	Travel speed, laden/unladen		mph	8.0 / 8.7
	5.2	Lifting speed, laden/unladen		fpm	65.0 / 88.6
	5.3	Lowering speed, laden/unladen		fpm	78.7 / 86.6
	5.8	Max gradeability, laden/unladen		%	10 / 15
	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	11
	6.4.1	Battery capacity		kWh	18.4
	6.4	Battery voltage / nominal capacity		V/Ah	80/230
Additional	10.1	Operating pressure for attachments		PSI	2750
	10.2	Oil flow for attachments		gpm	5.3
	10.5	Steering design			Hydraulic

¹ Front tire size is 200/50-10 when equipped with mast of 197 in. lift height or greater. Overall width with this configuration increases to 46 in..

² Right angle stack is provided without clearance and assumes a load 40in. wide x 48 in. long. LVE35 features dual drive motors capable of counter-rotating when turning. The correct formula for calculating right angle stack with this configuration is: turning radius + $\sqrt{(x + \text{load length})^2 + (0.5 * \text{load width})^2}$

MAST SPECIFICATIONS

LVE35												
Mast Type	Overall Dimensions (in.) ¹										Rated Capacity (lb.) at 24" Load Center ²	
	Lift Height (Top of Forks)	Lowered Height	Extended Height				Free Lift Height					
			no LBR	40.9" LBR	48" LBR	60" LBR	no LBR	40.9" LBR	48" LBR	60" LBR	Carry Height	Max Fork Ht
			3-Stage Full Free Lift	189	88.2	218.1	229.9	237.0	248.8	60.2	47.2	40.2
	197	90.7	226.0	237.8	244.9	256.7	62.8	49.8	42.7	30.9	3500	2360



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

2. Rated capacities reduced by 100 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 18.4kWh (80V / 230 Ah) integrated lithium-ion battery	●
	Onboard 1.2kW / 2.8kW battery charger for use with 120V / 240V AC single-phase power (15A / 35A)	●
	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)	○
	Telemetry with over-the-air updating	●
Drive System	Wet disc service brakes	●
	Hand lever-activated parking brake	●
	Power-assisted steering	●
Wheels & Tires	Pneumatic-shaped solid tires	●
	Non-marking pneumatic-shaped solid tires	○
Front End Equipment	3-stage full free-lift mast	●
	Mast tilt: 5° 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	○
Operator Compartment	1 auxiliary hose group	●
	2 auxiliary hose group	○
	2-way adjustable vinyl seat	●
	Entry assist grab handle	●
	Rear grab handle with integrated horn button	●
Lights and Alarms	Cup holder	●
	Digital display	●
	Steering wheel with integrated spinner knob	●
	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	●
Warranty	White noise sound generator (always on)	○
	Left and right red side curtain lights	○
	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	●



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.



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