AP44

4,400 LB. CAPACITY

AUTONOMOUS MOBILE ROBOT (AMR) PALLET JACK



BIG JOE

SPECIFICATIONS



PRACTICAL AUTONOMY FOR SMARTER MATERIAL MOVEMENT.

Today's warehouses face rising operating costs and increasing demands for faster, more consistent material movement and growing labor shortages. The Big Joe AP44 Autonomous Pallet Jack helps businesses overcome these challenges by automating repetitive pallet transport, allowing employees to focus on higher value work while improving productivity throughout the operation.

Designed for real warehouses, the AP44 combines advanced autonomous navigation, embodied AI and industry standard fleet management into a practical automation solution that is easy to deploy, simple to operate and scalable as your business grows. Whether implementing a single vehicle or expanding to a fleet, the AP44 delivers measurable improvements in operational throughput, workload optimization and efficiency without requiring costly infrastructure changes or advanced programming capabilities.

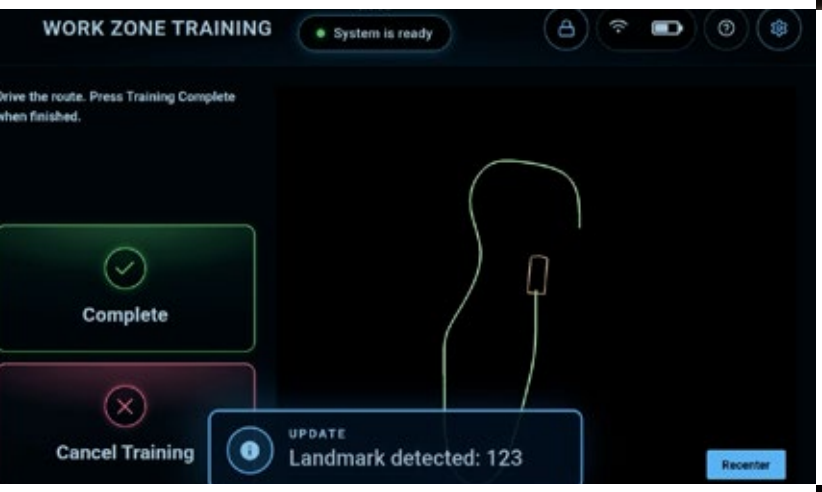
Backed by Big Joe's extensive dealer network, the AP44 provides customers with local support, training and deployment expertise to ensure successful implementation from day one.

FEATURES

Built with Safety at its Core

Big Joe's design philosophy is centered around ease of operations. Designed to work seamlessly with warehouse staff, AP44 continuously monitors its surroundings using dual overhead 3D LiDAR sensors and a suite of cameras for facility mapping, dynamic navigation and obstacle detection. Highly visible red safety curtain lights, a blue spotlight and an automatically activated and customizable warning horn help alert nearby personnel, enhancing awareness and confidence in shared warehouse environments.



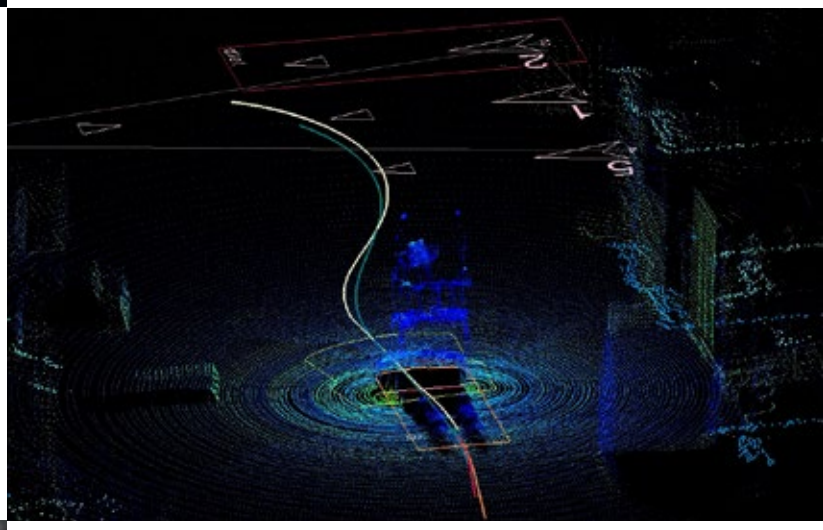


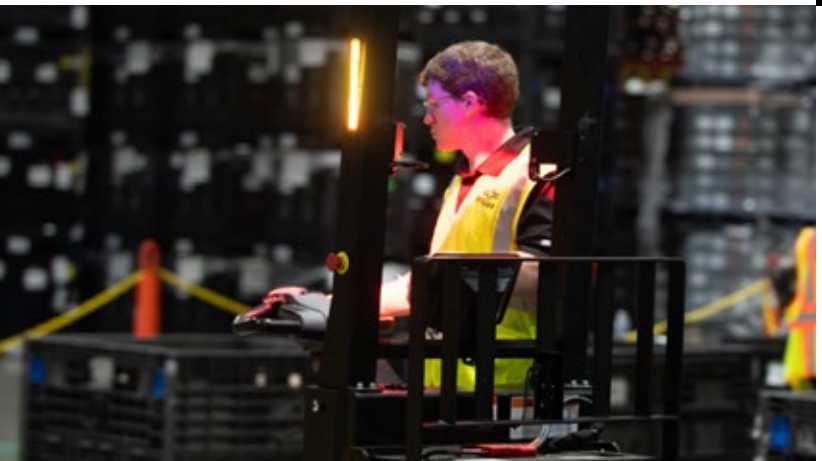
Built for Real Warehouses

Unlike traditional automation systems that require extensive facility modifications or custom engineering, AP44 is designed for rapid deployment in existing warehouse environments. Advanced mapping technology allows AP44 to quickly learn its operating environment and begin productive missions with minimal disruption to daily operations.

Autonomous Navigation with Embodied AI

Powered by embodied AI, AP44 continuously evaluates its surroundings to navigate around people, equipment and unexpected obstacles. Dynamic mapping, intelligent rerouting and advanced pallet recognition allows AP44 to make real time decisions while maintaining smooth, efficient material flow.





Flexible Automation that Fits Your Business

AP44 can operate in both semi-autonomous and fully autonomous modes, allowing businesses to begin their automation journey at their own pace. Manual operation is always available when needed, providing unmatched flexibility for changing workflows and unique operating conditions.

FEATURES

Advanced Vision System

A combination of 3D cameras, LiDAR sensors and fork tip vision provides exceptional environmental awareness and precise pallet handling. The raised sensor array delivers 360° visibility for facility mapping, obstacle detection and accurate pallet positioning, even in narrow aisles.





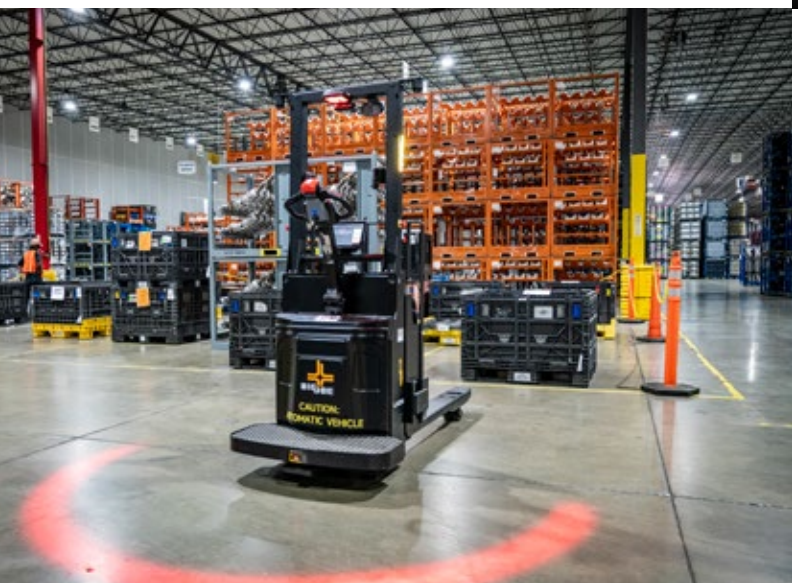
Fleet Management & Enterprise Integration

The integrated control tower software provides centralized fleet management, mission planning and real-time vehicle monitoring. Integration with WMS, MES and ERP systems enables seamless communication between warehouse software and autonomous vehicles, helping optimize material movement across the entire facility.

Integrated Lithium-ion Power

The maintenance-free, integrated lithium-ion battery delivers up to 12 hours of runtime and supports opportunity charging through an onboard 120V charger, optional fast charger or fully automated wireless charging. When equipped with wireless charging, AP44 can automatically return to a charging station as needed to maximize uptime without operator intervention.

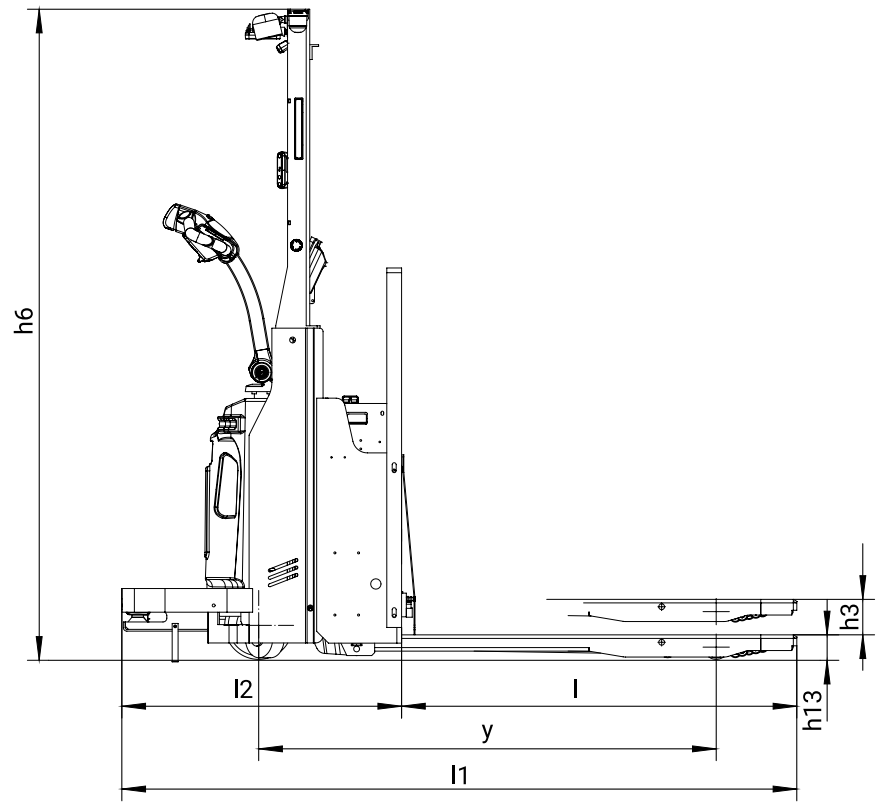


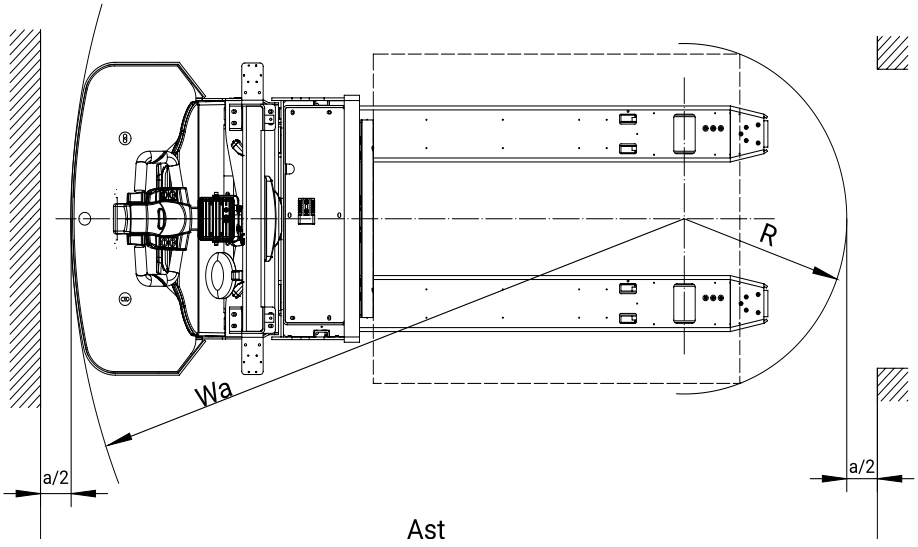


Automation That Grows With You

Big Joe believes successful automation can start small and expand as confidence grows. The AP44 is designed to provide immediate value as a standalone vehicle while offering a scalable path toward multiple vehicle fleets and enterprise-wide automation, while being supported by Big Joe's experienced dealer network.

DIAGRAMS





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SPECIFICATIONS

Distinguishing mark	1.1	Manufacturer			Big Joe	
	1.2	Model designation			AP44	
	1.3	Drive			Electric	
	1.4	Operator type			Automated / Manual	
	1.5	Load capacity	Q	lb.	4400	
	1.6	Load center distance	c	in.	24	
	1.8	Load distance, center of drive axle to fork	x	in.	41.8	
	1.9	Wheelbase	y	in.	60.8	
Service weight	2.1	Service weight		lb.	1435	
	2.2	Axle loading, laden (front / rear)		lb.	2300 / 3500	
	2.3	Axle loading, unladen (front / rear)		lb.	1170 / 265	
Tires/chassis	3.1	Tire type, drive wheel / front wheels			Polyurethane	
	3.2	Tire size, front		in.	9.06x2.95	
	3.3	Tire size, rear		in.	2.91x2.56	
	3.4	Additional wheels (caster wheels)		in.	5.12x2.16	
	3.5	Wheels, number (front/stability casters/rear) x=drive wheels			2 / 2 / 1x	
	3.7	Tread width, front	b10	in.	20.25	
	3.7.1	Tread width, rear	b11	in.	19.5	
Dimensions	4.4	Lift height	h3	in.	4.7	
	4.9	Height of tiller handle in drive position MIN / MAX	h14	in.	38.5 / 59	
	4.15	Lowered height	h13	in.	3.3	
	4.19	Overall length	l1	in.	89.8	
	4.20	Length to face of forks	l2	in.	37.2	
	4.21	Overall width	b1/b2	in.	37.5	
	4.22	Fork dimensions	s x e x l	in.	2 x 6.7 x 52.8	
	4.25	Fork carriage width	b3	in.	27	
	4.32	Platform step height		in.	7.9	
	4.34.1	Aisle width for pallets	Ast	in.	108.5	
	4.35	Turning radius	Wa	in.	84.6	
Performance Data					Manual	Autonomous
	5.1	Travel speed, laden/unladen		mph	5.0 / 5.0	2.8 / 2.8
	5.2	Lifting speed, laden/unladen		fpm	9.8 / 10.6	9.8 / 10.6
	5.3	Lowering speed, laden/unladen		fpm	13.2 / 10.6	13.2 / 10.6
	5.8	Max gradeability, laden/unladen		%	6 / 16	0 / 0
	5.10	Service brake			Electromagnetic	
Electric	6.1	Drive motor rating S2 60min		kW	1.6	
	6.2	Lift motor rating at S3 15%		kW	2.2	
	6.4	Battery voltage / nominal capacity		V/Ah	24 / 205 Li	
	6.5	Battery weight		lb.	147.7	

STANDARD/OPTIONAL EQUIPMENT

● Standard
○ Optional

Obstacle Avoidance	Fork tip cameras	●
	360° Vision for high visibility and detection	●
	Front protection (LiDAR + camera)	●
	Side protection (LiDAR)	●
	Rear protection (LiDAR + camera)	●
	Easily accessible emergency stop buttons	●
Communication & Navigation	Touch screen based interaction method	●
	Wi-Fi data transmission	●
	Remote firmware update capability	●
	Navigation (3D SLAM)	●
	Browser based interface	●
	Call button for on-demand missions (through cell phone, tablet or workstation terminal)	●
	Interface with infrastructure	●
	Integration to enterprise software systems (such as WMS or ERP)	●
Lights / Alarms / Swiches	Embedded safety horn with customizable length of alarm, decibel level, special tones and programmable locations	●
	Blue spotlight (forward)	●
	Red curtain light (front, sides)	●
	Pallet in-place detection switch	●

Energy	NRTL Certified 205Ah Lithium-ion battery with integrated 120V power cord (120V, 720W (30A))	●
	NRTL Certified 205Ah Lithium-ion battery with external fast charger (240V 2.4kW (100A))	○
	NRTL Certified 205Ah Lithium-ion battery with wireless charging (240V, 2.4kW (100A))	○
Load Handling	48 in. tall load backrest	●
	Forks: 27 in. wide x 53 in. long	●
	Forks: 22 in. wide x 53 in. long	○
	Pallet detection camera for easier load pick up	●
Support	12 months / 365 days, full parts and labor (excluding wearables and damage)	●
	36 months / 1095 days / 6000 hours from date of installation and first end-user, full parts coverage on frame, transmission, drive motors and weldments	●
	User training for robotic operations, facility mapping, mission plans and administration	●















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 truck 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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