

UNICARRIERS®

□FORKLIFT□

WLX Series



Walkie Pallet Trucks

24 Volt AC-Powered
4,500 lbs. Capacity

S P E C I F I C A T I O N S

MAIN TRUCK SPECIFICATIONS

CHARACTERISTICS	1	Manufacturer's Name			UniCarriers	UniCarriers
	2	Model	Model designation		WLX45S(E)	WLX45G(E)
	3		Long model code		WLXT2W7S22V(E)	WLXT2W7G22V(E)
	4	Rated Load Capacity	At 24" (610) load center	lb (kg)	4500 (2040)	4500 (2040)
FORKS	5	Power Type	Electric	volt	24	24
	6	Operator Type			Walkie	Walkie
	7	Tire Type	Drive tire		Solid Rubber	Solid Rubber
	8		Load Wheels		Poly	Poly
DIMENSIONS	9	Wheels	Drive/load	(x=driven)	1x / 2	1x / 2
	10	Size	Outside spread (standard)	in (mm)	26.4 (670)	26.4 (670)
	11	Height	Raised position	in (mm)	9.2 (235)	9.2 (235)
	12		Lowered position	in (mm)	3.3 (83)	3.3 (83)
SPEED	13	Individual Width	Width / thickness (max.)	in (mm)	6.7 (170) / 3.1 (78)	6.7 (170) / 3.1 (78)
	14	Overall Dimensions	Head length	in (mm)	21.1 (535)	22.4 (569)
	15	Width	Chassis	in (mm)	28.3 (720)	28.3 (720)
	16	Tires / Wheels	Drive tire - diameter x width	in (mm)	10 x 4 (254 x 102)	10 x 4 (254 x 102)
BATTERY	17		Load wheels - diameter x width	in (mm)	3.25 x 4.5 (83 x 114)	3.25 x 4.5 (83 x 114)
	18	Speed - Travel	No load	mph (kph)	3.7 (6)	3.7 (6)
	19		Full load	mph (kph)	3.7 (6)	3.7 (6)
	20	Speed - Lift	No load	sec	2.4	2.4
BATTERY	21		Full load	sec	3.5	3.5
	22	Battery Compartment Size	Width (x) x Height (z)	in (mm)	27 x 24.5 (685 x 622)	27 x 24.5 (685 x 622)
	23		Length (y)	in (mm)	7.8 (197)	9.1 (231)
	24	Amp Hr Capacity	Max (6-hr)	Ah	300	300
	25	Weight	Min / Max	lb (kg)	400 / 610 (180 / 275)	400 / 610 (180 / 275)
	26	Lead Length	Position "B"	in (mm)	20 (508)	20 (508)
	27	Connector		type	SB-175 Red	SB-175 Red

FORK AND AISLE SPECIFICATIONS

WLX45S - 7.8" (197mm) Battery Box

WLX45SE - 7.8" (197mm) Battery Box U.L. 'EE'

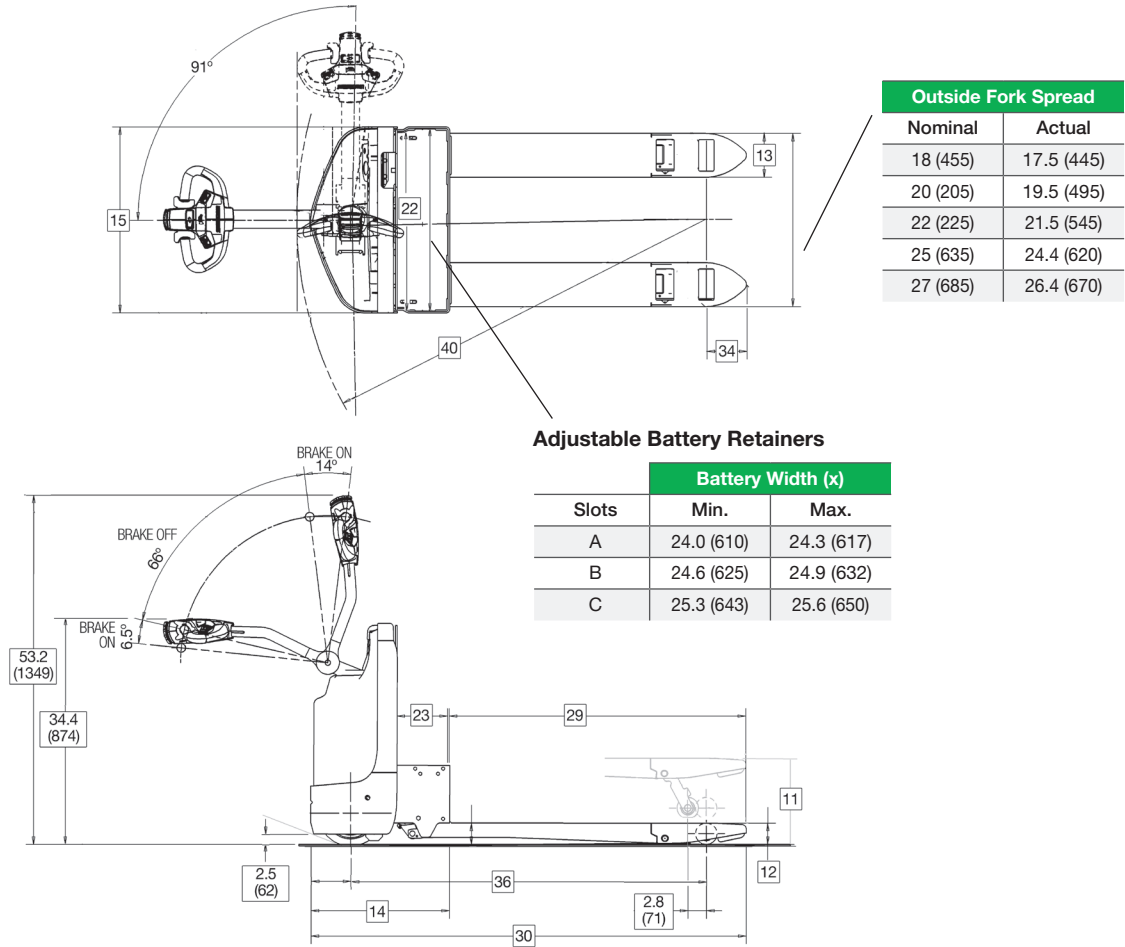
SPECIFICATIONS				Single Pallet						
	28	Fork Length	Nominal	in (mm)	32 (810)	36 (915)	42 (1065)	48 (1220)	54 (1370)	60 (1525)
	29		Actual	in (mm)	29.2 (742)	33.1 (842)	39.2 (997)	45.2 (1147)	51.3 (1302)	57.2 (1452)
	30	Overall Truck Length		in (mm)	50.3 (1278)	54.2 (1378)	60.3 (770)	66.2 (1683)	72.4 (1838)	78.3 (1988)
	31	Face of Forks to Center	Forks raised	in (mm)	20.3 (515)	24.2 (615)	30.3 (770)	36.2 (920)	42.3 (1075)	48.2 (1225)
	32	of Load Wheel	Forks lowered	in (mm)	23.1 (587)	27.0 (687)	33.1 (842)	39.0 (992)	45.2 (1147)	51.0 (1297)
	33	Center of Load Wheel	Forks raised	in (mm)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)
	34	to Tip of Forks	Forks lowered	in (mm)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)
	35	Wheelbase	Forks raised	in (mm)	35.3 (896)	39.2 (996)	45.3 (1151)	51.2 (1301)	57.3 (1456)	63.2 (1606)
	36		Forks lowered	in (mm)	38.1 (968)	42.0 (1068)	48.1 (1223)	54.1 (1373)	60.2 (1528)	66.1 (1678)
	37	Grade Clearance	Approach angle (chassis)	%	60.1	60.1	60.1	60.1	60.1	60.1
	38		Breakover angle¹	%	66.4	58.2	49.0	42.4	37.4	33.5
	39		Departure angle (forks)¹	%	44.5	44.5	44.5	44.5	44.5	44.5
	40	Turning Radius²		in (mm)	43.5 (1104)	47.4 (1204)	53.5 (1359)	59.4 (1509)	65.5 (1664)	71.4 (1813)
	41	Right Angle Stacking Aisle³	40" Load Width	in (mm)	51.7 (1314)	55.7 (1415)	61.7 (1568)	67.7 (1720)	73.7 (1873)	79.7 (2025)
	42	90° Equal Intersecting Area³	40" Load Width	in (mm)	45.7 (1161)	51.8 (1317)	55.0 (1398)	58.1 (1476)	61.6 (1566)	63.7 (1619)
	43	Truck Weight	No load, without battery	lb (kg)	588 (267)	597 (271)	611 (278)	624 (284)	639 (290)	652 (297)

¹ Forks raised. Includes pallet underhang.

² Forks raised with handle vertical and rotated 90°. For forks lowered, add 2.8" (72mm).

³ Add 6-8" (152-203mm) for ease of operation. Includes 1" (25mm) of clearance.

DIMENSIONS



FORK AND AISLE SPECIFICATIONS

WLX45G - 9.1" (231mm) Battery Box

WLX45GE - 9.1" (231mm) Battery Box U.L. 'EE'

SPECIFICATIONS				Single Pallet						
	28	Fork Length	Nominal	in (mm)	32 (810)	36 (915)	42 (1065)	48 (1220)	54 (1370)	60 (1525)
	29		Actual	in (mm)	29.2 (742)	33.1 (842)	39.2 (997)	45.2 (1147)	51.3 (1302)	57.2 (1452)
	30	Overall Truck Length		in (mm)	51.6 (1312)	55.6 (1412)	61.7 (1567)	67.6 (1717)	73.7 (1872)	79.6 (2022)
	31	Face of Forks to Center	Forks raised	in (mm)	20.3 (515)	24.2 (615)	30.3 (770)	36.2 (920)	42.3 (1075)	48.2 (1225)
	32	of Load Wheel	Forks lowered	in (mm)	23.1 (587)	27.0 (687)	33.1 (842)	39.0 (992)	45.2 (1147)	51.0 (1297)
	33	Center of Load Wheel	Forks raised	in (mm)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)	8.9 (227)
	34	to Tip of Forks	Forks lowered	in (mm)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)	6.1 (155)
	35	Wheelbase	Forks raised	in (mm)	36.3 (930)	40.5 (1030)	46.7 (1185)	52.6 (1335)	58.7 (1490)	64.3 (1640)
	36		Forks lowered	in (mm)	39.4 (1002)	43.4 (1102)	49.5 (1257)	55.4 (1407)	61.5 (1562)	67.4 (1712)
	37	Grade Clearance	Approach angle (chassis)	%	60.1	60.1	60.1	60.1	60.1	60.1
	38		Breakover angle¹	%	62.5	55.9	47.3	41.2	36.4	32.7
	39		Departure angle (forks)¹	%	44.5	44.5	44.5	44.5	44.5	44.5
	40	Turning Radius²		in (mm)	44.8 (1138)	48.7 (1238)	54.8 (1393)	60.7 (1543)	66.8 (1698)	72.7 (1848)
41	Right Angle Stacking Aisle³	40" Load Width	in (mm)	53.0 (1348)	56.9 (1446)	63.1 (1602)	69.0 (1754)	75.1 (1907)	81.1 (2059)	
42	90° Equal Intersecting Area³	40" Load Width	in (mm)	49.8 (1265)	51.1 (1299)	54.3 (1380)	57.4 (1459)	61.3 (1558)	65.2 (1655)	
43	Truck Weight	No load, without battery	lb (kg)	595 (270)	604 (275)	618 (813)	632 (287)	646 (294)	659 (300)	

¹ Forks raised. Includes pallet underhang.

² Forks raised with handle vertical and rotated 90°. For forks lowered, add 2.8" (72mm).

³ Add 6-8" (152-203mm) for ease of operation. Includes 1" (25mm) of clearance.

STANDARD EQUIPMENT

- 24-volt electrical system
- Brushless AC drive motor and DC pump motor
- Electronic motor controller system with AC inverter
- CAN-bus communications
- Chill storage conditioning down to -4°F (-20°C)
- Programmable performance characteristics
- Ergonomic control handle with thumb or fingertip actuated rotary travel and directional controls
- Fingertip control of electronic lift, lower, and horn buttons
- Electric horn
- Multi-function digital indicator
 - Battery discharge indicator with lift interrupt
 - Hour meter gauge: traction, lift, combined traction & lift
- On/off key switch
- Large reversing switch in handle
- SB-175 red battery connector
- 27" wide outside fork spread
- 48" long fork length (nominal) [45.2" (actual)]
- Full 5.9" of lift provides 9.2" raised fork height
- Rubber drive tire: 10" x 4" with string guard
- Poly load wheels: 3¼" x 4.5" with string guards
- Regenerative braking
- Spring applied/electronically released brake system
- Sealed switches and controller for wet and cooler applications¹
- Return oil filter in hydraulic system
- Motor and controller thermal protection
- Powder-coat paint finish

OPTIONAL EQUIPMENT

- 18", 20", 22", 25" outside fork spread
- 32", 36", 42", 54", 60" long forks (nominal)
- Torsion bar casters
- U.L. Rated "E", or "EE" models
- Battery packs:
 - Wet cell, 160Ah with swing-out upper trays
 - Maintenance free, 195 Ah battery with fixed trays
- On-board 25Amp sealed battery charger
- SB175 Gray battery connector
- Drive/tow switch for parking brake release
- Magnetic mount convenience tray for use with battery packs
- Adjustable lift height from 4.7"-5.9" with lift cutout switch
- On/off toggle switch
- 48", 60", or 72" high load backrest
- Travel alarm
- Non-marking rubber, traction treaded rubber, flat poly or siped poly drive tire options
- Anti-static ground strap (standard on "EE" rated models)

¹ Does not protect against high pressure water spray.

RUGGED RELIABILITY

Robust Fork Assembly

- High Strength Forks
 - C-channel, one-piece stamped steel forks offers high strength for handling heavy loads and feature reinforced tips for increased durability.
- Proven Push Rod Design
 - UniCarriers' push rod linkage design allows the rods to remain within the envelope of the forks, protecting the rods and linkages, resulting in increased uptime.
 - Push-type linkage design achieves full 5.9" of lift, yielding greater under-clearance for traversing dock plates, dock boards, ramp crowns or uneven floors.

Durable Design

- Robust Frame
 - Thick, reinforced stamped steel outer bumper provides robust protection for enhanced durability and is easily replaceable if damaged.
 - Rugged, one-piece polycarbonate component cover won't dent or rust providing maximum component life. Easily removable design affords easy access to major components, reducing maintenance for increased uptime.
- Rugged Drive System
 - Heavy duty, 1.5 kW high output AC drive motor mounted directly to the gear housing provides high starting torque.
 - Stationary and vertically mounted brushless motor eliminates cable flexing and means no brushes to replace reducing potential component wear for reduced maintenance. Motor and controller feature thermal protection system to slow or shut down truck in response to high operating temperatures for reduced maintenance.
 - Large 10" x 4" pressed-on rubber drive tire provides improved traction and braking. Allows for smooth travel when traversing bumps and dock plates, easing operation and reducing service.
- Strong Control Handle
 - Fiberglass reinforced plastic composite handle provides high strength and reduced weight for dependable operation.
 - Non-contact, Hall Effect sensors, with no mechanical switches or potentiometers to wear out, simplify maintenance and increase reliability and uptime.

Environmental Protection

- Protected Components
 - Fully enclosed, IP65 rated main controller and electronic unit in the control handle protect against dirt and moisture, for enhanced durability and increased uptime.
 - Sealed wire harness connectors protect against dust, moisture, and corrosion for increased uptime. WLX is designed for reliable operation in multiple environments including wet rooms and coolers down to -4°F (-20°C).
 - Electronic horn resists corrosion providing extended component life. Powder coat paint offers a durable, scratch resistant finish for enhanced frame protection.

Powerful Hydraulic System

- Fast Lift Speeds
 - Hydraulic system features integrated heavy duty 2.1 kW motor and high capacity pump, providing industry leading lift speeds. Controller managed hydraulic pump eliminates need for a lift limit switch.

Powerful Hydraulic System (Continued)

- Durable Design
 - Integral lift cylinder casted directly into the central iron frame provides a durable, resilient lift system for extended cylinder life with reduced frame length, enhancing maneuverability.
 - Lift cylinder is chrome plated for enhanced wear and corrosion resistance for high durability and long component life.

CONFIDENT CONTROL

Compactness

- Compact Frame
 - Short power unit length provides maximum maneuverability required in congested or tight operating areas for increased productivity.
 - Low profile chassis provides the operator full view of the fork tips for improved pallet approach positioning or exiting, especially in tight areas.

Maneuverability

- Effortless Pallet Entry/Exit
 - Tapered fork tip and convex fork slide enhance pallet entry/exit by smoothly gliding into pallets, even at sharp angles. Allows for easy operation and reduced product damage.
 - Pallet exit runners (fork slides) are strategically designed and placed to permit smooth pallet exit without the use of rollers.
- Tight Turning Radius
 - Industry leading tight turning radius provides increased productivity through ease of use and improved pinwheeling inside a trailer. A full 180° steering range and short chassis length enables precise operation in restricted spaces.
- Tiller-Up Drive
 - Standard tiller-up drive switch overrides the brake and engages a slower creep speed allowing operation with the handle in the vertical position for precise load positioning. Tiller-Up Drive combined with the compact frame and contoured forks ease pinwheel turning for increased productivity during right angle stacking inside trailers.
- Enhanced Stability
 - Wide mounted skid bars provide additional stability and are reversible/replaceable for low operating costs. Optional caster wheels, connected by a torsion bar, evenly distribute spring forces to provide exceptional stability and operation over uneven floors and docks for more confident operation.

Security

- Safety Reverse Switch
 - Large safety reverse switch on top of the handle automatically reverses truck travel to provide increased operator security.
- Wide Horn Switch
 - Extra wide horn switch provides effortless fingertip activation for enhanced operation and security without removing the operators hand from the travel controls.
- High/Low Speed Switch
 - A Rabbit/Turtle switch for high/low speed selection, allows the operator to select travel speed based on the operating area, providing greater operator confidence and control.
- Ramp Hold
 - Ramp hold feature minimizes unexpected travel when stopped on a slope, providing enhanced security.
- Automatic Parking Brake
 - For enhanced security, the spring applied/electronically released automatic parking brake activates when the truck is stationary and the speed control is released. An optional Drive/Tow brake release switch is available to release the brake for manual movement of a truck with a rundown battery.

ERGONOMICS & COMFORT

Low Steering Effort

- Effortless Steering
 - Precision steering results in low operator effort facilitating smoother navigation in tight spaces for easier operation, increased productivity and reduced operator fatigue.

Comfortable Tiller Handle

- Ergonomic Design
 - Tiller arm and control handle shapes provide a secure grip during operation for increased productivity and control. Handle grips are angled to match natural hand position for smooth and comfortable operation, helping reduce operator fatigue.
 - Truck's control head includes rotary thumb-actuated travel speed and directional controls and lift/lower switches conveniently located on left and right sides, allowing easily accessible fingertip operation from either side of the unit.
 - Tiller arm features optimally set upper and lower operating ranges (brake off zone optimized for the 5th to 95th percentile operators), provides exceptional operation for diverse size range of operators allowing increased productivity and control with reduced fatigue.

INCREASED PRODUCTIVITY

Efficient Operation

- Economical Control
 - 24-volt electrical system delivers maximum performance and run times for extended work cycles.
 - Advanced motor controller/AC inverter electronically distributes power as needed to the AC drive motor or DC pump motor for reliable performance. System offers programmable regenerative neutral braking and proportional plugging.
- High Performance
 - AC motor offers quick acceleration and travel performance for improved productivity.
 - Industry leading lift speeds allow the WLX to lift loaded pallets faster than many competitor trucks lifting unloaded pallets.

Smart Brake System

- Smart Brake System
 - Braking system utilizes regenerative braking prior to mechanical brake actuation resulting in optimum braking and improved efficiency with decreased component wear. Brake actuation occurs when the handle is in the upper and lower braking range.
 - The spring-applied/electronically released disc brake system reduces the need for adjustments.

Power Options

- Battery Compartment Size Options
 - 7.8" for battery packs
 - 9.1" for industrial batteries (300Ah max)
- Battery Pack Options
 - Wet cell battery pack (160Ah) with swing-out upper trays for faster, more convenient battery servicing.
 - Maintenance-free VRLA battery pack (195Ah) with fixed trays.
- Charger Option
 - Built-in, on-board 25A charger (120-240v) is sealed for protection from dirt/moisture, providing fast, simple and convenient battery charging.

LOWER OPERATING COSTS

Reliable Operation

- Controller Area Network (CANbus)
 - CANbus communication system simplifies wiring, reducing the number of wires and connectors providing greater reliability.
 - A sealed, plug-in port on the outside of the control panel offers convenient access for laptop diagnostics, without the need to remove covers, resulting in reduced service times.

Reduced Maintenance

- Low Maintenance Design
 - Brushless AC drive motor uses fewer components and requires less maintenance for lower operating costs, by elimination of directional and lift contactors.
 - Steel push rods are maintenance free, eliminating the required adjustments found in competitors' pull rod type linkages. The tie rods are factory aligned and pinned, no field adjustments are required.
 - All fork linkage pivot points have sealed, self-lubricating, maintenance-free, filament wound fiber bushings providing smooth operation with no lubrication requirements, reducing preventative maintenance for increased uptime.
 - Drive train operates in an enclosed oil bath, sealed for life with no oil change maintenance required, for lower operating costs.
- Easily Accessible Components
 - Removal of the single piece cover provides access to all electrical and hydraulic components.
 - Sealed ball bearings in load wheels are easily greaseable for faster service and minimal down time.



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