



MPB-VG

MOTORIZED HAND LOW LIFT PALLET
4,500 lbs

Yale® motorized hand trucks combine the latest in state-of-the-art technology and ergonomics making Yale the leader for walkie applications.

Controls

The ergonomically designed handle minimizes wrist movement and provides a solid grip for additional control while operating the unit. Lift, lower, and horn push buttons are conveniently located at the operator's fingertips. The butterfly throttle control provides multiple grip positions, minimizing operator fatigue while allowing travel direction and speed to be selected by rotating the actuator in the desired direction of travel.

Maneuverability and the operating position are optimized for transporting loads by the mid-mounted control handle. The Creep Speed can be enabled with the handle in full upright position as well as in the run position when positioning loads in confined spaces.

The **Traction Reversing Switch** located on top of the handle simultaneously reverses truck direction and sounds the horn should it come in contact with the operator. The wrap around design provides a large area of contact for the operator.

User Selectable Performance Modes

The truck offers a choice of three pre-programmed performance modes that are selectable through the control handle. These modes alter the acceleration, deceleration and top speed of the truck, enabling the performance of the truck to be optimized for the particular work environment or the work cycle.

- Mode 1 – Economy mode (battery saver) – Soft acceleration; reduced top travel speed with auto deceleration

- Mode 2 – Performance with auto deceleration – Medium acceleration; reduced top travel speed with auto deceleration
- Mode 3 – Performance without auto deceleration – Maximum acceleration; maximum top travel speed without auto deceleration

Electrical System

The MPB-VG electrical system is designed with uptime and reliability in mind. Industry leading technology, CANbus Communications, Hall Effect Sensors, Proximity Switches and Transistor Controller are incorporated into the design, reducing the number of wires, connectors, switches and contactors. The 200 Amp AC transistorized motor controller provides improved acceleration and high performance top speeds when loaded.

A standard display gauge allows for viewing of hour meter and battery state of charge. All units are equipped with low battery lift interrupt. Programmable features include, top speed, acceleration rate and auto deceleration.

Traction System

The AC traction system consists of the traction motor, gearbox, and brake. The UL listed traction motor is vertically mounted and fully enclosed to shield it from contamination and is stationary which reduces strain on wiring during cornering. The proven gearbox design includes a large, maintenance free, sealed turntable steer bearing. Heat treated gears are lubricated in an oil bath to provide long life. The maintenance free electromechanical brake is top-mounted on the traction motor, shielding it from debris and contamination.

Hydraulic Components

The lift pump and motor assembly features a 1.2 kw permanent magnet motor and translucent hydraulic tank. The permanent magnet motor provides high efficiency and low noise. The translucent tank provides quick and easy inspection of hydraulic oil level.

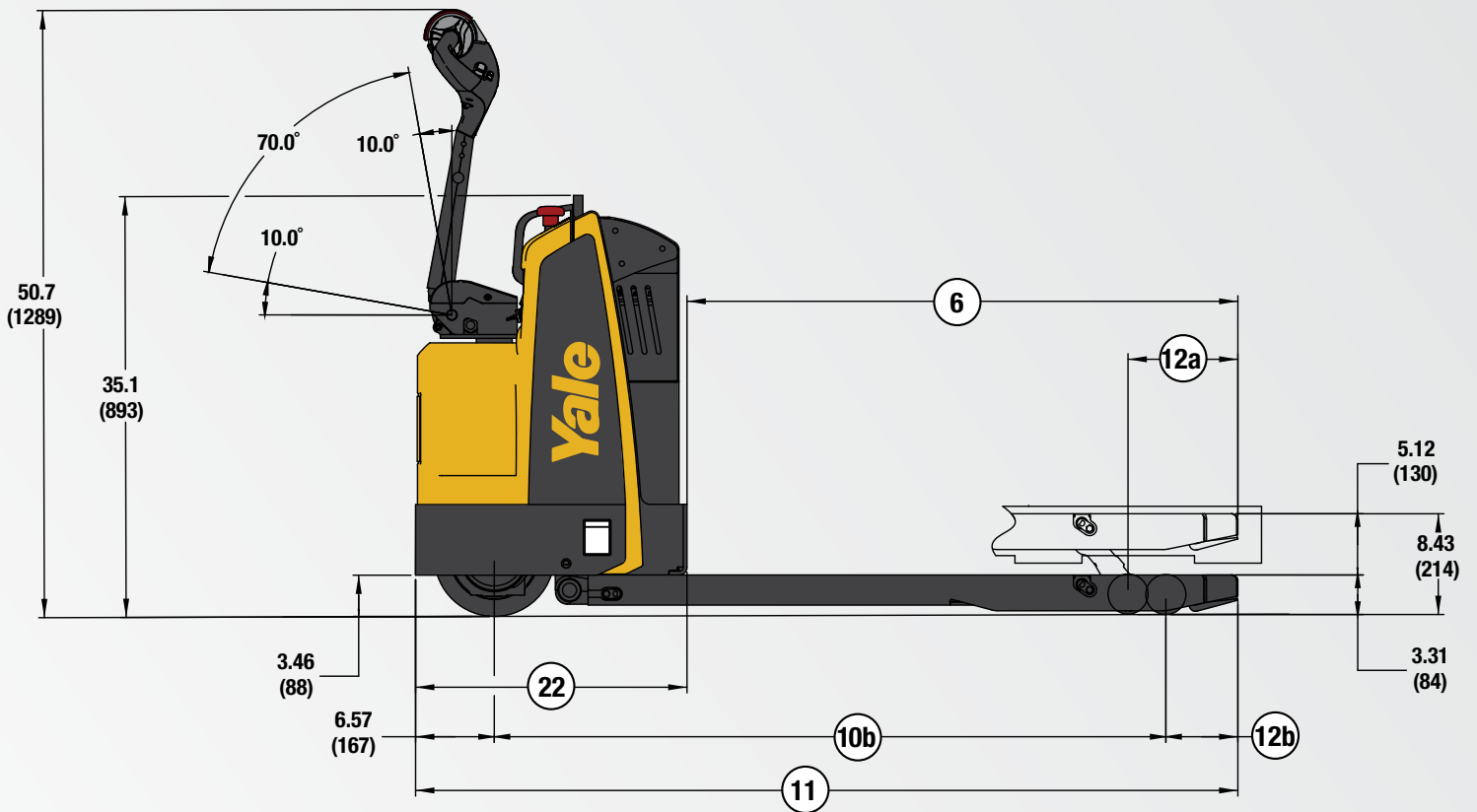
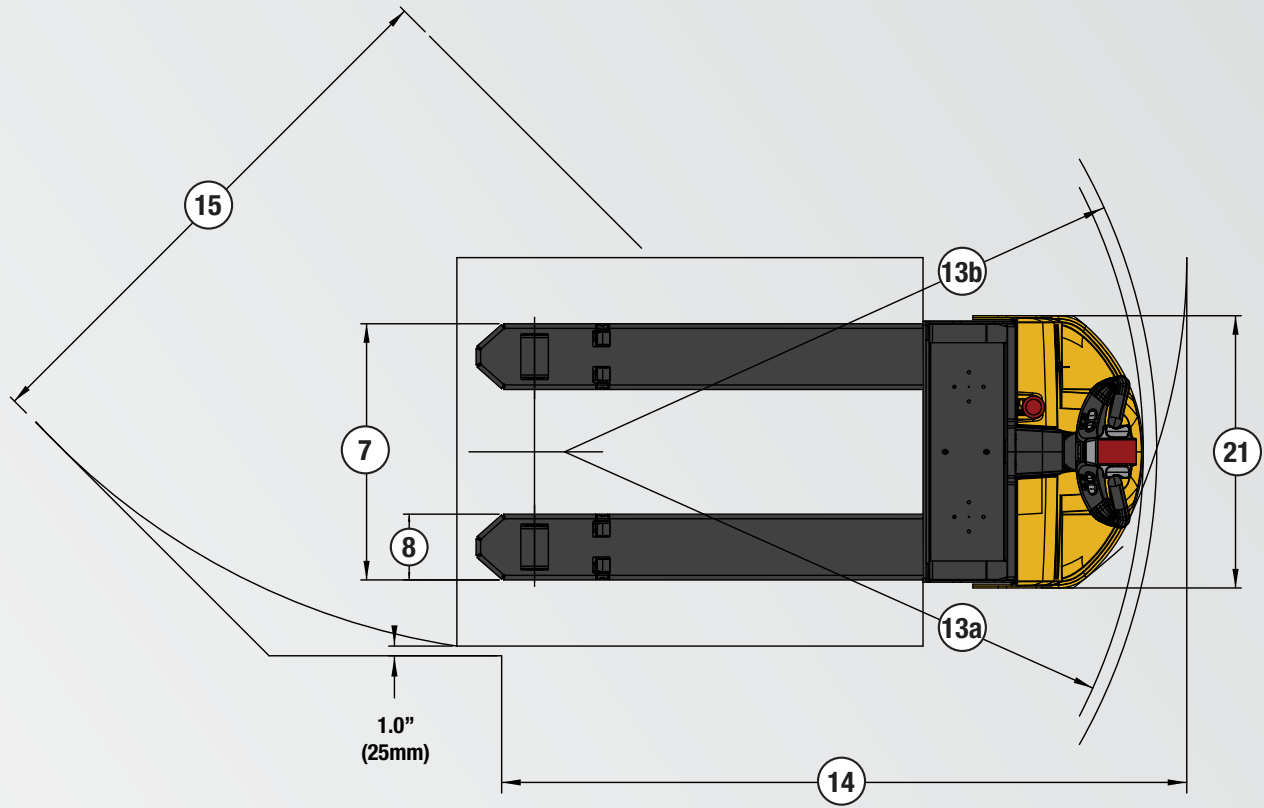
Forks and Frame

The 46" heavy duty, formed, boxed-in, steel forks are fabricated for strength and robustness. An integrated fork torsion box, heavy duty torsion bar and linkage all work together to reduce torsional twisting and load sway. The highly engineered heavy duty drive frame casting and weldment are the backbone of the MPB, featuring tightly controlled tolerances. All pivot points incorporate "X" groove bushings and hardened, nickel-plated flag pins to resist corrosion. All pivot points include high pressure grease fittings for servicing.

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GENERAL	1	Manufacturer		Yale			
	2	Model Designation		MPB045VG			
	3	Power Type		24 Volt			
	4	Operator Type		Pedestrian			
	5	Rated Capacity	lb (kg)	4500 (2041)			
	6a	Fork Length – Nominal	in (mm)	36 (914)	42 (1067)	48 (1219)	
	6b	Fork Length – Actual	in (mm)	34 (866)	43 (1084)	46 (1169) 48 (1219)	
	7	Fork Overall Width	in (mm)	27 (685)			
	8	Fork Width (Individual Fork)	in (mm)	7 (172)			
DIMENSIONS	9	Load Distance – Face of Forks to Center of Load Wheels	in (mm)	25 (635)	37 (931)	40 (1016)	
	10a	Wheelbase – Raised	in (mm)	41.0 (1042)	49.6 (1261)	53.0 (1346)	
	10b	Wheelbase – Lowered	in (mm)	44.2 (1122)	52.8 (1340)	56.1 (1425)	
	11	Overall Length	in (mm)	56.8 (1442)	65.4 (1660)	68.7 (1745) 70.7 (1795)	
	12a	Center of Load Wheel to Tip of Forks – Raised	in (mm)	9.1 (231)		11.1 (283)	
	12b	Center of Load Wheel to Tip of Forks – Lowered	in (mm)	6.1 (155)		8.1 (205)	
	13a	Outside Turning Radius (Bumper) - Raised	in (mm)	47.6 (1208)	57.1 (1449)	59.5 (1511)	
		Outside Turning Radius (Bumper) - Lowered	in (mm)	50.8 (1289)	60.3 (1530)	62.7 (1592)	
	13b	Outside Turning Radius (Handle) - Raised	in (mm)	48.9 (1242)	57.5 (1460)	60.8 (1545)	
		Outside Turning Radius (Handle) - Lowered	in (mm)	52.1 (1320)	61.6 (1565)	64.1 (1627)	
	15	Right Angle Stack – Raised	in (mm)	59.6 (1514)	62.6 (1590)	70.6 (1792)	
	16	Equal Intersecting Aisle – Raised	in (mm)	48.3 (1228)	55.0 (1396)	56.8 (1443)	
	17a	Grade Clearance	Chassis	%	67		
	17b		Center of Wheelbase	%	45	36	34
	17c		Forks	%	74		59
	18	Overall Lift Height – Top of Forks	in (mm)	8.4 (214)			
	19	Lowered Height – Top of Forks	in (mm)	3.3 (84)			
	20	Total Lift	in (mm)	5.1 (130)			
	21	Truck Overall Width	in (mm)	28.0 (712)			
	22	Chassis Length	in (mm)	22.7 (576)			
23	Battery Compartment – Standard	in (mm)	26.5 x 8.2 x OPEN (672 x 208 x OPEN)				
PERFORMANCE	24	Maximum Travel Speed – Chassis First – NL/RL	mph (kph)	3.7 / 3.7 (6.0 / 6.0)			
	25	Maximum Travel Speed – Forks First – NL/RL	mph (kph)	3.7 / 3.7 (6.0 / 6.0)			
	26	Number of Speeds		Infinitely Variable			
	27	Traction Motor Control Method Type		AC Transistor			
28	Service Brake Type		Electro-Mechanical				
WT.	29	Truck Weight (approximate) Without Battery – NL/RL	lb (kg)	624.0 / 5124.0 (283.0 / 2324.0)	650.0 / 5150.0 (295.0 / 2336.0)	659.0 / 5159.0 (299.0 / 2340.0)	
	30	Axle Loading – Drive – Static w/Max. Weight Battery – NL	lb (kg)	767 (348)	783 (355)		
	31	Axle Loading – Load Wheel – Static w/Max. Weight Battery – NL	lb (kg)	137 (62)	128 (58)		
WHEELS	32	Drive Tire – Size / Type (Number of Wheels)	in	10.0 x 4.0 / Polyurethane (1)			
	33	Load Wheel – Size / Type (Number of Wheels)	in	3.35 x 4.3 / Polyurethane (2)			
	34	Caster Wheel – Size / Type (Number of Wheels)	in	3.25 x 1.5 / Spring Loaded Polyurethane (2)			
BATTERY	35	Battery Type		Lead Acid			
	36	Ampere Hours – Maximum	ah	300			
	37	Ampere Hours – Minimum	ah	158			
	38	Maximum Weight	lb (kg)	377 (171)			
	39	Minimum Weight	lb (kg)	309 (140)			

NOTE: Above specifications, unless otherwise listed, are for a standard truck without optional equipment.
Right Angle Stack and Equal Intersecting Aisle are calculated using a 40" wide pallet.

RL = Rated Load; NL = No Load

CERTIFICATION: These Yale® lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance specifications are for a truck equipped as described under Standard Equipment on this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature, condition of the operating area, proper service and maintenance of the vehicle. If these specifications are critical, the proposed application should be discussed with your dealer.

6" Lithium-Ion Battery Specifications

GENERAL	1	Manufacturer	Yale				
	2	Model Designation	MPB045VG				
	3	Power Type	24 Volt				
	4	Operator Type	Pedestrian				
	5	Rated Capacity	4500 (2041)				
DIMENSIONS	6	Fork Length (Nominal)	in (mm)	36 (914)	42 (1067)	48 (1219)	48 (1219)
		Fork Length (Actual)	in (mm)	34 (866)	43 (1084)	46 (1169)	48 (1219)
	10a	Wheelbase – Raised	in (mm)	38.5 (979)	47.2 (1199)	50.6 (1284)	50.6 (1284)
	10b	Wheelbase – Lowered	in (mm)	41.7 (1060)	50.3 (1278)	53.7 (1363)	53.7 (1363)
	11	Overall Length	in (mm)	54.3 (1380)	62.9 (1598)	66.3 (1683)	68.2 (1733)
	13a	Outside Turning Radius (Bumper) - Raised	in (mm)	46.5 (1180)	55.0 (1398)	58.4 (1483)	
		Outside Turning Radius (Bumper) - Lowered	in (mm)	49.5 (1258)	59.2 (1503)	61.5 (1561)	
	15	Right Angle Stack – Raised	in (mm)	57.6 (1462)	58.9 (1496)	68.3 (1734)	68.3 (1734)
	16	Equal Intersecting Aisle – Raised	in (mm)	46.7 (1187)	53.0 (1345)	54.8 (1393)	54.8 (1393)
	22	Chassis Length	in (mm)	20.2 (514)	20.2 (514)	20.2 (514)	20.2 (514)
	23	Battery Compartment – Standard with Battery Rollers	in (mm)	26.5 x 6.0 x OPEN (672 x 153 x OPEN)			

Factory Installed

MPB045VG BATTERY & COMPARTMENT SPECIFICATIONS										
Battery	Compartment Dimensions			Battery Dimensions - Max			Capacity Amp-Hours	Battery Connector	Max Capacity	Weight
	Width	Length	Height	X	Y	Z			6 Hr Rate	
	in (mm)			in (mm)					amp hr (kwh)	
Standard Battery Pack	26.5 (672mm)	8.2 (208mm)	Open	26.0 (660mm)	7.8 (198mm)	23.8 (605mm)	208	None	4.0	353 lbs (160 kg)
AGM Battery	26.5 (672mm)	8.2 (208mm)	Open	26.0 (660mm)	7.8 (198mm)	23.8 (605mm)	224	None	4.4	388 lbs (176 kg)
Lithium-Ion	26.5 (672.0mm)	6.0 (153.0mm)	Open	6.7 (171mm)	5.4 (136mm)	23.1 (586mm)	56	None	N/A	92lbs (42 kg)

Dealer/Customer Installed

MPB045VG BATTERY & COMPARTMENT SPECIFICATIONS										
Battery	Compartment Dimensions			Battery Dimensions - Max			Capacity Amp-Hours	Battery Connector	Max Capacity	Weight
	Width	Length	Height	X	Y	Z			6 Hr Rate	
	in (mm)			in (mm)					amp hr (kwh)	
GNB PalletPro Battery	26.5" (672mm)	8.2" (208mm)	Open	25.3" (643mm)	7.6" (193mm)	24.5" (623mm)	195	SB-175 Red	4.5	400 lbs (181 kg)
Industrial Battery	25.5" (672mm)	9.1" (231mm)	Open	25.5" (645mm)	8.7" (221mm)	23.3" (591mm)	300	SB-175 Red	5.9	560 lbs (254 kg)

- Notes:
- a) Battery size is limited by rounded corners of battery compartment.
 - b) Cable lead position "B"
 - c) 16" cable length
 - d) Maximum cable gauge of 1/0

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Pallet Entry and Exit

Yale® fork design provides industry leading pallet entry and exit. Standard fork tips feature a tapered fork nose and blunt ends to allow for repositioning of pallets and enhances pallet entry.

Wheels, Tires, and Casters

The standard load wheel configuration is a single load wheel with two roller bearings for long life. A “knock-out” axle provides for quick and easy maintenance. A 10" x 4" pressed-on rubber drive tire is standard. The drive wheel is secured to the drive axle with 5 bolts.

Load Wheel Positioning

The integrated extended runner surface supports the fork inside the pallet preventing the load wheel and linkage from dropping down into the pallet opening. The rear angle of the runner surface matches the entry angle to allow for smooth exit from pallets. A minimized skid shoe under clearance reduces load wheel impact on pallet boards.

Battery Pack and Charger

Two battery box configurations are available. Various choices of battery compartment sizes, power alternatives, and on-board, chassis mounted smart chargers are available.

The battery pack consists of four premium 6-volt, deep-cycle flooded cell batteries. The top batteries swing out to enable easy inspection and maintenance of the lower batteries. The charger operates from a 110-volt outlet and includes a detachable AC

power cord. The battery capacity is 170 Ah at a 6 hour rate (201 Ah at a 20 hour) rate. To charge the batteries, simply plug the power cord into the battery charge port and outlet. The charger automatically prevents the truck from being operated.

Additional Features

Standard equipment includes key switch, electronic horn, Creep Speed, cowl mounted battery disconnect switch, and battery discharge indicator with hour meter display.

Options

- Power alternatives
 - Wet cell battery power pack
 - Absorbed Glass Mat (AGM) maintenance free battery power pack
 - Lithium-Ion Advanced Performance Power System
- Battery charger
 - 20 amp 110 volt on-board high frequency smart charger
 - 20 amp 220 volt on-board high frequency smart charger
- 9.1" x 25.5" battery compartment
- 6.0" x 26.5" battery compartment
- Cast aluminum control handle
- Stabilizers
 - Adjustable bolt-on stability tabs
 - Heavy duty quick adjust casters with greaseable or sealed wheel and pivot bearing
- Load backrest
 - 48" high bolt-on
 - 54" high bolt-on
 - 60" high bolt-on
 - 72" high bolt-on
 - 58.5" high moveable

- Load backrest mounted or magnetic battery mounted convenience tray
- Brake override drive / tow switch
- Yale Smart Slow Down™
- Yale Smart Lift™
- Fork lengths
 - 34" – short tip
 - 42" – short tip
 - 48" – standard tip
- 22" (560mm) overall fork width
- Cooler/Freezer Package – operating temperatures: 0° F to +120° F
- SubZero Freezer Package – operating temperatures: -40° F to +120° F
- Wash Down Package – operating temperatures: 0° F to +120° F
- Extreme Corrosion/Wash Down Package – operating temperatures: 0° F to +120° F
- Drive tire options:
 - 10" X 4" pressed-on-smooth polyurethane
 - 10" X 4" mold-on smooth polyurethane
 - 10" X 4" pressed-on non-marking rubber
 - 10" X 4" pressed-on red EZ polyurethane grooved
 - 10" x 4" molded-on vulkollan polyurethane
- Single vulkollan load wheel
- Stainless steel greaseable or sealed bearing
- Self-adjusting audible alarm



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Manufactured in our own ISO 9001 and 14001 Registered Facilities

2516-1C 3/2016 All trucks shown with optional equipment.

Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale® Industrial Truck Dealer if any of the information shown is critical to your application.

Specifications are subject to change without notice. This truck meets all applicable mandatory requirements of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture.

Classified by Underwriters' Laboratories, Inc., as to fire and electric shock hazard only for Type E industrial trucks.