

Yale

Electric Powered Cushion Tire Trucks

ERC030AH ERC040AH

Yale ERC-AH electric trucks are available in 3,000 and 4,000 pound capacities designed for demanding applications that require clean, quiet-running, heavy-duty capability. These trucks are extremely maneuverable and offer plenty of power and high stacking ability, while also offering excellent ergonomics, reliability and maintenance ease.

AC Transistor Traction Control

AC technology offers smooth acceleration and directional changes, proportional regenerative braking and the Auto Deceleration System. The controller converts battery power to three phase AC power, and adjusts frequency and current to meet performance demands. Performance control settings and extensive diagnostics are accessible by technicians through the dash display or a PC. A master controller utilizing CANbus technology monitors and controls key truck components and systems. The thermal management system monitors component temperature and gradually adjusts performance to prevent damage to key components.

Controller Area Network (CANbus)

CANbus technology streamlines communications between truck systems through one main master controller. Dash display, traction controller and optional pump controller are all controlled via the CANbus network. A connection point is provided for interface with a service PC.

Electrical System

The ERC-AH utilizes AC motor technology designed for exceptional performance. It uses a brushless induction motor for high starting torque and smooth rapid acceleration. A speed sensor built into the motor provides feedback to the control system, allowing motor speed and direction to be continuously monitored. A thermal management system controls the power delivered to the motor during stall conditions, thereby protecting the motors from damage.

Brake

Duo-serve hydraulic brakes are self-adjusting and self-energizing for reduced pedal effort. The master cylinder is sealed and has an external fluid level sensor connected to a warning light on the instrument module. A foot applied/hand-released parking brake is manually adjustable and has an audible warning if the operator leaves the truck without applying the brake. The standard Auto Deceleration System automatically slows the truck when the operator's foot is removed from the accelerator pedal, extending brake life. An optional seat-operated parking brake is available, which engages the brake when the operator leaves the truck.

Voltage

36 or 48 volt systems are available in two different battery compartment sizes to meet a variety of application requirements.

A solid-state, return-to-neutral feature reduces the possibility of inadvertent truck movement. The truck will not start forward or rearward until the direction selector lever has been moved through neutral. The truck is equipped with a direction lever on each side of the steering column.

Dash Display

The dash display includes an hour meter, 40 character LCD display for status codes and descriptions, battery discharge indicator with lift interrupt, warning lights for brake fluid, seat belt indicator, and parking brake indicator. The display also permits access for service technicians to adjust performance control settings, allowing the truck to be customized to meet customer applications. Additionally, extensive diagnostics allow service technicians to quickly troubleshoot problems. The optional premium display adds operator selectable performance modes, operator passwords and a pre-shift operator checklist.

Foot Directional Control Pedal (FDC) (optional)

The foot directional control pedal is a highly productive directional/accelerator pedal. One pedal allows the operator to change direction and acceleration reducing operator movement and resulting in increased productivity.

Hydraulic Components

An optional transistor control hydraulic system is powered by a brushless, AC induction motor with a flexible coupling that joins the motor to the pump for long drive life and low noise. The motor and pump are mounted on rubber isolators for reduced noise and vibration. A combination of flexible wire-braid hoses and steel tubing is used to simplify the hydraulic plumbing. These hydraulic lines are carefully routed and held in place to reduce possible damage. A dip-stick located on the right-hand step area allows checking of hydraulic oil without removing the floor plate. A 10-Micron full flow hydraulic filter located in the return line protects the hydraulic system from contaminants and helps provide long life. A by-pass relief valve permits oil flow in the event of the filter clogging.

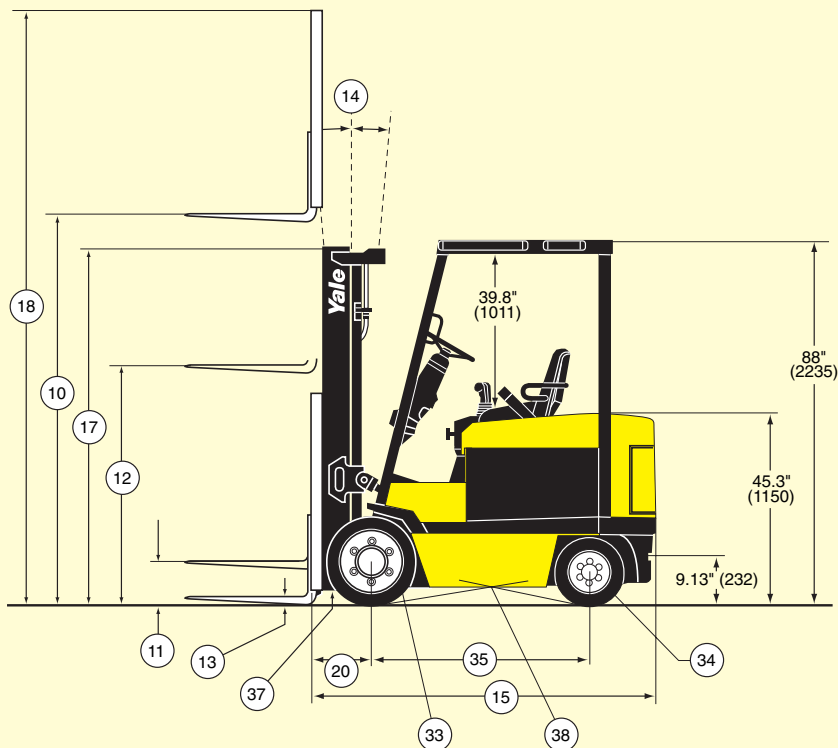
Hydrostatic Power Steering

Hydrostatic power steering is standard and the all-hydraulic design gives precise, reliable control while eliminating mechanical linkages and road shocks at the steering wheel. A seven position tilt steering column provides excellent operator comfort and visibility. A brushless motor is timed off when not in use, conserving energy and reducing noise levels.

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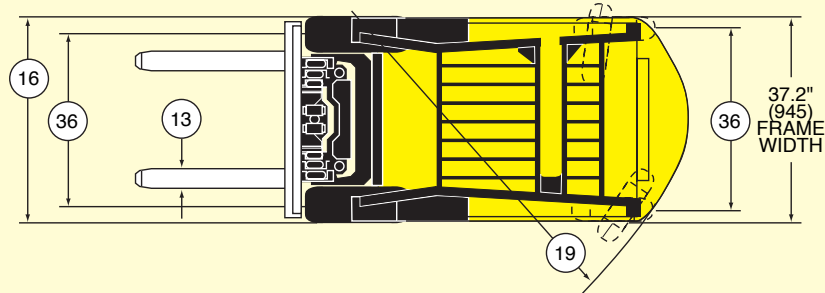
Truck shown with optional equipment



Dimensions displayed in inches. Dimensions in parenthesis represent millimeters.

GENERAL	1	Manufacturer	Manufacturer's Name	YALE	
	2	Model	Manufacturer's Designation	ERC030AH	
	3	Capacity	Rated Capacity	lb. (kg)	3,000 (1500)
	4	Load Center	Distance	in. (mm)	24 (500)
	5	Power Type	Electric	Electric	
	6	Operator Type	Sit	Sit	
	7	Tire Type	Cushion, Solid, Pneumatic, Etc.	Front/Rear	C / C
	8	Wheels	Number (x=Driven) Front/Rear	2x / 2	
DIMENSIONS	10		Standard Lift (Top of Fork)	in. (mm)	131.0 (3330)
	11	Upright Lift	Standard Free Lift (Top of Fork)	in. (mm)	5.5 (140)
	12		Opt. Free Lift (TOF) W-W/O LBR	in. (mm)	34.4 (875) / 60.0 (1524)
	13	Forks	Width/Thickness	in. (mm)	4 (100) / 1.50 (40)
	14	Tilt Angle	Standard Upright-Forward/Backward	Degrees	6 / 8
	15		Length to Face of Forks	in. (mm)	75.14 (1908)
	16	Overall	Width (Standard Tires)	in. (mm)	37.20 (945)
	17	Dimensions	Height Std., Upright Lowered	in. (mm)	84.0 (2130)
	18		Hgt. Std. Upright Ext-W-W/O LBR	in. (mm)	180.6 (4587) / 155.0 (3938)
	19	Turning Radius	Minimum (Outside)	in. (mm)	64.17 (1630)
	20	Load Distance	Center of Wheel to Face of Forks	in. (mm)	14.2 (360)
	22	Aisle Width	(Add load length for 90 Degree Stacking)	in. (mm)	78.37 (1990)
PERF.	23	Stability	Comply with ANSI?	Yes	
	24	Speeds	**Travel Speed Std. - No Load/With Load	Voltage	36 48
			Travel Speed Max - No Load/With Load	mph (km/h)	8.6 (13.8) / 8.0 (12.8) 11.1 (17.8) / 10.5 (16.9)
			Lift Speed - No Load/With Load	mph (km/h)	11.1 (17.9) / 11.1 (17.9) 11.1 (17.9) / 11.1 (17.9)
			Lowering Speed - No Load/With Load	ft/min (m/s)	107 (.54) / 75 (.36) 134 (.68) / 96 (.49)
	25			ft/min (m/s)	93 (.47) / 100 (.51) 93 (.47) / 100 (.51)
	26				
30	Total Approximate Weight	Standard Truck (W/O Battery)	lb. (kg)	5070 (2300)	
WHEELS & TIRES	31	Axle Loading*	Static W/Rated Load-Front/Rear (Max Batt)	lb. (kg)	8773 (3979) / 1949 (884)
	32		Number - Front/Rear	2 / 2	
	33	Tires	Size Front	18 x 6 x 12.1	
			Rear	15 x 5 x 11.25	
	35	Wheelbase	Distance	in. (mm)	48.03 (1220)
	36	Tread	Center of Tires - Front/Rear	in. (mm)	31.2 (793) / 32.17 (817)
	37	Ground	Lowest Point	in. (mm)	3.54 (90)
	38	Clearance	No Load at Center of Wheelbase	in. (mm)	4.08 (104)
	39	Brakes	Service/Parking - Method of Control	Foot/Foot	
			Service/Parking - Method of Operation	Hydraulic/Mechanical	
BATT.	Battery		Voltage	36 48	
		Type	Lead-Acid		
		Volts/Ampere Hrs. (Max)	v/ah	36 / 880 48 / 660	
		Minimum Weight	lb. (kg)	1850 (839)	
MOTORS	Electric Motors	Drive Motor - 60-Min. Rating	hp. (kw)	14.1 (10.5) 14.1 (10.5)	
		Pump Motor - 15-Min. Rating - AC/DC	hp. (kw)	18.7 (14)/12.6 (9.4) 18.7 (14)/16.7 (12.5)	
		Drive Motor Control Method	Transistor		
		Number of Speeds	Infinitely Variable		
		Relief Pressure	For Attachments	psi.	2250

* Based on triplex mast with maximum battery weight. ** Extended shift enabled



Dimensions displayed in inches. Dimensions in parenthesis represent millimeters.

GENERAL	1	Manufacturer	Manufacturer's Name		YALE
	2	Model	Manufacturer's Designation		ERC040AH
	3	Capacity	Rated Capacity	lb. (kg)	4,000 (1814)
	4	Load Center	Distance	in. (mm)	24 (500)
	5	Power Type	Electric		Electric
	6	Operator Type	Sit		Sit
	7	Tire Type	Cushion, Solid, Pneumatic, Etc.	Front/Rear	
DIMENSIONS	8	Wheels	Number (x=Driven) Front/Rear		2x / 2
	10		Standard Lift (Top of Fork)	in. (mm)	131.0 (3330)
	11	Upright Lift	Standard Free Lift (Top of Fork)	in. (mm)	5.5 (140)
	12		Opt. Free Lift (TOF) W-W/O LBR	in. (mm)	34.4 (875) / 60.0 (1524)
	13	Forks	Width/Thickness	in. (mm)	4 (100) / 1.50 (40)
	14	Tilt Angle	Standard Upright-Forward/Backward	Degrees	6 / 8
	15		Length to Face of Forks	in. (mm)	77.51 (1969)
	16	Overall	Width (Standard Tires)	in. (mm)	38.98 (990)
	17	Dimensions	Height Std., Upright Lowered	in. (mm)	84.0 (2130)
	18		Hgt. Std. Upright Ext-W-W/O LBR	in. (mm)	180.6 (4587) / 155.0 (3938)
	19	Turning Radius	Minimum (Outside)	in. (mm)	66.38 (1686)
20	Load Distance	Center of Wheel to Face of Forks	in. (mm)	14.2 (360)	
22	Aisle Width	(Add load length for 90 Degree Stacking)	in. (mm)	80.58 (2047)	
PERF.	23	Stability	Comply with ANSI?		Yes
				Voltage	36 48
	24	Speeds	**Travel Speed Std. - No Load/With Load	mph (km/h)	8.5 (13.6) / 7.6 (12.2) 11.0 (17.7) / 10.2 (16.4)
	25		Travel Speed Max. - No Load/With Load	mph (km/h)	11.1 (17.9) / 11.1 (17.9) 11.1 (17.9) / 11.1 (17.9)
	26		Lift Speed - No Load/With Load	ft/min (m/s)	107 (.54) / 67 (.38) 134 (.68) / 88 (.49)
			Lowering Speed - No Load/With Load	ft/min (m/s)	93 (.47) / 100 (.51) 93 (.47) / 100 (.51)
WHEELS & TIRES	30	Total Approximate Weight	Standard Truck (W/O Battery)	lb. (kg)	5955 (2701)
	31	Axle Loading*	Static W/Rated Load-Front/Rear (Max Batt)	lb. (kg)	10194 (4624) / 2036 (924)
	32		Number - Front/Rear		2 / 2
	33	Tires	Size Front		18 x 7 x 12.1
	34		Rear		15 x 5 x 11.25
	35	Wheelbase	Distance	in. (mm)	48.03 (1220)
	36	Tread	Center of Tires - Front/Rear	in. (mm)	31.97 (812) / 32.17 (817)
	37	Ground	Lowest Point	in. (mm)	3.54 (90)
	38	Clearance	No Load at Center of Wheelbase	in. (mm)	4.08 (104)
	39	Brakes	Service/Parking - Method of Control		Foot/Foot
BATT.	40		Service/Parking - Method of Operation		Hydraulic/Mechanical
				Voltage	36 48
	41		Type		Lead-Acid
	42	Battery	Volts/Ampere Hrs. (Max)	v/ah	36 / 880 48 / 660
	43		Minimum Weight	lb. (kg)	1850 (839)
MOTORS	44		Drive Motor - 60-Min. Rating	hp. (kw)	14.1 (10.5) 14.1 (10.5)
	45	Electric	Pump Motor - 15-Min. Rating	hp. (kw)	18.7 (14)/12.6 (9.4) 18.7 (14)/16.7 (12.5)
		Motors	Drive Motor Control Method		Transistor
			Number of Speeds		Infinitely Variable
55	Relief Pressure	For Attachments	psi.	2250	

* Based on triplex mast with maximum battery weight. ** Extended shift enabled

(continued from front page)

Steering Axle

The steering axle is a one-piece ductile iron casting mounted on elastic cushions that reduce shock and provide a softer ride.

Masts\Carriage\Forks\Load Backrest Extension

Yale Global Hi-Vis simplex, duplex and triplex masts provide excellent visibility. The mast features flush face design with geometrically matched, angled load rollers, which are canted, yet provide full-face roller contact. The mast front rail flange angle coupled with the inverted "J" inner channel and three degree mast rollers significantly reduces channel web milling and roller wear. Top accessible, "J-hook" mast mounting system allows convenient mast installation and removal. The J-hook mounting is standardized to allow direct mast interchangeability on a variety of Yale truck models without modification. Bronze steel backed bushings reduce mounting wear. Class II six-roller carriages are standard. Forks are "upset forged" from a single piece of high-strength steel to give added strength and thickness for wear. A 48" load backrest extension is standard.

Frame

The frame is a unitized construction, stress tested for durability. An integral step on both sides of the truck is provided for easy entry and exit. The truck has a two-piece floor plate that can be easily lifted out for service access without removing any hardware. A large, easily removable counterweight cover gives easy access to componentry. A fiberglass, gas spring-assisted battery cover allows easy changing of the battery. The battery compartment can be fitted with rollers or slides.

Additional Features

Additional features on the ERC-AH include an overhead guard, 42" forks, a contoured bucket type seat (6" fore and aft adjustment) with a hip restraint seat belt and an operator sensing switch. A seven position tilt steering column, rubber floor mat, electric horn and ignition lock are also standard.

Options

AC transister hydraulics
Foot Directional Control Pedal
Premium dash display
Convenience Box
Cold storage/corrosion packages
Raised battery compartment cover
Wide tread
Semi-suspension seats
Full suspension seats
Various battery compartment lengths
Battery rollers/sliders

Overhead guard mounted headlights
Lowered overhead guard
Drive-in rack overhead guard
Various light packages
10° forward tilt
Integral sideshifter
48 volt
Alarm - Back-up (87 dBA)
Light - Amber strobe
Rear work light
Various type drive tires
Type "EE" and "ES" UL construction

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 design specifications of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc. as to fire hazard only for type "E" and optional "EE" and "ES" for industrial trucks.

Standard Lift Specifications

(For other available mast heights - Contact your local Yale Dealer)

Model	O.A.H.	Free Fork Ht.	Max Fork Ht.	Tilt	Drive Tire		O.A.W.	
	in.(mm)				in.(mm)	in.(mm)	Rwd-Fwd	Size
					030	040	030	040
Simplex	76 (1930)	5.5 (140)	115 (2930)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	84 (2130)	5.5 (140)	131 (3330)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	92 (2330)	5.5 (140)	150 (3730)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	100 (2530)	5.5 (140)	154 (3930)	8° - 6°	18 x 6	18 x 7	37.2	39.0
Duplex	76 (1930)	5.2 (1320)	117 (2990)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	84 (2130)	6.0 (1524)	133 (3390)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	92 (2330)	6.7 (1700)	149 (3790)	8° - 6°	18 x 6	18 x 7	37.2	39.0
	100 (2530)	7.5 (1905)	161 (4090)	8° - 6°	18 x 6	18 x 7	37.2	39.0
Triplex	76 (1930)	5.1 (1295)	171 (4350)	5° - 6°	18 x 6	18 x 7	37.2	39.0
	82 (2080)	5.8 (1473)	188 (4800)	5° - 6°	18 x 6	18 x 7	37.2	39.0
	84 (2130)	6.0 (1524)	194 (4950)	5° - 6°	18 x 6	18 x 7	37.2	39.0
	94 (2380)	7.0 (1778)	218 (5550)	5° - 6°	18 x 6	18 x 7	37.2	39.0
	100 (2530)	7.5 (1905)	230 (5850)	5° - 6°	18 x 6	18 x 7	37.2	39.0

*Without backrest - With backrest subtract 48 inches from mast O.A.H.

Battery and Compartment Specifications

Model	Compartment Size	Battery Specifications										
		Size			Electrical			Weight				
		WD	LG	HT	Dim X Min Max	Dim Y † Min Max	Dim Z Max	Volts	Plates	Max Amp Hr	Min †	Max
ERC030AH	Std	34.57	27.36	24.29	30.87 34.49	25.75 27.24	23.79	36	17	880	1850	2496
ERC040AH	Std	34.57	27.36	24.29	30.87 34.49	25.75 27.24	23.79	48	13	660	1850	2496
ERC030AH	Opt	35.79	27.36	24.29	30.87 35.71	25.75 27.24	23.79	36	19	990	1850	2496
ERC040AH	Opt	35.79	27.36	24.29	30.87 35.71	25.75 27.24	23.79	48	15	770	1850	2496

36-volt battery uses Anderson SB-350 Gray connector position "B".
48-volt battery uses Anderson SB-350 Blue connector position "B".

† Smaller batteries require capacity reduction.

Lift and Lower Speeds ft/min (m/s), 3,000 Capacity

Battery	Lift Empty	Lift Loaded	Lower Empty	Lower Loaded	Weight (lbs.) Std. Truck w/o Battery
36-Volt					
AH - (Contactor hydraulics and standard hoist motor)					
Simplex	78 (0.39)	48 (0.24)	93 (0.47)	100 (0.51)	5070
Duplex	76 (0.38)	48 (0.24)	73 (0.37)	91 (0.46)	5154
Triplex	72 (0.36)	47 (0.23)	81 (0.41)	94 (0.48)	5408
48-Volt					
AH - (Contactor hydraulics and standard hoist motor)					
Simplex	99 (0.50)	67 (0.34)	93 (0.47)	100 (0.51)	5070
Duplex	97 (0.49)	67 (0.34)	73 (0.37)	91 (0.46)	5154
Triplex	93 (0.47)	66 (0.33)	81 (0.41)	94 (0.48)	5408

Lift and Lower Speeds ft/min (m/s), 4,000 Capacity

Battery	Lift Empty	Lift Loaded	Lower Empty	Lower Loaded	Weight (lbs.) Std. Truck w/o Battery
36-Volt					
AH - (Contactor hydraulics and standard hoist motor)					
Simplex	78 (0.39)	43 (0.21)	93 (0.47)	100 (0.51)	5955
Duplex	76 (0.38)	43 (0.21)	73 (0.37)	91 (0.46)	6039
Triplex	72 (0.36)	42 (0.21)	81 (0.41)	94 (0.48)	6293
48-Volt					
AH - (Contactor hydraulics and standard hoist motor)					
Simplex	99 (0.50)	61 (0.31)	93 (0.47)	100 (0.51)	5955
Duplex	97 (0.49)	61 (0.30)	73 (0.37)	91 (0.46)	6039
Triplex	93 (0.47)	59 (0.30)	81 (0.41)	94 (0.48)	6293



Manufactured in our own ISO 9001:2000 Registered Facilities

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