

# VA series

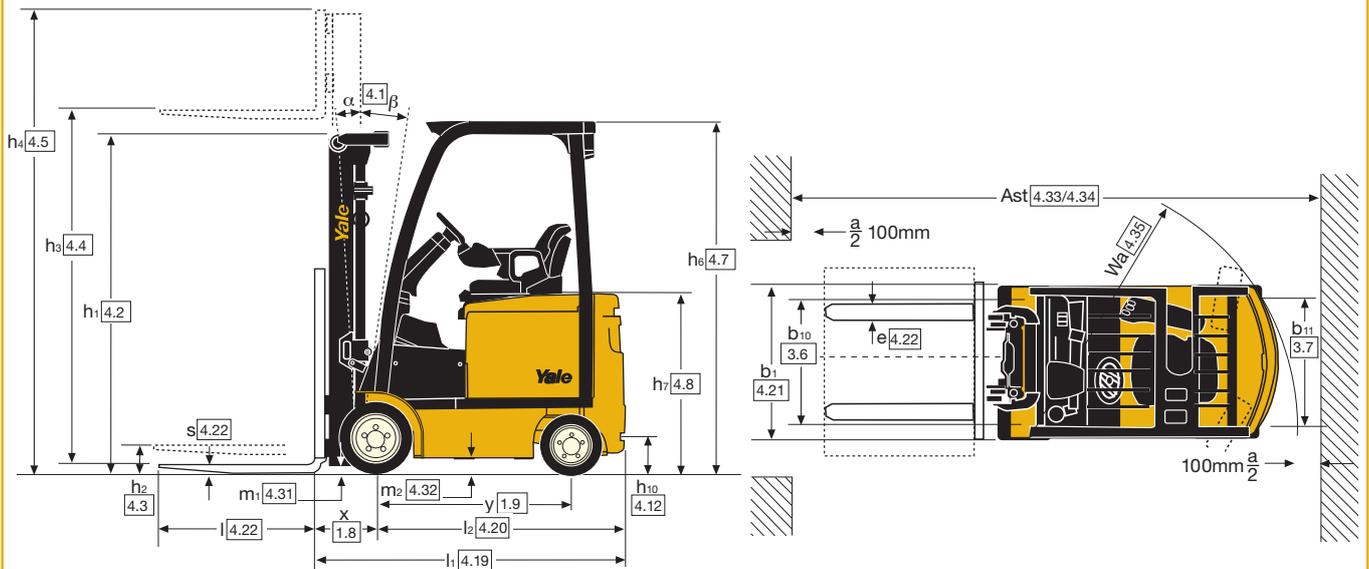
1,600kg / 1,800kg / 2,000kg

## Electric Forklift Trucks



- YaleStop automatic park brake eliminates uncontrolled roll-back on ramps
- Auto deceleration
- CANbus technology
- High-performance AC motor technology
- Continuous Stability Enhancement
- eLo and HiP performance settings

## Truck Dimensions



## ERC 16VA, ERC 18VA mast details and capacity ratings (kg) - Cushion tyres

Model		ERP 16 VA										ERP 18 VA						
Tyre size, front		18 x 6 x 12-1/8										18 x 6 x 12-1/8						
Overall width, front		945mm										945mm						
Mast	h <sub>1</sub> (mm)	h <sub>2</sub> +s (mm)	h <sub>3</sub> +s (mm)	h <sub>4</sub> (mm)	Tilt		Forks			Integral sideshift			Forks			Integral sideshift		
					F	B	Load centre (kg)			Load centre (kg)			Load centre (kg)			Load centre (kg)		
2 Stage LFL	2180	140	3430	4006 <sup>(1)</sup>	5	5	1600	1530	1360	1600	1450	1320	1800	1700	1540	1790	1610	1460
	2380	140	3830	4406 <sup>(1)</sup>	5	5	1600	1520	1360	1600	1440	1310	1800	1690	1530	1780	1600	1460
	2730	140	4330	4906 <sup>(1)</sup>	5	5	1600	1510	1360	1560	1430	1300	1760	1640	1490	1690	1560	1420
2 Stage FFL	2180	1505 <sup>(2)</sup>	3415	4012 <sup>(1)</sup>	5	5	1600	1530	1360	1600	1450	1320	1800	1700	1540	1790	1610	1460
3 Stage FFL	2130	1466 <sup>(2)</sup>	4900	5474 <sup>(1)</sup>	5	5	1520*	1440*	1290*	1520*	1360*	1240*	1670*	1570*	1420*	1650*	1480*	1350*
	2280	1616 <sup>(2)</sup>	5200	5774 <sup>(1)</sup>	5	5	1400*	1400*	1250*	1410*	1320*	1200*	1460*	1460*	1370*	1470*	1440*	1300*
	2380	1716 <sup>(2)</sup>	5500	6074 <sup>(1)</sup>	5	5	1240*	1240*	1210*	1240*	1240*	1160*	1280*	1280*	1280*	1280*	1280*	1260*

\* Wide tread required. (1) Add 649mm with load backrest extension. (2) Deduct 649mm with load backrest extension.

## ERC 20VA mast details and capacity ratings (kg) - Cushion tyres

Model		ERP 20 VA										
Tyre size, front		18 x 7 x 12-1/8										
Overall width, front		986mm										
Mast	h <sub>1</sub> (mm)	h <sub>2</sub> +s (mm)	h <sub>3</sub> +s (mm)	h <sub>4</sub> (mm)	Tilt		Forks			Integral sideshift		
					F	B	Load centre (kg)			Load centre (kg)		
2 Stage LFL	2180	140	3430	4006 <sup>(1)</sup>	5	5	2000	1900	1720	2000	1800	1630
	2380	140	3830	4406 <sup>(1)</sup>	5	5	2000	1890	1710	1990	1790	1630
	2730	140	4330	4906 <sup>(1)</sup>	5	5	1950	1840	1670	1920	1750	1590
2 Stage FFL	2180	1505 <sup>(2)</sup>	3415	4012 <sup>(1)</sup>	5	5	2000	1880	1710	1980	1790	1620
3 Stage FFL	2130	1466 <sup>(2)</sup>	4900	5474 <sup>(1)</sup>	5	5	1800*	1780*	1610*	1810*	1680*	1530*
	2280	1616 <sup>(2)</sup>	5200	5774 <sup>(1)</sup>	5	5	1560*	1560*	1560*	1570*	1570*	1490*
	2380	1716 <sup>(2)</sup>	5500	6074 <sup>(1)</sup>	5	5	1360*	1360*	1360*	1360*	1360*	1360*

\* Wide tread required.

<sup>(1)</sup> Add 649mm with load backrest extension.

<sup>(2)</sup> Deduct 649mm with load backrest extension.

All values are nominal values and they are subject to tolerances. For further information, please contact the manufacturer.

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Lift trucks illustrated may feature optional equipment.

Values may vary with alternative configurations.

## VDI 2198 – General Specifications

			Yale	Yale	Yale	
Distinguishing mark	1.1	Manufacturer (abbreviation)		Yale	Yale	
	1.2	Manufacturer's type designation		<b>ERC 16VA</b>	<b>ERC 18VA</b>	<b>ERC 20VA</b>
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric (Battery)	Electric (Battery)	Electric (Battery)
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated	Seated
	1.5	Rated capacity/rated load	Q (t)	1.6	1.8	2.0
	1.6	Load centre distance	c (mm)	500	500	500
	1.8	Load distance, centre of drive axle to fork	x (mm)	360	360	360
	1.9	Wheelbase	y (mm)	1220	1220	1220
	Weights	2.1	Service weight	kg	3414	3532
2.2		Axle loading, laden front/rear	kg	4233 / 782	4547 / 786	4881 / 838
2.3		Axle loading, unladen front/rear	kg	1506 / 1908	1479 / 2053	1473 / 2246
Tyres/chassis	3.1	Tyres: L = pneumatic, V = cushion, SE = superelastic		V	V	V
	3.2	Tyre size, front		18 x 6 x 12.125	18 x 6 x 12.125	18 x 7 x 12.125
	3.3	Tyre size, rear		15 x 5 x 11.25	15 x 5 x 11.25	15 x 5 x 11.25
	3.5	Wheels, number front/rear (x = driven wheels)		2X / 2	2X / 2	2X / 2
	3.6	Tread, front	b <sub>10</sub> (mm)	788 / 939	788 / 939	808 / 906
	3.7	Tread, rear	b <sub>11</sub> (mm)	822	822	817
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)	5 / 5	5 / 5
4.2		Height, mast lowered	h <sub>1</sub> (mm)	2180	2180	2180
4.3		Free lift ▼	h <sub>2</sub> (mm)	100	100	100
4.4		Lift ▼	h <sub>3</sub> (mm)	3390	3390	3390
4.5		Height, mast extended +	h <sub>4</sub> (mm)	4006	4006	4006
4.7		Height of overhead guard (cabin) ○	h <sub>6</sub> (mm)	2250	2250	2250
4.8		Seat height relating to SIP/stand height ✕	h <sub>7</sub> (mm)	1161	1161	1161
4.12		Coupling height	h <sub>10</sub> (mm)	232	232	232
4.19		Overall length	l <sub>1</sub> (mm)	2908	2929	2968
4.20		Length to face of forks	l <sub>2</sub> (mm)	1908	1929	1968
4.21		Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	945 / 1091	945 / 1091	986 / 1084
4.22		Fork dimensions ISO2331	s/e/l (mm)	40 / 80 / 1000	40 / 80 / 1000	40 / 100 / 1000
4.23		Fork carriage ISO 2328, class/type A, B		2A	2A	2A
4.24		Fork carriage width ▶	b <sub>3</sub> (mm)	907	907	907
4.31		Ground clearance, laden, below mast	m <sub>1</sub> (mm)	87	87	87
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	92	92	92
4.34.1		Aisle width for pallets 1000 x 1200 crossways	A <sub>st</sub> (mm)	3216	3226	3261
4.34.2	Aisle width for pallets 800 x 1200 lengthways	A <sub>st</sub> (mm)	3404	3417	3452	
4.35	Turning radius	W <sub>a</sub> (mm)	1644	1657	1692	
4.36	Internal turning radius	b <sub>13</sub> (mm)	417	447	447	
Performance data	5.1	Travel speed, laden/unladen ✓	km/h	18.4 / 18.4	18.4 / 18.4	18.4 / 18.4
	5.2	Lift speed, laden/unladen	m/s	0.53 / 0.72	0.49 / 0.72	0.47 / 0.72
	5.3	Lowering speed, laden/unladen	m/s	0.51 / 0.47	0.51 / 0.47	0.51 / 0.47
	5.5	Drawbar pull, laden/unladen	N	3156 / 2862	3088 / 2804	3023 / 2745
	5.6	Max. drawbar pull, laden/unladen	N	12964 / 12422	12709 / 12178	12459 / 11924
	5.7	Gradeability, laden/unladen	%	5.8 / 7.4	5.6 / 7.4	5.4 / 7.4
	5.8	Max. gradeability, laden/unladen	%	24.2 / 34.0	23.5 / 33.8	23.2 / 33.6
	5.9	Acceleration time, laden/unladen ✓	s	4.8 / 4.4	4.9 / 4.4	5.0 / 4.5
	5.10	Service brake		Hydraulic	Hydraulic	Hydraulic
	Electric-engine	6.1	Drive motor rating S2 60 min	kW	18.4	18.4
6.2		Lift motor rating at S3 15%	kW	15.9	15.9	15.9
6.3		Battery according to DIN 43531/35/36 A, B, C, no		no	no	no
6.4		Battery voltage/nominal capacity K5	(V)/(Ah)	48 / 660	48 / 660	48 / 660
6.5		Battery weight	kg	943 / 1132	943 / 1132	943 / 1132
6.6		Energy consumption according to VDI cycle *	kWh/h @Nr of Cycles	4.5	4.93	5.53
Addition data	10.1	Operating pressure for attachments	bar	180	180	180
	10.2	Oil volume for attachments ◊	l/min	20-40	20-40	20-40
	10.7	Sound pressure level at the driver's seat ★	dB(A)	68	68	68
	10.8	Towing coupling, type DIN		Pin	Pin	Pin

★ Measured according to the test cycles and based on the weighting values contained in EN12053.

▼ Bottom of forks.

✕ Full suspension specified.

▶ Without load backrest.

▶ Add 43mm with load backrest.

○ h<sub>6</sub> subject to +/- 5mm tolerance.

◊ Maximum flow set through dash display.

✓ HiP performance setting.

\* eLo performance setting.

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# VA series

Models: ERC 16VA, ERC 18VA, ERC 20VA



**Yale VA** electric trucks are designed for demanding applications that require clean, quiet-running, heavy-duty capability. They are extremely manoeuvrable, powerful with high stacking ability and also offer excellent ergonomics, reliability and ease of maintenance.

## AC Technology

The AC technology traction motor is suitable for the most arduous applications with smooth forward and reverse directional changes.

## Brakes

The fully automatic park brake is applied when the truck stops and is de-activated once the accelerator pedal is pressed. The Auto Deceleration System (ADS) automatically slows the truck when the operator's foot is removed from the accelerator pedal.

## Steering

The AC motor drives a pump providing oil pressure for all the hydraulic functions including steering. The adjustable steering column is mounted on the truck's cowl providing unrestricted floor space. The maintenance free Continuous Stability Enhancement system (CSE) optimizes steer axle geometry to reduce truck lean by limiting articulation. Transmission of shocks and vibrations to the operator and load when travelling over uneven ground conditions are reduced.

## Performance modes

The 'eLo' energy saving setting provides energy efficient performance for continuous operation over longer periods, increasing the time between battery charges. A 'HiP' high performance setting can be activated if more demanding application conditions and higher productivity are required.

Truck performance can be further tailored via the 'heads up' display. Application requirements or operator preferences can be set by selecting one of the 4 performance modes, further adjustable by trained service technicians.

## Ergonomics

The operator is positioned ergonomically for safety, comfort, visibility and ease of operation. Whole Body Vibration (WBV) transmitted to the operator is reduced by the full suspension seat, providing a comfortable working environment, reducing fatigue and increasing productivity.

A low intermediate anti-slip step, clear footwell and generous floorspace with non-slip rubber floor mat provide easy 'on' and 'off' access from both sides. Front and rear (with horn) operator grab handles aid entry and driving in reverse.

Contoured manual levers are standard. A 'Forward/Reverse' direction switch is integrated into the hoist lever with an emergency stop button and horn located in the manual lever console.

The AccuTouch™ mini-lever module (MLM) provides intuitive operation of all control functions with a cushioned arm and palm rest and mini levers for fingertip control. Travel direction is displayed on the 'heads up' display.

'Return to set tilt' and '4th function with clamp' options are integrated into the MLM, alleviating operator fatigue when aligning forks for load drop and retrieval.

The 'heads up display', located on the overhead guard, improves the operators field of vision for more productive load handling. Truck status and critical functions to be easily checked, including:

- Battery charge condition
- Hours worked
- Direction of travel
- Performance setting
- Motor temperature
- Low brake fluid
- Seat belt reminder
- Time

The dashboard has storage space including a clipboard holder as well as light switches and an optional 12V socket.

## Masts

A full range of Yale Hi-Vis, 2 stage LFL and 2 and 3 stage FFL masts are available, designed for durability and reliability with widely spaced channels, lift chains and main lift cylinders for maximum visibility.

## Low lifetime costs

Lower maintenance costs are achieved primarily through the use of Hall Effect sensors, 'O' Ring face seals, an electric park brake, CANbus and AC Technology. The Vehicle Systems Manager (VSM) monitors and controls key truck components and systems. An advanced thermal management system monitors component temperature, gradually adjusting performance to prevent key component damage.

Auto-regenerative braking reduces service brake usage contributing to an increase in component life. 1000 hours service intervals are standard on most components.

## Options

- AccuTouch™ mini-levers
- Return to set tilt
- Foot directional control
- Lighting kits, including LED lights
- Audible back up alarm
- Visible alarm strobe
- Load weight indicator
- Impact sensor
- Telescoping steering column with tilt memory
- Cold storage/freezer packages
- Drive-in rack overhead guard
- Integral sideshift
- Dual rear view mirrors
- Swivel seat.

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**Safety:** This truck conforms to the current EU requirements. Specification is subject to change without notice.

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