

## VM Series

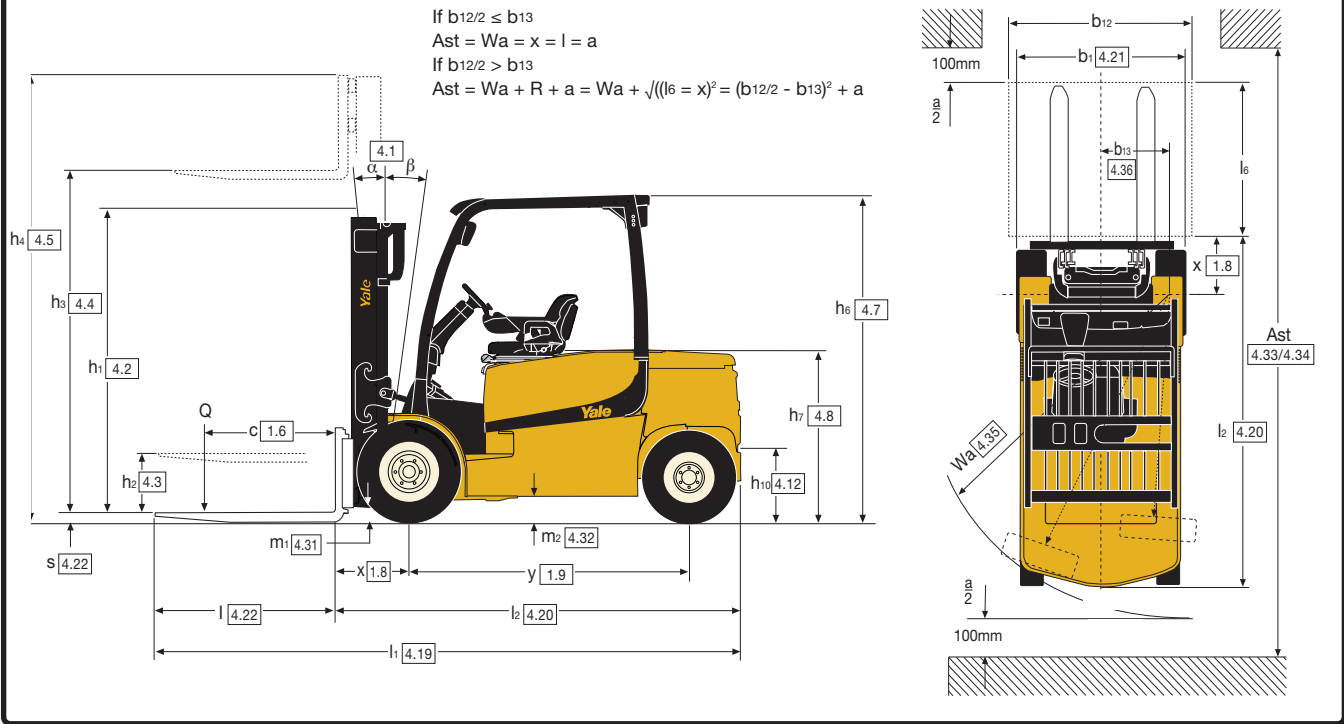
### Electric Forklift Trucks

4,000kg, 4,500kg and 5,000kg



- Unique combination of Dual Front Drive and Extended Steering Axle
- IP65 sealed axle with dual AC 14.7kW motors
- Class 4 mast and Class IIIA carriage combined with robust chassis construction for industry leading load handling stability

## Truck Dimensions



## ERP 40VM Mast details and capacity ratings (kg) - Supercushion tyres

Model						ERP 40 VM						
Tyres						250 x 15						
Width across tyres						1130mm tread						
Masts	OAH h1	FFH h2+s	MFH h3+s	h4	Tilt		Forks Load Centre			Integral Sideshift Load Centre		
					F	B	500	600	700	500	600	700
2 Stage LFL (V)	2320	150	3350	4109 <sup>(1)</sup>	6	6	4000	3500	3480	4000	3500	3370
	2470	150	3650	4409 <sup>(1)</sup>	6	6	4000	3500	3470	4000	3500	3360
	2770	150	4250	5009 <sup>(1)</sup>	6	6	4000	3500	3460	3990	3500	3350
	3220	150	4950	5709 <sup>(1)</sup>	6	6	4000	3500	3430	3950	3500	3320
2 Stage FFL (F)	2320	1514 <sup>(2)</sup>	3375	4187 <sup>(2)</sup>	6	6	4000	3500	3500	4000	3500	3430
	2470	1664 <sup>(2)</sup>	3675	4487 <sup>(2)</sup>	6	6	4000	3500	3490	4000	3500	3430
3 Stage FFL (E)	2334	1564 <sup>(2)</sup>	4950	5762 <sup>(2)</sup>	6	6	4000	3500	3440	3980	3500	3360
	2434	1664 <sup>(2)</sup>	5250	6062 <sup>(2)</sup>	6	6	4000	3500	3430	3970	3500	3350
	2534	1764 <sup>(2)</sup>	5550	6362 <sup>(2)</sup>	6	6	4000	3500	3420	3970	3500	3350
	2734	1964 <sup>(2)</sup>	6000	6812 <sup>(2)</sup>	6	6	3890	3410	3320	3850	3410	3250

<sup>(1)</sup> Add 482mm with load backrest extension. <sup>(2)</sup> Deduct 435mm with load backrest extension. <sup>(3)</sup> Add 435mm with load backrest extension.

## ERP 45VM, ERP 50VM Mast details and capacity ratings (kg) - Supercushion tyres

Model						ERP 45 VM						ERP 50 VM						
Tyres (front / rear)						250 x 15						28 x 12.5-15						
Width across tyres						1130mm tread						1167mm tread						
Masts	OAH h1	FFH h2+s	MFH h3+s	h4	Tilt		Forks Load Centre			Integral Sideshift Load Centre			Forks Load Centre			Integral Sideshift Load Centre		
					F	B	500	600	700	500	600	700	500	600	700	500	600	700
2 Stage LFL (V)	2320	150	3090	3855 <sup>(1)</sup>	6	6	4500	4100	3880	4480	4090	3760	4990	4500	3950	4910	4490	3950
	2470	150	3390	4155 <sup>(1)</sup>	6	6	4500	4100	3870	4470	4080	3760	4990	4500	3950	4900	4480	3950
	2770	150	3990	4755 <sup>(1)</sup>	6	6	4500	4100	3860	4450	4060	3740	4990	4500	3950	4880	4460	3950
	3220	150	4690	5455 <sup>(1)</sup>	6	6	4500	4100	3820	4410	4030	3710	4910	4410	3950	4760	4350	3950
	3620	150	5290	6055 <sup>(1)</sup>	6	6	4410	4020	3720	4300	3920	3610	4700	4240	3950	4540	4150	3950
4020	150	5890	6655 <sup>(1)</sup>	6	6	4260	3890	3580	4130	3770	3470	4450	4040	3750	4300	3930	3640	
2 Stage FFL (F)	2470	1658 <sup>(4)</sup>	3560	4371 <sup>(5)</sup>	6	6	4500	4100	3880	4500	4100	3810	4990	4500	3950	4970	4500	3950
3 Stage FFL (E)	2370	1558 <sup>(4)</sup>	4835	5647 <sup>(5)</sup>	6	6	4440	4050	3790	4390	4020	3710	4790	4310	3950	4690	4290	3950
	2470	1658 <sup>(4)</sup>	5135	5947 <sup>(5)</sup>	6	6	4380	3990	3730	4320	3950	3640	4690	4220	3950	4580	4190	3950
	2570	1758 <sup>(4)</sup>	5435	6247 <sup>(5)</sup>	6	6	4310	3930	3660	4240	3880	3580	4590	4130	3880	4470	4090	3800

<sup>(1)</sup> Add 482mm with load backrest extension. <sup>(4)</sup> Add 429mm with load backrest extension. <sup>(5)</sup> Deduct 429mm with load backrest extension.

# VDI 2198 - General Specifications

Characteristics	1.1	Manufacturer	Yale			Yale			Yale			
	1.2	Model designation	ERP40VM			ERP45VM			ERP50VM			
	1.3	Power: battery, diesel, LPG, electric mains	Battery			Battery			Battery			
	1.4	Operation: manual, pedestrian, stand, seat, order picker	Seat			Seat			Seat			
	1.5	Load capacity	Q (kg)	4000			4500			4999		
	1.6	Load centre	c (mm)	500			500			500		
	1.8	Load distance	x (mm)	549			549			549		
	1.9	Wheelbase	y (mm)	2020			2020			2020		
	Weights	2.1	Unladen weight (max. battery) □	kg	7384			7517			7821	
2.2		Axle loading laden, front/rear (max. battery)	kg	9941	1442		10737	1280		11603	1219	
2.3		Axle loading unladen, front/rear (max. battery)	kg	3916	3468		3958	3559		4070	3751	
Wheels and Tyres	3.1	Tyres: L = pneumatic, V = cushion, SE = supercushion	SE			SE			SE			
	3.2	Tyre size, front	250 X 15			250 X 15			28 X 12.5-15			
	3.3	Tyre size, rear	7.00 x 12			7.00 x 12			7.00 x 12			
	3.5	Number of wheels, front/rear (X = driven)	2X	2		2X	2		2X	2		
	3.6	Track width, front, standard/wide tread	b10 (mm)	1110	1167		1110	1167		-----	1167	
	3.7	Track width, rear	b11 (mm)	1143			1143			1143		
	Dimensions	4.1	Mast tilt, forward $\alpha$ /back $\beta$	degrees	6	6		6	6		6	6
4.2		Height of mast lowered	h1 (mm)	2320			2320			2320		
4.3		Free lift ▼	h2 (mm)	100			100			100		
4.4		Lift height ▼	h3 (mm)	3300			3040			3040		
4.5		Height of mast extended +	h4 (mm)	4109			3855			3855		
4.7		Height to top of overhead guard ○	h6 (mm)	2338			2338			2338		
4.8		Seat height ✕	h7 (mm)	1285			1285			1285		
4.12		Towing coupling height	h10 (mm)	526			526			526		
4.19		Overall length	l1 (mm)	3908			3908			3908		
4.20		Length to face of forks	l2 (mm)	2908			2908			2908		
4.21		Overall width, standard/wide tread	b1/b2 (mm)	1360	1472		1360	1472		----	1472	
4.22		Fork dimensions	s/e/l (mm)	50	125	1000	50	125	1000	50	150	1000
4.23		Fork carriage DIN 15173. Class, A/B		IIIA			IIIA			IIIA		
4.24		Fork carriage width ▶	b3 (mm)	1219			1219			1219		
4.31		Ground clearance under mast, laden	m1 (mm)	135			137			137		
4.32		Ground clearance at centre of wheelbase	m2 (mm)	130			130			134		
4.33		Aisle width with pallets 1000mm x 1200mm wide	Ast (mm)	4161			4161			4161		
4.34		Aisle width with pallets 800mm x 1200mm long	Ast (mm)	4336			4336			4336		
4.35		Outer turning radius	Wa (mm)	2411			2411			2411		
4.36		Inner turning radius, standard/wide tread	b13 (mm)	313			313			313		
Performance	5.1	Travel speed with/without load ●	km/h	20.0	21.0		20.0	21.0		20.0	21.0	
	5.2	Lifting speed with/without load	m/sec	0.44	0.60		0.38	0.47		0.36	0.47	
	5.3	Lowering speed with/without load	m/sec	0.53	0.48		0.45	0.37		0.45	0.37	
	5.5	Drawbar pull with/without load, 60 minute rating	N	6422	6561		6493	6640		6487	6627	
	5.6	Maximum drawbar pull with/without load, 5 minute rating	N	17203	17725		17382	17904		17377	17891	
	5.7	Gradeability with/without load, 30 minute rating,	%	8.1	11.8		7.7	11.7		7.3	11.3	
	5.8	Maximum gradeability laden/unladen, 5 minute rating	%	15.6	23.0		14.9	22.7		14.1	22.2	
	5.9	Acceleration time with/without load ●	sec	5.1	4.6		5.2	4.6		5.3	4.6	
	5.10	Service brake		Hydraulic			Hydraulic			Hydraulic		
	Motors	6.1	Drive motor output, (S2 60 minute rating)	kW	2 x 14.7		2 x 14.7		2 x 14.7			
6.2		Lifting motor, (S3 15% rating)	kW	36			36			36		
6.3		Battery to DIN 43531/35/36 A, B, C, no		43536A			43536A			43536A		
6.4		Battery voltage/capacity at 5hr rate	V/ah	80	840 / 930		80	840 / 930		80	840 / 930	
6.5		Battery weight (min/max)	kg	2069	2287		2069	2287		2069	2287	
6.6		Power consumption in accordance with VDI cycle ■	kWh/h	10.6			11.2			12.3		
Other	8.1	Drive control		AC electronic			AC electronic			AC electronic		
	8.2	Working pressure for attachments	bar	155			155			155		
	8.3	Oil flow for attachments †	l/min	20-40			20-40			20-40		
	8.4	Average noise level at operator's ear ★	dB(A)	69			69			69		
	8.5	Towing coupling type		Pin			Pin			Pin		

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

▼ Bottom of forks.

† Variable

✕ Full Suspension seat specified.

▶ Add 30mm with load backrest.

+ Without load backrest.

○ h6 subject to +/- 5 mm tolerance.

● HIP performance.

■ eLo performance

□ Weights are based on the following specifications:  
Complete truck with 3350mm (ERP40VM) / 2990mm (ERP45-50VM), 2 stage limited free lift mast, standard carriage, 1000mm forks and load backrest, manual hydraulics and Supercushion drive and steer tyres.

## VM Series

Models: ERP 40VM, ERP 45VM, ERP 50VM

The **VM Series** is designed to handle the loads found in tough indoor or outdoor applications such as timber processors and handlers, automotive manufacturers, paper/pulp, beverage / bottle handling and breweries / distilleries, metal works and fabricators, cargo storage and warehousing, building and construction. Offers many functions and features, including eLo and HiP performance settings and high mounted multi feature dash display which can be found on all Yale counterbalance trucks.

### Productivity

- 80V dual front wheel drive with AC motors throughout (hoist/steer and traction)
- HiP performance setting offers the ultimate in eBalance
- Dual drive motor and Extended Steering Axle is a unique feature in this capacity segment, which allows for excellent manoeuvrability and productivity, thanks to a 4161mm turning aisle width for 4-5t (1000mm x 1200mm pallet), while still offering unrivalled operator foot space and comfort
- The truck is designed for heavy duty usage and has superb residual capacity allowing operations to be productive through confident load handling
- Offers the fastest travel speeds in the industry (21km/h unladen) to match ICE truck performance with a stunning maximum laden lift speed of 0.44 m/s. Designed to meet the requirements of intensive applications where high productivity is of the essence
- Available options, which enhance productivity include; mini levers integrated into the armrest, light kits, carriage with integral side shift, full or partial cabins including optional heater, programmable maintenance reminder option.

### Ergonomics

- Yale focuses on ensuring that the operator's first hour is as productive as the last. The lowest vibration seat (0.5m/s<sup>2</sup> according to EN13059 - Safety of Industrial Trucks), low noise motors and pumps and the acclaimed Accutouch MiniLevers and armrest all ensure that the operator is comfortable at all times.
- The standard truck features a low noise level of 69dB(A).

- The dual drive motors and ZTR steer axle deliver a very tight turning circle, allowing the truck to be long enough to feature a very spacious operator compartment
- Supercushion tyres for a comfortable ride over rough terrain
- Options - Full or partial cabin with heater option, high backrest seat with lumbar, mini lever module and armrest, telescopic steer column with memory tilt, quiet hydraulic pump option (standard with full cab option, delivering 70dB(A), for unbeatable cabin comfort).

### Cost of Ownership

- Designed to deliver the optimal balance between productivity and energy consumption (e-Balance) to give you a low cost per pallet moved in varying application conditions
- Designed to be the most robust electric CB on the market, to withstand the rigours of the toughest applications
- IP65 rated drive axle for the ultimate protection during outdoor use
- 840-930 Ah 80V DIN batteries available
- Oil immersed brakes and automatic park brakes - Save money and have lower maintenance requirements.

### Dependability

- Part of the successful V range that has brought you industry leading reliability
- Strong construction and proven components ensure long term reliability and durability e.g. VSM (Vehicle system manager), O-ring face seal fittings, AC motors, sealed electrical connectors, Hall Effect sensors, solid state encoders
- Robust truck with highly rigid construction has been designed with a heavy duty mast and axle for excellent load handling capability and high residual capacity, in order to ensure fast, stable load handling and high productivity in arduous and intensive heavy duty applications
- Optional auxiliary hydraulic cooler for the most intense lifting applications, side thrust bearings in carriage for attachment use.

### Servicability

- Service intervals = 1000 hours / 6 months
- VSM and CANbus technology - faster troubleshooting and resolution

- Maintenance free automatic park brake
- Oil-immersed brakes service interval = 4000 hours
- Drive axle / transmission oil change interval = 4000 hours
- AC motors on traction and hoist are Maintenance free
- Hydraulic oil change interval = 4000 hours
- Standard warranty = 2000 hours or one year
- Power train warranty = 4000 hours or two years
- Available programmable maintenance reminder.

### Options

- 10 Class III standard mast offerings
- 10 Class IV standard mast offerings
- Class IIIA carriage offerings (also on class 4 masts)
- Wide tread (front) for wide load handling (4-4.5t)
- Load backrest and forks
- Integral side shift
- Auxiliary hydraulic cooler
- Side thrust bearings for attachment usage
- Non marking tyres
- Accutouch Mini levers
- Return to Set Tilt (RTST)
- Swivel full suspension seats (cloth / vinyl)
- High backrest seat with lumbar support and headrest
- Telescopic steering column with memory tilt
- Modular cabin with heater
- FDC
- LED light packages with visible alarm strobe
- Audible back up alarm
- 12V power outlet
- Batteries and chargers
- Extended warranty (36 Months / 6000 hours)
- Dual internal and Panoramic mirror
- Load weight indicator
- Impact sensor
- Keyless start with Operator ID
- Daily Operator checklist
- System Monitoring.



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

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Truck shown with optional equipment