Yale®
People. Products. Productivity.™

VM series

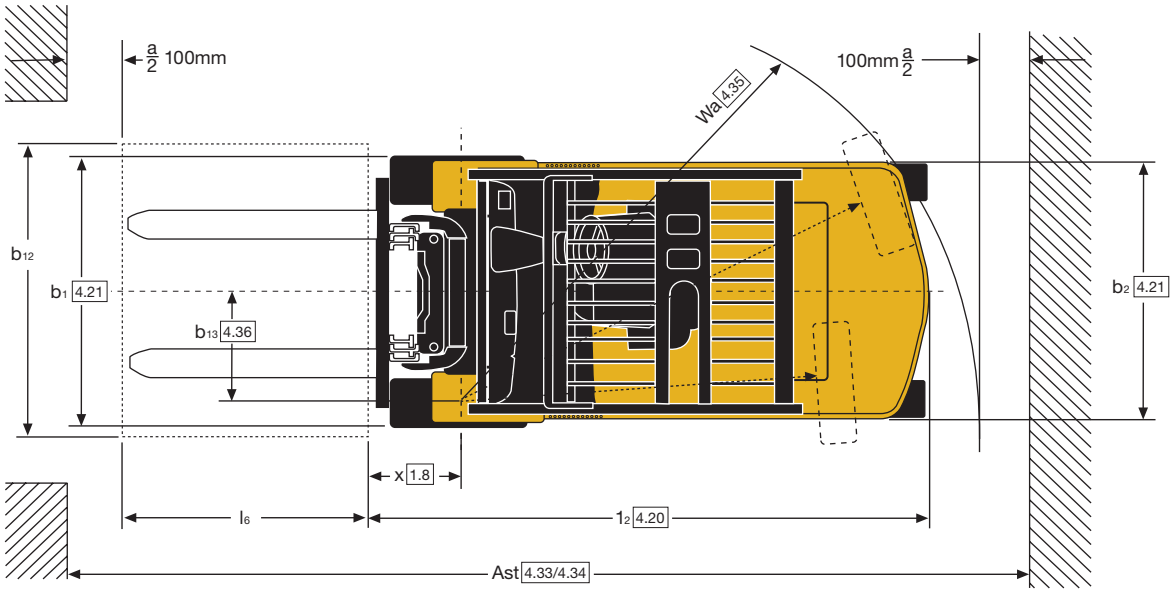
Electric forklift trucks

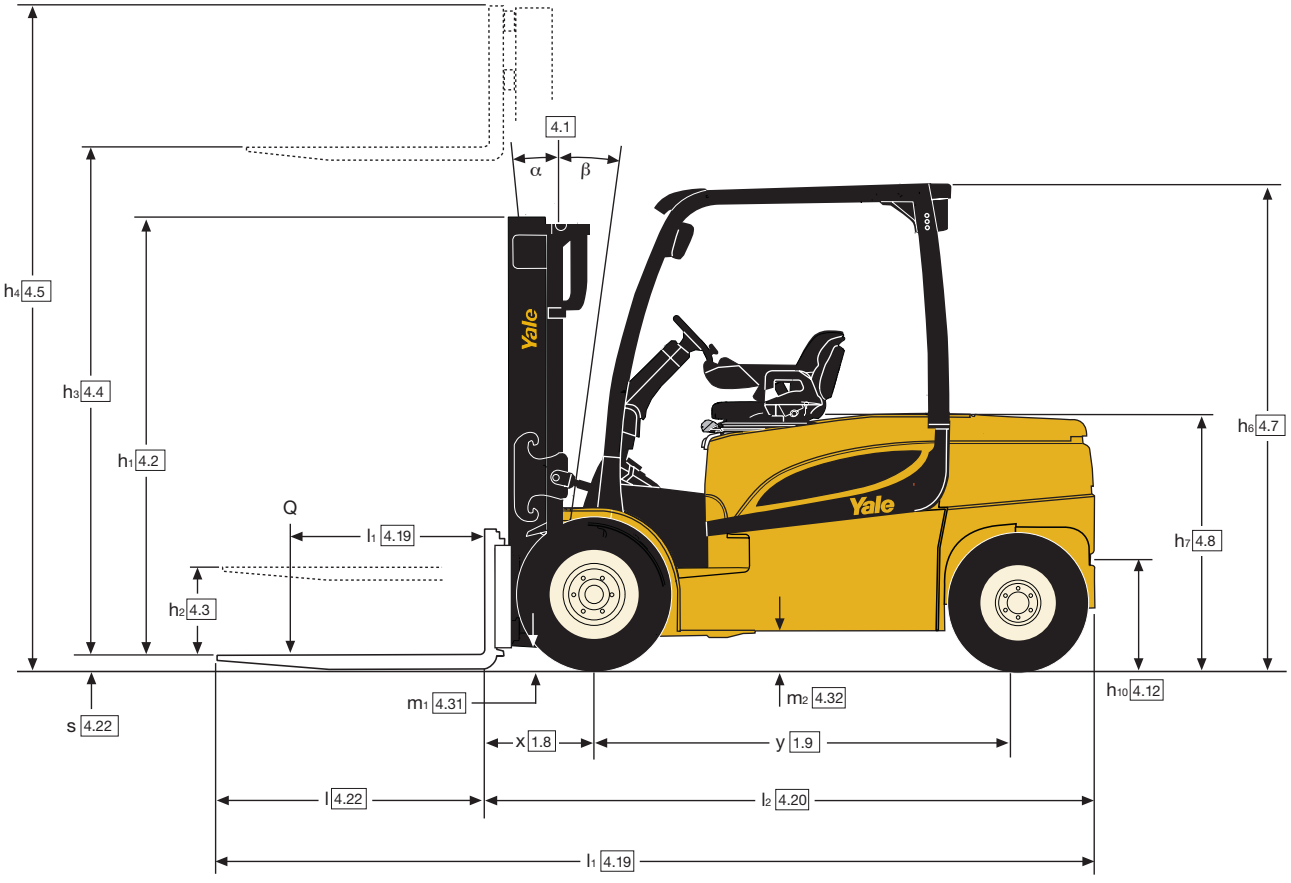
4,000kg / 4,500kg / 5,000kg / 5,500kg

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

Truck Dimensions

If $b_{12}/2 \leq b_{13}$
Ast = $W_a + x + l_6 + a$
If $b_{12}/2 > b_{13}$
Ast = $W_a + R + a = W_a + \sqrt{((l_6 + x)2 + (b_{12}/2 - b_{13})2)} + a$





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

Model							ERP 40VM					
Tyre size, front							250 x 15					
Overall width, front							50 x 120 x 1000mm					
Mast	**h_1 (mm)**	**h_{2+s} (mm)**	**h_3 (mm)**	**h_4 (mm)**	**Tilt**		**Forks**			**Integral sideshift**		
							500	**600**	**700**	**500**	**600**	**700**
					F	**B**	**Load centre kg)**			**Load centre kg)**		
2 Stage LFL	2320	150	3350	4109[1]	6	8	4000	3500	3480	4000	3500	3370
	2470	150	3650	4409[1]	6	8	4000	3500	3470	4000	3500	3360
	2770	150	4250	5009[1]	6	8	4000	3500	3460	3990	3500	3350
	3220	150	4950	5709[1]	6	8	4000	3500	3430	3950	3500	3320
2 Stage FFL	2320	1514[2]	3375	4187[3]	6	8	4000	3500	3500	4000	3500	3430
	2470	1664[2]	3675	4487[3]	6	8	4000	3500	3490	4000	3500	3430
3 Stage LFL	2370	1564[2]	4950	5762[3]	6	8	4000	3500	3440	3980	3500	3360
	2470	1664[2]	5250	6062[3]	6	8	4000	3500	3430	3970	3500	3350
	2570	1764[2]	5550	6362[3]	6	8	4000	3500	3420	3970	3500	3350
	2770	1964[2]	6000	6812[3]	6	8	3890	3410	3320	3850	3410	3250

[1] Add 482mm with load backrest extension.
[2] Deduct 435mm with load backrest extension.
[3] Add 435mm with load backrest extension.

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

Model							ERP 45VM						ERP 50VM					
Tyre size, front							250 x 15						355/50-15					
Overall width, front							50 x 120 x 1000mm						50 x 150 x 1200mm					
Mast	**h_1 (mm)**	**h_{2+s} (mm)**	**h_3 (mm)**	**h_4 (mm)**	**Tilt**		**Forks**			**Integral sideshift**			**Forks**			**Integral sideshift**		
							500	**600**	**700**	**500**	**600**	**700**	**500**	**600**	**700**	**500**	**600**	**700**
					F	**B**	**Load centre kg)**			**Load centre kg)**			**Load centre kg)**			**Load centre kg)**		
2 Stage LFL	2320	150	3090	3855[1]	6	8	4500	4100	3880	4480	4090	3950	4990	4500	3760	4910	4490	3950
	2470	150	3390	4155[1]	6	8	4500	4100	3870	4470	4080	3950	4990	4500	3950	4900	4480	3950
	2770	150	3990	4755[1]	6	8	4500	4100	3860	4450	4060	3950	4990	4500	3740	4880	4460	3950
	3220	150	4690	5455[1]	6	8	4500	4100	3820	4410	4030	3950	4910	4410	3710	4760	4350	3950
	3620	150	5290	6055[1]	6	8	4410	4020	3720	4300	3920	3950	4700	4240	3610	4540	4150	3840
	4020	150	5890	6655[1]	6	8	4260	3890	3580	4130	3770	3750	4450	4040	3810	4300	3930	3640
2 Stage FFL	2470	1658[4]	3559	4371[5]	6	8	4500	4100	3880	4500	4100	3950	4990	4500	3810	4970	4500	3950
3 Stage LFL	2370	1558[4]	4835	5647[5]	6	8	4440	4050	3790	4390	4020	3950	4790	4310	3710	4690	4290	3950
	2470	1658[4]	5135	5947[5]	6	8	4380	3990	3730	4320	3950	3950	4690	4220	3640	4580	4190	3890
	2570	1758[4]	5435	6247[5]	6	8	4310	3930	3660	4240	3880	3880	4590	4130	3580	4470	4090	3800

[1] Add 482mm with load backrest extension.
[4] Add 429mm with load backrest extension.
[5] Deduct 429mm with load backrest extension.

ERP 50VM6, ERP 55VM6 Mast details and capacity ratings (kg) - superelastic tyres

Model							ERP 50VM6						ERP 55VM6					
Tyre size, front							355/50-15						355/50-15					
Overall width, front							50 x 150 x 1200mm						60 x 150 x 1200mm					
Mast	**h_1 (mm)**	**h_{2+s} (mm)**	**h_3 (mm)**	**h_4 (mm)**	**Tilt**		**Forks**			**Integral sideshift**			**Forks**			**Integral sideshift**		
							500	**600**	**700**	**500**	**600**	**700**	**500**	**600**	**700**	**500**	**600**	**700**
					F	**B**	**Load centre kg)**			**Load centre kg)**			**Load centre kg)**			**Load centre kg)**		
2 Stage LFL	2320	150[9]	3090[9]	4030[6]	6	8	5400	5000	4770	5400	5000	4630	5500	5500	5150	5500	5410	5000
	2470	150[9]	3390[9]	4330[6]	6	8	5400	5000	4760	5400	5000	4620	5500	5500	5140	5500	5410	5000
	2770	150[9]	3990[9]	4930[6]	6	8	5400	5000	4750	5400	4990	4610	5500	5500	5130	5500	5390	4980
	3220	150[9]	4690[9]	5630[6]	6	8	5400	5000	4720	5400	4960	4580	5500	5500	5100	5500	5360	4950
	3620	150[9]	5290[9]	6230[6]	6	8	5330	4940	4630	5310	4870	4500	5310	5310	4900	5310	5150	4760
	4020	150[9]	5890[9]	6830[6]	6	8	5110	4740	4420	5070	4650	4290	5070	5070	4680	5090	4920	4540
2 Stage FFL	2170	1184[7][9]	2815[9]	3807[8]	6	8	5400	5000	4710	5390	4950	4570	5500	5160	5160	5420	5010	5010
3 Stage LFL	2170	1178[7][9]	4137	5129[8]	6	8	5400	5000	4690	5380	4930	4560	5500	5110	5110	5380	4970	4970
	2370	1378[7][9]	4690	5682[8]	6	8	5400	5000	4670	5360	4920	4540	5500	5100	5100	5360	4960	4960
	2470	1478[7][9]	4990	5982[8]	6	8	5400	5000	4660	5350	4910	4530	5410	5000	5000	5270	4870	4870
	2570	1578[7][9]	5290	6282[8]	6	8	5350	4950	4610	5290	4860	4490	5310	4910	4910	5160	4770	4700

[6] Add 334mm with load backrest extension
[7] Deduct 282mm with load backrest extension.
[8] Add 282mm with load backrest extension.
[9] Add 10mm for ERP55VM6

VDI 2198 - General Specifications

Distinguishing mark	1.1	Manufacturer (abbreviation)		Yale
	1.2	Manufacturer's type designition		**ERP40VM**
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric (battery)
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated
	1.5	Rated capacity/rated load	Q (t)	4.0
	1.6	Load centre distance	c (mm)	500
	1.8	Load distance, centre of drive axle to fork	x (mm)	523
	1.9	Wheelbase	y (mm)	2020
Weights	2.1	Service weight ■	kg	7435
	2.2	Axle loading, laden front/rear ■	kg	10006 / 1429
	2.3	Axle loading, unladen front/rear ■	kg	3980 / 3455
Tyres/chassis	3.1	Tyres: P=pneumatic, C=cushion, SE=superelastic		SE
	3.2	Tyre size, front		250x15
	3.3	Tyre size, rear		7.00x12
	3.5	Wheels, number front/rear (x = driven wheels)		2X / 2
	3.6	Tread, front *	b_{10} (mm)	1123 / 1167
	3.7	Tread, rear	b_{11} (mm)	1143
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)	6 / 8
	4.2	Height, mast lowered	h_1 (mm)	2320
	4.3	Free lift ▼	h_2 (mm)	100
	4.4	Lift ▼	h_3 (mm)	3300
	4.5	Height, mast extended ✚	h_4 (mm)	4109
	4.7	Height of overhead guard (cabin) ❍	h_6 (mm)	2338
	4.7.1	Cab height (open cab)	(mm)	2350
	4.8	Seat height relating to SIP/stand height ✘	h_7 (mm)	1318
	4.12	Coupling height	h_{10} (mm)	526
	4.19	Overall length	l_1 (mm)	3908
	4.20	Length to face of forks	l_2 (mm)	2908
	4.21	Overall width *	b_1/b_2 (mm)	1373 / 1451
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	50 / 120 / 1000
	4.23	Fork carriage ISO 2328, class/type A, B		3A
	4.24	Fork carriage width ◗	b_3 (mm)	1219
	4.31	Ground clearance, laden, below mast	m_1 (mm)	130
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	177
	4.33	Load dimension $b_{12} \times l_6$ crossways	$b_{12} \times l_6$ (mm)	1000 x 1200
	4.34	Aisle width predetermined load dimensions	A_{st} (mm)	4161
	4.34.1	Aisle width with pallets 1 000 x 1 200 wide	A_{st} (mm)	4161
	4.34.2	Aisle width with pallets 800 x 1 200 long	A_{st} (mm)	4336
	4.35	Turning radius	W_a (mm)	2411
	4.36	Internal turning radius	b_{13} (mm)	313
	4.41	90° intersecting aisle (With pallet W = 1200mm, L = 1000mm)	(mm)	2302
	4.42	Step Height (from ground to running board)	(mm)	840
	4.43	Step Height	(mm)	490
Performance data	5.1	Travel speed, laden/unladen ✔	km/h	20.0 / 21.0
	5.1.1	Travel speed, laden/unladen, backwards	km/h	20.0 / 21.0
	5.2	Lift speed, laden/unladen	m/sec	0.44 / 0.60
	5.3	Lowering speed, laden/unladen	m/sec	0.53 / 0.48
	5.5	Drawbar pull, laden/unladen **	N	6422 / 6561
	5.6	Max. drawbar pull, laden/unladen ***	N	17203 / 17725
	5.7	Gradeability, laden/unladen ****	%	8.1 / 11.8
	5.8	Max. gradeability, laden/unladen ***	%	15.6 / 23.0
	5.9	Acceleration time, laden/unladen ✔	s	5.1 / 4.6
	5.10	Service brake		Hydraulic
Electric-engine	6.1	Drive motor rating S2 60 min	kW	2x / 14.7
	6.2	Lift motor rating at S3 15%	kW	36
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		43536 A
	6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	80 / 840/930
	6.5	Battery weight (min./max)	kg	2069 / 2287
	6.6	Energy consumption according to VDI cycle ✻	kWh/h @Nr of Cycles	10.6
	8.1	Drive control		AC electronic
Addition data	10.1	Operating pressure for attachments	bar	155
	10.2	Oil volume for attachments ◊	l/min	60
	10.3	Hydraulic oil tank, capacity	l	49.6
	10.7	Sound pressure level at the driver's seat ★	dB(A)	68
	10.8	Towing coupling, type DIN		Pin

* Standard / Wide tread
** 60 minute rating
*** 5 minute rating
**** 30 minute rating

■ Max. battery
▼ Bottom of forks
✚ Without load backrest.
❍ h6 subject to +/- 5mm tolerance.

✘ Full suspension seat in depressed position.
◗ Add 30mm with load backrest
✔ HiP performance setting.
✻ eLo performance setting.

◊ Variable
★ LPAZ, measured according to the test cycles and based on the weighting values contained in EN12053.

Yale	Yale	Yale	Yale	1.1	Distinguishing mark
ERP45VM	**ERP50VM**	**ERP50VM6**	**ERP55VM6**	1.2	
Electric (battery)	Electric (battery)	Electric (battery)	Electric (battery)	1.3	
Seated	Seated	Seated	Seated	1.4	
4.5	4.9	5.0	5.5	1.5	
500	500	600	600	1.6	
523	523	581	591	1.8	
2020	2020	2180	2180	1.9	
7568	7821	8656	8867	2.1	Weights
10801 / 1267	11603 / 1219	12236 / 1420	13025 / 1342	2.2	
4022 / 3546	4070 / 3751	4467 / 4189	4520 / 4347	2.3	
SE	SE	SE	SE	3.1	Tyres/chassis
250x15	355/50-15	355/50-15	355/50-15	3.2	
7.00x12	7.00x12	28x9-15	28x9-15	3.3	
2X / 2	2X / 2	2X / 2	2X / 2	3.5	
1123 / 1167	- / 1167	- / 1167	- / 1167	3.6	
1143	1143	1143	1143	3.7	
6 / 8	6 / 8	6 / 8	6 / 8	4.1	Dimensions
2320	2320	2320	2320	4.2	
100	100	100	100	4.3	
3040	3040	3040	3040	4.4	
3855	3855	4030	4030	4.5	
2338	2338	2338	2338	4.7	
2350	2350	2350	2350	4.7.1	
1318	1318	1318	1318	4.8	
526	526	526	526	4.12	
3908	4108	4326	4336	4.19	
2908	2908	3126	3136	4.20	
1373 / 1451	- / 1451	- / 1451	- / 1451	4.21	
50 / 125 / 1000	50 / 150 / 1200	50 / 150 / 1200	60 / 150 / 1200	4.22	
3A	3A	4A	4A	4.23	
1219	1219	1219	1219	4.24	
130	135	135	135	4.31	
177	177	177	177	4.32	
1000 x 1200	1000 x 1200	1000 x 1200	1000 x 1200	4.33	
4161	4161	4381	4391	4.34	
4161	4161	4381	4391	4.34.1	
4336	4336	4555	4565	4.34.2	
2411	2411	2573	2573	4.35	
313	313	337	337	4.36	
2302	2302	2421	2423	4.41	
840	840	840	840	4.42	
490	490	490	490	4.43	
20.0 / 21.0	20.0 / 21.0	20.0 / 21.0	19.5 / 21.0	5.1	Performance data
20.0 / 21.0	20.0 / 21.0	20.0 / 21.0	19.5 / 21.0	5.1.1	
0.38 / 0.47	0.36 / 0.47	0.30 / 0.46	0.30 / 0.46	5.2	
0.45 / 0.37	0.45 / 0.37	0.46 / 0.36	0.46 / 0.36	5.3	
6493 / 6640	6487 / 6627	6602 / 6442	6598 / 6429	5.5	
17382 / 17904	17377 / 17891	17326 / 17880	17312 / 17874	5.6	
7.7 / 11.7	7.3 / 11.3	6.7 / 9.9	6.4 / 9.7	5.7	
14.9 / 22.7	14.1 / 22.2	13.7 / 21.5	13 / 21	5.8	
5.2 / 4.6	5.3 / 4.6	4.70 / 4.20	4.90 / 4.20	5.9	
Hydraulic	Hydraulic	Hydraulic	Hydraulic	5.10	
2x / 14.7	2x 14.7	2x 14.7	2x 14.7	6.1	Electric-engine
36	36	36.0	36.0	6.2	
43536 A	43536 A	43536 A	43536 A	6.3	
80 / 840/930	80 / 840/930	80 / 840/930	80 / 840/930	6.4	
2069 / 2287	2069 / 2287	2069 / 2287	2069 / 2287	6.5	
11.2	12.3	13.10	13.40	6.6	
AC electronic	AC electronic	AC electronic	AC electronic	8.1	
155	155	155	155	10.1	Addition data
60	60	60	60	10.2	
49.6	49.6	49.6	49.6	10.3	
68	68	68	68	10.7	
Pin	Pin	Pin	Pin	10.8	

Weights are based on the following specifications:- Complete truck with 3350mm (ERP40VM) / 2990mm (ERP45-50VM) / 3100 mm (ERP50-55VM6) , 2 stage limited free lift mast, standard carriage, 1000 mm forks (ERP40VM) / 1200 mm forks (ERP45-50VM; ERP50-55VM6) and load backrest, manual hydraulics and superelastic drive and steer tyres.

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

Values may vary with alternative configurations.

VM series

Models: ERP 40VM, ERP 45VM, ERP 50VM, ERP 50VM6, ERP 55VM6

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 electric counterbalance trucks.

Productivity

- 80V dual front wheel drive with AC motors throughout (hoist/steer and traction)
- HiP performance setting offers the ultimate in e-Balance. ICE-like productivity and low energy consumption
- 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 ERC 40VM-ERC50VM models (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 and Heavy Duty Class IV carriage and side shift on ERC50VM6 and ERC55VM6 models. This allows operations to be more 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; AccuTouch™ 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/s2 according to EN13059 - Safety of Industrial Trucks), low noise motors and pumps and the acclaimed AccuTouch™ mini levers and armrest all ensure that the operator is comfortable at all times.
- The standard truck features a low noise level of 68dB(A).
- Dual drive motor and Extended Steering Axle deliver a very tight turning circle, allowing the truck to be long enough to feature a very spacious operator compartment
- Superelastic tyres for a comfortable ride over rough terrain
- Options - Full or partial cabin with heater option, high backrest seat with lumbar support, AccuTouch™ mini lever module and armrest, telescopic steer column with memory tilt.

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

- Extended belly pan, Tilt cylinder boots and IP54 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
- Wide tread (front) for wide load handling and dual wheels for enhanced ride on rough yards
- Load backrest and forks
- Integral side shift
- Auxiliary hydraulic cooler
- Side thrust bearings for attachment usage
- Non marking tyres
- AccuTouch™ mini levers
- 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
- DIN batteries and chargers from multiple suppliers
- 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
- Auxillary hydraulic cooler (standard on ERP55VM6)
- Side thrust bearings for attachment use
- Spray and corrosive environment “wash down” protection kit.

VM series

Models: ERP 40VM, ERP 45VM, ERP 50VM, ERP 50BM6, ERP 55 VM6

People. Products. Productivity.™

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Country of Registration: England. Company Registration Number: 02636775

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

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