



ERP40-55VM

SPEC SHEET

4,000 - 5,500 kg

VM Series

Electric Forklift Trucks

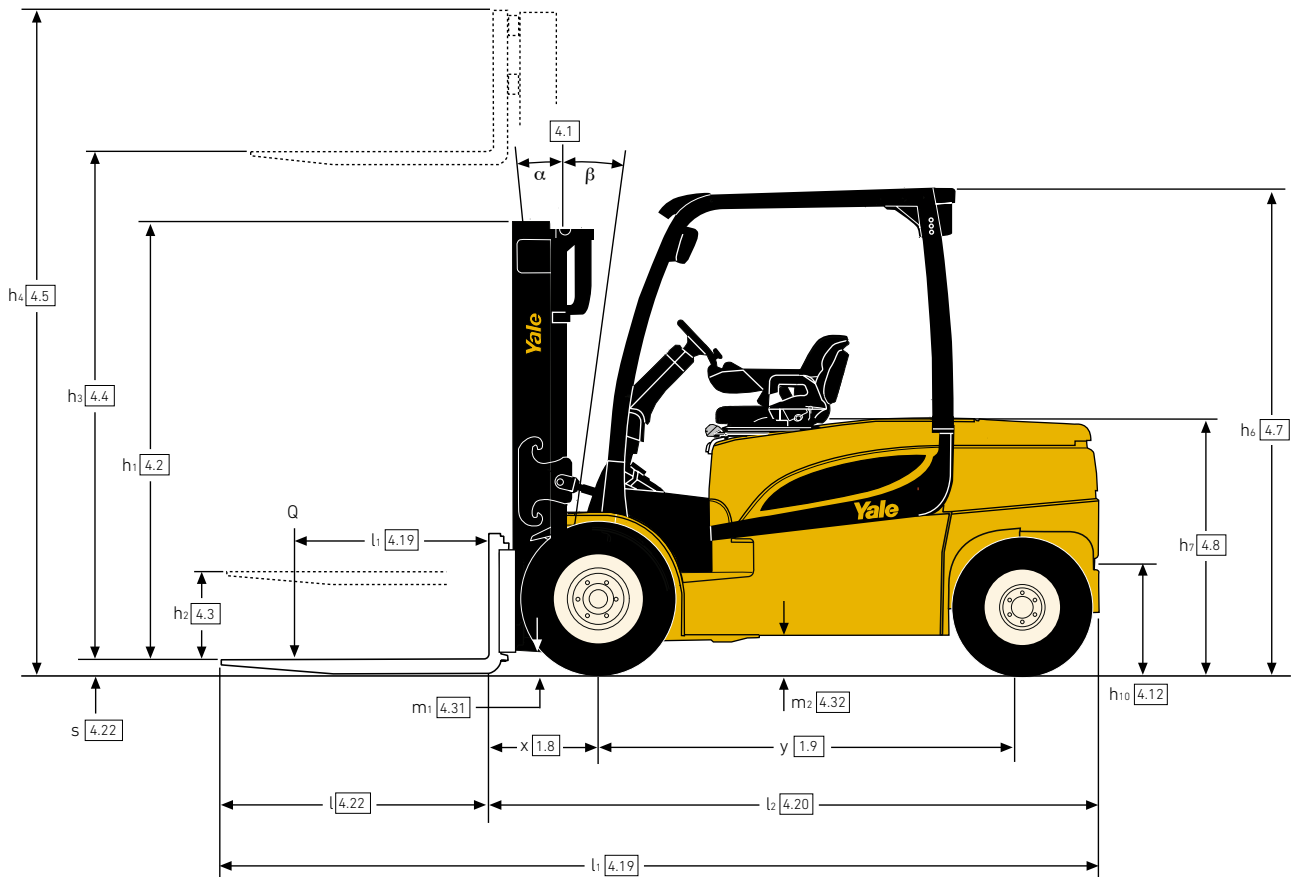
TRUCK DIMENSIONS – VM SERIES

If $b_{12}/2 \leq b_{13}$

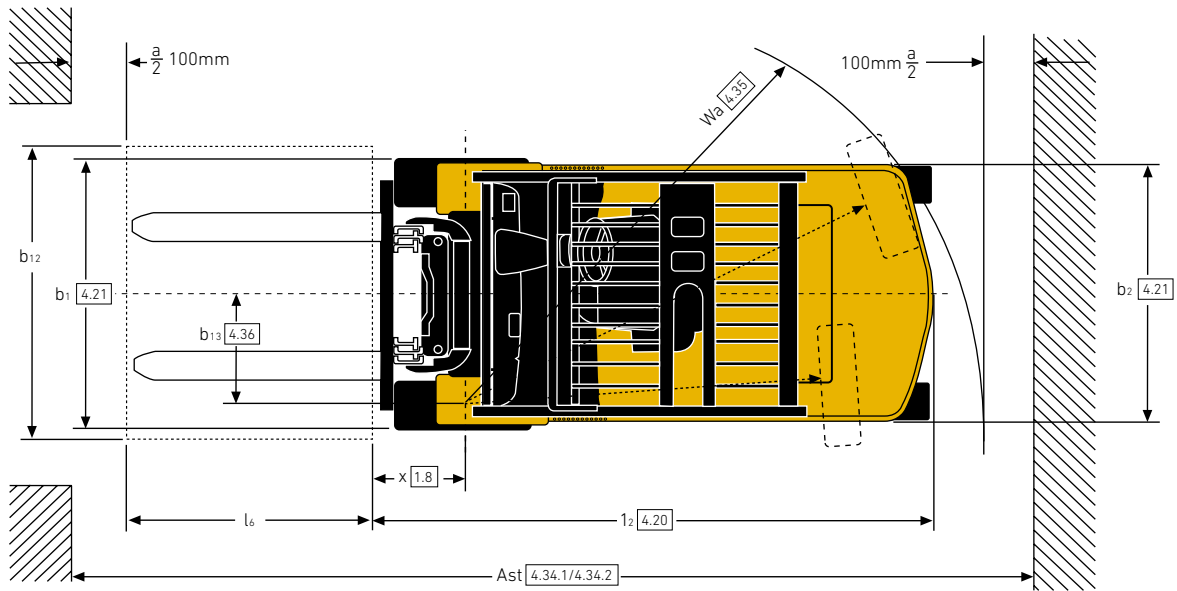
$A_{st} = Wa + x + l_6 + a$

If $b_{12}/2 > b_{13}$

$A_{st} = Wa + R + a = Wa + \sqrt{(l_6 + x)^2 + (b_{12}/2 - b_{13})^2} + a$



TRUCK DIMENSIONS – VM SERIES



VDI 2198 – GENERAL SPECIFICATIONS – VM SERIES

			Yale			
			ERP 40VM	ERP 45VM	ERP 50VM	
GENERAL	1.1	Manufacturer				
	1.2	Model designation				
	1.3	Drive:		Electric (battery)		
	1.4	Operator type		Seated		
	1.5	Rated capacity/rated load	Q (t)	4.0	4.5	4.9
	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		
	WEIGHT	2.1	Service weight ⁽¹⁾	kg	7435	7568
2.2		Axle loading, laden front/rear ⁽¹⁾	kg	10006 / 1429	10801 / 1267	11603 / 1219
2.3		Axle loading, unladen front/rear ⁽¹⁾	kg	3980 / 3455	4022 / 3546	4070 / 3751
TYRES	3.1	Tyres		Superelastic		
	3.2	Tyre size, front		250 x 15		
	3.3	Tyre size, rear		7.00 x 12		
	3.5	Wheels, number front/rear (x = driven wheels)		2X / 2		
	3.6	Tread, front ⁽²⁾	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 ⁽³⁾	h ₂ (mm)	100		
4.4		Lift ⁽³⁾	h ₃ (mm)	3300	3040	
4.5		Height, mast extended ⁽⁴⁾	h ₄ (mm)	4109	3855	
4.7		Height of overhead guard (cabin) ⁽⁵⁾	h ₆ (mm)	2338		
4.7.1		Cab height (open cab)	(mm)	2350		
4.8		Seat height relating to SIP/stand height ⁽⁶⁾	h ₇ (mm)	1318		
4.12		Coupling height	h ₁₀ (mm)	526		
4.19		Overall length	l ₁ (mm)	3908	4108	
4.20		Length to face of forks	l ₂ (mm)	2908		
4.21		Overall width ⁽²⁾	b ₁ /b ₂ (mm)	1373 / 1451		- / 1451
4.22		Fork dimensions DIN ISO 2331	s/e/l (mm)	50 / 120 / 1000	50 / 125 / 1000	50 / 150 / 1200
4.23		Fork carriage ISO 2328, class/type A, B		3A		
4.24		Fork carriage width ⁽⁷⁾	b ₃ (mm)	1219		
4.31		Ground clearance, laden, below mast	m ₁ (mm)	130	135	
4.32		Ground clearance, centre of wheelbase	m ₂ (mm)	177		
4.33		Load dimension b ₁₂ × l ₆ crossways	b ₁₂ × l ₆ (mm)	1000 x 1200	1000 x 1200	1000 x 1200
4.34		Aisle width predetermined load dimensions	Ast (mm)	4161		
4.34.1		Aisle width with pallets 1000 x 1200 wide	Ast (mm)	4161		
4.34.2		Aisle width with pallets 800 x 1200 long	Ast (mm)	4336		
4.35		Turning radius	Wa (mm)	2411		
4.36		Internal turning radius	b ₁₃ (mm)	313		
4.4.1	90° intersecting aisle (With pallet W = 1200mm, L = 1000mm)	(mm)	2302			
4.4.2	Step Height (from ground to running board)	(mm)	840			
4.4.3	Step Height	(mm)	490			
PERFORMANCE	5.1	Travel speed, laden/unladen ⁽⁸⁾	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	0.38 / 0.47	0.36 / 0.47
	5.3	Lowering speed, laden/unladen	m/sec	0.45 / 0.37		
	5.5	Drawbar pull, laden/unladen ⁽⁹⁾	N	6422 / 6561	6493 / 6640	6487 / 6627
	5.6	Max. drawbar pull, laden/unladen ⁽¹⁰⁾	N	17203 / 17725	17382 / 17904	17377 / 17891
	5.7	Gradeability, laden/unladen ⁽¹¹⁾	%	8.1 / 11.8	7.7 / 11.7	7.3 / 11.3
	5.8	Max. gradeability, laden/unladen ⁽¹⁰⁾	%	15.6 / 23.0	14.9 / 22.7	14.1 / 22.2
	5.9	Acceleration time, laden/unladen ⁽⁸⁾	s	5.1 / 4.6	5.2 / 4.6	5.3 / 4.6
	5.10	Service brake		Hydraulic		
ELECTRIC	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 ⁽¹²⁾	kWh/h @ no. of cycles	10.6	11.2	12.3
OTHER	8.1	Drive control		AC electronic		
	10.1	Operating pressure for attachments	bar	155		
	10.2	Oil volume for attachments ⁽¹³⁾	l/min	60		
	10.3	Hydraulic oil tank, capacity	l	49.6		
	10.7	Sound pressure level at the driver's seat ⁽¹⁴⁾	dB(A)	68		
	10.8	Towing coupling, type DIN		Pin		

(1) Max. battery

(2) Standard / Wide tread

(3) Bottom of forks

(4) Without load backrest

(5) h₆ subject to +/- 5mm tolerance

(6) Full suspension seat in depressed position

(7) Add 30mm with load backrest

(8) HiP performance setting

VDI 2198 – GENERAL SPECIFICATIONS – VM SERIES

		Yale		
		ERP 50VM6	ERP 55VM6	
GENERAL	1.1	Manufacturer		
	1.2	Model designation		
	1.3	Drive	Electric (battery)	
	1.4	Operator type	Seated	
	1.5	Rated capacity/rated load	Q (t)	5.0
	1.6	Load centre distance	c (mm)	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	581
	1.9	Wheelbase	y (mm)	2180
	1.9	Wheelbase	y (mm)	2180
WEIGHT	2.1	Service weight ⁽¹⁾	kg	8656
	2.2	Axle loading, laden front/rear ⁽¹⁾	kg	12236 / 1420
	2.3	Axle loading, unladen front/rear ⁽¹⁾	kg	4467 / 4189
TYRES	3.1	Tyres	Superelastic	
	3.2	Tyre size, front	355/50-15	
	3.3	Tyre size, rear	28 x 9-15	
	3.5	Wheels, number front/rear (x = driven wheels)	2X / 2	
	3.6	Tread, front ⁽²⁾	b ₁₀ (mm)	- / 1167
	3.7	Tread, rear	b ₁₁ (mm)	1143
	DIMENSIONS	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)
4.2		Height, mast lowered	h ₁ (mm)	2320
4.3		Free lift ⁽³⁾	h ₂ (mm)	100
4.4		Lift ⁽³⁾	h ₃ (mm)	3040
4.5		Height, mast extended ⁽⁴⁾	h ₄ (mm)	4030
4.7		Height of overhead guard (cabin) ⁽⁵⁾	h ₆ (mm)	2338
4.7.1		Cab height (open cab)	(mm)	2350
4.8		Seat height relating to SIP/stand height ⁽⁶⁾	h ₇ (mm)	1318
4.12		Coupling height	h ₁₀ (mm)	526
4.19		Overall length	l ₁ (mm)	4326
4.20		Length to face of forks	l ₂ (mm)	3126
4.21		Overall width ⁽²⁾	b ₁ /b ₂ (mm)	- / 1451
4.22		Fork dimensions DIN ISO 2331	s/e/l (mm)	50 / 150 / 1200
4.23		Fork carriage ISO 2328, class/type A, B		4A
4.24		Fork carriage width ⁽⁷⁾	b ₃ (mm)	1219
4.31		Ground clearance, laden, below mast	m ₁ (mm)	135
4.32		Ground clearance, centre of wheelbase	m ₂ (mm)	177
4.33		Load dimension b ₁₂ x l ₆ crossways	b ₁₂ x l ₆ (mm)	1000 x 1200
4.34		Aisle width predetermined load dimensions	A _{st} (mm)	4381
4.34.1		Aisle width with pallets 1000 x 1200 wide	A _{st} (mm)	4381
4.34.2		Aisle width with pallets 800 x 1200 long	A _{st} (mm)	4555
4.35		Turning radius	W _a (mm)	2573
4.36		Internal turning radius	b ₁₃ (mm)	337
4.41	90° intersecting aisle (With pallet W = 1200mm, L = 1000mm)	(mm)	2421	
4.42	Step Height (from ground to running board)	(mm)	840	
4.43	Step Height	(mm)	490	
PERFORMANCE	5.1	Travel speed, laden/unladen ⁽⁸⁾	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	0.30 / 0.46
	5.3	Lowering speed, laden/unladen	m/sec	0.46 / 0.36
	5.5	Drawbar pull, laden/unladen ⁽⁹⁾	N	6602 / 6442
	5.6	Max. drawbar pull, laden/unladen ⁽¹⁰⁾	N	17326 / 17880
	5.7	Gradeability, laden/unladen ⁽¹¹⁾	%	6.7 / 9.9
	5.8	Max. gradeability, laden/unladen ⁽¹⁰⁾	%	13.7 / 21.5
	5.9	Acceleration time, laden/unladen ⁽⁸⁾	s	4.70 / 4.20
	5.10	Service brake		Hydraulic
ELECTRIC	6.1	Drive motor rating S2 60 min	kW	2x 14.7
	6.2	Lift motor rating at S3 15%	kW	36.0
	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 ⁽¹²⁾	kWh/h @ no. of cycles	13.10
OTHER	8.1	Drive control		AC electronic
	10.1	Operating pressure for attachments	bar	155
	10.2	Oil volume for attachments ⁽¹³⁾	l/min	60
	10.3	Hydraulic oil tank, capacity	l	49.6
	10.7	Sound pressure level at the driver's seat ⁽¹⁴⁾	dB(A)	68
	10.8	Towing coupling, type DIN		Pin

(9) 60 minute rating

(10) 5 minute rating

(11) 30 minute rating

(12) eLo performance setting

(13) Variable

(14) LPAZ, measured according to the test cycles and based on the weighting values contained in EN12053

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.

MAST DIMENSIONS – ERP 40VM

h ₁ (mm)	h _{2+S} (mm)	h _{3+S} (mm)	h ₄ (mm)	Tilt		Forks			Integral sideshift		
						Load centre (kg)			Load centre (kg)		
				F	B	500	600	700	500	600	700
2-Stage Limited Free-Lift (LFL) Mast											
2320	150	3350	4109 ⁽²⁾	6	8	4000	3500	3480	4000	3500	3370
2470	150	3650	4409 ⁽²⁾	6	8	4000	3500	3470	4000	3500	3360
2770	150	4250	5009 ⁽²⁾	6	8	4000	3500	3460	3990	3500	3350
3220	150	4950	5709 ⁽²⁾	6	8	4000	3500	3430	3950	3500	3320
2-Stage Full Free-Lift (FFL) Mast											
2320	1514 ⁽¹⁾	3375	4187 ⁽³⁾	6	8	4000	3500	3500	4000	3500	3430
2470	1664 ⁽¹⁾	3675	4487 ⁽³⁾	6	8	4000	3500	3490	4000	3500	3430
3-Stage Limited Free-Lift (LFL) Mast											
2370	1564 ⁽¹⁾	4950	5762 ⁽³⁾	6	8	4000	3500	3440	3980	3500	3360
2470	1664 ⁽¹⁾	5250	6062 ⁽³⁾	6	8	4000	3500	3430	3970	3500	3350
2570	1764 ⁽¹⁾	5550	6362 ⁽³⁾	6	8	4000	3500	3420	3970	3500	3350
2770	1964 ⁽¹⁾	6000	6812 ⁽³⁾	6	8	3890	3410	3320	3850	3410	3250

- (1) Deduct 435mm with load backrest extension
 (2) Add 482mm with load backrest extension
 (3) Add 435mm with load backrest extension

MAST DIMENSIONS – ERP 45VM, ERP 50VM

h ₁ (mm)	h _{2+S} (mm)	h _{3+S} (mm)	h ₄ (mm)	Tilt		Forks			Integral sideshift			Forks			Integral sideshift		
						Load centre (kg)			Load centre (kg)			Load centre (kg)			Load centre (kg)		
				F	B	500	600	700	500	600	700	500	600	700	500	600	700
2-Stage Limited Free-Lift (LFL) Mast																	
2320	150	3090	3855 ⁽²⁾	6	8	4500	4100	3880	4480	4090	3950	4990	4500	3760	4910	4490	3950
2470	150	3390	4155 ⁽²⁾	6	8	4500	4100	3870	4470	4080	3950	4990	4500	3950	4900	4480	3950
2770	150	3990	4755 ⁽²⁾	6	8	4500	4100	3860	4450	4060	3950	4990	4500	3740	4880	4460	3950
3220	150	4690	5455 ⁽²⁾	6	8	4500	4100	3820	4410	4030	3950	4910	4410	3710	4760	4350	3950
3620	150	5290	6055 ⁽²⁾	6	8	4410	4020	3720	4300	3920	3950	4700	4240	3610	4540	4150	3840
4020	150	5890	6655 ⁽²⁾	6	8	4260	3890	3580	4130	3770	3750	4450	4040	3810	4300	3930	3640
2-Stage Full Free-Lift (FFL) Mast																	
2470	1658 ⁽¹⁾	3559	4371 ⁽³⁾	6	8	4500	4100	3880	4500	4100	3950	4990	4500	3810	4970	4500	3950
3-Stage Full Free-Lift (FFL) Mast																	
2370	1558 ⁽¹⁾	4835	5647 ⁽³⁾	6	8	4440	4050	3790	4390	4020	3950	4790	4310	3710	4690	4290	3950
2470	1658 ⁽¹⁾	5135	5947 ⁽³⁾	6	8	4380	3990	3730	4320	3950	3950	4690	4220	3640	4580	4190	3890
2570	1758 ⁽¹⁾	5435	6247 ⁽³⁾	6	8	4310	3930	3660	4240	3880	3880	4590	4130	3580	4470	4090	3800

- (1) Add 429mm with load backrest extension
 (2) Add 482mm with load backrest extension
 (3) Deduct 429mm with load backrest extension

MAST DIMENSIONS – ERP 50VM6, ERP 55VM6

h ₁ (mm)	h _{2+S} (mm)	h _{3+S} (mm)	h ₄ (mm)	Tilt		Forks			Integral sideshift			Forks			Integral sideshift		
						Load centre (kg)			Load centre (kg)			Load centre (kg)			Load centre (kg)		
				F	B	500	600	700	500	600	700	500	600	700	500	600	700
2-Stage Limited Free-Lift (LFL) Mast																	
2320	150 ⁽¹⁾	3090 ⁽¹⁾	4030 ⁽³⁾	6	8	5400	5000	4770	5400	5000	4630	5500	5500	5150	5500	5410	5000
2470	150 ⁽¹⁾	3390 ⁽¹⁾	4330 ⁽³⁾	6	8	5400	5000	4760	5400	5000	4620	5500	5500	5140	5500	5410	5000
2770	150 ⁽¹⁾	3990 ⁽¹⁾	4930 ⁽³⁾	6	8	5400	5000	4750	5400	4990	4610	5500	5500	5130	5500	5390	4980
3220	150 ⁽¹⁾	4690 ⁽¹⁾	5630 ⁽³⁾	6	8	5400	5000	4720	5400	4960	4580	5500	5500	5100	5500	5360	4950
3620	150 ⁽¹⁾	5290 ⁽¹⁾	6230 ⁽³⁾	6	8	5330	4940	4630	5310	4870	4500	5310	5310	4900	5310	5150	4760
4020	150 ⁽¹⁾	5890 ⁽¹⁾	6830 ⁽³⁾	6	8	5110	4740	4420	5070	4650	4290	5070	5070	4680	5090	4920	4540
2-Stage Full Free-Lift (FFL) Mast																	
2170	1184 ⁽¹⁾⁽²⁾	2815 ⁽¹⁾	3807 ⁽⁴⁾	6	8	5400	5000	4710	5390	4950	4570	5500	5160	5160	5420	5010	5010
3-Stage Full Free-Lift (FFL) Mast																	
2170	1178 ⁽¹⁾⁽²⁾	4137	5129 ⁽⁴⁾	6	8	5400	5000	4690	5380	4930	4560	5500	5110	5110	5380	4970	4970
2370	1378 ⁽¹⁾⁽²⁾	4690	5682 ⁽⁴⁾	6	8	5400	5000	4670	5360	4920	4540	5500	5100	5100	5360	4960	4960
2470	1478 ⁽¹⁾⁽²⁾	4990	5982 ⁽⁴⁾	6	8	5400	5000	4660	5350	4910	4530	5410	5000	5000	5270	4870	4870
2570	1578 ⁽¹⁾⁽²⁾	5290	6282 ⁽⁴⁾	6	8	5350	4950	4610	5290	4860	4490	5310	491	4910	5160	4770	4700

- (1) Add 10mm for ERP55VM6
 (2) Deduct 282mm with load backrest extension
 (3) Add 334mm with load backrest extension
 (4) Add 282mm with load backrest extension

All values are nominal values and they are subject to tolerances.





About Yale®

Yale Materials Handling Corporation is one of the oldest manufacturers of lift trucks in the world. We've been in the business of lifting since 1875 and we apply that experience to help customers solve materials handling challenges. Our full line of lift trucks range in capacity from 1 to 16 tonne and are powered by internal combustion engines or electric options. Yale also offers robotic solutions, telemetry, fleet management, parts, financing and training. From traditional lift truck equipment to emerging technologies, our goal, every day, is to work with our nationwide dealer network to continually improve and provide the solutions you need, when and how you need them.

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