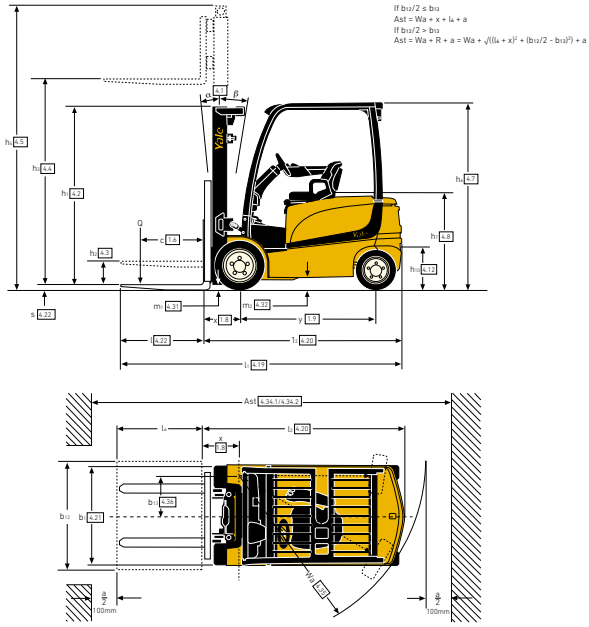
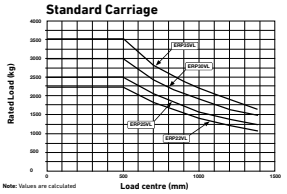
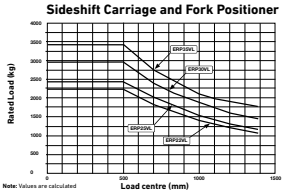
TRUCK DIMENSIONS – VL SERIES



RATED LOAD VS. LOAD CENTRE – VL SERIES



RATED LOAD VS. LOAD CENTRE – VL SERIES



Calculations based on: 5100mm (ERP20-25 VL MWB), 4650mm (ERP25VL LWB) or 4460mm (ERP30-35 VL) 3 stage FFL mast with 1067mm standard carriage with load backrest

VDI 2198 – GENERAL SPECIFICATIONS – VL SERIES

GENERAL	1.1	Manufacturer		Yale				
	1.2	Model designation		ERP 22VL MWB		ERP 25VL MWB		ERP 25VL LWB
		Model		Value	Productivity	Value	Productivity	Value
	1.3	Drive		Electric (battery)				
	1.4	Operator type		Seated				
	1.5	Rated capacity/rated load	Q (t)	2.2		2.5		
	1.6	Load centre distance	c (mm)	500				
	1.8	Load distance, centre of drive axle to fork	x (mm)	419				
	1.9	Wheelbase	y (mm)	1606				1750
WEIGHT	2.1	Service weight [1]	kg	4520				4930
	2.2	Axle loading, laden front/rear [2]	kg	5739 / 977	5640 / 1224	6211 / 805	6114 / 1254	6283 / 1144
	2.3	Axle loading, unladen front/rear [3]	kg	2279 / 2236	2018 / 2646	2279 / 2236	1805 / 3063	2469 / 2458
TYRES	3.1	Tyres front/rear		Superelastic				
	3.2	Tyre size, front		23 x 10 - 12				
	3.3	Tyre size, rear		18 x 7 - 8				
	3.5	Wheels, number front/rear (x = driven wheels)		2X / 2				
	3.6	Tread, front	b_{10} (mm)	938 / 1054				
	3.7	Tread, rear	b_{11} (mm)	992				
DIMENSIONS	4.1	Tilt of mast/fork carriage forward α /backward β	α / β (°)	5 / 5				
	4.2	Height of mast, lowered	h_1 (mm)	2192				
	4.3	Free lift [4]	h_2 (mm)	100				
	4.4	Lift [5]	h_3 (mm)	3350				
	4.5	Height, mast extended [6]	h_4 (mm)	3960				
	4.7	Height of overhead guard (cabin) [42]	h_6 (mm)	2193				
	4.7.1	Cab height (open cab)		2206				
	4.8	Seat height/stand height [8]	h_7 (mm)	1070				
	4.12	Coupling height	h_{14} (mm)	262				
	4.19	Overall length	l_1 (mm)	3336				3480
	4.20	Length to face of forks [40]	l_2 (mm)	2336				2480
	4.21	Overall width [17]	b_1/b_2 (mm)	1173 / 1289				
	4.22	Fork dimensions ISO2331	s/e/l (mm)	40 / 100 / 1000				
	4.23	Fork carriage ISO 2328, class/type A,B		2A				
	4.24	Fork carriage width [18]	b_3 (mm)	1067				
	4.31	Ground clearance, laden, below mast	m_1 (mm)	83				
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	137				
	4.33	Load dimension b_{12} x l_4 crossways	b_{12} × l_4 (mm)	1200 x 1000				
	4.34	Aisle width predetermined load dimensions	Ast (mm)	3613				3750
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3613				3750
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3766				3906
	4.35	Turning radius	Wa (mm)	1931				2073
	4.36	Internal turning radius	b_{13} (mm)	173				189
	4.41	90° intersecting aisle (With pallet W = 1200mm, L = 1000mm)	mm	1981				2043
	4.42	Step Height (from ground to running board) [19]	mm	706 / 810				
	4.43	Step Height	mm	475				
PERFORMANCE	5.1	Travel speed, laden/unladen [100]	km/h	18.0 / 18.0	21.0 / 21.0	18.0 / 18.0	21.0 / 21.0	18.0 / 18.0
	5.2	Lift speed, laden/unladen	m/s	0.40 / 0.63	0.52 / 0.72	0.38 / 0.63	0.49 / 0.72	0.38 / 0.63
	5.3	Lowering speed, laden/unladen	m/s	0.57 / 0.51				
	5.5	Drawbar pull, laden/unladen [11]	N	5468 / 5773	6015 / 6235	5591 / 5726	6037 / 6185	5591 / 5726
	5.6	Max. drawbar pull, laden/unladen [12]	N	18045 / 19052	19849 / 20576	18451 / 18897	19927 / 20409	18451 / 18897
	5.7	Gradeability, laden/unladen [13]	%	10 / 14	11 / 16	9 / 13	10 / 14	9 / 13
	5.8	Max. gradeability, laden/unladen [12]	%	26 / 39	28 / 42	24 / 35	26 / 38	24 / 35
	5.9	Acceleration time, laden/unladen [10]	s	4.42 / 4.11	4.04 / 3.71	4.45 / 4.11	4.04 / 3.71	4.45 / 4.11
	5.10	Service brake		Hydraulic				
ELECTRIC	6.1	Drive motor rating S2 60 min	kW	2 x 10.0				
	6.2	Lift motor rating at S3 15%	kW	16.0	24.0	16.0	24.0	16.0
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		43536A				
	6.4	Battery voltage/nominal capacity K5	(V)/(ah)	80 / 560				80 / 700
	6.5	Battery weight	kg	1480 / 1635				1770 / 1956
	6.6	Energy consumption according to VDI cycle [14]	kWh/h @ no. of cycles	6.68	7.51	7.00	7.87	7.89
OTHER	8.1	Type of drive unit		AC electronic				
	10.1	Operating pressure for attachments	bar	155				
	10.2	Oil volume for attachments [15]	l/min	20-40				
	10.3	Hydraulic oil tank, capacity	l	29.3				
	10.7	Sound pressure level at the driver's seat [16]	dB(A)	67	68	67	68	67
	10.8	Towing coupling, type DIN		Pin				

(1) Max. battery
(2) Bottom of forks
(3) Without load backrest
(4) h_2 subject to +/- 5mm tolerance
(5) Full suspension in compressed position specified. Add 40mm for nominal position. Add 104mm for battery side removal option
(6) With sideshift carriage add 32mm for ERP 22VL- ERP 25VL MWB, 34mm for ERP 25VL LWB, 33mm for ERP 30VL LWB, 32mm for ERP 35VL LWB
(7) Standard/Wide tread
(8) Add 28mm with load backrest
(9) Vertical / horizontal battery removal
(10) HiP performance settings

VDI 2198 – GENERAL SPECIFICATIONS – VL SERIES

GENERAL	1.1	Manufacturer		Yale				
	1.2	Model designation		ERP 25VL LWB		ERP 30VL LWB		ERP 35VL LWB
		Model		Productivity	Value	Productivity	Value	Productivity
	1.3	Drive		Electric (battery)				
	1.4	Operator type		Seated				
	1.5	Rated capacity/rated load	Q (t)	2.5	3.0		3.5	
	1.6	Load centre distance	c (mm)	500				
	1.8	Load distance, centre of drive axle to fork	x (mm)	419	431			
	1.9	Wheelbase	y (mm)	1750				
WEIGHT	2.1	Service weight [1]	kg	4930	5000		5320	
	2.2	Axle loading, laden front/rear [2]	kg	6183 / 1167	7157 / 841	7055 / 1244	7871 / 942	7752 / 1115
	2.3	Axle loading, unladen front/rear [3]	kg	2067 / 2783	2560 / 2438	2090 / 3209	2508 / 2805	2209 / 3158
TYRES	3.1	Tyres front/rear		Superelastic				
	3.2	Tyre size, front		23 x 10 - 12				
	3.3	Tyre size, rear		18 x 7 - 8				
	3.5	Wheels, number front/rear (x = driven wheels)		2X / 2				
	3.6	Tread, front	b_{10} (mm)	938 / 1054				
	3.7	Tread, rear	b_{11} (mm)	992				
DIMENSIONS	4.1	Tilt of mast/fork carriage forward α /backward β	α / β (°)	5 / 5				
	4.2	Height of mast, lowered	h_1 (mm)	2192				
	4.3	Free lift [4]	h_2 (mm)	100				
	4.4	Lift [5]	h_3 (mm)	3350	3155			
	4.5	Height, mast extended [6]	h_4 (mm)	3960	3865			
	4.7	Height of overhead guard (cabin) [42]	h_6 (mm)	2193				
	4.7.1	Cab height (open cab)		2206				
	4.8	Seat height/stand height [8]	h_7 (mm)	1070				
	4.12	Coupling height	h_{14} (mm)	262				
	4.19	Overall length	l_1 (mm)	3480	3492		3570	
	4.20	Length to face of forks [40]	l_2 (mm)	2480	2492		2570	
	4.21	Overall width [17]	b_1/b_2 (mm)	1173 / 1289				
	4.22	Fork dimensions ISO2331	s/e/l (mm)	40 / 100 / 1000	50 / 120 / 1000			
	4.23	Fork carriage ISO 2328, class/type A,B		2A	3A			
	4.24	Fork carriage width [18]	b_3 (mm)	1067				
	4.31	Ground clearance, laden, below mast	m_1 (mm)	83				
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	137				
	4.33	Load dimension b_{12} x l_4 crossways	b_{12} × l_4 (mm)	1200 x 1000				
	4.34	Aisle width predetermined load dimensions	Ast (mm)	3750	3762		3828	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3750	3762		3828	
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3906	3918		3984	
	4.35	Turning radius	Wa (mm)	2073			2139	
	4.36	Internal turning radius	b_{13} (mm)	189				
	4.41	90° intersecting aisle (With pallet W = 1200mm, L = 1000mm)	mm	2043			2076	
	4.42	Step Height (from ground to running board) [19]	mm	706 / 810				
	4.43	Step Height	mm	475				
PERFORMANCE	5.1	Travel speed, laden/unladen [100]	km/h	21.0 / 21.0	17.0 / 18.0	19.5 / 21.0	16.0 / 18.0	18.0 / 21.0
	5.2	Lift speed, laden/unladen	m/s	0.49 / 0.72	0.33 / 0.59	0.42 / 0.63	0.31 / 0.59	0.37 / 0.63
	5.3	Lowering speed, laden/unladen	m/s	0.57 / 0.51	0.56 / 0.46		0.58 / 0.46	
	5.5	Drawbar pull, laden/unladen [11]	N	6037 / 6185	5441 / 5588	5877 / 6035	5478 / 5720	5918 / 6177
	5.6	Max. drawbar pull, laden/unladen [12]	N	19927 / 20409	17956 / 18441	19393 / 19916	18076 / 18875	19522 / 20385
	5.7	Gradeability, laden/unladen [13]	%	10 / 14	8 / 12	9 / 13	7 / 12	8 / 13
	5.8	Max. gradeability, laden/unladen [12]	%	26 / 38	22 / 34	24 / 37	20 / 32	22 / 35
	5.9	Acceleration time, laden/unladen [10]	s	4.04 / 3.71	4.56 / 4.18	4.14 / 3.78	4.60 / 4.23	4.19 / 3.83
	5.10	Service brake		Hydraulic				
ELECTRIC	6.1	Drive motor rating S2 60 min	kW	2x 10.0				
	6.2	Lift motor rating at S3 15%	kW	24.0	16.0	24.0	16.0	24.0
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		43536A				
	6.4	Battery voltage/nominal capacity K5	(V)/(ah)	80 / 700				
	6.5	Battery weight	kg	1770 / 1956				
	6.6	Energy consumption according to VDI cycle [14]	kWh/h @ no. of cycles	8.86	8.66	9.74	10.03	11.28
OTHER	8.1	Type of drive unit		AC electronic				
	10.1	Operating pressure for attachments	bar	155				
	10.2	Oil volume for attachments [15]	l/min	20-40				
	10.3	Hydraulic oil tank, capacity	l	29.3				
	10.7	Sound pressure level at the driver's seat [16]	dB(A)	68	67	68	67	68
	10.8	Towing coupling, type DIN		Pin				

(11) 60 minute rating
(12) 5 minute rating
(13) 30 minute rating
(14) eLo performance settings
(15) Manual hydraulics, maximum flow set through dash display
(16) LPAZ, measured according to the test cycles and based on the weighting values contained in EN12053

Spec sheet truck based on: 3390mm (ERP 22-25 VL) or 3200mm (ERP 30-35 VL) 2 stage LFL mast with standard carriage, 1000mm forks and load backrest with extended shift on with DIN battery configuration, standard seat and overhead guard, manual hydraulics, superelastic drive and steer tyres

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

MAST DIMENSIONS – ERP 22VL MWB

h1 (mm)	h3+s (mm)	h3+s (mm)	h4 (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											
2195	140	3390	3956	5	5	2200	2000	1900	2200	2000	1830
2395	140	3790	4356	5	5	2200	2000	1900	2200	2000	1820
2745	140	4330	4896	5	5	2200	2000	1890	2200	1990	1810
2995	140	4830	5396	5	5	2200	2000	1880	2190	1980	1800
2-Stage Full Free-Lift (FFL) Mast											
2195	1625	3400	3966	5	5	2200	2000	1900	2200	2000	1830
3-Stage Full Free-Lift (FFL) Mast											
2145	1595	4950	5496	5	5	2200	2000	1870	2180	1970	1790
2395	1845	5550	6096	5	5	2110	1920	1780	2070	1870	1700
2595	2045	6000	6546	5	5	2020	1830	1700	1980	1790	1630

All capacities calculated with 1000mm long forks and are less load backrest

MAST DIMENSIONS – ERP 25VL MWB, ERP 25VL LWB

h1 (mm)	h3+s (mm)	h3+s (mm)	h4 (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																	
2195	140	3390	3956	5	5	2500	2270	2140	2490	2250	2060	2500	2270	2170	2500	2270	2090
2395	140	3790	4356	5	5	2500	2270	2130	2490	2250	2050	2500	2270	2170	2500	2270	2090
2745	140	4330	4896	5	5	2500	2270	2120	2470	2240	2040	2500	2270	2160	2500	2270	2080
2995	140	4830	5396	5	5	2480	2250	2090	2440	2210	2010	2500	2270	2150	2500	2270	2070
2-Stage Full Free-Lift (FFL) Mast																	
2195	1625	3400	3966	5	5	2500	2270	2140	2500	2600	2060	2500	2270	2170	2500	2270	2090
3-Stage Full Free-Lift (FFL) Mast																	
2145	1595	4950	5496	5	5	2440	2210	2060	2400	2170	1980	2500	2270	2140	2500	2250	2060
2395	1845	5550	6096	5	5	2310	2100	1930	2250	2030	1850	2410	2190	2050	2380	2150	1960
2595	2045	6000	6546	5	5	2210	2000	1840	2150	1940	1770	2310	2100	1960	2290	2070	1890

All capacities calculated with 1000mm long forks and are less load backrest

MAST DIMENSIONS – ERP 30VL LWB, ERP 35VL LWB

h1 (mm)	h3+s (mm)	h3+s (mm)	h4 (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																	
2195	145	3200	3861	5	5	3000	2720	2550	2960	2680	2440	3500	3130	2680	3440	3110	2680
2395	145	3600	4261	5	5	3000	2720	2540	2950	2670	2440	3500	3130	2680	3430	3100	2680
2745	145	4100	4761	5	5	3000	2720	2530	2940	2660	2430	3500	3130	2680	3420	3090	2680
2995	145	4600	5261	5	5	2920	2650	2460	2850	2580	2360	3410	3090	2680	3330	3010	2680
2-Stage Full Free-Lift (FFL) Mast																	
2195	1535	3205	3862	5	5	3000	2720	2550	2960	2680	2440	3500	3130	2680	3440	3110	2680
3-Stage Full Free-Lift (FFL) Mast																	
2145	1500	4610	5252	5	5	2970	2690	2500	2900	2620	2390	3460	3130	2680	3470	3050	2680
2295	1650	4910	5552	5	5	2900	2630	2440	2830	2560	2340	3400	3080	2680	3300	2980	2680
2395	1750	5210	5852	5	5	2840	2570	2380	2760	2500	2280	3320 (1)	3010 (1)	2680 (1)	3220 (1)	2920 (1)	2660 (1)
2645	2000	5810	6452	5	5	2690	2440	2250	2600	2350	2150	3170 (1)	2870 (1)	2640 (1)	3060 (1)	2760 (1)	2520 (1)

(1) Wide tread required

All capacities calculated with 1000mm long forks and are less load backrest

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