

Autopilot reach truck 1.6 - 2.5 ton



BT reflex *AUTOPILOT*

RAE160

RAE200

RAE250



Autopilot reach truck

Truck specifications					RAE160	RAE200	RAE250
Identification	1.1	Manufacturer			Toyota	Toyota	Toyota
	1.2	Model			RAE160	RAE200	RAE250
	1.3	Drive			Electric	Electric	Electric
	1.4	Operator type			Seated	Seated	Seated
	1.5	Load capacity/rated load	Q	kg	1600	2000	2500
	1.6	Load centre	c	mm	600	600	600
	1.8	Load distance, centre of support arm wheel to face of forks	x	mm	See battery compartment table		
	1.9	Wheelbase	y	mm	1395	1515	1575
	Weight	2.1	Service weight including battery		kg	3782	4246
2.3		Axle load, mast retracted without load, drive/support arm wheel		kg	2209/1380	2513/1610	2701/1952
2.4		Axle load, mast extended with load, drive/support arm wheel		kg	629/4560	746/5377	698/6455
2.5		Axle load, mast retracted with load, drive/support arm wheel		kg	1971/3218	2276/3846	2347/4806
Wheels		3.1	Drive wheel and support arm wheel			Vulkollan ®	Vulkollan ®
	3.2	Wheel size, front		mm	Ø 350x140	Ø 400x160	Ø 400x160
	3.3	Wheel size, rear		mm	Ø 300x106	Ø 350x106	Ø 350x106
	3.5	Wheels, number front/rear (x=driven wheels)			1x / 2	1x / 2	1x / 2
	3.7	Track width, rear	b ₁₁	mm	1134/1334	1134/1334	1134/1334
Dimensions	4.1	Tilt of fork, forward/backward (up/down)	a/b	deg	4°/-2°	4°/-2°	4°/-2°
	4.2	Height, mast lowered	h ₁	mm	See mast dimensions table		
	4.3	Free lift	h ₂	mm	See mast dimensions table		
		Lift height	h ₂₃	mm	See mast dimensions table		
	4.5	Height, mast extended	h ₄	mm	See mast dimensions table		
		Height with navigation scanner	h ₂₀	mm	2605/2955/3405	2667/3017/3467	2667/3017/3467
		Height eye navigation scanner	h ₂₁	mm	2586/2936/3386	2648/2998/3448	2648/2998/3448
	4.7	Height of overhead guard (cab)	h ₆	mm	2404	2466	2466
	4.10	Height support arms	h ₈	mm	313	363	363
	4.15	Height of lowered forks	h ₁₃	mm	55	55	60
	4.20	Length to face of forks	l ₂	mm	See battery compartment table		
	4.21	Overall width ¹⁾	b ₁	mm	1270/1470	1270/1470	1270/1470
	4.22	Overall width over support arms (including scanners) ¹⁾	b ₂	mm	1570/1770	1570/1770	1570/1770
	4.23	Fork dimensions	s/e/l	mm	40/100/1200 ²⁾	40/120/1200 ²⁾	45/125/1200 ²⁾
	4.24	Fork carriage ISO 2328, class/type A, B			2A	2A	2A
	4.25	Fork carriage width	b ₃	mm	843	843	843
	4.26	Width over forks ³⁾	b ₅	mm	252/392/516/622/698	272/412/536/642	277/417/541/647
	4.27	Distance between support arms	b ₄	mm	900/1100	900/1100	900/1100
	4.28	Reach distance	l ₄	mm	590	654	609
	4.31	Ground clearance, with load, below mast	m ₁	mm	68	68	68
4.32	Ground clearance, centre of wheelbase	m ₂	mm	74	74	74	
4.37	Length across support arms	l ₇	mm	1877	2031	2091	
Performance data	5.1a	Travel speed, with/without load Auto mode		km/h	7,2/7,2	7,2/7,2	7,2/7,2
	5.1b	Travel speed, with/without load Manual mode		km/h	7,2/7,2	7,2/7,2	7,2/7,2
	5.2	Lift speed, with/without load		m/s	0,36/0,68	0,43/0,68	0,37/0,64
	5.3	Lowering speed, with/without load		m/s	0,55/0,59	0,55/0,60	0,53/0,58
	5.4	Reach speed, with/without load		m/s	0,20/0,28	0,20/0,28	0,20/0,28
	5.8	Max. gradeability, with/without load		%	10/15	10/15	7/12
	5.10	Service brake			Electric	Electric	Electric
Electric motor	6.1	Drive motor rating S2 60 min		kW	7,5	9,0	9,0
	6.2	Lift motor rating S3 15%		kW	11,0	15,0	15,0
	6.4	Battery voltage, nominal capacity K ₅			48 / See battery compartment table		
	6.5	Battery weight		kg	See battery compartment table		
	6.6	Energy consumption acc. to VDI cycle ⁴⁾		kWh/h	3,7	4,7	5,2
	Other	8.1	Type of drive control			Variable AC	Variable AC
8.4		Sound level at driver's ear according to EN 12 053		dB(A)	66	66	66
		Safety of laser products			Class 1 (EC 60825-1)		

n) Note, new value/text in this version of data sheet.

1) Distance between supportarms 900/1100 mm.

2) Other alternative are available.

3) For the load camera usable WoF distance at FL 1200 mm.

4) Based on RRE-H Contact your supplier for more information.

All data are based on table configuration. Other configurations may give other values.

Truck performance and dimensions are nominal and subject to tolerances.

Toyota Material Handling Manufacturing Sweden AB products and specifications are subject to change without notice.

Battery dependent dimensions

Dimensions			RAE160				RAE200				RAE250					
Mast type			Triplex Hi-Lo - B				Triplex Hi-Lo - B				Triplex Hi-Lo - C		Triplex Hi-Lo - D			
	Battery compartment		mm	275 ¹⁾	347	419	491	347 ²⁾	419 ²⁾	491 ²⁾	419	491	419 ²⁾	491 ²⁾	419	491
1.8 ⁿ⁾	Load distance, centre of support arm wheel to face of forks	x	mm	385	313	241	160	424	352	280	319	247	379	307	324	252
4.20 ⁿ⁾	Length to face of forks	l_2	mm	1321	1393	1465	1546	1411	1483	1555	1516	1588	1516	1588	1571	1643
4.35	Turning radius Rotate on point.	W_a	mm	1715	1715	1715	1715	1845	1845	1845	1845	1845	1903	1903	1903	1903
6.4	Battery voltage (48V), nominal capacity K_3 , Lead-acid		Ah	465	620	775	930	620	775	930	775	930	775	930	775	930
6.4	Battery voltage (48V), nominal capacity K_3 , Li-Ion		Ah	n/a	420	420	420	420	420	420	420	420	420	420	420	420
6.5	Battery weight, min. - max.		kg	685-825	875-1030	1055-1235	1250-1440	875-1030	1055-1235	1250-1440	1055-1235	1250-1440	1055-1235	1250-1440	1055-1235	1250-1440

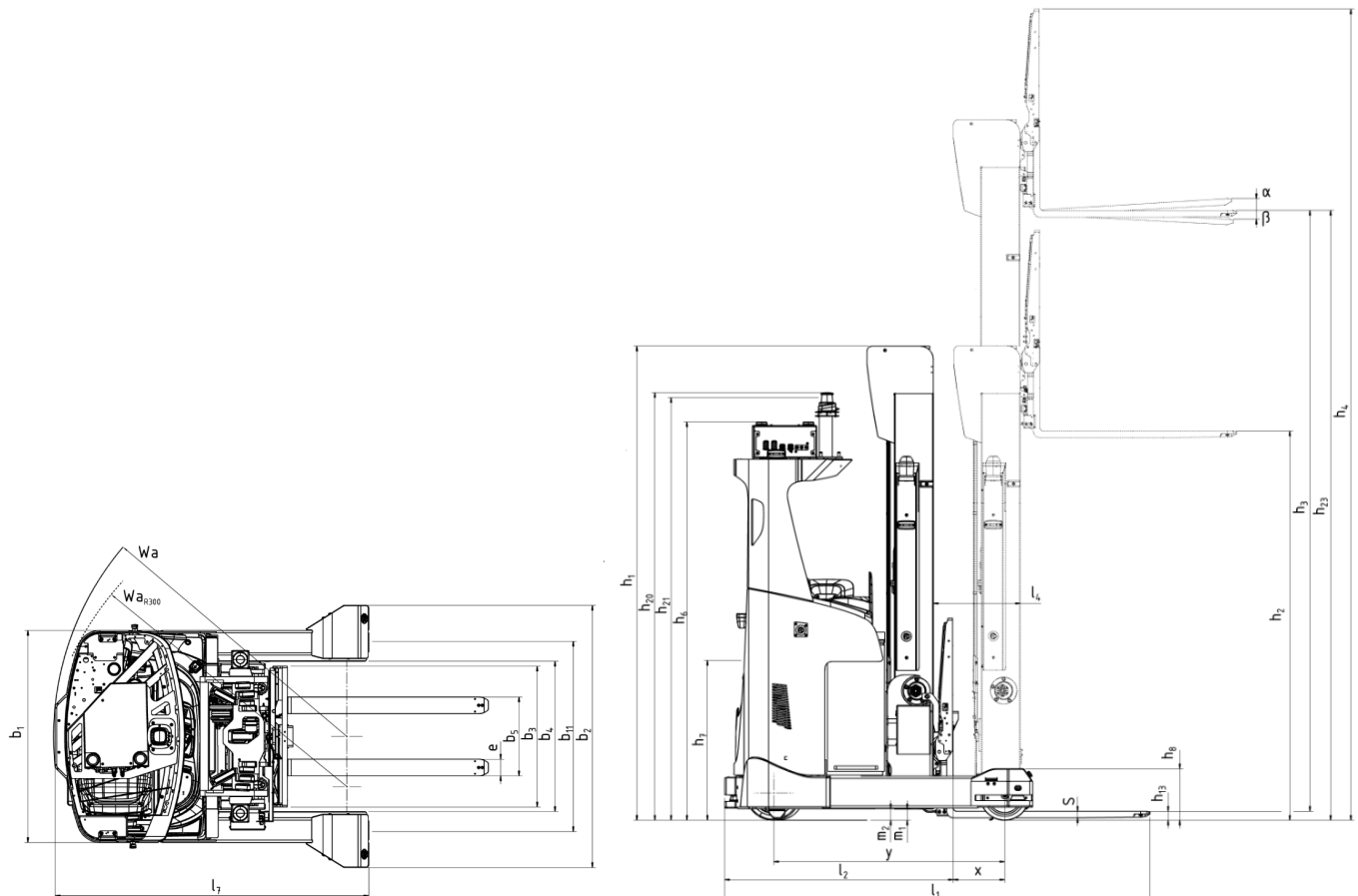
1) Max lift height 7500mm 2) Max lift height 9500mm

Mast dimensions

RAE160			Triplex Hi-Lo - B																					
	Lift height	h_{23}	mm	4850	5400	5700	6300	7000	7500	8000	8500	9000	9500	10000										
4.4	Lift	h_3	mm	4795	5345	5645	6245	6945	7445	7945	8445	8945	9445	9945										
4.2	Height, mast lowered	h_1	mm	2249	2432	2532	2732	2966	3132	3299	3466	3632	3799	3966										
4.3	Free lift	h_2	mm	1741	1925	2025	2225	2459	2625	2791	2959	3125	3291	3459										
4.5	Height, mast extended	h_4	mm	6026	6576	6876	7476	8176	8676	9176	9676	10176	10676	11176										

RAE200			Triplex Hi-Lo - B											Triplex Hi-Lo - C	
	Lift height	h_{23}	mm	4850	5400	5700	6300	7000	7500	8000	8500	9000	9500	10000	
4.4	Lift	h_3	mm	4795	5345	5645	6245	6945	7445	7945	8445	8945	9445	9945	
4.2	Height, mast lowered	h_1	mm	2249	2432	2532	2732	2966	3132	3299	3466	3632	3799	3963	
4.3	Free lift	h_2	mm	1741	1925	2025	2225	2459	2625	2791	2959	3125	3291	3449	
4.5	Height, mast extended	h_4	mm	6026	6576	6876	7476	8176	8676	9176	9676	10176	10676	11176	

RAE250			Triplex Hi-Lo - C											Triplex Hi-Lo - D
	Lift height	h_{23}	mm	4850	5400	5700	6300	7000	7500	8000	8500	9000	9500	10000
4.4	Lift	h_3	mm	4795	5345	5645	6245	6945	7445	7945	8445	8945	9445	9945
4.2	Height, mast lowered	h_1	mm	2247	2430	2530	2730	2936	3130	3297	3463	3630	3797	3963
4.3	Free lift	h_2	mm	1733	1917	2017	2217	2449	2617	2783	2949	3117	3283	3449
4.5	Height, mast extended	h_4	mm	6026	6576	6876	7476	8176	8676	9176	9676	10176	10676	11176



Aisle width Auto mode

			A _{st} Rotate on point, PPS Muted				A _{st} Rotate with radius 400 mm, PPS Muted					
		Load length	mm	800	1000	1200		800	1000	1200		
		Laod width	mm	1200	1200	800	1000	1200	1200	800	1000	
Model	Mast type	Battery comp.										
RAE160	Triplex hilo - B	275	mm	2694	2831	2888	2934	2683	2860	3001	3018	n)
		347	mm	2740	2885	2954	2997	2745	2926	3072	3088	n)
		419	mm	2790	2942	3020	3061	2809	2993	3144	3159	n)
		491	mm	2849	3008	3096	3134	2882	3069	3225	3238	n)
RAE200	Triplex hilo - B	347	mm	2801	2932	2983	3031	2781	2954	3092	3110	n)
		419	mm	2845	2985	3048	3093	2841	3020	3164	3180	n)
		491	mm	2893	3041	3114	3156	2904	3086	3235	3250	n)
	Triplex hilo - C	419	mm	2866	3011	3078	3122	2870	3050	3196	3212	n)
		491	mm	2916	3067	3145	3186	2934	3117	3268	3283	n)
RAE250	Triplex hilo - C	419	mm	2886	3023	3081	3127	2876	3053	3195	3212	n)
		491	mm	2932	3078	3147	3190	2938	3119	3266	3282	n)
	Triplex hilo - D	419	mm	2921	3065	3132	3175	2924	3104	3249	3265	n)
		491	mm	2970	3121	3198	3239	2987	3171	3321	3336	n)

Lift capacities RAE160 - RAE200 - RAE250

Actual Capacity (kg) at LCP650 TxHiLo mast

Model	RAE160			RAE200			RAE250					
Distance between support arms b ₄ (mm)	900			900			900					
Battery compartment (mm)	Mast type	347	419	491	Mast type	347	419	491	Mast type	419	491	
Load center LCP (mm)	type	650	650	650	type	650	650	650	type	650	650	
Lift height h ₂₃ (mm)												
4850	B	1470	1470	1470	B	1840	1840	1840	C	2300	2300	
5400	B	1470	1470	1470	B	1840	1840	1840	C	2190	2280	
5700	B	1470	x 1470	1470	B	1840	1840	1840	C	2120	2220	
6300	B	1470	x 1470	1470	B	1800	x 1840	1840	C	2010	2100	
7000	B	1420	x 1470	x 1470	B	1730	x 1780	x 1780	C	1750	x 1750	
7500	B	1350	x 1420	x 1470	x B	1600	x 1600	x 1600	C	1590	x 1590	x
8000	B	1300	x 1360	x 1440	x B	1460	x 1460	x 1460	C	1450	x 1450	x
8500	B	1240	x 1300	x 1380	x B	1340	x 1340	x 1340	C	1320	x 1320	x
9000	B	1190	x 1260	x 1360	x B	1250	x 1250	x 1250	C	1210	x 1210	x
9500	B	1150	x 1210	x 1290	x B	1170	x 1170	x 1170	C	1100	x 1100	x
10000	B	990	x 1180	x 1200	x C	1020	x 1020	x 1020	D	1650	x 1710	x

x With support studs

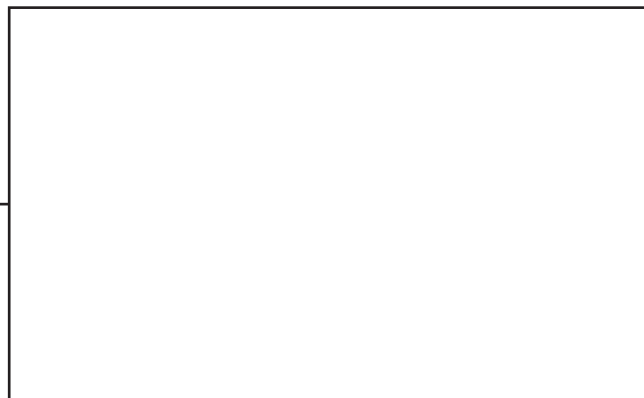
Actual Capacity (kg) at LCP650 TxHiLo mast

Model	RAE160			RAE200			RAE250				
Distance between support arms b ₄ (mm)	1100			1100			1100				
Battery compartment (mm)	Mast type	347	419	491	Mast type	347	419	491	Mast type	419	491
Load center LCP (mm)	type	650	650	650	type	650	650	650	type	650	650
Lift height h ₂₃ (mm)											
4850	B	1470	1470	1470	B	1840	1840	1840	C	2300	2300
5400	B	1470	1470	1470	B	1840	1840	1840	C	2190	2280
5700	B	1470	1470	1470	B	1840	1840	1840	C	2120	2220
6300	B	1470	1470	1470	B	1800	1840	1840	C	2010	2100
7000	B	1420	1470	1470	B	1730	1780	1780	C	1750	1750
7500	B	1350	x 1420	1470	B	1600	1600	1600	C	1590	1590
8000	B	1300	x 1360	1440	B	1460	x 1460	1460	C	1450	1450
8500	B	1240	x 1300	x 1380	B	1340	x 1340	x 1340	C	1320	x 1320
9000	B	1190	x 1260	x 1360	B	1250	x 1250	x 1250	C	1210	x 1210
9500	B	1150	x 1210	x 1290	x B	1170	x 1170	x 1170	C	1100	x 1100
10000	B	990	x 1180	x 1200	x C	1020	x 1020	x 1020	D	1650	x 1710

x With support studs

Truck features:

- Automatic
 - loading and unloading
 - horizontal transport
 - vertical stacking
 - horizontal deep stacking
- Manual handling
- Laser precision navigation
- Personal safety protection drive direction
- Personal safety protection fork direction
- Personal safety protection on sides
- Obstacle detection system forward (optional)
- Obstacle detection system sides (optional)
- Barcode scanner (optional)
- Auto charging Lithium Ion battery (optional)
- Blue LED warning light fork/drive direction (optional)
- Load presence and push detection
- Advanced vision aided load handling (optional)
- Multi load detection (optional)
- Information display



TP-Technical Publications, Sweden — 747505-040, version 7, 2021-10-12

TOYOTA

MATERIAL HANDLING