

FRE270

Specifications						FRE270
Identification	1.1	Manufacturer				Toyota
	1.2	Model				FRE270
	1.3	Drive				Electric
	1.4	Operator type				Rider seated
	1.5	Load capacity/rated load	Q	kg		2700
	1.6	Load centre	c	mm		400 ¹⁾ / 600 ²⁾
	1.8	Load distance, centre of drive axle to fork	x	mm		450
	1.9	Wheelbase	y	mm		1514
Weight	2.1	Service weight including battery		kg		4520 ³⁾
	2.3	Axle load, mast retracted without load, drive/support arm wheel		kg		3323/1351
	2.4	Axle load, mast extended with load, drive/support arm wheel		kg		1366/6016
	2.5	Axle load, mast retracted with load, drive/support arm wheel		kg		3360/4020
Wheels	3.1	Drive/fork wheel				Polyurethane
	3.2	Wheel size front (load end), load wheel/swivel castor				350x108/300x50 (2)
	3.3	Wheel size rear (driver end), drive wheel/swivel castor				350x128/230x65 (2)
	3.5	Wheels, number front/rear (x = driven wheels)				2/2 (1x)
	3.6	Track width, front (load end)	b ₁₀	mm		1560
	3.7	Track width, rear (driver end)	b ₁₁	mm		825
	Dimensions	4.1	Tilt of fork, forward/backward	α/β	deg	
4.2		Height, mast lowered	h ₁	mm		2950
4.3		Free lift	h ₂	mm		2087
4.4		Lift	h ₃	mm		6255
		Lift height	h ₂₃	mm		6300
4.5		Height, mast extended	h ₄	mm		7120
4.7		Height of overhead guard (cab)	h ₆	mm		2260
4.8		Seat height	h ₇	mm		1160
4.10		Height of support arms	h ₈	mm		480
4.15		Height of lowered forks	h ₁₃	mm		45
4.19		Overall length	l ₁	mm		2610*
4.20		Length to face of forks	l ₂	mm		1460
4.21		Overall width	b ₁	mm		1710
4.22		Fork dimensions	s/e/l	mm		45/100 ¹⁾ / 1150, 45/125 ²⁾ / 1150
4.25		Width over forks (fork adjustment min. - max.)	b ₅	mm		540/2220 ¹⁾ , 400/960 ²⁾
4.26		Distance between support arms (load surface)	b ₄	mm		1295
4.28		Reach distance	l ₄	mm		700
4.32		Ground clearance, centre of wheelbase	m ₂	mm		130
4.33		Aisle width for pallets 1000x1200 crossways	A _{st}	mm		2860
4.34		Aisle width for pallets 800x1200 lengthways	A _{st}	mm		3060
4.35	Turning radius	W _a	mm		1988	
4.37	Length over support arms	l ₇	mm		1960	
Performance data	5.1	Travel speed, with/without load		km/h		8,0/8,0
	5.2	Lift speed, with/without load		m/s		0,25/0,44
	5.3	Lowering speed, with/without load		m/s		0,33/0,38
	5.8	Max. gradeability, with/without load ⁴⁾		%		7/12
	5.10	Service brake				Electrical
Electric motor	6.1	Drive motor rating S2 60 min		kW		7,5
	6.2	Lift motor rating S3 15%		kW		14
	6.4	Battery voltage, nominal capacity K _s		V/Ah		48/750
	6.5	Battery weight		kg		1150
	6.6	Energy consumption according to VDI cycle ⁵⁾		kWh/h		3,5
	Other	8.1	Type of drive control			
8.4		Sound level at the driver's ear according to EN 12 053		dB(A)		72

¹⁾ Type "a" fork spreader (spread 540-2220 mm).

²⁾ Type "b" fork spreader (spread 400-960 mm).

³⁾ Triplex mast 6300 mm lift height.

⁴⁾ Measured according to company standard.

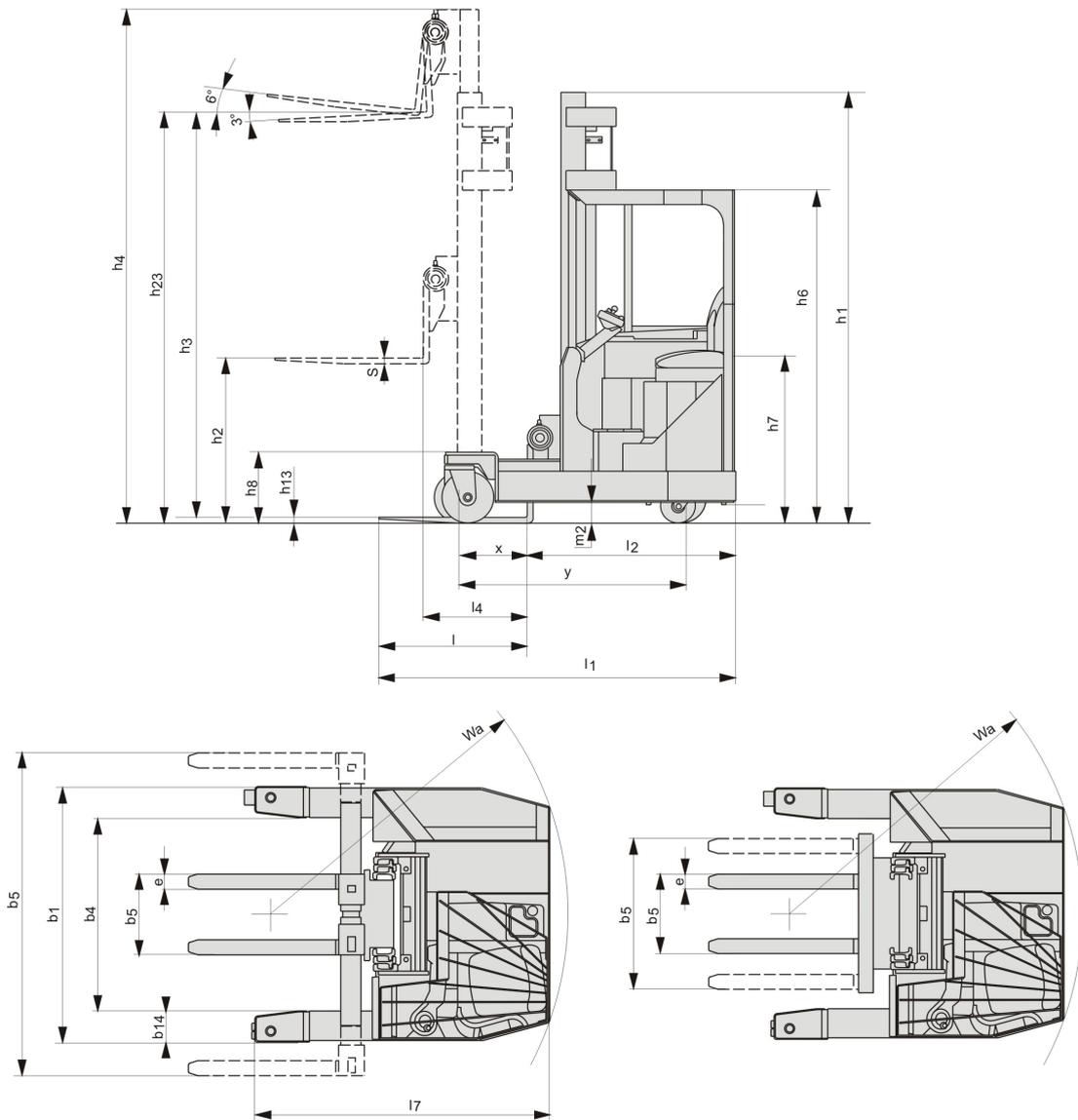
⁵⁾ Contact your supplier for information.

* Depends on length of forks.

Mast dimensions

FRE270			Duplex Hi-Lo		Triplex Hi-Lo								
Lift height	h_{23}	mm	4150	4500	4800	5400	5700	6300	6700	7000	7500	8000	
Lift	h_3	mm	4105	4455	4755	5355	5655	6255	6655	6955	7455	7955	
FRE270	Height, mast lowered	h_1	mm	2920	3100	2450	2650	2750	2950	3180	3280	3550	3710
	Free lift	h_2	mm	2050	2230	1587	1787	1887	2087	2320	2420	2687	2853
	Height, mast extended	h_4	mm	4980	5330	5620	6220	6520	7120	7520	7820	8330	8820

Fork spread type		Load center		Residual capacity			Lift height	
FRE270		mm	400	600	kg			h_{23} mm
	Fork spread 540 - 2220 ("a")	mm	X		2700			5700
		mm	X		2200			8000
		mm		X	2250			5400
		mm		X	1700			8000
	Fork spread 400 - 960 ("b")	mm	X		2700			6300
		mm	X		2200			8000
		mm		X	2700			4500
		mm		X	1700			8000



"a" Wide fork spread across support arms

"b" Thin fork spread between support arms

Standard equipment and option availability

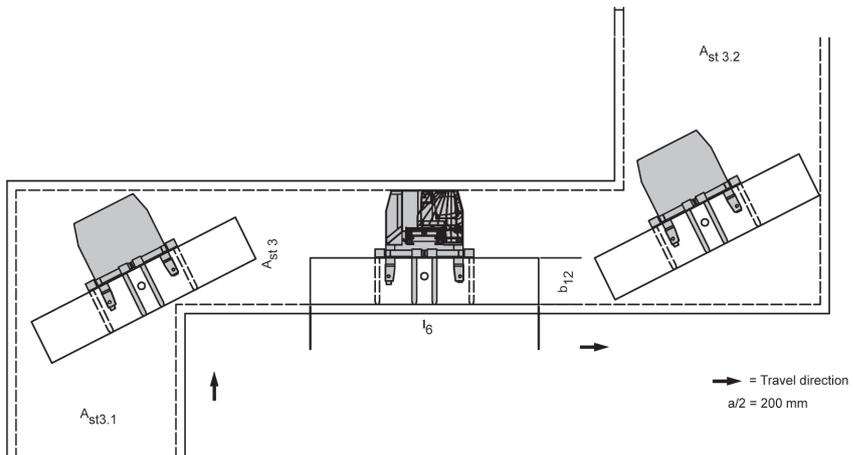
BT Reflex F-series	FRE270
Truck features	
Adjustable fork width	●
Automatic parking brake	●
Clear-view mast	●
Clear-view overhead guard	●
Electronic braking system	●
Electronic regenerative brakes (motor)	●
Electronic speed control	●
Fork spreader	●
Four-wheel design	●
Integrated sideshift	○
Tilting forks	●
Warning light	○
Working lights	○
Controls and instruments	
360° progressive steering	●
Adjustable Control console	●
Automatic deceleration	●
Drive motor temperature warning	●
Electronic controller temperature warning	●
Electronic fingertip controls	●
Electronic height indicator	○
Emergency cut-off	●
Height pre-selector	○
Hour meter	●
Lift motor temperature warning	●
Mini-joystick electronic controls	●
Pedals as in a car	●
Power/electronic steering	●
Steering direction indicator	●
Twin direction controls	●
Weight indicator	●
Operator features	
Adjustable pedals	●
Adjustable seat with safety belt	●
Adjustable steering wheel	●
Driver detection system	●
Driver facing forks	●
Driver-adapted programmable performance	●
Heated seat	○
Low step-in	●
Storage compartments	●
Writing table	○
Maintenance features	
Easy access for maintenance	●
Fault diagnosis facility	●
Historic fault log	●
Battery management features	
Battery change facility	○
Battery discharge prevention system	●
Battery status indicator	●
Sideways battery change	●

Rated capacities

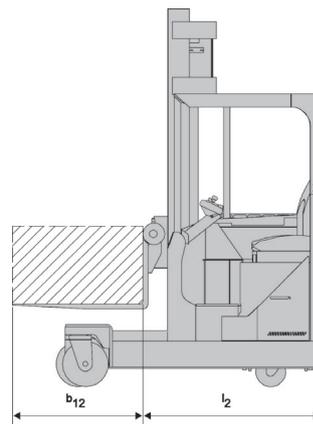
Permitted load Load center (kg)	Type A, fork spread across support arm										Type B, fork spread between support arms									
	Lifting height (mm)										Lifting height (mm)									
	4150	4500	4800	5400	5700	6300	6700	7000	7500	8000	4150	4500	4800	5400	5700	6300	6700	7000	7500	8000
400	2700	2700	2700	2700	2700	2600	2500	2400	2300	2200	2700	2700	2700	2700	2700	2700	2550	2350	2350	2200
500	2500	2500	2500	2500	2500	2350	2250	2150	2000	1900	2700	2700	2600	2450	2350	2200	2050	2000	1850	1700
600	2250	2250	2250	2250	2200	2050	1950	1900	1800	1700	2200	2100	2050	1900	1850	1700	1650	1550	1450	1350

Aisle width

Recommended aisle width (verified values)



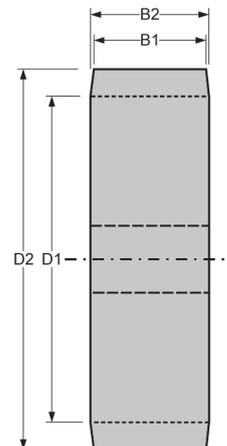
b_{12} (mm)	l_6 (mm)	A_{st3} (mm)	$A_{st3.1}$ (mm)	$A_{st3.2}$ (mm)
800	5000	2660	3850	4600
	6000		4350	5000
	7000		4850	5500
1000	5000	2860	3900	4700
	6000		4300	5100
	7000		4850	5600
1200	5000	3060	3950	4800
	6000		4350	5200
	7000		4950	5700



Wheel pressure/ wheel dimensions

* 1 MPa = 145 psi	Left support arm wheel					Right support arm wheel				
	Dimensions (mm)	No load (kg)	With load (kg)	No load *) MPa (kg/cm ²)	With load *) MPa (kg/cm ²)	Dimensions (mm)	No load (kg)	With load (kg)	No load *) MPa (kg/cm ²)	With load *) MPa (kg/cm ²)
D1	320	292	1064	2,35 (24)	4,95 (50,5)	300	732	2207	2,23 (22,7)	4,22 (43)
D2	350	292	1064	2,35 (24)	4,95 (50,5)	350	732	2207	2,23 (22,7)	4,22 (43)
B1	—	292	1064	2,35 (24)	4,95 (50,5)	102	732	2207	2,23 (22,7)	4,22 (43)
B2	55	292	1064	2,35 (24)	4,95 (50,5)	108	732	2207	2,23 (22,7)	4,22 (43)

* 1 MPa = 145 psi	Drive wheel					Castor wheel				
	Dimensions (mm)	No load (kg)	With load (kg)	No load *) MPa (kg/cm ²)	With load *) MPa (kg/cm ²)	Dimensions (mm)	No load (kg)	With load (kg)	No load *) MPa (kg/cm ²)	With load *) MPa (kg/cm ²)
D1	290	1924	1671	3,29 (33,5)	3,03 (30,9)	200	784	775	4,27 (43,5)	4,24 (43,2)
D2	350	1924	1671	3,29 (33,5)	3,03 (30,9)	230	784	775	4,27 (43,5)	4,24 (43,2)
B1	120	1924	1671	3,29 (33,5)	3,03 (30,9)	—	784	775	4,27 (43,5)	4,24 (43,2)
B2	127,5	1924	1671	3,29 (33,5)	3,03 (30,9)	65	784	775	4,27 (43,5)	4,24 (43,2)



Vibration

Vibration	FRE270
Full body vibration value according to EN 13059 and EN 12096, margin of error 30%	0,5 m/s ²