



FRB-VIII

Electric Reach Forklift Trucks 1.0 - 3.0ton
Class 2 Stand-up Type



01 Productivity



The FRB-VIII lifttrucks provided with AC drive-motor and regenerative brake system that performs to add extra run time.

Conventional model **8.5hours** → New model **9.0hours**
(at 55% rating work efficiency by TCM's testing standard)

02 Comfortable and Safety



Operator comfort and safety features include Interlock system, Password entry as standard configuration, easy access to operator compartment with lower step design and the soft floor cushion reduces vibration and shock against operator.

03 Excellent maneuverability and easy maintenance



The FRB-VIII lifttrucks provided with integrated dashboard design with the easy-to-read larger LCD display that indicates sufficient information for operation control and managemens. Self-diagnosis function supports quick and easy maintenance.

STANDARD SPECIFICATIONS																								
Characteristics					TCM																			
					FRB10-8		FRHB10-8		FRB13-8		FRHB13-8		FRB14-8		FRHB14-8		FRB15-8		FRHB15-8					
1	Manufacturer																							
2	Model																							
3	Load Capacity						kg		1000		1250		1350		1500									
4	Load Center						mm		500		500		500		500									
5	Power Type								Battery		Battery		Battery		Battery									
6	Operator Position								Stand-up		Stand-up		Stand-up		Stand-up									
7	Tire Type				Front / Rear				Solid		Solid		Solid		Solid									
8	Wheels (x = driven)				Front / Rear				2/1X+2		2/1X+2		2/1X+2		2/1X+2									
Dimensions	9	Maximum Fork Height				A	mm	3000	4000	3000	4000	3000	4000	3000	4000	3000	4000							
	10	Free Lift				B	mm	105		105		105		105										
	13	Fork Size				L x W x T	N	mm	920 x 100 x 35		920 x 100 x 35		920 x 100 x 35		920 x 100 x 35									
		Fork Spread (Outside)				Max. / Min.	O	mm	710 / 250		710/250		720/250		710 / 250		710 / 250							
	14	Tilt Angle				Fwd / Bwd	P/Q	deg	3 / 5		3 / 5		3 / 5		3 / 5									
	15	Length to Fork Face						mm	1080		1080		1150		1150		1185							
	16	Overall Width				F	mm	1090		1090		1090		1090										
	17	Mast Height Fork Lowered				H	mm	1995	2495	1995	2495	1995	2495	1995	2495	1995	2495							
	18	Mast Height Fork Raised				I	mm	3845	4845	3845	4845	3845	4845	3845	4845	3845	4845							
	19	Overhead Guard Height				G	mm	2245		2245		2245		2245										
	20	Reach Stroke				D	mm	405	555	555		580		580		725								
	21	Turning Radius (Outside)				C	mm	1350	1490	1490		1560		1560		1750								
	22	Load Distance (Centerline of front axle to front face of forks)				M	mm	170		170		165		165										
	Rear Overhang					mm	220		220		220		220											
23	Right Angle Stacking Aisle with 1100 x 1100mm pallet (clearance at 200mm)					mm	2580	2590	2590		2640		2640		2730									
Performance	24	Travel, Max. (Fwd. / Rvs.)	Full Load	km/h	9.5		9.5		9.5		9.5		9.5											
			No Load	km/h	10.5		10.5		10.5		10.5		10.5											
		Lifting	Full Load	mm/s	330		320		310		310		310											
			No Load	mm/s	540		540		540		540		540											
		Lowering	Full Load	mm/s	450		450		450		450		450											
			No Load	mm/s	550		550		550		550		550											
28	Reach	Full Load	mm/s	195		195		195		195		195												
		No Load	mm/s	200		200		200		200		200												
30	Max. Gradeability ¹⁾		Full Load	%	10		10		10		10		10											
			No Load	%	14.3		14.3		14.3		14.3		14.3											
Weight	32	Total Weight		No Battery	kg	1505	1600	1640	1720	1650	1645	1675	1665											
		With Battery ²⁾			kg	1865	1960	2000	2080	2055	2140	2170	2160											
	33	Weight Distribution ²⁾		Full Load	Front	kg	1890	1725	2015	2060	2095	2140	2305	2100										
					Rear	kg	975	1235	1235	1270	1315	1350	1365	1560										
34	No Load			Front	kg	645	635	650	695	655	705	710	655											
				Rear	kg	1215	1330	1350	1390	1400	1435	1460	1500											
Chassis & Wheels	35	Tires		Number	Front / Rear	2 / 3		2 / 3		2 / 3		2 / 3												
		Size		Front, Load		φ 255 x 114 Rubber		φ 255 x 114 Rubber		φ 254 x 114 Urethane		φ 254 x 114 Urethane												
			Rear, Drive		φ 334 x 145 Rubber		φ 334 x 145 Rubber		φ 334 x 145 Rubber		φ 334 x 145 Rubber													
			Rear, Caster		φ 178 x 73 Rubber		φ 178 x 73 Rubber		φ 178 x 73 Rubber		φ 178 x 73 Rubber													
Power Train	39		Wheelbase		J	mm	1095	1245	1245		1345		1345		1525									
	40		Tread		Front	K	mm	975		975		975		975										
					Rear	L	mm	680		680		680		680										
			Backrest Height			mm	820		820		820		820											
			Overhead Guard Clearance			mm	1910		1910		1910		1910											
			Floor Height			mm	295		295		295		295											
			41 Underclearance		Center of Wheelbase	R	mm	70		70		70		70										
		42		Brake System				Mechanical Disc		Mechanical Disc		Mechanical Disc		Mechanical Disc										
57	45		Battery ²⁾		Voltage / Capacity (5HR)	V/AH	48 / 201		48 / 201		48 / 280		48 / 280											
					Weight	kg	360		360		495		495											
			50		Electric Motors		Drive Motor (AC)	kW/60min	4.3		4.3		4.3		4.3									
					Hydraulic Motor (DC)		kW/5min	8.0		8.0		8.0		8.0										
					Power Steering Motor (DC)		kW/60min	0.3		0.3		0.3		0.3										
		51		Controller Type		Drive Control		FET Inverter		FET Inverter		FET Inverter		FET Inverter										
				Load Handling Control				FET Chopper		FET Chopper		FET Chopper		FET Chopper										
				Steering Control				FET Chopper		FET Chopper		FET Chopper		FET Chopper										
		57		Operating Pressure		For Attachments	MPa	12.3		12.3		13.7		13.7										

NOTE : 1) Computed Values. 2) Battery is an optional and figures are specified by STD size.

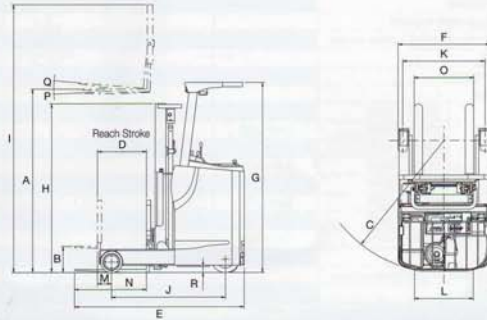
TCM							
FRB18-8	FRHB18-8	FRB20-8	FRHB20-8	FRB25-8	FRHB25-8	FRB30-8	FRHB30-8
1800		2000		2500		3000	
500		500		500		500	
Battery		Battery		Battery		Battery	
Stand-up		Stand-on		Stand-on		Stand-on	
Solid		Solid		Solid		Solid	
2/1X+2		2/1X+2		2/1X+2		2/1X+2	
3000	4000	3000	4000	3000	4000	3000	4000
110		410		410		410	
920 x 100 x 38		920 x 122 x 40		920 x 122 x 40		1070 x 125 x 45	
710 / 250		735 / 290		735 / 290		735 / 290	
3 / 5		3 / 5		3 / 5		3 / 5	
1190		1280	1305	1305		1515	
1090		1200		1200		1200	
1995	2495	2035	2535	2035	2535	2085	2585
3845	4845	3930	4930	3930	4930	3930	4930
2245		2300		2300		2300	
725		650	795	795		685	
1750		1795	1965	1965		2065	
170		165		165		165	
220		240		240		240	
2730		2830	2890	2890		3060	
9.5		9.5		9.5		9	
10.5		11.5		11.5		11	
290		270		250		210	
540		480		480		400	
450		450		450		450	
550		550		550		550	
195		260		260		260	
200		260		260		260	
10		10		10		10	
14.3		14.3		14.3		14.3	
1750	1835	2110	2245	2245	2360	2490	2605
2245	2330	2690	2825	2825	2940	3155	3270
2410	2455	2870	2710	3155	3210	3975	4040
1635	1675	1820	2115	2170	2230	2185	2230
675	720	855	860	850	905	1015	1080
1570	1610	1840	1960	1980	2035	2140	2190
2 / 3		2 / 3		2 / 3		2 / 3	
φ 254 x 114 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane	φ 267 x 135 Urethane
φ 334 x 145 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber	φ 380 x 165 Rubber
φ 178 x 73 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber	φ 204 x 76 Rubber
1525	1530	1700		1700		1800	
975	1065	1065		1065		1065	
680	725			725		725	
815	900			900		895	
1910	1915			1915		1915	
295	340			340		340	
70	70			70		70	
Mechanical Disc	Mechanical Disc	Mechanical Disc		Mechanical Disc		Mechanical Disc	
48 / 280	48 / 320			48 / 320		48 / 390	
495	580			580		665	
4.3	6.1			6.1		6.1	
8.0	11.0			11.0		11.0	
0.3	0.3			0.3		0.3	
FET Inverter	FET Inverter			FET Inverter		FET Inverter	
FET Chopper	FET Chopper			FET Chopper		FET Chopper	
FET Chopper	FET Chopper			FET Chopper		FET Chopper	
15.7	17.2			17.2		17.2	

NOTE: ● Meets following major industrial standards and code:
 ISO 3184 Reach forklift truck, stability & tests
 ISO/DIS 3691 Travel & loading interlock
 ISO 6055 Overhead guard

JIS D6001 Powered industrial trucks - safety code
 JIS D6012 Reach forklift truck, stability & tests
 JIS D6021 Overhead guard
 JIS D6023 Industrial trucks brake performance & safety tests

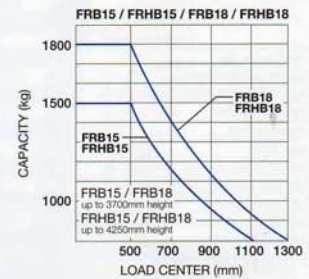
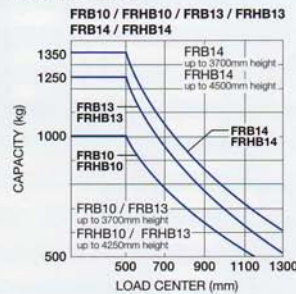
● In conformity with provision of Machinery Directive 98/37/EC, and as amended, (for EXE configuration)

STANDARD DIMENSIONS

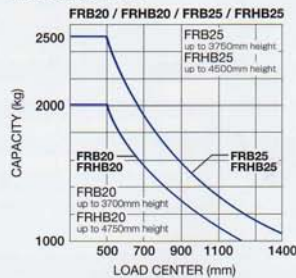


LOAD CHART

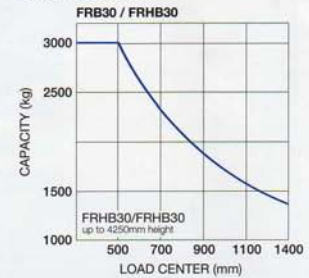
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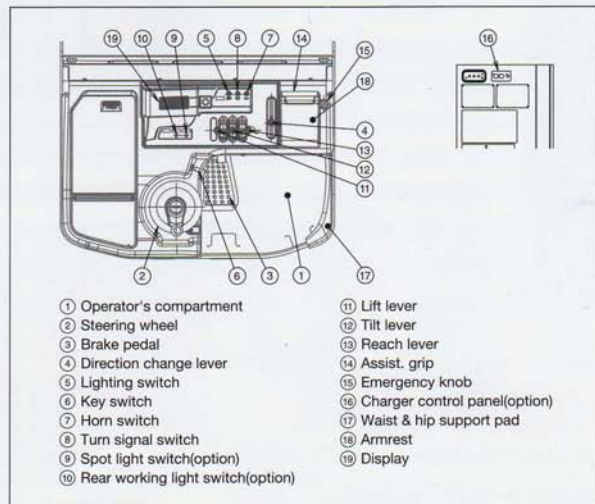
[2t STANDARD]



[3t STANDARD]



INSTRUMENTS & CONTROLS



Configuration for export specification																	
Model	Option code	FRB10-8	FRHB10-8	FRB13-8	FRHB13-8	FRB14-8	FRHB14-8	FRB15-8	FRHB15-8	FRB18-8	FRHB18-8	FRB20-8	FRHB20-8	FRB25-8	FRHB25-8	FRB30-8	FRHB30-8
Arm rest with assist grip		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Auto leveling system	ALS	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Auto-lock suspension system		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Automatic anti-slip control / drive wheel		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Auto power off		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Auto traction control		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Back-up buzzer		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Battery ¹⁾	201Ah / 5HR	BAH201	○ ²⁾	○ ²⁾													
	225Ah / 5HR	BAH225	△	△													
	280Ah / 5HR	BAH280					○ ²⁾	○ ²⁾	○ ²⁾								
	312Ah / 5HR	BAH312					△	△	△								
	320Ah / 5HR	BAH320										○ ²⁾	○ ²⁾				
	370Ah / 5HR	BAH370					△	△	△								
	390Ah / 5HR	BAH390										△	△				○ ²⁾
440Ah / 5HR	BAH440										△	△				△	
Battery carrier	BAC C							△	△	△							
Battery charger (Built-in type/Stational type)		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Battery container	BC	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Battery side rollout	BRO							△	△	△							
Central greasing system		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chime (Buzzer) / forward traveling	TAF	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Display	Battery fuel	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Clock with calendar	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Hourmeter	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Odmeter	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Safety monitor	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Speedometer	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Documents clip		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Electric power steering	EPS	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Electro-magnetic front wheel brake	FBK	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Fire extinguisher	FE	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Laser pointer	LSP	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Head light		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Neutral safety system		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Operator tool kit		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Overhead guard		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Overhead guard demount type / vaning	HGV											△	△	△	△	△	△
Overhead guard canvas	HGC	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Rear working light	RWL	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Regenerative braking	Accel-off brake	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Brake	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Down-slope travel	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Switch-back	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rotating beacon(yellow)	RLY	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Rotating beacon(red)	RLR	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Small-dia. steering wheel		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Speed warning device	SCS							△	△	△							
Spot light	SPL	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Stational charger (with MICON)		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Stop & backup lamp	SBL	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Turn signal lights		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Waist supporter		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

○ : STD △ : Optional 1) : Battery is an optional equipment. 2) : Std. battery size for factory installation.

RIGHT ANGLE STACKING AISLE (calculated with 200mm of clearance)

Model	Pallet Type : Width (W) x Depth (L)											
	W		L		W		L		W		L	
	1000	800	1100	800	1000	1000	1100	1000	1200	1000	1100	1100
FRB10-8	2310		2340		2460		2490		2520		2580	
FRHB10-8	2340		2380		2480		2520		2550		2590	
FRB13-8	2340		2380		2480		2520		2550		2590	
FRHB13-8	2340		2380		2480		2520		2550		2590	
FRB14-8	2400		2440		2530		2570		2600		2640	
FRHB14-8	2400		2440		2530		2570		2600		2640	
FRB15-8	2400		2440		2530		2570		2600		2640	
FRHB15-8	2510		2560		2620		2660		2700		2730	
FRB18-8	2510		2560		2620		2660		2700		2730	
FRHB18-8	2510		2560		2620		2660		2700		2730	
FRB20-8	2590		2630		2720		2750		2790		2830	
FRHB20-8	2700		2750		2790		2830		2870		2890	
FRB25-8	2700		2750		2790		2830		2870		2890	
FRHB25-8	2700		2750		2790		2830		2870		2890	
FRB30-8	2840		2880		2950		2990		3030		3060	
FRHB30-8	2840		2880		2950		2990		3030		3060	

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- Features and specifications may vary depending on markets.
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