

SHINKO ELECTRIC FORKLIFT TRUCKS

1.0-3.0-ton



 **SHINKO**

<https://www.forkliftpdfmanuals.com/>

Top-class power and speed! Fast, efficient materials handling!

A great new range of electric forklifts incorporating the best of SHINKO's state-of-the-art electronics technology. Unsurpassed in power, speed, stability, and energy efficiency. Smooth controls and a crisp response for quality materials handling performance.



Power & Speed!

High voltage + AC control give unprecedented high power and speed

48-volt batteries and AC control give top class performance in travel speed, hoist speed and grade-climbing (1.5 ton models; hyper mode)

Travel speed
15 km/h

Hoist speed:
560 mm/se

Grades up to
17%

Firm Stability!

Designed for quality materials handling with low silhouette and enhanced functions

Drop batterybox design, long wheel base, roomy head clearance and other features based on comprehensive research to ensure safe and stable operation.

Drop battery box

Low Center of Gravity design

Long wheel base

Spacious floor



Advanced features and extended operation



Power and speed

The advanced AC control produces the power and speed you expect from an engine-powered vehicle, to boost productivity. Travel and hoist speeds and grade climbing all top the class for electric forklifts.

Excellent stability for travel and turning

The new layout positions heavy battery low in the middle of the vehicle, and the long wheel base maintains stability in speedy travel. Rubber stopper helps prevent sudden articulation, and the low profile tires (1.75 ton class and

above) ensure excellent turning stability, even at high speed.

Easy-open battery hood

Battery hood can be opened smoothly with gas spring support and held open. Side covers can also be removed easily.



Grade climbing
17%



Lifting
560 mm/sec

Travel
15 km/h

Lowering
470 mm/sec



for working efficiency ations

One-touch floor plate

Floor plate comes off without any tools.



Maneuverability in tight spaces

Min. turning radius is 1775 mm (1.5 ton class). Maneuvering sharp turns makes easy work of operations in the narrow aisles and confined space of the typical warehouse.

New AC motors for travel and load handling

For the first time in the industry, high-efficiency, high-performance AC motors deliver top class speeds in travel and load handling.

High energy efficiency

All the braking energy generated when reducing speed, by releasing accelerator, applying brake, shifting levers, etc., as well as inertia in mast, is returned to the batteries for high energy efficiency.

- Neutral regeneration
- Brake pedal regeneration
- Shift lever regeneration
- Hydraulic regeneration

Electrical components in one cavity

The AC and PS controllers for travel and load handling are located in a single cavity, making checks quick and easy.



Advantages of AC drive system

Motor

1. Simple, robust structure

Stator coil and rotor are only major components. Bearing only part that may require replacement.

2. Maximum torque is limited, reducing risk of overheating

Thermo sensor reports stator coil temperature to control system, to protect motor from overheating. Transistors in the controller are similarly protected.

3. Large torque at high speed

Large torque even in mid- to high-speed range allows good acceleration.

4. Large regenerative torque

Large regenerative torque provides good maneuverability.

Controller

1. No F/R contactor or regenerative contactor required

Crisp response, reduced maintenance, and less noise.

2. Regenerative braking throughout speed range

Regenerative braking from zero to top speed improves driveability and recovers more energy.

3. Excellent control across speed range.

Consistently high controllability from low to high speed.



Easy, convenient control operator free from

Electro-Hydraulic Power Steering system (EHPS) with computerized control

Power steering combines the smooth feel of a hydraulic system with computerized control. With its range of computer-controlled features, the control system offers a unique experience.

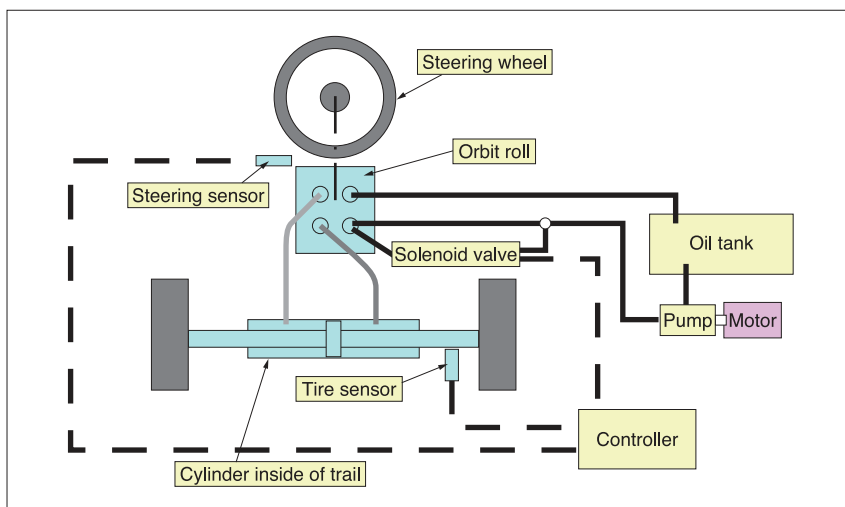
- Auto-adjust: position of steering

wheel and rear wheel angle are synchronized to give control that always matches vehicle movements precisely.

- On-demand: Steering motor is activated by turning steering wheel. Staying OFF when it's not needed saves energy and reduces noise.
- Speed sensing: Power is controlled to give the optimal level to match speed. This gives the control the operator expects.

Spacious operating area

Batteries are positioned low down, giving a flat, spacious floor to the operating area. Plenty of head clearance allows a natural operating stance. Operating area has relaxing, spacious feel.

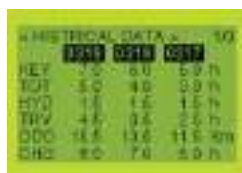


Enhanced Multi-display

Enhanced Multi-display gives a full range of displays that are clear and easy to read, including battery discharge indicator, speed meter, charging status, operation management, password entry etc.



Display shows data according to vehicle status: speed meter and battery discharge indicator during travel, and digital clock and battery discharge indicator when stationary.



Operational data including several hour meters, travel distance, and charging time, are recorded for weekly periods.



Operator can select from 3 working modes: 'energy-saving' mode, mid ~ high power plus hyper mode, and 'my' mode, which allows operator to make own settings.



For security, password entry feature requires a numeric code to be input before the vehicle can be switched ON. Up to 10 codes can be pre-set.

Controls keep in fatigue



Control layout is easy to use, reducing fatigue

The scaled down steering wheel is offset slightly to the left in the ergonomically designed control layout. The full range of vehicle controls – travel, hoisting, transporting – create no strain on the operator.

Combined switches

Shift levers are conveniently located on the right, light switch and indicator lever (w/ auto cancel) on the left.

Open view mast

Greater mast width gives a wide field of view to the front when hoisting or lowering. High visibility means safer operations.

Auto power-OFF

Power switches OFF automatically if the vehicle is not operated for more than 15 mins. Power is not wasted due to operator's oversight.

Soft landing hoist cylinder

Lowering speed of unloaded fork reaching the ground is slowed to avoid impact noise. (Not available for three-stage and full-free masts)



Warning buzzer for headlights

If headlights are still on when main key is switched OFF, a warning buzzer sounds.

Overhead guard

Extra-wide overhead guard keeps operator safe, and also comfortably dry in wet weather.



Water-proofed for safety

The electrical system, the life-blood of a electric forklift, is located in fully sealed housing. All parts of the vehicle are water-proofed to allow operation in rainy conditions.





Fork lifts for cold store use (option)



Specifications for deep freeze and cold store use

Deep freeze/cold store specs ensure reliable operations under cold conditions. Comprehensive low-temperature design is matched with anti-drip, anti-moisture configuration for superb, energy-saving materials handling and travel performance. Ideal for operations in -35° or -45° frozen food warehouses and cold stores.

Main Accessories

●: Standard △: Optional

	8FB10PX	8FB14PX	8FB15PX	8FB15PGX	8FB18PX	8FB18PGX	8FB20PX	8FB20PGX	8FB25PX	8FB25PGX	8FB30PZX
Controls											
Auto-power-OFF	●	●	●	●	●	●	●	●	●	●	●
Regenerative braking	●	●	●	●	●	●	●	●	●	●	●
Neutral regeneration (*1)	●	●	●	●	●	●	●	●	●	●	●
Ramp start (*2)	●	●	●	●	●	●	●	●	●	●	●
Neutral start (*3)	●	●	●	●	●	●	●	●	●	●	●
Accelerator pedal adjustment (*4)	●	●	●	●	●	●	●	●	●	●	●
Traction power adjustment (*4)	●	●	●	●	●	●	●	●	●	●	●
Hoist speed limit (*4)	●	●	●	●	●	●	●	●	●	●	●
Tilt speed limit (*4)	●	●	●	●	●	●	●	●	●	●	●
Travel speed limit (*5)	●	●	●	●	●	●	●	●	●	●	●
BDI interrupt (*6)	△	△	△	△	△	△	△	△	△	△	△
Multi-display											
Battery capacity gauge	●	●	●	●	●	●	●	●	●	●	●
Digital clock	●	●	●	●	●	●	●	●	●	●	●
Multi hour meters	●	●	●	●	●	●	●	●	●	●	●
Speed gauge	●	●	●	●	●	●	●	●	●	●	●
Safety monitor	●	●	●	●	●	●	●	●	●	●	●
Operation management	●	●	●	●	●	●	●	●	●	●	●
Password entry (*7)	●	●	●	●	●	●	●	●	●	●	●
Lights											
Headlights (*8)	●	●	●	●	●	●	●	●	●	●	●
Turning indicators	●	●	●	●	●	●	●	●	●	●	●
Back buzzer	●	●	●	●	●	●	●	●	●	●	●
Tilting steering wheel											
Suspension seat	△	△	△	△	△	△	△	△	△	△	△
Battery Ah/5HR											
48V x 325	●	●									
48V x 390	△	△	●		●						
48V x 440		—	—		—		●		—		
48V x 525	△	△	△		△		—				
48V x 565		—		●	—	●	△		●		
48V x 700				△		△	△		△		
48V x 725				—		—	△	○	△	○	—
72V x 465								—		—	○
72V x 600											△

*1 Releasing accelerator during travel activates regenerative braking to slow vehicle speed.

*2 When starting on a grade, automatic torque adjustment prevents roll-back.

*3 If the key is switched ON with travel lever engaged or accelerator depressed, vehicle is held stationary and an error message is displayed.

*4 Acceleration, and power, hoist and tilt speeds can be adjusted to match job requirements.

*5 Max. speed can be set to conform with workplace speed limit.

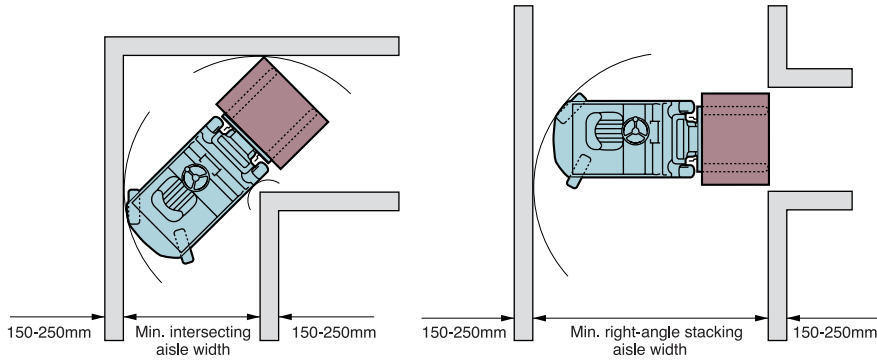
*6 When battery charge falls below 20%, hoist speed is first reduced by 50%, then fork operation stops altogether, to prevent damage to batteries.

*7 10 different codes can be pre-set.

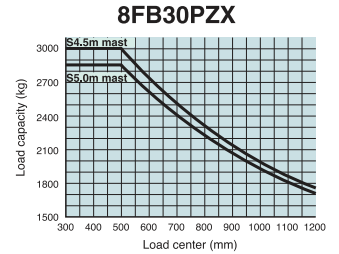
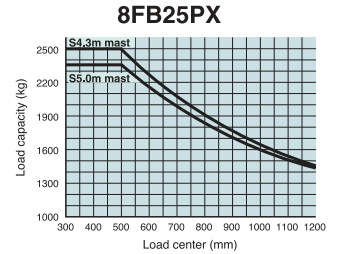
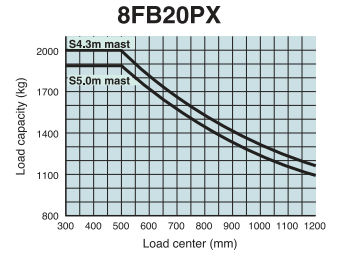
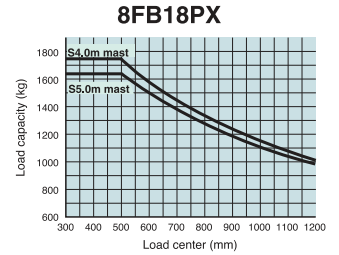
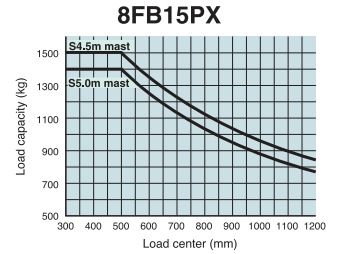
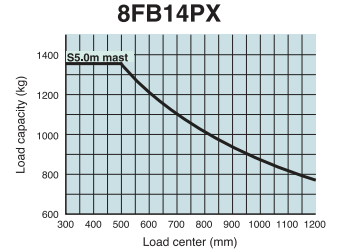
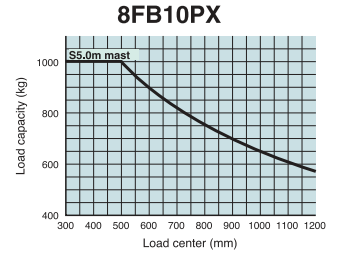
*8 With warning buzzer.

Intersecting (IA) and Right-angle Stacking (SA) Aisle Widths

Load Capacity Charts



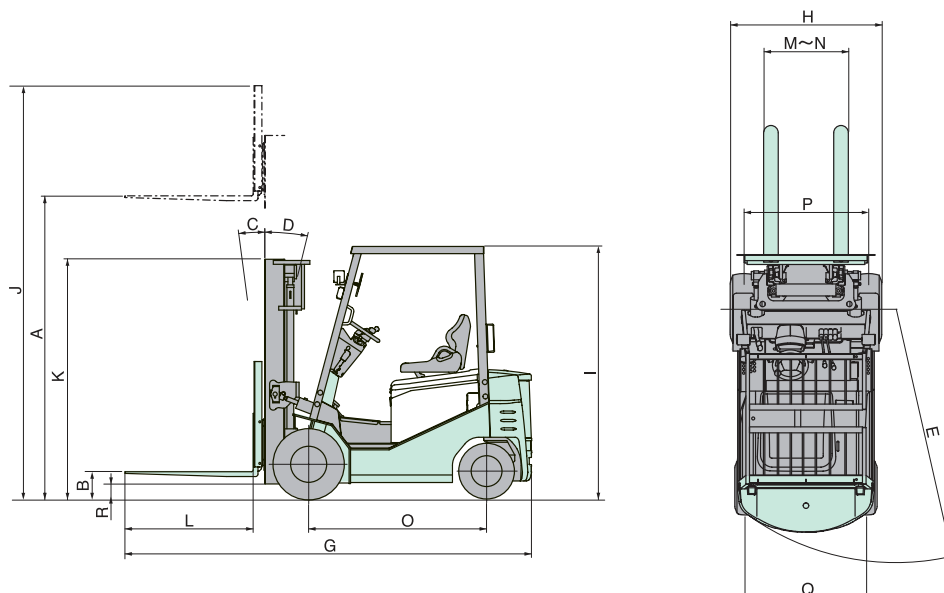
Model	Pallet length (mm) Pallet width (mm)	1000		1100		1200		1300		1400		1500	
		IA	SA	IA	SA	IA	SA	IA	SA	IA	SA	IA	SA
8FB10PX 8FB14PX	800	1730	3180	1760	3280	1795	3380	1835	3480	1880	3580	1920	3680
	1000	1760	3180	1795	3280	1835	3380	1875	3480	1920	3580	1965	3680
	1100	1780	3185	1815	3285	1855	3385	1895	3485	1940	3585	1985	3685
	1200	1800	3185	1835	3285	1875	3385	1920	3485	1965	3585	2010	3685
	1300	1820	3190	1855	3290	1900	3390	1945	3490	1990	3590	2035	3690
	1400	1845	3200	1880	3300	1925	3400	1970	3495	2015	3595	2070	3695
	1500	1895	3210	1930	3310	1970	3405	2020	3505	2070	3600	2130	3700
	1800	2095	3245	2130	3340	2175	3435	2225	3535	2280	3630	2340	3730
8FB15PX	800	1735	3200	1765	3300	1800	3400	1840	3500	1880	3600	1925	3700
	1000	1765	3200	1800	3300	1835	3400	1880	3500	1920	3600	1965	3700
	1100	1780	3200	1815	3300	1860	3400	1900	3500	1945	3600	1990	3700
	1200	1800	3205	1840	3305	1880	3405	1920	3505	1965	3605	2010	3705
	1300	1825	3210	1860	3310	1900	3410	1945	3510	1990	3610	2035	3710
	1400	1845	3220	1885	3315	1925	3415	1970	3515	2020	3615	2080	3715
	1500	1895	3230	1935	3325	1975	3425	2020	3525	2070	3620	2140	3720
8FB18PX	800	1770	3210	1800	3310	1835	3410	1880	3510	1940	3610	2015	3710
	1000	1790	3210	1825	3310	1860	3410	1910	3510	1965	3610	2030	3710
	1100	1805	3210	1840	3310	1880	3410	1925	3510	1980	3610	2045	3710
	1200	1825	3215	1860	3315	1900	3415	1945	3515	2000	3615	2060	3715
	1300	1845	3220	1880	3320	1920	3420	1965	3520	2020	3620	2075	3720
	1400	1870	3230	1905	3325	1945	3425	1990	3525	2040	3625	2095	3725
	1500	1905	3235	1940	3335	1980	3435	2025	3535	2075	3630	2130	3730
8FB20PX	800	1910	3435	1925	3535	1955	3635	1990	3735	2040	3835	2105	3935
	1000	1915	3435	1945	3535	1980	3635	2020	3735	2070	3835	2125	3935
	1100	1925	3435	1960	3535	1995	3635	2035	3735	2085	3835	2140	3935
	1200	1945	3435	1975	3535	2010	3635	2055	3735	2105	3835	2160	3935
	1300	1960	3435	1995	3535	2035	3635	2075	3735	2125	3835	2175	3935
	1400	1985	3440	2015	3540	2055	3640	2095	3740	2145	3840	2195	3940
	1500	2005	3445	2040	3545	2080	3645	2120	3745	2170	3840	2220	3940
8FB25PX	800	1945	3470	1910	3570	1945	3670	1980	3770	2030	3870	2085	3970
	1000	1945	3450	1955	3550	1975	3650	2010	3750	2055	3850	2110	3950
	1100	1950	3450	1975	3550	2010	3650	2050	3750	2095	3850	2150	3950
	1200	1960	3450	1990	3550	2025	3650	2070	3750	2115	3850	2165	3950
	1300	1980	3455	2010	3555	2045	3655	2090	3755	2135	3855	2185	3955
	1400	2000	3460	2030	3560	2070	3660	2110	3760	2155	3860	2205	3955
	1500	2020	3465	2055	3565	2090	3660	2130	3760	2175	3860	2225	3960
8FB30PZX	800	2155	3490	2190	3585	2225	3685	2265	3785	2310	3880	2360	3980
	1000	2020	3580	2045	3680	2060	3780	2095	3880	2135	3980	2180	4080
	1100	2020	3580	2045	3680	2075	3780	2105	3880	2145	3980	2195	4080
	1200	2030	3580	2055	3680	2085	3780	2120	3880	2165	3980	2210	4080
	1300	2045	3580	2070	3680	2105	3780	2140	3880	2180	3980	2225	4080
	1400	2060	3580	2090	3680	2125	3780	2160	3880	2200	3980	2245	4080
	1500	2080	3585	2110	3685	2145	3785	2180	3885	2220	3985	2265	4085
1800	2200	3610	2230	3705	2265	3805	2300	3905	2345	4000	2390	4100	



Specifications

Model				Standard chassis			
				8FB10PX	8FB14PX	8FB15PX	8FB18PX
Performance							
Capacity	kg		1,000	1,350	1,500	1,750	
With load center at	mm		500	500	500	500	
Max. Lifting height	A	mm	3,015	3,015	3,015	3,015	
Standard free lift	B	mm	145	145	145	145	
Tilt of mast (Forward/backward)	C/D	degree	6/10	6/10	6/10	6/10	
Lifting speed	Unladen	km/h	15.0	15.0	15.0	15.0	
(Standard tread)	Laden	km/h	14.0	13.5	13.5	13.5	
Travel speed	Unladen	mm/s	560	560	560	560	
	Laden	mm/s	370	350	340	330	
Minimum turning radius	E	mm	1,765	1,765	1,775	1,805	
Equal aisle width		mm	1,695	1,720	1,755	1,755	
Dimensions							
Overall length	with forks	G	mm	2,845	2,995	3,000	3,035
Overall width		H	mm	1,100	1,100	1,100	1,130
Height	Canopy guard	I	mm	2,090	2,090	2,090	2,090
	Extended mast	J	mm	3,955	3,955	3,955	3,955
	Collapsed mast	K	mm	1,995	1,995	1,995	1,995
Fork length		L	mm	770	920	920	920
Fork spread	Max.-Min.	M/N	mm	920-200	920-200	920-200	920-200
Wheelbase		O	mm	1,380	1,380	1,380	1,380
Tread	Front/Rear	P/Q	mm	885/895	885/895	885/895	925/895
Ground clearance	Mast	R	mm	110	110	110	110
Unladen weight	w/ standard battery		kg	2,790	2,795	2,940	3,135
	w/o battery		kg	2,170	2,175	2,295	2,490
Tire							
Front wheels				6.00-9-10PR (I)	6.00-9-10PR (I)	6.00-9-10PR (I)	21×8-9-10PR (I)
Back wheels				5.00-8-8PR (I)	5.00-8-8PR (I)	5.00-8-8PR (I)	5.00-8-8PR (I)
Electrical Components							
Control type	Drive			FET inverter	FET inverter	FET inverter	FET inverter
	Hoist			FET inverter	FET inverter	FET inverter	FET inverter
	Steering			IGBT chopper	IGBT chopper	IGBT chopper	IGBT chopper
Drive motor	Type			AC induction	AC induction	AC induction	AC induction
	Rated output	kW		6.5	6.5	6.5	6.5
Hoist motor	Type			AC induction	AC induction	AC induction	AC induction
	Rated output	kW		8.4	8.4	8.4	8.4
Power steer motor	Type			DC permanent magnet	DC permanent magnet	DC permanent magnet	DC permanent magnet
	Rated output	kW		0.9	0.9	0.9	0.9
Battery compartment	W × L × H	mm		465 × 980 × 780	465 × 980 × 780	465 × 980 × 780	465 × 980 × 780
Battery capacity	Minimum	Volt × Ah/hr		48 × 325/5	48 × 325/5	48 × 390/5	48 × 390/5
	Maximum	Volt × Ah/hr		48 × 525/5	48 × 525/5	48 × 525/5	48 × 525/5
Dual Tire							
Overall width		mm		1,255	1,255	1,255	1,255
Tread	Front	mm		1,135	1,135	1,135	1,135
Unladen weight	w/o battery	kg		2,220	2,225	2,345	2,530
Tyre size	Front			4.50-12-8PR (I)	4.50-12-8PR (I)	4.50-12-8PR (I)	4.50-12-8PR (I)

Dimension chart



				Large battery chassis			
	8FB20PX	8FB25PX	8FB30PZX	8FB15PGX	8FB18PGX	8FB20PGX	8FB25PGX
	2,000	2,500	3,000	1,500	1,750	2,000	2,500
	500	500	500	500	500	500	500
	3,030	3,030	3,035	3,030	3,030	3,030	3,030
	155	155	160	155	155	155	155
	6/10	6/10	6/10	6/10	6/10	6/10	6/10
	15.0	15.0	18.0	15.0	15.0	15.0	15.0
	13.0	12.5	17.0	13.5	13.5	13.0	12.5
	550	550	550	550	550	550	550
	310	290	400	330	320	310	290
	1,975	2,020	2,145	1,975	1,975	2,100	2,100
	1,895	1,950	2,030	1,895	1,895	1,975	1,995
	3,195	3,395	3,560	3,195	3,195	3,335	3,485
	1,265	1,265	1,265	1,265	1,265	1,265	1,265
	2,090	2,090	2,090	2,090	2,090	2,090	2,090
	3,970	3,970	3,975	3,970	3,970	3,970	3,970
	1,995	1,995	2,020	1,995	1,995	1,995	1,995
	920	1,070	1,070	920	920	920	1,070
	1,020-250	1,020-250	1,060-250	1,020-250	1,020-250	1,020-250	1,020-250
	1,485	1,485	1,625	1,485	1,485	1,625	1,625
	1,040/1,015	1,040/1,015	1,040/1,015	1,040/1,015	1,040/1,015	1,040/1,015	1,040/1,015
	120	120	120	120	120	120	120
	3,660	4,220	4,730	4,195	4,195	4,425	4,435
	2,880	3,170	3,395	2,880	2,880	2,875	2,885
	23×9-10-16PR (I)	23×9-10-16PR (I)	23×9-10-20PR (I)	23×9-10-16PR (I)	23×9-10-16PR (I)	23×9-10-16PR (I)	23×9-10-16PR (I)
	18×7-8-10PR (I)	18×7-8-10PR (I)	18×7-8-14PR (I)	18×7-8-10PR (I)	18×7-8-10PR (I)	18×7-8-10PR (I)	18×7-8-10PR (I)
	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter
	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter	FET inverter
	IGBT chopper	IGBT chopper	IGBT chopper	IGBT chopper	IGBT chopper	IGBT chopper	IGBT chopper
	AC induction	AC induction	AC induction	AC induction	AC induction	AC induction	AC induction
	8.7	8.7	10.7	10.7	10.7	10.7	10.7
	AC induction	AC induction	AC induction	AC induction	AC induction	AC induction	AC induction
	9.6	9.6	16.2	16.2	16.2	16.2	16.2
	DC permanent magnet	DC permanent magnet	DC permanent magnet	DC permanent magnet	DC permanent magnet	DC permanent magnet	DC permanent magnet
	1.0	1.0	1.2	1.2	1.2	1.2	1.2
	570 × 1,028 × 780	570 × 1,028 × 780	710 × 1,028 × 780	570 × 1,028 × 780	465 × 980 × 780	710 × 1,028 × 780	710 × 1,028 × 780
	48 × 440/5	48 × 565/5	72 × 465/5	48 × 565/5	48 × 565/5	48 × 700/5	48 × 700/5
	48 × 700/5	48 × 700/5	72 × 600/5	48 × 700/5	48 × 700/5	48 × 990/5	48 × 990/5
	1,580	1,580	1,580	1,580	1,580	1,580	1,580
	1,410	1,410	1,410	1,410	1,410	1,410	1,410
	2,925	3,215	3,435	2,925	2,925	2,920	2,930
	6.50-10-10PR (I)	4.50-12-8PR (I)	6.50-10-10PR (I)	6.50-10-10PR (I)	6.50-10-10PR (I)	6.50-10-10PR (I)	6.50-10-10PR (I)

Masts

Max. lifting height	8FB10-18PX	8FB20-30PZX
2500mm	● △	●
2700mm	● △	● △
3000mm	◎ △	◎ △
3300mm	○ △	○ △
3500mm	○ △	○ △
3700mm	○ △ ★	○ △ ★
4000mm	○ △ ★	○ △ ★
4300mm	○ ★	○ ★
4500mm	○	○ ★
4700mm	★	
5000mm	○ ★	○ ★
5300mm	★	★
5700mm		★
6000mm	★	★

◎ Standard mast (2-stage)

★ 3-stage full-tree mast

○ High mast

△ 2-stage full-tree mast

● Low mast

Options

	8FB10~18PX	8FB20~25PX	8FB30PZX
Long fork	○	○	○
Extension fork	○	○	○
High backrest	○	○	○
Wide carriage	○	○	○
Double tires	○	○	—
Pneumatic solid tires	○	○	○
Colored tires	○	○	○
Windscreen	○	○	○
Rear view mirror	○	○	○
Left-hand shift levers	○	○	○
Working lights	○	○	○
Rotating lights	○	○	○
Forward/reverse chime	○	○	○
Forward/reverse melody alarm	○	○	○
Cold store specs. -35°	○	○	○
Cold store specs. -45°	○	○	○
Rust-resistant specs	○	○	○
Dust-proof specs	○	○	○
Battery irrigation device	○	○	○
Spare battery	○	○	○



For safe and reliable operation, it is essential to read the user's manual carefully before using this equipment.

SHINKO FORKLIFT continually upgrades and improves its products. Actual features and specifications may therefore differ slightly from those described in this catalog.



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SUMITOMO NACCO MATERIALS HANDLING CO.,LTD., manufacturer of forklift trucks and materials handling equipments, uses a quality management system certified compliant with ISO9001.



SUMITOMO NACCO MATERIALS HANDLING CO.,LTD., manufacturer of forklift trucks and materials handling equipments, uses an environmental management system certified compliant with ISO14001.



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