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BE PRODUCTIVE, BE SOLUTIVE FOR MATERIAL HANDLING

NICHIYU
ELECTRIC FORKLIFT

15

sicos
Super Intelligent Control System

PLATTER

**ELECTRIC FORKLIFT
STAND-ON REACH TRUCKS**

PLATTER

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FBR10-30



PLATTER

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ELECTRIC FORKLIFT STAND-ON REACH TRUCK FBR85 Series

Superb Handling and Refined Technology of Our Leading-edge Trucks

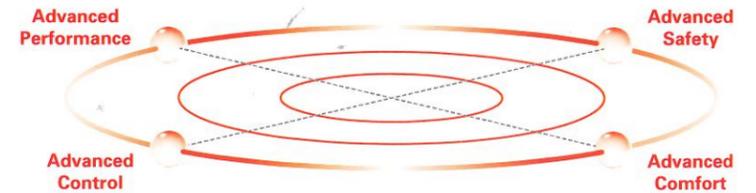
Nichiyu's pioneering expertise in electric forklift trucks has developed the FBR85 Series, the latest of its industry-first generation of top-performing reach trucks. Equipped with the latest innovative technology and features, these trucks promise optimum maneuverability, smooth operability, safety, and comfort within the robust materials handling and logistics environment.

Revolutionary AC Technology

Leveraging Nichiyu's revolutionary AC (alternating current) technology, the FBR85 Series is primed for superior performance, superior advantage, superior safety, and superior productivity. A multifunctional centralized AC control system ensures:

From DC to AC
AC (alternating current) motors have significant advantages over DC (direct current) motors:

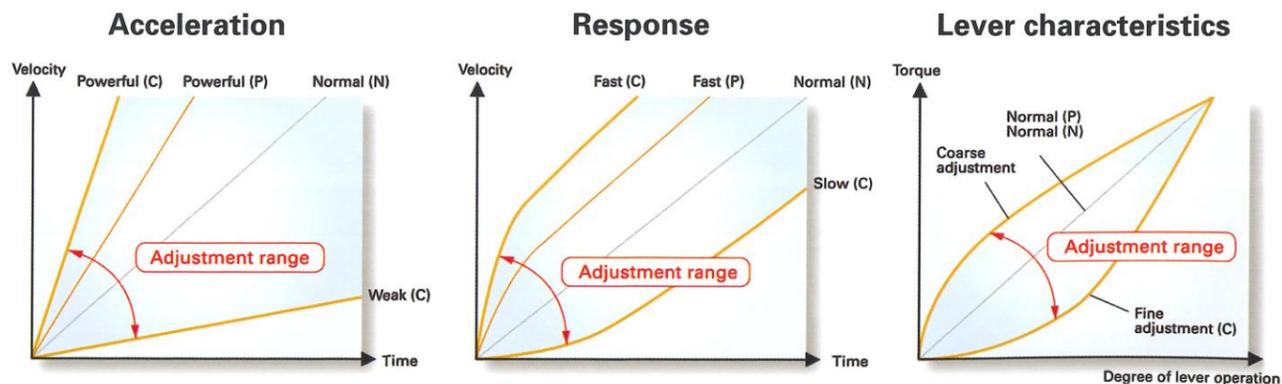
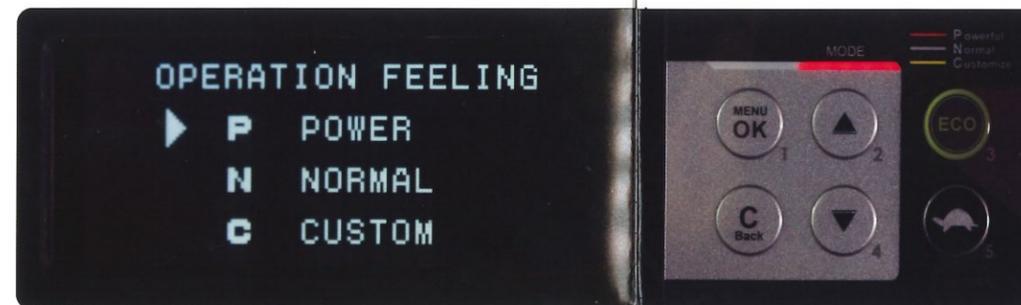
- Simplified and precise power control
- Increased torque
- Increased motor efficiency
- Multiple driving mode and operational settings
- Energy regeneration and saving



SUPERIOR • PERFORMANCE

Customized Operability

Sensitive to various loads, speeds and modes, the Platter's versatility centers on customizable operational features. Clear and precise monitors allow the user to refine preferential **Operation Feeling**, including acceleration, lever characteristics and response.



Increased Energy Efficiency

Improved hydraulics and engineering have enabled an ECO setting that cuts energy consumption by 15% while managing performance. This flexibility allows the Platter to maximize its performance optimally.



SUPERIOR • ADVANTAGES



Enhanced Stability

A newly-designed control linkage has substantially enhanced the truck's overall stability. Relocating the swing lock cylinder has improved both horizontal stability and the anti-slip function, allowing the truck to achieve outstanding stability in motion when lifting loads and making turns. An improved swing angle has also reinforced stability, especially when traveling on rough roads.

Improvement of stability

Lock Swing Function

The location of the swing lock cylinder is changed to absorb the movement of the control linkage effectively.

- Preventing the left load wheel from rising when starting of turning
- Improvement of horizontal stability
- Improvement of anti-slip function
- Improvement of stability when lifting a load



Improved Mast Rigidity

Improved mast rigidity underscores one of the Platter's superior advantages. Reinforcements to the outer mast and side plate have led to reduced mast swing, further enhancing stability, safety and efficiency. At the same time, an improved reach cylinder with a smaller diameter has strengthened the shock-absorbing structure and contributed to energy savings.



Reinforcement of outer mast to reduce mast swing

- The same mast channel as FBR20 is used for the FBR15~18.

P/PFL mast	FBR15	Lifting height:	4,700 mm or more
	FBR18	Lifting height:	4,000 mm or more
M mast	FBR15	All mast	

- A beam is added to the outer mast for M

Improvement of reach cylinder

- Shock absorbing structure
- Smaller diameter: Contributing to energy conservation (FBR10N to FBR18)

Reinforcement of side plate to reduce mast swing

- Improvement of mast looseness: Strict adjustment of shims for mast rollers.

SUPERIOR • SAFETY

With its refined ergonomics, Platter products also boast superior safety and security with its cutting-edge features that include: anti-slip control, travel hydraulic interlock, emergency stop button, and simple passcode entry system.

Anti-slip Control

This crucial feature enables higher stability on slippery road surfaces. The system calculates drive wheel slippage by detecting right-load wheel rotation speed, and reduces the torque of the drive wheel to ensure utmost safety.



Travel Hydraulic Interlock

Conforming to strict safety standards, including ISO3691, the operating interlock system prevents unintended operations when the user is either out of the compartment or assuming a wrong position for safe operations.

The independent Presence Switch Pedal prompts the user to take a safer operating posture during hydraulic operations. The alarm sounds if the situation is not right, while the travelling operation stops via its regenerative brake, and the hydraulic system stops.



Emergency Stop Button

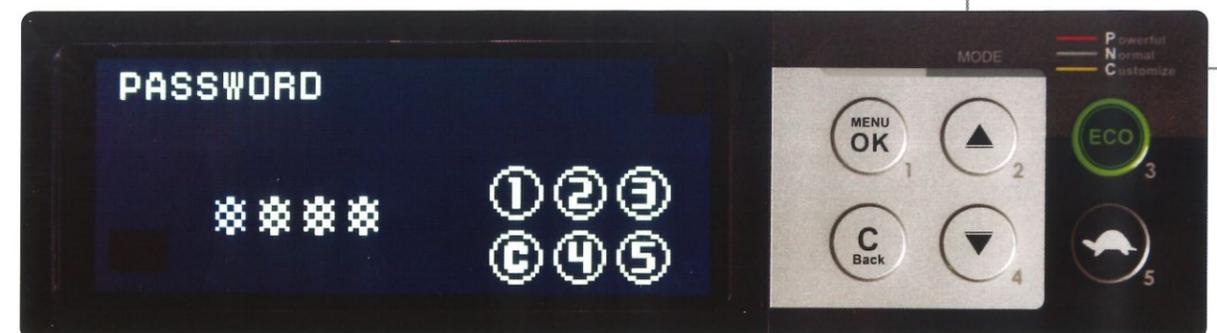
This button interrupts the electric power source as opposed to disconnecting from the battery plug. Such a direct termination of power enhances safety more effectively in an emergency.



Simple Passcode Entry System

Security for our trucks is paramount, and the compulsory entry of a passcode prevents unauthorized persons from using the truck. This feature is indispensable for effective security and safety management.

4 patterns of password settings are available



SUPERIOR • PRODUCTIVITY

The Platter trucks are designed to achieve superior productivity through the key elements of awareness, control and comfort.

Awareness

The use of transmissive LCD monitor provides clear contrasts that improve visibility even when outdoors and under the bright sunlight. With enlarged text, the full dot display makes the on-screen information more legible.

Negative display
(Normal)



Positive display
(Inverted)



Control

Improved ride comfort is achieved through upgraded control elements. A hand grip supports ease of riding. An enlarged, cushioned waist pad helps the user maintain an ideal posture and reduce fatigue, while improving the holding effect. Set at an optimum angle, the inclined steering wheel ensures further ease of posture during operation.

Inclined steering wheel

The steering is set in the optimum angle for ease of operation

Hand grip for riding (conforming to ISO3691)

Supports ease of ingress/egress

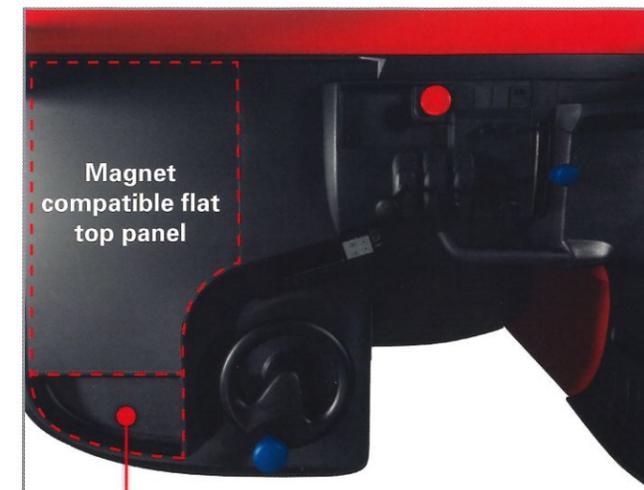
Waist pad

A large soft cushion pad reduces operator's fatigue, and improves holding effect



Comfort

FBR85 series is complete with a range of features for user comfort. A useful glove compartment and a flat, magnet-compatible document table enhance the user's convenience. Not found in other brands is a useful storage compartment for stationery and small items. A low floor height — without increasing the size of the caster wheels — also ensures ease of user ingress and egress.



Magnet compatible flat top panel

For storage of pens and small articles



Low Floor Height

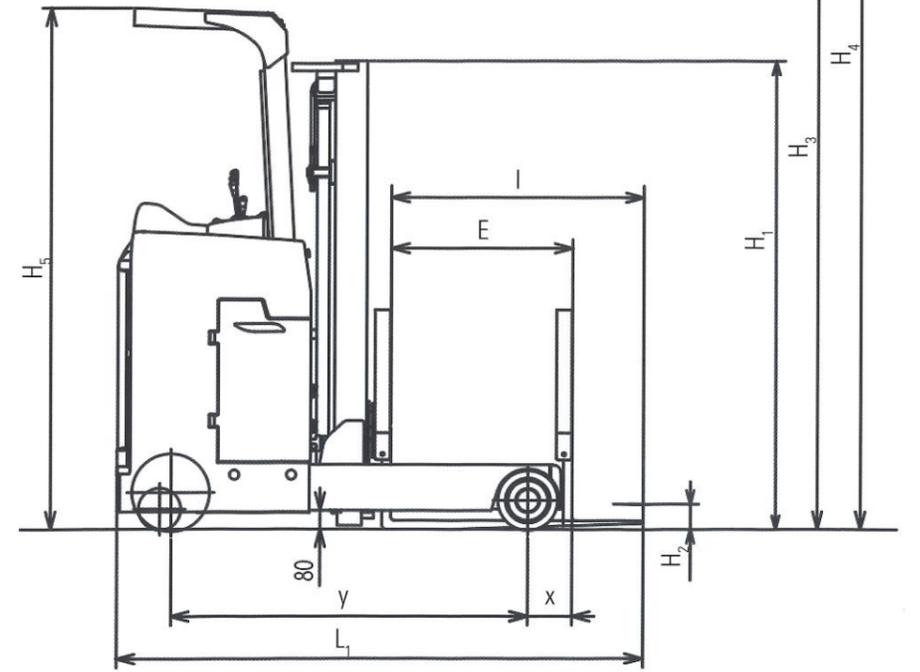
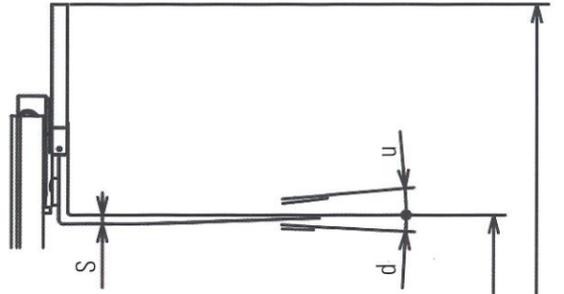
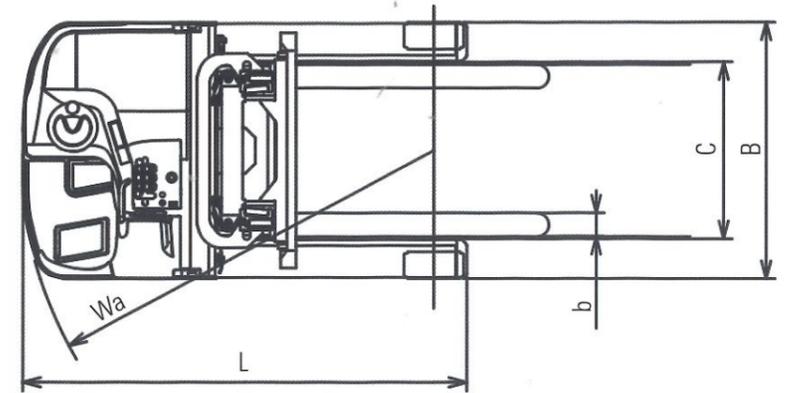


Large glove compartment

SPECIFICATIONS

STANDARD SPECIFICATION																	
Item	Summary	Unit	N series														
			Long Wheel Base			Long Wheel Base			Long Wheel Base			Long Wheel Base					
			FBR10N	FBR12N	FBR12	FBRA12	FBR15	FBR18	FBRA15	FBRA18	FBR20	FBR25	FBR30	FBRA20	FBRA25	FBRA30	
1 Model																	
2 Capacity		kg	1000	1200	1200	1200	1500	1800	1500	1800	2000	2500	3000	2000	2500	3000	
3 Load center		mm	500	500	500	500	500	500	500	500	500	500	500	500	500	500	
4 Motor type			AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	
5 Lift height		H ₃ mm	3000	3000	3000	4000	3000	3000	4000	4000	3000	3000	3000	4000	4000	4000	
6 Free lift		H ₂ mm	400	400	400	400	400	405	400	405	400	400	125	400	400	405	
7 Tilt angle	Down/Up	d/u deg	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	3/5	
8 Fork size	Length/Width/Thickness	l/b/s mm	850/100/35	850/100/35	850/100/35	850/100/35	850/100/35	920/100/38	850/100/35	920/100/38	920/122/40	920/122/40	1070/122/44	920/122/40	920/122/40	1070/122/44	
9 Fork setting	Min./Max	mm	225 - 635	225 - 635	225 - 735	225 - 735	225 - 735	225 - 735	225 - 735	225 - 735	285 - 765	285 - 765	285 - 765	285 - 765	285 - 765	285 - 765	
10 Overall length	L ₁ mm	mm	1885	1885	1920	1920	2010	2085	2010	2175	2205	2205	2460	2205	2245	2560	
11 Length	Frame	L mm	1475	1585	1575	1635	1705	1885	1885	1935	1915	2085	2185	2085	2155	2385	
12 To fork face	L ₂ mm	mm	1035	1035	1070	1070	1160	1165	1160	1255	1285	1285	1390	1285	1325	1490	
13 Reach stroke	E mm	mm	475	585	540	600	590	770	770	770	675	845	835	845	870	935	
14 Overall width	B mm	mm	990	990	1090	1090	1090	1090	1090	1090	1190	1190	1230	1190	1190	1230	
15	Between legs	mm	655	655	750	750	750	750	750	750	820	820	795	820	820	795	
16	Frame	mm	990	990	1090	1090	1090	1090	1090	1090	1190	1190	1190	1190	1190	1190	
17	Leg	mm	275	275	275	275	275	275	275	275	290	290	295	290	290	295	
18 Height	Mast lowered height	H ₁ mm	1995	1995	1995	2495	1995	1995	2495	2495	2050	2050	2050	2550	2550	2550	
19	Mast extended height	H ₄ mm	3900	3900	3900	4900	3900	3900	4900	4900	3950	3950	4050	4950	4950	5050	
20	Overhead guard height	H ₅ mm	2220	2220	2220	2220	2220	2220	2220	2220	2280	2280	2280	2280	2280	2280	
21 Front overhang	Reach out	x mm	175	175	175	175	185	190	185	190	195	195	190	195	190	190	
22 Floor height		mm	265	265	265	265	265	265	265	265	315	315	315	315	315	315	
23 Min. turning radius	Wa mm	mm	1350	1455	1455	1510	1580	1760	1760	1810	1785	1955	2050	1955	2020	2250	
24 Right angle turning aisle width	1100x1100 pallet (incl. 200mm clearance)	mm	1725	1765	1795	1815	1855	1930	1930	1960	2015	2090	2160	2090	2125	2265	
25 Right angle stacking aisle width	1100x1100 pallet (incl. 200mm clearance)	Ast mm	2520	2540	2575	2585	2670	2715	2715	2795	2815	2865	2970	2865	2915	3105	
26 Travel speed	Laden/Unladen	km/h	9.5/10.5	9.5/10.5	10.5/10.5	10.5/10.5	9.5/10.5	9.5/10.5	9.5/10.5	9.5/10.5	10/11.5	9.5/11.5	9.0/11.0	10/11.5	9.5/11.5	9.0/11.0	
27 Lift speed	Laden/Unladen	mm/s	265/450	240/450	320/540	320/540	310/540	300/540	310/540	300/540	290/490	270/490	220/400	290/490	270/490	220/400	
28 Max. Gradeability	3 min. rating, 1.5km/h and over	%	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	10/14.3	
29 Service weight	With standard battery	kg	2770	3060	3150	3250	3590	4040	3810	4230	4750	5330	3210	4910	5480	3390	
30 Number of wheels	Load/Drive/Caster		2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	
31 Load		mm	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ254 x 114 (Urethane)	φ267 x 114 (Urethane)	φ267 x 114 (Urethane)	φ267 x 135 (Urethane)	φ267 x 114 (Urethane)	φ267 x 114 (Urethane)	φ267 x 135 (Urethane)	
32 Tyre	Drive	mm	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ330 x 145 (Rubber)	φ380 x 165 (Rubber)	φ380 x 165 (Rubber)	φ380 x 165 (Rubber)	φ380 x 165 (Rubber)	
33	Caster	mm	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ178 x 73 (Rubber)	φ204 x 76 (Rubber)	φ204 x 76 (Rubber)	φ204 x 76 (Rubber)	φ204 x 76 (Rubber)	
34 Wheelbase	y mm	mm	1105	1215	1205	1265	1335	1515	1515	1515	1515	1685	1785	1685	1755	1985	
35 Tread	Front	mm	875	875	975	975	975	975	975	975	1075	1075	1095	1075	1075	1095	
36	Rear	mm	565	565	640	640	640	640	640	640	695	695	695	695	695	695	
37 Road clearance	Center of wheelbase	mm	80	80	80	80	80	80	80	80	78	78	78	78	78	78	
38 Service brake	Mech./Hydr./Electr./Pneum.		Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	Mech.	
39 Parking brake	Foot/Hand/Deadman		Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	Deadman	
40 Battery	Voltage/Capacity (5hr. Rating)	V/Ah	24/420	24/420	48/210	48/210	48/290	48/290	48/290	48/290	48/290	48/350	48/350	48/370	48/350	48/350	
41	Mass (w/case) (min/max)	kg	306 (300/450)	306 (300/450)	340 (340/450)	340 (340/450)	460 (450/750)	460 (450/750)	460 (450/750)	460 (450/750)	532 (525/900)	532 (525/900)	575 (560/900)	532 (525/900)	532 (525/900)	575 (560/900)	
42 Drive motor	60 min. rating	kW	2.6	2.6	4.3	4.3	4.3	4.3	4.3	4.3	5.0	5.0	5.0	5.0	5.0	5.0	
43	Control		AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	
44 Hydraulic motor	5 min. rating	kW	6.0	6.0	8.8	8.8	8.8	8.8	8.8	8.8	11.0	11.0	11.0	11.0	11.0	11.0	
45	Control		AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	
46 Power steering motor	60 min. rating	kW	0.22	0.22	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
47	Control		DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	
48	Type (built-in/stationary)		Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	
49 Charger (option)	Charging method		Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	
50	Input	φ/V	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	3/(400/200)	
51	Capacity	kVA	3.4(400) 3.8(200)	3.4(400) 3.8(200)	3.8	3.8	4.7	4.7	4.7	4.7	6.5	6.5	5.2	6.5	6.5	5.2	

FBR85



Battery Side Loading