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.

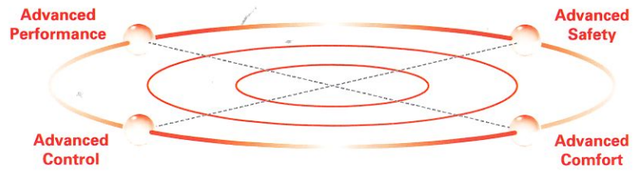
Revolutionary AC Technology

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:

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

From DC to AC

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

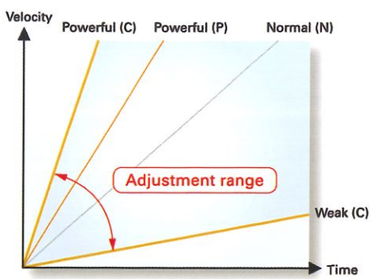


SUPERIOR • PERFORMANCE

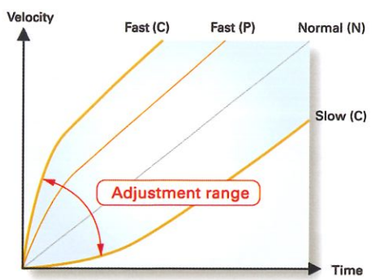
Customized Operability

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.

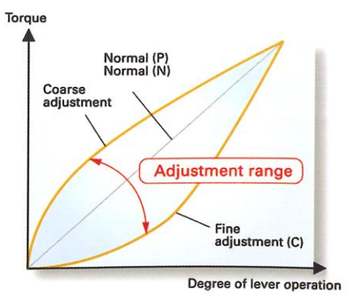
Acceleration



Response



Lever characteristics



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

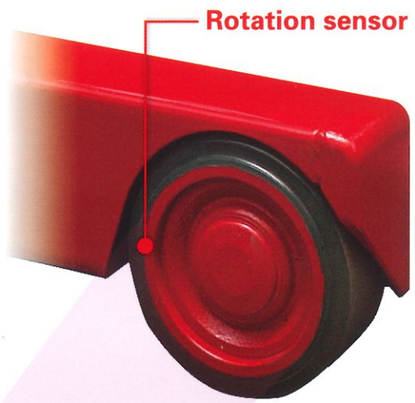
- Improvement of mast looseness: Strict adjustment of shims for mast rollers.

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.

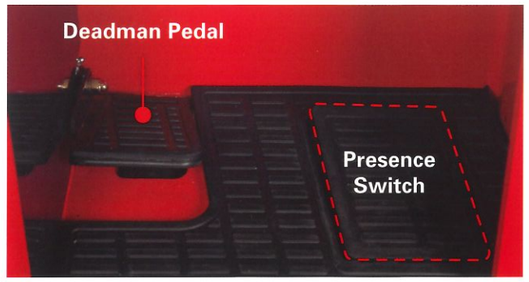


Soft landing features
activates when the fork nears the ground, automatically protecting loads from hard drops or shocks.

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.

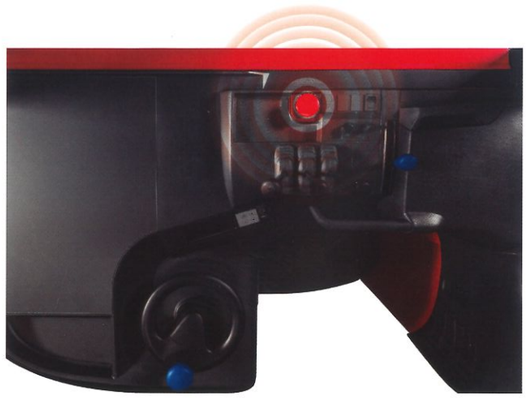
The independent **Presence Switch Pedal** prompts the user to take a safer operating posture during hydraulic operations. The alarm sounds if the situation is not right, while the travelling operation stops via its regenerative brake, and the hydraulic system stops.



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.

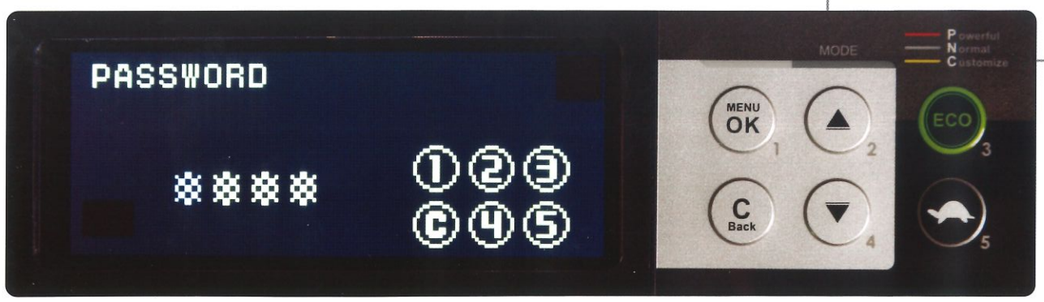
Emergency stop button



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



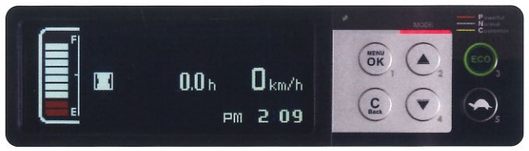
SUPERIOR · PRODUCTIVITY

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

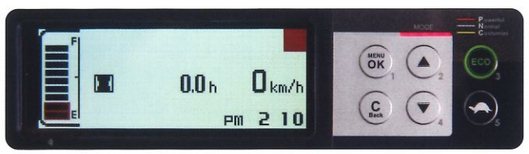
Awareness

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)



SELECTABLE

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.

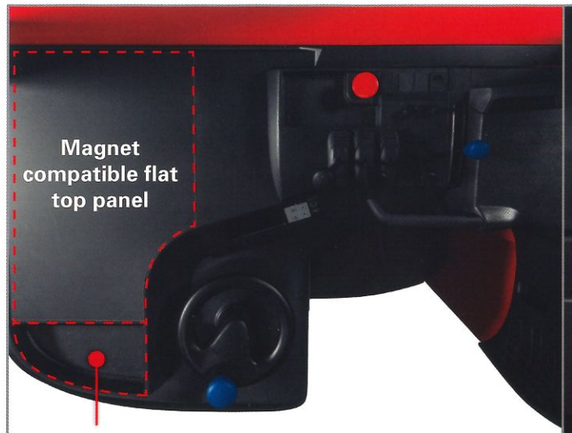
Inclined steering wheel
The steering is set in the optimum angle for ease of operation

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.



For storage of pens and small articles

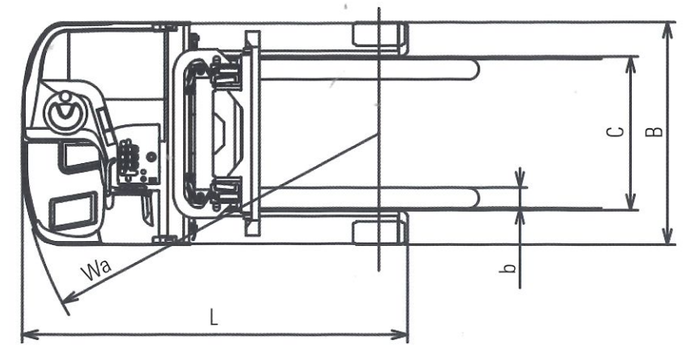
Low Floor Height

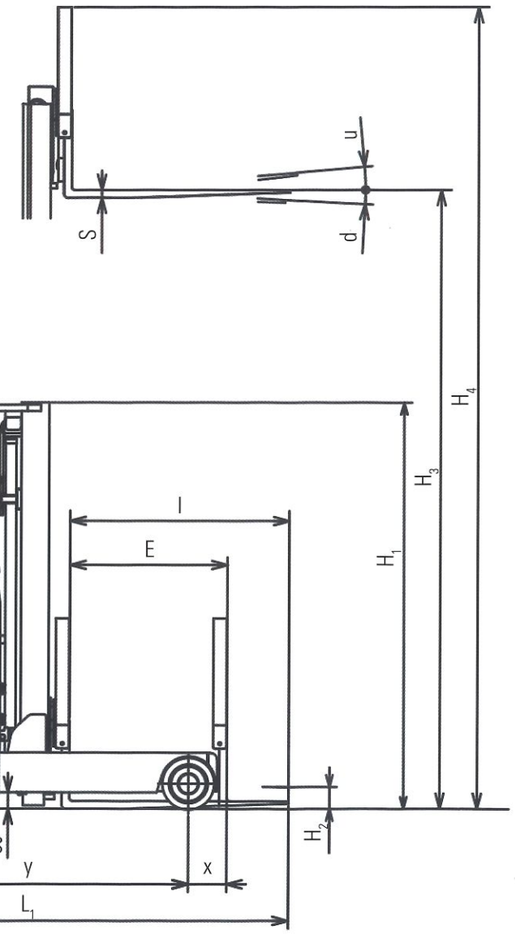
SPECIFICATIONS

STANDARD SPECIFICATION

		Item	Summary		Unit	N series		Long Wheel Base											
Type	1	Model				FBR10N	FBR12N	FBR12	FBRA12	FBR15	FBR18	FBRA15	FBRA18	FBR20	FBR25	FBR30	FBRA20	FBRA25	FBRA30
	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
Dimensions	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	Length	Overall length	L_1	mm	1885	1885	1920	1920	2010	2085	2010	2175	2205	2205	2460	2205	2245	2560
	11		Frame	L	mm	1475	1585	1575	1635	1705	1885	1885	1935	1915	2085	2185	2085	2155	2385
	12		To fork face	L_2	mm	1035	1035	1070	1070	1160	1165	1160	1255	1285	1285	1390	1285	1325	1490
	13	Reach stroke		E	mm	475	585	540	600	590	770	770	770	675	845	835	845	870	935
	14	Overall width	Overall width	B	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	Height	Leg		mm	275	275	275	275	275	275	275	275	290	290	295	290	290	295
	18		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	1350	1455	1455	1510	1580	1760	1760	1810	1785	1955	2050	1955	2020	2250
	24	Right angle turning aisle width	1100×1100 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	1100×1100 pallet (incl. 200mm clearance)	Ast	mm	2520	2540	2575	2585	2670	2715	2715	2795	2815	2865	2970	2865	2915	3105
Performance	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
Wheel and tire	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	Tyre	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		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)	ϕ380 x 165 (Rubber)	ϕ380 x 165 (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)	ϕ204 x 76 (Rubber)	ϕ204 x 76 (Rubber)	ϕ204 x 76 (Rubber)	ϕ204 x 76 (Rubber)	ϕ204 x 76 (Rubber)	ϕ204 x 76 (Rubber)
	34	Wheelbase		y	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
Drive unit and control	40	Battery	Voltage/Capacity (5hr. Rating)		V/Ah	24/420	24/420	48/210	48/210	48/290	48/290	48/290	48/290	48/350	48/350	48/370	48/350	48/350	48/370
	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	Charger (option)	Type (built-in/stationary)			Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary	Stationary
	49		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