

NICHIYU
ELECTRIC FORKLIFT



ELECTRIC FORKLIFT TRUCK
**COUNTER BALANCED
THREE-WHEELER**

FBT13-20



ELECTRIC COUNTER BALANCED THREE-WHEELER FBT13-20

SUPERIOR • FEATU

Nichiyu Three-wheeler

Featuring exceptional comfort and advanced functions, this new design encompasses all the elements necessary to maximise overall safety, durability, and the versatility to handle any work environment.

Choose from 6 varied models to accommodate a wide range of applications.



The standard series ensures easy turning and manoeuvre in narrow aisles of warehouses.

1.3t
FBT13P

1.5t
FBT15P

1.6t
FBT16P

1.8t
FBT18P

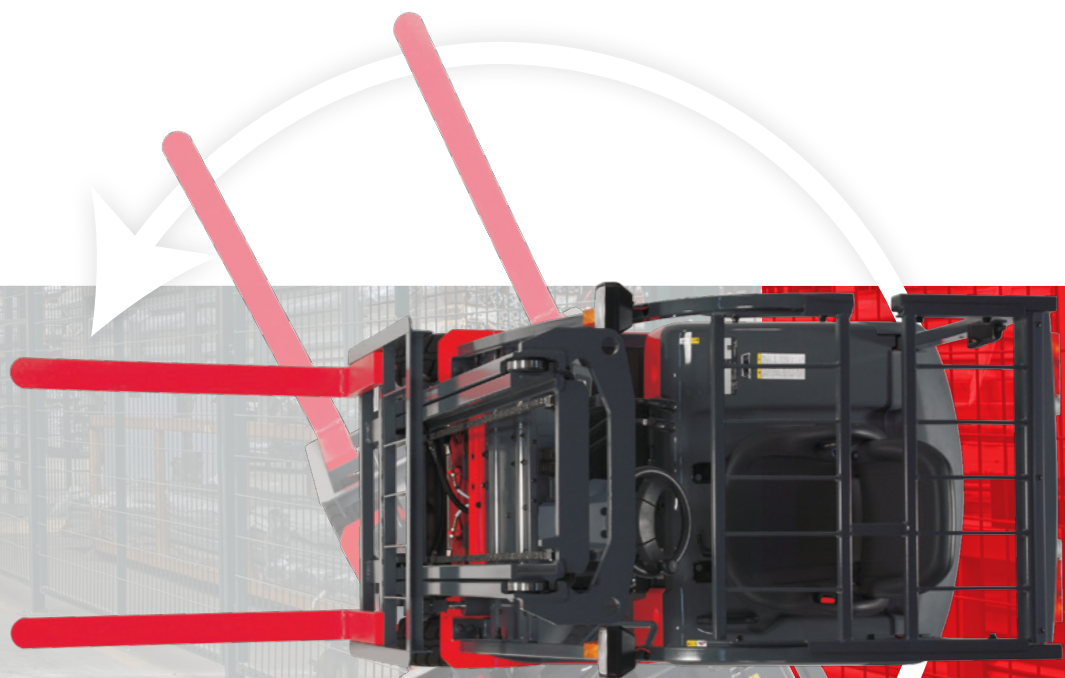
2.0t
FBT20PN

The PB Series accommodates a super-high capacity 730 Ah battery for longer running times.

2.0t
FBT20PBN



URES



An Appealing Design with Well-rounded Features



Featuring the SICOS-AC Multifunctional Centralized Control System

An AC motor powers the traveling and hydraulic operations. This control system ensures comprehensive and centralized AC control for smooth and powerful operation.

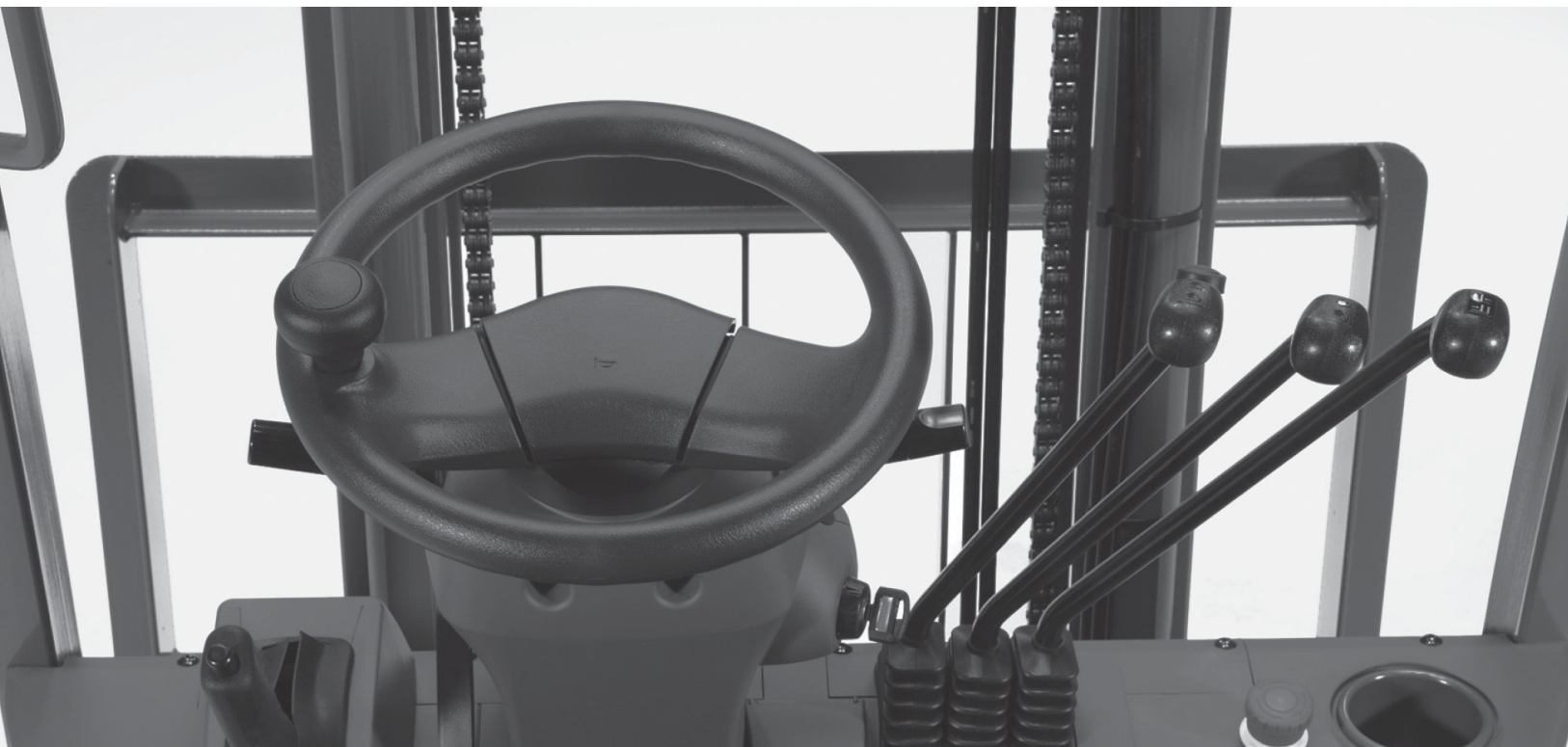
Excellent Space-Saving Design with 1510 mm Turning Radius

With a minimum turning radius of only 1510 mm (Model FBT15P), the Nichiyu Three-wheeler is ideal for material handling in limited space. The double rear wheels add extra stability in turns.

Lighter Weight Body

The reduced body weight contributes to improved handling while maintaining good stability. In addition, it is more eco-friendly thanks to its reduced energy consumption.



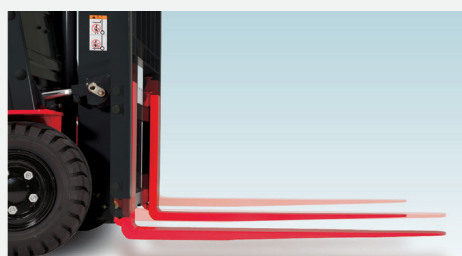


Standard Advanced Features



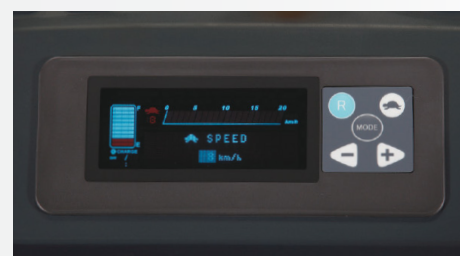
Electric Power Steering

The power steering motor is centrally controlled by the SICOS-AC system. This simple and economical approach reduces power consumption by two-thirds compared with conventional hydraulic power steering.



Fork Soft Landing Feature

A soft-landing mechanism has been adopted to slow the speed of the forks as they descend to the floor. This feature significantly reduces both shock and impact noise (when unladen).



Multifunction Display

The display reveals the battery state, vehicle speed, and other aspects of vehicle status at a glance. An innovative load indicator is also provided as standard equipment.



Seat Suspension

The comfortable and secure seat suspension contributes to stable operation. In addition, it is equipped with an emergency locking retractor mechanism for the seat belt to enhance operator safety.



Spacious Legroom

Legroom has been increased by 55 mm compared with previous models (some models excluded). A floor mat is also provided as standard for increased operator comfort.



Combination Tail Lamps

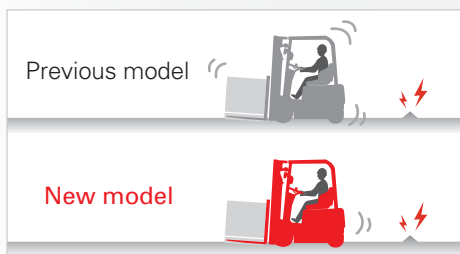
The large, highly visible tail lamps clearly indicate braking and turning as well as reverse operation.

Comfort

Comfortable operation contributes to increased efficiency.

Grip Assist with Integrated Horn

A new right rear handgrip is provided to ensure greater operator stability during rearward travel. The integrated yellow horn button allows for easier alerting of near by personnel during rearward operations.



Pitching Reduction System

We have incorporated a Pitching Reduction System to relieve the operator of uncomfortable lurching motion during travel.



Improved Forward Visibility

The display panel has been moved to the right to increase operator visibility of the fork tips. This innovation helps to make driving even more stress-free.



Increased Head Clearance

The new head guard is designed for increased head clearance.



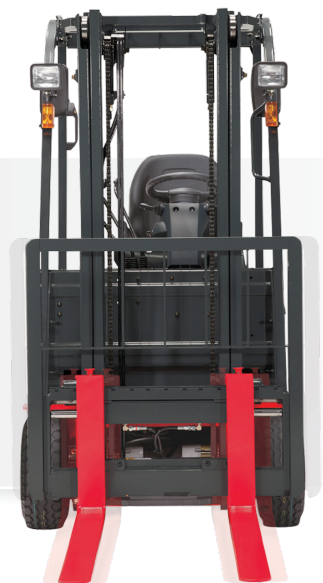
Increased Mast Backward Tilt Angle

We've increased the maximum tilt angle to 7.5°, an increase of a full 1.50° over the previous model. This feature contributes to improved cargo security during travel.



Easier Boarding

We've included a new wide and low step as well as a larger handgrip for use when boarding.



Optional Integral Sidsifter

An integral sidsifter is available as an option. This innovation contributes to higher operation efficiency without reducing load capacity.

SUPERIOR • TECHN

Still think you need an engine?

Think again!

A dependable truck that can be operated indoors or outdoors, in almost any weather

IPX4 Enclosure Rating Level

The IPX4 enclosure rating indicates a splash-proof design that allows for safe work out of doors, even in the rain. This model is resistant to the detrimental effects of water spray from any direction.



When the battery cover is opened, any falling water is safely caught in a drainage tray.



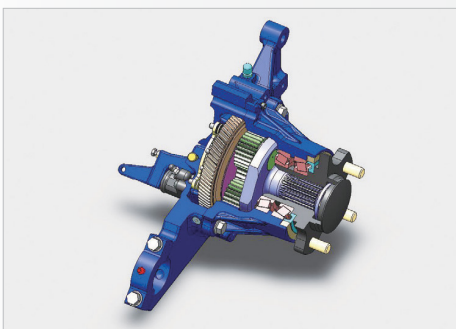
The controller is securely housed in the left side of the frame.



Waterproof floor mat



Lever boots



Wet Disc Brakes

Unaffected by dust and moisture, the wet disc brakes provide powerful braking force.



The PB Series: Designed for long hours operation.

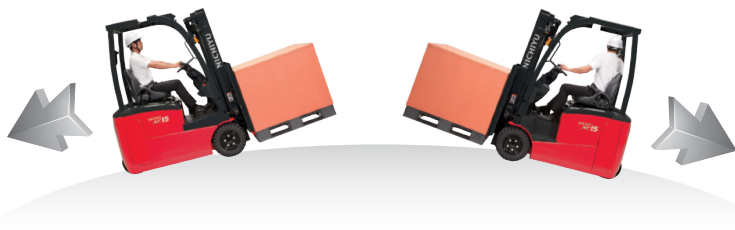
The super-high-capacity 730 Ah battery and long wheelbase contribute to lengthy operating time and highly stable traveling.



- Battery side loading specification
- Cold storage specification
- Rust resistant specification

NOLOGY

Advanced technologies ensure greater operational safety and security



Safety Cruise

Even if the accelerator or brake is released on an upslope, the truck will not roll backward. When descending, it maintains the initial safe speed.



Parking Brake Alert

An audible and visual alarm alerts an operator who leaves the vehicle without setting the parking brake. This alarm can be triggered even when the key is turned off.



Operation Interlock System

The operation interlock system (OIS) ensures that all traveling, hydraulic, and tilt operations are automatically locked out about two seconds after the operator leaves the driver's seat.



Emergency Stop Button

This emergency shutoff switch is provided as a red emergency button located on the instrument panel.

Optional Accessories

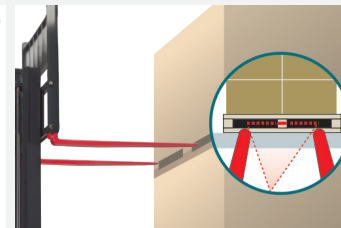
Contributing to a more efficient work environment



1 Headguard roof



2 Front window



3 Laser pointer



4 LED headlamp

5 Rearview mirror

6 Room mirror

7 Chime

8 Worklight

9 Backup lamp

10 Revolving light

Actual Capacities and Mast Specifications (with and without

Mast Type	Lift height <H3>	Mast specification (mm)					FBT13P				
		Free lift <H2>		Mast lowered height <H1>	Tile angle	FBT13P			FB		
		9/10/13/15/16/18	20	9/10/13/15/16/18/20	α/β	Pneumatic	No Puncture	Cushion	Pneumatic	No	
Two-stage full-visibility (Simplex) mast	300	3000	115	120	1975	5/7.5	1300	1300	1300	1500	
	330	3300	115	120	2125	5/7.5	1300	1300	1300	1500	
	350	3500	115	120	2225	5/7.5	1300	1300	1300	1500	
	370	3700	115	120	2325	5/7.5	1270	1270	1300	1500	
	400	4000	115	120	2525	5/7.5	1200	1230	1270	1400	
	450	4500	115	120	2770	3/6	1130	1150	1230	1250	
	500	5000	115	120	3035	3/6	900	1070	1170	1050	
Two-stage full-free (Duplex) mast	300PFL	3000	960	970	1975	5/6	1300	1300	1300	1500	
	330PFL	3300	1110	1125	2125	5/6	1270	1270	1270	1500	
	350PFL	3500	1210	1225	2225	5/6	1270	1270	1270	1500	
	370PFL	3700	1310	1325	2325	5/6	1270	1270	1270	1500	
	400PFL	4000	1510	1525	2525	5/6	1200	1230	1250	–	
Three-stage full-free (Triplex) mast	370M	3700	760	775	1775	5/6	1230	1270	1270	–	
	400M	4000	860	875	1875	5/6	1170	1230	1230	–	
	430M	4300	960	975	1975	3/6	1130	1170	1170	1250	
	450M	4500	1030	1045	2045	3/3	1070	1150	1150	1200	
	470M	4700	1110	1125	2125	3/6	1050	1130	1130	1150	
	500M	5000	1210	1225	2225	3/6	900	1070	1070	1000	
	550M	5500	1400	1415	2415	1.5/5	700	950	950	770	
	600M	6000	1580	1595	2595	1.5/5	500	670	800	550	
	650M	6500	1820	1835	2835	1.5/4	370	450	550	400	
700M	7000	2020	2035	3035	1.5/4	250	300	350	270		

* Mast Raised Height <H₄> : Lift Height <H₃> + 1015mm for FBT13/15/16/18 +1000mm for FBT20

Aisle Width

	Pallet size	Mast type	FBT13P
Front overhang (mm)		Two-stage Mast	375
		Two-stage Mast w/ISF	395
		Third-stage Mast	400
		Third-stage Mast w/ISF	425
Practical 90° turning aisle width* ³⁾ (mm)	W1100 x L1100	Two-stage Mast	1930
		Two-stage Mast w/ISF	1940
		Third-stage Mast	1950
		Third-stage Mast w/ISF	1960
Practical 90° stacking aisle width* ³⁾ (mm)	W1100 x L1100	Two-stage Mast	3185
		Two-stage Mast w/ISF	3205
		Third-stage Mast	3210
		Third-stage Mast w/ISF	3235

*³⁾ 200mm clearance included

integral sideshifter)

Capacities (Kg) At LC=500												
FBT15P			FBT16P			FBT18P			FBT20PN		FBT20PBN	
ic	No Puncture	Cushion	Pneumatic	No Puncture	Cushion	Pneumatic	No Puncture	Cushion	No Puncture	Cushion	No Puncture	Cushion
	1500	1500	1600	1600	1600	1800	1800	1800	2000	2000	2000	2000
	1500	1500	1570	1570	1600	1800	1800	1800	2000	2000	2000	2000
	1500	1500	1550	1550	1570	1770	1770	1800	2000	2000	2000	2000
	1500	1500	1530	1530	1550	1730	1750	1770	2000	2000	2000	2000
	1450	1500	1450	1470	1530	1630	1670	1730	2000	2000	2000	2000
	1350	1400	1270	1370	1430	1400	1600	1650	1800	1800	1830	1830
	1250	1300	1070	1270	1330	1150	1450	1550	1600	1600	1630	1630
	1500	1500	1600	1600	1600	1800	1800	1800	2000	2000	2000	2000
	1500	1500	1550	1550	1570	1800	1800	1800	2000	2000	2000	2000
	1500	1500	1530	1530	1550	1770	1770	1800	2000	2000	2000	2000
	1500	1500	1530	1530	1550	1730	1750	1770	2000	2000	2000	2000
	–	–	1430	1470	1530	1630	1670	1730	2000	2000	2000	2000
	–	–	1470	1530	1530	1630	1750	1750	1950	1950	1950	1950
	–	–	1400	1470	1470	1570	1670	1670	1930	1930	1930	1930
	1400	1400	1330	1430	1430	1470	1630	1630	1850	1850	1850	1870
	1350	1350	1270	1370	1370	1350	1570	1570	1800	1800	1800	1830
	1300	1300	1200	1330	1330	1270	1530	1530	1700	1700	1730	1750
	1250	1250	1030	1270	1270	1100	1470	1470	1600	1600	1600	1630
	1100	1100	800	1130	1130	850	1150	1200	1170	1300	1170	1300
	700	850	570	730	870	600	750	900	770	1000	700	1000
	470	570	430	500	600	450	530	630	550	650	550	650
	330	370	300	350	400	330	370	430	400	450	400	450

FBT15P	FBT16P	FBT18P	FBT20PN	FBT20PBN
375	375	375	415	415
395	395	395	430	430
400	400	400	420	420
425	425	425	430	430
1960	1990	2000	2020	2050
1970	2000	2010	2030	2060
1970	2000	2010	2030	2060
1980	2010	2020	2030	2060
3285	3380	3435	3505	3585
3305	3400	3455	3520	3600
3310	3405	3460	3510	3590
3335	3430	3485	3520	3600

Standard Specifications

	Item	Summary		Unit		
Type	1	Model			FBT13P	
	2	Rated capacity		Q	kg	1300
	3	Load center		C	mm	500
	4	Operator type	Stand-on / Seated			Seated
Dimensions	5	Lift height		H ₃	mm	3000
	6	Free lift		H ₂	mm	115
	7	Tilt angle	For-/Back-ward <F:Down/Up>	α/β	deg.	<Mast> 5 / 7.5
	8		Carriage			Class II A
	9	Fork	Dimensions (L / W / T)	$\ell / w / t$	mm	1070 / 100 / 35
	10		Spread (Max / Min)	B ₃ / B ₄	mm	920 / 240
	11	Length	Overall length	L ₁	mm	2855
	12		to fork face	L ₂	mm	1785
	13	Width	Overall width	B	mm	1090
	14	Height	Mast lowered	H ₁	mm	1975
	15		Mast extended	H ₄	mm	4015
	16		Overhead guard	H ₅ ₁	mm	2050
	17	Overhang	Front overhang	F	mm	375
	18	Min. turning radius		R	mm	1410
	19	Practical 90° turning aisle ^{*1)}	1100 x 1100 Pallet		mm	1930
	20	Practical 90° stacking aisle ^{*1)}	1100 x 1100 Pallet	As	mm	3185
Performance	21	Travel speed	Laden / Unladen		km/h	15.0 / 16.5
	22	Lifting speed	Laden / Unladen		mm/s	400 / 610
	23	Lowering speed	Laden / Unladen		mm/s	550/500
	24	Max. drawbar pull	3min. rating, 1.5km/h and over		N	7530
	25	Max. gradeability	3min. rating, 1.5km/h and over		%	20/20
Mass	26	Service weight	w/o battery (6.3)		kg	2075
	27	Axle loading	Laden (Front / Rear)		kg	3460/465
	28		Unladen (Front / Rear)		kg	1230/1395
Chassis	29	Tyres : Number	Front / Rear (X=Drive)			2X / 2
	30	Tyres	Front		mm	18x7-8-14PR
	31		Rear		mm	15x4 1/2-8-12PR
	32	Wheelbase		L ₃	mm	1220
	33	Tread	Front		mm	920
	34		Rear	B ₆	mm	250
	35	Ground clearance	Min.	m1	mm	85
	36		Middle of wheelbase	m2	mm	85
	37	Service brake	Mech. / Hydr. / Electr. / Pneum.			Hydr.
	38	Parking brake	Foot / Hand / Deadman			Hand
Motors	39	Battery	Type			BS/JIS
	40		Volts / Ampere hrs (5HR)		V/Ah	48 / 320
	41		Mass (with case)		kg	550
	42	Drive motor	60min. rating		kw	2 x 4.5
	43		control			Inverter
	44	Hydraulic motor	5min. rating		kw	9.5
	45		control			Inverter
	46	Power steering motor	60min. rating		kw	0.3
	47		control			Chopper
	48		Type (Built-in / Stationary)			Stationary
	49	Charger	Input		ϕ/V	3 / 200
	50		Capacity		kVA	4.7
51	Operating pressure	for Attachments		MPa	13.7	

Above specifications are based on the standard truck with 3 meters simplex mast.

They may vary by mast type & lifting height, tyres, battery capacity and/or warming up condition.

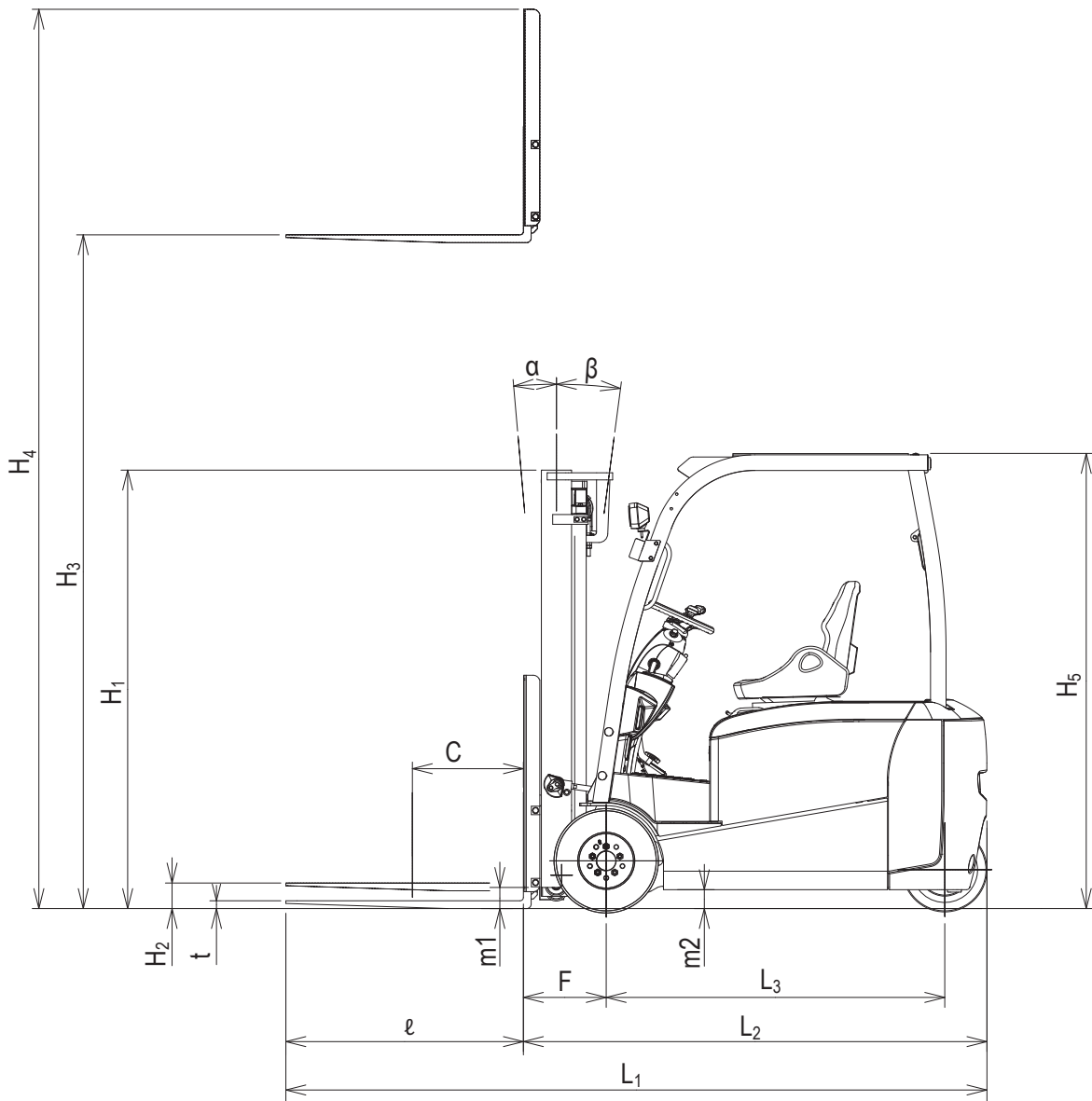
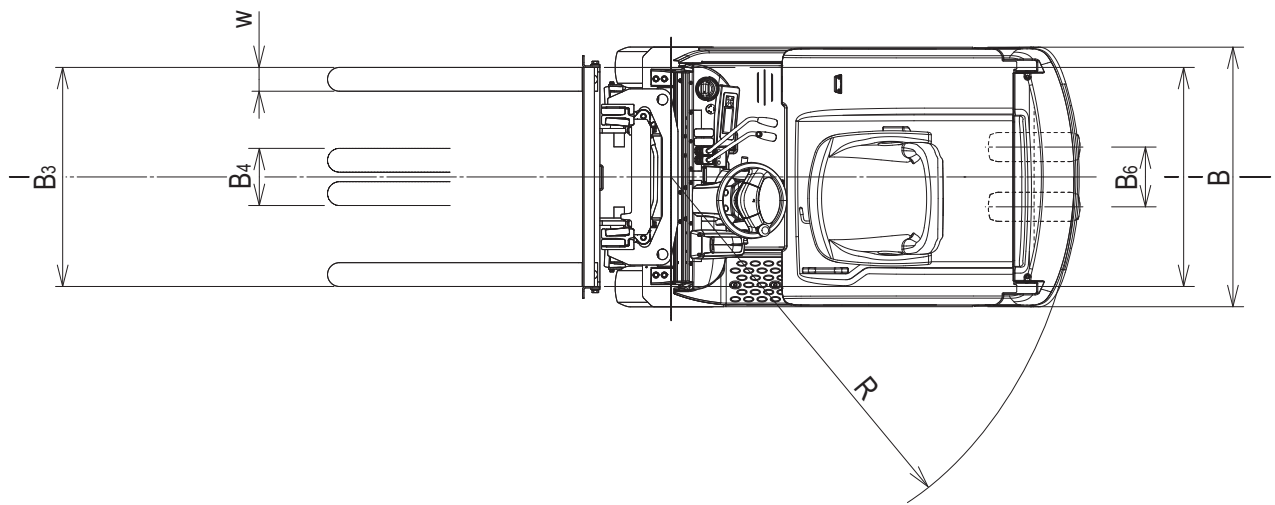
*1) 200mm clearance included

*2) N.P. : No puncture tyre

NICHIYU

FBT15P	FBT16P	FBT18P	FBT20PN	FBT20PBN
1500	1600	1800	2000	2000
500	500	500	500	500
Seated	Seated	Seated	Seated	Seated
3000	3000	3000	3000	3000
115	115	115	120	120
<Mast> 5 / 7.5	<Mast> 5 / 7.5	<Mast> 5 / 7.5	<Mast> 5 / 7.5	<Mast> 5 / 7.5
Class II A	Class II A	Class II A	Class II A	Class II A
1070 / 100 / 35	1070 / 100 / 35	1070 / 100 / 35	1070 / 122 / 40	1070 / 122 / 40
920 / 240	920 / 240	920 / 240	1000 / 245	1000 / 245
2955	3050	3105	3175	3255
1885	1980	2035	2105	2185
1090	1090	1090	1090	1090
1975	1975	1975	1975	1975
4015	4015	4015	4000	4000
2050	2050	2050	2050	2050
375	375	375	415	415
1510	1605	1660	1690	1770
1960	1990	2000	2020	2050
3285	3380	3435	3505	3585
15.0 / 16.5	14.5 / 16.0	14.5 / 16.0	14.0 / 15.5	14.0 / 15.5
380 / 610	360 / 610	360 / 610	300 / 500	300 / 500
550/500	550/500	550/500	550/500	550/500
7390	6910	7530	7550	7550
18/20	15/20	15/20	14/17	14/17
2105	2080	2220	2595	2285
3735/455	3820/445	4155/515	4650/595	4815/590
1245/1445	1235/1430	1245/1625	1355/1890	1615/1790
2X / 2	2X / 2	2X / 2	2X / 2	2X / 2
18x7-8-14PR	18x7-8-16PR	18x7-8-16PR	18x7-8 (N.P.) *2)	18x7-8 (N.P.) *2)
15x4 1/2-8-12PR	15x4 1/2-8-12PR	16x6-8-10PR	16x6-8-10PR	16x6-8-10PR
1320	1415	1415	1415	1525
920	920	920	920	920
250	250	230	230	230
85	85	85	85	85
85	85	85	85	85
Hydr.	Hydr.	Hydr.	Hydr.	Hydr.
Hand	Hand	Hand	Hand	Hand
BS/JIS	BS/JIS	BS/JIS	BS/JIS	BS/JIS
48 / 350	48 / 350	48 / 390	48 / 390	48 / 730
595	595	650	650	1120
2 x 4.5	2 x 4.5	2 x 4.5	2 x 4.5	2 x 4.5
Inverter	Inverter	Inverter	Inverter	Inverter
9.5	9.5	9.5	9.5	9.5
Inverter	Inverter	Inverter	Inverter	Inverter
0.3	0.3	0.6	0.6	0.6
Chopper	Chopper	Chopper	Chopper	Chopper
Stationary	Stationary	Stationary	Stationary	Stationary
3 / 200	3 / 200	3 / 200	3 / 200	3 / 200
6.5	6.5	6.5	6.5	11.0
13.7	15.7	15.7	18.1	18.1

FBT20PBN



SUPERIOR • DESIGN





About us

Nichiyu is a pioneering developer of electric forklifts in Japan. Since introducing the country's first electric forklift in 1937, Nichiyu has continued to introduce a variety of innovative electric forklift solutions. We take pride in our ability to provide customer-focused products and exceptional service.

Committed to comprehensive service

We maintain highly trained service staff in every country in which we sell our products. Should you require regular periodic maintenance or emergency repair, simply contact us for fast and efficient on-site service. We take pride in our commitment to first-rate support and unmatched customer service.

All specifications have been determined according to manufacturer's terms and conditions. Specifications are subject to change without notice in the interests of product improvement.

NICHIYU
ELECTRIC FORKLIFT

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