



NICHIYU  
**RACK FORKLIFT**  
RFTP11-20M(XL) SERIES



# NICHIYU RACK FORKLIFT

RFTP11-20M(XL) SERIES

up to 19 m

# SUPERIOR STR

## COMPACT IMPACT

*The Nichiyu Rack Forklift* promises compact performance with maximum impact. Boasting superior technology, supreme comfort and safety, and innovative design and engineering, this comprehensive range of rack forklifts is redefining logistics excellence.

Each model is customized to meet specific needs in tight logistical spaces. The 1.1 – 1.3 ton models use 48v or 80v electrical systems while the larger 1.35 – 2.0 ton ones come only with 80v systems.

## Mast and Fork Integrity

- The duplex mast promises enhanced stability and achieves high lifting speed for heights of up to 19m and at 1.1 – 2.0 tons.
- Fully computer-optimized mast design with Finite Element Method provides excellent rigidity, stability and weight parity while giving the operator clear vision.
- Standard fork attachment includes a swivel fork with supplementary lift of 1900mm.
- **Mast attachment alternatives\*** come with the following options:
  - a) supplementary lift of 2100mm or 2300mm with swivel fork
  - b) side shifter of +/- 100mm
  - c) telescopic fork with different initial lift
  - d) telescopic fork with low height of 190mm

A special design of the mast guarantees high stability

Overhead guard with compartment for emergency rope and 4 LED spot

Comfortable seat with adjustment for weight etc. (armrests as option)

A good view because of the round chassis



*All masts are computer optimised.  
The result is a high stiffness, low weight and very good view.*

# STRUCTURE

## Impressive Frame and Body

- Designed intelligently for efficient performance with low weight, low consumption, and low attrition for maximum results.
- Two types of **aisle guidance options\*** ensure safe operations within aisles. In wire guidance, the process is activated via two antennas on the truck. Rail guidance comes in standard or low profile (38mm) options with side guide rollers in front of load wheels that ensure guide precision while preventing damage to the wheels.



**Rail guidance rollers in standard or low profile:** height of profile minimum 38 mm      **Wire guidance**

- Design flexibility allows the unique customizing of cabin and chassis width to meet various space requirements.
- **Shortened truck length offerings\*** are available and ideal for small transfer aisle.
- Swift battery changes are easy, with additional two available **accessories\***: battery rollers with mobile roller station; or battery roller station with the winch.

\* RFTP15MXL and RFTP20M models are available on request for specific applications. Only RFTP15MXL offers lift height of 19m.

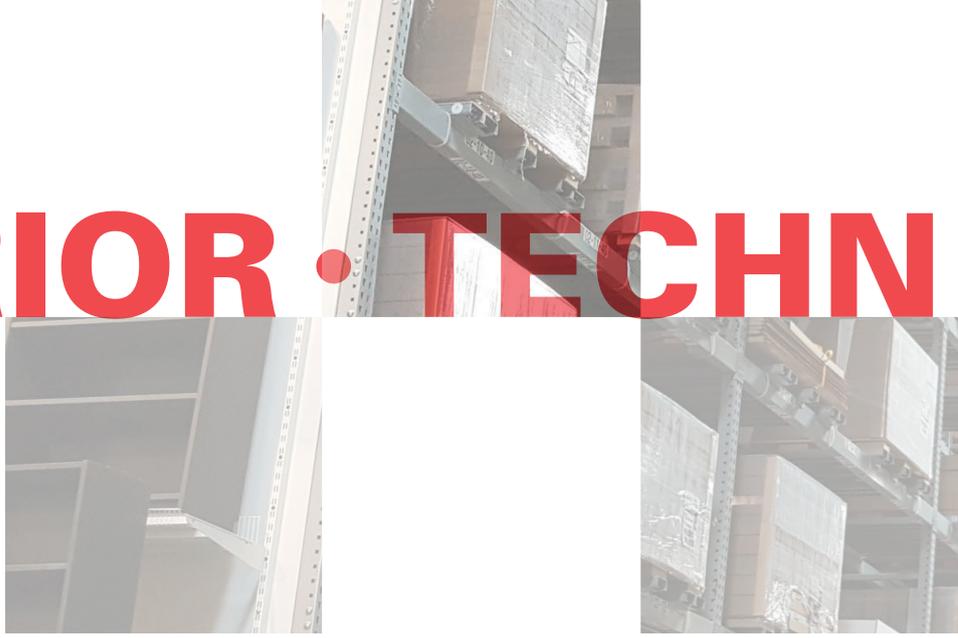
\* **Optional features, accessories, parts or systems that are available.**



## Innovative Drive and Safety

- Adjustable load wheel height allows a single wheel—rather than all wheels—to be re-aligned or changed when necessary.
- Low centre of gravity and a lightweight truck means a load wheel brake is not needed.

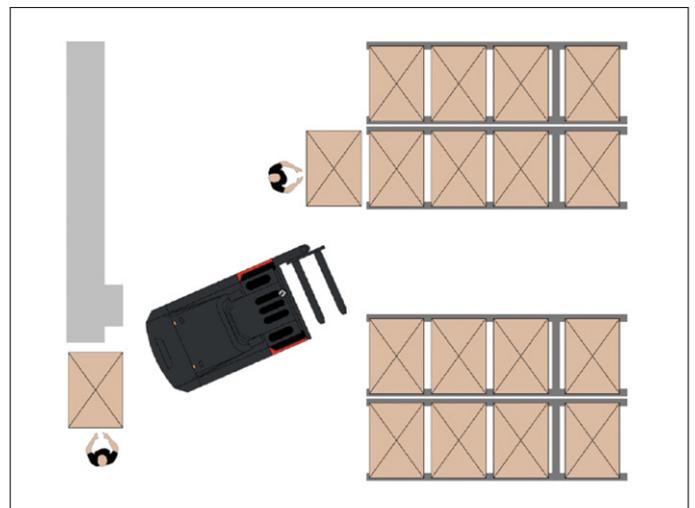
# SUPERIOR • TECHN



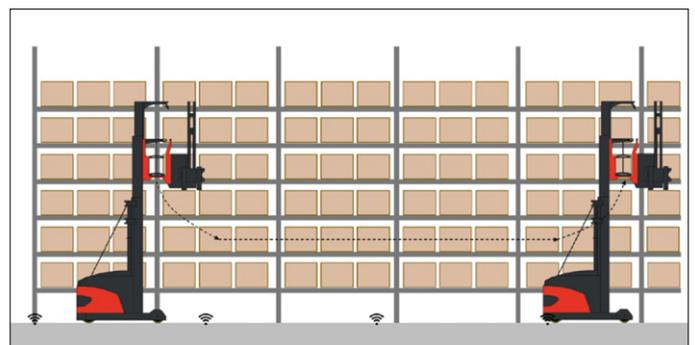
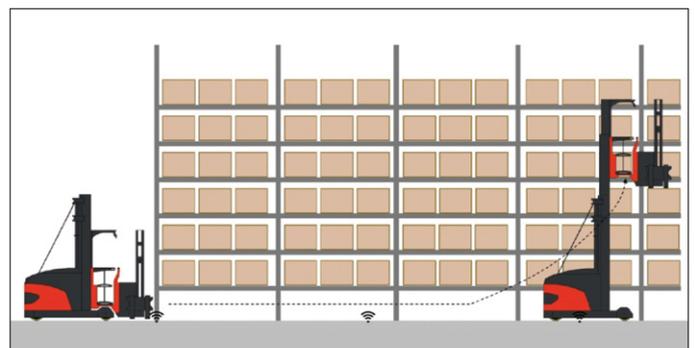
## Impeccable Control Systems & Dynamics

- Separate valve to regulate cabin lifting to reduce energy use with less parts replaced compared to the standard 'energy recovery' system.
- Swift error analyses and troubleshooting without a computer through the use of LED indicators with leading-edge micro-controllers.
- In-depth diagnostics via GSM connection or computer connection by USB (or optional CAN-BUS connection)
- **Vicinity Assistant\*** option serves as an advanced visual monitoring system that ensures an all-round 270° visibility through on-board industrial cameras and a high-resolution split screen monitor, assuring perpetual safe operations.
- **Driver Assistance Systems\*** come with available options that include:

- o **Height Level Positioning System\***: automatically stores targeted retrieval height levels and vertical coordinates that relieve the driver from manual operation and fine positioning.
- o **Position Assistance System\***: ensures precise navigation according to specific storage or retrieval orders by offering optimal driving profiles, allowing the driver to choose between automatic or manual operations befitting the situation.
- o **Automatic Stacking System\***: automates the recurring cycle of loading or unloading a load from particular storage slots.



Vicinity Assistant



Position Assistance System (Navigation system)

# LOGY



## Integrated Ergonomics and Execution

- Spacious and comfortable operator cabin with much legroom. For **cold store operations\***, the cabin offers heating with protective glass and seat heating.
- Control panel with ball handle bar is equipped with a multi-check operating system and a sensor that facilitates two-hand operations.
- Five various types of cabin control panels are available including, a split armrest panel that offers operators flexibility and familiarity.
- A narrow rail in front of the cabin makes order picking easy.
- Choice of seats with features like height and weight adjustment, air cushioning, adjustable lumbar support, downward-folding cushions, and back support for standing operations.
- An optional weight overload indicator helps improve operational efficiency.
- Clear graphics display makes key information easy to read.

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\* **Optional features, accessories, parts or systems that are available.**



Split panel



**Special trucks:** Cold-store cabin  
Double isolated and heated glass

# Standard Specifications

CHARACTERISTICS						
1	Manufacturer			Nichiyu Electric Forklift Trucks	Nichiyu Electric Forklift Trucks	Nichiyu Electric Forklift Trucks
2	Manufacturer's model designation			RFTP11M	RFTP12M	RFTP13M
3	Power source			Battery	Battery	Battery
4	Operator type			Standing / Seated	Standing / Seated	Standing / Seated
5	Load capacity	Q	kg	1100	1200	1300
6	Load centre distance	c	mm	600	600	600
7	Load wheel axle to fork face	x/x1	mm	355 / 255	355 / 255	355 / 255
8	Wheelbase	y	mm	1780	1845	1910
WEIGHT						
9	Truck weight, without load / including battery (simple x mast, lowest lift height)		kg	4900 - 5600	4950 - 5800	5050 - 5900
10	Axle loading with maximum load, front / rear (simple x mast, lowest lift height)		kg	1600/4400; 1850/4850	1650/4500; 1900/5100	1700/4650; 2000/5200
11	Axle loading without load, front / rear (simple x mast, lowest lift height)		kg	2100/2800; 2400/3200	2150/2800; 2450/3350	2250/2800; 2550/3350
WHEELS, DRIVE TRAIN						
12	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side			P	P	P
13	Tyre dimensions, drive side		mm	343 / 140	343 / 140	343 / 140
14	Tyre dimensions, load side		mm	343 / 140	343 / 140	343 / 140
15	Number of wheels, load / drive side (x = driven)		mm	2 / 1 x	2 / 1 x	2 / 1 x
DIMENSIONS						
16	Height with mast lowered	h1	mm	See Table	See Table	See Table
17	Lift height	h3G+h13	mm	See Table	See Table	See Table
18	Height with mast extended	h4	mm	See Table	See Table	See Table
19	Height to top of overhead guard	h6	mm	See Table	See Table	See Table
20	Seat or stand height	h7	mm	See Table	See Table	See Table
21	Supplementary lift	h9	mm	1900	1900	1900
22	Platform height, raised	h12	mm	See Table	See Table	See Table
23	Picking height		mm	h12 + 1600	h12 + 1600	h12 + 1600
24	Fork height, fully lowered	h13	mm	80	80	80
25	Overall length with fork carrier width 850 mm	l1	mm	3275 - 3365 - 3465	3335 - 3425 - 3525	3400 - 3490 - 3590
26	Overall length with fork carrier width 580 mm	l1	mm	3140 - 3230 - 3330	3200 - 3290 - 3390	3265 - 3355 - 3455
27	Support boom length (standard)	M15	mm	460 - 550 - 650	460 - 550 - 650	460 - 550 - 650
28	Overall width (steps 50 mm)	b1	mm	1000 - 1700	1200 - 1700	1200 - 1700
29	Fork dimensions (thickness, width)	s/e	mm	40 / 120	40 / 120	40 / 120
30	Fork dimensions (length)	l	mm	800 - 1300	800 - 1300	800 - 1300
31	Width across forks (fork carrier width 580/850 mm)	b5	mm	530 / 505 - 795	530 / 505 - 795	530 / 505 - 795
32	Ground clearance at centre of wheelbase, (forks lowered)	m2	mm	40	40	40
33	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast	mm	See Table	See Table	See Table
34	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	mm	See Table	See Table	See Table
35	Turning radius	Wa	mm	2080	2145	2210
PERFORMANCE						
36	Travel speed, with / without load		km/h	12.0 / 12.0	12.0 / 12.0	12.0 / 12.0
37	Lifting speed, with / without load		m/s	0.32 / 0.40 <sup>1)</sup>	0.31 / 0.40 <sup>1)</sup>	0.52 / 0.56 <sup>1)</sup>
38	Lowering speed, with / without load		m/s	0.45 / 0.45	0.45 / 0.45	0.45 / 0.45
39	Reach speed laden/unladen (adjustable)		m/s	up to 0.45	up to 0.45	up to 0.45
40	Service brakes (mechanical / hydraulic / electric / pneumatic)			Electric	Electric	Electric
ELECTRIC MOTORS						
41	Drive motor		kW	5.0	5.0	7.0
42	Lift motor		kW	12.5 <sup>1)</sup>	12.5 <sup>1)</sup>	21.0 <sup>1)</sup>
43	Battery voltage/capacity at 5-hour discharge		V/Ah	48 / 775 <sup>2) 3)</sup>	48 / 930 <sup>2) 3)</sup>	80 / 620 <sup>3)</sup>
44	Battery weight		kg	1118	1309	1558
MISCELLANEOUS						
45	Type of drive control			Stepless	Stepless	Stepless

# ELECTRIC FORKLIFT VNA TRUCKS

## RFTP11-20M(XL) SERIES

### 1.1 – 2.0 TONS



| Nichiyu Electric Forklift Trucks |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| RFTP14M                          | RFTP15M                          | RFTP15MXL*                       | RFTP20M*                         |
| Battery                          | Battery                          | Battery                          | Battery                          |
| Standing / Seated                | Standing / Seated                | Standing / Seated                | Standing / Seated                |
| 1350                             | 1500                             | 1500                             | 2000                             |
| 600                              | 600                              | 600                              | 600                              |
| 365 / 255                        | 360 / 270                        | 360 / 270                        | 360 / 270                        |
| 1880                             | 2140                             | 2140                             | 2140                             |
| 5800 - 6900                      | 7100 - 8700                      | 8900 - 9400                      | 7400 - 8900                      |
| 1800/5300; 2050/6150             | 2300/6300; 2950/7250             | 3000/7400; 3100/7800             | 2100/7300; 2700/8200             |
| 2400/3400; 2700/4200             | 2900/4200; 3550/5150             | 3500/5400; 3700/5700             | 3000/4400; 3400/5400             |
| P                                | P                                | P                                | P                                |
| 343 / 140                        | 381 / 152                        | 381 / 152                        | 381 / 152                        |
| 377 / 178                        | 377 / 178                        | 377 / 178                        | 377 / 178                        |
| 2 / 1 x                          | 2 / 1 x                          | 2 / 1 x                          | 2 / 1 x                          |
| See Table                        | See Table                        | See Table                        | See Table                        |
| See Table                        | See Table                        | See Table                        | See Table                        |
| See Table                        | See Table                        | See Table                        | See Table                        |
| See Table                        | See Table                        | See Table                        | See Table                        |
| See Table                        | See Table                        | See Table                        | See Table                        |
| 1900                             | 1900                             | 1900                             | 1500                             |
| See Table                        | See Table                        | See Table                        | See Table                        |
| h12 + 1600                       | h12 + 1600                       | h12 + 1600                       | h12 + 1600                       |
| 80                               | 80                               | 80                               | 80                               |
| 3375 - 3465 - 3565               | 3650 - 3740 - 3840               | 3650 - 3740 - 3840               | 3740 - 3840                      |
| 3240 - 3330 - 3430               | 3515 - 3605 - 3705               | 3515 - 3605 - 3705               | 3605 - 3705                      |
| 460 - 550 - 650                  | 460 - 550 - 650                  | 460 - 550 - 650                  | 550 - 650                        |
| 1200 - 1700                      | 1200 - 1700                      | 1600 - 1900                      | 1200 - 1700                      |
| 40 / 120                         | 40 / 120                         | 40 / 120                         | 40 / 120                         |
| 800 - 1300                       | 800 - 1300                       | 800 - 1300                       | 800 - 1300                       |
| 530 / 505 - 795                  | 530 / 505 - 795                  | 530 / 505 - 795                  | 240 - 795                        |
| 40                               | 40                               | 40                               | 40                               |
| See Table                        | See Table                        | See Table                        | See Table                        |
| See Table                        | See Table                        | See Table                        | See Table                        |
| 2170                             | 2445                             | 2445                             | 2445                             |
| 12.0 / 12.0                      | 12.0 / 12.0                      | 12.0 / 12.0                      | 12.0 / 12.0                      |
| 0.49 / 0.52 <sup>1)</sup>        | 0.48 / 0.52 <sup>1)</sup>        | 0.42 / 0.45                      | 0.45 / 0.54                      |
| 0.45 / 0.45                      | 0.45 / 0.45                      | 0.45 / 0.45                      | 0.45 / 0.45                      |
| up to 0.45                       | up to 0.45                       | up to 0.45                       | 0.20 / 0.20                      |
| Electric                         | Electric                         | Electric                         | Electric                         |
| 7.0                              | 7.0                              | 7.0                              | 7.0                              |
| 21.0 <sup>1)</sup>               | 21.0 <sup>1)</sup>               | 28.0                             | 28.0                             |
| 80 / 465 <sup>3)</sup>           | 80 / 775 <sup>3)</sup>           | 80 / 775 <sup>3)</sup>           | 80 / 775 <sup>3)</sup>           |
| 1238                             | 1862                             | 1862                             | 1862                             |
| Stepless                         | Stepless                         | Stepless                         | Stepless                         |

- 1) Higher lift speeds on request
- 2) Also available in 80 volt
- 3) Other capacities on request

# Standard Equipment and Options

○ = Standard      △ = Option

ITEM		RFTP11M	RFTP12M	RFTP13M	RFTP14M	RFTP15M	RFTP15MXL	RFTP20M
GENERAL	Overhead guard with 4 LED spot	○	○	○	○	○	○	○
	Mirrors	○	○	○	○	○	○	○
	Emergency rope	○	○	○	○	○	○	○
	Control panel with ball handle bar	○	○	○	○	○	○	○
	Higher side shift speed	○	○	○	○	○	○	○
CHASSIS	Special paint, change of one colour (Standard RAL)	△	△	△	△	△	△	△
	Extended or shortened chassis	△	△	△	△	△	△	△
	Twin/dual load wheels, minimum chassis width 1450 mm	△	△	△	△	△	△	△
	RFTP14M with RFTP15M chassis, battery up to 5 PzS 700/775 Ah	-	-	-	△	-	-	-
	RFTP15M with chassis for battery 6 PzS 840/930 Ah, special drive wheel	-	-	-	-	△	-	-
	Rail guidance for standard profile, minimum 80 mm profile height	△	△	△	△	△	△	△
	Rail guidance, minimum 38 mm profile height	△	△	△	△	△	△	△
	Side guide rollers antistatic	△	△	△	△	△	△	△
	Additional side guide roller in the centre of truck (3 rollers on each side)	△	△	△	△	△	△	△
	Inductive wire guidance 6.25 kHz +/- 30 Hz, 78 mA	△	△	△	△	△	△	△
	Line driver for max 1200 m wire, 6.25 kHz	△	△	△	△	△	△	△
	Fork carriage width 850 mm	△	△	△	△	△	△	△
Fork carriage width 1150 mm	△	△	△	△	△	△	△	
Head centre distance 700 mm (less capacity)	△	△	△	△	△	△	△	
Head centre distance 750/800 mm (less capacity)	△	△	△	△	△	△	△	
Shorten mast, special closed heights	△	△	△	△	△	△	△	
Full fork carriage for swivel fork 320, 850 mm for distance across forks 240 - 795 mm	△	△	△	△	△	△	△	
Hydraulic fork adjustment, 500 - 800 mm, integrated, width of fork carriage 1080 mm	△	△	△	△	△	△	△	
Side shifter +/- 100 mm	△	△	△	△	△	△	△	
Cross Hair Laser with Radio Remote Control	△	△	△	△	△	△	△	
Telescopic fork, width 1200 mm, supplementary lift 650 mm	△	△	△	△	△	△	△	
Telescopic fork, width 1200 mm, supplementary lift > 650 mm	△	△	△	△	△	△	△	
Telescopic fork, width 1200 mm, supplementary lift > 650 mm, profiles in front of the load, max 1000 kg, no cold store	△	△	△	△	△	△	△	
Telescopic forks, lowered height 190 mm, max capacity 1000 kg	△	△	△	△	△	△	△	
Supplementary lift height 1700 mm with swivel fork type MSG 320	△	△	△	△	△	△	△	
Supplementary lift height 2100 or 2300 mm with swivel fork type MSG 320	△	△	△	△	△	△	△	
RFTP15M with swivel fork type MSG 120, supplementary lift 1500 mm	-	-	-	-	△	-	-	
RFTP15M with swivel fork type MSG 120, guidance at overhead guard, supplementary lift 1500 mm	-	-	-	-	△	-	-	
CABIN	Control panel with rotary switches	△	△	△	△	△	△	△
	Control panel with single lever	△	△	△	△	△	△	△
	Control panel with multifunction lever	△	△	△	△	△	△	△
	Tilting panel for order picking (only possible with ball handle bar or rotary switch)	△	△	△	△	△	△	△
	Spilt control panel at the back, beside the seat, including armrests	△	△	△	△	△	△	△
	Multicheck with PIN-code access, 10 different codes, hour counter for week and day	△	△	△	△	△	△	△
	12 or 24 volt connection with separate DC converter	△	△	△	△	△	△	△
	24 volt connection behind ignition lock, max 2 ampere	△	△	△	△	△	△	△
	Armrests, adjustable	△	△	△	△	△	△	△
	Heated seat	△	△	△	△	△	△	△
	Air suspension seat	△	△	△	△	△	△	△

Continuing improvement may lead to changes in these specifications

ITEM	RFTP11M	RFTP12M	RFTP13M	RFTP14M	RFTP15M	RFTP15MXL	RFTP20M	
CABIN	Swivel seat	△	△	△	△	△	△	
	2 additional LED working lights at both sides of the overhead guard	△	△	△	△	△	△	
	2 powerful LED lighting strips at left and right side of overhead guard	△	△	△	△	△	△	
	Flashing light at the mast	△	△	△	△	△	△	
	Blue spot at the mast to the rear, functioning when travelling backwards	△	△	△	△	△	△	
	Simultaneous lifting of main and supplementary lift	△	△	△	△	△	△	
	Clipboard DIN A4 in the cabin	△	△	△	△	△	△	
	Clipboard DIN A4 at universal fastening rail	△	△	△	△	△	△	
	Height level positioning system (10 levels) with indicator, for cabin lift (not together with PIN-code system)	△	△	△	△	△	△	
	Overload indicator	△	△	△	△	△	△	
	Digital scale, +/- 25 kg, measurement by hydraulic pressure of supplementary lift mast	△	△	△	△	△	△	
	Fan in cabin	△	△	△	△	△	△	
	Swivel/tilting side gates, specially for order picking	△	△	△	△	△	△	
	Tray for universal fastening rail	△	△	△	△	△	△	
	Acoustic signal when driving backwards	△	△	△	△	△	△	
	Speed control unit GSG2 for linear driving speeds depending on lift height, programmable lift stop above 500 mm	△	△	△	△	△	△	
	Windscreen removable	△	△	△	△	△	△	
	Makrolon screen on the overhead guard	△	△	△	△	△	△	
	Makrolon window in front of the control panel (only for RFTP15M with swivel fork type 120)	-	-	-	-	△	-	-
	Makrolon cabin, windscreen removable	△	△	△	△	△	△	△
Cabin heating	△	△	△	△	△	△	△	
INTERLOCKS	Slow down at the end of aisle, without stop (system CAT)	△	△	△	△	△	△	
	Slow down and stop at the end of aisle (system CAT)	△	△	△	△	△	△	
	Magnets per aisle	△	△	△	△	△	△	
	Electrical drive and lift cut-out with overriding switch	△	△	△	△	△	△	
	Electrical drive and lift cut-out with overriding switch outside the aisle	△	△	△	△	△	△	
	Electrical reach cut-out for swivel head MSG 320	△	△	△	△	△	△	
	Zone-dependent interlocks	△	△	△	△	△	△	
BATTERY	Driving outside the guidance up to maximum lift height with override switch, 2.5 km/h, drive wheel in straight position	△	△	△	△	△	△	
	Battery frame additional for fast and easy battery change with counterbalance truck	△	△	△	△	△	△	
	Battery rollers in truck 48 V 6 PzS/80 V 3 PzS	△	△	△	△	△	△	
	Battery roller station for 1 battery 48 V 6 PzS/80 V 3 PzS for fixing on floor	△	△	△	△	△	△	
	Battery Rollers in truck 80 V 5 PzS	△	△	△	△	△	△	
	Battery Roller Station for 1 battery 80 V 5 PzS for fixing on floor	△	△	△	△	△	△	
	Mobile winch for battery change for fixing at the chassis	△	△	△	△	△	△	
Battery cable for battery changing	△	△	△	△	△	△		
COLD STORE	Cold store application, without cabin	△	△	△	△	△	△	
	Cabin for cold store applications	△	△	△	△	△	△	
	Inductive wire guidance 6.25 kHz +/- 30 Hz, 78 mA +/- 15%, Zapi	△	△	△	△	△	△	
	Lifting jack for relieving the driving wheel when battery is loading	△	△	△	△	△	△	
	48/80 volt supply for the night (converter not for cold store area, without cable)	△	△	△	△	△	△	
Telescopic forks for cold store application	△	△	△	△	△	△		
SAFETY	Preparation for installing personal safety system with laser scanner	△	△	△	△	△	△	



## 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.